STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051
Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@ct.gov
Internet: ct.gov/csc

Daniel F. Caruso
Chairman

January 22, 2008

Thomas J. Regan, Esq.
Brown Rudnick Berlack Israels LLP
CityPlace I
185 Asylum Street
Hartford, CT 06103

RE: **EM-SPRINT-NEXTEL-015-071212** – Sprint Nextel Corporation notice of intent to modify an existing telecommunications facility located at 623 Pine Street, Bridgeport, Connecticut.

Dear Attorney Regan:

At a public meeting held on January 10, 2008, the Connecticut Siting Council (Council) acknowledged your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies.

The proposed modifications are to be implemented as specified here and in your notice dated December 12, 2007, including the placement of all necessary equipment and shelters within the tower compound. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Any deviation from this format may result in the Council implementing enforcement proceedings pursuant to General Statutes § 16-50u including, without limitation, imposition of expenses resulting from such failure and of civil penalties in an amount not less than one thousand dollars per day for each day of construction or operation in material violation.

Thank you for your attention and cooperation.

Very truly yours,

Daniel F. Caruso
Chairman

DFC/MP/cm

c: The Honorable Bill Finch, Mayor, City of Bridgeport
Melanie J. Howlett, Associate City Attorney, City of Bridgeport
Andrew, Lillian and Robert Knapp

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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Phone: (860) 827-2935 Fax: (860) 827-2950
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Internet: ct.gov/csc

Daniel F. Caruso
Chairman

December 17, 2007

The Honorable Bill Finch
Mayor
City of Bridgeport
City Hall Annex
999 Broad Street
Bridgeport, CT 06604

RE: **EM-SPRINT-NEXTEL-015-071212** – Sprint Nextel Corporation notice of intent to modify an existing telecommunications facility located at 623 Pine Street, Bridgeport, Connecticut.

Dear Mayor Finch:

The Connecticut Siting Council (Council) received this request to modify an existing telecommunications facility, pursuant to Regulations of Connecticut State Agencies Section 16-50j-72.

The Council will consider this item at the next meeting scheduled for January 10, 2008 at 1:30 p.m. in Hearing Room One, Ten Franklin Square, New Britain, Connecticut.

If you have any questions or comments regarding this proposal, please call me or inform the Council by January 9, 2008.

Thank you for your cooperation and consideration.

Very truly yours,

S. Derek Phelps
Executive Director

SDP/jb

Enclosure: Notice of Intent

c: Melanie J. Howlett, Associate City Attorney, City of Bridgeport

THOMAS J. REGAN
Direct Dial: (860) 509-6522
tregan@brownrudnick.com

EM-SPRINT-NEXTEL-015-071212

Via Hand Delivery

BROWNRUDNICK
CityPlace I
185 Asylum
Street
Hartford
Connecticut
06103
tel 860.509.6500
fax 860.509.6501

December 12, 2007

S. Derek Phelps
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

RE: Sprint Nextel Corporation - Exempt Modification

Dear Mr. Phelps:

Enclosed for filing is Sprint Nextel Corporation's Notice of Exempt Modification for the addition of WiMAX antennas to an existing tower at 623 Pine Street in Bridgeport, Connecticut. I have also enclosed a check in the amount of $500.00 to cover the filing fee. If you have any questions, please feel free to contact me.

Very truly yours,

BROWN RUDNICK BERLACK ISRAELS LLP

By: Thomas J. Regan /cm
Thomas J. Regan

cc: City of Bridgeport

40246855 v1 - MERCIECM - 025064/0015

ORIGINAL

CONNECTICUT SITING COUNCIL

In re:

Sprint Nextel Corporation's Notice to Make an Exempt Modification to an Existing Facility at 623 Pine Street in Bridgeport, Connecticut.	:	**EXEMPT MODIFICATION NO. _____**
	:	December 12, 2007

NOTICE OF EXEMPT MODIFICATION

Pursuant to Conn. Agencies Regs. §§ 16-50j-73 and 16-50j-72(b), Sprint Nextel Corporation ("Sprint") hereby gives notice to the Connecticut Siting Council ("Council") and to the City of Bridgeport of Sprint's intent to make an exempt modification to an existing lattice tower (the "Tower") located at 623 Pine Street in Bridgeport, Connecticut. Specifically, Sprint plans to remove three of nine existing iDEN antennas and replace them with three WiMAX antennas. Under the Council's regulations (Conn. Agencies Regs. § 16-50j-72(b)), Sprint's plans do not constitute a modification subject to the Council's review because Sprint will not change the height of the tower, will not extend the boundaries of the compound, will not increase the noise levels at the site and will not increase the total radio frequency electromagnetic radiation power density at the site to levels above applicable standards.

Sprint is currently undertaking an upgrade to its wireless communications system in Connecticut. As part of the upgrade, Sprint is implementing WiMAX technology to enable enhanced wireless data communications. In order to accomplish the upgrade at this site, Sprint plans to add three WiMAX antennas to the existing antenna configuration and install additional WiMAX-related electronic equipment at the base of the Tower.

BROWN RUDNICK
BERLACK ISRAELS LLP
CITYPLACE I
185 ASYLUM STREET
HARTFORD, CT 06103
(860) 509-6500

The Tower is a 250-foot lattice tower located at 623 Pine Street in Bridgeport, Connecticut (latitude 41° 09' 49.2" N, longitude 73° 12' 56.4" W). Andrew Knapp, Lillian Knapp and Robert Knapp own the Tower and the property it is located on. Verizon and T-Mobile (previously known as Voicestream) have antennas located on the Tower at the 110-foot level and 180-foot level, respectively. Currently, Sprint has twelve iDEN antennas[1] spread over three sectors on a low profile platform with an antenna centerline at 85 feet. Sprint's base station equipment is located in an equipment shelter at the base of the Tower. A site plan with the Tower specifications is attached.

Sprint plans to remove three of its existing EMS RV65-13 iDEN panel antennas (one from each sector) and replace them with three KMW AM-X-WM-17-65-00T (WiMAX) panel antennas. The WiMAX antennas will be mounted to the existing pipemounts with the antenna centerline staying at 85 feet. Six coaxial cables, 1-5/8" in diameter, will run to the new WiMAX antennas. Sprint will also install one Radiowaves HPLP1-23 microwave dish, one foot in diameter, to the Tower. To confirm that the Tower can support these changes, Sprint commissioned URS Corporation to perform a structural analysis of the Tower (attached). According to the structural analysis dated December 4, 2007, the "tower and its foundation are considered structurally adequate." In addition, Sprint will install one global positioning system (GPS) antenna to an existing ice bridge post. One interior WiMAX radio cabinet will be installed inside the existing equipment room. Therefore, no increase in the size of the equipment shelter is necessary. Excluding brief, minor, construction-related noise during the addition/removal of the antennas and the installation of the equipment cabinet, Sprint's changes to the Tower will not increase noise levels at the site.

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BERLACK ISRAELS LLP
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HARTFORD, CT 06103
(860) 509-6500

[1] Referred to as "Nextel" antennas on the site plan.

The addition of the new WiMAX antennas to Sprint's existing antenna array will not adversely impact the health and safety of the surrounding community or the people working on the Tower. The total radio frequency exposure measured around the Tower will be well below the National Council on Radiation Protection and Measurements' ("NCRP") standard adopted by the Federal Communications Commission ("FCC"). The worst-case power density analysis for the WiMAX antennas, measured at the base of the Tower, indicates that the WiMAX antennas will emit 8.39% of the NCRP's standard for maximum permissible exposure. A cumulative power density analysis indicates that Sprint's antennas together with all of the existing antennas on the Tower will emit only 48.21% of the NCRP's standard for maximum permissible exposure. Therefore, the power density levels will be well below the FCC mandated radio frequency exposure limits in all locations around the Tower, even with extremely conservative assumptions. The power density analysis is attached.

In conclusion, Sprint's proposed plan to remove three iDEN antennas, add three WiMAX antennas, and add WiMAX associated equipment within the existing equipment shed, does not constitute a modification subject to the Council's jurisdiction because Sprint will not increase the height of the Tower, will not extend the boundaries of the site, will not increase the noise levels at the site, and the total radio frequency electromagnetic radiation power density will stay within all applicable standards. *See* Conn. Agencies Regs. § 16-50j-72.

Sprint Nextel Corporation

By: _____

Thomas J. Regan
Brown Rudnick Berlack Israels LLP
185 Asylum Street, CityPlace I
Hartford, CT 06103-3402
Email - tregan@brownrudnick.com
Phone - 860.509.6522
Fax - 860.509.6622

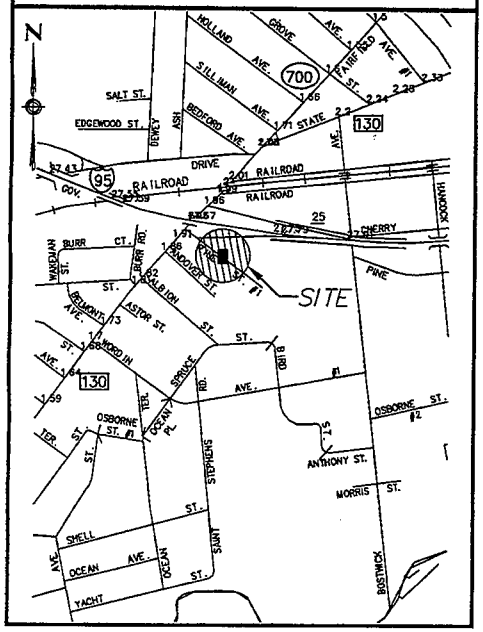
BROWN RUDNICK
BERLACK ISRAELS LLP
CITYPLACE I
185 ASYLUM STREET
HARTFORD, CT 06103
(860) 509-6500

Sprint Nextel Corp.

BRIDGEPORT WEST

CT01YC057/NCT3612
623 PINE STREET
BRIDGEPORT, CT 06605

PROJECT INDEX NO SCALE



SHEET INDEX

SHT. NO.	DESCRIPTION
T-1	TITLE SHEET – GENERAL NOTES AND LEGENDS
SC-1	COMPOUND PLAN
SC-2	TOWER ELEVATION

DRIVING DIRECTIONS

FROM 100 CORPORATE PLACE, ROCKY HILL, CT.:
Start out going SOUTH on CORPORATE PL toward WEST ST. 0.1 miles

Turn LEFT onto WEST ST. <0.1 miles

Merge onto I-91 S toward NEW HAVEN. 29.1 miles

Merge onto I-95 S / GOVERNOR JOHN DAVIS LODGE TURNPIKE via the exit on the LEFT. 20.0 miles

Take the FAIRFIELD AVENUE exit – EXIT 25– toward CT-130 0.1 miles

Turn LEFT onto FAIRFIELD AVE. <0.1 miles

Turn LEFT onto PINE STREET. <0.1 miles

End at 623 Pine Street, Bridgeport, CT 06605-2322, US

Total Est. Time: 55 minutes Total Est. Distance: 49.67 miles

PROJECT INDEX

SITE NUMBER:	CT01YC057/NCT3612
SITE NAME:	BRIDGEPORT WEST
SITE ADDRESS:	623 PINE STREET BRIDGEPORT, CT 06605
APPLICANT:	SPRINT NEXTEL CORP. 1 INTERNATIONAL BLVD, SUITE 800 MAHWAH, NJ 07495
CONTACT:	JASON DEIBERT (347) 284-8617
JURISDICTION:	CONNECTICUT SITING COUNCIL
LATITUDE:	41°-09'-49.2"
LONGITUDE:	73°-12'-56.4"

Sprint Nextel Corp.
1 INTERNATIONAL BLVD., SUITE 800
MAHWAH, NJ 07495

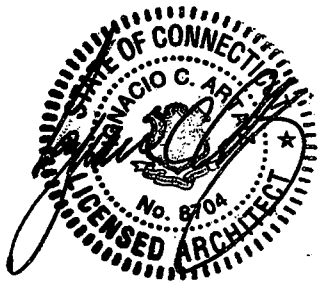
TRANSCEND WIRELESS, LLC
479 ROUTE 17 NORTH,
2ND FLOOR
MAHWAH, NJ 07430

A&E FIRM
URS CORPORATION AES
500 ENTERPRISE DRIVE, SUITE 3B
ROCKY HILL, CONNECTICUT
1-(860)-529-8882

NO.	DATE	REVISIONS	BY	CHK	APP'D
2	11/06/07	SITING COUNCIL	JES	PJS	AA
1	11/01/07	REVIEW	KAP	PJS	AA

NOT TO SCALE | DESIGNED BY: PJS | DRAWN BY: KAP

A&E SEAL

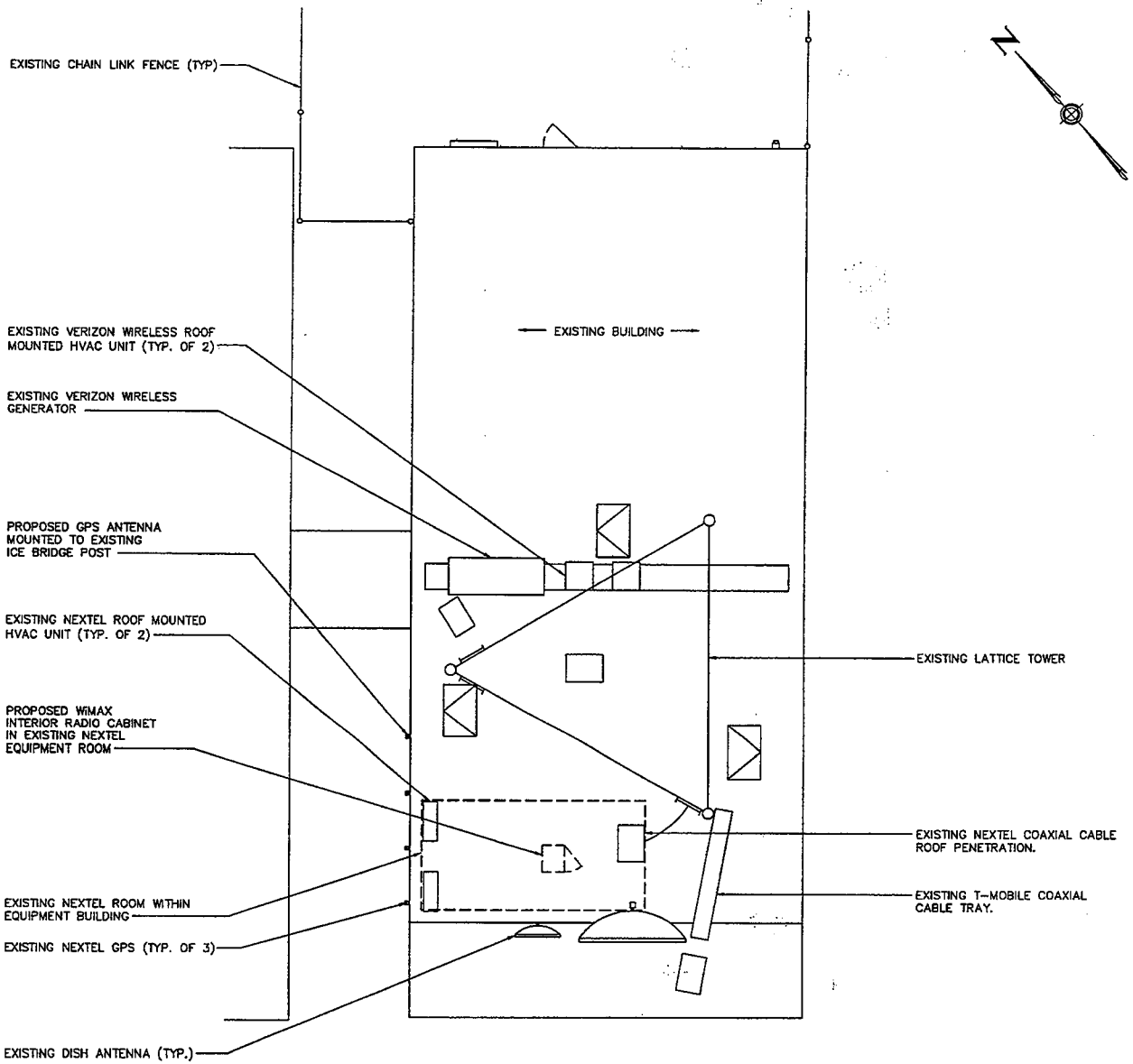


BRIDGEPORT WEST

CT01YC057/NCT3612

623 PINE STREET
BRIDGEPORT, CT 06605

PROJECT NO.	DRAWING NAME	DATE	SHEET NO.	REV
TW1-014 36917274	T-1	11/01/07	1 OF 3	0



1 / SC-1 PARTIAL ROOF PLAN

SCALE: 1" = 15'-0"

Sprint Nextel Corp.
1 INTERNATIONAL BLVD.,
SUITE 800
MAHWAH, NJ 07495

TRANSCEND WIRELESS, LLC
479 ROUTE 17 NORTH,
2ND FLOOR
MAHWAH, NJ 07430

A&E FIRM

URS CORPORATION AES
500 ENTERPRISE DRIVE, SUITE 3B
ROCKY HILL, CONNECTICUT
1-(860)-529-8882

NO.	DATE	REVISIONS	BY	CHK	APP'D
2	11/06/07	SITING COUNCIL	JES	PJS	AA
1	11/01/07	REVIEW	KAP	PJS	AA

NOT TO SCALE | DESIGNED BY: PJS | DRAWN BY: KAP

A&E SEAL

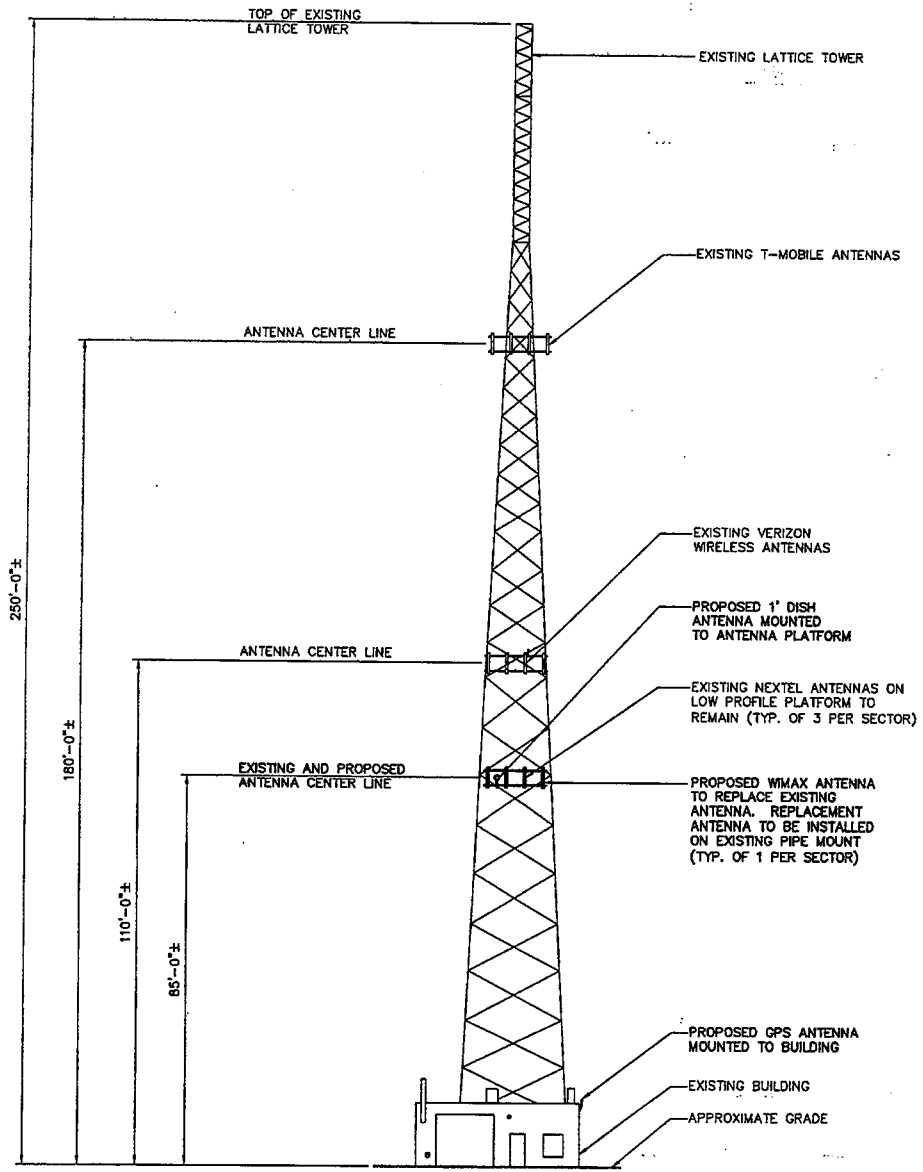
STATE OF CONNECTICUT
IGNACIO C. ARTAL
No. 8704
LICENSED ARCHITECT

BRIDGEPORT WEST

CT01YC057/NCT3612

623 PINE STREET
BRIDGEPORT, CT 06605

PROJECT NO.	DRAWING NAME	DATE	SHEET NO.	REV
TW1-014 36917274	SC-1	11/01/07	2 OF 3	0



1 / SC-2 **TOWER ELEVATION**

SCALE: 1" = 40'-0"

Sprint Nextel Corp.
1 INTERNATIONAL BLVD., SUITE 800
MAHWAH, NJ 07495

TRANSCEND WIRELESS, LLC
479 ROUTE 17 NORTH, 2ND FLOOR
MAHWAH, NJ 07430

A&E FIRM
URS CORPORATION AES
500 ENTERPRISE DRIVE, SUITE 3B
ROCKY HILL, CONNECTICUT
1-(860)-529-8882

NO.	DATE	REVISIONS	BY	CHK	APP'D
2	11/06/07	SITING COUNCIL	JES	PJS	AA
1	11/01/07	REVIEW	KAP	PJS	AA

NOT TO SCALE | DESIGNED BY: PJS | DRAWN BY: KAP

A&E SEAL

BRIDGEPORT WEST

CT01YC057/NCT3612

623 PINE STREET
BRIDGEPORT, CT 06605

PROJECT NO.	DRAWING NAME	DATE	SHEET NO.	REV
TW1-014 36917274	SC-2	11/01/07	3 OF 3	0

DETAILED STRUCTURAL ANALYSIS AND EVALUATION OF AN EXISTING 248' SSVMW SELF SUPPORT LATTICE TOWER FOR NEW ANTENNA ARRANGEMENT

Site I.D #: CT01YC057/NCT3612
Site Name: Bridgeport West
Address: 623 Pine Street,
Bridgeport, CT 06605

prepared for

Sprint Nextel Corp.

1 International Blvd.,
Suite 800
Mahwah, NJ 07495

TRANSCEND WIRELESS, LLC
479 ROUTE 17 NORTH,
2ND FLOOR,
MAHWAH, NJ 07495

prepared by

URS

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

36917274.00000
TW1-014

December 4, 2007

TABLE OF CONTENTS

1. EXECUTIVE SUMMARY

This report summarizes the structural analysis of the existing 248' self support lattice tower structure, located at 623 Pine Street, Bridgeport, CT. The analysis was conducted in accordance with the 2005 Connecticut State Building Code and the TIA/EIA-222-F standard for a basic wind velocity of 90 mph (fastest mile) and 78 mph (fastest mile) concurrent with 0.50" 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 Sprint Nextel modification is as follows:

Proposed Antenna and Mount	Carrier	Antenna Center Elevation
On the existing Sprint Nextel T-frame:-		
Remove: **(3) EMS RV65-13 panel antennas** **(3) 1 1/4" coax cables**	**Sprint Nextel (Existing)**	
Install: **(3) KMV AM-X-WM-17-65-00T with (1) RET and (1) TMA attached to antenna.** **(6) 1-5/8 coaxial cables** **(1) Radiowaves HPLP1-23 1' dia Dish**	**Sprint Nextel (Proposed)**	**@ 88'**

The results of the analysis indicate that the tower structure has the capacity to support the proposed loading conditions. **The tower and its foundation are considered structurally adequate with the wind load classification specified above and the proposed antenna loading.**

This analysis is based on:

1) The tower structure's theoretical capacity, not including any assessment of the condition of the tower.
2) Tower geometry and structural member sizes taken from the manufacturers original design documents prepared by Rohn Inc., dated July 7, 1998.
3) Antenna and mount configuration as specified in Section 2 and 6.
4) Coaxial cable orientation as specified in Section 6 of this report.
5) The existing antenna inventory was obtained from a structural analysis report prepared by KM Consulting Engineers, Inc., dated November 9, 2005, a structural analysis report prepared by URS Corporation, dated January 17, 2002 and field photographs taken by URS during November 2007.

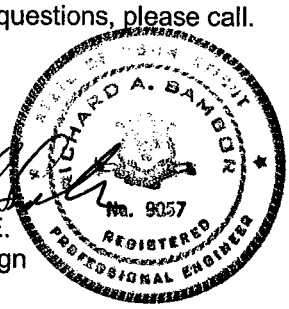
1. EXECUTIVE SUMMARY - *continued*

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. 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.
Manager Facilities Design

RAS/jrm
cc: AA, DR, ICA – URS, CF/Book

2. INTRODUCTION

The subject tower is located 623 Pine Street, Bridgeport, CT. The structure is an existing 248' self supporting three-legged steel tapered lattice tower designed and manufactured by Rohn Inc.

The inventory is summarized in the table below:

Antenna Type	Carrier	Mount	Antenna Centerline Elevation	Cable
(1) Beacon	Unknown (existing)	Platform w/ handrails	259'	-
(3) Omni 24' x 3" Antennas	Unknown (existing)	Mounted on same platform above	269'	(7) 1-1/4" coax cables and (1) ½" coax cable
(2) Omni 8' x 3" Antennas	Unknown (existing)	Mounted on same platform above	260'	Included in cable above
(2) Scala CL 400 Antennas	Unknown (existing)	Mounted on same platform above	258'	Included in cable above
(2) Decibel DB806 Omni antennas	Unknown (existing)	(2) 6' Standoff	233'	(2) 7/8" coax cables
(6) APX16PV-16PVL-X antennas	T-Mobile (existing)	(3) 15' T-Frames	180'	(24) 1-5/8" coax cables (12 redundant)
(6) RFS APL 196516 and (6) RFS APL 866513 antennas	Verizon (existing)	(3) 15' Boom Gates	108'	(12) 1-5/8" coax cables
(2) 48"x8"x8" Antenna (assumed)	TV 65 (existing)	(1) 4' Standoff	101'	Unknown
(9) EMS RV65-13 panel antennas	Sprint Nextel (existing)	(3) 15' T-Frames	88'	(9) 1-1/4" coax cables
(3) KMW AM-X-WM-17-65-00T antenna with (3) RET's and (3) TMA's	**Sprint Nextel (proposed)**	**Mounted on same T- Frames above**	**88'**	**(6) 1-5/8" coax cables**
(1) Radiowaves HPLP1-23 dish	**Sprint Nextel (proposed)**	**Mounted on same T- Frame above**	**88'**	**(1) 1/2" coax cable**

Note: Refer to Section 6 Tower Feed Line Plan for coaxial cable locations.

This structural analysis of the communications tower was performed by URS Corporation (URS) for Sprint Nextel. 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 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 analysis was conducted using RISA Tower 5.0.2. Two load conditions were evaluated as shown below which were compared to allowable stresses according to AISC and TIA/EIA.

Load Condition 1 =90 mph (fastest mile) Wind Load (without ice) + Tower Dead Load
Load Condition 2 =78 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 uni-poles 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 results of the analysis indicate that the calculated stresses under the proposed loading were below the allowable stresses (see table below). Detailed analysis and calculations for the proposed load condition are provided in section 6 of this report. An analysis of the foundation was not performed as the calculated reactions at the base of the structure were less than the original design reactions. The tower anchor bolts and foundation were found to be structurally adequate.

Tower Base Reactions:
For detailed proposed tower reactions, see drawing no. E-1 in section 6 of this report.

Tower Base Reactions

Tower Forces	Proposed Tower Load Reactions	Original Design Load Reactions
Compression (kips)	352	524.8
Uplift (kips)	289	460.5
Total Shear (kips)	68	93.1
Moment (kips-ft)	7939	11758.6

Tower Component Stress vs. Capacity Summary

Component / (Section No.)	Controlling Component/ Elevation	Stress (% capacity)	Pass/Fail	Comments:
Tower Leg (T13)	Bolt Tension/28'-48'	56.7%	Pass	
Diagonal (T12)	Gusset Bearing/28'-48'	91.7%	Pass	
Horizontal (T13)	Bolt Shear/8'-28'	46.1%	Pass	
Top Girt (T1)	Bolt Shear/256'	16.0%	Pass	
Anchor Bolts	Tension	36.0%	Pass	

5. CONCLUSIONS

The results of the analysis indicate that the tower structure has the capacity to support the proposed loading conditions. **The tower and its foundation are considered structurally adequate with the wind load classification specified above and the proposed antenna loading.**

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 cable is 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.

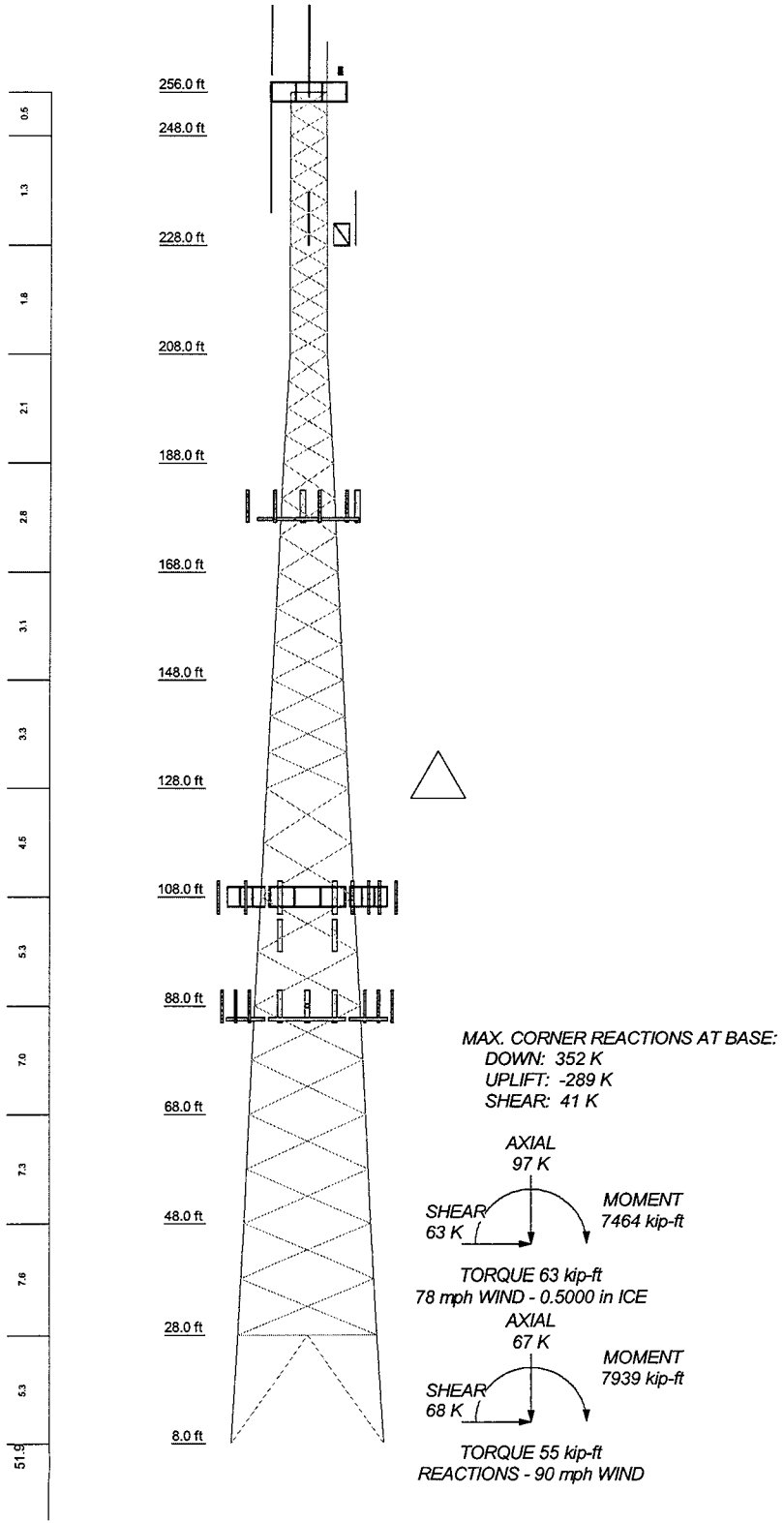
Ongoing and Periodic Inspection and Maintenance:

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

RISA TOWER INPUT/OUTPUT SUMMARY



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE
24' x 3" Omni (Up) (Unknown)	269	(2) APL196516-42T2 (Verizon)
24' x 3" Omni (Up) (Unknown)	269	(2) APL196516-42T2 (Verizon)
8'x3" Omni (Unknown)	260	(2) APL196516-42T2 (Verizon)
8'x3" Omni (Unknown)	260	(2) APL866513-42T0 (Verizon)
Beacon (Unknown)	259	(2) APL866513-42T0 (Verizon)
(2) Scala CL400 Antenna (Unknown)	258	(2) APL866513-42T0 (Verizon)
15' Platform with handrail (Unknown)	256	Pirod 4' Side Mount Standoff (1) (TV 65)
24' x 3" Omni (Down) (Unknown)	244	(2) 48"x8"x8" Antenna (TV 65)
Decibel DB806 (Unknown)	233	(3) RV65-13 (Sprint Nextel)
Decibel DB806 (Unknown)	233	(3) RV65-13 (Sprint Nextel)
Pirod 6' Side Mount Standoff (1) (Unknown)	230	(3) RV65-13 (Sprint Nextel)
Pirod 6' Side Mount Standoff (1) (Unknown)	230	KMW AM-X-WM-17-65-00T with RET (Sp
(2) APX16PV-16PVL-X (T-Mobile)	180	KMW AM-X-WM-17-65-00T with RET (Sp
(2) APX16PV-16PVL-X (T-Mobile)	180	KMW AM-X-WM-17-65-00T with RET (Sp
(2) APX16PV-16PVL-X (T-Mobile)	180	TMA (Sprint Nextel)
Pirod 15' T-Frame Sector Mount (1) (T-Mobile)	178	TMA (Sprint Nextel)
Pirod 15' T-Frame Sector Mount (1) (T-Mobile)	178	TMA (Sprint Nextel)
Pirod 15' T-Frame Sector Mount (1) (T-Mobile)	178	HPLP1-23 (Sprint Nextel)
Rohn 6'x15' Boom Gate (1) (Verizon)	108	Pirod 15' T-Frame Sector Mount (1) (Sprin
Rohn 6'x15' Boom Gate (1) (Verizon)	108	Pirod 15' T-Frame Sector Mount (1) (Sprin
Rohn 6'x15' Boom Gate (1) (Verizon)	108	Pirod 15' T-Frame Sector Mount (1) (Sprin

SYMBOL LIST

MARK	SIZE	MARK	
A	P2.5x.203	B	L1 3/4x1 3/4x3/

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	
A572-50	50 ksi	65 ksi	A36	36 ksi

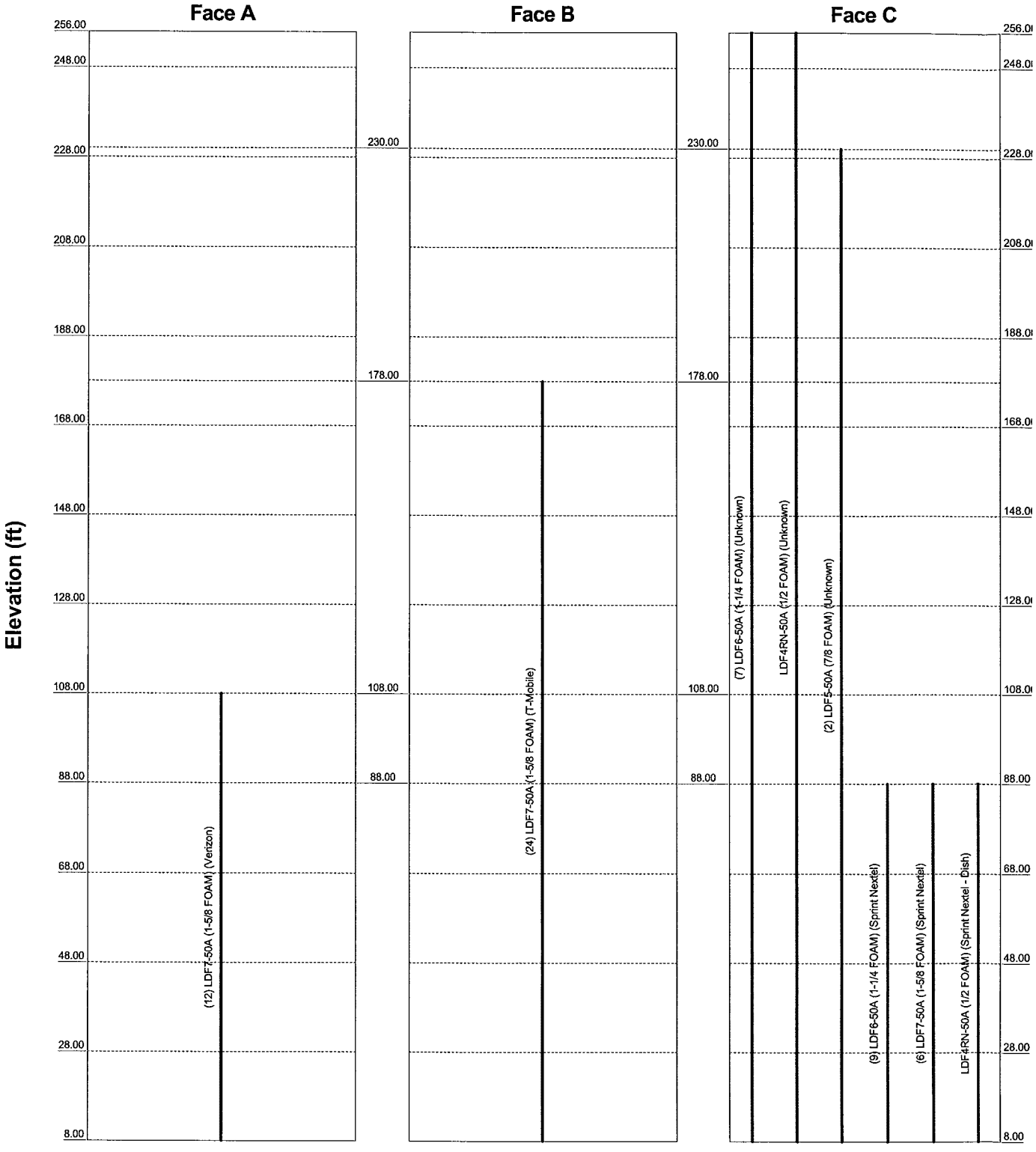
TOWER DESIGN NOTES

1. Tower is located in Fairfield County, Connecticut.
2. Tower designed for a 90 mph basic wind in accordance with the TIA/EIA-222-F Standard.
3. Tower is also designed for a 78 mph basic wind with 0.50 in ice.
4. Deflections are based upon a 50 mph wind.
5. TOWER RATING: 91.7%

RISA TOWER FEEDLINE DISTRIBUTION CHART

8' - 256'

Round Flat App In Face App Out Face Truss Leg

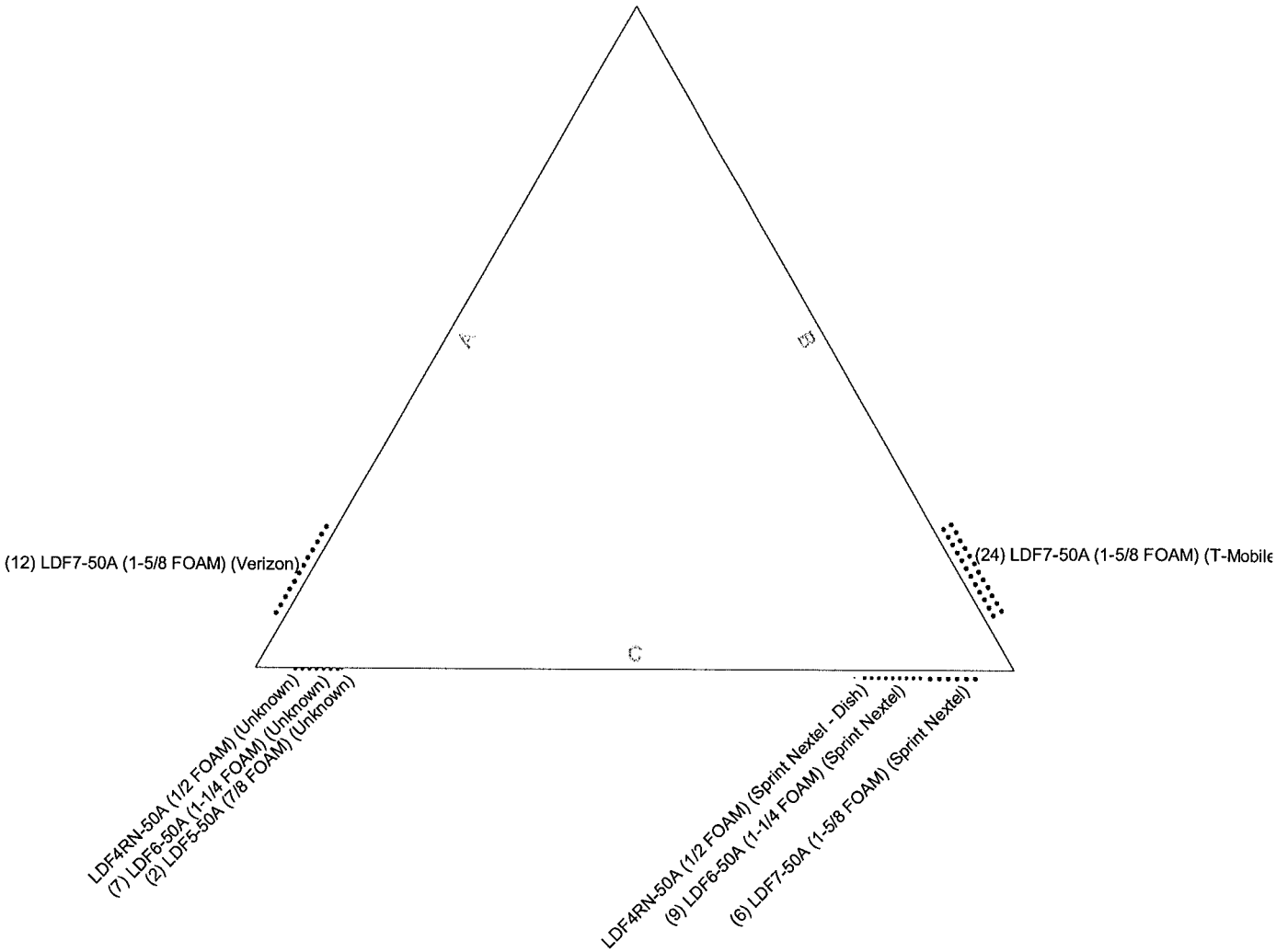


URS Corporation
500 Enterprise Drive, Suite 3B
Rocky Hill, CT 06067
Phone: (860) 529-8882
FAX: (860) 529-3991

Job:	***248' Self Supporting Lattice Tow***		
Project:	***CT01YC057 - NCT3612 Bridgeport West***		
Client: Sprint Nextel	Drawn by: Staff	App'd:	
Code: TIA/EIA-222-F	Date: 12/04/07	Scale: N	
Path: Z:\Jason Mead\TW1-014 248_ROHN_Bridgeport_CT.er		Dwg No.	

RISA TOWER FEEDLINE PLAN

_____ Round _____ Flat _____ App In Face _____ App Out Face



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RISA TOWER DETAILED OUTPUT

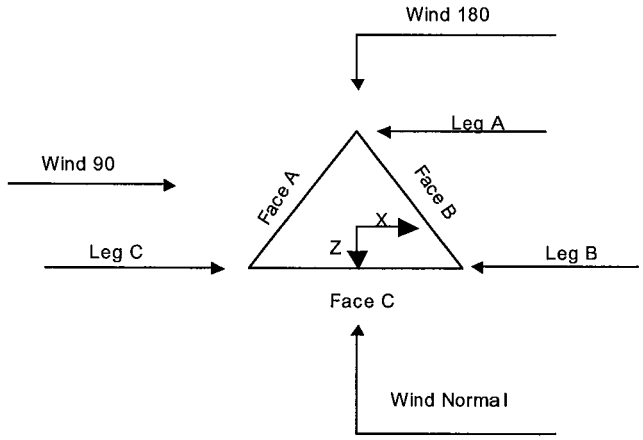
Tower Input Data

The main tower is a 3x free standing tower with an overall height of 256.00 ft above the ground line.
The base of the tower is set at an elevation of 8.00 ft above the ground line.
The face width of the tower is 6.60 ft at the top and 27.83 ft at the base.
This tower is designed using the TIA/EIA-222-F standard.
The following design criteria apply:

Tower is located in Fairfield County, Connecticut.
Basic wind speed of 90 mph.
Nominal ice thickness of 0.5000 in.
Ice density of 56 pcf.
A wind speed of 78 mph is used in combination with ice.
Deflections calculated using a wind speed of 50 mph.
A non-linear (P-delta) analysis was used.
Pressures are calculated at each section.
Stress ratio used in tower member design is 1.333.
Local bending stresses due to climbing loads, feedline supports, and appurtenance mounts are not considered.

Options

Consider Moments - Legs	Distribute Leg Loads As Uniform	Treat Feedline Bundles As Cylinder
Consider Moments - Horizontals	Assume Legs Pinned	Use ASCE 10 X-Brace Ly Rules
Consider Moments - Diagonals	√ Assume Rigid Index Plate	√ Calculate Redundant Bracing Forces
Use Moment Magnification	√ Use Clear Spans For Wind Area	Ignore Redundant Members in FEA
√ Use Code Stress Ratios	√ Use Clear Spans For KL/r	√ SR Leg Bolts Resist Compression
√ Use Code Safety Factors - Guys	√ Retension Guys To Initial Tension	√ All Leg Panels Have Same Allowable
Escalate Ice	Bypass Mast Stability Checks	Offset Girt At Foundation
Always Use Max Kz	√ Use Azimuth Dish Coefficients	√ Consider Feedline Torque
Use Special Wind Profile	√ Project Wind Area of Appurt.	Include Angle Block Shear Check
√ Include Bolts In Member Capacity	√ Autocalc Torque Arm Areas	Poles
√ Leg Bolts Are At Top Of Section	√ SR Members Have Cut Ends	√ Include Shear-Torsion Interaction
Secondary Horizontal Braces Leg	Sort Capacity Reports By Component	Always Use Sub-Critical Flow
Use Diamond Inner Bracing (4 Sided)	Triangulate Diamond Inner Bracing	Use Top Mounted Sockets
Add IBC .6D+W Combination		



Triangular Tower

Tower Section Geometry

Tower Section	Tower Elevation	Assembly Database	Description	Section Width	Number of Sections	Section Length
	ft			ft		ft
T1	256.00-248.00			6.60	1	8.00
T2	248.00-228.00			6.69	1	20.00
T3	228.00-208.00			6.76	1	20.00
T4	208.00-188.00			6.83	1	20.00
T5	188.00-168.00			8.92	1	20.00
T6	168.00-148.00			10.92	1	20.00
T7	148.00-128.00			12.92	1	20.00
T8	128.00-108.00			14.99	1	20.00
T9	108.00-88.00			17.08	1	20.00
T10	88.00-68.00			19.25	1	20.00
T11	68.00-48.00			21.25	1	20.00
T12	48.00-28.00			23.23	1	20.00
T13	28.00-8.00			25.33	1	20.00

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	256.00-248.00	4.00	X Brace	No	No	0.0000	0.0000
T2	248.00-228.00	4.00	X Brace	No	No	0.0000	0.0000

Tower Section	Tower Elevation ft	Diagonal Spacing ft	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset in	Bottom Girt Offset in
T3	228.00-208.00	4.00	X Brace	No	No	0.0000	0.0000
T4	208.00-188.00	5.00	X Brace	No	No	0.0000	0.0000
T5	188.00-168.00	6.67	X Brace	No	No	0.0000	0.0000
T6	168.00-148.00	6.67	X Brace	No	No	0.0000	0.0000
T7	148.00-128.00	6.67	X Brace	No	No	0.0000	0.0000
T8	128.00-108.00	10.00	X Brace	No	No	0.0000	0.0000
T9	108.00-88.00	10.00	X Brace	No	No	0.0000	0.0000
T10	88.00-68.00	10.00	X Brace	No	No	0.0000	0.0000
T11	68.00-48.00	10.00	X Brace	No	No	0.0000	0.0000
T12	48.00-28.00	10.00	X Brace	No	No	0.0000	0.0000
T13	28.00-8.00	20.00	K Brace Down	No	Yes	0.0000	0.0000

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
T1 256.00-248.00	Pipe	P2.5x.203	A572-50 (50 ksi)	Single Angle	L1 3/4x1 3/4x3/16	A36 (36 ksi)
T2 248.00-228.00	Pipe	P3x.216	A572-50 (50 ksi)	Single Angle	L2x2x1/4	A36 (36 ksi)
T3 228.00-208.00	Pipe	P4x.337	A572-50 (50 ksi)	Single Angle	L2x2x1/4	A36 (36 ksi)
T4 208.00-188.00	Pipe	P5x.375	A572-50 (50 ksi)	Single Angle	L2x2x1/4	A36 (36 ksi)
T5 188.00-168.00	Pipe	P6x.432	A572-50 (50 ksi)	Single Angle	L2 1/2x2 1/2x1/4	A36 (36 ksi)
T6 168.00-148.00	Pipe	P6x.432	A572-50 (50 ksi)	Single Angle	L3x3x1/4	A572-50 (50 ksi)
T7 148.00-128.00	Pipe	P6x.432	A572-50 (50 ksi)	Single Angle	L3x3x1/4	A572-50 (50 ksi)
T8 128.00-108.00	Pipe	P8x.375	A572-50 (50 ksi)	Single Angle	L4x4x3/8	A572-50 (50 ksi)
T9 108.00-88.00	Pipe	P8x.5	A572-50 (50 ksi)	Single Angle	L4x4x3/8	A572-50 (50 ksi)
T10 88.00-68.00	Pipe	P10x.5	A572-50 (50 ksi)	Single Angle	L5x5x3/8	A36 (36 ksi)
T11 68.00-48.00	Pipe	P10x.5	A572-50 (50 ksi)	Single Angle	L5x5x3/8	A36 (36 ksi)
T12 48.00-28.00	Pipe	P10x.5	A572-50 (50 ksi)	Single Angle	L5x5x3/8	A36 (36 ksi)
T13 28.00-8.00	Pipe	P10x.5	A572-50 (50 ksi)	Pipe	P3x.216	A572-50 (50 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
T1 256.00-248.00	Single Angle	L1 3/4x1 3/4x3/16	A36 (36 ksi)	Single Angle		A36 (36 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	No. of Mid Girts	Mid Girt Type	Mid Girt Size	Mid Girt Grade	Horizontal Type	Horizontal Size	Horizontal Grade
T13 28.00-8.00	None	Flat Bar		A36 (36 ksi)	Pipe	P3x.216	A572-50 (50 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Gusset Area (per face) ft²	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in
T1 256.00-248.00	2.00	0.2500	A36 (36 ksi)	1	1	1.05	36.0000	36.0000
T2 248.00-228.00	2.00	0.2500	A36 (36 ksi)	1	1	1.05	36.0000	36.0000
T3 228.00-208.00	2.00	0.2500	A36 (36 ksi)	1	1	1.05	36.0000	36.0000
T4 208.00-188.00	2.00	0.2500	A36 (36 ksi)	1	1	1.05	36.0000	36.0000
T5 188.00-168.00	2.00	0.2500	A36 (36 ksi)	1	1	1.05	36.0000	36.0000
T6 168.00-148.00	2.00	0.2500	A36 (36 ksi)	1	1	1.05	36.0000	36.0000
T7 148.00-128.00	2.00	0.2500	A36 (36 ksi)	1	1	1.05	36.0000	36.0000
T8 128.00-108.00	2.00	0.2500	A36 (36 ksi)	1	1	1.05	36.0000	36.0000
T9 108.00-88.00	2.00	0.2500	A36 (36 ksi)	1	1	1.05	36.0000	36.0000
T10 88.00-68.00	2.00	0.2500	A36 (36 ksi)	1	1	1.05	36.0000	36.0000
T11 68.00-48.00	2.00	0.2500	A36 (36 ksi)	1	1	1.05	36.0000	36.0000
T12 48.00-28.00	2.00	0.2500	A36 (36 ksi)	1	1	1.05	36.0000	36.0000
T13 28.00-8.00	2.00	0.2500	A36 (36 ksi)	1	1	1.05	36.0000	36.0000

Tower Section Geometry *(cont'd)*

K Factors[1]

Tower Elevation ft	Calc K Single Angles	Calc K Solid Rounds	Legs	X Brace Diags X Y	K Brace Diags X Y	Single Diags X Y	Girts X Y	Horiz. X Y	Sec. Horiz. X Y	Inner Brace X Y
T1 256.00-248.00	Yes	No	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T2 248.00-228.00	Yes	No	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T3 228.00-208.00	Yes	No	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T4 208.00-188.00	Yes	No	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T5 188.00-168.00	Yes	No	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T6 168.00-148.00	Yes	No	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T7 148.00-128.00	Yes	No	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T8 128.00-108.00	Yes	No	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T9 108.00-88.00	Yes	No	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T10 88.00-68.00	Yes	No	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T11 68.00-48.00	Yes	No	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T12 48.00-28.00	Yes	No	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T13 28.00-8.00	Yes	No	0.5	0.5 0.5	0.5 0.5	0.5 0.5	1 1	0.5 0.5	1 1	1 1

[1]*Note: 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 256.00-248.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	1	0.0000	0.75	0.0000	1
T2 248.00-228.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	1	0.0000	0.75	0.0000	1
T3 228.00-208.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	1	0.0000	0.75	0.0000	1
T4 208.00-188.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	1	0.0000	0.75	0.0000	1
T5 188.00-168.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	1	0.0000	0.75	0.0000	1
T6 168.00-148.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	1	0.0000	0.75	0.0000	1
T7 148.00-128.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	1	0.0000	0.75	0.0000	1
T8 128.00-108.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	1	0.0000	0.75	0.0000	1

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
T9 108.00-88.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	1	0.0000	0.75	0.0000	1
T10 88.00-68.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	1	0.0000	0.75	0.0000	1
T11 68.00-48.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	1	0.0000	0.75	0.0000	1
T12 48.00-28.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	1	0.0000	0.75	0.0000	1
T13 28.00-8.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	1	0.0000	0.75	0.0000	1

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg Connection Type	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
		Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.
T1 256.00-248.00	Flange	0.7500 A325N	4	0.6250 A325N	1	0.5000 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T2 248.00-228.00	Flange	0.8750 A325N	4	0.6250 A325N	1	0.6250 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T3 228.00-208.00	Flange	1.0000 A325N	4	0.6250 A325N	1	0.6250 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T4 208.00-188.00	Flange	1.0000 A325N	6	0.6250 A325N	1	0.7500 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T5 188.00-168.00	Flange	1.0000 A325N	6	0.7500 A325N	1	0.6250 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T6 168.00-148.00	Flange	1.0000 A325N	6	0.7500 A325N	1	0.6250 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T7 148.00-128.00	Flange	1.0000 A325N	8	0.7500 A325N	1	0.7500 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T8 128.00-108.00	Flange	1.0000 A325N	8	0.7500 A325N	1	0.6250 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T9 108.00-88.00	Flange	1.0000 A325N	12	0.7500 A325N	1	0.7500 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T10 88.00-68.00	Flange	1.0000 A325N	12	0.8750 A325N	1	0.7500 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T11 68.00-48.00	Flange	1.0000 A325N	12	0.8750 A325N	1	0.7500 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T12 48.00-28.00	Flange	1.0000 A325N	12	0.8750 A325N	1	0.7500 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T13 28.00-8.00	Flange	1.0000 A325N	16	0.7500 A325N	3	0.7500 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.7500 A325N	2	0.6250 A325N	0

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight klf
LDF6-50A (1-1/4 FOAM) (Unknown)	C	Yes	Ar (CfAe)	256.00 - 8.00	0.0000	0.42	7	7	1.5500	1.5500		0.00
LDF4RN-50A (1/2 FOAM) (Unknown)	C	Yes	Ar (CfAe)	256.00 - 8.00	0.0000	0.46	1	1	0.6300	0.6300		0.00
LDF5-50A (7/8 FOAM) (Unknown)	C	Yes	Ar (CfAe)	230.00 - 8.00	0.0000	0.39	2	2	1.0900	1.0900		0.00
LDF7-50A (1-5/8 FOAM) (Verizon)	A	Yes	Ar (CfAe)	108.00 - 8.00	3.0000	-0.36	12	12	1.9800	1.9800		0.00
LDF7-50A (1-5/8 FOAM) (T-Mobile)	B	Yes	Ar (CfAe)	178.00 - 8.00	3.0000	0.36	24	12	1.9800	1.9800		0.00
LDF6-50A (1-1/4 FOAM) (Sprint Nextel)	C	Yes	Ar (CfAe)	88.00 - 8.00	3.0000	-0.34	9	9	1.5500	1.5500		0.00
LDF7-50A (1-5/8 FOAM) (Sprint Nextel)	C	Yes	Ar (CfAe)	88.00 - 8.00	3.0000	-0.42	6	6	1.9800	1.9800		0.00
LDF4RN-50A (1/2 FOAM) (Sprint Nextel - Dish)	C	Yes	Ar (CfAe)	88.00 - 8.00	3.0000	-0.29	1	1	0.6300	0.6300		0.00

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
T1	256.00-248.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	7.653	0.000	0.000	0.000	0.04
T2	248.00-228.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	19.497	0.000	0.000	0.000	0.10
T3	228.00-208.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	22.767	0.000	0.000	0.000	0.11
T4	208.00-188.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	22.767	0.000	0.000	0.000	0.11
T5	188.00-168.00	A	0.000	0.000	0.000	0.000	0.00
		B	19.800	0.000	0.000	0.000	0.20
		C	22.767	0.000	0.000	0.000	0.11
T6	168.00-148.00	A	0.000	0.000	0.000	0.000	0.00
		B	39.600	0.000	0.000	0.000	0.39
		C	22.767	0.000	0.000	0.000	0.11
T7	148.00-128.00	A	0.000	0.000	0.000	0.000	0.00
		B	39.600	0.000	0.000	0.000	0.39
		C	22.767	0.000	0.000	0.000	0.11
T8	128.00-108.00	A	0.000	0.000	0.000	0.000	0.00
		B	39.600	0.000	0.000	0.000	0.39
		C	22.767	0.000	0.000	0.000	0.11
T9	108.00-88.00	A	39.600	0.000	0.000	0.000	0.20
		B	39.600	0.000	0.000	0.000	0.39

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		C	22.767	0.000	0.000	0.000	0.11
T10	88.00-68.00	A	39.600	0.000	0.000	0.000	0.20
		B	39.600	0.000	0.000	0.000	0.39
		C	66.867	0.000	0.000	0.000	0.33
T11	68.00-48.00	A	39.600	0.000	0.000	0.000	0.20
		B	39.600	0.000	0.000	0.000	0.39
		C	66.867	0.000	0.000	0.000	0.33
T12	48.00-28.00	A	39.600	0.000	0.000	0.000	0.20
		B	39.600	0.000	0.000	0.000	0.39
		C	66.867	0.000	0.000	0.000	0.33
T13	28.00-8.00	A	39.600	0.000	0.000	0.000	0.20
		B	39.600	0.000	0.000	0.000	0.39
		C	66.867	0.000	0.000	0.000	0.33

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_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
T1	256.00-248.00	A	0.500	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		12.987	0.000	0.000	0.000	0.11
T2	248.00-228.00	A	0.500	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		33.163	0.000	0.000	0.000	0.29
T3	228.00-208.00	A	0.500	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		39.433	0.000	0.000	0.000	0.34
T4	208.00-188.00	A	0.500	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		39.433	0.000	0.000	0.000	0.34
T5	188.00-168.00	A	0.500	0.000	0.000	0.000	0.000	0.00
		B		29.800	0.000	0.000	0.000	0.56
		C		39.433	0.000	0.000	0.000	0.34
T6	168.00-148.00	A	0.500	0.000	0.000	0.000	0.000	0.00
		B		59.600	0.000	0.000	0.000	1.12
		C		39.433	0.000	0.000	0.000	0.34
T7	148.00-128.00	A	0.500	0.000	0.000	0.000	0.000	0.00
		B		59.600	0.000	0.000	0.000	1.12
		C		39.433	0.000	0.000	0.000	0.34
T8	128.00-108.00	A	0.500	0.000	0.000	0.000	0.000	0.00
		B		59.600	0.000	0.000	0.000	1.12
		C		39.433	0.000	0.000	0.000	0.34
T9	108.00-88.00	A	0.500	59.600	0.000	0.000	0.000	0.56
		B		59.600	0.000	0.000	0.000	1.12
		C		39.433	0.000	0.000	0.000	0.34
T10	88.00-68.00	A	0.500	59.600	0.000	0.000	0.000	0.56
		B		59.600	0.000	0.000	0.000	1.12
		C		110.200	0.000	0.000	0.000	0.98
T11	68.00-48.00	A	0.500	59.600	0.000	0.000	0.000	0.56
		B		59.600	0.000	0.000	0.000	1.12
		C		110.200	0.000	0.000	0.000	0.98
T12	48.00-28.00	A	0.500	59.600	0.000	0.000	0.000	0.56
		B		59.600	0.000	0.000	0.000	1.12
		C		110.200	0.000	0.000	0.000	0.98
T13	28.00-8.00	A	0.500	59.600	0.000	0.000	0.000	0.56
		B		59.600	0.000	0.000	0.000	1.12
		C		110.200	0.000	0.000	0.000	0.98

Feed Line Shielding

Section	Elevation	Face	A_R	A_R Ice	A_F	A_F Ice
	ft		ft^2	ft^2	ft^2	ft^2
T1	256.00-248.00	A	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000
		C	0.000	0.767	0.791	1.342
T2	248.00-228.00	A	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000
		C	0.000	1.608	1.890	3.215
T3	228.00-208.00	A	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000
		C	0.000	1.907	2.201	3.813
T4	208.00-188.00	A	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000
		C	0.000	1.560	1.802	3.121
T5	188.00-168.00	A	0.000	0.000	0.000	0.000
		B	0.000	0.899	1.493	2.247
		C	0.000	1.189	1.716	2.973
T6	168.00-148.00	A	0.000	0.000	0.000	0.000
		B	0.000	1.708	3.405	5.125
		C	0.000	1.130	1.958	3.391
T7	148.00-128.00	A	0.000	0.000	0.000	0.000
		B	0.000	1.652	3.293	4.956
		C	0.000	1.093	1.893	3.279
T8	128.00-108.00	A	0.000	0.000	0.000	0.000
		B	0.000	1.171	3.112	4.684
		C	0.000	0.775	1.789	3.099
T9	108.00-88.00	A	0.000	1.134	3.014	4.537
		B	0.000	1.134	3.014	4.537
		C	0.000	0.750	1.733	3.002
T10	88.00-68.00	A	0.000	1.108	3.681	5.540
		B	0.000	1.108	3.681	5.540
		C	0.000	2.049	6.216	10.244
T11	68.00-48.00	A	0.000	1.089	3.619	5.446
		B	0.000	1.089	3.619	5.446
		C	0.000	2.014	6.110	10.070
T12	48.00-28.00	A	0.000	1.074	3.569	5.372
		B	0.000	1.074	3.569	5.372
		C	0.000	1.987	6.027	9.933
T13	28.00-8.00	A	1.588	3.072	0.000	0.000
		B	1.588	3.072	0.000	0.000
		C	2.681	5.681	0.000	0.000

Feed Line Center of Pressure

Section	Elevation	CP_X	CP_Z	CP_X Ice	CP_Z Ice
	ft	in	in	in	in
T1	256.00-248.00	-5.4706	3.8624	-6.0941	4.2885
T2	248.00-228.00	-6.1091	4.3170	-6.9816	4.9185
T3	228.00-208.00	-6.3087	4.4997	-7.4716	5.3209
T4	208.00-188.00	-6.8920	4.8959	-8.4507	5.9942
T5	188.00-168.00	0.2172	6.8342	-0.8798	8.3012

Section	Elevation	CP_X	CP_Z	CP_X Ice	CP_Z Ice
	ft	in	in	in	in
T6	168.00-148.00	6.1684	8.5945	5.7076	10.2410
T7	148.00-128.00	6.7754	9.7456	6.2423	11.6069
T8	128.00-108.00	6.7958	10.0179	6.5513	12.5223
T9	108.00-88.00	-6.8933	14.2639	-9.0511	17.0389
T10	88.00-68.00	4.5213	20.1138	4.8161	24.2890
T11	68.00-48.00	4.8342	21.5823	5.1575	26.1060
T12	48.00-28.00	5.1340	22.9905	5.4863	27.8572
T13	28.00-8.00	6.9598	31.2564	7.2393	36.8675

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert	Azimuth Adjustment	Placement		C_AA_A Front	C_AA_A Side	Weight
			ft ft ft	°	ft		ft^2	ft^2	K
15' Platform with handrail	C	None		0.0000	256.00	No Ice	33.80	33.80	2.04
(Unknown)						1/2" Ice	43.60	43.60	2.75
24' x 3" Omni (Up)	A	From Leg	0.00	0.0000	269.00	No Ice	7.20	7.20	0.06
(Unknown)			0.00			1/2" Ice	9.50	9.50	0.10
			0.00						
24' x 3" Omni (Up)	A	From Face	6.00	0.0000	269.00	No Ice	7.20	7.20	0.06
(Unknown)			0.00			1/2" Ice	9.50	9.50	0.10
			0.00						
24' x 3" Omni (Down)	A	From Face	6.00	0.0000	244.00	No Ice	7.20	7.20	0.06
(Unknown)			0.00			1/2" Ice	9.50	9.50	0.10
			0.00						
8'x3" Omni	C	From Face	6.00	0.0000	260.00	No Ice	2.40	2.40	0.02
(Unknown)			0.00			1/2" Ice	3.17	3.17	0.03
			0.00						
8'x3" Omni	B	From Leg	0.00	0.0000	260.00	No Ice	2.40	2.40	0.02
(Unknown)			0.00			1/2" Ice	3.17	3.17	0.03
			0.00						
Beacon	B	From Face	3.00	0.0000	259.00	No Ice	2.10	2.10	0.02
(Unknown)			3.00			1/2" Ice	2.40	2.40	0.04
			0.00						
(2) Scala CL400 Antenna	A	From Face	6.00	0.0000	258.00	No Ice	3.89	3.89	0.02
(Unknown)			0.00			1/2" Ice	4.17	4.17	0.04
			0.00						
Pirod 6' Side Mount Standoff	A	From Leg	3.00	0.0000	230.00	No Ice	4.97	4.97	0.07
(1)			0.00			1/2" Ice	6.12	6.12	0.13
(Unknown)			0.00						
Decibel DB806	A	From Leg	6.00	0.0000	233.00	No Ice	1.59	1.59	0.02
(Unknown)			0.00			1/2" Ice	1.93	1.93	0.03
			0.00						
Pirod 6' Side Mount Standoff	B	From Leg	3.00	0.0000	230.00	No Ice	4.97	4.97	0.07
(1)			0.00			1/2" Ice	6.12	6.12	0.13
(Unknown)			0.00						
Decibel DB806	B	From Leg	6.00	0.0000	233.00	No Ice	1.59	1.59	0.02
(Unknown)			0.00			1/2" Ice	1.93	1.93	0.03
			0.00						
Pirod 15' T-Frame Sector	A	From Leg	1.00	0.0000	178.00	No Ice	15.00	15.00	0.50
Mount (1)			0.00			1/2" Ice	20.60	20.60	0.65
(T-Mobile)			0.00						

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
Pirod 15' T-Frame Sector Mount (1) (T-Mobile)	B	From Leg	1.00 0.00 0.00	0.0000	178.00	No Ice 1/2" Ice	15.00 20.60	15.00 20.60	0.50 0.65
Pirod 15' T-Frame Sector Mount (1) (T-Mobile)	C	From Leg	1.00 0.00 0.00	0.0000	178.00	No Ice 1/2" Ice	15.00 20.60	15.00 20.60	0.50 0.65
(2) APX16PV-16PVL-X (T-Mobile)	A	From Leg	2.00 4.00 0.00	0.0000	180.00	No Ice 1/2" Ice	6.70 7.13	2.00 2.33	0.04 0.07
(2) APX16PV-16PVL-X (T-Mobile)	B	From Leg	2.00 4.00 0.00	0.0000	180.00	No Ice 1/2" Ice	6.70 7.13	2.00 2.33	0.04 0.07
(2) APX16PV-16PVL-X (T-Mobile)	C	From Leg	2.00 4.00 0.00	0.0000	180.00	No Ice 1/2" Ice	6.70 7.13	2.00 2.33	0.04 0.07
Rohn 6'x15' Boom Gate (1) (Verizon)	A	From Leg	3.00 0.00 0.00	0.0000	108.00	No Ice 1/2" Ice	16.00 25.00	16.00 25.00	0.70 1.10
Rohn 6'x15' Boom Gate (1) (Verizon)	B	From Leg	3.00 0.00 0.00	0.0000	108.00	No Ice 1/2" Ice	16.00 25.00	16.00 25.00	0.70 1.10
Rohn 6'x15' Boom Gate (1) (Verizon)	C	From Leg	3.00 0.00 0.00	0.0000	108.00	No Ice 1/2" Ice	16.00 25.00	16.00 25.00	0.70 1.10
(2) APL196516-42T2 (Verizon)	A	From Leg	6.00 0.00 0.00	0.0000	108.00	No Ice 1/2" Ice	3.47 3.86	2.96 3.35	0.01 0.03
(2) APL196516-42T2 (Verizon)	B	From Leg	6.00 6.00 0.00	0.0000	108.00	No Ice 1/2" Ice	3.47 3.86	2.96 3.35	0.01 0.03
(2) APL196516-42T2 (Verizon)	C	From Leg	6.00 0.00 0.00	0.0000	108.00	No Ice 1/2" Ice	3.47 3.86	2.96 3.35	0.01 0.03
(2) APL866513-42T0 (Verizon)	A	From Leg	6.00 0.00 0.00	0.0000	108.00	No Ice 1/2" Ice	4.29 4.67	3.73 4.10	0.02 0.05
(2) APL866513-42T0 (Verizon)	B	From Leg	6.00 0.00 0.00	0.0000	108.00	No Ice 1/2" Ice	4.29 4.67	3.73 4.10	0.02 0.05
(2) APL866513-42T0 (Verizon)	C	From Leg	6.00 0.00 0.00	0.0000	108.00	No Ice 1/2" Ice	4.29 4.67	3.73 4.10	0.02 0.05
Pirod 4' Side Mount Standoff (1) (TV 65)	A	From Leg	2.00 0.00 0.00	0.0000	101.00	No Ice 1/2" Ice	2.72 4.91	2.72 4.91	0.05 0.09
(2) 48"x8"x8" Antenna (TV 65)	A	From Leg	4.00 0.00 0.00	0.0000	101.00	No Ice 1/2" Ice	3.73 4.29	3.73 4.29	0.02 0.04
Pirod 15' T-Frame Sector Mount (1) (Sprint Nextel)	A	From Leg	1.75 0.00 0.00	0.0000	86.00	No Ice 1/2" Ice	15.00 20.60	15.00 20.60	0.50 0.65
Pirod 15' T-Frame Sector Mount (1) (Sprint Nextel)	B	From Leg	1.75 0.00 0.00	0.0000	86.00	No Ice 1/2" Ice	15.00 20.60	15.00 20.60	0.50 0.65
Pirod 15' T-Frame Sector Mount (1) (Sprint Nextel)	C	From Leg	1.75 0.00 0.00	0.0000	86.00	No Ice 1/2" Ice	15.00 20.60	15.00 20.60	0.50 0.65

Description	Face or Leg	Offset Type	Offsets: Horz Lateral / Vert (ft / ft / ft)	Azimuth Adjustment (°)	Placement (ft)		C_AA_A Front (ft^2)	C_AA_A Side (ft^2)	Weight (K)
(3) RV65-13	A	From Leg	4.00	0.0000	88.00	No Ice	5.60	3.27	0.02
(Sprint Nextel)			0.00			1/2" Ice	5.99	3.63	0.06
			0.00						
(3) RV65-13	B	From Leg	4.00	0.0000	88.00	No Ice	5.60	3.27	0.02
(Sprint Nextel)			0.00			1/2" Ice	5.99	3.63	0.06
			0.00						
(3) RV65-13	C	From Leg	4.00	0.0000	88.00	No Ice	5.60	3.27	0.02
(Sprint Nextel)			0.00			1/2" Ice	5.99	3.63	0.06
			0.00						
KMW AM-X-WM-17-65-00T with RET	A	From Leg	4.00	0.0000	88.00	No Ice	3.07	1.62	0.02
(Sprint Nextel)			0.00			1/2" Ice	3.62	2.37	0.03
			0.00						
KMW AM-X-WM-17-65-00T with RET	B	From Leg	4.00	0.0000	88.00	No Ice	3.07	1.62	0.02
(Sprint Nextel)			0.00			1/2" Ice	3.62	2.37	0.03
			0.00						
KMW AM-X-WM-17-65-00T with RET	C	From Leg	4.00	0.0000	88.00	No Ice	3.07	1.62	0.02
(Sprint Nextel)			0.00			1/2" Ice	3.62	2.37	0.03
			0.00						
TMA	A	From Leg	4.00	0.0000	88.00	No Ice	0.85	0.38	0.02
(Sprint Nextel)			0.00			1/2" Ice	1.04	0.54	0.03
			0.00						
TMA	B	From Leg	4.00	0.0000	88.00	No Ice	0.85	0.38	0.02
(Sprint Nextel)			0.00			1/2" Ice	1.04	0.54	0.03
			0.00						
TMA	C	From Leg	4.00	0.0000	88.00	No Ice	0.85	0.38	0.02
(Sprint Nextel)			0.00			1/2" Ice	1.04	0.54	0.03
			0.00						

Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral / Vert (ft)	Azimuth Adjustment (°)	3 dB Beam Width (°)	Elevation (ft)	Outside Diameter (ft)		Aperture Area (ft^2)	Weight (K)
HPLP1-23	A	Paraboloid w/o	From	4.00	0.0000	2.7000	88.00	1.00	No Ice	0.79	0.02
(Sprint Nextel)		Radome	Leg	0.00					1/2" Ice	0.92	0.04
				0.00							

Tower Pressures - No Ice

$G_H = 1.100$

Section Elevation (ft)	z (ft)	K_Z	q_z (psf)	A_G (ft^2)	Face	A_F (ft^2)	A_R (ft^2)	A_{leg} (ft^2)	Leg %	C_AA_A In Face (ft^2)	C_AA_A Out Face (ft^2)

Section Elevation ft	z ft	K_Z	q_z psf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
T1 256.00-248.00	252.00	1.788	37	55.073	A	7.288	3.833	3.833	34.47	0.000	0.000
					B	7.288	3.833		34.47		
					C	6.498	11.487		21.32		
T2 248.00-228.00	238.00	1.759	36	140.339	A	14.486	11.667	11.667	44.61	0.000	0.000
					B	14.486	11.667		44.61		
					C	12.596	31.163		26.66		
T3 228.00-208.00	218.00	1.715	36	143.411	A	14.433	15.000	15.000	50.96	0.000	0.000
					B	14.433	15.000		50.96		
					C	12.232	37.767		30.00		
T4 208.00-188.00	198.00	1.669	35	166.784	A	13.731	18.577	18.577	57.50	0.000	0.000
					B	13.731	18.577		57.50		
					C	11.929	41.344		34.87		
T5 188.00-168.00	178.00	1.619	34	209.441	A	16.136	22.120	22.120	57.82	0.000	0.000
					B	14.643	41.920		39.11		
					C	14.420	44.887		37.30		
T6 168.00-148.00	158.00	1.564	32	249.441	A	21.542	22.120	22.120	50.66	0.000	0.000
					B	18.137	61.720		27.70		
					C	19.584	44.887		34.31		
T7 148.00-128.00	138.00	1.505	31	290.145	A	24.284	22.123	22.123	47.67	0.000	0.000
					B	20.991	61.723		26.75		
					C	22.391	44.889		32.88		
T8 128.00-108.00	118.00	1.439	30	335.098	A	26.139	28.802	28.802	52.42	0.000	0.000
					B	23.027	68.402		31.50		
					C	24.350	51.569		37.94		
T9 108.00-88.00	98.00	1.365	28	377.703	A	25.545	68.406	28.806	30.66	0.000	0.000
					B	25.545	68.406		30.66		
					C	26.826	51.573		36.74		
T10 88.00-68.00	78.00	1.279	27	422.939	A	34.382	75.493	35.893	32.67	0.000	0.000
					B	34.382	75.493		32.67		
					C	31.848	102.760		26.66		
T11 68.00-48.00	58.00	1.175	24	462.730	A	37.389	75.492	35.892	31.80	0.000	0.000
					B	37.389	75.492		31.80		
					C	34.897	102.758		26.07		
T12 48.00-28.00	38.00	1.041	22	503.540	A	40.584	75.499	35.899	30.93	0.000	0.000
					B	40.584	75.499		30.93		
					C	38.127	102.766		25.48		
T13 28.00-8.00	18.00	1	21	549.566	A	2.000	94.828	35.927	37.10	0.000	0.000
					B	2.000	94.828		37.10		
					C	2.000	121.001		29.21		

Tower Pressure - With Ice

$G_H = 1.100$

Section Elevation ft	z ft	K_Z	q_z psf	t_Z in	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
T1 256.00-248.00	252.00	1.788	28	0.5000	55.740	A	7.288	8.424	5.167	32.88	0.000	0.000
						B	7.288	8.424		32.88		
						C	5.946	20.644		19.43		
T2 248.00-228.00	238.00	1.759	27	0.5000	142.005	A	14.486	21.479	15.000	41.71	0.000	0.000
						B	14.486	21.479		41.71		
						C	11.271	53.034		23.33		
T3 228.00-208.00	218.00	1.715	27	0.5000	145.078	A	14.433	24.786	18.333	46.75	0.000	0.000
						B	14.433	24.786		46.75		

Section Elevation ft	z ft	K_Z	q_z psf	t_Z in	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
						C	10.620	62.312		25.14		
T4 208.00-188.00	198.00	1.669	26	0.5000	168.453	A	13.731	28.017	21.916	52.50	0.000	0.000
						B	13.731	28.017		52.50		
						C	10.610	65.890		28.65		
T5 188.00-168.00	178.00	1.619	25	0.5000	211.110	A	16.136	31.349	25.459	53.61	0.000	0.000
						B	13.889	60.250		34.34		
						C	13.163	69.593		30.76		
T6 168.00-148.00	158.00	1.564	24	0.5000	251.110	A	21.542	32.209	25.459	47.37	0.000	0.000
						B	16.417	90.100		23.90		
						C	18.151	70.512		28.71		
T7 148.00-128.00	138.00	1.505	23	0.5000	291.814	A	24.284	33.126	25.462	44.35	0.000	0.000
						B	19.328	91.074		23.06		
						C	21.005	71.466		27.53		
T8 128.00-108.00	118.00	1.439	22	0.5000	336.767	A	26.139	38.412	32.142	49.79	0.000	0.000
						B	21.455	96.841		27.17		
						C	23.040	77.071		32.11		
T9 108.00-88.00	98.00	1.365	21	0.5000	379.373	A	24.022	97.487	32.146	26.46	0.000	0.000
						B	24.022	97.487		26.46		
						C	25.557	77.705		31.13		
T10 88.00-68.00	78.00	1.279	20	0.5000	424.608	A	32.523	105.172	39.232	28.49	0.000	0.000
						B	32.523	105.172		28.49		
						C	27.820	154.831		21.48		
T11 68.00-48.00	58.00	1.175	18	0.5000	464.399	A	35.561	105.779	39.231	27.76	0.000	0.000
						B	35.561	105.779		27.76		
						C	30.938	155.454		21.05		
T12 48.00-28.00	38.00	1.041	16	0.5000	505.209	A	38.782	106.431	39.239	27.02	0.000	0.000
						B	38.782	106.431		27.02		
						C	34.221	156.119		20.62		
T13 28.00-8.00	18.00	1	16	0.5000	551.236	A	2.000	122.889	39.269	31.44	0.000	0.000
						B	2.000	122.889		31.44		
						C	2.000	170.880		22.71		

Tower Pressure - Service

$G_H = 1.100$

Section Elevation ft	z ft	K_Z	q_z psf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
					C	7.288	3.833		34.47	0.000	0.000
T1 256.00-248.00	252.00	1.788	11	55.073	A	7.288	3.833	3.833	34.47		
					B	6.498	11.487		21.32		
					C	14.486	11.667		44.61	0.000	0.000
T2 248.00-228.00	238.00	1.759	11	140.339	A	14.486	11.667	11.667	44.61		
					B	12.596	31.163		26.66		
					C	14.433	15.000		50.96	0.000	0.000
T3 228.00-208.00	218.00	1.715	11	143.411	A	14.433	15.000	15.000	50.96		
					B	12.232	37.767		30.00		
					C	13.731	18.577		57.50	0.000	0.000
T4 208.00-188.00	198.00	1.669	11	166.784	A	13.731	18.577	18.577	57.50		
					B	11.929	41.344		34.87		
					C	16.136	22.120		57.82	0.000	0.000
T5 188.00-168.00	178.00	1.619	10	209.441	A	14.643	41.920	22.120	39.11		
					B	14.420	44.887		37.30		

Section Elevation ft	z ft	K_Z	q_z psf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
T6 168.00-148.00	158.00	1.564	10	249.441	A	21.542	22.120	22.120	50.66	0.000	0.000
					B	18.137	61.720		27.70		
					C	19.584	44.887		34.31		
T7 148.00-128.00	138.00	1.505	10	290.145	A	24.284	22.123	22.123	47.67	0.000	0.000
					B	20.991	61.723		26.75		
					C	22.391	44.889		32.88		
T8 128.00-108.00	118.00	1.439	9	335.098	A	26.139	28.802	28.802	52.42	0.000	0.000
					B	23.027	68.402		31.50		
					C	24.350	51.569		37.94		
T9 108.00-88.00	98.00	1.365	9	377.703	A	25.545	68.406	28.806	30.66	0.000	0.000
					B	25.545	68.406		30.66		
					C	26.826	51.573		36.74		
T10 88.00-68.00	78.00	1.279	8	422.939	A	34.382	75.493	35.893	32.67	0.000	0.000
					B	34.382	75.493		32.67		
					C	31.848	102.760		26.66		
T11 68.00-48.00	58.00	1.175	8	462.730	A	37.389	75.492	35.892	31.80	0.000	0.000
					B	37.389	75.492		31.80		
					C	34.897	102.758		26.07		
T12 48.00-28.00	38.00	1.041	7	503.540	A	40.584	75.499	35.899	30.93	0.000	0.000
					B	40.584	75.499		30.93		
					C	38.127	102.766		25.48		
T13 28.00-8.00	18.00	1	6	549.566	A	2.000	94.828	35.927	37.10	0.000	0.000
					B	2.000	94.828		37.10		
					C	2.000	121.001		29.21		

Tower Forces - No Ice - Wind Normal To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft²	F K	w klf	Ctrl. Face
T1 256.00-248.00	0.10	0.40	A	0.202	2.59	0.591	1	1	9.553	1.24	0.16	C
			B	0.202	2.59	0.591	1	1	9.553			
			C	0.327	2.228	0.624	1	1	13.670			
T2 248.00-228.00	0.16	1.26	A	0.186	2.642	0.588	1	1	21.343	2.90	0.14	C
			B	0.186	2.642	0.588	1	1	21.343			
			C	0.312	2.265	0.62	1	1	31.904			
T3 228.00-208.00	0.17	1.74	A	0.205	2.579	0.591	1	1	23.306	3.07	0.15	C
			B	0.205	2.579	0.591	1	1	23.306			
			C	0.349	2.175	0.632	1	1	36.100			
T4 208.00-188.00	0.17	2.06	A	0.194	2.617	0.589	1	1	24.675	3.22	0.16	C
			B	0.194	2.617	0.589	1	1	24.675			
			C	0.319	2.246	0.622	1	1	37.646			
T5 188.00-168.00	0.37	2.72	A	0.183	2.655	0.587	1	1	29.121	3.62	0.18	C
			B	0.27	2.379	0.607	1	1	40.097			
			C	0.283	2.342	0.611	1	1	41.841			
T6 168.00-148.00	0.56	3.07	A	0.175	2.681	0.586	1	1	34.496	4.53	0.23	B
			B	0.32	2.244	0.622	1	1	56.543			
			C	0.258	2.412	0.604	1	1	46.699			
T7 148.00-128.00	0.56	3.24	A	0.16	2.735	0.583	1	1	37.183	4.71	0.24	B
			B	0.285	2.336	0.611	1	1	58.732			
			C	0.232	2.493	0.597	1	1	49.209			
T8 128.00-108.00	0.56	4.41	A	0.164	2.721	0.584	1	1	42.951	5.03	0.25	B
			B	0.273	2.371	0.608	1	1	64.613			
			C	0.227	2.51	0.596	1	1	55.094			
T9 108.00-88.00	0.76	5.28	A	0.249	2.441	0.602	1	1	66.695	5.07	0.25	B
			B	0.249	2.441	0.602	1	1	66.695			

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft²	F K	w klf	Ctrl. Face
T10 88.00-68.00	0.98	6.95	C	0.208	2.571	0.592	1	1	57.356	6.28	0.31	C
			A	0.26	2.408	0.604	1	1	80.012			
			B	0.26	2.408	0.604	1	1	80.012			
T11 68.00-48.00	0.98	7.23	C	0.318	2.249	0.622	1	1	95.729	6.05	0.30	C
			A	0.244	2.456	0.6	1	1	82.710			
			B	0.244	2.456	0.6	1	1	82.710			
T12 48.00-28.00	0.98	7.52	C	0.297	2.303	0.615	1	1	98.108	5.63	0.28	C
			A	0.231	2.497	0.597	1	1	85.665			
			B	0.231	2.497	0.597	1	1	85.665			
T13 28.00-8.00	0.98	5.23	C	0.28	2.351	0.61	1	1	100.807	4.25	0.21	C
			A	0.176	2.677	0.586	1	1	57.553			
			B	0.176	2.677	0.586	1	1	57.553			
Sum Weight:	7.34	51.91	C	0.224	2.518	0.596	1	1	74.062			
								OTM	6093.95 kip-ft	55.58		

Tower Forces - No Ice - Wind 60 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft²	F K	w klf	Ctrl. Face
T1 256.00-248.00	0.10	0.40	A	0.202	2.59	0.591	0.8	1	8.096	1.12	0.14	C
			B	0.202	2.59	0.591	0.8	1	8.096			
			C	0.327	2.228	0.624	0.8	1	12.370			
T2 248.00-228.00	0.16	1.26	A	0.186	2.642	0.588	0.8	1	18.445	2.67	0.13	C
			B	0.186	2.642	0.588	0.8	1	18.445			
			C	0.312	2.265	0.62	0.8	1	29.385			
T3 228.00-208.00	0.17	1.74	A	0.205	2.579	0.591	0.8	1	20.419	2.86	0.14	C
			B	0.205	2.579	0.591	0.8	1	20.419			
			C	0.349	2.175	0.632	0.8	1	33.654			
T4 208.00-188.00	0.17	2.06	A	0.194	2.617	0.589	0.8	1	21.929	3.01	0.15	C
			B	0.194	2.617	0.589	0.8	1	21.929			
			C	0.319	2.246	0.622	0.8	1	35.260			
T5 188.00-168.00	0.37	2.72	A	0.183	2.655	0.587	0.8	1	25.894	3.37	0.17	C
			B	0.27	2.379	0.607	0.8	1	37.169			
			C	0.283	2.342	0.611	0.8	1	38.957			
T6 168.00-148.00	0.56	3.07	A	0.175	2.681	0.586	0.8	1	30.188	4.24	0.21	B
			B	0.32	2.244	0.622	0.8	1	52.916			
			C	0.258	2.412	0.604	0.8	1	42.782			
T7 148.00-128.00	0.56	3.24	A	0.16	2.735	0.583	0.8	1	32.326	4.37	0.22	B
			B	0.285	2.336	0.611	0.8	1	54.533			
			C	0.232	2.493	0.597	0.8	1	44.731			
T8 128.00-108.00	0.56	4.41	A	0.164	2.721	0.584	0.8	1	37.724	4.67	0.23	B
			B	0.273	2.371	0.608	0.8	1	60.008			
			C	0.227	2.51	0.596	0.8	1	50.224			
T9 108.00-88.00	0.76	5.28	A	0.249	2.441	0.602	0.8	1	61.586	4.68	0.23	B
			B	0.249	2.441	0.602	0.8	1	61.586			
			C	0.208	2.571	0.592	0.8	1	51.991			
T10 88.00-68.00	0.98	6.95	A	0.26	2.408	0.604	0.8	1	73.135	5.86	0.29	C
			B	0.26	2.408	0.604	0.8	1	73.135			
			C	0.318	2.249	0.622	0.8	1	89.360			
T11 68.00-48.00	0.98	7.23	A	0.244	2.456	0.6	0.8	1	75.233	5.62	0.28	C
			B	0.244	2.456	0.6	0.8	1	75.233			
			C	0.297	2.303	0.615	0.8	1	91.128			
T12 48.00-	0.98	7.52	A	0.231	2.497	0.597	0.8	1	77.549	5.20	0.26	C

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft²	F K	w klf	Ctrl. Face
28.00			B	0.231	2.497	0.597	0.8	1	77.549			
			C	0.28	2.351	0.61	0.8	1	93.181			
T13 28.00-8.00	0.98	5.23	A	0.176	2.677	0.586	0.8	1	57.153	4.23	0.21	C
			B	0.176	2.677	0.586	0.8	1	57.153			
			C	0.224	2.518	0.596	0.8	1	73.662			
Sum Weight:	7.34	51.91						OTM	5662.28 kip-ft	51.91		

Tower Forces - No Ice - Wind 90 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft²	F K	w klf	Ctrl. Face
T1 256.00-248.00	0.10	0.40	A	0.202	2.59	0.591	0.85	1	8.460	1.15	0.14	C
			B	0.202	2.59	0.591	0.85	1	8.460			
			C	0.327	2.228	0.624	0.85	1	12.695			
T2 248.00-228.00	0.16	1.26	A	0.186	2.642	0.588	0.85	1	19.170	2.73	0.14	C
			B	0.186	2.642	0.588	0.85	1	19.170			
			C	0.312	2.265	0.62	0.85	1	30.015			
T3 228.00-208.00	0.17	1.74	A	0.205	2.579	0.591	0.85	1	21.141	2.91	0.15	C
			B	0.205	2.579	0.591	0.85	1	21.141			
			C	0.349	2.175	0.632	0.85	1	34.265			
T4 208.00-188.00	0.17	2.06	A	0.194	2.617	0.589	0.85	1	22.615	3.06	0.15	C
			B	0.194	2.617	0.589	0.85	1	22.615			
			C	0.319	2.246	0.622	0.85	1	35.857			
T5 188.00-168.00	0.37	2.72	A	0.183	2.655	0.587	0.85	1	26.701	3.43	0.17	C
			B	0.27	2.379	0.607	0.85	1	37.901			
			C	0.283	2.342	0.611	0.85	1	39.678			
T6 168.00-148.00	0.56	3.07	A	0.175	2.681	0.586	0.85	1	31.265	4.31	0.22	B
			B	0.32	2.244	0.622	0.85	1	53.823			
			C	0.258	2.412	0.604	0.85	1	43.761			
T7 148.00-128.00	0.56	3.24	A	0.16	2.735	0.583	0.85	1	33.540	4.46	0.22	B
			B	0.285	2.336	0.611	0.85	1	55.583			
			C	0.232	2.493	0.597	0.85	1	45.851			
T8 128.00-108.00	0.56	4.41	A	0.164	2.721	0.584	0.85	1	39.031	4.76	0.24	B
			B	0.273	2.371	0.608	0.85	1	61.159			
			C	0.227	2.51	0.596	0.85	1	51.442			
T9 108.00-88.00	0.76	5.28	A	0.249	2.441	0.602	0.85	1	62.863	4.78	0.24	B
			B	0.249	2.441	0.602	0.85	1	62.863			
			C	0.208	2.571	0.592	0.85	1	53.332			
T10 88.00-68.00	0.98	6.95	A	0.26	2.408	0.604	0.85	1	74.854	5.96	0.30	C
			B	0.26	2.408	0.604	0.85	1	74.854			
			C	0.318	2.249	0.622	0.85	1	90.952			
T11 68.00-48.00	0.98	7.23	A	0.244	2.456	0.6	0.85	1	77.102	5.73	0.29	C
			B	0.244	2.456	0.6	0.85	1	77.102			
			C	0.297	2.303	0.615	0.85	1	92.873			
T12 48.00-28.00	0.98	7.52	A	0.231	2.497	0.597	0.85	1	79.578	5.31	0.27	C
			B	0.231	2.497	0.597	0.85	1	79.578			
			C	0.28	2.351	0.61	0.85	1	95.088			
T13 28.00-8.00	0.98	5.23	A	0.176	2.677	0.586	0.85	1	57.253	4.24	0.21	C
			B	0.176	2.677	0.586	0.85	1	57.253			
			C	0.224	2.518	0.596	0.85	1	73.762			
Sum Weight:	7.34	51.91						OTM	5770.20 kip-ft	52.83		

Tower Forces - With Ice - Wind Normal To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft²	F K	w klf	Ctrl. Face
T1 256.00-248.00	0.21	0.64	A	0.282	2.345	0.611	1	1	12.432	1.19	0.15	C
			B	0.282	2.345	0.611	1	1	12.432			
			C	0.477	1.932	0.686	1	1	20.110			
T2 248.00-228.00	0.38	1.87	A	0.253	2.428	0.603	1	1	27.432	2.79	0.14	C
			B	0.253	2.428	0.603	1	1	27.432			
			C	0.453	1.969	0.675	1	1	47.046			
T3 228.00-208.00	0.43	2.38	A	0.27	2.378	0.607	1	1	29.485	3.01	0.15	C
			B	0.27	2.378	0.607	1	1	29.485			
			C	0.503	1.896	0.699	1	1	54.170			
T4 208.00-188.00	0.43	2.72	A	0.248	2.444	0.601	1	1	30.578	3.09	0.15	C
			B	0.248	2.444	0.601	1	1	30.578			
			C	0.454	1.967	0.675	1	1	55.098			
T5 188.00-168.00	0.99	3.48	A	0.225	2.515	0.596	1	1	34.814	3.36	0.17	C
			B	0.351	2.169	0.633	1	1	52.022			
			C	0.392	2.08	0.648	1	1	58.286			
T6 168.00-148.00	1.55	4.00	A	0.214	2.55	0.593	1	1	40.654	4.11	0.21	B
			B	0.424	2.018	0.662	1	1	76.042			
			C	0.353	2.164	0.634	1	1	62.826			
T7 148.00-128.00	1.55	4.26	A	0.197	2.607	0.59	1	1	43.820	4.23	0.21	B
			B	0.378	2.109	0.643	1	1	77.889			
			C	0.317	2.252	0.621	1	1	65.401			
T8 128.00-108.00	1.55	5.53	A	0.192	2.624	0.589	1	1	48.754	4.42	0.22	B
			B	0.351	2.169	0.633	1	1	82.749			
			C	0.297	2.303	0.615	1	1	70.444			
T9 108.00-88.00	2.11	6.49	A	0.32	2.243	0.622	1	1	84.691	4.44	0.22	B
			B	0.32	2.243	0.622	1	1	84.691			
			C	0.272	2.373	0.608	1	1	72.785			
T10 88.00-68.00	2.75	8.52	A	0.324	2.233	0.624	1	1	98.112	5.74	0.29	C
			B	0.324	2.233	0.624	1	1	98.112			
			C	0.43	2.007	0.664	1	1	130.685			
T11 68.00-48.00	2.75	8.89	A	0.304	2.284	0.617	1	1	100.852	5.48	0.27	C
			B	0.304	2.284	0.617	1	1	100.852			
			C	0.401	2.061	0.652	1	1	132.318			
T12 48.00-28.00	2.75	9.28	A	0.287	2.33	0.612	1	1	103.932	5.06	0.25	C
			B	0.287	2.33	0.612	1	1	103.932			
			C	0.377	2.112	0.642	1	1	134.510			
T13 28.00-8.00	2.75	6.19	A	0.227	2.51	0.596	1	1	75.264	4.17	0.21	C
			B	0.227	2.51	0.596	1	1	75.264			
			C	0.314	2.26	0.62	1	1	107.974			
Sum Weight:	20.19	65.05						OTM	5641.23 kip-ft	51.07		

Tower Forces - With Ice - Wind 60 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft²	F K	w klf	Ctrl. Face
T1 256.00-	0.21	0.64	A	0.282	2.345	0.611	0.8	1	10.974	1.12	0.14	C

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft²	F K	w klf	Ctrl. Face
248.00			B	0.282	2.345	0.611	0.8	1	10.974			
			C	0.477	1.932	0.686	0.8	1	18.920			
T2 248.00-228.00	0.38	1.87	A	0.253	2.428	0.603	0.8	1	24.534	2.65	0.13	C
			B	0.253	2.428	0.603	0.8	1	24.534			
			C	0.453	1.969	0.675	0.8	1	44.792			
T3 228.00-208.00	0.43	2.38	A	0.27	2.378	0.607	0.8	1	26.598	2.90	0.14	C
			B	0.27	2.378	0.607	0.8	1	26.598			
			C	0.503	1.896	0.699	0.8	1	52.046			
T4 208.00-188.00	0.43	2.72	A	0.248	2.444	0.601	0.8	1	27.832	2.97	0.15	C
			B	0.248	2.444	0.601	0.8	1	27.832			
			C	0.454	1.967	0.675	0.8	1	52.976			
T5 188.00-168.00	0.99	3.48	A	0.225	2.515	0.596	0.8	1	31.587	3.20	0.16	C
			B	0.351	2.169	0.633	0.8	1	49.244			
			C	0.392	2.08	0.648	0.8	1	55.653			
T6 168.00-148.00	1.55	4.00	A	0.214	2.55	0.593	0.8	1	36.345	3.93	0.20	B
			B	0.424	2.018	0.662	0.8	1	72.759			
			C	0.353	2.164	0.634	0.8	1	59.196			
T7 148.00-128.00	1.55	4.26	A	0.197	2.607	0.59	0.8	1	38.963	4.02	0.20	B
			B	0.378	2.109	0.643	0.8	1	74.023			
			C	0.317	2.252	0.621	0.8	1	61.200			
T8 128.00-108.00	1.55	5.53	A	0.192	2.624	0.589	0.8	1	43.526	4.19	0.21	B
			B	0.351	2.169	0.633	0.8	1	78.458			
			C	0.297	2.303	0.615	0.8	1	65.836			
T9 108.00-88.00	2.11	6.49	A	0.32	2.243	0.622	0.8	1	79.886	4.18	0.21	B
			B	0.32	2.243	0.622	0.8	1	79.886			
			C	0.272	2.373	0.608	0.8	1	67.674			
T10 88.00-68.00	2.75	8.52	A	0.324	2.233	0.624	0.8	1	91.607	5.49	0.27	C
			B	0.324	2.233	0.624	0.8	1	91.607			
			C	0.43	2.007	0.664	0.8	1	125.121			
T11 68.00-48.00	2.75	8.89	A	0.304	2.284	0.617	0.8	1	93.740	5.22	0.26	C
			B	0.304	2.284	0.617	0.8	1	93.740			
			C	0.401	2.061	0.652	0.8	1	126.130			
T12 48.00-28.00	2.75	9.28	A	0.287	2.33	0.612	0.8	1	96.175	4.80	0.24	C
			B	0.287	2.33	0.612	0.8	1	96.175			
			C	0.377	2.112	0.642	0.8	1	127.666			
T13 28.00-8.00	2.75	6.19	A	0.227	2.51	0.596	0.8	1	74.864	4.16	0.21	C
			B	0.227	2.51	0.596	0.8	1	74.864			
			C	0.314	2.26	0.62	0.8	1	107.574			
Sum Weight:	20.19	65.05						OTM	5380.68 kip-ft	48.84		

Tower Forces - With Ice - Wind 90 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft²	F K	w klf	Ctrl. Face
T1 256.00-248.00	0.21	0.64	A	0.282	2.345	0.611	0.85	1	11.338	1.13	0.14	C
			B	0.282	2.345	0.611	0.85	1	11.338			
			C	0.477	1.932	0.686	0.85	1	19.218			
T2 248.00-228.00	0.38	1.87	A	0.253	2.428	0.603	0.85	1	25.259	2.69	0.13	C
			B	0.253	2.428	0.603	0.85	1	25.259			
			C	0.453	1.969	0.675	0.85	1	45.356			
T3 228.00-208.00	0.43	2.38	A	0.27	2.378	0.607	0.85	1	27.320	2.92	0.15	C
			B	0.27	2.378	0.607	0.85	1	27.320			
			C	0.503	1.896	0.699	0.85	1	52.577			

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft²	F K	w klf	Ctrl. Face
T4 208.00-188.00	0.43	2.72	A	0.248	2.444	0.601	0.85	1	28.519	3.00	0.15	C
			B	0.248	2.444	0.601	0.85	1	28.519			
			C	0.454	1.967	0.675	0.85	1	53.507			
T5 188.00-168.00	0.99	3.48	A	0.225	2.515	0.596	0.85	1	32.394	3.24	0.16	C
			B	0.351	2.169	0.633	0.85	1	49.939			
			C	0.392	2.08	0.648	0.85	1	56.311			
T6 168.00-148.00	1.55	4.00	A	0.214	2.55	0.593	0.85	1	37.422	3.97	0.20	B
			B	0.424	2.018	0.662	0.85	1	73.580			
			C	0.353	2.164	0.634	0.85	1	60.103			
T7 148.00-128.00	1.55	4.26	A	0.197	2.607	0.59	0.85	1	40.177	4.07	0.20	B
			B	0.378	2.109	0.643	0.85	1	74.989			
			C	0.317	2.252	0.621	0.85	1	62.250			
T8 128.00-108.00	1.55	5.53	A	0.192	2.624	0.589	0.85	1	44.833	4.25	0.21	B
			B	0.351	2.169	0.633	0.85	1	79.530			
			C	0.297	2.303	0.615	0.85	1	66.988			
T9 108.00-88.00	2.11	6.49	A	0.32	2.243	0.622	0.85	1	81.087	4.25	0.21	B
			B	0.32	2.243	0.622	0.85	1	81.087			
			C	0.272	2.373	0.608	0.85	1	68.951			
T10 88.00-68.00	2.75	8.52	A	0.324	2.233	0.624	0.85	1	93.233	5.55	0.28	C
			B	0.324	2.233	0.624	0.85	1	93.233			
			C	0.43	2.007	0.664	0.85	1	126.512			
T11 68.00-48.00	2.75	8.89	A	0.304	2.284	0.617	0.85	1	95.518	5.29	0.26	C
			B	0.304	2.284	0.617	0.85	1	95.518			
			C	0.401	2.061	0.652	0.85	1	127.677			
T12 48.00-28.00	2.75	9.28	A	0.287	2.33	0.612	0.85	1	98.114	4.87	0.24	C
			B	0.287	2.33	0.612	0.85	1	98.114			
			C	0.377	2.112	0.642	0.85	1	129.377			
T13 28.00-8.00	2.75	6.19	A	0.227	2.51	0.596	0.85	1	74.964	4.16	0.21	C
			B	0.227	2.51	0.596	0.85	1	74.964			
			C	0.314	2.26	0.62	0.85	1	107.674			
Sum Weight:	20.19	65.05						OTM	5445.82 kip-ft	49.40		

Tower Forces - Service - Wind Normal To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft²	F K	w klf	Ctrl. Face
T1 256.00-248.00	0.10	0.40	A	0.202	2.59	0.591	1	1	9.553	0.38	0.05	C
			B	0.202	2.59	0.591	1	1	9.553			
			C	0.327	2.228	0.624	1	1	13.670			
T2 248.00-228.00	0.16	1.26	A	0.186	2.642	0.588	1	1	21.343	0.89	0.04	C
			B	0.186	2.642	0.588	1	1	21.343			
			C	0.312	2.265	0.62	1	1	31.904			
T3 228.00-208.00	0.17	1.74	A	0.205	2.579	0.591	1	1	23.306	0.95	0.05	C
			B	0.205	2.579	0.591	1	1	23.306			
			C	0.349	2.175	0.632	1	1	36.100			
T4 208.00-188.00	0.17	2.06	A	0.194	2.617	0.589	1	1	24.675	0.99	0.05	C
			B	0.194	2.617	0.589	1	1	24.675			
			C	0.319	2.246	0.622	1	1	37.646			
T5 188.00-168.00	0.37	2.72	A	0.183	2.655	0.587	1	1	29.121	1.12	0.06	C
			B	0.27	2.379	0.607	1	1	40.097			
			C	0.283	2.342	0.611	1	1	41.841			
T6 168.00-148.00	0.56	3.07	A	0.175	2.681	0.586	1	1	34.496	1.40	0.07	B
			B	0.32	2.244	0.622	1	1	56.543			

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft²	F K	w klf	Ctrl. Face
			C	0.258	2.412	0.604	1	1	46.699			
T7 148.00-128.00	0.56	3.24	A	0.16	2.735	0.583	1	1	37.183	1.45	0.07	B
			B	0.285	2.336	0.611	1	1	58.732			
			C	0.232	2.493	0.597	1	1	49.209			
T8 128.00-108.00	0.56	4.41	A	0.164	2.721	0.584	1	1	42.951	1.55	0.08	B
			B	0.273	2.371	0.608	1	1	64.613			
			C	0.227	2.51	0.596	1	1	55.094			
T9 108.00-88.00	0.76	5.28	A	0.249	2.441	0.602	1	1	66.695	1.56	0.08	B
			B	0.249	2.441	0.602	1	1	66.695			
			C	0.208	2.571	0.592	1	1	57.356			
T10 88.00-68.00	0.98	6.95	A	0.26	2.408	0.604	1	1	80.012	1.94	0.10	C
			B	0.26	2.408	0.604	1	1	80.012			
			C	0.318	2.249	0.622	1	1	95.729			
T11 68.00-48.00	0.98	7.23	A	0.244	2.456	0.6	1	1	82.710	1.87	0.09	C
			B	0.244	2.456	0.6	1	1	82.710			
			C	0.297	2.303	0.615	1	1	98.108			
T12 48.00-28.00	0.98	7.52	A	0.231	2.497	0.597	1	1	85.665	1.74	0.09	C
			B	0.231	2.497	0.597	1	1	85.665			
			C	0.28	2.351	0.61	1	1	100.807			
T13 28.00-8.00	0.98	5.23	A	0.176	2.677	0.586	1	1	57.553	1.31	0.07	C
			B	0.176	2.677	0.586	1	1	57.553			
			C	0.224	2.518	0.596	1	1	74.062			
Sum Weight:	7.34	51.91						OTM	1880.85 kip-ft	17.16		

Tower Forces - Service - Wind 60 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft²	F K	w klf	Ctrl. Face
T1 256.00-248.00	0.10	0.40	A	0.202	2.59	0.591	0.8	1	8.096	0.35	0.04	C
			B	0.202	2.59	0.591	0.8	1	8.096			
			C	0.327	2.228	0.624	0.8	1	12.370			
T2 248.00-228.00	0.16	1.26	A	0.186	2.642	0.588	0.8	1	18.445	0.82	0.04	C
			B	0.186	2.642	0.588	0.8	1	18.445			
			C	0.312	2.265	0.62	0.8	1	29.385			
T3 228.00-208.00	0.17	1.74	A	0.205	2.579	0.591	0.8	1	20.419	0.88	0.04	C
			B	0.205	2.579	0.591	0.8	1	20.419			
			C	0.349	2.175	0.632	0.8	1	33.654			
T4 208.00-188.00	0.17	2.06	A	0.194	2.617	0.589	0.8	1	21.929	0.93	0.05	C
			B	0.194	2.617	0.589	0.8	1	21.929			
			C	0.319	2.246	0.622	0.8	1	35.260			
T5 188.00-168.00	0.37	2.72	A	0.183	2.655	0.587	0.8	1	25.894	1.04	0.05	C
			B	0.27	2.379	0.607	0.8	1	37.169			
			C	0.283	2.342	0.611	0.8	1	38.957			
T6 168.00-148.00	0.56	3.07	A	0.175	2.681	0.586	0.8	1	30.188	1.31	0.07	B
			B	0.32	2.244	0.622	0.8	1	52.916			
			C	0.258	2.412	0.604	0.8	1	42.782			
T7 148.00-128.00	0.56	3.24	A	0.16	2.735	0.583	0.8	1	32.326	1.35	0.07	B
			B	0.285	2.336	0.611	0.8	1	54.533			
			C	0.232	2.493	0.597	0.8	1	44.731			
T8 128.00-108.00	0.56	4.41	A	0.164	2.721	0.584	0.8	1	37.724	1.44	0.07	B
			B	0.273	2.371	0.608	0.8	1	60.008			
			C	0.227	2.51	0.596	0.8	1	50.224			
T9 108.00-	0.76	5.28	A	0.249	2.441	0.602	0.8	1	61.586	1.44	0.07	B

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft²	F K	w klf	Ctrl. Face
88.00			B	0.249	2.441	0.602	0.8	1	61.586			
			C	0.208	2.571	0.592	0.8	1	51.991			
T10 88.00-68.00	0.98	6.95	A	0.26	2.408	0.604	0.8	1	73.135	1.81	0.09	C
			B	0.26	2.408	0.604	0.8	1	73.135			
			C	0.318	2.249	0.622	0.8	1	89.360			
T11 68.00-48.00	0.98	7.23	A	0.244	2.456	0.6	0.8	1	75.233	1.74	0.09	C
			B	0.244	2.456	0.6	0.8	1	75.233			
			C	0.297	2.303	0.615	0.8	1	91.128			
T12 48.00-28.00	0.98	7.52	A	0.231	2.497	0.597	0.8	1	77.549	1.61	0.08	C
			B	0.231	2.497	0.597	0.8	1	77.549			
			C	0.28	2.351	0.61	0.8	1	93.181			
T13 28.00-8.00	0.98	5.23	A	0.176	2.677	0.586	0.8	1	57.153	1.31	0.07	C
			B	0.176	2.677	0.586	0.8	1	57.153			
			C	0.224	2.518	0.596	0.8	1	73.662			
Sum Weight:	7.34	51.91						OTM	1747.62 kip-ft	16.02		

Tower Forces - Service - Wind 90 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft²	F K	w klf	Ctrl. Face
T1 256.00-248.00	0.10	0.40	A	0.202	2.59	0.591	0.85	1	8.460	0.36	0.04	C
			B	0.202	2.59	0.591	0.85	1	8.460			
			C	0.327	2.228	0.624	0.85	1	12.695			
T2 248.00-228.00	0.16	1.26	A	0.186	2.642	0.588	0.85	1	19.170	0.84	0.04	C
			B	0.186	2.642	0.588	0.85	1	19.170			
			C	0.312	2.265	0.62	0.85	1	30.015			
T3 228.00-208.00	0.17	1.74	A	0.205	2.579	0.591	0.85	1	21.141	0.90	0.04	C
			B	0.205	2.579	0.591	0.85	1	21.141			
			C	0.349	2.175	0.632	0.85	1	34.265			
T4 208.00-188.00	0.17	2.06	A	0.194	2.617	0.589	0.85	1	22.615	0.95	0.05	C
			B	0.194	2.617	0.589	0.85	1	22.615			
			C	0.319	2.246	0.622	0.85	1	35.857			
T5 188.00-168.00	0.37	2.72	A	0.183	2.655	0.587	0.85	1	26.701	1.06	0.05	C
			B	0.27	2.379	0.607	0.85	1	37.901			
			C	0.283	2.342	0.611	0.85	1	39.678			
T6 168.00-148.00	0.56	3.07	A	0.175	2.681	0.586	0.85	1	31.265	1.33	0.07	B
			B	0.32	2.244	0.622	0.85	1	53.823			
			C	0.258	2.412	0.604	0.85	1	43.761			
T7 148.00-128.00	0.56	3.24	A	0.16	2.735	0.583	0.85	1	33.540	1.38	0.07	B
			B	0.285	2.336	0.611	0.85	1	55.583			
			C	0.232	2.493	0.597	0.85	1	45.851			
T8 128.00-108.00	0.56	4.41	A	0.164	2.721	0.584	0.85	1	39.031	1.47	0.07	B
			B	0.273	2.371	0.608	0.85	1	61.159			
			C	0.227	2.51	0.596	0.85	1	51.442			
T9 108.00-88.00	0.76	5.28	A	0.249	2.441	0.602	0.85	1	62.863	1.47	0.07	B
			B	0.249	2.441	0.602	0.85	1	62.863			
			C	0.208	2.571	0.592	0.85	1	53.332			
T10 88.00-68.00	0.98	6.95	A	0.26	2.408	0.604	0.85	1	74.854	1.84	0.09	C
			B	0.26	2.408	0.604	0.85	1	74.854			
			C	0.318	2.249	0.622	0.85	1	90.952			
T11 68.00-48.00	0.98	7.23	A	0.244	2.456	0.6	0.85	1	77.102	1.77	0.09	C
			B	0.244	2.456	0.6	0.85	1	77.102			
			C	0.297	2.303	0.615	0.85	1	92.873			

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft²	F K	w klf	Ctrl. Face
T12 48.00-28.00	0.98	7.52	A	0.231	2.497	0.597	0.85	1	79.578	1.64	0.08	C
			B	0.231	2.497	0.597	0.85	1	79.578			
			C	0.28	2.351	0.61	0.85	1	95.088			
T13 28.00-8.00	0.98	5.23	A	0.176	2.677	0.586	0.85	1	57.253	1.31	0.07	C
			B	0.176	2.677	0.586	0.85	1	57.253			
			C	0.224	2.518	0.596	0.85	1	73.762			
Sum Weight:	7.34	51.91						OTM	1780.92 kip-ft	16.30		

Discrete Appurtenance Pressures - No Ice $G_H = 1.100$

Description	Aiming Azimuth °	Weight K	$Offset_x$ ft	$Offset_z$ ft	z ft	K_z	q_z psf	C_AA_C Front ft²	C_AA_C Side ft²
15' Platform with handrail	0.0000	2.04	0.00	0.00	256.00	1.796	37	33.80	33.80
24' x 3" Omni (Up)	0.0000	0.06	0.00	-3.72	269.00	1.821	38	7.20	7.20
24' x 3" Omni (Up)	300.0000	0.06	-6.81	-3.93	269.00	1.821	38	7.20	7.20
24' x 3" Omni (Down)	300.0000	0.06	-6.87	-3.97	244.00	1.771	37	7.20	7.20
8'x3" Omni	180.0000	0.02	0.00	7.89	260.00	1.804	37	2.40	2.40
8'x3" Omni	120.0000	0.02	3.28	1.89	260.00	1.804	37	2.40	2.40
Beacon	60.0000	0.02	5.74	0.15	259.00	1.802	37	2.10	2.10
Scala CL400 Antenna	300.0000	0.04	-6.84	-3.95	258.00	1.800	37	7.78	7.78
Pirod 6' Side Mount Standoff (1)	0.0000	0.07	0.00	-6.90	230.00	1.741	36	4.97	4.97
Decibel DB806	0.0000	0.02	0.00	-9.89	233.00	1.748	36	1.59	1.59
Pirod 6' Side Mount Standoff (1)	120.0000	0.07	5.97	3.45	230.00	1.741	36	4.97	4.97
Decibel DB806	120.0000	0.02	8.57	4.95	233.00	1.748	36	1.59	1.59
Pirod 15' T-Frame Sector Mount (1)	0.0000	0.50	0.00	-6.73	178.00	1.619	34	15.00	15.00
Pirod 15' T-Frame Sector Mount (1)	120.0000	0.50	5.83	3.36	178.00	1.619	34	15.00	15.00
Pirod 15' T-Frame Sector Mount (1)	240.0000	0.50	-5.83	3.36	178.00	1.619	34	15.00	15.00
APX16PV-16PVL-X	0.0000	0.08	4.00	-7.61	180.00	1.624	34	13.40	4.01
APX16PV-16PVL-X	120.0000	0.08	4.59	7.27	180.00	1.624	34	13.40	4.01
APX16PV-16PVL-X	240.0000	0.08	-8.59	0.34	180.00	1.624	34	13.40	4.01
Rohn 6'x15' Boom Gate (1)	0.0000	0.70	0.00	-12.86	108.00	1.403	29	16.00	16.00
Rohn 6'x15' Boom Gate (1)	120.0000	0.70	11.14	6.43	108.00	1.403	29	16.00	16.00
Rohn 6'x15' Boom Gate (1)	240.0000	0.70	-11.14	6.43	108.00	1.403	29	16.00	16.00
APL196516-42T2	0.0000	0.02	0.00	-15.86	108.00	1.403	29	6.94	5.92
APL196516-42T2	120.0000	0.02	10.74	13.13	108.00	1.403	29	6.94	5.92
APL196516-42T2	240.0000	0.02	-13.74	7.93	108.00	1.403	29	6.94	5.92
APL866513-42T0	0.0000	0.04	0.00	-15.86	108.00	1.403	29	8.59	7.47
APL866513-42T0	120.0000	0.04	13.74	7.93	108.00	1.403	29	8.59	7.47
APL866513-42T0	240.0000	0.04	-13.74	7.93	108.00	1.403	29	8.59	7.47
Pirod 4' Side Mount Standoff (1)	0.0000	0.05	0.00	-12.30	101.00	1.377	29	2.72	2.72
48"x8"x8" Antenna	0.0000	0.04	0.00	-14.30	101.00	1.377	29	7.46	7.46
Pirod 15' T-Frame Sector Mount (1)	0.0000	0.50	0.00	-12.98	86.00	1.315	27	15.00	15.00
Pirod 15' T-Frame Sector	120.0000	0.50	11.24	6.49	86.00	1.315	27	15.00	15.00

Description	Aiming Azimuth °	Weight K	$Offset_x$ ft	$Offset_z$ ft	z ft	K_z	q_z psf	C_AA_C Front ft^2	C_AA_C Side ft^2
Mount (1)									
Pirod 15' T-Frame Sector Mount (1)	240.0000	0.50	-11.24	6.49	86.00	1.315	27	15.00	15.00
RV65-13	0.0000	0.06	0.00	-15.11	88.00	1.323	27	16.80	9.80
RV65-13	120.0000	0.06	13.09	7.56	88.00	1.323	27	16.80	9.80
RV65-13	240.0000	0.06	-13.09	7.56	88.00	1.323	27	16.80	9.80
KMW AM-X-WM-17-65-00T with RET	0.0000	0.02	0.00	-15.11	88.00	1.323	27	3.07	1.62
KMW AM-X-WM-17-65-00T with RET	120.0000	0.02	13.09	7.56	88.00	1.323	27	3.07	1.62
KMW AM-X-WM-17-65-00T with RET	240.0000	0.02	-13.09	7.56	88.00	1.323	27	3.07	1.62
TMA	0.0000	0.02	0.00	-15.11	88.00	1.323	27	0.85	0.38
TMA	120.0000	0.02	13.09	7.56	88.00	1.323	27	0.85	0.38
TMA	240.0000	0.02	-13.09	7.56	88.00	1.323	27	0.85	0.38
	Sum Weight:	8.37							

Discrete Appurtenance Pressures - With Ice $G_H = 1.100$

Description	Aiming Azimuth °	Weight K	$Offset_x$ ft	$Offset_z$ ft	z ft	K_z	q_z psf	C_AA_C Front ft^2	C_AA_C Side ft^2	t_z in
15' Platform with handrail	0.0000	2.75	0.00	0.00	256.00	1.796	28	43.60	43.60	0.5000
24' x 3" Omni (Up)	0.0000	0.10	0.00	-3.72	269.00	1.821	28	9.50	9.50	0.5000
24' x 3" Omni (Up)	300.0000	0.10	-6.81	-3.93	269.00	1.821	28	9.50	9.50	0.5000
24' x 3" Omni (Down)	300.0000	0.10	-6.87	-3.97	244.00	1.771	28	9.50	9.50	0.5000
8'x3" Omni	180.0000	0.03	0.00	7.89	260.00	1.804	28	3.17	3.17	0.5000
8'x3" Omni	120.0000	0.03	3.28	1.89	260.00	1.804	28	3.17	3.17	0.5000
Beacon	60.0000	0.04	5.74	0.15	259.00	1.802	28	2.40	2.40	0.5000
Scala CL400 Antenna	300.0000	0.08	-6.84	-3.95	258.00	1.800	28	8.34	8.34	0.5000
Pirod 6' Side Mount Standoff (1)	0.0000	0.13	0.00	-6.90	230.00	1.741	27	6.12	6.12	0.5000
Decibel DB806	0.0000	0.03	0.00	-9.89	233.00	1.748	27	1.93	1.93	0.5000
Pirod 6' Side Mount Standoff (1)	120.0000	0.13	5.97	3.45	230.00	1.741	27	6.12	6.12	0.5000
Decibel DB806	120.0000	0.03	8.57	4.95	233.00	1.748	27	1.93	1.93	0.5000
Pirod 15' T-Frame Sector Mount (1)	0.0000	0.65	0.00	-6.73	178.00	1.619	25	20.60	20.60	0.5000
Pirod 15' T-Frame Sector Mount (1)	120.0000	0.65	5.83	3.36	178.00	1.619	25	20.60	20.60	0.5000
Pirod 15' T-Frame Sector Mount (1)	240.0000	0.65	-5.83	3.36	178.00	1.619	25	20.60	20.60	0.5000
APX16PV-16PVL-X	0.0000	0.14	4.00	-7.61	180.00	1.624	25	14.26	4.65	0.5000
APX16PV-16PVL-X	120.0000	0.14	4.59	7.27	180.00	1.624	25	14.26	4.65	0.5000
APX16PV-16PVL-X	240.0000	0.14	-8.59	0.34	180.00	1.624	25	14.26	4.65	0.5000
Rohn 6'x15' Boom Gate (1)	0.0000	1.10	0.00	-12.86	108.00	1.403	22	25.00	25.00	0.5000
Rohn 6'x15' Boom Gate (1)	120.0000	1.10	11.14	6.43	108.00	1.403	22	25.00	25.00	0.5000
Rohn 6'x15' Boom Gate (1)	240.0000	1.10	-11.14	6.43	108.00	1.403	22	25.00	25.00	0.5000
APL196516-42T2	0.0000	0.06	0.00	-15.86	108.00	1.403	22	7.72	6.69	0.5000
APL196516-42T2	120.0000	0.06	10.74	13.13	108.00	1.403	22	7.72	6.69	0.5000
APL196516-42T2	240.0000	0.06	-13.74	7.93	108.00	1.403	22	7.72	6.69	0.5000
APL866513-42T0	0.0000	0.09	0.00	-15.86	108.00	1.403	22	9.34	8.20	0.5000
APL866513-42T0	120.0000	0.09	13.74	7.93	108.00	1.403	22	9.34	8.20	0.5000

Description	Aiming Azimuth °	Weight K	$Offset_x$ ft	$Offset_z$ ft	z ft	K_z	q_z psf	C_AA_C Front ft^2	C_AA_C Side ft^2	t_z in
APL866513-42T0	240.0000	0.09	-13.74	7.93	108.00	1.403	22	9.34	8.20	0.5000
Pirod 4' Side Mount Standoff (1)	0.0000	0.09	0.00	-12.30	101.00	1.377	21	4.91	4.91	0.5000
48"x8"x8" Antenna	0.0000	0.08	0.00	-14.30	101.00	1.377	21	8.57	8.57	0.5000
Pirod 15' T-Frame Sector Mount (1)	0.0000	0.65	0.00	-12.98	86.00	1.315	20	20.60	20.60	0.5000
Pirod 15' T-Frame Sector Mount (1)	120.0000	0.65	11.24	6.49	86.00	1.315	20	20.60	20.60	0.5000
Pirod 15' T-Frame Sector Mount (1)	240.0000	0.65	-11.24	6.49	86.00	1.315	20	20.60	20.60	0.5000
RV65-13	0.0000	0.17	0.00	-15.11	88.00	1.323	21	17.98	10.88	0.5000
RV65-13	120.0000	0.17	13.09	7.56	88.00	1.323	21	17.98	10.88	0.5000
RV65-13	240.0000	0.17	-13.09	7.56	88.00	1.323	21	17.98	10.88	0.5000
KMW AM-X-WM-17-65-00T with RET	0.0000	0.03	0.00	-15.11	88.00	1.323	21	3.62	2.37	0.5000
KMW AM-X-WM-17-65-00T with RET	120.0000	0.03	13.09	7.56	88.00	1.323	21	3.62	2.37	0.5000
KMW AM-X-WM-17-65-00T with RET	240.0000	0.03	-13.09	7.56	88.00	1.323	21	3.62	2.37	0.5000
TMA	0.0000	0.03	0.00	-15.11	88.00	1.323	21	1.04	0.54	0.5000
TMA	120.0000	0.03	13.09	7.56	88.00	1.323	21	1.04	0.54	0.5000
TMA	240.0000	0.03	-13.09	7.56	88.00	1.323	21	1.04	0.54	0.5000
	Sum Weight:	12.50								

Discrete Appurtenance Pressures - Service $G_H = 1.100$

Description	Aiming Azimuth °	Weight K	$Offset_x$ ft	$Offset_z$ ft	z ft	K_z	q_z psf	C_AA_C Front ft^2	C_AA_C Side ft^2
15' Platform with handrail	0.0000	2.04	0.00	0.00	256.00	1.796	11	33.80	33.80
24' x 3" Omni (Up)	0.0000	0.06	0.00	-3.72	269.00	1.821	12	7.20	7.20
24' x 3" Omni (Up)	300.0000	0.06	-6.81	-3.93	269.00	1.821	12	7.20	7.20
24' x 3" Omni (Down)	300.0000	0.06	-6.87	-3.97	244.00	1.771	11	7.20	7.20
8'x3" Omni	180.0000	0.02	0.00	7.89	260.00	1.804	12	2.40	2.40
8'x3" Omni	120.0000	0.02	3.28	1.89	260.00	1.804	12	2.40	2.40
Beacon	60.0000	0.02	5.74	0.15	259.00	1.802	12	2.10	2.10
Scala CL400 Antenna	300.0000	0.04	-6.84	-3.95	258.00	1.800	12	7.78	7.78
Pirod 6' Side Mount Standoff (1)	0.0000	0.07	0.00	-6.90	230.00	1.741	11	4.97	4.97
Decibel DB806	0.0000	0.02	0.00	-9.89	233.00	1.748	11	1.59	1.59
Pirod 6' Side Mount Standoff (1)	120.0000	0.07	5.97	3.45	230.00	1.741	11	4.97	4.97
Decibel DB806	120.0000	0.02	8.57	4.95	233.00	1.748	11	1.59	1.59
Pirod 15' T-Frame Sector Mount (1)	0.0000	0.50	0.00	-6.73	178.00	1.619	10	15.00	15.00
Pirod 15' T-Frame Sector Mount (1)	120.0000	0.50	5.83	3.36	178.00	1.619	10	15.00	15.00
Pirod 15' T-Frame Sector Mount (1)	240.0000	0.50	-5.83	3.36	178.00	1.619	10	15.00	15.00
APX16PV-16PVL-X	0.0000	0.08	4.00	-7.61	180.00	1.624	10	13.40	4.01
APX16PV-16PVL-X	120.0000	0.08	4.59	7.27	180.00	1.624	10	13.40	4.01
APX16PV-16PVL-X	240.0000	0.08	-8.59	0.34	180.00	1.624	10	13.40	4.01
Rohn 6'x15' Boom Gate (1)	0.0000	0.70	0.00	-12.86	108.00	1.403	9	16.00	16.00
Rohn 6'x15' Boom Gate (1)	120.0000	0.70	11.14	6.43	108.00	1.403	9	16.00	16.00

Description	Aiming Azimuth °	Weight K	$Offset_x$ ft	$Offset_z$ ft	z ft	K_z	q_z psf	C_AA_C Front ft^2	C_AA_C Side ft^2
Rohn 6'x15' Boom Gate (1)	240.0000	0.70	-11.14	6.43	108.00	1.403	9	16.00	16.00
APL196516-42T2	0.0000	0.02	0.00	-15.86	108.00	1.403	9	6.94	5.92
APL196516-42T2	120.0000	0.02	10.74	13.13	108.00	1.403	9	6.94	5.92
APL196516-42T2	240.0000	0.02	-13.74	7.93	108.00	1.403	9	6.94	5.92
APL866513-42T0	0.0000	0.04	0.00	-15.86	108.00	1.403	9	8.59	7.47
APL866513-42T0	120.0000	0.04	13.74	7.93	108.00	1.403	9	8.59	7.47
APL866513-42T0	240.0000	0.04	-13.74	7.93	108.00	1.403	9	8.59	7.47
Pirod 4' Side Mount Standoff (1)	0.0000	0.05	0.00	-12.30	101.00	1.377	9	2.72	2.72
48"x8"x8" Antenna	0.0000	0.04	0.00	-14.30	101.00	1.377	9	7.46	7.46
Pirod 15' T-Frame Sector Mount (1)	0.0000	0.50	0.00	-12.98	86.00	1.315	8	15.00	15.00
Pirod 15' T-Frame Sector Mount (1)	120.0000	0.50	11.24	6.49	86.00	1.315	8	15.00	15.00
Pirod 15' T-Frame Sector Mount (1)	240.0000	0.50	-11.24	6.49	86.00	1.315	8	15.00	15.00
RV65-13	0.0000	0.06	0.00	-15.11	88.00	1.323	8	16.80	9.80
RV65-13	120.0000	0.06	13.09	7.56	88.00	1.323	8	16.80	9.80
RV65-13	240.0000	0.06	-13.09	7.56	88.00	1.323	8	16.80	9.80
KMW AM-X-WM-17-65-00T with RET	0.0000	0.02	0.00	-15.11	88.00	1.323	8	3.07	1.62
KMW AM-X-WM-17-65-00T with RET	120.0000	0.02	13.09	7.56	88.00	1.323	8	3.07	1.62
KMW AM-X-WM-17-65-00T with RET	240.0000	0.02	-13.09	7.56	88.00	1.323	8	3.07	1.62
TMA	0.0000	0.02	0.00	-15.11	88.00	1.323	8	0.85	0.38
TMA	120.0000	0.02	13.09	7.56	88.00	1.323	8	0.85	0.38
TMA	240.0000	0.02	-13.09	7.56	88.00	1.323	8	0.85	0.38
	Sum Weight:	8.37							

Dish Pressures - No Ice

Elevation ft	Dish Description	Aiming Azimuth °	Weight K	$Offset_x$ ft	$Offset_z$ ft	K_z	A_A ft^2	q_z psf
88.00	HPLP1-23	0.0000	0.02	0.00	-15.11	1.323	0.79	27
		Sum Weight:	0.02					

Dish Pressures - With Ice

Elevation ft	Dish Description	Aiming Azimuth °	Weight K	$Offset_x$ ft	$Offset_z$ ft	K_z	A_A ft^2	q_z psf	t_z in
88.00	HPLP1-23	0.0000	0.04	0.00	-15.11	1.323	0.92	21	0.5000
		Sum Weight:	0.04						

Dish Pressures - Service

Elevation ft	Dish Description	Aiming Azimuth °	Weight K	$Offset_x$ ft	$Offset_z$ ft	K_z	A_A ft^2	q_z psf
88.00	HPLP1-23	0.0000	0.02	0.00	-15.11	1.323	0.79	8
		Sum Weight:	0.02					

Force Totals

Load Case	Vertical Forces K	Sum of Forces X K	Sum of Forces Z K	Sum of Overturning Moments, M_x kip-ft	Sum of Overturning Moments, M_z kip-ft	Sum of Torques kip-ft
Leg Weight	26.96					
Bracing Weight	24.16					
Total Member Self-Weight	51.12			22.82	-17.45	
Gusset Weight	0.80					
Total Weight	66.84			22.82	-17.45	
Wind 0 deg - No Ice		0.00	-67.70	-7902.30	-17.45	4.81
Wind 30 deg - No Ice		32.47	-56.24	-6559.89	-3817.87	31.49
Wind 60 deg - No Ice		55.43	-32.01	-3723.77	-6506.10	49.22
Wind 90 deg - No Ice		64.92	-0.00	22.80	-7617.46	55.39
Wind 120 deg - No Ice		58.61	33.88	3987.52	-6879.53	48.19
Wind 150 deg - No Ice		32.46	56.26	6607.02	-3817.07	23.90
Wind 180 deg - No Ice		0.00	64.03	7517.22	-17.45	-4.35
Wind 210 deg - No Ice		-32.46	56.26	6607.02	3782.17	-31.64
Wind 240 deg - No Ice		-58.61	33.88	3987.52	6844.63	-53.00
Wind 270 deg - No Ice		-64.92	-0.00	22.80	7582.56	-55.39
Wind 300 deg - No Ice		-55.43	-32.01	-3723.77	6471.20	-44.86
Wind 330 deg - No Ice		-32.47	-56.24	-6559.89	3782.97	-23.75
Member Ice	13.14					
Gusset Ice	0.39					
Total Weight Ice	96.98			69.50	-48.39	
Wind 0 deg - Ice		0.00	-62.71	-7325.13	-48.39	2.20
Wind 30 deg - Ice		30.52	-52.86	-6164.97	-3647.78	33.37
Wind 60 deg - Ice		52.37	-30.24	-3497.42	-6225.93	55.15
Wind 90 deg - Ice		61.02	-0.00	69.48	-7246.43	63.31
Wind 120 deg - Ice		54.30	31.38	3768.69	-6451.22	55.66
Wind 150 deg - Ice		30.51	52.87	6305.28	-3647.07	29.94
Wind 180 deg - Ice		0.00	60.49	7204.41	-48.39	-2.02
Wind 210 deg - Ice		-30.51	52.87	6305.28	3550.29	-33.50
Wind 240 deg - Ice		-54.30	31.38	3768.69	6354.43	-57.86
Wind 270 deg - Ice		-61.02	-0.00	69.48	7149.64	-63.31
Wind 300 deg - Ice		-52.37	-30.24	-3497.42	6129.14	-53.13
Wind 330 deg - Ice		-30.52	-52.86	-6164.97	3550.99	-29.80
Total Weight	66.84			22.82	-17.45	
Wind 0 deg - Service		0.00	-20.90	-2448.48	0.38	1.48
Wind 30 deg - Service		10.02	-17.36	-2034.15	-1172.59	9.72
Wind 60 deg - Service		17.11	-9.88	-1158.81	-2002.29	15.19
Wind 90 deg - Service		20.04	-0.00	-2.46	-2345.30	17.10
Wind 120 deg - Service		18.09	10.46	1221.22	-2117.55	14.87
Wind 150 deg - Service		10.02	17.36	2029.71	-1172.34	7.38
Wind 180 deg - Service		0.00	19.76	2310.63	0.38	-1.34
Wind 210 deg - Service		-10.02	17.36	2029.71	1173.10	-9.76
Wind 240 deg - Service		-18.09	10.46	1221.22	2118.30	-16.36
Wind 270 deg - Service		-20.04	-0.00	-2.46	2346.06	-17.10
Wind 300 deg - Service		-17.11	-9.88	-1158.81	2003.05	-13.85
Wind 330 deg - Service		-10.02	-17.36	-2034.15	1173.35	-7.33

Load Combinations

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

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T1	256 - 248	Leg	Max Tension	12	4.09	-0.02	0.01
			Max. Compression	23	-6.09	0.04	-0.01
			Max. Mx	2	-5.82	0.04	0.01
			Max. My	13	-0.84	-0.00	0.04
			Max. Vy	15	0.05	-0.00	0.00
			Max. Vx	13	-0.04	-0.00	0.04
		Diagonal	Max Tension	9	1.80	0.00	0.00
			Max. Compression	3	-1.79	0.00	0.00
			Max. Mx	15	1.50	0.01	0.00
			Max. My	3	-1.55	0.00	0.00
			Max. Vy	15	-0.01	0.01	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vx	3	-0.00	0.00	0.00
		Top Girt	Max Tension	6	0.43	0.00	0.00
			Max. Compression	12	-0.45	0.00	0.00
			Max. Mx	17	-0.43	-0.02	0.00
			Max. My	20	0.01	0.00	0.00
			Max. Vy	17	0.01	0.00	0.00
			Max. Vx	20	-0.00	0.00	0.00
T2	248 - 228	Leg	Max Tension	12	20.78	-0.10	-0.03
			Max. Compression	2	-24.20	0.14	-0.03
			Max. Mx	2	-24.20	0.14	-0.03
			Max. My	3	-1.22	-0.00	-0.15
			Max. Vy	10	0.12	0.03	0.01
			Max. Vx	2	0.28	-0.02	0.02
		Diagonal	Max Tension	3	3.31	0.00	0.00
			Max. Compression	9	-3.33	0.00	0.00
			Max. Mx	23	2.70	0.02	-0.00
			Max. My	3	-3.00	-0.00	0.00
			Max. Vy	23	-0.01	0.02	-0.00
			Max. Vx	3	-0.00	0.00	0.00
T3	228 - 208	Leg	Max Tension	12	48.02	-0.07	-0.00
			Max. Compression	10	-54.08	0.61	-0.00
			Max. Mx	2	-54.07	0.61	0.06
			Max. My	3	-1.71	-0.02	-0.38
			Max. Vy	10	-0.18	0.61	-0.00
			Max. Vx	13	-0.12	-0.02	0.37
		Diagonal	Max Tension	9	4.43	0.00	0.00
			Max. Compression	3	-4.51	0.00	0.00
			Max. Mx	23	3.50	0.02	-0.00
			Max. My	2	-2.95	0.00	0.01
			Max. Vy	23	-0.02	0.02	-0.00
			Max. Vx	15	-0.00	0.01	0.01
T4	208 - 188	Leg	Max Tension	12	66.30	-0.35	0.01
			Max. Compression	10	-75.11	0.38	-0.02
			Max. Mx	2	-59.91	0.61	0.06
			Max. My	9	-1.95	-0.03	0.60
			Max. Vy	2	0.13	0.61	0.06
			Max. Vx	13	-0.15	-0.03	0.60
		Diagonal	Max Tension	3	3.16	0.00	0.00
			Max. Compression	3	-3.18	0.00	0.00
			Max. Mx	25	1.75	0.02	0.00
			Max. My	22	-3.01	0.00	-0.01
			Max. Vy	25	0.02	0.02	0.00
			Max. Vx	22	0.00	0.00	0.00
T5	188 - 168	Leg	Max Tension	12	84.12	-0.84	0.01
			Max. Compression	10	-97.12	0.57	0.01
			Max. Mx	12	77.21	-0.94	0.01
			Max. My	9	-3.88	-0.03	0.84
			Max. Vy	12	-0.65	-0.94	0.01
			Max. Vx	9	0.61	-0.02	0.80
		Diagonal	Max Tension	3	4.90	0.00	0.00
			Max. Compression	3	-4.96	0.00	0.00
			Max. Mx	21	3.08	0.04	-0.01
			Max. My	21	-4.27	0.02	-0.01
			Max. Vy	21	0.02	0.04	-0.01
			Max. Vx	21	0.00	0.00	0.00
T6	168 - 148	Leg	Max Tension	8	106.79	-0.53	0.01
			Max. Compression	6	-123.50	0.61	-0.01
			Max. Mx	10	-123.37	0.61	0.03
			Max. My	7	-4.65	-0.00	-0.62
			Max. Vy	12	0.08	-0.58	0.01
			Max. Vx	3	0.11	-0.01	-0.61

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
		Diagonal	Max Tension	3	5.22	0.00	0.00
			Max. Compression	3	-5.30	0.00	0.00
			Max. Mx	19	3.69	0.07	-0.01
			Max. My	20	-2.73	0.04	-0.01
			Max. Vy	21	0.03	0.07	-0.01
			Max. Vx	20	0.00	0.00	0.00
T7	148 - 128	Leg	Max Tension	8	129.17	-0.42	0.02
			Max. Compression	6	-149.87	1.47	-0.08
			Max. Mx	10	-149.50	1.48	0.07
			Max. My	7	-6.73	0.03	-1.03
			Max. Vy	2	-0.22	1.48	0.01
			Max. Vx	3	0.19	0.03	-1.02
		Diagonal	Max Tension	11	5.73	0.00	0.00
			Max. Compression	11	-5.83	0.00	0.00
			Max. Mx	21	4.00	0.08	-0.01
			Max. My	25	-4.96	0.05	0.01
			Max. Vy	21	0.04	0.08	-0.01
			Max. Vx	25	-0.00	0.00	0.00
T8	128 - 108	Leg	Max Tension	8	149.19	-0.92	0.05
			Max. Compression	6	-174.23	1.51	0.00
			Max. Mx	10	-173.64	1.52	0.00
			Max. My	9	-7.85	-0.10	2.01
			Max. Vy	2	-0.20	1.51	-0.01
			Max. Vx	9	0.33	-0.10	2.01
		Diagonal	Max Tension	11	7.33	0.00	0.00
			Max. Compression	11	-7.47	0.00	0.00
			Max. Mx	19	4.90	0.24	-0.03
			Max. My	18	-6.40	0.04	-0.03
			Max. Vy	21	0.08	0.22	-0.03
			Max. Vx	25	-0.01	0.00	0.00
T9	108 - 88	Leg	Max Tension	8	172.97	-0.99	-0.04
			Max. Compression	6	-205.07	1.74	-0.12
			Max. Mx	2	-204.28	1.74	0.02
			Max. My	5	-9.68	-0.10	1.71
			Max. Vy	2	0.22	1.51	-0.01
			Max. Vx	5	-0.39	-0.10	1.71
		Diagonal	Max Tension	11	8.95	0.00	0.00
			Max. Compression	11	-9.09	0.00	0.00
			Max. Mx	19	6.35	0.24	-0.03
			Max. My	25	-7.03	0.13	0.03
			Max. Vy	21	0.09	0.23	-0.03
			Max. Vx	25	-0.01	0.00	0.00
T10	88 - 68	Leg	Max Tension	8	200.79	-2.02	0.03
			Max. Compression	6	-240.85	1.84	-0.06
			Max. Mx	4	200.53	-2.03	-0.08
			Max. My	9	-13.46	-0.09	2.01
			Max. Vy	8	-1.00	-1.62	-0.02
			Max. Vx	9	0.97	0.02	1.27
		Diagonal	Max Tension	11	11.77	0.00	0.00
			Max. Compression	11	-11.93	0.00	0.00
			Max. Mx	21	8.41	0.35	-0.03
			Max. My	25	-9.67	0.21	0.05
			Max. Vy	21	0.12	0.35	-0.03
			Max. Vx	25	-0.01	0.00	0.00
T11	68 - 48	Leg	Max Tension	8	230.81	-1.67	0.02
			Max. Compression	6	-278.15	2.68	-0.05
			Max. Mx	6	-278.15	2.68	-0.05
			Max. My	9	-16.39	-0.12	2.30
			Max. Vy	2	-0.23	2.68	-0.02
			Max. Vx	9	0.32	-0.12	2.30
		Diagonal	Max Tension	11	12.95	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Compression	11	-13.21	0.00	0.00
			Max. Mx	19	8.66	0.40	-0.04
			Max. My	19	-0.65	0.35	-0.05
			Max. Vy	21	0.13	0.40	-0.04
			Max. Vx	19	0.01	0.00	0.00
T12	48 - 28	Leg	Max Tension	8	259.48	-0.93	0.01
			Max. Compression	6	-314.39	3.63	0.09
			Max. Mx	12	257.17	-3.64	-0.03
			Max. My	9	-19.36	-0.17	3.47
			Max. Vy	2	-0.40	3.64	-0.04
			Max. Vx	9	-0.42	-0.17	3.47
		Diagonal	Max Tension	11	13.29	0.00	0.00
			Max. Compression	11	-13.61	0.00	0.00
			Max. Mx	19	8.32	0.46	-0.06
			Max. My	18	-11.68	0.24	-0.07
			Max. Vy	20	0.14	0.44	-0.06
			Max. Vx	18	0.01	0.00	0.00
T13	28 - 8	Leg	Max Tension	8	266.72	-3.63	0.07
			Max. Compression	6	-325.32	-0.00	0.00
			Max. Mx	12	264.88	-3.64	-0.03
			Max. My	9	-21.37	-0.09	2.31
			Max. Vy	12	-0.44	-3.64	-0.03
			Max. Vx	9	0.41	-0.09	2.31
		Diagonal	Max Tension	11	19.68	0.00	0.00
			Max. Compression	11	-20.08	0.00	0.00
			Max. Mx	24	18.59	0.44	0.00
			Max. My	23	-1.98	0.00	-0.00
			Max. Vy	24	-0.07	0.00	0.00
			Max. Vx	23	0.00	0.00	0.00
		Horizontal	Max Tension	11	11.41	-0.17	-0.11
			Max. Compression	11	-11.20	-0.17	-0.11
			Max. Mx	21	0.30	-0.29	-0.10
			Max. My	24	-10.54	-0.22	-0.13
			Max. Vy	21	-0.09	-0.29	-0.10
			Max. Vx	24	0.01	-0.22	-0.13

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Leg C	Max. Vert	10	350.43	35.79	-19.41
	Max. H_x	10	350.43	35.79	-19.41
	Max. H_z	3	-250.52	-25.69	17.47
	Min. Vert	4	-288.19	-31.29	16.87
	Min. H_x	4	-288.19	-31.29	16.87
	Min. H_z	10	350.43	35.79	-19.41
Leg B	Max. Vert	6	351.69	-35.75	-19.52
	Max. H_x	12	-286.93	31.23	16.93
	Max. H_z	13	-249.26	25.60	17.59
	Min. Vert	12	-286.93	31.23	16.93
	Min. H_x	6	351.69	-35.75	-19.52
	Min. H_z	6	351.69	-35.75	-19.52
Leg A	Max. Vert	2	349.64	0.11	40.69
	Max. H_x	11	21.33	4.55	1.73
	Max. H_z	2	349.64	0.11	40.69
	Min. Vert	8	-289.06	-0.08	-35.56

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
	Min. H_x	5	21.33	-4.52	1.73
	Min. H_z	8	-289.06	-0.08	-35.56

Tower Mast Reaction Summary

Load Combination	Vertical K	$Shear_x$ K	$Shear_z$ K	Overturning Moment, M_x kip-ft	Overturning Moment, M_z kip-ft	Torque kip-ft
Dead Only	66.84	0.00	0.00	22.82	-17.45	-0.00
Dead+Wind 0 deg - No Ice	66.84	-0.00	-67.68	-7890.03	-17.44	4.85
Dead+Wind 30 deg - No Ice	66.84	32.46	-56.22	-6548.69	-3811.24	31.55
Dead+Wind 60 deg - No Ice	66.84	55.41	-32.00	-3717.06	-6494.56	49.28
Dead+Wind 90 deg - No Ice	66.84	64.90	0.00	23.02	-7604.49	55.43
Dead+Wind 120 deg - No Ice	66.84	58.59	33.87	3981.47	-6868.94	48.22
Dead+Wind 150 deg - No Ice	66.84	32.45	56.24	6595.73	-3810.71	23.89
Dead+Wind 180 deg - No Ice	66.84	-0.00	64.01	7503.89	-17.44	-4.40
Dead+Wind 210 deg - No Ice	66.84	-32.45	56.24	6595.70	3775.80	-31.70
Dead+Wind 240 deg - No Ice	66.84	-58.59	33.87	3981.45	6834.00	-53.07
Dead+Wind 270 deg - No Ice	66.84	-64.90	0.00	23.03	7569.54	-55.44
Dead+Wind 300 deg - No Ice	66.84	-55.41	-32.00	-3717.02	6459.63	-44.89
Dead+Wind 330 deg - No Ice	66.84	-32.46	-56.22	-6548.66	3776.34	-23.74
Dead+Ice	96.98	0.00	0.00	69.51	-48.40	-0.00
Dead+Wind 0 deg+Ice	96.98	-0.00	-62.68	-7317.34	-48.46	2.31
Dead+Wind 30 deg+Ice	96.98	30.50	-52.83	-6157.69	-3643.58	33.55
Dead+Wind 60 deg+Ice	96.98	52.34	-30.22	-3492.94	-6218.56	55.35
Dead+Wind 90 deg+Ice	96.98	60.99	0.00	69.81	-7238.23	63.47
Dead+Wind 120 deg+Ice	96.98	54.27	31.36	3765.06	-6444.71	55.75
Dead+Wind 150 deg+Ice	96.98	30.49	52.84	6298.16	-3643.12	29.93
Dead+Wind 180 deg+Ice	96.98	-0.00	60.46	7195.90	-48.47	-2.12
Dead+Wind 210 deg+Ice	96.98	-30.49	52.84	6298.14	3546.17	-33.69
Dead+Wind 240 deg+Ice	96.98	-54.27	31.36	3765.05	6347.72	-58.06
Dead+Wind 270 deg+Ice	96.98	-60.99	0.00	69.84	7141.23	-63.47
Dead+Wind 300 deg+Ice	96.98	-52.34	-30.22	-3492.88	6121.58	-53.22
Dead+Wind 330 deg+Ice	96.98	-30.50	-52.83	-6157.65	3546.64	-29.79
Dead+Wind 0 deg - Service	66.84	-0.00	-20.89	-2419.38	-17.47	1.50
Dead+Wind 30 deg - Service	66.84	10.02	-17.35	-2005.40	-1188.43	9.74
Dead+Wind 60 deg - Service	66.84	17.10	-9.88	-1131.47	-2016.62	15.21
Dead+Wind 90 deg - Service	66.84	20.03	-0.00	22.86	-2359.17	17.11
Dead+Wind 120 deg - Service	66.84	18.08	10.45	1244.63	-2132.11	14.88
Dead+Wind 150 deg - Service	66.84	10.01	17.36	2051.55	-1188.21	7.37
Dead+Wind 180 deg - Service	66.84	-0.00	19.76	2331.87	-17.47	-1.36
Dead+Wind 210 deg - Service	66.84	-10.01	17.36	2051.55	1153.26	-9.78
Dead+Wind 240 deg - Service	66.84	-18.08	10.45	1244.63	2097.16	-16.38
Dead+Wind 270 deg - Service	66.84	-20.03	-0.00	22.87	2324.21	-17.11
Dead+Wind 300 deg - Service	66.84	-17.10	-9.88	-1131.46	1981.67	-13.85
Dead+Wind 330 deg - Service	66.84	-10.02	-17.35	-2005.39	1153.49	-7.33

Solution Summary

Load Comb.	Sum of Applied Forces PX K	PY K	PZ K	Sum of Reactions PX K	PY K	PZ K	% Error
1	0.00	-66.84	0.00	-0.00	66.84	-0.00	0.000%
2	0.00	-66.84	-67.70	0.00	66.84	67.68	0.024%

Load Comb.	Sum of Applied Forces PX K	PY K	PZ K	Sum of Reactions PX K	PY K	PZ K	% Error
3	32.47	-66.84	-56.24	-32.46	66.84	56.22	0.024%
4	55.43	-66.84	-32.01	-55.41	66.84	32.00	0.025%
5	64.92	-66.84	-0.00	-64.90	66.84	-0.00	0.024%
6	58.61	-66.84	33.88	-58.59	66.84	-33.87	0.024%
7	32.46	-66.84	56.26	-32.45	66.84	-56.24	0.024%
8	0.00	-66.84	64.03	0.00	66.84	-64.01	0.025%
9	-32.46	-66.84	56.26	32.45	66.84	-56.24	0.024%
10	-58.61	-66.84	33.88	58.59	66.84	-33.87	0.024%
11	-64.92	-66.84	-0.00	64.90	66.84	-0.00	0.024%
12	-55.43	-66.84	-32.01	55.41	66.84	32.00	0.025%
13	-32.47	-66.84	-56.24	32.46	66.84	56.22	0.024%
14	0.00	-96.98	0.00	-0.00	96.98	-0.00	0.000%
15	0.00	-96.98	-62.71	0.00	96.98	62.68	0.027%
16	30.52	-96.98	-52.86	-30.50	96.98	52.83	0.028%
17	52.37	-96.98	-30.24	-52.34	96.98	30.22	0.028%
18	61.02	-96.98	-0.00	-60.99	96.98	-0.00	0.028%
19	54.30	-96.98	31.38	-54.27	96.98	-31.36	0.028%
20	30.51	-96.98	52.87	-30.49	96.98	-52.84	0.028%
21	0.00	-96.98	60.49	0.00	96.98	-60.46	0.029%
22	-30.51	-96.98	52.87	30.49	96.98	-52.84	0.028%
23	-54.30	-96.98	31.38	54.27	96.98	-31.36	0.028%
24	-61.02	-96.98	-0.00	60.99	96.98	-0.00	0.028%
25	-52.37	-96.98	-30.24	52.34	96.98	30.22	0.028%
26	-30.52	-96.98	-52.86	30.50	96.98	52.83	0.028%
27	0.00	-66.84	-20.90	0.00	66.84	20.89	0.010%
28	10.02	-66.84	-17.36	-10.02	66.84	17.35	0.010%
29	17.11	-66.84	-9.88	-17.10	66.84	9.88	0.010%
30	20.04	-66.84	-0.00	-20.03	66.84	0.00	0.010%
31	18.09	-66.84	10.46	-18.08	66.84	-10.45	0.010%
32	10.02	-66.84	17.36	-10.01	66.84	-17.36	0.010%
33	0.00	-66.84	19.76	0.00	66.84	-19.76	0.010%
34	-10.02	-66.84	17.36	10.01	66.84	-17.36	0.010%
35	-18.09	-66.84	10.46	18.08	66.84	-10.45	0.010%
36	-20.04	-66.84	-0.00	20.03	66.84	0.00	0.010%
37	-17.11	-66.84	-9.88	17.10	66.84	9.88	0.010%
38	-10.02	-66.84	-17.36	10.02	66.84	17.35	0.010%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	4	0.00000001	0.00000001
2	Yes	4	0.00036315	0.00060568
3	Yes	4	0.00037876	0.00063147
4	Yes	4	0.00039247	0.00065407
5	Yes	4	0.00037835	0.00063060
6	Yes	4	0.00036307	0.00060523
7	Yes	4	0.00037842	0.00063069
8	Yes	4	0.00039237	0.00065383
9	Yes	4	0.00037876	0.00063138
10	Yes	4	0.00036324	0.00060577
11	Yes	4	0.00037844	0.00063107
12	Yes	4	0.00039246	0.00065436
13	Yes	4	0.00037852	0.00063125
14	Yes	4	0.00000001	0.00000001
15	Yes	4	0.00054699	0.00090871

16	Yes	4	0.00056196	0.00093285
17	Yes	4	0.00057541	0.00095450
18	Yes	4	0.00056139	0.00093123
19	Yes	4	0.00054687	0.00090736
20	Yes	4	0.00056148	0.00093131
21	Yes	4	0.00057527	0.00095414
22	Yes	4	0.00056206	0.00093284
23	Yes	4	0.00054731	0.00090908
24	Yes	4	0.00056177	0.00093305
25	Yes	4	0.00057562	0.00095594
26	Yes	4	0.00056177	0.00093315
27	Yes	4	0.00037511	0.00060581
28	Yes	4	0.00037990	0.00061176
29	Yes	4	0.00038412	0.00061777
30	Yes	4	0.00037959	0.00061097
31	Yes	4	0.00037480	0.00060479
32	Yes	4	0.00037957	0.00061095
33	Yes	4	0.00038405	0.00061767
34	Yes	4	0.00037990	0.00061175
35	Yes	4	0.00037517	0.00060588
36	Yes	4	0.00037993	0.00061211
37	Yes	4	0.00038434	0.00061865
38	Yes	4	0.00037992	0.00061210

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	256 - 248	5.975	31	0.2417	0.0410
T2	248 - 228	5.570	31	0.2388	0.0375
T3	228 - 208	4.594	31	0.2178	0.0282
T4	208 - 188	3.711	31	0.1903	0.0201
T5	188 - 168	2.955	31	0.1628	0.0150
T6	168 - 148	2.298	31	0.1422	0.0125
T7	148 - 128	1.728	31	0.1198	0.0104
T8	128 - 108	1.250	31	0.0963	0.0089
T9	108 - 88	0.879	31	0.0749	0.0080
T10	88 - 68	0.582	31	0.0582	0.0071
T11	68 - 48	0.348	31	0.0444	0.0063
T12	48 - 28	0.170	31	0.0298	0.0051
T13	28 - 8	0.054	27	0.0147	0.0037

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
269.00	24' x 3" Omni (Up)	31	5.975	0.2417	0.0410	140401
260.00	8'x3" Omni	31	5.975	0.2417	0.0410	140401
259.00	Beacon	31	5.975	0.2417	0.0410	140401
258.00	(2) Scala CL400 Antenna	31	5.975	0.2417	0.0410	140401
256.00	15' Platform with handrail	31	5.975	0.2417	0.0410	140401
244.00	24' x 3" Omni (Down)	31	5.369	0.2361	0.0357	76497
233.00	Decibel DB806	31	4.831	0.2243	0.0306	56683
230.00	Pirod 6' Side Mount Standoff (1)	31	4.688	0.2204	0.0292	52680

Elevation	Appurtenance	Gov. Load Comb.	Deflection	Tilt	Twist	Radius of Curvature
ft			in	°	°	ft
180.00	(2) APX16PV-16PVL-X	31	2.682	0.1541	0.0139	53634
178.00	Pirod 15' T-Frame Sector Mount (1)	31	2.615	0.1521	0.0136	53756
108.00	Rohn 6'x15' Boom Gate (1)	31	0.879	0.0749	0.0080	70168
101.00	Pirod 4' Side Mount Standoff (1)	31	0.768	0.0685	0.0077	73774
88.00	HPLP1-23	31	0.582	0.0582	0.0071	76557
				(3 dB)	(3 dB)	
86.00	Pirod 15' T-Frame Sector Mount (1)	31	0.556	2.1 0.0567	2.1 0.0071	77381

Maximum Tower Deflections - Design Wind

Section No.	Elevation	Horz. Deflection	Gov. Load Comb.	Tilt	Twist
	ft	in		°	°
T1	256 - 248	19.297	6	0.7810	0.1381
T2	248 - 228	17.981	6	0.7720	0.1279
T3	228 - 208	14.818	6	0.7049	0.0996
T4	208 - 188	11.962	6	0.6150	0.0781
T5	188 - 168	9.522	6	0.5254	0.0592
T6	168 - 148	7.402	6	0.4584	0.0487
T7	148 - 128	5.567	6	0.3859	0.0403
T8	128 - 108	4.027	6	0.3099	0.0334
T9	108 - 88	2.831	6	0.2409	0.0301
T10	88 - 68	1.876	6	0.1872	0.0267
T11	68 - 48	1.122	6	0.1427	0.0233
T12	48 - 28	0.549	6	0.0959	0.0190
T13	28 - 8	0.173	2	0.0472	0.0138

Critical Deflections and Radius of Curvature - Design Wind

Elevation	Appurtenance	Gov. Load Comb.	Deflection	Tilt	Twist	Radius of Curvature
ft			in	°	°	ft
269.00	24' x 3" Omni (Up)	6	19.297	0.7810	0.1381	45689
260.00	8'x3" Omni	6	19.297	0.7810	0.1381	45689
259.00	Beacon	6	19.297	0.7810	0.1381	45689
258.00	(2) Scala CL400 Antenna	6	19.297	0.7810	0.1381	45689
256.00	15' Platform with handrail	6	19.297	0.7810	0.1381	45689
244.00	24' x 3" Omni (Down)	6	17.331	0.7633	0.1226	24626
233.00	Decibel DB806	6	15.586	0.7258	0.1067	17748
230.00	Pirod 6' Side Mount Standoff (1)	6	15.123	0.7134	0.1022	16472
180.00	(2) APX16PV-16PVL-X	6	8.640	0.4970	0.0545	16618
178.00	Pirod 15' T-Frame Sector Mount (1)	6	8.426	0.4904	0.0534	16651
108.00	Rohn 6'x15' Boom Gate (1)	6	2.831	0.2409	0.0301	21810
101.00	Pirod 4' Side Mount Standoff (1)	6	2.473	0.2204	0.0289	22918
88.00	HPLP1-23	6	1.876	0.1872	0.0267	23745
				(3 dB)	(3 dB)	
86.00	Pirod 15' T-Frame Sector Mount (1)	6	1.792	2.1 0.1825	2.1 0.0263	24005

Bolt Design Data

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt K	Allowable Load K	Ratio Load / Allowable	Allowable Ratio	Criteria
T1	256	Leg	A325N	0.7500	4	0.48	19.44	0.025 ✓	1.333	Bolt Tension
		Diagonal	A325N	0.6250	1	1.80	6.44	0.279 ✓	1.333	Bolt Shear
		Top Girt	A325N	0.5000	1	0.45	4.12	0.108 ✓	1.333	Bolt Shear
T2	248	Leg	A325N	0.8750	4	1.63	26.46	0.062 ✓	1.333	Bolt Tension
		Diagonal	A325N	0.6250	1	3.33	6.44	0.517 ✓	1.333	Bolt Shear
T3	228	Leg	A325N	1.0000	4	6.38	34.56	0.185 ✓	1.333	Bolt Tension
		Diagonal	A325N	0.6250	1	4.51	6.44	0.701 ✓	1.333	Bolt Shear
T4	208	Leg	A325N	1.0000	6	8.90	34.56	0.257 ✓	1.333	Bolt Tension
		Diagonal	A325N	0.6250	1	3.18	6.44	0.493 ✓	1.333	Bolt Shear
T5	188	Leg	A325N	1.0000	6	11.84	34.56	0.343 ✓	1.333	Bolt Tension
		Diagonal	A325N	0.7500	1	4.96	9.28	0.535 ✓	1.333	Bolt Shear
T6	168	Leg	A325N	1.0000	6	15.29	34.56	0.442 ✓	1.333	Bolt Tension
		Diagonal	A325N	0.7500	1	5.30	9.28	0.571 ✓	1.333	Bolt Shear
T7	148	Leg	A325N	1.0000	8	14.29	34.56	0.413 ✓	1.333	Bolt Tension
		Diagonal	A325N	0.7500	1	5.83	9.28	0.628 ✓	1.333	Bolt Shear
T8	128	Leg	A325N	1.0000	8	17.27	34.56	0.500 ✓	1.333	Bolt Tension
		Diagonal	A325N	0.7500	1	7.47	9.28	0.805 ✓	1.333	Bolt Shear
T9	108	Leg	A325N	1.0000	12	13.37	34.56	0.387 ✓	1.333	Bolt Tension
		Diagonal	A325N	0.7500	1	9.09	9.28	0.980 ✓	1.333	Bolt Shear
T10	88	Leg	A325N	1.0000	12	15.54	34.56	0.450 ✓	1.333	Bolt Tension
		Diagonal	A325N	0.8750	1	11.77	10.88	1.083 ✓	1.333	Gusset Bearing
T11	68	Leg	A325N	1.0000	12	17.99	34.56	0.521 ✓	1.333	Bolt Tension
		Diagonal	A325N	0.8750	1	12.95	10.88	1.191 ✓	1.333	Gusset Bearing
T12	48	Leg	A325N	1.0000	12	20.49	34.56	0.593 ✓	1.333	Bolt Tension
		Diagonal	A325N	0.8750	1	13.29	10.88	1.222 ✓	1.333	Gusset Bearing
T13	28	Leg	A325N	1.0000	16	16.67	34.56	0.482 ✓	1.333	Bolt Tension
		Diagonal	A325N	0.7500	3	6.69	9.28	0.721 ✓	1.333	Bolt Shear
		Horizontal	A325N	0.7500	2	5.70	9.28	0.615 ✓	1.333	Bolt Shear

Compression Checks

Leg Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	F_a ksi	A in^2	Actual P K	Allow. P_a K	Ratio $\frac{P}{P_a}$
T1	256 - 248	P2.5x.203	8.00	4.00	50.7 K=1.00	24.247	1.7040	-6.09	41.32	0.148 ✓
T2	248 - 228	P3x.216	20.00	4.00	41.3 K=1.00	25.655	2.2285	-24.20	57.17	0.423 ✓
T3	228 - 208	P4x.337	20.00	4.00	32.5 K=1.00	26.838	4.4074	-54.08	118.29	0.457 ✓
T4	208 - 188	P5x.375	20.04	5.01	32.7 K=1.00	26.815	6.1120	-75.11	163.89	0.458 ✓
T5	188 - 168	P6x.432	20.03	6.68	36.5 K=1.00	26.312	8.4049	-97.12	221.15	0.439 ✓
T6	168 - 148	P6x.432	20.03	6.68	36.5 K=1.00	26.312	8.4049	-123.50	221.15	0.558 ✓
T7	148 - 128	P6x.432	20.04	6.68	36.5 K=1.00	26.311	8.4049	-149.87	221.15	0.678 ✓
T8	128 - 108	P8x.375	20.04	10.02	41.2 K=1.00	25.666	9.7193	-174.23	249.46	0.698 ✓
T9	108 - 88	P8x.5	20.04	10.02	41.8 K=1.00	25.580	12.7627	-205.07	326.48	0.628 ✓
T10	88 - 68	P10x.5	20.03	10.02	33.1 K=1.00	26.758	16.1007	-240.85	430.81	0.559 ✓
T11	68 - 48	P10x.5	20.03	10.02	33.1 K=1.00	26.758	16.1007	-278.15	430.82	0.646 ✓
T12	48 - 28	P10x.5	20.04	10.02	33.1 K=1.00	26.757	16.1007	-314.39	430.80	0.730 ✓
T13	28 - 8	P10x.5	20.05	20.05	33.2 K=0.50	26.753	16.1007	-325.32	430.75	0.755 ✓

Diagonal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	F_a ksi	A in^2	Actual P K	Allow. P_a K	Ratio $\frac{P}{P_a}$
T1	256 - 248	L1 3/4x1 3/4x3/16	7.78	3.59	125.6 K=1.00	9.467	0.6211	-1.79	5.88	0.304 ✓
T2	248 - 228	L2x2x1/4	7.85	3.59	112.7 K=1.02	11.306	0.9380	-3.33	10.61	0.314 ✓
T3	228 - 208	L2x2x1/4	7.91	3.57	112.3 K=1.02	11.362	0.9380	-4.51	10.66	0.424 ✓
T4	208 - 188	L2x2x1/4	10.00	4.72	144.7 K=1.00	7.128	0.9380	-3.18	6.69	0.475 ✓
T5	188 - 168	L2 1/2x2 1/2x1/4	12.51	5.96	145.7 K=1.00	7.038	1.1900	-4.96	8.38	0.593 ✓
T6	168 - 148	L3x3x1/4	14.24	6.83	138.5 K=1.00	7.787	1.4400	-5.30	11.21	0.472 ✓
T7	148 - 128	L3x3x1/4	16.09	7.77	157.4 K=1.00	6.027	1.4400	-5.83	8.68	0.671 ✓
T8	128 - 108	L4x4x3/8	19.35	9.39	143.0 K=1.00	7.300	2.8600	-7.47	20.88	0.358 ✓
T9	108 - 88	L4x4x3/8	21.22	10.34	157.5 K=1.00	6.022	2.8600	-9.09	17.22	0.528 ✓

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	F_a ksi	A in^2	Actual P K	Allow. P_a K	Ratio P / P_a
T10	88 - 68	L5x5x3/8	23.04	11.13	134.9 K=1.00	8.203	3.6100	-11.93	29.61	0.403 ✓
T11	68 - 48	L5x5x3/8	24.84	12.03	145.9 K=1.00	7.019	3.6100	-13.21	25.34	0.521 ✓
T12	48 - 28	L5x5x3/8	26.75	13.01	157.7 K=1.00	6.008	3.6100	-13.61	21.69	0.628 ✓
T13	28 - 8	P3x.216	24.38	23.59	121.7 K=0.50	10.091	2.2285	-20.08	22.49	0.893 ✓

Horizontal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	F_a ksi	A in^2	Actual P K	Allow. P_a K	Ratio P / P_a
T13	28 - 8	P3x.216	25.33	24.43	126.0 K=0.50	9.406	2.2285	-11.20	20.96	0.534 ✓

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 K	Allow. P_a K	Ratio P / P_a
T1	256 - 248	L1 3/4x1 3/4x3/16 KL/R > 200 (C) - 6	6.60	6.03	210.5 K=1.00	3.369	0.6211	-0.45	2.09	0.213 ✓

Tension Checks

Leg Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	F_a ksi	A in^2	Actual P K	Allow. P_a K	Ratio P / P_a
T1	256 - 248	P2.5x.203	8.00	4.00	50.7	30.000	1.7040	4.09	51.12	0.080 ✓
T2	248 - 228	P3x.216	20.00	4.00	41.3	30.000	2.2285	20.78	66.85	0.311 ✓
T3	228 - 208	P4x.337	20.00	4.00	32.5	30.000	4.4074	48.02	132.22	0.363 ✓
T4	208 - 188	P5x.375	20.04	5.01	32.7	30.000	6.1120	66.30	183.36	0.362 ✓
T5	188 - 168	P6x.432	20.03	6.68	36.5	30.000	8.4049	84.12	252.15	0.334 ✓

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	F_a ksi	A in^2	Actual P K	Allow. P_a K	Ratio P / P_a
T6	168 - 148	P6x.432	20.03	6.68	36.5	30.000	8.4049	106.79	252.15	0.424 ✓
T7	148 - 128	P6x.432	20.04	6.68	36.5	30.000	8.4049	129.16	252.15	0.512 ✓
T8	128 - 108	P8x.375	20.04	10.02	41.2	30.000	9.7193	149.19	291.58	0.512 ✓
T9	108 - 88	P8x.5	20.04	10.02	41.8	30.000	12.7627	172.97	382.88	0.452 ✓
T10	88 - 68	P10x.5	20.03	10.02	33.1	30.000	16.1007	200.79	483.02	0.416 ✓
T11	68 - 48	P10x.5	20.03	10.02	33.1	30.000	16.1007	230.81	483.02	0.478 ✓
T12	48 - 28	P10x.5	20.04	10.02	33.1	30.000	16.1007	259.48	483.02	0.537 ✓
T13	28 - 8	P10x.5	20.05	20.05	66.3	30.000	16.1007	266.72	483.02	0.552 ✓

Diagonal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	F_a ksi	A in^2	Actual P K	Allow. P_a K	Ratio P / P_a
T1	256 - 248	L1 3/4x1 3/4x3/16	7.78	3.59	84.1	29.000	0.3604	1.80	10.45	0.172 ✓
T2	248 - 228	L2x2x1/4	7.85	3.59	74.1	29.000	0.5629	3.31	16.32	0.203 ✓
T3	228 - 208	L2x2x1/4	7.91	3.57	73.7	29.000	0.5629	4.43	16.32	0.271 ✓
T4	208 - 188	L2x2x1/4	10.00	4.72	96.2	29.000	0.5629	3.16	16.32	0.193 ✓
T5	188 - 168	L2 1/2x2 1/2x1/4	12.51	5.96	95.6	29.000	0.7284	4.90	21.12	0.232 ✓
T6	168 - 148	L3x3x1/4	14.24	6.83	90.3	32.500	0.9159	5.22	29.77	0.175 ✓
T7	148 - 128	L3x3x1/4	16.09	7.77	102.4	32.500	0.9159	5.73	29.77	0.193 ✓
T8	128 - 108	L4x4x3/8	19.35	9.39	93.3	32.500	1.8989	7.33	61.71	0.119 ✓
T9	108 - 88	L4x4x3/8	21.22	10.34	102.5	32.500	1.8989	8.95	61.71	0.145 ✓
T10	88 - 68	L5x5x3/8	23.04	11.13	86.9	29.000	2.4262	11.77	70.36	0.167 ✓
T11	68 - 48	L5x5x3/8	24.84	12.03	93.8	29.000	2.4262	12.95	70.36	0.184 ✓
T12	48 - 28	L5x5x3/8	26.75	13.01	101.3	29.000	2.4262	13.29	70.36	0.189 ✓
T13	28 - 8	P3x.216	24.38	23.59	243.3	30.000	2.2285	19.68	66.85	0.294 ✓

Horizontal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	F_a ksi	A in^2	Actual P K	Allow. P_a K	Ratio $\frac{P}{P_a}$
T13	28 - 8	P3x.216	25.33	24.43	252.0	30.000	2.2285	11.41	66.85	0.171 ✔

Top Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	F_a ksi	A in^2	Actual P K	Allow. P_a K	Ratio $\frac{P}{P_a}$
T1	256 - 248	L1 3/4x1 3/4x3/16	6.60	6.03	142.1	29.000	0.3779	0.43	10.96	0.039 ✔

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$SF*P_{allow}$ K	% Capacity	Pass Fail
T1	256 - 248	Leg	P2.5x.203	1	-6.09	55.08	11.1	Pass
		Diagonal	L1 3/4x1 3/4x3/16	11	-1.79	7.84	22.8	Pass
		Top Girt	L1 3/4x1 3/4x3/16	6	-0.45	2.79	16.0	Pass
T2	248 - 228	Leg	P3x.216	21	-24.20	76.21	31.8	Pass
		Diagonal	L2x2x1/4	27	-3.33	14.14	23.6	Pass
							38.8 (b)	
T3	228 - 208	Leg	P4x.337	52	-54.08	157.67	34.3	Pass
		Diagonal	L2x2x1/4	59	-4.51	14.21	31.8	Pass
							52.6 (b)	
T4	208 - 188	Leg	P5x.375	85	-75.11	218.47	34.4	Pass
		Diagonal	L2x2x1/4	92	-3.18	8.91	35.7	Pass
							37.0 (b)	
T5	188 - 168	Leg	P6x.432	112	-97.12	294.79	32.9	Pass
		Diagonal	L2 1/2x2 1/2x1/4	119	-4.96	11.16	44.5	Pass
T6	168 - 148	Leg	P6x.432	134	-123.50	294.79	41.9	Pass
		Diagonal	L3x3x1/4	140	-5.30	14.95	35.4	Pass
							42.8 (b)	
T7	148 - 128	Leg	P6x.432	155	-149.87	294.79	50.8	Pass
		Diagonal	L3x3x1/4	157	-5.83	11.57	50.4	Pass
T8	128 - 108	Leg	P8x.375	176	-174.23	332.53	52.4	Pass
		Diagonal	L4x4x3/8	178	-7.47	27.83	26.8	Pass
							60.4 (b)	
T9	108 - 88	Leg	P8x.5	191	-205.07	435.19	47.1	Pass
		Diagonal	L4x4x3/8	193	-9.09	22.96	39.6	Pass
							73.5 (b)	
T10	88 - 68	Leg	P10x.5	206	-240.85	574.28	41.9	Pass
		Diagonal	L5x5x3/8	208	-11.93	39.47	30.2	Pass
							81.2 (b)	
T11	68 - 48	Leg	P10x.5	221	-278.15	574.28	48.4	Pass
		Diagonal	L5x5x3/8	223	-13.21	33.78	39.1	Pass
							89.4 (b)	
T12	48 - 28	Leg	P10x.5	236	-314.39	574.26	54.7	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$SF*P_{allow}$ K	% Capacity	Pass Fail
		Diagonal	L5x5x3/8	238	-13.61	28.91	47.1	Pass
							91.7 (b)	
T13	28 - 8	Leg	P10x.5	251	-325.32	574.19	56.7	Pass
		Diagonal	P3x.216	254	-20.08	29.97	67.0	Pass
		Horizontal	P3x.216	253	-11.20	27.94	40.1	Pass
							46.1 (b)	
							Summary	
						Leg (T13)	56.7	Pass
						Diagonal (T12)	91.7	Pass
						Horizontal (T13)	46.1	Pass
						Top Girt (T1)	16.0	Pass
						Bolt Checks	91.7	Pass
						RATING =	**91.7**	**Pass**

ANCHOR BOLT ANALYSIS

ANCHOR BOLT ANALYSIS

Input Data

Max Pier Reactions:

Uplift:	Uplift := 289·kips	*user input*
Shear:	Shear := 41·kips	*user input*
Compression:	Compression := 352·kips	*user input*

Anchor Bolt Data:

Use ASTM A354 GR. BC

Number of Anchor Bolts = N	N := 16	*user input*	
Bolt Ultimate Strength:	F_u := 125·ksi	*user input*	
Bolt Yield Strength:	Fy := 109·ksi	*user input*	
Bolt Modulus:	E := 29000·ksi	*user input*	
Thickness of Anchor Bolts	D := 1.0in	*user input*	
Threads per Inch:	n := 8	*user input*	
Coefficient of Friction:	μ := 0.55	*user input*	(for baseplate with grout ASCE 10-97)

Anchor Bolt Area:

Gross Area of Bolt:

$$A_g := \frac{\pi}{4} \cdot D^2 \qquad A_g = 0.785 \cdot in^2$$

Net Area of Bolt:

$$A_n := \frac{\pi}{4} \cdot \left(D - \frac{0.9743 \cdot in}{n} \right)^2 \qquad A_n = 0.606 \cdot in^2$$

Check Tensile Forces:

Maximum Tensile Force (Gross Area):

$$AllowableTension := 1.333 \cdot (0.33 \cdot A_g \cdot F_u) \qquad AllowableTension = 43.2 \cdot kips$$

Note: 1.333 increase allowed per TIA/EIA

Maximum Tensile Force (Net Area):

$$F_{net.area} := 1.333 \cdot (0.60 \cdot A_n \cdot Fy) \qquad F_{net.area} = 52.8 \cdot kips$$

Note: 1.333 increase allowed per TIA/EIA

Applied Tension:

$$MaxTension := \frac{Uplift}{N} \qquad MaxTension = 18.1 \cdot kips$$

Check Stresses:

$$\frac{MaxTension}{F_{net.area}} = 0.34$$

$$Condition1 := if\left(\frac{MaxTension}{F_{net.area}} \le 1.00, "OK", "Overstressed" \right)$$

Condition1 = "OK"

Check Anchor Bolt Area:

Based on the ASCE 10-97 Design of Latticed Steel Transmission Structures

Required Area:

$$A_{s1} := \frac{Uplift}{Fy} + \frac{Shear}{\mu \cdot 0.85 \cdot Fy} \qquad A_{s1} = 3.5 \cdot in^2$$

$$A_{s2} := \left| \frac{Shear - (0.3 \cdot Compression)}{\mu \cdot 0.85 \cdot Fy} \right| \qquad A_{s2} = 1.3 \cdot in^2$$

Provided Area:

$$A_{sprovided} := A_n \cdot N \qquad A_{sprovided} = 9.7 \cdot in^2$$

$$Condition2 := if\left(\frac{A_{s1}}{A_{sprovided}} \le 1.00, "OK", "Overstressed"\right) \qquad \frac{A_{s1}}{A_{sprovided}} = 0.36$$

Condition2 = "OK"

$$Condition3 := if\left(\frac{A_{s2}}{A_{sprovided}} \le 1.00, "OK", "Overstressed"\right) \qquad \frac{A_{s2}}{A_{sprovided}} = 0.13$$

Condition3 = "OK"

Bridgeport West,CT01YC057 (623 Pine Street, Bridgeport, CT) - Siting Council Power Density Calculations

Sprint Nextel Directional Antennas ESMR - 2657 MHz 85'

Note: Power densities are in mW/ cm²

Transmitters:	Frequency in MHz	CT Standard mW/ cm²	Number of Channels	ERP (W) per channel	Centerline of Tx antennas AGL (ft.)**	Power density calculated at base of tower	% of CT Standard
WiMAX	2657	1.0000	3	562	85	0.0838683	8.39%
iDEN	851	0.5673	12	100	85	0.0596927	10.52%
Microwave	22500	1.0000	2	31.6	85	0.0031438	0.31%
From previous filings:per CSC power density data base							
Verizon							9.12%
Verizon							2.54%
VoiceStream							2.25%
Unknown							1.22%
Unknown							8.54%
Unknown							5.32%
Total % of CT Standard							48.21%