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

May 7, 2008

Kenneth C. Baldwin, Esq.
Robinson & Cole LLP
280 Trumbull Street
Hartford, CT 06103-3597

RE: **EM-VER-166-080328** – Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at Meriden Road/Route 322 a/k/a 347 East Street, Wolcott, Connecticut.

Dear Attorney Baldwin:

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

The proposed modifications are to be implemented as specified here and in your notice dated March 28, 2008, 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,

S. Derek Phelps
Executive Director

SDP/MP

c: Honorable Thomas G. Dunn, Mayor, Town of Wolcott
David Kalinowski, Zoning Enforcement Officer, Town of Wolcott
Crown Castle International

ROBINSON & COLE LLP

KENNETH C. BALDWIN

280 Trumbull Street
Hartford, CT 06103-3597
Main (860) 275-8200
Fax (860) 275-8299
kbaldwin@rc.com
Direct (860) 275-8345

EM-VER-166-080328

March 28, 2008

Via Hand Delivery

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

ORIGINAL

Re: **Notice of Exempt Modification – Antenna Swap**
Meriden Road/Route 322 a/k/a 347 East Street
Wolcott, Connecticut

Dear Mr. Phelps:

Cellco Partnership d/b/a Verizon Wireless ("Cellco") currently maintains a wireless telecommunications facility at the above referenced location. The Council approved Cellco's shared use of this facility in Docket 56. On March 3, 2005 the Council granted Cellco's request to replace six cellular antennas with six PCS antennas. Cellco now intends to modify its installation further by replacing six (6) cellular antennas with four (4) LPD-4019 cellular antennas and two (2) LPA-80063/8CF cellular antennas at the 177-foot level on the 180-foot tower. The tower is owned by Crown Castle International. Attached behind Tab 1 are the specifications for the proposed replacement antennas.

Please accept this letter as notification pursuant to R.C.S.A. § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Thomas G. Dunn, Mayor of the Town of Wolcott. Pursuant to a Council directive, a copy of this letter is being sent to Agostinho V. and Joanne Rodrigues, the owners of the property on which the facility is located.

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

1. The proposed modifications will not result in the increase in the overall height of the existing structure. Cellco's replacement antennas will be located at the 177-foot level of the 180-foot tower.

2. The proposed modifications will not involve any ground-mounted equipment and, therefore, will not require the extension of the site boundaries.

3. The proposed modifications will not increase noise levels at the facility by six decibels or more.

4. The operation of the replacement antennas will not increase radio frequency (RF) power density levels at the facility to a level at or above the Federal Communications Commission (FCC) adopted safety standard. A cumulative power density table for the facility is included behind Tab 2.

Also attached is a Structural Analysis Report confirming that the tower can support the proposed modifications. (See Tab 3).

For the foregoing reasons, Cellco respectfully submits that the proposed modifications to the above-referenced telecommunications facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2).

Sincerely,

Kenneth C. Baldwin

Enclosures
Copy to:
Thomas G. Dunn, Wolcott Mayor
Agostinho V. and Joanne Rodrigues
Sandy M. Carter

Vertically Polarized, Log Periodic 40° / 19 dBd

LPA-4019 ___

When ordering replace "___" with connector type.

Mechanical specifications

Length	2400	mm	94.5	in
Width	545	mm	21.3	in
Depth	350	mm	13.7	in
Depth with z-bracket	390	mm	15.4	in
4) Weight	18.6	kg	41	lbs
Wind Area				
Fore/Aft	0.78	m^2	8.35	ft^2
Side	0.96	m^2	10.37	ft^2
5) Rated Wind Velocity (Safety factor 2.0)	>192	km/hr	>119	mph
Wind Load @ 100 mph (161 km/hr)				
Fore/Aft	1245	N	280	lbs
Side	1483	N	279	lbs

Antenna consisting of aluminum alloy with brass feedlines covered by a UV safe fiberglass radome. Aluminum reflector.

Mounting and Downtilting

Mounting brackets attach to a pipe diameter of Ø50-102 mm (2.0-4.0 in). If the lock-down brace is used, the maximum diameter is Ø88.9 mm (3.5 in)

Mounting Bracket & Downtilt Bracket Kit #21699999

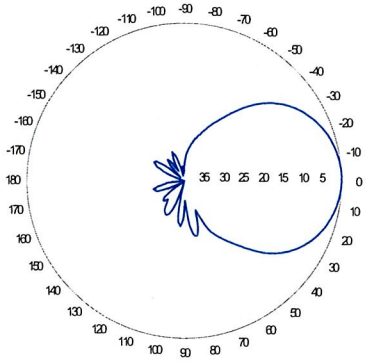
Electrical specifications

	Frequency Range	806-941 MHz
	Impedance	50Ω
3)	Connector(s)	NE or E-DIN 1 port / center
1)	VSWR	≤ 1.35:1
	Polarization	Vertical
1)	Gain	19 dBd
2)	Power Rating	500 W
1)	Half Power Angle	
	H-Plane	40°
	E-Plane	7°
1)	Electrical Downtilt	1.25°
1)	Null Fill	5%
	Lightning Protection	Direct Ground

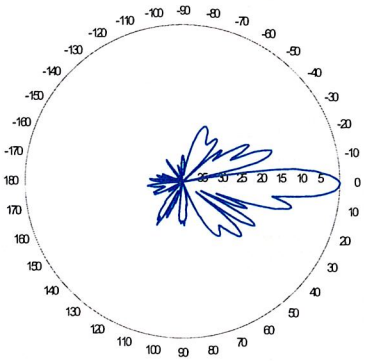
1) Typical values.
2) Power rating limited by connector only.
3) NE indicates an elongated N connector.
E-DIN indicates an elongated DIN connector.
4) The antenna weight listed above does not include the bracket weight.
5) Worst case at 15° mechanical downtilt.

Improvements to mechanical and/or electrical performance of the antenna may be made without notice.

Radiation pattern[1)]



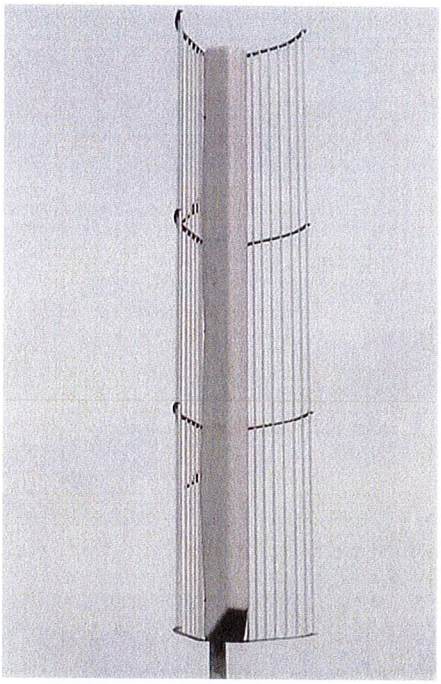
Horizontal



Vertical

Radiation patterns for all antennas are measured with the antenna mounted on a fiberglass pole.

Mounting on a metal pole will typically improve the Front-to-Back ratio.



Amphenol Antel's Exclusive 3T (True Transmission Line Technology) Antenna Design:

- True log-periodic design allows for superior front-to-side characteristics to minimize sector overlap.
- Durable brass feedline design eliminates the need for conventional solder joints in the signal path.
- A non-collinear system with access to every radiating element for broad band-width and superior performance.
- Air as insulation for virtually no internal signal loss.

This Amphenol Antel antenna is under a five-year limited warranty for repair or replacement.

Antenna available with center-fed connector only.

806-941 MHz

Amphenol Antel, Inc. 1300 Capital Drive Rockford, Illinois 61109 USA Tel. (815) 399-0001
Toll-Free (888) 417-9562 Fax. (815) 399-0156 antel@antelinc.com www.antelinc.com

Amphenol Antel, Inc. The Antenna Technology Company

Revision Date: 7/5/07

Vertically Polarized, Log Periodic 63° / 16 dBd

LPA-80063/8CF ___

When ordering replace "___" with connector type.

Mechanical specifications

	Length	2400 mm	94.5 in
	Width	386 mm	15.2 in
	Depth	335 mm	13.2 in
	Depth with z-bracket	375 mm	14.8 in
4)	Weight	17.2 kg	38.0 lbs
	Wind Area		
	Fore/Aft	0.93 m^2	10.0 ft^2
	Side	0.80 m^2	8.7 ft^2
	Rated Wind Velocity (Safety factor 2.0)	>276 km/hr	>172 mph
	Wind Load @ 100 mph (161 km/hr)		
	Fore/Aft	1357 N	305 lbs
	Side	1197 N	269 lbs

Antenna consisting of aluminum alloy with brass feedlines covered by a UV safe fiberglass radome.

Mounting and Downtilting

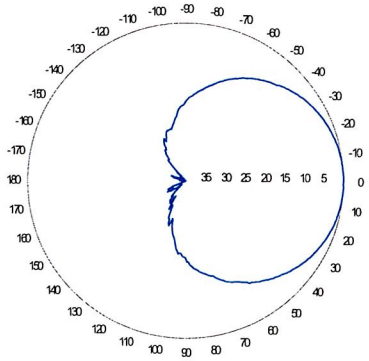
Mounting brackets attach to a pipe diameter of Ø50-102 mm (2.0-4.0 in). If the lock-down brace is used, the maximum diameter is Ø88.9 mm (3.5 in)

Mounting Bracket & Downtilt Bracket Kit #21699999

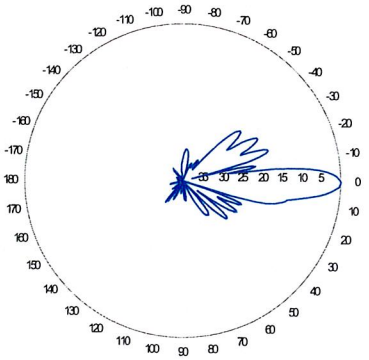
Electrical specifications

	Frequency Range	806-960 MHz
	Impedance	50Ω
3)	Connector(s)	NE or E-DIN 1 port / center
1)	VSWR	≤ 1.4:1
	Polarization	Vertical
1)	Gain	16 dBd
2)	Power Rating	500 W
1)	Half Power Angle	
	H-Plane	63°
	E-Plane	7°
1)	Electrical Downtilt	0°
1)	Null Fill	10%
	Lightning Protection	Direct Ground

Radiation pattern[1)]



Horizontal

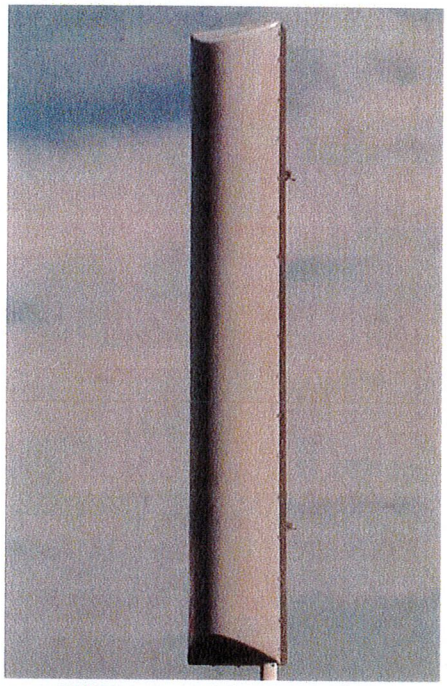


Vertical

Featuring upper side lobe suppression.

Radiation patterns for all antennas are measured with the antenna mounted on a fiberglass pole.

Mounting on a metal pole will typically improve the Front-to-Back ratio.



Amphenol Antel's Exclusive 3T (True Transmission Line Technology) Antenna Design:

- True log-periodic design allows for superior front-to-side characteristics to minimize sector overlap.
- Unique feedline design eliminates the need for conventional solder joints in the signal path.
- A non-collinear system with access to every radiating element for broad band-width and superior performance.
- Air as insulation for virtually no internal signal loss.

This Amphenol Antel antenna is under a five-year limited warranty for repair or replacement.

Antenna available with center-fed connector only.

1) Typical values.
2) Power rating limited by connector only.
3) NE indicates an elongated N connector. E-DIN indicates an elongated DIN connector.
4) The antenna weight listed above does not include the bracket weight.

Improvements to mechanical and/or electrical performance of the antenna may be made without notice.

CF Denotes a Center-Fed Connector.

806-960 MHz

Amphenol Antel, Inc. 1300 Capital Drive Rockford, Illinois 61109 USA Tel. (815) 399-0001
Toll-Free (888) 417-9562 Fax. (815) 399-0156 antel@antelinc.com www.antelinc.com

Amphenol Antel, Inc. The Antenna Technology Company

Revision Date: 7/5/07

	General	Power	Density					
Site Name: Wolcott								
Tower Height: Verizon @ 177Ft.								
CARRIER	**# OF CHAN.**	**WATTS ERP**	**HEIGHT**	**CALC. POWER DENS**	**FREQ.**	**MAX. PERMISS. EXP.**	**FRACTION MPE**	**Total**
*Cingular/UMTS	1	500	158	0.0072	880	0.5867	1.23%	
*Cingular/GSM	8	296	158	0.0341	880	0.5867	5.81%	
*Cingular/GSM	2	427	158	0.0123	1900	1.0000	1.23%	
*T-Mobile	8	122	190	0.0097	1935	1.0000	0.97%	
Verizon	**9**	**285**	**177**	**0.0294**	**880**	**0.5866**	**5.02%**	
Verizon	**3**	**400**	**177**	**0.0138**	**1900**	**1.0000**	**1.38%**	
								15.64%
* Source: Siting Council								

Date: **February 1, 2008**

Ms. Veronica Harris
Crown Castle International
2000 Corporate Dr.
Canonsburg, PA 15317

FDH Engineering, Inc.
2730 Rowland Rd., Suite 100
Raleigh, NC 27615
(919) 755-1012
info@FDH-Inc.com

Subject: Structural Analysis Report

Carrier Designation:	**Verizon Wireless**	
	Carrier Site Number:	n/a
	Carrier Site Name:	Wolcott, CT
Crown Castle Designation:	**Crown Castle BU Number:**	806362
	Crown Castle Site Name:	NHV 108 943133
	Crown Castle JDE Job Number:	101321
Engineering Firm Designation:	**FDH Engineering, Inc. Project Number:**	***08-01300E***
Site Data:	**Intersection of Rte 322/Meridian Rd, Wolcott, CT, New Haven Co.** **Latitude 41°-*33'-34.41"*, Longitude -*72°-56'-49.1"*** **180 Foot – Self Support Tower**	

Dear Ms. Harris,

FDH Engineering, Inc. is pleased to submit this **"Structural Analysis Report"** to determine the structural integrity of the aforementioned tower. This analysis has been performed in accordance with the Crown Castle Structural 'Statement of Work' and the terms of Crown Castle Purchase Order Number 273053, in accordance with application 58614, revision 2.

The purpose of the analysis is to determine acceptability of the tower stress level. Based on our analysis we have determined the tower stress level for the structure and foundation, under the following load case, to be:

LC1: Existing + Reserved + Proposed Equipment — Sufficient Capacity
Note: See Table I and Table II for the proposed and existing/reserved loading.

The analysis has been performed in accordance with the EIA/TIA-222-F standard based upon a wind speed of 85 mph without ice and 74 mph with 1/2" ice (fastest mile).

All equipment proposed in this report shall be installed in accordance with the attached drawings for the determined available structural capacity to be effective.

We at FDH Engineering, Inc. appreciate the opportunity of providing our continuing professional services to you and Crown Castle International. If you have any questions or need further assistance on this or any other projects please give us a call.

Respectfully submitted.

Bradley Newman, EI
Project Engineer

Christopher M. Murphy, PE
Vice President
CT PE License No. 25842

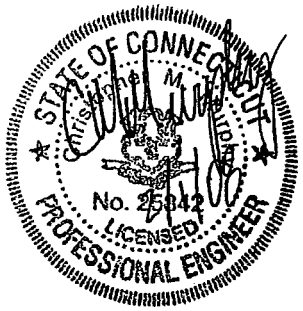


TABLE OF CONTENTS

1) INTRODUCTION

The subject tower is a 180 foot self support tower manufactured in 1986 by Rohn.

2) ANALYSIS CRITERIA

- TIA-222-F – Structural Standard for Antenna Supporting Structures and Antennas
- TIA-222-F – Wind speed without ice: 85 mph (fastest mile)
- TIA-222-F – Wind speed with 1/2" ice: 74 mph (fastest mile)

Table 1 – Proposed Antenna and Cable Information

Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Mount Information	Number of Feed Lines	Feed Line Size (in)
177[1]	4 2 6 12	Antel Antel Decibel MLA	LPD-4019 LPA-80063/8CF DB948F65T2E-M MLA	Existing T-Arms	12 12	1-5/8 1-5/8

1 This represents the final configuration for Verizon at 177'. According to information provided by Crown Castle, Verizon will remove (6) Decibel DB948F65T2E-M antennas and add (4) Antel LPD-4019 antennas and (2) Antel LPA-80063/8CF antennas at 177'. Verizon will reuse the existing (12) 1-5/8" coax for a final configuration of (12) antennas and (12) coax at 177'.

Table 2 – Existing and Reserved Antenna and Cable Information

Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
188	3 6	RFS Decibel	APX15PV-15PV-2 PCS 1900 TMAs	12 1	1-5/8 3/8
177[2]	12 12	Decibel MLA	DB948F65T2E-M MLA	12 12	1-5/8 1-5/8
168	3	EMS	RR90-17-02DP	6	1-5/8
158	6 3 6 6	CSS Powerwave ADC Powerwave	DUO1417/8686 7770.00 DB800/1900 TMAs LGP13519 diplexers	9	1-1/4
123	1	Andrew	HP8-59E	1	EW52
112	1	Andrew	HP8-59E	2	EW63
70	1	Andrew	HP10-59E	1	WE61
40	1	—	GPS	1	1/2

2 The existing loading at 177' will be altered. See the proposed loading above.

Table 3 – Design Antenna and Cable Information

Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
180	4	Cellwave	PD10017	4 (assumed)	1-5/8 (assumed)
170	3	Cellwave	PD1132D	3 (assumed)	1-5/8 (assumed)
160	2	---	6' Dishes	2 (assumed)	1-5/8 (assumed)

3) ANALYSIS PROCEDURE

Table 4 – Documents Provided

Document	Remarks	Reference	Source
Tower Design Drawings	Rohn File No. 21817JC	Doc # 529684	Crown Castle
Foundation Modification Drawings	All-Points Technology Corp, P.C. Job No. CT105680	Doc # 903539	Crown Castle
CAD Level Drawings	BU806362	---	Crown Castle

3.1) Analysis Method

RISA Tower (version 5.0), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various dead, live, wind, and ice load cases. All loads were computed in accordance with the ANSI/TIA-222-F and the local building code requirements. Selected output from the analysis is included in Appendix A.

3.2) Assumptions

1. Tower and structures were built in accordance with the manufacturer's specifications.
2. The tower and structures have been maintained in accordance with the manufacturer's specifications.
3. The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the reference drawings.
4. All pipe steel has F_y = 50 ksi and all angles have F_y = 36 ksi.

If any of these assumptions are not valid or have been made in error, this analysis may be affected, and FDH Engineering, Inc. should be allowed to review any new information to determine its effect on the structural integrity of the tower.

4) ANALYSIS RESULTS

Table 5 – Tower Component Stresses vs. Capacity – LC1

Notes	Component	Elevation (ft)	% Capacity	Pass/Fail
RISA Tower Analysis Summary:(Monopole)				
			Summary	
Notes:	**Component**	**Elevation**	**% Capacity**	**Pass/Fail**
	Leg	20-40	60.4%	Pass
	Diagonal	60-80	78.0%	Pass
	Horizontal	0-20	39.5%	Pass
	Top Girt	160-180	9.3%	Pass
Individual Components:				
Notes:	**Component**	**Elevation**	**% Capacity**	**Pass/Fail**
	Base Foundation	---	68.6%	Pass
Structure Rating (max from all components) =				**78.0%**

*Notes:

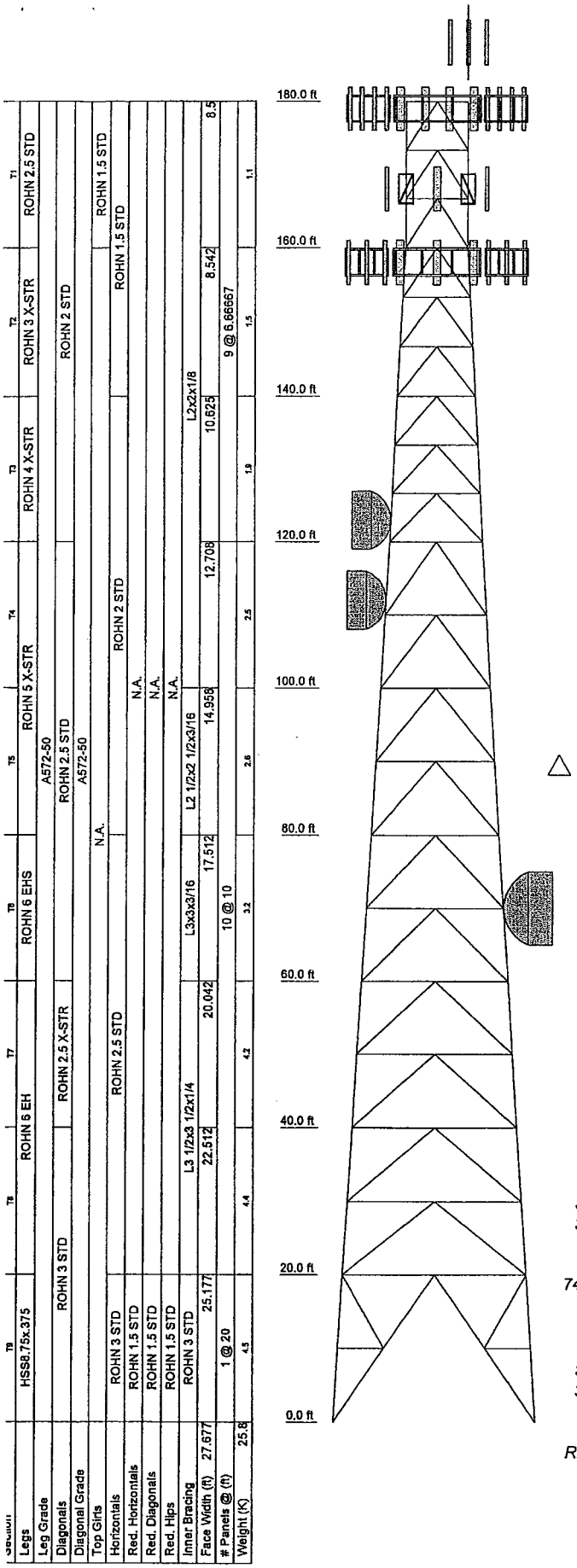
1) The following components listed in the RISA Tower Analysis Summary were analyzed separately to determine the percent capacity consumed (see attached calculations):

4.1) Recommendations

1. The proposed coax should be installed per the Base Level Drawing. See Appendix B.

APPENDIX A

RISA TOWER OUTPUT



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
(3) APX15PV-15PV-2	188	7770.00	158
(6) TMA	188	7770.00	158
10' Mount Extension	188	7770.00	158
(3) Pipe Mount	188	T-Frame Sector Mount (1)	158
(2) LPA-80063/8CF	179	T-Frame Sector Mount (1)	158
(2) LPD-4019	179	T-Frame Sector Mount (1)	158
(2) DB948F65T2E-M	179	(2) TMA	158
(2) DB948F65T2E-M	179	(2) TMA	158
(2) DB948F65T2E-M	179	(2) TMA	158
(2) LPD-4019	179	(2) diplexer	158
T-Frame Sector Mount (1)	177	(2) diplexer	158
T-Frame Sector Mount (1)	177	(2) diplexer	158
T-Frame Sector Mount (1)	177	(2) DUO1417-8686	158
Side Mount Standoff (1)	168	(2) DUO1417-8686	158
Side Mount Standoff (1)	168	Pipe Mount	123
Side Mount Standoff (1)	168	HP8-59E	123
RR90-17-02DP	168	Pipe Mount	112
RR90-17-02DP	168	HP8-59E	112
RR90-17-02DP	168	Pipe Mount	70
(2) DUO1417-8686	158	HP10-59E	70

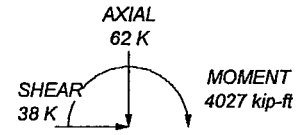
MATERIAL STRENGTH

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

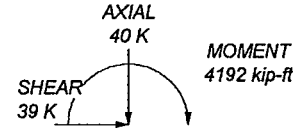
TOWER DESIGN NOTES

1. Tower is located in New Haven County, Connecticut.
2. Tower designed for a 85 mph basic wind in accordance with the TIA/EIA-222-F Standard.
3. Tower is also designed for a 74 mph basic wind with 0.50 in ice.
4. Deflections are based upon a 50 mph wind.
5. TOWER RATING: 78%

MAX. CORNER REACTIONS AT BASE:
DOWN: 186 K
UPLIFT: -162 K
SHEAR: 23 K



TORQUE 9 kip-ft
74 mph WIND - 0.5000 in ICE



TORQUE 12 kip-ft
REACTIONS - 85 mph WIND

FDH ENGINEERING
FDH Engineering, Inc
2730 Rowland Rd, Ste 100
Raleigh, NC 27615
Phone: (919) 755-1012
FAX: (919) 755-1031

Job: *NVH 108 943133, CT 806362*			
Project: *08-01300E*			
Client: Crown Castle	Drawn by: BRN	App'd:	
Code: TIA/EIA-222-F	Date: 02/06/08	Scale: NTS	
Path:		Dwg No. E-1	

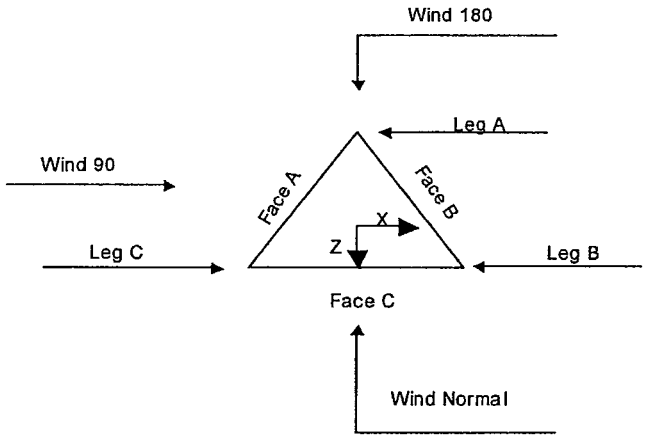
Tower Input Data

The main tower is a 3x free standing tower with an overall height of 180.00 ft above the ground line.
The base of the tower is set at an elevation of 0.00 ft above the ground line.
The face width of the tower is 8.50 ft at the top and 27.68 ft at the base.
This tower is designed using the TIA/EIA-222-F standard.
The following design criteria apply:

Tower is located in New Haven County, Connecticut.
Basic wind speed of 85 mph.
Nominal ice thickness of 0.5000 in.
Ice density of 56 pcf.
A wind speed of 74 mph is used in combination with ice.
Temperature drop of 50 °F.
Deflections calculated using a wind speed of 50 mph.
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	180.00-160.00			8.50	1	20.00
T2	160.00-140.00			8.54	1	20.00
T3	140.00-120.00			10.63	1	20.00
T4	120.00-100.00			12.71	1	20.00
T5	100.00-80.00			14.96	1	20.00
T6	80.00-60.00			17.51	1	20.00
T7	60.00-40.00			20.04	1	20.00
T8	40.00-20.00			22.51	1	20.00
T9	20.00-0.00			25.18	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	180.00-160.00	6.67	K Brace Down	No	Yes	0.0000	0.0000
T2	160.00-140.00	6.67	K Brace Down	No	Yes	0.0000	0.0000
T3	140.00-120.00	6.67	K Brace Down	No	Yes	0.0000	0.0000
T4	120.00-100.00	10.00	K Brace Down	No	Yes	0.0000	0.0000
T5	100.00-80.00	10.00	K Brace Down	No	Yes	0.0000	0.0000
T6	80.00-60.00	10.00	K Brace Down	No	Yes	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
T7	60.00-40.00	10.00	K Brace Down	No	Yes	0.0000	0.0000
T8	40.00-20.00	10.00	K Brace Down	No	Yes	0.0000	0.0000
T9	20.00-0.00	20.00	K1 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 180.00-160.00	Pipe	ROHN 2.5 STD	A572-50 (50 ksi)	Pipe	ROHN 2 STD	A572-50 (50 ksi)
T2 160.00-140.00	Pipe	ROHN 3 X-STR	A572-50 (50 ksi)	Pipe	ROHN 2 STD	A572-50 (50 ksi)
T3 140.00-120.00	Pipe	ROHN 4 X-STR	A572-50 (50 ksi)	Pipe	ROHN 2 STD	A572-50 (50 ksi)
T4 120.00-100.00	Pipe	ROHN 5 X-STR	A572-50 (50 ksi)	Pipe	ROHN 2.5 STD	A572-50 (50 ksi)
T5 100.00-80.00	Pipe	ROHN 5 X-STR	A572-50 (50 ksi)	Pipe	ROHN 2.5 STD	A572-50 (50 ksi)
T6 80.00-60.00	Pipe	ROHN 6 EHS	A572-50 (50 ksi)	Pipe	ROHN 2.5 STD	A572-50 (50 ksi)
T7 60.00-40.00	Pipe	ROHN 6 EH	A572-50 (50 ksi)	Pipe	ROHN 2.5 X-STR	A572-50 (50 ksi)
T8 40.00-20.00	Pipe	ROHN 6 EH	A572-50 (50 ksi)	Pipe	ROHN 3 STD	A572-50 (50 ksi)
T9 20.00-0.00	Pipe	HSS8.75x.375	A572-50 (50 ksi)	Pipe	ROHN 3 STD	A572-50 (50 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
T1 180.00-160.00	None	Flat Bar		A36 (36 ksi)	Pipe	ROHN 1.5 STD	A572-50 (50 ksi)
T2 160.00-140.00	None	Flat Bar		A36 (36 ksi)	Pipe	ROHN 1.5 STD	A572-50 (50 ksi)
T3 140.00-120.00	None	Flat Bar		A36 (36 ksi)	Pipe	ROHN 2 STD	A572-50 (50 ksi)
T4 120.00-100.00	None	Flat Bar		A36 (36 ksi)	Pipe	ROHN 2 STD	A572-50 (50 ksi)
T5 100.00-80.00	None	Flat Bar		A36 (36 ksi)	Pipe	ROHN 2 STD	A572-50 (50 ksi)
T6 80.00-60.00	None	Flat Bar		A36 (36 ksi)	Pipe	ROHN 2.5 STD	A572-50 (50 ksi)
T7 60.00-40.00	None	Flat Bar		A36 (36 ksi)	Pipe	ROHN 2.5 STD	A572-50 (50 ksi)
T8 40.00-20.00	None	Flat Bar		A36 (36 ksi)	Pipe	ROHN 2.5 STD	A572-50 (50 ksi)
T9 20.00-0.00	None	Flat Bar		A36 (36 ksi)	Pipe	ROHN 3 STD	A572-50 (50 ksi)

Tower Section Geometry (cont'd)

Tower Elevation ft	Secondary Horizontal Type	Secondary Horizontal Size	Secondary Horizontal Grade	Inner Bracing Type	Inner Bracing Size	Inner Bracing Grade
T1 180.00-160.00	Solid Round		A572-50 (50 ksi)	Equal Angle	L2x2x1/8	A36 (36 ksi)
T2 160.00-140.00	Solid Round		A572-50 (50 ksi)	Equal Angle	L2x2x1/8	A36 (36 ksi)
T3 140.00-120.00	Solid Round		A572-50 (50 ksi)	Equal Angle	L2x2x1/8	A36 (36 ksi)
T4 120.00-100.00	Solid Round		A572-50 (50 ksi)	Equal Angle	L2x2x1/8	A36 (36 ksi)
T5 100.00-80.00	Solid Round		A572-50 (50 ksi)	Equal Angle	L2 1/2x2 1/2x3/16	A36 (36 ksi)
T6 80.00-60.00	Solid Round		A572-50 (50 ksi)	Equal Angle	L3x3x3/16	A36 (36 ksi)
T7 60.00-40.00	Solid Round		A572-50 (50 ksi)	Equal Angle	L3 1/2x3 1/2x1/4	A36 (36 ksi)
T8 40.00-20.00	Solid Round		A572-50 (50 ksi)	Equal Angle	L3 1/2x3 1/2x1/4	A36 (36 ksi)
T9 20.00-0.00	Solid Round		A572-50 (50 ksi)	Pipe	ROHN 3 STD	A36 (36 ksi)

Tower Section Geometry (cont'd)

Tower Elevation ft	Redundant Bracing Grade		Redundant Type	Redundant Size	K Factor
T9 20.00-0.00	A572-50 (50 ksi)	Horizontal (1)	Pipe	ROHN 1.5 STD	1
		Diagonal (1)	Pipe	ROHN 1.5 STD	1
		Hip (1)	Pipe	ROHN 1.5 STD	1
		Hip Diagonal		ROHN 2.5 STD	1

Tower Section Geometry (cont'd)

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in
T1 180.00-160.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T2 160.00-140.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T3 140.00-120.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T4 120.00-100.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000

Tower Elevation ft	Gusset Area (per face) ft^2	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
T5 100.00-80.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T6 80.00-60.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T7 60.00-40.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T8 40.00-20.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T9 20.00-0.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Calc K Single Angles	Calc K Solid Rounds	K Factors[1] Legs	X Brace Diags X	X Brace Diags Y	Single Diags X	Single Diags Y	Girts X	Girts Y	Horiz. X	Horiz. Y	Sec. Horiz. X	Sec. Horiz. Y	Inner Brace X	Inner Brace Y
T1 180.00-160.00	No	No	1	1	1	1	1	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1	1	1	1	1	1
T2 160.00-140.00	No	No	1	1	1	1	1	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1	1	1	1	1	1
T3 140.00-120.00	No	No	1	1	1	1	1	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1	1	1	1	1	1
T4 120.00-100.00	No	No	1	1	1	1	1	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1	1	1	1	1	1
T5 100.00-80.00	No	No	1	1	1	1	1	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1	1	1	1	1	1
T6 80.00-60.00	No	No	1	1	1	1	1	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1	1	1	1	1	1
T7 60.00-40.00	No	No	1	1	1	1	1	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1	1	1	1	1	1
T8 40.00-20.00	No	No	1	1	1	1	1	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1	1	1	1	1	1
T9 20.00-0.00	No	No	1	1	1	1	1	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1	1	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 Net Width Deduct in	Leg U	Diagonal Net Width Deduct in	Diagonal U	Top Girt Net Width Deduct in	Top Girt U	Bottom Girt Net Width Deduct in	Bottom Girt U	Mid Girt Net Width Deduct in	Mid Girt U	Long Horizontal Net Width Deduct in	Long Horizontal U	Short Horizontal Net Width Deduct in	Short Horizontal U
T1 180.00-160.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75

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
T2 160.00-140.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T3 140.00-120.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T4 120.00-100.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T5 100.00-80.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T6 80.00-60.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T7 60.00-40.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T8 40.00-20.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T9 20.00-0.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75

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 180.00-160.00	Flange	0.7500 A325N	4	0.6250 A325N	3	0.7500 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	2	0.6250 A325N	0
T2 160.00-140.00	Flange	0.8750 A325N	4	0.6250 A325N	3	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	2	0.6250 A325N	0
T3 140.00-120.00	Flange	1.0000 A325N	4	0.6250 A325N	3	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	2	0.6250 A325N	0
T4 120.00-100.00	Flange	1.0000 A325N	4	0.6250 A325N	3	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	2	0.6250 A325N	0
T5 100.00-80.00	Flange	1.0000 A325N	6	0.6250 A325N	3	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	2	0.6250 A325N	0
T6 80.00-60.00	Flange	1.0000 A325N	6	0.6250 A325N	3	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	2	0.6250 A325N	0
T7 60.00-40.00	Flange	1.0000 A325N	6	0.6250 A325N	3	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	2	0.6250 A325N	0
T8 40.00-20.00	Flange	1.0000 A325N	8	0.6250 A325N	3	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	2	0.6250 A325N	0
T9 20.00-0.00	Flange	0.7500 A325N	0	0.6250 A325N	3	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 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	Total Number	Number Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
1 5/8	A	Yes	Ar (CfAe)	168.00 - 5.00	6	3	1.9800	1.9800		1.04
1 5/8	A	Yes	Ar (CfAe)	177.00 - 5.00	12	2	1.9800	1.9800		1.04
FSJ2-50 (3/8 SUPERFLEX. FOAM)	C	Yes	Ar (CfAe)	177.00 - 158.00	1	1	0.4300	0.4300		0.08

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number	Number Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
1 5/8	C	Yes	Ar (CfAe)	177.00 - 158.00	12	6	1.9800	1.9800		1.04
1/2	A	Yes	Ar (CfAe)	40.00 - 5.00	1	1	0.5800	0.0000		0.25
EW63	A	Yes	Af (CfAe)	112.00 - 5.00	2	1	1.5742	1.5742	5.0668	0.51
1 1/4	C	Yes	Ar (CfAe)	158.00 - 5.00	25	12	1.5500	1.5500		0.85
EW52	A	Yes	Af (CfAe)	123.00 - 5.00	1	1	1.7426	0.0000	0.5000	0.59
FSJ2-50 (3/8 SUPERFLEX. FOAM)	C	Yes	Ar (CfAe)	158.00 - 5.00	1	1	0.4300	0.0000		0.08
1 5/8	C	Yes	Ar (CfAe)	158.00 - 5.00	12	6	1.9800	0.0000		1.04

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	180.00-160.00	A	9.570	0.000	0.000	0.000	0.26
		B	0.000	0.000	0.000	0.000	0.00
		C	17.439	0.000	0.000	0.000	0.21
T2	160.00-140.00	A	16.500	0.000	0.000	0.000	0.37
		B	0.000	0.000	0.000	0.000	0.00
		C	29.952	0.000	0.000	0.000	0.63
T3	140.00-120.00	A	16.500	0.000	0.000	0.000	0.38
		B	0.000	0.000	0.000	0.000	0.00
		C	31.000	0.000	0.000	0.000	0.68
T4	120.00-100.00	A	16.500	1.574	0.000	0.000	0.40
		B	0.000	0.000	0.000	0.000	0.00
		C	31.000	0.000	0.000	0.000	0.68
T5	100.00-80.00	A	16.500	2.624	0.000	0.000	0.41
		B	0.000	0.000	0.000	0.000	0.00
		C	31.000	0.000	0.000	0.000	0.68
T6	80.00-60.00	A	16.500	2.624	0.000	0.000	0.41
		B	0.000	0.000	0.000	0.000	0.00
		C	31.000	0.000	0.000	0.000	0.68
T7	60.00-40.00	A	16.500	2.624	0.000	0.000	0.41
		B	0.000	0.000	0.000	0.000	0.00
		C	31.000	0.000	0.000	0.000	0.68
T8	40.00-20.00	A	16.500	2.624	0.000	0.000	0.41
		B	0.000	0.000	0.000	0.000	0.00
		C	31.000	0.000	0.000	0.000	0.68
T9	20.00-0.00	A	12.375	1.968	0.000	0.000	0.31
		B	0.000	0.000	0.000	0.000	0.00
		C	23.250	0.000	0.000	0.000	0.51

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	180.00-160.00	A	0.500	14.403	0.000	0.000	0.000	0.64
		B		0.000	0.000	0.000	0.000	0.00
		C		27.356	0.000	0.000	0.000	0.53
T2	160.00-140.00	A	0.500	24.833	0.000	0.000	0.000	0.92
		B		0.000	0.000	0.000	0.000	0.00
		C		59.618	0.000	0.000	0.000	1.31
T3	140.00-120.00	A	0.500	24.833	0.167	0.000	0.000	0.92
		B		0.000	0.000	0.000	0.000	0.00

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
		C		62.667	0.000	0.000	0.000	1.38
T4	120.00-100.00	A	0.500	24.833	3.352	0.000	0.000	0.99
		B		0.000	0.000	0.000	0.000	0.00
		C		62.667	0.000	0.000	0.000	1.38
T5	100.00-80.00	A	0.500	24.833	4.846	0.000	0.000	1.02
		B		0.000	0.000	0.000	0.000	0.00
		C		62.667	0.000	0.000	0.000	1.38
T6	80.00-60.00	A	0.500	24.833	4.846	0.000	0.000	1.02
		B		0.000	0.000	0.000	0.000	0.00
		C		62.667	0.000	0.000	0.000	1.38
T7	60.00-40.00	A	0.500	24.833	4.846	0.000	0.000	1.02
		B		0.000	0.000	0.000	0.000	0.00
		C		62.667	0.000	0.000	0.000	1.38
T8	40.00-20.00	A	0.500	26.500	4.846	0.000	0.000	1.03
		B		0.000	0.000	0.000	0.000	0.00
		C		62.667	0.000	0.000	0.000	1.38
T9	20.00-0.00	A	0.500	19.875	3.634	0.000	0.000	0.77
		B		0.000	0.000	0.000	0.000	0.00
		C		47.000	0.000	0.000	0.000	1.04

Feed Line Shielding

Section	Elevation ft	Face	A_R ft^2	A_R Ice ft^2	A_F ft^2	A_F Ice ft^2
T1	180.00-160.00	A	0.755	1.650	0.000	0.000
		B	0.000	0.000	0.000	0.000
		C	1.375	3.134	0.000	0.000
T2	160.00-140.00	A	1.214	2.658	0.000	0.000
		B	0.000	0.000	0.000	0.000
		C	2.203	6.380	0.000	0.000
T3	140.00-120.00	A	1.223	2.641	0.000	0.000
		B	0.000	0.000	0.000	0.000
		C	2.297	6.598	0.000	0.000
T4	120.00-100.00	A	1.099	2.426	0.000	0.000
		B	0.000	0.000	0.000	0.000
		C	1.886	5.228	0.000	0.000
T5	100.00-80.00	A	1.089	2.409	0.000	0.000
		B	0.000	0.000	0.000	0.000
		C	1.766	4.902	0.000	0.000
T6	80.00-60.00	A	1.116	2.422	0.000	0.000
		B	0.000	0.000	0.000	0.000
		C	1.809	4.930	0.000	0.000
T7	60.00-40.00	A	1.079	2.341	0.000	0.000
		B	0.000	0.000	0.000	0.000
		C	1.749	4.765	0.000	0.000
T8	40.00-20.00	A	1.178	2.619	0.000	0.000
		B	0.000	0.000	0.000	0.000
		C	1.910	5.057	0.000	0.000
T9	20.00-0.00	A	0.920	2.147	0.000	0.000
		B	0.000	0.000	0.000	0.000
		C	1.491	4.146	0.000	0.000

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
(2) DB948F65T2E-M	A	From Leg	3.00 0.00 0.00	0.0000	179.00	No Ice 1/2" Ice	4.95 5.34	3.30 3.66	0.01 0.05
(2) DB948F65T2E-M	B	From Leg	3.00 0.00 0.00	0.0000	179.00	No Ice 1/2" Ice	4.95 5.34	3.30 3.66	0.01 0.05
(2) DB948F65T2E-M	C	From Leg	3.00 0.00 0.00	0.0000	179.00	No Ice 1/2" Ice	4.95 5.34	3.30 3.66	0.01 0.05
(2) LPD-4019	A	From Leg	3.00 0.00 0.00	0.0000	179.00	No Ice 1/2" Ice	19.52 20.28	12.54 13.25	0.07 0.13
(2) LPA-80063/8CF	B	From Leg	3.00 0.00 0.00	0.0000	179.00	No Ice 1/2" Ice	13.97 14.68	12.17 12.83	0.04 0.14
(2) LPD-4019	C	From Leg	3.00 0.00 0.00	0.0000	179.00	No Ice 1/2" Ice	19.52 20.28	12.54 13.25	0.07 0.13
(3) APX15PV-15PV-2	B	From Leg	0.00 0.00 0.00	0.0000	188.00	No Ice 1/2" Ice	6.71 7.15	2.03 2.35	0.04 0.07
T-Frame Sector Mount (1)	A	From Leg	0.00 0.00 0.00	0.0000	177.00	No Ice 1/2" Ice	13.60 18.40	13.60 18.40	0.47 0.60
T-Frame Sector Mount (1)	B	From Leg	0.00 0.00 0.00	0.0000	177.00	No Ice 1/2" Ice	13.60 18.40	13.60 18.40	0.47 0.60
T-Frame Sector Mount (1)	C	From Leg	0.00 0.00 0.00	0.0000	177.00	No Ice 1/2" Ice	13.60 18.40	13.60 18.40	0.47 0.60
RR90-17-02DP	A	From Leg	3.00 0.00 0.00	0.0000	168.00	No Ice 1/2" Ice	4.36 4.77	1.97 2.31	0.02 0.04
RR90-17-02DP	B	From Leg	3.00 0.00 0.00	0.0000	168.00	No Ice 1/2" Ice	4.36 4.77	1.97 2.31	0.02 0.04
RR90-17-02DP	C	From Leg	3.00 0.00 0.00	0.0000	168.00	No Ice 1/2" Ice	4.36 4.77	1.97 2.31	0.02 0.04
Side Mount Standoff (1)	A	From Leg	0.00 0.00 0.00	0.0000	168.00	No Ice 1/2" Ice	2.72 4.91	2.72 4.91	0.05 0.09
Side Mount Standoff (1)	B	From Leg	0.00 0.00 0.00	0.0000	168.00	No Ice 1/2" Ice	2.72 4.91	2.72 4.91	0.05 0.09
Side Mount Standoff (1)	C	From Leg	0.00 0.00 0.00	0.0000	168.00	No Ice 1/2" Ice	2.72 4.91	2.72 4.91	0.05 0.09
(6) TMA	B	From Leg	0.00 0.00 0.00	0.0000	188.00	No Ice 1/2" Ice	0.00 0.00	0.55 0.67	0.00 0.01
(2) DUO1417-8686	A	From Leg	3.00 0.00 0.00	0.0000	158.00	No Ice 1/2" Ice	6.53 6.94	4.20 4.57	0.02 0.06

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
(2) DUO1417-8686	B	From Leg	3.00 0.00	0.0000	158.00	No Ice 1/2" Ice	6.53 6.94	4.20 4.57	0.02 0.06
(2) DUO1417-8686	C	From Leg	3.00 0.00	0.0000	158.00	No Ice 1/2" Ice	6.53 6.94	4.20 4.57	0.02 0.06
7770.00	A	From Leg	3.00 0.00	0.0000	158.00	No Ice 1/2" Ice	6.79 7.28	3.51 3.90	0.04 0.07
7770.00	B	From Leg	3.00 0.00	0.0000	158.00	No Ice 1/2" Ice	6.79 7.28	3.51 3.90	0.04 0.07
7770.00	C	From Leg	3.00 0.00	0.0000	158.00	No Ice 1/2" Ice	6.79 7.28	3.51 3.90	0.04 0.07
T-Frame Sector Mount (1)	A	From Leg	0.00 0.00	0.0000	158.00	No Ice 1/2" Ice	13.60 18.40	13.60 18.40	0.47 0.60
T-Frame Sector Mount (1)	B	From Leg	0.00 0.00	0.0000	158.00	No Ice 1/2" Ice	13.60 18.40	13.60 18.40	0.47 0.60
T-Frame Sector Mount (1)	C	From Leg	0.00 0.00	0.0000	158.00	No Ice 1/2" Ice	13.60 18.40	13.60 18.40	0.47 0.60
(2) TMA	A	From Leg	3.00 0.00	0.0000	158.00	No Ice 1/2" Ice	0.00 0.00	0.55 0.67	0.00 0.01
(2) TMA	B	From Leg	3.00 0.00	0.0000	158.00	No Ice 1/2" Ice	0.00 0.00	0.55 0.67	0.00 0.01
(2) TMA	C	From Leg	3.00 0.00	0.0000	158.00	No Ice 1/2" Ice	0.00 0.00	0.55 0.67	0.00 0.01
(2) diplexer	A	From Leg	3.00 0.00	0.0000	158.00	No Ice 1/2" Ice	1.40 1.56	0.55 0.67	0.00 0.01
(2) diplexer	B	From Leg	3.00 0.00	0.0000	158.00	No Ice 1/2" Ice	1.40 1.56	0.55 0.67	0.00 0.01
(2) diplexer	C	From Leg	3.00 0.00	0.0000	158.00	No Ice 1/2" Ice	1.40 1.56	0.55 0.67	0.00 0.01
Pipe Mount	C	From Leg	0.00 0.00	0.0000	123.00	No Ice 1/2" Ice	0.00 0.00	2.60 3.01	0.07 0.09
Pipe Mount	C	From Leg	0.00 0.00	0.0000	112.00	No Ice 1/2" Ice	0.00 0.00	2.60 3.01	0.07 0.09
Pipe Mount	C	From Leg	0.00 0.00	0.0000	70.00	No Ice 1/2" Ice	0.00 0.00	2.60 3.01	0.07 0.09
10' Mount Extension	B	From Leg	0.00 0.00	0.0000	188.00	No Ice 1/2" Ice	3.00 4.03	3.00 4.03	0.02 0.04
(3) Pipe Mount	B	From Leg	0.00 0.00	0.0000	188.00	No Ice 1/2" Ice	1.30 1.57	1.30 1.57	0.03 0.05

Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral / Vert	Azimuth Adjustment	3 dB Beam Width	Elevation	Outside Diameter		Aperture Area	Weight
				ft	°	°	ft	ft		ft^2	K
HP8-59E	C	Paraboloid w/Shroud (HP)	From Leg	0.00 0.00 0.00	0.0000		123.00	8.00	No Ice 1/2" Ice	50.26 51.29	0.25 0.51
HP8-59E	C	Paraboloid w/Shroud (HP)	From Leg	0.00 0.00 0.00	0.0000		112.00	8.00	No Ice 1/2" Ice	50.26 51.29	0.25 0.51
HP10-59E	B	Paraboloid w/Shroud (HP)	From Leg	0.00 0.00 0.00	0.0000		70.00	10.00	No Ice 1/2" Ice	78.54 79.81	0.32 0.73

Compression Checks

Leg Design Data (Compression)

Section No.	Elevation	Size	L	L_u	Kl/r	F_a	A	Actual P	Allow. P_a	Ratio $\frac{P}{P_a}$
	ft		ft	ft		ksi	in^2	K	K	
T1	180 - 160	ROHN 2.5 STD	20.00	6.67	84.4 K=1.00	18.110	1.7040	-12.87	30.86	0.417 ✓
T2	160 - 140	ROHN 3 X-STR	20.04	6.68	70.5 K=1.00	20.840	3.0159	-36.82	62.85	0.586 ✓
T3	140 - 120	ROHN 4 X-STR	20.04	6.68	54.3 K=1.00	23.671	4.4074	-59.21	104.33	0.567 ✓
T4	120 - 100	ROHN 5 X-STR	20.04	10.02	65.4 K=1.00	21.776	6.1120	-78.23	133.10	0.588 ✓
T5	100 - 80	ROHN 5 X-STR	20.05	10.03	65.4 K=1.00	21.769	6.1120	-100.31	133.05	0.754 ✓
T6	80 - 60	ROHN 6 EHS	20.05	10.03	54.1 K=1.00	23.704	6.7133	-119.79	159.13	0.753 ✓
T7	60 - 40	ROHN 6 EH	20.05	10.03	54.8 K=1.00	23.583	8.4049	-140.29	198.22	0.708 ✓
T8	40 - 20	ROHN 6 EH	20.06	10.03	54.8 K=1.00	23.580	8.4049	-159.50	198.19	0.805 ✓
T9	20 - 0	HSS8.75x.375	20.05	10.03	40.5 K=1.00	25.766	9.2110	-168.71	237.33	0.711 ✓

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	180 - 160	ROHN 2 STD	7.92	7.70	117.3 K=1.00	10.850	1.0745	-4.97	11.66	0.426 ✓
T2	160 - 140	ROHN 2 STD	8.31	8.08	123.2 K=1.00	9.839	1.0745	-6.01	10.57	0.568 ✓
T3	140 - 120	ROHN 2 STD	9.21	8.94	136.3 K=1.00	8.039	1.0745	-5.85	8.64	0.677 ✓
T4	120 - 100	ROHN 2.5 STD	12.49	12.10	153.3 K=1.00	6.353	1.7040	-8.93	10.83	0.825 ✓
T5	100 - 80	ROHN 2.5 STD	13.30	12.95	164.0 K=1.00	5.555	1.7040	-7.74	9.47	0.817 ✓
T6	80 - 60	ROHN 2.5 STD	14.16	13.77	174.4 K=1.00	4.908	1.7040	-8.69	8.36	1.040 ✓
T7	60 - 40	ROHN 2.5 X-STR	15.06	14.69	190.8 K=1.00	4.102	2.2535	-8.72	9.25	0.943 ✓
T8	40 - 20	ROHN 3 STD	16.08	15.73	162.2 K=1.00	5.675	2.2285	-8.13	12.65	0.643 ✓
T9	20 - 0	ROHN 3 STD	24.33	12.17	125.5 K=1.00	9.486	2.2285	-12.58	21.14	0.595 ✓

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 $\frac{P}{P_a}$
T1	180 - 160	ROHN 1.5 STD	8.53	4.14	79.9 K=1.00	19.037	0.7995	-2.64	15.22	0.173 ✓
T2	160 - 140	ROHN 1.5 STD	9.93	4.82	92.9 K=1.00	16.309	0.7995	-3.48	13.04	0.267 ✓
T3	140 - 120	ROHN 2 STD	12.01	5.82	88.7 K=1.00	17.212	1.0745	-3.97	18.50	0.214 ✓
T4	120 - 100	ROHN 2 STD	13.83	6.68	101.9 K=1.00	14.261	1.0745	-5.21	15.32	0.340 ✓
T5	100 - 80	ROHN 2 STD	16.24	7.89	120.2 K=1.00	10.332	1.0745	-5.02	11.10	0.452 ✓
T6	80 - 60	ROHN 2.5 STD	18.78	9.11	115.4 K=1.00	11.210	1.7040	-6.15	19.10	0.322 ✓
T7	60 - 40	ROHN 2.5 STD	21.28	10.36	131.3 K=1.00	8.669	1.7040	-6.29	14.77	0.426 ✓
T8	40 - 20	ROHN 2.5 STD	23.84	11.65	147.5 K=1.00	6.863	1.7040	-6.07	11.69	0.519 ✓
T9	20 - 0	ROHN 3 STD	25.18	12.31	127.0 K=1.00	9.262	2.2285	-6.78	20.64	0.329 ✓

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 $\frac{P}{P_a}$
T1	180 - 160	ROHN 1.5 STD	8.50	4.13	79.6 K=1.00	19.091	0.7995	-1.89	15.26	0.124 ✔

Redundant Horizontal (1) 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 $\frac{P}{P_a}$
T9	20 - 0	ROHN 1.5 STD	6.29	5.93	114.3 K=1.00	11.433	0.7995	-0.76	9.14	0.084 ✔

Redundant Diagonal (1) 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 $\frac{P}{P_a}$
T9	20 - 0	ROHN 1.5 STD	11.50	10.94	210.9 K=1.00	3.357	0.7995	-0.48	2.68	0.178 ✔

Redundant Hip (1) 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 $\frac{P}{P_a}$
T9	20 - 0	ROHN 1.5 STD	6.29	6.29	121.3 K=1.00	10.147	0.7995	-0.04	8.11	0.004 ✔

Redundant Hip 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 $\frac{P}{P_a}$
T9	20 - 0	ROHN 2.5 STD	15.07	15.07	190.9 K=1.00	4.096	1.7040	-0.04	6.98	0.006* ✔

* DL controls

Inner Bracing 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	180 - 160	L2x2x1/8	4.26	4.26	128.5 K=1.00	9.044	0.4844	-0.00	4.38	0.001 ✓
T2	160 - 140	L2x2x1/8	4.97	4.97	149.9 K=1.00	6.648	0.4844	-0.00	3.22	0.001 ✓
T3	140 - 120	L2x2x1/8	6.01	6.01	181.3 K=1.00	4.542	0.4844	-0.01	2.20	0.003 ✓
T4	120 - 100	L2x2x1/8	6.92	6.92	208.8 K=1.00	3.426	0.4844	-0.01	1.66	0.004 ✓
T5	100 - 80	L2 1/2x2 1/2x3/16	8.12	8.12	196.8 K=1.00	3.856	0.9020	-0.01	3.48	0.002 ✓
T6	80 - 60	L3x3x3/16	9.39	9.39	189.0 K=1.00	4.179	1.0900	-0.01	4.56	0.002 ✓
T7	60 - 40	L3 1/2x3 1/2x1/4	10.64	10.64	184.0 K=1.00	4.413	1.6900	-0.01	7.46	0.001 ✓
T8	40 - 20	L3 1/2x3 1/2x1/4	11.92	11.92	206.1 K=1.00	3.514	1.6900	-0.01	5.94	0.001* ✓
T9	20 - 0	ROHN 3 STD	12.59	12.59	129.8 K=1.00	8.860	2.2285	-0.01	19.74	0.001 ✓

* DL controls

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 $\frac{P}{P_a}$
T1	180 - 160	ROHN 2.5 STD	20.00	6.67	84.4	30.000	1.7040	10.45	51.12	0.204 ✓
T2	160 - 140	ROHN 3 X-STR	20.04	6.68	70.5	30.000	3.0159	31.85	90.48	0.352 ✓
T3	140 - 120	ROHN 4 X-STR	20.04	6.68	54.3	30.000	4.4074	52.32	132.22	0.396 ✓
T4	120 - 100	ROHN 5 X-STR	20.04	10.02	65.4	30.000	6.1120	68.81	183.36	0.375 ✓
T5	100 - 80	ROHN 5 X-STR	20.05	10.03	65.4	30.000	6.1120	89.55	183.36	0.488 ✓
T6	80 - 60	ROHN 6 EHS	20.05	10.03	54.1	30.000	6.7133	106.95	201.40	0.531 ✓
T7	60 - 40	ROHN 6 EH	20.05	10.03	54.8	30.000	8.4049	124.68	252.15	0.494 ✓
T8	40 - 20	ROHN 6 EH	20.06	10.03	54.8	30.000	8.4049	140.45	252.15	0.557 ✓
T9	20 - 0	HSS8.75x.375	20.05	10.03	40.5	30.000	9.2110	146.09	276.33	0.529 ✓

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 $\frac{P}{P_a}$
T1	180 - 160	ROHN 2 STD	7.92	7.70	117.3	30.000	1.0745	4.90	32.24	0.152 ✓
T2	160 - 140	ROHN 2 STD	8.31	8.08	123.2	30.000	1.0745	5.94	32.24	0.184 ✓
T3	140 - 120	ROHN 2 STD	9.21	8.94	136.3	30.000	1.0745	5.75	32.24	0.178 ✓
T4	120 - 100	ROHN 2.5 STD	12.49	12.10	153.3	30.000	1.7040	8.78	51.12	0.172 ✓
T5	100 - 80	ROHN 2.5 STD	12.89	12.53	158.8	30.000	1.7040	7.78	51.12	0.152 ✓
T6	80 - 60	ROHN 2.5 STD	14.16	13.77	174.4	30.000	1.7040	8.43	51.12	0.165 ✓
T7	60 - 40	ROHN 2.5 X-STR	14.60	14.24	184.9	30.000	2.2535	8.45	67.61	0.125 ✓
T8	40 - 20	ROHN 3 STD	15.57	15.21	156.9	30.000	2.2285	7.72	66.85	0.116 ✓
T9	20 - 0	ROHN 3 STD	24.33	12.17	125.5	30.000	2.2285	12.09	66.85	0.181 ✓

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 $\frac{P}{P_a}$
T1	180 - 160	ROHN 1.5 STD	8.53	4.14	79.9	30.000	0.7995	2.67	23.98	0.111 ✓
T2	160 - 140	ROHN 1.5 STD	9.24	4.47	86.2	30.000	0.7995	3.55	23.98	0.148 ✓
T3	140 - 120	ROHN 2 STD	12.01	5.82	88.7	30.000	1.0745	4.04	32.24	0.125 ✓
T4	120 - 100	ROHN 2 STD	13.83	6.68	101.9	30.000	1.0745	5.36	32.24	0.166 ✓
T5	100 - 80	ROHN 2 STD	16.24	7.89	120.2	30.000	1.0745	5.00	32.24	0.155 ✓
T6	80 - 60	ROHN 2.5 STD	18.78	9.11	115.4	30.000	1.7040	6.19	51.12	0.121 ✓
T7	60 - 40	ROHN 2.5 STD	21.28	10.36	131.3	30.000	1.7040	6.39	51.12	0.125 ✓
T8	40 - 20	ROHN 2.5 STD	23.84	11.65	147.5	30.000	1.7040	6.24	51.12	0.122 ✓
T9	20 - 0	ROHN 3 STD	25.18	12.31	127.0	30.000	2.2285	6.74	66.85	0.101 ✓

Top Girt Design Data (Tension)

Section No.	Elevation	Size	L	L_u	Kl/r	F_a	A	Actual P	Allow. P_a	Ratio $\frac{P}{P_a}$
	ft		ft	ft		ksi	in^2	K	K	
T1	180 - 160	ROHN 1.5 STD	8.50	4.13	79.6	30.000	0.7995	1.89	23.98	0.079 ✓

Redundant Horizontal (1) Design Data (Tension)

Section No.	Elevation	Size	L	L_u	Kl/r	F_a	A	Actual P	Allow. P_a	Ratio $\frac{P}{P_a}$
	ft		ft	ft		ksi	in^2	K	K	
T9	20 - 0	ROHN 1.5 STD	6.29	5.93	114.3	30.000	0.7995	0.60	23.98	0.025 ✓

Redundant Diagonal (1) Design Data (Tension)

Section No.	Elevation	Size	L	L_u	Kl/r	F_a	A	Actual P	Allow. P_a	Ratio $\frac{P}{P_a}$
	ft		ft	ft		ksi	in^2	K	K	
T9	20 - 0	ROHN 1.5 STD	11.50	10.94	210.9	30.000	0.7995	0.87	23.98	0.036 ✓

Redundant Hip Diagonal Design Data (Tension)

Section No.	Elevation	Size	L	L_u	Kl/r	F_a	A	Actual P	Allow. P_a	Ratio $\frac{P}{P_a}$
	ft		ft	ft		ksi	in^2	K	K	
T9	20 - 0	ROHN 2.5 STD	15.07	15.07	190.9	30.000	1.7040	0.07	51.12	0.001 ✓

Inner Bracing Design Data (Tension)

Section No.	Elevation	Size	L	L_u	Kl/r	F_a	A	Actual P	Allow. P_a	Ratio $\frac{P}{P_a}$
	ft		ft	ft		ksi	in^2	K	K	
T1	180 - 160	L2x2x1/8	4.26	4.26	81.6	21.600	0.4844	0.00	10.46	0.000 ✓
T2	160 - 140	L2x2x1/8	4.27	4.27	81.8	21.600	0.4844	0.00	10.46	0.000 ✓
T3	140 - 120	L2x2x1/8	5.31	5.31	101.8	21.600	0.4844	0.00	10.46	0.000 ✓
T4	120 - 100	L2x2x1/8	6.35	6.35	121.8	21.600	0.4844	0.00	10.46	0.000

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 $\frac{P}{P_a}$
T5	100 - 80	L2 1/2x2 1/2x3/16	7.48	7.48	115.4	21.600	0.9020	0.00	19.48	0.000

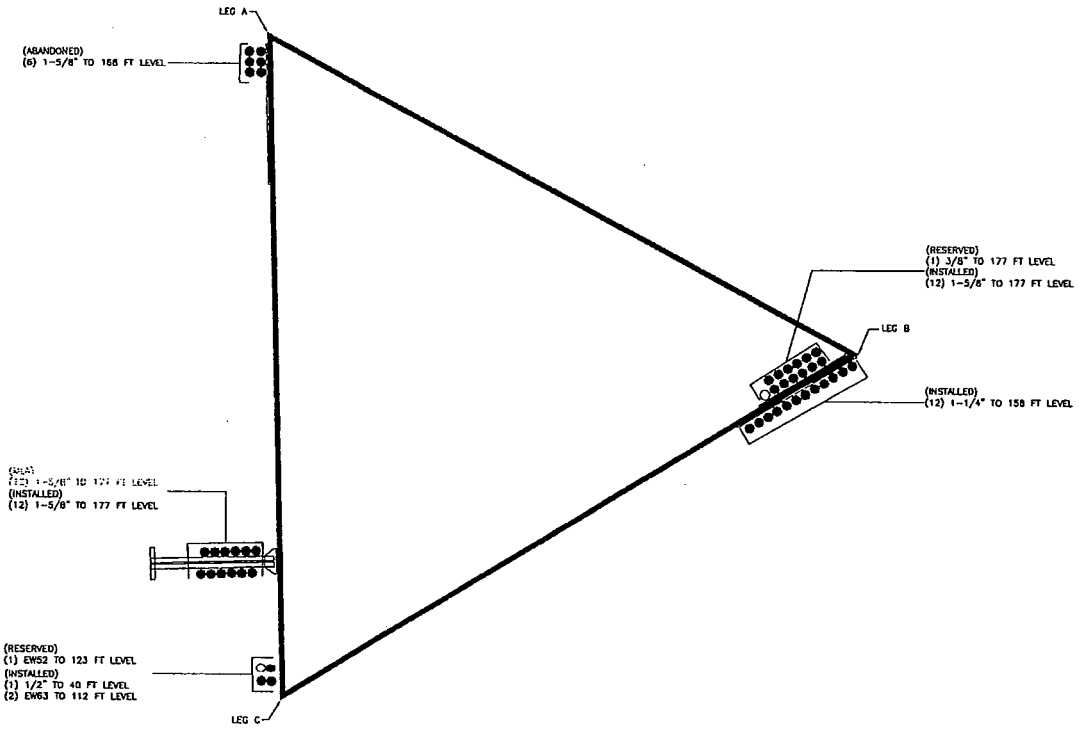
Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$SF*P_{allow}$ K	% Capacity	Pass Fail
T1	180 - 160	Leg	ROHN 2.5 STD	2	-12.87	41.14	31.3	Pass
		Diagonal	ROHN 2 STD	11	-4.97	15.54	32.0	Pass
		Horizontal	ROHN 1.5 STD	10	-2.64	20.29	13.0	Pass
							15.5 (b)	
		Top Girt	ROHN 1.5 STD	5	-1.89	20.34	9.3	Pass
		Inner Bracing	L2x2x1/8	16	-0.00	5.82	0.2	Pass
T2	160 - 140	Leg	ROHN 3 X-STR	41	-36.82	83.78	43.9	Pass
		Diagonal	ROHN 2 STD	56	-6.01	14.09	42.6	Pass
		Horizontal	ROHN 1.5 STD	46	-3.48	17.38	20.0	Pass
							20.7 (b)	
		Inner Bracing	L2x2x1/8	52	-0.00	4.29	0.2	Pass
T3	140 - 120	Leg	ROHN 4 X-STR	80	-59.21	139.07	42.6	Pass
		Diagonal	ROHN 2 STD	84	-5.85	11.51	50.8	Pass
		Horizontal	ROHN 2 STD	82	-3.97	24.65	16.1	Pass
							23.5 (b)	
		Inner Bracing	L2x2x1/8	93	-0.01	2.93	0.2	Pass
T4	120 - 100	Leg	ROHN 5 X-STR	118	-78.23	177.42	44.1	Pass
		Diagonal	ROHN 2.5 STD	123	-8.93	14.43	61.9	Pass
		Horizontal	ROHN 2 STD	121	-5.21	20.43	25.5	Pass
							31.2 (b)	
		Inner Bracing	L2x2x1/8	132	-0.01	2.21	0.3	Pass
T5	100 - 80	Leg	ROHN 5 X-STR	145	-100.31	177.36	56.6	Pass
		Diagonal	ROHN 2.5 STD	150	-7.74	12.62	61.3	Pass
		Horizontal	ROHN 2 STD	148	-5.02	14.80	33.9	Pass
		Inner Bracing	L2 1/2x2 1/2x3/16	159	-0.01	4.64	0.2	Pass
T6	80 - 60	Leg	ROHN 6 EHS	172	-119.79	212.12	56.5	Pass
		Diagonal	ROHN 2.5 STD	177	-8.69	11.15	78.0	Pass
		Horizontal	ROHN 2.5 STD	175	-6.15	25.46	24.2	Pass
							36.0 (b)	
		Inner Bracing	L3x3x3/16	185	-0.01	6.07	0.3	Pass
T7	60 - 40	Leg	ROHN 6 EH	199	-140.29	264.22	53.1	Pass
		Diagonal	ROHN 2.5 X-STR	204	-8.72	12.32	70.8	Pass
		Horizontal	ROHN 2.5 STD	202	-6.29	19.69	31.9	Pass
							37.2 (b)	
		Inner Bracing	L3 1/2x3 1/2x1/4	213	-0.01	9.94	0.3	Pass
T8	40 - 20	Leg	ROHN 6 EH	226	-159.50	264.18	60.4	Pass
		Diagonal	ROHN 3 STD	230	-8.13	16.86	48.2	Pass
		Horizontal	ROHN 2.5 STD	229	-6.07	15.59	38.9	Pass
		Inner Bracing	L3 1/2x3 1/2x1/4	238	-0.01	5.94	0.4	Pass
T9	20 - 0	Leg	HSS8.75x.375	253	-168.71	316.36	53.3	Pass
		Diagonal	ROHN 3 STD	260	-12.58	28.18	44.6	Pass
							48.8 (b)	
		Horizontal	ROHN 3 STD	256	-6.78	27.51	24.6	Pass
							39.5 (b)	
		Redund Horz 1 Bracing	ROHN 1.5 STD	277	-0.76	12.18	6.3	Pass
		Redund Diag 1 Bracing	ROHN 1.5 STD	266	-0.48	3.58	13.3	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$SF*P_{allow}$ K	% Capacity	Pass Fail
		Redund Hip 1 Bracing	ROHN 1.5 STD	281	-0.04	10.81	0.3	Pass
		Redund Hip Diagonal Bracing	ROHN 2.5 STD	280	-0.04	6.98	0.6	Pass
		Inner Bracing	ROHN 3 STD	284	-0.01	19.74	0.6	Pass
							Summary	
						Leg (T8)	60.4	Pass
						Diagonal (T6)	78.0	Pass
						Horizontal (T9)	39.5	Pass
						Top Girt (T1)	9.3	Pass
						Redund Horz 1 Bracing (T9)	6.3	Pass
						Redund Diag 1 Bracing (T9)	13.3	Pass
						Redund Hip 1 Bracing (T9)	0.3	Pass
						Redund Hip Diagonal Bracing (T9)	0.6	Pass
						Inner Bracing (T9)	0.6	Pass
						Bolt Checks	48.8	Pass
						RATING =	**78.0**	**Pass**

APENDIX B

BASE LEVEL DRAWING



Base Level Drawing