



STATE OF CONNECTICUT  
*CONNECTICUT SITING COUNCIL*

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**VIA ELECTRONIC MAIL**

August 9, 2021

Richard Zajac  
Site Acquisition Specialist  
Crown Castle USA  
4545 East River Road, Suite 320  
West Henrietta, NY 14586

RE: **TS-DISH-154-210621** - DISH Wireless LLC request for an order to approve tower sharing at an existing telecommunications facility located at 782 Old Clinton Road, Westbrook, Connecticut.

Dear Mr. Zajac:

The Connecticut Siting Council (Council) is in receipt of your correspondence of August 2, 2021 submitted in response to the Council's July 2, 2021 notification of an incomplete request for tower sharing with regard to the above-referenced matter.

The submission renders the request for tower sharing complete and the Council will process the request in accordance with the Federal Communications Commission 60-day timeframe.

Thank you for your attention and cooperation.

Sincerely,

*s/Melanie A. Bachman*

Melanie A. Bachman  
Executive Director

MAB/IN/laf

**From:** Zajac, Richard <Richard.Zajac@crowncastle.com>  
**Sent:** Monday, August 2, 2021 3:03 PM  
**To:** Robidoux, Evan <Evan.Robidoux@ct.gov>  
**Cc:** CSC-DL Siting Council <Siting.Council@ct.gov>  
**Subject:** RE: Council Incomplete Letter for TS-DISH-154-210621 (782 Old Clinton Road, Westbrook)

Good afternoon,

Pursuant to the incomplete letter issued for TS-DISH-154-210621, please see the attached mount analysis report. A hard copy of this report will be sent via FedEx to arrive to you tomorrow, 8/3.

If you have any questions/comments/concerns or require additional information in order to resume the review process/issue an approval, please do not hesitate to contact me.

Thank you,

**RICH ZAJAC**

Site Acquisition Specialist

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**CROWN CASTLE**

4545 East River Road, Suite 320

West Henrietta, NY 14586

Date: **July 21, 2021**

Darcy Tarr  
Crown Castle  
3530 Tornigdon Way, Suite 300  
Charlotte, NC 28277  
(704) 405-6589



Trylon  
1825 W. Walnut Hill Lane,  
Suite 302  
Irving, TX 75038  
214-930-1730

**Subject:** **Mount Replacement Analysis Report**

**Carrier Designation:** **DISH Network Equipment Change Out**  
**Carrier Site Number:** BOBDL00089A  
**Carrier Site Name:** CT-CCI-T-876339

**Crown Castle Designation:** **Crown Castle BU Number:** 876339  
**Crown Castle Site Name:** POND MEADOW RD. STABLE  
**Crown Castle JDE Job Number:** 645180  
**Crown Castle Order Number:** 553290 Rev. 1

**Engineering Firm Designation:** **Trylon Report Designation:** 188206

**Site Data:** **782 Old Clinton Road, Westbrook, Middlesex County, CT, 06498**  
**Latitude 41°17'25.70" Longitude -72°28'7.90"**

**Structure Information:** **Tower Height & Type:** **160.0 ft Monopole**  
**Mount Elevation:** **132.0 ft**  
**Mount Type:** **8.0 ft Platform**

Dear Darcy Tarr,

Trylon is pleased to submit this "**Mount Replacement Analysis Report**" to determine the structural integrity of DISH Network's antenna mounting system with the proposed appurtenance and equipment addition on the abovementioned supporting tower structure. Analysis of the existing supporting tower structure is to be completed by others and therefore is not part of this analysis. Analysis of the antenna mounting system as a tie-off point for fall protection or rigging is not part of this document.

The purpose of the analysis is to determine acceptability of the mount stress level. Based on our analysis we have determined the mount stress level to be:

**Platform** **Sufficient**  
**\*Sufficient upon completion of the changes listed in the 'Recommendations' section of this report.**

This analysis utilizes an ultimate 3-second gust wind speed of 135 mph as required by the 2015 International Building Code. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Mount analysis prepared by: Jordan Everson, E.I.T.

Respectfully Submitted by:  
Cliff Abernathy, P.E.



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## 1) INTRODUCTION

This is a proposed 3 sector 8.0 ft Platform, designed by Commscope.

## 2) ANALYSIS CRITERIA

<b>Building Code:</b>	2015 IBC
<b>TIA-222 Revision:</b>	TIA-222-H
<b>Risk Category:</b>	II
<b>Ultimate Wind Speed:</b>	135 mph
<b>Exposure Category:</b>	B
<b>Topographic Factor at Base:</b>	1.0
<b>Topographic Factor at Mount:</b>	1.0
<b>Ice Thickness:</b>	1.5 in
<b>Wind Speed with Ice:</b>	50 mph
<b>Seismic S<sub>s</sub>:</b>	0.167
<b>Seismic S<sub>1</sub>:</b>	0.059
<b>Live Loading Wind Speed:</b>	30 mph
<b>Man Live Load at Mid/End-Points:</b>	250 lb
<b>Man Live Load at Mount Pipes:</b>	500 lb

**Table 1 - Proposed Equipment Configuration**

Mount Centerline (ft)	Antenna Centerline (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Mount / Modification Details
132.0	132.0	3	JMA WIRELESS	MX08FRO665-20	8.0 ft Platform [Commscope MC-PK8-DSH]
		3	FUJITSU	TA08025-B604	
		3	FUJITSU	TA08025-B605	
		1	RAYCAP	RDIDC-9181-PF-48	

## 3) ANALYSIS PROCEDURE

**Table 2 - Documents Provided**

Document	Remarks	Reference	Source
Crown Application	DISH Network Application	553290 Rev. 1	CCI Sites
Construction Drawings	Infinigy	BOBDL00089A	TSA
Mount Manufacturer Drawings	Commscope	MC-PK8-DSH	TSA

### 3.1) Analysis Method

RISA-3D (Version 17.0.4), 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.

A tool internally developed, using Microsoft Excel, by Tylon was used to calculate wind loading on all appurtenances, dishes, and mount members for various load cases. Selected output from the analysis is included in Appendix B.

This analysis was performed in accordance with Crown Castle's ENG-SOW-10208 *Tower Mount Analysis* (Revision B).

### 3.2) Assumptions

- 1) The antenna mounting system was properly fabricated, installed and maintained in good condition in accordance with its original design and manufacturer's specifications.
- 2) The configuration of antennas, mounts, and other appurtenances are as specified in Table 1 and the referenced drawings.
- 3) All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected member unless otherwise specified in this report.
- 4) The analysis will be required to be revised if the existing conditions in the field differ from those shown in the above-referenced documents or assumed in this analysis. No allowance was made for any damaged, missing, or rusted members.
- 5) Prior structural modifications to the tower mounting system are assumed to be installed as shown per available data.
- 6) Steel grades have been assumed as follows, unless noted otherwise:
 

Channel, Solid Round, Angle, Plate	ASTM A36 (GR 36)
HSS (Rectangular)	ASTM A500 (GR B-46)
Pipe	ASTM A53 (GR 35)
Connection Bolts	ASTM A325

This analysis may be affected if any assumptions are not valid or have been made in error. Tylon should be notified to determine the effect on the structural integrity of the antenna mounting system.

### 4) ANALYSIS RESULTS

**Table 3 - Mount Component Stresses vs. Capacity (Platform, All Sectors)**

Notes	Component	Critical Member	Centerline (ft)	% Capacity	Pass / Fail
1, 2	Mount Pipe(s)	MP3	121.0	35.0	Pass
	Horizontal(s)	H1		10.7	Pass
	Standoff(s)	M12		50.4	Pass
	Bracing(s)	M1		37.8	Pass
	Mount Connection(s)	--		20.6	Pass

<b>Structure Rating (max from all components) =</b>	<b>50.4%</b>
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Notes:

- 1) See additional documentation in "Appendix C - Software Analysis Output" for calculations supporting the % capacity consumed.
- 2) Rating per TIA-222-H, Section 15.5

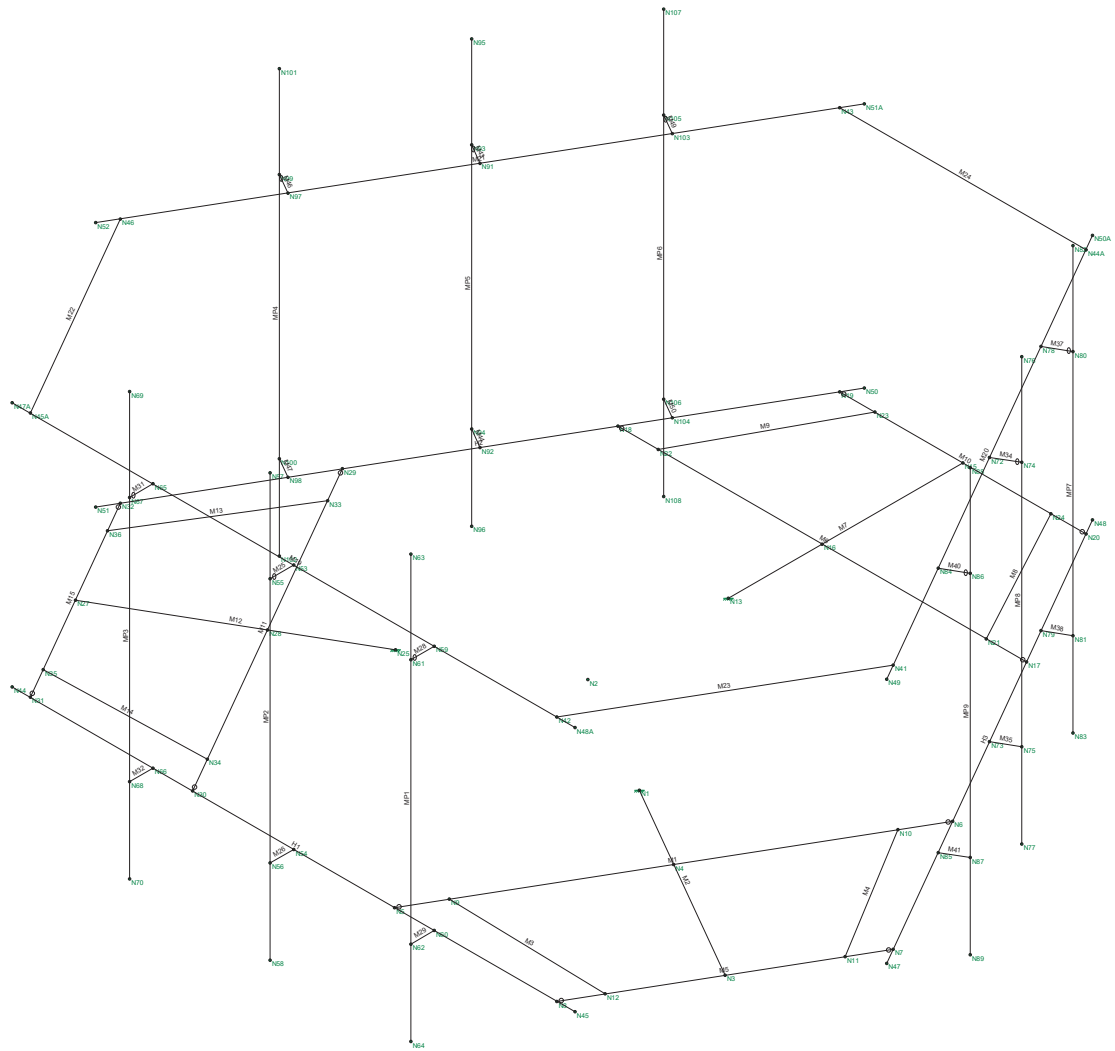
#### 4.1) Recommendations

The mount has sufficient capacity to carry the proposed loading configuration. In order for the results of the analysis to be considered valid, the proposed mount listed below must be installed.

1. Commscope MC-PK8-DSH.

No structural modifications are required at this time, provided that the above-listed changes are implemented.

**APPENDIX A**  
**WIRE FRAME AND RENDERED MODELS**

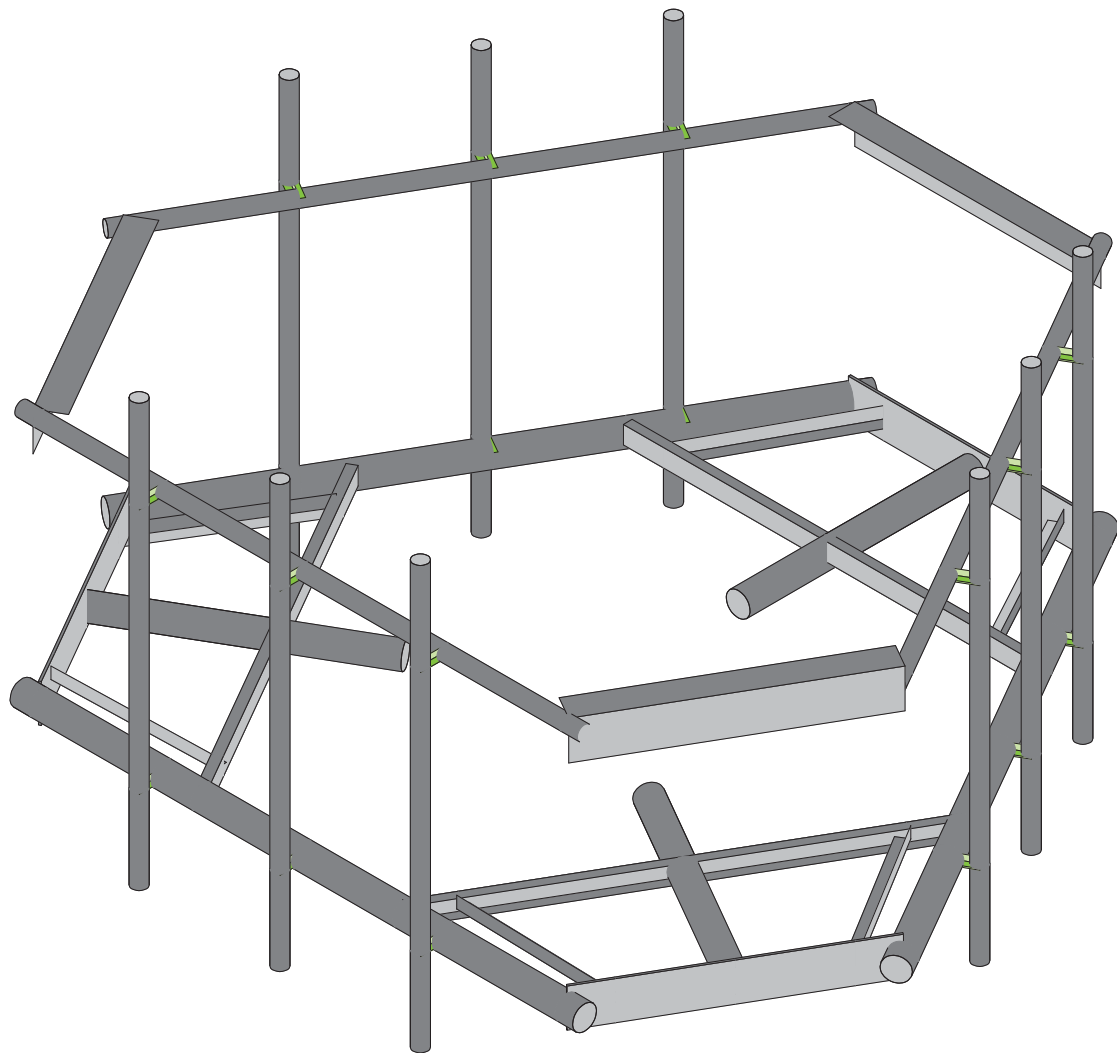


Trylon
JE

876339

Wireframe
July 21, 2021 at 2:40 PM
876339_loaded.r3d





Trylon

JE

876339

Render

July 21, 2021 at 2:40 PM

876339\_loaded.r3d

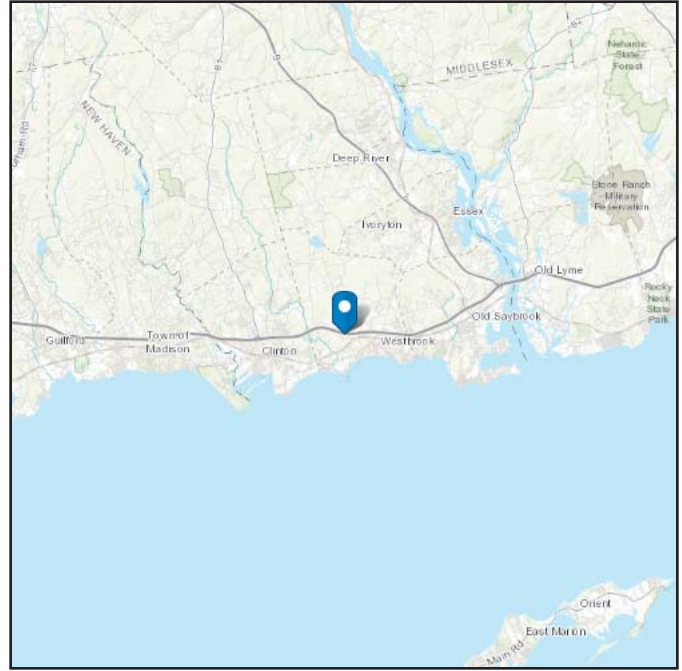
**APPENDIX B**  
**SOFTWARE INPUT CALCULATIONS**

# ASCE 7 Hazards Report

**Address:**  
No Address at This  
Location

**Standard:** ASCE/SEI 7-10  
**Risk Category:** II  
**Soil Class:** D - Stiff Soil

**Elevation:** 94.72 ft (NAVD 88)  
**Latitude:** 41.290472  
**Longitude:** -72.468861

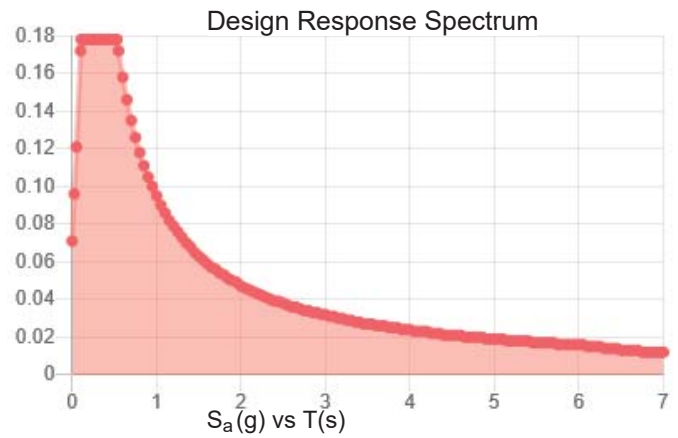
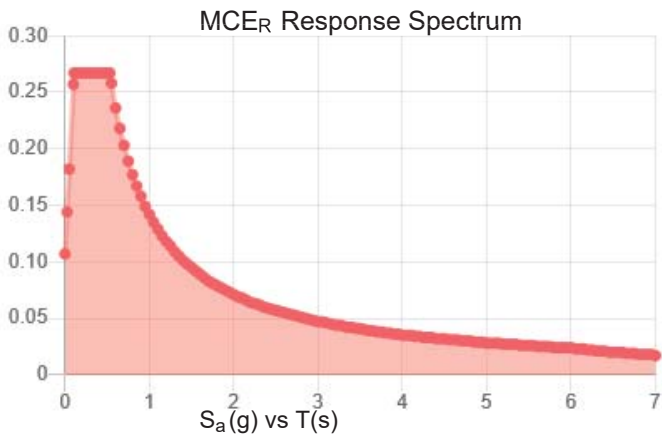


**Site Soil Class:** D - Stiff Soil

**Results:**

$S_s$ :	0.167	$S_{DS}$ :	0.178
$S_1$ :	0.059	$S_{D1}$ :	0.095
$F_a$ :	1.6	$T_L$ :	6
$F_v$ :	2.4	PGA :	0.084
$S_{MS}$ :	0.267	PGA <sub>M</sub> :	0.134
$S_{M1}$ :	0.142	F <sub>PGA</sub> :	1.6
		$I_e$ :	1

**Seismic Design Category** B



**Data Accessed:**

Wed Jul 21 2021

**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

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**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:** Wed Jul 21 2021

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.

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The ASCE 7 Hazard Tool is provided for your convenience, for informational purposes only, and is provided “as is” and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE 7 standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

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**TIA LOAD CALCULATOR 2.0**

PROJECT DATA		
Job Code:	188206	
Carrier Site ID:	876339	
Carrier Site Name:	OND MEADOW RD. STABL	

CODES AND STANDARDS		
Building Code:	2015 IBC	
Local Building Code:	2018 CBC	
Design Standard:	TIA-222-H	

STRUCTURE DETAILS		
Mount Type:	Platform	--
Mount Elevation:	132.0	ft.
Number of Sectors:	3	--
Structure Type:	Monopole	--
Structure Height:	160.0	ft.

ANALYSIS CRITERIA		
Structure Risk Category:	II	--
Exposure Category:	B	--
Site Class:	D - Stiff Soil	--
Ground Elevation:	94	ft.

TOPOGRAPHIC DATA		
Topographic Category:	1.00	--
Topographic Feature:	N/A	--
Crest Point Elevation:	0.00	ft.
Base Point Elevation:	0.00	ft.
Crest to Mid-Height (L/2):	0.00	ft.
Distance from Crest (x):	0.00	ft.
Base Topo Factor ( $K_{zt}$ ):	1.00	--
Mount Topo Factor ( $K_{zt}$ ):	1.00	--

WIND PARAMETERS		
Design Wind Speed:	135	mph
Wind Escalation Factor ( $K_s$ ):	1.00	--
Velocity Coefficient ( $K_z$ ):	1.07	--
Directionality Factor ( $K_d$ ):	0.95	--
Gust Effect Factor ( $G_h$ ):	1.00	--
Shielding Factor ( $K_a$ ):	0.90	--
Velocity Pressure ( $q_z$ ):	47.26	psf

ICE PARAMETERS		
Design Ice Wind Speed:	50	mph
Design Ice Thickness ( $t_i$ ):	1.50	in
Importance Factor ( $I_i$ ):	1.00	--
Ice Velocity Pressure ( $q_{zi}$ ):	47.26	psf
Mount Ice Thickness ( $t_{iz}$ ):	1.72	in

WIND STRUCTURE CALCULATIONS		
Flat Member Pressure:	85.06	psf
Round Member Pressure:	51.04	psf
Ice Wind Pressure:	7.52	psf

SEISMIC PARAMETERS		
Importance Factor ( $I_e$ ):	1.00	--
Short Period Accel. ( $S_s$ ):	0.17	g
1 Second Accel. ( $S_1$ ):	0.06	g
Short Period Des. ( $S_{DS}$ ):	0.18	g
1 Second Des. ( $S_{D1}$ ):	0.09	g
Short Period Coeff. ( $F_a$ ):	1.60	--
1 Second Coeff. ( $F_v$ ):	2.40	--
Response Coefficient ( $C_s$ ):	0.09	--
Amplification Factor ( $A_S$ ):	1.20	--

## LOAD COMBINATIONS [LRFD]

#	Description
1	1.4DL
2	1.2DL + 1WL 0 AZI
3	1.2DL + 1WL 30 AZI
4	1.2DL + 1WL 45 AZI
5	1.2DL + 1WL 60 AZI
6	1.2DL + 1WL 90 AZI
7	1.2DL + 1WL 120 AZI
8	1.2DL + 1WL 135 AZI
9	1.2DL + 1WL 150 AZI
10	1.2DL + 1WL 180 AZI
11	1.2DL + 1WL 210 AZI
12	1.2DL + 1WL 225 AZI
13	1.2DL + 1WL 240 AZI
14	1.2DL + 1WL 270 AZI
15	1.2DL + 1WL 300 AZI
16	1.2DL + 1WL 315 AZI
17	1.2DL + 1WL 330 AZI
18	0.9DL + 1WL 0 AZI
19	0.9DL + 1WL 30 AZI
20	0.9DL + 1WL 45 AZI
21	0.9DL + 1WL 60 AZI
22	0.9DL + 1WL 90 AZI
23	0.9DL + 1WL 120 AZI
24	0.9DL + 1WL 135 AZI
25	0.9DL + 1WL 150 AZI
26	0.9DL + 1WL 180 AZI
27	0.9DL + 1WL 210 AZI
28	0.9DL + 1WL 225 AZI
29	0.9DL + 1WL 240 AZI
30	0.9DL + 1WL 270 AZI
31	0.9DL + 1WL 300 AZI
32	0.9DL + 1WL 315 AZI
33	0.9DL + 1WL 330 AZI
34	1.2DL + 1DLi + 1WLi 0 AZI
35	1.2DL + 1DLi + 1WLi 30 AZI
36	1.2DL + 1DLi + 1WLi 45 AZI
37	1.2DL + 1DLi + 1WLi 60 AZI
38	1.2DL + 1DLi + 1WLi 90 AZI
39	1.2DL + 1DLi + 1WLi 120 AZI
40	1.2DL + 1DLi + 1WLi 135 AZI
41	1.2DL + 1DLi + 1WLi 150 AZI

#	Description
42	1.2DL + 1DLi + 1WLi 180 AZI
43	1.2DL + 1DLi + 1WLi 210 AZI
44	1.2DL + 1DLi + 1WLi 225 AZI
45	1.2DL + 1DLi + 1WLi 240 AZI
46	1.2DL + 1DLi + 1WLi 270 AZI
47	1.2DL + 1DLi + 1WLi 300 AZI
48	1.2DL + 1DLi + 1WLi 315 AZI
49	1.2DL + 1DLi + 1WLi 330 AZI
50	(1.2+0.2Sds) + 1.0E 0 AZI
51	(1.2+0.2Sds) + 1.0E 30 AZI
52	(1.2+0.2Sds) + 1.0E 45 AZI
53	(1.2+0.2Sds) + 1.0E 60 AZI
54	(1.2+0.2Sds) + 1.0E 90 AZI
55	(1.2+0.2Sds) + 1.0E 120 AZI
56	(1.2+0.2Sds) + 1.0E 135 AZI
57	(1.2+0.2Sds) + 1.0E 150 AZI
58	(1.2+0.2Sds) + 1.0E 180 AZI
59	(1.2+0.2Sds) + 1.0E 210 AZI
60	(1.2+0.2Sds) + 1.0E 225 AZI
61	(1.2+0.2Sds) + 1.0E 240 AZI
62	(1.2+0.2Sds) + 1.0E 270 AZI
63	(1.2+0.2Sds) + 1.0E 300 AZI
64	(1.2+0.2Sds) + 1.0E 315 AZI
65	(1.2+0.2Sds) + 1.0E 330 AZI
66	(0.9-0.2Sds) + 1.0E 0 AZI
67	(0.9-0.2Sds) + 1.0E 30 AZI
68	(0.9-0.2Sds) + 1.0E 45 AZI
69	(0.9-0.2Sds) + 1.0E 60 AZI
70	(0.9-0.2Sds) + 1.0E 90 AZI
71	(0.9-0.2Sds) + 1.0E 120 AZI
72	(0.9-0.2Sds) + 1.0E 135 AZI
73	(0.9-0.2Sds) + 1.0E 150 AZI
74	(0.9-0.2Sds) + 1.0E 180 AZI
75	(0.9-0.2Sds) + 1.0E 210 AZI
76	(0.9-0.2Sds) + 1.0E 225 AZI
77	(0.9-0.2Sds) + 1.0E 240 AZI
78	(0.9-0.2Sds) + 1.0E 270 AZI
79	(0.9-0.2Sds) + 1.0E 300 AZI
80	(0.9-0.2Sds) + 1.0E 315 AZI
81	(0.9-0.2Sds) + 1.0E 330 AZI
82-88	1.2D + 1.5 Lv1

#	Description
89	1.2D + 1.5Lm + 1.0Wm 0 AZI - MP1
90	1.2D + 1.5Lm + 1.0Wm 30 AZI - MP1
91	1.2D + 1.5Lm + 1.0Wm 45 AZI - MP1
92	1.2D + 1.5Lm + 1.0Wm 60 AZI - MP1
93	1.2D + 1.5Lm + 1.0Wm 90 AZI - MP1
94	1.2D + 1.5Lm + 1.0Wm 120 AZI - MP1
95	1.2D + 1.5Lm + 1.0Wm 135 AZI - MP1
96	1.2D + 1.5Lm + 1.0Wm 150 AZI - MP1
97	1.2D + 1.5Lm + 1.0Wm 180 AZI - MP1
98	1.2D + 1.5Lm + 1.0Wm 210 AZI - MP1
99	1.2D + 1.5Lm + 1.0Wm 225 AZI - MP1
100	1.2D + 1.5Lm + 1.0Wm 240 AZI - MP1
101	1.2D + 1.5Lm + 1.0Wm 270 AZI - MP1
102	1.2D + 1.5Lm + 1.0Wm 300 AZI - MP1
103	1.2D + 1.5Lm + 1.0Wm 315 AZI - MP1
104	1.2D + 1.5Lm + 1.0Wm 330 AZI - MP1
105	1.2D + 1.5Lm + 1.0Wm 0 AZI - MP2
106	1.2D + 1.5Lm + 1.0Wm 30 AZI - MP2
107	1.2D + 1.5Lm + 1.0Wm 45 AZI - MP2
108	1.2D + 1.5Lm + 1.0Wm 60 AZI - MP2
109	1.2D + 1.5Lm + 1.0Wm 90 AZI - MP2
110	1.2D + 1.5Lm + 1.0Wm 120 AZI - MP2
111	1.2D + 1.5Lm + 1.0Wm 135 AZI - MP2
112	1.2D + 1.5Lm + 1.0Wm 150 AZI - MP2
113	1.2D + 1.5Lm + 1.0Wm 180 AZI - MP2
114	1.2D + 1.5Lm + 1.0Wm 210 AZI - MP2
115	1.2D + 1.5Lm + 1.0Wm 225 AZI - MP2
116	1.2D + 1.5Lm + 1.0Wm 240 AZI - MP2
117	1.2D + 1.5Lm + 1.0Wm 270 AZI - MP2
118	1.2D + 1.5Lm + 1.0Wm 300 AZI - MP2
119	1.2D + 1.5Lm + 1.0Wm 315 AZI - MP2
120	1.2D + 1.5Lm + 1.0Wm 330 AZI - MP2

#	Description
121	1.2D + 1.5Lm + 1.0Wm 0 AZI - MP3
122	1.2D + 1.5Lm + 1.0Wm 30 AZI - MP3
123	1.2D + 1.5Lm + 1.0Wm 45 AZI - MP3
124	1.2D + 1.5Lm + 1.0Wm 60 AZI - MP3
125	1.2D + 1.5Lm + 1.0Wm 90 AZI - MP3
126	1.2D + 1.5Lm + 1.0Wm 120 AZI - MP3
127	1.2D + 1.5Lm + 1.0Wm 135 AZI - MP3
128	1.2D + 1.5Lm + 1.0Wm 150 AZI - MP3
129	1.2D + 1.5Lm + 1.0Wm 180 AZI - MP3
130	1.2D + 1.5Lm + 1.0Wm 210 AZI - MP3
131	1.2D + 1.5Lm + 1.0Wm 225 AZI - MP3
132	1.2D + 1.5Lm + 1.0Wm 240 AZI - MP3
133	1.2D + 1.5Lm + 1.0Wm 270 AZI - MP3
134	1.2D + 1.5Lm + 1.0Wm 300 AZI - MP3
135	1.2D + 1.5Lm + 1.0Wm 315 AZI - MP3
136	1.2D + 1.5Lm + 1.0Wm 330 AZI - MP3
137	1.2D + 1.5Lm + 1.0Wm 0 AZI - MP4
138	1.2D + 1.5Lm + 1.0Wm 30 AZI - MP4
139	1.2D + 1.5Lm + 1.0Wm 45 AZI - MP4
140	1.2D + 1.5Lm + 1.0Wm 60 AZI - MP4
141	1.2D + 1.5Lm + 1.0Wm 90 AZI - MP4
142	1.2D + 1.5Lm + 1.0Wm 120 AZI - MP4
143	1.2D + 1.5Lm + 1.0Wm 135 AZI - MP4
144	1.2D + 1.5Lm + 1.0Wm 150 AZI - MP4
145	1.2D + 1.5Lm + 1.0Wm 180 AZI - MP4
146	1.2D + 1.5Lm + 1.0Wm 210 AZI - MP4
147	1.2D + 1.5Lm + 1.0Wm 225 AZI - MP4
148	1.2D + 1.5Lm + 1.0Wm 240 AZI - MP4
149	1.2D + 1.5Lm + 1.0Wm 270 AZI - MP4
150	1.2D + 1.5Lm + 1.0Wm 300 AZI - MP4
151	1.2D + 1.5Lm + 1.0Wm 315 AZI - MP4
152	1.2D + 1.5Lm + 1.0Wm 330 AZI - MP4

\*This page shows an example of maintenance loads for (4) pipes, the number of mount pipe LCs may vary per site



# EQUIPMENT LOADING

<i>Appurtenance Name/Location</i>	<i>Qty.</i>	<i>Elevation [ft]</i>	<i>--</i>	<i>EPA<sub>N</sub> (ft<sup>2</sup>)</i>	<i>EPA<sub>T</sub> (ft<sup>2</sup>)</i>	<i>Weight (lbs)</i>
MX08FRO665-20	3	132	No Ice	8.01	3.21	82.50
MP1/MP4/MP7, 0/120/240	--	--	w/ Ice	9.63	4.63	285.63
TA08025-B604	3	132	No Ice	1.96	0.98	63.90
MP1/MP4/MP7, 0/120/240	--	--	w/ Ice	2.39	1.31	69.48
TA08025-B605	3	132	No Ice	1.96	1.13	75.00
MP1/MP4/MP7, 0/120/240	--	--	w/ Ice	2.39	1.47	74.02
RDIDC-9181-PF-48	1	132	No Ice	2.01	1.17	21.85
MP3, 0	--	--	w/ Ice	2.44	1.52	72.95
			No Ice			
--	--	--	w/ Ice			
			No Ice			
--	--	--	w/ Ice			
			No Ice			
--	--	--	w/ Ice			
			No Ice			
--	--	--	w/ Ice			
			No Ice			
--	--	--	w/ Ice			
			No Ice			
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			No Ice			
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			No Ice			
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			No Ice			
--	--	--	w/ Ice			
			No Ice			
--	--	--	w/ Ice			

## EQUIPMENT LOADING [CONT.]

<i>Appurtenance Name/Location</i>	<i>Qty.</i>	<i>Elevation [ft]</i>	<i>--</i>	<i>EPA<sub>N</sub> (ft<sup>2</sup>)</i>	<i>EPA<sub>T</sub> (ft<sup>2</sup>)</i>	<i>Weight (lbs)</i>
			No Ice			
--	--	--	w/ Ice			
			No Ice			
--	--	--	w/ Ice			
			No Ice			
--	--	--	w/ Ice			
			No Ice			
--	--	--	w/ Ice			
			No Ice			
--	--	--	w/ Ice			
			No Ice			
--	--	--	w/ Ice			
			No Ice			
--	--	--	w/ Ice			
			No Ice			
--	--	--	w/ Ice			
			No Ice			
--	--	--	w/ Ice			
			No Ice			
--	--	--	w/ Ice			
			No Ice			
--	--	--	w/ Ice			

## EQUIPMENT WIND CALCULATIONS

<i>Appurtenance Name</i>	<i>Qty.</i>	<i>Elevation [ft]</i>	$K_{zt}$	$K_z$	$K_d$	$t_d$	$q_z$ [psf]	$q_{zi}$ [psf]
MX08FRO665-20	3	132	1.00	1.07	0.95	1.72	47.26	6.48
TA08025-B604	3	132	1.00	1.07	0.95	1.72	47.26	6.48
TA08025-B605	3	132	1.00	1.07	0.95	1.72	47.26	6.48
RDIDC-9181-PF-48	1	132	1.00	1.07	0.95	1.72	47.26	6.48

## EQUIPMENT LATERAL WIND FORCE CALCULATIONS

<i>Appurtenance Name</i>	<i>Qty.</i>	<i>--</i>	<i>0° 180°</i>	<i>30° 210°</i>	<i>60° 240°</i>	<i>90° 270°</i>	<i>120° 300°</i>	<i>150° 330°</i>
MX08FRO665-20	3	No Ice	340.67	187.56	289.64	136.52	289.64	187.56
MP1/MP4/MP7, 0/120/240	--	w/ Ice	56.20	34.32	48.91	27.03	48.91	34.32
TA08025-B604	3	No Ice	83.51	52.17	73.06	41.73	73.06	52.17
MP1/MP4/MP7, 0/120/240	--	w/ Ice	13.92	9.21	12.35	7.64	12.35	9.21
TA08025-B605	3	No Ice	83.51	56.91	74.64	48.04	74.64	56.91
MP1/MP4/MP7, 0/120/240	--	w/ Ice	13.92	9.92	12.58	8.59	12.58	9.92
RDIDC-9181-PF-48	1	No Ice	85.57	58.65	76.60	49.68	76.60	58.65
MP3, 0	--	w/ Ice	14.24	10.23	12.90	8.89	12.90	10.23
		No Ice						
--	--	w/ Ice						
		No Ice						
--	--	w/ Ice						
		No Ice						
--	--	w/ Ice						
		No Ice						
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--	--	w/ Ice						
		No Ice						
--	--	w/ Ice						

**EQUIPMENT LATERAL WIND FORCE CALCULATIONS [CONT.]**

<i>Appurtenance Name</i>	<i>Qty.</i>	<i>--</i>	<i>0° 180°</i>	<i>30° 210°</i>	<i>60° 240°</i>	<i>90° 270°</i>	<i>120° 300°</i>	<i>150° 330°</i>
		No Ice						
--	--	w/ Ice						
		No Ice						
--	--	w/ Ice						
		No Ice						
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		No Ice						
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		No Ice						
--	--	w/ Ice						
		No Ice						
--	--	w/ Ice						

## EQUIPMENT SEISMIC FORCE CALCULATIONS

<i>Appurtenance Name</i>	<i>Qty.</i>	<i>Elevation [ft]</i>	<i>Weight [lbs]</i>	<i>F<sub>p</sub> [lbs]</i>
MX08FRO665-20	3	132	82.5	8.82
TA08025-B604	3	132	63.9	6.83
TA08025-B605	3	132	75	8.02
RDIDC-9181-PF-48	1	132	21.85	2.34

**APPENDIX C**  
**SOFTWARE ANALYSIS OUTPUT**

**(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	Y
Global Member Orientation Plane	XZ
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 S100-12: LRFD
Wood Code	AWC NDS-15: ASD
Wood Temperature	< 100F
Concrete Code	ACI 318-14
Masonry Code	ACI 530-13: Strength
Aluminum Code	AA ADM1-10: LRFD - 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?	Yes
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[psi]	Ry	Fu[psi]	Rt	
1	A992	29000	11154	.3	.65	.49	50000	1.1	65000	1.1
2	A36 Gr.36	29000	11154	.3	.65	.49	36000	1.5	58000	1.2
3	A572 Gr.50	29000	11154	.3	.65	.49	50000	1.1	65000	1.1
4	A500 Gr.B RND	29000	11154	.3	.65	.527	42000	1.4	58000	1.3
5	A500 Gr.B Rect	29000	11154	.3	.65	.527	46000	1.4	58000	1.3
6	A53 Gr.B	29000	11154	.3	.65	.49	35000	1.6	60000	1.2
7	A1085	29000	11154	.3	.65	.49	50000	1.4	65000	1.3

**Hot Rolled Steel Section Sets**

	Label	Shape	Type	Design List	Material	Design Ru...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Plates	6.5"x0.37" Plate	Beam	RECT	A53 Gr.B	Typical	2.405	.027	8.468	.106
2	Grating Bracing	L2x2x3	Beam	Single Angle	A36 Gr.36	Typical	.722	.271	.271	.009
3	Standoffs	PIPE 3.5	Beam	Pipe	A53 Gr.B	Typical	2.5	4.52	4.52	9.04
4	Standoff Bracing	C3X5	Beam	Channel	A36 Gr.36	Typical	1.47	.241	1.85	.043
5	Handrails	PIPE 2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
6	Handrail Corners	L6 5/8x4 7/16x...	Beam	Single Angle	A36 Gr.36	Typical	2.039	3.593	9.575	.023
7	Horizontals	PIPE 3.5	Beam	Pipe	A53 Gr.B	Typical	2.5	4.52	4.52	9.04
8	Mount Pipes	PIPE 2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25

### 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	N25	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
2	N1	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
3	N13	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	N5	N6			Standoff Bracing	Beam	Channel	A36 Gr.36	Typical
2	M2	N3	N1			Standoffs	Beam	Pipe	A53 Gr.B	Typical
3	M3	N9	N12		270	Grating Bracing	Beam	Single Angle	A36 Gr.36	Typical
4	M4	N10	N11			Grating Bracing	Beam	Single Angle	A36 Gr.36	Typical
5	M5	N8	N7			Plates	Beam	RECT	A53 Gr.B	Typical
6	M6	N17	N18			Standoff Bracing	Beam	Channel	A36 Gr.36	Typical
7	M7	N15	N13			Standoffs	Beam	Pipe	A53 Gr.B	Typical
8	M8	N21	N24		270	Grating Bracing	Beam	Single Angle	A36 Gr.36	Typical
9	M9	N22	N23			Grating Bracing	Beam	Single Angle	A36 Gr.36	Typical
10	M10	N20	N19			Plates	Beam	RECT	A53 Gr.B	Typical
11	M11	N29	N30			Standoff Bracing	Beam	Channel	A36 Gr.36	Typical
12	M12	N27	N25			Standoffs	Beam	Pipe	A53 Gr.B	Typical
13	M13	N33	N36		270	Grating Bracing	Beam	Single Angle	A36 Gr.36	Typical
14	M14	N34	N35			Grating Bracing	Beam	Single Angle	A36 Gr.36	Typical
15	M15	N32	N31			Plates	Beam	RECT	A53 Gr.B	Typical
16	H1	N44	N45			Horizontals	Beam	Pipe	A53 Gr.B	Typical
17	H3	N47	N48			Horizontals	Beam	Pipe	A53 Gr.B	Typical
18	H2	N50	N51			Horizontals	Beam	Pipe	A53 Gr.B	Typical
19	M19	N47A	N48A			Handrails	Beam	Pipe	A53 Gr.B	Typical
20	M20	N49	N50A			Handrails	Beam	Pipe	A53 Gr.B	Typical
21	M21	N51A	N52			Handrails	Beam	Pipe	A53 Gr.B	Typical
22	M22	N46	N45A		180	Handrail Corne...	Beam	Single Angle	A36 Gr.36	Typical
23	M23	N42	N41		180	Handrail Corne...	Beam	Single Angle	A36 Gr.36	Typical
24	M24	N44A	N43		180	Handrail Corne...	Beam	Single Angle	A36 Gr.36	Typical
25	M25	N55	N53			RIGID	None	None	RIGID	Typical
26	M26	N56	N54			RIGID	None	None	RIGID	Typical
27	MP2	N57	N58			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
28	M28	N61	N59			RIGID	None	None	RIGID	Typical
29	M29	N62	N60			RIGID	None	None	RIGID	Typical
30	MP1	N63	N64			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
31	M31	N67	N65			RIGID	None	None	RIGID	Typical
32	M32	N68	N66			RIGID	None	None	RIGID	Typical
33	MP3	N69	N70			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
34	M34	N74	N72			RIGID	None	None	RIGID	Typical
35	M35	N75	N73			RIGID	None	None	RIGID	Typical
36	MP8	N76	N77			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
37	M37	N80	N78			RIGID	None	None	RIGID	Typical
38	M38	N81	N79			RIGID	None	None	RIGID	Typical
39	MP7	N82	N83			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
40	M40	N86	N84			RIGID	None	None	RIGID	Typical
41	M41	N87	N85			RIGID	None	None	RIGID	Typical
42	MP9	N88	N89			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
43	M43	N93	N91			RIGID	None	None	RIGID	Typical
44	M44	N94	N92			RIGID	None	None	RIGID	Typical



Company : Trylon  
 Designer : JE  
 Job Number :  
 Model Name : 876339

July 21, 2021  
 2:39 PM  
 Checked By: \_\_\_\_\_

**Member Primary Data (Continued)**

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
45	MP5	N95	N96			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
46	M46	N99	N97			RIGID	None	None	RIGID	Typical
47	M47	N100	N98			RIGID	None	None	RIGID	Typical
48	MP4	N101	N102			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
49	M49	N105	N103			RIGID	None	None	RIGID	Typical
50	M50	N106	N104			RIGID	None	None	RIGID	Typical
51	MP6	N107	N108			Mount Pipes	Beam	Pipe	A53 Gr.B	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	BenPIN	BenPIN				Yes				None
2	M2						Yes				None
3	M3						Yes				None
4	M4						Yes				None
5	M5	OOOOXO	OOOOXO				Yes	Default			None
6	M6	BenPIN	BenPIN				Yes				None
7	M7						Yes				None
8	M8						Yes				None
9	M9						Yes				None
10	M10	OOOOXO	OOOOXO				Yes	Default			None
11	M11	BenPIN	BenPIN				Yes				None
12	M12						Yes				None
13	M13						Yes				None
14	M14						Yes				None
15	M15	OOOOXO	OOOOXO				Yes	Default			None
16	H1						Yes	Default			None
17	H3						Yes				None
18	H2						Yes				None
19	M19						Yes				None
20	M20						Yes				None
21	M21						Yes				None
22	M22						Yes				None
23	M23						Yes				None
24	M24						Yes				None
25	M25	OOOXOO					Yes	** NA **			None
26	M26						Yes	** NA **			None
27	MP2						Yes				None
28	M28	OOOXOO					Yes	** NA **			None
29	M29						Yes	** NA **			None
30	MP1						Yes				None
31	M31	OOOXOO					Yes	** NA **			None
32	M32						Yes	** NA **			None
33	MP3						Yes				None
34	M34	OOOXOO					Yes	** NA **			None
35	M35						Yes	** NA **			None
36	MP8						Yes				None
37	M37	OOOXOO					Yes	** NA **			None
38	M38						Yes	** NA **			None
39	MP7						Yes				None
40	M40	OOOXOO					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...
41	M41						Yes	** NA **			None
42	MP9						Yes				None
43	M43	OOOXOO					Yes	** NA **			None
44	M44						Yes	** NA **			None
45	MP5						Yes				None
46	M46	OOOXOO					Yes	** NA **			None
47	M47						Yes	** NA **			None
48	MP4						Yes				None
49	M49	OOOXOO					Yes	** NA **			None
50	M50						Yes	** NA **			None
51	MP6						Yes				None

**Hot Rolled Steel Design Parameters**

	Label	Shape	Length[in]	Lbyy[in]	Lbzz[in]	Lcomp top[in]	Lcomp bot[in]	L-torqu...	Kyy	Kzz	Cb	Function
1	M1	Standoff Br...	69.713			Lbyy						Lateral
2	M2	Standoffs	40			Lbyy						Lateral
3	M3	Grating Bra...	27.295			Lbyy						Lateral
4	M4	Grating Bra...	27.295			Lbyy						Lateral
5	M5	Plates	42			Lbyy						Lateral
6	M6	Standoff Br...	69.713	28	28	28	28	28				Lateral
7	M7	Standoffs	40			Lbyy						Lateral
8	M8	Grating Bra...	27.295			Lbyy						Lateral
9	M9	Grating Bra...	27.295			Lbyy						Lateral
10	M10	Plates	42			Lbyy						Lateral
11	M11	Standoff Br...	69.713			Lbyy						Lateral
12	M12	Standoffs	40			Lbyy						Lateral
13	M13	Grating Bra...	27.295			Lbyy						Lateral
14	M14	Grating Bra...	27.295			Lbyy						Lateral
15	M15	Plates	42			Lbyy						Lateral
16	H1	Horizontals	96			Lbyy						Lateral
17	H3	Horizontals	96			Lbyy						Lateral
18	H2	Horizontals	96			Lbyy						Lateral
19	M19	Handrails	96			Lbyy						Lateral
20	M20	Handrails	96			Lbyy						Lateral
21	M21	Handrails	96			Lbyy						Lateral
22	M22	Handrail Co...	42			Lbyy						Lateral
23	M23	Handrail Co...	42			Lbyy						Lateral
24	M24	Handrail Co...	42			Lbyy						Lateral
25	MP2	Mount Pipes	72			Lbyy						Lateral
26	MP1	Mount Pipes	72			Lbyy						Lateral
27	MP3	Mount Pipes	72			Lbyy						Lateral
28	MP8	Mount Pipes	72			Lbyy						Lateral
29	MP7	Mount Pipes	72			Lbyy						Lateral
30	MP9	Mount Pipes	72			Lbyy						Lateral
31	MP5	Mount Pipes	72			Lbyy						Lateral
32	MP4	Mount Pipes	72			Lbyy						Lateral
33	MP6	Mount Pipes	72			Lbyy						Lateral



### Joint Loads and Enforced Displacements

Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^...
No Data to Print ...			

### Member Point Loads (BLC 1 : Self Weight)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Y	-41.25	3
2	MP1	Y	-41.25	69
3	MP1	Y	-63.9	%50
4	MP1	Y	-75	%50
5	MP3	Y	-21.85	%33
6	MP4	Y	-41.25	3
7	MP4	Y	-41.25	69
8	MP4	Y	-63.9	%50
9	MP4	Y	-75	%50
10	MP7	Y	-41.25	3
11	MP7	Y	-41.25	69
12	MP7	Y	-63.9	%50
13	MP7	Y	-75	%50

### Member Point Loads (BLC 4 : Wind Load 0 AZI)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	-170.336	3
2	MP1	Z	-170.336	69
3	MP1	Z	-83.509	%50
4	MP1	Z	-83.509	%50
5	MP3	Z	-85.567	%33
6	MP4	Z	-93.781	3
7	MP4	Z	-93.781	69
8	MP4	Z	-52.173	%50
9	MP4	Z	-56.906	%50
10	MP7	Z	-93.781	3
11	MP7	Z	-93.781	69
12	MP7	Z	-52.173	%50
13	MP7	Z	-56.906	%50
14	MP1	X	0	3
15	MP1	X	0	69
16	MP1	X	0	%50
17	MP1	X	0	%50
18	MP3	X	0	%33
19	MP4	X	0	3
20	MP4	X	0	69
21	MP4	X	0	%50
22	MP4	X	0	%50
23	MP7	X	0	3
24	MP7	X	0	69
25	MP7	X	0	%50
26	MP7	X	0	%50

### Member Point Loads (BLC 5 : Wind Load 30 AZI)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
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**Member Point Loads (BLC 5 : Wind Load 30 AZI) (Continued)**

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	-125.416	3
2	MP1	Z	-125.416	69
3	MP1	Z	-63.275	%50
4	MP1	Z	-64.641	%50
5	MP3	Z	-66.334	%33
6	MP4	Z	-125.416	3
7	MP4	Z	-125.416	69
8	MP4	Z	-63.275	%50
9	MP4	Z	-64.641	%50
10	MP7	Z	-59.117	3
11	MP7	Z	-59.117	69
12	MP7	Z	-36.138	%50
13	MP7	Z	-41.602	%50
14	MP1	X	-72.409	3
15	MP1	X	-72.409	69
16	MP1	X	-36.532	%50
17	MP1	X	-37.321	%50
18	MP3	X	-38.298	%33
19	MP4	X	-72.409	3
20	MP4	X	-72.409	69
21	MP4	X	-36.532	%50
22	MP4	X	-37.321	%50
23	MP7	X	-34.131	3
24	MP7	X	-34.131	69
25	MP7	X	-20.864	%50
26	MP7	X	-24.019	%50

**Member Point Loads (BLC 6 : Wind Load 45 AZI)**

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	-84.357	3
2	MP1	Z	-84.357	69
3	MP1	Z	-44.278	%50
4	MP1	Z	-46.509	%50
5	MP3	Z	-47.818	%33
6	MP4	Z	-115.611	3
7	MP4	Z	-115.611	69
8	MP4	Z	-57.071	%50
9	MP4	Z	-57.37	%50
10	MP7	Z	-53.103	3
11	MP7	Z	-53.103	69
12	MP7	Z	-31.485	%50
13	MP7	Z	-35.648	%50
14	MP1	X	-84.357	3
15	MP1	X	-84.357	69
16	MP1	X	-44.278	%50
17	MP1	X	-46.509	%50
18	MP3	X	-47.818	%33
19	MP4	X	-115.611	3
20	MP4	X	-115.611	69
21	MP4	X	-57.071	%50
22	MP4	X	-57.37	%50



**Member Point Loads (BLC 6 : Wind Load 45 AZI) (Continued)**

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
23	MP7	X	-53.103	3
24	MP7	X	-53.103	69
25	MP7	X	-31.485	%50
26	MP7	X	-35.648	%50

**Member Point Loads (BLC 7 : Wind Load 60 AZI)**

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	-46.89	3
2	MP1	Z	-46.89	69
3	MP1	Z	-26.087	%50
4	MP1	Z	-28.453	%50
5	MP3	Z	-29.327	%33
6	MP4	Z	-85.168	3
7	MP4	Z	-85.168	69
8	MP4	Z	-41.755	%50
9	MP4	Z	-41.755	%50
10	MP7	Z	-46.89	3
11	MP7	Z	-46.89	69
12	MP7	Z	-26.087	%50
13	MP7	Z	-28.453	%50
14	MP1	X	-81.216	3
15	MP1	X	-81.216	69
16	MP1	X	-45.184	%50
17	MP1	X	-49.282	%50
18	MP3	X	-50.796	%33
19	MP4	X	-147.515	3
20	MP4	X	-147.515	69
21	MP4	X	-72.321	%50
22	MP4	X	-72.321	%50
23	MP7	X	-81.216	3
24	MP7	X	-81.216	69
25	MP7	X	-45.184	%50
26	MP7	X	-49.282	%50

**Member Point Loads (BLC 8 : Wind Load 90 AZI)**

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	-4.18e-15	3
2	MP1	Z	-4.18e-15	69
3	MP1	Z	-2.555e-15	%50
4	MP1	Z	-2.941e-15	%50
5	MP3	Z	-3.042e-15	%33
6	MP4	Z	-8.868e-15	3
7	MP4	Z	-8.868e-15	69
8	MP4	Z	-4.474e-15	%50
9	MP4	Z	-4.57e-15	%50
10	MP7	Z	-8.868e-15	3
11	MP7	Z	-8.868e-15	69
12	MP7	Z	-4.474e-15	%50
13	MP7	Z	-4.57e-15	%50
14	MP1	X	-68.262	3
15	MP1	X	-68.262	69



**Member Point Loads (BLC 8 : Wind Load 90 AZI) (Continued)**

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
16	MP1	X	-41.728	%50
17	MP1	X	-48.038	%50
18	MP3	X	-49.684	%33
19	MP4	X	-144.818	3
20	MP4	X	-144.818	69
21	MP4	X	-73.064	%50
22	MP4	X	-74.641	%50
23	MP7	X	-144.818	3
24	MP7	X	-144.818	69
25	MP7	X	-73.064	%50
26	MP7	X	-74.641	%50

**Member Point Loads (BLC 9 : Wind Load 120 AZI)**

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	46.89	3
2	MP1	Z	46.89	69
3	MP1	Z	26.087	%50
4	MP1	Z	28.453	%50
5	MP3	Z	29.327	%33
6	MP4	Z	46.89	3
7	MP4	Z	46.89	69
8	MP4	Z	26.087	%50
9	MP4	Z	28.453	%50
10	MP7	Z	85.168	3
11	MP7	Z	85.168	69
12	MP7	Z	41.755	%50
13	MP7	Z	41.755	%50
14	MP1	X	-81.216	3
15	MP1	X	-81.216	69
16	MP1	X	-45.184	%50
17	MP1	X	-49.282	%50
18	MP3	X	-50.796	%33
19	MP4	X	-81.216	3
20	MP4	X	-81.216	69
21	MP4	X	-45.184	%50
22	MP4	X	-49.282	%50
23	MP7	X	-147.515	3
24	MP7	X	-147.515	69
25	MP7	X	-72.321	%50
26	MP7	X	-72.321	%50

**Member Point Loads (BLC 10 : Wind Load 135 AZI)**

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	84.357	3
2	MP1	Z	84.357	69
3	MP1	Z	44.278	%50
4	MP1	Z	46.509	%50
5	MP3	Z	47.818	%33
6	MP4	Z	53.103	3
7	MP4	Z	53.103	69
8	MP4	Z	31.485	%50





Company : Trylon  
 Designer : JE  
 Job Number :  
 Model Name : 876339

July 21, 2021  
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**Member Point Loads (BLC 10 : Wind Load 135 AZI) (Continued)**

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
9	MP4	Z	35.648	%50
10	MP7	Z	115.611	3
11	MP7	Z	115.611	69
12	MP7	Z	57.071	%50
13	MP7	Z	57.37	%50
14	MP1	X	-84.357	3
15	MP1	X	-84.357	69
16	MP1	X	-44.278	%50
17	MP1	X	-46.509	%50
18	MP3	X	-47.818	%33
19	MP4	X	-53.103	3
20	MP4	X	-53.103	69
21	MP4	X	-31.485	%50
22	MP4	X	-35.648	%50
23	MP7	X	-115.611	3
24	MP7	X	-115.611	69
25	MP7	X	-57.071	%50
26	MP7	X	-57.37	%50

**Member Point Loads (BLC 11 : Wind Load 150 AZI)**

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	125.416	3
2	MP1	Z	125.416	69
3	MP1	Z	63.275	%50
4	MP1	Z	64.641	%50
5	MP3	Z	66.334	%33
6	MP4	Z	59.117	3
7	MP4	Z	59.117	69
8	MP4	Z	36.138	%50
9	MP4	Z	41.602	%50
10	MP7	Z	125.416	3
11	MP7	Z	125.416	69
12	MP7	Z	63.275	%50
13	MP7	Z	64.641	%50
14	MP1	X	-72.409	3
15	MP1	X	-72.409	69
16	MP1	X	-36.532	%50
17	MP1	X	-37.321	%50
18	MP3	X	-38.298	%33
19	MP4	X	-34.131	3
20	MP4	X	-34.131	69
21	MP4	X	-20.864	%50
22	MP4	X	-24.019	%50
23	MP7	X	-72.409	3
24	MP7	X	-72.409	69
25	MP7	X	-36.532	%50
26	MP7	X	-37.321	%50

**Member Point Loads (BLC 12 : Ice Weight)**

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Y	-142.817	3



**Member Point Loads (BLC 12 : Ice Weight) (Continued)**

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
2	MP1	Y	-142.817	69
3	MP1	Y	-69.479	%50
4	MP1	Y	-74.019	%50
5	MP3	Y	-72.95	%33
6	MP4	Y	-142.817	3
7	MP4	Y	-142.817	69
8	MP4	Y	-69.479	%50
9	MP4	Y	-74.019	%50
10	MP7	Y	-142.817	3
11	MP7	Y	-142.817	69
12	MP7	Y	-69.479	%50
13	MP7	Y	-74.019	%50

**Member Point Loads (BLC 15 : Ice Wind Load 0 AZI)**

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	-28.1	3
2	MP1	Z	-28.1	69
3	MP1	Z	-13.918	%50
4	MP1	Z	-13.918	%50
5	MP3	Z	-14.237	%33
6	MP4	Z	-17.161	3
7	MP4	Z	-17.161	69
8	MP4	Z	-9.208	%50
9	MP4	Z	-9.918	%50
10	MP7	Z	-17.161	3
11	MP7	Z	-17.161	69
12	MP7	Z	-9.208	%50
13	MP7	Z	-9.918	%50
14	MP1	X	0	3
15	MP1	X	0	69
16	MP1	X	0	%50
17	MP1	X	0	%50
18	MP3	X	0	%33
19	MP4	X	0	3
20	MP4	X	0	69
21	MP4	X	0	%50
22	MP4	X	0	%50
23	MP7	X	0	3
24	MP7	X	0	69
25	MP7	X	0	%50
26	MP7	X	0	%50

**Member Point Loads (BLC 16 : Ice Wind Load 30 AZI)**

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	-21.178	3
2	MP1	Z	-21.178	69
3	MP1	Z	-10.693	%50
4	MP1	Z	-10.899	%50
5	MP3	Z	-11.172	%33
6	MP4	Z	-21.178	3
7	MP4	Z	-21.178	69



**Member Point Loads (BLC 16 : Ice Wind Load 30 AZI) (Continued)**

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
8	MP4	Z	-10.693	%50
9	MP4	Z	-10.899	%50
10	MP7	Z	-11.703	3
11	MP7	Z	-11.703	69
12	MP7	Z	-6.614	%50
13	MP7	Z	-7.435	%50
14	MP1	X	-12.227	3
15	MP1	X	-12.227	69
16	MP1	X	-6.174	%50
17	MP1	X	-6.292	%50
18	MP3	X	-6.45	%33
19	MP4	X	-12.227	3
20	MP4	X	-12.227	69
21	MP4	X	-6.174	%50
22	MP4	X	-6.292	%50
23	MP7	X	-6.757	3
24	MP7	X	-6.757	69
25	MP7	X	-3.819	%50
26	MP7	X	-4.293	%50

**Member Point Loads (BLC 17 : Ice Wind Load 45 AZI)**

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	-14.713	3
2	MP1	Z	-14.713	69
3	MP1	Z	-7.621	%50
4	MP1	Z	-7.956	%50
5	MP3	Z	-8.177	%33
6	MP4	Z	-19.179	3
7	MP4	Z	-19.179	69
8	MP4	Z	-9.544	%50
9	MP4	Z	-9.589	%50
10	MP7	Z	-10.247	3
11	MP7	Z	-10.247	69
12	MP7	Z	-5.698	%50
13	MP7	Z	-6.323	%50
14	MP1	X	-14.713	3
15	MP1	X	-14.713	69
16	MP1	X	-7.621	%50
17	MP1	X	-7.956	%50
18	MP3	X	-8.177	%33
19	MP4	X	-19.179	3
20	MP4	X	-19.179	69
21	MP4	X	-9.544	%50
22	MP4	X	-9.589	%50
23	MP7	X	-10.247	3
24	MP7	X	-10.247	69
25	MP7	X	-5.698	%50
26	MP7	X	-6.323	%50

**Member Point Loads (BLC 18 : Ice Wind Load 60 AZI)**

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
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**Member Point Loads (BLC 18 : Ice Wind Load 60 AZI) (Continued)**

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	-8.58	3
2	MP1	Z	-8.58	69
3	MP1	Z	-4.604	%50
4	MP1	Z	-4.959	%50
5	MP3	Z	-5.114	%33
6	MP4	Z	-14.05	3
7	MP4	Z	-14.05	69
8	MP4	Z	-6.959	%50
9	MP4	Z	-6.959	%50
10	MP7	Z	-8.58	3
11	MP7	Z	-8.58	69
12	MP7	Z	-4.604	%50
13	MP7	Z	-4.959	%50
14	MP1	X	-14.861	3
15	MP1	X	-14.861	69
16	MP1	X	-7.974	%50
17	MP1	X	-8.59	%50
18	MP3	X	-8.857	%33
19	MP4	X	-24.336	3
20	MP4	X	-24.336	69
21	MP4	X	-12.053	%50
22	MP4	X	-12.053	%50
23	MP7	X	-14.861	3
24	MP7	X	-14.861	69
25	MP7	X	-7.974	%50
26	MP7	X	-8.59	%50

**Member Point Loads (BLC 19 : Ice Wind Load 90 AZI)**

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	-8.275e-16	3
2	MP1	Z	-8.275e-16	69
3	MP1	Z	-4.677e-16	%50
4	MP1	Z	-5.257e-16	%50
5	MP3	Z	-5.444e-16	%33
6	MP4	Z	-1.497e-15	3
7	MP4	Z	-1.497e-15	69
8	MP4	Z	-7.561e-16	%50
9	MP4	Z	-7.706e-16	%50
10	MP7	Z	-1.497e-15	3
11	MP7	Z	-1.497e-15	69
12	MP7	Z	-7.561e-16	%50
13	MP7	Z	-7.706e-16	%50
14	MP1	X	-13.514	3
15	MP1	X	-13.514	69
16	MP1	X	-7.638	%50
17	MP1	X	-8.585	%50
18	MP3	X	-8.891	%33
19	MP4	X	-24.454	3
20	MP4	X	-24.454	69
21	MP4	X	-12.348	%50
22	MP4	X	-12.585	%50



**Member Point Loads (BLC 19 : Ice Wind Load 90 AZI) (Continued)**

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
23	MP7	X	-24.454	3
24	MP7	X	-24.454	69
25	MP7	X	-12.348	%50
26	MP7	X	-12.585	%50

**Member Point Loads (BLC 20 : Ice Wind Load 120 AZI)**

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	8.58	3
2	MP1	Z	8.58	69
3	MP1	Z	4.604	%50
4	MP1	Z	4.959	%50
5	MP3	Z	5.114	%33
6	MP4	Z	8.58	3
7	MP4	Z	8.58	69
8	MP4	Z	4.604	%50
9	MP4	Z	4.959	%50
10	MP7	Z	14.05	3
11	MP7	Z	14.05	69
12	MP7	Z	6.959	%50
13	MP7	Z	6.959	%50
14	MP1	X	-14.861	3
15	MP1	X	-14.861	69
16	MP1	X	-7.974	%50
17	MP1	X	-8.59	%50
18	MP3	X	-8.857	%33
19	MP4	X	-14.861	3
20	MP4	X	-14.861	69
21	MP4	X	-7.974	%50
22	MP4	X	-8.59	%50
23	MP7	X	-24.336	3
24	MP7	X	-24.336	69
25	MP7	X	-12.053	%50
26	MP7	X	-12.053	%50

**Member Point Loads (BLC 21 : Ice Wind Load 135 AZI)**

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	14.713	3
2	MP1	Z	14.713	69
3	MP1	Z	7.621	%50
4	MP1	Z	7.956	%50
5	MP3	Z	8.177	%33
6	MP4	Z	10.247	3
7	MP4	Z	10.247	69
8	MP4	Z	5.698	%50
9	MP4	Z	6.323	%50
10	MP7	Z	19.179	3
11	MP7	Z	19.179	69
12	MP7	Z	9.544	%50
13	MP7	Z	9.589	%50
14	MP1	X	-14.713	3
15	MP1	X	-14.713	69



**Member Point Loads (BLC 21 : Ice Wind Load 135 AZI) (Continued)**

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [in, %]
16	MP1	X	-7.621	%50
17	MP1	X	-7.956	%50
18	MP3	X	-8.177	%33
19	MP4	X	-10.247	3
20	MP4	X	-10.247	69
21	MP4	X	-5.698	%50
22	MP4	X	-6.323	%50
23	MP7	X	-19.179	3
24	MP7	X	-19.179	69
25	MP7	X	-9.544	%50
26	MP7	X	-9.589	%50

**Member Point Loads (BLC 22 : Ice Wind Load 150 AZI)**

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [in, %]
1	MP1	Z	21.178	3
2	MP1	Z	21.178	69
3	MP1	Z	10.693	%50
4	MP1	Z	10.899	%50
5	MP3	Z	11.172	%33
6	MP4	Z	11.703	3
7	MP4	Z	11.703	69
8	MP4	Z	6.614	%50
9	MP4	Z	7.435	%50
10	MP7	Z	21.178	3
11	MP7	Z	21.178	69
12	MP7	Z	10.693	%50
13	MP7	Z	10.899	%50
14	MP1	X	-12.227	3
15	MP1	X	-12.227	69
16	MP1	X	-6.174	%50
17	MP1	X	-6.292	%50
18	MP3	X	-6.45	%33
19	MP4	X	-6.757	3
20	MP4	X	-6.757	69
21	MP4	X	-3.819	%50
22	MP4	X	-4.293	%50
23	MP7	X	-12.227	3
24	MP7	X	-12.227	69
25	MP7	X	-6.174	%50
26	MP7	X	-6.292	%50

**Member Point Loads (BLC 23 : Seismic Load Z)**

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [in, %]
1	MP1	Z	-4.409	3
2	MP1	Z	-4.409	69
3	MP1	Z	-6.83	%50
4	MP1	Z	-8.016	%50
5	MP3	Z	-2.335	%33
6	MP4	Z	-4.409	3
7	MP4	Z	-4.409	69
8	MP4	Z	-6.83	%50



**Member Point Loads (BLC 23 : Seismic Load Z) (Continued)**

	Member Label	Direction	Magnitude [lb,lb-ft]	Location [in,%]
9	MP4	Z	-8.016	%50
10	MP7	Z	-4.409	3
11	MP7	Z	-4.409	69
12	MP7	Z	-6.83	%50
13	MP7	Z	-8.016	%50

**Member Point Loads (BLC 24 : Seismic Load X)**

	Member Label	Direction	Magnitude [lb,lb-ft]	Location [in,%]
1	MP1	X	-4.409	3
2	MP1	X	-4.409	69
3	MP1	X	-6.83	%50
4	MP1	X	-8.016	%50
5	MP3	X	-2.335	%33
6	MP4	X	-4.409	3
7	MP4	X	-4.409	69
8	MP4	X	-6.83	%50
9	MP4	X	-8.016	%50
10	MP7	X	-4.409	3
11	MP7	X	-4.409	69
12	MP7	X	-6.83	%50
13	MP7	X	-8.016	%50

**Member Point Loads (BLC 25 : Live Load 1 (Lv))**

	Member Label	Direction	Magnitude [lb,lb-ft]	Location [in,%]
1	H1	Y	-250	0

**Member Point Loads (BLC 26 : Live Load 2 (Lv))**

	Member Label	Direction	Magnitude [lb,lb-ft]	Location [in,%]
1	H1	Y	-250	%50

**Member Point Loads (BLC 27 : Live Load 3 (Lv))**

	Member Label	Direction	Magnitude [lb,lb-ft]	Location [in,%]
1	H1	Y	-250	%100

**Member Point Loads (BLC 28 : Live Load 4 (Lv))**

	Member Label	Direction	Magnitude [lb,lb-ft]	Location [in,%]
1	H3	Y	-250	0

**Member Point Loads (BLC 29 : Live Load 5 (Lv))**

	Member Label	Direction	Magnitude [lb,lb-ft]	Location [in,%]
1	H3	Y	-250	%50

**Member Point Loads (BLC 30 : Live Load 6 (Lv))**

	Member Label	Direction	Magnitude [lb,lb-ft]	Location [in,%]
1	H3	Y	-250	%100

**Member Point Loads (BLC 31 : Live Load 7 (Lv))**

	Member Label	Direction	Magnitude [lb,lb-ft]	Location [in,%]
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**Member Point Loads (BLC 31 : Live Load 7 (Lv)) (Continued)**

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [in, %]
1	H2	Y	-250	0

**Member Point Loads (BLC 32 : Live Load 8 (Lv))**

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [in, %]
1	H2	Y	-250	%50

**Member Point Loads (BLC 33 : Live Load 9 (Lv))**

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [in, %]
1	H2	Y	-250	%100

**Member Point Loads (BLC 34 : Maintenance Load 1 (Lm))**

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [in, %]
1	MP2	Y	-500	%50

**Member Point Loads (BLC 35 : Maintenance Load 2 (Lm))**

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [in, %]
1	MP1	Y	-500	%50

**Member Point Loads (BLC 36 : Maintenance Load 3 (Lm))**

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [in, %]
1	MP3	Y	-500	%50

**Member Point Loads (BLC 37 : Maintenance Load 4 (Lm))**

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [in, %]
1	MP8	Y	-500	%50

**Member Point Loads (BLC 38 : Maintenance Load 5 (Lm))**

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [in, %]
1	MP7	Y	-500	%50

**Member Point Loads (BLC 39 : Maintenance Load 6 (Lm))**

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [in, %]
1	MP9	Y	-500	%50

**Member Point Loads (BLC 40 : Maintenance Load 7 (Lm))**

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [in, %]
1	MP5	Y	-500	%50

**Member Point Loads (BLC 41 : Maintenance Load 8 (Lm))**

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [in, %]
1	MP4	Y	-500	%50

**Member Point Loads (BLC 42 : Maintenance Load 9 (Lm))**

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [in, %]
1	MP6	Y	-500	%50





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**Member Distributed Loads (BLC 2 : Structure Wind Z)**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M1	SZ	-85.062	-85.062	0	%100
2	M2	SZ	-51.037	-51.037	0	%100
3	M3	SZ	-85.062	-85.062	0	%100
4	M4	SZ	-85.062	-85.062	0	%100
5	M5	SZ	-85.062	-85.062	0	%100
6	M6	SZ	-85.062	-85.062	0	%100
7	M7	SZ	-51.037	-51.037	0	%100
8	M8	SZ	-85.062	-85.062	0	%100
9	M9	SZ	-85.062	-85.062	0	%100
10	M10	SZ	-85.062	-85.062	0	%100
11	M11	SZ	-85.062	-85.062	0	%100
12	M12	SZ	-51.037	-51.037	0	%100
13	M13	SZ	-85.062	-85.062	0	%100
14	M14	SZ	-85.062	-85.062	0	%100
15	M15	SZ	-85.062	-85.062	0	%100
16	H1	SZ	-51.037	-51.037	0	%100
17	H3	SZ	-51.037	-51.037	0	%100
18	H2	SZ	-51.037	-51.037	0	%100
19	M19	SZ	-51.037	-51.037	0	%100
20	M20	SZ	-51.037	-51.037	0	%100
21	M21	SZ	-51.037	-51.037	0	%100
22	M22	SZ	-85.062	-85.062	0	%100
23	M23	SZ	-85.062	-85.062	0	%100
24	M24	SZ	-85.062	-85.062	0	%100
25	M25	SZ	-85.062	-85.062	0	%100
26	M26	SZ	-85.062	-85.062	0	%100
27	MP2	SZ	-51.037	-51.037	0	%100
28	M28	SZ	-85.062	-85.062	0	%100
29	M29	SZ	-85.062	-85.062	0	%100
30	MP1	SZ	-51.037	-51.037	0	%100
31	M31	SZ	-85.062	-85.062	0	%100
32	M32	SZ	-85.062	-85.062	0	%100
33	MP3	SZ	-51.037	-51.037	0	%100
34	M34	SZ	-85.062	-85.062	0	%100
35	M35	SZ	-85.062	-85.062	0	%100
36	MP8	SZ	-51.037	-51.037	0	%100
37	M37	SZ	-85.062	-85.062	0	%100
38	M38	SZ	-85.062	-85.062	0	%100
39	MP7	SZ	-51.037	-51.037	0	%100
40	M40	SZ	-85.062	-85.062	0	%100
41	M41	SZ	-85.062	-85.062	0	%100
42	MP9	SZ	-51.037	-51.037	0	%100
43	M43	SZ	-85.062	-85.062	0	%100
44	M44	SZ	-85.062	-85.062	0	%100
45	MP5	SZ	-51.037	-51.037	0	%100
46	M46	SZ	-85.062	-85.062	0	%100
47	M47	SZ	-85.062	-85.062	0	%100
48	MP4	SZ	-51.037	-51.037	0	%100
49	M49	SZ	-85.062	-85.062	0	%100
50	M50	SZ	-85.062	-85.062	0	%100
51	MP6	SZ	-51.037	-51.037	0	%100



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**Member Distributed Loads (BLC 3 : Structure Wind X)**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M1	SX	-85.062	-85.062	0	%100
2	M2	SX	-51.037	-51.037	0	%100
3	M3	SX	-85.062	-85.062	0	%100
4	M4	SX	-85.062	-85.062	0	%100
5	M5	SX	-85.062	-85.062	0	%100
6	M6	SX	-85.062	-85.062	0	%100
7	M7	SX	-51.037	-51.037	0	%100
8	M8	SX	-85.062	-85.062	0	%100
9	M9	SX	-85.062	-85.062	0	%100
10	M10	SX	-85.062	-85.062	0	%100
11	M11	SX	-85.062	-85.062	0	%100
12	M12	SX	-51.037	-51.037	0	%100
13	M13	SX	-85.062	-85.062	0	%100
14	M14	SX	-85.062	-85.062	0	%100
15	M15	SX	-85.062	-85.062	0	%100
16	H1	SX	-51.037	-51.037	0	%100
17	H3	SX	-51.037	-51.037	0	%100
18	H2	SX	-51.037	-51.037	0	%100
19	M19	SX	-51.037	-51.037	0	%100
20	M20	SX	-51.037	-51.037	0	%100
21	M21	SX	-51.037	-51.037	0	%100
22	M22	SX	-85.062	-85.062	0	%100
23	M23	SX	-85.062	-85.062	0	%100
24	M24	SX	-85.062	-85.062	0	%100
25	M25	SX	-85.062	-85.062	0	%100
26	M26	SX	-85.062	-85.062	0	%100
27	MP2	SX	-51.037	-51.037	0	%100
28	M28	SX	-85.062	-85.062	0	%100
29	M29	SX	-85.062	-85.062	0	%100
30	MP1	SX	-51.037	-51.037	0	%100
31	M31	SX	-85.062	-85.062	0	%100
32	M32	SX	-85.062	-85.062	0	%100
33	MP3	SX	-51.037	-51.037	0	%100
34	M34	SX	-85.062	-85.062	0	%100
35	M35	SX	-85.062	-85.062	0	%100
36	MP8	SX	-51.037	-51.037	0	%100
37	M37	SX	-85.062	-85.062	0	%100
38	M38	SX	-85.062	-85.062	0	%100
39	MP7	SX	-51.037	-51.037	0	%100
40	M40	SX	-85.062	-85.062	0	%100
41	M41	SX	-85.062	-85.062	0	%100
42	MP9	SX	-51.037	-51.037	0	%100
43	M43	SX	-85.062	-85.062	0	%100
44	M44	SX	-85.062	-85.062	0	%100
45	MP5	SX	-51.037	-51.037	0	%100
46	M46	SX	-85.062	-85.062	0	%100
47	M47	SX	-85.062	-85.062	0	%100
48	MP4	SX	-51.037	-51.037	0	%100
49	M49	SX	-85.062	-85.062	0	%100
50	M50	SX	-85.062	-85.062	0	%100
51	MP6	SX	-51.037	-51.037	0	%100



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**Member Distributed Loads (BLC 12 : Ice Weight)**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M1	Y	-10.688	-10.688	0	%100
2	M2	Y	-12.048	-12.048	0	%100
3	M3	Y	-9.581	-9.581	0	%100
4	M4	Y	-9.581	-9.581	0	%100
5	M5	Y	-17.332	-17.332	0	%100
6	M6	Y	-10.688	-10.688	0	%100
7	M7	Y	-12.048	-12.048	0	%100
8	M8	Y	-9.581	-9.581	0	%100
9	M9	Y	-9.581	-9.581	0	%100
10	M10	Y	-17.332	-17.332	0	%100
11	M11	Y	-10.688	-10.688	0	%100
12	M12	Y	-12.048	-12.048	0	%100
13	M13	Y	-9.581	-9.581	0	%100
14	M14	Y	-9.581	-9.581	0	%100
15	M15	Y	-17.332	-17.332	0	%100
16	H1	Y	-12.048	-12.048	0	%100
17	H3	Y	-12.048	-12.048	0	%100
18	H2	Y	-12.048	-12.048	0	%100
19	M19	Y	-8.627	-8.627	0	%100
20	M20	Y	-8.627	-8.627	0	%100
21	M21	Y	-8.627	-8.627	0	%100
22	M22	Y	-20.413	-20.413	0	%100
23	M23	Y	-20.413	-20.413	0	%100
24	M24	Y	-20.413	-20.413	0	%100
25	M25	Y	0	0	0	%100
26	M26	Y	0	0	0	%100
27	MP2	Y	-8.627	-8.627	0	%100
28	M28	Y	0	0	0	%100
29	M29	Y	0	0	0	%100
30	MP1	Y	-8.627	-8.627	0	%100
31	M31	Y	0	0	0	%100
32	M32	Y	0	0	0	%100
33	MP3	Y	-8.627	-8.627	0	%100
34	M34	Y	0	0	0	%100
35	M35	Y	0	0	0	%100
36	MP8	Y	-8.627	-8.627	0	%100
37	M37	Y	0	0	0	%100
38	M38	Y	0	0	0	%100
39	MP7	Y	-8.627	-8.627	0	%100
40	M40	Y	0	0	0	%100
41	M41	Y	0	0	0	%100
42	MP9	Y	-8.627	-8.627	0	%100
43	M43	Y	0	0	0	%100
44	M44	Y	0	0	0	%100
45	MP5	Y	-8.627	-8.627	0	%100
46	M46	Y	0	0	0	%100
47	M47	Y	0	0	0	%100
48	MP4	Y	-8.627	-8.627	0	%100
49	M49	Y	0	0	0	%100
50	M50	Y	0	0	0	%100
51	MP6	Y	-8.627	-8.627	0	%100



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**Member Distributed Loads (BLC 13 : Ice Structure Wind Z)**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M1	SZ	-15.241	-15.241	0	%100
2	M2	SZ	-13.993	-13.993	0	%100
3	M3	SZ	-16.676	-16.676	0	%100
4	M4	SZ	-16.676	-16.676	0	%100
5	M5	SZ	-11.496	-11.496	0	%100
6	M6	SZ	-15.241	-15.241	0	%100
7	M7	SZ	-13.993	-13.993	0	%100
8	M8	SZ	-16.676	-16.676	0	%100
9	M9	SZ	-16.676	-16.676	0	%100
10	M10	SZ	-11.496	-11.496	0	%100
11	M11	SZ	-15.241	-15.241	0	%100
12	M12	SZ	-13.993	-13.993	0	%100
13	M13	SZ	-16.676	-16.676	0	%100
14	M14	SZ	-16.676	-16.676	0	%100
15	M15	SZ	-11.496	-11.496	0	%100
16	H1	SZ	-13.993	-13.993	0	%100
17	H3	SZ	-13.993	-13.993	0	%100
18	H2	SZ	-13.993	-13.993	0	%100
19	M19	SZ	-18.425	-18.425	0	%100
20	M20	SZ	-18.425	-18.425	0	%100
21	M21	SZ	-18.425	-18.425	0	%100
22	M22	SZ	-10.766	-10.766	0	%100
23	M23	SZ	-10.766	-10.766	0	%100
24	M24	SZ	-10.766	-10.766	0	%100
25	M25	SZ	0	0	0	%100
26	M26	SZ	0	0	0	%100
27	MP2	SZ	-18.425	-18.425	0	%100
28	M28	SZ	0	0	0	%100
29	M29	SZ	0	0	0	%100
30	MP1	SZ	-18.425	-18.425	0	%100
31	M31	SZ	0	0	0	%100
32	M32	SZ	0	0	0	%100
33	MP3	SZ	-18.425	-18.425	0	%100
34	M34	SZ	0	0	0	%100
35	M35	SZ	0	0	0	%100
36	MP8	SZ	-18.425	-18.425	0	%100
37	M37	SZ	0	0	0	%100
38	M38	SZ	0	0	0	%100
39	MP7	SZ	-18.425	-18.425	0	%100
40	M40	SZ	0	0	0	%100
41	M41	SZ	0	0	0	%100
42	MP9	SZ	-18.425	-18.425	0	%100
43	M43	SZ	0	0	0	%100
44	M44	SZ	0	0	0	%100
45	MP5	SZ	-18.425	-18.425	0	%100
46	M46	SZ	0	0	0	%100
47	M47	SZ	0	0	0	%100
48	MP4	SZ	-18.425	-18.425	0	%100
49	M49	SZ	0	0	0	%100
50	M50	SZ	0	0	0	%100
51	MP6	SZ	-18.425	-18.425	0	%100



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**Member Distributed Loads (BLC 14 : Ice Structure Wind X)**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M1	SX	-15.241	-15.241	0	%100
2	M2	SX	-13.993	-13.993	0	%100
3	M3	SX	-16.676	-16.676	0	%100
4	M4	SX	-16.676	-16.676	0	%100
5	M5	SX	-11.496	-11.496	0	%100
6	M6	SX	-15.241	-15.241	0	%100
7	M7	SX	-13.993	-13.993	0	%100
8	M8	SX	-16.676	-16.676	0	%100
9	M9	SX	-16.676	-16.676	0	%100
10	M10	SX	-11.496	-11.496	0	%100
11	M11	SX	-15.241	-15.241	0	%100
12	M12	SX	-13.993	-13.993	0	%100
13	M13	SX	-16.676	-16.676	0	%100
14	M14	SX	-16.676	-16.676	0	%100
15	M15	SX	-11.496	-11.496	0	%100
16	H1	SX	-13.993	-13.993	0	%100
17	H3	SX	-13.993	-13.993	0	%100
18	H2	SX	-13.993	-13.993	0	%100
19	M19	SX	-18.425	-18.425	0	%100
20	M20	SX	-18.425	-18.425	0	%100
21	M21	SX	-18.425	-18.425	0	%100
22	M22	SX	-10.766	-10.766	0	%100
23	M23	SX	-10.766	-10.766	0	%100
24	M24	SX	-10.766	-10.766	0	%100
25	M25	SX	0	0	0	%100
26	M26	SX	0	0	0	%100
27	MP2	SX	-18.425	-18.425	0	%100
28	M28	SX	0	0	0	%100
29	M29	SX	0	0	0	%100
30	MP1	SX	-18.425	-18.425	0	%100
31	M31	SX	0	0	0	%100
32	M32	SX	0	0	0	%100
33	MP3	SX	-18.425	-18.425	0	%100
34	M34	SX	0	0	0	%100
35	M35	SX	0	0	0	%100
36	MP8	SX	-18.425	-18.425	0	%100
37	M37	SX	0	0	0	%100
38	M38	SX	0	0	0	%100
39	MP7	SX	-18.425	-18.425	0	%100
40	M40	SX	0	0	0	%100
41	M41	SX	0	0	0	%100
42	MP9	SX	-18.425	-18.425	0	%100
43	M43	SX	0	0	0	%100
44	M44	SX	0	0	0	%100
45	MP5	SX	-18.425	-18.425	0	%100
46	M46	SX	0	0	0	%100
47	M47	SX	0	0	0	%100
48	MP4	SX	-18.425	-18.425	0	%100
49	M49	SX	0	0	0	%100
50	M50	SX	0	0	0	%100
51	MP6	SX	-18.425	-18.425	0	%100



**Member Distributed Loads (BLC 43 : BLC 1 Transient Area Loads)**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M12	Y	-10.921	-10.921	0	23.596
2	M13	Y	-5.504	-5.504	3.828	27.295
3	M14	Y	-5.504	-5.504	3.828	27.295
4	M7	Y	-10.921	-10.921	0	23.596
5	M8	Y	-5.504	-5.504	3.828	27.295
6	M9	Y	-5.504	-5.504	3.828	27.295
7	M2	Y	-10.921	-10.921	0	23.596
8	M3	Y	-5.504	-5.504	3.828	27.295
9	M4	Y	-5.504	-5.504	3.828	27.295

**Member Distributed Loads (BLC 44 : BLC 12 Transient Area Loads)**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M12	Y	-29.305	-29.305	0	23.596
2	M13	Y	-14.768	-14.768	3.828	27.295
3	M14	Y	-14.768	-14.768	3.828	27.295
4	M7	Y	-29.305	-29.305	0	23.596
5	M8	Y	-14.768	-14.768	3.828	27.295
6	M9	Y	-14.768	-14.768	3.828	27.295
7	M2	Y	-29.305	-29.305	0	23.596
8	M3	Y	-14.768	-14.768	3.828	27.295
9	M4	Y	-14.768	-14.768	3.828	27.295

**Member Area Loads (BLC 1 : Self Weight)**

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
1	N35	N36	N33	N34	Y	Two Way	-6
2	N22	N23	N24	N21	Y	Two Way	-6
3	N9	N10	N11	N12	Y	Two Way	-6

**Member Area Loads (BLC 12 : Ice Weight)**

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
1	N35	N36	N33	N34	Y	Two Way	-16.1
2	N22	N23	N24	N21	Y	Two Way	-16.1
3	N9	N10	N11	N12	Y	Two Way	-16.1

**Basic Load Cases**

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed Area(Me...	Surface(P...
1	Self Weight	DL		-1			13	3	
2	Structure Wind Z	WLZ						51	
3	Structure Wind X	WLX						51	
4	Wind Load 0 AZI	WLZ					26		
5	Wind Load 30 AZI	None					26		
6	Wind Load 45 AZI	None					26		
7	Wind Load 60 AZI	None					26		
8	Wind Load 90 AZI	WLX					26		
9	Wind Load 120 AZI	None					26		
10	Wind Load 135 AZI	None					26		
11	Wind Load 150 AZI	None					26		
12	Ice Weight	OL1					13	51	3



**Basic Load Cases (Continued)**

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed Area(Me...)	Surface(P...
13	Ice Structure Wind Z	OL2						51	
14	Ice Structure Wind X	OL3						51	
15	Ice Wind Load 0 AZI	OL2					26		
16	Ice Wind Load 30 AZI	None					26		
17	Ice Wind Load 45 AZI	None					26		
18	Ice Wind Load 60 AZI	None					26		
19	Ice Wind Load 90 AZI	OL3					26		
20	Ice Wind Load 120 AZI	None					26		
21	Ice Wind Load 135 AZI	None					26		
22	Ice Wind Load 150 AZI	None					26		
23	Seismic Load Z	ELZ			-.107		13		
24	Seismic Load X	ELX	-.107				13		
25	Live Load 1 (Lv)	None					1		
26	Live Load 2 (Lv)	None					1		
27	Live Load 3 (Lv)	None					1		
28	Live Load 4 (Lv)	None					1		
29	Live Load 5 (Lv)	None					1		
30	Live Load 6 (Lv)	None					1		
31	Live Load 7 (Lv)	None					1		
32	Live Load 8 (Lv)	None					1		
33	Live Load 9 (Lv)	None					1		
34	Maintenance Load 1 (...)	None					1		
35	Maintenance Load 2 (...)	None					1		
36	Maintenance Load 3 (...)	None					1		
37	Maintenance Load 4 (...)	None					1		
38	Maintenance Load 5 (...)	None					1		
39	Maintenance Load 6 (...)	None					1		
40	Maintenance Load 7 (...)	None					1		
41	Maintenance Load 8 (...)	None					1		
42	Maintenance Load 9 (...)	None					1		
43	BLC 1 Transient Area..	None						9	
44	BLC 12 Transient Are..	None						9	

**Load Combinations**

	Description	So..P...	S...	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..
1	1.4DL	Yes	Y		DL	1.4									
2	1.2DL + 1WL 0 AZI	Yes	Y		DL	1.2	2	1	3		4	1			
3	1.2DL + 1WL 30 AZI	Yes	Y		DL	1.2	2	.866	3	.5	5	1			
4	1.2DL + 1WL 45 AZI	Yes	Y		DL	1.2	2	.707	3	.707	6	1			
5	1.2DL + 1WL 60 AZI	Yes	Y		DL	1.2	2	.5	3	.866	7	1			
6	1.2DL + 1WL 90 AZI	Yes	Y		DL	1.2	2		3	1	8	1			
7	1.2DL + 1WL 120 AZI	Yes	Y		DL	1.2	2	-.5	3	.866	9	1			
8	1.2DL + 1WL 135 AZI	Yes	Y		DL	1.2	2	-.707	3	.707	10	1			
9	1.2DL + 1WL 150 AZI	Yes	Y		DL	1.2	2	-.866	3	.5	11	1			
10	1.2DL + 1WL 180 AZI	Yes	Y		DL	1.2	2	-1	3		4	-1			
11	1.2DL + 1WL 210 AZI	Yes	Y		DL	1.2	2	-.866	3	-.5	5	-1			
12	1.2DL + 1WL 225 AZI	Yes	Y		DL	1.2	2	-.707	3	-.707	6	-1			
13	1.2DL + 1WL 240 AZI	Yes	Y		DL	1.2	2	-.5	3	-.866	7	-1			
14	1.2DL + 1WL 270 AZI	Yes	Y		DL	1.2	2		3	-1	8	-1			
15	1.2DL + 1WL 300 AZI	Yes	Y		DL	1.2	2	.5	3	-.866	9	-1			



**Load Combinations (Continued)**

	Description	So..P...	S...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...
16	1.2DL + 1WL 315 AZI	Yes	Y	DL	1.2	2	.707	3	-.707	10	-1							
17	1.2DL + 1WL 330 AZI	Yes	Y	DL	1.2	2	.866	3	-.5	11	-1							
18	0.9DL + 1WL 0 AZI	Yes	Y	DL	.9	2	1	3		4	1							
19	0.9DL + 1WL 30 AZI	Yes	Y	DL	.9	2	.866	3	.5	5	1							
20	0.9DL + 1WL 45 AZI	Yes	Y	DL	.9	2	.707	3	.707	6	1							
21	0.9DL + 1WL 60 AZI	Yes	Y	DL	.9	2	.5	3	.866	7	1							
22	0.9DL + 1WL 90 AZI	Yes	Y	DL	.9	2		3	1	8	1							
23	0.9DL + 1WL 120 AZI	Yes	Y	DL	.9	2	-.5	3	.866	9	1							
24	0.9DL + 1WL 135 AZI	Yes	Y	DL	.9	2	-.707	3	.707	10	1							
25	0.9DL + 1WL 150 AZI	Yes	Y	DL	.9	2	-.866	3	.5	11	1							
26	0.9DL + 1WL 180 AZI	Yes	Y	DL	.9	2	-1	3		4	-1							
27	0.9DL + 1WL 210 AZI	Yes	Y	DL	.9	2	-.866	3	-.5	5	-1							
28	0.9DL + 1WL 225 AZI	Yes	Y	DL	.9	2	-.707	3	-.707	6	-1							
29	0.9DL + 1WL 240 AZI	Yes	Y	DL	.9	2	-.5	3	-.866	7	-1							
30	0.9DL + 1WL 270 AZI	Yes	Y	DL	.9	2		3	-1	8	-1							
31	0.9DL + 1WL 300 AZI	Yes	Y	DL	.9	2	.5	3	-.866	9	-1							
32	0.9DL + 1WL 315 AZI	Yes	Y	DL	.9	2	.707	3	-.707	10	-1							
33	0.9DL + 1WL 330 AZI	Yes	Y	DL	.9	2	.866	3	-.5	11	-1							
34	1.2DL + 1DLi + 1W Li ...	Yes	Y	DL	1.2	OL1	1	13	1	14	15	1						
35	1.2DL + 1DLi + 1W Li ...	Yes	Y	DL	1.2	OL1	1	13	.866	14	.5	16	1					
36	1.2DL + 1DLi + 1W Li ...	Yes	Y	DL	1.2	OL1	1	13	.707	14	.707	17	1					
37	1.2DL + 1DLi + 1W Li ...	Yes	Y	DL	1.2	OL1	1	13	.5	14	.866	18	1					
38	1.2DL + 1DLi + 1W Li ...	Yes	Y	DL	1.2	OL1	1	13		14	1	19	1					
39	1.2DL + 1DLi + 1W Li ...	Yes	Y	DL	1.2	OL1	1	13	-.5	14	.866	20	1					
40	1.2DL + 1DLi + 1W Li ...	Yes	Y	DL	1.2	OL1	1	13	-.707	14	.707	21	1					
41	1.2DL + 1DLi + 1W Li ...	Yes	Y	DL	1.2	OL1	1	13	-.866	14	.5	22	1					
42	1.2DL + 1DLi + 1W Li ...	Yes	Y	DL	1.2	OL1	1	13	-1	14		15	-1					
43	1.2DL + 1DLi + 1W Li ...	Yes	Y	DL	1.2	OL1	1	13	-.866	14	-.5	16	-1					
44	1.2DL + 1DLi + 1W Li ...	Yes	Y	DL	1.2	OL1	1	13	-.707	14	-.707	17	-1					
45	1.2DL + 1DLi + 1W Li ...	Yes	Y	DL	1.2	OL1	1	13	-.5	14	-.866	18	-1					
46	1.2DL + 1DLi + 1W Li ...	Yes	Y	DL	1.2	OL1	1	13		14	-1	19	-1					
47	1.2DL + 1DLi + 1W Li ...	Yes	Y	DL	1.2	OL1	1	13	.5	14	-.866	20	-1					
48	1.2DL + 1DLi + 1W Li ...	Yes	Y	DL	1.2	OL1	1	13	.707	14	-.707	21	-1					
49	1.2DL + 1DLi + 1W Li ...	Yes	Y	DL	1.2	OL1	1	13	.866	14	-.5	22	-1					
50	(1.2+0.2Sds)DL + 1E ...	Yes	Y	DL	1.2...	23	1	24										
51	(1.2+0.2Sds)DL + 1E ...	Yes	Y	DL	1.2...	23	.866	24	.5									
52	(1.2+0.2Sds)DL + 1E ...	Yes	Y	DL	1.2...	23	.707	24	.707									
53	(1.2+0.2Sds)DL + 1E ...	Yes	Y	DL	1.2...	23	.5	24	.866									
54	(1.2+0.2Sds)DL + 1E ...	Yes	Y	DL	1.2...	23		24	1									
55	(1.2+0.2Sds)DL + 1E ...	Yes	Y	DL	1.2...	23	-.5	24	.866									
56	(1.2+0.2Sds)DL + 1E ...	Yes	Y	DL	1.2...	23	-.707	24	.707									
57	(1.2+0.2Sds)DL + 1E ...	Yes	Y	DL	1.2...	23	-.866	24	.5									
58	(1.2+0.2Sds)DL + 1E ...	Yes	Y	DL	1.2...	23	-1	24										
59	(1.2+0.2Sds)DL + 1E ...	Yes	Y	DL	1.2...	23	-.866	24	-.5									
60	(1.2+0.2Sds)DL + 1E ...	Yes	Y	DL	1.2...	23	-.707	24	-.707									
61	(1.2+0.2Sds)DL + 1E ...	Yes	Y	DL	1.2...	23	-.5	24	-.866									
62	(1.2+0.2Sds)DL + 1E ...	Yes	Y	DL	1.2...	23		24	-1									
63	(1.2+0.2Sds)DL + 1E ...	Yes	Y	DL	1.2...	23	.5	24	-.866									
64	(1.2+0.2Sds)DL + 1E ...	Yes	Y	DL	1.2...	23	.707	24	-.707									
65	(1.2+0.2Sds)DL + 1E ...	Yes	Y	DL	1.2...	23	.866	24	-.5									
66	(0.9-0.2Sds)DL + 1E 0...	Yes	Y	DL	.864	23	1	24										
67	(0.9-0.2Sds)DL + 1E 3...	Yes	Y	DL	.864	23	.866	24	.5									





**Load Combinations (Continued)**

	Description	So..P...	S...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...								
120	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	35	1.5	2	.025	3	-.043	9	-.049						
121	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	35	1.5	2	.035	3	-.035	10	-.049						
122	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	35	1.5	2	.043	3	-.025	11	-.049						
123	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	36	1.5	2	.049	3		4	.049						
124	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	36	1.5	2	.043	3	.025	5	.049						
125	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	36	1.5	2	.035	3	.035	6	.049						
126	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	36	1.5	2	.025	3	.043	7	.049						
127	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	36	1.5	2		3	.049	8	.049						
128	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	36	1.5	2	-.025	3	.043	9	.049						
129	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	36	1.5	2	-.035	3	.035	10	.049						
130	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	36	1.5	2	-.043	3	.025	11	.049						
131	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	36	1.5	2	-.049	3		4	-.049						
132	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	36	1.5	2	-.043	3	-.025	5	-.049						
133	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	36	1.5	2	-.035	3	-.035	6	-.049						
134	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	36	1.5	2	-.025	3	-.043	7	-.049						
135	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	36	1.5	2		3	-.049	8	-.049						
136	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	36	1.5	2	.025	3	-.043	9	-.049						
137	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	36	1.5	2	.035	3	-.035	10	-.049						
138	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	36	1.5	2	.043	3	-.025	11	-.049						
139	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	37	1.5	2	.049	3		4	.049						
140	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	37	1.5	2	.043	3	.025	5	.049						
141	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	37	1.5	2	.035	3	.035	6	.049						
142	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	37	1.5	2	.025	3	.043	7	.049						
143	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	37	1.5	2		3	.049	8	.049						
144	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	37	1.5	2	-.025	3	.043	9	.049						
145	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	37	1.5	2	-.035	3	.035	10	.049						
146	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	37	1.5	2	-.043	3	.025	11	.049						
147	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	37	1.5	2	-.049	3		4	-.049						
148	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	37	1.5	2	-.043	3	-.025	5	-.049						
149	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	37	1.5	2	-.035	3	-.035	6	-.049						
150	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	37	1.5	2	-.025	3	-.043	7	-.049						
151	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	37	1.5	2		3	-.049	8	-.049						
152	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	37	1.5	2	.025	3	-.043	9	-.049						
153	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	37	1.5	2	.035	3	-.035	10	-.049						
154	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	37	1.5	2	.043	3	-.025	11	-.049						
155	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	38	1.5	2	.049	3		4	.049						
156	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	38	1.5	2	.043	3	.025	5	.049						
157	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	38	1.5	2	.035	3	.035	6	.049						
158	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	38	1.5	2	.025	3	.043	7	.049						
159	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	38	1.5	2		3	.049	8	.049						
160	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	38	1.5	2	-.025	3	.043	9	.049						
161	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	38	1.5	2	-.035	3	.035	10	.049						
162	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	38	1.5	2	-.043	3	.025	11	.049						
163	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	38	1.5	2	-.049	3		4	-.049						
164	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	38	1.5	2	-.043	3	-.025	5	-.049						
165	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	38	1.5	2	-.035	3	-.035	6	-.049						
166	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	38	1.5	2	-.025	3	-.043	7	-.049						
167	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	38	1.5	2		3	-.049	8	-.049						
168	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	38	1.5	2	.025	3	-.043	9	-.049						
169	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	38	1.5	2	.035	3	-.035	10	-.049						
170	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	38	1.5	2	.043	3	-.025	11	-.049						
171	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	39	1.5	2	.049	3		4	.049						

**Load Combinations (Continued)**

	Description	So..P...	S...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...
172	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	39	1.5	2	.043	3	.025	5	.049					
173	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	39	1.5	2	.035	3	.035	6	.049					
174	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	39	1.5	2	.025	3	.043	7	.049					
175	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	39	1.5	2		3	.049	8	.049					
176	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	39	1.5	2	-.025	3	.043	9	.049					
177	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	39	1.5	2	-.035	3	.035	10	.049					
178	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	39	1.5	2	-.043	3	.025	11	.049					
179	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	39	1.5	2	-.049	3		4	-.049					
180	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	39	1.5	2	-.043	3	-.025	5	-.049					
181	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	39	1.5	2	-.035	3	-.035	6	-.049					
182	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	39	1.5	2	-.025	3	-.043	7	-.049					
183	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	39	1.5	2		3	-.049	8	-.049					
184	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	39	1.5	2	.025	3	-.043	9	-.049					
185	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	39	1.5	2	.035	3	-.035	10	-.049					
186	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	39	1.5	2	.043	3	-.025	11	-.049					
187	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	40	1.5	2	.049	3		4	.049					
188	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	40	1.5	2	.043	3	.025	5	.049					
189	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	40	1.5	2	.035	3	.035	6	.049					
190	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	40	1.5	2	.025	3	.043	7	.049					
191	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	40	1.5	2		3	.049	8	.049					
192	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	40	1.5	2	-.025	3	.043	9	.049					
193	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	40	1.5	2	-.035	3	.035	10	.049					
194	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	40	1.5	2	-.043	3	.025	11	.049					
195	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	40	1.5	2	-.049	3		4	-.049					
196	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	40	1.5	2	-.043	3	-.025	5	-.049					
197	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	40	1.5	2	-.035	3	-.035	6	-.049					
198	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	40	1.5	2	-.025	3	-.043	7	-.049					
199	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	40	1.5	2		3	-.049	8	-.049					
200	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	40	1.5	2	.025	3	-.043	9	-.049					
201	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	40	1.5	2	.035	3	-.035	10	-.049					
202	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	40	1.5	2	.043	3	-.025	11	-.049					
203	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	41	1.5	2	.049	3		4	.049					
204	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	41	1.5	2	.043	3	.025	5	.049					
205	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	41	1.5	2	.035	3	.035	6	.049					
206	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	41	1.5	2	.025	3	.043	7	.049					
207	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	41	1.5	2		3	.049	8	.049					
208	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	41	1.5	2	-.025	3	.043	9	.049					
209	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	41	1.5	2	-.035	3	.035	10	.049					
210	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	41	1.5	2	-.043	3	.025	11	.049					
211	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	41	1.5	2	-.049	3		4	-.049					
212	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	41	1.5	2	-.043	3	-.025	5	-.049					
213	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	41	1.5	2	-.035	3	-.035	6	-.049					
214	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	41	1.5	2	-.025	3	-.043	7	-.049					
215	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	41	1.5	2		3	-.049	8	-.049					
216	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	41	1.5	2	.025	3	-.043	9	-.049					
217	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	41	1.5	2	.035	3	-.035	10	-.049					
218	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	41	1.5	2	.043	3	-.025	11	-.049					
219	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	42	1.5	2	.049	3		4	.049					
220	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	42	1.5	2	.043	3	.025	5	.049					
221	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	42	1.5	2	.035	3	.035	6	.049					
222	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	42	1.5	2	.025	3	.043	7	.049					
223	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	42	1.5	2		3	.049	8	.049					



### Load Combinations (Continued)

Description	So..P...	S...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...
224	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	42	1.5	2	-0.25	3	.043	9	.049	
225	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	42	1.5	2	-0.35	3	.035	10	.049	
226	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	42	1.5	2	-0.43	3	.025	11	.049	
227	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	42	1.5	2	-0.49	3		4	-0.49	
228	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	42	1.5	2	-0.43	3	-0.25	5	-0.49	
229	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	42	1.5	2	-0.35	3	-0.35	6	-0.49	
230	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	42	1.5	2	-0.25	3	-0.43	7	-0.49	
231	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	42	1.5	2		3	-0.49	8	-0.49	
232	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	42	1.5	2	.025	3	-0.43	9	-0.49	
233	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	42	1.5	2	.035	3	-0.35	10	-0.49	
234	1.2DL + 1.5Lm + 1W...	Yes	Y		DL	1.2	42	1.5	2	.043	3	-0.25	11	-0.49	

### Envelope Joint Reactions

Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC	
1	N25	max	1065.092	20	1998.347	39	1628.251	3	402.962	33	1931.508	19	329.63	30
2		min	-1069.852	12	-28.747	31	-1621.943	27	-2066.739	41	-1933.682	11	-3689.112	38
3	N1	max	942.856	8	1946.866	45	1641.913	17	439.892	19	1892.059	25	3390.74	45
4		min	-935.889	32	-37.877	21	-1640.491	25	-2299.393	43	-1895.723	17	-329.288	21
5	N13	max	1627.048	22	1902.066	34	430.814	18	3974.807	34	1591.506	30	753.477	167
6		min	-1629.049	14	-72.091	26	-438.708	10	-478.235	26	-1595.433	6	-619.271	223
7	Totals:	max	3076.597	22	5487.792	41	3291.341	18						
8		min	-3076.597	30	1430.112	81	-3291.343	10						

### 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	M12	PIPE 3.5	.529	40	39	.186	40		3	75262.68	78750	7953.75	7953.75	2...H1-1b
2	M2	PIPE 3.5	.511	40	45	.189	40		9	75262.68	78750	7953.75	7953.75	2...H1-1b
3	M7	PIPE 3.5	.500	40	34	.171	40		14	75262.68	78750	7953.75	7953.75	2...H1-1b
4	M1	C3X5	.397	34.856	44	.139	63.177	y	40	11202.9...	47628	981.263	4104	1...H1-1b
5	M11	C3X5	.397	34.856	40	.142	63.177	y	35	11202.9...	47628	981.263	4104	1...H1-1b
6	M6	C3X5	.382	34.856	34	.136	63.177	y	46	37027.8...	47628	981.263	4020.228	1 H1-1b
7	MP3	PIPE 2.0	.368	57	5	.038	57		10	20866.7...	32130	1871.625	1871.625	1...H1-1b
8	MP1	PIPE 2.0	.356	57	16	.043	57		12	20866.7...	32130	1871.625	1871.625	1...H1-1b
9	MP4	PIPE 2.0	.355	57	10	.050	57		11	20866.7...	32130	1871.625	1871.625	1...H1-1b
10	MP9	PIPE 2.0	.347	57	10	.029	57		3	20866.7...	32130	1871.625	1871.625	1...H1-1b
11	MP2	PIPE 2.0	.341	57	5	.045	57		8	20866.7...	32130	1871.625	1871.625	1...H1-1b
12	MP8	PIPE 2.0	.332	57	10	.040	57		10	20866.7...	32130	1871.625	1871.625	1...H1-1b
13	MP7	PIPE 2.0	.324	57	10	.038	57		9	20866.7...	32130	1871.625	1871.625	1...H1-1b
14	MP5	PIPE 2.0	.322	57	17	.053	57		3	20866.7...	32130	1871.625	1871.625	1...H1-1b
15	MP6	PIPE 2.0	.318	57	15	.036	57		5	20866.7...	32130	1871.625	1871.625	1...H1-1b
16	M10	6.5"x0.37" P...	.274	21	2	.097	21	y	48	3513.807	75757.5	583.963	6321.024	1...H1-1b
17	M15	6.5"x0.37" P...	.272	21	7	.098	21	y	37	3513.807	75757.5	583.963	6299.781	1...H1-1b
18	M5	6.5"x0.37" P...	.264	21	12	.099	21	y	42	3513.807	75757.5	583.963	6562.77	1...H1-1b
19	M13	L2x2x3	.191	0	14	.029	0	z	43	18051.7...	23392.8	557.717	1239.29	2...H2-1
20	M22	L6 5/8x4 7/...	.178	0	21	.034	42	z	4	15453.0...	66065.6...	1040.591	3031.076	1...H2-1
21	M3	L2x2x3	.173	0	3	.028	0	z	49	18051.7...	23392.8	557.717	1239.29	2...H2-1
22	M8	L2x2x3	.164	0	9	.027	0	z	38	18051.7...	23392.8	557.717	1239.29	2...H2-1
23	M21	PIPE 2.0	.153	72	5	.137	72		13	14916.0...	32130	1871.625	1871.625	1...H1-1b
24	M4	L2x2x3	.151	0	13	.030	0	y	41	18051.7...	23392.8	557.717	1239.29	2...H2-1



Company : Trylon  
 Designer : JE  
 Job Number :  
 Model Name : 876339

July 21, 2021  
 2:39 PM  
 Checked By: \_\_\_\_\_

**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	
25	M23	L6 5/8x4 7/...	.151	0	26	.034	42	y	17	15453.0...	66065.6...	1040.591	3031.076	1...	H2-1
26	M19	PIPE 2.0	.150	72	10	.143	72		2	14916.0...	32130	1871.625	1871.625	1...	H1-1b
27	M20	PIPE 2.0	.144	24	16	.136	72		8	14916.0...	32130	1871.625	1871.625	1...	H1-1b
28	M9	L2x2x3	.135	0	2	.029	0	y	46	18051.7...	23392.8	557.717	1239.29	2.3	H2-1
29	M24	L6 5/8x4 7/...	.134	0	32	.031	42	y	6	15453.0...	66065.6...	1040.591	3031.076	1...	H2-1
30	M14	L2x2x3	.129	0	8	.030	0	y	36	18051.7...	23392.8	557.717	1239.29	2...	H2-1
31	H3	PIPE 3.5	.112	31	10	.106	24		16	60666.0...	78750	7953.75	7953.75	1...	H1-1b
32	H1	PIPE 3.5	.110	31	5	.113	24		10	60666.0...	78750	7953.75	7953.75	1...	H1-1b
33	H2	PIPE 3.5	.108	31	15	.101	24		5	60666.0...	78750	7953.75	7953.75	1...	H1-1b

**APPENDIX D**  
**ADDITIONAL CALCUATIONS**

**BOLT TOOL 1.5.2**

Project Data	
Job Code:	188206
Carrier Site ID:	876339
Carrier Site Name:	DND MEADOW RD. STAB

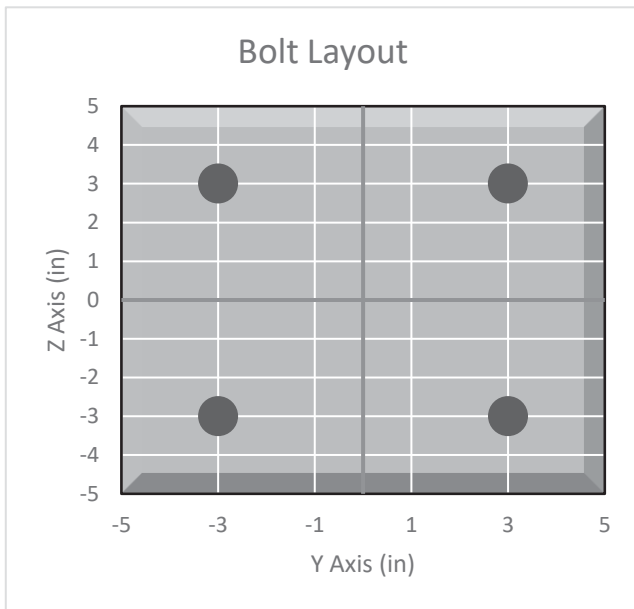
Code	
Design Standard:	TIA-222-H
Slip Check:	No
Pretension Standard:	-

Bolt Properties		
Connection Type:	Bolt	
Diameter:	0.625	in
Grade:	A325	--
Yield Strength (Fy):	92	ksi
Ultimate Strength (Fu):	120	ksi
Number of Bolts:	4	--
Threads Included:	Yes	--
Double Shear:	No	--
Connection Pipe Size:	-	in

Connection Description
Standoff to Collar

Bolt Check*		
Tensile Capacity ( $\phi T_n$ ):	20340.1	lbs
Shear Capacity ( $\phi V_n$ ):	13805.8	lbs
Tension Force ( $T_u$ ):	4394.2	lbs
Shear Force ( $V_u$ ):	629.6	lbs
Tension Usage:	20.6%	--
Shear Usage:	4.3%	--
Interaction:	20.6%	Pass
Controlling Member:	M12	--
Controlling LC:	37	--

\*Rating per TIA-222-H Section 15.5



**APPENDIX E**  
**SUPPLEMENTAL DRAWINGS**

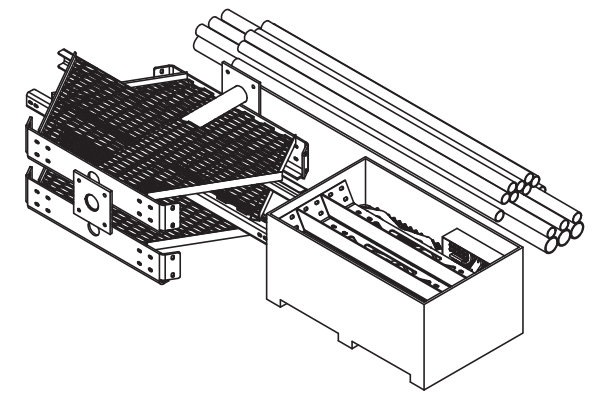


ITEM	PART NO.	DESCRIPTION	QTY.	WEIGHT	NOTE NO.
1	MTC3006SB	STEEL BUNDLE FOR SNUB NOSE PLATFORM	1	402.64 LBS	
2	MCPK8CSB	PIPE STEEL BUNDLE FOR MC-PK8-C	1	464.27 LBS	
3	MCPK8CHWK	HARDWARE KIT FOR MC-PK8-C	1	543.22 LBS	




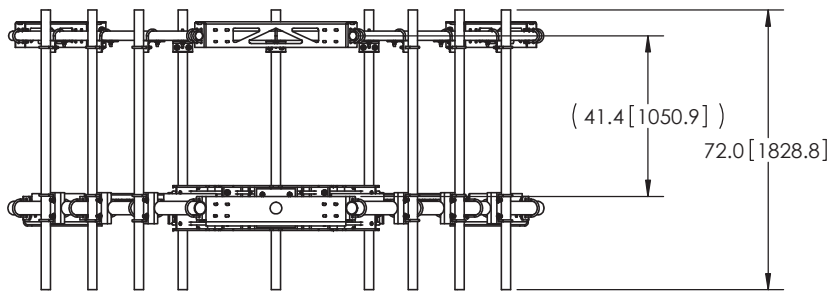
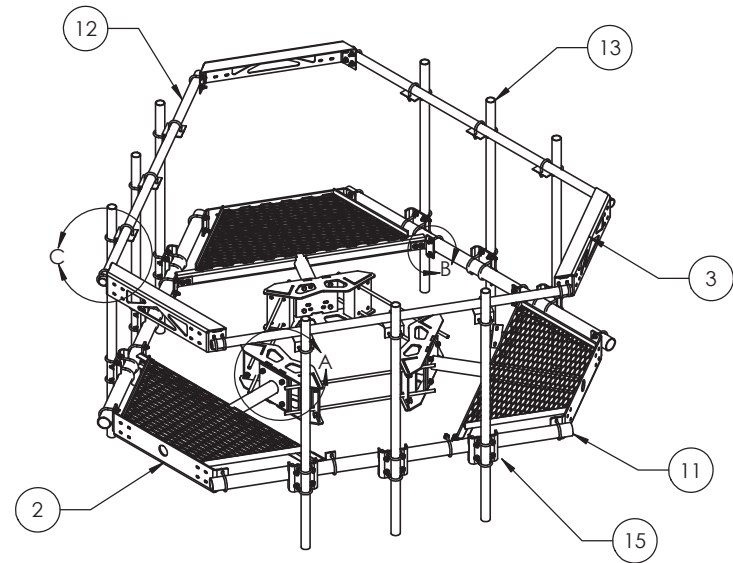
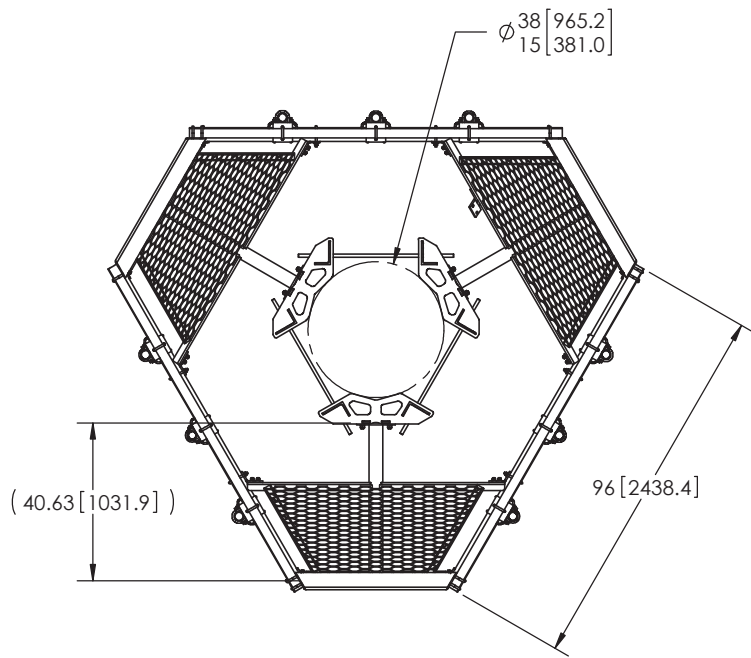
REVISIONS				
REV.	ECN	DESCRIPTION	BY	DATE
A		INITIAL RELEASE	DRR	12/27/11
B	8000005979	CHANGE NOSE CORNER BRKT, ADD GUB-4240	MSM	11/25/14
C	8000007579	NEW RINGMOUNT WELDMENT DESIGN	RJC	04/07/15

FOR BOM ENTRY ONLY



NOTES:  
1. CUSTOMER ASSEMBLY SHEETS 2-3.

<small>These drawings and specifications are the proprietary property of ANDREW CORPORATION and may be used only for the specific purpose authorized in writing by Andrew Corporation.</small>			<small>DRAWN BY:</small> MSM	<small>SHEET:</small> 1 of 3	<small>PART NUMBER:</small> MC-PK8-C
<small>ALL DIMENSIONS ARE IN INCHES U.O.S. TOLERANCES UNLESS OTHERWISE SPECIFIED:</small> .X = ± .12    ANGLES    ±2° .XX = ± .06    FRACTIONS    ±1/32 .XXX = ± .03 REMOVE BURRS AND BREAK EDGES .005			<small>CHECKED BY:</small> TP	<small>SCALE:</small> NTS	<small>DESCRIPTION:</small> LOW PROFILE PLATFORM KIT 8' FACE
<small>DO NOT SCALE THIS PRINT</small>			<small>DATE:</small> 10/18/11	<small>MATERIAL:</small> A36, A500	<small>DRAWING TYPE:</small> ASSEMBLY DRAWING
			<small>REVISION:</small> C	<small>FINISH:</small> GALV A123	 WESTCHESTER, IL. 60154 U.S.A.
				<small>WEIGHT:</small> 1410.14 LBS	



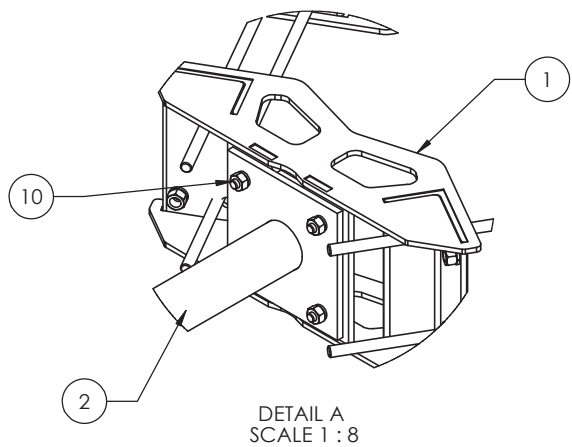
ITEM	PART NO.	DESCRIPTION	QTY.	WEIGHT
1	MC-RM1550-3	12" - 50" OD RINGMOUNT	1	230.42 LBS
2	MTC300601	Low Profile Co-Location Platform Snub Nose	3	134.21 LBS
3	MT195801	Corner Weldment Snub Nose Handrail	3	27.10 LBS
4	XA2020.01	CROSS OVER ANGLE	9	2.65 LBS
5	GUB-4356	1/2" X 3-5/8" X 6" GALV U-BOLT	18	0.82 LBS
6	GUB-4355	1/2" X 3-5/8" X 5" GALV U-BOLT	12	0.71 LBS
7	GUB-4240	1/2" X 2-1/2" X 4" GALV U-BOLT	48	0.56 LBS
8	GB-04145	1/2" X 1-1/2" GALV BOLT KIT	12	0.13 LBS
9	GWF-04	1/2" GALV FLAT WASHER	24	0.03 LBS
10	GB-0520A	5/8" X 2" GALV BOLT KIT (A325)	12	0.27 LBS
11	MT54796	3.50" OD X 96" GALV PIPE	3	60.28 LBS
12	MT-651-96	Ø2.375" OD X 96" PIPE	3	29.07 LBS
13	MT-651	2.375" OD x 72" PIPE	9	21.80 LBS
14	MT19617	MT196 Pipe Mount Plate	6	2.49 LBS
15	MT21701	PIPE MOUNT PLATE	9	7.93 LBS

<small>These drawings and specifications are the proprietary property of ANDREW CORPORATION and may be used only for the specific purpose authorized in writing by Andrew Corporation.</small>			
<small>ALL DIMENSIONS ARE IN INCHES U.O.S. TOLERANCES UNLESS OTHERWISE SPECIFIED:</small> .X = ± .12 ANGLES ±2° .XX = ± .06 FRACTIONS ±1/32 .XXX = ± .03 REMOVE BURRS AND BREAK EDGES .005 DO NOT SCALE THIS PRINT	<small>DRAWN BY:</small> MSM <small>CHECKED BY:</small> TP <small>DATE:</small> 10/18/11 <small>REVISION:</small> C	<small>SHEET:</small> 2 of 3 <small>SCALE:</small> NTS <small>DATE:</small> 10/18/11 <small>REVISION:</small> C	<small>PART NUMBER:</small> MC-PK8-C <small>DESCRIPTION:</small> 25" OD Snub Nose MT-196 <small>MATERIAL:</small> A36, A53 <small>DRAWING TYPE:</small> ASSEMBLY DRAWING <small>WEIGHT:</small> 1361.27 LBS

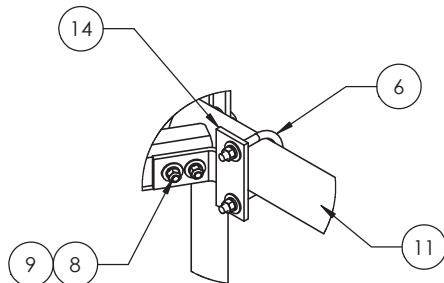
- NOTES:
1. ALL METRIC DIMENSIONS ARE IN BRACKETS.
  2. WILL FIT MONOPOLES 15"-38" OD.



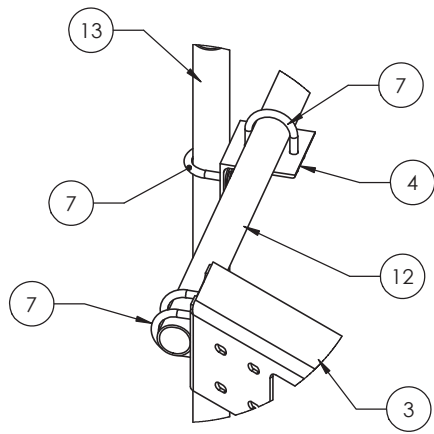
8 7 6 5 4 3 2 1



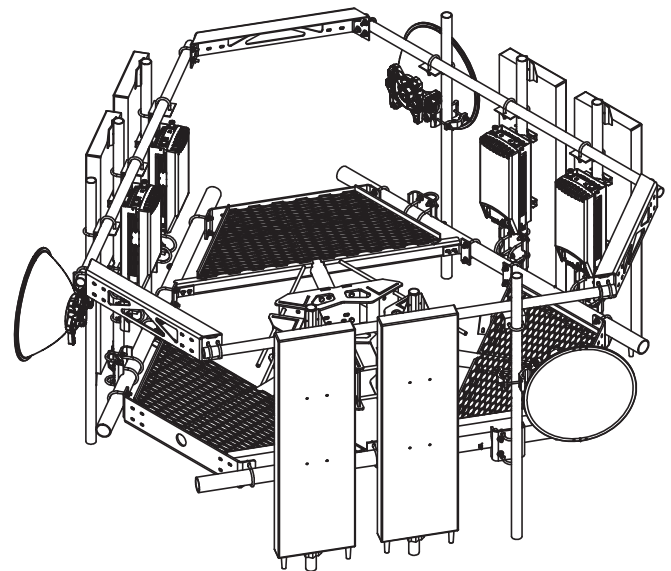
DETAIL A  
SCALE 1 : 8



DETAIL B  
SCALE 1 : 8




DETAIL C  
SCALE 1 : 8



**WITH ANTENNAS**

NOTES:  
1. ALL METRIC DIMENSIONS ARE IN BRACKETS.

<small>These drawings and specifications are the proprietary property of ANDREW CORPORATION and may be used only for the specific purpose authorized in writing by Andrew Corporation.</small>		<small>DRAWN BY:</small> MSM	<small>SHEET:</small> 3 of 3	<small>PART NUMBER:</small> MC-PK8-C
<small>ALL DIMENSIONS ARE IN INCHES U.O.S. TOLERANCES UNLESS OTHERWISE SPECIFIED:</small> .X = ± .12 ANGLES ±2° .XX = ± .06 FRACTIONS ±1/32 .XXX = ± .03 REMOVE BURRS AND BREAK EDGES .005		<small>CHECKED BY:</small> TP	<small>SCALE:</small> NTS	<small>DESCRIPTION:</small> 25" OD Snub Nose MT-196
<small>DO NOT SCALE THIS PRINT</small>		<small>DATE:</small> 10/18/11	<small>MATERIAL:</small> A36, A53	<small>DRAWING TYPE:</small> ASSEMBLY DRAWING
		<small>REVISION:</small> C	<small>FINISH:</small> GALV A123	 WESTCHESTER, IL. 60154 U.S.A.
			<small>WEIGHT:</small> 1361.27 LBS	

8 7 6 5 4 3 2 1