

JULIE D. KOHLER

PLEASE REPLY TO: Bridgeport
WRITER'S DIRECT DIAL: (203) 337-4157
E-Mail Address: jkohler@cohenandwolf.com

November 21, 2014

Attorney Melanie Bachman
Acting Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

**Re: Notice of Exempt Modification
Mountaintop Enterprises Inc./T-Mobile co-location
Site ID CT11180C
130 Vernon Road, Bolton CT
Filing Amendment**

Dear Attorney Bachman:

This office represents T-Mobile Northeast LLC ("T-Mobile") and has been retained to file exempt modification filings with the Connecticut Siting Council on its behalf. T-Mobile initially filed this exempt modification request on October 9, 2014. Immediately upon learning that it was possible that the site parameters may be adjusted, on October 20, 2014, T-Mobile requested that the Council suspend action on the exempt modification request. T-Mobile hereby provides supplemental informational information so that the Council may act upon this exempt modification request.

In this case, Mountaintop Enterprises Inc. owns the existing guyed lattice telecommunications tower and related facility at 130 Vernon Road, Bolton, Connecticut (latitude 41.802648/ longitude -72.441213). T-Mobile intends to add three antennas and replace three antenna and related equipment at this existing telecommunications facility in Bolton ("Bolton Facility"). Please accept this letter as notification, pursuant to R.C.S.A. § 16-50j-73, of construction which constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to the First Selectman Robert Morra. Mountaintop Enterprises Inc. is also the property owner.

The existing Bolton Facility consists of an approximately 280 foot tall guyed lattice structure.¹ T-Mobile plans to add three (3) antennas at a centerline of 226 feet, replace two

¹ The online CSC database does not include a Docket or Petition approval for this facility. It does however include several notices of intent, the most recent captioned EM-SPRINT-012-140908, EM-AT&T-012-131223, and EM-VER-012-130107.

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Site ID CT11180C
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(2) antennas at the 180 foot centerline with three (3) antennas at the 226 foot centerline, and replace two existing TMAs (tower mounted amplifiers) at the 180 foot centerline with three (3) TMAs at the 226 foot centerline. T-Mobile will also install fiber cable, coax cable and reuse existing coax cable. T-Mobile will also replace an equipment cabinet on an existing concrete pad. All of these modifications will take place within the existing equipment compound. See the plans revised to October 28, 2014 attached hereto as Exhibit A. The existing Facility is structurally capable of supporting T-Mobile's proposed modification, as indicated in the structural analysis dated November 19, 2014 attached hereto as Exhibit B.

The planned modifications to the Bolton Facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2).

1 . The proposed modification will not increase the height of the tower. T-Mobile's replacement antennas will be installed at the 226 foot level of the approximately 280 foot lattice tower. The enclosed tower drawing confirms that the proposed modification will not increase the height of the tower.

2 . The installation of the T-Mobile equipment in the existing compound, as reflected on Sheet 1 of Exhibit A, will not require an extension of the site boundaries. T-Mobile's proposed equipment will be located entirely within the existing compound area.


3 . The proposed modification to the Facility will not increase the noise levels at the existing facility by six decibels or more.

4 . The operation of the proposed antennas will not increase the total radio frequency (RF) power density, measured at the base of the tower, to a level at or above the applicable standard. According to a Radio Frequency Emissions Analysis Report prepared by EBI dated November 18, 2014 T-Mobile's operations would add 3.33% of the FCC Standard. Therefore, the calculated "worst case" power density for the planned combined operation at the site including all of the proposed antennas would be 77.44% of the FCC Standard as calculated for a mixed frequency site as evidenced by the engineering exhibit attached hereto as Exhibit C.

For the foregoing reasons, T-Mobile respectfully submits that the proposed antennas and equipment at the Bolton Facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2). Upon acknowledgement by the Council of this proposed exempt modification, T-Mobile shall commence construction approximately sixty days from the date of the Council's notice of acknowledgement.

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Site ID CT11180C
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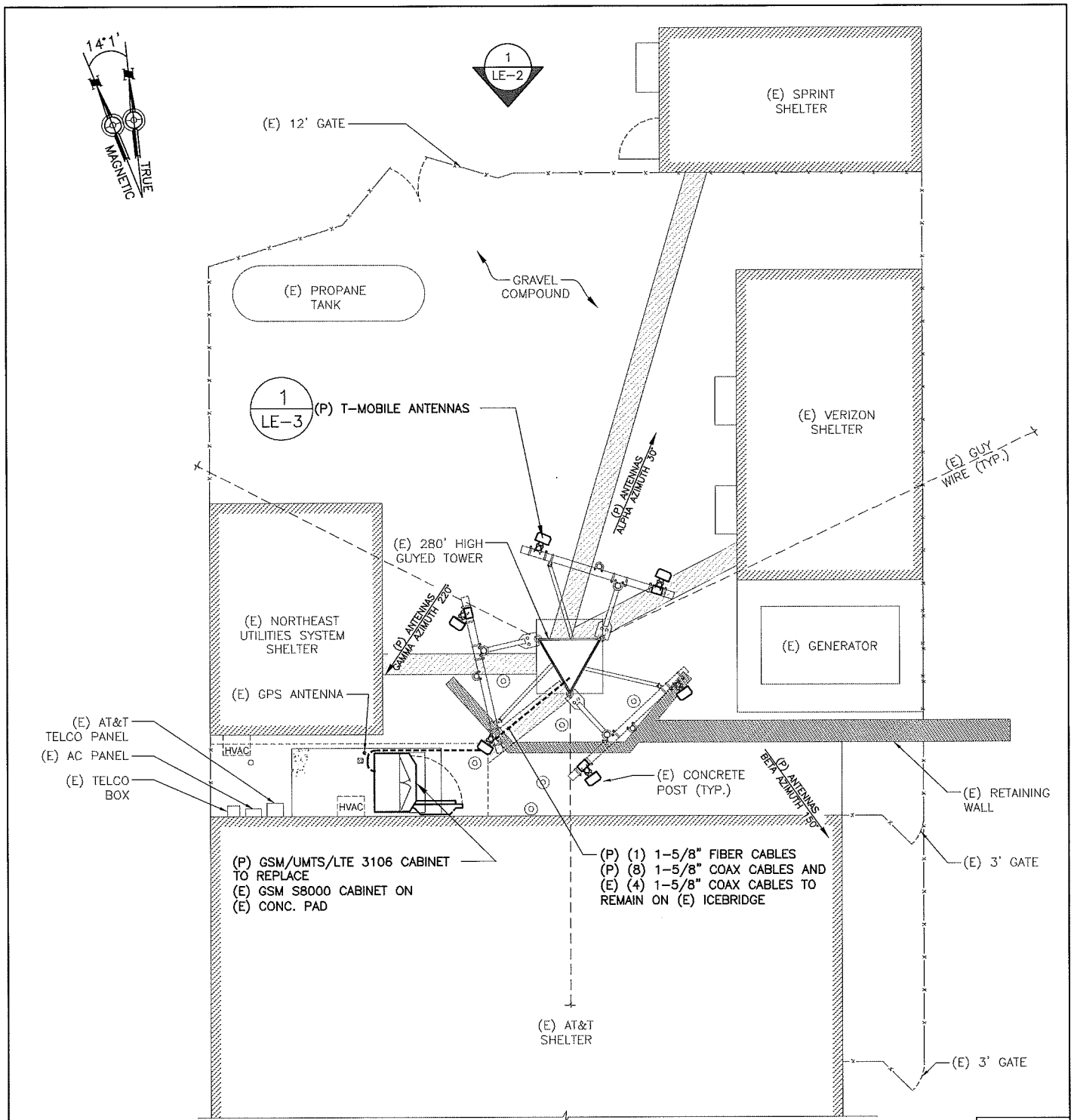
Sincerely,

A handwritten signature in black ink, appearing to read "Julie D. Kohler". The signature is fluid and cursive, with a large initial "J" and a stylized "K" at the end.

Julie D. Kohler, Esq.

cc: Town of Bolton, First Selectman Robert Morra
Mountaintop Enterprises Inc.
Sheldon Freinckle, NSS

EXHIBIT A



ALL EQUIPMENT LOCATIONS ARE APPROXIMATE AND ARE SUBJECT TO APPROVAL BY LESSEE/LICENSEE'S STRUCTURAL & RF ENGINEERS. LOCATIONS OF POWER & TELEPHONE FACILITIES ARE SUBJECT TO APPROVAL BY UTILITY COMPANIES.

SITE PLAN 1
N.T.S. LE-1

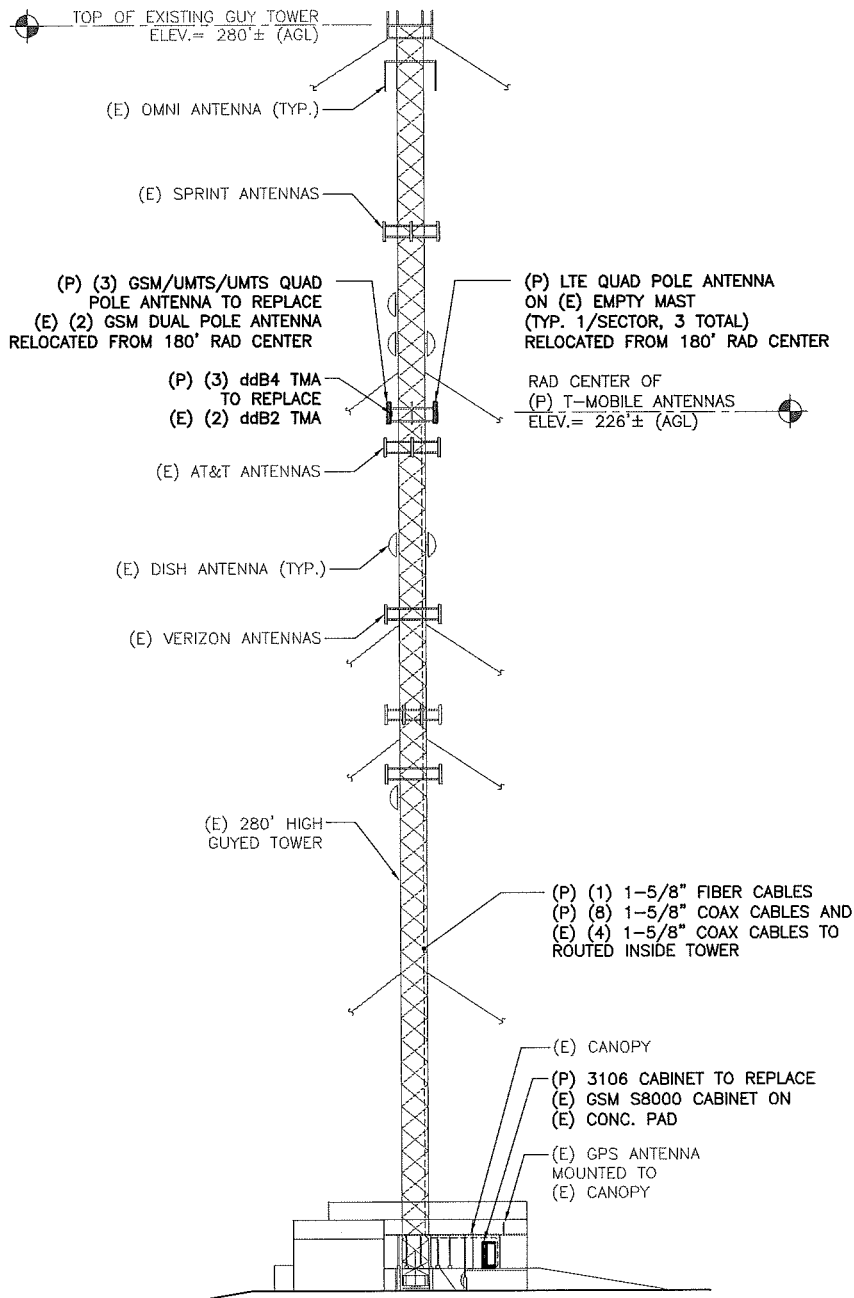
CONFIGURATION
2C

SUBMITTALS	
LE REV A	08.11.14
LE REV 0	10.28.14


ATLANTIS GROUP
 1340 Centre Street
 Suite 212
 Newton, MA 02459
 Office: 617-965-0789
 Fax: 617-213-5056

LEASE EXHIBIT
 SITE NUMBER:
 CT11180C
 SITE NAME:
 BOLTON CT.._1
 SITE ADDRESS:
 130 VERNON RD.
 BOLTON, CT 06043

NORTHEAST SITE SOLUTIONS
 54 MAIN STREET, UNIT 3
 STURBRIDGE, MA 01566
 (508) 434-5237
 FOR
T-MOBILE NORTHEAST, LLC
 35 GRIFFIN ROAD SOUTH
 BLOOMFIELD, CT 06002
 OFFICE: (860) 692-7100
 FAX: (860) 692-7159



NORTH ELEVATION

N.T.S.

1
LE-2

CONFIGURATION

2C

SUBMITTALS	
LE REV A	08.11.14
LE REV 0	10.28.14

ATLANTIS GROUP
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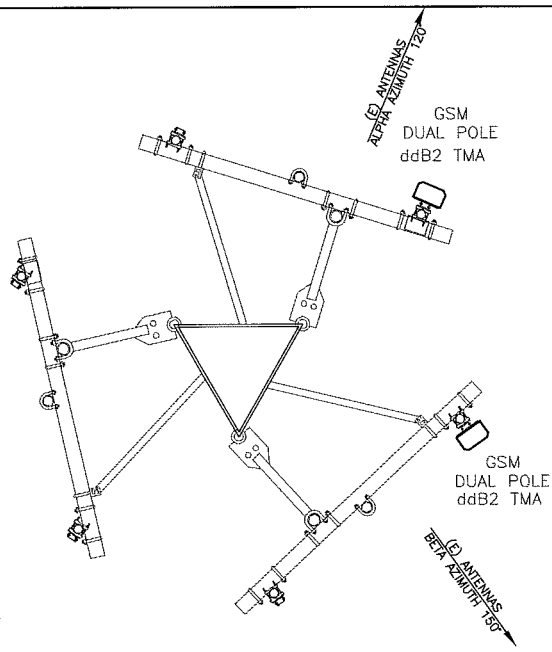
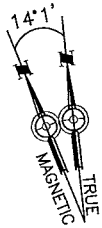
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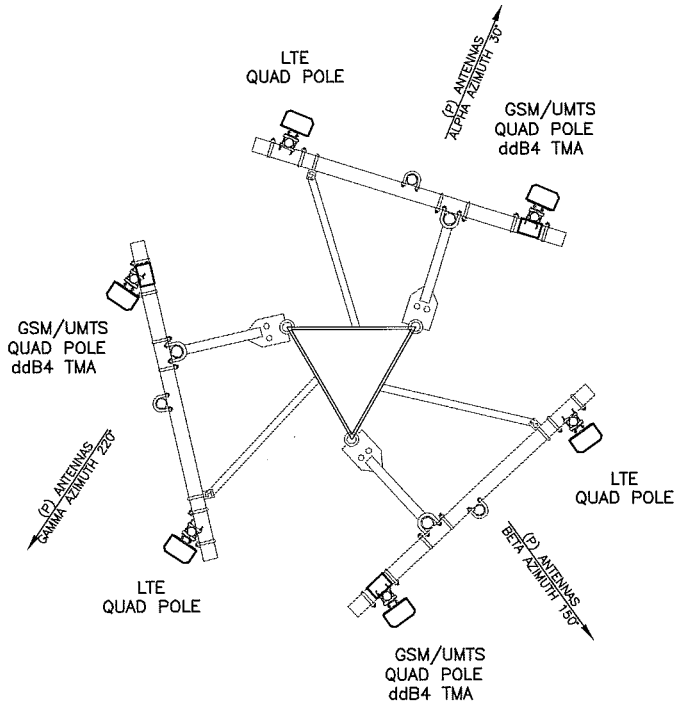
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PAGE 2 OF 3



EXISTING ANTENNA CONFIGURATION



PROPOSING ANTENNA CONFIGURATION

ANTENNA PLAN
N.T.S.

1
LE-3

CONFIGURATION

2C

SUBMITTALS	
LE REV A	08.11.14
LE REV 0	10.28.14

ATLANTIS GROUP
 1340 Centre Street
 Suite 212
 Newton, MA 02459
 Office: 617-965-0789
 Fax: 617-213-5056

LEASE EXHIBIT
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DRAWN BY: EB

CHECKED BY: SM

PAGE 3 OF 3

EXHIBIT B

**DETAILED STRUCTURAL ANALYSIS AND
EVALUATION OF AN EXISTING 280' GUYED
TOWER AND ITS FOUNDATION FOR
PROPOSED ANTENNA ARRANGEMENT**

**Site ID: CT11180C
Site Name: Bolton CT
Address: 130 Vernon Road
Bolton, Connecticut**

prepared for

• • T • • Mobile •

Northeast Site Solutions/T-Mobile

**54 Main Street
Sturbridge, MA 01566**

prepared by

URS

**URS CORPORATION
500 ENTERPRISE DRIVE, SUITE 3B
ROCKY HILL, CT 06067
TEL. 860-529-8882**

**36931359.00000
NSS-014**

November 18, 2014

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 - **TNX TOWER INPUT / OUTPUT SUMMARY**
 - **TNX TOWER FEEDLINE DISTRIBUTION**
 - **TNX TOWER FEEDLINE PLAN**
 - **GUY TENSIONS AND TOWER REACTIONS**
 - **TNX TOWER DETAILED OUTPUT**
 - **FOUNDATION ANALYSIS**

1. EXECUTIVE SUMMARY

This report summarizes the structural analysis of the existing 280' guyed lattice tower located at 130 Vernon Road in Bolton, Connecticut. The analysis was conducted in accordance with the 2005 Connecticut State Building Code which requires a three second gust wind speed of 100 mph which converts to a 80 mph fastest mile per 2003 IBC (Table 1609.3.1) and the TIA/EIA-222-F standard for a wind velocity of 85 mph (fastest mile). The wind speed from the TIA/EIA-222-F governs the design at 85 mph (fastest mile) and 74 mph (fastest mile) concurrent with 1/2" ice. The antenna loading considered in the analysis consists of all existing and proposed antennas, transmission lines, and ancillary items as outlined in the Introduction Section of this report.

The proposed T-Mobile modification is as follows:

Proposed Antenna and Mount	Carrier	Antenna Center Elevation
<u>Remove:</u> (2) RR90_17_02DP Panel Antennas (2) Existing TMA Units (4) Existing 1-5/8" Coax Cables @ 180'	T-Mobile (existing)	@ EL. 180'
<u>Install:</u> (3) Ericsson AIR21 B2A/B4P Panel Antennas (3) Ericsson AIR21 B4A/B2P Panel Antennas (3) (AWS) TMA Units (12) 1-5/8" Coaxial Cables (1) 1-5/8" Fiber Optic Cable	T-Mobile (Proposed)	@ 226' (adjusted from EL.180')

The results of the analysis indicate that the tower structure, guy cables and foundation are in compliance with the proposed loading conditions without modification. **The existing tower, guy cables and foundation are considered structurally adequate for the proposed antenna loading with the wind load classification specified above.**

The previous structural analysis of this tower provided by URS Corporation, project number NSS-011 / 36931290.00000, on behalf of T-Mobile, had their mounts, antennas and cables located at 180 feet in elevation. The adjustment from the elevation of 180 feet to the elevation of 226 feet is reflected in this analysis. This report supersedes the previous analysis (NSS-011 / 36931290.00000) signed and sealed by URS, dated September 30, 2014.

1. **EXECUTIVE SUMMARY (continued)**

This analysis is based on:

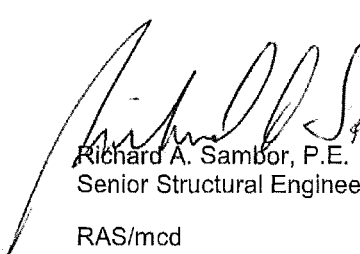
- 1) The tower structure's theoretical capacity, not including any assessment of the condition of the tower.
- 2) Geotechnical information taken from report by Dr. Clarence Welti, P.E., P.C. Geotechnical Engineering dated February 13, 1991.
- 3) Tower geometry, structural member sizes and foundation information taken from structural analysis performed by L&R Communications, Limited, L&R File No. 92-43-023, signed and sealed October 16, 1992.
- 4) Structural analysis performed by URS Corp for AT&T, Job No. MTS-007 / 36939370, signed and sealed July 24, 2012.
- 5) Structural analysis performed by URS Corp for Verizon Wireless, Job No. VZ5-120 / 36922278, signed and sealed July 26, 2012.
- 6) Tower condition and inventory report with site photographs taken from Northeast Towers, Inc., dated July 16, 2014.
- 7) Structural analysis performed by URS Corp. for Northeast Utilities, Job No. MTS-012 / 36931339, signed and sealed September 29, 2014.
- 8) Structural analysis performed by URS Corp. for T-Mobile, Job No. NSS-011 / 36931290.00000, signed and sealed September 30, 2014.
- 9) Tower inventory mapping of existing tower antennas, mounts and cables performed by Northeast Towers, Inc. for Mountaintop Services, obtained via e-mail, dated November 10, 2014.
- 10) Antenna and mount configuration as specified on the inventory page following this Executive Summary.

This report is only valid as per the assumptions and data utilized in this report for antenna inventory, mounts and associated cables. The user of this report shall field verify the assumption of the antenna and mount configuration as well as the physical condition of the tower and connections. Notify the engineer in writing immediately if any of the information in this report is found to be other than specified.

If you should have any questions, please call.

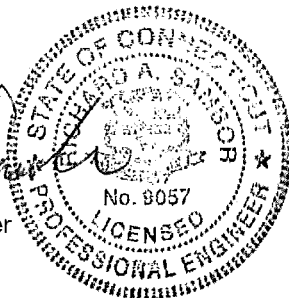
Sincerely,

URS Corporation


Richard A. Sambor, P.E.
Senior Structural Engineer

RAS/mcd

cc: CF/Book – URS



2. INTRODUCTION

The subject tower is located at 130 Vernon Road in Bolton, Connecticut. The structure is a 280' guyed lattice tower. The inventory is summarized in the table below:

Antenna Type	Carrier	Mount	Antenna Centerline Elevation	Cable
10' Omnidirectional Antenna	Not in Operation	3' Standoff	284'	1-1/4"
(1) LED Medium Intensity Beacon Light (DLS L-864/L-865)	Tower (existing)	Top of Tower Plate	280'	(1) 18 AWG Dual Flashhead Cable (1) 1/2" Power Cable
FM Antenna	WMRQ (Existing)	5' Standoff	289'	1-1/4"
Kathrein MF-950B Grid Antenna	WBMW (Existing)	Leg Mounted	280'	1-1/4"
14' Whip antenna	Mountaintop Services (Existing)	3' Standoff	260'	1-1/4" (shared with dipole)
ASPA-711 Dipole Antenna	Mountaintop Services (Existing)	1' Standoff	260'	1-1/4" (shared with whip)
(1) DS9A09F36D-N (1) 430-94C-09168-M-110/48 TTA	Northeast Utilities (Existing)	(1) 3' Side-Arm (mounted at 230')	240'	(2) 1 5/8" (1) 1/2"
(1) 531-70HD Dipole Antenna	Northeast Utilities (Existing)	(1) 6' Side-Arm	218'	(1) 7/8"
(3) AIR21 B4A/B2P (3) AIR21 B2A/B4P (3) TMA Units	T-Mobile (Proposed)	(3) T-Arm Mounts	226'	(12) 1-5/8" (1) 1-5/8" Fiber Optic Cable
8' Dish with Radome	Northeast Utilities (Existing)	Leg Mount	212'-6"	(1) EW63
8' Dish with Radome	Northeast Utilities (Existing)	Leg Mount	204'-6"	(1) EW63
6' Dish with Radome	Northeast Utilities (Existing)	Leg Mount	204'-6"	(1) EW63
None	Not in Use	6' Standoff	180'-6"	N/A
(6) Powerwave 7770 Panel Antennas (3) SBNH-1D6565C Panel Antennas (6) LGP21401 TMAs (12) LGP21901 Diplexers (6) Ericsson RRUs (1) Surge Suppressor	AT&T (Existing)	(3) Andrew 12' Sector Frames, (SF-U12-3-72)	164'	(12) 1-5/8" (1) Fiber Optic Cable (2) DC Cables
6.5' Dish with Radome	Northeast Utilities (Existing)	Leg Mount	153'	(1) EW63

Antenna Type	Carrier	Mount	Antenna Centerline Elevation	Cable
5.5' Dish with Radome	Northeast Utilities (Existing)	Leg Mount	153'	(1) EW63
(3) L-810 Obstruction Lights	Tower (existing)	Leg Mount	140'	(1) 1/2" DC Cable
22' Whip Antenna	Unknown (Existing)	6' Standoff	132'	(1) 1-1/4"
12' Dipole	Unknown (Existing)	6' Standoff	132'	(1) 1-1/4"
12.5' Omni	Not in Operation	1.5' Standoff	125'	Dead Line
1' Yagi	Not in Operation	Leg Mount	124'-6"	N/A
<u>Alpha:</u> (1) BXA-70063-6CF (2) LPA-80080-4CF (2) LPA-171080-8CF <u>Beta:</u> (1) BXA-70063-6CF (2) LPA-80063-4CF (2) LPA-171063-8CF	Verizon (existing)	(2) T-Arms	121'	(4) 1-5/8" (6) 1 1/4"
4' Dish with Radome	Northeast Utilities (Existing)	Leg Mount	113'	(1) EW-90
9' Dish with Radome	Northeast Utilities (Existing)	Leg Mount	104'-6"	(1) EW-63

Note: There are several items on the tower which are either unused or not functional. These items are identified in the inventory.

This structural analysis of the communications tower was performed by URS Corporation (URS) for T-Mobile. The purpose of this analysis was to investigate the structural integrity of the existing tower with its existing and proposed antenna loads. This analysis was conducted to evaluate stress on the tower and the effect of forces to the foundation of the tower resulting from existing and proposed antenna arrangements.

3. ANALYSIS METHODOLOGY AND LOADING CONDITIONS

The structural analysis was done in accordance with the 2005 Connecticut State Building Code, TIA/EIA-222-F—Structural Standard for Steel Antenna Towers and Antenna Supporting Structures, and the American Institute of Steel Construction (AISC) Manual of Steel Construction—Allowable Stress Design (ASD).

The Connecticut State Building Code requires a three second gust wind speed of 100 mph which converts to a 80 mph fastest mile per 2003 IBC (Table 1609.3.1). The TIA/EIA-222-F requires a basic wind speed of 85 mph fastest mile. In this case the wind speed from the TIA/EIA-222-F governs the design.

The analysis was conducted using TNX Tower 6.1.3.1. Two load conditions were evaluated as shown below which were compared to allowable stresses according to AISC and TIA/EIA.

Load Condition 1 = 85 mph (fastest mile) Wind Load (without ice) + Tower Dead Load
 Load Condition 2 = 74 mph (fastest mile) Wind Load (with ice) + Ice Load + Tower Dead Load

Please note that wind pressure is a function of velocity squared. Under Load Condition 2, a 25 percent reduction in wind pressure is allowed by code to account for the unlikelihood of the full wind pressure and ice load occurring at the same time. The same results may be achieved by utilizing a lower wind pressure without taking the 25 percent reduction, as shown above.

The TIA/EIA standard permits a one-third increase in allowable stresses for towers and monopoles less than 700 feet tall. For the purposes of this analysis, in computing the load capacity the allowable stresses of the tower members were increased by one-third.

4. FINDINGS AND EVALUATION

Stresses on the tower structure were evaluated to compare with allowable stresses in accordance with AISC. The calculated stresses under the proposed loading were within the allowable limits (see table below). Detailed analysis and calculations for the proposed load condition are provided in section 6 of this report.

COMPONENT (SECTION NO.)	CONTROLLING COMPONENT / ELEVATION	STRESS RATIO (% CAPACITY)	PASS/FAIL
Legs (T12)	40'-60'	91.2 %	Pass
Diagonal (T1)	260'-280'	77.5 %	Pass
Sec. Horizontal (T12)	40'-60'	11.5 %	Pass
Top Girt (T1)	260'-280'	7.8 %	Pass
Guy @ 270' (3/4" EHS)	270'	65.3 %	Pass
Guy @ 196' (5/8" EHS)	196'	85.4 %	Pass
Guy @ 128' (9/16" EHS)	128'	93.9 %	Pass
Guy @ 70' (1/2" EHS)	70'	93.6 %	Pass
Top Guy Pull-Off (T8)	120'-140'	27.5 %	Pass
Bottom Guy Pull-Off (T8)	120'-140'	12.9 %	Pass
Torque Arm Top (T5)	180'-200'	28.6 %	Pass
Torque Arm Bottom (T5)	180'-200'	53.7 %	Pass
Foundation	Guy Anchor Shear	99.1 %	Pass

5. CONCLUSIONS AND RECOMMENDATIONS

The results of the analysis indicate that the tower structure, guy cables and foundation are in compliance with the proposed loading conditions without modification. **The existing tower, guy cables and foundation are considered structurally adequate for the proposed antenna loading with the wind load classification specified above.**

The previous structural analysis of this tower provided by URS Corporation, project number NSS-011 / 36931290.00000, on behalf of T-Mobile, had their mounts, antennas and cables located at 180 feet in elevation. The adjustment from the elevation of 180 feet to the elevation of 226 feet is reflected in this analysis. This report supersedes the previous analysis (NSS-011 / 36931290.00000) signed and sealed by URS, dated September 30, 2014.

Limitations/Assumptions:

This report is based on the following:

1. Tower inventory as listed in this report.
2. Tower is properly installed and maintained.
3. All members are as specified in the original design documents and are in good condition.
4. All required members are in place.
5. All bolts are in place and are properly tightened.
6. Tower is in plumb condition.
7. All member protective coatings are in good condition.
8. All tower members were properly designed, detailed, fabricated, and installed and have been properly maintained since erection.
9. Foundations were properly constructed to support original design loads as specified in the original design documents.
10. All coaxial cables are installed as specified in Section 6 of this report.

URS is not responsible for any modifications completed prior to or hereafter in which URS is not or was not directly involved. Modifications include but are not limited to:

- A. Adding antennas
- B. Removing/replacing antennas
- C. Adding coaxial cables

URS hereby states that this document represents the entire report and that it assumes no liability for any factual changes that may occur after the date of this report. All representations, recommendations, and conclusions are based upon information contained and set forth herein. If you are aware of any information which conflicts with that which is contained herein, or you are aware of any defects arising from original design, material, fabrication, or erection deficiencies, you should disregard this report and immediately contact URS. URS disclaims all liability for any representation, recommendation, or conclusion not expressly stated herein.

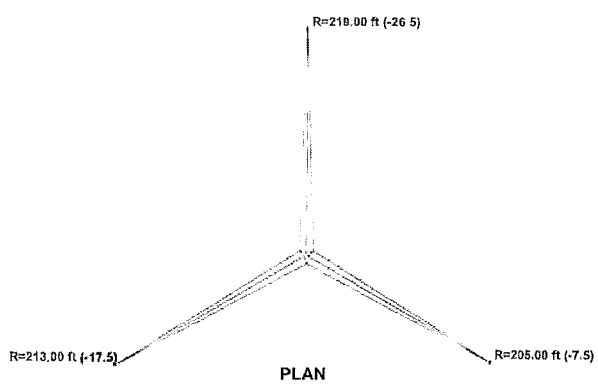
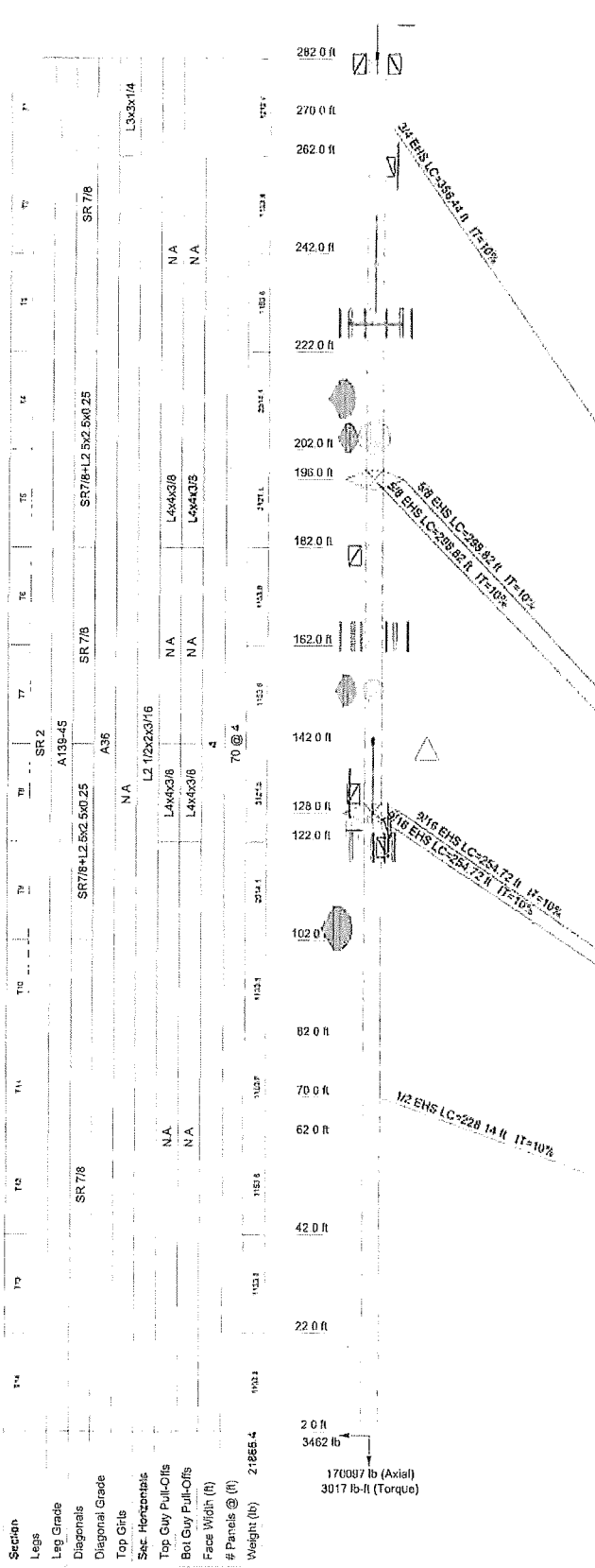
Ongoing and Periodic Inspection and Maintenance:

After the Contractor has successfully completed the installation and the work has been accepted, the owner will be responsible for the ongoing and periodic inspection and maintenance of the tower.

The owner shall refer to TIA/EIA-222-F for recommendations for maintenance and inspection. The frequency of the inspection and maintenance intervals is to be determined by the owner based upon actual site and environmental conditions. It is recommended that a complete and thorough inspection of the entire tower structural system be performed at least yearly and more frequently as conditions warrant. According to TIA/EIA-222-F section 14.1, Note 1: It is recommended that the structure be inspected after severe wind and/or ice storms or other extreme loading conditions.

6. DRAWINGS AND DATA

TNX TOWER INPUT/OUTPUT SUMMARY



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
FM Antenna (WMRO)	289	Surge Suppressor (ATT)	164
2 5' x 10' Omni (Not Used)	284	(2) RRU (ATT)	164
DLS L 864-L-865 Light Beacon Unit (Tower)	282	(2) RRU (ATT)	164
6' Stand-off (Unknown)	281	(2) RRU (ATT)	164
6' Stand-off (Unknown)	281	Andrew 12' Sector Frame (SF-U12-3-72) (ATT)	164
MF-950B (WBMW)	280	Andrew 12' Sector Frame (SF-U12-3-72) (ATT)	164
3' Stand-off (Unknown)	260	Andrew 12' Sector Frame (SF-U12-3-72) (ATT)	164
2 5' x 14' Omni (Unknown)	260	(4) LGP 219nn (ATT)	164
3' Stand-off (Unknown)	260	(2) LGP214nn TMA (ATT)	164
ASP-711 (Unknown)	260	SBNH-1D6565C (ATT)	164
DSA09F36D-N Omni (MTS)	240	(2) 7770 Panel Antenna (ATT)	164
430-94C-09168-M-11048 TTA (MYS)	240	(2) 7770 Panel Antenna (ATT)	164
3' Stand-off (MTS)	230	(2) LGP214nn TMA (ATT)	164
Pirol 12' T-Frame Sector Mount (1) (T-Mobile)	228	(4) LGP 219nn (ATT)	164
Pirol 12' T-Frame Sector Mount (1) (T-Mobile)	228	(2) LGP214nn TMA (ATT)	164
Pirol 12' T-Frame Sector Mount (1) (T-Mobile)	228	SBNH-1D6565C (ATT)	164
AIR B2A/B4P w/ 6' Sch 40 Pipe Mount (T-Mobile)	228	SBNH-1D6565C (ATT)	164
AIR B2A/B4P w/ 6' Sch 40 Pipe Mount (T-Mobile)	228	(4) LGP 219nn (ATT)	164
AIR B2A/B4P w/ 6' Sch 40 Pipe Mount (T-Mobile)	228	6.5' Dish w/ Radome (NU)	153
AIR B2A/B4P w/ 6' Sch 40 Pipe Mount (T-Mobile)	228	5' 5' Dish w/ Radome (NU)	153
AIR B2A/B4P w/ 6' Sch 40 Pipe Mount (T-Mobile)	228	(3) L-810 Obstruction Lights w/ Mount Kit (Tower - CBS Light)	142
AIR B2A/B4P w/ 6' Sch 40 Pipe Mount (T-Mobile)	228	2 5' x 22' Whip (Unknown)	132
AIR B2A/B4P w/ 6' Sch 40 Pipe Mount (T-Mobile)	228	6' Stand-off (Unknown)	132
AIR B2A/B4P w/ 6' Sch 40 Pipe Mount (T-Mobile)	228	14' Dipole (Unknown)	132
AIR B2A/B4P w/ 6' Sch 40 Pipe Mount (T-Mobile)	228	6' Stand-off (Unknown)	132
AIR B2A/B4P w/ 6' Sch 40 Pipe Mount (T-Mobile)	228	3' x 12 5' Omni (Not Used)	125
AIR B2A/B4P w/ 6' Sch 40 Pipe Mount (T-Mobile)	228	3' Stand-off (Not Used)	125
TMA (T-Mobile)	228	1' Yagi antenna (Not Used)	124.5
TMA (T-Mobile)	228	6'8"x4" Pipe Mount (Verizon)	121
TMA (T-Mobile)	228	6'8"x4" Pipe Mount (Verizon)	121
531-70HD Exposed Dipole Antenna (MTS)	218	(2) LPA-80060-4CF-EDIN (Verizon)	121
6' Stand-off (MTS)	218	BXA-70063-6CF-EDIN (Verizon)	121
8' Dish w/ Radome (NU)	212.5	BXA-70063-6CF-EDIN (Verizon)	121
8' Dish w/ Radome (NU)	204.5	(2) LPA-171063-8CF-EDIN (Verizon)	121
8' Dish w/ Radome (NU)	204.5	(2) LPA-80063-4CF (Verizon)	121
8' Stand-off (Not Used)	180.5	9' Dish w/ Radome (NU)	104.5

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A139-45	45 ksi	60 ksi	A36	36 ksi	58 ksi

TOWER DESIGN NOTES

1. Tower designed for a 85 mph basic wind in accordance with the TIA/EIA-222-F Standard.
2. Tower is also designed for a 74 mph basic wind with 0.50 in ice
3. Deflections are based upon a 50 mph wind.
4. TOWER RATING: 93.9%



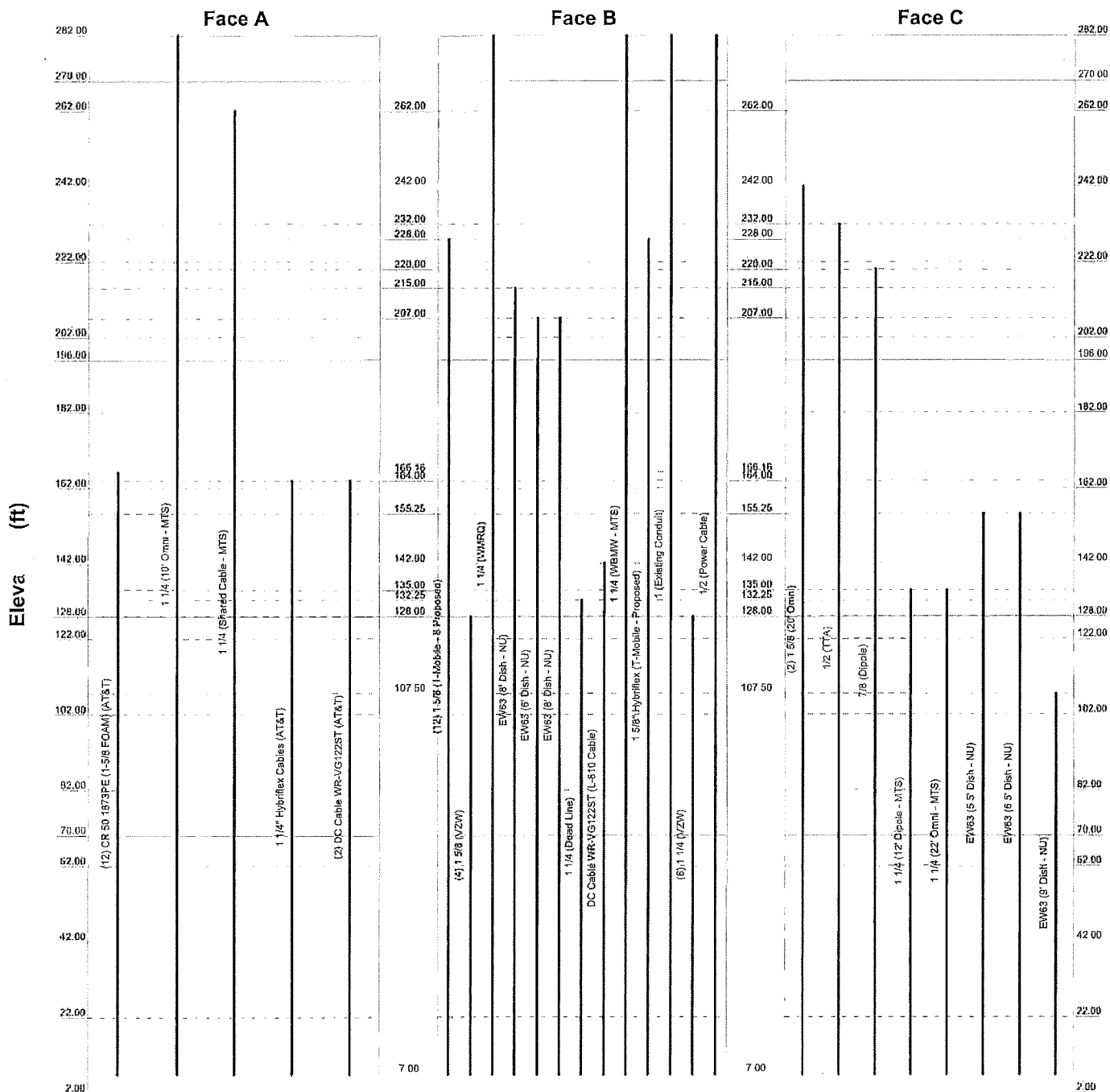
<p>URS Corporation 500 Enterprise Drive, Suite 3B Rocky Hill, CT 06067 Phone: 860-529-8882 FAX: 860-529-3991</p>	<p>Job: 280' Guyed Tower</p>		
	<p>Project: 130 Vernon Rd Bolton, CT</p>		
	Client: T-Mobile / NSS-014	Drawn by: MCD	App'd:
	Code: TIA/EIA-222-F	Date: 11/14/14	Scale: NTS
	Path:	Dwg No. E-1	

TNX TOWER FEEDLINE DISTRIBUTION

Feed Line Distribution Chart

2' - 282'

Round Flat App In Face App Out Face Truss Leg



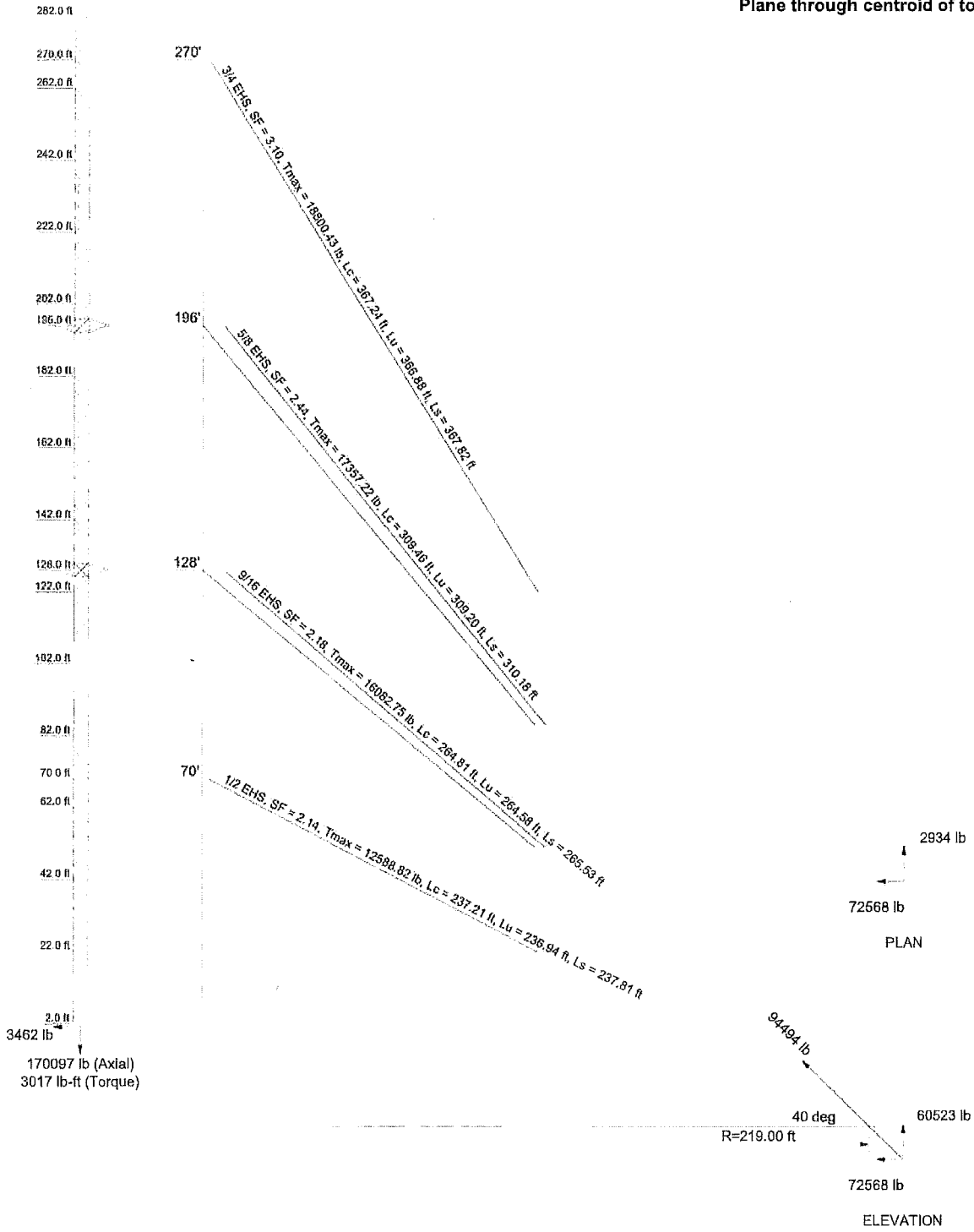
URS Corporation 500 Enterprise Drive, Suite 3B Rocky Hill, CT 06067 Phone: 860-529-8882 FAX: 860-529-3991	Job: 280' Guyed Tower
	Project: 130 Vernon Rd Bolton, CT
	Client: T-Mobile / NSS-014 Drawn by: MCD App'd:
	Code: TIA/EIA-222-F Date: 11/14/14 Scale: NTS
	Path: _____ Dwg No. E-7

TNX TOWER FEEDLINE PLAN

GUY TENSIONS AND TOWER REACTIONS

Guy Tensions and Tower Reactions
TIA/EIA-222-F - 85 mph/74 mph 0.5000 in Ice

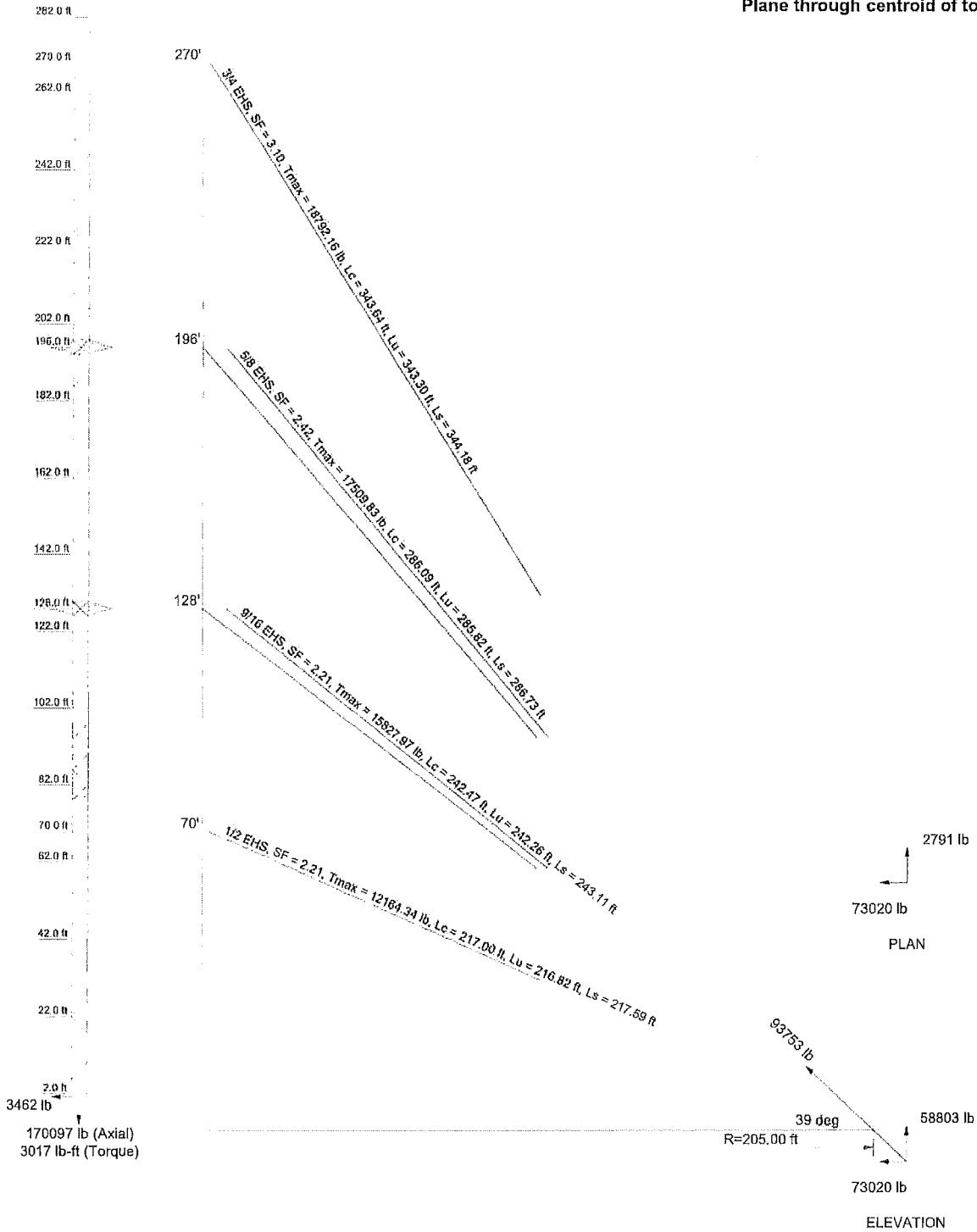
Maximum Values
Anchor 'A'@219 ft Azimuth 0 deg Elev -26.5 ft
Plane through centroid of tower



URS Corporation		Job: 280' Guyed Tower	
500 Enterprise Drive, Suite 3B		Project: 130 Vernon Rd Bolton, CT	
Rocky Hill, CT 06067		Client: T-Mobile / NSS-014	Drawn by: MCD
Phone: 860-529-8882		Code: TIA/EIA-222-F	Date: 11/14/14
FAX: 860-529-3991		Path:	Scale: NTS
			Dwg No: E-6

Guy Tensions and Tower Reactions
 TIA/EIA-222-F - 85 mph/74 mph 0.5000 in Ice

Maximum Values
 Anchor 'B' @ 205 ft Azimuth 120 deg Elev -7.5 ft
 Plane through centroid of tower

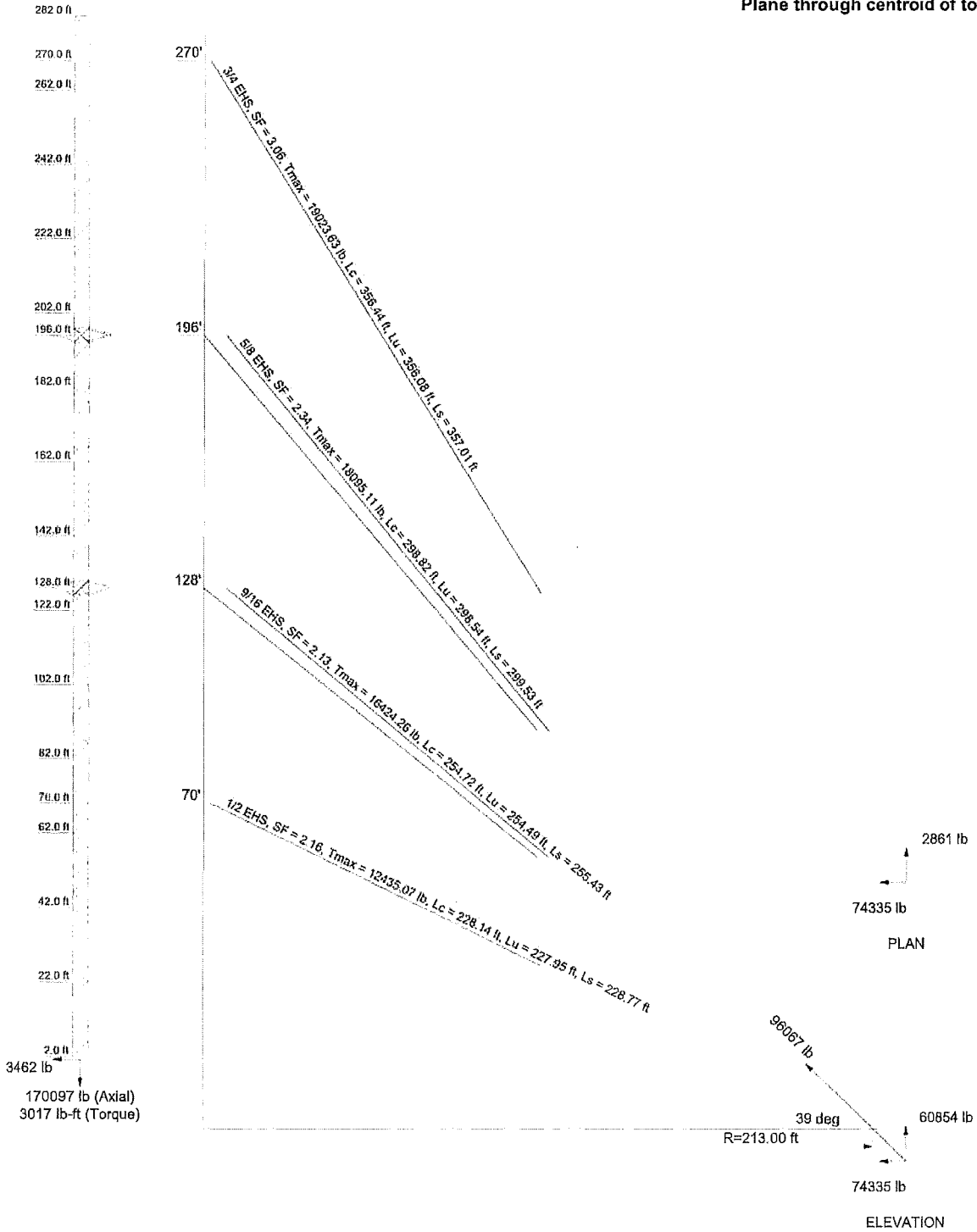


3462 lb
 170097 lb (Axial)
 3017 lb-ft (Torque)

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	Project: 130 Vernon Rd Bolton, CT		
	Client: T-Mobile / NSS-014	Drawn by: MCD	Appl'd:
	Code: TIA/EIA-222-F	Date: 11/14/14	Scale: NTS
	Path:	Dwg No. E-6	

Guy Tensions and Tower Reactions
 TIA/EIA-222-F - 85 mph/74 mph 0.5000 in Ice

Maximum Values
 Anchor 'C' @ 213 ft Azimuth 240 deg Elev -17.5 ft
 Plane through centroid of tower



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	Project: 130 Vernon Rd Bolton, CT
	Client: T-Mobile / NSS-014
	Code: TIA/EIA-222-F
	Drawn by: MCD
	Date: 11/14/14
	Scale: NTS
	Dwg No.: E-6

TNX TOWER DETAILED OUTPUT

tnxTower URS Corporation 500 Enterprise Drive, Suite 3B Rocky Hill, CT 06067 Phone: 860-529-8882 FAX: 860-529-3991	Job 280' Guyed Tower	Page 1 of 59
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Tower Input Data

The main tower is a 3x guyed tower with an overall height of 282.00 ft above the ground line.

The base of the tower is set at an elevation of 2.00 ft above the ground line.

The face width of the tower is 4.00 ft at the top and 4.00 ft at the base.

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

The following design criteria apply:

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.

Pressures are calculated at each section.

Safety factor used in guy design is 2.

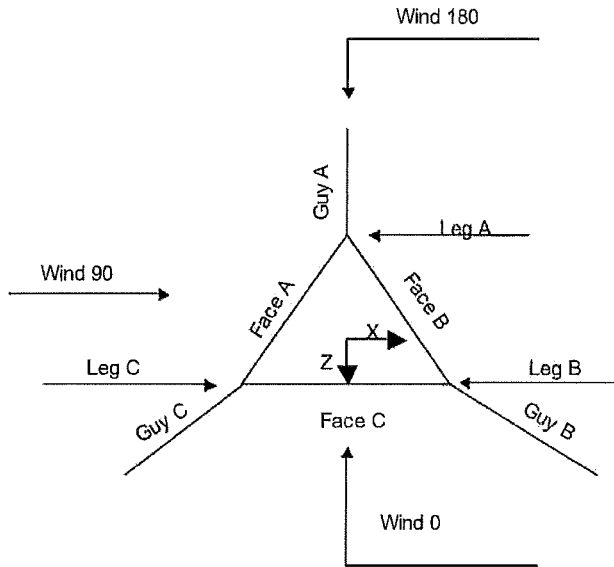
Stress ratio used in tower member design is 1.333.

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

Options

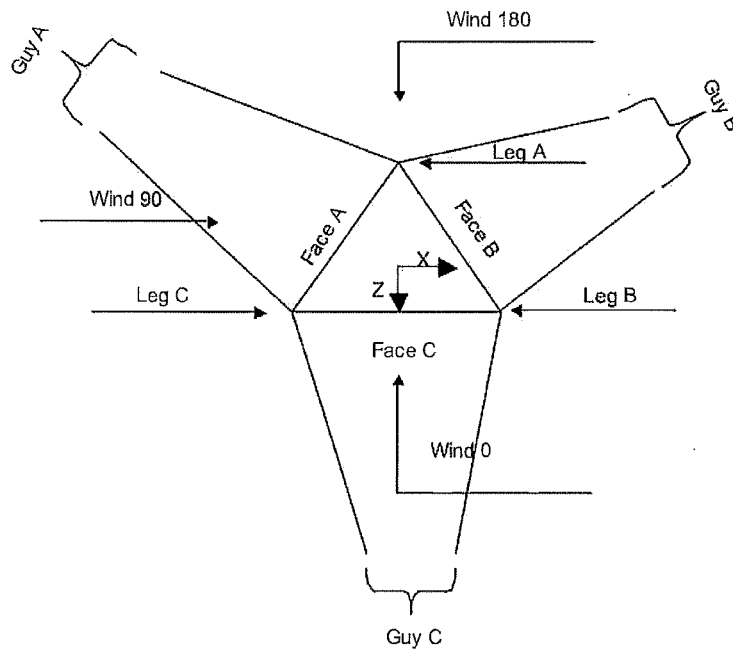
<ul style="list-style-type: none"> Consider Moments - Legs Consider Moments - Horizontals Consider Moments - Diagonals Use Moment Magnification √ Use Code Stress Ratios √ Use Code Safety Factors - Guys Escalate Ice Always Use Max Kz Use Special Wind Profile √ Include Bolts In Member Capacity √ Leg Bolts Are 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 Use TIA-222-G Tension Splice Capacity Exemption 	<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
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Corner & Starmount Guyed Tower

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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	282.00-262.00			4.00	1	20.00
T2	262.00-242.00			4.00	1	20.00
T3	242.00-222.00			4.00	1	20.00
T4	222.00-202.00			4.00	1	20.00
T5	202.00-182.00			4.00	1	20.00
T6	182.00-162.00			4.00	1	20.00
T7	162.00-142.00			4.00	1	20.00
T8	142.00-122.00			4.00	1	20.00
T9	122.00-102.00			4.00	1	20.00
T10	102.00-82.00			4.00	1	20.00
T11	82.00-62.00			4.00	1	20.00
T12	62.00-42.00			4.00	1	20.00
T13	42.00-22.00			4.00	1	20.00
T14	22.00-2.00			4.00	1	20.00

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Tower Section Geometry (cont'd)

Tower Section	Tower Elevation	Diagonal Spacing	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset	Bottom Girt Offset
	ft	ft				in	in
T1	282.00-262.00	4.00	CX Brace	No	Yes	0.0000	0.0000
T2	262.00-242.00	4.00	CX Brace	No	Yes	0.0000	0.0000
T3	242.00-222.00	4.00	CX Brace	No	Yes	0.0000	0.0000
T4	222.00-202.00	4.00	CX Brace	No	Yes	0.0000	0.0000
T5	202.00-182.00	4.00	CX Brace	No	Yes	0.0000	0.0000
T6	182.00-162.00	4.00	CX Brace	No	Yes	0.0000	0.0000
T7	162.00-142.00	4.00	CX Brace	No	Yes	0.0000	0.0000
T8	142.00-122.00	4.00	CX Brace	No	Yes	0.0000	0.0000
T9	122.00-102.00	4.00	CX Brace	No	Yes	0.0000	0.0000
T10	102.00-82.00	4.00	CX Brace	No	Yes	0.0000	0.0000
T11	82.00-62.00	4.00	CX Brace	No	Yes	0.0000	0.0000
T12	62.00-42.00	4.00	CX Brace	No	Yes	0.0000	0.0000
T13	42.00-22.00	4.00	CX Brace	No	Yes	0.0000	0.0000
T14	22.00-2.00	4.00	CX Brace	No	Yes	0.0000	0.0000

Tower Section Geometry (cont'd)

Tower Elevation	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
ft						
T1 282.00-262.00	Solid Round	2	A139-45 (45 ksi)	Solid Round	7/8	A36 (36 ksi)
T2 262.00-242.00	Solid Round	2	A139-45 (45 ksi)	Solid Round	7/8	A36 (36 ksi)
T3 242.00-222.00	Solid Round	2	A139-45 (45 ksi)	Solid Round	7/8	A36 (36 ksi)
T4 222.00-202.00	Solid Round	2	A139-45 (45 ksi)	Arbitrary Shape	SR7/8+L2.5x2.5x0.25	A36 (36 ksi)
T5 202.00-182.00	Solid Round	2	A139-45 (45 ksi)	Arbitrary Shape	SR7/8+L2.5x2.5x0.25	A36 (36 ksi)
T6 182.00-162.00	Solid Round	2	A139-45 (45 ksi)	Solid Round	7/8	A36 (36 ksi)
T7 162.00-142.00	Solid Round	2	A139-45 (45 ksi)	Solid Round	7/8	A36 (36 ksi)
T8 142.00-122.00	Solid Round	2	A139-45 (45 ksi)	Arbitrary Shape	SR7/8+L2.5x2.5x0.25	A36 (36 ksi)
T9 122.00-102.00	Solid Round	2	A139-45 (45 ksi)	Arbitrary Shape	SR7/8+L2.5x2.5x0.25	A36 (36 ksi)
T10 102.00-82.00	Solid Round	2	A139-45 (45 ksi)	Solid Round	7/8	A36 (36 ksi)
T11 82.00-62.00	Solid Round	2	A139-45 (45 ksi)	Solid Round	7/8	A36 (36 ksi)
T12 62.00-42.00	Solid Round	2	A139-45 (45 ksi)	Solid Round	7/8	A36 (36 ksi)
T13 42.00-22.00	Solid Round	2	A139-45 (45 ksi)	Solid Round	7/8	A36 (36 ksi)
T14 22.00-2.00	Solid Round	2	A139-45 (45 ksi)	Solid Round	7/8	A36 (36 ksi)

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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 282.00-262.00	Single Angle	L3x3x1/4	A36 (36 ksi)	Solid Round		A36 (36 ksi)

Tower Section Geometry (cont'd)

Tower Elevation ft	Secondary Horizontal Type	Secondary Horizontal Size	Secondary Horizontal Grade	Inner Bracing Type	Inner Bracing Size	Inner Bracing Grade
T1 282.00-262.00	Single Angle	L2 1/2x2x3/16	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T2 262.00-242.00	Single Angle	L2 1/2x2x3/16	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T3 242.00-222.00	Single Angle	L2 1/2x2x3/16	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T4 222.00-202.00	Single Angle	L2 1/2x2x3/16	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T5 202.00-182.00	Single Angle	L2 1/2x2x3/16	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T6 182.00-162.00	Single Angle	L2 1/2x2x3/16	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T7 162.00-142.00	Single Angle	L2 1/2x2x3/16	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T8 142.00-122.00	Single Angle	L2 1/2x2x3/16	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T9 122.00-102.00	Single Angle	L2 1/2x2x3/16	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T10 102.00-82.00	Single Angle	L2 1/2x2x3/16	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T11 82.00-62.00	Single Angle	L2 1/2x2x3/16	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T12 62.00-42.00	Single Angle	L2 1/2x2x3/16	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T13 42.00-22.00	Single Angle	L2 1/2x2x3/16	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T14 22.00-2.00	Single Angle	L2 1/2x2x3/16	A36 (36 ksi)	Solid Round		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 _f	Adjust Factor A _v	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in
T1 282.00-262.00	0.00	0.0000	A36 (36 ksi)				36.0000	36.0000

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Tower Elevation	Gusset Area (per face)	Gusset Thickness	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_s	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in
ft	ft ²	in						
T2	0.00	0.0000	A36				36.0000	36.0000
262.00-242.00			(36 ksi)					
T3	0.00	0.0000	A36				36.0000	36.0000
242.00-222.00			(36 ksi)					
T4	0.00	0.0000	A36				36.0000	36.0000
222.00-202.00			(36 ksi)					
T5	0.00	0.0000	A36				36.0000	36.0000
202.00-182.00			(36 ksi)					
T6	0.00	0.0000	A36				36.0000	36.0000
182.00-162.00			(36 ksi)					
T7	0.00	0.0000	A36				36.0000	36.0000
162.00-142.00			(36 ksi)					
T8	0.00	0.0000	A36				36.0000	36.0000
142.00-122.00			(36 ksi)					
T9	0.00	0.0000	A36				36.0000	36.0000
122.00-102.00			(36 ksi)					
T10	0.00	0.0000	A36				36.0000	36.0000
102.00-82.00			(36 ksi)					
T11	0.00	0.0000	A36				36.0000	36.0000
82.00-62.00			(36 ksi)					
T12	0.00	0.0000	A36				36.0000	36.0000
62.00-42.00			(36 ksi)					
T13	0.00	0.0000	A36				36.0000	36.0000
42.00-22.00			(36 ksi)					
T14	0.00	0.0000	A36				36.0000	36.0000
22.00-2.00			(36 ksi)					

Tower Section Geometry (cont'd)

Tower Elevation	Calc K Single Angles	Calc K Solid Rounds	Legs	K Factors ¹							
				X Brace Diags	K Brace Diags	Single Diags	Girts	Horiz.	Sec. Horiz.	Inner Brace	
											X
ft				Y	Y	Y	Y	Y	Y	Y	
T1	No	No		0.5							
282.00-262.00				0.5							
T2	No	No		0.5							
262.00-242.00				0.5							
T3	No	No		0.5							
242.00-222.00				0.5							
T4	No	No		0.5							
222.00-202.00				0.5							
T5	No	No		0.5							
202.00-182.00				0.5							
T6	No	No		0.5							
182.00-162.00				0.5							
T7	No	No		0.5							
162.00-142.00				0.5							
T8	No	No		0.5							
142.00-122.00				0.5							
T9	No	No		0.5							
122.00-102.00				0.5							
T10	No	No		0.5							
102.00-82.00				0.5							

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Tower Elevation ft	Calc K Single Angles	Calc K Solid Rounds	K Factors ¹								
			Legs	X Brace Diags	K Brace Diags	Single Diags	Girts	Horiz	Sec. Horiz	Inner Brace	
				X Y	X Y	X Y	X Y	X Y	X Y	X Y	
T11 82.00-62.00	No	No	1	0.5	1	1	1	1	1	1	1
T12 62.00-42.00	No	No	1	0.5	1	1	1	1	1	1	1
T13 42.00-22.00	No	No	1	0.5	1	1	1	1	1	1	1
T14 22.00-2.00	No	No	1	0.5	1	1	1	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)

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 282.00-262.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T2 262.00-242.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T3 242.00-222.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T4 222.00-202.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T5 202.00-182.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T6 182.00-162.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T7 162.00-142.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T8 142.00-122.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T9 122.00-102.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T10 102.00-82.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T11 82.00-62.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T12 62.00-42.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T13 42.00-22.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T14 22.00-2.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75

Guy Data

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Guy Elevation ft	Cable Weight A lb	Cable Weight B lb	Cable Weight C lb	Cable Weight D lb	Tower Intercept		Tower Intercept		Tower Intercept	
					A ft	B ft	C ft	D ft		
270	423.80	396.56	411.33		12.97 6.2 sec/pulse	11.38 5.8 sec/pulse	12.23 6.0 sec/pulse			
196	251.41	232.40	242.75		10.00 5.5 sec/pulse	7.69 4.8 sec/pulse	8.38 5.0 sec/pulse			
128	177.55	162.57	170.78		6.62 4.4 sec/pulse	5.56 4.1 sec/pulse	6.13 4.3 sec/pulse			
70	122.50	112.10	117.85		4.13 3.5 sec/pulse	4.49 3.7 sec/pulse	4.96 3.8 sec/pulse			

Guy Data (cont'd)

Guy Elevation ft	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
270	No	No						
196	No	No						
128	No	No						
70	No	No						

Guy Data (cont'd)

Guy Elevation ft	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
270	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75
196	0.0000 A325N	0	0.0000	1	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75
128	0.0000 A325N	0	0.0000	1	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75
70	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75

Guy Pressures

Guy Elevation ft	Guy Location	z ft	q _z psf	q _z Ice psf	Ice Thickness in
270	A	121.75	27	20	0.5000
	B	131.25	27	21	0.5000
	C	126.25	27	20	0.5000
196	A	84.75	24	18	0.5000
	B	94.25	25	19	0.5000
	C	89.25	25	18	0.5000
128	A	50.75	21	16	0.5000
	B	60.25	22	16	0.5000

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Guy Elevation ft	Guy Location	z ft	q _z psf	q _z Ice psf	Ice Thickness in
70	C	55.25	21	16	0.5000
	A	21.75	18	14	0.5000
	B	31.25	18	14	0.5000
	C	26.25	18	14	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
270	A	53.8396	6172.14 5830.00	0.00	5056.62	-3539.19	-11677.76	0.00	0.00
	B	53.8550	6150.21 5830.00	3058.49	5035.14	1765.82	5814.08	0.00	-10070.28
	C	53.7647	6161.75 5830.00	-3067.94	5041.58	1771.28	5821.51	-0.00	10083.15
	Sum:			-9.45	15133.33	-2.10	-42.17	-0.00	12.87
196	A	45.9725	3979.87 3799.12	-87.94	2922.02	-2700.63	-11809.19	19259.85	-20454.12
	A	45.9725	3979.87 3799.12	87.94	2922.02	-2700.63	-11809.19	-19259.85	20454.12
	B	45.3427	4405.30 4240.00	2681.71	3190.78	1426.19	25790.79	21675.98	0.00
	B	45.3427	4405.30 4240.00	2575.97	3190.78	1609.33	-12895.39	-21675.98	-22335.48
	C	45.5998	4413.42 4240.00	-2568.71	3212.45	1600.04	-12982.98	21581.64	22487.18
	C	45.5998	4413.42 4240.00	-2670.04	3212.45	1424.55	25965.96	-21581.64	0.00
	Sum:			18.93	18650.51	658.85	2259.99	0.00	151.71
	A	35.6920	3603.58 3500.00	-93.86	2160.85	-2882.31	-8732.96	20555.51	-15125.93
128	A	35.6920	3603.58 3500.00	93.86	2160.85	-2882.31	-8732.96	-20555.51	15125.93
	B	33.9744	3590.84 3500.00	2595.29	2062.43	1380.23	16670.40	20977.44	0.00
	B	33.9744	3590.84 3500.00	2492.96	2062.43	1557.47	-8335.20	-20977.44	-14436.99
	C	34.8348	3597.55 3500.00	-2471.78	2112.36	1539.66	-8537.01	20767.23	14786.53
	C	34.8348	3597.55 3500.00	-2569.28	2112.36	1370.79	17074.02	-20767.23	0.00
	Sum:			47.18	12671.27	83.53	-593.71	0.00	349.54
	A	24.0051	3546.83 3497.00	0.00	1493.97	-3216.84	-3450.18	0.00	0.00
	B	20.9247	2730.03 2690.00	2191.72	1023.84	1265.39	1182.23	0.00	-2047.69
70	C	22.5532	2735.20 2690.00	-2169.04	1099.25	1252.29	1269.30	-0.00	2198.49
	Sum:			22.68	3617.06	-699.16	-998.64	0.00	150.81

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Guy-Mast Forces (Excluding Wind) - Ice

Guy Elevation	Guy Location	Chord Angle	Guy Tension Top Bottom	F _x	F _y	F _z	M _x	M _y	M _z
ft		°	lb	lb	lb	lb-ft	lb-ft	lb-ft	lb-ft
270	A	53.8396	8569.71 8001.40	0.00	7040.78	-4885.42	-16259.98	0.00	0.00
	B	53.8550	8517.80 7985.91	4212.49	6992.34	2432.08	8074.06	0.00	-13984.68
	C	53.7647	8546.06 7995.00	-4230.94	7011.94	2442.74	8096.69	-0.00	14023.88
196			Sum:	-18.45	21045.06	-10.60	-89.23	-0.00	39.20
	A	45.9725	5905.34 5571.82	-129.72	4357.49	-3983.53	-17610.59	28408.99	-30502.43
	A	45.9725	5905.34 5571.82	129.72	4357.49	-3983.53	-17610.59	-28408.99	30502.43
	B	45.3427	6291.82 5986.80	3807.91	4581.01	2025.13	37027.84	30778.96	0.00
	B	45.3427	6291.82 5986.80	3657.77	4581.01	2285.18	-18513.92	-30778.96	-32067.05
	C	45.5998	6317.07 5997.06	-3654.53	4622.53	2276.39	-18681.74	30704.35	32357.72
	C	45.5998	6317.07 5997.06	-3798.68	4622.53	2026.72	37363.47	-30704.35	0.00
128			Sum:	12.47	27122.06	646.35	1974.48	0.00	290.66
	A	35.6920	5222.87 5019.11	-135.30	3161.98	-4154.75	-12778.98	29630.05	-22133.85
	A	35.6920	5222.87 5019.11	135.30	3161.98	-4154.75	-12778.98	-29630.05	22133.85
	B	33.9744	5177.55 4998.85	3723.86	3002.97	1980.43	24272.69	30099.57	0.00
	B	33.9744	5177.55 4998.85	3577.03	3002.97	2234.74	-12136.34	-30099.57	-21020.76
	C	34.8348	5202.53 5010.64	-3556.03	3084.56	2215.04	-12466.10	29876.84	21591.91
	C	34.8348	5202.53 5010.64	-3696.30	3084.56	1972.09	24932.19	-29876.84	0.00
70			Sum:	48.55	18499.01	92.80	-955.52	0.00	571.15
	A	24.0051	4811.01 4702.30	0.00	2068.48	-4343.64	-4776.95	0.00	0.00
	B	20.9247	4010.66 3923.33	3207.50	1538.83	1851.85	1776.89	0.00	-3077.66
	C	22.5532	4035.40 3936.80	-3186.50	1657.13	1839.72	1913.49	-0.00	3314.27
			Sum:	21.00	5264.44	-652.07	-1086.57	0.00	236.61

Guy-Mast Forces (Excluding Wind) - Service

Guy Elevation	Guy Location	Chord Angle	Guy Tension Top Bottom	F _x	F _y	F _z	M _x	M _y	M _z
ft		°	lb	lb	lb	lb-ft	lb-ft	lb-ft	lb-ft
270	A	53.8396	6172.14 5830.00	0.00	5056.62	-3539.19	-11677.76	0.00	0.00
	B	53.8550	6150.21	3058.49	5035.14	1765.82	5814.08	0.00	-10070.28

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Guy Elevation	Guy Location	Chord Angle	Guy Tension Top Bottom	F _x	F _y	F _z	M _x	M _y	M _z	
ft		°	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft	
196	C	53.7647	5830.00							
			6161.75	-3067.94	5041.58	1771.28	5821.51	-0.00	10083.15	
	A	45.9725	3799.12							
			3979.87	-87.94	2922.02	-2700.63	-11809.19	19259.85	-20454.12	
	A	45.9725	3799.12							
			3979.87	87.94	2922.02	-2700.63	-11809.19	-19259.85	20454.12	
	B	45.3427	4405.30	4240.00						
				4240.00	2681.71	3190.78	1426.19	25790.79	21675.98	0.00
	B	45.3427	4405.30	4240.00						
				4240.00	2575.97	3190.78	1609.33	-12895.39	-21675.98	-22335.48
C	45.5998	4413.42	4240.00							
			4240.00	-2568.71	3212.45	1600.04	-12982.98	21581.64	22487.18	
C	45.5998	4413.42	4240.00							
			4240.00	-2670.04	3212.45	1424.55	25965.96	-21581.64	0.00	
A	35.6920	3603.58	3500.00							
			3500.00	18.93	18650.51	658.85	2259.99	0.00	151.71	
A	35.6920	3603.58	3500.00							
			3500.00	-93.86	2160.85	-2882.31	-8732.96	20555.51	-15125.93	
B	33.9744	3590.84	3500.00							
			3500.00	93.86	2160.85	-2882.31	-8732.96	-20555.51	15125.93	
B	33.9744	3590.84	3500.00							
			3500.00	2492.96	2062.43	1557.47	-8335.20	-20977.44	-14436.99	
C	34.8348	3597.55	3500.00							
			3500.00	-2471.78	2112.36	1539.66	-8537.01	20767.23	14786.53	
C	34.8348	3597.55	3500.00							
			3500.00	-2569.28	2112.36	1370.79	17074.02	-20767.23	0.00	
A	24.0051	3546.83	3497.00							
			3497.00	47.18	12671.27	83.53	-593.71	0.00	349.54	
B	20.9247	2730.03	2690.00							
			2690.00	0.00	1493.97	-3216.84	-3450.18	0.00	0.00	
C	22.5532	2735.20	2690.00							
			2690.00	-2169.04	1099.25	1252.29	1269.30	-0.00	2198.49	
			Sum:	22.68	3617.06	-699.16	-998.64	0.00	150.81	

Guy-Tensioning Information

Temperature At Time Of Tensioning																	
Guy Elevation	H	Y	0 F		20 F		40 F		60 F		80 F		100 F		120 F		
			Initial Tension	Intercept	Initial Tension	Intercept	Initial Tension	Intercept	Initial Tension	Intercept	Initial Tension	Intercept	Initial Tension	Intercept	Initial Tension	Intercept	
ft	ft	ft	lb	ft	lb	ft	lb	ft	lb	ft	lb	ft	lb	ft	lb	ft	
270	A	216.69	296.50	6599	11.49	6339	11.95	6083	12.44	5830	12.97	5582	13.53	5338	14.13	5100	14.77
	B	202.69	277.50	6609	10.06	6346	10.47	6086	10.91	5830	11.38	5578	11.88	5330	12.42	5087	12.99
	C	210.69	287.50	6606	10.82	6344	11.26	6085	11.73	5830	12.23	5579	12.76	5333	13.34	5092	13.95
196	A	215.07	222.50	4603	8.29	4328	8.80	4060	9.37	3799	10.00	3548	10.70	3306	11.46	3078	12.29
	B	201.08	203.50	5106	6.41	4813	6.79	4524	7.22	4240	7.69	3963	8.22	3694	8.81	3435	9.46
	C	209.08	213.50	5091	7.00	4803	7.42	4518	7.88	4240	8.38	3968	8.95	3705	9.57	3451	10.26
128	A	215.07	154.50	4445	5.23	4123	5.63	3807	6.09	3500	6.62	3203	7.22	2920	7.91	2653	8.70
	B	201.08	135.50	4499	4.34	4159	4.69	3825	5.09	3500	5.56	3185	6.10	2884	6.73	2601	7.45
	C	209.08	145.50	4472	4.81	4141	5.19	3816	5.63	3500	6.13	3195	6.71	2903	7.37	2629	8.13
70	A	216.69	96.50	4471	3.23	4142	3.49	3817	3.78	3497	4.13	3183	4.53	2877	5.01	2582	5.58
	B	202.69	77.50	3671	3.29	3336	3.62	3008	4.02	2690	4.49	2386	5.06	2100	5.74	1840	6.55
	C	210.69	87.50	3642	3.67	3316	4.03	2998	4.45	2690	4.96	2396	5.56	2120	6.28	1868	7.12

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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 m	Weight plf
1 5/8 (20' Omni)	C	Yes	Ar (CfAe)	242.00 - 7.00	0.0000	-0.2	2	2	1.5000	1.9800		1.04
1/2 (TTA)	C	Yes	Ar (CfAe)	232.00 - 7.00	0.0000	-0.3	1	1	0.5800	0.5800		0.25
7/8 (Dipole)	C	Yes	Ar (CfAe)	220.00 - 7.00	0.0000	-0.33	1	1	1.1100	1.1100		0.54
1 5/8 (T-Mobile - 8 Proposed)	B	Yes	Ar (CfAe)	228.00 - 7.00	2.0000	-0.3	12	6	1.5000	1.9800		1.04
CR 50 1873PE (1-5/8 FOAM) (AT&T)	A	Yes	Ar (CfAe)	166.16 - 7.00	0.0000	-0.1	12	6	1.5000	1.9800		0.83
1 5/8 (VZW)	B	Yes	Ar (CfAe)	128.00 - 7.00	0.0000	0.29	4	2	1.5000	1.9800		1.04
1 1/4 (10' Omni - MTS)	A	Yes	Ar (CfAe)	282.00 - 7.00	0.0000	0.48	1	1	1.5500	1.5500		0.66
1 1/4 (Shared Cable - MTS)	A	Yes	Ar (CfAe)	262.00 - 7.00	0.0000	-0.33	1	1	1.5500	1.5500		0.66
1 1/4 (12' Dipole - MTS)	C	Yes	Ar (CfAe)	135.00 - 7.00	0.0000	0.48	1	1	1.5500	1.5500		0.66
1 1/4 (22' Omni - MTS)	C	Yes	Ar (CfAe)	135.00 - 7.00	0.0000	0.42	1	1	1.5500	1.5500		0.66
1 1/4 (WMRQ)	B	Yes	Ar (CfAe)	282.00 - 7.00	0.0000	-0.42	1	1	1.5500	1.5500		0.66
EW63 (8' Dish - NU)	B	Yes	Af (CfAe)	215.00 - 7.00	0.0000	0.48	1	1	1.5742	1.5742	5.0668	0.51
EW63 (6' Dish - NU)	B	Yes	Af (CfAe)	207.00 - 7.00	0.0000	0.43	1	1	1.5742	1.5742	5.0668	0.51
EW63 (8' Dish - NU)	B	Yes	Af (CfAe)	207.00 - 7.00	0.0000	0.38	1	1	1.5742	1.5742	5.0668	0.51
EW63 (5.5' Dish - NU)	C	Yes	Af (CfAe)	155.25 - 7.00	0.0000	-0.48	1	1	1.5742	1.5742	5.0668	0.51
EW63 (6.5' Dish - NU)	C	Yes	Af (CfAe)	155.25 - 7.00	0.0000	-0.43	1	1	1.5742	1.5742	5.0668	0.51
1 1/4 (Dead Line)	B	Yes	Ar (CfAe)	132.25 - 7.00	0.0000	-0.38	1	1	1.5500	1.5500		0.66
EW63 (9' Dish - NU)	C	Yes	Af (CfAe)	107.50 - 7.00	0.0000	-0.38	1	1	1.5742	1.5742	5.0668	0.51
DC Cable WR-VG122S T	B	Yes	Ar (CfAe)	142.00 - 7.00	0.0000	-0.025	1	1	0.4000	0.4000		0.25
(L-810 Cable)												
1 1/4 (WBMW - MTS)	B	Yes	Ar (CfAe)	282.00 - 7.00	0.0000	-0.3	1	1	1.5500	1.5500		0.66
1 1/4" Hybriflex Cables	A	Yes	Ar (CfAe)	164.00 - 7.00	0.0000	-0.4	1	1	1.2500	1.2500		0.99

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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
(AT&T) DC Cable WR-VG122S	A	Yes	Ar (CfAe)	164.00 - 7.00	0.0000	-0.44	2	2	0.4000	0.4000		0.25
T (AT&T) 1 5/8" Hybriflex (T-Mobile - Proposed)	B	Yes	Ar (CfAe)	228.00 - 7.00	0.0000	-0.1	1	1	1.6250	1.6250		0.21
1 (Existing Conduit)	B	Yes	Ar (CfAe)	282.00 - 7.00	0.0000	0	1	1	1.2500	1.2500		0.58
1 1/4 (VZW)	B	Yes	Ar (CfAe)	128.00 - 7.00	0.0000	0.12	6	3	1.5500	1.5500		0.66
1/2 (Power Cable)	B	Yes	Ar (CfAe)	282.00 - 7.00	0.0000	-0.045	1	1	0.5800	0.5800		0.25

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A _R ft ²	A _F ft ²	C _{AA} In Face ft ²	C _{AA} Out Face ft ²	Weight lb
T1	282.00-262.00	A	2.583	0.000	0.000	0.000	13.20
		B	8.217	0.000	0.000	0.000	43.00
		C	0.000	0.000	0.000	0.000	0.00
T2	262.00-242.00	A	5.167	0.000	0.000	0.000	26.40
		B	8.217	0.000	0.000	0.000	43.00
		C	0.000	0.000	0.000	0.000	0.00
T3	242.00-222.00	A	5.167	0.000	0.000	0.000	26.40
		B	14.969	0.000	0.000	0.000	119.15
		C	7.083	0.000	0.000	0.000	44.10
T4	222.00-202.00	A	5.167	0.000	0.000	0.000	26.40
		B	30.725	3.017	0.000	0.000	308.57
		C	9.232	0.000	0.000	0.000	56.32
T5	202.00-182.00	A	5.167	0.000	0.000	0.000	26.40
		B	30.725	7.871	0.000	0.000	327.44
		C	9.417	0.000	0.000	0.000	57.40
T6	182.00-162.00	A	9.627	0.000	0.000	0.000	70.82
		B	30.725	7.871	0.000	0.000	327.44
		C	9.417	0.000	0.000	0.000	57.40
T7	162.00-142.00	A	28.383	0.000	0.000	0.000	255.44
		B	30.725	7.871	0.000	0.000	327.44
		C	9.417	3.476	0.000	0.000	70.92
T8	142.00-122.00	A	28.383	0.000	0.000	0.000	255.44
		B	37.021	7.871	0.000	0.000	387.93
		C	12.775	5.247	0.000	0.000	94.96
T9	122.00-102.00	A	28.383	0.000	0.000	0.000	255.44
		B	48.325	7.871	0.000	0.000	508.04
		C	14.583	5.969	0.000	0.000	107.01
T10	102.00-82.00	A	28.383	0.000	0.000	0.000	255.44
		B	48.325	7.871	0.000	0.000	508.04
		C	14.583	7.871	0.000	0.000	114.40
T11	82.00-62.00	A	28.383	0.000	0.000	0.000	255.44
		B	48.325	7.871	0.000	0.000	508.04
		C	14.583	7.871	0.000	0.000	114.40
T12	62.00-42.00	A	28.383	0.000	0.000	0.000	255.44
		B	48.325	7.871	0.000	0.000	508.04

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Tower Section	Tower Elevation ft	Face	A_R ft ²	A_F ft ²	$C_A A_A$ In Face ft ²	$C_A A_A$ Out Face ft ²	Weight lb
T13	42.00-22.00	C	14.583	7.871	0.000	0.000	114.40
		A	28.383	0.000	0.000	0.000	255.44
		B	48.325	7.871	0.000	0.000	508.04
T14	22.00-2.00	C	14.583	7.871	0.000	0.000	114.40
		A	21.288	0.000	0.000	0.000	191.58
		B	36.244	5.903	0.000	0.000	381.03
		C	10.938	5.903	0.000	0.000	85.80

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	$C_A A_A$ In Face ft ²	$C_A A_A$ Out Face ft ²	Weight lb
T1	282.00-262.00	A	0.500	4.250	0.000	0.000	0.000	38.25
		B		14.883	0.000	0.000	0.000	127.67
		C		0.000	0.000	0.000	0.000	0.00
T2	262.00-242.00	A	0.500	8.500	0.000	0.000	0.000	76.49
		B		14.883	0.000	0.000	0.000	127.67
		C		0.000	0.000	0.000	0.000	0.00
T3	242.00-222.00	A	0.500	8.500	0.000	0.000	0.000	76.49
		B		25.136	0.000	0.000	0.000	320.68
		C		11.250	0.000	0.000	0.000	111.30
T4	222.00-202.00	A	0.500	8.500	0.000	0.000	0.000	76.49
		B		49.058	4.295	0.000	0.000	813.91
		C		15.732	0.000	0.000	0.000	147.82
T5	202.00-182.00	A	0.500	8.500	0.000	0.000	0.000	76.49
		B		49.058	11.204	0.000	0.000	882.85
		C		16.083	0.000	0.000	0.000	150.86
T6	182.00-162.00	A	0.500	15.307	0.133	0.000	0.000	200.55
		B		49.058	11.204	0.000	0.000	882.85
		C		16.083	0.000	0.000	0.000	150.86
T7	162.00-142.00	A	0.500	44.383	1.333	0.000	0.000	709.23
		B		49.058	11.204	0.000	0.000	882.85
		C		16.083	4.949	0.000	0.000	200.24
T8	142.00-122.00	A	0.500	44.383	1.333	0.000	0.000	709.23
		B		60.375	11.204	0.000	0.000	1048.61
		C		21.608	7.470	0.000	0.000	275.11
T9	122.00-102.00	A	0.500	44.383	1.333	0.000	0.000	709.23
		B		78.325	11.204	0.000	0.000	1370.96
		C		24.583	8.497	0.000	0.000	312.13
T10	102.00-82.00	A	0.500	44.383	1.333	0.000	0.000	709.23
		B		78.325	11.204	0.000	0.000	1370.96
		C		24.583	11.204	0.000	0.000	339.15
T11	82.00-62.00	A	0.500	44.383	1.333	0.000	0.000	709.23
		B		78.325	11.204	0.000	0.000	1370.96
		C		24.583	11.204	0.000	0.000	339.15
T12	62.00-42.00	A	0.500	44.383	1.333	0.000	0.000	709.23
		B		78.325	11.204	0.000	0.000	1370.96
		C		24.583	11.204	0.000	0.000	339.15
T13	42.00-22.00	A	0.500	44.383	1.333	0.000	0.000	709.23
		B		78.325	11.204	0.000	0.000	1370.96
		C		24.583	11.204	0.000	0.000	339.15
T14	22.00-2.00	A	0.500	33.288	1.000	0.000	0.000	531.92
		B		58.744	8.403	0.000	0.000	1028.22
		C		18.438	8.403	0.000	0.000	254.36

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Feed Line Shielding

Section	Elevation ft	Face	A_R	A_R	A_F	A_F
			ft ²	Ice ft ²	ft ²	Ice ft ²
T1	282.00-262.00	A	0.133	0.576	0.167	0.274
		B	0.424	2.016	0.531	0.961
		C	0.000	0.000	0.000	0.000
T2	262.00-242.00	A	0.266	1.116	0.269	0.443
		B	0.424	1.954	0.428	0.775
		C	0.000	0.000	0.000	0.000
T3	242.00-222.00	A	0.266	1.116	0.269	0.443
		B	0.772	3.301	0.780	1.309
		C	0.365	1.477	0.369	0.586
T4	222.00-202.00	A	0.000	0.177	1.030	2.029
		B	0.000	1.125	6.728	12.887
		C	0.000	0.328	1.841	3.755
T5	202.00-182.00	A	0.000	0.248	1.202	2.312
		B	0.000	1.806	8.982	16.846
		C	0.000	0.469	2.192	4.375
T6	182.00-162.00	A	0.496	2.028	0.501	0.804
		B	1.990	8.132	2.010	3.225
		C	0.486	2.112	0.490	0.838
T7	162.00-142.00	A	1.463	6.003	1.478	2.381
		B	1.990	8.132	2.010	3.225
		C	0.665	2.859	0.672	1.134
T8	142.00-122.00	A	0.000	1.333	6.606	12.436
		B	0.000	2.136	10.448	19.924
		C	0.000	0.881	4.194	8.212
T9	122.00-102.00	A	0.000	0.952	5.660	10.912
		B	0.000	1.900	11.205	21.767
		C	0.000	0.715	4.098	8.197
T10	102.00-82.00	A	1.463	6.003	1.478	2.381
		B	2.897	11.976	2.927	4.750
		C	1.158	4.918	1.169	1.951
T11	82.00-62.00	A	1.463	6.003	1.478	2.381
		B	2.897	11.976	2.927	4.750
		C	1.158	4.918	1.169	1.951
T12	62.00-42.00	A	1.463	6.003	1.478	2.381
		B	2.897	11.976	2.927	4.750
		C	1.158	4.918	1.169	1.951
T13	42.00-22.00	A	1.463	6.003	1.478	2.381
		B	2.897	11.976	2.927	4.750
		C	1.158	4.918	1.169	1.951
T14	22.00-2.00	A	1.098	4.503	1.109	1.786
		B	2.173	8.982	2.195	3.562
		C	0.868	3.689	0.877	1.463

Feed Line Center of Pressure

Section	Elevation ft	CP_x	CP_z	CP_x	CP_z
		in	in	Ice in	Ice in
T1	282.00-262.00	0.8606	-3.2881	0.9269	-3.1182
T2	262.00-242.00	0.0255	-3.0944	0.1638	-2.9413
T3	242.00-222.00	1.7487	-2.9759	1.6933	-2.7936
T4	222.00-202.00	2.9075	-3.7166	3.0540	-3.7824

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Section	Elevation	CP _x	CP _z	CP _x	CP _z
	ft	in	in	Ice in	Ice in
T5	202.00-182.00	3.2962	-2.9005	3.3419	-3.0061
T6	182.00-162.00	3.8902	-4.1839	3.6131	-3.8790
T7	162.00-142.00	1.2326	-3.3367	1.2434	-3.1956
T8	142.00-122.00	1.1692	-2.0890	1.2605	-2.2737
T9	122.00-102.00	2.0679	-2.0420	2.1590	-2.2196
T10	102.00-82.00	2.7075	-2.2791	2.5976	-2.2994
T11	82.00-62.00	2.7075	-2.2791	2.5976	-2.2994
T12	62.00-42.00	2.7075	-2.2791	2.5976	-2.2994
T13	42.00-22.00	2.7075	-2.2791	2.5976	-2.2994
T14	22.00-2.00	2.4513	-2.0633	2.3320	-2.0643

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement ft	C _A A _A Front ft ²	C _A A _A Side ft ²	Weight lb
			Horz Lateral ft	Vert ft					
6'8"x4" Pipe Mount (Verizon)	A	From Leg	0.50	0.0000	121.00	No Ice	2.60	2.60	72.00
			0.00			1/2" Ice	3.01	3.01	93.13
			0.00						
6'8"x4" Pipe Mount (Verizon)	B	From Leg	0.50	0.0000	121.00	No Ice	2.60	2.60	72.00
			0.00			1/2" Ice	3.01	3.01	93.13
			0.00						
14' Dipole (Unknown)	C	From Leg	4.00	0.0000	132.00	No Ice	2.80	2.80	75.00
			0.00			1/2" Ice	4.22	4.22	97.50
			0.00						
6' Stand-off (Unknown)	C	From Leg	3.00	0.0000	132.00	No Ice	1.20	4.50	75.00
			0.00			1/2" Ice	1.40	5.50	125.00
			0.00						
2.5" x 22' Whip (Unknown)	A	From Leg	4.00	0.0000	132.00	No Ice	5.51	5.51	150.30
			0.00			1/2" Ice	7.77	7.77	191.34
			0.00						
6' Stand-off (Unknown)	A	From Leg	3.00	0.0000	132.00	No Ice	1.20	4.50	75.00
			0.00			1/2" Ice	1.40	5.50	125.00
			0.00						
ASP-711 (Unknown)	A	From Leg	1.50	0.0000	260.00	No Ice	1.30	1.30	13.00
			0.00			1/2" Ice	3.63	3.63	31.56
			0.00						
3' Stand-off (Unknown)	A	From Leg	0.75	0.0000	260.00	No Ice	1.00	2.00	50.00
			0.00			1/2" Ice	1.20	2.70	75.00
			0.00						
2.5" x 14' Omni (Unknown)	B	From Leg	3.50	0.0000	260.00	No Ice	3.50	3.50	30.00
			0.00			1/2" Ice	4.93	4.93	55.97
			0.00						
3' Stand-off (Unknown)	B	From Leg	1.50	0.0000	260.00	No Ice	1.00	2.00	50.00
			0.00			1/2" Ice	1.20	2.70	75.00
			0.00						
6' Stand-off (Unknown)	A	From Leg	2.50	0.0000	281.00	No Ice	1.20	4.50	75.00
			0.00			1/2" Ice	1.40	5.50	125.00
			0.00						
6' Stand-off (Unknown)	B	From Leg	2.50	0.0000	281.00	No Ice	1.20	4.50	75.00
			0.00			1/2" Ice	1.40	5.50	125.00
			0.00						

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Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _{AA}		Weight	
			Horz	Lateral			Front	Side		
			ft	ft	°	ft	ft ²	ft ²	lb	
6' Stand-off (Unknown)	C	From Leg	2.50		0.0000	281.00	No Ice	1.20	4.50	75.00
			0.00				1/2" Ice	1.40	5.50	125.00
			0.00							
DLS L 864-L-865 Light Beacon Unit (Tower)	C	None	0.0000		0.0000	282.00	No Ice	2.50	1.14	52.00
							1/2" Ice	2.72	1.29	69.23
1' Yagi antenna (Not Used)	C	From Leg	0.50		0.0000	124.50	No Ice	0.50	0.50	25.00
			0.00				1/2" Ice	0.86	0.86	29.40
			0.00							
3" x 12.5' Omni (Not Used)	B	From Leg	2.00		0.0000	125.00	No Ice	3.75	3.75	30.00
			0.00				1/2" Ice	5.03	5.03	57.13
			0.00							
3' Stand-off (Not Used)	B	From Leg	1.50		0.0000	125.00	No Ice	1.00	2.00	50.00
			0.00				1/2" Ice	1.20	2.70	75.00
			0.00							
6' Stand-off (Not Used)	C	From Leg	3.00		0.0000	180.50	No Ice	1.20	4.50	75.00
			0.00				1/2" Ice	1.40	5.50	125.00
			0.00							
2.5" x 10' Omni (Not Used)	A	From Leg	1.00		0.0000	284.00	No Ice	2.50	2.50	30.00
			0.00				1/2" Ice	3.53	3.53	48.64
			0.00							
FM Antenna (WMRQ)	B	From Face	4.50		0.0000	289.00	No Ice	8.30	8.30	102.00
			0.00				1/2" Ice	13.00	13.00	132.60
			0.00							
(2) 7770 Panel Antenna (AT&T)	A	From Leg	4.00		0.0000	164.00	No Ice	5.88	2.93	35.00
			0.00				1/2" Ice	6.31	3.27	67.63
			0.00							
(2) 7770 Panel Antenna (AT&T)	B	From Leg	4.00		0.0000	164.00	No Ice	5.88	2.93	35.00
			0.00				1/2" Ice	6.31	3.27	67.63
			0.00							
(2) 7770 Panel Antenna (AT&T)	C	From Leg	4.00		0.0000	164.00	No Ice	5.88	2.93	35.00
			0.00				1/2" Ice	6.31	3.27	67.63
			0.00							
(2) LGP214nn TMA (AT&T)	A	From Leg	4.00		0.0000	164.00	No Ice	1.29	0.23	1.90
			0.00				1/2" Ice	1.45	0.31	9.06
			0.00							
(4) LGP 219nn (AT&T)	A	From Leg	4.00		0.0000	164.00	No Ice	0.23	0.12	5.50
			0.00				1/2" Ice	0.30	0.17	7.70
			0.00							
(2) LGP214nn TMA (AT&T)	B	From Leg	4.00		0.0000	164.00	No Ice	1.29	0.23	1.90
			0.00				1/2" Ice	1.45	0.31	9.06
			0.00							
(4) LGP 219nn (AT&T)	B	From Leg	4.00		0.0000	164.00	No Ice	0.23	0.12	5.50
			0.00				1/2" Ice	0.30	0.17	7.70
			0.00							
(2) LGP214nn TMA (AT&T)	C	From Leg	4.00		0.0000	164.00	No Ice	1.29	0.23	1.90
			0.00				1/2" Ice	1.45	0.31	9.06
			0.00							
(4) LGP 219nn (AT&T)	C	From Leg	4.00		0.0000	164.00	No Ice	0.23	0.12	5.50
			0.00				1/2" Ice	0.30	0.17	7.70
			0.00							
SBNH-1D6565C (AT&T)	A	From Leg	4.00		0.0000	164.00	No Ice	11.41	7.70	61.00
			0.00				1/2" Ice	12.02	8.29	126.70
			0.00							
SBNH-1D6565C (AT&T)	B	From Leg	4.00		0.0000	164.00	No Ice	11.41	7.70	61.00
			0.00				1/2" Ice	12.02	8.29	126.70
			0.00							

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Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	C _{AA} Front ft ²	C _{AA} Side ft ²	Weight lb	
SBNH-1D6565C (AT&T)	C	From Leg	4.00 0.00 0.00	0.0000	164.00	No Ice 1/2" Ice	11.41 12.02	7.70 8.29	61.00 126.70
Surge Suppressor (AT&T)	C	None		0.0000	164.00	No Ice 1/2" Ice	0.80 0.94	0.80 0.94	30.00 41.94
(2) RRU (AT&T)	A	From Leg	4.00 0.00 0.00	0.0000	164.00	No Ice 1/2" Ice	1.40 1.56	0.70 0.82	10.00 20.34
(2) RRU (AT&T)	B	From Leg	4.00 0.00 0.00	0.0000	164.00	No Ice 1/2" Ice	1.40 1.56	0.70 0.82	10.00 20.34
(2) RRU (AT&T)	C	From Leg	4.00 0.00 0.00	0.0000	164.00	No Ice 1/2" Ice	1.40 1.56	0.70 0.82	10.00 20.34
Andrew 12' Sector Frame (SF-U12-3-72) (AT&T)	A	From Leg	2.00 0.00 0.00	0.0000	164.00	No Ice 1/2" Ice	10.80 15.10	10.80 15.10	487.00 633.10
Andrew 12' Sector Frame (SF-U12-3-72) (AT&T)	B	From Leg	2.00 0.00 0.00	0.0000	164.00	No Ice 1/2" Ice	10.80 15.10	10.80 15.10	487.00 633.10
Andrew 12' Sector Frame (SF-U12-3-72) (AT&T)	C	From Leg	2.00 0.00 0.00	0.0000	164.00	No Ice 1/2" Ice	10.80 15.10	10.80 15.10	487.00 633.10
BXA-70063-6CF-EDIN (Verizon)	A	From Leg	1.00 0.00 0.00	0.0000	121.00	No Ice 1/2" Ice	7.73 8.27	4.16 4.60	20.00 62.49
BXA-70063-6CF-EDIN (Verizon)	B	From Leg	1.00 0.00 0.00	0.0000	121.00	No Ice 1/2" Ice	7.73 8.27	4.16 4.60	20.00 62.49
(2) LPA-80080-4CF-EDIN (Verizon)	A	From Leg	1.00 0.00 0.00	0.0000	121.00	No Ice 1/2" Ice	2.62 2.92	6.06 6.45	20.00 53.12
(2) LPA-80063-4CF (Verizon)	B	From Leg	1.00 0.00 0.00	0.0000	121.00	No Ice 1/2" Ice	7.00 7.41	6.04 6.43	32.00 84.41
(2) LPA-171080-8CF-EDIN (Verizon)	A	From Leg	1.00 0.00 0.00	0.0000	121.00	No Ice 1/2" Ice	2.10 2.40	3.19 3.54	13.50 33.28
(2) LPA-171063-8CF-EDIN (Verizon)	B	From Leg	1.00 0.00 0.00	0.0000	121.00	No Ice 1/2" Ice	3.69 4.06	3.69 4.06	16.50 45.29
DS9A09F36D-N Omni (MTS)	A	From Leg	3.00 0.00 0.00	0.0000	240.00	No Ice 1/2" Ice	5.75 7.70	5.75 7.70	57.00 98.39
430-94C-09168-M-11048 TTA (MTS)	A	From Leg	1.50 0.00 0.00	0.0000	240.00	No Ice 1/2" Ice	1.63 1.81	0.95 1.09	25.00 37.44
3' Stand-off (MTS)	A	From Leg	0.00 0.00 0.00	0.0000	230.00	No Ice 1/2" Ice	1.00 1.20	2.00 2.70	50.00 75.00
531-70HD Exposed Dipole Antenna (MTS)	A	From Leg	3.00 0.00 0.00	0.0000	218.00	No Ice 1/2" Ice	5.91 7.68	5.91 7.68	45.00 79.03
6' Stand-off (MTS)	A	From Leg	0.00 0.00 0.00	0.0000	218.00	No Ice 1/2" Ice	1.20 1.40	4.50 5.50	75.00 125.00
(3) L-810 Obstruction Lights	C	None		0.0000	142.00	No Ice	0.85	0.43	45.00

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Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert	Azimuth Adjustment	Placement	CAA Front	CAA Side	Weight	
			ft	°	ft	ft ²	ft ²	lb	
w/ Mount Kit (Tower - OBS Light)					1/2" Ice	0.97	0.53	51.66	
Pirod 12' T-Frame Sector Mount (1) (T-Mobile)	A	From Leg	1.50 0.00 0.00	0.0000	228.00	No Ice 1/2" Ice	13.60 18.40	13.60 18.40	465.00 600.00
Pirod 12' T-Frame Sector Mount (1) (T-Mobile)	B	From Leg	1.50 0.00 0.00	0.0000	228.00	No Ice 1/2" Ice	13.60 18.40	13.60 18.40	465.00 600.00
Pirod 12' T-Frame Sector Mount (1) (T-Mobile)	C	From Leg	1.50 0.00 0.00	0.0000	228.00	No Ice 1/2" Ice	13.60 18.40	13.60 18.40	465.00 600.00
AIR B2A/B4P w/ 6' Sch 40 Pipe Mount (T-Mobile)	A	From Leg	4.00 6.00 0.00	0.0000	228.00	No Ice 1/2" Ice	6.75 7.31	5.65 6.56	104.90 161.79
AIR B2A/B4P w/ 6' Sch 40 Pipe Mount (T-Mobile)	A	From Leg	4.00 -6.00 0.00	0.0000	228.00	No Ice 1/2" Ice	6.75 7.31	5.65 6.56	104.90 161.79
AIR B2A/B4P w/ 6' Sch 40 Pipe Mount (T-Mobile)	B	From Leg	4.00 6.00 0.00	0.0000	228.00	No Ice 1/2" Ice	6.75 7.31	5.65 6.56	104.90 161.79
AIR B2A/B4P w/ 6' Sch 40 Pipe Mount (T-Mobile)	B	From Leg	4.00 -6.00 0.00	0.0000	228.00	No Ice 1/2" Ice	6.75 7.31	5.65 6.56	104.90 161.79
AIR B2A/B4P w/ 6' Sch 40 Pipe Mount (T-Mobile)	C	From Leg	4.00 6.00 0.00	0.0000	228.00	No Ice 1/2" Ice	6.75 7.31	5.65 6.56	104.90 161.79
AIR B2A/B4P w/ 6' Sch 40 Pipe Mount (T-Mobile)	C	From Leg	4.00 -6.00 0.00	0.0000	228.00	No Ice 1/2" Ice	6.75 7.31	5.65 6.56	104.90 161.79
TMA (T-Mobile)	A	From Leg	4.00 -6.00 0.00	0.0000	228.00	No Ice 1/2" Ice	1.06 1.21	0.45 0.57	20.00 26.53
TMA (T-Mobile)	A	From Leg	4.00 -6.00 0.00	0.0000	228.00	No Ice 1/2" Ice	1.06 1.21	0.45 0.57	20.00 26.53
TMA (T-Mobile)	A	From Leg	4.00 -6.00 0.00	0.0000	228.00	No Ice 1/2" Ice	1.06 1.21	0.45 0.57	20.00 26.53

Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert	Azimuth Adjustment	3 dB Beam Width	Elevation	Outside Diameter	Aperture Area	Weight	
				ft	°	°	ft	ft	ft ²	lb	
9' Dish w/ Radome (NU)	C	Paraboloid w/Radome	From Leg	3.00 0.00 0.00	0.0000		104.50	9.00	No Ice 1/2" Ice	63.62 64.80	100.00 432.64
6.5' Dish w/ Radome (NU)	C	Paraboloid w/Radome	From Leg	2.25 0.00	0.0000		153.00	6.50	No Ice 1/2" Ice	33.18 34.04	75.00 249.74

tnxTower URS Corporation 500 Enterprise Drive, Suite 3B Rocky Hill, CT 06067 Phone: 860-529-8882 FAX: 860-529-3991	Job	280' Guyed Tower	Page	21 of 59
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	Client	T-Mobile / NSS-014	Designed by	MCD

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert	Azimuth Adjustment	3 dB Beam Width	Elevation	Outside Diameter	Aperture Area	Weight				
				ft	°	°	ft	ft	ft ²	lb				
5.5' Dish w/ Radome (NU)	A	Paraboloid w/Radome	From Leg	0.00	0.0000		153.00	5.50	No Ice	23.76	75.00			
				2.50								1/2" Ice	24.48	200.66
				0.00										
8' Dish w/ Radome (NU)	A	Paraboloid w/Radome	From Leg	2.83	0.0000		204.50	8.00	No Ice	50.27	75.00			
				0.00								1/2" Ice	51.32	338.44
				0.00										
6' Dish w/ Radome (NU)	C	Paraboloid w/Radome	From Leg	2.25	0.0000		204.50	6.00	No Ice	28.27	75.00			
				0.00								1/2" Ice	29.07	224.23
				0.00										
8' Dish w/ Radome (NU)	C	Paraboloid w/Radome	From Leg	2.83	0.0000		212.50	8.00	No Ice	50.27	75.00			
				0.00								1/2" Ice	51.32	338.44
				0.00										
MF-950B (WBMW)	C	Grid	From Leg	0.50	0.0000		280.00	1.33	No Ice	2.66	13.00			
				0.00								1/2" Ice	3.50	21.00
				0.00										

Tower Pressures - No Ice

$G_H = 1.092$

Section Elevation	z	K _z	q _z	A _G	F _a	A _F	A _R	A _{avg}	Leg %	C _{AAs} In Face	C _{AAs} Out Face
ft	ft		psf	ft ²	c	ft ²	ft ²	ft ²	%	ft ²	ft ²
T1 282.00-262.00	272.00	1.827	34	83.333	A	4.785	13.070	6.667	37.34	0.000	0.000
					B	4.421	18.413		29.20	0.000	0.000
					C	4.951	10.620		42.81	0.000	0.000
T2 262.00-242.00	252.00	1.788	33	83.333	A	3.724	15.520	6.667	34.64	0.000	0.000
					B	3.565	18.413		30.33	0.000	0.000
					C	3.993	10.620		45.62	0.000	0.000
T3 242.00-222.00	232.00	1.746	32	83.333	A	3.724	15.520	6.667	34.64	0.000	0.000
					B	3.213	24.817		23.78	0.000	0.000
					C	3.624	17.338		31.80	0.000	0.000
T4 222.00-202.00	212.00	1.701	31	83.333	A	14.257	11.833	6.667	25.55	0.000	0.000
					B	11.576	37.392		13.61	0.000	0.000
					C	13.446	15.898		22.72	0.000	0.000
T5 202.00-182.00	192.00	1.654	31	83.333	A	16.640	11.833	6.667	23.41	0.000	0.000
					B	16.731	37.392		12.32	0.000	0.000
					C	15.651	16.083		21.01	0.000	0.000
T6 182.00-162.00	172.00	1.603	30	83.333	A	3.492	19.750	6.667	28.68	0.000	0.000
					B	9.854	39.355		13.55	0.000	0.000
					C	3.503	19.551		28.92	0.000	0.000
T7 162.00-142.00	152.00	1.547	29	83.333	A	2.515	37.539	6.667	16.64	0.000	0.000
					B	9.854	39.355		13.55	0.000	0.000
					C	6.798	19.371		25.48	0.000	0.000
T8 142.00-122.00	132.00	1.486	27	83.333	A	11.237	35.050	6.667	14.40	0.000	0.000
					B	15.266	43.687		11.31	0.000	0.000
					C	18.896	19.442		17.39	0.000	0.000
T9 122.00-102.00	112.00	1.418	26	83.333	A	9.628	35.050	6.667	14.92	0.000	0.000
					B	11.953	54.992		9.96	0.000	0.000
					C	17.158	21.250		17.36	0.000	0.000
T10 102.00-82.00	92.00	1.34	25	83.333	A	2.515	37.539	6.667	16.64	0.000	0.000
					B	8.937	56.047		10.26	0.000	0.000
					C	10.695	24.045		19.19	0.000	0.000

tnxTower URS Corporation 500 Enterprise Drive, Suite 3B Rocky Hill, CT 06067 Phone: 860-529-8882 FAX: 860-529-3991	Job	280' Guyed Tower	Page	22 of 59
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	Client	T-Mobile / NSS-014	Designed by	MCD

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 ft ²	C _A A _A Out Face ft ²
ft	ft		psf	ft ²		ft ²	ft ²	ft ²			
T11 82.00-62.00	72.00	1.25	23	83.333	A	2.515	37.539	6.667	16.64	0.000	0.000
					B	8.937	56.047		10.26	0.000	0.000
					C	10.695	24.045		19.19	0.000	0.000
T12 62.00-42.00	52.00	1.139	21	83.333	A	2.515	37.539	6.667	16.64	0.000	0.000
					B	8.937	56.047		10.26	0.000	0.000
					C	10.695	24.045		19.19	0.000	0.000
T13 42.00-22.00	32.00	1	18	83.333	A	2.515	37.539	6.667	16.64	0.000	0.000
					B	8.937	56.047		10.26	0.000	0.000
					C	10.695	24.045		19.19	0.000	0.000
T14 22.00-2.00	12.00	1	18	83.333	A	2.884	30.810	6.667	19.79	0.000	0.000
					B	7.701	44.690		12.72	0.000	0.000
					C	9.019	20.689		22.44	0.000	0.000

Tower Pressure - With Ice

$G_H = 1.092$

Section Elevation	z	K _z	q _z	t _z	A _G	F _a c e	A _F	A _R	A _{leg}	Leg %	C _A A _A In Face ft ²	C _A A _A Out Face ft ²
ft	ft		psf	in	ft ²		ft ²	ft ²	ft ²			
T1 282.00-262.00	272.00	1.827	25	0.5000	85.000	A	4.677	24.061	10.000	34.80	0.000	0.000
						B	3.990	33.254		26.85	0.000	0.000
						C	4.951	20.387		39.47	0.000	0.000
T2 262.00-242.00	252.00	1.788	25	0.5000	85.000	A	3.550	27.452	10.000	32.26	0.000	0.000
						B	3.218	32.997		27.61	0.000	0.000
						C	3.993	20.068		41.56	0.000	0.000
T3 242.00-222.00	232.00	1.746	24	0.5000	85.000	A	3.550	27.452	10.000	32.26	0.000	0.000
						B	2.684	41.903		22.43	0.000	0.000
						C	3.407	29.840		30.08	0.000	0.000
T4 222.00-202.00	212.00	1.701	24	0.5000	85.000	A	16.270	19.920	10.000	27.63	0.000	0.000
						B	9.707	59.531		14.44	0.000	0.000
						C	14.544	27.001		24.07	0.000	0.000
T5 202.00-182.00	192.00	1.654	23	0.5000	85.000	A	18.542	20.488	10.000	25.62	0.000	0.000
						B	15.213	59.488		13.39	0.000	0.000
						C	16.480	27.850		22.56	0.000	0.000
T6 182.00-162.00	172.00	1.603	22	0.5000	85.000	A	3.322	33.347	10.000	27.27	0.000	0.000
						B	11.972	60.994		13.71	0.000	0.000
						C	3.155	34.039		26.89	0.000	0.000
T7 162.00-142.00	152.00	1.547	21	0.5000	85.000	A	2.945	58.448	10.000	16.29	0.000	0.000
						B	11.972	60.994		13.71	0.000	0.000
						C	7.808	33.293		24.33	0.000	0.000
T8 142.00-122.00	132.00	1.486	21	0.5000	85.000	A	9.752	55.286	10.000	15.38	0.000	0.000
						B	12.135	70.475		12.11	0.000	0.000
						C	20.112	32.964		18.84	0.000	0.000
T9 122.00-102.00	112.00	1.418	20	0.5000	85.000	A	8.721	55.028	10.000	15.69	0.000	0.000
						B	7.737	88.022		10.44	0.000	0.000
						C	18.598	35.465		18.50	0.000	0.000
T10 102.00-82.00	92.00	1.34	19	0.5000	85.000	A	2.945	58.448	10.000	16.29	0.000	0.000
						B	10.448	86.417		10.32	0.000	0.000
						C	13.247	39.733		18.88	0.000	0.000
T11 82.00-62.00	72.00	1.25	17	0.5000	85.000	A	2.945	58.448	10.000	16.29	0.000	0.000
						B	10.448	86.417		10.32	0.000	0.000
						C	13.247	39.733		18.88	0.000	0.000
T12 62.00-42.00	52.00	1.139	16	0.5000	85.000	A	2.945	58.448	10.000	16.29	0.000	0.000
						B	10.448	86.417		10.32	0.000	0.000

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	Client	T-Mobile / NSS-014	Designed by	MCD

Section Elevation	z	K _Z	q _z	t _z	A _G	F a c e	A _F	A _R	A _{leg}	Leg %	C _A A ₄ In Face ft ²	C _A A ₄ Out Face ft ²
ft	ft		psf	in	ft ²	e	ft ²	ft ²	ft ²			
T13 42.00-22.00	32.00	1	14	0.5000	85.000	C	13.247	39.733	10.000	18.88	0.000	0.000
						A	2.945	58.448		16.29	0.000	0.000
						B	10.448	86.417		10.32	0.000	0.000
T14 22.00-2.00	12.00	1	14	0.5000	85.000	C	13.247	39.733	10.000	18.88	0.000	0.000
						A	3.207	48.853		19.21	0.000	0.000
						B	8.834	69.830		12.71	0.000	0.000
						C	10.933	34.816		21.86	0.000	0.000

Tower Pressure - Service

$$G_H = 1.092$$

Section Elevation	z	K _Z	q _z	A _G	F a c e	A _F	A _R	A _{leg}	Leg %	C _A A ₄ In Face ft ²	C _A A ₄ Out Face ft ²
ft	ft		psf	ft ²	e	ft ²	ft ²	ft ²			
T1 282.00-262.00	272.00	1.827	12	83.333	A	4.785	13.070	6.667	37.34	0.000	0.000
					B	4.421	18.413		29.20	0.000	0.000
					C	4.951	10.620		42.81	0.000	0.000
T2 262.00-242.00	252.00	1.788	11	83.333	A	3.724	15.520	6.667	34.64	0.000	0.000
					B	3.565	18.413		30.33	0.000	0.000
					C	3.993	10.620		45.62	0.000	0.000
T3 242.00-222.00	232.00	1.746	11	83.333	A	3.724	15.520	6.667	34.64	0.000	0.000
					B	3.213	24.817		23.78	0.000	0.000
					C	3.624	17.338		31.80	0.000	0.000
T4 222.00-202.00	212.00	1.701	11	83.333	A	14.257	11.833	6.667	25.55	0.000	0.000
					B	11.576	37.392		13.61	0.000	0.000
					C	13.446	15.898		22.72	0.000	0.000
T5 202.00-182.00	192.00	1.654	11	83.333	A	16.640	11.833	6.667	23.41	0.000	0.000
					B	16.731	37.392		12.32	0.000	0.000
					C	15.651	16.083		21.01	0.000	0.000
T6 182.00-162.00	172.00	1.603	10	83.333	A	3.492	19.750	6.667	28.68	0.000	0.000
					B	9.854	39.355		13.55	0.000	0.000
					C	3.503	19.551		28.92	0.000	0.000
T7 162.00-142.00	152.00	1.547	10	83.333	A	2.515	37.539	6.667	16.64	0.000	0.000
					B	9.854	39.355		13.55	0.000	0.000
					C	6.798	19.371		25.48	0.000	0.000
T8 142.00-122.00	132.00	1.486	10	83.333	A	11.237	35.050	6.667	14.40	0.000	0.000
					B	15.266	43.687		11.31	0.000	0.000
					C	18.896	19.442		17.39	0.000	0.000
T9 122.00-102.00	112.00	1.418	9	83.333	A	9.628	35.050	6.667	14.92	0.000	0.000
					B	11.953	54.992		9.96	0.000	0.000
					C	17.158	21.250		17.36	0.000	0.000
T10 102.00-82.00	92.00	1.34	9	83.333	A	2.515	37.539	6.667	16.64	0.000	0.000
					B	8.937	56.047		10.26	0.000	0.000
					C	10.695	24.045		19.19	0.000	0.000
T11 82.00-62.00	72.00	1.25	8	83.333	A	2.515	37.539	6.667	16.64	0.000	0.000
					B	8.937	56.047		10.26	0.000	0.000
					C	10.695	24.045		19.19	0.000	0.000
T12 62.00-42.00	52.00	1.139	7	83.333	A	2.515	37.539	6.667	16.64	0.000	0.000
					B	8.937	56.047		10.26	0.000	0.000
					C	10.695	24.045		19.19	0.000	0.000
T13 42.00-22.00	32.00	1	6	83.333	A	2.515	37.539	6.667	16.64	0.000	0.000
					B	8.937	56.047		10.26	0.000	0.000
					C	10.695	24.045		19.19	0.000	0.000

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	Client	T-Mobile / NSS-014	Designed by	MCD

Section Elevation	z	K _z	q _z	A _G	F _a	A _F	A _R	A _{leg}	Leg %	C _A A ₄ In Face	C _A A ₄ Out Face
ft	ft		psf	ft ²	e	ft ²	ft ²	ft ²		ft ²	ft ²
T14 22.00-2.00	12.00	1	6	83.333	A	2.884	30.810	6.667	19.79	0.000	0.000
					B	7.701	44.690		12.72	0.000	0.000
					C	9.019	20.689		22.44	0.000	0.000

Tower Forces - No Ice - Wind Normal 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	56.20	1212.63	A	0.214	2.549	0.593			12.540	1364.73	68.24	B
282.00-262.00			B	0.274	2.367	0.608			15.621			
			C	0.187	2.641	0.588			11.194			
T2	69.40	1153.83	A	0.231	2.496	0.597			12.992	1273.36	63.67	B
262.00-242.00			B	0.264	2.397	0.605			14.713			
			C	0.175	2.68	0.586			10.213			
T3	189.65	1153.83	A	0.231	2.496	0.597			12.992	1460.28	73.01	B
242.00-222.00			B	0.336	2.204	0.628			18.791			
			C	0.252	2.433	0.602			14.066			
T4	391.29	2014.07	A	0.313	2.262	0.62			21.593	2458.40	122.92	B
222.00-202.00			B	0.588	1.812	0.746			39.474			
			C	0.352	2.167	0.633			23.514			
T5	411.24	2247.64	A	0.342	2.191	0.63			24.090	2743.16	137.16	B
202.00-182.00		TA 873.93	B	0.649	1.782	0.785			46.088			
			C	0.381	2.103	0.644			26.008			
T6	455.66	1153.83	A	0.279	2.354	0.61			15.533	2302.16	115.11	B
182.00-162.00			B	0.591	1.81	0.748			39.285			
			C	0.277	2.36	0.609			15.410			
T7	653.79	1153.83	A	0.481	1.926	0.688			28.335	2222.27	111.11	B
162.00-142.00			B	0.591	1.81	0.748			39.285			
			C	0.314	2.259	0.62			18.814			
T8	738.33	2247.64	A	0.555	1.838	0.727			36.730	2736.64	136.83	B
142.00-122.00		TA 873.93	B	0.707	1.777	0.825			51.319			
			C	0.46	1.957	0.678			32.076			
T9	870.49	2014.07	A	0.536	1.857	0.717			34.744	3197.57	159.88	B
122.00-102.00			B	0.803	1.819	0.899			61.397			
			C	0.461	1.956	0.678			31.573			
T10	877.88	1153.83	A	0.481	1.926	0.688			28.335	2843.33	142.17	B
102.00-82.00			B	0.78	1.802	0.88			58.266			
			C	0.417	2.032	0.659			26.532			
T11	877.88	1153.83	A	0.481	1.926	0.688			28.335	2651.01	132.55	B
82.00-62.00			B	0.78	1.802	0.88			58.266			
			C	0.417	2.032	0.659			26.532			
T12	877.88	1153.83	A	0.481	1.926	0.688			28.335	2415.64	120.78	B
62.00-42.00			B	0.78	1.802	0.88			58.266			
			C	0.417	2.032	0.659			26.532			
T13	877.88	1153.83	A	0.481	1.926	0.688			28.335	2121.32	106.07	B
42.00-22.00			B	0.78	1.802	0.88			58.266			
			C	0.417	2.032	0.659			26.532			
T14	658.41	1153.83	A	0.404	2.055	0.653			23.014	1524.34	76.22	B
22.00-2.00			B	0.629	1.789	0.772			42.183			
			C	0.356	2.157	0.635			22.153			
Sum Weight:	8005.97	21868.35								31314.22		

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Tower Forces - No Ice - Wind 45 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 282.00-262.00	56.20	1212.63	A	0.214	2.549	0.593	0.825		11.703	1297.14	64.86	B
			B	0.274	2.367	0.608	0.825		14.847			
			C	0.187	2.641	0.588	0.825		10.327			
T2 262.00-242.00	69.40	1153.83	A	0.231	2.496	0.597	0.825		12.341	1219.37	60.97	B
			B	0.264	2.397	0.605	0.825		14.090			
			C	0.175	2.68	0.586	0.825		9.514			
T3 242.00-222.00	189.65	1153.83	A	0.231	2.496	0.597	0.825		12.341	1416.58	70.83	B
			B	0.336	2.204	0.628	0.825		18.229			
			C	0.252	2.433	0.602	0.825		13.432			
T4 222.00-202.00	391.29	2014.07	A	0.313	2.262	0.62	0.825		19.099	2332.23	116.61	B
			B	0.588	1.812	0.746	0.825		37.448			
			C	0.352	2.167	0.633	0.825		21.161			
T5 202.00-182.00	411.24	2247.64 TA 873.93	A	0.342	2.191	0.63	0.825		21.178	2568.89	128.44	B
			B	0.649	1.782	0.785	0.825		43.160			
			C	0.381	2.103	0.644	0.825		23.269			
T6 182.00-162.00	455.66	1153.83	A	0.279	2.354	0.61	0.825		14.922	2201.11	110.06	B
			B	0.591	1.81	0.748	0.825		37.560			
			C	0.277	2.36	0.609	0.825		14.797			
T7 162.00-142.00	653.79	1153.83	A	0.481	1.926	0.688	0.825		27.895	2124.72	106.24	B
			B	0.591	1.81	0.748	0.825		37.560			
			C	0.314	2.259	0.62	0.825		17.624			
T8 142.00-122.00	738.33	2247.64 TA 873.93	A	0.555	1.838	0.727	0.825		34.764	2594.17	129.71	B
			B	0.707	1.777	0.825	0.825		48.647			
			C	0.46	1.957	0.678	0.825		28.769			
T9 122.00-102.00	870.49	2014.07	A	0.536	1.857	0.717	0.825		33.059	3088.63	154.43	B
			B	0.803	1.819	0.899	0.825		59.306			
			C	0.461	1.956	0.678	0.825		28.570			
T10 102.00-82.00	877.88	1153.83	A	0.481	1.926	0.688	0.825		27.895	2767.01	138.35	B
			B	0.78	1.802	0.88	0.825		56.702			
			C	0.417	2.032	0.659	0.825		24.660			
T11 82.00-62.00	877.88	1153.83	A	0.481	1.926	0.688	0.825		27.895	2579.85	128.99	B
			B	0.78	1.802	0.88	0.825		56.702			
			C	0.417	2.032	0.659	0.825		24.660			
T12 62.00-42.00	877.88	1153.83	A	0.481	1.926	0.688	0.825		27.895	2350.80	117.54	B
			B	0.78	1.802	0.88	0.825		56.702			
			C	0.417	2.032	0.659	0.825		24.660			
T13 42.00-22.00	877.88	1153.83	A	0.481	1.926	0.688	0.825		27.895	2064.38	103.22	B
			B	0.78	1.802	0.88	0.825		56.702			
			C	0.417	2.032	0.659	0.825		24.660			
T14 22.00-2.00	658.41	1153.83	A	0.404	2.055	0.653	0.825		22.510	1475.64	73.78	B
			B	0.629	1.789	0.772	0.825		40.836			
			C	0.356	2.157	0.635	0.825		20.574			
Sum Weight:	8005.97	21868.35								30080.52		

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 282.00-262.00	56.20	1212.63	A	0.214	2.549	0.593	0.8		11.583	1287.48	64.37	B
			B	0.274	2.367	0.608	0.8		14.737			
			C	0.187	2.641	0.588	0.8		10.203			

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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	
T2 262.00-242.00	69.40	1153.83	A	0.231	2.496	0.597	0.8		12.248	1211.66	60.58	B
			B	0.264	2.397	0.605	0.8		14.000			
			C	0.175	2.68	0.586	0.8		9.414			
T3 242.00-222.00	189.65	1153.83	A	0.231	2.496	0.597	0.8		12.248	1410.34	70.52	B
			B	0.336	2.204	0.628	0.8		18.148			
			C	0.252	2.433	0.602	0.8		13.341			
T4 222.00-202.00	391.29	2014.07	A	0.313	2.262	0.62	0.8		18.742	2314.21	115.71	B
			B	0.588	1.812	0.746	0.8		37.159			
			C	0.352	2.167	0.633	0.8		20.825			
T5 202.00-182.00	411.24	2247.64 TA 873.93	A	0.342	2.191	0.63	0.8		20.762	2544.00	127.20	B
			B	0.649	1.782	0.785	0.8		42.742			
			C	0.381	2.103	0.644	0.8		22.878			
T6 182.00-162.00	455.66	1153.83	A	0.279	2.354	0.61	0.8		14.834	2186.67	109.33	B
			B	0.591	1.81	0.748	0.8		37.314			
			C	0.277	2.36	0.609	0.8		14.709			
T7 162.00-142.00	653.79	1153.83	A	0.481	1.926	0.688	0.8		27.832	2110.79	105.54	B
			B	0.591	1.81	0.748	0.8		37.314			
			C	0.314	2.259	0.62	0.8		17.454			
T8 142.00-122.00	738.33	2247.64 TA 873.93	A	0.555	1.838	0.727	0.8		34.483	2573.82	128.69	B
			B	0.707	1.777	0.825	0.8		48.265			
			C	0.46	1.957	0.678	0.8		28.297			
T9 122.00-102.00	870.49	2014.07	A	0.536	1.857	0.717	0.8		32.819	3073.07	153.65	B
			B	0.803	1.819	0.899	0.8		59.007			
			C	0.461	1.956	0.678	0.8		28.141			
T10 102.00-82.00	877.88	1153.83	A	0.481	1.926	0.688	0.8		27.832	2756.11	137.81	B
			B	0.78	1.802	0.88	0.8		56.479			
			C	0.417	2.032	0.659	0.8		24.393			
T11 82.00-62.00	877.88	1153.83	A	0.481	1.926	0.688	0.8		27.832	2569.69	128.48	B
			B	0.78	1.802	0.88	0.8		56.479			
			C	0.417	2.032	0.659	0.8		24.393			
T12 62.00-42.00	877.88	1153.83	A	0.481	1.926	0.688	0.8		27.832	2341.53	117.08	B
			B	0.78	1.802	0.88	0.8		56.479			
			C	0.417	2.032	0.659	0.8		24.393			
T13 42.00-22.00	877.88	1153.83	A	0.481	1.926	0.688	0.8		27.832	2056.25	102.81	B
			B	0.78	1.802	0.88	0.8		56.479			
			C	0.417	2.032	0.659	0.8		24.393			
T14 22.00-2.00	658.41	1153.83	A	0.404	2.055	0.653	0.8		22.438	1468.68	73.43	B
			B	0.629	1.789	0.772	0.8		40.643			
			C	0.356	2.157	0.635	0.8		20.349			
Sum Weight:	8005.97	21868.35								29904.28		

Tower Forces - No 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 282.00-262.00	56.20	1212.63	A	0.214	2.549	0.593	0.85		11.823	1306.79	65.34	B
			B	0.274	2.367	0.608	0.85		14.958			
			C	0.187	2.641	0.588	0.85		10.451			
T2 262.00-242.00	69.40	1153.83	A	0.231	2.496	0.597	0.85		12.434	1227.08	61.35	B
			B	0.264	2.397	0.605	0.85		14.179			
			C	0.175	2.68	0.586	0.85		9.614			
T3 242.00-222.00	189.65	1153.83	A	0.231	2.496	0.597	0.85		12.434	1422.82	71.14	B
			B	0.336	2.204	0.628	0.85		18.309			
			C	0.252	2.433	0.602	0.85		13.522			

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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	
T4 222.00-202.00	391.29	2014.07	A	0.313	2.262	0.62	0.85		19.455	2350.25	117.51	B
			B	0.588	1.812	0.746	0.85		37.738			
			C	0.352	2.167	0.633	0.85		21.497			
T5 202.00-182.00	411.24	2247.64	A	0.342	2.191	0.63	0.85		21.594	2593.79	129.69	B
		TA 873.93	B	0.649	1.782	0.785	0.85		43.579			
			C	0.381	2.103	0.644	0.85		23.660			
T6 182.00-162.00	455.66	1153.83	A	0.279	2.354	0.61	0.85		15.009	2215.54	110.78	B
			B	0.591	1.81	0.748	0.85		37.806			
			C	0.277	2.36	0.609	0.85		14.884			
T7 162.00-142.00	653.79	1153.83	A	0.481	1.926	0.688	0.85		27.958	2138.66	106.93	B
			B	0.591	1.81	0.748	0.85		37.806			
			C	0.314	2.259	0.62	0.85		17.794			
T8 142.00-122.00	738.33	2247.64	A	0.555	1.838	0.727	0.85		35.045	2614.52	130.73	B
		TA 873.93	B	0.707	1.777	0.825	0.85		49.029			
			C	0.46	1.957	0.678	0.85		29.242			
T9 122.00-102.00	870.49	2014.07	A	0.536	1.857	0.717	0.85		33.300	3104.20	155.21	B
			B	0.803	1.819	0.899	0.85		59.604			
			C	0.461	1.956	0.678	0.85		28.999			
T10 102.00-82.00	877.88	1153.83	A	0.481	1.926	0.688	0.85		27.958	2777.91	138.90	B
			B	0.78	1.802	0.88	0.85		56.926			
			C	0.417	2.032	0.659	0.85		24.927			
T11 82.00-62.00	877.88	1153.83	A	0.481	1.926	0.688	0.85		27.958	2590.02	129.50	B
			B	0.78	1.802	0.88	0.85		56.926			
			C	0.417	2.032	0.659	0.85		24.927			
T12 62.00-42.00	877.88	1153.83	A	0.481	1.926	0.688	0.85		27.958	2360.06	118.00	B
			B	0.78	1.802	0.88	0.85		56.926			
			C	0.417	2.032	0.659	0.85		24.927			
T13 42.00-22.00	877.88	1153.83	A	0.481	1.926	0.688	0.85		27.958	2072.51	103.63	B
			B	0.78	1.802	0.88	0.85		56.926			
			C	0.417	2.032	0.659	0.85		24.927			
T14 22.00-2.00	658.41	1153.83	A	0.404	2.055	0.653	0.85		22.582	1482.59	74.13	B
			B	0.629	1.789	0.772	0.85		41.028			
			C	0.356	2.157	0.635	0.85		20.800			
Sum Weight:	8005.97	21868.35								30256.76		

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							ft ²	lb	plf	
T1 282.00-262.00	165.91	1607.29	A	0.338	2.2	0.628			19.795	1445.53	72.28	B
			B	0.438	1.993	0.668			26.201			
			C	0.298	2.301	0.615			17.496			
T2 262.00-242.00	204.16	1515.91	A	0.365	2.138	0.638			21.060	1368.35	68.42	B
			B	0.426	2.015	0.663			25.081			
			C	0.283	2.342	0.611			16.252			
T3 242.00-222.00	508.47	1515.91	A	0.365	2.138	0.638			21.060	1604.91	80.25	B
			B	0.525	1.87	0.71			32.449			
			C	0.391	2.082	0.648			22.745			
T4 222.00-202.00	1038.22	2563.59	A	0.426	2.015	0.662			29.466	3004.44	150.22	B
			B	0.815	1.827	0.908			63.784			
			C	0.489	1.915	0.692			33.224			
T5 202.00-182.00	1110.20	2880.99	A	0.459	1.959	0.678			32.424	3445.71	172.29	B
		TA	B	0.879	1.895	0.964			72.554			
		1187.59	C	0.522	1.874	0.709			36.218			

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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	
T6 182.00-162.00	1234.26	1515.91	A	0.431	2.005	0.665			25.495	3164.25	158.21	B
			B	0.858	1.871	0.946			69.660			
			C	0.438	1.994	0.668			25.882			
T7 162.00-142.00	1792.31	1515.91	A	0.722	1.779	0.836			51.811	3054.44	152.72	B
			B	0.858	1.871	0.946			69.660			
			C	0.484	1.922	0.689			30.755			
T8 142.00-122.00	2032.94	2880.99	A	0.765	1.794	0.869			57.773	3800.47	190.02	B
			TA	0.972	2.044	1			82.609			
			C	0.624	1.791	0.769			45.457			
T9 122.00-102.00	2392.32	2563.59	A	0.75	1.787	0.857			55.872	3651.47*	182.57	B
			B	1	2.1	1			95.759			
			C	0.636	1.786	0.776			46.130			
T10 102.00-82.00	2419.33	1515.91	A	0.722	1.779	0.836			51.811	3451.90*	172.60	B
			B	1	2.1	1			96.865			
			C	0.623	1.791	0.768			43.766			
T11 82.00-62.00	2419.33	1515.91	A	0.722	1.779	0.836			51.811	3218.42*	160.92	B
			B	1	2.1	1			96.865			
			C	0.623	1.791	0.768			43.766			
T12 62.00-42.00	2419.33	1515.91	A	0.722	1.779	0.836			51.811	2932.67*	146.63	B
			B	1	2.1	1			96.865			
			C	0.623	1.791	0.768			43.766			
T13 42.00-22.00	2419.33	1515.91	A	0.722	1.779	0.836			51.811	2575.36*	128.77	B
			B	1	2.1	1			96.865			
			C	0.623	1.791	0.768			43.766			
T14 22.00-2.00	1814.50	1515.91	A	0.612	1.797	0.761			40.399	2338.51	116.93	B
			B	0.925	1.962	1			78.664			
			C	0.538	1.855	0.718			35.923			
Sum Weight:	21970.61	28514.80								39056.43		

Tower Forces - With Ice - Wind 45 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 282.00-262.00	165.91	1607.29	A	0.338	2.2	0.628	0.825		18.976	1407.01	70.35	B
			B	0.438	1.993	0.668	0.825		25.503			
			C	0.298	2.301	0.615	0.825		16.630			
T2 262.00-242.00	204.16	1515.91	A	0.365	2.138	0.638	0.825		20.439	1337.62	66.88	B
			B	0.426	2.015	0.663	0.825		24.518			
			C	0.283	2.342	0.611	0.825		15.553			
T3 242.00-222.00	508.47	1515.91	A	0.365	2.138	0.638	0.825		20.439	1581.68	79.08	B
			B	0.525	1.87	0.71	0.825		31.979			
			C	0.391	2.082	0.648	0.825		22.148			
T4 222.00-202.00	1038.22	2563.59	A	0.426	2.015	0.662	0.825		26.619	2924.43	146.22	B
			B	0.815	1.827	0.908	0.825		62.085			
			C	0.489	1.915	0.692	0.825		30.679			
T5 202.00-182.00	1110.20	2880.99	A	0.459	1.959	0.678	0.825		29.179	3319.27	165.96	B
			TA	0.879	1.895	0.964	0.825		69.892			
			C	0.522	1.874	0.709	0.825		33.334			
T6 182.00-162.00	1234.26	1515.91	A	0.431	2.005	0.665	0.825		24.914	3069.08	153.45	B
			B	0.858	1.871	0.946	0.825		67.565			
			C	0.438	1.994	0.668	0.825		25.329			
T7 162.00-142.00	1792.31	1515.91	A	0.722	1.779	0.836	0.825		51.295	2962.58	148.13	B
			B	0.858	1.871	0.946	0.825		67.565			

tnxTower URS Corporation 500 Enterprise Drive, Suite 3B Rocky Hill, CT 06067 Phone: 860-529-8882 FAX: 860-529-3991	Job	280' Guyed Tower	Page	29 of 59
	Project	130 Vernon Rd Bolton, CT	Date	11:44:04 11/14/14
	Client	T-Mobile / NSS-014	Designed by	MCD

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 142.00-122.00	2032.94	2880.99	C	0.484	1.922	0.689	0.825		29.388	3702.78	185.14	B
			A	0.765	1.794	0.869	0.825		56.066			
			TA	0.972	2.044	1	0.825		80.486			
T9 122.00-102.00	2392.32	2563.59	C	0.624	1.791	0.769	0.825		41.937	3651.47*	182.57	B
			A	0.75	1.787	0.857	0.825		54.346			
			B	1	2.1	1	0.825		94.405			
T10 102.00-82.00	2419.33	1515.91	C	0.636	1.786	0.776	0.825		42.876	3451.90*	172.60	B
			A	0.722	1.779	0.836	0.825		51.295			
			B	1	2.1	1	0.825		95.036			
T11 82.00-62.00	2419.33	1515.91	C	0.623	1.791	0.768	0.825		41.448	3218.42*	160.92	B
			A	0.722	1.779	0.836	0.825		51.295			
			B	1	2.1	1	0.825		95.036			
T12 62.00-42.00	2419.33	1515.91	C	0.623	1.791	0.768	0.825		41.448	2932.67*	146.63	B
			A	0.722	1.779	0.836	0.825		51.295			
			B	1	2.1	1	0.825		95.036			
T13 42.00-22.00	2419.33	1515.91	C	0.623	1.791	0.768	0.825		41.448	2575.36*	128.77	B
			A	0.722	1.779	0.836	0.825		51.295			
			B	1	2.1	1	0.825		95.036			
T14 22.00-2.00	1814.50	1515.91	C	0.623	1.791	0.768	0.825		41.448	2292.55	114.63	B
			A	0.612	1.797	0.761	0.825		39.838			
			B	0.925	1.962	1	0.825		77.118			
Sum Weight:	21970.61	28514.80			*2A _B limit					38426.82		

Tower Forces - With 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 282.00-262.00	165.91	1607.29	A	0.338	2.2	0.628	0.8		18.859	1401.51	70.08	B
			B	0.438	1.993	0.668	0.8		25.403			
			C	0.298	2.301	0.615	0.8		16.506			
T2 262.00-242.00	204.16	1515.91	A	0.365	2.138	0.638	0.8		20.350	1333.23	66.66	B
			B	0.426	2.015	0.663	0.8		24.437			
			C	0.283	2.342	0.611	0.8		15.453			
T3 242.00-222.00	508.47	1515.91	A	0.365	2.138	0.638	0.8		20.350	1578.36	78.92	B
			B	0.525	1.87	0.71	0.8		31.912			
			C	0.391	2.082	0.648	0.8		22.063			
T4 222.00-202.00	1038.22	2563.59	A	0.426	2.015	0.662	0.8		26.212	2913.00	145.65	B
			B	0.815	1.827	0.908	0.8		61.843			
			C	0.489	1.915	0.692	0.8		30.316			
T5 202.00-182.00	1110.20	2880.99	A	0.459	1.959	0.678	0.8		28.715	3301.21	165.06	B
			TA	0.879	1.895	0.964	0.8		69.511			
			C	0.522	1.874	0.709	0.8		32.922			
T6 182.00-162.00	1234.26	1515.91	A	0.431	2.005	0.665	0.8		24.831	3055.49	152.77	B
			B	0.858	1.871	0.946	0.8		67.266			
			C	0.438	1.994	0.668	0.8		25.251			
T7 162.00-142.00	1792.31	1515.91	A	0.722	1.779	0.836	0.8		51.222	2949.45	147.47	B
			B	0.858	1.871	0.946	0.8		67.266			
			C	0.484	1.922	0.689	0.8		29.193			
T8 142.00-122.00	2032.94	2880.99	A	0.765	1.794	0.869	0.8		55.822	3688.82	184.44	B
			TA	0.972	2.044	1	0.8		80.182			
			C	0.624	1.791	0.769	0.8		41.434			
T9	2392.32	2563.59	A	0.75	1.787	0.857	0.8		54.128	3651.47*	182.57	B

tnxTower URS Corporation 500 Enterprise Drive, Suite 3B Rocky Hill, CT 06067 Phone: 860-529-8882 FAX: 860-529-3991	Job	280' Guyed Tower	Page	30 of 59
	Project	130 Vernon Rd Bolton, CT	Date	11:44:04 11/14/14
	Client	T-Mobile / NSS-014	Designed by	MCD

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	
122.00-102.00			B	1	2.1	1	0.8	1	94.212			
			C	0.636	1.786	0.776	0.8	1	42.411			
T10	2419.33	1515.91	A	0.722	1.779	0.836	0.8	1	51.222	3451.90*	172.60	B
102.00-82.00			B	1	2.1	1	0.8	1	94.775			
			C	0.623	1.791	0.768	0.8	1	41.117			
T11	2419.33	1515.91	A	0.722	1.779	0.836	0.8	1	51.222	3218.42*	160.92	B
82.00-62.00			B	1	2.1	1	0.8	1	94.775			
			C	0.623	1.791	0.768	0.8	1	41.117			
T12	2419.33	1515.91	A	0.722	1.779	0.836	0.8	1	51.222	2932.67*	146.63	B
62.00-42.00			B	1	2.1	1	0.8	1	94.775			
			C	0.623	1.791	0.768	0.8	1	41.117			
T13	2419.33	1515.91	A	0.722	1.779	0.836	0.8	1	51.222	2575.36*	128.77	B
42.00-22.00			B	1	2.1	1	0.8	1	94.775			
			C	0.623	1.791	0.768	0.8	1	41.117			
T14	1814.50	1515.91	A	0.612	1.797	0.761	0.8	1	39.758	2285.99	114.30	B
22.00-2.00			B	0.925	1.962	1	0.8	1	76.897			
			C	0.538	1.855	0.718	0.8	1	33.736			
Sum Weight:	21970.61	28514.80								38336.87		

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	165.91	1607.29	A	0.338	2.2	0.628	0.85	1	19.093	1412.51	70.63	B
282.00-262.00			B	0.438	1.993	0.668	0.85	1	25.603			
			C	0.298	2.301	0.615	0.85	1	16.753			
T2	204.16	1515.91	A	0.365	2.138	0.638	0.85	1	20.528	1342.01	67.10	B
262.00-242.00			B	0.426	2.015	0.663	0.85	1	24.598			
			C	0.283	2.342	0.611	0.85	1	15.653			
T3	508.47	1515.91	A	0.365	2.138	0.638	0.85	1	20.528	1585.00	79.25	B
242.00-222.00			B	0.525	1.87	0.71	0.85	1	32.046			
			C	0.391	2.082	0.648	0.85	1	22.233			
T4	1038.22	2563.59	A	0.426	2.015	0.662	0.85	1	27.026	2935.86	146.79	B
222.00-202.00			B	0.815	1.827	0.908	0.85	1	62.328			
			C	0.489	1.915	0.692	0.85	1	31.043			
T5	1110.20	2880.99	A	0.459	1.959	0.678	0.85	1	29.642	3337.33	166.87	B
202.00-182.00		TA	B	0.879	1.895	0.964	0.85	1	70.272			
		1187.59	C	0.522	1.874	0.709	0.85	1	33.746			
T6	1234.26	1515.91	A	0.431	2.005	0.665	0.85	1	24.997	3082.68	154.13	B
182.00-162.00			B	0.858	1.871	0.946	0.85	1	67.865			
			C	0.438	1.994	0.668	0.85	1	25.408			
T7	1792.31	1515.91	A	0.722	1.779	0.836	0.85	1	51.369	2975.70	148.79	B
162.00-142.00			B	0.858	1.871	0.946	0.85	1	67.865			
			C	0.484	1.922	0.689	0.85	1	29.583			
T8	2032.94	2880.99	A	0.765	1.794	0.869	0.85	1	56.310	3716.73	185.84	B
142.00-122.00		TA	B	0.972	2.044	1	0.85	1	80.789			
		1187.59	C	0.624	1.791	0.769	0.85	1	42.440			
T9	2392.32	2563.59	A	0.75	1.787	0.857	0.85	1	54.564	3651.47*	182.57	B
122.00-102.00			B	1	2.1	1	0.85	1	94.598			
			C	0.636	1.786	0.776	0.85	1	43.341			
T10	2419.33	1515.91	A	0.722	1.779	0.836	0.85	1	51.369	3451.90*	172.60	B
102.00-82.00			B	1	2.1	1	0.85	1	95.298			
			C	0.623	1.791	0.768	0.85	1	41.779			

tnxTower URS Corporation 500 Enterprise Drive, Suite 3B Rocky Hill, CT 06067 Phone: 860-529-8882 FAX: 860-529-3991	Job 280' Guyed Tower	Page 31 of 59
	Project 130 Vernon Rd Bolton, CT	Date 11:44:04 11/14/14
	Client T-Mobile / NSS-014	Designed by MCD

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	
T11 82.00-62.00	2419.33	1515.91	A	0.722	1.779	0.836	0.85		51.369	3218.42*	160.92	B
			B	1	2.1	1	0.85		95.298			
			C	0.623	1.791	0.768	0.85		41.779			
T12 62.00-42.00	2419.33	1515.91	A	0.722	1.779	0.836	0.85		51.369	2932.67*	146.63	B
			B	1	2.1	1	0.85		95.298			
			C	0.623	1.791	0.768	0.85		41.779			
T13 42.00-22.00	2419.33	1515.91	A	0.722	1.779	0.836	0.85		51.369	2575.36*	128.77	B
			B	1	2.1	1	0.85		95.298			
			C	0.623	1.791	0.768	0.85		41.779			
T14 22.00-2.00	1814.50	1515.91	A	0.612	1.797	0.761	0.85		39.918	2299.12	114.96	B
			B	0.925	1.962	1	0.85		77.339			
			C	0.538	1.855	0.718	0.85		34.283			
Sum Weight:	21970.61	28514.80			*2A _B limit					38516.76		

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 _E	F	w	Ctrl Face
ft	lb	lb							ft ²	lb	plf	
T1 282.00-262.00	56.20	1212.63	A	0.214	2.549	0.593			12.540	472.22	23.61	B
			B	0.274	2.367	0.608			15.621			
			C	0.187	2.641	0.588			11.194			
T2 262.00-242.00	69.40	1153.83	A	0.231	2.496	0.597			12.992	440.61	22.03	B
			B	0.264	2.397	0.605			14.713			
			C	0.175	2.68	0.586			10.213			
T3 242.00-222.00	189.65	1153.83	A	0.231	2.496	0.597			12.992	505.29	25.26	B
			B	0.336	2.204	0.628			18.791			
			C	0.252	2.433	0.602			14.066			
T4 222.00-202.00	391.29	2014.07	A	0.313	2.262	0.62			21.593	850.66	42.53	B
			B	0.588	1.812	0.746			39.474			
			C	0.352	2.167	0.633			23.514			
T5 202.00-182.00	411.24	2247.64	A	0.342	2.191	0.63			24.090	949.19	47.46	B
		TA 873.93	B	0.649	1.782	0.785			46.088			
			C	0.381	2.103	0.644			26.008			
T6 182.00-162.00	455.66	1153.83	A	0.279	2.354	0.61			15.533	796.60	39.83	B
			B	0.591	1.81	0.748			39.285			
			C	0.277	2.36	0.609			15.410			
T7 162.00-142.00	653.79	1153.83	A	0.481	1.926	0.688			28.335	768.95	38.45	B
			B	0.591	1.81	0.748			39.285			
			C	0.314	2.259	0.62			18.814			
T8 142.00-122.00	738.33	2247.64	A	0.555	1.838	0.727			36.730	946.93	47.35	B
		TA 873.93	B	0.707	1.777	0.825			51.319			
			C	0.46	1.957	0.678			32.076			
T9 122.00-102.00	870.49	2014.07	A	0.536	1.857	0.717			34.744	1106.43	55.32	B
			B	0.803	1.819	0.899			61.397			
			C	0.461	1.956	0.678			31.573			
T10 102.00-82.00	877.88	1153.83	A	0.481	1.926	0.688			28.335	983.85	49.19	B
			B	0.78	1.802	0.88			58.266			
			C	0.417	2.032	0.659			26.532			
T11 82.00-62.00	877.88	1153.83	A	0.481	1.926	0.688			28.335	917.31	45.87	B
			B	0.78	1.802	0.88			58.266			
			C	0.417	2.032	0.659			26.532			
T12 62.00-42.00	877.88	1153.83	A	0.481	1.926	0.688			28.335	835.86	41.79	B
			B	0.78	1.802	0.88			58.266			

tnxTower URS Corporation 500 Enterprise Drive, Suite 3B Rocky Hill, CT 06067 Phone: 860-529-8882 FAX: 860-529-3991	Job 280' Guyed Tower	Page 32 of 59
	Project 130 Vernon Rd Bolton, CT	Date 11:44:04 11/14/14
	Client T-Mobile / NSS-014	Designed by MCD

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	
T13 42.00-22.00	877.88	1153.83	C	0.417	2.032	0.659	1	1	26.532	734.02	36.70	B
			A	0.481	1.926	0.688	1	1	28.335			
			B	0.78	1.802	0.88	1	1	58.266			
T14 22.00-2.00	658.41	1153.83	C	0.417	2.032	0.659	1	1	26.532	527.45	26.37	B
			A	0.404	2.055	0.653	1	1	23.014			
			B	0.629	1.789	0.772	1	1	42.183			
Sum Weight:	8005.97	21868.35								10835.37		

Tower Forces - Service - Wind 45 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 282.00-262.00	56.20	1212.63	A	0.214	2.549	0.593	0.825	1	11.703	448.84	22.44	B
			B	0.274	2.367	0.608	0.825	1	14.847			
			C	0.187	2.641	0.588	0.825	1	10.327			
T2 262.00-242.00	69.40	1153.83	A	0.231	2.496	0.597	0.825	1	12.341	421.93	21.10	B
			B	0.264	2.397	0.605	0.825	1	14.090			
			C	0.175	2.68	0.586	0.825	1	9.514			
T3 242.00-222.00	189.65	1153.83	A	0.231	2.496	0.597	0.825	1	12.341	490.17	24.51	B
			B	0.336	2.204	0.628	0.825	1	18.229			
			C	0.252	2.433	0.602	0.825	1	13.432			
T4 222.00-202.00	391.29	2014.07	A	0.313	2.262	0.62	0.825	1	19.099	807.00	40.35	B
			B	0.588	1.812	0.746	0.825	1	37.448			
			C	0.352	2.167	0.633	0.825	1	21.161			
T5 202.00-182.00	411.24	2247.64	A	0.342	2.191	0.63	0.825	1	21.178	888.89	44.44	B
			B	0.649	1.782	0.785	0.825	1	43.160			
			C	0.381	2.103	0.644	0.825	1	23.269			
T6 182.00-162.00	455.66	1153.83	A	0.279	2.354	0.61	0.825	1	14.922	761.63	38.08	B
			B	0.591	1.81	0.748	0.825	1	37.560			
			C	0.277	2.36	0.609	0.825	1	14.797			
T7 162.00-142.00	653.79	1153.83	A	0.481	1.926	0.688	0.825	1	27.895	735.20	36.76	B
			B	0.591	1.81	0.748	0.825	1	37.560			
			C	0.314	2.259	0.62	0.825	1	17.624			
T8 142.00-122.00	738.33	2247.64	A	0.555	1.838	0.727	0.825	1	34.764	897.64	44.88	B
			B	0.707	1.777	0.825	0.825	1	48.647			
			C	0.46	1.957	0.678	0.825	1	28.769			
T9 122.00-102.00	870.49	2014.07	A	0.536	1.857	0.717	0.825	1	33.059	1068.73	53.44	B
			B	0.803	1.819	0.899	0.825	1	59.306			
			C	0.461	1.956	0.678	0.825	1	28.570			
T10 102.00-82.00	877.88	1153.83	A	0.481	1.926	0.688	0.825	1	27.895	957.44	47.87	B
			B	0.78	1.802	0.88	0.825	1	56.702			
			C	0.417	2.032	0.659	0.825	1	24.660			
T11 82.00-62.00	877.88	1153.83	A	0.481	1.926	0.688	0.825	1	27.895	892.68	44.63	B
			B	0.78	1.802	0.88	0.825	1	56.702			
			C	0.417	2.032	0.659	0.825	1	24.660			
T12 62.00-42.00	877.88	1153.83	A	0.481	1.926	0.688	0.825	1	27.895	813.42	40.67	B
			B	0.78	1.802	0.88	0.825	1	56.702			
			C	0.417	2.032	0.659	0.825	1	24.660			
T13 42.00-22.00	877.88	1153.83	A	0.481	1.926	0.688	0.825	1	27.895	714.32	35.72	B
			B	0.78	1.802	0.88	0.825	1	56.702			
			C	0.417	2.032	0.659	0.825	1	24.660			
T14 22.00-2.00	658.41	1153.83	A	0.404	2.055	0.653	0.825	1	22.510	510.60	25.53	B
			B	0.629	1.789	0.772	0.825	1	40.836			

tnxTower URS Corporation 500 Enterprise Drive, Suite 3B Rocky Hill, CT 06067 Phone: 860-529-8882 FAX: 860-529-3991	Job 280' Guyed Tower	Page 33 of 59
	Project 130 Vernon Rd Bolton, CT	Date 11:44:04 11/14/14
	Client T-Mobile / NSS-014	Designed by MCD

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	
Sum Weight:	8005.97	21868.35	C	0.356	2.157	0.635	0.825	1	20.574	10408.48		

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 282.00-262.00	56.20	1212.63	A	0.214	2.549	0.593	0.8	1	11.583	445.50	22.27	B
			B	0.274	2.367	0.608	0.8	1	14.737			
			C	0.187	2.641	0.588	0.8	1	10.203			
T2 262.00-242.00	69.40	1153.83	A	0.231	2.496	0.597	0.8	1	12.248	419.26	20.96	B
			B	0.264	2.397	0.605	0.8	1	14.000			
			C	0.175	2.68	0.586	0.8	1	9.414			
T3 242.00-222.00	189.65	1153.83	A	0.231	2.496	0.597	0.8	1	12.248	488.01	24.40	B
			B	0.336	2.204	0.628	0.8	1	18.148			
			C	0.252	2.433	0.602	0.8	1	13.341			
T4 222.00-202.00	391.29	2014.07	A	0.313	2.262	0.62	0.8	1	18.742	800.76	40.04	B
			B	0.588	1.812	0.746	0.8	1	37.159			
			C	0.352	2.167	0.633	0.8	1	20.825			
T5 202.00-182.00	411.24	2247.64	A	0.342	2.191	0.63	0.8	1	20.762	880.28	44.01	B
		TA 873.93	B	0.649	1.782	0.785	0.8	1	42.742			
			C	0.381	2.103	0.644	0.8	1	22.878			
T6 182.00-162.00	455.66	1153.83	A	0.279	2.354	0.61	0.8	1	14.834	756.63	37.83	B
			B	0.591	1.81	0.748	0.8	1	37.314			
			C	0.277	2.36	0.609	0.8	1	14.709			
T7 162.00-142.00	653.79	1153.83	A	0.481	1.926	0.688	0.8	1	27.832	730.38	36.52	B
			B	0.591	1.81	0.748	0.8	1	37.314			
			C	0.314	2.259	0.62	0.8	1	17.454			
T8 142.00-122.00	738.33	2247.64	A	0.555	1.838	0.727	0.8	1	34.483	890.59	44.53	B
		TA 873.93	B	0.707	1.777	0.825	0.8	1	48.265			
			C	0.46	1.957	0.678	0.8	1	28.297			
T9 122.00-102.00	870.49	2014.07	A	0.536	1.857	0.717	0.8	1	32.819	1063.35	53.17	B
			B	0.803	1.819	0.899	0.8	1	59.007			
			C	0.461	1.956	0.678	0.8	1	28.141			
T10 102.00-82.00	877.88	1153.83	A	0.481	1.926	0.688	0.8	1	27.832	953.67	47.68	B
			B	0.78	1.802	0.88	0.8	1	56.479			
			C	0.417	2.032	0.659	0.8	1	24.393			
T11 82.00-62.00	877.88	1153.83	A	0.481	1.926	0.688	0.8	1	27.832	889.17	44.46	B
			B	0.78	1.802	0.88	0.8	1	56.479			
			C	0.417	2.032	0.659	0.8	1	24.393			
T12 62.00-42.00	877.88	1153.83	A	0.481	1.926	0.688	0.8	1	27.832	810.22	40.51	B
			B	0.78	1.802	0.88	0.8	1	56.479			
			C	0.417	2.032	0.659	0.8	1	24.393			
T13 42.00-22.00	877.88	1153.83	A	0.481	1.926	0.688	0.8	1	27.832	711.50	35.58	B
			B	0.78	1.802	0.88	0.8	1	56.479			
			C	0.417	2.032	0.659	0.8	1	24.393			
T14 22.00-2.00	658.41	1153.83	A	0.404	2.055	0.653	0.8	1	22.438	508.19	25.41	B
			B	0.629	1.789	0.772	0.8	1	40.643			
			C	0.356	2.157	0.635	0.8	1	20.349			
Sum Weight:	8005.97	21868.35								10347.50		

tnxTower URS Corporation 500 Enterprise Drive, Suite 3B Rocky Hill, CT 06067 Phone: 860-529-8882 FAX: 860-529-3991	Job	280' Guyed Tower	Page	34 of 59
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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 282.00-262.00	56.20	1212.63	A	0.214	2.549	0.593	0.85		11.823	452.18	22.61	B
			B	0.274	2.367	0.608	0.85		14.958			
			C	0.187	2.641	0.588	0.85		10.451			
T2 262.00-242.00	69.40	1153.83	A	0.231	2.496	0.597	0.85		12.434	424.60	21.23	B
			B	0.264	2.397	0.605	0.85		14.179			
			C	0.175	2.68	0.586	0.85		9.614			
T3 242.00-222.00	189.65	1153.83	A	0.231	2.496	0.597	0.85		12.434	492.33	24.62	B
			B	0.336	2.204	0.628	0.85		18.309			
			C	0.252	2.433	0.602	0.85		13.522			
T4 222.00-202.00	391.29	2014.07	A	0.313	2.262	0.62	0.85		19.455	813.24	40.66	B
			B	0.588	1.812	0.746	0.85		37.738			
			C	0.352	2.167	0.633	0.85		21.497			
T5 202.00-182.00	411.24	2247.64 TA 873.93	A	0.342	2.191	0.63	0.85		21.594	897.50	44.88	B
			B	0.649	1.782	0.785	0.85		43.579			
			C	0.381	2.103	0.644	0.85		23.660			
T6 182.00-162.00	455.66	1153.83	A	0.279	2.354	0.61	0.85		15.009	766.62	38.33	B
			B	0.591	1.81	0.748	0.85		37.806			
			C	0.277	2.36	0.609	0.85		14.884			
T7 162.00-142.00	653.79	1153.83	A	0.481	1.926	0.688	0.85		27.958	740.02	37.00	B
			B	0.591	1.81	0.748	0.85		37.806			
			C	0.314	2.259	0.62	0.85		17.794			
T8 142.00-122.00	738.33	2247.64 TA 873.93	A	0.555	1.838	0.727	0.85		35.045	904.68	45.23	B
			B	0.707	1.777	0.825	0.85		49.029			
			C	0.46	1.957	0.678	0.85		29.242			
T9 122.00-102.00	870.49	2014.07	A	0.536	1.857	0.717	0.85		33.300	1074.12	53.71	B
			B	0.803	1.819	0.899	0.85		59.604			
			C	0.461	1.956	0.678	0.85		28.999			
T10 102.00-82.00	877.88	1153.83	A	0.481	1.926	0.688	0.85		27.958	961.22	48.06	B
			B	0.78	1.802	0.88	0.85		56.926			
			C	0.417	2.032	0.659	0.85		24.927			
T11 82.00-62.00	877.88	1153.83	A	0.481	1.926	0.688	0.85		27.958	896.20	44.81	B
			B	0.78	1.802	0.88	0.85		56.926			
			C	0.417	2.032	0.659	0.85		24.927			
T12 62.00-42.00	877.88	1153.83	A	0.481	1.926	0.688	0.85		27.958	816.63	40.83	B
			B	0.78	1.802	0.88	0.85		56.926			
			C	0.417	2.032	0.659	0.85		24.927			
T13 42.00-22.00	877.88	1153.83	A	0.481	1.926	0.688	0.85		27.958	717.13	35.86	B
			B	0.78	1.802	0.88	0.85		56.926			
			C	0.417	2.032	0.659	0.85		24.927			
T14 22.00-2.00	658.41	1153.83	A	0.404	2.055	0.653	0.85		22.582	513.01	25.65	B
			B	0.629	1.789	0.772	0.85		41.028			
			C	0.356	2.157	0.635	0.85		20.800			
Sum Weight:	8005.97	21868.35								10469.47		

Force Totals (Does not include forces on guys)

Load Case	Vertical Forces	Sum of Forces X	Sum of Forces Z	Sum of Torques
	lb	lb	lb	lb-ft
Leg Weight	8979.76			
Bracing Weight	12888.60			
Total Member Self-Weight	21868.35			

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Load Case	Vertical Forces lb	Sum of Forces X lb	Sum of Forces Z lb	Sum of Torques lb-ft
Guy Weight	4059.04			
Total Weight	40279.47			
Wind 0 deg - No Ice		492.69	-48656.64	-5048.26
Wind 30 deg - No Ice		24406.02	-41966.99	-9941.61
Wind 45 deg - No Ice		34125.66	-33991.53	-10869.04
Wind 60 deg - No Ice		41567.17	-23683.01	-13690.64
Wind 90 deg - No Ice		48443.61	312.41	-13561.88
Wind 120 deg - No Ice		42533.04	24078.97	-7859.80
Wind 135 deg - No Ice		33906.71	32803.44	-4358.26
Wind 150 deg - No Ice		24195.47	40187.50	861.91
Wind 180 deg - No Ice		297.11	46241.79	7857.60
Wind 210 deg - No Ice		-23964.41	41238.77	11805.59
Wind 225 deg - No Ice		-33704.44	33865.77	13941.37
Wind 240 deg - No Ice		-42346.09	24539.93	12908.06
Wind 270 deg - No Ice		-46909.75	327.66	10549.36
Wind 300 deg - No Ice		-39307.75	-22721.61	5833.04
Wind 315 deg - No Ice		-32037.41	-32546.83	3149.88
Wind 330 deg - No Ice		-22599.93	-40320.72	286.62
Member Ice	6646.44			
Guy Ice	3447.39			
Total Weight Ice	68541.64			
Wind 0 deg - Ice		496.04	-54116.64	-302.51
Wind 30 deg - Ice		27340.16	-46944.56	-6880.45
Wind 45 deg - Ice		38346.89	-38159.30	-9197.04
Wind 60 deg - Ice		46799.23	-26758.45	-12941.58
Wind 90 deg - Ice		54273.44	168.28	-15363.89
Wind 120 deg - Ice		47260.92	26764.89	-12014.30
Wind 135 deg - Ice		38176.68	37182.42	-9313.82
Wind 150 deg - Ice		27085.52	45556.48	-4862.86
Wind 180 deg - Ice		223.03	52586.02	2474.46
Wind 210 deg - Ice		-26913.14	46385.52	8449.00
Wind 225 deg - Ice		-37953.39	38054.41	11642.29
Wind 240 deg - Ice		-47037.95	27208.93	12316.81
Wind 270 deg - Ice		-53051.84	246.95	12914.78
Wind 300 deg - Ice		-45008.37	-25982.03	10467.12
Wind 315 deg - Ice		-36683.21	-37015.71	8385.28
Wind 330 deg - Ice		-25857.06	-45660.72	5743.42
Total Weight	40279.47			
Wind 0 deg - Service		170.48	-16836.21	-1746.80
Wind 30 deg - Service		8444.99	-14521.45	-3440.00
Wind 45 deg - Service		11808.19	-11761.77	-3760.92
Wind 60 deg - Service		14383.10	-8194.81	-4737.25
Wind 90 deg - Service		16762.49	108.10	-4692.69
Wind 120 deg - Service		14717.32	8331.82	-2719.65
Wind 135 deg - Service		11732.42	11350.67	-1508.05
Wind 150 deg - Service		8372.13	13905.71	298.24
Wind 180 deg - Service		102.81	16000.62	2718.89
Wind 210 deg - Service		-8292.18	14269.47	4084.98
Wind 225 deg - Service		-11662.43	11718.26	4824.00
Wind 240 deg - Service		-14652.63	8491.33	4466.46
Wind 270 deg - Service		-16231.75	113.38	3650.30
Wind 300 deg - Service		-13601.30	-7862.15	2018.35
Wind 315 deg - Service		-11085.61	-11261.88	1089.93
Wind 330 deg - Service		-7820.05	-13951.81	99.18

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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 45 deg - No Ice+Guy
5	Dead+Wind 60 deg - No Ice+Guy
6	Dead+Wind 90 deg - No Ice+Guy
7	Dead+Wind 120 deg - No Ice+Guy
8	Dead+Wind 135 deg - No Ice+Guy
9	Dead+Wind 150 deg - No Ice+Guy
10	Dead+Wind 180 deg - No Ice+Guy
11	Dead+Wind 210 deg - No Ice+Guy
12	Dead+Wind 225 deg - No Ice+Guy
13	Dead+Wind 240 deg - No Ice+Guy
14	Dead+Wind 270 deg - No Ice+Guy
15	Dead+Wind 300 deg - No Ice+Guy
16	Dead+Wind 315 deg - No Ice+Guy
17	Dead+Wind 330 deg - No Ice+Guy
18	Dead+Ice+Temp+Guy
19	Dead+Wind 0 deg+Ice+Temp+Guy
20	Dead+Wind 30 deg+Ice+Temp+Guy
21	Dead+Wind 45 deg+Ice+Temp+Guy
22	Dead+Wind 60 deg+Ice+Temp+Guy
23	Dead+Wind 90 deg+Ice+Temp+Guy
24	Dead+Wind 120 deg+Ice+Temp+Guy
25	Dead+Wind 135 deg+Ice+Temp+Guy
26	Dead+Wind 150 deg+Ice+Temp+Guy
27	Dead+Wind 180 deg+Ice+Temp+Guy
28	Dead+Wind 210 deg+Ice+Temp+Guy
29	Dead+Wind 225 deg+Ice+Temp+Guy
30	Dead+Wind 240 deg+Ice+Temp+Guy
31	Dead+Wind 270 deg+Ice+Temp+Guy
32	Dead+Wind 300 deg+Ice+Temp+Guy
33	Dead+Wind 315 deg+Ice+Temp+Guy
34	Dead+Wind 330 deg+Ice+Temp+Guy
35	Dead+Wind 0 deg - Service+Guy
36	Dead+Wind 30 deg - Service+Guy
37	Dead+Wind 45 deg - Service+Guy
38	Dead+Wind 60 deg - Service+Guy
39	Dead+Wind 90 deg - Service+Guy
40	Dead+Wind 120 deg - Service+Guy
41	Dead+Wind 135 deg - Service+Guy
42	Dead+Wind 150 deg - Service+Guy
43	Dead+Wind 180 deg - Service+Guy
44	Dead+Wind 210 deg - Service+Guy
45	Dead+Wind 225 deg - Service+Guy
46	Dead+Wind 240 deg - Service+Guy
47	Dead+Wind 270 deg - Service+Guy
48	Dead+Wind 300 deg - Service+Guy
49	Dead+Wind 315 deg - Service+Guy
50	Dead+Wind 330 deg - Service+Guy

Maximum Member Forces

Section No	Elevation ft	Component Type	Condition	Gov Load Comb	Force lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft
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Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb	Force lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft	
T1	282 - 262	Leg	Max Tension	22	7081.01	-245.88	145.79	
			Max. Compression	27	-16093.69	9.44	460.63	
			Max. Mx	20	-15118.09	-807.74	315.63	
			Max. My	27	-16008.58	-3.53	-870.66	
			Max. Vy	24	-531.17	0.00	0.00	
			Max. Vx	27	564.13	-3.53	-870.66	
		Diagonal	Max Tension	23	4838.45	0.00	0.00	
			Max. Compression	23	-4195.31	0.00	0.00	
			Max. Mx	24	2384.85	8.21	0.00	
			Max. My	23	2812.78	0.00	0.09	
			Max. Vy	24	-5.81	0.00	0.00	
			Max. Vx	23	-0.07	0.00	0.00	
		Secondary Horizontal	Max Tension	30	317.26	0.00	0.00	
			Max. Compression	27	-278.75	0.00	0.00	
			Max. Mx	18	140.12	-9.77	0.00	
			Max. My	23	218.52	0.00	0.00	
			Max. Vy	18	9.77	0.00	0.00	
			Max. Vx	23	-0.00	0.00	0.00	
		Top Girt	Max Tension	1	0.00	0.00	0.00	
			Max. Compression	19	-2342.75	0.00	0.00	
			Max. Mx	18	-1164.15	-15.23	0.00	
			Max. My	23	-1364.07	0.00	0.00	
			Max. Vy	18	15.23	0.00	0.00	
			Max. Vx	23	-0.00	0.00	0.00	
		Guy A	Bottom Tension	27	18235.96			
			Top Tension	27	18800.43			
			Top Cable Vert	27	15536.50			
			Top Cable Norm	27	10586.47			
			Top Cable Tan	27	1.86			
			Bot Cable Vert	27	-14289.40			
			Bot Cable Norm	27	11329.75			
			Bot Cable Tan	27	1.86			
			Guy B	Bottom Tension	32	18263.99		
				Top Tension	32	18792.16		
				Top Cable Vert	32	15512.90		
				Top Cable Norm	32	10606.37		
		Top Cable Tan		32	2.09			
		Bot Cable Vert		32	-14334.92			
		Guy C	Bot Cable Norm	32	11317.39			
			Bot Cable Tan	32	2.09			
Bottom Tension	22		18476.42					
Top Tension	22		19023.63					
Top Cable Vert	22		15692.68					
Top Cable Norm	22		10753.53					
Top Cable Tan	22		4.02					
Bot Cable Vert	22		-14476.85					
T2	262 - 242	Leg	Bot Cable Norm	22	11480.37			
			Bot Cable Tan	22	4.02			
			Max Tension	13	16385.38	-79.88	60.05	
			Max. Compression	27	-32130.10	-3.22	-11.10	
			Max. Mx	20	-21044.42	-511.20	166.69	
			Max. My	27	-22696.47	-42.90	-532.48	
		Diagonal	Max. Vy	21	-384.63	-499.62	211.84	
			Max. Vx	27	-407.09	-42.90	-532.48	
			Max Tension	27	2870.99	0.00	0.00	
			Max. Compression	27	-2534.16	0.00	0.00	
			Max. Mx	24	1624.33	8.21	0.00	
			Max. My	23	1696.45	0.00	0.09	
			Max. Vy	24	-5.81	0.00	0.00	
			Max. Vx	23	-0.06	0.00	0.00	

tnxTower URS Corporation 500 Enterprise Drive, Suite 3B Rocky Hill, CT 06067 Phone: 860-529-8882 FAX: 860-529-3991	Job 280' Guyed Tower	Page 38 of 59
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Section No	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft
T3	242 - 222	Secondary Horizontal	Max Tension	27	556.51	0.00	0.00
			Max. Compression	27	-556.51	0.00	0.00
			Max. Mx	18	137.16	-9.77	0.00
			Max. My	23	234.09	0.00	0.00
			Max. Vy	18	9.77	0.00	0.00
		Leg	Max. Vx	23	-0.00	0.00	0.00
			Max Tension	13	22591.67	248.29	-177.69
			Max. Compression	27	-31700.56	21.84	-391.46
			Max. Mx	6	-31262.40	777.94	-159.45
			Max. My	10	-34219.62	-76.68	873.70
		Diagonal	Max. Vy	6	-600.89	-391.73	171.55
			Max. Vx	10	-693.68	31.41	-479.35
			Max Tension	33	2074.62	0.00	0.00
			Max. Compression	33	-2626.53	0.00	0.00
			Max. Mx	24	-442.03	8.20	0.00
Secondary Horizontal	Max. My	23	-787.97	0.00	0.07		
	Max. Vy	24	-5.80	0.00	0.00		
	Max. Vx	23	-0.05	0.00	0.00		
	Max Tension	27	642.60	0.00	0.00		
	Max. Compression	27	-642.60	0.00	0.00		
T4	222 - 202	Leg	Max. Mx	25	549.99	-9.77	0.00
			Max. My	23	286.67	0.00	0.00
			Max. Vy	25	9.77	0.00	0.00
			Max. Vx	23	-0.00	0.00	0.00
			Max Tension	13	16347.08	-58.39	38.36
		Diagonal	Max. Compression	27	-30682.74	-66.30	-114.55
			Max. Mx	5	-13940.67	817.90	-48.82
			Max. My	3	-7935.03	68.90	-745.35
			Max. Vy	5	-822.22	-407.57	11.60
			Max. Vx	3	730.87	-61.90	346.68
		Secondary Horizontal	Max Tension	5	4951.68	0.00	0.00
			Max. Compression	12	-4828.93	0.00	0.00
			Max. Mx	32	3152.26	25.69	0.00
			Max. My	23	-506.95	0.00	0.17
			Max. Vy	32	-18.16	0.00	0.00
T5	202 - 182	Leg	Max. Vx	23	-0.12	0.00	0.00
			Max Tension	27	531.44	0.00	0.00
			Max. Compression	27	-531.44	0.00	0.00
			Max. Mx	18	227.05	-9.77	0.00
			Max. My	23	366.06	0.00	0.00
		Diagonal	Max. Vy	18	9.77	0.00	0.00
			Max. Vx	23	-0.00	0.00	0.00
			Max Tension	15	7765.76	40.45	137.45
			Max. Compression	28	-41925.45	-28.95	-298.71
			Max. Mx	6	-19904.76	364.50	42.21
Secondary Horizontal	Max. My	2	-8734.77	-11.25	-338.53		
	Max. Vy	6	279.98	-175.71	-43.05		
	Max. Vx	2	272.96	-24.20	199.67		
	Max Tension	12	5653.77	0.00	0.00		
	Max. Compression	27	-9295.76	0.00	0.00		
Secondary Horizontal	Max. Mx	22	5057.57	25.68	0.00		
	Max. My	23	-2541.02	0.00	0.15		
	Max. Vy	22	-18.16	0.00	0.00		
	Max. Vx	23	-0.11	0.00	0.00		
	Max Tension	28	726.17	0.00	0.00		
		Secondary Horizontal	Max. Compression	28	-726.17	0.00	0.00
			Max. Mx	18	386.50	-9.77	0.00

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Section No.	Elevation ft	Component Type	Condition	Gov Load Comb	Force lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft
			Max. My	23	640.44	0.00	-0.00
			Max. Vy	18	9.77	0.00	0.00
			Max. Vx	23	0.00	0.00	0.00
		Guy A	Bottom Tension	28	17027.21		
			Top Tension	28	17357.22		
			Top Cable Vert	28	12727.16		
			Top Cable Norm	28	11801.39		
			Top Cable Tan	28	140.42		
			Bot Cable Vert	28	-11916.27		
			Bot Cable Norm	28	12160.39		
			Bot Cable Tan	28	230.92		
		Guy B	Bottom Tension	32	17207.16		
			Top Tension	32	17509.83		
			Top Cable Vert	32	12692.41		
			Top Cable Norm	32	12062.21		
			Top Cable Tan	32	10.93		
			Bot Cable Vert	32	-11925.90		
			Bot Cable Norm	32	12403.99		
			Bot Cable Tan	32	12.60		
		Guy C	Bottom Tension	21	17777.87		
			Top Tension	21	18095.11		
			Top Cable Vert	21	13171.92		
			Top Cable Norm	21	12406.88		
			Top Cable Tan	21	53.31		
			Bot Cable Vert	21	-12376.05		
			Bot Cable Norm	21	12762.23		
			Bot Cable Tan	21	108.45		
		Top Guy Pull-Off	Max Tension	22	20352.42	0.00	0.00
			Max. Compression	19	-5628.08	0.00	0.00
			Max. Mx	18	4623.42	-26.45	0.00
			Max. My	23	-3901.16	0.00	-0.00
			Max. Vy	18	26.45	0.00	0.00
			Max. Vx	23	0.00	0.00	0.00
		Bottom Guy Pull-Off	Max Tension	32	3181.67	0.00	0.00
			Max. Compression	19	-2725.65	0.00	0.00
			Max. Mx	18	558.64	-26.45	0.00
			Max. My	23	2936.02	0.00	0.00
			Max. Vy	18	26.45	0.00	0.00
			Max. Vx	23	-0.00	0.00	0.00
		Torque Arm Top	Max Tension	23	23556.94	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	23	20011.48	-89.23	0.00
			Max. My	23	8778.42	0.00	0.17
			Max. Vy	23	47.70	0.00	0.00
			Max. Vx	23	-0.09	0.00	0.00
		Torque Arm Bottom	Max Tension	13	1092.33	0.00	0.00
			Max. Compression	21	-23176.69	0.00	0.00
			Max Mx	24	-16503.08	-89.26	0.00
			Max. My	23	-240.90	0.00	-0.17
			Max. Vy	24	47.71	0.00	0.00
			Max. Vx	23	-0.09	0.00	0.00
T6	182 - 162	Leg	Max Tension	7	6305.97	-241.29	-145.56
			Max. Compression	28	-53971.17	113.03	-516.95
			Max. Mx	6	-41095.09	1015.20	-175.52
			Max. My	27	-52495.00	10.77	1087.27
			Max. Vy	31	770.14	535.72	207.25
			Max. Vx	27	-862.41	-13.20	-623.58
		Diagonal	Max Tension	23	1995.97	0.00	0.00
			Max. Compression	23	-1990.67	0.00	0.00
			Max. Mx	27	655.72	8.19	0.00

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Section No.	Elevation ft	Component Type	Condition	Gov Load Comb.	Force lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft	
T7	162 - 142	Secondary Horizontal	Max. My	23	-1364.46	0.00	0.05	
			Max. Vy	27	-5.79	0.00	0.00	
			Max. Vx	23	0.03	0.00	0.00	
			Max Tension	28	934.81	0.00	0.00	
			Max. Compression	28	-934.81	0.00	0.00	
			Max. Mx	24	849.40	-9.77	0.00	
			Max. My	23	862.46	0.00	0.00	
			Max. Vy	24	9.77	0.00	0.00	
			Max. Vx	23	-0.00	0.00	0.00	
			Max Tension	7	2880.52	-310.01	-182.18	
			Max. Compression	28	-51380.24	-123.96	-128.56	
			Max. Mx	6	-39606.34	-483.67	165.59	
		Max. My	27	-50380.01	5.41	-563.98		
		Max. Vy	12	496.94	144.49	-282.85		
		Max. Vx	3	626.41	-208.10	265.78		
		Diagonal	Max Tension	29	3633.35	0.00	0.00	
			Max. Compression	29	-3762.76	0.00	0.00	
			Max. Mx	28	3625.20	8.21	0.00	
			Max. My	23	1997.50	0.00	0.05	
			Max. Vy	28	-5.80	0.00	0.00	
			Max. Vx	23	-0.03	0.00	0.00	
			Max Tension	28	889.93	0.00	0.00	
			Max. Compression	28	-889.93	0.00	0.00	
Max. Mx	22		595.24	-9.77	0.00			
Max. My	23		823.72	0.00	0.00			
Max. Vy	22		9.77	0.00	0.00			
T8	142 - 122	Secondary Horizontal	Max. Vx	23	-0.00	0.00	0.00	
			Max Tension	5	5542.65	-139.11	172.88	
			Max. Compression	19	-56103.68	-49.73	40.08	
			Max. Mx	30	-38941.03	421.34	111.71	
			Max. My	26	-34499.48	-162.67	-440.19	
			Max. Vy	6	-338.50	-367.34	-77.44	
			Max. Vx	23	305.02	-189.88	-368.30	
			Diagonal	Max Tension	28	4544.29	0.00	0.00
				Max. Compression	29	-12045.98	0.00	0.00
				Max. Mx	28	3775.65	25.76	0.00
				Max. My	23	2207.42	0.00	0.14
				Max. Vy	28	-18.21	0.00	0.00
		Max. Vx		23	-0.10	0.00	0.00	
		Max Tension		19	971.74	0.00	0.00	
		Max. Compression		19	-971.74	0.00	0.00	
		Max. Mx		22	839.02	-9.77	0.00	
		Max. My		23	859.81	0.00	0.00	
		Max. Vy		22	9.77	0.00	0.00	
		Guy A	Max. Vx	23	-0.00	0.00	0.00	
			Bottom Tension	28	15880.98			
			Top Tension	28	16082.75			
			Top Cable Vert	28	9568.94			
			Top Cable Norm	28	12926.13			
Top Cable Tan	28		72.02					
Bot Cable Vert	28		-9013.15					
Bot Cable Norm	28		13074.50					
Bot Cable Tan	28		161.05					
Guy B	Bottom Tension		33	15650.53				
	Top Tension	33	15827.97					
	Top Cable Vert	33	9015.08					
	Top Cable Norm	33	13009.71					
	Top Cable Tan	33	20.70					

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Section No	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft	
T9	122 - 102	Guy C	Bot Cable Vert	33	-8514.10			
			Bot Cable Norm	33	13131.80			
			Bot Cable Tan	33	69.60			
			Bottom Tension	21	16233.78			
			Top Tension	21	16424.26			
			Top Cable Vert	21	9557.26			
			Top Cable Norm	21	13357.20			
			Top Cable Tan	21	20.37			
			Bot Cable Vert	21	-9029.85			
			Bot Cable Norm	21	13490.44			
		Top Guy Pull-Off	Bot Cable Tan	21	74.52			
			Max Tension	22	22676.86	0.00	0.00	
			Max. Compression	19	-5557.76	0.00	0.00	
			Max. Mx	22	22676.86	-26.45	0.00	
			Max. My	23	7961.82	0.00	0.00	
			Max. Vy	22	26.45	0.00	0.00	
			Max. Vx	23	-0.00	0.00	0.00	
		Bottom Guy Pull-Off	Max Tension	32	10643.78	0.00	0.00	
			Max. Compression	2	-2459.47	0.00	0.00	
			Max. Mx	22	10580.01	-26.45	0.00	
			Max. My	23	3098.55	0.00	0.00	
			Max. Vy	22	26.45	0.00	0.00	
			Max. Vx	23	-0.00	0.00	0.00	
			Max Tension	23	20363.74	0.00	0.00	
		Torque Arm Top	Max. Compression	1	0.00	0.00	0.00	
			Max. Mx	28	18883.66	-89.28	0.00	
			Max. My	23	18662.61	0.00	0.12	
			Max. Vy	28	47.72	0.00	0.00	
			Max. Vx	23	0.06	0.00	0.00	
			Max Tension	30	4515.34	0.00	0.00	
			Max. Compression	21	-19752.78	0.00	0.00	
		Torque Arm Bottom	Max. Mx	28	-10165.38	-89.30	0.00	
			Max. My	23	1428.55	0.00	-0.10	
			Max. Vy	28	47.73	0.00	0.00	
			Max. Vx	23	0.05	0.00	0.00	
			Max Tension	1	0.00	0.00	0.00	
			Max. Compression	23	-67844.83	655.18	-74.96	
			Max. Mx	23	-67844.83	655.18	-74.96	
		Diagonal	Max. My	17	-39879.07	-126.23	-799.38	
			Max. Vy	7	-716.34	-432.40	-119.14	
Max. Vx	17		833.05	1.60	450.29			
Max Tension	31		4298.79	0.00	0.00			
Max. Compression	31		-4177.45	0.00	0.00			
Max. Mx	28		-237.71	25.75	0.00			
Max. My	23		650.21	0.00	0.14			
Secondary Horizontal	Max. Vy	28	-18.21	0.00	0.00			
	Max. Vx	23	-0.10	0.00	0.00			
	Max Tension	23	1175.11	0.00	0.00			
	Max. Compression	23	-1175.11	0.00	0.00			
	Max. Mx	22	817.47	-9.77	0.00			
	Max. My	23	1175.11	0.00	0.00			
	Max. Vy	22	9.77	0.00	0.00			
T10	102 - 82	Leg	Max. Vx	23	-0.00	0.00	0.00	
			Max Tension	1	0.00	0.00	0.00	
			Max. Compression	23	-73402.11	410.78	-268.36	
			Max. Mx	19	-62138.69	-804.24	138.27	
			Max. My	24	-65183.83	290.36	-779.95	
			Max. Vy	19	605.79	-804.24	138.28	
			Max. Vx	25	624.70	245.76	-778.68	

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Section No	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft	
T11	82 - 62	Diagonal	Max Tension	25	2108.97	0.00	0.00	
			Max. Compression	26	-2846.90	0.00	0.00	
			Max. Mx	29	-654.59	8.22	0.00	
			Max. My	24	-2724.12	0.00	0.06	
			Max. Vy	29	-5.81	0.00	0.00	
			Max. Vx	24	-0.04	0.00	0.00	
			Secondary Horizontal	Max Tension	23	1271.36	0.00	0.00
				Max. Compression	23	-1271.36	0.00	0.00
				Max. Mx	22	626.27	-9.77	0.00
				Max. My	23	1271.36	0.00	0.00
		Max. Vy		22	9.77	0.00	0.00	
		Max. Vx		23	-0.00	0.00	0.00	
		Leg		Max Tension	1	0.00	0.00	0.00
				Max. Compression	23	-73228.66	454.41	-328.40
				Max. Mx	19	-69057.14	-1583.60	297.16
				Max. My	29	-63215.22	-448.19	-1572.90
			Max. Vy	19	1041.07	-1583.60	297.18	
			Max. Vx	29	-1054.89	-448.21	-1572.89	
			Diagonal	Max Tension	22	4309.97	0.00	0.00
				Max. Compression	22	-3886.75	0.00	0.00
				Max. Mx	25	-3350.97	8.24	0.00
				Max. My	24	-2810.01	0.00	0.07
		Max. Vy		25	-5.83	0.00	0.00	
		Max. Vx		24	-0.05	0.00	0.00	
		Secondary Horizontal		Max Tension	23	1268.36	0.00	0.00
				Max. Compression	23	-1268.36	0.00	0.00
				Max. Mx	18	698.57	-9.77	0.00
				Max. My	23	1268.36	0.00	0.00
			Max. Vy	18	9.77	0.00	0.00	
			Max. Vx	23	-0.00	0.00	0.00	
			Guy A	Bottom Tension	27	12480.55		
				Top Tension	27	12588.82		
				Top Cable Vert	27	5257.96		
				Top Cable Norm	27	11438.19		
		Top Cable Tan		27	0.16			
		Bot Cable Vert		27	-4909.32			
		Bot Cable Norm		27	11474.44			
		Bot Cable Tan		27	0.16			
		Guy B		Bottom Tension	32	12077.38		
				Top Tension	32	12164.34		
Top Cable Vert	32		4465.87					
Top Cable Norm	32		11314.91					
Top Cable Tan	32		1.53					
Bot Cable Vert	32		-4162.62					
Bot Cable Norm	32		11337.35					
Bot Cable Tan	32		1.53					
Guy C	Bottom Tension		21	12337.01				
	Top Tension		21	12435.07				
	Top Cable Vert	21	4903.01					
	Top Cable Norm	21	11427.65					
	Top Cable Tan	21	11.72					
	Bot Cable Vert	21	-4565.83					
	Bot Cable Norm	21	11460.91					
	Bot Cable Tan	21	48.87					
	Leg	Max Tension	1	0.00	0.00	0.00		
		Max. Compression	21	-86039.64	444.28	-233.22		
Max. Mx		19	-72582.19	-1170.39	184.15			
Max. My		24	-70256.56	432.75	-1129.20			
Max. Vy		19	-809.44	-1170.39	184.15			

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Section No	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft	
T13	42 - 22	Diagonal	Max. Vx	25	-820.46	363.81	-1127.65	
			Max Tension	23	3013.24	0.00	0.00	
			Max. Compression	22	-2740.46	0.00	0.00	
			Max. Mx	25	484.57	8.27	0.00	
			Max. My	24	1151.12	0.00	0.09	
			Max. Vy	25	-5.85	0.00	0.00	
		Secondary Horizontal	Max. Vx	24	-0.06	0.00	0.00	
			Max Tension	21	1490.25	0.00	0.00	
			Max. Compression	21	-1490.25	0.00	0.00	
			Max. Mx	18	696.66	-9.77	0.00	
			Max. My	23	1490.12	0.00	0.00	
			Max. Vy	18	9.77	0.00	0.00	
		Leg	Max. Vx	23	-0.00	0.00	0.00	
			Max Tension	1	0.00	0.00	0.00	
			Max. Compression	21	-85450.65	423.50	-223.06	
			Max. Mx	19	-74626.15	-671.59	131.77	
			Max. My	25	-78907.80	185.17	-662.70	
			Max. Vy	20	-538.49	-642.28	209.63	
			Diagonal	Max. Vx	28	-563.84	-134.96	-653.60
				Max Tension	24	1470.53	0.00	0.00
				Max. Compression	24	-2146.61	0.00	0.00
				Max. Mx	25	1420.20	8.29	0.00
				Max. My	24	-184.52	0.00	0.11
				Max. Vy	25	-5.87	0.00	0.00
Secondary Horizontal	Max. Vx	24	-0.08	0.00	0.00			
	Max Tension	21	1480.05	0.00	0.00			
	Max. Compression	21	-1480.05	0.00	0.00			
	Max. Mx	18	705.12	-9.77	0.00			
	Max. My	23	1475.01	0.00	0.00			
	Max. Vy	18	9.77	0.00	0.00			
T14	22 - 2	Leg	Max. Vx	23	-0.00	0.00	0.00	
			Max Tension	1	0.00	0.00	0.00	
			Max. Compression	21	-76138.65	365.12	-197.43	
			Max. Mx	19	-68717.29	-517.65	158.06	
			Max. My	25	-72099.07	95.19	-539.60	
			Max. Vy	20	-441.67	-506.83	206.69	
		Diagonal	Max. Vx	28	-478.19	-72.37	-537.51	
			Max Tension	25	2747.09	0.00	0.00	
			Max. Compression	25	-3521.55	0.00	0.00	
			Max. Mx	25	2656.34	8.31	0.00	
			Max. My	24	276.50	0.00	0.12	
			Max. Vy	25	-5.88	0.00	0.00	
		Secondary Horizontal	Max. Vx	24	-0.08	0.00	0.00	
			Max Tension	21	1318.76	0.00	0.00	
			Max. Compression	21	-1318.76	0.00	0.00	
			Max. Mx	18	716.26	-9.77	0.00	
			Max. My	23	1317.07	0.00	0.00	
			Max. Vy	18	9.77	0.00	0.00	
Base Beam	Max. Vx	23	-0.00	0.00	0.00			
	Max Tension	24	3319.38	-130474.40	866.21			
	Max. Compression	22	-2613.23	374.54	1.38			
	Max. Mx	24	-56706.27	-130571.56	-987.03			
	Max. My	23	-55522.10	-127868.21	3193.58			
	Max. Vy	24	-56706.27	-130571.56	-987.03			
		Max. Vx	23	1381.64	-127868.21	3193.58		

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Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical lb	Horizontal, X lb	Horizontal, Z lb
Guy C @ 213 ft Elev -17.5 ft Azimuth 240 deg	Max. Vert	13	-1703.97	-1188.17	685.09
	Max. H _x	13	-1703.97	-1188.17	685.09
	Max. H _z	21	-60853.58	-64044.99	37740.98
	Min. Vert	21	-60853.58	-64044.99	37740.98
	Min. H _x	22	-60829.12	-64223.96	37135.66
	Min. H _z	13	-1703.97	-1188.17	685.09
Guy B @ 205 ft Elev -7.5 ft Azimuth 120 deg	Max. Vert	7	-1635.01	1150.04	663.52
	Max. H _x	32	-58803.06	63220.60	36537.90
	Max. H _z	33	-58463.16	62664.57	36897.81
	Min. Vert	32	-58803.06	63220.60	36537.90
	Min. H _x	7	-1635.01	1150.04	663.52
	Min. H _z	7	-1635.01	1150.04	663.52
Guy A @ 219 ft Elev -26.5 ft Azimuth 0 deg Mast	Max. Vert	2	-1822.03	-0.39	-1445.23
	Max. H _x	31	-33117.88	2911.25	-38907.88
	Max. H _z	2	-1822.03	-0.39	-1445.23
	Min. Vert	27	-60522.90	15.80	-72567.71
	Min. H _x	23	-33156.49	-2933.68	-39083.89
	Min. H _z	27	-60522.90	15.80	-72567.71
	Max. Vert	24	170097.42	-2598.21	-1435.29
	Max. H _x	31	165236.38	3238.51	214.81
	Max. H _z	19	168675.24	41.20	3087.19
	Max. M _x	1	0.00	6.27	121.87
	Max. M _z	1	0.00	6.27	121.87
	Min. Torsion	23	3017.30	-3099.23	239.73
	Min. Vert	1	86129.90	6.27	121.87
	Min. H _x	23	166668.86	-3099.23	239.73
	Min. H _z	27	159477.86	43.98	-3292.73
	Min. M _x	1	0.00	6.27	121.87
Min. M _z	1	0.00	6.27	121.87	
Min. Torsion	31	-2750.08	3238.51	214.81	

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	86129.90	-6.27	-121.87	0.00	0.00	0.13
Dead+Wind 0 deg - No Ice+Guy	125977.03	-18.92	-2477.48	0.00	0.00	437.20
Dead+Wind 30 deg - No Ice+Guy	121186.89	1293.86	-2089.77	0.00	0.00	-271.74
Dead+Wind 45 deg - No Ice+Guy	115023.10	1852.13	-1778.33	0.00	0.00	-709.10
Dead+Wind 60 deg - No Ice+Guy	110706.97	2252.83	-1373.59	0.00	0.00	-1626.21
Dead+Wind 90 deg - No Ice+Guy	121280.99	2444.34	-223.62	0.00	0.00	-2115.10

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Load Combination	Vertical lb	Shear _x lb	Shear _y lb	Overturning Moment, M _x lb-ft	Overturning Moment, M _y lb-ft	Torque lb-ft
Dead+Wind 120 deg - No Ice+Guy	127389.56	2082.06	1092.73	0.00	0.00	-1830.64
Dead+Wind 135 deg - No Ice+Guy	124100.25	1631.63	1622.90	0.00	0.00	-1440.56
Dead+Wind 150 deg - No Ice+Guy	120143.28	1130.67	2084.44	0.00	0.00	-905.69
Dead+Wind 180 deg - No Ice+Guy	109696.04	-30.04	2512.32	0.00	0.00	110.98
Dead+Wind 210 deg - No Ice+Guy	120699.25	-1145.95	2050.23	0.00	0.00	632.86
Dead+Wind 225 deg - No Ice+Guy	124398.92	-1648.69	1593.19	0.00	0.00	1109.10
Dead+Wind 240 deg - No Ice+Guy	126957.07	-2113.43	1089.73	0.00	0.00	1391.69
Dead+Wind 270 deg - No Ice+Guy	119137.01	-2534.56	-197.56	0.00	0.00	1803.83
Dead+Wind 300 deg - No Ice+Guy	109743.28	-2330.11	-1388.54	0.00	0.00	1521.35
Dead+Wind 315 deg - No Ice+Guy	113134.72	-1917.93	-1844.76	0.00	0.00	1145.74
Dead+Wind 330 deg - No Ice+Guy	118564.70	-1355.40	-2182.84	0.00	0.00	862.16
Dead+Ice+Temp+Guy	124722.48	-23.30	-70.27	0.00	0.00	1.43
Dead+Wind 0 deg+Ice+Temp+Guy	168675.24	-41.20	-3087.19	0.00	0.00	1102.44
Dead+Wind 30 deg+Ice+Temp+Guy	166786.43	1669.43	-2604.41	0.00	0.00	257.31
Dead+Wind 45 deg+Ice+Temp+Guy	163043.20	2379.30	-2197.55	0.00	0.00	-482.88
Dead+Wind 60 deg+Ice+Temp+Guy	160502.46	2884.56	-1700.08	0.00	0.00	-1686.97
Dead+Wind 90 deg+Ice+Temp+Guy	166668.86	3099.23	-239.73	0.00	0.00	-3017.30
Dead+Wind 120 deg+Ice+Temp+Guy	170097.42	2598.21	1435.29	0.00	0.00	-2720.84
Dead+Wind 135 deg+Ice+Temp+Guy	168389.46	2065.36	2156.09	0.00	0.00	-2252.63
Dead+Wind 150 deg+Ice+Temp+Guy	165811.47	1393.03	2730.56	0.00	0.00	-1666.36
Dead+Wind 180 deg+Ice+Temp+Guy	159477.86	-43.98	3292.73	0.00	0.00	-859.13
Dead+Wind 210 deg+Ice+Temp+Guy	166316.58	-1442.15	2694.96	0.00	0.00	61.34
Dead+Wind 225 deg+Ice+Temp+Guy	168454.21	-2126.05	2129.22	0.00	0.00	854.70
Dead+Wind 240 deg+Ice+Temp+Guy	169488.71	-2682.73	1436.99	0.00	0.00	1593.50
Dead+Wind 270 deg+Ice+Temp+Guy	165236.38	-3238.51	-214.81	0.00	0.00	2750.08
Dead+Wind 300 deg+Ice+Temp+Guy	160001.91	-3005.86	-1718.01	0.00	0.00	2521.53
Dead+Wind 315 deg+Ice+Temp+Guy	161816.52	-2486.40	-2280.91	0.00	0.00	1987.49
Dead+Wind 330 deg+Ice+Temp+Guy	164898.77	-1774.02	-2710.86	0.00	0.00	1571.27
Dead+Wind 0 deg - Service+Guy	88366.32	-6.79	-1136.09	0.00	0.00	185.63
Dead+Wind 30 deg - Service+Guy	88237.01	481.45	-966.86	0.00	0.00	-47.89
Dead+Wind 45 deg - Service+Guy	88226.79	683.41	-805.74	0.00	0.00	-174.43

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Load Combination	Vertical lb	Shear _x lb	Shear _y lb	Overturning Moment, M _x lb-ft	Overturning Moment, M _y lb-ft	Torque lb-ft
Dead+Wind 60 deg - Service+Guy	88183.27	837.78	-602.08	0.00	0.00	-402.11
Dead+Wind 90 deg - Service+Guy	87937.44	991.92	-111.84	0.00	0.00	-657.39
Dead+Wind 120 deg - Service+Guy	87882.04	900.66	402.72	0.00	0.00	-597.75
Dead+Wind 135 deg - Service+Guy	87691.90	711.93	588.52	0.00	0.00	-479.13
Dead+Wind 150 deg - Service+Guy	87665.36	498.89	742.40	0.00	0.00	-314.08
Dead+Wind 180 deg - Service+Guy	87795.59	-11.59	857.69	0.00	0.00	-80.99
Dead+Wind 210 deg - Service+Guy	87849.86	-516.08	736.24	0.00	0.00	141.47
Dead+Wind 225 deg - Service+Guy	87930.89	-726.57	582.98	0.00	0.00	313.11
Dead+Wind 240 deg - Service+Guy	88151.59	-913.39	402.63	0.00	0.00	411.22
Dead+Wind 270 deg - Service+Guy	88201.91	-1013.05	-107.08	0.00	0.00	544.07
Dead+Wind 300 deg - Service+Guy	88415.11	-863.57	-605.10	0.00	0.00	481.73
Dead+Wind 315 deg - Service+Guy	88387.15	-706.95	-814.48	0.00	0.00	408.63
Dead+Wind 330 deg - Service+Guy	88293.40	-502.11	-978.97	0.00	0.00	329.69

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	-40279.05	0.00	6.05	40279.08	15.10	0.040%
2	482.09	-40543.99	-53911.03	-480.38	40541.63	53824.06	0.129%
3	27030.82	-40253.58	-46501.35	-27037.77	40251.65	46420.84	0.120%
4	37856.29	-40047.07	-37688.74	-37872.89	40045.74	37614.34	0.114%
5	46137.56	-39969.41	-26304.64	-46118.14	39969.64	26363.18	0.093%
6	53722.62	-40310.52	323.37	-53656.31	40308.63	-272.05	0.125%
7	47122.73	-40643.48	26723.97	-47042.95	40640.98	-26675.68	0.138%
8	37660.63	-40555.62	36523.15	-37583.05	40553.35	-36480.99	0.133%
9	26843.63	-40335.99	44740.39	-26769.29	40334.11	-44706.31	0.124%
10	307.70	-40014.11	51496.17	-253.32	40014.21	-51504.51	0.084%
11	-26589.22	-40304.51	45773.13	26515.41	40302.56	-45737.01	0.124%
12	-37435.06	-40511.02	37562.99	37358.51	40508.70	-37519.23	0.132%
13	-46916.48	-40588.68	27161.56	46839.44	40586.22	-27112.86	0.135%
14	-52188.76	-40247.57	316.69	52128.76	40245.87	-268.25	0.117%
15	-43897.44	-39914.61	-25366.61	43923.44	39915.29	25388.97	0.053%
16	-35791.33	-40002.47	-36266.53	35808.60	40001.42	36201.96	0.103%
17	-25248.09	-40222.10	-44873.60	25257.86	40220.43	44800.09	0.114%
18	0.00	-68540.86	0.00	-0.72	68540.83	-4.20	0.006%
19	475.21	-69070.44	-64255.00	-473.37	69068.03	64158.51	0.102%
20	32404.14	-68489.95	-55691.76	-32418.57	68488.01	55599.09	0.100%
21	45546.56	-68077.28	-45290.93	-45573.10	68075.98	45203.50	0.098%
22	55618.80	-67921.86	-31816.94	-55556.36	67920.82	31816.50	0.067%
23	64458.92	-68603.54	190.06	-64386.11	68601.63	-124.86	0.104%
24	56118.84	-69269.05	31869.56	-56029.83	69266.42	-31815.04	0.110%
25	45422.59	-69093.28	44358.31	-45331.61	69090.83	-44312.60	0.109%
26	32195.67	-68654.45	54340.10	-32105.82	68652.49	-54306.14	0.103%

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Load Comb.	Sum of Applied Forces				Sum of Reactions		% Error
	PX lb	PY lb	PZ lb	PX lb	PY lb	PZ lb	
27	243.86	-68011.29	62724.38	-211.00	68010.03	-62661.06	0.077%
28	-31977.11	-68591.78	55132.73	31888.90	68589.78	-55096.73	0.102%
29	-45153.07	-69004.45	45186.04	45064.95	69002.04	-45139.39	0.106%
30	-55857.52	-69159.86	32267.42	55772.48	69157.34	-32213.09	0.107%
31	-63237.32	-68478.19	225.17	63173.16	68476.54	-165.74	0.094%
32	-53866.29	-67812.68	-31086.71	53853.21	67812.28	31067.76	0.025%
33	-43929.11	-67988.45	-44191.59	43956.10	67987.39	44112.59	0.091%
34	-30967.21	-68427.27	-54444.34	30983.88	68425.62	54361.00	0.092%
35	166.81	-40370.72	-18654.34	-166.05	40370.50	18631.82	0.051%
36	9353.23	-40270.23	-16090.43	-9356.18	40270.08	16069.19	0.048%
37	13099.06	-40198.78	-13041.09	-13102.35	40198.64	13017.50	0.054%
38	15964.55	-40171.91	-9101.95	-15945.51	40171.76	9092.62	0.048%
39	18589.14	-40289.94	111.89	-18573.36	40289.84	-95.99	0.050%
40	16305.44	-40405.15	9247.05	-16284.90	40404.93	-9234.10	0.055%
41	13031.36	-40374.75	12637.77	-13011.48	40374.58	-12628.38	0.050%
42	9288.45	-40298.75	15481.10	-9267.51	40298.63	-15474.07	0.050%
43	106.47	-40187.37	17818.75	-105.61	40187.24	-17796.45	0.051%
44	-9200.42	-40287.86	15838.45	9178.91	40287.71	-15830.21	0.052%
45	-12953.31	-40359.31	12997.57	12931.42	40359.11	-12986.35	0.055%
46	-16234.08	-40386.19	9398.46	16215.67	40385.99	-9386.02	0.050%
47	-18058.39	-40268.16	109.58	18044.10	40268.07	-94.32	0.047%
48	-15189.43	-40152.94	-8777.38	15174.65	40152.83	8770.17	0.038%
49	-12384.54	-40183.35	-12548.97	12388.63	40183.24	12527.91	0.049%
50	-8736.36	-40259.34	-15527.20	8740.85	40259.21	15506.00	0.049%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	20	0.0000001	0.00004723
2	Yes	98	0.00019558	0.00009438
3	Yes	93	0.00019543	0.00008238
4	Yes	87	0.00019853	0.00005937
5	Yes	32	0.00018719	0.00013847
6	Yes	100	0.00019728	0.00007765
7	Yes	104	0.00019333	0.00009293
8	Yes	102	0.00019370	0.00008771
9	Yes	99	0.00019198	0.00007707
10	Yes	33	0.00018912	0.00015968
11	Yes	96	0.00019324	0.00008212
12	Yes	99	0.00019621	0.00009218
13	Yes	101	0.00019592	0.00009563
14	Yes	96	0.00019913	0.00007487
15	Yes	28	0.00019271	0.00012444
16	Yes	85	0.00019430	0.00005127
17	Yes	92	0.00019646	0.00007485
18	Yes	12	0.00020000	0.00018477
19	Yes	101	0.00019597	0.00007458
20	Yes	96	0.00019774	0.00006477
21	Yes	89	0.00019670	0.00004376
22	Yes	25	0.00019140	0.00017358
23	Yes	103	0.00019859	0.00005689
24	Yes	107	0.00019475	0.00007174
25	Yes	105	0.00019469	0.00006762
26	Yes	102	0.00019175	0.00005675
27	Yes	29	0.00018867	0.00015242

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28	Yes	99	0.00019368	0.00006296
29	Yes	102	0.00019566	0.00007178
30	Yes	104	0.00019658	0.00007444
31	Yes	100	0.00019444	0.00005503
32	Yes	22	0.00009282	0.00016745
33	Yes	87	0.00019558	0.00003864
34	Yes	96	0.00019276	0.00005697
35	Yes	39	0.00000001	0.00003644
36	Yes	36	0.00000001	0.00003102
37	Yes	30	0.00019786	0.00003596
38	Yes	20	0.00019163	0.00005919
39	Yes	36	0.00000001	0.00003770
40	Yes	40	0.00019919	0.00005320
41	Yes	38	0.00000001	0.00004717
42	Yes	35	0.00000001	0.00004140
43	Yes	19	0.00018511	0.00006572
44	Yes	35	0.00018516	0.00004017
45	Yes	37	0.00019917	0.00004938
46	Yes	40	0.00000001	0.00004501
47	Yes	35	0.00000001	0.00003334
48	Yes	20	0.00000001	0.00005529
49	Yes	29	0.00000001	0.00003579
50	Yes	34	0.00000001	0.00003319

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	282 - 262	2.711	43	0.1116	0.1479
T2	262 - 242	3.071	43	0.1092	0.1375
T3	242 - 222	3.365	43	0.0760	0.1254
T4	222 - 202	3.469	43	0.0280	0.1003
T5	202 - 182	3.394	43	0.0258	0.0897
T6	182 - 162	3.314	44	0.0306	0.0831
T7	162 - 142	3.161	44	0.0700	0.0695
T8	142 - 122	2.888	46	0.0908	0.0478
T9	122 - 102	2.770	35	0.0608	0.0416
T10	102 - 82	2.758	35	0.0665	0.0428
T11	82 - 62	2.583	35	0.0839	0.0385
T12	62 - 42	2.234	35	0.1031	0.0345
T13	42 - 22	1.698	35	0.1558	0.0261
T14	22 - 2	0.931	35	0.2049	0.0144

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
289.00	FM Antenna	43	2.711	0.1116	0.1479	396263
284.00	2.5" x 10' Omni	43	2.711	0.1116	0.1479	396263
282.00	DLS L 864-L-865 Light Beacon Unit	43	2.711	0.1116	0.1479	396263
281.00	6' Stand-off	43	2.729	0.1119	0.1474	396263
280.00	MF-950B	43	2.747	0.1121	0.1468	396263
270.00	Guy	43	2.930	0.1128	0.1414	165109

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Elevation	Appurtenance	Gov. Load Comb.	Deflection	Tilt	Twist	Radius of Curvature
ft			in	°	°	ft
260.00	ASP-711	43	3.105	0.1074	0.1366	72115
240.00	DS9A09F36D-N Omni	43	3.385	0.0711	0.1232	21651
230.00	3' Stand-off	43	3.454	0.0458	0.1101	20465
228.00	Pirod 12' T-Frame Sector Mount (1)	43	3.461	0.0410	0.1074	20267
218.00	531-70HD Exposed Dipole Antenna	43	3.464	0.0242	0.0968	26179
212.50	8' Dish w/ Radome	43	3.445	0.0263	0.0935	47721
204.50	8' Dish w/ Radome	43	3.406	0.0266	0.0904	38827
196.00	Guy	43	3.367	0.0279	0.0880	43241
180.50	6' Stand-off	44	3.309	0.0321	0.0825	40363
164.00	(2) 7770 Panel Antenna	44	3.186	0.0655	0.0715	18895
153.00	6 5' Dish w/ Radome	46	3.032	0.0862	0.0594	45220
142.00	(3) L-810 Obstruction Lights w/ Mount Kit	46	2.888	0.0908	0.0478	37197
132.00	14' Dipole	35	2.782	0.0766	0.0424	37096
128.00	Guy	35	2.775	0.0693	0.0417	39060
125.00	3" x 12.5' Omni	35	2.771	0.0645	0.0415	40933
124.50	1' Yagi antenna	35	2.771	0.0638	0.0415	41471
121.00	6'8"x4" Pipe Mount	35	2.770	0.0599	0.0417	50839
104.50	9' Dish w/ Radome	35	2.766	0.0641	0.0432	25794
70.00	Guy	35	2.394	0.0902	0.0368	28184

Maximum Tower Deflections - Design Wind

Section No	Elevation	Horz Deflection	Gov. Load Comb.	Tilt	Twist
	ft	m		°	°
T1	282 - 262	14.430	19	0.3720	0.5854
T2	262 - 242	15.875	30	0.3666	0.5505
T3	242 - 222	17.106	30	0.2668	0.5077
T4	222 - 202	17.796	24	0.1381	0.4271
T5	202 - 182	18.054	24	0.1343	0.3927
T6	182 - 162	18.267	24	0.1095	0.3718
T7	162 - 142	18.063	24	0.2151	0.3152
T8	142 - 122	17.157	24	0.2938	0.2291
T9	122 - 102	16.251	24	0.2358	0.2092
T10	102 - 82	15.340	24	0.3223	0.2013
T11	82 - 62	13.760	24	0.4651	0.1919
T12	62 - 42	11.519	24	0.6167	0.1653
T13	42 - 22	8.511	24	0.8272	0.1225
T14	22 - 2	4.594	24	1.0255	0.0666

Critical Deflections and Radius of Curvature - Design Wind

Elevation	Appurtenance	Gov. Load Comb.	Deflection	Tilt	Twist	Radius of Curvature
ft			in	°	°	ft
289.00	FM Antenna	19	14.430	0.3720	0.5854	121781
284.00	2.5" x 10' Omni	19	14.430	0.3720	0.5854	121781
282.00	DLS L 864-L-865 Light Beacon Unit	19	14.430	0.3720	0.5854	121781
281.00	6' Stand-off	30	14.503	0.3728	0.5836	121781
280.00	MF-950B	30	14.576	0.3735	0.5818	121781

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Elevation	Appurtenance	Gov. Load	Deflection	Tilt	Twist	Radius of Curvature
ft		Comb	in	°	°	ft
270.00	Guy	30	15.307	0.3766	0.5639	50742
260.00	ASP-711	30	16.014	0.3614	0.5473	22731
240.00	DS9A09F36D-N Omni	30	17.201	0.2519	0.5005	6986
230.00	3' Stand-off	30	17.575	0.1731	0.4582	6531
228.00	Pirod 12' T-Frame Sector Mount (1)	30	17.630	0.1580	0.4497	6455
218.00	531-70HD Exposed Dipole Antenna	24	17.875	0.1365	0.4158	8121
212.50	8' Dish w/ Radome	24	17.950	0.1456	0.4047	13745
204.50	8' Dish w/ Radome	24	18.028	0.1397	0.3950	13498
196.00	Guy	24	18.124	0.1177	0.3878	16582
180.50	6' Stand-off	24	18.273	0.1131	0.3692	10172
164.00	(2) 7770 Panel Antenna	24	18.118	0.2021	0.3233	5200
153.00	6.5' Dish w/ Radome	24	17.707	0.2677	0.2734	10543
142.00	(3) L-810 Obstruction Lights w/ Mount Kit	24	17.157	0.2938	0.2291	11420
132.00	14' Dipole	24	16.681	0.2660	0.2125	10864
128.00	Guy	24	16.503	0.2505	0.2105	11145
125.00	3" x 12.5' Omni	24	16.375	0.2412	0.2098	11432
124.50	1' Yagi antenna	24	16.354	0.2400	0.2097	11536
121.00	6'8"x4" Pipe Mount	24	16.210	0.2352	0.2089	13925
104.50	9' Dish w/ Radome	24	15.482	0.3047	0.2023	6298
70.00	Guy	24	12.496	0.5530	0.1782	6992

Guy Design Data

Section No.	Elevation	Size	Initial Tension	Breaking Load	Actual T	Allowable T _a	Required S.F.	Actual S.F.
	ft		lb	lb	lb	lb		
T1	270.00 (A)	3/4 EHS	5830.00	58299.91	18800.40	29150.00	2.000	3.101 ✓
	(678)							
	270.00 (B)	3/4 EHS	5830.00	58299.91	18792.20	29150.00	2.000	3.102 ✓
	(677)							
	270.00 (C)	3/4 EHS	5830.00	58299.91	19023.60	29150.00	2.000	3.065 ✓
	(676)							
T5	196.00 (A)	5/8 EHS	3799.04	42399.99	17126.90	21200.00	2.000	2.476 ✓
	(697)							
	196.00 (A)	5/8 EHS	3799.04	42399.99	17357.20	21200.00	2.000	2.443 ✓
	(698)							
	196.00 (B)	5/8 EHS	4240.00	42399.99	16952.70	21200.00	2.000	2.501 ✓
	(691)							
	196.00 (B)	5/8 EHS	4240.00	42399.99	17509.80	21200.00	2.000	2.421 ✓
	(692)							
	196.00 (C)	5/8 EHS	4240.00	42399.99	18095.10	21200.00	2.000	2.343 ✓
	(679)							
	196.00 (C)	5/8 EHS	4240.00	42399.99	17259.80	21200.00	2.000	2.457 ✓
	(680)							
T8	128.00 (A)	9/16 EHS	3500.00	35000.04	15791.50	17500.00	2.000	2.216 ✓
	(721)							
	128.00 (A)	9/16 EHS	3500.00	35000.04	16082.70	17500.00	2.000	2.176 ✓
	(722)							
	128.00 (B)	9/16 EHS	3500.00	35000.04	15517.60	17500.00	2.000	2.256 ✓
	(715)							
	128.00 (B)	9/16 EHS	3500.00	35000.04	15828.00	17500.00	2.000	2.211 ✓
	(716)							
	128.00 (C)	9/16 EHS	3500.00	35000.04	16424.30	17500.00	2.000	2.131 ✓
	(703)							
	128.00 (C)	9/16 EHS	3500.00	35000.04	15980.20	17500.00	2.000	2.190 ✓

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Section No.	Elevation ft	Size	Initial Tension lb	Breaking Load lb	Actual T lb	Allowable T _a lb	Required S.F.	Actual S.F.
T11	(704) 70.00 (A)	1/2 EHS	3497.00	26900.04	12588.80	13450.00	2.000	2.137 ✓
	(729) 70.00 (B) (728)	1/2 EHS	2690.00	26900.04	12164.30	13450.00	2.000	2.211 ✓
	70.00 (C) (727)	1/2 EHS	2690.00	26900.04	12435.10	13450.00	2.000	2.163 ✓

Compression Checks

Leg Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _n ft	Kl/r	Mast Stability Index	F _a ksi	A in ²	Actual P lb	Allow. P _a lb	Ratio P/P _a
T1	282 - 262	2	20.00	2.00	48.0 K=1.00	1.00	22,528	3.1416	-16093.70	70773.60	0.227
T2	262 - 242	2	20.00	2.00	48.0 K=1.00	1.00	22,528	3.1416	-32130.10	70773.60	0.454
T3	242 - 222	2	20.00	2.00	48.0 K=1.00	1.00	22,528	3.1416	-37100.60	70773.60	0.524
T4	222 - 202	2	20.00	2.00	48.0 K=1.00	1.00	22,528	3.1416	-30682.70	70773.60	0.434
T5	202 - 182	2	20.00	2.00	48.0 K=1.00	1.00	22,528	3.1416	-41925.50	70773.60	0.592
T6	182 - 162	2	20.00	2.00	48.0 K=1.00	1.00	22,528	3.1416	-53971.20	70773.60	0.763
T7	162 - 142	2	20.00	2.00	48.0 K=1.00	1.00	22,528	3.1416	-51380.20	70773.60	0.726
T8	142 - 122	2	20.00	2.00	48.0 K=1.00	1.00	22,528	3.1416	-56103.70	70773.60	0.793
T9	122 - 102	2	20.00	2.00	48.0 K=1.00	1.00	22,528	3.1416	-67844.80	70773.60	0.959
T10	102 - 82	2	20.00	2.00	48.0 K=1.00	1.00	22,528	3.1416	-73402.10	70773.60	1.037
T11	82 - 62	2	20.00	2.00	48.0 K=1.00	1.00	22,528	3.1416	-73228.70	70773.60	1.035
T12	62 - 42	2	20.00	2.00	48.0 K=1.00	1.00	22,528	3.1416	-86039.60	70773.60	1.216
T13	42 - 22	2	20.00	2.00	48.0 K=1.00	1.00	22,528	3.1416	-85450.70	70773.60	1.207
T14	22 - 2	2	20.00	2.00	48.0 K=1.00	1.00	22,528	3.1416	-76138.60	70773.60	1.076

Diagonal Design Data (Compression)

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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	282 - 262	7/8	5.66	5.42	148.7 K=0.50	6.754	0.6013	-4195.31	4061.32	1.033
T2	262 - 242	7/8	5.66	5.42	148.7 K=0.50	6.754	0.6013	-2534.16	4061.32	0.624
T3	242 - 222	7/8	5.66	5.42	148.7 K=0.50	6.754	0.6013	-2626.53	4061.32	0.647
T4	222 - 202	SR7/8+L2.5x2.5x0.25	5.66	5.42	53.0 K=0.50	18.081	2.0910	-4828.93	37807.40	0.128
T5	202 - 182	SR7/8+L2.5x2.5x0.25	5.66	5.42	53.0 K=0.50	18.081	2.0910	-9295.76	37807.40	0.246
T6	182 - 162	7/8	5.66	5.42	148.7 K=0.50	6.754	0.6013	-1990.67	4061.32	0.490
T7	162 - 142	7/8	5.66	5.42	148.7 K=0.50	6.754	0.6013	-3762.76	4061.32	0.926
T8	142 - 122	SR7/8+L2.5x2.5x0.25	5.66	5.42	53.0 K=0.50	18.081	2.0910	-12046.00	37807.40	0.319
T9	122 - 102	SR7/8+L2.5x2.5x0.25	5.66	5.42	53.0 K=0.50	18.081	2.0910	-4177.45	37807.40	0.110
T10	102 - 82	7/8	5.66	5.42	148.7 K=0.50	6.754	0.6013	-2846.90	4061.32	0.701
T11	82 - 62	7/8	5.66	5.42	148.7 K=0.50	6.754	0.6013	-3886.75	4061.32	0.957
T12	62 - 42	7/8	5.66	5.42	148.7 K=0.50	6.754	0.6013	-2740.46	4061.32	0.675
T13	42 - 22	7/8	5.66	5.42	148.7 K=0.50	6.754	0.6013	-2146.61	4061.32	0.529
T14	22 - 2	7/8	5.66	5.42	148.7 K=0.50	6.754	0.6013	-3521.55	4061.32	0.867

Secondary Horizontal 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	282 - 262	L2 1/2x2x3/16	4.00	3.83	107.7 K=1.00	11.976	0.8090	-278.75	9688.31	0.029
T2	262 - 242	L2 1/2x2x3/16	4.00	3.83	107.7 K=1.00	11.976	0.8090	-556.51	9688.31	0.057
T3	242 - 222	L2 1/2x2x3/16	4.00	3.83	107.7 K=1.00	11.976	0.8090	-642.60	9688.31	0.066
T4	222 - 202	L2 1/2x2x3/16	4.00	3.83	107.7 K=1.00	11.976	0.8090	-531.44	9688.31	0.055
T5	202 - 182	L2 1/2x2x3/16	4.00	3.83	107.7 K=1.00	11.976	0.8090	-726.17	9688.31	0.075
T6	182 - 162	L2 1/2x2x3/16	4.00	3.83	107.7 K=1.00	11.976	0.8090	-934.81	9688.31	0.096
T7	162 - 142	L2 1/2x2x3/16	4.00	3.83	107.7 K=1.00	11.976	0.8090	-889.93	9688.31	0.092
T8	142 - 122	L2 1/2x2x3/16	4.00	3.83	107.7	11.976	0.8090	-971.74	9688.31	0.100

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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 $\frac{P}{P_a}$
T9	122 - 102	L2 1/2x2x3/16	4.00	3.83	K=1.00 107.7	11.976	0.8090	-1175.11	9688.31	0.121
T10	102 - 82	L2 1/2x2x3/16	4.00	3.83	K=1.00 107.7	11.976	0.8090	-1271.36	9688.31	0.131
T11	82 - 62	L2 1/2x2x3/16	4.00	3.83	K=1.00 107.7	11.976	0.8090	-1268.36	9688.31	0.131
T12	62 - 42	L2 1/2x2x3/16	4.00	3.83	K=1.00 107.7	11.976	0.8090	-1490.25	9688.31	0.154
T13	42 - 22	L2 1/2x2x3/16	4.00	3.83	K=1.00 107.7	11.976	0.8090	-1480.05	9688.31	0.153
T14	22 - 2	L2 1/2x2x3/16	4.00	3.83	K=1.00 107.7	11.976	0.8090	-1318.76	9688.31	0.136

Top Girt Design Data (Compression)

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	282 - 262	L3x3x1/4	4.00	3.83	77.7 K=1.00	15.609	1.4400	-2342.75	22476.90	0.104

Top Guy Pull-Off Design Data (Compression)

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 $\frac{P}{P_a}$
T5	202 - 182	L4x4x3/8	4.00	3.83	58.4 K=1.00	17.585	2.8600	-5628.08	50292.20	0.112
T8	142 - 122	L4x4x3/8	4.00	3.83	58.4 K=1.00	17.585	2.8600	-5557.76	50292.20	0.111

Bottom Guy Pull-Off Design Data (Compression)

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 $\frac{P}{P_a}$
T5	202 - 182	L4x4x3/8	4.00	3.83	58.4 K=1.00	17.585	2.8600	-2725.65	50292.20	0.054
T8	142 - 122	L4x4x3/8	4.00	3.83	58.4 K=1.00	17.585	2.8600	-2459.47	50292.20	0.049

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Torque-Arm Bottom Design Data

Section No	Elevation ft	Size	L ft	L _u ft	Kl/r	F _n ksi	A in ²	Actual P lb	Allow P _a lb	Ratio $\frac{P}{P_a}$
T5	202 - 182 (686)	L4x4x3/8	7.48	7.40	112.6 K=1.00	11.313	2.8600	-23176.70	32355.50	0.716
T5	202 - 182 (687)	L4x4x3/8	7.48	7.40	112.6 K=1.00	11.313	2.8600	-22289.00	32355.50	0.689
T5	202 - 182 (695)	L4x4x3/8	7.48	7.40	112.6 K=1.00	11.313	2.8600	-21981.20	32355.50	0.679
T5	202 - 182 (696)	L4x4x3/8	7.48	7.40	112.6 K=1.00	11.313	2.8600	-22521.30	32355.50	0.696
T5	202 - 182 (701)	L4x4x3/8	7.48	7.40	112.6 K=1.00	11.313	2.8600	-22443.80	32355.50	0.694
T5	202 - 182 (702)	L4x4x3/8	7.48	7.40	112.6 K=1.00	11.313	2.8600	-22166.90	32355.50	0.685
T8	142 - 122 (710)	L4x4x3/8	7.48	7.40	112.6 K=1.00	11.313	2.8600	-19752.80	32355.50	0.610
T8	142 - 122 (711)	L4x4x3/8	7.48	7.40	112.6 K=1.00	11.313	2.8600	-19720.30	32355.50	0.609
T8	142 - 122 (719)	L4x4x3/8	7.48	7.40	112.6 K=1.00	11.313	2.8600	-18948.10	32355.50	0.586
T8	142 - 122 (720)	L4x4x3/8	7.48	7.40	112.6 K=1.00	11.313	2.8600	-19578.30	32355.50	0.605
T8	142 - 122 (725)	L4x4x3/8	7.48	7.40	112.6 K=1.00	11.313	2.8600	-19005.20	32355.50	0.587
T8	142 - 122 (726)	L4x4x3/8	7.48	7.40	112.6 K=1.00	11.313	2.8600	-19551.30	32355.50	0.604

Tension Checks

Leg Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	F _n ksi	A in ²	Actual P lb	Allow P _a lb	Ratio $\frac{P}{P_a}$
T1	282 - 262	2	20.00	2.00	48.0	27.000	3.1416	7081.01	84823.00	0.083
T2	262 - 242	2	20.00	2.00	48.0	27.000	3.1416	16385.40	84823.00	0.193
T3	242 - 222	2	20.00	2.00	48.0	27.000	3.1416	22591.60	84823.00	0.266
T4	222 - 202	2	20.00	2.00	48.0	27.000	3.1416	16347.10	84823.00	0.193
T5	202 - 182	2	20.00	2.00	48.0	27.000	3.1416	7765.76	84823.00	0.092
T6	182 - 162	2	20.00	2.00	48.0	27.000	3.1416	6305.97	84823.00	0.074
T7	162 - 142	2	20.00	2.00	48.0	27.000	3.1416	2880.52	84823.00	0.034

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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 $\frac{P}{P_a}$
T8	142 - 122	2	20.00	2.00	48.0	27.000	3.1416	5542.65	84823.00	0.065

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	282 - 262	7/8	5.66	5.42	297.4	21.600	0.6013	4838.45	12988.50	0.373
T2	262 - 242	7/8	5.66	5.42	297.4	21.600	0.6013	2870.99	12988.50	0.221
T3	242 - 222	7/8	5.66	5.42	297.4	21.600	0.6013	2074.62	12988.50	0.160
T4	222 - 202	SR7/8+L2.5x2.5x0.25	5.66	5.42	106.0	21.600	2.0910	4951.68	45165.60	0.110
T5	202 - 182	SR7/8+L2.5x2.5x0.25	5.66	5.42	106.0	21.600	2.0910	5653.77	45165.60	0.125
T6	182 - 162	7/8	5.66	5.42	297.4	21.600	0.6013	1995.97	12988.50	0.154
T7	162 - 142	7/8	5.66	5.42	297.4	21.600	0.6013	3633.35	12988.50	0.280
T8	142 - 122	SR7/8+L2.5x2.5x0.25	5.66	5.42	106.0	21.600	2.0910	4544.29	45165.60	0.101
T9	122 - 102	SR7/8+L2.5x2.5x0.25	5.66	5.42	106.0	21.600	2.0910	4298.79	45165.60	0.095
T10	102 - 82	7/8	5.66	5.42	297.4	21.600	0.6013	2108.97	12988.50	0.162
T11	82 - 62	7/8	5.66	5.42	297.4	21.600	0.6013	4309.97	12988.50	0.332
T12	62 - 42	7/8	5.66	5.42	297.4	21.600	0.6013	3013.24	12988.50	0.232
T13	42 - 22	7/8	5.66	5.42	297.4	21.600	0.6013	1470.53	12988.50	0.113
T14	22 - 2	7/8	5.66	5.42	297.4	21.600	0.6013	2747.09	12988.50	0.212

Secondary Horizontal 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	282 - 262	L2 1/2x2x3/16	4.00	3.83	76.7	21.600	0.8090	317.26	17474.40	0.018
T2	262 - 242	L2 1/2x2x3/16	4.00	3.83	76.7	21.600	0.8090	556.51	17474.40	0.032

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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
T3	242 - 222	L2 1/2x2x3/16	4.00	3.83	76.7	21.600	0.8090	642.60	17474.40	0.037
T4	222 - 202	L2 1/2x2x3/16	4.00	3.83	76.7	21.600	0.8090	531.44	17474.40	0.030
T5	202 - 182	L2 1/2x2x3/16	4.00	3.83	76.7	21.600	0.8090	726.17	17474.40	0.042
T6	182 - 162	L2 1/2x2x3/16	4.00	3.83	76.7	21.600	0.8090	934.81	17474.40	0.053
T7	162 - 142	L2 1/2x2x3/16	4.00	3.83	76.7	21.600	0.8090	889.93	17474.40	0.051
T8	142 - 122	L2 1/2x2x3/16	4.00	3.83	76.7	21.600	0.8090	971.74	17474.40	0.056
T9	122 - 102	L2 1/2x2x3/16	4.00	3.83	76.7	21.600	0.8090	1175.11	17474.40	0.067
T10	102 - 82	L2 1/2x2x3/16	4.00	3.83	76.7	21.600	0.8090	1271.36	17474.40	0.073
T11	82 - 62	L2 1/2x2x3/16	4.00	3.83	76.7	21.600	0.8090	1268.36	17474.40	0.073
T12	62 - 42	L2 1/2x2x3/16	4.00	3.83	76.7	21.600	0.8090	1490.25	17474.40	0.085
T13	42 - 22	L2 1/2x2x3/16	4.00	3.83	76.7	21.600	0.8090	1480.05	17474.40	0.085
T14	22 - 2	L2 1/2x2x3/16	4.00	3.83	76.7	21.600	0.8090	1318.76	17474.40	0.075

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
T5	202 - 182	L4x4x3/8	4.00	3.83	37.4	21.600	2.8600	20352.40	61776.00	0.329
T8	142 - 122	L4x4x3/8	4.00	3.83	37.4	21.600	2.8600	22676.90	61776.00	0.367

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
T5	202 - 182	L4x4x3/8	4.00	3.83	37.4	21.600	2.8600	3181.67	61776.00	0.052
T8	142 - 122	L4x4x3/8	4.00	3.83	37.4	21.600	2.8600	10643.80	61776.00	0.172

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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 $\frac{P}{P_a}$
T5	202 - 182 (681)	L4x4x3/8	7.48	7.40	72.2	21.600	2.8600	22033.50	61776.00	0.357
T5	202 - 182 (682)	L4x4x3/8	7.48	7.40	72.2	21.600	2.8600	23556.90	61776.00	0.381
T5	202 - 182 (693)	L4x4x3/8	7.48	7.40	72.2	21.600	2.8600	22424.00	61776.00	0.363
T5	202 - 182 (694)	L4x4x3/8	7.48	7.40	72.2	21.600	2.8600	22137.10	61776.00	0.358
T5	202 - 182 (699)	L4x4x3/8	7.48	7.40	72.2	21.600	2.8600	21914.40	61776.00	0.355
T5	202 - 182 (700)	L4x4x3/8	7.48	7.40	72.2	21.600	2.8600	23154.60	61776.00	0.375
T8	142 - 122 (705)	L4x4x3/8	7.48	7.40	72.2	21.600	2.8600	19519.70	61776.00	0.316
T8	142 - 122 (706)	L4x4x3/8	7.48	7.40	72.2	21.600	2.8600	20363.70	61776.00	0.330
T8	142 - 122 (717)	L4x4x3/8	7.48	7.40	72.2	21.600	2.8600	19165.30	61776.00	0.310
T8	142 - 122 (718)	L4x4x3/8	7.48	7.40	72.2	21.600	2.8600	18939.90	61776.00	0.307
T8	142 - 122 (723)	L4x4x3/8	7.48	7.40	72.2	21.600	2.8600	18958.10	61776.00	0.307
T8	142 - 122 (724)	L4x4x3/8	7.48	7.40	72.2	21.600	2.8600	19802.40	61776.00	0.321

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 $\frac{P}{P_a}$
T5	202 - 182 (686)	L4x4x3/8	7.48	7.40	72.2	21.600	2.8600	499.85	61776.00	0.008
T5	202 - 182 (687)	L4x4x3/8	7.48	7.40	72.2	21.600	2.8600	703.64	61776.00	0.011
T5	202 - 182 (695)	L4x4x3/8	7.48	7.40	72.2	21.600	2.8600	962.33	61776.00	0.016
T5	202 - 182 (696)	L4x4x3/8	7.48	7.40	72.2	21.600	2.8600	1092.33	61776.00	0.018
T5	202 - 182 (701)	L4x4x3/8	7.48	7.40	72.2	21.600	2.8600	626.17	61776.00	0.010
T5	202 - 182 (702)	L4x4x3/8	7.48	7.40	72.2	21.600	2.8600	950.40	61776.00	0.015
T8	142 - 122 (710)	L4x4x3/8	7.48	7.40	72.2	21.600	2.8600	4094.03	61776.00	0.066
T8	142 - 122 (711)	L4x4x3/8	7.48	7.40	72.2	21.600	2.8600	4100.51	61776.00	0.066
T8	142 - 122 (719)	L4x4x3/8	7.48	7.40	72.2	21.600	2.8600	4455.68	61776.00	0.072

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Section No	Elevation ft	Size	L ft	L _n ft	Kl/r	F _a kst	A in ²	Actual P lb	Allow P _a lb	Ratio P P _a
T8	142 - 122 (720)	L4x4x3/8	7.48	7.40	72.2	21.600	2.8600	4515.34	61776.00	0.073
T8	142 - 122 (725)	L4x4x3/8	7.48	7.40	72.2	21.600	2.8600	4211.56	61776.00	0.068
T8	142 - 122 (726)	L4x4x3/8	7.48	7.40	72.2	21.600	2.8600	4452.79	61776.00	0.072

Section Capacity Table

Section No	Elevation ft	Component Type	Size	Critical Element	P lb	SF*P _{allow} lb	% Capacity	Pass Fail
T1	282 - 262	Leg	2	3	-16093.70	94341.21	17.1	Pass
T2	262 - 242	Leg	2	54	-32130.10	94341.21	34.1	Pass
T3	242 - 222	Leg	2	102	-37100.60	94341.21	39.3	Pass
T4	222 - 202	Leg	2	150	-30682.70	94341.21	32.5	Pass
T5	202 - 182	Leg	2	198	-41925.50	94341.21	44.4	Pass
T6	182 - 162	Leg	2	246	-53971.20	94341.21	57.2	Pass
T7	162 - 142	Leg	2	294	-51380.20	94341.21	54.5	Pass
T8	142 - 122	Leg	2	342	-56103.70	94341.21	59.5	Pass
T9	122 - 102	Leg	2	388	-67844.80	94341.21	71.9	Pass
T10	102 - 82	Leg	2	436	-73402.10	94341.21	77.8	Pass
T11	82 - 62	Leg	2	484	-73228.70	94341.21	77.6	Pass
T12	62 - 42	Leg	2	532	-86039.60	94341.21	91.2	Pass
T13	42 - 22	Leg	2	580	-85450.70	94341.21	90.6	Pass
T14	22 - 2	Leg	2	628	-76138.60	94341.21	80.7	Pass
T1	282 - 262	Diagonal	7/8	38	-4195.31	5413.74	77.5	Pass
T2	262 - 242	Diagonal	7/8	86	-2534.16	5413.74	46.8	Pass
T3	242 - 222	Diagonal	7/8	106	-2626.53	5413.74	48.5	Pass
T4	222 - 202	Diagonal	SR7/8+L2.5x2.5x0.25	156	-4828.93	50397.26	9.6	Pass
T5	202 - 182	Diagonal	SR7/8+L2.5x2.5x0.25	229	-9295.76	50397.26	18.4	Pass
T6	182 - 162	Diagonal	7/8	283	-1990.67	5413.74	36.8	Pass
T7	162 - 142	Diagonal	7/8	300	-3762.76	5413.74	69.5	Pass
T8	142 - 122	Diagonal	SR7/8+L2.5x2.5x0.25	356	-12046.00	50397.26	23.9	Pass
T9	122 - 102	Diagonal	SR7/8+L2.5x2.5x0.25	419	-4177.45	50397.26	8.3	Pass
T10	102 - 82	Diagonal	7/8	444	-2846.90	5413.74	52.6	Pass
T11	82 - 62	Diagonal	7/8	487	-3886.75	5413.74	71.8	Pass
T12	62 - 42	Diagonal	7/8	562	-2740.46	5413.74	50.6	Pass
T13	42 - 22	Diagonal	7/8	585	-2146.61	5413.74	39.7	Pass
T14	22 - 2	Diagonal	7/8	633	-3521.55	5413.74	65.0	Pass
T1	282 - 262	Secondary Horizontal	L2 1/2x2x3/16	14	-278.75	12914.52	2.2	Pass
T2	262 - 242	Secondary Horizontal	L2 1/2x2x3/16	71	-556.51	12914.52	4.3	Pass
T3	242 - 222	Secondary Horizontal	L2 1/2x2x3/16	110	-642.60	12914.52	5.0	Pass
T4	222 - 202	Secondary Horizontal	L2 1/2x2x3/16	158	-531.44	12914.52	4.1	Pass
T5	202 - 182	Secondary Horizontal	L2 1/2x2x3/16	215	-726.17	12914.52	5.6	Pass
T6	182 - 162	Secondary Horizontal	L2 1/2x2x3/16	255	-934.81	12914.52	7.2	Pass
T7	162 - 142	Secondary Horizontal	L2 1/2x2x3/16	303	-889.93	12914.52	6.9	Pass
T8	142 - 122	Secondary Horizontal	L2 1/2x2x3/16	350	-971.74	12914.52	7.5	Pass
T9	122 - 102	Secondary Horizontal	L2 1/2x2x3/16	406	-1175.11	12914.52	9.1	Pass
T10	102 - 82	Secondary Horizontal	L2 1/2x2x3/16	447	-1271.36	12914.52	9.8	Pass
T11	82 - 62	Secondary Horizontal	L2 1/2x2x3/16	495	-1268.36	12914.52	9.8	Pass
T12	62 - 42	Secondary Horizontal	L2 1/2x2x3/16	550	-1490.25	12914.52	11.5	Pass
T13	42 - 22	Secondary Horizontal	L2 1/2x2x3/16	598	-1480.05	12914.52	11.5	Pass
T14	22 - 2	Secondary Horizontal	L2 1/2x2x3/16	637	-1318.76	12914.52	10.2	Pass
T1	282 - 262	Top Girt	L3x3x1/4	4	-2342.75	29961.71	7.8	Pass

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Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	SF*P _{allow} lb	% Capacity	Pass Fail	
T1	282 - 262	Guy A@270	3/4	678	18800.40	29150.00	64.5	Pass	
T5	202 - 182	Guy A@196	5/8	698	17357.20	21200.00	81.9	Pass	
T8	142 - 122	Guy A@128	9/16	722	16082.70	17500.00	91.9	Pass	
T11	82 - 62	Guy A@70	1/2	729	12588.80	13450.00	93.6	Pass	
T1	282 - 262	Guy B@270	3/4	677	18792.20	29150.00	64.5	Pass	
T5	202 - 182	Guy B@196	5/8	692	17509.80	21200.00	82.6	Pass	
T8	142 - 122	Guy B@128	9/16	716	15828.00	17500.00	90.4	Pass	
T11	82 - 62	Guy B@70	1/2	728	12164.30	13450.00	90.4	Pass	
T1	282 - 262	Guy C@270	3/4	676	19023.60	29150.00	65.3	Pass	
T5	202 - 182	Guy C@196	5/8	679	18095.10	21200.00	85.4	Pass	
T8	142 - 122	Guy C@128	9/16	703	16424.30	17500.00	93.9	Pass	
T11	82 - 62	Guy C@70	1/2	727	12435.10	13450.00	92.5	Pass	
T5	202 - 182	Top Guy	L4x4x3/8	684	20352.40	82347.40	24.7	Pass	
T8	142 - 122	Pull-Off@196 Top Guy	L4x4x3/8	708	22676.90	82347.40	27.5	Pass	
T5	202 - 182	Pull-Off@128 Bottom Guy	L4x4x3/8	688	-2725.65	67039.50	4.1	Pass	
T8	142 - 122	Pull-Off@196 Bottom Guy	L4x4x3/8	714	10643.80	82347.40	12.9	Pass	
T5	202 - 182	Pull-Off@128 Torque Arm Top@196	L4x4x3/8	682	23556.90	82347.40	28.6	Pass	
T8	142 - 122	Torque Arm Top@128	L4x4x3/8	706	20363.70	82347.40	24.7	Pass	
T5	202 - 182	Torque Arm Bottom@196	L4x4x3/8	686	-23176.70	43129.88	53.7	Pass	
T8	142 - 122	Torque Arm Bottom@128	L4x4x3/8	710	-19752.80	43129.88	45.8	Pass	
							Summary		
							Leg (T12)	91.2	Pass
							Diagonal (T1)	77.5	Pass
							Secondary Horizontal (T12)	11.5	Pass
							Top Girt (T1)	7.8	Pass
							Guy A (T11)	93.6	Pass
							Guy B (T8)	90.4	Pass
							Guy C (T8)	93.9	Pass
							Top Guy	27.5	Pass
							Pull-Off (T8)		
							Bottom Guy	12.9	Pass
							Pull-Off (T8)		
							Torque Arm Top (T5)	28.6	Pass
							Torque Arm Bottom (T5)	53.7	Pass
							RATING =	93.9	Pass

FOUNDATION ANALYSIS

Job	280' Guyed Tower - Bolton, CT	Project No.	NSS-014	Sheet	of
Description	Foundation Analysis	Computed by	MCD	Date	11/14/14
		Checked by		Date	

Tower Base

Width of Base	$w_{base} := 5ft$	
Thickness of Base	$t_{base} := 3.5ft$	
Unit Weight of Concrete	$\gamma_{conc} := 150pcf$	
Weight of Base	$Wt_{base} := w_{base}^2 \cdot t_{base} \cdot \gamma_{conc}$	$Wt_{base} = 13.13 \cdot kip$
Compressive force of Tower	$P_{tower} := 170.097kip$	
Total Downward Force	$P_{foundation} := P_{tower} + Wt_{base}$	$P_{foundation} = 183.22 \cdot kip$
Bearing Pressure	$P_{bearing} := \frac{P_{foundation}}{w_{base}^2}$	$P_{bearing} = 7.33 \cdot ksf$
Allowable Bearing Pressure	$P_{bearing.allow} := 10tsf$	
Bearing _{check} :=	$\begin{cases} \text{"OK"} & \text{if } P_{bearing} \leq P_{bearing.allow} \\ \text{"NG"} & \text{otherwise} \end{cases}$	Bearing _{check} = "OK"

Guy Anchors

Six #8 bars in 2 1/4" dia. holes extending 8'6" below foundation

Bond between Rock & Grout = 50 psi

$$Bond_{capacity} := 2.25in \cdot \pi \cdot 50psi \quad Bond_{capacity} = 4.24 \cdot \frac{kip}{ft}$$

$$Bond_{capacity} \cdot 8.5ft = 36.05 \cdot kip < F_y \cdot rebar$$

$$Uplift_{resistance} := Bond_{capacity} \cdot 8.5ft \cdot 6 \quad Uplift_{resistance} = 216.3 \cdot kip$$

$$Uplift_{anchor} := 60.854kip$$

$$Uplift_{check} := \begin{cases} \text{"OK"} & \text{if } Uplift_{anchor} \leq Uplift_{resistance} \\ \text{"NG"} & \text{otherwise} \end{cases} \quad Uplift_{check} = \text{"OK"}$$

Each anchor is embedded into rock a minimum of 1'6"

$$Shear_{resistance} := 5tsf \cdot 1.5ft \cdot 5ft \quad Shear_{resistance} = 75 \cdot kip$$

$$Shear_{anchor} := 74.335kip$$

$$Shear_{check} := \begin{cases} \text{"OK"} & \text{if } Shear_{anchor} \leq Shear_{resistance} \\ \text{"NG"} & \text{otherwise} \end{cases} \quad Shear_{check} = \text{"OK"}$$

2 C6x10.5 Anchor Shafts

$$A_s := 2 \cdot 3.08in^2 \quad F_y := 36ksi$$

$$Tension := 96.067kip$$

$$\sigma := \frac{Tension}{A_s} \quad \sigma = 15.6 \cdot ksi$$

$$\sigma_{check} := \begin{cases} \text{"OK"} & \text{if } \sigma \leq F_y \\ \text{"NG"} & \text{otherwise} \end{cases} \quad \sigma_{check} = \text{"OK"}$$

EXHIBIT C

RADIO FREQUENCY EMISSIONS ANALYSIS REPORT
EVALUATION OF HUMAN EXPOSURE POTENTIAL
TO NON-IONIZING EMISSIONS

T-Mobile Existing Facility

Site ID: CT11180C

Bolton CT_1
130 Vernon Road
Bolton, CT 06343

November 19, 2014

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general public allowable limit:	76.19 %

November 19, 2014

T-Mobile USA
Attn: Jason Overbey, RF Manager
35 Griffin Road South
Bloomfield, CT 06002

Emissions Analysis for Site: **CT11180C – Bolton CT_1**

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **130 Vernon Road, Bolton, CT**, for the purpose of determining whether the emissions from the Proposed T-Mobile Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01 and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The number of $\mu\text{W}/\text{cm}^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The general population exposure limit for both the PCS and AWS bands is 1000 $\mu\text{W}/\text{cm}^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed T-Mobile Wireless antenna facility located at **130 Vernon Road, Bolton, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-Mobile is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was focused at the base of the tower. For this report the sample point is the top of a 6 foot person standing at the base of the tower.

For all calculations, all equipment was calculated using the following assumptions:

- 1) 2 GSM channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel
- 2) 2 UMTS channels (AWS Band – 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 3) 2 LTE channels (AWS Band – 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.
- 4) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.

- 5) For the following calculations the sample point was the top of a six foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufactures supplied specifications minus 10 dB was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 6) The antennas used in this modeling are the **Ericsson AIR21 B4A/B2P** for 1900 MHz (PCS) and 2100 MHz (AWS) channels. This is based on feedback from the carrier with regards to anticipated antenna selection. The **Ericsson AIR21 B4A/B2P** has a maximum gain of **15.9 dBd** at its main lobe. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 7) The antenna mounting height centerline of the proposed antennas is **226 feet** above ground level (AGL).
- 8) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.

All calculations were done with respect to uncontrolled / general public threshold limits.



EBI Consulting

environmental | engineering | due diligence

T-Mobile Site Inventory and Power Data

Sector:	A	Sector:	B	Sector:	C
Antenna #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	Ericsson AIR21 B4A/B2P	Make / Model:	Ericsson AIR21 B4A/B2P	Make / Model:	Ericsson AIR21 B4A/B2P
Gain:	15.9 dBd	Gain:	15.9 dBd	Gain:	15.9 dBd
Height (AGL):	226	Height (AGL):	226	Height (AGL):	226
Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)	Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)	Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)
Channel Count	2	Channel Count	2	# PCS Channels:	2
Total TX Power:	120	Total TX Power:	120	# AWS Channels:	120
ERP (W):	1,906.06	ERP (W):	1,906.06	ERP (W):	1,906.06
Antenna A1 MPE%	0.35	Antenna B1 MPE%	0.35	Antenna C1 MPE%	0.35
Antenna #:	2	Antenna #:	2	Antenna #:	2
Make / Model:	Ericsson AIR21 B4A/B2P	Make / Model:	Ericsson AIR21 B4A/B2P	Make / Model:	Ericsson AIR21 B4A/B2P
Gain:	15.9 dBd	Gain:	15.9 dBd	Gain:	15.9 dBd
Height (AGL):	226	Height (AGL):	226	Height (AGL):	226
Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)	Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)	Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)
Channel Count	4	Channel Count	4	Channel Count	4
Total TX Power:	120	Total TX Power:	120	Total TX Power:	120
ERP (W):	1,906.06	ERP (W):	1,906.06	ERP (W):	1,906.06
Antenna A2 MPE%	0.35	Antenna B2 MPE%	0.35	Antenna C2 MPE%	0.35

Site Composite MPE%	
Carrier	MPE%
T-Mobile	2.08
AT&T	12.12 %
Verizon Wireless	24.45 %
Sprint	4.54 %
Bolton Radio Station	0.02 %
Commsite Internat'l	0.43 %
Metrocall	1.11 %
Pagemart	20.30 %
AirTouch	5.64 %
Conn. Radio	2.09 %
Nextel	3.00 %
NU	0.40 %
Site Total MPE %:	76.19 %

T-Mobile Sector 1 Total:	0.69 %
T-Mobile Sector 2 Total:	0.69 %
T-Mobile Sector 3 Total:	0.69 %
Site Total:	76.19 %

Summary

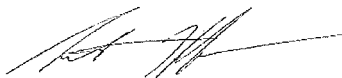
All calculations performed for this analysis yielded results that were **within** the allowable limits for general public exposure to RF Emissions.

The anticipated maximum composite contributions from the T-Mobile facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general public exposure to RF Emissions are shown here:

T-Mobile Sector	Power Density Value (%)
Sector 1:	0.69 %
Sector 2:	0.69 %
Sector 3 :	0.69 %
T-Mobile Total:	2.08 %
Site Total:	76.19 %
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **76.19%** of the allowable FCC established general public limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were well within the allowable 100% threshold standard per the federal government.



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