Alex Murshteyn, Site Acquisition Consultant
c/o Cellco Partnership d/b/a Verizon Wireless
Centerline Communications, LLC
750 West Center Street, Floor 3
West Bridgewater, MA 02379
Mobile: (508) 821-0159
AMurshteyn@centerlinecommunications.com

May 4, 2020

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

RE: Notice of Exempt Modification // Site: Westport 2 CT (ATC: 310968)
180(A) Bayberry Lane, Westport, CT 06880
N 41.17166 // W 73.3286

Dear Ms. Bachman:

Cellco Partnership d/b/a Verizon Wireless currently maintains 12 antennas at the 110-foot mount on the existing 140-foot monopole tower, located at 180 (aka 180A) Bayberry Lane, Westport, CT. The tower is owned by American Tower. The property is owned by the Town of Westport. The Council approved Verizon Wireless use of the existing tower in 1998. Verizon Wireless now intends to replace 3 the existing antennas with 3 new ones, reinforce mounts, and update existing equipment as part of its CBRS (3500 MHz) upgrade. Additionally, Verizon Wireless will replace all of its remaining remote radio head units (RRUs) with 6 new RRUs and 3 new diplexers, replace 1 over-voltage protector (OVP), and remove and upgrade certain cabling; altogether updating leased equipment rights, as reflected by the final configuration outlined in the structural analysis and proposed hereby.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies §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 Jim Marpe, First Selectman for the Town of Westport, which is also the owner of the property, its Planning and Zoning Director Mary Young and American Tower, the tower owner.

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2). Enclosed to accommodate this filing are construction drawings by dated March 24, 2020, structural analysis dated April 29, 2020 and antenna mount analysis dated March 9 and stamped March 10, 2020, as well as radio frequency (RF) analysis table showing worst-case RF emission calculation by Verizon Wireless RF Design Engineering.

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

2. The proposed modifications will not require the extension of the site boundary.

3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.

4. The operation of the new antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.

5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.

6. The existing structure and its foundation can support the proposed loading, as shown in the attached structural analysis dated and stamped April 29 by A.T. Engineering Service, PLLC, and antenna mount analysis dated March 9 and stamped March 10, 2020 by Trylon.

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

Sincerely,

Alex Murshteyn, Site Acquisition Consultant
c/o Cellco Partnership d/b/a Verizon Wireless
Centerline Communications, LLC
750 West Center Street, Floor 3
West Bridgewater, MA 02379
Mobile: (508) 821-0159
AMurshteyn@centerlinecommunications.com

Attachments

cc: Jim Marpe, First Selectman, Town of Westport - as elected official & ground owner
Mary Young, Director of Planning and Zoning, Town of Westport - as P&Z official
American Tower Corporation - as tower owner

Filing Guides
Meetings & Minutes
Public Participation
Audio Link to New Britain Hearing Rooms
Programs & Services
Telecommunications Database
Maps
Publications
Other Resources
Statutes & Regulations
Frequently Asked Questions

Melanie Bachman,
Executive Director

Decisions

Printable Version

DOCKET NO. 278 – SpectraSite Communications, Inc. application for an amendment to an existing Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a telecommunications facility in Westport, Connecticut.	} } }	Connecticut Siting Council May 19, 2004

Decision and Order

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, operation, and maintenance of a telecommunications facility including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate either alone or cumulatively with other effects when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application and therefore directs that an amended Certificate of Environmental Compatibility and Public Need, as provided by General Statutes **§** 16-50k, be issued to SpectraSite Communications, Inc. for the construction, maintenance and operation of a wireless telecommunications facility at 180-182 Bayberry Lane in Westport, Connecticut.

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

1. The tower shall be constructed no taller than 140 feet above ground level to provide the proposed telecommunications services to both public and private entities. The overall height of the tower, taking into consideration all appurtenances attached thereto, shall not exceed a height of 150 feet above ground level and shall be designed with a yield point to reduce the setback radius to approximately 41 feet.

2. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be served on all parties and intervenors, as listed in the service list, and submitted to and approved by the Council prior to the commencement of facility construction and shall include:

    a. a final site plan(s) of site development to include specifications for the tower, tower foundation, antennas, equipment building, access road, utility line, and landscaping; and

        b) construction plans for site clearing, water drainage, and erosion and sedimentation control consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.

1. The Certificate Holder shall, prior to the commencement of operation, provide the Council worst-case modeling of electromagnetic radio frequency power density of all proposed entities' antennas at the closest point of uncontrolled access to the tower base,
consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin No. 65, August 1997. The Certificate Holder shall ensure a recalculated report of electromagnetic radio frequency power density is submitted to the Council if and when circumstances in operation cause a change in power density above the levels calculated and provided pursuant to this Decision and Order.

2. Upon the establishment of any new State or federal radio frequency standards applicable to frequencies of this facility, the facility granted herein shall be brought into compliance with such standards.

3. The Certificate Holder shall permit public or private entities to share space on the proposed tower for fair consideration, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing.

4. The Certificate Holder shall provide reasonable space on the tower for no compensation for any municipal antennas, provided such antennas are compatible with the structural integrity of the tower.

5. If the facility does not initially provide wireless services within one year of completion of construction or ceases to provide wireless services for a period of one year, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made.

6. Any antenna that becomes obsolete and ceases to function shall be removed within 60 days after such antennas become obsolete and cease to function.

7. Unless otherwise approved by the Council, this Decision and Order shall be void if the facility authorized herein is not operational within one year of the effective date of this Decision and Order or within one year after all appeals to this Decision and Order have been resolved. Any request for extensions of the period shall be filed with the Council not later than sixty days prior to expiration date of the Certificate and shall be served on all parties and intervenors, as listed in the service list. Any proposed modifications to this Decision and Order shall likewise be so served.

Pursuant to General Statutes **§** 16-50p, we hereby direct that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed below, and notice of issuance shall be published in the Westport News and the Norwalk Hour.

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

The parties and intervenors to this proceeding are:

Applicant	**Its Representative**
SpectraSite Communications, Inc.	Julie Donaldson Kohler, Esq. Hurwitz & Sagarin, LLC 147 N. Broad Street Milford, CT 06460 (203) 877-8000
Party	**Its Representative**
Town of Westport	Eugene E. Cederbaum, Esq. Town of Westport 27 Imperial Avenue Westport, CT 06880 (203) 227-9545
Intervenor	**Its Representative**
Sprint Spectrum L.P. d/b/a Sprint PCS	Thomas J. Regan Brown, Rudnick, Berlack, Israels, LLP City Place I 185 Asylum Avenue Hartford, CT 06103-3402 (860) 509-6500
Intervenor	**Its Representative**
AT&T Wireless, PCS, LLC	Christopher B. Fisher, Esq. Cuddy & Feder LLP 90 Maple Avenue White Plains, NY 10601
Intervenor	**Its Representative**
Omnipoint Facilities Network 2 L.L.C. ("T-Mobile")	Stephen J. Humes LeBoeuf, Lamb, Greene & MacRae, LLP Goodwin Square 225 Asylum Street Hartford, CT 06103

Content Last Modified on 5/20/2004 10:21:03 AM

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Structural Analysis Report

Structure	:	**140 ft Monopole**
ATC Site Name	:	**WSPT-WESTPORT REBUILD CT, CT**
ATC Asset Number	:	**310968**
Engineering Number	:	**13001211_C3_03**
Proposed Carrier	:	**VERIZON WIRELESS**
Carrier Site Name	:	**WESTPORT 2 CT**
Carrier Site Number	:	**468226**
Site Location	:	**180A Bayberry Lane** **Westport, CT 06880-2844** **41.171700,-73.328500**
County	:	**Fairfield**
Date	:	**April 29, 2020**
Max Usage	:	**60%**
Result	:	**Pass**

Prepared By:
Hussam Al Tahan, E.I.
Structural Engineer I

Hussam Al Tahan

Reviewed By:

Authorized by "EOR"
29 Apr 2020 10:25:02 cosign

COA: PEC.0001553

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Table of Contents

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 140 ft monopole to reflect the change in loading by VERIZON WIRELESS.

Supporting Documents

Tower Drawings	PJF, Penn Summit Job #29204-0171, dated July 1, 2004
Foundation Drawing	PJF, Penn Summit Job #29204-0171, dated June 10, 2004
Geotechnical Report	GeoTechnologies Project #1-02-1190-EA, dated September 23, 2002

Analysis

The tower was analyzed using American Tower Corporation's tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

Basic Wind Speed:	93 mph (3-Second Gust, V_{asd}) / 120 mph (3-Second Gust, V_{ult})
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 3/4" radial ice concurrent
Code:	ANSI/TIA-222-G / 2015 IBC / 2018 Connecticut State Building Code
Structure Class:	II
Exposure Category:	B
Topographic Category:	1
Crest Height:	0 ft
Spectral Response:	Ss = 0.22, S_1 = 0.07
Site Class:	D - Stiff Soil

Conclusion

Based on the analysis results, the structure meets the requirements per the applicable codes listed above. The tower and foundation can support the equipment as described in this report.

If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

Existing and Reserved Equipment

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
141.0	1	Generic 12' Dipole	Platform with Handrails	(7) 7/8" Coax (3) 1 5/8" Coax (4) 3/8" Coax	OTHER
138.0	2	Generic 6' Omni			
	4	Generic 12' Omni			
	1	Generic 6' FM antenna			
	1	Generic 4' HP Dish			
130.0	3	Alcatel-Lucent 800 MHz 2X50W RRH w/ Filter	Platform with Handrails	(4) 1 1/4" Hybriflex Cable	SPRINT NEXTEL
	3	RFS APXVSPP18-C-A20			
	3	Alcatel-Lucent 4x40W RRH (91 lb)			
	3	Alcatel-Lucent TD-RRH8x20-25 w/ Solar Shield			
	3	RFS APXV9TM14-ALU-I20*			
121.0	1	Andrew DB586	Low Profile Platform	(2) 1 1/4" Coax (1) 1/2" Coax	EVERSOURCE ENERGY
116.0	2	Generic 6' Omni		(2) 1/2" Coax	OTHER
110.0	3	Samsung B2/B66A RRH-BR049	Low Profile Platform	(6) 1 5/8" Coax	VERIZON WIRELESS
	3	Commscope CBC78T-DS-43-2X			
	3	Samsung B5/B13 RRH-BR04C			
	6	Commscope JAHH-65B-R3B			
	3	Antel BXA-70080/6CF__			
100.0	12	Powerwave Allgon 7020.00 Dual Band RET	Low Profile Platform	(1) 0.28" (7.1mm) Fiber (1) 0.39" (10mm) Fiber Trunk (2) 0.74" (18.7mm) 8 AWG 7 (2) 0.78" (19.7mm) 8 AWG 6 (12) 1 5/8" Coax (1) 3" conduit (1) 3/8" (0.38"-9.5mm) RET Control Cable	AT&T MOBILITY
	12	Powerwave Allgon LGP21401			
	1	Raycap DC6-48-60-18-8F ("Squid")			
	3	Ericsson RRUS-11 (50 lbs.)			
	3	Ericsson RRUS 32 B2			
	6	Powerwave Allgon 7770.00			
	3	CCI HPA-65R-BUU-H6			
87.0	3	RFS ATMAA1412D-1A20	Low Profile Platform	(2) 1 1/4" (1.25"-31.8mm) Fiber (1) 1 5/8" (1.63"-41.3mm) Fiber (12) 1 5/8" Coax	T-MOBILE
	3	Ericsson Radio 4449 B12,B71			
	3	Ericsson AIR32 B66Aa/B2a			
	3	Ericsson AIR 21, 1.3M, B4A B2P			
	3	RFS APXVAARR24_43-U-NA20			

Equipment to be Removed

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
110.0	3	Samsung B5/B13 RRH-BR04C	-	(1) 1 5/8" Hybriflex	VERIZON WIRELESS
	1	RFS DB-T1-6Z-8AB-0Z			
	3	Amphenol Antel BXA-171063-8BF-EDIN-X			

Proposed Equipment

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
110.0	3	Samsung Outdoor CBRS 20W RRH	Low Profile Platform w/ Site Pro HRK12	(1) 2.02 (51.2mm) Hybrid	VERIZON WIRELESS
	1	RFS DB-C1-12C-24AB-0Z			
	3	Samsung Outdoor LAA 1W RRH –Clip-on Antenna			

[1] Contracted elevations are shown for appurtenances within contracted installation tolerances. Appurtenances outside of contract limits are shown at installed elevations.

Install proposed coax inside the pole shaft.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	55%	Pass
Shaft	60%	Pass
Base Plate	39%	Pass

Foundations

Reaction Component	Original Design Reactions	Factored Design Reactions*	Analysis Reactions	% of Design
Moment (Kips-Ft)	3,550.0	4,792.5	2,506.2	52%
Shear (Kips)	35.0	47.3	24.2	51%
* The design reactions are factored by 1.35 per ANSI/TIA-222-G, Sec. 15.5.1				

The structure base reactions resulting from this analysis are acceptable when compared to those shown on the original structure drawings, therefore no modification or reinforcement of the foundation will be required.

Deflection and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Sway (Rotation) (°)
138.0	Generic 4' HP Dish	Other	1.326	1.014
110.0	Samsung Outdoor LAA 1W RRH –Clip-on Antenna	VERIZON WIRELESS	0.852	0.877
	Samsung Outdoor CBRS 20W RRH			
	RFS DB-C1-12C-24AB-0Z			

***Deflection and Sway was evaluated considering a design wind speed of 60 mph (3-Second Gust) per ANSI/TIA-222-G**

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Standard Conditions

All engineering services performed by A.T. Engineering Service, PLLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

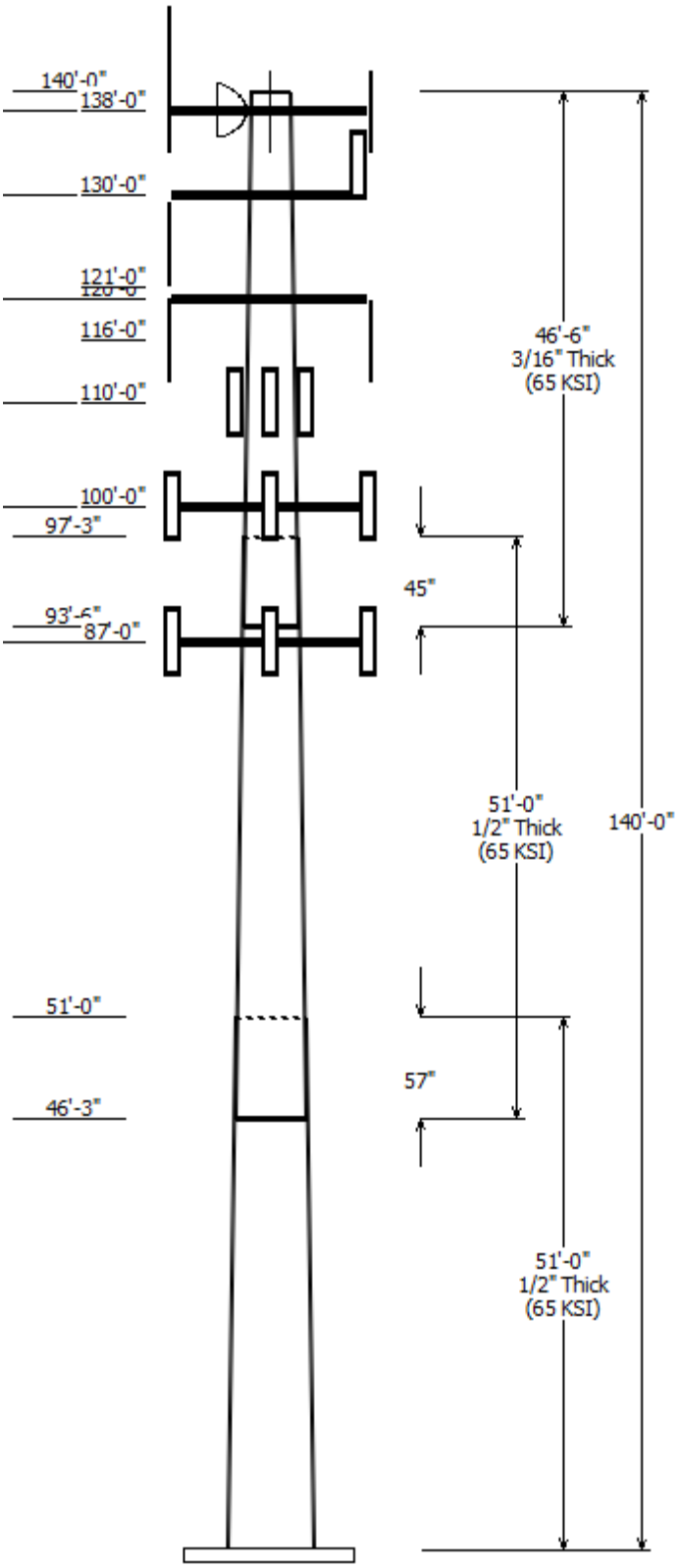
- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

It is the responsibility of the client to ensure that the information provided to A.T. Engineering Service, PLLC and used in the performance of our engineering services is correct and complete.

All assets of American Tower Corporation, its affiliates and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with the drawings and specifications.

Unless explicitly agreed by both the client and A.T. Engineering Service, PLLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. A.T. Engineering Service, PLLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.



Job Information

Client :	VERIZON WIRELESS
Pole :	310968
Code:	ANSI/TIA-222-G
Location :	WSPT-WESTPORT REBUILD CT, CT
Description :	140 ft Summit Monopole
Struct Class :	II
Shape :	18 Sides
Exposure :	B
Height :	140.00 (ft)
Topo :	1
Base Elev (ft):	0.00
Taper:	0.200036 (in/ft)

Sections Properties

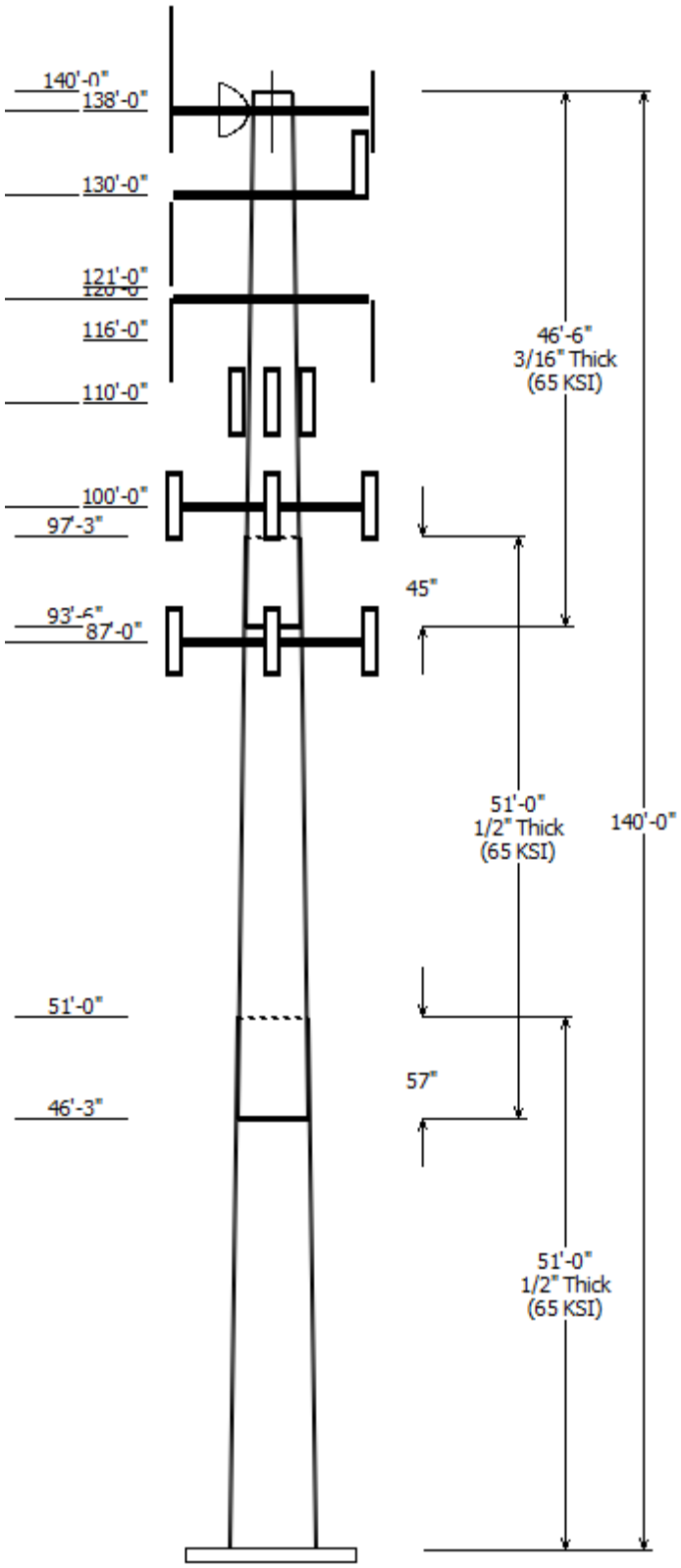
Shaft Section	Length (ft)	Diameter (in) Accross Flats Top	Bottom	Thick (in)	Joint Type	Overlap Length (in)	Shape	Steel Grade (ksi)
1	51.000	36.92	47.13	0.500		0.000	18 Sides	65
2	51.000	28.67	38.87	0.500	Slip Joint	57.000	18 Sides	65
3	46.500	20.50	29.80	0.188	Slip Joint	45.000	18 Sides	65

Discrete Appurtenance

Attach Elev (ft)	Force Elev (ft)	Qty	Description
140.000	141.000	1	Generic 12' Dipole
138.000	138.000	1	Flat Platform w/ Handrails
138.000	138.000	1	Generic 4' HP Dish
138.000	138.000	1	Generic 6' FM antenna
138.000	138.000	4	Generic 12' Omni
138.000	138.000	2	Generic 6' Omni
130.000	130.000	1	Flat Platform w/ Handrails
130.000	131.000	3	RFS APXVSPP18-C-A20
130.000	131.000	3	RFS APXV9TM14-ALU-I20*
130.000	131.000	3	Alcatel-Lucent TD-RRH8x20-25
130.000	131.000	3	Alcatel-Lucent 4x40W RRH (91 l
130.000	131.000	3	Alcatel-Lucent 800 MHz 2X50W
121.000	123.000	1	Andrew DB586
120.000	120.000	1	Flat Low Profile Platform
116.000	116.000	2	Generic 6' Omni
110.000	110.000	3	Samsung Outdoor LAA 1W
110.000	110.000	6	Commscope JAHH-65B-R3B
110.000	110.000	1	RFS DB-C1-12C-24AB-0Z
110.000	110.000	3	Antel BXA-70080/6CF__
110.000	110.000	3	Samsung B5/B13 RRH-BR04C
110.000	110.000	3	Samsung B2/B66A RRH-BR049
110.000	110.000	3	Commscope CBC78T-DS-43-2X
110.000	110.000	1	Low Profile Platform w/ Site P
110.000	110.000	3	Samsung Outdoor CBRS 20W
100.000	100.000	1	Flat Low Profile Platform
100.000	100.000	3	CCI HPA-65R-BUU-H6
100.000	100.000	6	Powerwave Allgon 7770.00
100.000	100.000	3	Ericsson RRUS 32 B2
100.000	100.000	3	Ericsson RRUS-11 (50 lbs.)
100.000	100.000	1	Raycap DC6-48-60-18-8F
100.000	100.000	12	Powerwave Allgon LGP21401
100.000	100.000	12	Powerwave Allgon 7020.00
87.000	87.000	1	Flat Low Profile Platform
87.000	87.000	3	RFS APXVAARR24_43-U-NA20
87.000	87.000	3	Ericsson AIR32 B66Aa/B2a
87.000	87.000	3	Ericsson AIR 21, 1.3M, B4A B2P
87.000	87.000	3	Ericsson Radio 4449 B12,B71
87.000	87.000	3	RFS ATMAA1412D-1A20

Linear Appurtenance

Elev (ft) From	To	Description	Exposed To Wind
0.000	87.000	1 1/4" (1.25"-	No



0.000	87.000	1 5/8" (1.63"-	No
0.000	87.000	1 5/8" Coax	No
0.000	100.0	0.28" (7.1mm)	No
0.000	100.0	0.39" (10mm)	No
0.000	100.0	0.74" (18.7mm) 8	No
0.000	100.0	0.78" (19.7mm) 8	No
0.000	100.0	1 5/8" Coax	No
0.000	100.0	3" conduit	No
0.000	100.0	3/8" (0.38"-	No
0.000	110.0	1 5/8" Coax	No
0.000	110.0	2.02 (51.2mm)	No
0.000	116.0	1/2" Coax	No
0.000	121.0	1 1/4" Coax	No
0.000	121.0	1/2" Coax	No
0.000	130.0	1 1/4" Hybriflex	No
0.000	138.0	1 5/8" Coax	No
0.000	138.0	3/8" Coax	No
0.000	138.0	7/8" Coax	No
0.000	141.0	7/8" Coax	No

Load Cases

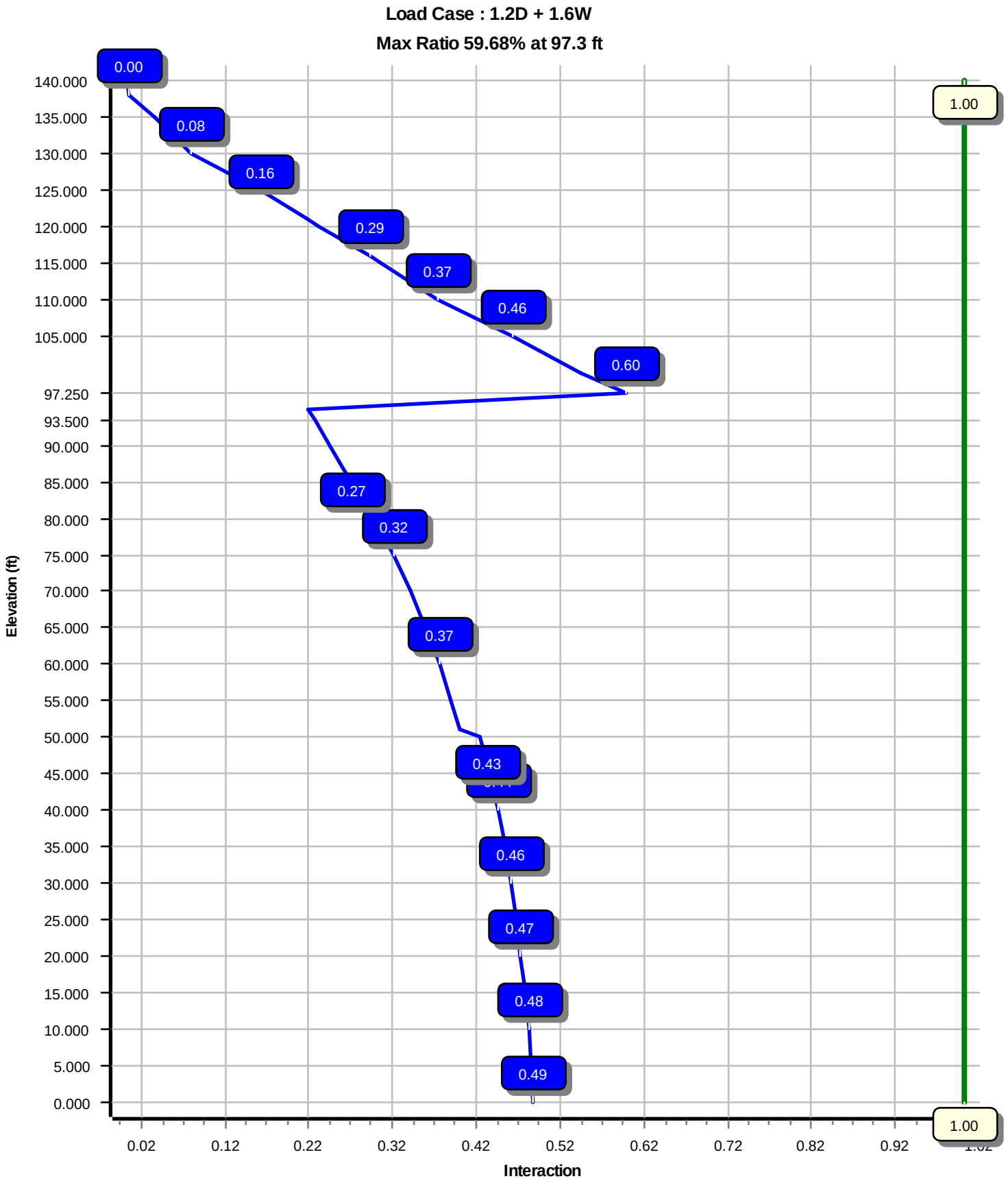
1.2D + 1.6W	93 mph with No Ice
0.9D + 1.6W	93 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 0.75 in Radial Ice
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Lateral Forces Method
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Modal Analysis Method
(0.9 - 0.2Sds) * DL + E	Seismic (Reduced DL) Equivalent Lateral
(0.9 - 0.2Sds) * DL + E	Seismic (Reduced DL) Equivalent Modal
1.0D + 1.0W	Serviceability 60 mph

Reactions

Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
1.2D + 1.6W	2506.22	24.20	51.80
0.9D + 1.6W	2476.51	24.18	38.84
1.2D + 1.0Di + 1.0Wi	784.42	7.32	91.77
(1.2 + 0.2Sds) * DL + E ELFM	150.98	1.37	52.00
(1.2 + 0.2Sds) * DL + E EMAM	191.64	1.78	52.00
(0.9 - 0.2Sds) * DL + E ELFM	148.71	1.37	35.55
(0.9 - 0.2Sds) * DL + E EMAM	188.46	1.78	35.55
1.0D + 1.0W	579.11	5.63	43.20

Dish Deflections

Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
1.0D + 1.0W	138.00	15.908	1.014


Load Case : 1.2D + 1.6W
Max Ratio 59.68% at 97.3 ft
0.00
0.08
0.16
0.29
0.37
0.46
0.60
0.27
0.32
0.37
0.43
0.46
0.47
0.48
0.49
1.00
1.00
140.000
135.000
130.000
125.000
120.000
115.000
110.000
105.000
97.250
93.500
90.000
85.000
80.000
75.000
70.000
65.000
60.000
55.000
50.000
45.000
40.000
35.000
30.000
25.000
20.000
15.000
10.000
5.000
0.000
Elevation (ft)
0.02
0.12
0.22
0.32
0.42
0.52
0.62
0.72
0.82
0.92
Interaction

Site Number: 310968 **Code: ANSI/TIA-222-G**

Site Name: WSPT-WESTPORT REBUILD CT, CT **Engineering Number:13001211_C3_03** **4/29/2020 4:56:45 PM**

Customer: VERIZON WIRELESS

Analysis Parameters

Location :	**Fairfield County, CT**	**Height (ft) :**	**140**
Code :	**ANSI/TIA-222-G**	**Base Diameter (in) :**	**47.13**
Shape :	**18 Sides**	**Top Diameter (in) :**	**20.50**
Pole Type :	**Taper**	**Taper (in/ft) :**	**0.200**
Pole Manfacturer :	**PennSummit Tub**	**Rotation (deg) :**	**0.00**

Ice & Wind Parameters

Structure Class:	**II**	**Design Wind Speed Without Ice:**	**93 mph**
Exposure Category:	**B**	**Design Wind Speed With Ice:**	**50 mph**
Topographic Category:	**1**	**Operational Wind Speed:**	**60 mph**
Crest Height:	**0 ft**	**Design Ice Thickness:**	**0.75 in**

Seismic Parameters

Analysis Method: **Equivalent Modal Analysis & Equivalent Lateral Force Methods**

Site Class: **D - Stiff Soil**

Period Based on Rayleigh Method (sec): **2.22**

T_L (sec):	**6**	**p:**	**1**	**C_s:**	**0.032**
S_s:	**0.222**	**S_1:**	**0.066**	**C_s Max:**	**0.032**
F_a:	**1.600**	**F_v:**	**2.400**	**C_s Min:**	**0.030**
S_{ds}:	**0.237**	**S_{d1}:**	**0.106**		

Load Cases

1.2D + 1.6W	**93 mph with No Ice**
0.9D + 1.6W	**93 mph with No Ice (Reduced DL)**
1.2D + 1.0Di + 1.0Wi	**50 mph with 0.75 in Radial Ice**
(1.2 + 0.2Sds) * DL + E ELFM	**Seismic Equivalent Lateral Forces Method**
(1.2 + 0.2Sds) * DL + E EMAM	**Seismic Equivalent Modal Analysis Method**
(0.9 - 0.2Sds) * DL + E ELFM	**Seismic (Reduced DL) Equivalent Lateral Forces Method**
(0.9 - 0.2Sds) * DL + E EMAM	**Seismic (Reduced DL) Equivalent Modal Analysis Method**
1.0D + 1.0W	**Serviceability 60 mph**

Shaft Section Properties

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Slip Joint Len (in)	Weight (lb)	Bottom Dia (in)	Bottom Elev (ft)	Bottom Area (in²)	Bottom Ix (in⁴)	Bottom W/t Ratio	Bottom D/t Ratio	Top Dia (in)	Top Elev (ft)	Top Area (in²)	Top Ix (in⁴)	Top W/t Ratio	Top D/t Ratio	Taper (in/ft)
1-18	51.000	0.5000	65		0.00	11,437	47.13	0.00	74.00	20328.7	14.86	94.26	36.92	51.00	57.81	9692.3	11.26	73.86	0.200036
2-18	51.000	0.5000	65	Slip	57.00	9,165	38.87	46.25	60.90	11333.7	11.95	77.76	28.67	97.25	44.71	4485.1	8.35	57.35	0.200036
3-18	46.500	0.1875	65	Slip	45.00	2,351	29.80	93.50	17.62	1952.7	26.26	158.94	20.50	140.00	12.09	630.1	17.52	109.33	0.200036
				Shaft Weight		22,952													

Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	Ka	Vert Ecc (ft)	No Ice Weight (lb)	No Ice EPAa (sf)	No Ice Orientation Factor	Ice Weight (lb)	Ice EPAa (sf)	Ice Orientation Factor
140.00	Generic 12' Dipole	1	1.00	1.000	40.00	4.510	1.00	172.60	11.628	1.00
138.00	Generic 6' Omni	2	1.00	0.000	25.00	1.760	1.00	70.76	3.009	1.00
138.00	Generic 12' Omni	4	1.00	0.000	40.00	3.600	1.00	130.12	7.865	1.00
138.00	Generic 6' FM antenna	1	1.00	0.000	30.00	13.450	1.00	705.74	18.017	1.00
138.00	Generic 4' HP Dish	1	1.00	0.000	170.00	15.855	1.00	486.94	18.168	1.00
138.00	Flat Platform w/ Handrails	1	1.00	0.000	1,750.00	33.000	1.00	2,984.39	49.203	1.00
130.00	Alcatel-Lucent 800 MHz 2X50W	3	0.75	1.000	64.00	2.058	0.50	139.96	3.002	0.50
130.00	Alcatel-Lucent 4x40W RRH (91	3	0.75	1.000	91.00	3.287	0.72	198.94	4.463	0.72
130.00	Alcatel-Lucent TD-RRH8x20-25	3	0.75	1.000	70.00	4.046	0.61	163.18	5.355	0.61
130.00	RFS APXV9TM14-ALU-I20*	3	0.75	1.000	55.10	6.342	0.66	190.85	8.489	0.66
130.00	RFS APXVSPP18-C-A20	3	0.75	1.000	57.00	8.024	0.69	227.07	10.774	0.69
130.00	Flat Platform w/ Handrails	1	1.00	0.000	2,000.00	42.400	1.00	3,401.14	63.076	1.00
121.00	Andrew DB586	1	1.00	2.000	8.30	0.740	1.00	52.86	1.974	1.00
120.00	Flat Low Profile Platform	1	1.00	0.000	1,500.00	26.100	1.00	2,133.83	44.777	1.00
116.00	Generic 6' Omni	2	1.00	0.000	25.00	1.760	1.00	70.00	2.988	1.00
110.00	Commscope CBC78T-DS-43-2X	3	0.75	0.000	20.70	0.552	0.50	42.11	1.044	0.50
110.00	Samsung Outdoor LAA 1W RRH	3	0.75	0.000	4.40	0.811	0.50	20.03	1.396	0.50
110.00	Samsung Outdoor CBRS 20W	3	0.75	0.000	18.60	0.857	0.50	41.86	1.465	0.50
110.00	Samsung B2/B66A RRH-BR049	3	0.75	0.000	84.40	1.875	0.50	146.23	2.750	0.50
110.00	Samsung B5/B13 RRH-BR04C	3	0.75	0.000	70.30	1.875	0.50	125.74	2.750	0.50
110.00	RFS DB-C1-12C-24AB-0Z	1	0.75	0.000	32.00	4.056	1.00	155.18	5.379	1.00
110.00	Antel BXA-70080/6CF__	3	0.75	0.000	18.00	5.836	0.72	139.81	8.141	0.72
110.00	Commscope JAHH-65B-R3B	6	0.75	0.000	60.60	9.113	0.69	256.68	11.802	0.69
110.00	Low Profile Platform w/ Site Pro	1	1.00	0.000	1,772.40	27.200	1.00	2,969.15	45.566	1.00
100.00	Powerwave Allgon 7020.00 Dual	12	0.80	0.000	2.20	0.339	0.50	12.02	0.732	0.50
100.00	Powerwave Allgon LGP21401	12	0.80	0.000	14.10	1.104	0.50	38.07	1.790	0.50
100.00	Raycap DC6-48-60-18-8F	1	0.80	0.000	31.80	1.470	1.00	91.09	2.141	1.00
100.00	Ericsson RRUS-11 (50 lbs.)	3	0.80	0.000	50.00	2.566	0.67	115.50	3.573	0.67
100.00	Ericsson RRUS 32 B2	3	0.80	0.000	53.00	2.743	0.67	123.67	3.867	0.67
100.00	Powerwave Allgon 7770.00	6	0.80	0.000	35.00	5.508	0.65	163.41	6.519	0.65
100.00	CCI HPA-65R-BUU-H6	3	0.80	0.000	51.00	9.658	0.69	261.82	12.322	0.69
100.00	Flat Low Profile Platform	1	1.00	0.000	1,500.00	26.100	1.00	2,122.56	44.445	1.00
87.00	RFS ATMAA1412D-1A20	3	0.80	0.000	13.00	1.000	0.50	38.14	1.633	0.50
87.00	Ericsson Radio 4449 B12,B71	3	0.80	0.000	74.00	1.639	0.50	127.07	2.439	0.50
87.00	Ericsson AIR 21, 1.3M, B4A B2P	3	0.80	0.000	81.50	6.092	0.70	219.32	8.144	0.70
87.00	Ericsson AIR32 B66Aa/B2a	3	0.80	0.000	132.20	6.510	0.71	283.48	8.586	0.71
87.00	RFS APXVAARR24_43-U-NA20	3	0.80	0.000	127.90	20.243	0.63	500.00	23.758	0.63
87.00	Flat Low Profile Platform	1	1.00	0.000	1,500.00	26.100	1.00	2,114.09	44.196	1.00
Totals	Num Loadings:38	113			14,772.00			30,627.52		

Linear Appurtenance Properties

Load Case Azimuth (deg) :

Elev From (ft)	Elev To (ft)	Qty	Description	Coax Dia (in)	Coax Wt (lb/ft)	Flat	Max Coax / Row	Dist Between Rows (in)	Dist Between Cols (in)	Azimuth (deg)	Dist From Face (in)	Exposed To Wind	Carrier
0.00	141.00	1	7/8" Coax	1.09	0.33	N	0	0.00	0.00	0	0.00	N	Other

0.00	138.00	3	1 5/8" Coax	1.98	0.82	N	0	0.00	0.00	0	0.00	N	Other
0.00	138.00	4	3/8" Coax	0.44	0.08	N	0	0.00	0.00	0	0.00	N	OTHER
0.00	138.00	6	7/8" Coax	1.09	0.33	N	0	0.00	0.00	0	0.00	N	Other
0.00	130.00	4	1 1/4" Hybriflex Cable	1.54	1.00	N	0	0.00	0.00	0	0.00	N	SPRINT NEXTEL
0.00	121.00	2	1 1/4" Coax	1.55	0.63	N	0	0.00	0.00	0	0.00	N	EVERSOURCE
0.00	121.00	1	1/2" Coax	0.63	0.15	N	0	0.00	0.00	0	0.00	N	EVERSOURCE
0.00	116.00	2	1/2" Coax	0.63	0.15	N	0	0.00	0.00	0	0.00	N	OTHER
0.00	110.00	6	1 5/8" Coax	1.98	0.82	N	0	0.00	0.00	0	0.00	N	VERIZON WIRELESS
0.00	110.00	1	2.02 (51.2mm) Hybrid	2.02	3.04	N	0	0.00	0.00	0	0.00	N	VERIZON WIRELESS
0.00	100.00	1	0.28" (7.1mm) Fiber	0.28	0.03	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	100.00	1	0.39" (10mm) Fiber	0.39	0.06	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	100.00	2	0.74" (18.7mm) 8 AWG	0.74	0.49	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	100.00	2	0.78" (19.7mm) 8 AWG	0.78	0.59	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	100.00	12	1 5/8" Coax	1.98	0.82	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	100.00	1	3" conduit	3.50	7.58	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	100.00	1	3/8" (0.38"- 9.5mm)	0.38	0.23	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	87.00	2	1 1/4" (1.25"- 31.8mm)	1.25	1.05	N	0	0.00	0.00	0	0.00	N	T-MOBILE
0.00	87.00	1	1 5/8" (1.63"-41.3mm)	1.63	1.61	N	0	0.00	0.00	0	0.00	N	T-MOBILE
0.00	87.00	12	1 5/8" Coax	1.98	0.82	N	0	0.00	0.00	0	0.00	N	T-MOBILE

Segment Properties (Max Len : 5. ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	F'y (ksi)	S (in^3)	Z (in^3)	Weight (lb)
0.00		0.5000	47.130	73.999	20,328.7	14.86	94.26	82.6	849.6	0.0	0.0
5.00		0.5000	46.130	72.412	19,048.5	14.50	92.26	82.6	813.3	0.0	1,245.5
10.00		0.5000	45.130	70.825	17,823.2	14.15	90.26	82.6	777.9	0.0	1,218.5
15.00		0.5000	44.129	69.237	16,651.5	13.80	88.26	82.6	743.2	0.0	1,191.5
20.00		0.5000	43.129	67.650	15,532.4	13.45	86.26	82.6	709.3	0.0	1,164.5
25.00		0.5000	42.129	66.063	14,464.6	13.09	84.26	82.6	676.2	0.0	1,137.5
30.00		0.5000	41.129	64.476	13,446.8	12.74	82.26	82.6	644.0	0.0	1,110.5
35.00		0.5000	40.129	62.889	12,478.0	12.39	80.26	82.6	612.5	0.0	1,083.5
40.00		0.5000	39.129	61.301	11,556.9	12.04	78.26	82.6	581.7	0.0	1,056.5
45.00		0.5000	38.128	59.714	10,682.2	11.68	76.26	82.6	551.8	0.0	1,029.5
46.25	Bot - Section 2	0.5000	37.878	59.317	10,470.7	11.59	75.76	82.6	544.5	0.0	253.1
50.00		0.5000	37.128	58.127	9,852.8	11.33	74.26	82.6	522.7	0.0	1,518.9
51.00	Top - Section 1	0.5000	37.928	59.396	10,512.6	11.61	75.86	82.6	545.9	0.0	399.9
55.00		0.5000	37.128	58.127	9,852.7	11.33	74.26	82.6	522.7	0.0	799.8
60.00		0.5000	36.128	56.539	9,067.4	10.98	72.26	82.6	494.3	0.0	975.5
65.00		0.5000	35.128	54.952	8,325.0	10.62	70.26	82.6	466.8	0.0	948.5
70.00		0.5000	34.128	53.365	7,624.3	10.27	68.26	82.6	440.0	0.0	921.4
75.00		0.5000	33.127	51.778	6,964.0	9.92	66.25	82.6	414.1	0.0	894.4
80.00		0.5000	32.127	50.190	6,343.0	9.57	64.25	82.6	388.9	0.0	867.4
85.00		0.5000	31.127	48.603	5,760.0	9.21	62.25	82.6	364.5	0.0	840.4
87.00		0.5000	30.727	47.968	5,537.3	9.07	61.45	82.6	354.9	0.0	328.6
90.00		0.5000	30.127	47.016	5,214.0	8.86	60.25	82.6	340.9	0.0	484.8
93.50	Bot - Section 3	0.5000	29.427	45.905	4,853.0	8.61	58.85	82.6	324.8	0.0	553.3
95.00		0.5000	29.127	45.429	4,703.5	8.51	58.25	82.6	318.1	0.0	322.6
97.25	Top - Section 2	0.1875	29.052	17.177	1,808.1	25.56	154.94	71.3	122.6	0.0	477.6
100.0		0.1875	28.501	16.850	1,706.7	25.04	152.01	71.9	117.9	0.0	159.2
105.0		0.1875	27.501	16.255	1,532.1	24.10	146.67	73.1	109.7	0.0	281.6
110.0		0.1875	26.501	15.659	1,369.9	23.16	141.34	74.2	101.8	0.0	271.5
115.0		0.1875	25.501	15.064	1,219.5	22.22	136.00	75.3	94.2	0.0	261.4
116.0		0.1875	25.301	14.945	1,190.9	22.03	134.94	75.5	92.7	0.0	51.1
120.0		0.1875	24.501	14.469	1,080.6	21.28	130.67	76.4	86.9	0.0	200.2
121.0		0.1875	24.301	14.350	1,054.2	21.09	129.60	76.6	85.4	0.0	49.0
125.0		0.1875	23.501	13.874	952.7	20.34	125.34	77.5	79.8	0.0	192.1
130.0		0.1875	22.500	13.278	835.2	19.40	120.00	78.6	73.1	0.0	231.0
135.0		0.1875	21.500	12.683	727.9	18.46	114.67	79.7	66.7	0.0	220.9
138.0		0.1875	20.900	12.326	668.1	17.89	111.47	80.4	63.0	0.0	127.7
140.0		0.1875	20.500	12.088	630.1	17.52	109.33	80.8	60.5	0.0	83.1
											22,952.4

Load Case: 1.2D + 1.6W — 93 mph with No Ice — 23 Iterations

Gust Response Factor :1.10 — Wind Importance Factor :1.00
Dead Load Factor :1.20
Wind Load Factor :1.60

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces Wind FX (lb)	Shaft Forces Dead Load (lb)	Discrete Forces Wind FX (lb)	Discrete Forces Torsion MY (lb-ft)	Discrete Forces Moment MZ (lb-ft)	Discrete Forces Dead Load (lb)	Linear Forces Wind FX (lb)	Linear Forces Dead Load (lb)	Sum of Forces Wind FX (lb)	Sum of Forces Dead Load (lb)	Sum of Forces Torsion MY (lb-ft)	Sum of Forces Moment MZ (lb)
0.00		166.2	0.0					0.0	0.0	166.2	0.0	0.0	0.0
5.00		328.8	1,494.6					0.0	313.3	328.8	1,807.9	0.0	0.0
10.00		321.6	1,462.2					0.0	313.3	321.6	1,775.5	0.0	0.0
15.00		314.5	1,429.8					0.0	313.3	314.5	1,743.1	0.0	0.0
20.00		307.4	1,397.4					0.0	313.3	307.4	1,710.7	0.0	0.0
25.00		300.2	1,365.0					0.0	313.3	300.2	1,678.2	0.0	0.0
30.00		296.6	1,332.6					0.0	313.3	296.6	1,645.8	0.0	0.0
35.00		298.9	1,300.2					0.0	313.3	298.9	1,613.4	0.0	0.0
40.00		302.8	1,267.8					0.0	313.3	302.8	1,581.0	0.0	0.0
45.00		190.4	1,235.4					0.0	313.3	190.4	1,548.6	0.0	0.0
46.25	Bot - Section 2	156.1	303.8					0.0	78.3	156.1	382.1	0.0	0.0
50.00		149.4	1,822.7					0.0	234.9	149.4	2,057.6	0.0	0.0
51.00	Top - Section 1	157.5	479.9					0.0	62.7	157.5	542.5	0.0	0.0
55.00		283.3	959.8					0.0	250.6	283.3	1,210.4	0.0	0.0
60.00		314.0	1,170.5					0.0	313.3	314.0	1,483.8	0.0	0.0
65.00		312.4	1,138.1					0.0	313.3	312.4	1,451.4	0.0	0.0
70.00		310.0	1,105.7					0.0	313.3	310.0	1,419.0	0.0	0.0
75.00		306.9	1,073.3					0.0	313.3	306.9	1,386.6	0.0	0.0
80.00		303.2	1,040.9					0.0	313.3	303.2	1,354.2	0.0	0.0
85.00		210.2	1,008.5					0.0	313.3	210.2	1,321.8	0.0	0.0
87.00	Appurtenance(s)	148.3	394.3	2,854.9	0.0	0.0	3,343.0	0.0	125.3	3,003.2	3,862.6	0.0	0.0
90.00		191.0	581.8					0.0	139.2	191.0	721.0	0.0	0.0
93.50	Bot - Section 3	146.3	664.0					0.0	162.4	146.3	826.4	0.0	0.0
95.00		109.5	387.1					0.0	69.6	109.5	456.7	0.0	0.0
97.25	Top - Section 2	144.8	573.1					0.0	104.4	144.8	677.5	0.0	0.0
100.00	Appurtenance(s)	221.2	191.0	2,777.4	0.0	0.0	2,879.3	0.0	127.6	2,998.6	3,197.9	0.0	0.0
105.00		280.5	337.9					0.0	112.6	280.5	450.5	0.0	0.0
110.00	Appurtenance(s)	273.9	325.8	2,808.6	0.0	0.0	3,380.6	0.0	112.6	3,082.6	3,819.0	0.0	0.0
115.00		161.9	313.6					0.0	64.8	161.9	378.4	0.0	0.0
116.00	Appurtenance(s)	131.7	61.3	134.4	0.0	0.0	60.0	0.0	13.0	266.1	134.2	0.0	0.0
120.00	Appurtenance(s)	131.0	240.2	1,005.9	0.0	0.0	1,800.0	0.0	50.4	1,136.9	2,090.6	0.0	0.0
121.00	Appurtenance(s)	127.9	58.8	28.7	0.0	57.4	10.0	0.0	12.6	156.7	81.4	0.0	0.0
125.00		226.1	230.5					0.0	43.6	226.1	274.1	0.0	0.0
130.00	Appurtenance(s)	244.0	277.2	3,057.8	0.0	1,385.9	3,613.6	0.0	54.5	3,301.8	3,945.3	0.0	0.0
135.00		189.9	265.0					0.0	30.5	189.9	295.6	0.0	0.0
138.00	Appurtenance(s)	115.7	153.2	3,217.9	0.0	0.0	2,592.0	0.0	18.3	3,333.6	2,763.5	0.0	0.0
140.00	Appurtenance(s)	45.8	99.7	182.0	0.0	182.0	48.0	0.0	0.8	227.8	148.5	0.0	0.0
								Totals:		24,287.4	51,836.7	0.00	0.00

Load Case: 1.2D + 1.6W — 93 mph with No Ice — 23 Iterations

Gust Response Factor :1.10 Wind Importance Factor 1.00
Dead Load Factor :1.20
Wind Load Factor :1.60

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-51.80	-24.20	0.00	-2,506.22	0.00	2,506.22	5,497.77	2,748.88	10,504.0	5,259.85	0.00	0.00	0.486
5.00	-49.92	-24.02	0.00	-2,385.23	0.00	2,385.23	5,379.84	2,689.92	10,055.9	5,035.45	0.09	-0.17	0.483
10.00	-48.07	-23.84	0.00	-2,265.14	0.00	2,265.14	5,261.92	2,630.96	9,617.62	4,815.96	0.36	-0.34	0.480
15.00	-46.26	-23.65	0.00	-2,145.96	0.00	2,145.96	5,144.00	2,572.00	9,189.04	4,601.35	0.82	-0.52	0.475
20.00	-44.48	-23.46	0.00	-2,027.71	0.00	2,027.71	5,026.07	2,513.04	8,770.23	4,391.63	1.46	-0.70	0.471
25.00	-42.73	-23.28	0.00	-1,910.39	0.00	1,910.39	4,908.15	2,454.08	8,361.19	4,186.81	2.29	-0.88	0.465
30.00	-41.02	-23.08	0.00	-1,794.01	0.00	1,794.01	4,790.23	2,395.11	7,961.92	3,986.88	3.31	-1.06	0.459
35.00	-39.34	-22.88	0.00	-1,678.59	0.00	1,678.59	4,672.31	2,336.15	7,572.42	3,791.84	4.52	-1.25	0.451
40.00	-37.69	-22.66	0.00	-1,564.20	0.00	1,564.20	4,554.38	2,277.19	7,192.68	3,601.69	5.92	-1.43	0.443
45.00	-36.10	-22.50	0.00	-1,450.90	0.00	1,450.90	4,436.46	2,218.23	6,822.72	3,416.43	7.52	-1.62	0.433
46.25	-35.69	-22.39	0.00	-1,422.77	0.00	1,422.77	4,406.98	2,203.49	6,731.76	3,370.88	7.95	-1.66	0.430
50.00	-33.60	-22.24	0.00	-1,338.79	0.00	1,338.79	4,318.54	2,159.27	6,462.53	3,236.07	9.31	-1.80	0.422
51.00	-33.03	-22.12	0.00	-1,316.56	0.00	1,316.56	4,412.85	2,206.43	6,749.84	3,379.93	9.69	-1.84	0.397
55.00	-31.77	-21.88	0.00	-1,228.10	0.00	1,228.10	4,318.52	2,159.26	6,462.46	3,236.03	11.30	-1.99	0.387
60.00	-30.23	-21.60	0.00	-1,118.70	0.00	1,118.70	4,200.59	2,100.30	6,112.04	3,060.56	13.48	-2.16	0.373
65.00	-28.73	-21.32	0.00	-1,010.69	0.00	1,010.69	4,082.67	2,041.33	5,771.38	2,889.98	15.83	-2.33	0.357
70.00	-27.27	-21.02	0.00	-904.12	0.00	904.12	3,964.75	1,982.37	5,440.50	2,724.29	18.36	-2.49	0.339
75.00	-25.84	-20.72	0.00	-799.00	0.00	799.00	3,846.82	1,923.41	5,119.38	2,563.49	21.05	-2.65	0.319
80.00	-24.45	-20.42	0.00	-695.38	0.00	695.38	3,728.90	1,864.45	4,808.03	2,407.59	23.91	-2.80	0.296
85.00	-23.11	-20.18	0.00	-593.28	0.00	593.28	3,610.98	1,805.49	4,506.45	2,256.57	26.93	-2.95	0.269
87.00	-19.38	-17.01	0.00	-552.91	0.00	552.91	3,563.81	1,781.90	4,388.55	2,197.54	28.17	-3.00	0.257
90.00	-18.65	-16.81	0.00	-501.89	0.00	501.89	3,493.05	1,746.53	4,214.63	2,110.45	30.09	-3.09	0.243
93.50	-17.81	-16.64	0.00	-443.07	0.00	443.07	3,410.51	1,705.25	4,016.18	2,011.07	32.38	-3.18	0.226
95.00	-17.35	-16.51	0.00	-418.12	0.00	418.12	3,375.13	1,687.57	3,932.59	1,969.22	33.39	-3.21	0.218
97.25	-16.67	-16.35	0.00	-380.96	0.00	380.96	1,102.89	551.44	1,309.83	655.89	34.91	-3.27	0.597
100.00	-13.61	-13.21	0.00	-336.00	0.00	336.00	1,091.10	545.55	1,270.97	636.43	36.81	-3.33	0.541
105.00	-13.12	-12.96	0.00	-269.95	0.00	269.95	1,068.74	534.37	1,200.66	601.22	40.44	-3.58	0.462
110.00	-9.48	-9.67	0.00	-205.17	0.00	205.17	1,045.19	522.60	1,130.92	566.30	44.31	-3.80	0.372
115.00	-9.09	-9.50	0.00	-156.83	0.00	156.83	1,020.46	510.23	1,061.89	531.74	48.40	-3.99	0.304
116.00	-8.96	-9.24	0.00	-147.33	0.00	147.33	1,015.38	507.69	1,048.19	524.87	49.24	-4.03	0.290
120.00	-6.95	-7.96	0.00	-110.39	0.00	110.39	994.55	497.27	993.73	497.61	52.67	-4.15	0.229
121.00	-6.87	-7.81	0.00	-102.37	0.00	102.37	989.22	494.61	980.22	490.84	53.54	-4.18	0.216
125.00	-6.60	-7.57	0.00	-71.15	0.00	71.15	967.45	483.72	926.59	463.98	57.08	-4.27	0.160
130.00	-2.91	-3.98	0.00	-31.90	0.00	31.90	939.16	469.58	860.60	430.94	61.60	-4.35	0.077
135.00	-2.63	-3.77	0.00	-11.98	0.00	11.98	909.69	454.85	795.92	398.55	66.17	-4.39	0.033
138.00	-0.13	-0.24	0.00	-0.66	0.00	0.66	891.44	445.72	757.80	379.46	68.93	-4.39	0.002
140.00	0.00	-0.23	0.00	-0.18	0.00	0.18	879.04	439.52	732.69	366.89	70.77	-4.40	0.000

Load Case: 0.9D + 1.6W — 93 mph with No Ice (Reduced DL) — 23 Iterations

Gust Response Factor :1.10 Wind Importance Factor 1.00
Dead Load Factor :0.90
Wind Load Factor :1.60

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces Wind FX (lb)	Shaft Forces Dead Load (lb)	Discrete Forces Wind FX (lb)	Discrete Forces Torsion MY (lb-ft)	Discrete Forces Moment MZ (lb-ft)	Discrete Forces Dead Load (lb)	Linear Forces Wind FX (lb)	Linear Forces Dead Load (lb)	Sum of Forces Wind FX (lb)	Sum of Forces Dead Load (lb)	Sum of Forces Torsion MY (lb-ft)	Sum of Forces Moment MZ (lb)
0.00		166.2	0.0					0.0	0.0	166.2	0.0	0.0	0.0
5.00		328.8	1,121.0					0.0	234.9	328.8	1,355.9	0.0	0.0
10.00		321.6	1,096.7					0.0	234.9	321.6	1,331.6	0.0	0.0
15.00		314.5	1,072.4					0.0	234.9	314.5	1,307.3	0.0	0.0
20.00		307.4	1,048.0					0.0	234.9	307.4	1,283.0	0.0	0.0
25.00		300.2	1,023.7					0.0	234.9	300.2	1,258.7	0.0	0.0
30.00		296.6	999.4					0.0	234.9	296.6	1,234.4	0.0	0.0
35.00		298.9	975.1					0.0	234.9	298.9	1,210.1	0.0	0.0
40.00		302.8	950.8					0.0	234.9	302.8	1,185.8	0.0	0.0
45.00		190.4	926.5					0.0	234.9	190.4	1,161.5	0.0	0.0
46.25	Bot - Section 2	156.1	227.8					0.0	58.7	156.1	286.6	0.0	0.0
50.00		149.4	1,367.0					0.0	176.2	149.4	1,543.2	0.0	0.0
51.00	Top - Section 1	157.5	359.9					0.0	47.0	157.5	406.9	0.0	0.0
55.00		283.3	719.8					0.0	188.0	283.3	907.8	0.0	0.0
60.00		314.0	877.9					0.0	234.9	314.0	1,112.9	0.0	0.0
65.00		312.4	853.6					0.0	234.9	312.4	1,088.6	0.0	0.0
70.00		310.0	829.3					0.0	234.9	310.0	1,064.2	0.0	0.0
75.00		306.9	805.0					0.0	234.9	306.9	1,039.9	0.0	0.0
80.00		303.2	780.7					0.0	234.9	303.2	1,015.6	0.0	0.0
85.00		210.2	756.4					0.0	234.9	210.2	991.3	0.0	0.0
87.00	Appurtenance(s)	148.3	295.8	2,854.9	0.0	0.0	2,507.2	0.0	94.0	3,003.2	2,896.9	0.0	0.0
90.00		191.0	436.3					0.0	104.4	191.0	540.7	0.0	0.0
93.50	Bot - Section 3	146.3	498.0					0.0	121.8	146.3	619.8	0.0	0.0
95.00		109.5	290.3					0.0	52.2	109.5	342.5	0.0	0.0
97.25	Top - Section 2	144.8	429.9					0.0	78.3	144.8	508.1	0.0	0.0
100.00	Appurtenance(s)	221.2	143.3	2,777.4	0.0	0.0	2,159.5	0.0	95.7	2,998.6	2,398.4	0.0	0.0
105.00		280.5	253.5					0.0	84.4	280.5	337.9	0.0	0.0
110.00	Appurtenance(s)	273.9	244.3	2,808.6	0.0	0.0	2,535.5	0.0	84.4	3,082.6	2,864.2	0.0	0.0
115.00		161.9	235.2					0.0	48.6	161.9	283.8	0.0	0.0
116.00	Appurtenance(s)	131.7	46.0	134.4	0.0	0.0	45.0	0.0	9.7	266.1	100.7	0.0	0.0
120.00	Appurtenance(s)	131.0	180.2	1,005.9	0.0	0.0	1,350.0	0.0	37.8	1,136.9	1,568.0	0.0	0.0
121.00	Appurtenance(s)	127.9	44.1	28.7	0.0	57.4	7.5	0.0	9.4	156.7	61.0	0.0	0.0
125.00		226.1	172.9					0.0	32.7	226.1	205.6	0.0	0.0
130.00	Appurtenance(s)	244.0	207.9	3,057.8	0.0	1,385.9	2,710.2	0.0	40.9	3,301.8	2,959.0	0.0	0.0
135.00		189.9	198.8					0.0	22.9	189.9	221.7	0.0	0.0
138.00	Appurtenance(s)	115.7	114.9	3,217.9	0.0	0.0	1,944.0	0.0	13.7	3,333.6	2,072.6	0.0	0.0
140.00	Appurtenance(s)	45.8	74.8	182.0	0.0	182.0	36.0	0.0	0.6	227.8	111.4	0.0	0.0
								Totals:		24,287.4	38,877.5	0.00	0.00

Load Case: 0.9D + 1.6W — 93 mph with No Ice (Reduced DL) — 23 Iterations

Gust Response Factor :1.10 Wind Importance Factor 1.00
Dead Load Factor :0.90
Wind Load Factor :1.60

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-38.84	-24.18	0.00	-2,476.51	0.00	2,476.51	5,497.77	2,748.88	10,504.0	5,259.85	0.00	0.00	0.478
5.00	-37.41	-23.96	0.00	-2,355.62	0.00	2,355.62	5,379.84	2,689.92	10,055.9	5,035.45	0.09	-0.17	0.475
10.00	-36.01	-23.74	0.00	-2,235.82	0.00	2,235.82	5,261.92	2,630.96	9,617.62	4,815.96	0.36	-0.34	0.471
15.00	-34.64	-23.52	0.00	-2,117.12	0.00	2,117.12	5,144.00	2,572.00	9,189.04	4,601.35	0.81	-0.51	0.467
20.00	-33.29	-23.30	0.00	-1,999.51	0.00	1,999.51	5,026.07	2,513.04	8,770.23	4,391.63	1.44	-0.69	0.462
25.00	-31.96	-23.09	0.00	-1,882.99	0.00	1,882.99	4,908.15	2,454.08	8,361.19	4,186.81	2.26	-0.87	0.456
30.00	-30.66	-22.87	0.00	-1,767.56	0.00	1,767.56	4,790.23	2,395.11	7,961.92	3,986.88	3.27	-1.05	0.450
35.00	-29.38	-22.64	0.00	-1,653.23	0.00	1,653.23	4,672.31	2,336.15	7,572.42	3,791.84	4.46	-1.23	0.442
40.00	-28.13	-22.40	0.00	-1,540.05	0.00	1,540.05	4,554.38	2,277.19	7,192.68	3,601.69	5.84	-1.41	0.434
45.00	-26.93	-22.23	0.00	-1,428.07	0.00	1,428.07	4,436.46	2,218.23	6,822.72	3,416.43	7.42	-1.59	0.424
46.25	-26.61	-22.11	0.00	-1,400.29	0.00	1,400.29	4,406.98	2,203.49	6,731.76	3,370.88	7.84	-1.64	0.422
50.00	-25.04	-21.95	0.00	-1,317.38	0.00	1,317.38	4,318.54	2,159.27	6,462.53	3,236.07	9.19	-1.78	0.413
51.00	-24.61	-21.82	0.00	-1,295.43	0.00	1,295.43	4,412.85	2,206.43	6,749.84	3,379.93	9.56	-1.82	0.389
55.00	-23.65	-21.57	0.00	-1,208.15	0.00	1,208.15	4,318.52	2,159.26	6,462.46	3,236.03	11.15	-1.96	0.379
60.00	-22.49	-21.28	0.00	-1,100.29	0.00	1,100.29	4,200.59	2,100.30	6,112.04	3,060.56	13.29	-2.13	0.365
65.00	-21.35	-20.99	0.00	-993.87	0.00	993.87	4,082.67	2,041.33	5,771.38	2,889.98	15.61	-2.29	0.349
70.00	-20.24	-20.69	0.00	-888.92	0.00	888.92	3,964.75	1,982.37	5,440.50	2,724.29	18.10	-2.45	0.332
75.00	-19.16	-20.39	0.00	-785.46	0.00	785.46	3,846.82	1,923.41	5,119.38	2,563.49	20.76	-2.61	0.311
80.00	-18.11	-20.09	0.00	-683.50	0.00	683.50	3,728.90	1,864.45	4,808.03	2,407.59	23.57	-2.76	0.289
85.00	-17.10	-19.86	0.00	-583.06	0.00	583.06	3,610.98	1,805.49	4,506.45	2,256.57	26.54	-2.90	0.263
87.00	-14.34	-16.73	0.00	-543.35	0.00	543.35	3,563.81	1,781.90	4,388.55	2,197.54	27.77	-2.96	0.251
90.00	-13.79	-16.53	0.00	-493.17	0.00	493.17	3,493.05	1,746.53	4,214.63	2,110.45	29.65	-3.04	0.238
93.50	-13.16	-16.36	0.00	-435.32	0.00	435.32	3,410.51	1,705.25	4,016.18	2,011.07	31.91	-3.13	0.220
95.00	-12.81	-16.25	0.00	-410.77	0.00	410.77	3,375.13	1,687.57	3,932.59	1,969.22	32.90	-3.16	0.212
97.25	-12.29	-16.08	0.00	-374.22	0.00	374.22	1,102.89	551.44	1,309.83	655.89	34.40	-3.22	0.583
100.00	-10.03	-12.98	0.00	-329.99	0.00	329.99	1,091.10	545.55	1,270.97	636.43	36.28	-3.28	0.528
105.00	-9.66	-12.72	0.00	-265.08	0.00	265.08	1,068.74	534.37	1,200.66	601.22	39.85	-3.53	0.451
110.00	-6.96	-9.49	0.00	-201.47	0.00	201.47	1,045.19	522.60	1,130.92	566.30	43.66	-3.74	0.363
115.00	-6.67	-9.32	0.00	-154.03	0.00	154.03	1,020.46	510.23	1,061.89	531.74	47.68	-3.93	0.297
116.00	-6.58	-9.06	0.00	-144.71	0.00	144.71	1,015.38	507.69	1,048.19	524.87	48.51	-3.96	0.282
120.00	-5.09	-7.82	0.00	-108.48	0.00	108.48	994.55	497.27	993.73	497.61	51.88	-4.08	0.223
121.00	-5.03	-7.66	0.00	-100.60	0.00	100.60	989.22	494.61	980.22	490.84	52.74	-4.11	0.210
125.00	-4.83	-7.43	0.00	-69.95	0.00	69.95	967.45	483.72	926.59	463.98	56.22	-4.20	0.156
130.00	-2.12	-3.92	0.00	-31.41	0.00	31.41	939.16	469.58	860.60	430.94	60.67	-4.28	0.075
135.00	-1.91	-3.72	0.00	-11.80	0.00	11.80	909.69	454.85	795.92	398.55	65.17	-4.32	0.032
138.00	-0.09	-0.24	0.00	-0.65	0.00	0.65	891.44	445.72	757.80	379.46	67.88	-4.32	0.002
140.00	0.00	-0.23	0.00	-0.18	0.00	0.18	879.04	439.52	732.69	366.89	69.69	-4.33	0.000

Load Case: 1.2D + 1.0Di + 1.0Wi — 50 mph with 0.75 in Radial Ice — 23 Iterations

Gust Response Factor :1.10 | Ice Dead Load Factor :1.00 | Wind Importance Factor :1.00
Dead Load Factor :1.20 | Ice Importance Factor :1.00
Wind Load Factor :1.00

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces Wind FX (lb)	Shaft Forces Dead Load (lb)	Discrete Forces Wind FX (lb)	Discrete Forces Torsion MY (lb-ft)	Discrete Forces Moment MZ (lb-ft)	Discrete Forces Dead Load (lb)	Linear Forces Wind FX (lb)	Linear Forces Dead Load (lb)	Sum of Forces Wind FX (lb)	Sum of Forces Dead Load (lb)	Sum of Forces Torsion MY (lb-ft)	Sum of Forces Moment MZ (lb)
0.00		58.1	0.0					0.0	0.0	58.1	0.0	0.0	0.0
5.00		115.4	1,837.9					0.0	313.3	115.4	2,151.2	0.0	0.0
10.00		113.5	1,838.3					0.0	313.3	113.5	2,151.6	0.0	0.0
15.00		111.4	1,817.7					0.0	313.3	111.4	2,130.9	0.0	0.0
20.00		109.2	1,790.1					0.0	313.3	109.2	2,103.4	0.0	0.0
25.00		107.0	1,759.0					0.0	313.3	107.0	2,072.2	0.0	0.0
30.00		106.0	1,725.6					0.0	313.3	106.0	2,038.9	0.0	0.0
35.00		107.1	1,690.7					0.0	313.3	107.1	2,003.9	0.0	0.0
40.00		108.8	1,654.6					0.0	313.3	108.8	1,967.8	0.0	0.0
45.00		68.5	1,617.6					0.0	313.3	68.5	1,930.8	0.0	0.0
46.25	Bot - Section 2	56.2	399.4					0.0	78.3	56.2	477.7	0.0	0.0
50.00		53.8	2,113.0					0.0	234.9	53.8	2,348.0	0.0	0.0
51.00	Top - Section 1	56.8	557.3					0.0	62.7	56.8	620.0	0.0	0.0
55.00		102.4	1,264.7					0.0	250.6	102.4	1,515.3	0.0	0.0
60.00		113.8	1,545.1					0.0	313.3	113.8	1,858.3	0.0	0.0
65.00		113.6	1,505.9					0.0	313.3	113.6	1,819.2	0.0	0.0
70.00		113.0	1,466.4					0.0	313.3	113.0	1,779.6	0.0	0.0
75.00		112.3	1,426.5					0.0	313.3	112.3	1,739.7	0.0	0.0
80.00		111.3	1,386.3					0.0	313.3	111.3	1,699.6	0.0	0.0
85.00		77.3	1,345.9					0.0	313.3	77.3	1,659.1	0.0	0.0
87.00	Appurtenance(s)	54.7	528.2	719.7	0.0	0.0	8,961.1	0.0	125.3	774.4	9,614.6	0.0	0.0
90.00		70.6	779.5					0.0	139.2	70.6	918.6	0.0	0.0
93.50	Bot - Section 3	54.2	890.4					0.0	162.4	54.2	1,052.8	0.0	0.0
95.00		40.6	484.6					0.0	69.6	40.6	554.2	0.0	0.0
97.25	Top - Section 2	53.8	717.6					0.0	104.4	53.8	822.0	0.0	0.0
100.00	Appurtenance(s)	82.4	365.0	733.4	0.0	0.0	7,967.5	0.0	127.6	815.8	8,460.0	0.0	0.0
105.00		104.8	644.9					0.0	112.6	104.8	757.5	0.0	0.0
110.00	Appurtenance(s)	102.9	623.7	747.2	0.0	0.0	9,592.4	0.0	112.6	850.0	10,328.6	0.0	0.0
115.00		61.0	602.4					0.0	64.8	61.0	667.2	0.0	0.0
116.00	Appurtenance(s)	49.8	118.8	41.2	0.0	0.0	200.0	0.0	13.0	91.0	331.7	0.0	0.0
120.00	Appurtenance(s)	49.6	463.8	311.8	0.0	0.0	3,933.8	0.0	50.4	361.4	4,448.1	0.0	0.0
121.00	Appurtenance(s)	48.7	114.4	13.8	0.0	27.7	54.5	0.0	12.6	62.5	181.6	0.0	0.0
125.00		86.3	446.5					0.0	43.6	86.3	490.1	0.0	0.0
130.00	Appurtenance(s)	93.6	537.5	787.0	0.0	337.6	9,774.7	0.0	54.5	880.6	10,366.7	0.0	0.0
135.00		73.2	515.6					0.0	30.5	73.2	546.1	0.0	0.0
138.00	Appurtenance(s)	44.9	300.1	890.3	0.0	0.0	7,431.1	0.0	18.3	935.2	7,749.5	0.0	0.0
140.00	Appurtenance(s)	17.8	196.1	84.8	0.0	84.8	220.6	0.0	0.8	102.6	417.5	0.0	0.0
								Totals:		7,333.47	91,774.1	0.00	0.00

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph with 0.75 in Radial Ice 23 Iterations

Gust Response Factor :1.10 Ice Dead Load Factor :1.00 Wind Importance Factor :1.00
Dead Load Factor :1.20 Ice Importance Factor :1.00
Wind Load Factor :1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-91.77	-7.32	0.00	-784.42	0.00	784.42	5,497.77	2,748.88	10,504.0	5,259.85	0.00	0.00	0.166
5.00	-89.61	-7.29	0.00	-747.83	0.00	747.83	5,379.84	2,689.92	10,055.9	5,035.45	0.03	-0.05	0.165
10.00	-87.45	-7.25	0.00	-711.40	0.00	711.40	5,261.92	2,630.96	9,617.62	4,815.96	0.11	-0.11	0.164
15.00	-85.32	-7.22	0.00	-675.13	0.00	675.13	5,144.00	2,572.00	9,189.04	4,601.35	0.26	-0.16	0.163
20.00	-83.21	-7.19	0.00	-639.02	0.00	639.02	5,026.07	2,513.04	8,770.23	4,391.63	0.46	-0.22	0.162
25.00	-81.13	-7.15	0.00	-603.09	0.00	603.09	4,908.15	2,454.08	8,361.19	4,186.81	0.72	-0.28	0.161
30.00	-79.08	-7.11	0.00	-567.33	0.00	567.33	4,790.23	2,395.11	7,961.92	3,986.88	1.04	-0.33	0.159
35.00	-77.07	-7.07	0.00	-531.76	0.00	531.76	4,672.31	2,336.15	7,572.42	3,791.84	1.42	-0.39	0.157
40.00	-75.10	-7.03	0.00	-496.40	0.00	496.40	4,554.38	2,277.19	7,192.68	3,601.69	1.86	-0.45	0.154
45.00	-73.16	-6.99	0.00	-461.26	0.00	461.26	4,436.46	2,218.23	6,822.72	3,416.43	2.37	-0.51	0.152
46.25	-72.68	-6.97	0.00	-452.52	0.00	452.52	4,406.98	2,203.49	6,731.76	3,370.88	2.50	-0.52	0.151
50.00	-70.33	-6.93	0.00	-426.40	0.00	426.40	4,318.54	2,159.27	6,462.53	3,236.07	2.93	-0.57	0.148
51.00	-69.71	-6.90	0.00	-419.47	0.00	419.47	4,412.85	2,206.43	6,749.84	3,379.93	3.05	-0.58	0.140
55.00	-68.19	-6.84	0.00	-391.87	0.00	391.87	4,318.52	2,159.26	6,462.46	3,236.03	3.56	-0.63	0.137
60.00	-66.33	-6.77	0.00	-357.66	0.00	357.66	4,200.59	2,100.30	6,112.04	3,060.56	4.25	-0.68	0.133
65.00	-64.50	-6.69	0.00	-323.82	0.00	323.82	4,082.67	2,041.33	5,771.38	2,889.98	4.99	-0.74	0.128
70.00	-62.72	-6.61	0.00	-290.36	0.00	290.36	3,964.75	1,982.37	5,440.50	2,724.29	5.79	-0.79	0.122
75.00	-60.97	-6.53	0.00	-257.30	0.00	257.30	3,846.82	1,923.41	5,119.38	2,563.49	6.65	-0.84	0.116
80.00	-59.27	-6.44	0.00	-224.65	0.00	224.65	3,728.90	1,864.45	4,808.03	2,407.59	7.56	-0.89	0.109
85.00	-57.61	-6.37	0.00	-192.45	0.00	192.45	3,610.98	1,805.49	4,506.45	2,256.57	8.51	-0.94	0.101
87.00	-48.01	-5.46	0.00	-179.71	0.00	179.71	3,563.81	1,781.90	4,388.55	2,197.54	8.91	-0.96	0.095
90.00	-47.09	-5.39	0.00	-163.34	0.00	163.34	3,493.05	1,746.53	4,214.63	2,110.45	9.52	-0.98	0.091
93.50	-46.03	-5.34	0.00	-144.47	0.00	144.47	3,410.51	1,705.25	4,016.18	2,011.07	10.25	-1.01	0.085
95.00	-45.48	-5.30	0.00	-136.46	0.00	136.46	3,375.13	1,687.57	3,932.59	1,969.22	10.57	-1.02	0.083
97.25	-44.66	-5.24	0.00	-124.54	0.00	124.54	1,102.89	551.44	1,309.83	655.89	11.05	-1.04	0.230
100.00	-36.21	-4.31	0.00	-110.12	0.00	110.12	1,091.10	545.55	1,270.97	636.43	11.66	-1.06	0.206
105.00	-35.45	-4.24	0.00	-88.58	0.00	88.58	1,068.74	534.37	1,200.66	601.22	12.82	-1.14	0.181
110.00	-25.13	-3.20	0.00	-67.40	0.00	67.40	1,045.19	522.60	1,130.92	566.30	14.06	-1.22	0.143
115.00	-24.47	-3.14	0.00	-51.39	0.00	51.39	1,020.46	510.23	1,061.89	531.74	15.37	-1.28	0.121
116.00	-24.14	-3.05	0.00	-48.25	0.00	48.25	1,015.38	507.69	1,048.19	524.87	15.63	-1.29	0.116
120.00	-19.70	-2.60	0.00	-36.03	0.00	36.03	994.55	497.27	993.73	497.61	16.73	-1.33	0.092
121.00	-19.52	-2.54	0.00	-33.40	0.00	33.40	989.22	494.61	980.22	490.84	17.01	-1.34	0.088
125.00	-19.03	-2.45	0.00	-23.24	0.00	23.24	967.45	483.72	926.59	463.98	18.15	-1.37	0.070
130.00	-8.68	-1.32	0.00	-10.64	0.00	10.64	939.16	469.58	860.60	430.94	19.60	-1.40	0.034
135.00	-8.14	-1.24	0.00	-4.03	0.00	4.03	909.69	454.85	795.92	398.55	21.07	-1.41	0.019
138.00	-0.41	-0.11	0.00	-0.31	0.00	0.31	891.44	445.72	757.80	379.46	21.95	-1.41	0.001
140.00	0.00	-0.10	0.00	-0.08	0.00	0.08	879.04	439.52	732.69	366.89	22.54	-1.41	0.000

Load Case: 1.0D + 1.0W Serviceability 60 mph 22 Iterations

Gust Response Factor :1.10 Wind Importance Factor 1.00
Dead Load Factor :1.00
Wind Load Factor :1.00

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces Wind FX (lb)	Shaft Forces Dead Load (lb)	Discrete Forces Wind FX (lb)	Discrete Forces Torsion MY (lb-ft)	Discrete Forces Moment MZ (lb-ft)	Discrete Forces Dead Load (lb)	Linear Forces Wind FX (lb)	Linear Forces Dead Load (lb)	Sum of Forces Wind FX (lb)	Sum of Forces Dead Load (lb)	Sum of Forces Torsion MY (lb-ft)	Sum of Forces Moment MZ (lb)
0.00		38.7	0.0					0.0	0.0	38.7	0.0	0.0	0.0
5.00		76.5	1,245.5					0.0	261.1	76.5	1,506.6	0.0	0.0
10.00		74.9	1,218.5					0.0	261.1	74.9	1,479.6	0.0	0.0
15.00		73.2	1,191.5					0.0	261.1	73.2	1,452.6	0.0	0.0
20.00		71.5	1,164.5					0.0	261.1	71.5	1,425.5	0.0	0.0
25.00		69.9	1,137.5					0.0	261.1	69.9	1,398.5	0.0	0.0
30.00		69.0	1,110.5					0.0	261.1	69.0	1,371.5	0.0	0.0
35.00		69.6	1,083.5					0.0	261.1	69.6	1,344.5	0.0	0.0
40.00		70.5	1,056.5					0.0	261.1	70.5	1,317.5	0.0	0.0
45.00		44.3	1,029.5					0.0	261.1	44.3	1,290.5	0.0	0.0
46.25	Bot - Section 2	36.3	253.1					0.0	65.3	36.3	318.4	0.0	0.0
50.00		34.8	1,518.9					0.0	195.8	34.8	1,714.7	0.0	0.0
51.00	Top - Section 1	36.6	399.9					0.0	52.2	36.6	452.1	0.0	0.0
55.00		65.9	799.8					0.0	208.8	65.9	1,008.6	0.0	0.0
60.00		73.1	975.5					0.0	261.1	73.1	1,236.5	0.0	0.0
65.00		72.7	948.5					0.0	261.1	72.7	1,209.5	0.0	0.0
70.00		72.2	921.4					0.0	261.1	72.2	1,182.5	0.0	0.0
75.00		71.4	894.4					0.0	261.1	71.4	1,155.5	0.0	0.0
80.00		70.6	867.4					0.0	261.1	70.6	1,128.5	0.0	0.0
85.00		48.9	840.4					0.0	261.1	48.9	1,101.5	0.0	0.0
87.00	Appurtenance(s)	34.5	328.6	664.5	0.0	0.0	2,785.8	0.0	104.4	699.0	3,218.8	0.0	0.0
90.00		44.5	484.8					0.0	116.0	44.5	600.8	0.0	0.0
93.50	Bot - Section 3	34.1	553.3					0.0	135.3	34.1	688.6	0.0	0.0
95.00		25.5	322.6					0.0	58.0	25.5	380.6	0.0	0.0
97.25	Top - Section 2	33.7	477.6					0.0	87.0	33.7	564.6	0.0	0.0
100.00	Appurtenance(s)	51.5	159.2	646.5	0.0	0.0	2,399.4	0.0	106.3	698.0	2,664.9	0.0	0.0
105.00		65.3	281.6					0.0	93.8	65.3	375.4	0.0	0.0
110.00	Appurtenance(s)	63.8	271.5	653.7	0.0	0.0	2,817.2	0.0	93.8	717.5	3,182.5	0.0	0.0
115.00		37.7	261.4					0.0	54.0	37.7	315.4	0.0	0.0
116.00	Appurtenance(s)	30.7	51.1	31.3	0.0	0.0	50.0	0.0	10.8	61.9	111.9	0.0	0.0
120.00	Appurtenance(s)	30.5	200.2	234.1	0.0	0.0	1,500.0	0.0	42.0	264.6	1,742.2	0.0	0.0
121.00	Appurtenance(s)	29.8	49.0	6.7	0.0	13.4	8.3	0.0	10.5	36.5	67.8	0.0	0.0
125.00		52.6	192.1					0.0	36.4	52.6	228.4	0.0	0.0
130.00	Appurtenance(s)	56.8	231.0	711.7	0.0	322.6	3,011.3	0.0	45.5	768.5	3,287.7	0.0	0.0
135.00		44.2	220.9					0.0	25.5	44.2	246.3	0.0	0.0
138.00	Appurtenance(s)	26.9	127.7	749.0	0.0	0.0	2,160.0	0.0	15.3	775.9	2,302.9	0.0	0.0
140.00	Appurtenance(s)	10.7	83.1	42.4	0.0	42.4	40.0	0.0	0.7	53.0	123.7	0.0	0.0
								Totals:		5,653.20	43,197.3	0.00	0.00

Load Case: 1.0D + 1.0W Serviceability 60 mph 22 Iterations

Gust Response Factor :1.10 Wind Importance Factor 1.00
Dead Load Factor :1.00
Wind Load Factor :1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-43.20	-5.63	0.00	-579.11	0.00	579.11	5,497.77	2,748.88	10,504.0	5,259.85	0.00	0.00	0.118
5.00	-41.68	-5.58	0.00	-550.96	0.00	550.96	5,379.84	2,689.92	10,055.9	5,035.45	0.02	-0.04	0.117
10.00	-40.20	-5.53	0.00	-523.06	0.00	523.06	5,261.92	2,630.96	9,617.62	4,815.96	0.08	-0.08	0.116
15.00	-38.75	-5.48	0.00	-495.40	0.00	495.40	5,144.00	2,572.00	9,189.04	4,601.35	0.19	-0.12	0.115
20.00	-37.32	-5.44	0.00	-467.97	0.00	467.97	5,026.07	2,513.04	8,770.23	4,391.63	0.34	-0.16	0.114
25.00	-35.91	-5.39	0.00	-440.79	0.00	440.79	4,908.15	2,454.08	8,361.19	4,186.81	0.53	-0.20	0.113
30.00	-34.54	-5.34	0.00	-413.85	0.00	413.85	4,790.23	2,395.11	7,961.92	3,986.88	0.76	-0.25	0.111
35.00	-33.19	-5.29	0.00	-387.15	0.00	387.15	4,672.31	2,336.15	7,572.42	3,791.84	1.04	-0.29	0.109
40.00	-31.87	-5.23	0.00	-360.71	0.00	360.71	4,554.38	2,277.19	7,192.68	3,601.69	1.37	-0.33	0.107
45.00	-30.58	-5.20	0.00	-334.53	0.00	334.53	4,436.46	2,218.23	6,822.72	3,416.43	1.74	-0.37	0.105
46.25	-30.26	-5.17	0.00	-328.04	0.00	328.04	4,406.98	2,203.49	6,731.76	3,370.88	1.84	-0.38	0.104
50.00	-28.54	-5.13	0.00	-308.65	0.00	308.65	4,318.54	2,159.27	6,462.53	3,236.07	2.15	-0.42	0.102
51.00	-28.09	-5.10	0.00	-303.52	0.00	303.52	4,412.85	2,206.43	6,749.84	3,379.93	2.24	-0.43	0.096
55.00	-27.08	-5.05	0.00	-283.10	0.00	283.10	4,318.52	2,159.26	6,462.46	3,236.03	2.61	-0.46	0.094
60.00	-25.84	-4.98	0.00	-257.86	0.00	257.86	4,200.59	2,100.30	6,112.04	3,060.56	3.11	-0.50	0.090
65.00	-24.62	-4.91	0.00	-232.96	0.00	232.96	4,082.67	2,041.33	5,771.38	2,889.98	3.65	-0.54	0.087
70.00	-23.44	-4.85	0.00	-208.38	0.00	208.38	3,964.75	1,982.37	5,440.50	2,724.29	4.24	-0.57	0.082
75.00	-22.28	-4.78	0.00	-184.15	0.00	184.15	3,846.82	1,923.41	5,119.38	2,563.49	4.86	-0.61	0.078
80.00	-21.15	-4.71	0.00	-160.27	0.00	160.27	3,728.90	1,864.45	4,808.03	2,407.59	5.52	-0.65	0.072
85.00	-20.05	-4.65	0.00	-136.74	0.00	136.74	3,610.98	1,805.49	4,506.45	2,256.57	6.21	-0.68	0.066
87.00	-16.84	-3.92	0.00	-127.43	0.00	127.43	3,563.81	1,781.90	4,388.55	2,197.54	6.50	-0.69	0.063
90.00	-16.24	-3.87	0.00	-115.67	0.00	115.67	3,493.05	1,746.53	4,214.63	2,110.45	6.94	-0.71	0.059
93.50	-15.55	-3.83	0.00	-102.12	0.00	102.12	3,410.51	1,705.25	4,016.18	2,011.07	7.47	-0.73	0.055
95.00	-15.17	-3.81	0.00	-96.36	0.00	96.36	3,375.13	1,687.57	3,932.59	1,969.22	7.70	-0.74	0.053
97.25	-14.60	-3.77	0.00	-87.80	0.00	87.80	1,102.89	551.44	1,309.83	655.89	8.06	-0.75	0.147
100.00	-11.94	-3.04	0.00	-77.43	0.00	77.43	1,091.10	545.55	1,270.97	636.43	8.50	-0.77	0.133
105.00	-11.57	-2.98	0.00	-62.21	0.00	62.21	1,068.74	534.37	1,200.66	601.22	9.33	-0.83	0.114
110.00	-8.39	-2.23	0.00	-47.29	0.00	47.29	1,045.19	522.60	1,130.92	566.30	10.23	-0.88	0.092
115.00	-8.08	-2.19	0.00	-36.15	0.00	36.15	1,020.46	510.23	1,061.89	531.74	11.17	-0.92	0.076
116.00	-7.97	-2.13	0.00	-33.97	0.00	33.97	1,015.38	507.69	1,048.19	524.87	11.36	-0.93	0.073
120.00	-6.23	-1.84	0.00	-25.46	0.00	25.46	994.55	497.27	993.73	497.61	12.15	-0.96	0.057
121.00	-6.16	-1.80	0.00	-23.61	0.00	23.61	989.22	494.61	980.22	490.84	12.36	-0.96	0.054
125.00	-5.93	-1.74	0.00	-16.41	0.00	16.41	967.45	483.72	926.59	463.98	13.17	-0.99	0.042
130.00	-2.66	-0.92	0.00	-7.37	0.00	7.37	939.16	469.58	860.60	430.94	14.22	-1.00	0.020
135.00	-2.41	-0.87	0.00	-2.77	0.00	2.77	909.69	454.85	795.92	398.55	15.27	-1.01	0.010
138.00	-0.12	-0.06	0.00	-0.15	0.00	0.15	891.44	445.72	757.80	379.46	15.91	-1.01	0.001
140.00	0.00	-0.05	0.00	-0.04	0.00	0.04	879.04	439.52	732.69	366.89	16.33	-1.01	0.000

Equivalent Lateral Forces Method Analysis

(Based on ASCE7-10 Chapters 11, 12, 15)

Spectral Response Acceleration for Short Period (S_s):	0.22	
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.07	
Long-Period Transition Period (T_L):	6	
Importance Factor (I_E):	1.00	
Site Coefficient F_a:	1.60	
Site Coeffiecient F_v:	2.40	
Response Modification Coefficient (R):	1.50	
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.24	
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.11	
Seismic Response Coefficient (C_s):	0.03	
Upper Limit C_s	0.03	
Lower Limit C_s	0.03	
Period based on Rayleigh Method (sec):	2.22	
Redundancy Factor (p):	1.00	
Seismic Force Distribution Exponent (k):	1.86	
Total Unfactored Dead Load:	43.20	k
Seismic Base Shear (E):	1.37	k

Load Case (1.2 + 0.2Sds) * DL + E ELFM **Seismic Equivalent Lateral Forces Method**

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
36	139.00	84	810	0.005	7	104
35	136.50	143	1,337	0.008	12	178
34	132.50	246	2,181	0.014	19	307
33	127.50	276	2,278	0.014	20	345
32	123.00	228	1,761	0.011	15	285
31	120.50	60	442	0.003	4	74
30	118.00	242	1,728	0.011	15	302
29	115.50	62	424	0.003	4	77
28	112.50	315	2,059	0.013	18	393
27	107.50	365	2,192	0.014	19	456
26	102.50	375	2,062	0.013	18	468
25	98.63	266	1,357	0.009	12	331
24	96.13	565	2,752	0.017	24	704
23	94.25	381	1,788	0.011	15	475
22	91.75	689	3,078	0.019	26	859
21	88.50	601	2,511	0.016	22	749
20	86.00	433	1,716	0.011	15	540
19	82.50	1,101	4,040	0.025	35	1,374
18	77.50	1,128	3,685	0.023	32	1,408
17	72.50	1,155	3,333	0.021	29	1,441
16	67.50	1,182	2,986	0.019	26	1,475
15	62.50	1,210	2,647	0.017	23	1,509
14	57.50	1,237	2,317	0.015	20	1,542

13	53.00	1,009	1,624	0.010	14	1,258
12	50.50	452	666	0.004	6	564
11	48.13	1,715	2,308	0.014	20	2,139
10	45.63	318	388	0.002	3	397
9	42.50	1,291	1,378	0.009	12	1,610
8	37.50	1,318	1,115	0.007	10	1,643
7	32.50	1,345	872	0.005	8	1,677
6	27.50	1,372	652	0.004	6	1,711
5	22.50	1,399	458	0.003	4	1,744
4	17.50	1,426	292	0.002	3	1,778
3	12.50	1,453	159	0.001	1	1,812
2	7.50	1,480	63	0.000	1	1,846
1	2.50	1,507	8	0.000	0	1,879
Generic 12' Dipole	140.00	40	392	0.002	3	50
Generic 6' Omni	138.00	50	477	0.003	4	62
Generic 12' Omni	138.00	160	1,528	0.010	13	200
Generic 6' FM antenn	138.00	30	286	0.002	2	37
Generic 4' HP Dish	138.00	170	1,623	0.010	14	212
Flat Platform w/ Han	138.00	1,750	16,710	0.105	144	2,183
Alcatel-Lucent 800 M	130.00	192	1,641	0.010	14	239
Alcatel-Lucent 4x40W	130.00	273	2,333	0.015	20	341
Alcatel-Lucent TD-RR	130.00	210	1,794	0.011	15	262
RFS APXV9TM14-ALU-I2	130.00	165	1,412	0.009	12	206
RFS APXVSPP18-C-A20	130.00	171	1,461	0.009	13	213
Flat Platform w/ Han	130.00	2,000	17,090	0.107	147	2,495
Andrew DB586	121.00	8	62	0.000	1	10
Flat Low Profile Pla	120.00	1,500	11,044	0.069	95	1,871
Generic 6' Omni	116.00	50	346	0.002	3	62
Commscope CBC78T-DS-	110.00	62	389	0.002	3	77
Samsung Outdoor LAA	110.00	13	83	0.001	1	16
Samsung Outdoor CBRS	110.00	56	349	0.002	3	70
Samsung B2/B66A RRH-	110.00	253	1,586	0.010	14	316
Samsung B5/B13 RRH-B	110.00	211	1,321	0.008	11	263
RFS DB-C1-12C-24AB-0	110.00	32	200	0.001	2	40
Antel BXA-70080/6CF_	110.00	54	338	0.002	3	67
Commscope JAHH-65B-R	110.00	364	2,277	0.014	20	454
Low Profile Platform	110.00	1,772	11,100	0.070	96	2,211
Powerwave Allgon 702	100.00	26	138	0.001	1	33
Powerwave Allgon LGP	100.00	169	888	0.006	8	211
Raycap DC6-48-60-18-	100.00	32	167	0.001	1	40
Ericsson RRUS-11 (50	100.00	150	787	0.005	7	187
Ericsson RRUS 32 B2	100.00	159	834	0.005	7	198
Powerwave Allgon 777	100.00	210	1,102	0.007	9	262
CCI HPA-65R-BUU-H6	100.00	153	803	0.005	7	191
Flat Low Profile Pla	100.00	1,500	7,868	0.049	68	1,871
RFS ATMAA1412D-1A20	87.00	39	158	0.001	1	49
Ericsson Radio 4449	87.00	222	899	0.006	8	277
Ericsson AIR 21, 1.3	87.00	244	990	0.006	9	305
Ericsson AIR32 B66Aa	87.00	397	1,606	0.010	14	495
RFS APXVAARR24_43-U-	87.00	384	1,553	0.010	13	479
Flat Low Profile Pla	87.00	1,500	6,073	0.038	52	1,871
		43,197	159,175	1.000	1,370	53,883

Load Case (0.9 - 0.2Sds) * DL + E ELFM Seismic (Reduced DL) Equivalent Lateral Forces Method

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
36	139.00	84	810	0.005	7	71
35	136.50	143	1,337	0.008	12	122
34	132.50	246	2,181	0.014	19	210

33	127.50	276	2,278	0.014	20	236
32	123.00	228	1,761	0.011	15	195
31	120.50	60	442	0.003	4	51
30	118.00	242	1,728	0.011	15	206
29	115.50	62	424	0.003	4	53
28	112.50	315	2,059	0.013	18	269
27	107.50	365	2,192	0.014	19	311
26	102.50	375	2,062	0.013	18	320
25	98.63	266	1,357	0.009	12	226
24	96.13	565	2,752	0.017	24	481
23	94.25	381	1,788	0.011	15	324
22	91.75	689	3,078	0.019	26	587
21	88.50	601	2,511	0.016	22	512
20	86.00	433	1,716	0.011	15	369
19	82.50	1,101	4,040	0.025	35	939
18	77.50	1,128	3,685	0.023	32	962
17	72.50	1,155	3,333	0.021	29	985
16	67.50	1,182	2,986	0.019	26	1,008
15	62.50	1,210	2,647	0.017	23	1,031
14	57.50	1,237	2,317	0.015	20	1,054
13	53.00	1,009	1,624	0.010	14	860
12	50.50	452	666	0.004	6	385
11	48.13	1,715	2,308	0.014	20	1,462
10	45.63	318	388	0.002	3	271
9	42.50	1,291	1,378	0.009	12	1,100
8	37.50	1,318	1,115	0.007	10	1,123
7	32.50	1,345	872	0.005	8	1,146
6	27.50	1,372	652	0.004	6	1,169
5	22.50	1,399	458	0.003	4	1,192
4	17.50	1,426	292	0.002	3	1,215
3	12.50	1,453	159	0.001	1	1,239
2	7.50	1,480	63	0.000	1	1,262
1	2.50	1,507	8	0.000	0	1,285
Generic 12' Dipole	140.00	40	392	0.002	3	34
Generic 6' Omni	138.00	50	477	0.003	4	43
Generic 12' Omni	138.00	160	1,528	0.010	13	136
Generic 6' FM antenn	138.00	30	286	0.002	2	26
Generic 4' HP Dish	138.00	170	1,623	0.010	14	145
Flat Platform w/ Han	138.00	1,750	16,710	0.105	144	1,492
Alcatel-Lucent 800 M	130.00	192	1,641	0.010	14	164
Alcatel-Lucent 4x40W	130.00	273	2,333	0.015	20	233
Alcatel-Lucent TD-RR	130.00	210	1,794	0.011	15	179
RFS APXV9TM14-ALU-I2	130.00	165	1,412	0.009	12	141
RFS APXVSPP18-C-A20	130.00	171	1,461	0.009	13	146
Flat Platform w/ Han	130.00	2,000	17,090	0.107	147	1,705
Andrew DB586	121.00	8	62	0.000	1	7
Flat Low Profile Pla	120.00	1,500	11,044	0.069	95	1,279
Generic 6' Omni	116.00	50	346	0.002	3	43
Commscope CBC78T-DS-	110.00	62	389	0.002	3	53
Samsung Outdoor LAA	110.00	13	83	0.001	1	11
Samsung Outdoor CBRS	110.00	56	349	0.002	3	48
Samsung B2/B66A RRH-	110.00	253	1,586	0.010	14	216
Samsung B5/B13 RRH-B	110.00	211	1,321	0.008	11	180
RFS DB-C1-12C-24AB-0	110.00	32	200	0.001	2	27
Antel BXA-70080/6CF_	110.00	54	338	0.002	3	46
Commscope JAHH-65B-R	110.00	364	2,277	0.014	20	310
Low Profile Platform	110.00	1,772	11,100	0.070	96	1,511
Powerwave Allgon 702	100.00	26	138	0.001	1	23
Powerwave Allgon LGP	100.00	169	888	0.006	8	144
Raycap DC6-48-60-18-	100.00	32	167	0.001	1	27
Ericsson RRUS-11 (50	100.00	150	787	0.005	7	128
Ericsson RRUS 32 B2	100.00	159	834	0.005	7	136
Powerwave Allgon 777	100.00	210	1,102	0.007	9	179
CCI HPA-65R-BUU-H6	100.00	153	803	0.005	7	130

Flat Low Profile Pla	**100.00**	**1,500**	**7,868**	**0.049**	**68**	**1,279**
RFS ATMAA1412D-1A20	**87.00**	**39**	**158**	**0.001**	**1**	**33**
Ericsson Radio 4449	**87.00**	**222**	**899**	**0.006**	**8**	**189**
Ericsson AIR 21, 1.3	**87.00**	**244**	**990**	**0.006**	**9**	**208**
Ericsson AIR32 B66Aa	**87.00**	**397**	**1,606**	**0.010**	**14**	**338**
RFS APXVAARR24_43-U-	**87.00**	**384**	**1,553**	**0.010**	**13**	**327**
Flat Low Profile Pla	**87.00**	**1,500**	**6,073**	**0.038**	**52**	**1,279**
		43,197	**159,175**	**1.000**	**1,370**	**36,832**

Load Case (1.2 + 0.2Sds) * DL + E ELFM **Seismic Equivalent Lateral Forces Method**

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-52.00	-1.37	0.00	-150.98	0.00	150.98	5,497.77	2,748.88	10,504.0	5,259.85	0.00	0.00	0.038
5.00	-50.16	-1.38	0.00	-144.11	0.00	144.11	5,379.84	2,689.92	10,055.9	5,035.45	0.01	-0.01	0.038
10.00	-48.35	-1.39	0.00	-137.20	0.00	137.20	5,261.92	2,630.96	9,617.62	4,815.96	0.02	-0.02	0.038
15.00	-46.57	-1.39	0.00	-130.25	0.00	130.25	5,144.00	2,572.00	9,189.04	4,601.35	0.05	-0.03	0.037
20.00	-44.82	-1.40	0.00	-123.28	0.00	123.28	5,026.07	2,513.04	8,770.23	4,391.63	0.09	-0.04	0.037
25.00	-43.11	-1.40	0.00	-116.29	0.00	116.29	4,908.15	2,454.08	8,361.19	4,186.81	0.14	-0.05	0.037
30.00	-41.43	-1.40	0.00	-109.29	0.00	109.29	4,790.23	2,395.11	7,961.92	3,986.88	0.20	-0.06	0.036
35.00	-39.79	-1.39	0.00	-102.30	0.00	102.30	4,672.31	2,336.15	7,572.42	3,791.84	0.27	-0.08	0.035
40.00	-38.18	-1.39	0.00	-95.32	0.00	95.32	4,554.38	2,277.19	7,192.68	3,601.69	0.36	-0.09	0.035
45.00	-37.78	-1.39	0.00	-88.38	0.00	88.38	4,436.46	2,218.23	6,822.72	3,416.43	0.46	-0.10	0.034
46.25	-35.64	-1.37	0.00	-86.65	0.00	86.65	4,406.98	2,203.49	6,731.76	3,370.88	0.48	-0.10	0.034
50.00	-35.08	-1.37	0.00	-81.51	0.00	81.51	4,318.54	2,159.27	6,462.53	3,236.07	0.56	-0.11	0.033
51.00	-33.82	-1.35	0.00	-80.15	0.00	80.15	4,412.85	2,206.43	6,749.84	3,379.93	0.59	-0.11	0.031
55.00	-32.28	-1.33	0.00	-74.74	0.00	74.74	4,318.52	2,159.26	6,462.46	3,236.03	0.69	-0.12	0.031
60.00	-30.77	-1.31	0.00	-68.07	0.00	68.07	4,200.59	2,100.30	6,112.04	3,060.56	0.82	-0.13	0.030
65.00	-29.29	-1.29	0.00	-61.50	0.00	61.50	4,082.67	2,041.33	5,771.38	2,889.98	0.96	-0.14	0.028
70.00	-27.85	-1.26	0.00	-55.05	0.00	55.05	3,964.75	1,982.37	5,440.50	2,724.29	1.11	-0.15	0.027
75.00	-26.45	-1.23	0.00	-48.73	0.00	48.73	3,846.82	1,923.41	5,119.38	2,563.49	1.28	-0.16	0.026
80.00	-25.07	-1.20	0.00	-42.58	0.00	42.58	3,728.90	1,864.45	4,808.03	2,407.59	1.45	-0.17	0.024
85.00	-24.53	-1.18	0.00	-36.59	0.00	36.59	3,610.98	1,805.49	4,506.45	2,256.57	1.64	-0.18	0.023
87.00	-20.31	-1.05	0.00	-34.23	0.00	34.23	3,563.81	1,781.90	4,388.55	2,197.54	1.71	-0.18	0.021
90.00	-19.45	-1.02	0.00	-31.07	0.00	31.07	3,493.05	1,746.53	4,214.63	2,110.45	1.83	-0.19	0.020
93.50	-18.97	-1.01	0.00	-27.48	0.00	27.48	3,410.51	1,705.25	4,016.18	2,011.07	1.97	-0.19	0.019
95.00	-18.27	-0.98	0.00	-25.97	0.00	25.97	3,375.13	1,687.57	3,932.59	1,969.22	2.03	-0.20	0.019
97.25	-17.94	-0.97	0.00	-23.76	0.00	23.76	1,102.89	551.44	1,309.83	655.89	2.12	-0.20	0.052
100.00	-14.48	-0.84	0.00	-21.08	0.00	21.08	1,091.10	545.55	1,270.97	636.43	2.24	-0.20	0.046
105.00	-14.02	-0.82	0.00	-16.90	0.00	16.90	1,068.74	534.37	1,200.66	601.22	2.46	-0.22	0.041
110.00	-10.11	-0.64	0.00	-12.80	0.00	12.80	1,045.19	522.60	1,130.92	566.30	2.70	-0.23	0.032
115.00	-10.04	-0.63	0.00	-9.61	0.00	9.61	1,020.46	510.23	1,061.89	531.74	2.95	-0.24	0.028
116.00	-9.67	-0.62	0.00	-8.98	0.00	8.98	1,015.38	507.69	1,048.19	524.87	3.00	-0.25	0.027
120.00	-7.73	-0.51	0.00	-6.52	0.00	6.52	994.55	497.27	993.73	497.61	3.21	-0.25	0.021
121.00	-7.43	-0.49	0.00	-6.01	0.00	6.01	989.22	494.61	980.22	490.84	3.26	-0.26	0.020
125.00	-7.09	-0.47	0.00	-4.04	0.00	4.04	967.45	483.72	926.59	463.98	3.48	-0.26	0.016
130.00	-3.03	-0.21	0.00	-1.68	0.00	1.68	939.16	469.58	860.60	430.94	3.76	-0.27	0.007
135.00	-2.85	-0.20	0.00	-0.61	0.00	0.61	909.69	454.85	795.92	398.55	4.03	-0.27	0.005
138.00	-0.05	0.00	0.00	-0.01	0.00	0.01	891.44	445.72	757.80	379.46	4.20	-0.27	0.000
140.00	0.00	0.00	0.00	0.00	0.00	0.00	879.04	439.52	732.69	366.89	4.31	-0.27	0.000

Load Case (0.9 - 0.2Sds) * DL + E ELFM **Seismic (Reduced DL) Equivalent Lateral Forces Method**

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-35.55	-1.37	0.00	-148.71	0.00	148.71	5,497.77	2,748.88	10,504.0	5,259.85	0.00	0.00	0.035
5.00	-34.29	-1.38	0.00	-141.85	0.00	141.85	5,379.84	2,689.92	10,055.9	5,035.45	0.01	-0.01	0.035
10.00	-33.05	-1.38	0.00	-134.96	0.00	134.96	5,261.92	2,630.96	9,617.62	4,815.96	0.02	-0.02	0.034
15.00	-31.83	-1.39	0.00	-128.05	0.00	128.05	5,144.00	2,572.00	9,189.04	4,601.35	0.05	-0.03	0.034
20.00	-30.64	-1.39	0.00	-121.12	0.00	121.12	5,026.07	2,513.04	8,770.23	4,391.63	0.09	-0.04	0.034
25.00	-29.47	-1.39	0.00	-114.19	0.00	114.19	4,908.15	2,454.08	8,361.19	4,186.81	0.14	-0.05	0.033
30.00	-28.32	-1.38	0.00	-107.27	0.00	107.27	4,790.23	2,395.11	7,961.92	3,986.88	0.20	-0.06	0.033
35.00	-27.20	-1.38	0.00	-100.36	0.00	100.36	4,672.31	2,336.15	7,572.42	3,791.84	0.27	-0.07	0.032
40.00	-26.10	-1.37	0.00	-93.48	0.00	93.48	4,554.38	2,277.19	7,192.68	3,601.69	0.35	-0.09	0.032
45.00	-25.83	-1.37	0.00	-86.64	0.00	86.64	4,436.46	2,218.23	6,822.72	3,416.43	0.45	-0.10	0.031
46.25	-24.36	-1.35	0.00	-84.93	0.00	84.93	4,406.98	2,203.49	6,731.76	3,370.88	0.47	-0.10	0.031
50.00	-23.98	-1.34	0.00	-79.87	0.00	79.87	4,318.54	2,159.27	6,462.53	3,236.07	0.56	-0.11	0.030
51.00	-23.12	-1.33	0.00	-78.53	0.00	78.53	4,412.85	2,206.43	6,749.84	3,379.93	0.58	-0.11	0.028
55.00	-22.06	-1.31	0.00	-73.21	0.00	73.21	4,318.52	2,159.26	6,462.46	3,236.03	0.67	-0.12	0.028
60.00	-21.03	-1.29	0.00	-66.66	0.00	66.66	4,200.59	2,100.30	6,112.04	3,060.56	0.80	-0.13	0.027
65.00	-20.02	-1.27	0.00	-60.21	0.00	60.21	4,082.67	2,041.33	5,771.38	2,889.98	0.94	-0.14	0.026
70.00	-19.04	-1.24	0.00	-53.88	0.00	53.88	3,964.75	1,982.37	5,440.50	2,724.29	1.10	-0.15	0.025
75.00	-18.08	-1.21	0.00	-47.69	0.00	47.69	3,846.82	1,923.41	5,119.38	2,563.49	1.26	-0.16	0.023
80.00	-17.14	-1.17	0.00	-41.66	0.00	41.66	3,728.90	1,864.45	4,808.03	2,407.59	1.43	-0.17	0.022
85.00	-16.77	-1.16	0.00	-35.80	0.00	35.80	3,610.98	1,805.49	4,506.45	2,256.57	1.61	-0.18	0.021
87.00	-13.88	-1.03	0.00	-33.49	0.00	33.49	3,563.81	1,781.90	4,388.55	2,197.54	1.68	-0.18	0.019
90.00	-13.29	-1.00	0.00	-30.40	0.00	30.40	3,493.05	1,746.53	4,214.63	2,110.45	1.80	-0.18	0.018
93.50	-12.97	-0.99	0.00	-26.88	0.00	26.88	3,410.51	1,705.25	4,016.18	2,011.07	1.93	-0.19	0.017
95.00	-12.49	-0.96	0.00	-25.40	0.00	25.40	3,375.13	1,687.57	3,932.59	1,969.22	1.99	-0.19	0.017
97.25	-12.26	-0.95	0.00	-23.24	0.00	23.24	1,102.89	551.44	1,309.83	655.89	2.08	-0.20	0.047
100.00	-9.90	-0.82	0.00	-20.62	0.00	20.62	1,091.10	545.55	1,270.97	636.43	2.20	-0.20	0.041
105.00	-9.58	-0.80	0.00	-16.52	0.00	16.52	1,068.74	534.37	1,200.66	601.22	2.41	-0.21	0.036
110.00	-6.91	-0.62	0.00	-12.51	0.00	12.51	1,045.19	522.60	1,130.92	566.30	2.65	-0.23	0.029
115.00	-6.86	-0.62	0.00	-9.40	0.00	9.40	1,020.46	510.23	1,061.89	531.74	2.89	-0.24	0.024
116.00	-6.61	-0.60	0.00	-8.78	0.00	8.78	1,015.38	507.69	1,048.19	524.87	2.94	-0.24	0.023
120.00	-5.28	-0.50	0.00	-6.37	0.00	6.37	994.55	497.27	993.73	497.61	3.15	-0.25	0.018
121.00	-5.08	-0.48	0.00	-5.87	0.00	5.87	989.22	494.61	980.22	490.84	3.20	-0.25	0.017
125.00	-4.84	-0.46	0.00	-3.95	0.00	3.95	967.45	483.72	926.59	463.98	3.41	-0.26	0.014
130.00	-2.07	-0.21	0.00	-1.64	0.00	1.64	939.16	469.58	860.60	430.94	3.68	-0.26	0.006
135.00	-1.95	-0.20	0.00	-0.60	0.00	0.60	909.69	454.85	795.92	398.55	3.96	-0.26	0.004
138.00	-0.03	0.00	0.00	-0.01	0.00	0.01	891.44	445.72	757.80	379.46	4.12	-0.26	0.000
140.00	0.00	0.00	0.00	0.00	0.00	0.00	879.04	439.52	732.69	366.89	4.23	-0.26	0.000

Equivalent Modal Analysis Method

(Based on ASCE7-10 Chapters 11, 12 & 15 and ANSI/TIA-G, section 2.7)

Spectral Response Acceleration for Short Period (S_s):	0.22
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.07
Importance Factor (I_E):	1.00
Site Coefficient F_a:	1.60
Site Coefficient F_v	2.40
Response Modification Coefficient (R):	1.50
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.24
Desing Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.11
Period Based on Rayleigh Method (sec):	2.22
Redundancy Factor (p):	1.00

Load Case (1.2 + 0.2Sds) * DL + E EMAM **Seismic Equivalent Modal Analysis Method**

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
36	139.00	84	1.863	1.841	1.090	0.427	24	104
35	136.50	143	1.797	1.523	0.972	0.376	36	178
34	132.50	246	1.693	1.096	0.804	0.300	49	307
33	127.50	276	1.568	0.682	0.627	0.216	40	345
32	123.00	228	1.459	0.405	0.495	0.150	23	285
31	120.50	60	1.400	0.284	0.432	0.117	5	74
30	118.00	242	1.343	0.184	0.375	0.088	14	302
29	115.50	62	1.286	0.102	0.324	0.060	2	77
28	112.50	315	1.220	0.025	0.270	0.031	7	393
27	107.50	365	1.114	-0.061	0.196	-0.008	-2	456
26	102.50	375	1.013	-0.106	0.138	-0.037	-9	468
25	98.63	266	0.938	-0.120	0.103	-0.052	-9	331
24	96.13	565	0.891	-0.122	0.084	-0.058	-22	704
23	94.25	381	0.857	-0.120	0.072	-0.060	-15	475
22	91.75	689	0.812	-0.114	0.057	-0.062	-28	859
21	88.50	601	0.755	-0.102	0.042	-0.059	-24	749
20	86.00	433	0.713	-0.091	0.032	-0.054	-16	540
19	82.50	1,101	0.656	-0.073	0.022	-0.044	-32	1,374
18	77.50	1,128	0.579	-0.045	0.012	-0.023	-17	1,408
17	72.50	1,155	0.507	-0.019	0.007	0.002	2	1,441
16	67.50	1,182	0.439	0.005	0.006	0.025	20	1,475
15	62.50	1,210	0.377	0.025	0.007	0.044	35	1,509
14	57.50	1,237	0.319	0.041	0.011	0.056	46	1,542
13	53.00	1,009	0.271	0.051	0.015	0.063	42	1,258
12	50.50	452	0.246	0.056	0.018	0.065	20	564
11	48.13	1,715	0.223	0.060	0.020	0.066	75	2,139
10	45.63	318	0.201	0.063	0.023	0.067	14	397
9	42.50	1,291	0.174	0.066	0.027	0.067	57	1,610
8	37.50	1,318	0.136	0.069	0.032	0.065	57	1,643
7	32.50	1,345	0.102	0.071	0.037	0.064	57	1,677
6	27.50	1,372	0.073	0.072	0.040	0.062	57	1,711
5	22.50	1,399	0.049	0.071	0.042	0.060	56	1,744
4	17.50	1,426	0.030	0.068	0.040	0.058	55	1,778
3	12.50	1,453	0.015	0.061	0.036	0.053	51	1,812

2	7.50	1,480	0.005	0.046	0.026	0.042	42	1,846
1	2.50	1,507	0.001	0.019	0.010	0.020	20	1,879
Generic 12' Dipole	140.00	40	1.890	1.980	1.140	0.448	12	50
Generic 6' Omni	138.00	50	1.836	1.709	1.041	0.406	14	62
Generic 12' Omni	138.00	160	1.836	1.709	1.041	0.406	43	200
Generic 6' FM antenn	138.00	30	1.836	1.709	1.041	0.406	8	37
Generic 4' HP Dish	138.00	170	1.836	1.709	1.041	0.406	46	212
Flat Platform w/ Han	138.00	1,750	1.836	1.709	1.041	0.406	474	2,183
Alcatel-Lucent 800 M	130.00	192	1.630	0.873	0.711	0.257	33	239
Alcatel-Lucent 4x40W	130.00	273	1.630	0.873	0.711	0.257	47	341
Alcatel-Lucent TD-RR	130.00	210	1.630	0.873	0.711	0.257	36	262
RFS APXV9TM14-ALU-I2	130.00	165	1.630	0.873	0.711	0.257	28	206
RFS APXVSPP18-C-A20	130.00	171	1.630	0.873	0.711	0.257	29	213
Flat Platform w/ Han	130.00	2,000	1.630	0.873	0.711	0.257	342	2,495
Andrew DB586	121.00	8	1.412	0.307	0.444	0.124	1	10
Flat Low Profile Pla	120.00	1,500	1.389	0.263	0.420	0.111	111	1,871
Generic 6' Omni	116.00	50	1.298	0.117	0.334	0.066	2	62
Commscope CBC78T-	110.00	62	1.167	-0.024	0.231	0.010	0	77
Samsung Outdoor LAA	110.00	13	1.167	-0.024	0.231	0.010	0	16
Samsung Outdoor	110.00	56	1.167	-0.024	0.231	0.010	0	70
Samsung B2/B66A RRH-	110.00	253	1.167	-0.024	0.231	0.010	2	316
Samsung B5/B13 RRH-B	110.00	211	1.167	-0.024	0.231	0.010	1	263
RFS DB-C1-12C-24AB-0	110.00	32	1.167	-0.024	0.231	0.010	0	40
Antel BXA-70080/6CF_	110.00	54	1.167	-0.024	0.231	0.010	0	67
Commscope JAHH-65B-	110.00	364	1.167	-0.024	0.231	0.010	3	454
Low Profile Platform	110.00	1,772	1.167	-0.024	0.231	0.010	12	2,211
Powerwave Allgon 702	100.00	26	0.964	-0.117	0.114	-0.047	-1	33
Powerwave Allgon LGP	100.00	169	0.964	-0.117	0.114	-0.047	-5	211
Raycap DC6-48-60-18-	100.00	32	0.964	-0.117	0.114	-0.047	-1	40
Ericsson RRUS-11 (50	100.00	150	0.964	-0.117	0.114	-0.047	-5	187
Ericsson RRUS 32 B2	100.00	159	0.964	-0.117	0.114	-0.047	-5	198
Powerwave Allgon 777	100.00	210	0.964	-0.117	0.114	-0.047	-7	262
CCI HPA-65R-BUU-H6	100.00	153	0.964	-0.117	0.114	-0.047	-5	191
Flat Low Profile Pla	100.00	1,500	0.964	-0.117	0.114	-0.047	-47	1,871
RFS ATMAA1412D-1A20	87.00	39	0.730	-0.096	0.036	-0.057	-1	49
Ericsson Radio 4449	87.00	222	0.730	-0.096	0.036	-0.057	-8	277
Ericsson AIR 21, 1.3	87.00	244	0.730	-0.096	0.036	-0.057	-9	305
Ericsson AIR32 B66Aa	87.00	397	0.730	-0.096	0.036	-0.057	-15	495
RFS APXVAARR24_43-U-	87.00	384	0.730	-0.096	0.036	-0.057	-14	479
Flat Low Profile Pla	87.00	1,500	0.730	-0.096	0.036	-0.057	-57	1,871
		43,197	72.666	20.734	21.562	5.883	1,797	53,883

Load Case (0.9 - 0.2Sds) * DL + E EMAM Seismic (Reduced DL) Equivalent Modal Analysis Method

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
36	139.00	84	1.863	1.841	1.090	0.427	24	71
35	136.50	143	1.797	1.523	0.972	0.376	36	122
34	132.50	246	1.693	1.096	0.804	0.300	49	210
33	127.50	276	1.568	0.682	0.627	0.216	40	236
32	123.00	228	1.459	0.405	0.495	0.150	23	195
31	120.50	60	1.400	0.284	0.432	0.117	5	51
30	118.00	242	1.343	0.184	0.375	0.088	14	206
29	115.50	62	1.286	0.102	0.324	0.060	2	53
28	112.50	315	1.220	0.025	0.270	0.031	7	269
27	107.50	365	1.114	-0.061	0.196	-0.008	-2	311
26	102.50	375	1.013	-0.106	0.138	-0.037	-9	320
25	98.63	266	0.938	-0.120	0.103	-0.052	-9	226
24	96.13	565	0.891	-0.122	0.084	-0.058	-22	481

23	94.25	381	0.857	-0.120	0.072	-0.060	-15	324
22	91.75	689	0.812	-0.114	0.057	-0.062	-28	587
21	88.50	601	0.755	-0.102	0.042	-0.059	-24	512
20	86.00	433	0.713	-0.091	0.032	-0.054	-16	369
19	82.50	1,101	0.656	-0.073	0.022	-0.044	-32	939
18	77.50	1,128	0.579	-0.045	0.012	-0.023	-17	962
17	72.50	1,155	0.507	-0.019	0.007	0.002	2	985
16	67.50	1,182	0.439	0.005	0.006	0.025	20	1,008
15	62.50	1,210	0.377	0.025	0.007	0.044	35	1,031
14	57.50	1,237	0.319	0.041	0.011	0.056	46	1,054
13	53.00	1,009	0.271	0.051	0.015	0.063	42	860
12	50.50	452	0.246	0.056	0.018	0.065	20	385
11	48.13	1,715	0.223	0.060	0.020	0.066	75	1,462
10	45.63	318	0.201	0.063	0.023	0.067	14	271
9	42.50	1,291	0.174	0.066	0.027	0.067	57	1,100
8	37.50	1,318	0.136	0.069	0.032	0.065	57	1,123
7	32.50	1,345	0.102	0.071	0.037	0.064	57	1,146
6	27.50	1,372	0.073	0.072	0.040	0.062	57	1,169
5	22.50	1,399	0.049	0.071	0.042	0.060	56	1,192
4	17.50	1,426	0.030	0.068	0.040	0.058	55	1,215
3	12.50	1,453	0.015	0.061	0.036	0.053	51	1,239
2	7.50	1,480	0.005	0.046	0.026	0.042	42	1,262
1	2.50	1,507	0.001	0.019	0.010	0.020	20	1,285
Generic 12' Dipole	140.00	40	1.890	1.980	1.140	0.448	12	34
Generic 6' Omni	138.00	50	1.836	1.709	1.041	0.406	14	43
Generic 12' Omni	138.00	160	1.836	1.709	1.041	0.406	43	136
Generic 6' FM antenn	138.00	30	1.836	1.709	1.041	0.406	8	26
Generic 4' HP Dish	138.00	170	1.836	1.709	1.041	0.406	46	145
Flat Platform w/ Han	138.00	1,750	1.836	1.709	1.041	0.406	474	1,492
Alcatel-Lucent 800 M	130.00	192	1.630	0.873	0.711	0.257	33	164
Alcatel-Lucent 4x40W	130.00	273	1.630	0.873	0.711	0.257	47	233
Alcatel-Lucent TD-RR	130.00	210	1.630	0.873	0.711	0.257	36	179
RFS APXV9TM14-ALU-I2	130.00	165	1.630	0.873	0.711	0.257	28	141
RFS APXVSPP18-C-A20	130.00	171	1.630	0.873	0.711	0.257	29	146
Flat Platform w/ Han	130.00	2,000	1.630	0.873	0.711	0.257	342	1,705
Andrew DB586	121.00	8	1.412	0.307	0.444	0.124	1	7
Flat Low Profile Pla	120.00	1,500	1.389	0.263	0.420	0.111	111	1,279
Generic 6' Omni	116.00	50	1.298	0.117	0.334	0.066	2	43
Commscope CBC78T-	110.00	62	1.167	-0.024	0.231	0.010	0	53
Samsung Outdoor LAA	110.00	13	1.167	-0.024	0.231	0.010	0	11
Samsung Outdoor	110.00	56	1.167	-0.024	0.231	0.010	0	48
Samsung B2/B66A RRH-	110.00	253	1.167	-0.024	0.231	0.010	2	216
Samsung B5/B13 RRH-B	110.00	211	1.167	-0.024	0.231	0.010	1	180
RFS DB-C1-12C-24AB-0	110.00	32	1.167	-0.024	0.231	0.010	0	27
Antel BXA-70080/6CF_	110.00	54	1.167	-0.024	0.231	0.010	0	46
Commscope JAHH-65B-	110.00	364	1.167	-0.024	0.231	0.010	3	310
Low Profile Platform	110.00	1,772	1.167	-0.024	0.231	0.010	12	1,511
Powerwave Allgon 702	100.00	26	0.964	-0.117	0.114	-0.047	-1	23
Powerwave Allgon LGP	100.00	169	0.964	-0.117	0.114	-0.047	-5	144
Raycap DC6-48-60-18-	100.00	32	0.964	-0.117	0.114	-0.047	-1	27
Ericsson RRUS-11 (50	100.00	150	0.964	-0.117	0.114	-0.047	-5	128
Ericsson RRUS 32 B2	100.00	159	0.964	-0.117	0.114	-0.047	-5	136
Powerwave Allgon 777	100.00	210	0.964	-0.117	0.114	-0.047	-7	179
CCI HPA-65R-BUU-H6	100.00	153	0.964	-0.117	0.114	-0.047	-5	130
Flat Low Profile Pla	100.00	1,500	0.964	-0.117	0.114	-0.047	-47	1,279
RFS ATMAA1412D-1A20	87.00	39	0.730	-0.096	0.036	-0.057	-1	33
Ericsson Radio 4449	87.00	222	0.730	-0.096	0.036	-0.057	-8	189
Ericsson AIR 21, 1.3	87.00	244	0.730	-0.096	0.036	-0.057	-9	208
Ericsson AIR32 B66Aa	87.00	397	0.730	-0.096	0.036	-0.057	-15	338
RFS APXVAARR24_43-U-	87.00	384	0.730	-0.096	0.036	-0.057	-14	327
Flat Low Profile Pla	87.00	1,500	0.730	-0.096	0.036	-0.057	-57	1,279
		43,197	72.666	20.734	21.562	5.883	1,797	36,832

Load Case **(1.2 + 0.2Sds) * DL + E EMAM** **Seismic Equivalent Modal Analysis Method**

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-52.00	-1.78	0.00	-191.64	0.00	191.64	5,497.77	2,748.88	10,504.08	5,259.85	0.00	0.00	0.046
5.00	-50.16	-1.75	0.00	-182.73	0.00	182.73	5,379.84	2,689.92	10,055.96	5,035.45	0.01	-0.01	0.046
10.00	-48.35	-1.71	0.00	-173.97	0.00	173.97	5,261.92	2,630.96	9,617.62	4,815.96	0.03	-0.03	0.045
15.00	-46.57	-1.67	0.00	-165.41	0.00	165.41	5,144.00	2,572.00	9,189.04	4,601.35	0.06	-0.04	0.045
20.00	-44.82	-1.62	0.00	-157.08	0.00	157.08	5,026.07	2,513.04	8,770.23	4,391.63	0.11	-0.05	0.045
25.00	-43.11	-1.57	0.00	-148.98	0.00	148.98	4,908.15	2,454.08	8,361.19	4,186.81	0.18	-0.07	0.044
30.00	-41.43	-1.52	0.00	-141.12	0.00	141.12	4,790.23	2,395.11	7,961.92	3,986.88	0.25	-0.08	0.044
35.00	-39.79	-1.47	0.00	-133.50	0.00	133.50	4,672.31	2,336.15	7,572.42	3,791.84	0.35	-0.10	0.044
40.00	-38.18	-1.42	0.00	-126.14	0.00	126.14	4,554.38	2,277.19	7,192.68	3,601.69	0.46	-0.11	0.043
45.00	-37.78	-1.41	0.00	-119.02	0.00	119.02	4,436.46	2,218.23	6,822.72	3,416.43	0.58	-0.13	0.043
46.25	-35.64	-1.34	0.00	-117.25	0.00	117.25	4,406.98	2,203.49	6,731.76	3,370.88	0.62	-0.13	0.043
50.00	-35.08	-1.32	0.00	-112.23	0.00	112.23	4,318.54	2,159.27	6,462.53	3,236.07	0.72	-0.14	0.043
51.00	-33.82	-1.28	0.00	-110.91	0.00	110.91	4,412.85	2,206.43	6,749.84	3,379.93	0.75	-0.15	0.040
55.00	-32.28	-1.24	0.00	-105.78	0.00	105.78	4,318.52	2,159.26	6,462.46	3,236.03	0.88	-0.16	0.040
60.00	-30.77	-1.21	0.00	-99.59	0.00	99.59	4,200.59	2,100.30	6,112.04	3,060.56	1.05	-0.17	0.040
65.00	-29.29	-1.19	0.00	-93.55	0.00	93.55	4,082.67	2,041.33	5,771.38	2,889.98	1.24	-0.19	0.040
70.00	-27.85	-1.19	0.00	-87.59	0.00	87.59	3,964.75	1,982.37	5,440.50	2,724.29	1.45	-0.20	0.039
75.00	-26.44	-1.21	0.00	-81.64	0.00	81.64	3,846.82	1,923.41	5,119.38	2,563.49	1.67	-0.22	0.039
80.00	-25.07	-1.25	0.00	-75.58	0.00	75.58	3,728.90	1,864.45	4,808.03	2,407.59	1.91	-0.24	0.038
85.00	-24.53	-1.26	0.00	-69.35	0.00	69.35	3,610.98	1,805.49	4,506.45	2,256.57	2.16	-0.25	0.038
87.00	-20.30	-1.38	0.00	-66.83	0.00	66.83	3,563.81	1,781.90	4,388.55	2,197.54	2.27	-0.26	0.036
90.00	-19.45	-1.40	0.00	-62.70	0.00	62.70	3,493.05	1,746.53	4,214.63	2,110.45	2.43	-0.27	0.035
93.50	-18.97	-1.42	0.00	-57.78	0.00	57.78	3,410.51	1,705.25	4,016.18	2,011.07	2.64	-0.28	0.034
95.00	-18.27	-1.44	0.00	-55.65	0.00	55.65	3,375.13	1,687.57	3,932.59	1,969.22	2.72	-0.28	0.034
97.25	-17.93	-1.45	0.00	-52.41	0.00	52.41	1,102.89	551.44	1,309.83	655.89	2.86	-0.29	0.096
100.00	-14.47	-1.52	0.00	-48.42	0.00	48.42	1,091.10	545.55	1,270.97	636.43	3.03	-0.30	0.089
105.00	-14.02	-1.53	0.00	-40.81	0.00	40.81	1,068.74	534.37	1,200.66	601.22	3.37	-0.34	0.081
110.00	-10.11	-1.49	0.00	-33.15	0.00	33.15	1,045.19	522.60	1,130.92	566.30	3.74	-0.37	0.068
115.00	-10.03	-1.49	0.00	-25.72	0.00	25.72	1,020.46	510.23	1,061.89	531.74	4.15	-0.40	0.058
116.00	-9.67	-1.47	0.00	-24.23	0.00	24.23	1,015.38	507.69	1,048.19	524.87	4.23	-0.41	0.056
120.00	-7.72	-1.34	0.00	-18.35	0.00	18.35	994.55	497.27	993.73	497.61	4.58	-0.43	0.045
121.00	-7.43	-1.32	0.00	-17.01	0.00	17.01	989.22	494.61	980.22	490.84	4.67	-0.43	0.042
125.00	-7.08	-1.28	0.00	-11.74	0.00	11.74	967.45	483.72	926.59	463.98	5.04	-0.45	0.033
130.00	-3.02	-0.68	0.00	-5.36	0.00	5.36	939.16	469.58	860.60	430.94	5.52	-0.46	0.016
135.00	-2.84	-0.64	0.00	-1.96	0.00	1.96	909.69	454.85	795.92	398.55	6.01	-0.47	0.008
138.00	-0.05	-0.01	0.00	-0.02	0.00	0.02	891.44	445.72	757.80	379.46	6.31	-0.47	0.000
140.00	0.00	-0.01	0.00	0.00	0.00	0.00	879.04	439.52	732.69	366.89	6.50	-0.47	0.000

Load Case **(0.9 - 0.2Sds) * DL + E EMAM** **Seismic (Reduced DL) Equivalent Modal Analysis Method**

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-35.55	-1.78	0.00	-188.46	0.00	188.46	5,497.77	2,748.88	10,504.08	5,259.85	0.00	0.00	0.042
5.00	-34.29	-1.75	0.00	-179.56	0.00	179.56	5,379.84	2,689.92	10,055.96	5,035.45	0.01	-0.01	0.042
10.00	-33.05	-1.70	0.00	-170.83	0.00	170.83	5,261.92	2,630.96	9,617.62	4,815.96	0.03	-0.03	0.042
15.00	-31.83	-1.65	0.00	-162.32	0.00	162.32	5,144.00	2,572.00	9,189.04	4,601.35	0.06	-0.04	0.041
20.00	-30.64	-1.60	0.00	-154.04	0.00	154.04	5,026.07	2,513.04	8,770.23	4,391.63	0.11	-0.05	0.041
25.00	-29.47	-1.55	0.00	-146.02	0.00	146.02	4,908.15	2,454.08	8,361.19	4,186.81	0.17	-0.07	0.041
30.00	-28.32	-1.50	0.00	-138.25	0.00	138.25	4,790.23	2,395.11	7,961.92	3,986.88	0.25	-0.08	0.041
35.00	-27.20	-1.45	0.00	-130.75	0.00	130.75	4,672.31	2,336.15	7,572.42	3,791.84	0.34	-0.09	0.040
40.00	-26.10	-1.40	0.00	-123.50	0.00	123.50	4,554.38	2,277.19	7,192.68	3,601.69	0.45	-0.11	0.040
45.00	-25.83	-1.39	0.00	-116.51	0.00	116.51	4,436.46	2,218.23	6,822.72	3,416.43	0.57	-0.12	0.040
46.25	-24.36	-1.31	0.00	-114.78	0.00	114.78	4,406.98	2,203.49	6,731.76	3,370.88	0.60	-0.13	0.040
50.00	-23.98	-1.29	0.00	-109.86	0.00	109.86	4,318.54	2,159.27	6,462.53	3,236.07	0.71	-0.14	0.040
51.00	-23.12	-1.25	0.00	-108.57	0.00	108.57	4,412.85	2,206.43	6,749.84	3,379.93	0.74	-0.14	0.037
55.00	-22.06	-1.21	0.00	-103.56	0.00	103.56	4,318.52	2,159.26	6,462.46	3,236.03	0.86	-0.15	0.037
60.00	-21.03	-1.18	0.00	-97.52	0.00	97.52	4,200.59	2,100.30	6,112.04	3,060.56	1.03	-0.17	0.037
65.00	-20.02	-1.16	0.00	-91.64	0.00	91.64	4,082.67	2,041.33	5,771.38	2,889.98	1.22	-0.18	0.037
70.00	-19.04	-1.16	0.00	-85.85	0.00	85.85	3,964.75	1,982.37	5,440.50	2,724.29	1.42	-0.20	0.036
75.00	-18.08	-1.18	0.00	-80.06	0.00	80.06	3,846.82	1,923.41	5,119.38	2,563.49	1.64	-0.21	0.036
80.00	-17.14	-1.21	0.00	-74.18	0.00	74.18	3,728.90	1,864.45	4,808.03	2,407.59	1.87	-0.23	0.035
85.00	-16.77	-1.23	0.00	-68.13	0.00	68.13	3,610.98	1,805.49	4,506.45	2,256.57	2.12	-0.25	0.035
87.00	-13.88	-1.35	0.00	-65.67	0.00	65.67	3,563.81	1,781.90	4,388.55	2,197.54	2.22	-0.25	0.034
90.00	-13.29	-1.37	0.00	-61.64	0.00	61.64	3,493.05	1,746.53	4,214.63	2,110.45	2.39	-0.26	0.033
93.50	-12.97	-1.39	0.00	-56.83	0.00	56.83	3,410.51	1,705.25	4,016.18	2,011.07	2.58	-0.27	0.032
95.00	-12.48	-1.41	0.00	-54.74	0.00	54.74	3,375.13	1,687.57	3,932.59	1,969.22	2.67	-0.28	0.031
97.25	-12.26	-1.42	0.00	-51.57	0.00	51.57	1,102.89	551.44	1,309.83	655.89	2.80	-0.29	0.090
100.00	-9.89	-1.50	0.00	-47.67	0.00	47.67	1,091.10	545.55	1,270.97	636.43	2.97	-0.30	0.084
105.00	-9.58	-1.50	0.00	-40.19	0.00	40.19	1,068.74	534.37	1,200.66	601.22	3.30	-0.33	0.076
110.00	-6.91	-1.46	0.00	-32.67	0.00	32.67	1,045.19	522.60	1,130.92	566.30	3.67	-0.37	0.064
115.00	-6.85	-1.46	0.00	-25.35	0.00	25.35	1,020.46	510.23	1,061.89	531.74	4.07	-0.40	0.054
116.00	-6.60	-1.45	0.00	-23.89	0.00	23.89	1,015.38	507.69	1,048.19	524.87	4.15	-0.40	0.052
120.00	-5.27	-1.32	0.00	-18.10	0.00	18.10	994.55	497.27	993.73	497.61	4.50	-0.42	0.042
121.00	-5.07	-1.30	0.00	-16.78	0.00	16.78	989.22	494.61	980.22	490.84	4.58	-0.43	0.039
125.00	-4.84	-1.26	0.00	-11.59	0.00	11.59	967.45	483.72	926.59	463.98	4.95	-0.44	0.030
130.00	-2.06	-0.67	0.00	-5.30	0.00	5.30	939.16	469.58	860.60	430.94	5.42	-0.45	0.014
135.00	-1.94	-0.64	0.00	-1.93	0.00	1.93	909.69	454.85	795.92	398.55	5.90	-0.46	0.007
138.00	-0.03	-0.01	0.00	-0.02	0.00	0.02	891.44	445.72	757.80	379.46	6.19	-0.46	0.000
140.00	0.00	-0.01	0.00	0.00	0.00	0.00	879.04	439.52	732.69	366.89	6.38	-0.46	0.000

Analysis Summary

	Reactions						Max Usage	
Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.6W	24.20	0.00	51.80	0.00	0.00	2506.22	97.25	0.60
0.9D + 1.6W	24.18	0.00	38.84	0.00	0.00	2476.51	97.25	0.58
1.2D + 1.0Di + 1.0Wi	7.32	0.00	91.77	0.00	0.00	784.42	97.25	0.23
(1.2 + 0.2Sds) * DL + E ELFM	1.37	0.00	52.00	0.00	0.00	150.98	97.25	0.05
(1.2 + 0.2Sds) * DL + E EMAM	1.78	0.00	52.00	0.00	0.00	191.64	97.25	0.10
(0.9 - 0.2Sds) * DL + E ELFM	1.37	0.00	35.55	0.00	0.00	148.71	97.25	0.05
(0.9 - 0.2Sds) * DL + E EMAM	1.78	0.00	35.55	0.00	0.00	188.46	97.25	0.09
1.0D + 1.0W	5.63	0.00	43.20	0.00	0.00	579.11	97.25	0.15

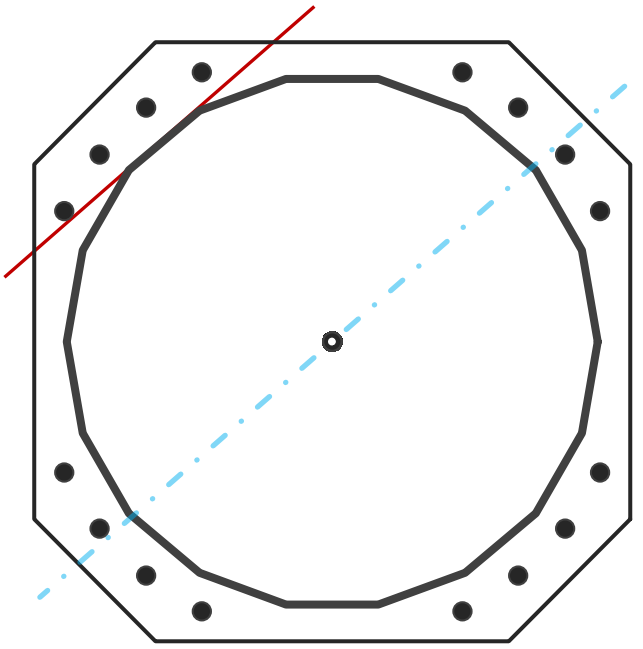
Base Plate & Anchor Rod Analysis

Pole Dimensions		
Number of Sides	18	-
Diameter	47.13	in
Thickness	0.5	in
Orientation Offset		°

Base Reactions		
Moment, Mu	2506.2	k-ft
Axial, Pu	51.8	k
Shear, Vu	24.2	k
Neutral Axis	41	°

Report Capacities		
Component	Capacity	Result
Base Plate	39%	Pass
Anchor Rods	55%	Pass
Dwyidag	-	-

Base Plate		
Shape	Square	-
Width	54	in
Thickness	3 1/4	in
Grade	A572-50	
Yield Strength, Fy	50	ksi
Tensile Strength, Fu	65	ksi
Clip	11	in
Orientation Offset		°
Anchor Rod Detail	d	η=0.5
Clear Distance	3	in
Applied Moment, Mu	1347.0	k
Bending Stress, ϕMn	3444.5	k



Original Anchor Rods		
Arrangement	Cluster	-
Quantity	16	-
Diameter, ø	2 1/4	in
Bolt Circle	54	in
Grade	A615-75	
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Spacing	6.0	in
Orientation Offset		°
Applied Force, Pu	142.3	k
Anchor Rods, ϕPn	259.8	k

Calculations for Monopole Base Plate & Anchor Rod Analysis

Reaction Distribution

Reaction	Shear Vu	Moment Mu	Factor
-	k	k-ft	-
Base Forces	24.2	2506.2	1.00
Anchor Rod Forces	24.2	2506.2	1.00
Additional Bolt (Grp1) Forces	0.0	0.0	0.00
Additional Bolt (Grp2) Forces	0.0	0.0	0.00
Dywidag Forces	0.0	0.0	0.00
Stiffener Forces	0.0	0.0	0.00

Geometric Properties

Section	Gross Area	Net Area	Individual Inertia	Threads per Inch	Moment of Inertia
-	in^2	in^2	in^4	#	in^4
Pole	72.8749	4.0486	0.3392		19813.12
Bolt	3.9761	3.2477	0.8393	4.5	18953.95
Bolt1	0.0000	0.0000	0.0000	0	0.00
Bolt2	0.0000	0.0000	0.0000	0	0.00
Dywidag	0.0000	0.0000	0.0000		0.00
Stiffener	0.0000	0.0000	0.0000		0.00

Base Plate		
Shape	Square	-
Width, W	54	in
Thickness, t	3.25	in
Yield Strength, Fy	50	ksi
Tensile Strength, Fu	65	ksi
Base Plate Chord	26.358	in
Detail Type	d	-
Detail Factor	0.50	-
Clear Distance	3	-

Anchor Rods		
Anchor Rod Quantity, N	16	-
Rod Diameter, d	2.25	in
Bolt Circle, BC	54	in
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Applied Axial, Pu	142.3	k
Applied Shear, Vu	0.1	k
Compressive Capacity, ϕPn	259.8	k
Tensile Capacity, ϕRnt	0.548	OK
Interaction Capacity	0.548	OK

External Base Plate		
Chord Length AA	28.988	in
Additional AA	0.000	in
Section Modulus, Z	76.545	in^3
Applied Moment, Mu	1347.0	k-ft
Bending Capacity, ϕMn	3444.5	k-ft
Capacity, Mu/ϕMn	0.391	OK
Chord Length AB	28.257	in
Additional AB	0.000	in
Section Modulus, Z	74.615	in^3
Applied Moment, Mu	1145.6	k-ft
Bending Capacity, ϕMn	3357.7	k-ft
Capacity, Mu/ϕMn	0.341	OK
Bend Line Length	0.000	in
Additional Bend Line	0.000	in
Section Modulus, Z	0.000	in^3
Applied Moment, Mu	0.0	k-ft
Bending Capacity, ϕMn	0.0	k-ft
Capacity, Mu/ϕMn		

Internal Base Plate		
Arc Length	0.000	in
Section Modulus, Z	0.000	in^3
Moment Arm	0.000	in
Applied Moment, Mu	0.0	k-ft
Bending Capacity, ϕMn	0.0	k-ft
Capacity, Mu/ϕMn		

Mount Structural Analysis Report of the Existing Platform

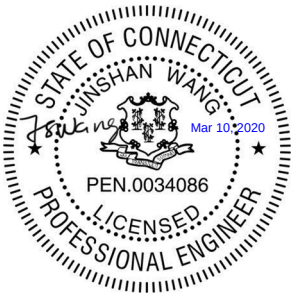
Trylon Project #152155, Rev 3
March 9, 2020

Carrier Name	Verizon
ATC Site Code	310968
ATC Site Name	WSPT Westport Rebuild CT
Verizon Site Code	468226
Verizon Site Name	WESTPORT 2 CT
Site Adress	180 Bayberry Ln., Westport, Fairfield, CT 06880
Coordinates	Lat :41.171667 Long :-73.328472
Structure Type	Monopole
Structure Height	138-ft
Mount Elevation	110-ft
Antenna Centerline	110-ft
Standard	2015 IBC / ASCE 7-10 / TIA-222-H

Structure Rating =	**55%**	**CONDITIONAL PASS**

Analysis performed by:
Alexandru Ciuca

Reviewed and approved by:
Jinshan Wang, P.E.



MOUNT STRUCTURAL ANALYSIS REPORT

ATC
10 Presidential Way Woburn, MA 01801

Attention: **Blake Paynter**

Subject: Analysis of the Existing Platform installed at 110-ft. elevation

Dear Blake Paynter,

We have been provided with RF information, photos and sketches of the structure for above-referenced site. Verizon is proposing to change the equipment configuration on the existing mounting hardware.

A revised antenna, coax and miscellaneous equipment schematic have been provided to us. We have been asked to evaluate this information to determine whether or not the mounting apparatus is adequate to safely support the proposed loading change.

RISA 3D (version 17), a commercially available analysis software package, was used to create a three-dimensional model of the antenna mounting system and calculate member stresses for various loading cases.

1. Source of data

Document Type	Source	Date
Mount mapping	Trylon	8/17/2019
RFDS WESTPORT 2 CT 1498129 Rev2 20191111	Verizon	11/11/2019
Client Configuration Modifications	Email	3/6/2020
Assembly Drawing	SITE PRO1	5/30/2012

2. Analysis Criteria

Standard	2015 IBC / ASCE 7-10 / TIA-222-H
Basic Design Wind Speed without Ice (mph)	121
Basic Design Wind Speed with Ice (mph)	50
Basic Design Ice Thickness (in)	1.50
Structure Risk Category	II
Exposure Category	C
Topographic Factor, Kzt	1
Wind Direction Probability Factor, Kd	0.95
Gust Factor, Gh	1.00
Shielding Factor, Ka	0.90
Velocity Pressure Coefficient, Kz	1.29
Rooftop Speed-up Factor, Ks	1.00
Ground Elevation Factor, Ke	0.99
Wind Velocity Pressure w/o ice, qz (lbs/sf)	45.57
Wind Velocity Pressure with ice, qz (lbs/sf)	7.78
Thickness of Radial Glaze, tiz (in)	1.69
Seismic Response Coefficient, Cs	0.12
Live Load Wind Speed (mph)	30
Man Live Load at Mounting Pipes, Lm (lbs)	500
Man Live Load at Mid/End Points, Lv (lbs)	250

3. Final Equipment Configuration

Mount Centerline 110 ft.
Antennas Centerline 110 ft.
Antennas Azimuth 30/150/270

Position No.	Total Qty.	Equipment Manufacturer	Equipment Model	Height [in]	Width [in]	Thk. [in]	Weight [lbs]	CaAa Normal w/o ice [in^2]	CaAa Side w/o ice [in^2]	Ice Weight [lbs]	CaAa Normal w/ ice [in^2]	CaAa Side w/ ice [in^2]	Wind Forces without ice						Wind Forces with ice						Note
													0° [lbs]	30° [lbs]	60° [lbs]	90° [lbs]	120° [lbs]	150° [lbs]	0° [lbs]	30° [lbs]	60° [lbs]	90° [lbs]	120° [lbs]	150° [lbs]	
2	6	COMMSCOPE	JAHH-65B-R3B	72	13.8	8.2	63.3	761.3	439.6	288.4	993.7	657.0	216.8	193.9	148.1	125.2	148.1	193.9	48.3	44.23	36.04	31.95	36.04	44.23	2
4	3	AMPHENOL	BXA-70080-6CF-782MHZ PRELIMINARY(200501)	71	8	5.9	18.0	830.7	656.8	142.3	1168.0	990.1	236.6	224.2	199.4	187.0	199.4	224.2	56.8	54.63	50.31	48.15	50.31	54.63	1
1	3	COMMSCOPE	CBC78T-DS-43-2X	6.4	6.9	9.6	20.7	53.0	73.7	14.9	120.7	152.4	15.1	16.6	19.5	21.0	19.5	16.6	5.9	6.26	7.03	7.41	7.03	6.26	1
1	3	SAMSUNG2	B5/B13 RRH-BR04C(RFV01U-D2A)	15	15	8.1	70.3	270.0	145.8	48.4	405.6	253.3	76.9	68.0	50.4	41.5	50.4	68.0	19.7	17.87	14.17	12.32	14.17	17.87	1
1	3	SAMSUNG2	B2/B66A RRH-BR049(RFV01U-D1A)	15	15	10	84.4	270.0	180.0	51.0	405.6	295.3	76.9	70.5	57.7	51.3	57.7	70.5	19.7	18.38	15.70	14.36	15.70	18.38	1
4	3	OTHER2	CBRS 20W RRH	12.3	8.7	4.67	9.9	128.4	69.3	24.5	227.4	151.6	36.6	32.4	23.9	19.7	23.9	32.4	11.1	10.14	8.29	7.37	8.29	10.14	1
1	3	OTHER2	LAA 1W RRH	10.7	9.1	1.2	9.9	116.8	18.8	20.0	211.0	79.1	5.4	12.3	26.3	33.3	26.3	12.3	3.8	5.45	8.66	10.26	8.66	5.45	1
-	1	RFS	DB-C1-12C-24AB-0Z	29.5	16.5	12.6	32.0	584.1	446.0	114.1	784.6	630.7	166.3	156.5	136.9	127.0	136.9	156.5	38.2	36.28	32.54	30.67	32.54	36.28	1

Notes:
1. CaAa determined with TIA-222-H, Section 2.6.11.2
2. CaAa determined with CFD procedure

4. Standard Conditions for Providing Structural Consulting Services on Existing Structures

1) Mounting hardware is analyzed to the best of our ability using all information that is provided or can be obtained during fieldwork (if authorized by client). If the existing conditions are not as we have represented in this analysis, we should be contacted to evaluate the significance of the deviation and revise the assessment accordingly.

2) The structural analysis has been performed assuming that hardware is in “like new” condition. No allowance was made for excessive corrosion, damaged or missing structural members, loose bolts, misaligned parts, or any reduction in strength due to the age or fatigue of the product.

3) The structural analysis provided is an assessment of the primary load carrying capacity of the hardware. We provide a limited scope of service. In some cases we cannot verify the capacity of every weld, plate, connection detail, etc. In some cases, structural fabrication details are unknown at the time of our analysis, and the detailed field measurement of some of the required details may not be possible. In instances where we cannot perform connection capacity calculations, it is assumed that the existing manufactured connections develop the full capacity of the primary members being connected.

4) We cannot be held responsible for mounting hardware that is installed improperly or hardware that is loose or has a tendency of working loose over the lifetime of the mounting hardware. Our analysis has been performed assuming fully tightened connections, and proper installation and symmetry of the mounting hardware per manufacturer’s instructions.

5) The structural analysis has been performed using information currently provided by the client and potentially field verified. We have been provided with a mounting arrangement for all telecommunications equipment, including antennas RRH’s, TMA’s, RRU’s, diplexers, surge protection devices, etc. Our analysis has been based upon a particular mounting arrangement. We are not responsible for deviations in the mounting arrangement that may occur over time. If deviations in equipment type or mounting arrangements are proposed, then we should be contacted to revise the recommendations of this structural report.

6) We cannot be held responsible for temporary and unbalanced loads on mounting hardware. Our analysis is based on a particular mounting arrangement or as-built field condition. We are not responsible for the methods and means of how the mounting arrangement is accomplished by the contractor. These methods and means may include rigging of equipment or hardware to lift and locate, temporary hanging of equipment in locations other than the final arrangement, movement and tie off of tower riggers, personnel, and their equipment, etc.

7) Steel grade and strength is unknown and cannot be field tested. We cannot be held responsible for equipment manufactured from inferior steel or bolts. Our analysis assumes that standard structural grade steel has been used by the equipment manufacturer for all assembled parts of the mounting apparatus. Acceptable steels and connection components are specified by the American Institute of Steel Construction. It is assumed all welded connections are performed in the shop under the latest American Welding Society Code. No field welds are permitted or assumed for the existing premanufactured equipment.

8) Steel grades have been assumed as follows, unless noted otherwise:

Channel, Solid Round, Angle, Plate	ASTM A36 (GR 36)
HSS (Rectangular)	ASTM 500 (GR B-46)
HSS (Round)	ASTM A53 (GR 35)
Connection Bolts	ASTM A325
U-Bolts, Threaded Rods	SAE J429 Gr.2

5. Analysis Results

Mount CL (ft.)	Component	% Capacity	Pass/Fail	Notes
110	Face Horizontals	21	Pass	1
	Grillage Angle	19	Pass	1
	Plane Brace	26	Pass	1
	Tube Standoff Arms	45	Pass	1
	Connection Plates	55	Pass	1
	Mounting Pipes	35	Pass	1
	Connections	42	Pass	1

Structure Rating (max from all components) =	**55%**

Notes:

1. See additional documentation in "Appendix B - Analysis Output" for calculations supporting the % capacity consumed.
2. All sectors are typical

6. Conclusions and Recommendations

Based on information provided, our calculations conclude that the Existing Verizon Platform located at 110-ft elevation on the existing Monopole at the specified address, is ADEQUATE to safely support the proposed equipment, subject to the attached Standard Conditions on page 3.

In order for this analysis result to be valid a Site Pro 1 HRK12 handrail kit must be installed at at approx.3 ft above the existing pipe face horizontal. The new handrail must be connected to all existing pipe mounts.

Classification	Classification
Mount Classification (w/ Ice, w/ Vertical Offset):	**M450R(600) - 15[2]**

Sincerely,
Analysis performed by:

Alexandru Ciuca

Reviewed by:

Jinshan Wang, P.E.

APPENDIX A
ADDITIONAL CALCULATIONS

Detailed Wind Force Calculation Sample

Manufacturer	**COMMSCOPE**	
Model	**JAHH-65B-R3B**	
Length of Normal Face	72	[in]
Width of Normal Face	13.8	[in]
Width of Transversal Face	8.2	[in]
Weight	63.30	[lbs.]
CaAa (N) w/o ice	761.25	[in^2]
CaAa (S) w/o ice	439.60	[in^2]
Ice Weight	288.41	[lbs.]
CaAa (N) w/ ice	993.74	[in^2]
CaAa (S) w/ ice	656.97	[in^2]

Wind Forces without ice

Wind Force 0 degrees	216.79	[lbs.]
Wind Force 30 degrees	193.89	[lbs.]
Wind Force 60 degrees	148.09	[lbs.]
Wind Force 90 degrees	125.19	[lbs.]
Wind Force 120 degrees	148.09	[lbs.]
Wind Force 150 degrees	193.89	[lbs.]

Wind Forces with ice

Wind Force 0 degrees	48.32	[lbs.]
Wind Force 30 degrees	44.23	[lbs.]
Wind Force 60 degrees	36.04	[lbs.]
Wind Force 90 degrees	31.95	[lbs.]
Wind Force 120 degrees	36.04	[lbs.]
Wind Force 150 degrees	44.23	[lbs.]

SEISMIC CALCULATIONS

Seismic Input

S_S	0.222
S_1	0.066
S_{MS}	0.354
S_{M1}	0.159
$S_{DS} = 2/3\ S_{MS}$	0.236
$S_{D1} = 2/3\ S_{M1}$	0.106
ρ	1

Seismic Response Coefficient

Structure Height	138
Mount Elevation	110
As (Amplification Factor)	1.00
R (Response modification coeficient)	2
I (Importance Factor)	1
Cs, min	0.010
Cs	0.118

Trylon

Analysis date: 3/9/2020

WIND FORCES 0 DIRECTION - NO ICE

Member Label	Member Type	Description	F/R	Normal Length [in]	Normal Width [in]	Lateral Length [in]	Lateral Width [in]	0 (wind directio n from normal [°]	AN [in^2]	AT [in^2]	Aspect Ratio Normal -	Aspect Ratio Lateral -	CaN -	CaT -	Resultant Wind Force Frontal [lbs]	Resultant Wind Force Distributed [lbs/in]	Resultant Component on Global X [lbs/in]	Resultant Component on Global Y [lbs/in]
M1	Pipe	3.5" O.D.	R	150	3.500	0	3.500	0	525.00	0.00	42.86	0.00	1.20	0.70	179.41	1.20	1.20	0.00
M15	Equal_Angle	L2x2	F	52	2.000	0	2.000	0	104.00	0.00	26.00	0.00	2.00	1.20	59.24	1.14	1.14	0.00
M24	Equal_Angle	L2x2	F	52	2.000	0	2.000	0	104.00	0.00	26.00	0.00	2.00	1.20	59.24	1.14	1.14	0.00
M38	Equal_Tube	Tube 4x4	F	31	4.000	0	4.000	0	122.00	0.00	7.63	0.00	1.42	1.20	49.37	1.62	1.62	0.00
M33	Equal_Tube	Tube 4x4	F	31	4.000	0	4.000	0	122.00	0.00	7.63	0.00	1.42	1.20	49.37	1.62	1.62	0.00
M4	Equal_Tube	Tube 4x4	F	62	4.000	0	4.000	90	248.00	0.00	15.50	0.00	1.68	1.20	0.00	0.00	0.00	0.00
M26	Plate	6"x0.375"	F	13	6.000	0	6.000	0	75.00	0.00	2.08	0.00	1.20	1.20	25.63	2.05	2.05	0.00
M61	Pipe	2.375" O.D.	R	84	2.375	84	2.375	0	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.81	0.00
M63	Pipe	2.875" O.D.	R	96	2.875	96	2.875	0	276.00	276.00	33.39	33.39	1.20	1.20	94.32	0.98	0.98	0.00
M65	Pipe	2.375" O.D.	R	84	2.375	84	2.375	0	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.81	0.00
M67	Pipe	2.375" O.D.	R	84	2.375	84	2.375	0	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.81	0.00
M69	Pipe	2.375" O.D.	R	84	2.375	84	2.375	0	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.81	0.00
M94	Pipe	2.375" O.D.	R	150	2.375	0	2.375	0	356.25	0.00	63.16	0.00	1.20	0.70	121.75	0.81	0.81	0.00
M113	Equal_Angle	L2.5x2.5	F	17	2.500	0	2.500	0	41.25	0.00	6.60	0.00	1.38	1.20	16.24	0.98	0.98	0.00
0	0	0	0	0	0.000	0	0.000	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

1825 W. Walnut Hill Lane Suite 302
Irving, Texas 75038

Trylon

Analysis date: 3/9/2020

WIND FORCES 0 DIRECTION - NO ICE

Member Label	Member Type	Description	F/R	Normal Length [in]	Normal Width [in]	Lateral Length [in]	Lateral Width [in]	θ (wind directio n from normal [°]	A_N [in²]	A_T [in²]	Aspect Ratio Normal -	Aspect Ratio Lateral -	CaN -	CaT -	Resultant Wind Force Frontal [lbs]	Resultant Wind Force Distributed [lbs/in]	Resultant Component on Global X [lbs/in]	Resultant Component on Global Y [lbs/in]
M2	Pipe	3.5" O.D.	R	150	3.500	0	3.500	120	525.00	0.00	42.86	0.00	1.20	0.70	44.85	0.30	0.30	0.00
M9	Equal_Angle	L2x2	F	52	2.000	0	2.000	120	104.00	0.00	26.00	0.00	2.00	1.20	14.81	0.28	0.28	0.00
M18	Equal_Angle	L2x2	F	52	2.000	0	2.000	120	104.00	0.00	26.00	0.00	2.00	1.20	14.81	0.28	0.28	0.00
M42	Equal_Tube	Tube 4x4	F	31	4.000	0	4.000	120	122.00	0.00	7.63	0.00	1.42	1.20	12.34	0.40	0.40	0.00
M41	Equal_Tube	Tube 4x4	F	31	4.000	0	4.000	120	122.00	0.00	7.63	0.00	1.42	1.20	12.34	0.40	0.40	0.00
M6	Equal_Tube	Tube 4x4	F	62	4.000	0	4.000	210	248.00	0.00	15.50	0.00	1.68	1.20	89.17	1.44	1.44	0.00
M32	Plate	6"x0.375"	F	13	6.000	0	6.000	120	75.00	0.00	2.08	0.00	1.20	1.20	6.41	0.51	0.51	0.00
M81	Pipe	2.375" O.D.	R	84	2.375	84	2.375	120	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.81	0.00
M83	Pipe	2.875" O.D.	R	96	2.875	96	2.875	120	276.00	276.00	33.39	33.39	1.20	1.20	94.32	0.98	0.98	0.00
M85	Pipe	2.375" O.D.	R	84	2.375	84	2.375	120	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.81	0.00
M87	Pipe	2.375" O.D.	R	84	2.375	84	2.375	120	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.81	0.00
M89	Pipe	2.375" O.D.	R	84	2.375	84	2.375	120	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.81	0.00
M106	Pipe	2.375" O.D.	R	150	2.375	0	2.375	120	356.25	0.00	63.16	0.00	1.20	0.70	30.44	0.20	0.20	0.00
M114	Equal_Angle	L2.5x2.5	F	17	2.500	0	2.500	120	41.25	0.00	6.60	0.00	1.38	1.20	4.06	0.25	0.25	0.00
0	0	0	0	0	0.000	0	0.000	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

WIND FORCES 0 DIRECTION - NO ICE

Member Label	Member Type	Description	F/R	Normal Length [in]	Normal Width [in]	Lateral Length [in]	Lateral Width [in]	θ (wind direction from normal) [°]	A_N [in^2]	A_T [in^2]	Aspect Ratio Normal -	Aspect Ratio Lateral -	CaN -	CaT -	Resultant Wind Force Frontal [lbs]	Resultant Wind Force Distributed [lbs/in]	Resultant Component on Global X [lbs/in]	Resultant Component on Global Y [lbs/in]
M3	Pipe	3.5" O.D.	R	150	3.500	0	3.500	240	525.00	0.00	42.86	0.00	1.20	0.70	44.85	0.30	0.30	0.00
M21	Equal_Angle	L2x2	F	52	2.000	0	2.000	240	104.00	0.00	26.00	0.00	2.00	1.20	14.81	0.28	0.28	0.00
M12	Equal_Angle	L2x2	F	52	2.000	0	2.000	240	104.00	0.00	26.00	0.00	2.00	1.20	14.81	0.28	0.28	0.00
M40	Equal_Tube	Tube 4x4	F	31	4.000	0	4.000	240	122.00	0.00	7.63	0.00	1.42	1.20	12.34	0.40	0.40	0.00
M39	Equal_Tube	Tube 4x4	F	31	4.000	0	4.000	240	122.00	0.00	7.63	0.00	1.42	1.20	12.34	0.40	0.40	0.00
M5	Equal_Tube	Tube 4x4	F	62	4.000	0	4.000	330	248.00	0.00	15.50	0.00	1.68	1.20	89.17	1.44	1.44	0.00
M29	Plate	6"x0.375"	F	13	6.000	0	6.000	240	75.00	0.00	2.08	0.00	1.20	1.20	6.41	0.51	0.51	0.00
M71	Pipe	2.375" O.D.	R	84	2.375	84	2.375	240	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.81	0.00
M73	Pipe	2.875" O.D.	R	96	2.875	96	2.875	240	276.00	276.00	33.39	33.39	1.20	1.20	94.32	0.98	0.98	0.00
M75	Pipe	2.375" O.D.	R	84	2.375	84	2.375	240	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.81	0.00
M77	Pipe	2.375" O.D.	R	84	2.375	84	2.375	240	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.81	0.00
M79	Pipe	2.375" O.D.	R	84	2.375	84	2.375	240	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.81	0.00
M100	Pipe	2.375" O.D.	R	150	2.375	0	2.375	240	356.25	0.00	63.16	0.00	1.20	0.70	30.44	0.20	0.20	0.00
M112	Equal_Angle	L2.5x2.5	F	17	2.500	0	2.500	240	41.25	0.00	6.60	0.00	1.38	1.20	4.06	0.25	0.25	0.00
0	0	0	0	0	0.000	0	0.000	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

WIND FORCES 30 DIRECTION - NO ICE

Member Label	Member Type	Description	F/R	Normal Length [in]	Normal Width [in]	Lateral Length [in]	Lateral Width [in]	θ (wind direction from normal) [°]	A_N [in^2]	A_T [in^2]	Aspect Ratio Normal -	Aspect Ratio Lateral -	CaN -	CaT -	Resultant Wind Force Frontal [lbs]	Resultant Wind Force Distributed [lbs/in]	Resultant Component on Global X [lbs/in]	Resultant Component on Global Y [lbs/in]
M1	Pipe	3.5" O.D.	R	150	3.500	0	3.500	30	525.00	0.00	42.86	0.00	1.20	0.70	44.85	0.30	0.15	0.26
M15	Equal_Angle	L2x2	F	52	2.000	0	2.000	30	104.00	0.00	26.00	0.00	2.00	1.20	14.81	0.28	0.14	0.25
M24	Equal_Angle	L2x2	F	52	2.000	0	2.000	30	104.00	0.00	26.00	0.00	2.00	1.20	14.81	0.28	0.14	0.25
M38	Equal_Tube	Tube 4x4	F	31	4.000	0	4.000	30	122.00	0.00	7.63	0.00	1.42	1.20	12.34	0.40	0.20	0.35
M33	Equal_Tube	Tube 4x4	F	31	4.000	0	4.000	30	122.00	0.00	7.63	0.00	1.42	1.20	12.34	0.40	0.20	0.35
M4	Equal_Tube	Tube 4x4	F	62	4.000	0	4.000	120	248.00	0.00	15.50	0.00	1.68	1.20	89.17	1.44	0.72	1.25
M26	Plate	6"x0.375"	F	13	6.000	0	6.000	30	75.00	0.00	2.08	0.00	1.20	1.20	6.41	0.51	0.26	0.44
M61	Pipe	2.375" O.D.	R	84	2.375	84	2.375	30	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.41	0.70
M63	Pipe	2.875" O.D.	R	96	2.875	96	2.875	30	276.00	276.00	33.39	33.39	1.20	1.20	94.32	0.98	0.49	0.85
M65	Pipe	2.375" O.D.	R	84	2.375	84	2.375	30	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.41	0.70
M67	Pipe	2.375" O.D.	R	84	2.375	84	2.375	30	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.41	0.70
M69	Pipe	2.375" O.D.	R	84	2.375	84	2.375	30	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.41	0.70
M94	Pipe	2.375" O.D.	R	150	2.375	0	2.375	30	356.25	0.00	63.16	0.00	1.20	0.70	30.44	0.20	0.10	0.18
M113	Equal_Angle	L2.5x2.5	F	17	2.500	0	2.500	30	41.25	0.00	6.60	0.00	1.38	1.20	4.06	0.25	0.12	0.21
0	0	0	0	0	0.000	0	0.000	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

WIND FORCES 30 DIRECTION - NO ICE

Member Label	Member Type	Description	F/R	Normal Length [in]	Normal Width [in]	Lateral Length [in]	Lateral Width [in]	θ (wind direction from normal) [°]	AN [in^2]	AT [in^2]	Aspect Ratio Normal -	Aspect Ratio Lateral -	CaN -	CaT -	Resultant Wind Force Frontal [lbs]	Resultant Wind Force Distributed [lbs/in]	Resultant Component on Global X [lbs/in]	Resultant Component on Global Y [lbs/in]
M2	Pipe	3.5" O.D.	R	150	3.500	0	3.500	150	525.00	0.00	42.86	0.00	1.20	0.70	179.41	1.20	0.60	1.04
M9	Equal_Angle	L2x2	F	52	2.000	0	2.000	150	104.00	0.00	26.00	0.00	2.00	1.20	59.24	1.14	0.57	0.99
M18	Equal_Angle	L2x2	F	52	2.000	0	2.000	150	104.00	0.00	26.00	0.00	2.00	1.20	59.24	1.14	0.57	0.99
M42	Equal_Tube	Tube 4x4	F	31	4.000	0	4.000	150	122.00	0.00	7.63	0.00	1.42	1.20	49.37	1.62	0.81	1.40
M41	Equal_Tube	Tube 4x4	F	31	4.000	0	4.000	150	122.00	0.00	7.63	0.00	1.42	1.20	49.37	1.62	0.81	1.40
M6	Equal_Tube	Tube 4x4	F	62	4.000	0	4.000	240	248.00	0.00	15.50	0.00	1.68	1.20	0.00	0.00	0.00	0.00
M32	Plate	6"x0.375"	F	13	6.000	0	6.000	150	75.00	0.00	2.08	0.00	1.20	1.20	25.63	2.05	1.03	1.78
M81	Pipe	2.375" O.D.	R	84	2.375	84	2.375	150	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.41	0.70
M83	Pipe	2.875" O.D.	R	96	2.875	96	2.875	150	276.00	276.00	33.39	33.39	1.20	1.20	94.32	0.98	0.49	0.85
M85	Pipe	2.375" O.D.	R	84	2.375	84	2.375	150	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.41	0.70
M87	Pipe	2.375" O.D.	R	84	2.375	84	2.375	150	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.41	0.70
M89	Pipe	2.375" O.D.	R	84	2.375	84	2.375	150	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.41	0.70
M106	Pipe	2.375" O.D.	R	150	2.375	0	2.375	150	356.25	0.00	63.16	0.00	1.20	0.70	121.75	0.81	0.41	0.70
M114	Equal_Angle	L2.5x2.5	F	17	2.500	0	2.500	150	41.25	0.00	6.60	0.00	1.38	1.20	16.24	0.98	0.49	0.85
0	0	0	0	0	0.000	0	0.000	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Trylon

Analysis date: 3/9/2020

WIND FORCES 30 DIRECTION - NO ICE

Member Label	Member Type	Description	F/R	Normal Length [in]	Normal Width [in]	Lateral Length [in]	Lateral Width [in]	θ (wind direction from normal) [°]	A_N [in^2]	A_T [in^2]	Aspect Ratio Normal -	Aspect Ratio Lateral -	CaN -	CaT -	Resultant Wind Force Frontal [lbs]	Resultant Wind Force Distributed [lbs/in]	Resultant Component on Global X [lbs/in]	Resultant Component on Global Y [lbs/in]
M3	Pipe	3.5" O.D.	R	150	3.500	0	3.500	270	525.00	0.00	42.86	0.00	1.20	0.70	44.85	0.30	0.15	0.26
M21	Equal_Angle	L2x2	F	52	2.000	0	2.000	270	104.00	0.00	26.00	0.00	2.00	1.20	14.81	0.28	0.14	0.25
M12	Equal_Angle	L2x2	F	52	2.000	0	2.000	270	104.00	0.00	26.00	0.00	2.00	1.20	14.81	0.28	0.14	0.25
M40	Equal_Tube	Tube 4x4	F	31	4.000	0	4.000	270	122.00	0.00	7.63	0.00	1.42	1.20	12.34	0.40	0.20	0.35
M39	Equal_Tube	Tube 4x4	F	31	4.000	0	4.000	270	122.00	0.00	7.63	0.00	1.42	1.20	12.34	0.40	0.20	0.35
M5	Equal_Tube	Tube 4x4	F	62	4.000	0	4.000	360	248.00	0.00	15.50	0.00	1.68	1.20	89.17	1.44	0.72	1.25
M29	Plate	6"x0.375"	F	13	6.000	0	6.000	270	75.00	0.00	2.08	0.00	1.20	1.20	6.41	0.51	0.26	0.44
M71	Pipe	2.375" O.D.	R	84	2.375	84	2.375	270	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.41	0.70
M73	Pipe	2.875" O.D.	R	96	2.875	96	2.875	270	276.00	276.00	33.39	33.39	1.20	1.20	94.32	0.98	0.49	0.85
M75	Pipe	2.375" O.D.	R	84	2.375	84	2.375	270	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.41	0.70
M77	Pipe	2.375" O.D.	R	84	2.375	84	2.375	270	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.41	0.70
M79	Pipe	2.375" O.D.	R	84	2.375	84	2.375	270	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.41	0.70
M100	Pipe	2.375" O.D.	R	150	2.375	0	2.375	270	356.25	0.00	63.16	0.00	1.20	0.70	30.44	0.20	0.10	0.18
M112	Equal_Angle	L2.5x2.5	F	17	2.500	0	2.500	270	41.25	0.00	6.60	0.00	1.38	1.20	4.06	0.25	0.12	0.21
0	0	0	0	0	0.000	0	0.000	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

1825 W. Walnut Hill Lane Suite 302
Irving, Texas 75038

Trylon

Analysis date: 3/9/2020

WIND FORCES 60 DIRECTION - NO ICE

Member Label	Member Type	Description	F/R	Normal Length [in]	Normal Width [in]	Lateral Length [in]	Lateral Width [in]	θ (wind direction from normal) [°]	AN [in²]	AT [in²]	Aspect Ratio Normal -	Aspect Ratio Lateral -	CaN -	CaT -	Resultant Wind Force Frontal [lbs]	Resultant Wind Force Distributed [lbs/in]	Resultant Component on Global X [lbs/in]	Resultant Component on Global Y [lbs/in]
M1	Pipe	3.5" O.D.	R	150	3.500	0	3.500	60	525.00	0.00	42.86	0.00	1.20	0.70	44.85	0.30	0.15	0.26
M15	Equal_Angle	L2x2	F	52	2.000	0	2.000	60	104.00	0.00	26.00	0.00	2.00	1.20	14.81	0.28	0.14	0.25
M24	Equal_Angle	L2x2	F	52	2.000	0	2.000	60	104.00	0.00	26.00	0.00	2.00	1.20	14.81	0.28	0.14	0.25
M38	Equal_Tube	Tube 4x4	F	31	4.000	0	4.000	60	122.00	0.00	7.63	0.00	1.42	1.20	12.34	0.40	0.20	0.35
M33	Equal_Tube	Tube 4x4	F	31	4.000	0	4.000	60	122.00	0.00	7.63	0.00	1.42	1.20	12.34	0.40	0.20	0.35
M4	Equal_Tube	Tube 4x4	F	62	4.000	0	4.000	150	248.00	0.00	15.50	0.00	1.68	1.20	89.17	1.44	0.72	1.25
M26	Plate	6"x0.375"	F	13	6.000	0	6.000	60	75.00	0.00	2.08	0.00	1.20	1.20	6.41	0.51	0.26	0.44
M61	Pipe	2.375" O.D.	R	84	2.375	84	2.375	60	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.41	0.70
M63	Pipe	2.875" O.D.	R	96	2.875	96	2.875	60	276.00	276.00	33.39	33.39	1.20	1.20	94.32	0.98	0.49	0.85
M65	Pipe	2.375" O.D.	R	84	2.375	84	2.375	60	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.41	0.70
M67	Pipe	2.375" O.D.	R	84	2.375	84	2.375	60	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.41	0.70
M69	Pipe	2.375" O.D.	R	84	2.375	84	2.375	60	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.41	0.70
M94	Pipe	2.375" O.D.	R	150	2.375	0	2.375	60	356.25	0.00	63.16	0.00	1.20	0.70	30.44	0.20	0.10	0.18
M113	Equal_Angle	L2.5x2.5	F	17	2.500	0	2.500	60	41.25	0.00	6.60	0.00	1.38	1.20	4.06	0.25	0.12	0.21
0	0	0	0	0	0.000	0	0.000	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

WIND FORCES 60 DIRECTION - NO ICE

Member Label	Member Type	Description	F/R	Normal Length [in]	Normal Width [in]	Lateral Length [in]	Lateral Width [in]	θ (wind directio n from normal [°]	AN [in²]	AT [in²]	Aspect Ratio Normal -	Aspect Ratio Lateral -	CaN -	CaT -	Resultant Wind Force Frontal [lbs]	Resultant Wind Force Distributed [lbs/in]	Resultant Component on Global X [lbs/in]	Resultant Component on Global Y [lbs/in]
M2	Pipe	3.5" O.D.	R	150	3.500	0	3.500	180	525.00	0.00	42.86	0.00	1.20	0.70	179.41	1.20	0.60	1.04
M9	Equal_Angle	L2x2	F	52	2.000	0	2.000	180	104.00	0.00	26.00	0.00	2.00	1.20	59.24	1.14	0.57	0.99
M18	Equal_Angle	L2x2	F	52	2.000	0	2.000	180	104.00	0.00	26.00	0.00	2.00	1.20	59.24	1.14	0.57	0.99
M42	Equal_Tube	Tube 4x4	F	31	4.000	0	4.000	180	122.00	0.00	7.63	0.00	1.42	1.20	49.37	1.62	0.81	1.40
M41	Equal_Tube	Tube 4x4	F	31	4.000	0	4.000	180	122.00	0.00	7.63	0.00	1.42	1.20	49.37	1.62	0.81	1.40
M6	Equal_Tube	Tube 4x4	F	62	4.000	0	4.000	270	248.00	0.00	15.50	0.00	1.68	1.20	0.00	0.00	0.00	0.00
M32	Plate	6"x0.375"	F	13	6.000	0	6.000	180	75.00	0.00	2.08	0.00	1.20	1.20	25.63	2.05	1.03	1.78
M81	Pipe	2.375" O.D.	R	84	2.375	84	2.375	180	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.41	0.70
M83	Pipe	2.875" O.D.	R	96	2.875	96	2.875	180	276.00	276.00	33.39	33.39	1.20	1.20	94.32	0.98	0.49	0.85
M85	Pipe	2.375" O.D.	R	84	2.375	84	2.375	180	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.41	0.70
M87	Pipe	2.375" O.D.	R	84	2.375	84	2.375	180	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.41	0.70
M89	Pipe	2.375" O.D.	R	84	2.375	84	2.375	180	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.41	0.70
M106	Pipe	2.375" O.D.	R	150	2.375	0	2.375	180	356.25	0.00	63.16	0.00	1.20	0.70	121.75	0.81	0.41	0.70
M114	Equal_Angle	L2.5x2.5	F	17	2.500	0	2.500	180	41.25	0.00	6.60	0.00	1.38	1.20	16.24	0.98	0.49	0.85
0	0	0	0	0	0.000	0	0.000	180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Trylon

Analysis date: 3/9/2020

WIND FORCES 60 DIRECTION - NO ICE

Member Label	Member Type	Description	F/R	Normal Length [in]	Normal Width [in]	Lateral Length [in]	Lateral Width [in]	θ (wind direction from normal [°]	A_N [in²]	A_T [in²]	Aspect Ratio Normal -	Aspect Ratio Lateral -	CaN -	CaT -	Resultant Wind Force Frontal [lbs]	Resultant Wind Force Distributed [lbs/in]	Resultant Component on Global X [lbs/in]	Resultant Component on Global Y [lbs/in]
M3	Pipe	3.5" O.D.	R	150	3.500	0	3.500	300	525.00	0.00	42.86	0.00	1.20	0.70	44.85	0.30	0.15	0.26
M21	Equal_Angle	L2x2	F	52	2.000	0	2.000	300	104.00	0.00	26.00	0.00	2.00	1.20	14.81	0.28	0.14	0.25
M12	Equal_Angle	L2x2	F	52	2.000	0	2.000	300	104.00	0.00	26.00	0.00	2.00	1.20	14.81	0.28	0.14	0.25
M40	Equal_Tube	Tube 4x4	F	31	4.000	0	4.000	300	122.00	0.00	7.63	0.00	1.42	1.20	12.34	0.40	0.20	0.35
M39	Equal_Tube	Tube 4x4	F	31	4.000	0	4.000	300	122.00	0.00	7.63	0.00	1.42	1.20	12.34	0.40	0.20	0.35
M5	Equal_Tube	Tube 4x4	F	62	4.000	0	4.000	390	248.00	0.00	15.50	0.00	1.68	1.20	89.17	1.44	0.72	1.25
M29	Plate	6"x0.375"	F	13	6.000	0	6.000	300	75.00	0.00	2.08	0.00	1.20	1.20	6.41	0.51	0.26	0.44
M71	Pipe	2.375" O.D.	R	84	2.375	84	2.375	300	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.41	0.70
M73	Pipe	2.875" O.D.	R	96	2.875	96	2.875	300	276.00	276.00	33.39	33.39	1.20	1.20	94.32	0.98	0.49	0.85
M75	Pipe	2.375" O.D.	R	84	2.375	84	2.375	300	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.41	0.70
M77	Pipe	2.375" O.D.	R	84	2.375	84	2.375	300	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.41	0.70
M79	Pipe	2.375" O.D.	R	84	2.375	84	2.375	300	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.41	0.70
M100	Pipe	2.375" O.D.	R	150	2.375	0	2.375	300	356.25	0.00	63.16	0.00	1.20	0.70	30.44	0.20	0.10	0.18
M112	Equal_Angle	L2.5x2.5	F	17	2.500	0	2.500	300	41.25	0.00	6.60	0.00	1.38	1.20	4.06	0.25	0.12	0.21
0	0	0	0	0	0.000	0	0.000	300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Trylon

Analysis date: 3/9/2020

WIND FORCES 90 DIRECTION - NO ICE

Member Label	Member Type	Description	F/R	Normal Length [in]	Normal Width [in]	Lateral Length [in]	Lateral Width [in]	θ (wind direction from normal) [°]	A_N [in^2]	A_T [in^2]	Aspect Ratio Normal -	Aspect Ratio Lateral -	CaN -	CaT -	Resultant Wind Force Frontal [lbs]	Resultant Wind Force Distributed [lbs/in]	Resultant Component on Global X [lbs/in]	Resultant Component on Global Y [lbs/in]
M1	Pipe	3.5" O.D.	R	150	3.500	0	3.500	90	525.00	0.00	42.86	0.00	1.20	0.70	0.00	0.00	0.00	0.00
M15	Equal_Angle	L2x2	F	52	2.000	0	2.000	90	104.00	0.00	26.00	0.00	2.00	1.20	0.00	0.00	0.00	0.00
M24	Equal_Angle	L2x2	F	52	2.000	0	2.000	90	104.00	0.00	26.00	0.00	2.00	1.20	0.00	0.00	0.00	0.00
M38	Equal_Tube	Tube 4x4	F	31	4.000	0	4.000	90	122.00	0.00	7.63	0.00	1.42	1.20	0.00	0.00	0.00	0.00
M33	Equal_Tube	Tube 4x4	F	31	4.000	0	4.000	90	122.00	0.00	7.63	0.00	1.42	1.20	0.00	0.00	0.00	0.00
M4	Equal_Tube	Tube 4x4	F	62	4.000	0	4.000	180	248.00	0.00	15.50	0.00	1.68	1.20	118.89	1.92	0.00	1.92
M26	Plate	6"x0.375"	F	13	6.000	0	6.000	90	75.00	0.00	2.08	0.00	1.20	1.20	0.00	0.00	0.00	0.00
M61	Pipe	2.375" O.D.	R	84	2.375	84	2.375	90	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.00	0.81
M63	Pipe	2.875" O.D.	R	96	2.875	96	2.875	90	276.00	276.00	33.39	33.39	1.20	1.20	94.32	0.98	0.00	0.98
M65	Pipe	2.375" O.D.	R	84	2.375	84	2.375	90	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.00	0.81
M67	Pipe	2.375" O.D.	R	84	2.375	84	2.375	90	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.00	0.81
M69	Pipe	2.375" O.D.	R	84	2.375	84	2.375	90	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.00	0.81
M94	Pipe	2.375" O.D.	R	150	2.375	0	2.375	90	356.25	0.00	63.16	0.00	1.20	0.70	0.00	0.00	0.00	0.00
M113	Equal_Angle	L2.5x2.5	F	17	2.500	0	2.500	90	41.25	0.00	6.60	0.00	1.38	1.20	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

WIND FORCES 90 DIRECTION - NO ICE

Member Label	Member Type	Description	F/R	Normal Length [in]	Normal Width [in]	Lateral Length [in]	Lateral Width [in]	θ (wind direction from normal [°]	AN $[in^2]$	AT $[in^2]$	Aspect Ratio Normal -	Aspect Ratio Lateral -	CaN -	CaT -	Resultant Wind Force Frontal [lbs]	Resultant Wind Force Distributed [lbs/in]	Resultant Component on Global X [lbs/in]	Resultant Component on Global Y [lbs/in]
M2	Pipe	3.5" O.D.	R	150	3.500	0	3.500	210	525.00	0.00	42.86	0.00	1.20	0.70	134.56	0.90	0.00	0.90
M9	Equal_Angle	L2x2	F	52	2.000	0	2.000	210	104.00	0.00	26.00	0.00	2.00	1.20	44.43	0.85	0.00	0.85
M18	Equal_Angle	L2x2	F	52	2.000	0	2.000	210	104.00	0.00	26.00	0.00	2.00	1.20	44.43	0.85	0.00	0.85
M42	Equal_Tube	Tube 4x4	F	31	4.000	0	4.000	210	122.00	0.00	7.63	0.00	1.42	1.20	37.02	1.21	0.00	1.21
M41	Equal_Tube	Tube 4x4	F	31	4.000	0	4.000	210	122.00	0.00	7.63	0.00	1.42	1.20	37.02	1.21	0.00	1.21
M6	Equal_Tube	Tube 4x4	F	62	4.000	0	4.000	300	248.00	0.00	15.50	0.00	1.68	1.20	29.72	0.48	0.00	0.48
M32	Plate	6"x0.375"	F	13	6.000	0	6.000	210	75.00	0.00	2.08	0.00	1.20	1.20	19.22	1.54	0.00	1.54
M81	Pipe	2.375" O.D.	R	84	2.375	84	2.375	210	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.00	0.81
M83	Pipe	2.875" O.D.	R	96	2.875	96	2.875	210	276.00	276.00	33.39	33.39	1.20	1.20	94.32	0.98	0.00	0.98
M85	Pipe	2.375" O.D.	R	84	2.375	84	2.375	210	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.00	0.81
M87	Pipe	2.375" O.D.	R	84	2.375	84	2.375	210	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.00	0.81
M89	Pipe	2.375" O.D.	R	84	2.375	84	2.375	210	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.00	0.81
M106	Pipe	2.375" O.D.	R	150	2.375	0	2.375	210	356.25	0.00	63.16	0.00	1.20	0.70	91.31	0.61	0.00	0.61
M114	Equal_Angle	L2.5x2.5	F	17	2.500	0	2.500	210	41.25	0.00	6.60	0.00	1.38	1.20	12.18	0.74	0.00	0.74
0	0	0	0	0	0.000	0	0.000	210	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	210	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	210	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	210	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	210	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	210	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	210	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	210	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	210	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	210	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	210	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	210	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	210	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	210	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	210	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	210	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Trylon

Analysis date: 3/9/2020

WIND FORCES 90 DIRECTION - NO ICE

Member Label	Member Type	Description	F/R	Normal Length [in]	Normal Width [in]	Lateral Length [in]	Lateral Width [in]	θ (wind direction from normal) [°]	AN [in^2]	AT [in^2]	Aspect Ratio Normal -	Aspect Ratio Lateral -	CaN -	CaT -	Resultant Wind Force Frontal [lbs]	Resultant Wind Force Distributed [lbs/in]	Resultant Component on Global X [lbs/in]	Resultant Component on Global Y [lbs/in]
M3	Pipe	3.5" O.D.	R	150	3.500	0	3.500	330	525.00	0.00	42.86	0.00	1.20	0.70	134.56	0.90	0.00	0.90
M21	Equal_Angle	L2x2	F	52	2.000	0	2.000	330	104.00	0.00	26.00	0.00	2.00	1.20	44.43	0.85	0.00	0.85
M12	Equal_Angle	L2x2	F	52	2.000	0	2.000	330	104.00	0.00	26.00	0.00	2.00	1.20	44.43	0.85	0.00	0.85
M40	Equal_Tube	Tube 4x4	F	31	4.000	0	4.000	330	122.00	0.00	7.63	0.00	1.42	1.20	37.02	1.21	0.00	1.21
M39	Equal_Tube	Tube 4x4	F	31	4.000	0	4.000	330	122.00	0.00	7.63	0.00	1.42	1.20	37.02	1.21	0.00	1.21
M5	Equal_Tube	Tube 4x4	F	62	4.000	0	4.000	420	248.00	0.00	15.50	0.00	1.68	1.20	29.72	0.48	0.00	0.48
M29	Plate	6"x0.375"	F	13	6.000	0	6.000	330	75.00	0.00	2.08	0.00	1.20	1.20	19.22	1.54	0.00	1.54
M71	Pipe	2.375" O.D.	R	84	2.375	84	2.375	330	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.00	0.81
M73	Pipe	2.875" O.D.	R	96	2.875	96	2.875	330	276.00	276.00	33.39	33.39	1.20	1.20	94.32	0.98	0.00	0.98
M75	Pipe	2.375" O.D.	R	84	2.375	84	2.375	330	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.00	0.81
M77	Pipe	2.375" O.D.	R	84	2.375	84	2.375	330	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.00	0.81
M79	Pipe	2.375" O.D.	R	84	2.375	84	2.375	330	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	0.00	0.81
M100	Pipe	2.375" O.D.	R	150	2.375	0	2.375	330	356.25	0.00	63.16	0.00	1.20	0.70	91.31	0.61	0.00	0.61
M112	Equal_Angle	L2.5x2.5	F	17	2.500	0	2.500	330	41.25	0.00	6.60	0.00	1.38	1.20	12.18	0.74	0.00	0.74
0	0	0	0	0	0.000	0	0.000	330	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	330	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	330	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	330	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	330	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	330	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	330	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	330	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	330	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	330	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	330	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	330	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	330	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	330	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	330	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	330	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

1825 W. Walnut Hill Lane Suite 302
Irving, Texas 75038

Trylon

Analysis date: 3/9/2020

WIND FORCES 120 DIRECTION - NO ICE

Member Label	Member Type	Description	F/R	Normal Length [in]	Normal Width [in]	Lateral Length [in]	Lateral Width [in]	θ (wind direction from normal) [°]	A_N [in^2]	A_T [in^2]	Aspect Ratio Normal -	Aspect Ratio Lateral -	CaN -	CaT -	Resultant Wind Force Frontal [lbs]	Resultant Wind Force Distributed [lbs/in]	Resultant Component on Global X [lbs/in]	Resultant Component on Global Y [lbs/in]
M1	Pipe	3.5" O.D.	R	150	3.500	0	3.500	120	525.00	0.00	42.86	0.00	1.20	0.70	44.85	0.30	-0.15	0.26
M15	Equal_Angle	L2x2	F	52	2.000	0	2.000	120	104.00	0.00	26.00	0.00	2.00	1.20	14.81	0.28	-0.14	0.25
M24	Equal_Angle	L2x2	F	52	2.000	0	2.000	120	104.00	0.00	26.00	0.00	2.00	1.20	14.81	0.28	-0.14	0.25
M38	Equal_Tube	Tube 4x4	F	31	4.000	0	4.000	120	122.00	0.00	7.63	0.00	1.42	1.20	12.34	0.40	-0.20	0.35
M33	Equal_Tube	Tube 4x4	F	31	4.000	0	4.000	120	122.00	0.00	7.63	0.00	1.42	1.20	12.34	0.40	-0.20	0.35
M4	Equal_Tube	Tube 4x4	F	62	4.000	0	4.000	210	248.00	0.00	15.50	0.00	1.68	1.20	89.17	1.44	-0.72	1.25
M26	Plate	6"x0.375"	F	13	6.000	0	6.000	120	75.00	0.00	2.08	0.00	1.20	1.20	6.41	0.51	-0.26	0.44
M61	Pipe	2.375" O.D.	R	84	2.375	84	2.375	120	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	-0.41	0.70
M63	Pipe	2.875" O.D.	R	96	2.875	96	2.875	120	276.00	276.00	33.39	33.39	1.20	1.20	94.32	0.98	-0.49	0.85
M65	Pipe	2.375" O.D.	R	84	2.375	84	2.375	120	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	-0.41	0.70
M67	Pipe	2.375" O.D.	R	84	2.375	84	2.375	120	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	-0.41	0.70
M69	Pipe	2.375" O.D.	R	84	2.375	84	2.375	120	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	-0.41	0.70
M94	Pipe	2.375" O.D.	R	150	2.375	0	2.375	120	356.25	0.00	63.16	0.00	1.20	0.70	30.44	0.20	-0.10	0.18
M113	Equal_Angle	L2.5x2.5	F	17	2.500	0	2.500	120	41.25	0.00	6.60	0.00	1.38	1.20	4.06	0.25	-0.12	0.21
0	0	0	0	0	0.000	0	0.000	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Trylon

Analysis date: 3/9/2020

WIND FORCES 120 DIRECTION - NO ICE

Member Label	Member Type	Description	F/R	Normal Length [in]	Normal Width [in]	Lateral Length [in]	Lateral Width [in]	θ (wind direction from normal) [°]	AN [in²]	AT [in²]	Aspect Ratio Normal -	Aspect Ratio Lateral -	CaN -	CaT -	Resultant Wind Force Frontal [lbs]	Resultant Wind Force Distributed [lbs/in]	Resultant Component on Global X [lbs/in]	Resultant Component on Global Y [lbs/in]
M2	Pipe	3.5" O.D.	R	150	3.500	0	3.500	240	525.00	0.00	42.86	0.00	1.20	0.70	44.85	0.30	-0.15	0.26
M9	Equal_Angle	L2x2	F	52	2.000	0	2.000	240	104.00	0.00	26.00	0.00	2.00	1.20	14.81	0.28	-0.14	0.25
M18	Equal_Angle	L2x2	F	52	2.000	0	2.000	240	104.00	0.00	26.00	0.00	2.00	1.20	14.81	0.28	-0.14	0.25
M42	Equal_Tube	Tube 4x4	F	31	4.000	0	4.000	240	122.00	0.00	7.63	0.00	1.42	1.20	12.34	0.40	-0.20	0.35
M41	Equal_Tube	Tube 4x4	F	31	4.000	0	4.000	240	122.00	0.00	7.63	0.00	1.42	1.20	12.34	0.40	-0.20	0.35
M6	Equal_Tube	Tube 4x4	F	62	4.000	0	4.000	330	248.00	0.00	15.50	0.00	1.68	1.20	89.17	1.44	-0.72	1.25
M32	Plate	6"x0.375"	F	13	6.000	0	6.000	240	75.00	0.00	2.08	0.00	1.20	1.20	6.41	0.51	-0.26	0.44
M81	Pipe	2.375" O.D.	R	84	2.375	84	2.375	240	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	-0.41	0.70
M83	Pipe	2.875" O.D.	R	96	2.875	96	2.875	240	276.00	276.00	33.39	33.39	1.20	1.20	94.32	0.98	-0.49	0.85
M85	Pipe	2.375" O.D.	R	84	2.375	84	2.375	240	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	-0.41	0.70
M87	Pipe	2.375" O.D.	R	84	2.375	84	2.375	240	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	-0.41	0.70
M89	Pipe	2.375" O.D.	R	84	2.375	84	2.375	240	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	-0.41	0.70
M106	Pipe	2.375" O.D.	R	150	2.375	0	2.375	240	356.25	0.00	63.16	0.00	1.20	0.70	30.44	0.20	-0.10	0.18
M114	Equal_Angle	L2.5x2.5	F	17	2.500	0	2.500	240	41.25	0.00	6.60	0.00	1.38	1.20	4.06	0.25	-0.12	0.21
0	0	0	0	0	0.000	0	0.000	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

WIND FORCES 120 DIRECTION - NO ICE

Member Label	Member Type	Description	F/R	Normal Length [in]	Normal Width [in]	Lateral Length [in]	Lateral Width [in]	θ (wind direction from normal) [°]	A_N [in²]	A_T [in²]	Aspect Ratio Normal -	Aspect Ratio Lateral -	CaN -	CaT -	Resultant Wind Force Frontal [lbs]	Resultant Wind Force Distributed [lbs/in]	Resultant Component on Global X [lbs/in]	Resultant Component on Global Y [lbs/in]
M3	Pipe	3.5" O.D.	R	150	3.500	0	3.500	360	525.00	0.00	42.86	0.00	1.20	0.70	179.41	1.20	-0.60	1.04
M21	Equal_Angle	L2x2	F	52	2.000	0	2.000	360	104.00	0.00	26.00	0.00	2.00	1.20	59.24	1.14	-0.57	0.99
M12	Equal_Angle	L2x2	F	52	2.000	0	2.000	360	104.00	0.00	26.00	0.00	2.00	1.20	59.24	1.14	-0.57	0.99
M40	Equal_Tube	Tube 4x4	F	31	4.000	0	4.000	360	122.00	0.00	7.63	0.00	1.42	1.20	49.37	1.62	-0.81	1.40
M39	Equal_Tube	Tube 4x4	F	31	4.000	0	4.000	360	122.00	0.00	7.63	0.00	1.42	1.20	49.37	1.62	-0.81	1.40
M5	Equal_Tube	Tube 4x4	F	62	4.000	0	4.000	450	248.00	0.00	15.50	0.00	1.68	1.20	0.00	0.00	0.00	0.00
M29	Plate	6"x0.375"	F	13	6.000	0	6.000	360	75.00	0.00	2.08	0.00	1.20	1.20	25.63	2.05	-1.03	1.78
M71	Pipe	2.375" O.D.	R	84	2.375	84	2.375	360	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	-0.41	0.70
M73	Pipe	2.875" O.D.	R	96	2.875	96	2.875	360	276.00	276.00	33.39	33.39	1.20	1.20	94.32	0.98	-0.49	0.85
M75	Pipe	2.375" O.D.	R	84	2.375	84	2.375	360	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	-0.41	0.70
M77	Pipe	2.375" O.D.	R	84	2.375	84	2.375	360	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	-0.41	0.70
M79	Pipe	2.375" O.D.	R	84	2.375	84	2.375	360	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	-0.41	0.70
M100	Pipe	2.375" O.D.	R	150	2.375	0	2.375	360	356.25	0.00	63.16	0.00	1.20	0.70	121.75	0.81	-0.41	0.70
M112	Equal_Angle	L2.5x2.5	F	17	2.500	0	2.500	360	41.25	0.00	6.60	0.00	1.38	1.20	16.24	0.98	-0.49	0.85
0	0	0	0	0	0.000	0	0.000	360	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	360	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	360	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	360	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	360	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	360	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	360	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	360	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	360	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	360	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	360	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	360	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	360	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	360	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	360	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	360	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

WIND FORCES 150 DIRECTION - NO ICE

Member Label	Member Type	Description	F/R	Normal Length [in]	Normal Width [in]	Lateral Length [in]	Lateral Width [in]	θ (wind direction from normal) [°]	A_N [in^2]	A_T [in^2]	Aspect Ratio Normal -	Aspect Ratio Lateral -	CaN -	CaT -	Resultant Wind Force Frontal [lbs]	Resultant Wind Force Distributed [lbs/in]	Resultant Component on Global X [lbs/in]	Resultant Component on Global Y [lbs/in]
M1	Pipe	3.5" O.D.	R	150	3.500	0	3.500	150	525.00	0.00	42.86	0.00	1.20	0.70	134.56	0.90	-0.78	0.45
M15	Equal_Angle	L2x2	F	52	2.000	0	2.000	150	104.00	0.00	26.00	0.00	2.00	1.20	44.43	0.85	-0.74	0.43
M24	Equal_Angle	L2x2	F	52	2.000	0	2.000	150	104.00	0.00	26.00	0.00	2.00	1.20	44.43	0.85	-0.74	0.43
M38	Equal_Tube	Tube 4x4	F	31	4.000	0	4.000	150	122.00	0.00	7.63	0.00	1.42	1.20	37.02	1.21	-1.05	0.61
M33	Equal_Tube	Tube 4x4	F	31	4.000	0	4.000	150	122.00	0.00	7.63	0.00	1.42	1.20	37.02	1.21	-1.05	0.61
M4	Equal_Tube	Tube 4x4	F	62	4.000	0	4.000	240	248.00	0.00	15.50	0.00	1.68	1.20	29.72	0.48	-0.42	0.24
M26	Plate	6"x0.375"	F	13	6.000	0	6.000	150	75.00	0.00	2.08	0.00	1.20	1.20	19.22	1.54	-1.33	0.77
M61	Pipe	2.375" O.D.	R	84	2.375	84	2.375	150	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	-0.70	0.41
M63	Pipe	2.875" O.D.	R	96	2.875	96	2.875	150	276.00	276.00	33.39	33.39	1.20	1.20	94.32	0.98	-0.85	0.49
M65	Pipe	2.375" O.D.	R	84	2.375	84	2.375	150	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	-0.70	0.41
M67	Pipe	2.375" O.D.	R	84	2.375	84	2.375	150	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	-0.70	0.41
M69	Pipe	2.375" O.D.	R	84	2.375	84	2.375	150	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	-0.70	0.41
M94	Pipe	2.375" O.D.	R	150	2.375	0	2.375	150	356.25	0.00	63.16	0.00	1.20	0.70	91.31	0.61	-0.53	0.30
M113	Equal_Angle	L2.5x2.5	F	17	2.500	0	2.500	150	41.25	0.00	6.60	0.00	1.38	1.20	12.18	0.74	-0.64	0.37
0	0	0	0	0	0.000	0	0.000	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

WIND FORCES 150 DIRECTION - NO ICE

Member Label	Member Type	Description	F/R	Normal Length [in]	Normal Width [in]	Lateral Length [in]	Lateral Width [in]	θ (wind direction from normal) [°]	AN [in^2]	AT [in^2]	Aspect Ratio Normal -	Aspect Ratio Lateral -	CaN -	CaT -	Resultant Wind Force Frontal [lbs]	Resultant Wind Force Distributed [lbs/in]	Resultant Component on Global X [lbs/in]	Resultant Component on Global Y [lbs/in]
M2	Pipe	3.5" O.D.	R	150	3.500	0	3.500	270	525.00	0.00	42.86	0.00	1.20	0.70	0.00	0.00	0.00	0.00
M9	Equal_Angle	L2x2	F	52	2.000	0	2.000	270	104.00	0.00	26.00	0.00	2.00	1.20	0.00	0.00	0.00	0.00
M18	Equal_Angle	L2x2	F	52	2.000	0	2.000	270	104.00	0.00	26.00	0.00	2.00	1.20	0.00	0.00	0.00	0.00
M42	Equal_Tube	Tube 4x4	F	31	4.000	0	4.000	270	122.00	0.00	7.63	0.00	1.42	1.20	0.00	0.00	0.00	0.00
M41	Equal_Tube	Tube 4x4	F	31	4.000	0	4.000	270	122.00	0.00	7.63	0.00	1.42	1.20	0.00	0.00	0.00	0.00
M6	Equal_Tube	Tube 4x4	F	62	4.000	0	4.000	360	248.00	0.00	15.50	0.00	1.68	1.20	118.89	1.92	-1.66	0.96
M32	Plate	6"x0.375"	F	13	6.000	0	6.000	270	75.00	0.00	2.08	0.00	1.20	1.20	0.00	0.00	0.00	0.00
M81	Pipe	2.375" O.D.	R	84	2.375	84	2.375	270	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	-0.70	0.41
M83	Pipe	2.875" O.D.	R	96	2.875	96	2.875	270	276.00	276.00	33.39	33.39	1.20	1.20	94.32	0.98	-0.85	0.49
M85	Pipe	2.375" O.D.	R	84	2.375	84	2.375	270	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	-0.70	0.41
M87	Pipe	2.375" O.D.	R	84	2.375	84	2.375	270	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	-0.70	0.41
M89	Pipe	2.375" O.D.	R	84	2.375	84	2.375	270	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	-0.70	0.41
M106	Pipe	2.375" O.D.	R	150	2.375	0	2.375	270	356.25	0.00	63.16	0.00	1.20	0.70	0.00	0.00	0.00	0.00
M114	Equal_Angle	L2.5x2.5	F	17	2.500	0	2.500	270	41.25	0.00	6.60	0.00	1.38	1.20	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Trylon

Analysis date: 3/9/2020

WIND FORCES 150 DIRECTION - NO ICE

Member Label	Member Type	Description	F/R	Normal Length [in]	Normal Width [in]	Lateral Length [in]	Lateral Width [in]	θ (wind direction from normal) [°]	A_N $[in^2]$	A_T $[in^2]$	Aspect Ratio Normal -	Aspect Ratio Lateral -	CaN -	CaT -	Resultant Wind Force Frontal [lbs]	Resultant Wind Force Distributed [lbs/in]	Resultant Component on Global X [lbs/in]	Resultant Component on Global Y [lbs/in]
M3	Pipe	3.5" O.D.	R	150	3.500	0	3.500	390	525.00	0.00	42.86	0.00	1.20	0.70	134.56	0.90	-0.78	0.45
M21	Equal_Angle	L2x2	F	52	2.000	0	2.000	390	104.00	0.00	26.00	0.00	2.00	1.20	44.43	0.85	-0.74	0.43
M12	Equal_Angle	L2x2	F	52	2.000	0	2.000	390	104.00	0.00	26.00	0.00	2.00	1.20	44.43	0.85	-0.74	0.43
M40	Equal_Tube	Tube 4x4	F	31	4.000	0	4.000	390	122.00	0.00	7.63	0.00	1.42	1.20	37.02	1.21	-1.05	0.61
M39	Equal_Tube	Tube 4x4	F	31	4.000	0	4.000	390	122.00	0.00	7.63	0.00	1.42	1.20	37.02	1.21	-1.05	0.61
M5	Equal_Tube	Tube 4x4	F	62	4.000	0	4.000	480	248.00	0.00	15.50	0.00	1.68	1.20	29.72	0.48	-0.42	0.24
M29	Plate	6"x0.375"	F	13	6.000	0	6.000	390	75.00	0.00	2.08	0.00	1.20	1.20	19.22	1.54	-1.33	0.77
M71	Pipe	2.375" O.D.	R	84	2.375	84	2.375	390	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	-0.70	0.41
M73	Pipe	2.875" O.D.	R	96	2.875	96	2.875	390	276.00	276.00	33.39	33.39	1.20	1.20	94.32	0.98	-0.85	0.49
M75	Pipe	2.375" O.D.	R	84	2.375	84	2.375	390	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	-0.70	0.41
M77	Pipe	2.375" O.D.	R	84	2.375	84	2.375	390	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	-0.70	0.41
M79	Pipe	2.375" O.D.	R	84	2.375	84	2.375	390	199.50	199.50	35.37	35.37	1.20	1.20	68.18	0.81	-0.70	0.41
M100	Pipe	2.375" O.D.	R	150	2.375	0	2.375	390	356.25	0.00	63.16	0.00	1.20	0.70	91.31	0.61	-0.53	0.30
M112	Equal_Angle	L2.5x2.5	F	17	2.500	0	2.500	390	41.25	0.00	6.60	0.00	1.38	1.20	12.18	0.74	-0.64	0.37
0	0	0	0	0	0.000	0	0.000	390	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	390	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	390	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	390	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	390	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	390	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	390	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	390	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	390	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	390	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	390	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	390	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	390	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	390	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	390	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0.000	0	0.000	390	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Analysis date: 3/9/2020

WIND FORCES 0 DIRECTION - ICE

Member Label	Member Type	Description	F/R	Normal Length [in]	Normal Width [in]	Lateral Length [in]	Lateral Width [in]	θ (wind direction from normal [°]	A_N [in^2]	A_T [in^2]	Aspect Ratio Normal -	Aspect Ratio Lateral -	CaN -	CaT -	Resultant Wind Force Frontal [lbs]	Resultant Wind Force Distributed [lbs/in]	Resultant Component on Global X [lbs/in]	Resultant Component on Global Y [lbs/in]
M1	Pipe	3.5" O.D.	R	153.38	6.88	3.38	6.88	0	1055.87	23.29	22.28	0.49	1.14	0.70	58.51	0.38	0.38	0.00
M15	Equal_Angle	L2x2	F	55.38	5.38	3.38	5.38	0	298.18	18.22	10.29	0.63	1.51	1.20	21.89	0.40	0.40	0.00
M24	Equal_Angle	L2x2	F	55.38	5.38	3.38	5.38	0	298.18	18.22	10.29	0.63	1.51	1.20	21.89	0.40	0.40	0.00
M38	Equal_Tube	Tube 4x4	F	33.88	7.38	3.38	7.38	0	250.19	24.99	4.59	0.46	1.29	1.20	15.73	0.46	0.46	0.00
M33	Equal_Tube	Tube 4x4	F	33.88	7.38	3.38	7.38	0	250.19	24.99	4.59	0.46	1.29	1.20	15.73	0.46	0.46	0.00
M4	Equal_Tube	Tube 4x4	F	65.38	7.38	3.38	7.38	90	482.78	24.99	8.85	0.46	1.46	1.20	1.46	0.02	0.02	0.00
M26	Plate	6"x0.375"	F	15.88	9.38	3.38	9.38	0	149.05	31.75	1.69	0.36	1.20	1.20	8.70	0.55	0.55	0.00
M61	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	0	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.27	0.00
M63	Pipe	2.875" O.D.	R	99.38	6.26	99.38	6.26	0	622.03	622.03	15.88	15.88	1.00	1.00	30.17	0.30	0.30	0.00
M65	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	0	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.27	0.00
M67	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	0	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.27	0.00
M69	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	0	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.27	0.00
M94	Pipe	2.375" O.D.	R	153.38	5.76	3.38	5.76	0	883.31	19.49	26.63	0.59	1.20	0.70	51.54	0.34	0.34	0.00
M113	Equal_Angle	L2.5x2.5	F	19.88	5.88	3.38	5.88	0	116.99	19.91	3.38	0.58	1.24	1.20	7.05	0.35	0.35	0.00
0	0	0	0	3.38	0.00	3.38	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

WIND FORCES 0 DIRECTION - ICE

Member Label	Member Type	Description	F/R	Normal Length [in]	Normal Width [in]	Lateral Length [in]	Lateral Width [in]	θ (wind direction from normal [°]	A_N [in^2]	A_T [in^2]	Aspect Ratio Normal -	Aspect Ratio Lateral -	CaN -	CaT -	Resultant Wind Force Frontal [lbs]	Resultant Wind Force Distributed [lbs/in]	Resultant Component on Global X [lbs/in]	Resultant Component on Global Y [lbs/in]
M2	Pipe	3.5" O.D.	R	153.38	6.88	3.38	6.88	120	1055.87	23.29	22.28	0.49	1.14	0.70	15.22	0.10	0.10	0.00
M9	Equal_Angle	L2x2	F	55.38	5.38	3.38	5.38	120	298.18	18.22	10.29	0.63	1.51	1.20	6.27	0.11	0.11	0.00
M18	Equal_Angle	L2x2	F	55.38	5.38	3.38	5.38	120	298.18	18.22	10.29	0.63	1.51	1.20	6.27	0.11	0.11	0.00
M42	Equal_Tube	Tube 4x4	F	33.88	7.38	3.38	7.38	120	250.19	24.99	4.59	0.46	1.29	1.20	5.03	0.15	0.15	0.00
M41	Equal_Tube	Tube 4x4	F	33.88	7.38	3.38	7.38	120	250.19	24.99	4.59	0.46	1.29	1.20	5.03	0.15	0.15	0.00
M6	Equal_Tube	Tube 4x4	F	65.38	7.38	3.38	7.38	210	482.78	24.99	8.85	0.46	1.46	1.20	26.10	0.40	0.40	0.00
M32	Plate	6"x0.375"	F	15.88	9.38	3.38	9.38	120	149.05	31.75	1.69	0.36	1.20	1.20	3.56	0.22	0.22	0.00
M81	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	120	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.27	0.00
M83	Pipe	2.875" O.D.	R	99.38	6.26	99.38	6.26	120	622.03	622.03	15.88	15.88	1.00	1.00	30.17	0.30	0.30	0.00
M85	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	120	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.27	0.00
M87	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	120	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.27	0.00
M89	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	120	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.27	0.00
M106	Pipe	2.375" O.D.	R	153.38	5.76	3.38	5.76	120	883.31	19.49	26.63	0.59	1.20	0.70	13.38	0.09	0.09	0.00
M114	Equal_Angle	L2.5x2.5	F	19.88	5.88	3.38	5.88	120	116.99	19.91	3.38	0.58	1.24	1.20	2.63	0.13	0.13	0.00
0	0	0	0	3.38	0.00	3.38	0.00	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

WIND FORCES 0 DIRECTION - ICE

Member Label	Member Type	Description	F/R	Normal Length [in]	Normal Width [in]	Lateral Length [in]	Lateral Width [in]	θ (wind direction from normal [°]	AN [in²]	AT [in²]	Aspect Ratio Normal -	Aspect Ratio Lateral -	CaN -	CaT -	Resultant Wind Force Frontal [lbs]	Resultant Wind Force Distributed [lbs/in]	Resultant Component on Global X [lbs/in]	Resultant Component on Global Y [lbs/in]
M3	Pipe	3.5" O.D.	R	153.38	6.88	3.38	6.88	240	1055.87	23.29	22.28	0.49	1.14	0.70	15.22	0.10	0.10	0.00
M21	Equal_Angle	L2x2	F	55.38	5.38	3.38	5.38	240	298.18	18.22	10.29	0.63	1.51	1.20	6.27	0.11	0.11	0.00
M12	Equal_Angle	L2x2	F	55.38	5.38	3.38	5.38	240	298.18	18.22	10.29	0.63	1.51	1.20	6.27	0.11	0.11	0.00
M40	Equal_Tube	Tube 4x4	F	33.88	7.38	3.38	7.38	240	250.19	24.99	4.59	0.46	1.29	1.20	5.03	0.15	0.15	0.00
M39	Equal_Tube	Tube 4x4	F	33.88	7.38	3.38	7.38	240	250.19	24.99	4.59	0.46	1.29	1.20	5.03	0.15	0.15	0.00
M5	Equal_Tube	Tube 4x4	F	65.38	7.38	3.38	7.38	330	482.78	24.99	8.85	0.46	1.46	1.20	26.10	0.40	0.40	0.00
M29	Plate	6"x0.375"	F	15.88	9.38	3.38	9.38	240	149.05	31.75	1.69	0.36	1.20	1.20	3.56	0.22	0.22	0.00
M71	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	240	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.27	0.00
M73	Pipe	2.875" O.D.	R	99.38	6.26	99.38	6.26	240	622.03	622.03	15.88	15.88	1.00	1.00	30.17	0.30	0.30	0.00
M75	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	240	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.27	0.00
M77	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	240	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.27	0.00
M79	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	240	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.27	0.00
M100	Pipe	2.375" O.D.	R	153.38	5.76	3.38	5.76	240	883.31	19.49	26.63	0.59	1.20	0.70	13.38	0.09	0.09	0.00
M112	Equal_Angle	L2.5x2.5	F	19.88	5.88	3.38	5.88	240	116.99	19.91	3.38	0.58	1.24	1.20	2.63	0.13	0.13	0.00
0	0	0	0	3.38	0.00	3.38	0.00	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Analysis date: 3/9/2020

WIND FORCES 30 DIRECTION - ICE

Member Label	Member Type	Description	F/R	Normal Length [in]	Normal Width [in]	Lateral Length [in]	Lateral Width [in]	θ (wind direction from [°]	AN [in^2]	AT [in^2]	Aspect Ratio Normal -	Aspect Ratio Lateral -	CaN -	CaT -	Resultant Wind Force Frontal [lbs]	Resultant Wind Force Distributed [lbs/in]	Resultant Component on Global X [lbs/in]	Resultant Component on Global Y [lbs/in]
M1	Pipe	3.5" O.D.	R	153.38	6.88	3.38	6.88	30	1055.87	23.29	22.28	0.49	1.14	0.70	44.08	0.29	0.25	0.14
M15	Equal_Angle	L2x2	F	55.38	5.38	3.38	5.38	30	298.18	18.22	10.29	0.63	1.51	1.20	16.68	0.30	0.26	0.15
M24	Equal_Angle	L2x2	F	55.38	5.38	3.38	5.38	30	298.18	18.22	10.29	0.63	1.51	1.20	16.68	0.30	0.26	0.15
M38	Equal_Tube	Tube 4x4	F	33.88	7.38	3.38	7.38	30	250.19	24.99	4.59	0.46	1.29	1.20	12.16	0.36	0.31	0.18
M33	Equal_Tube	Tube 4x4	F	33.88	7.38	3.38	7.38	30	250.19	24.99	4.59	0.46	1.29	1.20	12.16	0.36	0.31	0.18
M4	Equal_Tube	Tube 4x4	F	65.38	7.38	3.38	7.38	120	482.78	24.99	8.85	0.46	1.46	1.20	9.67	0.15	0.13	0.07
M26	Plate	6"x0.375"	F	15.88	9.38	3.38	9.38	30	149.05	31.75	1.69	0.36	1.20	1.20	6.99	0.44	0.38	0.22
M61	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	30	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.24	0.14
M63	Pipe	2.875" O.D.	R	99.38	6.26	99.38	6.26	30	622.03	622.03	15.88	15.88	1.00	1.00	30.17	0.30	0.26	0.15
M65	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	30	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.24	0.14
M67	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	30	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.24	0.14
M69	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	30	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.24	0.14
M94	Pipe	2.375" O.D.	R	153.38	5.76	3.38	5.76	30	883.31	19.49	26.63	0.59	1.20	0.70	38.82	0.25	0.22	0.13
M113	Equal_Angle	L2.5x2.5	F	19.88	5.88	3.38	5.88	30	116.99	19.91	3.38	0.58	1.24	1.20	5.58	0.28	0.24	0.14
0	0	0	0	3.38	0.00	3.38	0.00	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Trylon

Analysis date: 3/9/2020

WIND FORCES 30 DIRECTION - ICE

Member Label	Member Type	Description	F/R	Normal Length [in]	Normal Width [in]	Lateral Length [in]	Lateral Width [in]	θ (wind direction from [°]	AN [in^2]	AT [in^2]	Aspect Ratio Normal -	Aspect Ratio Lateral -	CaN -	CaT -	Resultant Wind Force Frontal [lbs]	Resultant Wind Force Distributed [lbs/in]	Resultant Component on Global X [lbs/in]	Resultant Component on Global Y [lbs/in]
M2	Pipe	3.5" O.D.	R	153.38	6.88	3.38	6.88	150	1055.87	23.29	22.28	0.49	1.14	0.70	44.08	0.29	0.25	0.14
M9	Equal_Angle	L2x2	F	55.38	5.38	3.38	5.38	150	298.18	18.22	10.29	0.63	1.51	1.20	16.68	0.30	0.26	0.15
M18	Equal_Angle	L2x2	F	55.38	5.38	3.38	5.38	150	298.18	18.22	10.29	0.63	1.51	1.20	16.68	0.30	0.26	0.15
M42	Equal_Tube	Tube 4x4	F	33.88	7.38	3.38	7.38	150	250.19	24.99	4.59	0.46	1.29	1.20	12.16	0.36	0.31	0.18
M41	Equal_Tube	Tube 4x4	F	33.88	7.38	3.38	7.38	150	250.19	24.99	4.59	0.46	1.29	1.20	12.16	0.36	0.31	0.18
M6	Equal_Tube	Tube 4x4	F	65.38	7.38	3.38	7.38	240	482.78	24.99	8.85	0.46	1.46	1.20	9.67	0.15	0.13	0.07
M32	Plate	6"x0.375"	F	15.88	9.38	3.38	9.38	150	149.05	31.75	1.69	0.36	1.20	1.20	6.99	0.44	0.38	0.22
M81	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	150	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.24	0.14
M83	Pipe	2.875" O.D.	R	99.38	6.26	99.38	6.26	150	622.03	622.03	15.88	15.88	1.00	1.00	30.17	0.30	0.26	0.15
M85	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	150	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.24	0.14
M87	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	150	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.24	0.14
M89	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	150	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.24	0.14
M106	Pipe	2.375" O.D.	R	153.38	5.76	3.38	5.76	150	883.31	19.49	26.63	0.59	1.20	0.70	38.82	0.25	0.22	0.13
M114	Equal_Angle	L2.5x2.5	F	19.88	5.88	3.38	5.88	150	116.99	19.91	3.38	0.58	1.24	1.20	5.58	0.28	0.24	0.14
0	0	0	0	3.38	0.00	3.38	0.00	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

WIND FORCES 30 DIRECTION - ICE

Member Label	Member Type	Description	F/R	Normal Length [in]	Normal Width [in]	Lateral Length [in]	Lateral Width [in]	θ (wind direction from [°]	AN [in^2]	AT [in^2]	Aspect Ratio Normal -	Aspect Ratio Lateral -	CaN -	CaT -	Resultant Wind Force Frontal [lbs]	Resultant Wind Force Distributed [lbs/in]	Resultant Component on Global X [lbs/in]	Resultant Component on Global Y [lbs/in]
M3	Pipe	3.5" O.D.	R	153.38	6.88	3.38	6.88	270	1055.87	23.29	22.28	0.49	1.14	0.70	0.79	0.01	0.00	0.00
M21	Equal_Angle	L2x2	F	55.38	5.38	3.38	5.38	270	298.18	18.22	10.29	0.63	1.51	1.20	1.06	0.02	0.02	0.01
M12	Equal_Angle	L2x2	F	55.38	5.38	3.38	5.38	270	298.18	18.22	10.29	0.63	1.51	1.20	1.06	0.02	0.02	0.01
M40	Equal_Tube	Tube 4x4	F	33.88	7.38	3.38	7.38	270	250.19	24.99	4.59	0.46	1.29	1.20	1.46	0.04	0.04	0.02
M39	Equal_Tube	Tube 4x4	F	33.88	7.38	3.38	7.38	270	250.19	24.99	4.59	0.46	1.29	1.20	1.46	0.04	0.04	0.02
M5	Equal_Tube	Tube 4x4	F	65.38	7.38	3.38	7.38	360	482.78	24.99	8.85	0.46	1.46	1.20	34.32	0.52	0.45	0.26
M29	Plate	6"x0.375"	F	15.88	9.38	3.38	9.38	270	149.05	31.75	1.69	0.36	1.20	1.20	1.85	0.12	0.10	0.06
M71	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	270	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.24	0.14
M73	Pipe	2.875" O.D.	R	99.38	6.26	99.38	6.26	270	622.03	622.03	15.88	15.88	1.00	1.00	30.17	0.30	0.26	0.15
M75	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	270	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.24	0.14
M77	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	270	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.24	0.14
M79	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	270	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.24	0.14
M100	Pipe	2.375" O.D.	R	153.38	5.76	3.38	5.76	270	883.31	19.49	26.63	0.59	1.20	0.70	0.66	0.00	0.00	0.00
M112	Equal_Angle	L2.5x2.5	F	19.88	5.88	3.38	5.88	270	116.99	19.91	3.38	0.58	1.24	1.20	1.16	0.06	0.05	0.03
0	0	0	0	3.38	0.00	3.38	0.00	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Trylon

Analysis date: 3/9/2020

WIND FORCES 60 DIRECTION - ICE

Member Label	Member Type	Description	F/R	Normal Length [in]	Normal Width [in]	Lateral Length [in]	Lateral Width [in]	θ (wind direction from [°]	AN [in^2]	AT [in^2]	Aspect Ratio Normal -	Aspect Ratio Lateral -	CaN -	CaT -	Resultant Wind Force Frontal [lbs]	Resultant Wind Force Distributed [lbs/in]	Resultant Component on Global X [lbs/in]	Resultant Component on Global Y [lbs/in]
M1	Pipe	3.5" O.D.	R	153.38	6.88	3.38	6.88	60	1055.87	23.29	22.28	0.49	1.14	0.70	15.22	0.10	0.05	0.09
M15	Equal_Angle	L2x2	F	55.38	5.38	3.38	5.38	60	298.18	18.22	10.29	0.63	1.51	1.20	6.27	0.11	0.06	0.10
M24	Equal_Angle	L2x2	F	55.38	5.38	3.38	5.38	60	298.18	18.22	10.29	0.63	1.51	1.20	6.27	0.11	0.06	0.10
M38	Equal_Tube	Tube 4x4	F	33.88	7.38	3.38	7.38	60	250.19	24.99	4.59	0.46	1.29	1.20	5.03	0.15	0.07	0.13
M33	Equal_Tube	Tube 4x4	F	33.88	7.38	3.38	7.38	60	250.19	24.99	4.59	0.46	1.29	1.20	5.03	0.15	0.07	0.13
M4	Equal_Tube	Tube 4x4	F	65.38	7.38	3.38	7.38	150	482.78	24.99	8.85	0.46	1.46	1.20	26.10	0.40	0.20	0.35
M26	Plate	6"x0.375"	F	15.88	9.38	3.38	9.38	60	149.05	31.75	1.69	0.36	1.20	1.20	3.56	0.22	0.11	0.19
M61	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	60	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.14	0.24
M63	Pipe	2.875" O.D.	R	99.38	6.26	99.38	6.26	60	622.03	622.03	15.88	15.88	1.00	1.00	30.17	0.30	0.15	0.26
M65	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	60	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.14	0.24
M67	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	60	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.14	0.24
M69	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	60	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.14	0.24
M94	Pipe	2.375" O.D.	R	153.38	5.76	3.38	5.76	60	883.31	19.49	26.63	0.59	1.20	0.70	13.38	0.09	0.04	0.08
M113	Equal_Angle	L2.5x2.5	F	19.88	5.88	3.38	5.88	60	116.99	19.91	3.38	0.58	1.24	1.20	2.63	0.13	0.07	0.11
0	0	0	0	3.38	0.00	3.38	0.00	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

WIND FORCES 60 DIRECTION - ICE

Member Label	Member Type	Description	F/R	Normal Length [in]	Normal Width [in]	Lateral Length [in]	Lateral Width [in]	θ (wind direction from [°]	AN [in^2]	AT [in^2]	Aspect Ratio Normal -	Aspect Ratio Lateral -	CaN -	CaT -	Resultant Wind Force Frontal [lbs]	Resultant Wind Force Distributed [lbs/in]	Resultant Component on Global X [lbs/in]	Resultant Component on Global Y [lbs/in]
M2	Pipe	3.5" O.D.	R	153.38	6.88	3.38	6.88	180	1055.87	23.29	22.28	0.49	1.14	0.70	58.51	0.38	0.19	0.33
M9	Equal_Angle	L2x2	F	55.38	5.38	3.38	5.38	180	298.18	18.22	10.29	0.63	1.51	1.20	21.89	0.40	0.20	0.34
M18	Equal_Angle	L2x2	F	55.38	5.38	3.38	5.38	180	298.18	18.22	10.29	0.63	1.51	1.20	21.89	0.40	0.20	0.34
M42	Equal_Tube	Tube 4x4	F	33.88	7.38	3.38	7.38	180	250.19	24.99	4.59	0.46	1.29	1.20	15.73	0.46	0.23	0.40
M41	Equal_Tube	Tube 4x4	F	33.88	7.38	3.38	7.38	180	250.19	24.99	4.59	0.46	1.29	1.20	15.73	0.46	0.23	0.40
M6	Equal_Tube	Tube 4x4	F	65.38	7.38	3.38	7.38	270	482.78	24.99	8.85	0.46	1.46	1.20	1.46	0.02	0.01	0.02
M32	Plate	6"x0.375"	F	15.88	9.38	3.38	9.38	180	149.05	31.75	1.69	0.36	1.20	1.20	8.70	0.55	0.27	0.47
M81	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	180	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.14	0.24
M83	Pipe	2.875" O.D.	R	99.38	6.26	99.38	6.26	180	622.03	622.03	15.88	15.88	1.00	1.00	30.17	0.30	0.15	0.26
M85	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	180	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.14	0.24
M87	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	180	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.14	0.24
M89	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	180	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.14	0.24
M106	Pipe	2.375" O.D.	R	153.38	5.76	3.38	5.76	180	883.31	19.49	26.63	0.59	1.20	0.70	51.54	0.34	0.17	0.29
M114	Equal_Angle	L2.5x2.5	F	19.88	5.88	3.38	5.88	180	116.99	19.91	3.38	0.58	1.24	1.20	7.05	0.35	0.18	0.31
0	0	0	0	3.38	0.00	3.38	0.00	180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Trylon

Analysis date: 3/9/2020

WIND FORCES 60 DIRECTION - ICE

Member Label	Member Type	Description	F/R	Normal Length [in]	Normal Width [in]	Lateral Length [in]	Lateral Width [in]	θ (wind direction from normal [°]	AN [in²]	AT [in²]	Aspect Ratio Normal -	Aspect Ratio Lateral -	CaN -	CaT -	Resultant Wind Force Frontal [lbs]	Resultant Wind Force Distributed [lbs/in]	Resultant Component on Global X [lbs/in]	Resultant Component on Global Y [lbs/in]
M3	Pipe	3.5" O.D.	R	153.38	6.88	3.38	6.88	300	1055.87	23.29	22.28	0.49	1.14	0.70	15.22	0.10	0.05	0.09
M21	Equal_Angle	L2x2	F	55.38	5.38	3.38	5.38	300	298.18	18.22	10.29	0.63	1.51	1.20	6.27	0.11	0.06	0.10
M12	Equal_Angle	L2x2	F	55.38	5.38	3.38	5.38	300	298.18	18.22	10.29	0.63	1.51	1.20	6.27	0.11	0.06	0.10
M40	Equal_Tube	Tube 4x4	F	33.88	7.38	3.38	7.38	300	250.19	24.99	4.59	0.46	1.29	1.20	5.03	0.15	0.07	0.13
M39	Equal_Tube	Tube 4x4	F	33.88	7.38	3.38	7.38	300	250.19	24.99	4.59	0.46	1.29	1.20	5.03	0.15	0.07	0.13
M5	Equal_Tube	Tube 4x4	F	65.38	7.38	3.38	7.38	390	482.78	24.99	8.85	0.46	1.46	1.20	26.10	0.40	0.20	0.35
M29	Plate	6"x0.375"	F	15.88	9.38	3.38	9.38	300	149.05	31.75	1.69	0.36	1.20	1.20	3.56	0.22	0.11	0.19
M71	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	300	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.14	0.24
M73	Pipe	2.875" O.D.	R	99.38	6.26	99.38	6.26	300	622.03	622.03	15.88	15.88	1.00	1.00	30.17	0.30	0.15	0.26
M75	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	300	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.14	0.24
M77	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	300	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.14	0.24
M79	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	300	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.14	0.24
M100	Pipe	2.375" O.D.	R	153.38	5.76	3.38	5.76	300	883.31	19.49	26.63	0.59	1.20	0.70	13.38	0.09	0.04	0.08
M112	Equal_Angle	L2.5x2.5	F	19.88	5.88	3.38	5.88	300	116.99	19.91	3.38	0.58	1.24	1.20	2.63	0.13	0.07	0.11
0	0	0	0	3.38	0.00	3.38	0.00	300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

1825 W. Walnut Hill Lane Suite 302
Irving, Texas 75038

Trylon

Analysis date: 3/9/2020

WIND FORCES 90 DIRECTION - ICE

Member Label	Member Type	Description	F/R	Normal Length [in]	Normal Width [in]	Lateral Length [in]	Lateral Width [in]	θ (wind direction from [°]	AN [in²]	AT [in²]	Aspect Ratio Normal -	Aspect Ratio Lateral -	CaN -	CaT -	Resultant Wind Force Frontal [lbs]	Resultant Wind Force Distributed [lbs/in]	Resultant Component on Global X [lbs/in]	Resultant Component on Global Y [lbs/in]
M1	Pipe	3.5" O.D.	R	153.38	6.88	3.38	6.88	90	1055.87	23.29	22.28	0.49	1.14	0.70	0.79	0.01	0.00	0.01
M15	Equal_Angle	L2x2	F	55.38	5.38	3.38	5.38	90	298.18	18.22	10.29	0.63	1.51	1.20	1.06	0.02	0.00	0.02
M24	Equal_Angle	L2x2	F	55.38	5.38	3.38	5.38	90	298.18	18.22	10.29	0.63	1.51	1.20	1.06	0.02	0.00	0.02
M38	Equal_Tube	Tube 4x4	F	33.88	7.38	3.38	7.38	90	250.19	24.99	4.59	0.46	1.29	1.20	1.46	0.04	0.00	0.04
M33	Equal_Tube	Tube 4x4	F	33.88	7.38	3.38	7.38	90	250.19	24.99	4.59	0.46	1.29	1.20	1.46	0.04	0.00	0.04
M4	Equal_Tube	Tube 4x4	F	65.38	7.38	3.38	7.38	180	482.78	24.99	8.85	0.46	1.46	1.20	34.32	0.52	0.00	0.52
M26	Plate	6"x0.375"	F	15.88	9.38	3.38	9.38	90	149.05	31.75	1.69	0.36	1.20	1.20	1.85	0.12	0.00	0.12
M61	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	90	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.00	0.27
M63	Pipe	2.875" O.D.	R	99.38	6.26	99.38	6.26	90	622.03	622.03	15.88	15.88	1.00	1.00	30.17	0.30	0.00	0.30
M65	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	90	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.00	0.27
M67	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	90	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.00	0.27
M69	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	90	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.00	0.27
M94	Pipe	2.375" O.D.	R	153.38	5.76	3.38	5.76	90	883.31	19.49	26.63	0.59	1.20	0.70	0.66	0.00	0.00	0.00
M113	Equal_Angle	L2.5x2.5	F	19.88	5.88	3.38	5.88	90	116.99	19.91	3.38	0.58	1.24	1.20	1.16	0.06	0.00	0.06
0	0	0	0	3.38	0.00	3.38	0.00	90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

1825 W. Walnut Hill Lane Suite 302
Irving, Texas 75038

WIND FORCES 90 DIRECTION - ICE

Member Label	Member Type	Description	F/R	Normal Length [in]	Normal Width [in]	Lateral Length [in]	Lateral Width [in]	θ (wind direction from [°]	AN [in^2]	AT [in^2]	Aspect Ratio Normal -	Aspect Ratio Lateral -	CaN -	CaT -	Resultant Wind Force Frontal [lbs]	Resultant Wind Force Distributed [lbs/in]	Resultant Component on Global X [lbs/in]	Resultant Component on Global Y [lbs/in]
M2	Pipe	3.5" O.D.	R	153.38	6.88	3.38	6.88	210	1055.87	23.29	22.28	0.49	1.14	0.70	44.08	0.29	0.00	0.29
M9	Equal_Angle	L2x2	F	55.38	5.38	3.38	5.38	210	298.18	18.22	10.29	0.63	1.51	1.20	16.68	0.30	0.00	0.30
M18	Equal_Angle	L2x2	F	55.38	5.38	3.38	5.38	210	298.18	18.22	10.29	0.63	1.51	1.20	16.68	0.30	0.00	0.30
M42	Equal_Tube	Tube 4x4	F	33.88	7.38	3.38	7.38	210	250.19	24.99	4.59	0.46	1.29	1.20	12.16	0.36	0.00	0.36
M41	Equal_Tube	Tube 4x4	F	33.88	7.38	3.38	7.38	210	250.19	24.99	4.59	0.46	1.29	1.20	12.16	0.36	0.00	0.36
M6	Equal_Tube	Tube 4x4	F	65.38	7.38	3.38	7.38	300	482.78	24.99	8.85	0.46	1.46	1.20	9.67	0.15	0.00	0.15
M32	Plate	6"x0.375"	F	15.88	9.38	3.38	9.38	210	149.05	31.75	1.69	0.36	1.20	1.20	6.99	0.44	0.00	0.44
M81	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	210	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.00	0.27
M83	Pipe	2.875" O.D.	R	99.38	6.26	99.38	6.26	210	622.03	622.03	15.88	15.88	1.00	1.00	30.17	0.30	0.00	0.30
M85	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	210	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.00	0.27
M87	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	210	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.00	0.27
M89	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	210	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.00	0.27
M106	Pipe	2.375" O.D.	R	153.38	5.76	3.38	5.76	210	883.31	19.49	26.63	0.59	1.20	0.70	38.82	0.25	0.00	0.25
M114	Equal_Angle	L2.5x2.5	F	19.88	5.88	3.38	5.88	210	116.99	19.91	3.38	0.58	1.24	1.20	5.58	0.28	0.00	0.28
0	0	0	0	3.38	0.00	3.38	0.00	210	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	210	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	210	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	210	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	210	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	210	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	210	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	210	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	210	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	210	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	210	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	210	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	210	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	210	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	210	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	210	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	210	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Trylon

Analysis date: 3/9/2020

WIND FORCES 90 DIRECTION - ICE

Member Label	Member Type	Description	F/R	Normal Length [in]	Normal Width [in]	Lateral Length [in]	Lateral Width [in]	θ (wind direction from [°]	AN [in²]	AT [in²]	Aspect Ratio Normal -	Aspect Ratio Lateral -	CaN -	CaT -	Resultant Wind Force Frontal [lbs]	Resultant Wind Force Distributed [lbs/in]	Resultant Component on Global X [lbs/in]	Resultant Component on Global Y [lbs/in]
M3	Pipe	3.5" O.D.	R	153.38	6.88	3.38	6.88	330	1055.87	23.29	22.28	0.49	1.14	0.70	44.08	0.29	0.00	0.29
M21	Equal_Angle	L2x2	F	55.38	5.38	3.38	5.38	330	298.18	18.22	10.29	0.63	1.51	1.20	16.68	0.30	0.00	0.30
M12	Equal_Angle	L2x2	F	55.38	5.38	3.38	5.38	330	298.18	18.22	10.29	0.63	1.51	1.20	16.68	0.30	0.00	0.30
M40	Equal_Tube	Tube 4x4	F	33.88	7.38	3.38	7.38	330	250.19	24.99	4.59	0.46	1.29	1.20	12.16	0.36	0.00	0.36
M39	Equal_Tube	Tube 4x4	F	33.88	7.38	3.38	7.38	330	250.19	24.99	4.59	0.46	1.29	1.20	12.16	0.36	0.00	0.36
M5	Equal_Tube	Tube 4x4	F	65.38	7.38	3.38	7.38	420	482.78	24.99	8.85	0.46	1.46	1.20	9.67	0.15	0.00	0.15
M29	Plate	6"x0.375"	F	15.88	9.38	3.38	9.38	330	149.05	31.75	1.69	0.36	1.20	1.20	6.99	0.44	0.00	0.44
M71	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	330	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.00	0.27
M73	Pipe	2.875" O.D.	R	99.38	6.26	99.38	6.26	330	622.03	622.03	15.88	15.88	1.00	1.00	30.17	0.30	0.00	0.30
M75	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	330	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.00	0.27
M77	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	330	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.00	0.27
M79	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	330	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	0.00	0.27
M100	Pipe	2.375" O.D.	R	153.38	5.76	3.38	5.76	330	883.31	19.49	26.63	0.59	1.20	0.70	38.82	0.25	0.00	0.25
M112	Equal_Angle	L2.5x2.5	F	19.88	5.88	3.38	5.88	330	116.99	19.91	3.38	0.58	1.24	1.20	5.58	0.28	0.00	0.28
0	0	0	0	3.38	0.00	3.38	0.00	330	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	330	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	330	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	330	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	330	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	330	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	330	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	330	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	330	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	330	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	330	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	330	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	330	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	330	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	330	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	330	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

1825 W. Walnut Hill Lane Suite 302
Irving, Texas 75038

WIND FORCES 120 DIRECTION - ICE

Member Label	Member Type	Description	F/R	Normal Length [in]	Normal Width [in]	Lateral Length [in]	Lateral Width [in]	θ (wind direction from [°]	AN [in^2]	AT [in^2]	Aspect Ratio Normal -	Aspect Ratio Lateral -	CaN -	CaT -	Resultant Wind Force Frontal [lbs]	Resultant Wind Force Distributed [lbs/in]	Resultant Component on Global X [lbs/in]	Resultant Component on Global Y [lbs/in]
M1	Pipe	3.5" O.D.	R	153.38	6.88	3.38	6.88	120	1055.87	23.29	22.28	0.49	1.14	0.70	15.22	0.10	-0.05	0.09
M15	Equal_Angle	L2x2	F	55.38	5.38	3.38	5.38	120	298.18	18.22	10.29	0.63	1.51	1.20	6.27	0.11	-0.06	0.10
M24	Equal_Angle	L2x2	F	55.38	5.38	3.38	5.38	120	298.18	18.22	10.29	0.63	1.51	1.20	6.27	0.11	-0.06	0.10
M38	Equal_Tube	Tube 4x4	F	33.88	7.38	3.38	7.38	120	250.19	24.99	4.59	0.46	1.29	1.20	5.03	0.15	-0.07	0.13
M33	Equal_Tube	Tube 4x4	F	33.88	7.38	3.38	7.38	120	250.19	24.99	4.59	0.46	1.29	1.20	5.03	0.15	-0.07	0.13
M4	Equal_Tube	Tube 4x4	F	65.38	7.38	3.38	7.38	210	482.78	24.99	8.85	0.46	1.46	1.20	26.10	0.40	-0.20	0.35
M26	Plate	6"x0.375"	F	15.88	9.38	3.38	9.38	120	149.05	31.75	1.69	0.36	1.20	1.20	3.56	0.22	-0.11	0.19
M61	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	120	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	-0.14	0.24
M63	Pipe	2.875" O.D.	R	99.38	6.26	99.38	6.26	120	622.03	622.03	15.88	15.88	1.00	1.00	30.17	0.30	-0.15	0.26
M65	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	120	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	-0.14	0.24
M67	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	120	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	-0.14	0.24
M69	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	120	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	-0.14	0.24
M94	Pipe	2.375" O.D.	R	153.38	5.76	3.38	5.76	120	883.31	19.49	26.63	0.59	1.20	0.70	13.38	0.09	-0.04	0.08
M113	Equal_Angle	L2.5x2.5	F	19.88	5.88	3.38	5.88	120	116.99	19.91	3.38	0.58	1.24	1.20	2.63	0.13	-0.07	0.11
0	0	0	0	3.38	0.00	3.38	0.00	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

WIND FORCES 120 DIRECTION - ICE

Member Label	Member Type	Description	F/R	Normal Length [in]	Normal Width [in]	Lateral Length [in]	Lateral Width [in]	θ (wind direction from [°]	A_N [in²]	A_T [in²]	Aspect Ratio Normal -	Aspect Ratio Lateral -	CaN -	CaT -	Resultant Wind Force Frontal [lbs]	Resultant Wind Force Distributed [lbs/in]	Resultant Component on Global X [lbs/in]	Resultant Component on Global Y [lbs/in]
M2	Pipe	3.5" O.D.	R	153.38	6.88	3.38	6.88	240	1055.87	23.29	22.28	0.49	1.14	0.70	15.22	0.10	-0.05	0.09
M9	Equal_Angle	L2x2	F	55.38	5.38	3.38	5.38	240	298.18	18.22	10.29	0.63	1.51	1.20	6.27	0.11	-0.06	0.10
M18	Equal_Angle	L2x2	F	55.38	5.38	3.38	5.38	240	298.18	18.22	10.29	0.63	1.51	1.20	6.27	0.11	-0.06	0.10
M42	Equal_Tube	Tube 4x4	F	33.88	7.38	3.38	7.38	240	250.19	24.99	4.59	0.46	1.29	1.20	5.03	0.15	-0.07	0.13
M41	Equal_Tube	Tube 4x4	F	33.88	7.38	3.38	7.38	240	250.19	24.99	4.59	0.46	1.29	1.20	5.03	0.15	-0.07	0.13
M6	Equal_Tube	Tube 4x4	F	65.38	7.38	3.38	7.38	330	482.78	24.99	8.85	0.46	1.46	1.20	26.10	0.40	-0.20	0.35
M32	Plate	6"x0.375"	F	15.88	9.38	3.38	9.38	240	149.05	31.75	1.69	0.36	1.20	1.20	3.56	0.22	-0.11	0.19
M81	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	240	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	-0.14	0.24
M83	Pipe	2.875" O.D.	R	99.38	6.26	99.38	6.26	240	622.03	622.03	15.88	15.88	1.00	1.00	30.17	0.30	-0.15	0.26
M85	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	240	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	-0.14	0.24
M87	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	240	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	-0.14	0.24
M89	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	240	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	-0.14	0.24
M106	Pipe	2.375" O.D.	R	153.38	5.76	3.38	5.76	240	883.31	19.49	26.63	0.59	1.20	0.70	13.38	0.09	-0.04	0.08
M114	Equal_Angle	L2.5x2.5	F	19.88	5.88	3.38	5.88	240	116.99	19.91	3.38	0.58	1.24	1.20	2.63	0.13	-0.07	0.11
0	0	0	0	3.38	0.00	3.38	0.00	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

WIND FORCES 120 DIRECTION - ICE

Member Label	Member Type	Description	F/R	Normal Length [in]	Normal Width [in]	Lateral Length [in]	Lateral Width [in]	θ (wind direction from [°]	AN [in²]	AT [in²]	Aspect Ratio Normal -	Aspect Ratio Lateral -	CaN -	CaT -	Resultant Wind Force Frontal [lbs]	Resultant Wind Force Distributed [lbs/in]	Resultant Component on Global X [lbs/in]	Resultant Component on Global Y [lbs/in]
M3	Pipe	3.5" O.D.	R	153.38	6.88	3.38	6.88	360	1055.87	23.29	22.28	0.49	1.14	0.70	58.51	0.38	-0.19	0.33
M21	Equal_Angle	L2x2	F	55.38	5.38	3.38	5.38	360	298.18	18.22	10.29	0.63	1.51	1.20	21.89	0.40	-0.20	0.34
M12	Equal_Angle	L2x2	F	55.38	5.38	3.38	5.38	360	298.18	18.22	10.29	0.63	1.51	1.20	21.89	0.40	-0.20	0.34
M40	Equal_Tube	Tube 4x4	F	33.88	7.38	3.38	7.38	360	250.19	24.99	4.59	0.46	1.29	1.20	15.73	0.46	-0.23	0.40
M39	Equal_Tube	Tube 4x4	F	33.88	7.38	3.38	7.38	360	250.19	24.99	4.59	0.46	1.29	1.20	15.73	0.46	-0.23	0.40
M5	Equal_Tube	Tube 4x4	F	65.38	7.38	3.38	7.38	450	482.78	24.99	8.85	0.46	1.46	1.20	1.46	0.02	-0.01	0.02
M29	Plate	6"x0.375"	F	15.88	9.38	3.38	9.38	360	149.05	31.75	1.69	0.36	1.20	1.20	8.70	0.55	-0.27	0.47
M71	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	360	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	-0.14	0.24
M73	Pipe	2.875" O.D.	R	99.38	6.26	99.38	6.26	360	622.03	622.03	15.88	15.88	1.00	1.00	30.17	0.30	-0.15	0.26
M75	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	360	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	-0.14	0.24
M77	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	360	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	-0.14	0.24
M79	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	360	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	-0.14	0.24
M100	Pipe	2.375" O.D.	R	153.38	5.76	3.38	5.76	360	883.31	19.49	26.63	0.59	1.20	0.70	51.54	0.34	-0.17	0.29
M112	Equal_Angle	L2.5x2.5	F	19.88	5.88	3.38	5.88	360	116.99	19.91	3.38	0.58	1.24	1.20	7.05	0.35	-0.18	0.31
0	0	0	0	3.38	0.00	3.38	0.00	360	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	360	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	360	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	360	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	360	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	360	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	360	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	360	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	360	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	360	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	360	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	360	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	360	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	360	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	360	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	360	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

WIND FORCES 150 DIRECTION - ICE

Member Label	Member Type	Description	F/R	Normal Length [in]	Normal Width [in]	Lateral Length [in]	Lateral Width [in]	θ (wind direction from [°]	AN [in²]	AT [in²]	Aspect Ratio Normal -	Aspect Ratio Lateral -	CaN -	CaT -	Resultant Wind Force Frontal [lbs]	Resultant Wind Force Distributed [lbs/in]	Resultant Component on Global X [lbs/in]	Resultant Component on Global Y [lbs/in]
M1	Pipe	3.5" O.D.	R	153.38	6.88	3.38	6.88	150	1055.87	23.29	22.28	0.49	1.14	0.70	44.08	0.29	-0.25	0.14
M15	Equal_Angle	L2x2	F	55.38	5.38	3.38	5.38	150	298.18	18.22	10.29	0.63	1.51	1.20	16.68	0.30	-0.26	0.15
M24	Equal_Angle	L2x2	F	55.38	5.38	3.38	5.38	150	298.18	18.22	10.29	0.63	1.51	1.20	16.68	0.30	-0.26	0.15
M38	Equal_Tube	Tube 4x4	F	33.88	7.38	3.38	7.38	150	250.19	24.99	4.59	0.46	1.29	1.20	12.16	0.36	-0.31	0.18
M33	Equal_Tube	Tube 4x4	F	33.88	7.38	3.38	7.38	150	250.19	24.99	4.59	0.46	1.29	1.20	12.16	0.36	-0.31	0.18
M4	Equal_Tube	Tube 4x4	F	65.38	7.38	3.38	7.38	240	482.78	24.99	8.85	0.46	1.46	1.20	9.67	0.15	-0.13	0.07
M26	Plate	6"x0.375"	F	15.88	9.38	3.38	9.38	150	149.05	31.75	1.69	0.36	1.20	1.20	6.99	0.44	-0.38	0.22
M61	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	150	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	-0.24	0.14
M63	Pipe	2.875" O.D.	R	99.38	6.26	99.38	6.26	150	622.03	622.03	15.88	15.88	1.00	1.00	30.17	0.30	-0.26	0.15
M65	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	150	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	-0.24	0.14
M67	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	150	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	-0.24	0.14
M69	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	150	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	-0.24	0.14
M94	Pipe	2.375" O.D.	R	153.38	5.76	3.38	5.76	150	883.31	19.49	26.63	0.59	1.20	0.70	38.82	0.25	-0.22	0.13
M113	Equal_Angle	L2.5x2.5	F	19.88	5.88	3.38	5.88	150	116.99	19.91	3.38	0.58	1.24	1.20	5.58	0.28	-0.24	0.14
0	0	0	0	3.38	0.00	3.38	0.00	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

WIND FORCES 150 DIRECTION - ICE

Member Label	Member Type	Description	F/R	Normal Length [in]	Normal Width [in]	Lateral Length [in]	Lateral Width [in]	θ (wind direction from [°]	AN [in²]	AT [in²]	Aspect Ratio Normal -	Aspect Ratio Lateral -	CaN -	CaT -	Resultant Wind Force Frontal [lbs]	Resultant Wind Force Distributed [lbs/in]	Resultant Component on Global X [lbs/in]	Resultant Component on Global Y [lbs/in]
M2	Pipe	3.5" O.D.	R	153.38	6.88	3.38	6.88	270	1055.87	23.29	22.28	0.49	1.14	0.70	0.79	0.01	0.00	0.00
M9	Equal_Angle	L2x2	F	55.38	5.38	3.38	5.38	270	298.18	18.22	10.29	0.63	1.51	1.20	1.06	0.02	-0.02	0.01
M18	Equal_Angle	L2x2	F	55.38	5.38	3.38	5.38	270	298.18	18.22	10.29	0.63	1.51	1.20	1.06	0.02	-0.02	0.01
M42	Equal_Tube	Tube 4x4	F	33.88	7.38	3.38	7.38	270	250.19	24.99	4.59	0.46	1.29	1.20	1.46	0.04	-0.04	0.02
M41	Equal_Tube	Tube 4x4	F	33.88	7.38	3.38	7.38	270	250.19	24.99	4.59	0.46	1.29	1.20	1.46	0.04	-0.04	0.02
M6	Equal_Tube	Tube 4x4	F	65.38	7.38	3.38	7.38	360	482.78	24.99	8.85	0.46	1.46	1.20	34.32	0.52	-0.45	0.26
M32	Plate	6"x0.375"	F	15.88	9.38	3.38	9.38	270	149.05	31.75	1.69	0.36	1.20	1.20	1.85	0.12	-0.10	0.06
M81	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	270	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	-0.24	0.14
M83	Pipe	2.875" O.D.	R	99.38	6.26	99.38	6.26	270	622.03	622.03	15.88	15.88	1.00	1.00	30.17	0.30	-0.26	0.15
M85	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	270	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	-0.24	0.14
M87	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	270	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	-0.24	0.14
M89	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	270	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	-0.24	0.14
M106	Pipe	2.375" O.D.	R	153.38	5.76	3.38	5.76	270	883.31	19.49	26.63	0.59	1.20	0.70	0.66	0.00	0.00	0.00
M114	Equal_Angle	L2.5x2.5	F	19.88	5.88	3.38	5.88	270	116.99	19.91	3.38	0.58	1.24	1.20	1.16	0.06	-0.05	0.03
0	0	0	0	3.38	0.00	3.38	0.00	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

WIND FORCES 150 DIRECTION - ICE

Member Label	Member Type	Description	F/R	Normal Length [in]	Normal Width [in]	Lateral Length [in]	Lateral Width [in]	θ (wind direction from [°]	AN [in²]	AT [in²]	Aspect Ratio Normal -	Aspect Ratio Lateral -	CaN -	CaT -	Resultant Wind Force Frontal [lbs]	Resultant Wind Force Distributed [lbs/in]	Resultant Component on Global X [lbs/in]	Resultant Component on Global Y [lbs/in]
M3	Pipe	3.5" O.D.	R	153.38	6.88	3.38	6.88	390	1055.87	23.29	22.28	0.49	1.14	0.70	44.08	0.29	-0.25	0.14
M21	Equal_Angle	L2x2	F	55.38	5.38	3.38	5.38	390	298.18	18.22	10.29	0.63	1.51	1.20	16.68	0.30	-0.26	0.15
M12	Equal_Angle	L2x2	F	55.38	5.38	3.38	5.38	390	298.18	18.22	10.29	0.63	1.51	1.20	16.68	0.30	-0.26	0.15
M40	Equal_Tube	Tube 4x4	F	33.88	7.38	3.38	7.38	390	250.19	24.99	4.59	0.46	1.29	1.20	12.16	0.36	-0.31	0.18
M39	Equal_Tube	Tube 4x4	F	33.88	7.38	3.38	7.38	390	250.19	24.99	4.59	0.46	1.29	1.20	12.16	0.36	-0.31	0.18
M5	Equal_Tube	Tube 4x4	F	65.38	7.38	3.38	7.38	480	482.78	24.99	8.85	0.46	1.46	1.20	9.67	0.15	-0.13	0.07
M29	Plate	6"x0.375"	F	15.88	9.38	3.38	9.38	390	149.05	31.75	1.69	0.36	1.20	1.20	6.99	0.44	-0.38	0.22
M71	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	390	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	-0.24	0.14
M73	Pipe	2.875" O.D.	R	99.38	6.26	99.38	6.26	390	622.03	622.03	15.88	15.88	1.00	1.00	30.17	0.30	-0.26	0.15
M75	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	390	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	-0.24	0.14
M77	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	390	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	-0.24	0.14
M79	Pipe	2.375" O.D.	R	87.38	5.76	87.38	5.76	390	503.23	503.23	15.17	15.17	0.98	0.98	24.02	0.27	-0.24	0.14
M100	Pipe	2.375" O.D.	R	153.38	5.76	3.38	5.76	390	883.31	19.49	26.63	0.59	1.20	0.70	38.82	0.25	-0.22	0.13
M112	Equal_Angle	L2.5x2.5	F	19.88	5.88	3.38	5.88	390	116.99	19.91	3.38	0.58	1.24	1.20	5.58	0.28	-0.24	0.14
0	0	0	0	3.38	0.00	3.38	0.00	390	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	390	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	390	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	390	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	390	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	390	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	390	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	390	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	390	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	390	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	390	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	390	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	390	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	390	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	390	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	3.38	0.00	3.38	0.00	390	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CONNECTION CHECK

Mount to Tower Connections Check (N3 - Results from LC14)

Reactions		
Tension Force (X)	0.53	[kips]
Shear Force (Y)	0.006	[kips]
Shear Force (Z)	3.016	[kips]
Torsional Moment (about x-x)	2.21	[kips-in]
Bending Moment (about y-y)	74.388	[kips-in]
Bending Moment (about z-z)	0.565	[kips-in]

Bolt Properties		
# of Bolts	4	
Distance between bolts, z-z	6	[in]
Distance between bolts, y-y	6	[in]
Bolt Diameter	0.625	[in]
Bolt Grade	A325, D<1	Assumed
An	0.226	[in^2]
Ab	0.307	[in^2]
Yield Strength, min	92	[ksi]
Tensile Strength, min	120	[ksi]

Bolt Strength		
ϕ*Rnt	20.34	[kips]
ϕ*Rnv	13.81	[kips]

Strength Check		
Tension	31.36%	PASS
Shear	6.17%	PASS
Combined Tension and Shear	10.21%	PASS

Weldment Connections Check

Reactions		
Tension Force (X)	0.53	[kips]
Shear Force (Y)	0.006	[kips]
Shear Force (Z)	3.016	[kips]
Torsional Moment (about x-x)	2.21	[kips-in]
Bending Moment (about y-y)	74.388	[kips-in]
Bending Moment (about z-z)	0.565	[kips-in]

Fillet Weld Check		
The standoff member is Round?	No	
Height, z-z	4	[in]
Width, y-y	4	[in]
Fillet weld Thickness	0.25	[in]
Weld Material Yield (Assumed)	70	[ksi]
Length of weldment	16.00	[in]
Section modulus in a line weld, y-y	21.33	[in^2]
Section modulus in a line weld, z-z	21.33	[in^2]
Fnw	63	ksi
Weld Force, y-y	3.53	kips/inch
Weld Force, z-z	0.06	kips/inch
ϕ*Rn	8.35	kips/inch
Weld Check	42.21%	PASS

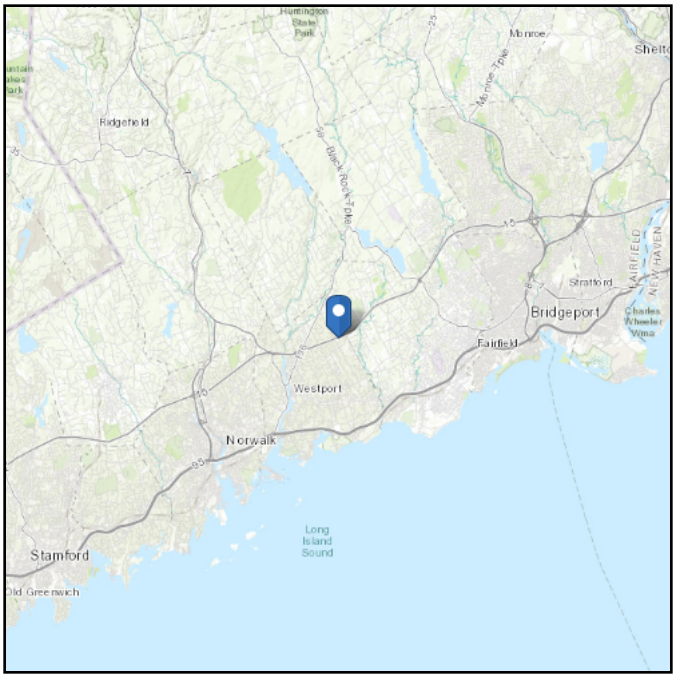
APPENDIX B

SOFTWARE OUTPUTS

ASCE 7 Hazards Report

Address:
No Address at This Location

Standard:	ASCE/SEI 7-10	**Elevation:**	249 ft (NAVD 88)
Risk Category:	II	**Latitude:**	41.171667
Soil Class:	D - Stiff Soil	**Longitude:**	-73.328472



Wind

Results:

Wind Speed:	121 Vmph
10-year MRI	76 Vmph
25-year MRI	86 Vmph
50-year MRI	92 Vmph
100-year MRI	98 Vmph
Data Source:	ASCE/SEI 7-10, Fig. 26.5-1A and Figs. CC-1–CC-4, incorporating errata of March 12, 2014
Date Accessed:	Fri Feb 07 2020

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-10 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

Site is in a hurricane-prone region as defined in ASCE/SEI 7-10 Section 26.2. Glazed openings need not be protected against wind-borne debris.

Mountainous terrain, gorges, ocean promontories, and special wind regions should be examined for unusual wind conditions.

Seismic

Site Soil Class: D - Stiff Soil

Results:

S_S :	0.222	S_{DS} :	0.236
S_1 :	0.066	S_{D1} :	0.106
F_a :	1.6	T_L :	6
F_v :	2.4	PGA :	0.123
S_{MS} :	0.354	PGA_M :	0.191
S_{M1} :	0.159	F_{PGA} :	1.554
		I_e :	1

Seismic Design Category B

Data Accessed: Fri Feb 07 2020

Date Source: USGS Seismic Design Maps based on ASCE/SEI 7-10, incorporating Supplement 1 and errata of March 31, 2013, and ASCE/SEI 7-10 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-10 Ch. 21 are available from USGS.

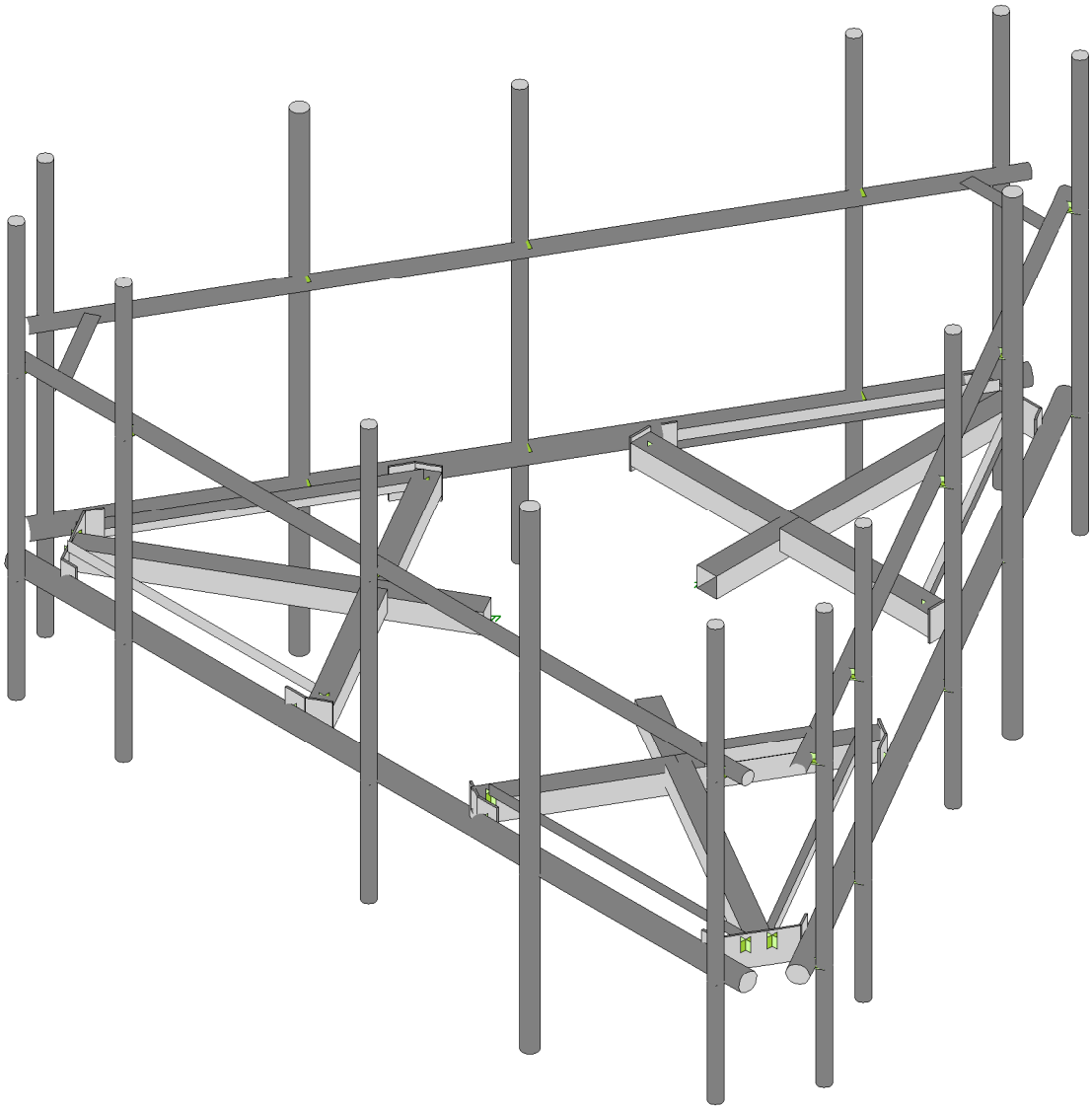
Ice

Results:

Ice Thickness:	0.75 in.
Concurrent Temperature:	15 F
Gust Speed:	50 mph
Data Source:	Standard ASCE/SEI 7-10, Figs. 10-2 through 10-8
Date Accessed:	Fri Feb 07 2020

Ice thicknesses on structures in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 50-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.



Envelope Only Solution

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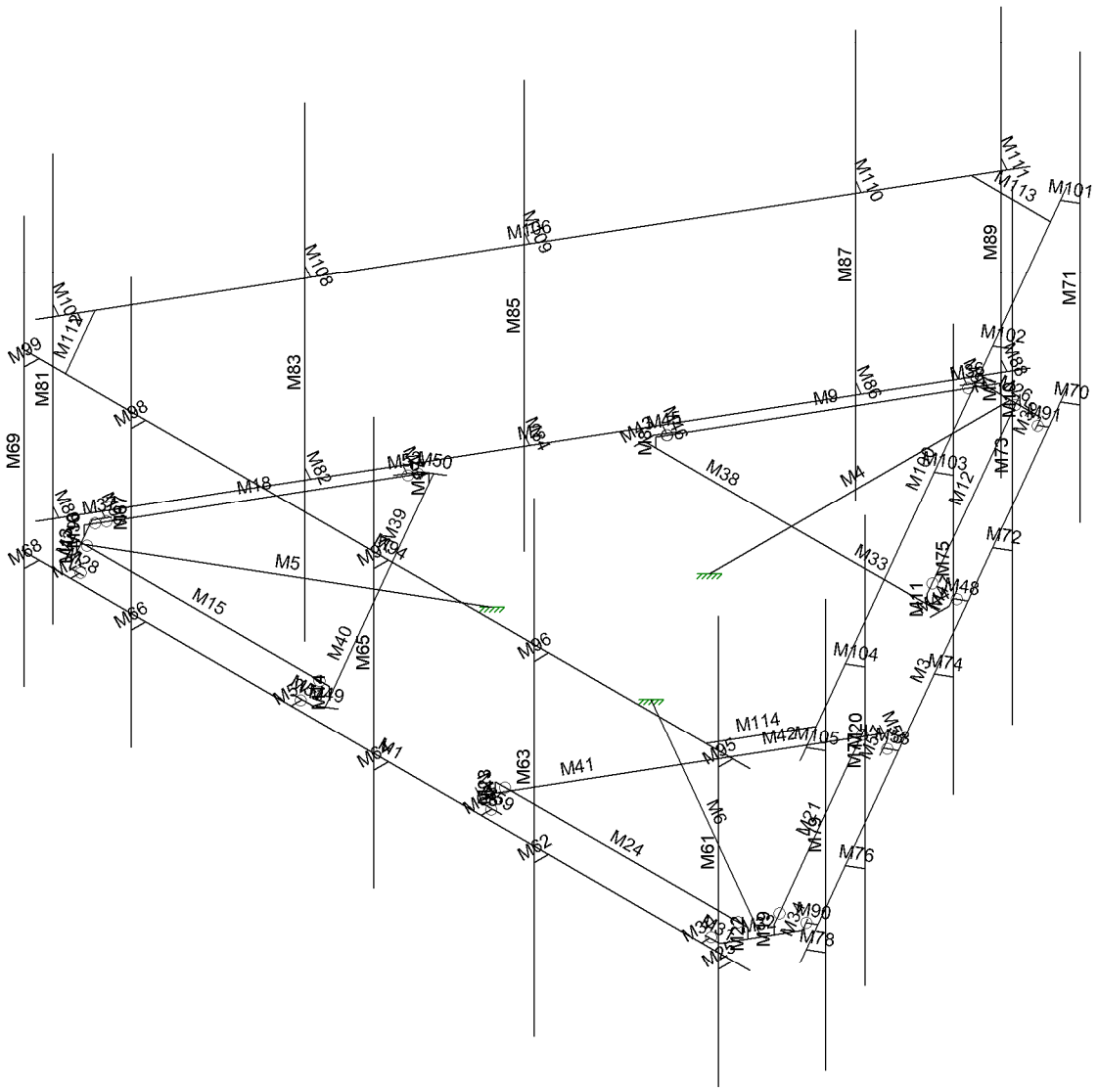

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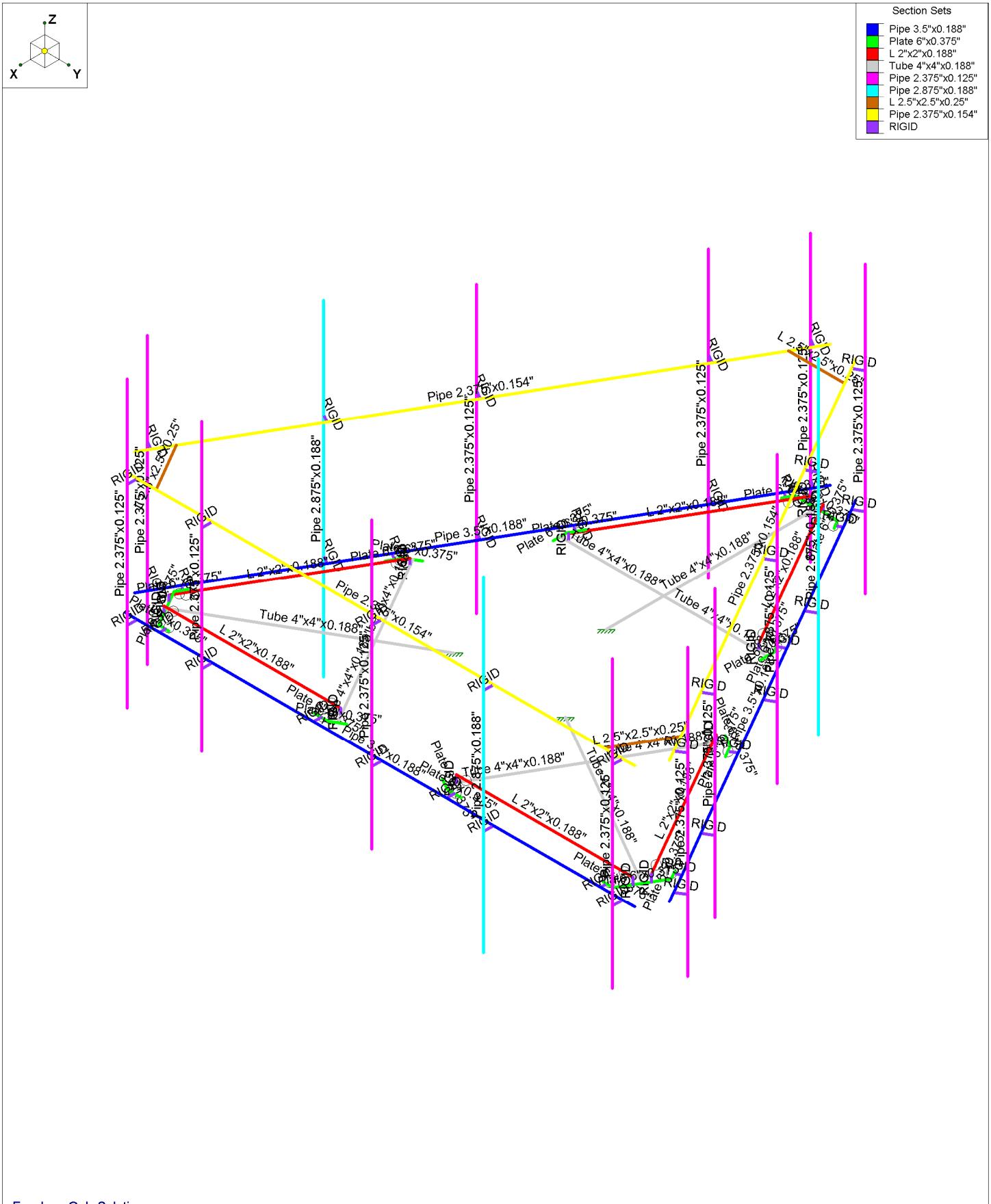

Envelope Only Solution

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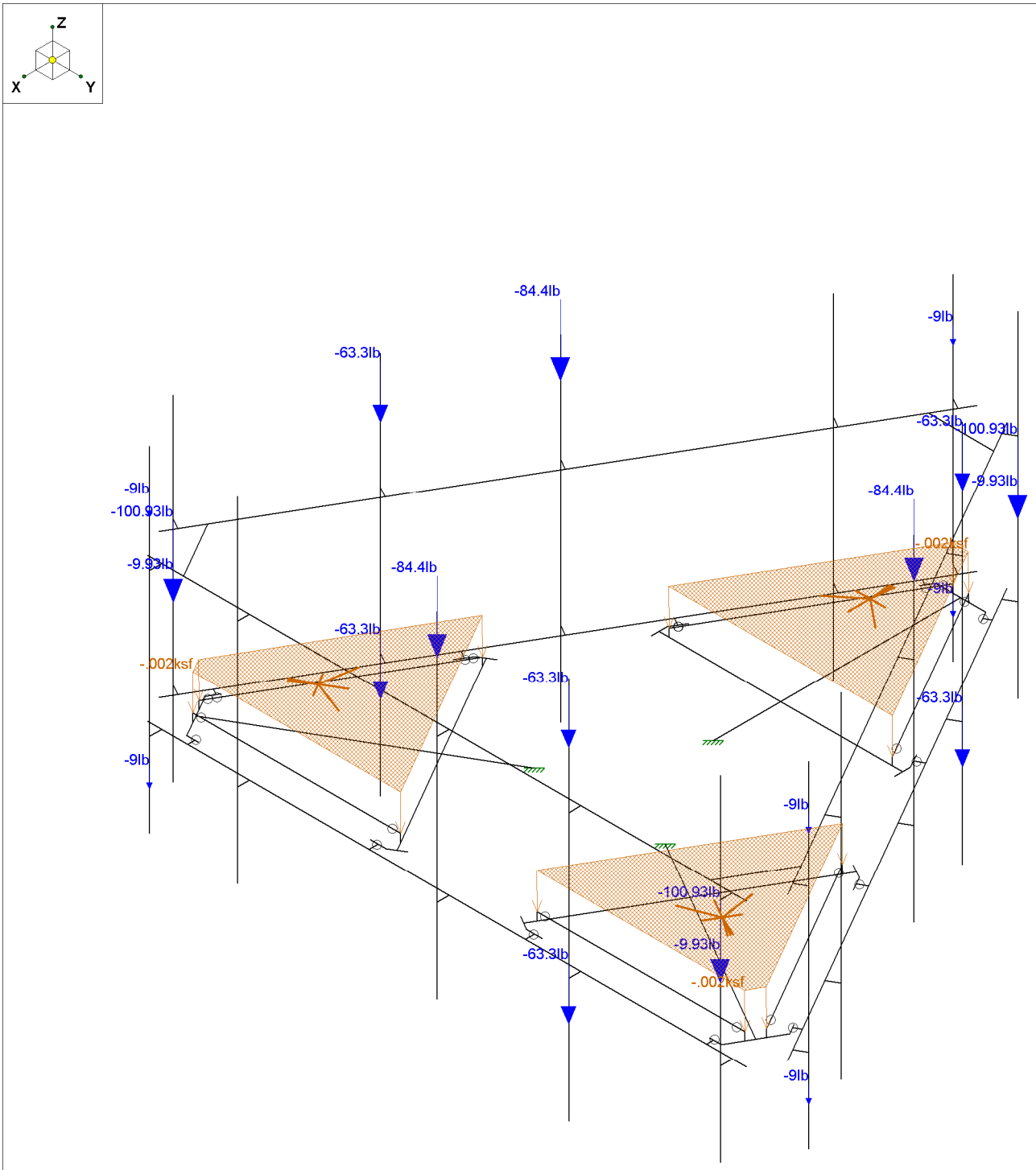

Loads: BLC 2, Weights
Envelope Only Solution

Trylon	310968-WESTPORT 2 CT	SK - 4
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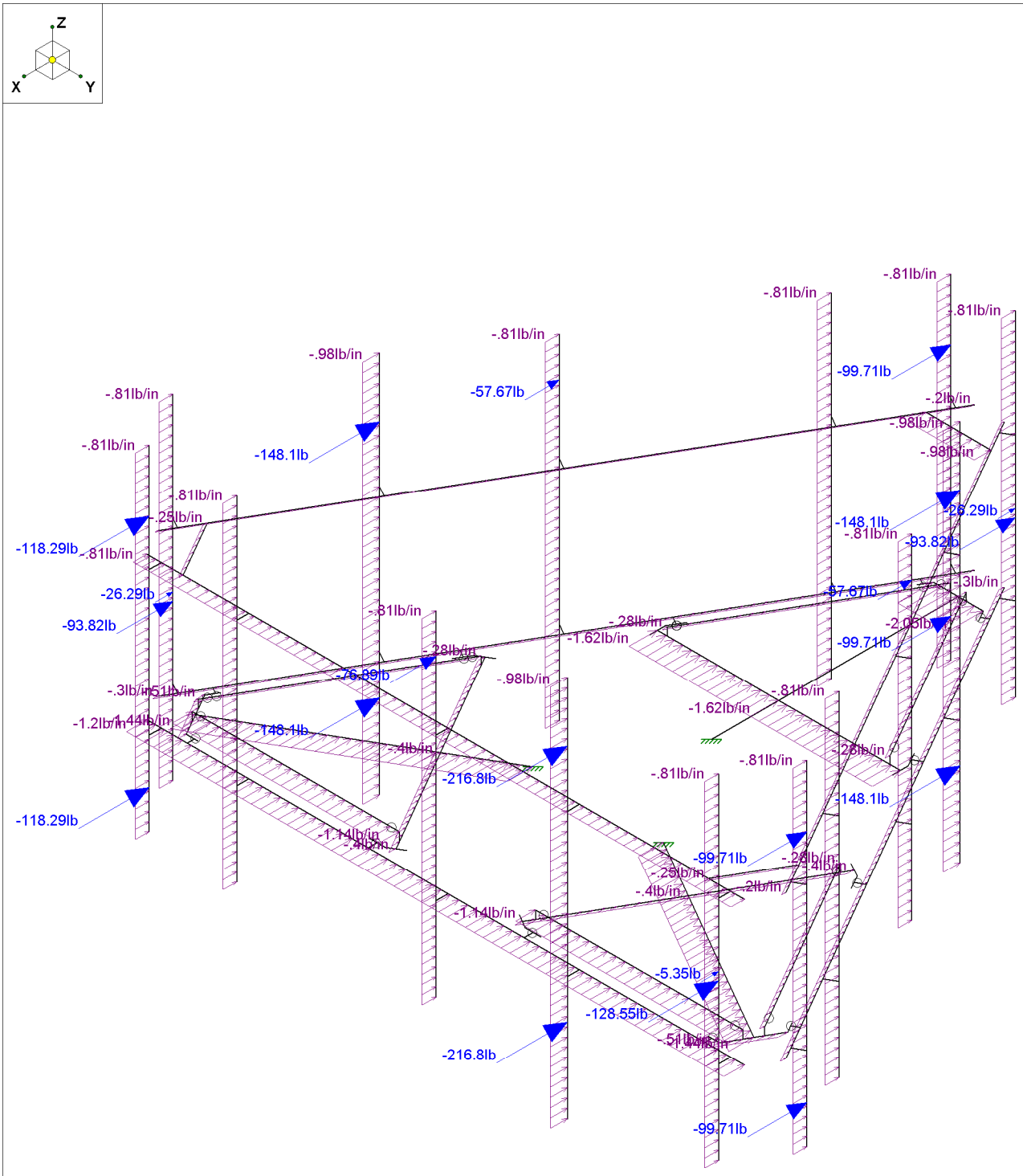

Loads: BLC 4, Wind 0°
Envelope Only Solution

Trylon	310968-WESTPORT 2 CT	SK - 5
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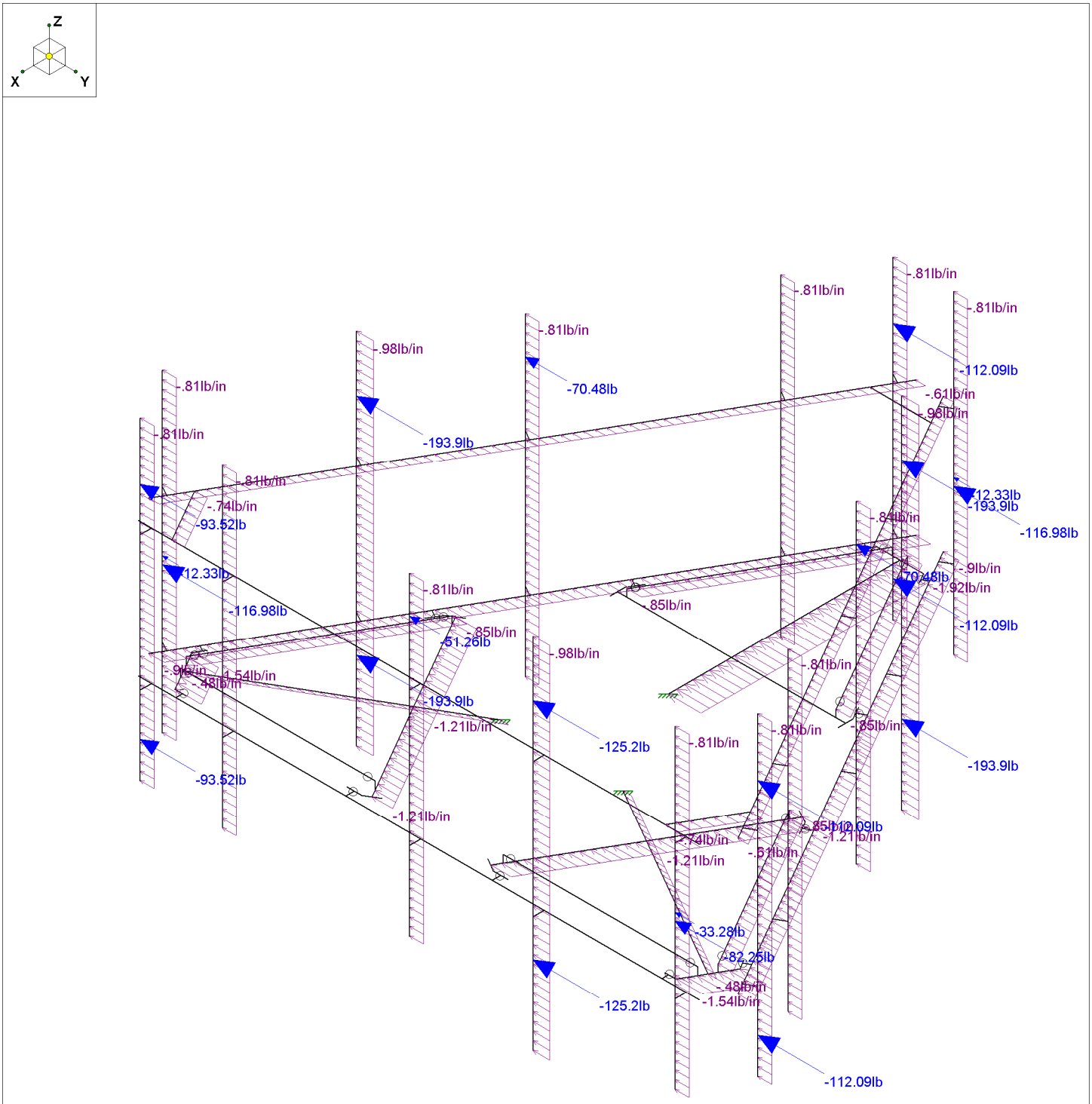
152155		310968-Westport 2 CT.R3D



Loads: BLC 7, Wind 90°
Envelope Only Solution

Trylon	310968-WESTPORT 2 CT	SK - 6
MB		Mar 9, 2020 at 5:17 PM
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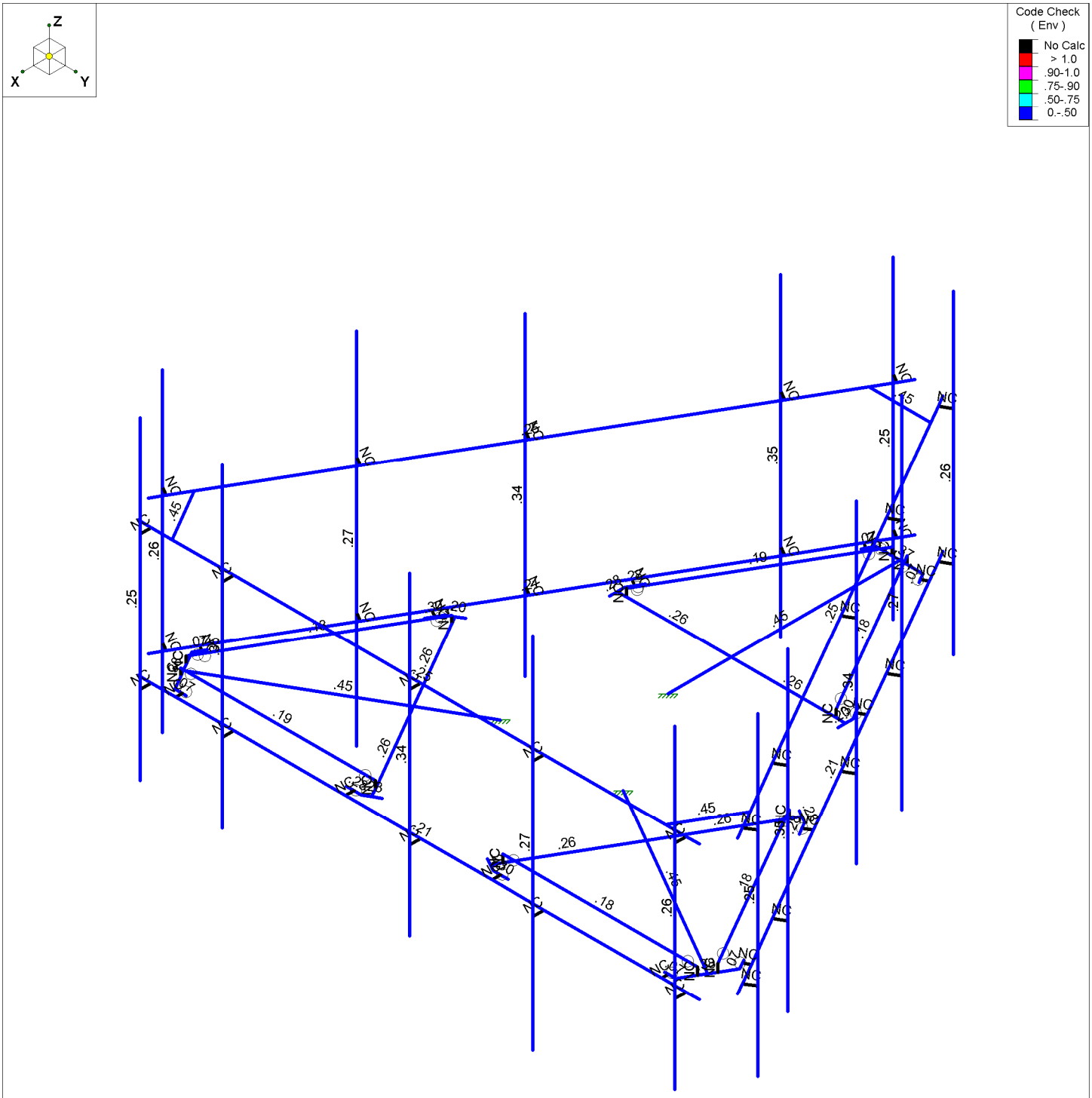

Member Code Checks Displayed (Enveloped)
Envelope Only Solution

Trylon	310968-WESTPORT 2 CT	SK - 7
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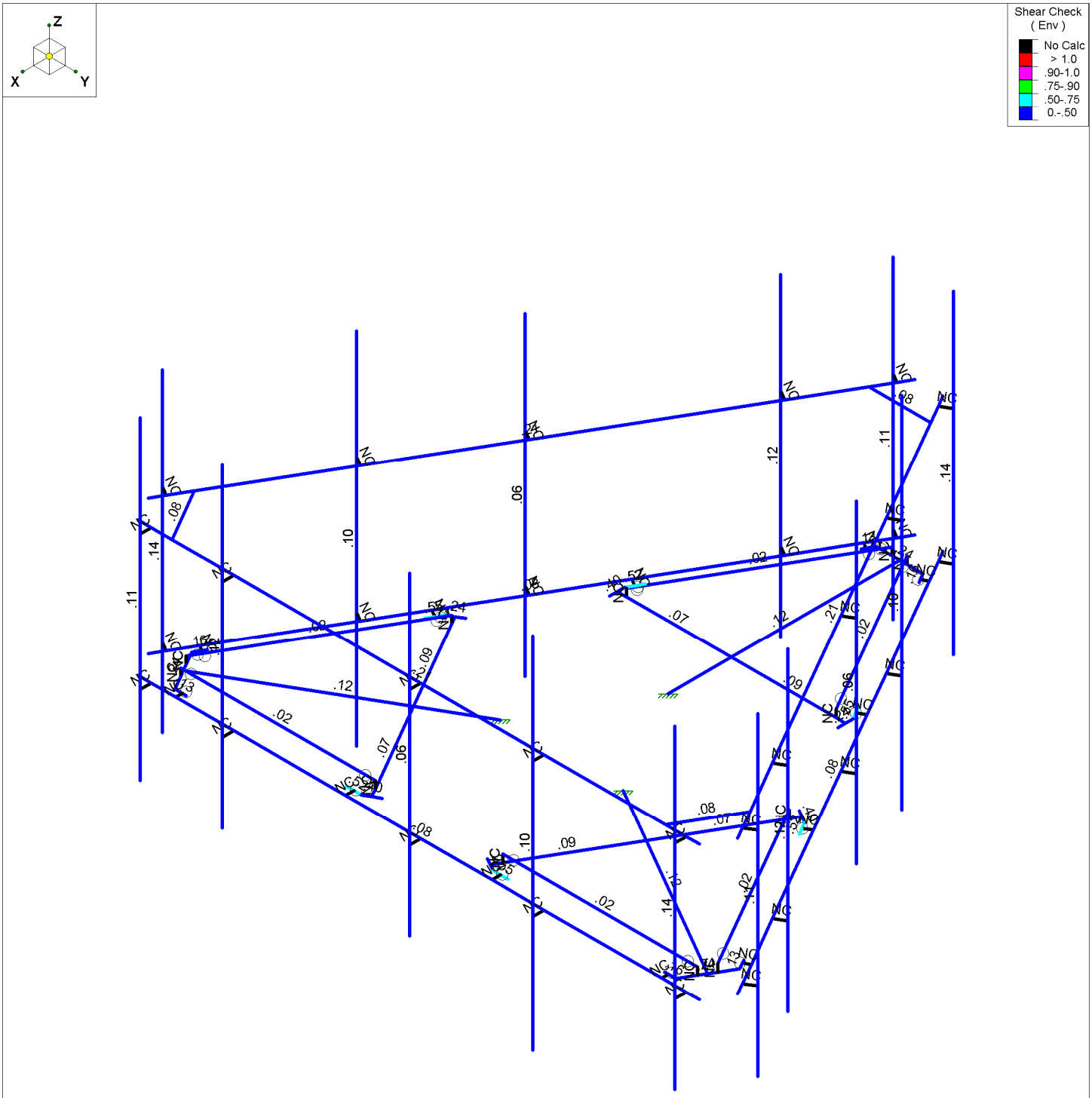


Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

Trylon	310968-WESTPORT 2 CT	SK - 8
MB		Mar 9, 2020 at 5:17 PM
152155		310968-Westport 2 CT.R3D

(Global) Model Settings

Display Sections for Member Calcs	5
Max Internal Sections for Member Calcs	97
Include Shear Deformation?	Yes
Increase Nailing Capacity for Wind?	Yes
Include Warping?	Yes
Trans Load Btwn Intersecting Wood Wall?	Yes
Area Load Mesh (in^2)	144
Merge Tolerance (in)	.12
P-Delta Analysis Tolerance	0.50%
Include P-Delta for Walls?	Yes
Automatically Iterate Stiffness for Walls?	Yes
Max Iterations for Wall Stiffness	3
Gravity Acceleration (in/sec^2)	386.4
Wall Mesh Size (in)	24
Eigensolution Convergence Tol. (1.E-)	4
Vertical Axis	Z
Global Member Orientation Plane	XY
Static Solver	Sparse Accelerated
Dynamic Solver	Accelerated Solver

Hot Rolled Steel Code	AISC 15th(360-16): LRFD
Adjust Stiffness?	Yes(Iterative)
RISAConnection Code	AISC 15th(360-16): LRFD
Cold Formed Steel Code	AISI S100-16: LRFD
Wood Code	None
Wood Temperature	< 100F
Concrete Code	None
Masonry Code	None
Aluminum Code	None - Building
Stainless Steel Code	AISC 14th(360-10): LRFD
Adjust Stiffness?	Yes(Iterative)

Number of Shear Regions	4
Region Spacing Increment (in)	4
Biaxial Column Method	Exact Integration
Parme Beta Factor (PCA)	.65
Concrete Stress Block	Rectangular
Use Cracked Sections?	Yes
Use Cracked Sections Slab?	No
Bad Framing Warnings?	No
Unused Force Warnings?	Yes
Min 1 Bar Diam. Spacing?	No
Concrete Rebar Set	REBAR_SET_ASTMA615
Min % Steel for Column	1
Max % Steel for Column	8

(Global) Model Settings, Continued

Seismic Code	ASCE 7-10
Seismic Base Elevation (in)	Not Entered
Add Base Weight?	Yes
Ct X	.02
Ct Z	.02
T X (sec)	Not Entered
T Z (sec)	Not Entered
R X	3
R Z	3
Ct Exp. X	.75
Ct Exp. Z	.75
SD1	1
SDS	1
S1	1
TL (sec)	5
Risk Cat	I or II
Drift Cat	Other
Om Z	1
Om X	1
Cd Z	1
Cd X	1
Rho Z	1
Rho X	1

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/1E...	Density[k/ft...	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A992	29000	11154	.3	.65	.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	.3	.65	.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	.3	.65	.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	.3	.65	.527	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	.3	.65	.527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	.3	.65	.49	35	1.6	60	1.2
7	A1085	29000	11154	.3	.65	.49	50	1.4	65	1.3

Cold Formed Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/1E5 F)	Density[k/ft^3]	Yield[ksi]	Fu[ksi]
1	A653 SS Gr33	29500	11346	.3	.65	.49	33	45
2	A653 SS Gr50/1	29500	11346	.3	.65	.49	50	65
3	A36	29000	11154	.3	.65	.49	36	58

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Pipe 3.5"x0.188"	HSS3.500X0.188_A1085	Beam	Pipe	A53 Gr.B	Typical	1.947	2.68	2.68	5.36
2	Plate 6"x0.375"	Plate 6"x0.375"	Beam	RECT	A36 Gr.36	Typical	2.25	.026	6.75	.101
3	L 2"x2"x0.188"	L2x2x3	Beam	Single An...	A36 Gr.36	Typical	.722	.271	.271	.009
4	Tube 4"x4"x0.188"	HSS4X4X3_A1085	Beam	Tube	A500 Gr.B ...	Typical	2.854	6.931	6.931	10.371
5	Pipe 2.375"x0.125"	HSS2.375X0.125_A1085	Beam	Pipe	A53 Gr.B	Typical	.884	.564	.564	1.127
6	Pipe 2.875"x0.188"	HSS2.875X0.188_A1085	Beam	Pipe	A53 Gr.B	Typical	1.583	1.442	1.442	2.883
7	L 2.5"x2.5"x0.25"	L2.5x2.5x4	Beam	Single An...	A36 Gr.36	Typical	1.19	.692	.692	.026
8	Pipe 2.375"x0.154"	HSS2.375X0.154_A1085	Beam	Pipe	A53 Gr.B	Typical	1.075	.669	.669	1.339

Cold Formed Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rul...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	3" Channel	C 3" x2"	Beam	None	A36	Typical	1.169	.463	1.6	.014

Joint Boundary Conditions

	Joint Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot.[k-ft/rad]	Y Rot.[k-ft/rad]	Z Rot.[k-ft/rad]
1	N3	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
2	N54	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
3	N55	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N1	N7			Pipe 3.5"x0.188"	Beam	Pipe	A53 Gr.B	Typical
2	M2	N63	N62			Pipe 3.5"x0.188"	Beam	Pipe	A53 Gr.B	Typical
3	M3	N61	N60			Pipe 3.5"x0.188"	Beam	Pipe	A53 Gr.B	Typical
4	M4	N2	N3			Tube 4"x4"x0....	Beam	Tube	A500 Gr.B...	Typical
5	M5	N4	N54			Tube 4"x4"x0....	Beam	Tube	A500 Gr.B...	Typical
6	M6	N5	N55			Tube 4"x4"x0....	Beam	Tube	A500 Gr.B...	Typical
7	M7	N10	N13			RIGID	None	None	RIGID	Typical
8	M8	N11	N12			RIGID	None	None	RIGID	Typical
9	M9	N12	N13			L 2"x2"x0.188"	Beam	Single Angle	A36 Gr.36	Typical
10	M10	N14	N17			RIGID	None	None	RIGID	Typical
11	M11	N15	N16			RIGID	None	None	RIGID	Typical
12	M12	N16	N17		270	L 2"x2"x0.188"	Beam	Single Angle	A36 Gr.36	Typical
13	M13	N18	N21			RIGID	None	None	RIGID	Typical
14	M14	N19	N20			RIGID	None	None	RIGID	Typical
15	M15	N20	N21			L 2"x2"x0.188"	Beam	Single Angle	A36 Gr.36	Typical
16	M16	N22	N25			RIGID	None	None	RIGID	Typical
17	M17	N23	N24			RIGID	None	None	RIGID	Typical
18	M18	N24	N25		270	L 2"x2"x0.188"	Beam	Single Angle	A36 Gr.36	Typical
19	M19	N26	N29			RIGID	None	None	RIGID	Typical
20	M20	N27	N28			RIGID	None	None	RIGID	Typical
21	M21	N28	N29			L 2"x2"x0.188"	Beam	Single Angle	A36 Gr.36	Typical
22	M22	N30	N33			RIGID	None	None	RIGID	Typical
23	M23	N31	N32			RIGID	None	None	RIGID	Typical
24	M24	N32	N33		270	L 2"x2"x0.188"	Beam	Single Angle	A36 Gr.36	Typical
25	M25	N34	N35			RIGID	None	None	RIGID	Typical
26	M26	N36	N37			Plate 6"x0.375"	Beam	RECT	A36 Gr.36	Typical
27	M27	N39	N38			RIGID	None	None	RIGID	Typical
28	M28	N42	N40			Plate 6"x0.375"	Beam	RECT	A36 Gr.36	Typical
29	M29	N41	N42			Plate 6"x0.375"	Beam	RECT	A36 Gr.36	Typical
30	M30	N44	N43			RIGID	None	None	RIGID	Typical
31	M31	N46	N45			Plate 6"x0.375"	Beam	RECT	A36 Gr.36	Typical
32	M32	N46	N47			Plate 6"x0.375"	Beam	RECT	A36 Gr.36	Typical
33	M33	N6	N9		180	Tube 4"x4"x0....	Beam	Tube	A500 Gr.B...	Typical
34	M34	N47	N50			Plate 6"x0.375"	Beam	RECT	A36 Gr.36	Typical
35	M35	N36	N51			Plate 6"x0.375"	Beam	RECT	A36 Gr.36	Typical
36	M36	N37	N52			Plate 6"x0.375"	Beam	RECT	A36 Gr.36	Typical
37	M37	N41	N53			Plate 6"x0.375"	Beam	RECT	A36 Gr.36	Typical
38	M38	N8	N6		180	Tube 4"x4"x0....	Beam	Tube	A500 Gr.B...	Typical
39	M39	N48	N56		180	Tube 4"x4"x0....	Beam	Tube	A500 Gr.B...	Typical
40	M40	N57	N48		180	Tube 4"x4"x0....	Beam	Tube	A500 Gr.B...	Typical
41	M41	N49	N58		180	Tube 4"x4"x0....	Beam	Tube	A500 Gr.B...	Typical
42	M42	N59	N49		180	Tube 4"x4"x0....	Beam	Tube	A500 Gr.B...	Typical
43	M43	N64	N66			Plate 6"x0.375"	Beam	RECT	A36 Gr.36	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
44	M44	N65	N67			Plate 6"x0.375"	Beam	RECT	A36 Gr.36	Typical
45	M45	N66	N68			Plate 6"x0.375"	Beam	RECT	A36 Gr.36	Typical
46	M46	N69	N70			RIGID	None	None	RIGID	Typical
47	M47	N67	N71			Plate 6"x0.375"	Beam	RECT	A36 Gr.36	Typical
48	M48	N72	N73			RIGID	None	None	RIGID	Typical
49	M49	N74	N76			Plate 6"x0.375"	Beam	RECT	A36 Gr.36	Typical
50	M50	N75	N77			Plate 6"x0.375"	Beam	RECT	A36 Gr.36	Typical
51	M51	N76	N78			Plate 6"x0.375"	Beam	RECT	A36 Gr.36	Typical
52	M52	N79	N80			RIGID	None	None	RIGID	Typical
53	M53	N77	N81			Plate 6"x0.375"	Beam	RECT	A36 Gr.36	Typical
54	M54	N82	N83			RIGID	None	None	RIGID	Typical
55	M55	N84	N86			Plate 6"x0.375"	Beam	RECT	A36 Gr.36	Typical
56	M56	N85	N87			Plate 6"x0.375"	Beam	RECT	A36 Gr.36	Typical
57	M57	N86	N88			Plate 6"x0.375"	Beam	RECT	A36 Gr.36	Typical
58	M58	N89	N90			RIGID	None	None	RIGID	Typical
59	M59	N87	N91			Plate 6"x0.375"	Beam	RECT	A36 Gr.36	Typical
60	M60	N92	N93			RIGID	None	None	RIGID	Typical
61	M61	N94	N95			Pipe 2.375"x0....	Beam	Pipe	A53 Gr.B	Typical
62	M62	N96	N97			RIGID	None	None	RIGID	Typical
63	M63	N98	N99			Pipe 2.875"x0....	Beam	Pipe	A53 Gr.B	Typical
64	M64	N100	N101			RIGID	None	None	RIGID	Typical
65	M65	N102	N103			Pipe 2.375"x0....	Beam	Pipe	A53 Gr.B	Typical
66	M66	N104	N105			RIGID	None	None	RIGID	Typical
67	M67	N106	N107			Pipe 2.375"x0....	Beam	Pipe	A53 Gr.B	Typical
68	M68	N108	N109			RIGID	None	None	RIGID	Typical
69	M69	N110	N111			Pipe 2.375"x0....	Beam	Pipe	A53 Gr.B	Typical
70	M70	N112	N113			RIGID	None	None	RIGID	Typical
71	M71	N114	N115			Pipe 2.375"x0....	Beam	Pipe	A53 Gr.B	Typical
72	M72	N116	N117			RIGID	None	None	RIGID	Typical
73	M73	N118	N119			Pipe 2.875"x0....	Beam	Pipe	A53 Gr.B	Typical
74	M74	N120	N121			RIGID	None	None	RIGID	Typical
75	M75	N122	N123			Pipe 2.375"x0....	Beam	Pipe	A53 Gr.B	Typical
76	M76	N124	N125			RIGID	None	None	RIGID	Typical
77	M77	N126	N127			Pipe 2.375"x0....	Beam	Pipe	A53 Gr.B	Typical
78	M78	N128	N129			RIGID	None	None	RIGID	Typical
79	M79	N130	N131			Pipe 2.375"x0....	Beam	Pipe	A53 Gr.B	Typical
80	M80	N132	N133			RIGID	None	None	RIGID	Typical
81	M81	N134	N135			Pipe 2.375"x0....	Beam	Pipe	A53 Gr.B	Typical
82	M82	N136	N137			RIGID	None	None	RIGID	Typical
83	M83	N138	N139			Pipe 2.875"x0....	Beam	Pipe	A53 Gr.B	Typical
84	M84	N140	N141			RIGID	None	None	RIGID	Typical
85	M85	N142	N143			Pipe 2.375"x0....	Beam	Pipe	A53 Gr.B	Typical
86	M86	N144	N145			RIGID	None	None	RIGID	Typical
87	M87	N146	N147			Pipe 2.375"x0....	Beam	Pipe	A53 Gr.B	Typical
88	M88	N148	N149			RIGID	None	None	RIGID	Typical
89	M89	N150	N151			Pipe 2.375"x0....	Beam	Pipe	A53 Gr.B	Typical
90	M90	N153	N152			RIGID	None	None	RIGID	Typical
91	M91	N155	N154			RIGID	None	None	RIGID	Typical
92	M92	N157	N156			RIGID	None	None	RIGID	Typical
93	M93	N159	N158			RIGID	None	None	RIGID	Typical
94	M94	N160	N161			Pipe 2.375"x0....	Beam	Pipe	A53 Gr.B	Typical
95	M95	N162	N163			RIGID	None	None	RIGID	Typical
96	M96	N164	N165			RIGID	None	None	RIGID	Typical
97	M97	N166	N167			RIGID	None	None	RIGID	Typical
98	M98	N168	N169			RIGID	None	None	RIGID	Typical
99	M99	N170	N171			RIGID	None	None	RIGID	Typical
100	M100	N172	N173			Pipe 2.375"x0....	Beam	Pipe	A53 Gr.B	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
101	M101	N174	N175			RIGID	None	None	RIGID	Typical
102	M102	N176	N177			RIGID	None	None	RIGID	Typical
103	M103	N178	N179			RIGID	None	None	RIGID	Typical
104	M104	N180	N181			RIGID	None	None	RIGID	Typical
105	M105	N182	N183			RIGID	None	None	RIGID	Typical
106	M106	N184	N185			Pipe 2.375"x0....	Beam	Pipe	A53 Gr.B	Typical
107	M107	N186	N187			RIGID	None	None	RIGID	Typical
108	M108	N188	N189			RIGID	None	None	RIGID	Typical
109	M109	N190	N191			RIGID	None	None	RIGID	Typical
110	M110	N192	N193			RIGID	None	None	RIGID	Typical
111	M111	N194	N195			RIGID	None	None	RIGID	Typical
112	M112	N201	N196		180	L 2.5"x2.5"x0.2...	Beam	Single Angle	A36 Gr.36	Typical
113	M113	N200	N198		180	L 2.5"x2.5"x0.2...	Beam	Single Angle	A36 Gr.36	Typical
114	M114	N199	N197		180	L 2.5"x2.5"x0.2...	Beam	Single Angle	A36 Gr.36	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	M1						Yes	Default			None
2	M2						Yes				None
3	M3						Yes				None
4	M4						Yes				None
5	M5						Yes	Default			None
6	M6						Yes				None
7	M7						Yes	** NA **			None
8	M8						Yes	** NA **			None
9	M9	BenPIN	BenPIN				Yes				None
10	M10						Yes	** NA **			None
11	M11						Yes	** NA **			None
12	M12	BenPIN	BenPIN				Yes				None
13	M13						Yes	** NA **			None
14	M14						Yes	** NA **			None
15	M15	BenPIN	BenPIN				Yes				None
16	M16						Yes	** NA **			None
17	M17						Yes	** NA **			None
18	M18	BenPIN	BenPIN				Yes				None
19	M19						Yes	** NA **			None
20	M20						Yes	** NA **			None
21	M21	BenPIN	BenPIN				Yes				None
22	M22						Yes	** NA **			None
23	M23						Yes	** NA **			None
24	M24	BenPIN	BenPIN				Yes				None
25	M25						Yes	** NA **			None
26	M26						Yes				None
27	M27		BenPIN				Yes	** NA **			None
28	M28						Yes				None
29	M29						Yes				None
30	M30		BenPIN				Yes	** NA **			None
31	M31						Yes				None
32	M32						Yes				None
33	M33						Yes	Default			None
34	M34						Yes				None
35	M35						Yes				None
36	M36						Yes				None
37	M37						Yes				None
38	M38						Yes	Default			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
39	M39						Yes	Default			None
40	M40						Yes	Default			None
41	M41						Yes	Default			None
42	M42						Yes	Default			None
43	M43						Yes				None
44	M44						Yes				None
45	M45						Yes				None
46	M46		BenPIN				Yes	** NA **			None
47	M47						Yes				None
48	M48		BenPIN				Yes	** NA **			None
49	M49						Yes				None
50	M50						Yes				None
51	M51						Yes				None
52	M52		BenPIN				Yes	** NA **			None
53	M53						Yes				None
54	M54		BenPIN				Yes	** NA **			None
55	M55						Yes				None
56	M56						Yes				None
57	M57						Yes				None
58	M58		BenPIN				Yes	** NA **			None
59	M59						Yes	Default			None
60	M60		BenPIN				Yes	** NA **			None
61	M61						Yes				None
62	M62						Yes	** NA **			None
63	M63						Yes	Default			None
64	M64						Yes	** NA **			None
65	M65						Yes				None
66	M66						Yes	** NA **			None
67	M67						Yes				None
68	M68						Yes	** NA **			None
69	M69						Yes				None
70	M70						Yes	** NA **			None
71	M71						Yes				None
72	M72						Yes	** NA **			None
73	M73						Yes				None
74	M74						Yes	** NA **			None
75	M75						Yes				None
76	M76						Yes	** NA **			None
77	M77						Yes				None
78	M78						Yes	** NA **			None
79	M79						Yes				None
80	M80						Yes	** NA **			None
81	M81						Yes				None
82	M82						Yes	** NA **			None
83	M83						Yes				None
84	M84						Yes	** NA **			None
85	M85						Yes				None
86	M86						Yes	** NA **			None
87	M87						Yes				None
88	M88						Yes	** NA **			None
89	M89						Yes				None
90	M90		BenPIN				Yes	** NA **			None
91	M91		BenPIN				Yes	** NA **			None
92	M92		BenPIN				Yes	** NA **			None
93	M93		BenPIN				Yes	** NA **			None
94	M94						Yes	Default			None
95	M95						Yes	** NA **			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
96	M96						Yes	** NA **			None
97	M97						Yes	** NA **			None
98	M98						Yes	** NA **			None
99	M99						Yes	** NA **			None
100	M100						Yes	Default			None
101	M101						Yes	** NA **			None
102	M102						Yes	** NA **			None
103	M103						Yes	** NA **			None
104	M104						Yes	** NA **			None
105	M105						Yes	** NA **			None
106	M106						Yes	Default			None
107	M107						Yes	** NA **			None
108	M108						Yes	** NA **			None
109	M109						Yes	** NA **			None
110	M110						Yes	** NA **			None
111	M111						Yes	** NA **			None
112	M112						Yes				None
113	M113						Yes				None
114	M114						Yes				None

Hot Rolled Steel Design Parameters

	Label	Shape	Length[in]	Lbyy[in]	Lbzz[in]	Lcomp top[i...	Lcomp bot[i...	L-torq...	Kyy	Kzz	Cb	Functi...
1	M1	Pipe 3.5"x0.188"	150	45	150	Lbyy		45	1	1		Lateral
2	M2	Pipe 3.5"x0.188"	150	45	150	Lbyy		45	1	1		Lateral
3	M3	Pipe 3.5"x0.188"	150	45	150	Lbyy		45	1	1		Lateral
4	M4	Tube 4"x4"x0.188"	62	45	45	Lbyy		45	2.1	2.1		Lateral
5	M5	Tube 4"x4"x0.188"	62	45	45	Lbyy		45	2.1	2.1		Lateral
6	M6	Tube 4"x4"x0.188"	62	45	45	Lbyy		45	2.1	2.1		Lateral
7	M9	L 2"x2"x0.188"	52	52	52	Lbyy		52	1	1		Lateral
8	M12	L 2"x2"x0.188"	52	52	52	Lbyy		52	1	1		Lateral
9	M15	L 2"x2"x0.188"	52	52	52	Lbyy		52	1	1		Lateral
10	M18	L 2"x2"x0.188"	52	52	52	Lbyy		52	1	1		Lateral
11	M21	L 2"x2"x0.188"	52	52	52	Lbyy		52	1	1		Lateral
12	M24	L 2"x2"x0.188"	52	52	52	Lbyy		52	1	1		Lateral
13	M26	Plate 6"x0.375"	12.5	Segment	Segment	Lbyy		Segm...	1	1		Lateral
14	M28	Plate 6"x0.375"	3	Segment	Segment	Lbyy		Segm...	1	1		Lateral
15	M29	Plate 6"x0.375"	12.5	Segment	Segment	Lbyy		Segm...	1	1		Lateral
16	M31	Plate 6"x0.375"	3	Segment	Segment	Lbyy		Segm...	1	1		Lateral
17	M32	Plate 6"x0.375"	12.5	Segment	Segment	Lbyy		Segm...	1	1		Lateral
18	M33	Tube 4"x4"x0.188"	30.5	30.5	30.5	Lbyy		30.5	.8	.8		Lateral
19	M34	Plate 6"x0.375"	3	Segment	Segment	Lbyy		Segm...	1	1		Lateral
20	M35	Plate 6"x0.375"	3	Segment	Segment	Lbyy		Segm...	1	1		Lateral
21	M36	Plate 6"x0.375"	3	Segment	Segment	Lbyy		Segm...	1	1		Lateral
22	M37	Plate 6"x0.375"	3	Segment	Segment	Lbyy		Segm...	1	1		Lateral
23	M38	Tube 4"x4"x0.188"	30.5	30.5	30.5	Lbyy		30.5	.8	.8		Lateral
24	M39	Tube 4"x4"x0.188"	30.5	30.5	30.5	Lbyy		30.5	.8	.8		Lateral
25	M40	Tube 4"x4"x0.188"	30.5	30.5	30.5	Lbyy		30.5	.8	.8		Lateral
26	M41	Tube 4"x4"x0.188"	30.5	30.5	30.5	Lbyy		30.5	.8	.8		Lateral
27	M42	Tube 4"x4"x0.188"	30.5	30.5	30.5	Lbyy		30.5	.8	.8		Lateral
28	M43	Plate 6"x0.375"	4	Segment	Segment	Lbyy		Segm...	1	1		Lateral
29	M44	Plate 6"x0.375"	4	Segment	Segment	Lbyy		Segm...	1	1		Lateral
30	M45	Plate 6"x0.375"	4	Segment	Segment	Lbyy		Segm...	1	1		Lateral
31	M47	Plate 6"x0.375"	4	Segment	Segment	Lbyy		Segm...	1	1		Lateral
32	M49	Plate 6"x0.375"	4	Segment	Segment	Lbyy		Segm...	1	1		Lateral
33	M50	Plate 6"x0.375"	4	Segment	Segment	Lbyy		Segm...	1	1		Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length[in]	Lbyy[in]	Lbzz[in]	Lcomp top[i...	Lcomp bot[i...	L-torq...	Kyy	Kzz	Cb	Functi...
34	M51	Plate 6"x0.375"	4	Segment	Segment	Lbyy		Segm...	1	1		Lateral
35	M53	Plate 6"x0.375"	4	Segment	Segment	Lbyy		Segm...	1	1		Lateral
36	M55	Plate 6"x0.375"	4	Segment	Segment	Lbyy		Segm...	1	1		Lateral
37	M56	Plate 6"x0.375"	4	Segment	Segment	Lbyy		Segm...	1	1		Lateral
38	M57	Plate 6"x0.375"	4	Segment	Segment	Lbyy		Segm...	1	1		Lateral
39	M59	Plate 6"x0.375"	4	Segment	Segment	Lbyy		Segm...	1	1		Lateral
40	M61	Pipe 2.375"x0.125"	84	84	84	Lbyy		84	1	1		Lateral
41	M63	Pipe 2.875"x0.188"	96	96	96	Lbyy		96	1	1		Lateral
42	M65	Pipe 2.375"x0.125"	84	84	84	Lbyy		84	1	1		Lateral
43	M67	Pipe 2.375"x0.125"	84	84	84	Lbyy		84	1	1		Lateral
44	M69	Pipe 2.375"x0.125"	84	84	84	Lbyy		84	1	1		Lateral
45	M71	Pipe 2.375"x0.125"	84	84	84	Lbyy		84	1	1		Lateral
46	M73	Pipe 2.875"x0.188"	96	96	96	Lbyy		96	1	1		Lateral
47	M75	Pipe 2.375"x0.125"	84	84	84	Lbyy		84	1	1		Lateral
48	M77	Pipe 2.375"x0.125"	84	84	84	Lbyy		84	1	1		Lateral
49	M79	Pipe 2.375"x0.125"	84	84	84	Lbyy		84	1	1		Lateral
50	M81	Pipe 2.375"x0.125"	84	84	84	Lbyy		84	1	1		Lateral
51	M83	Pipe 2.875"x0.188"	96	96	96	Lbyy		96	1	1		Lateral
52	M85	Pipe 2.375"x0.125"	84	84	84	Lbyy		84	1	1		Lateral
53	M87	Pipe 2.375"x0.125"	84	84	84	Lbyy		84	1	1		Lateral
54	M89	Pipe 2.375"x0.125"	84	84	84	Lbyy		84	1	1		Lateral
55	M94	Pipe 2.375"x0.154"	150	150	150	Lbyy		150	1	1		Lateral
56	M100	Pipe 2.375"x0.154"	150	150	150	Lbyy		150	1	1		Lateral
57	M106	Pipe 2.375"x0.154"	150	150	150	Lbyy		150	1	1		Lateral
58	M112	L 2.5"x2.5"x0.25"	16.5	16.5	16.5	Lbyy		16.5	1	1		Lateral
59	M113	L 2.5"x2.5"x0.25"	16.5	16.5	16.5	Lbyy		16.5	1	1		Lateral
60	M114	L 2.5"x2.5"x0.25"	16.5	16.5	16.5	Lbyy		16.5	1	1		Lateral

Cold Formed Steel Design Parameters

Label	Shape	Length...	Lbyy[in]	Lbzz[in]	Lcomp to...	Lcomp bo...	L-torque[in]	Kyy	Kzz	Cb	R	a[in]	Funct...
No Data to Print ...													

Joint Loads and Enforced Displacements (BLC 18 : Lm1)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-in), (in,rad), (lb*s^2...
1	N163	L	Z	-500

Joint Loads and Enforced Displacements (BLC 19 : Lm2)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-in), (in,rad), (lb*s^2...
1	N165	L	Z	-500

Joint Loads and Enforced Displacements (BLC 20 : Lm3)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-in), (in,rad), (lb*s^2...
1	N169	L	Z	-500

Joint Loads and Enforced Displacements (BLC 21 : Lm4)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-in), (in,rad), (lb*s^2...
1	N171	L	Z	-500

Joint Loads and Enforced Displacements (BLC 22 : Lm5)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-in), (in,rad), (lb*s^2...
1	N187	L	Z	-500

Joint Loads and Enforced Displacements (BLC 23 : Lm6)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-in), (in,rad), (lb*s^2...
1	N189	L	Z	-500

Joint Loads and Enforced Displacements (BLC 24 : Lm7)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-in), (in,rad), (lb*s^2...
1	N193	L	Z	-500

Joint Loads and Enforced Displacements (BLC 25 : Lm8)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-in), (in,rad), (lb*s^2...
1	N195	L	Z	-500

Joint Loads and Enforced Displacements (BLC 26 : Lm9)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-in), (in,rad), (lb*s^2...
1	N175	L	Z	-500

Joint Loads and Enforced Displacements (BLC 27 : Lm10)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-in), (in,rad), (lb*s^2...
1	N177	L	Z	-500

Joint Loads and Enforced Displacements (BLC 28 : Lm11)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-in), (in,rad), (lb*s^2...
1	N181	L	Z	-500

Joint Loads and Enforced Displacements (BLC 29 : Lm12)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-in), (in,rad), (lb*s^2...
1	N183	L	Z	-500

Joint Loads and Enforced Displacements (BLC 30 : Lv1)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-in), (in,rad), (lb*s^2...
1	N1	L	Z	-250

Joint Loads and Enforced Displacements (BLC 31 : Lv2)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-in), (in,rad), (lb*s^2...
1	N184	L	Z	-250

Joint Loads and Enforced Displacements (BLC 32 : Lv3)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-in), (in,rad), (lb*s^2...
1	N172	L	Z	-250

Joint Loads and Enforced Displacements (BLC 33 : Lv4)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-in), (in,rad), (lb*s^2...
1	N160	L	Z	-250

Joint Loads and Enforced Displacements (BLC 34 : Lv5)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-in), (in,rad), (lb*s^2...
1	N62	L	Z	-250

Joint Loads and Enforced Displacements (BLC 35 : Lv6)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-in), (in,rad), (lb*s^2...
1	N60	L	Z	-250

Member Point Loads (BLC 2 : Weights)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
1	M63	Z	-31.65	15
2	M63	Z	-31.65	75
3	M63	Z	-31.65	15
4	M63	Z	-31.65	75
5	M69	Z	-9	15.5
6	M69	Z	-9	74.5
7	M83	Z	-31.65	15
8	M83	Z	-31.65	75
9	M83	Z	-31.65	15
10	M83	Z	-31.65	75
11	M89	Z	-9	15.5
12	M89	Z	-9	74.5
13	M73	Z	-31.65	15
14	M73	Z	-31.65	75
15	M73	Z	-31.65	15
16	M73	Z	-31.65	75
17	M79	Z	-9	15.5
18	M79	Z	-9	74.5
19	M61	Z	-20.7	45
20	M61	Z	-70.3	45
21	M65	Z	-84.4	10
22	M61	Z	-9.93	45
23	M61	Z	-9.93	43
24	M81	Z	-20.7	45
25	M81	Z	-70.3	45
26	M85	Z	-84.4	10
27	M81	Z	-9.93	45
28	M81	Z	-9.93	43
29	M71	Z	-20.7	45
30	M71	Z	-70.3	45
31	M75	Z	-84.4	10
32	M71	Z	-9.93	45
33	M71	Z	-9.93	43

Member Point Loads (BLC 3 : ICE Load)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
1	M63	Z	-144.2	15
2	M63	Z	-144.2	75
3	M63	Z	-144.2	15
4	M63	Z	-144.2	75
5	M69	Z	-71.13	15.5
6	M69	Z	-71.13	74.5
7	M83	Z	-144.2	15
8	M83	Z	-144.2	75
9	M83	Z	-144.2	15
10	M83	Z	-144.2	75
11	M89	Z	-71.13	15.5
12	M89	Z	-71.13	74.5
13	M73	Z	-144.2	15
14	M73	Z	-144.2	75
15	M73	Z	-144.2	15
16	M73	Z	-144.2	75
17	M79	Z	-71.13	15.5
18	M79	Z	-71.13	74.5
19	M61	Z	-14.9	45

Member Point Loads (BLC 3 : ICE Load) (Continued)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
20	M61	Z	-48.42	45
21	M65	Z	-50.95	10
22	M61	Z	-24.51	45
23	M61	Z	-20.04	43
24	M81	Z	-14.9	45
25	M81	Z	-48.42	45
26	M85	Z	-50.95	10
27	M81	Z	-24.51	45
28	M81	Z	-20.04	43
29	M71	Z	-14.9	45
30	M71	Z	-48.42	45
31	M75	Z	-50.95	10
32	M71	Z	-24.51	45
33	M71	Z	-20.04	43

Member Point Loads (BLC 4 : Wind 0°)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
1	M63	X	-108.4	15
2	M63	X	-108.4	75
3	M63	X	-108.4	15
4	M63	X	-108.4	75
5	M69	X	-118.29	15.5
6	M69	X	-118.29	74.5
7	M83	X	-74.05	15
8	M83	X	-74.05	75
9	M83	X	-74.05	15
10	M83	X	-74.05	75
11	M89	X	-99.71	15.5
12	M89	X	-99.71	74.5
13	M73	X	-74.05	15
14	M73	X	-74.05	75
15	M73	X	-74.05	15
16	M73	X	-74.05	75
17	M79	X	-99.71	15.5
18	M79	X	-99.71	74.5
19	M61	X	-15.09	45
20	M61	X	-76.89	45
21	M65	X	-76.89	10
22	M61	X	-36.57	45
23	M61	X	-5.35	43
24	M81	X	-19.52	45
25	M81	X	-50.36	45
26	M85	X	-57.67	10
27	M81	X	-23.94	45
28	M81	X	-26.29	43
29	M71	X	-19.52	45
30	M71	X	-50.36	45
31	M75	X	-57.67	10
32	M71	X	-23.94	45
33	M71	X	-26.29	43

Member Point Loads (BLC 5 : Wind 30°)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
1	M63	X	-83.96	15
2	M63	X	-83.96	75
3	M63	X	-83.96	15

Member Point Loads (BLC 5 : Wind 30°) (Continued)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
4	M63	X	-83.96	75
5	M69	X	-97.08	15.5
6	M69	X	-97.08	74.5
7	M83	X	-83.96	15
8	M83	X	-83.96	75
9	M83	X	-83.96	15
10	M83	X	-83.96	75
11	M89	X	-97.08	15.5
12	M89	X	-97.08	74.5
13	M73	X	-54.21	15
14	M73	X	-54.21	75
15	M73	X	-54.21	15
16	M73	X	-54.21	75
17	M79	X	-80.99	15.5
18	M79	X	-80.99	74.5
19	M61	X	-14.35	45
20	M61	X	-58.93	45
21	M65	X	-61.04	10
22	M61	X	-28.02	45
23	M61	X	-10.68	43
24	M81	X	-14.35	45
25	M81	X	-58.93	45
26	M85	X	-61.04	10
27	M81	X	-28.02	45
28	M81	X	-10.68	43
29	M71	X	-18.18	45
30	M71	X	-35.96	45
31	M75	X	-44.39	10
32	M71	X	-17.08	45
33	M71	X	-28.82	43
34	M63	Y	-48.47	15
35	M63	Y	-48.47	75
36	M63	Y	-48.47	15
37	M63	Y	-48.47	75
38	M69	Y	-56.05	15.5
39	M69	Y	-56.05	74.5
40	M83	Y	-48.47	15
41	M83	Y	-48.47	75
42	M83	Y	-48.47	15
43	M83	Y	-48.47	75
44	M89	Y	-56.05	15.5
45	M89	Y	-56.05	74.5
46	M73	Y	-31.3	15
47	M73	Y	-31.3	75
48	M73	Y	-31.3	15
49	M73	Y	-31.3	75
50	M79	Y	-46.76	15.5
51	M79	Y	-46.76	74.5
52	M61	Y	-8.28	45
53	M61	Y	-34.02	45
54	M65	Y	-35.24	10
55	M61	Y	-16.18	45
56	M61	Y	-6.17	43
57	M81	Y	-8.28	45
58	M81	Y	-34.02	45
59	M85	Y	-35.24	10
60	M81	Y	-16.18	45

Member Point Loads (BLC 5 : Wind 30°) (Continued)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
61	M81	Y	-6.17	43
62	M71	Y	-10.5	45
63	M71	Y	-20.76	45
64	M75	Y	-25.63	10
65	M71	Y	-9.86	45
66	M71	Y	-16.64	43

Member Point Loads (BLC 6 : Wind 60°)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
1	M63	X	-37.02	15
2	M63	X	-37.02	75
3	M63	X	-37.02	15
4	M63	X	-37.02	75
5	M69	X	-49.85	15.5
6	M69	X	-49.85	74.5
7	M83	X	-54.2	15
8	M83	X	-54.2	75
9	M83	X	-54.2	15
10	M83	X	-54.2	75
11	M89	X	-59.14	15.5
12	M89	X	-59.14	74.5
13	M73	X	-37.02	15
14	M73	X	-37.02	75
15	M73	X	-37.02	15
16	M73	X	-37.02	75
17	M79	X	-49.85	15.5
18	M79	X	-49.85	74.5
19	M61	X	-9.76	45
20	M61	X	-25.18	45
21	M65	X	-28.83	10
22	M61	X	-11.97	45
23	M61	X	-13.15	43
24	M81	X	-7.55	45
25	M81	X	-38.45	45
26	M85	X	-38.45	10
27	M81	X	-18.28	45
28	M81	X	-2.68	43
29	M71	X	-9.76	45
30	M71	X	-25.18	45
31	M75	X	-28.83	10
32	M71	X	-11.97	45
33	M71	X	-13.15	43
34	M63	Y	-64.13	15
35	M63	Y	-64.13	75
36	M63	Y	-64.13	15
37	M63	Y	-64.13	75
38	M69	Y	-86.35	15.5
39	M69	Y	-86.35	74.5
40	M83	Y	-93.87	15
41	M83	Y	-93.87	75
42	M83	Y	-93.87	15
43	M83	Y	-93.87	75
44	M89	Y	-102.44	15.5
45	M89	Y	-102.44	74.5
46	M73	Y	-64.13	15
47	M73	Y	-64.13	75

Member Point Loads (BLC 6 : Wind 60°) (Continued)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
48	M73	Y	-64.13	15
49	M73	Y	-64.13	75
50	M79	Y	-86.35	15.5
51	M79	Y	-86.35	74.5
52	M61	Y	-16.91	45
53	M61	Y	-43.62	45
54	M65	Y	-49.94	10
55	M61	Y	-20.73	45
56	M61	Y	-22.77	43
57	M81	Y	-13.07	45
58	M81	Y	-66.59	45
59	M85	Y	-66.59	10
60	M81	Y	-31.67	45
61	M81	Y	-4.64	43
62	M71	Y	-16.91	45
63	M71	Y	-43.62	45
64	M75	Y	-49.94	10
65	M71	Y	-20.73	45
66	M71	Y	-22.77	43

Member Point Loads (BLC 7 : Wind 90°)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
1	M63	Y	-62.6	15
2	M63	Y	-62.6	75
3	M63	Y	-62.6	15
4	M63	Y	-62.6	75
5	M69	Y	-93.52	15.5
6	M69	Y	-93.52	74.5
7	M83	Y	-96.95	15
8	M83	Y	-96.95	75
9	M83	Y	-96.95	15
10	M83	Y	-96.95	75
11	M89	Y	-112.09	15.5
12	M89	Y	-112.09	74.5
13	M73	Y	-96.95	15
14	M73	Y	-96.95	75
15	M73	Y	-96.95	15
16	M73	Y	-96.95	75
17	M79	Y	-112.09	15.5
18	M79	Y	-112.09	74.5
19	M61	Y	-21	45
20	M61	Y	-41.52	45
21	M65	Y	-51.26	10
22	M61	Y	-19.73	45
23	M61	Y	-33.28	43
24	M81	Y	-16.57	45
25	M81	Y	-68.05	45
26	M85	Y	-70.48	10
27	M81	Y	-32.36	45
28	M81	Y	-12.33	43
29	M71	Y	-16.57	45
30	M71	Y	-68.05	45
31	M75	Y	-70.48	10
32	M71	Y	-32.36	45
33	M71	Y	-12.33	43

Member Point Loads (BLC 8 : Wind 120°)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
1	M63	X	37.02	15
2	M63	X	37.02	75
3	M63	X	37.02	15
4	M63	X	37.02	75
5	M69	X	49.85	15.5
6	M69	X	49.85	74.5
7	M83	X	37.02	15
8	M83	X	37.02	75
9	M83	X	37.02	15
10	M83	X	37.02	75
11	M89	X	49.85	15.5
12	M89	X	49.85	74.5
13	M73	X	54.2	15
14	M73	X	54.2	75
15	M73	X	54.2	15
16	M73	X	54.2	75
17	M79	X	59.14	15.5
18	M79	X	59.14	74.5
19	M61	X	9.76	45
20	M61	X	25.18	45
21	M65	X	28.83	10
22	M61	X	11.97	45
23	M61	X	13.15	43
24	M81	X	9.76	45
25	M81	X	25.18	45
26	M85	X	28.83	10
27	M81	X	11.97	45
28	M81	X	13.15	43
29	M71	X	7.55	45
30	M71	X	38.45	45
31	M75	X	38.45	10
32	M71	X	18.28	45
33	M71	X	2.68	43
34	M63	Y	-64.13	15
35	M63	Y	-64.13	75
36	M63	Y	-64.13	15
37	M63	Y	-64.13	75
38	M69	Y	-86.35	15.5
39	M69	Y	-86.35	74.5
40	M83	Y	-64.13	15
41	M83	Y	-64.13	75
42	M83	Y	-64.13	15
43	M83	Y	-64.13	75
44	M89	Y	-86.35	15.5
45	M89	Y	-86.35	74.5
46	M73	Y	-93.87	15
47	M73	Y	-93.87	75
48	M73	Y	-93.87	15
49	M73	Y	-93.87	75
50	M79	Y	-102.44	15.5
51	M79	Y	-102.44	74.5
52	M61	Y	-16.91	45
53	M61	Y	-43.62	45
54	M65	Y	-49.94	10
55	M61	Y	-20.73	45
56	M61	Y	-22.77	43
57	M81	Y	-16.91	45

Member Point Loads (BLC 8 : Wind 120°) (Continued)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
58	M81	Y	-43.62	45
59	M85	Y	-49.94	10
60	M81	Y	-20.73	45
61	M81	Y	-22.77	43
62	M71	Y	-13.07	45
63	M71	Y	-66.59	45
64	M75	Y	-66.59	10
65	M71	Y	-31.67	45
66	M71	Y	-4.64	43

Member Point Loads (BLC 9 : Wind 150°)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
1	M63	X	83.96	15
2	M63	X	83.96	75
3	M63	X	83.96	15
4	M63	X	83.96	75
5	M69	X	97.08	15.5
6	M69	X	97.08	74.5
7	M83	X	54.21	15
8	M83	X	54.21	75
9	M83	X	54.21	15
10	M83	X	54.21	75
11	M89	X	80.99	15.5
12	M89	X	80.99	74.5
13	M73	X	83.96	15
14	M73	X	83.96	75
15	M73	X	83.96	15
16	M73	X	83.96	75
17	M79	X	97.08	15.5
18	M79	X	97.08	74.5
19	M61	X	14.35	45
20	M61	X	58.93	45
21	M65	X	61.04	10
22	M61	X	28.02	45
23	M61	X	10.68	43
24	M81	X	18.18	45
25	M81	X	35.96	45
26	M85	X	44.39	10
27	M81	X	17.08	45
28	M81	X	28.82	43
29	M71	X	14.35	45
30	M71	X	58.93	45
31	M75	X	61.04	10
32	M71	X	28.02	45
33	M71	X	10.68	43
34	M63	Y	-48.47	15
35	M63	Y	-48.47	75
36	M63	Y	-48.47	15
37	M63	Y	-48.47	75
38	M69	Y	-56.05	15.5
39	M69	Y	-56.05	74.5
40	M83	Y	-31.3	15
41	M83	Y	-31.3	75
42	M83	Y	-31.3	15
43	M83	Y	-31.3	75
44	M89	Y	-46.76	15.5

Member Point Loads (BLC 9 : Wind 150°) (Continued)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
45	M89	Y	-46.76	74.5
46	M73	Y	-48.47	15
47	M73	Y	-48.47	75
48	M73	Y	-48.47	15
49	M73	Y	-48.47	75
50	M79	Y	-56.05	15.5
51	M79	Y	-56.05	74.5
52	M61	Y	-8.28	45
53	M61	Y	-34.02	45
54	M65	Y	-35.24	10
55	M61	Y	-16.18	45
56	M61	Y	-6.17	43
57	M81	Y	-10.5	45
58	M81	Y	-20.76	45
59	M85	Y	-25.63	10
60	M81	Y	-9.86	45
61	M81	Y	-16.64	43
62	M71	Y	-8.28	45
63	M71	Y	-34.02	45
64	M75	Y	-35.24	10
65	M71	Y	-16.18	45
66	M71	Y	-6.17	43

Member Point Loads (BLC 10 : Wind 0° with ice)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
1	M63	X	-24.16	15
2	M63	X	-24.16	75
3	M63	X	-24.16	15
4	M63	X	-24.16	75
5	M69	X	-28.4	15.5
6	M69	X	-28.4	74.5
7	M83	X	-18.02	15
8	M83	X	-18.02	75
9	M83	X	-18.02	15
10	M83	X	-18.02	75
11	M89	X	-25.15	15.5
12	M89	X	-25.15	74.5
13	M73	X	-18.02	15
14	M73	X	-18.02	75
15	M73	X	-18.02	15
16	M73	X	-18.02	75
17	M79	X	-25.15	15.5
18	M79	X	-25.15	74.5
19	M61	X	-5.87	45
20	M61	X	-19.72	45
21	M65	X	-19.72	10
22	M61	X	-11.06	45
23	M61	X	-3.85	43
24	M81	X	-7.03	45
25	M81	X	-14.17	45
26	M85	X	-15.7	10
27	M81	X	-8.29	45
28	M81	X	-8.66	43
29	M71	X	-7.03	45
30	M71	X	-14.17	45
31	M75	X	-15.7	10

Member Point Loads (BLC 10 : Wind 0° with ice) (Continued)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
32	M71	X	-8.29	45
33	M71	X	-8.66	43

Member Point Loads (BLC 11 : Wind 30° with ice)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
1	M63	X	-19.15	15
2	M63	X	-19.15	75
3	M63	X	-19.15	15
4	M63	X	-19.15	75
5	M69	X	-23.66	15.5
6	M69	X	-23.66	74.5
7	M83	X	-19.15	15
8	M83	X	-19.15	75
9	M83	X	-19.15	15
10	M83	X	-19.15	75
11	M89	X	-23.66	15.5
12	M89	X	-23.66	74.5
13	M73	X	-13.83	15
14	M73	X	-13.83	75
15	M73	X	-13.83	15
16	M73	X	-13.83	75
17	M79	X	-20.85	15.5
18	M79	X	-20.85	74.5
19	M61	X	-5.42	45
20	M61	X	-15.48	45
21	M65	X	-15.92	10
22	M61	X	-8.78	45
23	M61	X	-4.72	43
24	M81	X	-5.42	45
25	M81	X	-15.48	45
26	M85	X	-15.92	10
27	M81	X	-8.78	45
28	M81	X	-4.72	43
29	M71	X	-6.42	45
30	M71	X	-10.67	45
31	M75	X	-12.43	10
32	M71	X	-6.38	45
33	M71	X	-8.89	43
34	M63	Y	-11.06	15
35	M63	Y	-11.06	75
36	M63	Y	-11.06	15
37	M63	Y	-11.06	75
38	M69	Y	-13.66	15.5
39	M69	Y	-13.66	74.5
40	M83	Y	-11.06	15
41	M83	Y	-11.06	75
42	M83	Y	-11.06	15
43	M83	Y	-11.06	75
44	M89	Y	-13.66	15.5
45	M89	Y	-13.66	74.5
46	M73	Y	-7.99	15
47	M73	Y	-7.99	75
48	M73	Y	-7.99	15
49	M73	Y	-7.99	75
50	M79	Y	-12.04	15.5
51	M79	Y	-12.04	74.5

Member Point Loads (BLC 11 : Wind 30° with ice) (Continued)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
52	M61	Y	-3.13	45
53	M61	Y	-8.94	45
54	M65	Y	-9.19	10
55	M61	Y	-5.07	45
56	M61	Y	-2.73	43
57	M81	Y	-3.13	45
58	M81	Y	-8.94	45
59	M85	Y	-9.19	10
60	M81	Y	-5.07	45
61	M81	Y	-2.73	43
62	M71	Y	-3.71	45
63	M71	Y	-6.16	45
64	M75	Y	-7.18	10
65	M71	Y	-3.69	45
66	M71	Y	-5.13	43

Member Point Loads (BLC 12 : Wind 60° with ice)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
1	M63	X	-9.01	15
2	M63	X	-9.01	75
3	M63	X	-9.01	15
4	M63	X	-9.01	75
5	M69	X	-12.58	15.5
6	M69	X	-12.58	74.5
7	M83	X	-12.08	15
8	M83	X	-12.08	75
9	M83	X	-12.08	15
10	M83	X	-12.08	75
11	M89	X	-14.2	15.5
12	M89	X	-14.2	74.5
13	M73	X	-9.01	15
14	M73	X	-9.01	75
15	M73	X	-9.01	15
16	M73	X	-9.01	75
17	M79	X	-12.58	15.5
18	M79	X	-12.58	74.5
19	M61	X	-3.51	45
20	M61	X	-7.08	45
21	M65	X	-7.85	10
22	M61	X	-4.15	45
23	M61	X	-4.33	43
24	M81	X	-2.94	45
25	M81	X	-9.86	45
26	M85	X	-9.86	10
27	M81	X	-5.53	45
28	M81	X	-1.92	43
29	M71	X	-3.51	45
30	M71	X	-7.08	45
31	M75	X	-7.85	10
32	M71	X	-4.15	45
33	M71	X	-4.33	43
34	M63	Y	-15.61	15
35	M63	Y	-15.61	75
36	M63	Y	-15.61	15
37	M63	Y	-15.61	75
38	M69	Y	-21.78	15.5

Member Point Loads (BLC 12 : Wind 60° with ice) (Continued)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
39	M69	Y	-21.78	74.5
40	M83	Y	-20.92	15
41	M83	Y	-20.92	75
42	M83	Y	-20.92	15
43	M83	Y	-20.92	75
44	M89	Y	-24.59	15.5
45	M89	Y	-24.59	74.5
46	M73	Y	-15.61	15
47	M73	Y	-15.61	75
48	M73	Y	-15.61	15
49	M73	Y	-15.61	75
50	M79	Y	-21.78	15.5
51	M79	Y	-21.78	74.5
52	M61	Y	-6.09	45
53	M61	Y	-12.27	45
54	M65	Y	-13.6	10
55	M61	Y	-7.18	45
56	M61	Y	-7.5	43
57	M81	Y	-5.08	45
58	M81	Y	-17.08	45
59	M85	Y	-17.08	10
60	M81	Y	-9.58	45
61	M81	Y	-3.33	43
62	M71	Y	-6.09	45
63	M71	Y	-12.27	45
64	M75	Y	-13.6	10
65	M71	Y	-7.18	45
66	M71	Y	-7.5	43

Member Point Loads (BLC 13 : Wind 90° with ice)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
1	M63	Y	-15.97	15
2	M63	Y	-15.97	75
3	M63	Y	-15.97	15
4	M63	Y	-15.97	75
5	M69	Y	-24.07	15.5
6	M69	Y	-24.07	74.5
7	M83	Y	-22.11	15
8	M83	Y	-22.11	75
9	M83	Y	-22.11	15
10	M83	Y	-22.11	75
11	M89	Y	-27.32	15.5
12	M89	Y	-27.32	74.5
13	M73	Y	-22.11	15
14	M73	Y	-22.11	75
15	M73	Y	-22.11	15
16	M73	Y	-22.11	75
17	M79	Y	-27.32	15.5
18	M79	Y	-27.32	74.5
19	M61	Y	-7.41	45
20	M61	Y	-12.32	45
21	M65	Y	-14.36	10
22	M61	Y	-7.37	45
23	M61	Y	-10.26	43
24	M81	Y	-6.26	45
25	M81	Y	-17.87	45

Member Point Loads (BLC 13 : Wind 90° with ice) (Continued)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
26	M85	Y	-18.38	10
27	M81	Y	-10.14	45
28	M81	Y	-5.45	43
29	M71	Y	-6.26	45
30	M71	Y	-17.87	45
31	M75	Y	-18.38	10
32	M71	Y	-10.14	45
33	M71	Y	-5.45	43

Member Point Loads (BLC 14 : Wind 120° with ice)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
1	M63	X	9.01	15
2	M63	X	9.01	75
3	M63	X	9.01	15
4	M63	X	9.01	75
5	M69	X	12.58	15.5
6	M69	X	12.58	74.5
7	M83	X	9.01	15
8	M83	X	9.01	75
9	M83	X	9.01	15
10	M83	X	9.01	75
11	M89	X	12.58	15.5
12	M89	X	12.58	74.5
13	M73	X	12.08	15
14	M73	X	12.08	75
15	M73	X	12.08	15
16	M73	X	12.08	75
17	M79	X	14.2	15.5
18	M79	X	14.2	74.5
19	M61	X	3.51	45
20	M61	X	7.08	45
21	M65	X	7.85	10
22	M61	X	4.15	45
23	M61	X	4.33	43
24	M81	X	3.51	45
25	M81	X	7.08	45
26	M85	X	7.85	10
27	M81	X	4.15	45
28	M81	X	4.33	43
29	M71	X	2.94	45
30	M71	X	9.86	45
31	M75	X	9.86	10
32	M71	X	5.53	45
33	M71	X	1.92	43
34	M63	Y	-15.61	15
35	M63	Y	-15.61	75
36	M63	Y	-15.61	15
37	M63	Y	-15.61	75
38	M69	Y	-21.78	15.5
39	M69	Y	-21.78	74.5
40	M83	Y	-15.61	15
41	M83	Y	-15.61	75
42	M83	Y	-15.61	15
43	M83	Y	-15.61	75
44	M89	Y	-21.78	15.5
45	M89	Y	-21.78	74.5

Member Point Loads (BLC 14 : Wind 120° with ice) (Continued)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
46	M73	Y	-20.92	15
47	M73	Y	-20.92	75
48	M73	Y	-20.92	15
49	M73	Y	-20.92	75
50	M79	Y	-24.59	15.5
51	M79	Y	-24.59	74.5
52	M61	Y	-6.09	45
53	M61	Y	-12.27	45
54	M65	Y	-13.6	10
55	M61	Y	-7.18	45
56	M61	Y	-7.5	43
57	M81	Y	-6.09	45
58	M81	Y	-12.27	45
59	M85	Y	-13.6	10
60	M81	Y	-7.18	45
61	M81	Y	-7.5	43
62	M71	Y	-5.08	45
63	M71	Y	-17.08	45
64	M75	Y	-17.08	10
65	M71	Y	-9.58	45
66	M71	Y	-3.33	43

Member Point Loads (BLC 15 : Wind 150° with ice)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
1	M63	X	19.15	15
2	M63	X	19.15	75
3	M63	X	19.15	15
4	M63	X	19.15	75
5	M69	X	23.66	15.5
6	M69	X	23.66	74.5
7	M83	X	13.83	15
8	M83	X	13.83	75
9	M83	X	13.83	15
10	M83	X	13.83	75
11	M89	X	20.85	15.5
12	M89	X	20.85	74.5
13	M73	X	19.15	15
14	M73	X	19.15	75
15	M73	X	19.15	15
16	M73	X	19.15	75
17	M79	X	23.66	15.5
18	M79	X	23.66	74.5
19	M61	X	5.42	45
20	M61	X	15.48	45
21	M65	X	15.92	10
22	M61	X	8.78	45
23	M61	X	4.72	43
24	M81	X	6.42	45
25	M81	X	10.67	45
26	M85	X	12.43	10
27	M81	X	6.38	45
28	M81	X	8.89	43
29	M71	X	5.42	45
30	M71	X	15.48	45
31	M75	X	15.92	10
32	M71	X	8.78	45

Member Point Loads (BLC 15 : Wind 150° with ice) (Continued)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
33	M71	X	4.72	43
34	M63	Y	-11.06	15
35	M63	Y	-11.06	75
36	M63	Y	-11.06	15
37	M63	Y	-11.06	75
38	M69	Y	-13.66	15.5
39	M69	Y	-13.66	74.5
40	M83	Y	-7.99	15
41	M83	Y	-7.99	75
42	M83	Y	-7.99	15
43	M83	Y	-7.99	75
44	M89	Y	-12.04	15.5
45	M89	Y	-12.04	74.5
46	M73	Y	-11.06	15
47	M73	Y	-11.06	75
48	M73	Y	-11.06	15
49	M73	Y	-11.06	75
50	M79	Y	-13.66	15.5
51	M79	Y	-13.66	74.5
52	M61	Y	-3.13	45
53	M61	Y	-8.94	45
54	M65	Y	-9.19	10
55	M61	Y	-5.07	45
56	M61	Y	-2.73	43
57	M81	Y	-3.71	45
58	M81	Y	-6.16	45
59	M85	Y	-7.18	10
60	M81	Y	-3.69	45
61	M81	Y	-5.13	43
62	M71	Y	-3.13	45
63	M71	Y	-8.94	45
64	M75	Y	-9.19	10
65	M71	Y	-5.07	45
66	M71	Y	-2.73	43

Member Point Loads (BLC 16 : Horizontal Seismic Load X)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
1	M63	X	-31.65	15
2	M63	X	-31.65	75
3	M63	X	-31.65	15
4	M63	X	-31.65	75
5	M69	X	-9	15.5
6	M69	X	-9	74.5
7	M83	X	-31.65	15
8	M83	X	-31.65	75
9	M83	X	-31.65	15
10	M83	X	-31.65	75
11	M89	X	-9	15.5
12	M89	X	-9	74.5
13	M73	X	-31.65	15
14	M73	X	-31.65	75
15	M73	X	-31.65	15
16	M73	X	-31.65	75
17	M79	X	-9	15.5
18	M79	X	-9	74.5
19	M61	X	-20.7	45

Member Point Loads (BLC 16 : Horizontal Seismic Load X) (Continued)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
20	M61	X	-70.3	45
21	M65	X	-84.4	10
22	M61	X	-9.93	45
23	M61	X	-9.93	43
24	M81	X	-20.7	45
25	M81	X	-70.3	45
26	M85	X	-84.4	10
27	M81	X	-9.93	45
28	M81	X	-9.93	43
29	M71	X	-20.7	45
30	M71	X	-70.3	45
31	M75	X	-84.4	10
32	M71	X	-9.93	45
33	M71	X	-9.93	43

Member Point Loads (BLC 17 : Horizontal Seismic Load Y)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
1	M63	Y	-31.65	15
2	M63	Y	-31.65	75
3	M63	Y	-31.65	15
4	M63	Y	-31.65	75
5	M69	Y	-9	15.5
6	M69	Y	-9	74.5
7	M83	Y	-31.65	15
8	M83	Y	-31.65	75
9	M83	Y	-31.65	15
10	M83	Y	-31.65	75
11	M89	Y	-9	15.5
12	M89	Y	-9	74.5
13	M73	Y	-31.65	15
14	M73	Y	-31.65	75
15	M73	Y	-31.65	15
16	M73	Y	-31.65	75
17	M79	Y	-9	15.5
18	M79	Y	-9	74.5
19	M61	Y	-20.7	45
20	M61	Y	-70.3	45
21	M65	Y	-84.4	10
22	M61	Y	-9.93	45
23	M61	Y	-9.93	43
24	M81	Y	-20.7	45
25	M81	Y	-70.3	45
26	M85	Y	-84.4	10
27	M81	Y	-9.93	45
28	M81	Y	-9.93	43
29	M71	Y	-20.7	45
30	M71	Y	-70.3	45
31	M75	Y	-84.4	10
32	M71	Y	-9.93	45
33	M71	Y	-9.93	43

Member Point Loads (BLC 36 : Lv7)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
1	M94	Z	-250	%50

Member Point Loads (BLC 37 : Lv8)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
1	M1	Z	-250	%50

Member Point Loads (BLC 38 : Lv9)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
1	M106	Z	-250	%50

Member Point Loads (BLC 39 : Lv10)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
1	M2	Z	-250	%50

Member Point Loads (BLC 40 : Lv11)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
1	M100	Z	-250	%50

Member Point Loads (BLC 41 : Lv12)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
1	M3	Z	-250	%50

Member Distributed Loads (BLC 3 : ICE Load)

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
1	M1	Z	-.89	-.89	0	0
2	M15	Z	-.78	-.78	0	0
3	M24	Z	-.78	-.78	0	0
4	M38	Z	-1.27	-1.27	0	0
5	M33	Z	-1.27	-1.27	0	0
6	M4	Z	-1.27	-1.27	0	0
7	M26	Z	-1.33	-1.33	0	0
8	M61	Z	-.7	-.7	0	0
9	M63	Z	-.79	-.79	0	0
10	M65	Z	-.7	-.7	0	0
11	M67	Z	-.7	-.7	0	0
12	M69	Z	-.7	-.7	0	0
13	M94	Z	-.7	-.7	0	0
14	M113	Z	-.9	-.9	0	0
15	M2	Z	-.89	-.89	0	0
16	M9	Z	-.78	-.78	0	0
17	M18	Z	-.78	-.78	0	0
18	M42	Z	-1.27	-1.27	0	0
19	M41	Z	-1.27	-1.27	0	0
20	M6	Z	-1.27	-1.27	0	0
21	M32	Z	-1.33	-1.33	0	0
22	M81	Z	-.7	-.7	0	0
23	M83	Z	-.79	-.79	0	0
24	M85	Z	-.7	-.7	0	0
25	M87	Z	-.7	-.7	0	0
26	M89	Z	-.7	-.7	0	0
27	M106	Z	-.7	-.7	0	0
28	M114	Z	-.9	-.9	0	0
29	M3	Z	-.89	-.89	0	0
30	M21	Z	-.78	-.78	0	0
31	M12	Z	-.78	-.78	0	0
32	M40	Z	-1.27	-1.27	0	0
33	M39	Z	-1.27	-1.27	0	0

Member Distributed Loads (BLC 3 : ICE Load) (Continued)

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
34	M5	Z	-1.27	-1.27	0	0
35	M29	Z	-1.33	-1.33	0	0
36	M71	Z	-.7	-.7	0	0
37	M73	Z	-.79	-.79	0	0
38	M75	Z	-.7	-.7	0	0
39	M77	Z	-.7	-.7	0	0
40	M79	Z	-.7	-.7	0	0
41	M100	Z	-.7	-.7	0	0
42	M112	Z	-.9	-.9	0	0

Member Distributed Loads (BLC 4 : Wind 0°)

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
1	M1	X	-1.2	-1.2	0	0
2	M15	X	-1.14	-1.14	0	0
3	M24	X	-1.14	-1.14	0	0
4	M38	X	-1.62	-1.62	0	0
5	M33	X	-1.62	-1.62	0	0
6	M4	X	0	0	0	0
7	M26	X	-2.05	-2.05	0	0
8	M61	X	-.81	-.81	0	0
9	M63	X	-.98	-.98	0	0
10	M65	X	-.81	-.81	0	0
11	M67	X	-.81	-.81	0	0
12	M69	X	-.81	-.81	0	0
13	M94	X	-.81	-.81	0	0
14	M113	X	-.98	-.98	0	0
15	M2	X	-.3	-.3	0	0
16	M9	X	-.28	-.28	0	0
17	M18	X	-.28	-.28	0	0
18	M42	X	-.4	-.4	0	0
19	M41	X	-.4	-.4	0	0
20	M6	X	-1.44	-1.44	0	0
21	M32	X	-.51	-.51	0	0
22	M81	X	-.81	-.81	0	0
23	M83	X	-.98	-.98	0	0
24	M85	X	-.81	-.81	0	0
25	M87	X	-.81	-.81	0	0
26	M89	X	-.81	-.81	0	0
27	M106	X	-.2	-.2	0	0
28	M114	X	-.25	-.25	0	0
29	M3	X	-.3	-.3	0	0
30	M21	X	-.28	-.28	0	0
31	M12	X	-.28	-.28	0	0
32	M40	X	-.4	-.4	0	0
33	M39	X	-.4	-.4	0	0
34	M5	X	-1.44	-1.44	0	0
35	M29	X	-.51	-.51	0	0
36	M71	X	-.81	-.81	0	0
37	M73	X	-.98	-.98	0	0
38	M75	X	-.81	-.81	0	0
39	M77	X	-.81	-.81	0	0
40	M79	X	-.81	-.81	0	0
41	M100	X	-.2	-.2	0	0
42	M112	X	-.25	-.25	0	0

Member Distributed Loads (BLC 5 : Wind 30°)

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
1	M1	X	-.78	-.78	0	0
2	M15	X	-.74	-.74	0	0
3	M24	X	-.74	-.74	0	0
4	M38	X	-1.05	-1.05	0	0
5	M33	X	-1.05	-1.05	0	0
6	M4	X	-.42	-.42	0	0
7	M26	X	-1.33	-1.33	0	0
8	M61	X	-.7	-.7	0	0
9	M63	X	-.85	-.85	0	0
10	M65	X	-.7	-.7	0	0
11	M67	X	-.7	-.7	0	0
12	M69	X	-.7	-.7	0	0
13	M94	X	-.53	-.53	0	0
14	M113	X	-.64	-.64	0	0
15	M2	X	-.78	-.78	0	0
16	M9	X	-.74	-.74	0	0
17	M18	X	-.74	-.74	0	0
18	M42	X	-1.05	-1.05	0	0
19	M41	X	-1.05	-1.05	0	0
20	M6	X	-.42	-.42	0	0
21	M32	X	-1.33	-1.33	0	0
22	M81	X	-.7	-.7	0	0
23	M83	X	-.85	-.85	0	0
24	M85	X	-.7	-.7	0	0
25	M87	X	-.7	-.7	0	0
26	M89	X	-.7	-.7	0	0
27	M106	X	-.53	-.53	0	0
28	M114	X	-.64	-.64	0	0
29	M3	X	0	0	0	0
30	M21	X	0	0	0	0
31	M12	X	0	0	0	0
32	M40	X	0	0	0	0
33	M39	X	0	0	0	0
34	M5	X	-1.66	-1.66	0	0
35	M29	X	0	0	0	0
36	M71	X	-.7	-.7	0	0
37	M73	X	-.85	-.85	0	0
38	M75	X	-.7	-.7	0	0
39	M77	X	-.7	-.7	0	0
40	M79	X	-.7	-.7	0	0
41	M100	X	0	0	0	0
42	M112	X	0	0	0	0
43	M1	Y	-.45	-.45	0	0
44	M15	Y	-.43	-.43	0	0
45	M24	Y	-.43	-.43	0	0
46	M38	Y	-.61	-.61	0	0
47	M33	Y	-.61	-.61	0	0
48	M4	Y	-.24	-.24	0	0
49	M26	Y	-.77	-.77	0	0
50	M61	Y	-.41	-.41	0	0
51	M63	Y	-.49	-.49	0	0
52	M65	Y	-.41	-.41	0	0
53	M67	Y	-.41	-.41	0	0
54	M69	Y	-.41	-.41	0	0
55	M94	Y	-.3	-.3	0	0
56	M113	Y	-.37	-.37	0	0
57	M2	Y	-.45	-.45	0	0

Member Distributed Loads (BLC 5 : Wind 30°) (Continued)

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
58	M9	Y	-.43	-.43	0	0
59	M18	Y	-.43	-.43	0	0
60	M42	Y	-.61	-.61	0	0
61	M41	Y	-.61	-.61	0	0
62	M6	Y	-.24	-.24	0	0
63	M32	Y	-.77	-.77	0	0
64	M81	Y	-.41	-.41	0	0
65	M83	Y	-.49	-.49	0	0
66	M85	Y	-.41	-.41	0	0
67	M87	Y	-.41	-.41	0	0
68	M89	Y	-.41	-.41	0	0
69	M106	Y	-.3	-.3	0	0
70	M114	Y	-.37	-.37	0	0
71	M3	Y	0	0	0	0
72	M21	Y	0	0	0	0
73	M12	Y	0	0	0	0
74	M40	Y	0	0	0	0
75	M39	Y	0	0	0	0
76	M5	Y	-.96	-.96	0	0
77	M29	Y	0	0	0	0
78	M71	Y	-.41	-.41	0	0
79	M73	Y	-.49	-.49	0	0
80	M75	Y	-.41	-.41	0	0
81	M77	Y	-.41	-.41	0	0
82	M79	Y	-.41	-.41	0	0
83	M100	Y	0	0	0	0
84	M112	Y	0	0	0	0

Member Distributed Loads (BLC 6 : Wind 60°)

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
1	M1	X	-.15	-.15	0	0
2	M15	X	-.14	-.14	0	0
3	M24	X	-.14	-.14	0	0
4	M38	X	-.2	-.2	0	0
5	M33	X	-.2	-.2	0	0
6	M4	X	-.72	-.72	0	0
7	M26	X	-.26	-.26	0	0
8	M61	X	-.41	-.41	0	0
9	M63	X	-.49	-.49	0	0
10	M65	X	-.41	-.41	0	0
11	M67	X	-.41	-.41	0	0
12	M69	X	-.41	-.41	0	0
13	M94	X	-.1	-.1	0	0
14	M113	X	-.12	-.12	0	0
15	M2	X	-.6	-.6	0	0
16	M9	X	-.57	-.57	0	0
17	M18	X	-.57	-.57	0	0
18	M42	X	-.81	-.81	0	0
19	M41	X	-.81	-.81	0	0
20	M6	X	0	0	0	0
21	M32	X	-1.03	-1.03	0	0
22	M81	X	-.41	-.41	0	0
23	M83	X	-.49	-.49	0	0
24	M85	X	-.41	-.41	0	0
25	M87	X	-.41	-.41	0	0
26	M89	X	-.41	-.41	0	0

Member Distributed Loads (BLC 6 : Wind 60°) (Continued)

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
27	M106	X	-.41	-.41	0	0
28	M114	X	-.49	-.49	0	0
29	M3	X	-.15	-.15	0	0
30	M21	X	-.14	-.14	0	0
31	M12	X	-.14	-.14	0	0
32	M40	X	-.2	-.2	0	0
33	M39	X	-.2	-.2	0	0
34	M5	X	-.72	-.72	0	0
35	M29	X	-.26	-.26	0	0
36	M71	X	-.41	-.41	0	0
37	M73	X	-.49	-.49	0	0
38	M75	X	-.41	-.41	0	0
39	M77	X	-.41	-.41	0	0
40	M79	X	-.41	-.41	0	0
41	M100	X	-.1	-.1	0	0
42	M112	X	-.12	-.12	0	0
43	M1	Y	-.26	-.26	0	0
44	M15	Y	-.25	-.25	0	0
45	M24	Y	-.25	-.25	0	0
46	M38	Y	-.35	-.35	0	0
47	M33	Y	-.35	-.35	0	0
48	M4	Y	-1.25	-1.25	0	0
49	M26	Y	-.44	-.44	0	0
50	M61	Y	-.7	-.7	0	0
51	M63	Y	-.85	-.85	0	0
52	M65	Y	-.7	-.7	0	0
53	M67	Y	-.7	-.7	0	0
54	M69	Y	-.7	-.7	0	0
55	M94	Y	-.18	-.18	0	0
56	M113	Y	-.21	-.21	0	0
57	M2	Y	-1.04	-1.04	0	0
58	M9	Y	-.99	-.99	0	0
59	M18	Y	-.99	-.99	0	0
60	M42	Y	-1.4	-1.4	0	0
61	M41	Y	-1.4	-1.4	0	0
62	M6	Y	0	0	0	0
63	M32	Y	-1.78	-1.78	0	0
64	M81	Y	-.7	-.7	0	0
65	M83	Y	-.85	-.85	0	0
66	M85	Y	-.7	-.7	0	0
67	M87	Y	-.7	-.7	0	0
68	M89	Y	-.7	-.7	0	0
69	M106	Y	-.7	-.7	0	0
70	M114	Y	-.85	-.85	0	0
71	M3	Y	-.26	-.26	0	0
72	M21	Y	-.25	-.25	0	0
73	M12	Y	-.25	-.25	0	0
74	M40	Y	-.35	-.35	0	0
75	M39	Y	-.35	-.35	0	0
76	M5	Y	-1.25	-1.25	0	0
77	M29	Y	-.44	-.44	0	0
78	M71	Y	-.7	-.7	0	0
79	M73	Y	-.85	-.85	0	0
80	M75	Y	-.7	-.7	0	0
81	M77	Y	-.7	-.7	0	0
82	M79	Y	-.7	-.7	0	0
83	M100	Y	-.18	-.18	0	0

Member Distributed Loads (BLC 6 : Wind 60°) (Continued)

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
84	M112	Y	-.21	-.21	0	0

Member Distributed Loads (BLC 7 : Wind 90°)

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
1	M1	Y	0	0	0	0
2	M15	Y	0	0	0	0
3	M24	Y	0	0	0	0
4	M38	Y	0	0	0	0
5	M33	Y	0	0	0	0
6	M4	Y	-1.92	-1.92	0	0
7	M26	Y	0	0	0	0
8	M61	Y	-.81	-.81	0	0
9	M63	Y	-.98	-.98	0	0
10	M65	Y	-.81	-.81	0	0
11	M67	Y	-.81	-.81	0	0
12	M69	Y	-.81	-.81	0	0
13	M94	Y	0	0	0	0
14	M113	Y	0	0	0	0
15	M2	Y	-.9	-.9	0	0
16	M9	Y	-.85	-.85	0	0
17	M18	Y	-.85	-.85	0	0
18	M42	Y	-1.21	-1.21	0	0
19	M41	Y	-1.21	-1.21	0	0
20	M6	Y	-.48	-.48	0	0
21	M32	Y	-1.54	-1.54	0	0
22	M81	Y	-.81	-.81	0	0
23	M83	Y	-.98	-.98	0	0
24	M85	Y	-.81	-.81	0	0
25	M87	Y	-.81	-.81	0	0
26	M89	Y	-.81	-.81	0	0
27	M106	Y	-.61	-.61	0	0
28	M114	Y	-.74	-.74	0	0
29	M3	Y	-.9	-.9	0	0
30	M21	Y	-.85	-.85	0	0
31	M12	Y	-.85	-.85	0	0
32	M40	Y	-1.21	-1.21	0	0
33	M39	Y	-1.21	-1.21	0	0
34	M5	Y	-.48	-.48	0	0
35	M29	Y	-1.54	-1.54	0	0
36	M71	Y	-.81	-.81	0	0
37	M73	Y	-.98	-.98	0	0
38	M75	Y	-.81	-.81	0	0
39	M77	Y	-.81	-.81	0	0
40	M79	Y	-.81	-.81	0	0
41	M100	Y	-.61	-.61	0	0
42	M112	Y	-.74	-.74	0	0

Member Distributed Loads (BLC 8 : Wind 120°)

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
1	M1	X	.15	.15	0	0
2	M15	X	.14	.14	0	0
3	M24	X	.14	.14	0	0
4	M38	X	.2	.2	0	0
5	M33	X	.2	.2	0	0
6	M4	X	.72	.72	0	0
7	M26	X	.26	.26	0	0

Member Distributed Loads (BLC 8 : Wind 120°) (Continued)

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
8	M61	X	.41	.41	0	0
9	M63	X	.49	.49	0	0
10	M65	X	.41	.41	0	0
11	M67	X	.41	.41	0	0
12	M69	X	.41	.41	0	0
13	M94	X	.1	.1	0	0
14	M113	X	.12	.12	0	0
15	M2	X	.15	.15	0	0
16	M9	X	.14	.14	0	0
17	M18	X	.14	.14	0	0
18	M42	X	.2	.2	0	0
19	M41	X	.2	.2	0	0
20	M6	X	.72	.72	0	0
21	M32	X	.26	.26	0	0
22	M81	X	.41	.41	0	0
23	M83	X	.49	.49	0	0
24	M85	X	.41	.41	0	0
25	M87	X	.41	.41	0	0
26	M89	X	.41	.41	0	0
27	M106	X	.1	.1	0	0
28	M114	X	.12	.12	0	0
29	M3	X	.6	.6	0	0
30	M21	X	.57	.57	0	0
31	M12	X	.57	.57	0	0
32	M40	X	.81	.81	0	0
33	M39	X	.81	.81	0	0
34	M5	X	0	0	0	0
35	M29	X	1.03	1.03	0	0
36	M71	X	.41	.41	0	0
37	M73	X	.49	.49	0	0
38	M75	X	.41	.41	0	0
39	M77	X	.41	.41	0	0
40	M79	X	.41	.41	0	0
41	M100	X	.41	.41	0	0
42	M112	X	.49	.49	0	0
43	M1	Y	-.26	-.26	0	0
44	M15	Y	-.25	-.25	0	0
45	M24	Y	-.25	-.25	0	0
46	M38	Y	-.35	-.35	0	0
47	M33	Y	-.35	-.35	0	0
48	M4	Y	-1.25	-1.25	0	0
49	M26	Y	-.44	-.44	0	0
50	M61	Y	-.7	-.7	0	0
51	M63	Y	-.85	-.85	0	0
52	M65	Y	-.7	-.7	0	0
53	M67	Y	-.7	-.7	0	0
54	M69	Y	-.7	-.7	0	0
55	M94	Y	-.18	-.18	0	0
56	M113	Y	-.21	-.21	0	0
57	M2	Y	-.26	-.26	0	0
58	M9	Y	-.25	-.25	0	0
59	M18	Y	-.25	-.25	0	0
60	M42	Y	-.35	-.35	0	0
61	M41	Y	-.35	-.35	0	0
62	M6	Y	-1.25	-1.25	0	0
63	M32	Y	-.44	-.44	0	0
64	M81	Y	-.7	-.7	0	0

Member Distributed Loads (BLC 8 : Wind 120°) (Continued)

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
65	M83	Y	-.85	-.85	0	0
66	M85	Y	-.7	-.7	0	0
67	M87	Y	-.7	-.7	0	0
68	M89	Y	-.7	-.7	0	0
69	M106	Y	-.18	-.18	0	0
70	M114	Y	-.21	-.21	0	0
71	M3	Y	-1.04	-1.04	0	0
72	M21	Y	-.99	-.99	0	0
73	M12	Y	-.99	-.99	0	0
74	M40	Y	-1.4	-1.4	0	0
75	M39	Y	-1.4	-1.4	0	0
76	M5	Y	0	0	0	0
77	M29	Y	-1.78	-1.78	0	0
78	M71	Y	-.7	-.7	0	0
79	M73	Y	-.85	-.85	0	0
80	M75	Y	-.7	-.7	0	0
81	M77	Y	-.7	-.7	0	0
82	M79	Y	-.7	-.7	0	0
83	M100	Y	-.7	-.7	0	0
84	M112	Y	-.85	-.85	0	0

Member Distributed Loads (BLC 9 : Wind 150°)

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
1	M1	X	.78	.78	0	0
2	M15	X	.74	.74	0	0
3	M24	X	.74	.74	0	0
4	M38	X	1.05	1.05	0	0
5	M33	X	1.05	1.05	0	0
6	M4	X	.42	.42	0	0
7	M26	X	1.33	1.33	0	0
8	M61	X	.7	.7	0	0
9	M63	X	.85	.85	0	0
10	M65	X	.7	.7	0	0
11	M67	X	.7	.7	0	0
12	M69	X	.7	.7	0	0
13	M94	X	.53	.53	0	0
14	M113	X	.64	.64	0	0
15	M2	X	0	0	0	0
16	M9	X	0	0	0	0
17	M18	X	0	0	0	0
18	M42	X	0	0	0	0
19	M41	X	0	0	0	0
20	M6	X	1.66	1.66	0	0
21	M32	X	0	0	0	0
22	M81	X	.7	.7	0	0
23	M83	X	.85	.85	0	0
24	M85	X	.7	.7	0	0
25	M87	X	.7	.7	0	0
26	M89	X	.7	.7	0	0
27	M106	X	0	0	0	0
28	M114	X	0	0	0	0
29	M3	X	.78	.78	0	0
30	M21	X	.74	.74	0	0
31	M12	X	.74	.74	0	0
32	M40	X	1.05	1.05	0	0
33	M39	X	1.05	1.05	0	0

Member Distributed Loads (BLC 9 : Wind 150°) (Continued)

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
34	M5	X	.42	.42	0	0
35	M29	X	1.33	1.33	0	0
36	M71	X	.7	.7	0	0
37	M73	X	.85	.85	0	0
38	M75	X	.7	.7	0	0
39	M77	X	.7	.7	0	0
40	M79	X	.7	.7	0	0
41	M100	X	.53	.53	0	0
42	M112	X	.64	.64	0	0
43	M1	Y	-.45	-.45	0	0
44	M15	Y	-.43	-.43	0	0
45	M24	Y	-.43	-.43	0	0
46	M38	Y	-.61	-.61	0	0
47	M33	Y	-.61	-.61	0	0
48	M4	Y	-.24	-.24	0	0
49	M26	Y	-.77	-.77	0	0
50	M61	Y	-.41	-.41	0	0
51	M63	Y	-.49	-.49	0	0
52	M65	Y	-.41	-.41	0	0
53	M67	Y	-.41	-.41	0	0
54	M69	Y	-.41	-.41	0	0
55	M94	Y	-.3	-.3	0	0
56	M113	Y	-.37	-.37	0	0
57	M2	Y	0	0	0	0
58	M9	Y	0	0	0	0
59	M18	Y	0	0	0	0
60	M42	Y	0	0	0	0
61	M41	Y	0	0	0	0
62	M6	Y	-.96	-.96	0	0
63	M32	Y	0	0	0	0
64	M81	Y	-.41	-.41	0	0
65	M83	Y	-.49	-.49	0	0
66	M85	Y	-.41	-.41	0	0
67	M87	Y	-.41	-.41	0	0
68	M89	Y	-.41	-.41	0	0
69	M106	Y	0	0	0	0
70	M114	Y	0	0	0	0
71	M3	Y	-.45	-.45	0	0
72	M21	Y	-.43	-.43	0	0
73	M12	Y	-.43	-.43	0	0
74	M40	Y	-.61	-.61	0	0
75	M39	Y	-.61	-.61	0	0
76	M5	Y	-.24	-.24	0	0
77	M29	Y	-.77	-.77	0	0
78	M71	Y	-.41	-.41	0	0
79	M73	Y	-.49	-.49	0	0
80	M75	Y	-.41	-.41	0	0
81	M77	Y	-.41	-.41	0	0
82	M79	Y	-.41	-.41	0	0
83	M100	Y	-.3	-.3	0	0
84	M112	Y	-.37	-.37	0	0

Member Distributed Loads (BLC 10 : Wind 0° with ice)

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
1	M1	X	-.38	-.38	0	0
2	M15	X	-.4	-.4	0	0

Member Distributed Loads (BLC 10 : Wind 0° with ice) (Continued)

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
3	M24	X	-.4	-.4	0	0
4	M38	X	-.46	-.46	0	0
5	M33	X	-.46	-.46	0	0
6	M4	X	-.02	-.02	0	0
7	M26	X	-.55	-.55	0	0
8	M61	X	-.27	-.27	0	0
9	M63	X	-.3	-.3	0	0
10	M65	X	-.27	-.27	0	0
11	M67	X	-.27	-.27	0	0
12	M69	X	-.27	-.27	0	0
13	M94	X	-.34	-.34	0	0
14	M113	X	-.35	-.35	0	0
15	M2	X	-.1	-.1	0	0
16	M9	X	-.11	-.11	0	0
17	M18	X	-.11	-.11	0	0
18	M42	X	-.15	-.15	0	0
19	M41	X	-.15	-.15	0	0
20	M6	X	-.4	-.4	0	0
21	M32	X	-.22	-.22	0	0
22	M81	X	-.27	-.27	0	0
23	M83	X	-.3	-.3	0	0
24	M85	X	-.27	-.27	0	0
25	M87	X	-.27	-.27	0	0
26	M89	X	-.27	-.27	0	0
27	M106	X	-.09	-.09	0	0
28	M114	X	-.13	-.13	0	0
29	M3	X	-.1	-.1	0	0
30	M21	X	-.11	-.11	0	0
31	M12	X	-.11	-.11	0	0
32	M40	X	-.15	-.15	0	0
33	M39	X	-.15	-.15	0	0
34	M5	X	-.4	-.4	0	0
35	M29	X	-.22	-.22	0	0
36	M71	X	-.27	-.27	0	0
37	M73	X	-.3	-.3	0	0
38	M75	X	-.27	-.27	0	0
39	M77	X	-.27	-.27	0	0
40	M79	X	-.27	-.27	0	0
41	M100	X	-.09	-.09	0	0
42	M112	X	-.13	-.13	0	0

Member Distributed Loads (BLC 11 : Wind 30° with ice)

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
1	M1	X	-.25	-.25	0	0
2	M15	X	-.26	-.26	0	0
3	M24	X	-.26	-.26	0	0
4	M38	X	-.31	-.31	0	0
5	M33	X	-.31	-.31	0	0
6	M4	X	-.13	-.13	0	0
7	M26	X	-.38	-.38	0	0
8	M61	X	-.24	-.24	0	0
9	M63	X	-.26	-.26	0	0
10	M65	X	-.24	-.24	0	0
11	M67	X	-.24	-.24	0	0
12	M69	X	-.24	-.24	0	0
13	M94	X	-.22	-.22	0	0

Member Distributed Loads (BLC 11 : Wind 30° with ice) (Continued)

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
14	M113	X	-.24	-.24	0	0
15	M2	X	-.25	-.25	0	0
16	M9	X	-.26	-.26	0	0
17	M18	X	-.26	-.26	0	0
18	M42	X	-.31	-.31	0	0
19	M41	X	-.31	-.31	0	0
20	M6	X	-.13	-.13	0	0
21	M32	X	-.38	-.38	0	0
22	M81	X	-.24	-.24	0	0
23	M83	X	-.26	-.26	0	0
24	M85	X	-.24	-.24	0	0
25	M87	X	-.24	-.24	0	0
26	M89	X	-.24	-.24	0	0
27	M106	X	-.22	-.22	0	0
28	M114	X	-.24	-.24	0	0
29	M3	X	0	0	0	0
30	M21	X	-.02	-.02	0	0
31	M12	X	-.02	-.02	0	0
32	M40	X	-.04	-.04	0	0
33	M39	X	-.04	-.04	0	0
34	M5	X	-.45	-.45	0	0
35	M29	X	-.1	-.1	0	0
36	M71	X	-.24	-.24	0	0
37	M73	X	-.26	-.26	0	0
38	M75	X	-.24	-.24	0	0
39	M77	X	-.24	-.24	0	0
40	M79	X	-.24	-.24	0	0
41	M100	X	0	0	0	0
42	M112	X	-.05	-.05	0	0
43	M1	Y	-.14	-.14	0	0
44	M15	Y	-.15	-.15	0	0
45	M24	Y	-.15	-.15	0	0
46	M38	Y	-.18	-.18	0	0
47	M33	Y	-.18	-.18	0	0
48	M4	Y	-.07	-.07	0	0
49	M26	Y	-.22	-.22	0	0
50	M61	Y	-.14	-.14	0	0
51	M63	Y	-.15	-.15	0	0
52	M65	Y	-.14	-.14	0	0
53	M67	Y	-.14	-.14	0	0
54	M69	Y	-.14	-.14	0	0
55	M94	Y	-.13	-.13	0	0
56	M113	Y	-.14	-.14	0	0
57	M2	Y	-.14	-.14	0	0
58	M9	Y	-.15	-.15	0	0
59	M18	Y	-.15	-.15	0	0
60	M42	Y	-.18	-.18	0	0
61	M41	Y	-.18	-.18	0	0
62	M6	Y	-.07	-.07	0	0
63	M32	Y	-.22	-.22	0	0
64	M81	Y	-.14	-.14	0	0
65	M83	Y	-.15	-.15	0	0
66	M85	Y	-.14	-.14	0	0
67	M87	Y	-.14	-.14	0	0
68	M89	Y	-.14	-.14	0	0
69	M106	Y	-.13	-.13	0	0
70	M114	Y	-.14	-.14	0	0

Member Distributed Loads (BLC 11 : Wind 30° with ice) (Continued)

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
71	M3	Y	0	0	0	0
72	M21	Y	-.01	-.01	0	0
73	M12	Y	-.01	-.01	0	0
74	M40	Y	-.02	-.02	0	0
75	M39	Y	-.02	-.02	0	0
76	M5	Y	-.26	-.26	0	0
77	M29	Y	-.06	-.06	0	0
78	M71	Y	-.14	-.14	0	0
79	M73	Y	-.15	-.15	0	0
80	M75	Y	-.14	-.14	0	0
81	M77	Y	-.14	-.14	0	0
82	M79	Y	-.14	-.14	0	0
83	M100	Y	0	0	0	0
84	M112	Y	-.03	-.03	0	0

Member Distributed Loads (BLC 12 : Wind 60° with ice)

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
1	M1	X	-.05	-.05	0	0
2	M15	X	-.06	-.06	0	0
3	M24	X	-.06	-.06	0	0
4	M38	X	-.07	-.07	0	0
5	M33	X	-.07	-.07	0	0
6	M4	X	-.2	-.2	0	0
7	M26	X	-.11	-.11	0	0
8	M61	X	-.14	-.14	0	0
9	M63	X	-.15	-.15	0	0
10	M65	X	-.14	-.14	0	0
11	M67	X	-.14	-.14	0	0
12	M69	X	-.14	-.14	0	0
13	M94	X	-.04	-.04	0	0
14	M113	X	-.07	-.07	0	0
15	M2	X	-.19	-.19	0	0
16	M9	X	-.2	-.2	0	0
17	M18	X	-.2	-.2	0	0
18	M42	X	-.23	-.23	0	0
19	M41	X	-.23	-.23	0	0
20	M6	X	-.01	-.01	0	0
21	M32	X	-.27	-.27	0	0
22	M81	X	-.14	-.14	0	0
23	M83	X	-.15	-.15	0	0
24	M85	X	-.14	-.14	0	0
25	M87	X	-.14	-.14	0	0
26	M89	X	-.14	-.14	0	0
27	M106	X	-.17	-.17	0	0
28	M114	X	-.18	-.18	0	0
29	M3	X	-.05	-.05	0	0
30	M21	X	-.06	-.06	0	0
31	M12	X	-.06	-.06	0	0
32	M40	X	-.07	-.07	0	0
33	M39	X	-.07	-.07	0	0
34	M5	X	-.2	-.2	0	0
35	M29	X	-.11	-.11	0	0
36	M71	X	-.14	-.14	0	0
37	M73	X	-.15	-.15	0	0
38	M75	X	-.14	-.14	0	0
39	M77	X	-.14	-.14	0	0

Member Distributed Loads (BLC 12 : Wind 60° with ice) (Continued)

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
40	M79	X	-.14	-.14	0	0
41	M100	X	-.04	-.04	0	0
42	M112	X	-.07	-.07	0	0
43	M1	Y	-.09	-.09	0	0
44	M15	Y	-.1	-.1	0	0
45	M24	Y	-.1	-.1	0	0
46	M38	Y	-.13	-.13	0	0
47	M33	Y	-.13	-.13	0	0
48	M4	Y	-.35	-.35	0	0
49	M26	Y	-.19	-.19	0	0
50	M61	Y	-.24	-.24	0	0
51	M63	Y	-.26	-.26	0	0
52	M65	Y	-.24	-.24	0	0
53	M67	Y	-.24	-.24	0	0
54	M69	Y	-.24	-.24	0	0
55	M94	Y	-.08	-.08	0	0
56	M113	Y	-.11	-.11	0	0
57	M2	Y	-.33	-.33	0	0
58	M9	Y	-.34	-.34	0	0
59	M18	Y	-.34	-.34	0	0
60	M42	Y	-.4	-.4	0	0
61	M41	Y	-.4	-.4	0	0
62	M6	Y	-.02	-.02	0	0
63	M32	Y	-.47	-.47	0	0
64	M81	Y	-.24	-.24	0	0
65	M83	Y	-.26	-.26	0	0
66	M85	Y	-.24	-.24	0	0
67	M87	Y	-.24	-.24	0	0
68	M89	Y	-.24	-.24	0	0
69	M106	Y	-.29	-.29	0	0
70	M114	Y	-.31	-.31	0	0
71	M3	Y	-.09	-.09	0	0
72	M21	Y	-.1	-.1	0	0
73	M12	Y	-.1	-.1	0	0
74	M40	Y	-.13	-.13	0	0
75	M39	Y	-.13	-.13	0	0
76	M5	Y	-.35	-.35	0	0
77	M29	Y	-.19	-.19	0	0
78	M71	Y	-.24	-.24	0	0
79	M73	Y	-.26	-.26	0	0
80	M75	Y	-.24	-.24	0	0
81	M77	Y	-.24	-.24	0	0
82	M79	Y	-.24	-.24	0	0
83	M100	Y	-.08	-.08	0	0
84	M112	Y	-.11	-.11	0	0

Member Distributed Loads (BLC 13 : Wind 90° with ice)

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
1	M1	Y	-.01	-.01	0	0
2	M15	Y	-.02	-.02	0	0
3	M24	Y	-.02	-.02	0	0
4	M38	Y	-.04	-.04	0	0
5	M33	Y	-.04	-.04	0	0
6	M4	Y	-.52	-.52	0	0
7	M26	Y	-.12	-.12	0	0
8	M61	Y	-.27	-.27	0	0

Member Distributed Loads (BLC 13 : Wind 90° with ice) (Continued)

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
9	M63	Y	-.3	-.3	0	0
10	M65	Y	-.27	-.27	0	0
11	M67	Y	-.27	-.27	0	0
12	M69	Y	-.27	-.27	0	0
13	M94	Y	0	0	0	0
14	M113	Y	-.06	-.06	0	0
15	M2	Y	-.29	-.29	0	0
16	M9	Y	-.3	-.3	0	0
17	M18	Y	-.3	-.3	0	0
18	M42	Y	-.36	-.36	0	0
19	M41	Y	-.36	-.36	0	0
20	M6	Y	-.15	-.15	0	0
21	M32	Y	-.44	-.44	0	0
22	M81	Y	-.27	-.27	0	0
23	M83	Y	-.3	-.3	0	0
24	M85	Y	-.27	-.27	0	0
25	M87	Y	-.27	-.27	0	0
26	M89	Y	-.27	-.27	0	0
27	M106	Y	-.25	-.25	0	0
28	M114	Y	-.28	-.28	0	0
29	M3	Y	-.29	-.29	0	0
30	M21	Y	-.3	-.3	0	0
31	M12	Y	-.3	-.3	0	0
32	M40	Y	-.36	-.36	0	0
33	M39	Y	-.36	-.36	0	0
34	M5	Y	-.15	-.15	0	0
35	M29	Y	-.44	-.44	0	0
36	M71	Y	-.27	-.27	0	0
37	M73	Y	-.3	-.3	0	0
38	M75	Y	-.27	-.27	0	0
39	M77	Y	-.27	-.27	0	0
40	M79	Y	-.27	-.27	0	0
41	M100	Y	-.25	-.25	0	0
42	M112	Y	-.28	-.28	0	0

Member Distributed Loads (BLC 14 : Wind 120° with ice)

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
1	M1	X	.05	.05	0	0
2	M15	X	.06	.06	0	0
3	M24	X	.06	.06	0	0
4	M38	X	.07	.07	0	0
5	M33	X	.07	.07	0	0
6	M4	X	.2	.2	0	0
7	M26	X	.11	.11	0	0
8	M61	X	.14	.14	0	0
9	M63	X	.15	.15	0	0
10	M65	X	.14	.14	0	0
11	M67	X	.14	.14	0	0
12	M69	X	.14	.14	0	0
13	M94	X	.04	.04	0	0
14	M113	X	.07	.07	0	0
15	M2	X	.05	.05	0	0
16	M9	X	.06	.06	0	0
17	M18	X	.06	.06	0	0
18	M42	X	.07	.07	0	0
19	M41	X	.07	.07	0	0

Member Distributed Loads (BLC 14 : Wind 120° with ice) (Continued)

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
20	M6	X	.2	.2	0	0
21	M32	X	.11	.11	0	0
22	M81	X	.14	.14	0	0
23	M83	X	.15	.15	0	0
24	M85	X	.14	.14	0	0
25	M87	X	.14	.14	0	0
26	M89	X	.14	.14	0	0
27	M106	X	.04	.04	0	0
28	M114	X	.07	.07	0	0
29	M3	X	.19	.19	0	0
30	M21	X	.2	.2	0	0
31	M12	X	.2	.2	0	0
32	M40	X	.23	.23	0	0
33	M39	X	.23	.23	0	0
34	M5	X	.01	.01	0	0
35	M29	X	.27	.27	0	0
36	M71	X	.14	.14	0	0
37	M73	X	.15	.15	0	0
38	M75	X	.14	.14	0	0
39	M77	X	.14	.14	0	0
40	M79	X	.14	.14	0	0
41	M100	X	.17	.17	0	0
42	M112	X	.18	.18	0	0
43	M1	Y	-.09	-.09	0	0
44	M15	Y	-.1	-.1	0	0
45	M24	Y	-.1	-.1	0	0
46	M38	Y	-.13	-.13	0	0
47	M33	Y	-.13	-.13	0	0
48	M4	Y	-.35	-.35	0	0
49	M26	Y	-.19	-.19	0	0
50	M61	Y	-.24	-.24	0	0
51	M63	Y	-.26	-.26	0	0
52	M65	Y	-.24	-.24	0	0
53	M67	Y	-.24	-.24	0	0
54	M69	Y	-.24	-.24	0	0
55	M94	Y	-.08	-.08	0	0
56	M113	Y	-.11	-.11	0	0
57	M2	Y	-.09	-.09	0	0
58	M9	Y	-.1	-.1	0	0
59	M18	Y	-.1	-.1	0	0
60	M42	Y	-.13	-.13	0	0
61	M41	Y	-.13	-.13	0	0
62	M6	Y	-.35	-.35	0	0
63	M32	Y	-.19	-.19	0	0
64	M81	Y	-.24	-.24	0	0
65	M83	Y	-.26	-.26	0	0
66	M85	Y	-.24	-.24	0	0
67	M87	Y	-.24	-.24	0	0
68	M89	Y	-.24	-.24	0	0
69	M106	Y	-.08	-.08	0	0
70	M114	Y	-.11	-.11	0	0
71	M3	Y	-.33	-.33	0	0
72	M21	Y	-.34	-.34	0	0
73	M12	Y	-.34	-.34	0	0
74	M40	Y	-.4	-.4	0	0
75	M39	Y	-.4	-.4	0	0
76	M5	Y	-.02	-.02	0	0

Member Distributed Loads (BLC 14 : Wind 120° with ice) (Continued)

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
77	M29	Y	-.47	-.47	0	0
78	M71	Y	-.24	-.24	0	0
79	M73	Y	-.26	-.26	0	0
80	M75	Y	-.24	-.24	0	0
81	M77	Y	-.24	-.24	0	0
82	M79	Y	-.24	-.24	0	0
83	M100	Y	-.29	-.29	0	0
84	M112	Y	-.31	-.31	0	0

Member Distributed Loads (BLC 15 : Wind 150° with ice)

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
1	M1	X	.25	.25	0	0
2	M15	X	.26	.26	0	0
3	M24	X	.26	.26	0	0
4	M38	X	.31	.31	0	0
5	M33	X	.31	.31	0	0
6	M4	X	.13	.13	0	0
7	M26	X	.38	.38	0	0
8	M61	X	.24	.24	0	0
9	M63	X	.26	.26	0	0
10	M65	X	.24	.24	0	0
11	M67	X	.24	.24	0	0
12	M69	X	.24	.24	0	0
13	M94	X	.22	.22	0	0
14	M113	X	.24	.24	0	0
15	M2	X	0	0	0	0
16	M9	X	.02	.02	0	0
17	M18	X	.02	.02	0	0
18	M42	X	.04	.04	0	0
19	M41	X	.04	.04	0	0
20	M6	X	.45	.45	0	0
21	M32	X	.1	.1	0	0
22	M81	X	.24	.24	0	0
23	M83	X	.26	.26	0	0
24	M85	X	.24	.24	0	0
25	M87	X	.24	.24	0	0
26	M89	X	.24	.24	0	0
27	M106	X	0	0	0	0
28	M114	X	.05	.05	0	0
29	M3	X	.25	.25	0	0
30	M21	X	.26	.26	0	0
31	M12	X	.26	.26	0	0
32	M40	X	.31	.31	0	0
33	M39	X	.31	.31	0	0
34	M5	X	.13	.13	0	0
35	M29	X	.38	.38	0	0
36	M71	X	.24	.24	0	0
37	M73	X	.26	.26	0	0
38	M75	X	.24	.24	0	0
39	M77	X	.24	.24	0	0
40	M79	X	.24	.24	0	0
41	M100	X	.22	.22	0	0
42	M112	X	.24	.24	0	0
43	M1	Y	-.14	-.14	0	0
44	M15	Y	-.15	-.15	0	0
45	M24	Y	-.15	-.15	0	0

Member Distributed Loads (BLC 15 : Wind 150° with ice) (Continued)

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
46	M38	Y	-.18	-.18	0	0
47	M33	Y	-.18	-.18	0	0
48	M4	Y	-.07	-.07	0	0
49	M26	Y	-.22	-.22	0	0
50	M61	Y	-.14	-.14	0	0
51	M63	Y	-.15	-.15	0	0
52	M65	Y	-.14	-.14	0	0
53	M67	Y	-.14	-.14	0	0
54	M69	Y	-.14	-.14	0	0
55	M94	Y	-.13	-.13	0	0
56	M113	Y	-.14	-.14	0	0
57	M2	Y	0	0	0	0
58	M9	Y	-.01	-.01	0	0
59	M18	Y	-.01	-.01	0	0
60	M42	Y	-.02	-.02	0	0
61	M41	Y	-.02	-.02	0	0
62	M6	Y	-.26	-.26	0	0
63	M32	Y	-.06	-.06	0	0
64	M81	Y	-.14	-.14	0	0
65	M83	Y	-.15	-.15	0	0
66	M85	Y	-.14	-.14	0	0
67	M87	Y	-.14	-.14	0	0
68	M89	Y	-.14	-.14	0	0
69	M106	Y	0	0	0	0
70	M114	Y	-.03	-.03	0	0
71	M3	Y	-.14	-.14	0	0
72	M21	Y	-.15	-.15	0	0
73	M12	Y	-.15	-.15	0	0
74	M40	Y	-.18	-.18	0	0
75	M39	Y	-.18	-.18	0	0
76	M5	Y	-.07	-.07	0	0
77	M29	Y	-.22	-.22	0	0
78	M71	Y	-.14	-.14	0	0
79	M73	Y	-.15	-.15	0	0
80	M75	Y	-.14	-.14	0	0
81	M77	Y	-.14	-.14	0	0
82	M79	Y	-.14	-.14	0	0
83	M100	Y	-.13	-.13	0	0
84	M112	Y	-.14	-.14	0	0

Member Distributed Loads (BLC 42 : BLC 2 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
1	M15	Z	-.055	-.249	0	10.4
2	M15	Z	-.249	-.278	10.4	20.8
3	M15	Z	-.278	-.197	20.8	31.2
4	M15	Z	-.197	-.136	31.2	41.6
5	M15	Z	-.136	-.041	41.6	52
6	M18	Z	-.055	-.248	0	10.4
7	M18	Z	-.248	-.277	10.4	20.8
8	M18	Z	-.277	-.194	20.8	31.2
9	M18	Z	-.194	-.132	31.2	41.6
10	M18	Z	-.132	-.035	41.6	52
11	M9	Z	-.055	-.248	0	10.4
12	M9	Z	-.248	-.277	10.4	20.8
13	M9	Z	-.277	-.194	20.8	31.2
14	M9	Z	-.194	-.132	31.2	41.6

Member Distributed Loads (BLC 42 : BLC 2 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
15	M9	Z	-.132	-.035	41.6	52
16	M12	Z	-.055	-.249	0	10.4
17	M12	Z	-.249	-.278	10.4	20.8
18	M12	Z	-.278	-.197	20.8	31.2
19	M12	Z	-.197	-.136	31.2	41.6
20	M12	Z	-.136	-.041	41.6	52
21	M21	Z	-.069	-.215	0	10.4
22	M21	Z	-.215	-.246	10.4	20.8
23	M21	Z	-.246	-.205	20.8	31.2
24	M21	Z	-.205	-.153	31.2	41.6
25	M21	Z	-.153	-.045	41.6	52
26	M24	Z	-.03	-.251	0	10.4
27	M24	Z	-.251	-.309	10.4	20.8
28	M24	Z	-.309	-.214	20.8	31.2
29	M24	Z	-.214	-.124	31.2	41.6
30	M24	Z	-.124	-.029	41.6	52

Member Distributed Loads (BLC 43 : BLC 3 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
1	M15	Z	-.434	-1.965	0	10.4
2	M15	Z	-1.965	-2.2	10.4	20.8
3	M15	Z	-2.2	-1.557	20.8	31.2
4	M15	Z	-1.557	-1.072	31.2	41.6
5	M15	Z	-1.072	-.326	41.6	52
6	M18	Z	-.437	-1.959	0	10.4
7	M18	Z	-1.959	-2.187	10.4	20.8
8	M18	Z	-2.187	-1.536	20.8	31.2
9	M18	Z	-1.536	-1.039	31.2	41.6
10	M18	Z	-1.039	-.28	41.6	52
11	M9	Z	-.437	-1.959	0	10.4
12	M9	Z	-1.959	-2.187	10.4	20.8
13	M9	Z	-2.187	-1.536	20.8	31.2
14	M9	Z	-1.536	-1.039	31.2	41.6
15	M9	Z	-1.039	-.28	41.6	52
16	M12	Z	-.434	-1.965	0	10.4
17	M12	Z	-1.965	-2.2	10.4	20.8
18	M12	Z	-2.2	-1.557	20.8	31.2
19	M12	Z	-1.557	-1.072	31.2	41.6
20	M12	Z	-1.072	-.326	41.6	52
21	M21	Z	-.544	-1.702	0	10.4
22	M21	Z	-1.702	-1.94	10.4	20.8
23	M21	Z	-1.94	-1.619	20.8	31.2
24	M21	Z	-1.619	-1.212	31.2	41.6
25	M21	Z	-1.212	-.356	41.6	52
26	M24	Z	-.237	-1.982	0	10.4
27	M24	Z	-1.982	-2.444	10.4	20.8
28	M24	Z	-2.444	-1.694	20.8	31.2
29	M24	Z	-1.694	-.979	31.2	41.6
30	M24	Z	-.979	-.228	41.6	52

Member Area Loads (BLC 2 : Weights)

	Joint A	Joint B	Joint C	Joint D	Direction	Dist...	Magnitude[ksf]
1	N21	N25	N24	N20	Z	Two...	-.002
2	N17	N13	N12	N16	Z	Two...	-.002
3	N33	N29	N28	N32	Z	Two...	-.002

Member Area Loads (BLC 3 : ICE Load)

	Joint A	Joint B	Joint C	Joint D	Direction	Dist...	Magnitude[ksf]
1	N21	N25	N24	N20	Z	Two...	-.016
2	N17	N13	N12	N16	Z	Two...	-.016
3	N33	N29	N28	N32	Z	Two...	-.016

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(...
1	Self Weight	DL			-1					
2	Weights	DL					33		3	
3	ICE Load	DL					33	42	3	
4	Wind 0°	WL					33	42		
5	Wind 30°	WL					66	84		
6	Wind 60°	WL					66	84		
7	Wind 90°	WL					33	42		
8	Wind 120°	WL					66	84		
9	Wind 150°	WL					66	84		
10	Wind 0° with ice	WL					33	42		
11	Wind 30° with ice	WL					66	84		
12	Wind 60° with ice	WL					66	84		
13	Wind 90° with ice	WL					33	42		
14	Wind 120° with ice	WL					66	84		
15	Wind 150° with ice	WL					66	84		
16	Horizontal Seismic Lo...	ELX	-1				33			
17	Horizontal Seismic Lo...	ELY		-1			33			
18	Lm1	LL				1				
19	Lm2	LL				1				
20	Lm3	LL				1				
21	Lm4	LL				1				
22	Lm5	LL				1				
23	Lm6	LL				1				
24	Lm7	LL				1				
25	Lm8	LL				1				
26	Lm9	LL				1				
27	Lm10	LL				1				
28	Lm11	LL				1				
29	Lm12	LL				1				
30	Lv1	LL				1				
31	Lv2	LL				1				
32	Lv3	LL				1				
33	Lv4	LL				1				
34	Lv5	LL				1				
35	Lv6	LL				1				
36	Lv7	LL					1			
37	Lv8	LL					1			
38	Lv9	LL					1			
39	Lv10	LL					1			
40	Lv11	LL					1			
41	Lv12	LL					1			
42	BLC 2 Transient Area...	None						30		
43	BLC 3 Transient Area...	None						30		

Load Combinations

	Description	So...	P...	S...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...
1	Dead Only	Yes	Y		1	1.4	2	1.4																
2	1.2D+1.0W_0°	Yes	Y		1	1.2	2	1.2	4	1														
3	1.2D+1.0W_30°	Yes	Y		1	1.2	2	1.2	5	1														
4	1.2D+1.0W_60°	Yes	Y		1	1.2	2	1.2	6	1														
5	1.2D+1.0W_90°	Yes	Y		1	1.2	2	1.2	7	1														
6	1.2D+1.0W_120°	Yes	Y		1	1.2	2	1.2	8	1														
7	1.2D+1.0W_150°	Yes	Y		1	1.2	2	1.2	9	1														
8	1.2D+1.0W_180°	Yes	Y		1	1.2	2	1.2	4	-1														
9	1.2D+1.0W_210°	Yes	Y		1	1.2	2	1.2	5	-1														
10	1.2D+1.0W_240°	Yes	Y		1	1.2	2	1.2	6	-1														
11	1.2D+1.0W_270°	Yes	Y		1	1.2	2	1.2	7	-1														
12	1.2D+1.0W_300°	Yes	Y		1	1.2	2	1.2	8	-1														
13	1.2D+1.0W_330°	Yes	Y		1	1.2	2	1.2	9	-1														
14	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	2	1.2	10	1	3	1												
15	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	2	1.2	11	1	3	1												
16	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	2	1.2	12	1	3	1												
17	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	2	1.2	13	1	3	1												
18	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	2	1.2	14	1	3	1												
19	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	2	1.2	15	1	3	1												
20	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	2	1.2	10	-1	3	1												
21	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	2	1.2	11	-1	3	1												
22	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	2	1.2	12	-1	3	1												
23	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	2	1.2	13	-1	3	1												
24	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	2	1.2	14	-1	3	1												
25	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	2	1.2	15	-1	3	1												
26	1.2D+1.0E_0°	Yes	Y		1	1.247	2	1.247	16	.118	17													
27	1.2D+1.0E_30°	Yes	Y		1	1.247	2	1.247	16	.102	17	.059												
28	1.2D+1.0E_60°	Yes	Y		1	1.247	2	1.247	16	.059	17	.102												
29	1.2D+1.0E_90°	Yes	Y		1	1.247	2	1.247	16		17	.118												
30	1.2D+1.0E_120°	Yes	Y		1	1.247	2	1.247	16	-.059	17	.102												
31	1.2D+1.0E_150°	Yes	Y		1	1.247	2	1.247	16	-.102	17	.059												
32	1.2D+1.0E_180°	Yes	Y		1	1.247	2	1.247	16	-.118	17													
33	1.2D+1.0E_210°	Yes	Y		1	1.247	2	1.247	16	-.102	17	-.059												
34	1.2D+1.0E_240°	Yes	Y		1	1.247	2	1.247	16	-.059	17	-.102												
35	1.2D+1.0E_270°	Yes	Y		1	1.247	2	1.247	16		17	-.118												
36	1.2D+1.0E_300°	Yes	Y		1	1.247	2	1.247	16	.059	17	-.102												
37	1.2D+1.0E_330°	Yes	Y		1	1.247	2	1.247	16	.102	17	-.059												
38	1.2D+1.5Lm1+1....	Yes	Y		1	1.2	2	1.2	18	1.5	4	.061												
39	1.2D+1.5Lm1+1....	Yes	Y		1	1.2	2	1.2	18	1.5	5	.061												
40	1.2D+1.5Lm1+1....	Yes	Y		1	1.2	2	1.2	18	1.5	6	.061												
41	1.2D+1.5Lm1+1....	Yes	Y		1	1.2	2	1.2	18	1.5	7	.061												
42	1.2D+1.5Lm1+1....	Yes	Y		1	1.2	2	1.2	18	1.5	8	.061												
43	1.2D+1.5Lm1+1....	Yes	Y		1	1.2	2	1.2	18	1.5	9	.061												
44	1.2D+1.5Lm1+1....	Yes	Y		1	1.2	2	1.2	18	1.5	4	-.061												
45	1.2D+1.5Lm1+1....	Yes	Y		1	1.2	2	1.2	18	1.5	5	-.061												
46	1.2D+1.5Lm1+1....	Yes	Y		1	1.2	2	1.2	18	1.5	6	-.061												
47	1.2D+1.5Lm1+1....	Yes	Y		1	1.2	2	1.2	18	1.5	7	-.061												
48	1.2D+1.5Lm1+1....	Yes	Y		1	1.2	2	1.2	18	1.5	8	-.061												
49	1.2D+1.5Lm1+1....	Yes	Y		1	1.2	2	1.2	18	1.5	9	-.061												
50	1.2D+1.5Lm2+1....	Yes	Y		1	1.2	2	1.2	19	1.5	4	.061												
51	1.2D+1.5Lm2+1....	Yes	Y		1	1.2	2	1.2	19	1.5	5	.061												
52	1.2D+1.5Lm2+1....	Yes	Y		1	1.2	2	1.2	19	1.5	6	.061												
53	1.2D+1.5Lm2+1....	Yes	Y		1	1.2	2	1.2	19	1.5	7	.061												
54	1.2D+1.5Lm2+1....	Yes	Y		1	1.2	2	1.2	19	1.5	8	.061												
55	1.2D+1.5Lm2+1....	Yes	Y		1	1.2	2	1.2	19	1.5	9	.061												
56	1.2D+1.5Lm2+1....	Yes	Y		1	1.2	2	1.2	19	1.5	4	-.061												
57	1.2D+1.5Lm2+1....	Yes	Y		1	1.2	2	1.2	19	1.5	5	-.061												

Load Combinations (Continued)

	Description	So...	P...	S...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...
58	1.2D+1.5Lm2+1....	Yes	Y		1	1.2	2	1.2	19	1.5	6	-.061														
59	1.2D+1.5Lm2+1....	Yes	Y		1	1.2	2	1.2	19	1.5	7	-.061														
60	1.2D+1.5Lm2+1....	Yes	Y		1	1.2	2	1.2	19	1.5	8	-.061														
61	1.2D+1.5Lm2+1....	Yes	Y		1	1.2	2	1.2	19	1.5	9	-.061														
62	1.2D+1.5Lm3+1....	Yes	Y		1	1.2	2	1.2	20	1.5	4	.061														
63	1.2D+1.5Lm3+1....	Yes	Y		1	1.2	2	1.2	20	1.5	5	.061														
64	1.2D+1.5Lm3+1....	Yes	Y		1	1.2	2	1.2	20	1.5	6	.061														
65	1.2D+1.5Lm3+1....	Yes	Y		1	1.2	2	1.2	20	1.5	7	.061														
66	1.2D+1.5Lm3+1....	Yes	Y		1	1.2	2	1.2	20	1.5	8	.061														
67	1.2D+1.5Lm3+1....	Yes	Y		1	1.2	2	1.2	20	1.5	9	.061														
68	1.2D+1.5Lm3+1....	Yes	Y		1	1.2	2	1.2	20	1.5	4	-.061														
69	1.2D+1.5Lm3+1....	Yes	Y		1	1.2	2	1.2	20	1.5	5	-.061														
70	1.2D+1.5Lm3+1....	Yes	Y		1	1.2	2	1.2	20	1.5	6	-.061														
71	1.2D+1.5Lm3+1....	Yes	Y		1	1.2	2	1.2	20	1.5	7	-.061														
72	1.2D+1.5Lm3+1....	Yes	Y		1	1.2	2	1.2	20	1.5	8	-.061														
73	1.2D+1.5Lm3+1....	Yes	Y		1	1.2	2	1.2	20	1.5	9	-.061														
74	1.2D+1.5Lm4+1....	Yes	Y		1	1.2	2	1.2	21	1.5	4	.061														
75	1.2D+1.5Lm4+1....	Yes	Y		1	1.2	2	1.2	21	1.5	5	.061														
76	1.2D+1.5Lm4+1....	Yes	Y		1	1.2	2	1.2	21	1.5	6	.061														
77	1.2D+1.5Lm4+1....	Yes	Y		1	1.2	2	1.2	21	1.5	7	.061														
78	1.2D+1.5Lm4+1....	Yes	Y		1	1.2	2	1.2	21	1.5	8	.061														
79	1.2D+1.5Lm4+1....	Yes	Y		1	1.2	2	1.2	21	1.5	9	.061														
80	1.2D+1.5Lm4+1....	Yes	Y		1	1.2	2	1.2	21	1.5	4	-.061														
81	1.2D+1.5Lm4+1....	Yes	Y		1	1.2	2	1.2	21	1.5	5	-.061														
82	1.2D+1.5Lm4+1....	Yes	Y		1	1.2	2	1.2	21	1.5	6	-.061														
83	1.2D+1.5Lm4+1....	Yes	Y		1	1.2	2	1.2	21	1.5	7	-.061														
84	1.2D+1.5Lm4+1....	Yes	Y		1	1.2	2	1.2	21	1.5	8	-.061														
85	1.2D+1.5Lm4+1....	Yes	Y		1	1.2	2	1.2	21	1.5	9	-.061														
86	1.2D+1.5Lm5+1....	Yes	Y		1	1.2	2	1.2	22	1.5	4	.061														
87	1.2D+1.5Lm5+1....	Yes	Y		1	1.2	2	1.2	22	1.5	5	.061														
88	1.2D+1.5Lm5+1....	Yes	Y		1	1.2	2	1.2	22	1.5	6	.061														
89	1.2D+1.5Lm5+1....	Yes	Y		1	1.2	2	1.2	22	1.5	7	.061														
90	1.2D+1.5Lm5+1....	Yes	Y		1	1.2	2	1.2	22	1.5	8	.061														
91	1.2D+1.5Lm5+1....	Yes	Y		1	1.2	2	1.2	22	1.5	9	.061														
92	1.2D+1.5Lm5+1....	Yes	Y		1	1.2	2	1.2	22	1.5	4	-.061														
93	1.2D+1.5Lm5+1....	Yes	Y		1	1.2	2	1.2	22	1.5	5	-.061														
94	1.2D+1.5Lm5+1....	Yes	Y		1	1.2	2	1.2	22	1.5	6	-.061														
95	1.2D+1.5Lm5+1....	Yes	Y		1	1.2	2	1.2	22	1.5	7	-.061														
96	1.2D+1.5Lm5+1....	Yes	Y		1	1.2	2	1.2	22	1.5	8	-.061														
97	1.2D+1.5Lm5+1....	Yes	Y		1	1.2	2	1.2	22	1.5	9	-.061														
98	1.2D+1.5Lm6+1....	Yes	Y		1	1.2	2	1.2	23	1.5	4	.061														
99	1.2D+1.5Lm6+1....	Yes	Y		1	1.2	2	1.2	23	1.5	5	.061														
100	1.2D+1.5Lm6+1....	Yes	Y		1	1.2	2	1.2	23	1.5	6	.061														
101	1.2D+1.5Lm6+1....	Yes	Y		1	1.2	2	1.2	23	1.5	7	.061														
102	1.2D+1.5Lm6+1....	Yes	Y		1	1.2	2	1.2	23	1.5	8	.061														
103	1.2D+1.5Lm6+1....	Yes	Y		1	1.2	2	1.2	23	1.5	9	.061														
104	1.2D+1.5Lm6+1....	Yes	Y		1	1.2	2	1.2	23	1.5	4	-.061														
105	1.2D+1.5Lm6+1....	Yes	Y		1	1.2	2	1.2	23	1.5	5	-.061														
106	1.2D+1.5Lm6+1....	Yes	Y		1	1.2	2	1.2	23	1.5	6	-.061														
107	1.2D+1.5Lm6+1....	Yes	Y		1	1.2	2	1.2	23	1.5	7	-.061														
108	1.2D+1.5Lm6+1....	Yes	Y		1	1.2	2	1.2	23	1.5	8	-.061														
109	1.2D+1.5Lm6+1....	Yes	Y		1	1.2	2	1.2	23	1.5	9	-.061														
110	1.2D+1.5Lm7+1....	Yes	Y		1	1.2	2	1.2	24	1.5	4	.061														
111	1.2D+1.5Lm7+1....	Yes	Y		1	1.2	2	1.2	24	1.5	5	.061														
112	1.2D+1.5Lm7+1....	Yes	Y		1	1.2	2	1.2	24	1.5	6	.061														
113	1.2D+1.5Lm7+1....	Yes	Y		1	1.2	2	1.2	24	1.5	7	.061														
114	1.2D+1.5Lm7+1....	Yes	Y		1	1.2	2	1.2	24	1.5	8	.061														

Load Combinations (Continued)

	Description	So...	P...	S...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...
115	1.2D+1.5Lm7+1....	Yes	Y		1	1.2	2	1.2	24	1.5	9	.061														
116	1.2D+1.5Lm7+1....	Yes	Y		1	1.2	2	1.2	24	1.5	4	-.061														
117	1.2D+1.5Lm7+1....	Yes	Y		1	1.2	2	1.2	24	1.5	5	-.061														
118	1.2D+1.5Lm7+1....	Yes	Y		1	1.2	2	1.2	24	1.5	6	-.061														
119	1.2D+1.5Lm7+1....	Yes	Y		1	1.2	2	1.2	24	1.5	7	-.061														
120	1.2D+1.5Lm7+1....	Yes	Y		1	1.2	2	1.2	24	1.5	8	-.061														
121	1.2D+1.5Lm7+1....	Yes	Y		1	1.2	2	1.2	24	1.5	9	-.061														
122	1.2D+1.5Lm8+1....	Yes	Y		1	1.2	2	1.2	25	1.5	4	.061														
123	1.2D+1.5Lm8+1....	Yes	Y		1	1.2	2	1.2	25	1.5	5	.061														
124	1.2D+1.5Lm8+1....	Yes	Y		1	1.2	2	1.2	25	1.5	6	.061														
125	1.2D+1.5Lm8+1....	Yes	Y		1	1.2	2	1.2	25	1.5	7	.061														
126	1.2D+1.5Lm8+1....	Yes	Y		1	1.2	2	1.2	25	1.5	8	.061														
127	1.2D+1.5Lm8+1....	Yes	Y		1	1.2	2	1.2	25	1.5	9	.061														
128	1.2D+1.5Lm8+1....	Yes	Y		1	1.2	2	1.2	25	1.5	4	-.061														
129	1.2D+1.5Lm8+1....	Yes	Y		1	1.2	2	1.2	25	1.5	5	-.061														
130	1.2D+1.5Lm8+1....	Yes	Y		1	1.2	2	1.2	25	1.5	6	-.061														
131	1.2D+1.5Lm8+1....	Yes	Y		1	1.2	2	1.2	25	1.5	7	-.061														
132	1.2D+1.5Lm8+1....	Yes	Y		1	1.2	2	1.2	25	1.5	8	-.061														
133	1.2D+1.5Lm8+1....	Yes	Y		1	1.2	2	1.2	25	1.5	9	-.061														
134	1.2D+1.5Lm9+1....	Yes	Y		1	1.2	2	1.2	26	1.5	4	.061														
135	1.2D+1.5Lm9+1....	Yes	Y		1	1.2	2	1.2	26	1.5	5	.061														
136	1.2D+1.5Lm9+1....	Yes	Y		1	1.2	2	1.2	26	1.5	6	.061														
137	1.2D+1.5Lm9+1....	Yes	Y		1	1.2	2	1.2	26	1.5	7	.061														
138	1.2D+1.5Lm9+1....	Yes	Y		1	1.2	2	1.2	26	1.5	8	.061														
139	1.2D+1.5Lm9+1....	Yes	Y		1	1.2	2	1.2	26	1.5	9	.061														
140	1.2D+1.5Lm9+1....	Yes	Y		1	1.2	2	1.2	26	1.5	4	-.061														
141	1.2D+1.5Lm9+1....	Yes	Y		1	1.2	2	1.2	26	1.5	5	-.061														
142	1.2D+1.5Lm9+1....	Yes	Y		1	1.2	2	1.2	26	1.5	6	-.061														
143	1.2D+1.5Lm9+1....	Yes	Y		1	1.2	2	1.2	26	1.5	7	-.061														
144	1.2D+1.5Lm9+1....	Yes	Y		1	1.2	2	1.2	26	1.5	8	-.061														
145	1.2D+1.5Lm9+1....	Yes	Y		1	1.2	2	1.2	26	1.5	9	-.061														
146	1.2D+1.5Lm10+...	Yes	Y		1	1.2	2	1.2	27	1.5	4	.061														
147	1.2D+1.5Lm10+...	Yes	Y		1	1.2	2	1.2	27	1.5	5	.061														
148	1.2D+1.5Lm10+...	Yes	Y		1	1.2	2	1.2	27	1.5	6	.061														
149	1.2D+1.5Lm10+...	Yes	Y		1	1.2	2	1.2	27	1.5	7	.061														
150	1.2D+1.5Lm10+...	Yes	Y		1	1.2	2	1.2	27	1.5	8	.061														
151	1.2D+1.5Lm10+...	Yes	Y		1	1.2	2	1.2	27	1.5	9	.061														
152	1.2D+1.5Lm10+...	Yes	Y		1	1.2	2	1.2	27	1.5	4	-.061														
153	1.2D+1.5Lm10+...	Yes	Y		1	1.2	2	1.2	27	1.5	5	-.061														
154	1.2D+1.5Lm10+...	Yes	Y		1	1.2	2	1.2	27	1.5	6	-.061														
155	1.2D+1.5Lm10+...	Yes	Y		1	1.2	2	1.2	27	1.5	7	-.061														
156	1.2D+1.5Lm10+...	Yes	Y		1	1.2	2	1.2	27	1.5	8	-.061														
157	1.2D+1.5Lm10+...	Yes	Y		1	1.2	2	1.2	27	1.5	9	-.061														
158	1.2D+1.5Lm11+...	Yes	Y		1	1.2	2	1.2	28	1.5	4	.061														
159	1.2D+1.5Lm11+...	Yes	Y		1	1.2	2	1.2	28	1.5	5	.061														
160	1.2D+1.5Lm11+...	Yes	Y		1	1.2	2	1.2	28	1.5	6	.061														
161	1.2D+1.5Lm11+...	Yes	Y		1	1.2	2	1.2	28	1.5	7	.061														
162	1.2D+1.5Lm11+...	Yes	Y		1	1.2	2	1.2	28	1.5	8	.061														
163	1.2D+1.5Lm11+...	Yes	Y		1	1.2	2	1.2	28	1.5	9	.061														
164	1.2D+1.5Lm11+...	Yes	Y		1	1.2	2	1.2	28	1.5	4	-.061														
165	1.2D+1.5Lm11+...	Yes	Y		1	1.2	2	1.2	28	1.5	5	-.061														
166	1.2D+1.5Lm11+...	Yes	Y		1	1.2	2	1.2	28	1.5	6	-.061														
167	1.2D+1.5Lm11+...	Yes	Y		1	1.2	2	1.2	28	1.5	7	-.061														
168	1.2D+1.5Lm11+...	Yes	Y		1	1.2	2	1.2	28	1.5	8	-.061														
169	1.2D+1.5Lm11+...	Yes	Y		1	1.2	2	1.2	28	1.5	9	-.061														
170	1.2D+1.5Lm12+...	Yes	Y		1	1.2	2	1.2	29	1.5	4	.061														
171	1.2D+1.5Lm12+...	Yes	Y		1	1.2	2	1.2	29	1.5	5	.061														

Load Combinations (Continued)

	Description	So...	P...	S...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...
172	1.2D+1.5Lm12+...	Yes	Y		1	1.2	2	1.2	29	1.5	6	.061												
173	1.2D+1.5Lm12+...	Yes	Y		1	1.2	2	1.2	29	1.5	7	.061												
174	1.2D+1.5Lm12+...	Yes	Y		1	1.2	2	1.2	29	1.5	8	.061												
175	1.2D+1.5Lm12+...	Yes	Y		1	1.2	2	1.2	29	1.5	9	.061												
176	1.2D+1.5Lm12+...	Yes	Y		1	1.2	2	1.2	29	1.5	4	-.061												
177	1.2D+1.5Lm12+...	Yes	Y		1	1.2	2	1.2	29	1.5	5	-.061												
178	1.2D+1.5Lm12+...	Yes	Y		1	1.2	2	1.2	29	1.5	6	-.061												
179	1.2D+1.5Lm12+...	Yes	Y		1	1.2	2	1.2	29	1.5	7	-.061												
180	1.2D+1.5Lm12+...	Yes	Y		1	1.2	2	1.2	29	1.5	8	-.061												
181	1.2D+1.5Lm12+...	Yes	Y		1	1.2	2	1.2	29	1.5	9	-.061												
182	1.2D+1.5Lv1	Yes	Y		1	1.2	2	1.2	30	1.5														
183	1.2D+1.5Lv2	Yes	Y		1	1.2	2	1.2	31	1.5														
184	1.2D+1.5Lv3	Yes	Y		1	1.2	2	1.2	32	1.5														
185	1.2D+1.5Lv4	Yes	Y		1	1.2	2	1.2	33	1.5														
186	1.2D+1.5Lv5	Yes	Y		1	1.2	2	1.2	34	1.5														
187	1.2D+1.5Lv6	Yes	Y		1	1.2	2	1.2	35	1.5														
188	1.2D+1.5Lv7	Yes	Y		1	1.2	2	1.2	36	1.5														
189	1.2D+1.5Lv8	Yes	Y		1	1.2	2	1.2	37	1.5														
190	1.2D+1.5Lv9	Yes	Y		1	1.2	2	1.2	38	1.5														
191	1.2D+1.5Lv10	Yes	Y		1	1.2	2	1.2	39	1.5														
192	1.2D+1.5Lv11	Yes	Y		1	1.2	2	1.2	40	1.5														
193	1.2D+1.5Lv12	Yes	Y		1	1.2	2	1.2	41	1.5														

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-in]	LC	MY [k-in]	LC	MZ [k-in]	LC
1	N3	max	2081.288	2	890.713	5	3015.809	14	7.192	155	74.388	14	18.303	11
2		min	-2124.791	8	-869.876	11	81.691	8	-5.546	5	-8.884	8	-17.884	5
3	N54	max	1016.628	13	1837.952	6	3019.585	18	6.692	12	7.016	13	18.313	3
4		min	-1010.061	7	-1886.506	12	80.965	12	-65.608	18	-35.567	19	-17.893	9
5	N55	max	1258.958	2	1798.709	4	3019.596	22	63.418	22	3.068	3	18.315	7
6		min	-1218.941	8	-1771.956	10	80.955	4	-8.745	4	-39.315	21	-17.896	13
7	Totals:	max	4343.743	2	4345.416	5	8306.77	19						
8		min	-4343.746	8	-4345.42	11	2773.405	13						

Envelope AISC 15th(360-16): LRFD Steel Code Checks

	Member	Shape	Code Check	Loc[in]	LC	Shear ...	Loc[in]	Dir	LC	phi*Pnc ...	phi*Pnt [...	phi*Mn y...	phi*Mn z...	Cb	Eqn
1	M1	HSS3.500X...	.208	56.25	19	.085	56.25		7	26567.1...	61338.8...	64.752	64.752	3....	H1-1b
2	M2	HSS3.500X...	.208	93.75	15	.084	93.75		3	26567.1...	61338.8...	64.752	64.752	3....	H1-1b
3	M3	HSS3.500X...	.208	93.75	23	.084	93.75		11	26567.1...	61338.8...	64.752	64.752	3....	H1-1b
4	M4	HSS4X4X3_...	.446	62	14	.120	62	y	24	92251.0...	118136....	169.051	169.051	1....	H1-1b
5	M5	HSS4X4X3_...	.446	62	18	.120	62	y	16	92251.0...	118136....	169.051	169.051	1....	H1-1b
6	M6	HSS4X4X3_...	.446	62	22	.120	62	y	20	92251.0...	118136....	169.051	169.051	1....	H1-1b
7	M9	L2x2x3	.188	24.917	15	.018	0	y	22	9131.31	23392.8	6.693	12.346	1	H2-1
8	M12	L2x2x3	.177	24.917	25	.017	0	z	19	9131.31	23392.8	6.693	12.798	1....	H2-1
9	M15	L2x2x3	.190	24.917	19	.018	0	y	14	9131.31	23392.8	6.693	12.346	1	H2-1
10	M18	L2x2x3	.176	24.917	17	.017	0	z	23	9131.31	23392.8	6.693	12.799	1....	H2-1
11	M21	L2x2x3	.184	25.458	23	.017	0	y	18	9131.31	23392.8	6.693	12.346	1	H2-1
12	M24	L2x2x3	.183	24.917	21	.017	0	z	15	9131.31	23392.8	6.693	12.811	1....	H2-1
13	M26	Plate 6"x0.3...	.375	6.25	2	.236	4.297	y	7	71583.5...	72900	6.836	109.35	1....	H1-1b
14	M28	Plate 6"x0.3...	.073	2	6	.130	0	y	80	71583.5...	72900	6.836	109.35	1....	H1-1b
15	M29	Plate 6"x0.3...	.375	6.25	6	.236	4.297	y	11	71583.5...	72900	6.836	109.35	1....	H1-1b
16	M31	Plate 6"x0.3...	.072	2	10	.155	0	y	45	71583.5...	72900	6.836	109.35	1....	H1-1b
17	M32	Plate 6"x0.3...	.375	6.25	10	.236	4.297	y	3	71583.5...	72900	6.836	109.35	1....	H1-1b
18	M33	HSS4X4X3_...	.257	0	25	.086	0	y	14	116204....	118136....	169.051	169.051	1	H1-1b

Envelope AISC 15th(360-16): LRFD Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc[in]	LC	Shear ...	Loc[in]	Dir	LC	phi*Pnc ...	phi*Pnt [...	phi*Mn y...	phi*Mn z...	Cb	Eqn
19	M34	Plate 6"x0.3...	.073	2	10	.130	0	y	1...	71583.5...	72900	6.836	109.35	1....	H1-1b
20	M35	Plate 6"x0.3...	.072	2	2	.155	0	y	1...	72568.64	72900	6.836	109.35	1....	H1-1b
21	M36	Plate 6"x0.3...	.073	2	2	.130	0	y	1...	71583.5...	72900	6.836	109.35	1....	H1-1b
22	M37	Plate 6"x0.3...	.072	2	6	.155	0	y	89	72568.64	72900	6.836	109.35	1....	H1-1b
23	M38	HSS4X4X3_...	.257	30.5	14	.069	30.5	y	15	116204....	118136....	169.051	169.051	1	H1-1b
24	M39	HSS4X4X3_...	.257	0	17	.086	0	y	18	116204....	118136....	169.051	169.051	1	H1-1b
25	M40	HSS4X4X3_...	.258	30.5	18	.069	30.5	y	19	116204....	118136....	169.051	169.051	1	H1-1b
26	M41	HSS4X4X3_...	.257	0	21	.086	0	y	22	116204....	118136....	169.051	169.051	1	H1-1b
27	M42	HSS4X4X3_...	.258	30.5	22	.069	30.5	y	23	116204....	118136....	169.051	169.051	1	H1-1b
28	M43	Plate 6"x0.3...	.284	2	3	.397	2	y	23	71583.5...	72900	6.836	109.35	1....	H1-1b
29	M44	Plate 6"x0.3...	.204	2	2	.240	2	y	21	71583.5...	72900	6.836	109.35	1....	H1-1b
30	M45	Plate 6"x0.3...	.283	2	9	.522	0	y	14	71583.5...	72900	6.836	109.35	1....	H1-1b
31	M47	Plate 6"x0.3...	.300	2	7	.550	0	y	25	71583.5...	72900	6.836	109.35	1....	H1-1b
32	M49	Plate 6"x0.3...	.284	2	7	.398	2	y	15	71583.5...	72900	6.836	109.35	1....	H1-1b
33	M50	Plate 6"x0.3...	.204	2	6	.241	2	y	25	71583.5...	72900	6.836	109.35	1....	H1-1b
34	M51	Plate 6"x0.3...	.283	2	13	.522	0	y	18	71583.5...	72900	6.836	109.35	1....	H1-1b
35	M53	Plate 6"x0.3...	.300	2	11	.550	0	y	17	71583.5...	72900	6.836	109.35	1....	H1-1b
36	M55	Plate 6"x0.3...	.284	2	11	.398	2	y	19	71583.5...	72900	6.836	109.35	1....	H1-1b
37	M56	Plate 6"x0.3...	.204	2	10	.240	2	y	17	71583.5...	72900	6.836	109.35	1....	H1-1b
38	M57	Plate 6"x0.3...	.282	2	5	.523	0	y	22	71583.5...	72900	6.836	109.35	4....	H1-1b
39	M59	Plate 6"x0.3...	.300	2	3	.550	0	y	21	71583.5...	72900	6.836	109.35	1....	H1-1b
40	M61	HSS2.375X...	.257	63	7	.140	27.125		8	15810.0...	27846	20.003	20.003	1	H1-1b
41	M63	HSS2.875X...	.266	65	6	.104	65		8	29705.8...	49859.5...	42.807	42.807	1	H1-1b
42	M65	HSS2.375X...	.343	63	5	.059	63		6	15810.0...	27846	20.003	20.003	1	H1-1b
43	M67	HSS2.375X...	.345	63	22	.124	63		8	15810.0...	27846	20.003	20.003	2....	H1-1b
44	M69	HSS2.375X...	.250	63	21	.111	63		9	15810.0...	27846	20.003	20.003	2....	H1-1b
45	M71	HSS2.375X...	.257	63	11	.140	27.125		12	15810.0...	27846	20.003	20.003	1....	H1-1b
46	M73	HSS2.875X...	.267	65	10	.104	65		12	29705.8...	49859.5...	42.807	42.807	2....	H1-1b
47	M75	HSS2.375X...	.343	63	9	.059	63		10	15810.0...	27846	20.003	20.003	1....	H1-1b
48	M77	HSS2.375X...	.345	63	14	.125	63		12	15810.0...	27846	20.003	20.003	1	H1-1b
49	M79	HSS2.375X...	.250	63	25	.111	63		13	15810.0...	27846	20.003	20.003	1	H1-1b
50	M81	HSS2.375X...	.257	63	3	.140	27.125		4	15810.0...	27846	20.003	20.003	1....	H1-1b
51	M83	HSS2.875X...	.266	65	2	.104	65		4	29705.8...	49859.5...	42.807	42.807	4....	H1-1b
52	M85	HSS2.375X...	.343	63	13	.059	63		2	15810.0...	27846	20.003	20.003	2....	H1-1b
53	M87	HSS2.375X...	.345	63	18	.124	63		4	15810.0...	27846	20.003	20.003	1	H1-1b
54	M89	HSS2.375X...	.249	63	17	.111	63		5	15810.0...	27846	20.003	20.003	1	H1-1b
55	M94	HSS2.375X...	.248	109....	7	.205	140....		2	6717.125	33862.5	24.035	24.035	2....	H1-1b
56	M100	HSS2.375X...	.248	109....	11	.205	140....		6	6717.125	33862.5	24.035	24.035	2....	H1-1b
57	M106	HSS2.375X...	.248	109....	3	.205	140....		10	6717.125	33862.5	24.035	24.035	2....	H1-1b
58	M112	L2.5x2.5x4	.450	16.5	4	.078	16.5	y	9	36249.3...	38556	13.363	30.449	1	H2-1
59	M113	L2.5x2.5x4	.450	16.5	12	.078	16.5	y	5	36249.3...	38556	13.363	30.449	1	H2-1
60	M114	L2.5x2.5x4	.450	16.5	8	.078	16.5	y	13	36249.3...	38556	13.363	30.449	1	H2-1

Envelope AISI S100-16: LRFD Cold Formed Steel Code Checks

Member	Shape	Code Check	Loc[in]	LC	Shear...	Loc[in]	Dir	LC	phi*Pn[lb]	phi*Tn[lb]	phi*Mn...	phi*Mn...	phi*V...	phi*V...	Cb	Eqn
No Data to Print ...																

APPENDIX C

SCOPE OF WORK FILES

verizon fuze | RFDS

EAST > North East > New England > New England West > WESTPORT 2 CT

Gadasu, Shiva - shiva.gadasu@verizonwireless.com - 11/11/2019 14:39:34

Project Details

Carrier Aggregation:	false
MPT Id:	
eCIP-0:	false
Project Name:	MANUAL Modification ENTRY -
FUZE Project ID:	15597861
Designed Sector Carrier 4G:	15
Designed Sector Carrier 5G:	N/A
Additional Sector Carrier 4G:	N/A
Additional Sector Carrier 5G:	N/A
SiteTraker Project Id:	
RFDS Project Scope:	Post PCS SPM job# 2553267 850 LTE/CBRS add Rev2_20191111 : Adding CBRS Rev1_20190829 : Updated to Swap High band Nokia RRHs to Samsung Dualband RRHs. No change otherwise. Rev0_20190604 : Initial design
Suffix:	Rev2_20191111

Location Information

Site ID:	325124
E-NodeB ID:	065117
PSLC:	468226
Switch Name:	
Tower Owner:	
Tower Type:	Monopole
Site Type:	Macro
Street Address:	180 Bayberry Ln.
City:	Westport
State:	CT
Zip Code:	06880
County:	Fairfield
Latitude:	41.171667 / 41° 10' 18.0012" N
Longitude:	-73.328472 / 73° 19' 42.4992" W

Service Info

2100 MHZ LTE	0001			850NR		
Sector	**D1**	**D2**	**D3**	**D1**	**D2**	**D3**
Azimuth	30	150	270	30	150	270
Cell / ENode B ID	065117	065117	065117	065117	065117	065117
Antenna Model	JAHH-65B-R3B_2DT_2100MHZ (432957)	JAHH-65B-R3B_2DT_2100MHZ (432957)	JAHH-65B-R3B_2DT_2100MHZ (432957)	JAHH-65B-R3B_2DT_2100MHZ (432957)	JAHH-65B-R3B_2DT_2100MHZ (432957)	JAHH-65B-R3B_2DT_2100MHZ (432957)
Antenna Make	ANDREW	ANDREW	ANDREW	ANDREW	ANDREW	ANDREW
Antenna Centerline(Ft)	110	110	110	110	110	110
Mechanical Down-Tilt(Deg.)	0	0	0	0	0	0
Electrical Down-Tilt	2	2	2	2	2	2
Tip Height	113	113	113	113	113	113
Regulatory Power	156.25	156.25	156.25	139.26	139.26	139.26
TMA Make						
TMA Model						
RRU Make	Nokia	Nokia	Nokia	Samsung	Samsung	Samsung
RRU Model	UHIE B66A RRH 4x45	UHIE B66A RRH 4x45	UHIE B66A RRH 4x45	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)
Number of Tx, Rx Lines	4,4	4,4	4,4	4,4	4,4	4,4
Position						
Source	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API

700 MHZ LTE	0001			850NR		
Sector	**D1**	**D2**	**D3**	**D1**	**D2**	**D3**
Azimuth	30	150	270	30	150	270
Cell / ENode B ID	065117	065117	065117	065117	065117	065117
Antenna Model	JAHH-65B-R3B_2DT_750MHZ (432958)	JAHH-65B-R3B_2DT_750MHZ (432958)	JAHH-65B-R3B_2DT_750MHZ (432958)	JAHH-65B-R3B_2DT_750MHZ (432958)	JAHH-65B-R3B_2DT_750MHZ (432958)	JAHH-65B-R3B_2DT_750MHZ (432958)
Antenna Make	ANDREW	ANDREW	ANDREW	ANDREW	ANDREW	ANDREW
Antenna Centerline(Ft)	110	110	110	110	110	110
Mechanical Down-Tilt(Deg.)	0	0	0	0	0	0
Electrical Down-Tilt	2	2	2	2	2	2
Tip Height	113	113	113	113	113	113
Regulatory Power	108.03	108.03	108.03	71.38	71.38	71.38
TMA Make						
TMA Model						
RRU Make	Nokia	Nokia	Nokia	Samsung	Samsung	Samsung
RRU Model	UHBA B13 RRH 4x30	UHBA B13 RRH 4x30	UHBA B13 RRH 4x30	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)
Number of Tx, Rx Lines	2,4	2,4	2,4	4,4	4,4	4,4
Position						
Source	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API

850 MHZ CDMA	0001			850NR		
Sector	**D1**	**D2**	**D3**	**D1**	**D2**	**D3**
Azimuth	30	150	270	30	150	270
Cell / ENode B ID						
Antenna Model	BXA-70080-6CF-782MHZ _PRELIMINARY (200501)	BXA-70080-6CF-782MHZ _PRELIMINARY (200501)	BXA-70080-6CF-782MHZ _PRELIMINARY (200501)	BXA-70080-6CF-782MHZ _PRELIMINARY (200501)	BXA-70080-6CF-782MHZ _PRELIMINARY (200501)	BXA-70080-6CF-782MHZ _PRELIMINARY (200501)
Antenna Make	ANTEL	ANTEL	ANTEL	ANTEL	ANTEL	ANTEL
Antenna Centerline(Ft)	110	110	110	110	110	110
Mechanical Down-Tilt(Deg.)	3	7	3	3	7	3
Electrical Down-Tilt	0	0	0	0	0	0
Tip Height	113	113	113	113	113	113
Regulatory Power	445.66	445.66	445.66	445.66	445.66	445.66
TMA Make						
TMA Model						
RRU Make						
RRU Model						
Number of Tx, Rx Lines						
Position						
Source	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API

1900 MHZ LTE

	0001			850NR		
Sector	**D1**	**D2**	**D3**	**D1**	**D2**	**D3**
Azimuth	30	150	270	30	150	270
Cell / ENode B ID	065117	065117	065117	065117	065117	065117
Antenna Model	JAHH-65B-R3B_2DT_1900MHZ (432956)	JAHH-65B-R3B_2DT_1900MHZ (432956)	JAHH-65B-R3B_2DT_1900MHZ (432956)	JAHH-65B-R3B_2DT_1900MHZ (432956)	JAHH-65B-R3B_2DT_1900MHZ (432956)	JAHH-65B-R3B_2DT_1900MHZ (432956)
Antenna Make	ANDREW	ANDREW	ANDREW	ANDREW	ANDREW	ANDREW
Antenna Centerline(Ft)	110	110	110	110	110	110
Mechanical Down-Tilt(Deg.)	0	0	0	0	0	0
Electrical Down-Tilt	2	2	2	2	2	2
Tip Height	113	113	113	113	113	113
Regulatory Power	107.9	107.9	107.9	142.24	142.24	142.24
TMA Make						
TMA Model						
RRU Make	Nokia	Nokia	Nokia	Samsung	Samsung	Samsung
RRU Model	UHFA B25 RRH 4x30	UHFA B25 RRH 4x30	UHFA B25 RRH 4x30	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)
Number of Tx, Rx Lines	4,4	4,4	4,4	4,4	4,4	4,4
Position						
Source	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API

850 MHZ LTE

	850NR		
Sector	**D1**	**D2**	**D3**
Azimuth	30	150	270
Cell / ENode B ID	065117	065117	065117
Antenna Model	JAHH-65B-R3B_2DT_850MHZ (432959)	JAHH-65B-R3B_9DT_850MHZ (432987)	JAHH-65B-R3B_2DT_850MHZ (432959)
Antenna Make	ANDREW	ANDREW	ANDREW
Antenna Centerline(Ft)	110	110	110
Mechanical Down-Tilt(Deg.)	0	0	0
Electrical Down-Tilt	2	9	2
Tip Height	113	113	113
Regulatory Power	297.64	15.57	297.64
TMA Make			
TMA Model			
RRU Make	Samsung	Samsung	Samsung
RRU Model	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)
Number of Tx, Rx Lines	4,4	4,4	4,4
Position			
Source	ATOLL_API	ATOLL_API	ATOLL_API

3_5 GHz

	850NR		
Sector	**D19**	**D20**	**D21**
Azimuth	30	150	270
Cell / ENode B ID	065117	065117	065117
Antenna Model	XXDWMM-12.5-65-8T-C BRS_Port1_3550_8DT	XXDWMM-12.5-65-8T-C BRS_Port1_3550_8DT	XXDWMM-12.5-65-8T-C BRS_Port1_3550_8DT
Antenna Make	Samsung	Samsung	Samsung
Antenna Centerline(Ft)	110	110	110
Mechanical Down-Tilt(Deg.)	0	0	0
Electrical Down-Tilt	8	8	8
Tip Height	110.5	110.5	110.5
Regulatory Power	1.97	1.97	1.97
TMA Make			
TMA Model			
RRU Make	Samsung	Samsung	Samsung
RRU Model	CBRS RRH - RT4401-48A	CBRS RRH - RT4401-48A	CBRS RRH - RT4401-48A
Number of Tx, Rx Lines	4,4	4,4	4,4
Position			
Source	ATOLL_API	ATOLL_API	ATOLL_API

Service Comments

Antenna Summary

Added

700	850	1900	AWS	AWS3	28 GHz	31 GHz	39 GHz	CBRS	LAA	Make	Model	Centerline	Tip Height	Azimuth	RET	4xRx	Inst. Type	Quantity
								LTE		Samsung	XXDWMM-12.5-65-8T-CBRS	110	110.5	30(D19) 150(D20) 270(D21)	false	false	PHYSICAL	3

Removed

700	850	1900	AWS	AWS3	28 GHz	31 GHz	39 GHz	CBRS	LAA	Make	Model	Centerline	Tip Height	Azimuth	RET	4xRx	Inst. Type	Quantity
										ANTEL	BXA-171063-8BFEDIN-2 (unused)	110			false	false	PHYSICAL	3

Retained

700	850	1900	AWS	AWS3	28 GHz	31 GHz	39 GHz	CBRS	LAA	Make	Model	Centerline	Tip Height	Azimuth	RET	4xRx	Inst. Type	Quantity
LTE	LTE	LTE	LTE							ANDREW	JAHH-65B-R3B	110	113	30(D1) 150(D2) 270(D3)	true	true	PHYSICAL	6
	CDMA									ANTEL	BXA-70080-6CF-782MHZ PRELIMINARY (200501)	110	113	30(D1) 150(D2) 270(D3)	false	false	PHYSICAL	3

Added: 3 **Removed:** 3 **Retained:** 9

Equipment Summary

Added

Equipment Type	Location	700	850	1900	AWS	AWS3	28 GHz	31 GHz	39 GHz	CBRS	LAA	Make	Model	Cable Length	Cable Size	Install Type	Quantity
Hybrid Cable	Tower											RFS	HB158-13U12S24			PHYSICAL	1
OVP Box	Tower											RFS	DB-C1-12C-24AB-0Z			PHYSICAL	1
Hybrid Cable	Tower									LTE			1x2 Hybrid (2 per RRH)			PHYSICAL	6
Quadplexer	Tower	LTE	LTE									Commscope	CBC78T-DS-43-2X			PHYSICAL	3
RRU	Tower			LTE	LTE							Samsung	B2/B66A RRH-BR049 (RFV01U-D1A)			PHYSICAL	3
RRU	Tower	LTE	LTE									Samsung	B5/B13 RRH-BR04C (RFV01U-D2A)			PHYSICAL	3
RRU	Tower									LTE		Samsung	CBRS RRH - RT4401-48A			PHYSICAL	3

Removed

Equipment Type	Location	700	850	1900	AWS	AWS3	28 GHz	31 GHz	39 GHz	CBRS	LAA	Make	Model	Cable Length	Cable Size	Install Type	Quantity
Hybrid Cable	Tower												6x12 Hybrid			PHYSICAL	1
OVP Box	Tower												6 circuit OVP			PHYSICAL	1
RRU	Tower	LTE										Nokia	UHBA B13 RRH 4x30			PHYSICAL	3
RRU	Tower			LTE								Nokia	UHFA B25 RRH 4x30			PHYSICAL	3
RRU	Tower				LTE							Nokia	UHIE B66A RRH 4x45			PHYSICAL	3

Retained

Equipment Type	Location	700	850	1900	AWS	AWS3	28 GHz	31 GHz	39 GHz	CBRS	LAA	Make	Model	Cable Length	Cable Size	Install Type	Quantity
Coaxial Cables	Tower															PHYSICAL	6

Callsigns Per Antenna

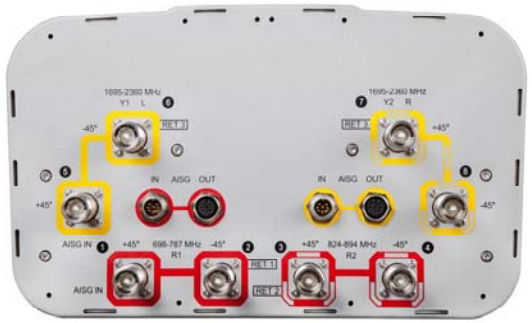
Sector	Antenna Make	Antenna Mode	Ant CL Height AGL	Tip Height	Azimuth (TN)	Electrical Tilt	Mechanical Tilt	Gain	Beamwidth	Regulatory Power	Callsigns						
											700	850	1900	2100	28 GHz	31 GHz	39 GHz
D1	ANTEL	BXA-70080-6CF-7B2WHZ_PRELIM R (200501)	110	113	30	0	3	13.5	79	445.66		KNKA363					
D1	ANTEL	BXA-70080-6CF-7B2WHZ_PRELIM R (200501)	110	113	30	0	3	13.5	79	199.53		KNKA363					
D3	ANTEL	BXA-70080-6CF-7B2WHZ_PRELIM R (200501)	110	113	270	0	3	13.5	79	199.53		KNKA363					
D3	ANTEL	BXA-70080-6CF-7B2WHZ_PRELIM R (200501)	110	113	270	0	3	13.5	79	445.66		KNKA363					
D2	ANTEL	BXA-70080-6CF-7B2WHZ_PRELIM R (200501)	110	113	150	0	7	13.5	79	445.66		KNKA363					
D2	ANTEL	BXA-70080-6CF-7B2WHZ_PRELIM R (200501)	110	113	150	0	7	13.5	79	199.53		KNKA363					
D1	ANDREW	JAHH-65B-R3B_2DT (432959)	110	113	30	2	0	12.806	65	372.05		KNKA363					
D3	ANDREW	JAHH-65B-R3B_2DT (432959)	110	113	270	2	0	12.806	65	372.05		KNKA363					
D1	ANDREW	JAHH-65B-R3B_2DT (432956)	110	113	30	2	0	16.033001	63.25	142.24			KNLF644 KNLH264 WQBT539				
D2	ANDREW	JAHH-65B-R3B_2DT (432956)	110	113	150	2	0	16.033001	63.25	142.24			KNLF644 KNLH264 WQBT539				
D3	ANDREW	JAHH-65B-R3B_2DT (432956)	110	113	270	2	0	16.033001	63.25	142.24			KNLF644 KNLH264 WQBT539				
D1	ANDREW	JAHH-65B-R3B_2DT (432957)	110	113	30	2	0	15.941	66.25	139.26				WQGA906 WQGB279			
D3	ANDREW	JAHH-65B-R3B_2DT (432957)	110	113	270	2	0	15.941	66.25	139.26				WQGA906 WQGB279			
D2	ANDREW	JAHH-65B-R3B_2DT (432957)	110	113	150	2	0	15.941	66.25	139.26				WQGA906 WQGB279			

D3	ANDREW	JAHH-65B-R3B_2DT (432958)	110	113	270	2	0	12.178	67.5	71.38	WQJQ689						
D1	ANDREW	JAHH-65B-R3B_2DT (432958)	110	113	30	2	0	12.178	67.5	71.38	WQJQ689						
D2	ANDREW	JAHH-65B-R3B_2DT (432958)	110	113	150	2	0	12.178	67.5	71.38	WQJQ689						
D2	ANDREW	JAHH-65B-R3B_9DT (432987)	110	113	150	9	0	-0.008	65.75	19.46		KNKA363					

Callsigns

Callsign	Market	Radio Code	Market Number	Block	State	County	Licensee Name	Wholly Owned	Total MHZ	Freq Range 1	Freq Range 2	Freq Range 3	Freq Range 4	Regulatory Power	Threshold (W)	POPs/Sq Mi	Status	Action	Approved for Insvc
CBRS_CALLSI	*UNLICENSED*	*3.5 GHz*	*UNLICENSED*	*UNLICENSED*	*CT*	*Fairfield*	*UNLICENSED*	*UNLICENSED*	*UNLICENSED*	*UNLICENSED-UNLICENSED*	*UNLICENSED-UNLICENSED*	*UNLICENSED-UNLICENSED*	*UNLICENSED-UNLICENSED*	*1.97*		*1467.2*	*Active*	*added*	*No*
KNKA363	*Bridgeport-Stamford-Norwalk-Danbury, CT*	*CL*	*CMA042*	*A*	*CT*	*Fairfield*	*Cellco Partnership*	*Yes*	*25.000*	*824.000-835.000*	*869.000-880.000*	*845.000-846.500*	*890.000-891.500*	*19.46*	*500*	*1467.2*	*Active*	*added*	*Yes*
KNLF644	*New York, NY*	*CW*	*BTA321*	*C*	*CT*	*Fairfield*	*AirTouch Cellular*	*Yes*	*20.000*	*1900.000-1910.000*	*1980.000-1990.000*	*.000-.000*	*.000-.000*	*142.24*	*1640*	*1467.2*	*Active*	*added*	*Yes*
KNLH264	*New York, NY*	*CW*	*BTA321*	*F*	*CT*	*Fairfield*	*Cellco Partnership*	*Yes*	*10.000*	*1890.000-1895.000*	*1970.000-1975.000*	*.000-.000*	*.000-.000*	*142.24*	*1640*	*1467.2*	*Active*	*added*	*Yes*
WPLM397	New York, NY	LD	BTA321	B	CT	Fairfield	Cellco Partnership	Yes	150.000	31000.000-31075.000	31225.000-31300.000	.000-.000	.000-.000			1467.2	Active		No
WPOH942	New York, NY	LD	BTA321	A	CT	Fairfield	Cellco Partnership	Yes	300.000	29100.000-29250.000	31075.000-31225.000	.000-.000	.000-.000			1467.2	Active		No
WQBT539	*New York, NY*	*CW*	*BTA321*	*C*	*CT*	*Fairfield*	*Cellco Partnership*	*Yes*	*10.000*	*1895.000-1900.000*	*1975.000-1980.000*	*.000-.000*	*.000-.000*	*142.24*	*1640*	*1467.2*	*Active*	*added*	*Yes*
WQGA906	*New York-No. New Jer.-Long Island, NY-NJ-CT-PA-MA-*	*AW*	*BEA010*	*B*	*CT*	*Fairfield*	*Cellco Partnership*	*Yes*	*20.000*	*1720.000-1730.000*	*2120.000-2130.000*	*.000-.000*	*.000-.000*	*139.26*	*1640*	*1467.2*	*Active*	*retained*	*Yes*
WQGB279	*Bridgeport-Stamford-Norwalk-Danbury, CT*	*AW*	*CMA042*	*A*	*CT*	*Fairfield*	*Cellco Partnership*	*Yes*	*20.000*	*1710.000-1720.000*	*2110.000-2120.000*	*.000-.000*	*.000-.000*	*139.26*	*1640*	*1467.2*	*Active*	*retained*	*Yes*
WQJQ689	*Northeast*	*WU*	*REA001*	*C*	*CT*	*Fairfield*	*Cellco Partnership*	*Yes*	*22.000*	*746.000-757.000*	*776.000-787.000*	*.000-.000*	*.000-.000*	*71.38*	*1000*	*1467.2*	*Active*	*retained*	*Yes*
WRBA702	New York, NY	UU	BTA321	L1	CT	Fairfield	Cellco Partnership	Yes	325.000	27600.000-27925.000	.000-.000	.000-.000	.000-.000			1467.2	Active		Yes
WRBA703	New York, NY	UU	BTA321	L2	CT	Fairfield	Cellco Partnership	Yes	325.000	27925.000-27950.000	28050.000-28350.000	.000-.000	.000-.000			1467.2	Active		Yes
WRBD571	New York, NY	UU	PEA001	2-A	CT	Fairfield	Straight Path Spectrum, LLC	Yes	.000	.000-.000	.000-.000	.000-.000	.000-.000			.0	Active		Yes
WRBD572	New York, NY	UU	PEA001	2-B	CT	Fairfield	Straight Path Spectrum, LLC	Yes	.000	.000-.000	.000-.000	.000-.000	.000-.000			.0	Active		Yes
WRBE444	New York, NY	UU	PEA001	5-A	CT	Fairfield	Straight Path Spectrum, LLC	Yes	50.000	38800.000-38850.000	.000-.000	.000-.000	.000-.000			.0	Active		Yes
WRBE445	New York, NY	UU	PEA001	5-B	CT	Fairfield	Straight Path Spectrum, LLC	Yes	50.000	39500.000-39550.000	.000-.000	.000-.000	.000-.000			.0	Active		Yes
WRBE704	New York, NY	UU	PEA001	6-A	CT	Fairfield	Straight Path Spectrum, LLC	Yes	.000	.000-.000	.000-.000	.000-.000	.000-.000			.0	Active		Yes

WRBE705	New York, NY	UU	PEA001	6-B	CT	Fairfield	Straight Path Spectrum, LLC	Yes	.000	.000-.000	.000-.000	.000-.000	.000-.000			.0	Active		Yes
WRBE864	New York, NY	UU	PEA001	7-A	CT	Fairfield	Straight Path Spectrum, LLC	Yes	50.000	38900.000-38950.000	.000-.000	.000-.000	.000-.000			.0	Active		Yes
WRBE865	New York, NY	UU	PEA001	7-B	CT	Fairfield	Straight Path Spectrum, LLC	Yes	50.000	39600.000-39650.000	.000-.000	.000-.000	.000-.000			.0	Active		Yes
WRBF500	New York, NY	UU	PEA001	9-A	CT	Fairfield	Straight Path Spectrum, LLC	Yes	50.000	39000.000-39050.000	.000-.000	.000-.000	.000-.000			.0	Active		Yes
WRBF501	New York, NY	UU	PEA001	9-B	CT	Fairfield	Straight Path Spectrum, LLC	Yes	50.000	39700.000-39750.000	.000-.000	.000-.000	.000-.000			.0	Active		Yes
WRBF792	New York, NY	UU	PEA001	10-A	CT	Fairfield	Straight Path Spectrum, LLC	Yes	50.000	39050.000-39100.000	.000-.000	.000-.000	.000-.000			.0	Active		Yes
WRBF793	New York, NY	UU	PEA001	10-B	CT	Fairfield	Straight Path Spectrum, LLC	Yes	50.000	39750.000-39800.000	.000-.000	.000-.000	.000-.000			.0	Active		Yes
WRBF968	New York, NY	UU	PEA001	11-A	CT	Fairfield	Straight Path Spectrum, LLC	Yes	.000	.000-.000	.000-.000	.000-.000	.000-.000			.0	Active		Yes
WRBF969	New York, NY	UU	PEA001	11-B	CT	Fairfield	Straight Path Spectrum, LLC	Yes	.000	.000-.000	.000-.000	.000-.000	.000-.000			.0	Active		Yes
WRDG500	New York, NY	UU	PEA001	S2	CT	Fairfield	Cellco Partnership	Yes	400.000	37800.000-38200.000	.000-.000	.000-.000	.000-.000			.0	Active		Yes



- Port 1 & 2 are for low band (698-787 MHz).
- Port 3 & 4 are for low band (824-894 MHz).
- Port 3,4,5, & 6 are for high band (1695-2360 MHz).
- Antenna Smart Bias Tee (SBT) is through port 1 for low band and port 5 for high band.
- AISG cable is only needed when drawn in the diagrams below, if it is not drawn then SBT is enough to control all RET motors.
- Not all SBT ports are needed to control RET, only green port connection to green port will control RET.

RET DC signal pass for RET
(Port that will control RET)

BSAMNT-SBS-2-2

850

Commscope JAHH-65B-R3B

Commscope JAHH-65B-R3B

CBRS Clip on

Quadplexer CBC78T-DS-43-2X

B5/B13 RRH-BR04C (RFV01U-D2A)

B2/B66A RRH-BR049 (RFV01U-D1A)

12 OVP Box

DC signal capable Port

AISG Cable

RET DC signal pass for RET
(Port that will control RET)

Hybriflex cables

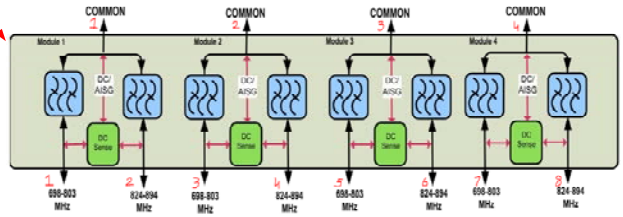
Comments:

Diagram shows configuration as viewed from below antennas.

Antennas will be installed in that order from left to right.

Cap and weatherproof unused antenna ports.

All plumbing diagram colors are irrelevant except for AISG & Hybriflex cable.

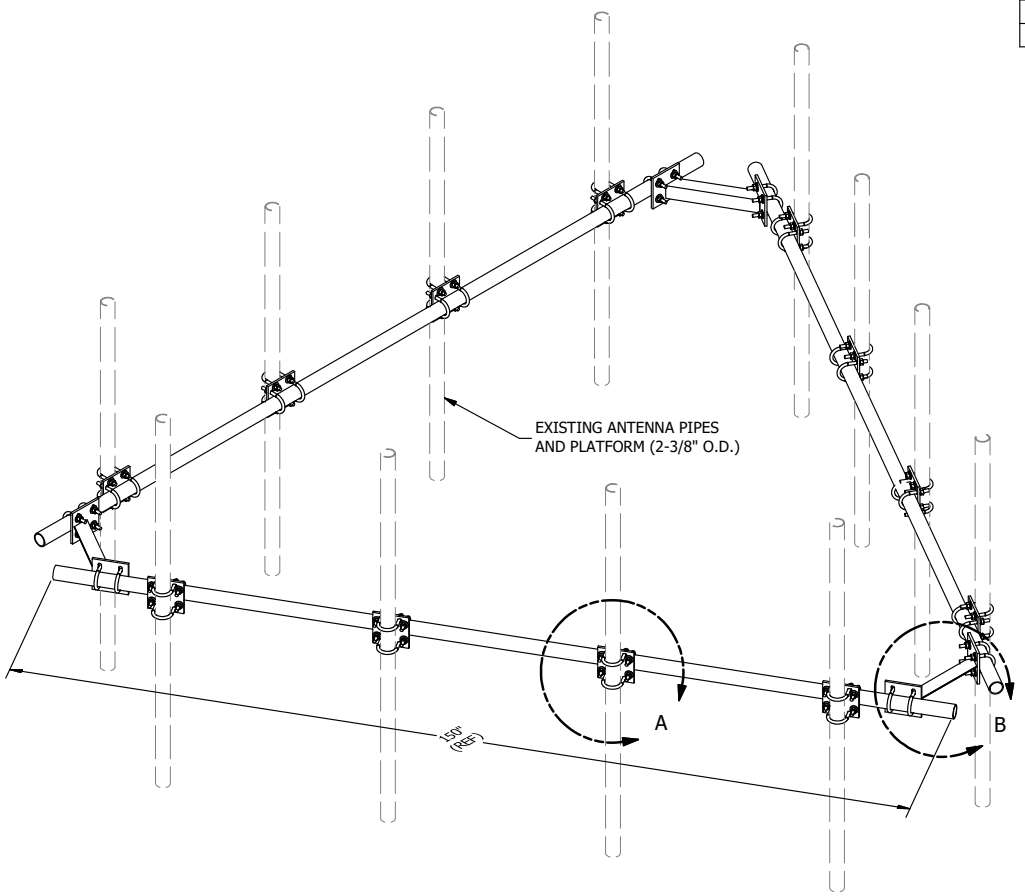


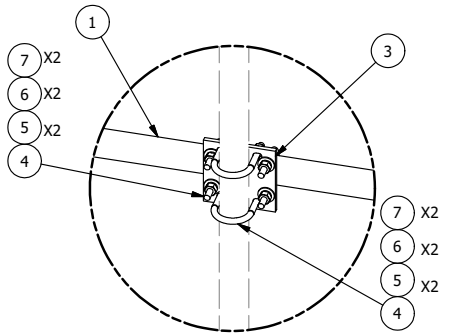
Tower/
Watertank/
Rooftop

Equipment
Pad

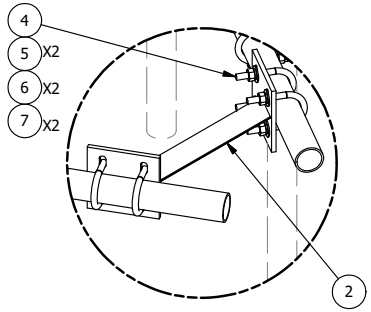
850 Cell

PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	3	P2150	2-3/8" O.D. X 150" SCH 40 GALVANIZED PIPE	150 in	45.77	137.31
2	3	X-AHCP	ANGLE HANDRAIL CORNER PLATE		12.92	38.76
3	12	SCX1	CROSSOVER PLATE 2-3/8" X 2-3/8"	6 in	3.71	44.50
4	60	X-UB1212	1/2" X 2-1/2" X 4-1/2" X 2" U-BOLT (HDG.)		0.63	37.51
5	120	G12FW	1/2" HDG USS FLATWASHER	3/32 in	0.03	4.09
6	120	G12LW	1/2" HDG LOCKWASHER	1/8 in	0.01	1.67
7	120	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	8.60
					TOTAL WT. #	272.43





DETAIL A



DETAIL B

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
A	REPLACED HCP WITH X-AHCP		CEK	7/10/2014

REVISION HISTORY

TOLERANCE NOTES

TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
SAWED, SHEARED AND GAS CUT EDGES *(± 0.030")*
DRILLED AND GAS CUT HOLES *(± 0.030")* - NO CONING OF HOLES
LASER CUT EDGES AND HOLES *(± 0.010")* - NO CONING OF HOLES
BENDS ARE ± 1/2 DEGREE
ALL OTHER MACHINING *(± 0.030")*
ALL OTHER ASSEMBLY *(± 0.060")*

DESCRIPTION: **HANDRAIL KIT FOR 12'-6" FACE**

SITE PRO 1
A valmont COMPANY
Engineering Support Team: 1-888-753-7446
Locations: New York, NY; Atlanta, GA; Los Angeles, CA; Plymouth, IN; Salem, OR; Dallas, TX

CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.
	KC8 5/30/2012		HRK12

CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
81	01	CUSTOMER	BMC 7/13/2014	HRK12

Site Name: WESTPORT 2 CT
Cumulative Power Density

Operator	Operating Frequency	Number of Trans.	ERP Per Trans.	Total ERP	Distance to Target	Calculated Power Density	Maximum Permissible Exposure*	Fraction of MPE
	(MHz)		(watts)	(watts)	(feet)	(mW/cm^2)	(mW/cm^2)	(%)
VZW PCS	1970	4	1561	6242.52	110	0.1855	1.0	18.55%
VZW Cellular CDMA	869	3	498	1494	110	0.0444	0.579333333	7.66%
VZW Cellular LTE	880	4	498	1992	110	0.0592	0.586666667	10.09%
VZW AWS	2145	4	1528	6111.64	110	0.1816	1.0	18.16%
VZW 700	746	4	642	2569.56	110	0.0764	0.497333333	15.36%
VZW CBRS	3550	4	50	200	110	0.0059	2.366666667	0.25%

Total Percentage of Maximum Permissible Exposure 70.08%

*Guidelines adopted by the FCC on August 1, 1996, 47 CFR Section 1.13101 based on NCRP Report 86, 1986 and generally on ANSI/IEEE C95.1-1992

MHz = Megahertz
mW/cm^2 = milliwatts per square centimeter
ERP = Effective Radiated Power

Absolute worst case maximum values used, including the following assumptions:
1. closest accessible point is distance from antenna to base of pole;
2. continuous transmission from all available channels at full power for indefinite time period; and,
3. all RF energy is assumed to be directed solely to the base of the pole

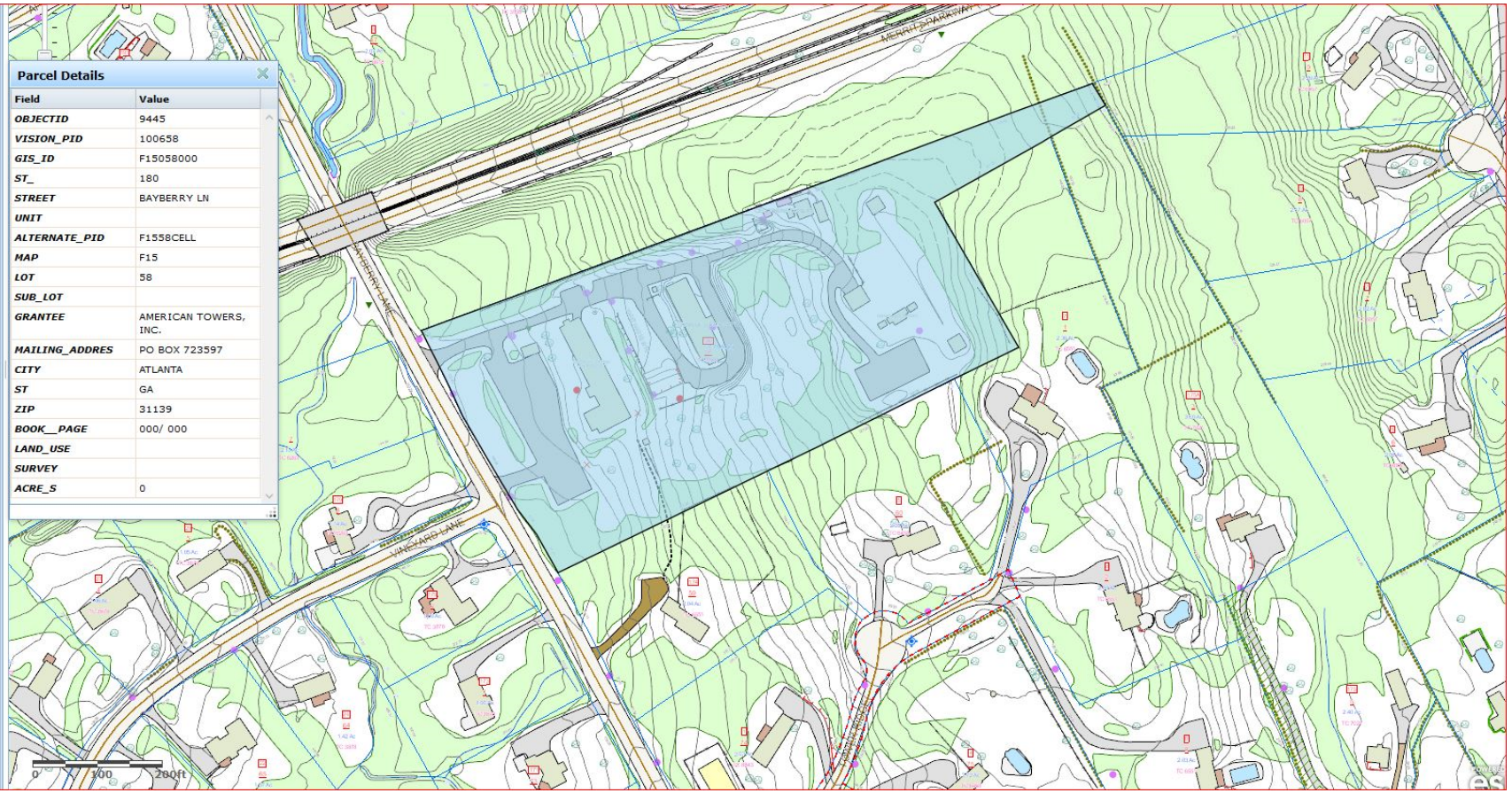
Found 2 assessor records.
Found 1 parcels.

Selected | All | Clear

ParcelId	Owner	Street
F15058000	AMERICAN TOWERS, INC.	BAYBERRY LN
F15058000	WESTPORT TOWN OF	BAYBERRY LN

Parcel Details

Field	Value
OBJECTID	9445
VISION_PID	100658
GIS_ID	F15058000
*ST_*	180
STREET	BAYBERRY LN
UNIT	
ALTERNATE_PID	F1558CELL
MAP	F15
LOT	58
SUB_LOT	
GRANTEE	AMERICAN TOWERS, INC.
MAILING_ADDRES	PO BOX 723597
CITY	ATLANTA
ST	GA
ZIP	31139
BOOK__PAGE	000/ 000
LAND_USE	
SURVEY	
ACRE_S	0



Property Location: 180 BAYBERRY LN **MAP ID:** F15/ / 58/ / **Bldg Name:** **State Use:** 435

Vision ID: 100658 **Account #** 14714 **Bldg #:** 1 of 1 **Sec #:** 1 of 1 **Card** 1 of 1 **Print Date:** 01/06/2018 20:57

CURRENT OWNER	TOPO.	UTILITIES	STRT./ROAD	LOCATION
AMERICAN TOWERS, INC. PROPERTY TAX DEPT PO BOX 723597 ATLANTA, GA 31139 Additional Owners:				

SUPPLEMENTAL DATA

Other ID:	F1558CELL
Historic ID	
Census	
WestportCode	
Survey Map	
Survey Map	
GIS ID: F15058000	ASSOC PID#

Lift Hse

CURRENT ASSESSMENT

Description	Code	Appraised Value	Assessed Value
UTL OUTBL	4-3	1,575,900	1,103,290
	Total	1,575,900	1,103,290

6158
WESTPORT, CT

VISION

RECORD OF OWNERSHIP	BK-VOL/PAGE	SALE DATE	q/u	v/i	SALE PRICE	V.C.
AMERICAN TOWERS, INC.	000/ 000	10/01/2010	U	I	0	

PREVIOUS ASSESSMENTS (HISTORY)

Yr.	Code	Assessed Value	Yr.	Code	Assessed Value	Yr.	Code	Assessed Value
2016	4-3	1,103,290	2015	4-3	903,000	2014	4-3	903,000
	Total:	1,103,290		Total:	903,000		Total:	903,000

EXEMPTIONS

Year	Type	Description	Amount
		Total:	

OTHER ASSESSMENTS

Code	Description	Number	Amount	Comm. Int.

This signature acknowledges a visit by a Data Collector or Assessor

ASSESSING NEIGHBORHOOD

NBHD/ SUB	NBHD Name	Street Index Name	Tracing	Batch
0001/A				

NOTES

6 SITES ON TOWER

TOWER VALUE

2000 X 12=24000 X.75=18000/.11=

BU GENERATOR

163600 X 6=981,600

APPRAISED VALUE SUMMARY

Appraised Bldg. Value (Card)	0
Appraised XF (B) Value (Bldg)	0
Appraised OB (L) Value (Bldg)	1,575,900
Appraised Land Value (Bldg)	0
Special Land Value	0
Total Appraised Parcel Value	1,575,900
Valuation Method:	C
Adjustment:	0
Net Total Appraised Parcel Value	1,575,900

BUILDING PERMIT RECORD

Permit ID	Issue Date	Type	Description	Amount	Insp. Date	% Comp.	Date Comp.	Comments

VISIT/ CHANGE HISTORY

Date	Type	IS	ID	Cd.	Purpose/Result
03/16/2015			BAA	50	BAA Change
02/15/2013	7		TM	01	Measured/No Interior Ins

LAND LINE VALUATION SECTION

B #	Use Code	Use Description	Zone	D	Front	Depth	Units		Unit Price	I. Factor	S.A.		C. Factor	ST. Idx	Adj.	Notes- Adj	Special Pricing: Spec Use	Special Pricing: Spec Calc	S Adj Fact	Adj. Unit Price	Land Value
1	435	Cell Site Vac Lnd	AAA				0	SF	0.00	1.0000			1.00		0.00				.00		0

Total Card Land Units: 0.00 AC **Parcel Total Land Area:** 0 AC **Total Land Value:** 0

Property Location: 180 BAYBERRY LN **MAP ID:** F15/ / 58/ / **Bldg Name:** **State Use:** 435

Vision ID: 100658 **Account #** 14714 **Bldg #:** 1 of 1 **Sec #:** 1 of 1 **Card** 1 of 1 **Print Date:** 01/06/2018 20:57

CONSTRUCTION DETAIL

Element	Cd.	Ch.	Description
Model	00		Vacant

CONSTRUCTION DETAIL (CONTINUED)

Element	Cd.	Ch.	Description

MIXED USE

Code	Description	Percentage
435	Cell Site Vac Lnd	100

COST/MARKET VALUATION

Adj. Base Rate:	0.00
	0
Net Other Adj:	0.00
Replace Cost	0
AYB	
Dep Code	
Remodel Rating	
Year Remodeled	
Dep %	
Functional Obslnc	
External Obslnc	
Cost Trend Factor	
Special Condition Code	
% Complete	
Overall % Cond	
Apprais Val	
Dep % Ovr	0
Dep Ovr Comment	
Misc Imp Ovr	0
Misc Imp Ovr Comment	
Cost to Cure Ovr	0
Cost to Cure Ovr Comment	

OB-OUTBUILDING & YARD ITEMS(L) / XF-BUILDING EXTRA FEATURES(B)

Code	Description	Sub	Sub Descript	L/B	Units	Unit Price	Yr	Gde	Dp Rt	Cnd	%Cnd	Apr Value
CELL	Cell on TWR	TW		L	6	328,000.00	2010	2	0		100	1,267,700
CB3	PerCastConcC			L	360	350.00	2010	3		6	75	94,500
CB3	PerCastConcC			L	440	350.00	2010	3		6	75	115,500
FN4	Fence 8'			L	200	21.40	2010			5	60	2,600
CB3	PerCastConcC			L	144	350.00	2010	3		6	75	37,800
CB3	PerCastConcC			L	220	350.00	2010	3		6	75	57,800

BUILDING SUB-AREA SUMMARY SECTION

Code	Description	Living Area	Gross Area	Eff. Area	Unit Cost	Undeprec. Value
	Ttl. Gross Liv/Lease Area:	0	0			

No Photo On Record

Property Location: 180 BAYBERRY LN | **MAP ID:** F15/ / 058/000 / | **Bldg Name:** | **State Use:** 922

Vision ID: 10353 | **Account #** 29153 | **Bldg #:** 1 of 2 | **Sec #:** 1 of 1 | **Card** 1 of 2 | **Print Date:** 01/06/2018 19:50

CURRENT OWNER	TOPO.	UTILITIES	STRT./ROAD	LOCATION
WESTPORT TOWN OF NIKE SITE 110 MYRTLE AVE WESTPORT, CT 06880 Additional Owners:			1 Public	

SUPPLEMENTAL DATA

Other ID:	5441112	Lift Hse	
Historic ID			
Census	503		
WestportCode	F38		
Survey Map	8960		
Survey Map			
GIS ID: F15058000		*ASSOC PID#*	

CURRENT ASSESSMENT

Description	Code	Appraised Value	Assessed Value
EX COM LN	21	5,449,200	3,814,400
EX COM BL	22	1,022,100	715,500
EX CM OTB	25	12,000	8,400
	Total	6,483,300	4,538,300

6158
WESTPORT, CT

VISION

RECORD OF OWNERSHIP

BK-VOL/PAGE	SALE DATE	q/u	v/i	SALE PRICE	V.C.
WESTPORT TOWN OF	0/ 0	11/14/2002	U	I	0	29

PREVIOUS ASSESSMENTS (HISTORY)

Yr.	Code	Assessed Value	Yr.	Code	Assessed Value	Yr.	Code	Assessed Value
2016	21	3,814,400	2015	21	3,814,400	2014	21	3,814,400
2016	22	715,500	2015	22	715,500	2014	22	715,500
2016	25	8,400	2015	25	8,400	2014	25	8,400
	Total:	4,538,300		*Total:*	4,538,300		*Total:*	4,538,300

EXEMPTIONS

Year	Type	Description	Amount
		Total:	

OTHER ASSESSMENTS

Code	Description	Number	Amount	Comm. Int.

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APPRAISED VALUE SUMMARY

Appraised Bldg. Value (Card)	650,700
Appraised XF (B) Value (Bldg)	0
Appraised OB (L) Value (Bldg)	0
Appraised Land Value (Bldg)	5,449,200
Special Land Value	0
Total Appraised Parcel Value	6,483,300
Valuation Method:	C
Adjustment:	0
Net Total Appraised Parcel Value	6,483,300

ASSESSING NEIGHBORHOOD

NBHD/ SUB	NBHD Name	Street Index Name	Tracing	Batch
0001/A				

NOTES

ABUTTS MERRITT PKWY
MINOR ALTERS.N/C 10/06/006
CELL TOWER; 2 SHEDS
6 SITES

OBSERVATORY BUILDINGS IN BACK

BUILDING PERMIT RECORD

Permit ID	Issue Date	Type	Description	Amount	Insp. Date	% Comp.	Date Comp.	Comments
69286	12/05/2007		ALTERATIONS	0		100		MINOR ALTERATION
67136	04/05/2006		ALTERATIONS	17,000		100		MINOR INT ALT TO FI
61524	10/03/2001		ATTACH SPRINT PC	54,000		100		ATTACH SPRINT PCS
60492	11/06/2000		REPAIR EXISTING S	0		100		REPAIR EXISTING ST/
57427	06/01/1998		12 X 30 X 15 EQUIP E	0		100		12 X 30 X 15 EQUIP BL

VISIT/ CHANGE HISTORY

Date	Type	IS	ID	Cd.	Purpose/Result

LAND LINE VALUATION SECTION

B #	Use Code	Use Description	Zone	D	Front	Depth	Units		Unit Price	I. Factor	S.A.		C. Factor	ST. Idx	Adj.	Notes- Adj	Special Pricing		S Adj Fact	Adj. Unit Price	Land Value
1	922	Mun Bldg Com	AAA				4.00	AC	1,200,000.00	1.0000	C		1.00	F	1.00				.00		4,800,000
1	922	Mun Bldg Com	AA				3.91	AC	120,000.00	1.0000	0		1.00		0.00	EXCESS			.00		469,200
1	922	Mun Bldg Com	AA				1	SF	180,000.00	1.0000	0		1.00		0.00	LAND LEASE VALU			.00		180,000

Total Card Land Units: 7.91 AC | **Parcel Total Land Area:** 7.91 AC | **Total Land Value:** 5,449,200

Property Location: 180 BAYBERRY LN **MAP ID:** F15/ / 058/000 / **Bldg Name:** **State Use:** 922

Vision ID: 10353 **Account #** 29153 **Bldg #:** 1 of 2 **Sec #:** 1 of 1 **Card** 1 of 2 **Print Date:** 01/06/2018 19:50

CONSTRUCTION DETAIL

Element	Cd.	Ch.	Description
Style	85		Office Bldg
Model	94		Commercial
Grade	04		Average +10
Stories	1		
Occupancy	1		
Exterior Wall 1	15		Concr/CinderBk
Exterior Wall 2	03		Below Average
Roof Structure	03		Gable
Roof Cover	03		Asphalt/F Glas
Interior Wall 1	05		Drywall
Interior Wall 2			
Interior Floor 1	11		Ceram Clay Til
Interior Floor 2			
Heating Fuel	03		Gas
Heating Type	04		Forced Air
AC Type	01		None
Bldg Use	922		Mun Bldg Com
Income Adj			
Heat/AC	00		None
Frame Type	03		Masonry
Baths/Plumbing	02		Average
Ceiling/Walls	02		Ceiling Only
Rooms/Prtns	02		Average
Wall Height	10		
% Comn Wall			

CONSTRUCTION DETAIL (CONTINUED)

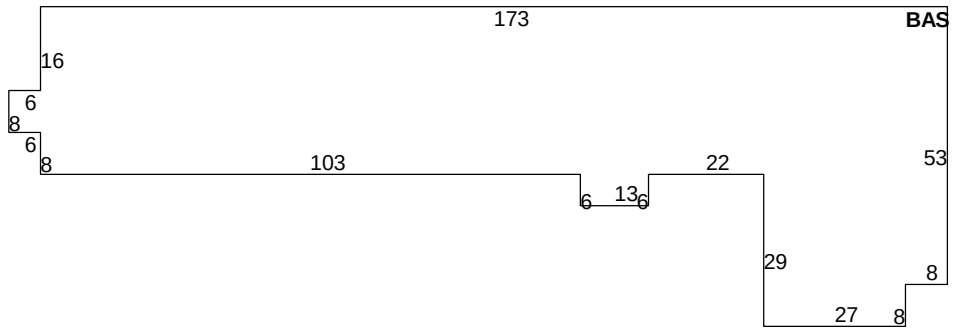
Element	Cd.	Ch.	Description

MIXED USE

Code	Description	Percentage
922	Mun Bldg Com	100

COST/MARKET VALUATION

Adj. Base Rate:	149.08
	985,886
Net Other Adj:	0.00
Replace Cost	985,886
AYB	1900
Dep Code	A
Remodel Rating	
Year Remodeled	
Dep %	34
Functional Obslnc	
External Obslnc	
Cost Trend Factor	
Special Condition Code	
% Complete	
Overall % Cond	66
Apprais Val	650,700
Dep % Ovr	0
Dep Ovr Comment	
Misc Imp Ovr	0
Misc Imp Ovr Comment	
Cost to Cure Ovr	0
Cost to Cure Ovr Comment	



No Photo On Record

OB-OUTBUILDING & YARD ITEMS(L) / XF-BUILDING EXTRA FEATURES(B)

Code	Description	Sub	Sub Descript	L/B	Units	Unit Price	Yr	Gde	Dp Rt	Cnd	%Cnd	Apr Value

BUILDING SUB-AREA SUMMARY SECTION

Code	Description	Living Area	Gross Area	Eff. Area	Unit Cost	Undeprec. Value
BAS	First Floor	6,613	6,613		149.08	985,886
	Ttl. Gross Liv/Lease Area:	6,613	6,613			985,886

Property Location: 180 BAYBERRY LN | **MAP ID:** F15/ / 058/000 / | **Bldg Name:** | **State Use:** 922

Vision ID: 10353 | **Account #** 29153 | **Bldg #:** 2 of 2 | **Sec #:** 1 of 1 | **Card** 2 of 2 | **Print Date:** 01/06/2018 19:50

CURRENT OWNER	TOPO.	UTILITIES	STRT./ROAD	LOCATION
WESTPORT TOWN OF NIKE SITE 110 MYRTLE AVE WESTPORT, CT 06880 Additional Owners:			1 Public	

SUPPLEMENTAL DATA

Other ID:	5441112
Historic ID	
Census	503
WestportCode	F38
Survey Map	8960
Survey Map	
GIS ID: F15058000	*ASSOC PID#*

Lift Hse

CURRENT ASSESSMENT

Description	Code	Appraised Value	Assessed Value
EX COM LN	21	5,449,200	3,814,400
EX COM BL	22	1,022,100	715,500
EX CM OTB	25	12,000	8,400
	Total	6,483,300	4,538,300

6158
WESTPORT, CT

VISION

RECORD OF OWNERSHIP

BK-VOL/PAGE	SALE DATE	q/u	v/i	SALE PRICE	V.C.
WESTPORT TOWN OF	0/ 0	11/14/2002	U	I	0	29

PREVIOUS ASSESSMENTS (HISTORY)

Yr.	Code	Assessed Value	Yr.	Code	Assessed Value	Yr.	Code	Assessed Value
2016	21	3,814,400	2015	21	3,814,400	2014	21	3,814,400
2016	22	715,500	2015	22	715,500	2014	22	715,500
2016	25	8,400	2015	25	8,400	2014	25	8,400
	Total:	4,538,300		*Total:*	4,538,300		*Total:*	4,538,300

EXEMPTIONS

Year	Type	Description	Amount
		Total:	

OTHER ASSESSMENTS

Code	Description	Number	Amount	Comm. Int.

This signature acknowledges a visit by a Data Collector or Assessor

APPRAISED VALUE SUMMARY

Appraised Bldg. Value (Card)	371,400
Appraised XF (B) Value (Bldg)	0
Appraised OB (L) Value (Bldg)	12,000
Appraised Land Value (Bldg)	0
Special Land Value	0
Total Appraised Parcel Value	6,483,300
Valuation Method:	C
Adjustment:	0
Net Total Appraised Parcel Value	6,483,300

ASSESSING NEIGHBORHOOD

NBHD/ SUB	NBHD Name	Street Index Name	Tracing	Batch
0001/A				

NOTES

BUILDING PERMIT RECORD

Permit ID	Issue Date	Type	Description	Amount	Insp. Date	% Comp.	Date Comp.	Comments

VISIT/ CHANGE HISTORY

Date	Type	IS	ID	Cd.	Purpose/Result

LAND LINE VALUATION SECTION

B #	Use Code	Use Description	Zone	D	Front	Depth	Units		Unit Price	I. Factor	S.A.		C. Factor	ST. Idx	Adj.	Notes- Adj	Special Pricing		S Adj Fact	Adj. Unit Price	Land Value
2	922	Mun Bldg Com	AAA				0.00	AC	0.00	1.0000	0		1.00		0.00				.00		0

Total Card Land Units:	0.00	AC	Parcel Total Land Area:	7.91 AC	Total Land Value: 0

Property Location: 180 BAYBERRY LN **MAP ID:** F15/ / 058/000 / **Bldg Name:** **State Use:** 922

Vision ID: 10353 **Account #** 29153 **Bldg #:** 2 of 2 **Sec #:** 1 of 1 **Card** 2 of 2 **Print Date:** 01/06/2018 19:50

CONSTRUCTION DETAIL

Element	Cd.	Ch.	Description
Style	85		Office Bldg
Model	94		Commercial
Grade	01		Minimum
Stories	1		
Occupancy	1		
Exterior Wall 1	15		Concr/CinderBk
Exterior Wall 2			
Roof Structure	03		Gable
Roof Cover	03		Asphalt/F Glas
Interior Wall 1	05		Drywall
Interior Wall 2			
Interior Floor 1	11		Ceram Clay Til
Interior Floor 2			
Heating Fuel	04		Electric
Heating Type	07		Electr Basebrd
AC Type	01		None
Bldg Use	922		Mun Bldg Com
Income Adj			
Heat/AC	00		None
Frame Type	06		Fireprf Steel
Baths/Plumbing	02		Average
Ceiling/Walls	02		Ceiling Only
Rooms/Prtns	02		Average
Wall Height	10		
% Comn Wall			

CONSTRUCTION DETAIL (CONTINUED)

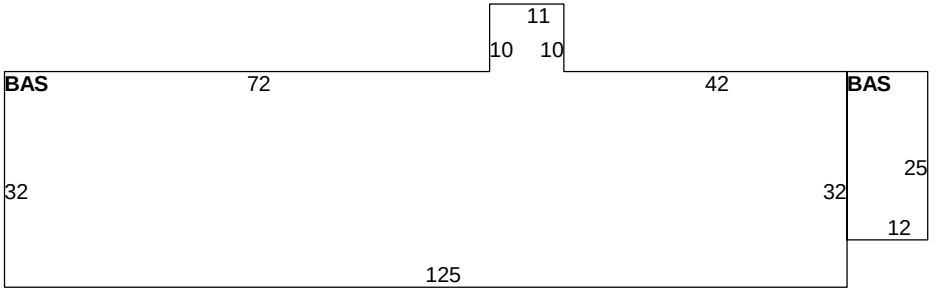
Element	Cd.	Ch.	Description

MIXED USE

Code	Description	Percentage
922	Mun Bldg Com	100

COST/MARKET VALUATION

Adj. Base Rate:	127.61
	562,765
Net Other Adj:	0.00
Replace Cost	562,765
AYB	1900
Dep Code	A
Remodel Rating	
Year Remodeled	
Dep %	34
Functional Obslnc	
External Obslnc	
Cost Trend Factor	
Special Condition Code	
% Complete	
Overall % Cond	66
Apprais Val	371,400
Dep % Ovr	0
Dep Ovr Comment	
Misc Imp Ovr	0
Misc Imp Ovr Comment	
Cost to Cure Ovr	0
Cost to Cure Ovr Comment	



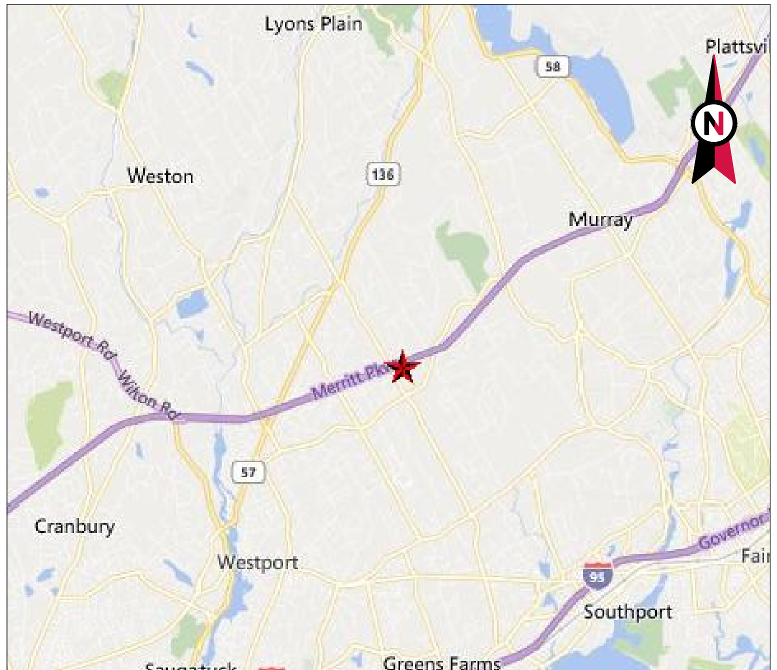
No Photo On Record

OB-OUTBUILDING & YARD ITEMS(L) / XF-BUILDING EXTRA FEATURES(B)

Code	Description	Sub	Sub Descript	L/B	Units	Unit Price	Yr	Gde	Dp Rt	Cnd	%Cnd	Apr Value
SHD1	Shed	FR	Frame	L	725	11.00	1999	3		6	75	6,000
SHD1	Shed	FR	Frame	L	382	11.00	1999	3		6	75	3,200
SHD1	Shed	FR	Frame	L	336	11.00	1999	3		6	75	2,800

BUILDING SUB-AREA SUMMARY SECTION

Code	Description	Living Area	Gross Area	Eff. Area	Unit Cost	Undeprec. Value
BAS	First Floor	4,410	4,410		127.61	562,765
	Ttl. Gross Liv/Lease Area:	4,410	4,410			562,765



VICINITY MAP

AMERICAN TOWER®

ATC SITE NAME: WSPT-WESTPORT REBUILD CT
ATC SITE NUMBER: 310968
VERIZON SITE NAME: WESTPORT 2 CT
VERIZON SITE NUMBER:468226
SITE ADDRESS: 180A BAYBERRY LANE
WESTPORT, CT 06880

LOCATION MAP

VERIZON WIRELESS
ANTENNA AMENDMENT DRAWINGS

COMPLIANCE CODE

ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

1. INTERNATIONAL BUILDING CODE (IBC)
2. NATIONAL ELECTRIC CODE (NEC)
3. LOCAL BUILDING CODE
4. CITY/COUNTY ORDINANCES

UTILITY COMPANIES

POWER COMPANY: NORTHEAST UTILITIES
PHONE: (800) 286-5000

TELEPHONE COMPANY: FRONTIER COMMUNICATIONS
PHONE: (800) 921-8102

811®
Know what's **below.**
Call before you dig.

PROJECT SUMMARY

SITE ADDRESS:

180A BAYBERRY LANE
WESTPORT, CT 06880
COUNTY: FAIRFIELD

GEOGRAPHIC COORDINATES:

LATITUDE: 41.17166667
LONGITUDE: -73.32846667
GROUND ELEVATION: 250' AMSL

PROJECT TEAM

TOWER OWNER:

AMERICAN TOWER
10 PRESIDENTIAL WAY
WOBURN, MA 01801

ENGINEER:

ATC TOWER SERVICES, LLC
3500 REGENCY PKWY STE 100
CARY, NC 27518

PROPERTY OWNER:

TOWN OF WESTPORT CONN
FINANCE DEPARTMENT
110 MYRTLE AVE
WESTPORT, CT06880

APPLICANT:

VERIZON WIRELESS
20 ALEXANDER DRIVE, 2ND FLOOR
WALLINGFORD, CT 06492

PROJECT DESCRIPTION

THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW:

REMOVE (3) PANELS, (9) RRUs, (6) DIPLEXERS, (6) 1-5/8" COAX CABLES, (1) 1-5/8" HYBRID CABLE, AND (1) OVP

INSTALL (3) NEW PANELS, (9) RRUs, (3) DIPLEXERS, (1) 2.02" HYBRID CABLE, (1) OVP, AND MOUNT MODIFICATIONS

EXISTING (9) PANELS AND (6) 1-5/8" COAX CABLES TO REMAIN

PROJECT NOTES

1. THE FACILITY IS UNMANNED.
2. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE.
3. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE.
4. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED.
5. HANDICAP ACCESS IS NOT REQUIRED.

PROJECT LOCATION DIRECTIONS

FROM HARTFORD TAKE I-91 SOUTH TO MERRITT PKWY SOUTH. TAKE EXIT 42 AND TURN RIGHT OFF EXIT. AT FORK STAY LEFT AND TURN LEFT AT STOP SIGN ONTO EASTON ROAD. FOLLOW EASTON TO BAYBERRY LANE AND TURN RIGHT. GO UNDER MERRITT OVERPASS AND TURN LEFT INTO TOWN COMPLEX. TOWER IS UP HILL JUST PASS ACCESS GATE.

SHEET INDEX

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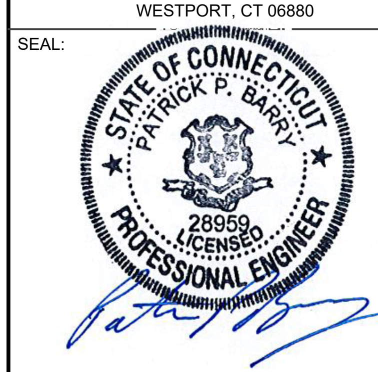
AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	AZ	12/09/19
1	UPDATED MOUNT ANALYSIS	AZ	02/18/20
2	ANTENNA AND RRU MODELS	AZ	03/19/20
3	NEW MOUNT ANALYSIS	AZ	03/24/20

ATC SITE NUMBER:
310968
ATC SITE NAME:
WSPT-WESTPORT REBUILD CT
SITE ADDRESS:
180A BAYBERRY LANE
WESTPORT, CT 06880

SEAL:



Authorized by "EOR"
verizon cosign

DRAWN BY:	AZ
APPROVED BY:	PPB
DATE DRAWN:	12/09/19
ATC JOB NO:	12973878
CUSTOMER ID:	WESTPORT 2 CT
CUSTOMER #:	468226

COVER SHEET

SHEET NUMBER:	REVISION:
G-001	3

GENERAL CONSTRUCTION NOTES:

1. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH ATC MASTER SPECIFICATIONS.
2. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
4. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
5. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
6. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
7. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
8. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
9. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
10. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE VERIZON WIRELESS REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE VERIZON WIRELESS REP PRIOR TO PROCEEDING.
11. EACH CONTRACTOR SHALL COOPERATE WITH THE VERIZON WIRELESS REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
12. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE VERIZON WIRELESS CONSTRUCTION MANAGER.
13. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
14. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE VERIZON WIRELESS REP IMMEDIATELY.
15. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
16. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
17. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH LANDLORD AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
18. CONTRACTOR SHALL FURNISH VERIZON WIRELESS WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
19. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH VERIZON WIRELESS REP TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED.
20. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH VERIZON WIRELESS REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY VERIZON WIRELESS MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
21. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH VERIZON WIRELESS SPECIFICATIONS AND REQUIREMENTS.
22. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO VERIZON WIRELESS FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
23. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO VERIZON WIRELESS SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
24. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
25. CONTRACTOR SHALL NOTIFY VERIZON WIRELESS REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
26. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.
27. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
28. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE VERIZON WIRELESS REP. ANY WORK FOUND BY THE VERIZON WIRELESS REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
29. IN ORDER TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE, ALL TYPES OF MATERIALS LISTED HEREINAFTER BY MANUFACTURER'S NAMES AND/OR MANUFACTURER'S CATALOG NUMBER SHALL BE PROVIDED BY THESE MANUFACTURERS AS SPECIFIED.

STRUCTURAL STEEL NOTES:

1. STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS."
2. STRUCTURAL STEEL ROLLED SHAPES, PLATES AND BARS SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS:
   A. ASTM A-572, GRADE 50 - ALL W SHAPES, UNLESS NOTED OR A992 OTHERWISE
   B. ASTM A-36 - ALL OTHER ROLLED SHAPES, PLATES AND BARS UNLESS NOTED OTHERWISE.
   C. ASTM A-500, GRADE B - HSS SECTION (SQUARE, RECTANGULAR, AND ROUND)
   D. ASTM A-325, TYPE SC OR N - ALL BOLTS FOR CONNECTING STRUCTURAL MEMBERS
   E. ASTM F-1554 07 - ALL ANCHOR BOLTS, UNLESS NOTED OTHERWISE
3. ALL EXPOSED STRUCTURAL STEEL MEMBERS SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION PER ASTM A123. EXPOSED STEEL HARDWARE AND ANCHOR BOLTS SHALL BE GALVANIZED PER ASTM A153 OR B695.
4. ALL FIELD CUT SURFACES, FIELD DRILLED HOLES AND GROUND SURFACES WHERE EXISTING PAINT OR GALVANIZATION REMOVAL WAS REQUIRED SHALL BE REPAIRED WITH (2) BRUSHED COATS OF ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS.
5. DO NOT DRILL HOLES THROUGH STRUCTURAL STEEL MEMBERS EXCEPT AS SHOWN AND DETAILED ON STRUCTURAL DRAWINGS.
6. CONNECTIONS:
   A. ALL WELDING TO BE PERFORMED BY AWS CERTIFIED WELDERS AND CONDUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS WELDING CODE D1.1.
   B. ALL WELDS SHALL BE INSPECTED VISUALLY. 25% OF WELDS SHALL BE INSPECTED WITH DYE PENETRANT OR MAGNETIC PARTICLE TO MEET THE ACCEPTANCE CRITERIA OF AWS D1.1. REPAIR ALL WELDS AS NECESSARY.
   C. INSPECTION SHALL BE PERFORMED BY AN AWS CERTIFIED WELD INSPECTOR.
   D. IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE BURNING/WELDING PERMITS AS REQUIRED BY LOCAL GOVERNING AUTHORITY AND IF REQUIRED SHALL HAVE FIRE DEPARTMENT DETAIL FOR ANY WELDING ACTIVITY.
   E. ALL ELECTRODES TO BE LOW HYDROGEN, MATCHING FILLER METAL, PER AWS D1.1, UNLESS NOTED OTHERWISE.
   F. MINIMUM WELD SIZE TO BE 0.1875 INCH FILLET WELDS, UNLESS NOTED OTHERWISE.
   G. PRIOR TO FIELD WELDING GALVANIZING MATERIAL, CONTRACTOR SHALL GRIND OFF GALVANIZING ½" BEYOND ALL FIELD WELD SURFACES. AFTER WELD AND WELD INSPECTION IS COMPLETE, REPAIR ALL GROUND AND WELDED SURFACES WITH ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS RECOMMENDATIONS.

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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	AZ	12/09/19

ATC SITE NUMBER:
310968

ATC SITE NAME:
WSPT-WESTPORT
REBUILD CT

SITE ADDRESS:
180A BAYBERRY LANE
WESTPORT, CT 06880

SEAL:

Authorized by "EOR"
Ma[illegible]

verizon

DRAWN BY:	AZ
APPROVED BY:	PPB
DATE DRAWN:	12/09/19
ATC JOB NO:	12973878
CUSTOMER ID:	WESTPORT 2 CT
CUSTOMER #:	468226

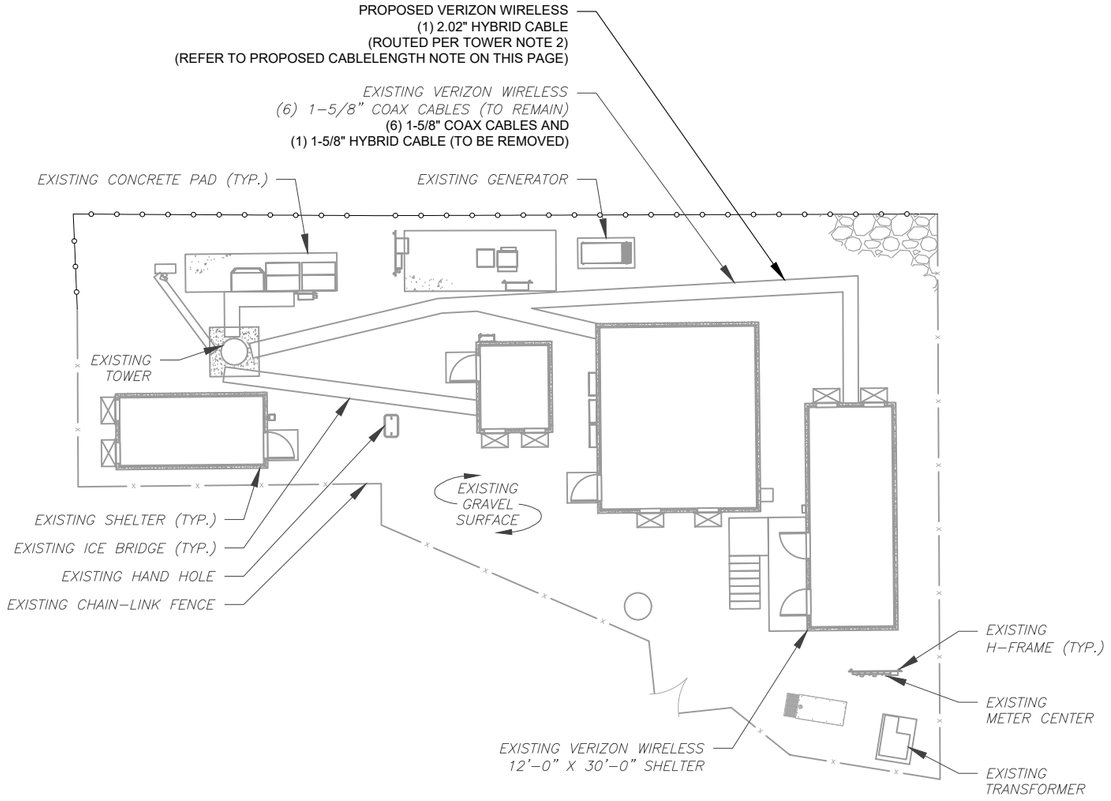
GENERAL NOTES

SHEET NUMBER:	REVISION:
G-002	0

SITE PLAN NOTES:

1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.

2. ICE BRIDGE, CABLE LADDER, COAX PORT, CABLE SUPPORTS, AND CABLES ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL CONFIRM THE EXACT LOCATION OF ALL PROPOSED AND EXISTING EQUIPMENT AND STRUCTURES DEPICTED ON THIS PLAN. BEFORE INSTALLING NEW CABLE SUPPORT STRUCTURES, COAX PORTS, OR ANY OTHER EQUIPMENT, CONTRACTOR SHALL VERIFY ALL ASPECTS OF THE COMPONENTS MEET THE ATC SPECIFICATIONS.



PROPOSED CABLE LENGTH:

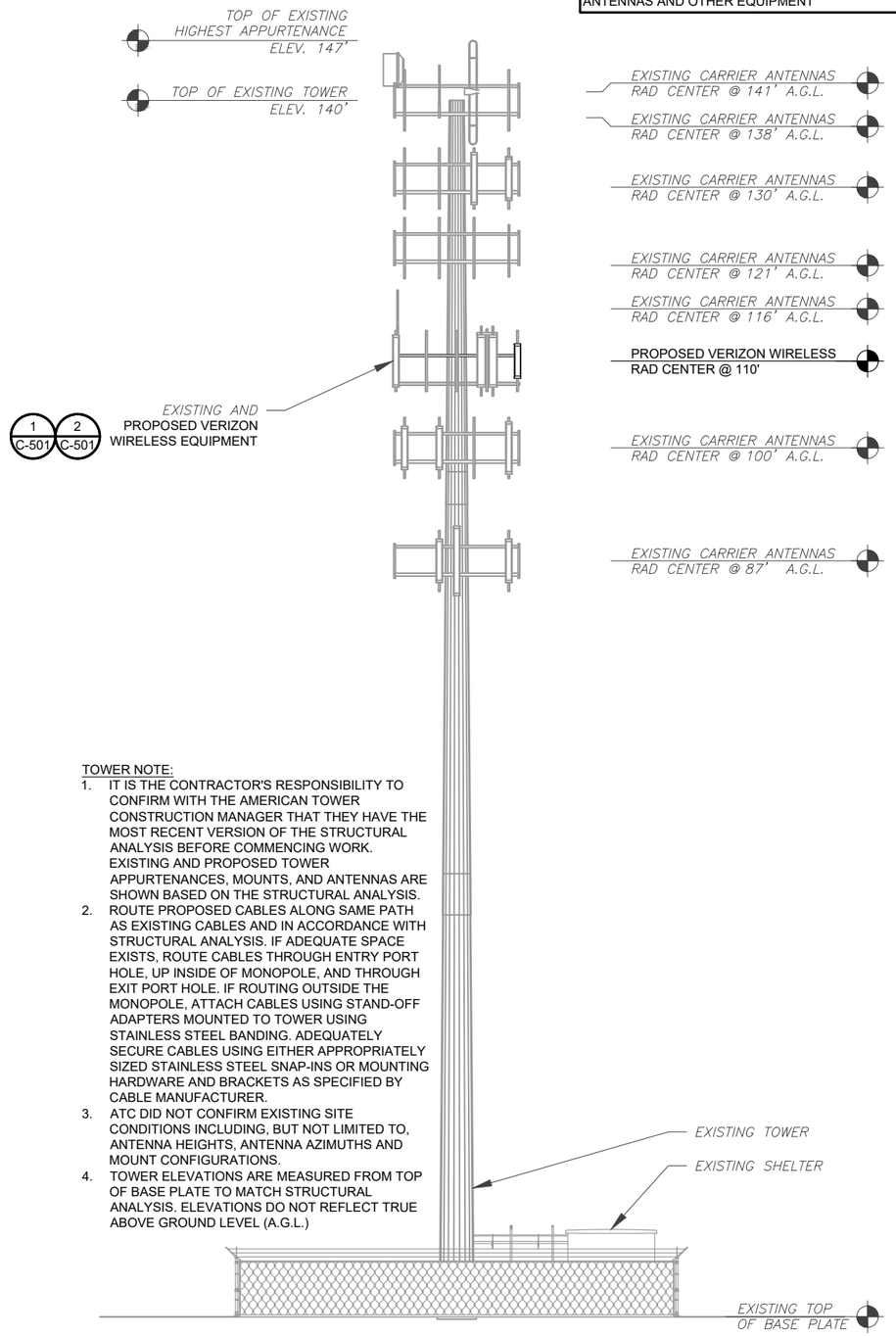
ESTIMATED LENGTH OF PROPOSED CABLE IS **240'**. ESTIMATED LENGTH OF CABLE IS CALCULATED BY ADDING THE RAD CENTER AND THE DISTANCE FROM THE SHELTER ENTRY PLATE TO THE TOWER (ALONG THE ICE BRIDGE) AND A SAFETY FACTOR MEASUREMENT OF 15% (OF THE TWO PREVIOUS VALUES).

1 DETAILED SITE PLAN

0 20' 40'

SCALE: 1"=20' (11X17)
1"=10' (22X34)

PER MOUNT ANALYSIS COMPLETED BY TRYLON, DATED 03/10/20, THE EXISTING MOUNT CAN NOT ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT MODIFICATION PROPOSED IN THE MOUNT ANALYSIS, INCLUDED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT



TOWER NOTE:

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE AMERICAN TOWER CONSTRUCTION MANAGER THAT THEY HAVE THE MOST RECENT VERSION OF THE STRUCTURAL ANALYSIS BEFORE COMMENCING WORK. EXISTING AND PROPOSED TOWER APPURTENANCES, MOUNTS, AND ANTENNAS ARE SHOWN BASED ON THE STRUCTURAL ANALYSIS.
2. ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. IF ADEQUATE SPACE EXISTS, ROUTE CABLES THROUGH ENTRY PORT HOLE, UP INSIDE OF MONOPOLE, AND THROUGH EXIT PORT HOLE. IF ROUTING OUTSIDE THE MONOPOLE, ATTACH CABLES USING STAND-OFF ADAPTERS MOUNTED TO TOWER USING STAINLESS STEEL BANDING. ADEQUATELY SECURE CABLES USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER.
3. ATC DID NOT CONFIRM EXISTING SITE CONDITIONS INCLUDING, BUT NOT LIMITED TO, ANTENNA HEIGHTS, ANTENNA AZIMUTHS AND MOUNT CONFIGURATIONS.
4. TOWER ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE TO MATCH STRUCTURAL ANALYSIS. ELEVATIONS DO NOT REFLECT TRUE ABOVE GROUND LEVEL (A.G.L.)

2 TOWER ELEVATION

SCALE: NOT TO SCALE

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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	AZ	12/09/19
1	UPDATED MOUNT ANALYSIS	AZ	02/18/20
3	NEW MOUNT ANALYSIS	AZ	03/24/20

ATC SITE NUMBER:

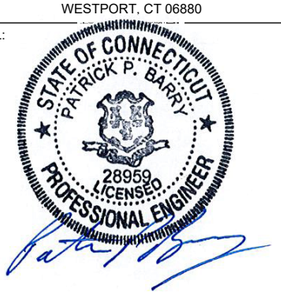
310968

ATC SITE NAME:

WSPT-WESTPORT REBUILD CT

SITE ADDRESS:
180A BAYBERRY LANE
WESTPORT, CT 06880

SEAL:



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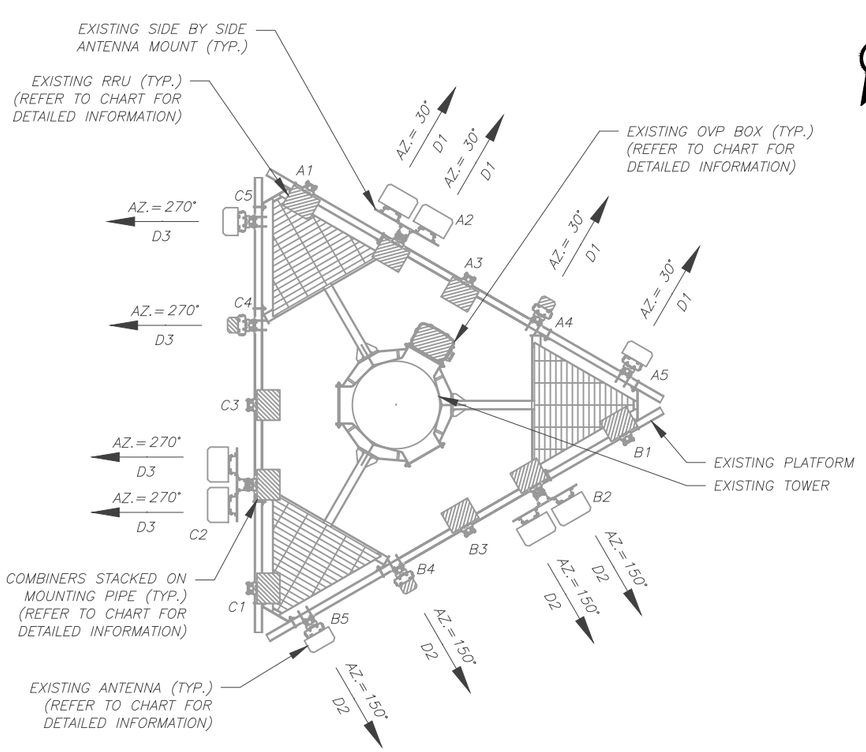
DRAWN BY:	AZ
APPROVED BY:	PPB
DATE DRAWN:	12/09/19
ATC JOB NO:	12973878
CUSTOMER ID:	WESTPORT 2 CT
CUSTOMER #:	468226

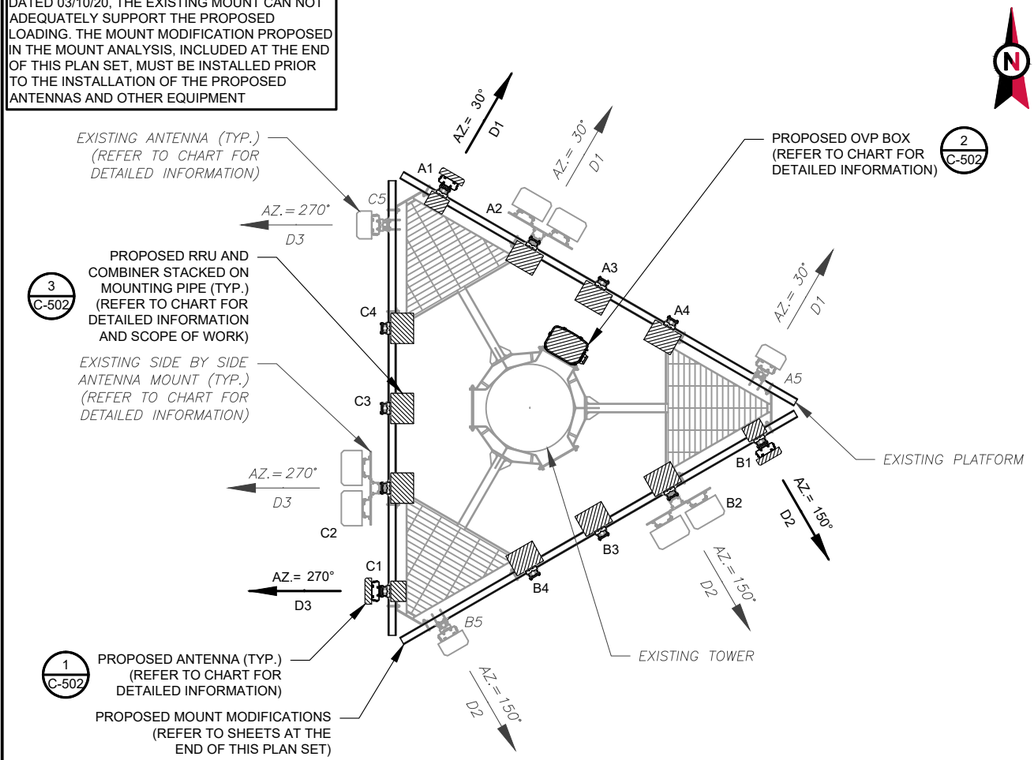
DETAILED SITE PLAN AND TOWER ELEVATION

SHEET NUMBER:	REVISION:
C-101	3



1 CURRENT ANTENNA PLAN

PER MOUNT ANALYSIS COMPLETED BY TRYLON, DATED 03/10/20, THE EXISTING MOUNT CAN NOT ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT MODIFICATION PROPOSED IN THE MOUNT ANALYSIS, INCLUDED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT



2 FINAL ANTENNA PLAN

EXISTING ANTENNA SCHEDULE								
LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
D1	110'	30°	A1	–	–	–	UHBA B13 RRH 4X30	RMV
			A2	(2) JAHH-65B-R3B	700/850/1900/2100 LTE	RMN	(2) FD9R6004/2C-3L B66A RRH4X45 (AWS-3)	RMV
			A3	–	–	–	UHFA B25 RRH 4X30	RMV
			A4	BXA-171063-8BF-EDIN-X	–	RMV	–	–
			A5	BXA-70080/6CF_	850 CDMA	RMN	–	–
D2	110'	150°	B1	–	–	–	UHBA B13 RRH 4X30	RMV
			B2	(2) JAHH-65B-R3B	700/850/1900/2100 LTE	RMN	(2) FD9R6004/2C-3L B66A RRH4X45 (AWS-3)	RMV
			B3	–	–	–	UHFA B25 RRH 4X30	RMV
			B4	BXA-171063-8BF-EDIN-X	–	RMV	–	–
			B5	BXA-70080/6CF_	850 CDMA	RMN	–	–
D3	110'	270°	C1	–	–	–	UHBA B13 RRH 4X30	RMV
			C2	(2) JAHH-65B-R3B	700/850/1900/2100 LTE	RMN	(2) FD9R6004/2C-3L B66A RRH4X45 (AWS-3)	RMV
			C3	–	–	–	UHFA B25 RRH 4X30	RMV
			C4	BXA-171063-8BF-EDIN-X	–	RMV	–	–
			C5	BXA-70080/6CF_	850 CDMA	RMN	–	–

EXISTING FIBER DISTRIBUTION/OVP BOX		EXISTING CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
(1) DB-T1-6Z-8AB-0Z	RMV	(6) 1-5/8"	–	RMN
–	–	(6) 1-5/8"	(1) 1-5/8"	RMV

STATUS ABBREVIATIONS
RMV: TO BE REMOVED
RMN: TO REMAIN
REL: TO BE RELOCATED
DSC: TO BE DISCONNECTED & REMAIN
ADD: TO BE ADDED

NOTES
1. BASED ON APPROVED ATC APPLICATION 12973878, DATED 09/04/19. CONFIRM WITH VERIZON WIRELESS REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS FOR NSN CONFIGURATION (CONFIG). GC TO CAP ALL UNUSED PORTS.
2. ATC HAS NOT YET VERIFIED ANY EXISTING ANTENNA CONFIG OR MOUNT CONFIG. CONTRACTOR TO VERIFY MOUNT CONFIG HAS SUFFICIENT SPACE FOR PROPOSED LESSEE EQUIPMENT (EQUIP) (I.E. CLEARANCES, MOUNT PIPE, SUFFICIENT LENGTH, ETC.) ATC DID NOT ANALYZE ANTENNA MOUNT TO DETERMINE ADEQUATE STRUCTURAL CAPACITY FOR ANY LESSEE LOADING.
3. ALL PROPOSED EQUIP INCLUDING ANTENNAS, COAX, ETC. SHALL BE MOUNTED IN ACCORDANCE WITH THE TOWER STRUCTURAL ANALYSIS ON FILE WITH ATC'S CM.
4. CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.
5. POSITIONS START WITH FIRST PIPE ON THE LEFT SIDE (AS VIEWED FROM BEHIND THE MOUNT).

FINAL ANTENNA SCHEDULE								
LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
D1	110'	30°	A1	LAA 1W	3.5GHZ LTE	ADD	CBRS 20W	ADD
			A2	(2) JAHH-65B-R3B	700/850/1900/2100 LTE	RMN	CBC78T-DS-43-2X	ADD
			A3	-	-	-	B2/B66A RRH-BR049	ADD
			A4	-	-	-	B5/B13 RRH-BR04C	ADD
			A5	BXA-70080/6CF_	850 CDMA	RMN	-	-
D2	110'	150°	B1	LAA 1W	3.5GHZ LTE	ADD	CBRS 20W	ADD
			B2	(2) JAHH-65B-R3B	700/850/1900/2100 LTE	RMN	CBC78T-DS-43-2X	ADD
			B3	-	-	-	B2/B66A RRH-BR049	ADD
			B4	-	-	-	B5/B13 RRH-BR04C	ADD
			B5	BXA-70080/6CF_	850 CDMA	RMN	-	-
D3	110'	270°	C1	LAA 1W	3.5GHZ LTE	ADD	CBRS 20W	ADD
			C2	(2) JAHH-65B-R3B	700/850/1900/2100 LTE	RMN	CBC78T-DS-43-2X	ADD
			C3	-	-	-	B2/B66A RRH-BR049	ADD
			C4	-	-	-	B5/B13 RRH-BR04C	ADD
			C5	BXA-70080/6CF_	850 CDMA	RMN	-	-

CABLE LENGTHS FOR JUMPERS
FIBER DISTRIBUTION/OVP TO RRU: 15'
RRU TO COMBINER: 16'
COMBINER TO ANTENNA: 10'

FINAL FIBER DISTRIBUTION/OVP BOX		FINAL CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
(1) DB-C1-12C-24AB-0Z	ADD	-	(1) 2.02"	ADD
-	-	(6) 1-5/8"	–	RMN

3 EQUIPMENT SCHEDULES

AMERICAN TOWER®
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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	AZ	12/09/19
1	UPDATED MOUNT ANALYSIS	AZ	02/18/20
2	ANTENNA AND RRU MODELS	AZ	03/19/20
3	NEW MOUNT ANALYSIS	AZ	03/24/20

ATC SITE NUMBER:
310968

ATC SITE NAME:
WSPT-WESTPORT REBUILD CT

SITE ADDRESS:
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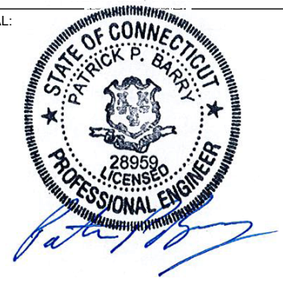
WESTPORT, CT 06880

SEAL:



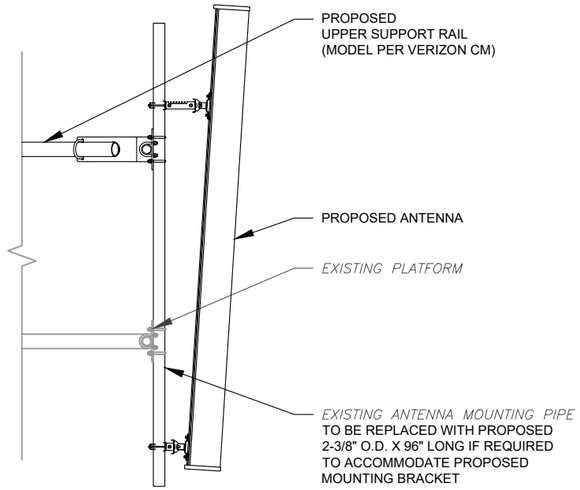
Authorized by "EOR"
Mark Date

verizon design

DRAWN BY:	AZ
APPROVED BY:	PPB
DATE DRAWN:	12/09/19
ATC JOB NO:	12973878
CUSTOMER ID:	WESTPORT 2 CT
CUSTOMER #:	468226

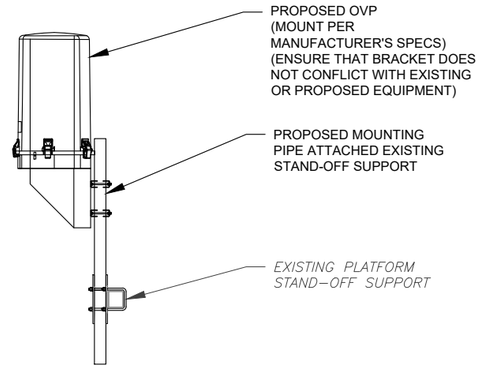
RF SCHEDULE AND ANTENNA INSTALLATION

SHEET NUMBER:	REVISION:
C-501	3



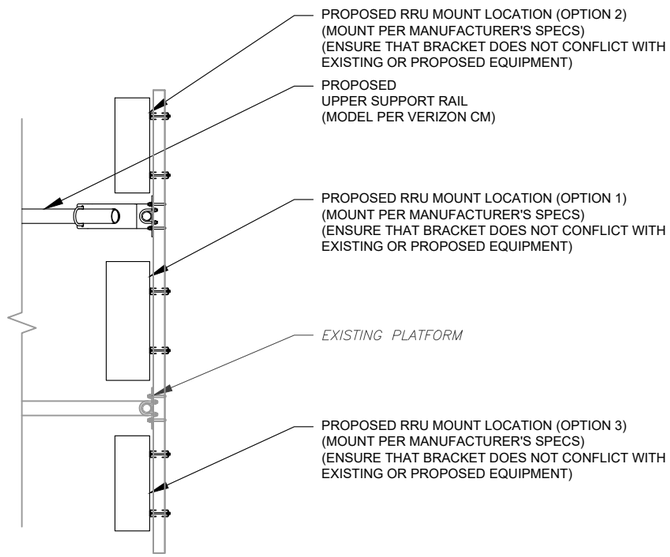
1 PROPOSED ANTENNA MOUNTING DETAIL - TYPICAL

SCALE: NOT TO SCALE



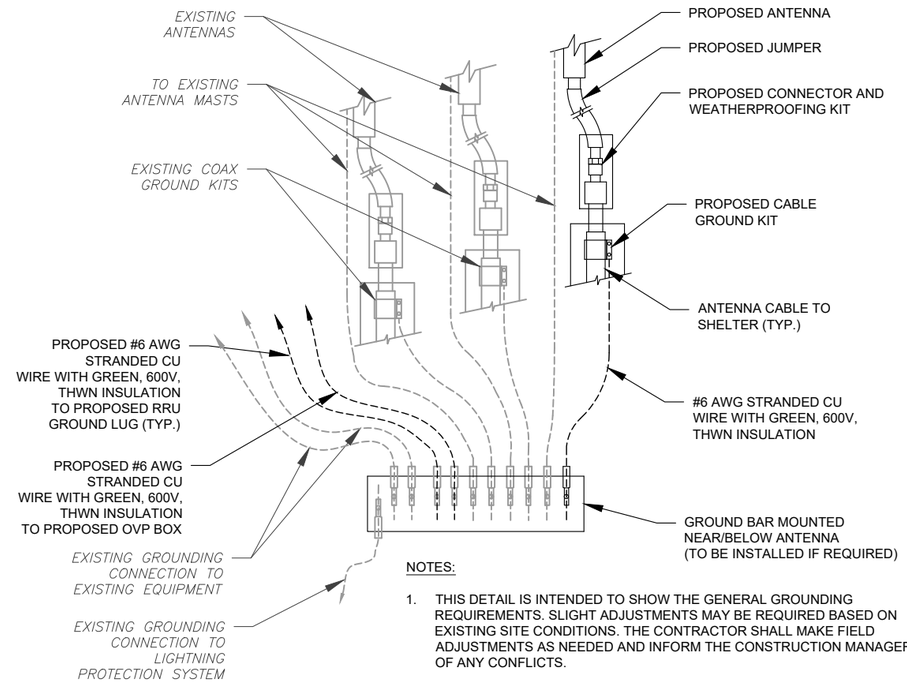
2 PROPOSED OVP MOUNTING

SCALE: NOT TO SCALE



3 PROPOSED RRU MOUNTING DETAIL - TYPICAL

SCALE: NOT TO SCALE



NOTES:

1. THIS DETAIL IS INTENDED TO SHOW THE GENERAL GROUNDING REQUIREMENTS. SLIGHT ADJUSTMENTS MAY BE REQUIRED BASED ON EXISTING SITE CONDITIONS. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NEEDED AND INFORM THE CONSTRUCTION MANAGER OF ANY CONFLICTS.
2. SITE GROUNDING SHALL COMPLY WITH VERIZON WIRELESS GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH VERIZON WIRELESS GROUNDING CHECKLIST, LATEST VERSION. WHEN NATIONAL AND LOCAL GROUNDING CODES ARE MORE STRINGENT THEY SHALL GOVERN.

4 TYPICAL ANTENNA GROUNDING DIAGRAM

SCALE: NOT TO SCALE

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	AZ	12/09/19

ATC SITE NUMBER:

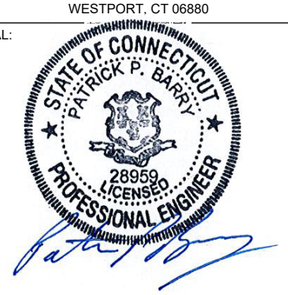
310968

ATC SITE NAME:

WSPT-WESTPORT REBUILD CT

SITE ADDRESS:
180A BAYBERRY LANE
WESTPORT, CT 06880

SEAL:



Authorized by "EOR"
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verizon design

DRAWN BY:	AZ
APPROVED BY:	PPB
DATE DRAWN:	12/09/19
ATC JOB NO:	12973878
CUSTOMER ID:	WESTPORT 2 CT
CUSTOMER #:	468226

CONSTRUCTION DETAILS

SHEET NUMBER:	REVISION:
C-502	0

Trylon

AMERICAN TOWER®

Mount Structural Analysis Report of the Existing Platform

Trylon Project #152155, Rev 3
March 9, 2020

Carrier Name	Verizon
ATC Site Code	310968
ATC Site Name	WSPT Westport Rebuild CT
Verizon Site Code	468226
Verizon Site Name	WESTPORT 2 CT
Site Adress	180 Bayberry Ln., Westport, Fairfield, CT 06880
Coordinates	Lat :41.171667 Long :-73.328472
Structure Type	Monopole
Structure Height	138-ft
Mount Elevation	110-ft
Antenna Centerline	110-ft
Standard	2015 IBC / ASCE 7-10 / TIA-222-H

Structure Rating =	55%	**CONDITIONAL PASS**

Analysis performed by:
Alexandru Ciuca

Reviewed and approved by:
Jinshan Wang, P.E.

6. Conclusions and Recommendations

Based on information provided, our calculations conclude that the Existing Verizon Platform located at 110-ft elevation on the existing Monopole at the specified address, is ADEQUATE to safely support the proposed equipment, subject to the attached Standard Conditions on page 3.

In order for this analysis result to be valid a Site Pro 1 HRK12 handrail kit must be installed at at approx.3 ft above the existing pipe face horizontal. The new handrail must be connected to all existing pipe mounts.

Classification	Classification
Mount Classification (w/ Ice, w/ Vertical Offset):	**M450R(600) - 15[2]**

Sincerely,
Analysis performed by:

Alexandru Ciuca

Reviewed by:

Jinshan Wang, P.E.

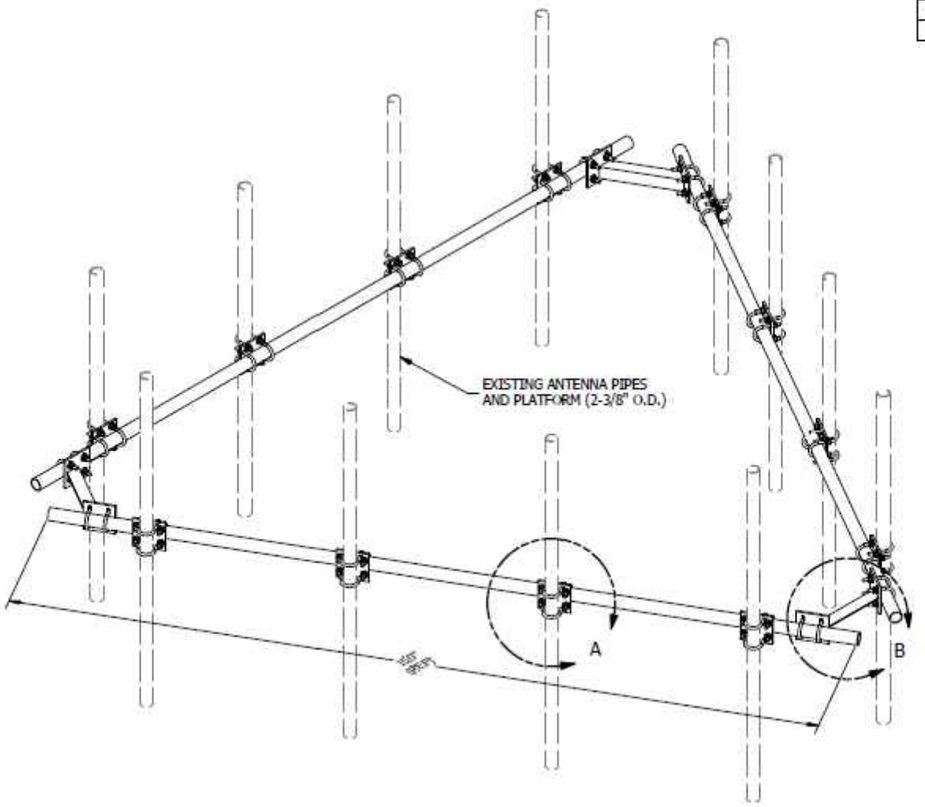
1825 W. Walnut Hill Lane Suite 302
Irving, Texas 75038

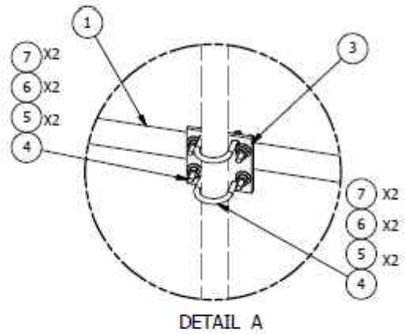
NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT. PLEASE REFERENCE THE MOUNT ANALYSIS REPORT FOR COMPLETE MOUNT ANALYSIS CALCULATIONS AND DETAILS. SUPPLEMENTAL PAGES INCLUDED IN THE CONSTRUCTION DRAWINGS ARE FOR REFERENCE ONLY. GENERAL CONTRACTOR IS TO VERYIFY THEY HAVE THE MOST RECENT MOUNT ANALYSIS PRIOR TO CONTRUCTION.

SUPPLEMENTAL

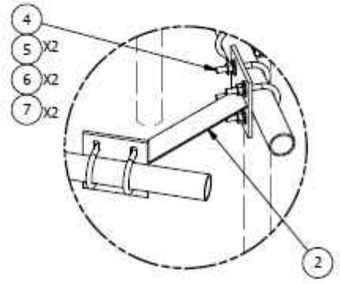
SHEET NUMBER:	REVISION:
R-601	3

PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	3	P2150	2-3/8" O.D. X 150" SCH 40 GALVANIZED PIPE	150 in	45.77	137.31
2	3	X-AHCP	ANGLE HANDRAIL CORNER PLATE		12.92	38.76
3	12	SCX1	CROSSOVER PLATE 2-3/8" X 2-3/8"	6 in	3.71	44.50
4	60	X-UB1212	1/2" X 2-1/2" X 4-1/2" X 2" U-BOLT (HDG.)		0.63	37.51
5	120	G12FW	1/2" HDG USS FLATWASHER	3/32 in	0.03	4.09
6	120	G12LW	1/2" HDG LOCKWASHER	1/8 in	0.01	1.67
7	120	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	8.60
					TOTAL WT. #	272.43





DETAIL A



DETAIL B

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
A	REPLACED HCP WITH X-AHCP		CEK	7/10/2014

REVISION HISTORY

TOLERANCE NOTES

TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
SAWED, SHEARED AND GAS CUT EDGES *(± 0.030")*
DRILLED AND GAS CUT HOLES *(± 0.030")* - NO CONING OF HOLES
LASER CUT EDGES AND HOLES *(± 0.010")* - NO CONING OF HOLES
BENDS ARE ± 1/2 DEGREE
ALL OTHER MACHINING *(± 0.030")*
ALL OTHER ASSEMBLY *(± 0.060")*

DESCRIPTION: HANDRAIL KIT FOR 12'-6" FACE

CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.
	KC8 5/30/2012		HRK12

CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
81	01	CUSTOMER	BMC 7/13/2014	HRK12

PAGE 1 OF 1

SITE PRO 1
A valmont COMPANY
Engineering Support Team: 1-888-753-7446
Locations: New York, NY; Atlanta, GA; Los Angeles, CA; Plymouth, IN; Salem, OR; Dallas, TX

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SUPPLEMENTAL

SHEET NUMBER: R-602

REVISION: 1