STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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

VIA ELECTRONIC MAIL

July 26, 2019

Anne Marie Zsamba
Real Estate Specialist
Crown Castle
3 Corporate Park Drive, Suite 101
Clifton Park, NY 12065
AnneMarie.Zsamba@crowncastle.com

RE: **EM-T-MOBILE-130-190722** – T-Mobile notice of intent to modify an existing telecommunications facility located at 214 Russian Village Road, Southbury, Connecticut.

Dear Ms. Zsamba:

The Connecticut Siting Council (Council) is in receipt of your correspondence of July 24, 2019 submitted in response to the Council's July 23, 2019 notification of an incomplete request for exempt modification with regard to the above-referenced matter.

The submission renders the request for exempt modification 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,

Melanie A. Bachman
Executive Director

MAB/IN/emr

Zsamba, Anne Marie

From: Zsamba, Anne Marie
Sent: Wednesday, July 24, 2019 10:52 AM
To: 'Robidoux, Evan'
Cc: CSC-DL Siting Council
Subject: RE: Council Incomplete Letter for EM-T-MOBILE-130-190722-RussianVillageRd-Southbury
Attachments: Digitally Signed MA_214 Russian Village_876314_PASSING.pdf

Good morning,

In response to the Council's notice of incomplete correspondence, dated July 23, 2019, attached please find an electronic copy of the Mount Analysis for this filing signed by Raphael Mohamed, a Connecticut Professional Engineer. Please note that this document is digitally signed and date stamped.

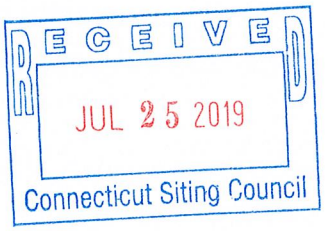
If possible, please confirm receipt of this email as well as your ability to view the signature on the attached document.

I will remit a hard copy of this report to the Council as well.

Thank you kindly.

ANNE MARIE ZSAMBA
Real Estate Specialist
T: (201) 236-9224
F: (724) 416-6112

CROWN CASTLE
3 Corporate Park Drive, Suite 101,
Clifton Park, NY 12065
CrownCastle.com



From: Robidoux, Evan <Evan.Robidoux@ct.gov>
Sent: Wednesday, July 24, 2019 9:59 AM
To: Zsamba, Anne Marie <AnneMarie.Zsamba@crowncastle.com>
Cc: CSC-DL Siting Council <Siting.Council@ct.gov>
Subject: Council Incomplete Letter for EM-T-MOBILE-130-190722-RussianVillageRd-Southbury

Please see the attached correspondence.

Evan Robidoux
Clerk Typist
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Date: **May 30, 2019**

Charles McGuirt
Crown Castle
3530 Toringdon Way Suite 300
Charlotte, NC 28277

MasTec Network Solutions
507 Airport Blvd, Suite 111
Morrisville, NC 27560
(919) 244-5207

Subject:	**Mount Modification Analysis**	
Carrier Designation:	**T-Mobile Equipment Change-Out**	
	Carrier Site Number:	CT11124H
	Carrier Site Name:	Southbury-W/ I-84
Crown Castle Designation:	**Crown Castle BU Number:**	876314
	Crown Castle Site Name:	HORSE HILL
	Crown Castle JDE Number:	559320
	Crown Castle Order Number:	479810 Revision 0
Engineering Firm Designation:	**MasTec Network Solutions Project Number:**	18543-MOD1
Site Data:	**214 Russian Village Rd, Southbury, New Haven County, CT 06488** **Latitude: 41° 27' 7.97" Longitude: -73° 15' 1.25"**	
Structure Information	**Tower Height & Type:**	130 ft Monopole
	Mount Elevation:	100 ft
	Mount Width & Type:	14 ft Platform Mount

Dear Charles McGuirt,

MasTec Network Solutions is pleased to submit this **"Mount Modification Analysis Report"** to determine the structural integrity of T-Mobile's antenna mounting system with the proposed appurtenance and equipment addition on the above mentioned 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 Mount **Sufficient***

***Structure has sufficient capacity provided the proposed reinforcement is installed as recommended.**

This analysis utilizes an ultimate 3-second gust wind speed of 120 mph as required by the 2018 Connecticut State Building Code. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Mount analysis prepared by: Elisa Mathon

Respectfully Submitted by:

Raphael Mohamed, PE, PEng
Senior Director of Engineering
CT PE License No. 25112

Raphael Mohamed

Digitally signed by Raphael Mohamed
DN: E=Raphael.Mohamed@mastec.com, CN=Raphael Mohamed, OU=Users, OU=MasTec Network Solutions, OU=Service Lines, DC=mastec, DC=local
Date: 2019.06.03 14:29:30-04'00'

TABLE OF CONTENTS

1) INTRODUCTION

This is a 14 ft Platform Mount mapped by P-SEC.

2) ANALYSIS CRITERIA

TIA-222 Revision:	TIA-222-H
Risk Category:	II
an ultimate:	120 mph
Exposure Category:	B
Topographic Category:	1
Ice Thickness:	1.5 in
Wind Speed with Ice:	50 mph
Seismic Ss:	0.201
Seismic S1:	0.065
Live Loading Wind Speed:	30 mph
Live Loading at Mid/End-Points:	250 lb
Man Live Loading at Mount Pipes	500 lb

Table 1 - Proposed Loading Configuration

Mount Centerline (ft)	Antenna Centerline (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Mount / Modification Details
100.0	100.0	6	ems	RR90-17-02DP	(1) Low Profile Platform
		3	rfs	APXVAARR24_43-U-NA20	
		3	ericsson	KRY 112 144/1	
		3	ericsson	KRY 112 489/2	
		3	ericsson	RADIO 4449 B12/B71	

3) ANALYSIS PROCEDURE

Table 2 - Documents Provided

Document	Remarks	Reference	Source
4-MOUNT MAPPING	P-SEC	Project No. 19651-08	On File
4-ORDER INFORMATION	CROWN CASTLE	ORDER NO. 479810 REV. 0	CCIsites
4-MOUNT ANALYSIS	MasTec	Project No. 18543-MNT1	On File
4-MODIFICATION DRAWINGS	MasTec	Appendix E	On File

3.1) Analysis Method

RISA-3D (Version No. 17.0.2), 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.

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

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 Tables 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) 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)
Pipe	ASTM A53 (GR B-35)
Connection Bolts	ASTM A325

This analysis may be affected if any assumptions are not valid or have been made in error. MasTec 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 Mount)

Notes	Component	Beam No.	Centerline (ft)	% Capacity	Pass / Fail
1	Mount Pipe	--	100	12.0	Pass
1	Interior Angle	--	100	11.8	Pass
1	Outer Standoff	--	100	13.1	Pass
1	Inner Standoff	--	100	27.3	Pass
1	Horizontal	--	100	49.0	Pass
1	Diagonals	--	100	33.5	Pass
1	Large Pipe Mount	--	100	36.1	Pass
1	MOD Angle	--	100	9.2	Pass

Structure Rating (max from all components) =	**49.0%**

Notes:
1) See additional documentation in "Appendix C - Software Analysis Output" for calculations supporting the % capacity consumed.

4.1) Recommendations

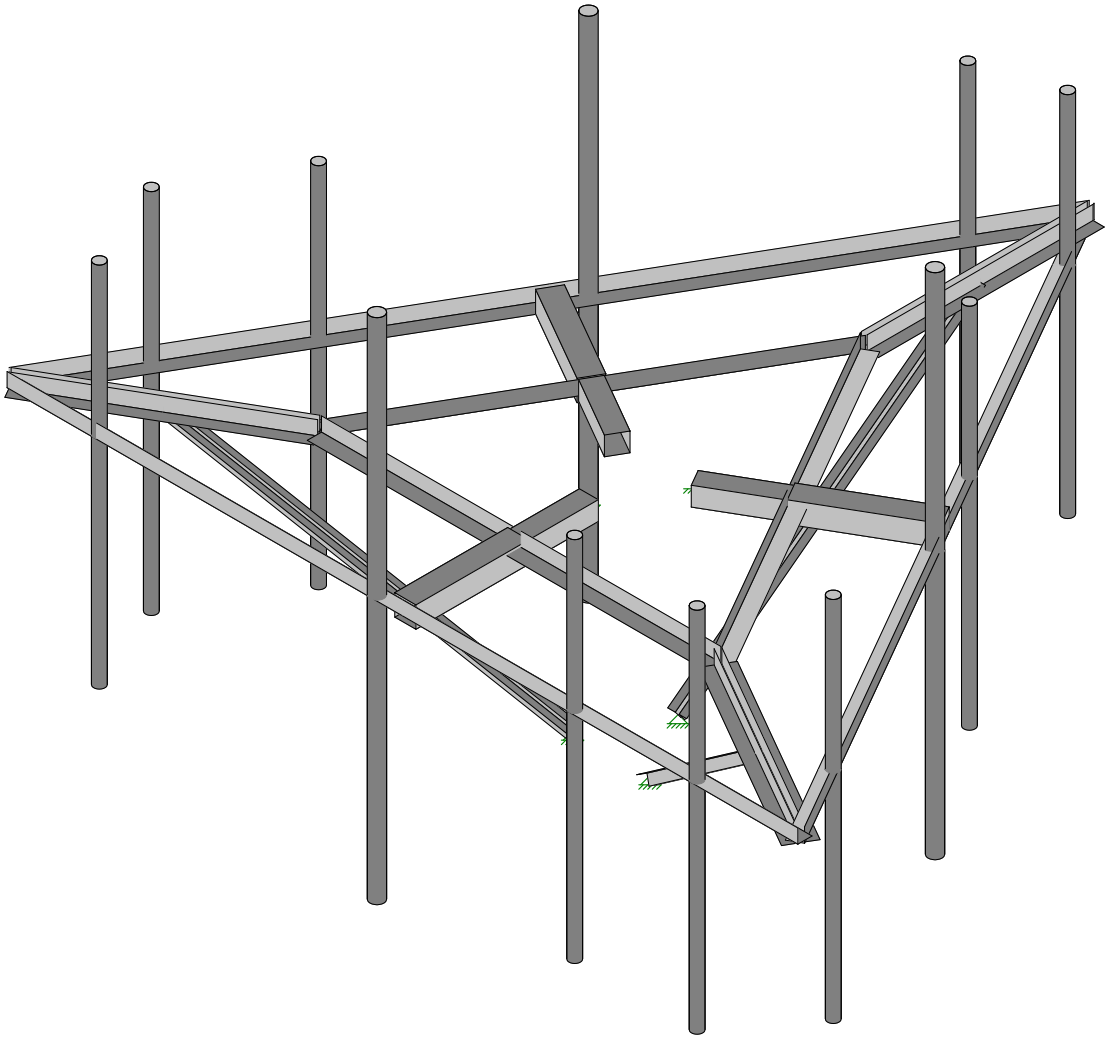
The mount has sufficient capacity to carry the proposed loading configuration. In order for the results of the analysis to be considered valid, the structural modifications listed below must be completed.

1. Kicker, Sabre C10851202DP

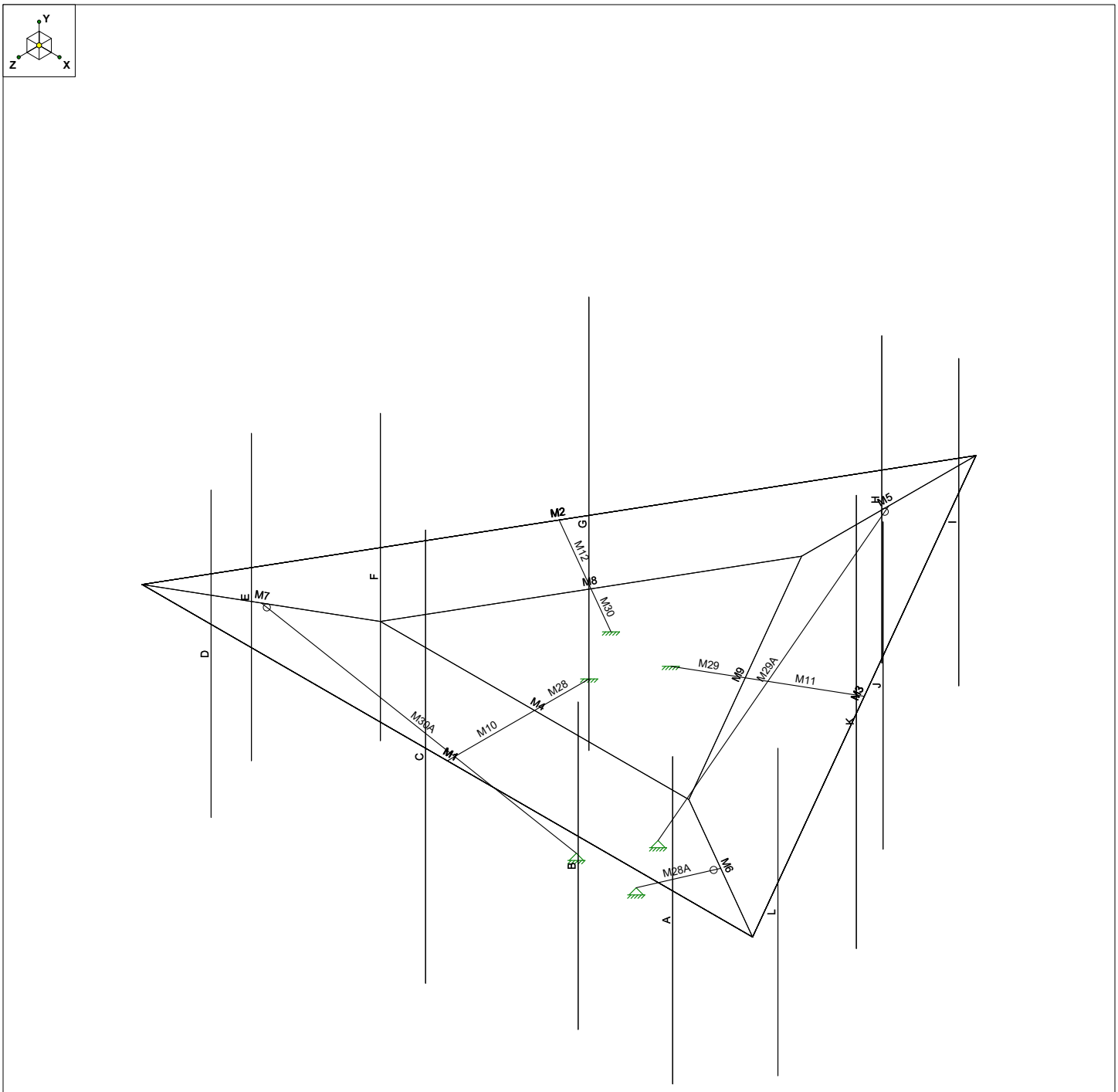
Engineering Detail Drawings have been provided in Appendix E- Mount Modification Drawings. Connection from the mount to the tower and local stresses on the tower are sufficient.

APPENDIX A

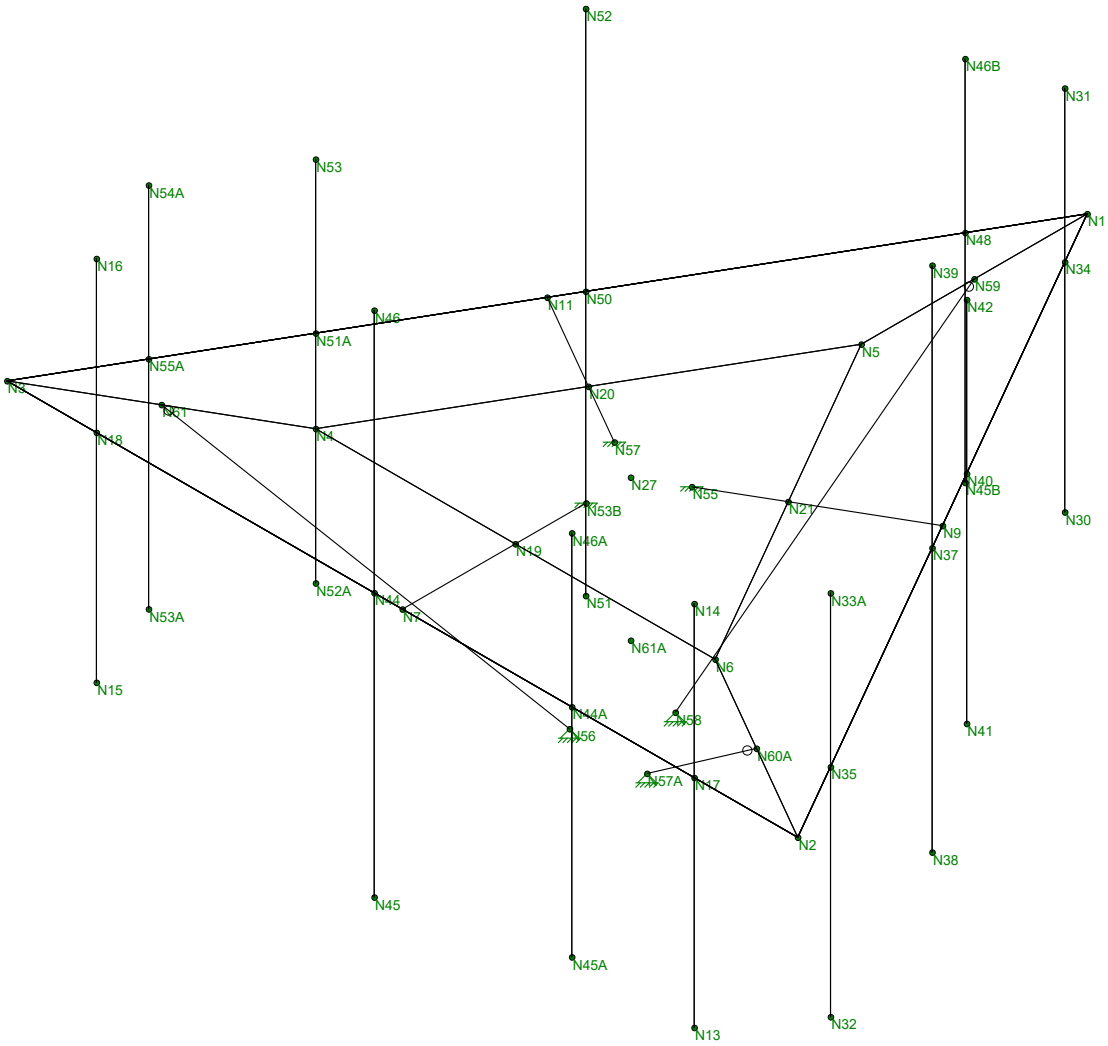
WIRE FRAME AND RENDERED MODELS



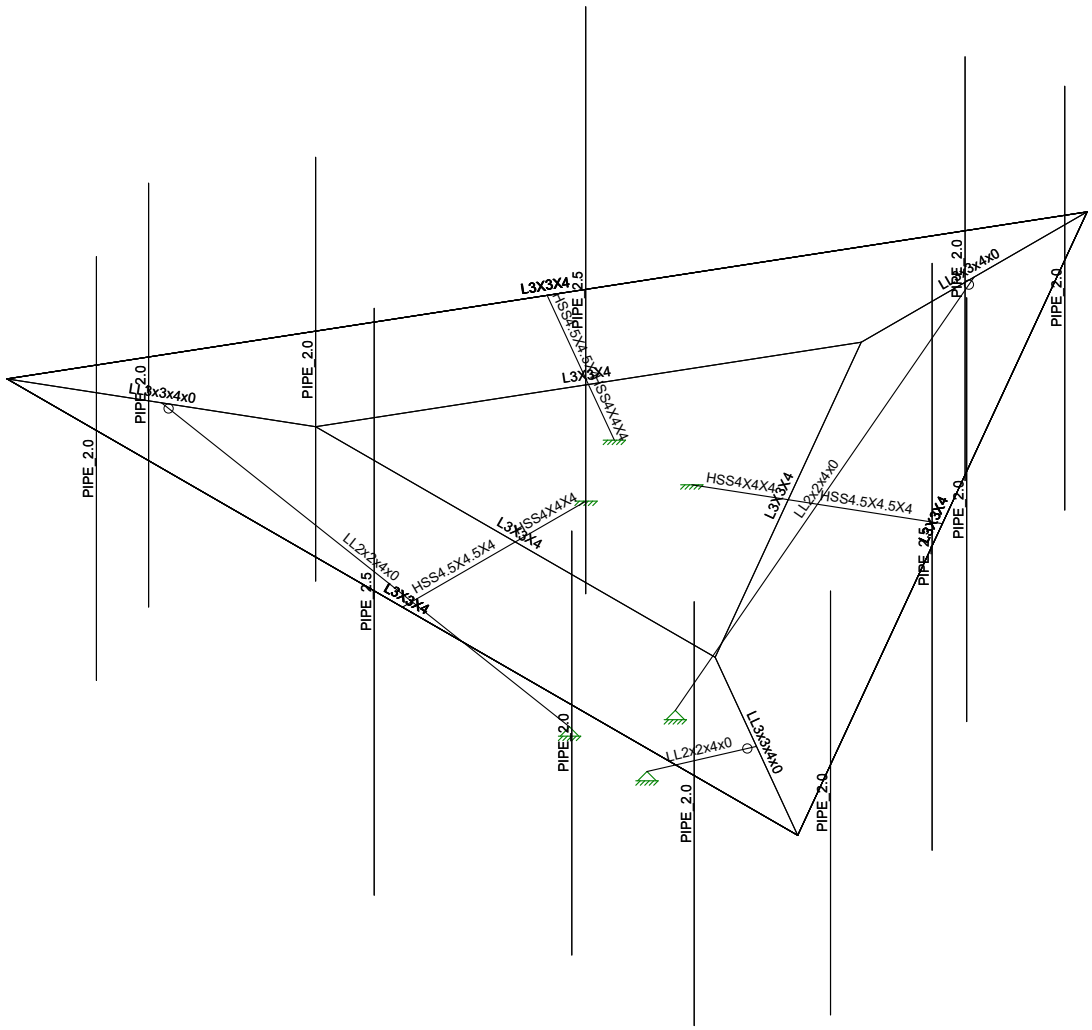
MasTec Network Solutions	876314-HORSE HILL	Rendered View
EJM		May 30, 2019 at 3:57 PM
18543-MOD1		18543 - mod.R3D



MasTec Network Solutions	876314-HORSE HILL	Member Labels
EJM		May 30, 2019 at 3:57 PM
18543-MOD1		18543 - mod.R3D



MasTec Network Solutions	876314-HORSE HILL	Node Labels
EJM		May 30, 2019 at 3:58 PM
18543-MOD1		18543 - mod.R3D



MasTec Network Solutions	876314-HORSE HILL	Member Shapes
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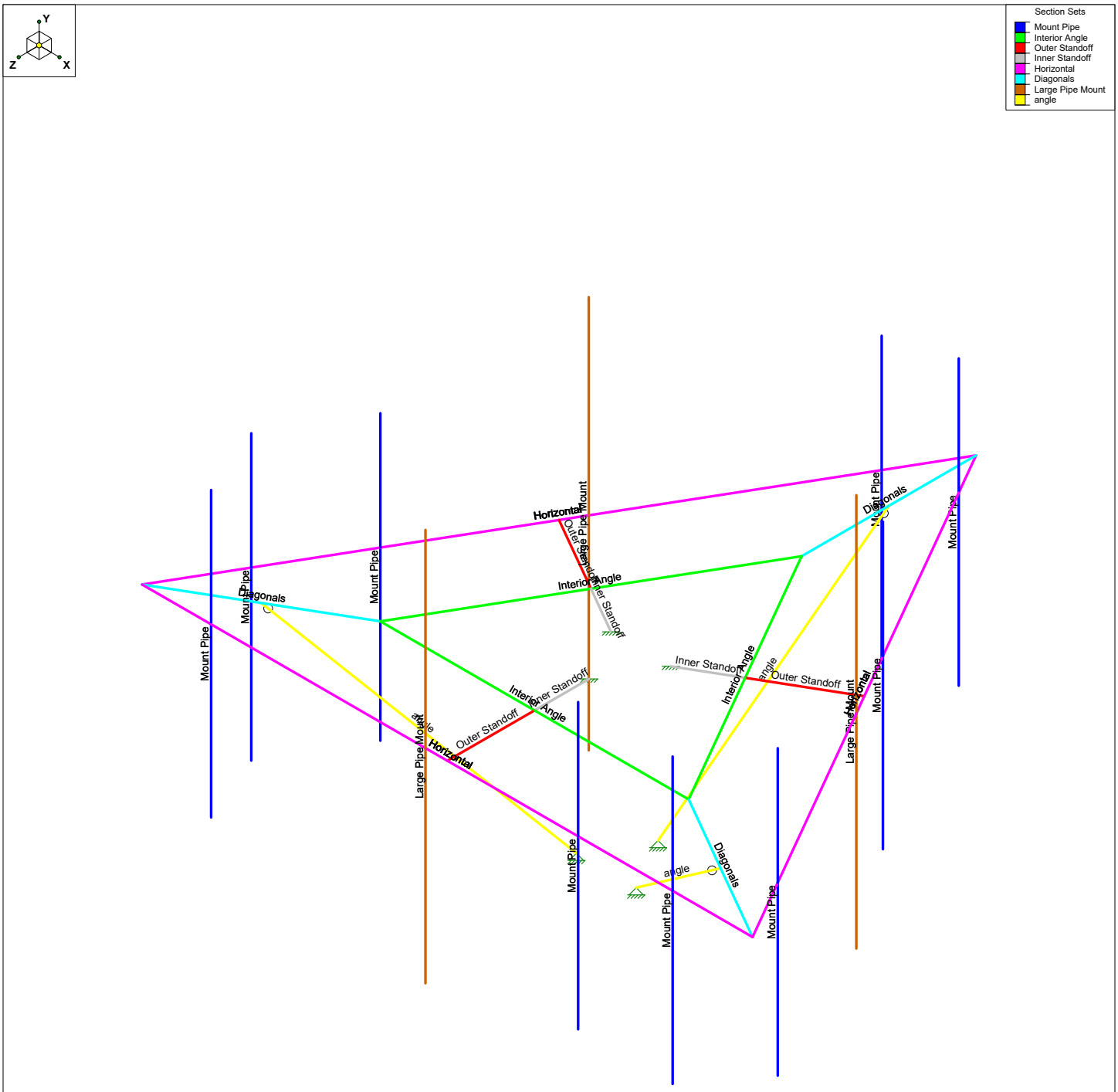
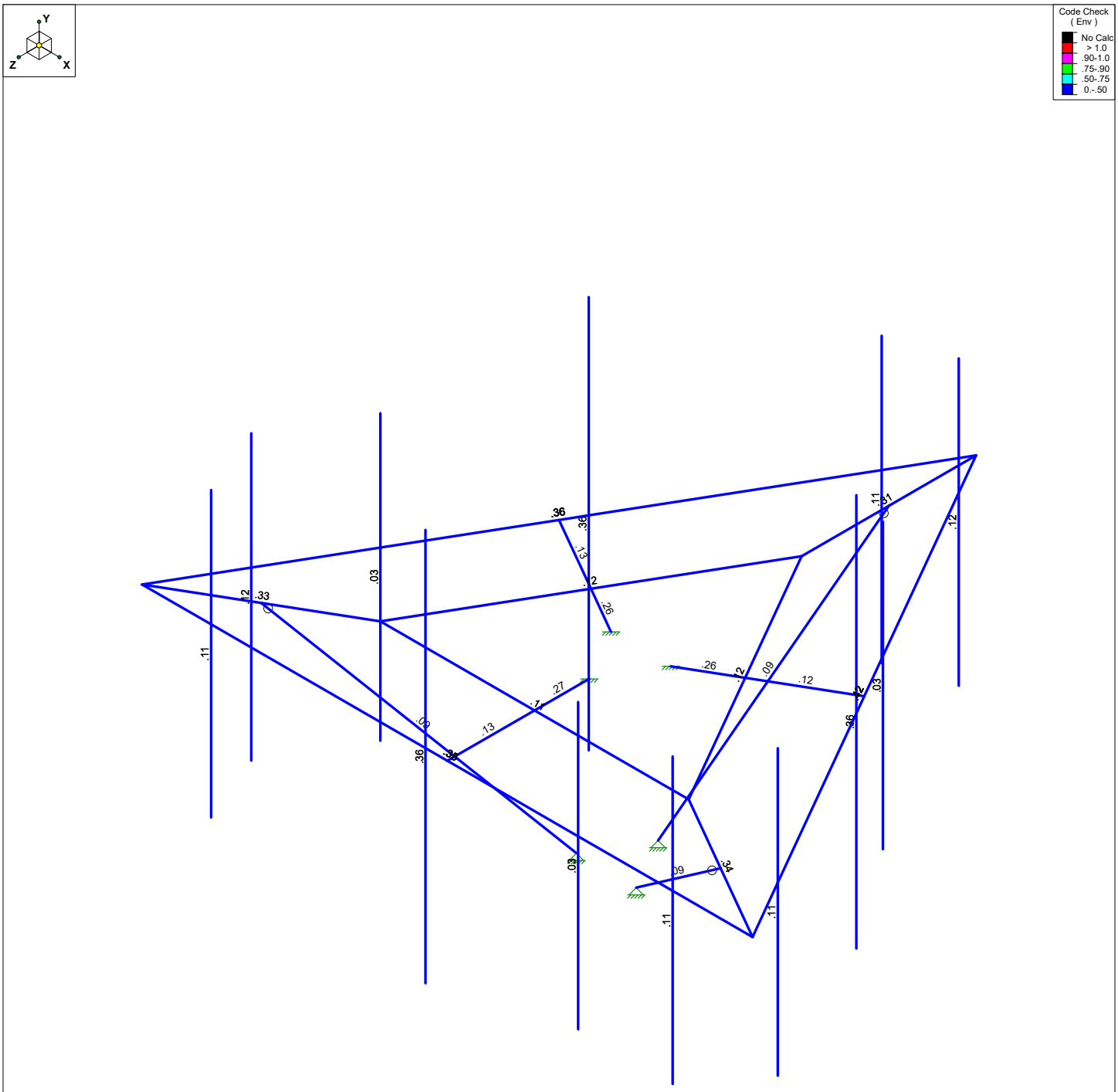
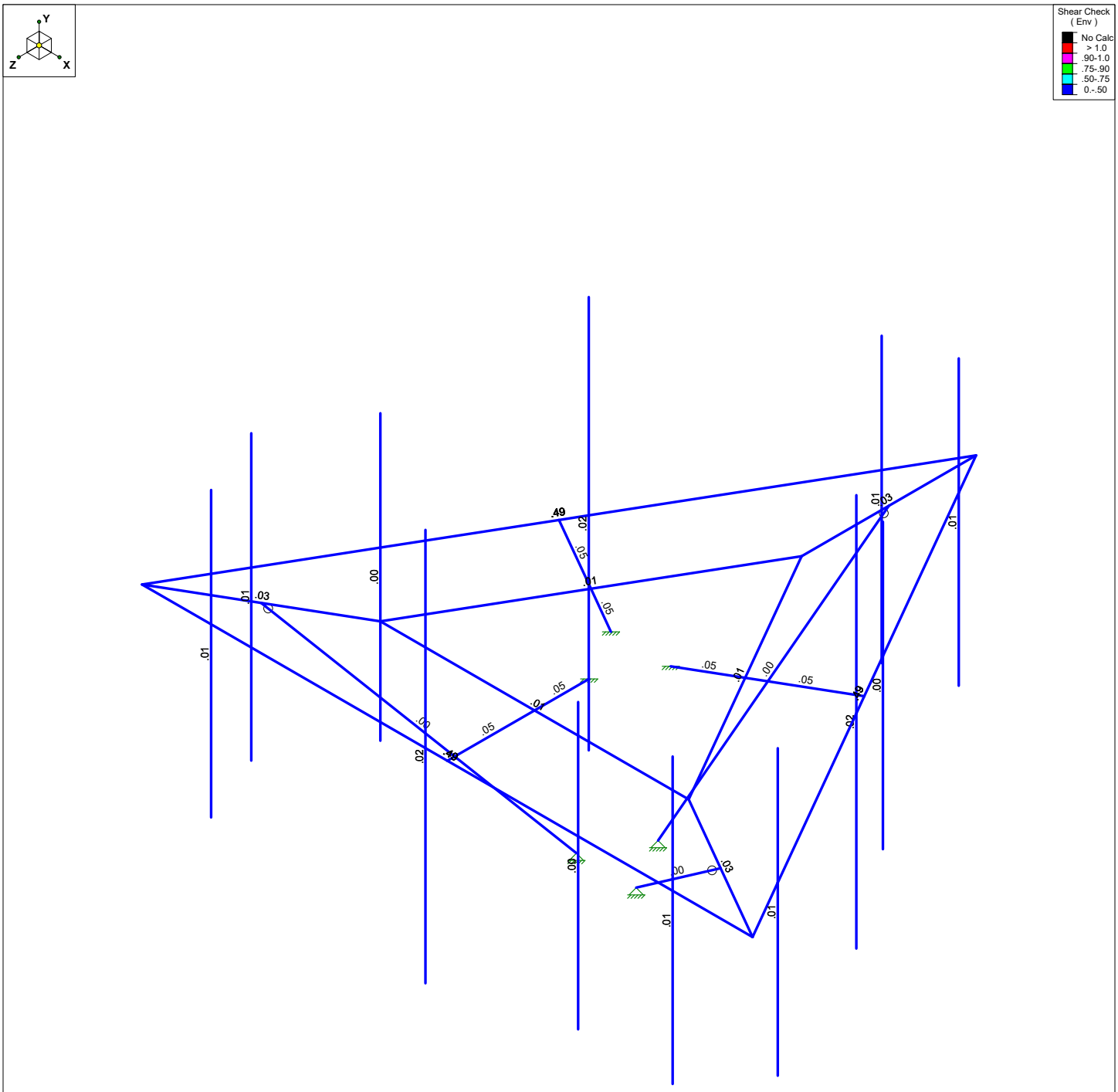


MasTec Network Solutions	876314-HORSE HILL	Section Sets
EJM		May 30, 2019 at 3:58 PM
18543-MOD1		18543 - mod.R3D



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

MasTec Network Solutions	876314-HORSE HILL	Unity Check
EJM		May 30, 2019 at 3:58 PM
18543-MOD1		18543 - mod.R3D



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

MasTec Network Solutions	876314-HORSE HILL	Shear Check
EJM		May 30, 2019 at 3:58 PM
18543-MOD1		18543 - mod.R3D

APPENDIX B

SOFTWARE INPUT CALCULATIONS

MasTec Network Solutions

Mount Analysis Tool

Site Name	Horse Hill		
Site ID	876314		
Job Number	18543-MNT1	Mount Existing?	Crown
Code	H	Risk Category	II

Legend
Input
Calculated
Notes

Maximum Capacity		
Controlling Capacity	49.0%	PASS

Analysis Parameters		
Mount Height	100	ft
Exposure Category	B	(B,C, or D)
Ultimate Wind Speed	120	mph
Ice Wind Speed	50	mph
Design Ice Thickness, t_i	1.5	in
Maintenance Wind Speed	30	mph
Run Earthquake Analysis?	Yes	
Ground Elevation	445.14	ft, Google Earth
S_1	0.065	USGS
S_{DS}	0.214	2.7.5
Vertical Seismic Loads, E_v	0.043	2.7.6
Seismic Response Coefficient, C_s	0.107	2.7.7.1.1
C_s Min	0.030	2.7.7.1.1

Wind Parameters					
Gust Effect Factor, G_h	1.000	2.6.9	K_s	1.000	2.6.7
K_z	0.988	2.6.5.2	K_e	0.984	2.6.8
K_{zt}	1.000	2.6.6	K_a	0.900	16.6
K_d	0.950	Table 2-2	*Note for Rooftop Structures greater than 50', unobstructed for 90 deg and protruding 50' above surrounding buildings Ks must be calculated.		
q_z	30.746	psf, 2.6.11.6			
C/D	119.292	Table 2-9			
t_{iz}	1.676	in, 2.6.10			
q_{iz}	5.338	psf, 2.6.9.6	I, Ice	1.000	Table 2-3
C/D_{iz}	49.705	Table 2-9	I, EQ	1.000	Table 2-3
$q_{Maintenance}$	1.947	psf, 2.6.9.6	$K_{es\ (Wind)}$	1.000	Table S-1
$C/D_{Maintenance}$	29.823	Table 2-9	$K_{es\ (ice)}$	1.000	Table S-1
Ice Dead, Grating	0.015641437	ksf			

Pipe Mounts (Orientation Drawn Top-Down)			
Risa 3D Label	Elevation (ft)	Length (in)	Diameter (in)
A	100	78	2.375
B	100	78	2.375
C	100	108	2.875
D	100	78	2.375
E	100	78	2.375
F	100	78	2.375
G	100	108	2.875
H	100	78	2.375
I	100	78	2.375
J	100	78	2.375
K	100	108	2.875
L	100	78	2.375

Appurtenances					
Model	Type	Height (in)	Width (in)	Depth (in)	Weight (lbs)
Ericsson KRY 112 489/2	RRU, TMA, Etc.	11	6.1	3.94	15.4
EMS RR90-17-02DP	Antenna	56	8	2.75	13.5
RFS APXVAARR24_43-U-NA20	Antenna	95.9	24	8.7	128
Ericsson KRY 112 144/1	RRU, TMA, Etc.	7	6	3	11
Ericsson RADIO 4449 B12/B71	RRU, TMA, Etc.	14.95	13.19	9.25	75

Pipe Mount	Antenna	Elevation (ft)	Quantity	Orientation (deg)	Front Exposed (%)	Side Exposed (%)	Type	Height (in)	Width (in)	Depth (in)	Weight (lbs)	Front CaAa (ft^2)	Side CaAa (ft^2)	Front F_A (kips)	Side F_A (kips)	Top %	Bottom %
A	EMS RR90-17-02DP	100	1	0	100.0%	100.0%	Antenna	56.000	8.000	2.750	13.500	4.356	1.974	0.134	0.061	14.1%	85.9%
A	Ericsson KRY 112 144/1	100	1	90	0.0%	0.0%	RRU, TMA, Etc.	7.000	6.000	3.000	11.000	0.350	0.175	0.000	0.000	45.5%	54.5%
A	Ericsson RADIO 4449 B12/B71	100	1	90	50.0%	100.0%	RRU, TMA, Etc.	14.950	13.190	9.250	75.000	1.643	1.152	0.018	0.051	40.4%	59.6%
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C	RFS APXVAARR24_43-U-NA20	100	1	0	100.0%	100.0%	Antenna	95.900	24.000	8.700	128.000	20.243	8.889	0.622	0.273	5.6%	94.4%
C																	
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C																	
D	EMS RR90-17-02DP	100	1	0	100.0%	100.0%	Antenna	56.000	8.000	2.750	13.500	4.356	1.974	0.134	0.061	14.1%	85.9%
D	Ericsson KRY 112 144/1	100	1	0	0.0%	100.0%	RRU, TMA, Etc.	7.000	6.000	3.000	11.000	0.350	0.175	0.000	0.005	45.5%	54.5%
D																	
D																	
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D																	
E	EMS RR90-17-02DP	100	1	120	100.0%	100.0%	Antenna	56.000	8.000	2.750	13.500	4.356	1.974	0.079	0.116	14.1%	85.9%
E	Ericsson KRY 112 489/2	100	1	210	0.0%	0.0%	RRU, TMA, Etc.	11.000	6.100	3.940	15.400	0.559	0.365	0.000	0.000	42.9%	57.1%
E	Ericsson RADIO 4449 B12/B71	100	1	210	50.0%	100.0%	RRU, TMA, Etc.	14.950	13.190	9.250	75.000	1.643	1.152	0.023	0.039	40.4%	59.6%
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G	RFS APXVAARR24_43-U-NA20	100	1	120	100.0%	100.0%	Antenna	95.900	24.000	8.700	128.000	20.243	8.889	0.361	0.535	5.6%	94.4%
G																	
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H	EMS RR90-17-02DP	100	1	120	100.0%	100.0%	Antenna	56.000	8.000	2.750	13.500	4.356	1.974	0.079	0.116	14.1%	85.9%
H	Ericsson KRY 112 489/2	100	1	120	0.0%	100.0%	RRU, TMA, Etc.	11.000	6.100	3.940	15.400	0.559	0.365	0.000	0.016	42.9%	57.1%
H																	
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I	EMS RR90-17-02DP	100	1	240	100.0%	100.0%	Antenna	56.000	8.000	2.750	13.500	4.356	1.974	0.079	0.116	14.1%	85.9%
I	Ericsson KRY 112 489/2	100	1	330	0.0%	0.0%	RRU, TMA, Etc.	11.000	6.100	3.940	15.400	0.559	0.365	0.000	0.000	42.9%	57.1%
I	Ericsson RADIO 4449 B12/B71	100	1	330	50.0%	100.0%	RRU, TMA, Etc.	14.950	13.190	9.250	75.000	1.643	1.152	0.023	0.039	40.4%	59.6%
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K	RFS APXVAARR24_43-U-NA20	100	1	240	100.0%	100.0%	Antenna	95.900	24.000	8.700	128.000	20.243	8.889	0.361	0.535	5.6%	94.4%
K																	
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L	EMS RR90-17-02DP	100	1	240	100.0%	100.0%	Antenna	56.000	8.000	2.750	13.500	4.356	1.974	0.079	0.116	14.1%	85.9%
L	Ericsson KRY 112 489/2	100	1	240	0.0%	100.0%	RRU, TMA, Etc.	11.000	6.100	3.940	15.400	0.559	0.365	0.000	0.016	42.9%	57.1%
L																	
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L																	

Pipe Mount	Antenna	Elevation (ft)	Quantity	Orientation (deg)	Front Exposed (%)	Side Exposed (%)	Type	Height (in)	Width (in)	Depth (in)	Ice Weight (lb)	Front CaAa (ft^2)	Side CaAa (ft^2)	Front F_A (kips)	Side F_A (kips)	Top %	Bottom %
A	EMS RR90-17-02DP	100	1	0	100.0%	100.0%	Antenna	56.000	8.000	2.750	96.841	6.182	3.749	0.033	0.020	14.1%	85.9%
A	Ericsson KRY 112 144/1	100	1	90	0.0%	0.0%	RRU, TMA, Etc.	7.000	6.000	3.000	10.014	0.807	0.548	0.000	0.000	45.5%	54.5%
A	Ericsson RADIO 4449 B12/B71	100	1	90	50.0%	100.0%	RRU, TMA, Etc.	14.950	13.190	9.250	45.369	2.523	1.922	0.005	0.013	40.4%	59.6%
A																	
A																	
A																	
B																	
B																	
B																	
B																	
B																	
B																	
C	RFS APXVAARR24_43-U-NA20	100	1	0	100.0%	100.0%	Antenna	95.900	24.000	8.700	445.130	23.568	11.971	0.126	0.064	5.6%	94.4%
C																	
C																	
C																	
C																	
C																	
D	EMS RR90-17-02DP	100	1	0	100.0%	100.0%	Antenna	56.000	8.000	2.750	96.841	6.182	3.749	0.033	0.020	14.1%	85.9%
D	Ericsson KRY 112 144/1	100	1	0	0.0%	100.0%	RRU, TMA, Etc.	7.000	6.000	3.000	10.014	0.807	0.548	0.000	0.003	45.5%	54.5%
D																	
D																	
D																	
D																	
E	EMS RR90-17-02DP	100	1	120	100.0%	100.0%	Antenna	56.000	8.000	2.750	96.841	6.182	3.749	0.023	0.030	14.1%	85.9%
E	Ericsson KRY 112 489/2	100	1	210	0.0%	0.0%	RRU, TMA, Etc.	11.000	6.100	3.940	16.775	1.130	0.872	0.000	0.000	42.9%	57.1%
E	Ericsson RADIO 4449 B12/B71	100	1	210	50.0%	100.0%	RRU, TMA, Etc.	14.950	13.190	9.250	45.369	2.523	1.922	0.006	0.011	40.4%	59.6%
E																	
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F																	
G	RFS APXVAARR24_43-U-NA20	100	1	120	100.0%	100.0%	Antenna	95.900	24.000	8.700	445.130	23.568	11.971	0.079	0.110	5.6%	94.4%
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H	EMS RR90-17-02DP	100	1	120	100.0%	100.0%	Antenna	56.000	8.000	2.750	96.841	6.182	3.749	0.023	0.030	14.1%	85.9%
H	Ericsson KRY 112 489/2	100	1	120	0.0%	100.0%	RRU, TMA, Etc.	11.000	6.100	3.940	16.775	1.130	0.872	0.000	0.006	42.9%	57.1%
H																	
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H																	
H																	
I	EMS RR90-17-02DP	100	1	240	100.0%	100.0%	Antenna	56.000	8.000	2.750	96.841	6.182	3.749	0.023	0.030	14.1%	85.9%
I	Ericsson KRY 112 489/2	100	1	330	0.0%	0.0%	RRU, TMA, Etc.	11.000	6.100	3.940	16.775	1.130	0.872	0.000	0.000	42.9%	57.1%
I	Ericsson RADIO 4449 B12/B71	100	1	330	50.0%	100.0%	RRU, TMA, Etc.	14.950	13.190	9.250	45.369	2.523	1.922	0.006	0.011	40.4%	59.6%
I																	
I																	
I																	
J																	
J																	
J																	
J																	
J																	
J																	
K	RFS APXVAARR24_43-U-NA20	100	1	240	100.0%	100.0%	Antenna	95.900	24.000	8.700	445.130	23.568	11.971	0.079	0.110	5.6%	94.4%
K																	
K																	
K																	
K																	

K																		
L	EMS RR90-17-02DP	100	1	240	100.0%	100.0%	Antenna	56.000	8.000	2.750	96.841	6.182	3.749	0.023	0.030	14.1%	85.9%
L	Ericsson KRY 112 489/2	100	1	240	0.0%	100.0%	RRU, TMA, Etc.	11.000	6.100	3.940	16.775	1.130	0.872	0.000	0.006	42.9%	57.1%
L																		
L																		
L																		
L																		

Member	Section Set	Member Length (ft)	Flat/Round	Wind Projection (in)	D_c (in)	A_w (in^2)	C_f	Front Wind (klf)	Side Wind (klf)	Front Ice Wind (klf)	Side Ice Wind (klf)	Ice Dead (klf)	Front Maint Wind (klf)	Side Maint Wind (klf)
M1	Horizontal	14	Flat	3.000	4.243	31.160	2.000	0.015	0.000	0.005	0.002	0.012	0.001	0.000
M2	Horizontal	13.99999943	Flat	3.000	4.243	31.160	2.000	0.004	0.012	0.001	0.002	0.012	0.000	0.001
M3	Horizontal	13.99999943	Flat	3.000	4.243	31.160	2.000	0.004	0.012	0.001	0.002	0.012	0.000	0.001
M4	Interior Angle	7.071797	Flat	3.000	4.243	31.160	2.000	0.015	0.000	0.005	0.002	0.012	0.001	0.000
M5	Diagonals	4	Flat	6.000	6.000	40.413	2.000	0.000	0.031	0.000	0.005	0.016	0.000	0.002
M6	Diagonals	3.999999467	Flat	6.000	6.000	40.413	2.000	0.023	0.008	0.006	0.003	0.016	0.001	0.000
M7	Diagonals	4.000000333	Flat	6.000	6.000	40.413	2.000	0.023	0.008	0.006	0.003	0.016	0.001	0.000
M8	Interior Angle	7.071796012	Flat	3.000	4.243	31.160	2.000	0.004	0.012	0.001	0.002	0.012	0.000	0.001
M9	Interior Angle	7.071796512	Flat	3.000	4.243	31.160	2.000	0.004	0.012	0.001	0.002	0.012	0.000	0.001
M10	Outer Standoff	2	Flat	4.500	6.364	42.329	2.000	0.000	0.023	0.000	0.004	0.016	0.000	0.001
M11	Outer Standoff	2.000000167	Flat	4.500	6.364	42.329	2.000	0.017	0.006	0.005	0.003	0.016	0.001	0.000
M12	Outer Standoff	2.000000167	Flat	4.500	6.364	42.329	2.000	0.017	0.006	0.005	0.003	0.016	0.001	0.000
A	Mount Pipe	6.5	Round	2.380	2.380	21.354	1.200	0.007	0.007	0.003	0.003	0.008	0.000	0.000
D	Mount Pipe	6.5	Round	2.380	2.380	21.354	1.200	0.007	0.007	0.003	0.003	0.008	0.000	0.000
C	Large Pipe Mount	9	Flat	2.880	2.880	23.986	2.000	0.015	0.015	0.005	0.005	0.009	0.001	0.001
M28	Inner Standoff	1.25	Flat	4.000	5.657	38.606	2.000	0.000	0.020	0.000	0.004	0.015	0.000	0.001
M29	Inner Standoff	1.249999346	Flat	4.000	5.657	38.606	2.000	0.015	0.005	0.005	0.003	0.015	0.001	0.000
M30	Inner Standoff	1.250000212	Flat	4.000	5.657	38.606	2.000	0.015	0.005	0.005	0.003	0.015	0.001	0.000
B	Mount Pipe	6.5	Round	2.380	2.380	21.354	1.200	0.007	0.007	0.003	0.003	0.008	0.000	0.000
I	Mount Pipe	6.5	Round	2.380	2.380	21.354	1.200	0.007	0.007	0.003	0.003	0.008	0.000	0.000
L	Mount Pipe	6.5	Round	2.380	2.380	21.354	1.200	0.007	0.007	0.003	0.003	0.008	0.000	0.000
K	Large Pipe Mount	9	Flat	2.880	2.880	23.986	2.000	0.015	0.015	0.005	0.005	0.009	0.001	0.001
J	Mount Pipe	6.5	Round	2.380	2.380	21.354	1.200	0.007	0.007	0.003	0.003	0.008	0.000	0.000
H	Mount Pipe	6.5	Round	2.380	2.380	21.354	1.200	0.007	0.007	0.003	0.003	0.008	0.000	0.000
G	Large Pipe Mount	9	Flat	2.880	2.880	23.986	2.000	0.015	0.015	0.005	0.005	0.009	0.001	0.001
E	Mount Pipe	6.5	Round	2.380	2.380	21.354	1.200	0.007	0.007	0.003	0.003	0.008	0.000	0.000
F	Mount Pipe	6.5	Round	2.380	2.380	21.354	1.200	0.007	0.007	0.003	0.003	0.008	0.000	0.000
M28A	angle	6.633208608	Flat	4.000	4.000	29.883	2.000	0.018	0.014	0.005	0.004	0.012	0.001	0.001
M29A	angle	6.633209198	Flat	4.000	4.000	29.883	2.000	0.012	0.020	0.004	0.006	0.012	0.001	0.001
M30A	angle	6.633209299	Flat	4.000	4.000	29.883	2.000	0.018	0.014	0.005	0.004	0.012	0.001	0.001

APPENDIX C

SOFTWARE ANALYSIS OUTPUT

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

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Mount Pipe	PIPE 2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
2	Interior Angle	L3X3X4	Beam	Single Angle	A36 Gr.36	Typical	1.44	1.23	1.23	.031
3	Outer Standoff	HSS4.5X4.5X4	Beam	SquareTube	A36 Gr.36	Typical	3.84	11.4	11.4	18.5
4	Inner Standoff	HSS4X4X4	Beam	SquareTube	A36 Gr.36	Typical	3.37	7.8	7.8	12.8
5	Horizontal	L3X3X4	Beam	Single Angle	A36 Gr.36	Typical	1.44	1.23	1.23	.031
6	Diagonals	LL3x3x4x0	Beam	Double Angle (No G...	A36 Gr.36	Typical	2.88	4.5	2.46	.063
7	Large Pipe Mount	PIPE 2.5	Beam	Pipe	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
8	angle	LL2x2x4x0	Beam	Double Angle (No G...	A36 Gr.36	Typical	1.89	1.34	.692	.042

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	N1	2.56702	0	6.763475	0	
2	N2	9.56702	0	18.88783	0	
3	N3	-4.43298	0	18.88783	0	
4	N4	-0.968878	0	16.88783	0	
5	N5	2.56702	0	10.763475	0	
6	N6	6.102919	0	16.88783	0	
7	N7	2.56702	0	18.88783	0	
8	N9	6.06702	0	12.825653	0	
9	N11	-0.93298	0	12.825653	0	
10	N13	7.733687	-3.833333	18.88783	0	
11	N14	7.733687	2.666667	18.88783	0	
12	N15	-2.849646	-3.833333	18.88783	0	
13	N16	-2.849646	2.666667	18.88783	0	
14	N17	7.733687	0	18.88783	0	
15	N18	-2.849646	0	18.88783	0	
16	N19	2.56702	0	16.88783	0	
17	N20	0.799071	0	13.825653	0	
18	N21	4.334969	0	13.825653	0	
19	N27	2.56702	0	14.846378	0	
20	N44	2.06702	0	18.88783	0	
21	N45	2.06702	-4.666667	18.88783	0	
22	N46	2.06702	4.333333	18.88783	0	
23	N44A	5.56702	0	18.88783	0	
24	N45A	5.56702	-3.833333	18.88783	0	
25	N46A	5.56702	2.666667	18.88783	0	
26	N30	3.108687	-3.833333	7.701669	0	
27	N31	3.108687	2.666667	7.701669	0	
28	N32	8.775354	-3.833333	17.516623	0	
29	N33A	8.775354	2.666667	17.516623	0	
30	N34	3.108687	0	7.701669	0	
31	N35	8.775354	0	17.516623	0	
32	N37	6.31702	0	13.258665	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
33	N38	6.31702	-4.666667	13.258665	0	
34	N39	6.31702	4.333333	13.258665	0	
35	N40	5.483687	0	11.81529	0	
36	N41	5.483687	-3.833333	11.81529	0	
37	N42	5.483687	2.666667	11.81529	0	
38	N45B	1.775354	-3.833333	8.134682	0	
39	N46B	1.775354	2.666667	8.134682	0	
40	N48	1.775354	0	8.134682	0	
41	N50	-0.68298	0	12.39264	0	
42	N51	-0.68298	-4.666667	12.39264	0	
43	N52	-0.68298	4.333333	12.39264	0	
44	N53A	-3.516313	-3.833333	17.300117	0	
45	N54A	-3.516313	2.666667	17.300117	0	
46	N55A	-3.516313	0	17.300117	0	
47	N51A	-2.43298	0	15.423729	0	
48	N52A	-2.43298	-3.833333	15.423729	0	
49	N53	-2.43298	2.666667	15.423729	0	
50	N53B	2.56702	0	15.63783	0	
51	N55	3.252438	0	14.450653	0	
52	N57	1.881603	0	14.450653	0	
53	N56	1.881603	-4	15.242104	0	
54	N57A	3.252438	-4	15.242104	0	
55	N58	2.56702	-4	14.054927	0	
56	N59	2.56702	0	8.763475	0	
57	N60A	7.834969	0	17.88783	0	
58	N61	-2.700929	0	17.88783	0	
59	N61A	2.56702	-2.5	14.846378	0	

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design R...
1	M1	N2	N3			Horizontal	Beam	Single Angle	A36 Gr.36	Typical
2	M2	N3	N1			Horizontal	Beam	Single Angle	A36 Gr.36	Typical
3	M3	N2	N1		270	Horizontal	Beam	Single Angle	A36 Gr.36	Typical
4	M4	N4	N6			Interior Angle	Beam	Single Angle	A36 Gr.36	Typical
5	M5	N1	N5		180	Diagonals	Beam	Double Angl..	A36 Gr.36	Typical
6	M6	N2	N6		180	Diagonals	Beam	Double Angl..	A36 Gr.36	Typical
7	M7	N3	N4		180	Diagonals	Beam	Double Angl..	A36 Gr.36	Typical
8	M8	N4	N5		270	Interior Angle	Beam	Single Angle	A36 Gr.36	Typical
9	M9	N5	N6		270	Interior Angle	Beam	Single Angle	A36 Gr.36	Typical
10	M10	N7	N19			Outer Standoff	Beam	SquareTube	A36 Gr.36	Typical
11	M11	N9	N21			Outer Standoff	Beam	SquareTube	A36 Gr.36	Typical
12	M12	N11	N20			Outer Standoff	Beam	SquareTube	A36 Gr.36	Typical
13	A	N14	N13			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
14	D	N16	N15			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
15	C	N46	N45			Large Pipe Mount	Beam	Pipe	A53 Gr.B	Typical
16	M28	N19	N53B			Inner Standoff	Beam	SquareTube	A36 Gr.36	Typical
17	M29	N21	N55			Inner Standoff	Beam	SquareTube	A36 Gr.36	Typical
18	M30	N20	N57			Inner Standoff	Beam	SquareTube	A36 Gr.36	Typical
19	B	N46A	N45A			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
20	I	N31	N30			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
21	L	N33A	N32			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
22	K	N39	N38			Large Pipe Mount	Beam	Pipe	A53 Gr.B	Typical
23	J	N42	N41			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
24	H	N46B	N45B			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
25	G	N52	N51			Large Pipe Mount	Beam	Pipe	A53 Gr.B	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design R...
26	E	N54A	N53A			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
27	F	N53	N52A			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
28	M28A	N60A	N57A			angle	Beam	Double Angl..	A36 Gr.36	Typical
29	M29A	N59	N58			angle	Beam	Double Angl..	A36 Gr.36	Typical
30	M30A	N61	N56			angle	Beam	Double Angl..	A36 Gr.36	Typical

Joint Loads and Enforced Displacements (BLC 42 : Man 1 (500 lbs))

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft, k*s^2*ft)]
1	N44	L	Y	-.5

Joint Loads and Enforced Displacements (BLC 43 : Man 2 (500 lbs))

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft, k*s^2*ft)]
1	N50	L	Y	-.5

Joint Loads and Enforced Displacements (BLC 44 : Man 3 (500 lbs))

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft, k*s^2*ft)]
1	N37	L	Y	-.5

Joint Loads and Enforced Displacements (BLC 45 : Man 4 (250 lbs))

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft, k*s^2*ft)]
1	N2	L	Y	-.25

Joint Loads and Enforced Displacements (BLC 46 : Man 5 (250 lbs))

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft, k*s^2*ft)]
1	N1	L	Y	-.25

Joint Loads and Enforced Displacements (BLC 47 : Man 6 (250 lbs))

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft, k*s^2*ft)]
1	N3	L	Y	-.25

Member Point Loads (BLC 1 : Dead)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	A	Y	-.014	%50
2	A	Y	-.011	%50
3	A	Y	-.075	%50
4	C	Y	-.128	%50
5	D	Y	-.014	%50
6	D	Y	-.011	%50
7	E	Y	-.014	%50
8	E	Y	-.015	%50
9	E	Y	-.075	%50
10	G	Y	-.128	%50
11	H	Y	-.014	%50
12	H	Y	-.015	%50
13	I	Y	-.014	%50
14	I	Y	-.015	%50
15	I	Y	-.075	%50
16	K	Y	-.128	%50
17	L	Y	-.014	%50
18	L	Y	-.015	%50

Member Point Loads (BLC 2 : Ice Dead)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	A	Y	-.097	%50
2	A	Y	-.01	%50
3	A	Y	-.045	%50
4	C	Y	-.445	%50
5	D	Y	-.097	%50
6	D	Y	-.01	%50
7	E	Y	-.097	%50
8	E	Y	-.017	%50
9	E	Y	-.045	%50
10	G	Y	-.445	%50
11	H	Y	-.097	%50
12	H	Y	-.017	%50
13	I	Y	-.097	%50
14	I	Y	-.017	%50
15	I	Y	-.045	%50
16	K	Y	-.445	%50
17	L	Y	-.097	%50
18	L	Y	-.017	%50

Member Point Loads (BLC 3 : Full Wind Antenna (0 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	A	Z	-.067	%14.1
2	A	Z	-.018	%50
3	C	Z	-.311	%5.6
4	D	Z	-.067	%14.1
5	E	Z	-.039	%14.1
6	E	Z	-.023	%50
7	G	Z	-.18	%5.6
8	H	Z	-.039	%14.1
9	I	Z	-.039	%14.1
10	I	Z	-.023	%50
11	K	Z	-.18	%5.6
12	L	Z	-.039	%14.1
13	A	Z	-.067	%85.9
14	C	Z	-.311	%94.4
15	D	Z	-.067	%85.9
16	E	Z	-.039	%85.9
17	G	Z	-.18	%94.4
18	H	Z	-.039	%85.9
19	I	Z	-.039	%85.9
20	K	Z	-.18	%94.4
21	L	Z	-.039	%85.9

Member Point Loads (BLC 4 : Full Wind Antenna (30 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	A	Z	-.05	%14.1
2	A	Z	-.017	%50
3	C	Z	-.232	%5.6
4	D	Z	-.05	%14.1
5	E	Z	-.026	%14.1
6	E	Z	-.022	%50
7	G	Z	-.118	%5.6
8	H	Z	-.026	%14.1
9	I	Z	-.05	%14.1
10	I	Z	-.017	%50
11	K	Z	-.232	%5.6

Member Point Loads (BLC 4 : Full Wind Antenna (30 Deg)) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
12	L	Z	-.05	%14.1
13	A	Z	-.05	%85.9
14	C	Z	-.232	%94.4
15	D	Z	-.05	%85.9
16	E	Z	-.026	%85.9
17	G	Z	-.118	%94.4
18	H	Z	-.026	%85.9
19	I	Z	-.05	%85.9
20	K	Z	-.232	%94.4
21	L	Z	-.05	%85.9
22	A	X	.029	%14.1
23	A	X	.016	%50
24	C	X	.134	%5.6
25	D	X	.029	%14.1
26	D	X	.001	%50
27	E	X	.015	%14.1
28	E	X	.013	%50
29	G	X	.068	%5.6
30	H	X	.015	%14.1
31	H	X	.006	%50
32	I	X	.029	%14.1
33	I	X	.016	%50
34	K	X	.134	%5.6
35	L	X	.029	%14.1
36	L	X	.001	%50
37	A	X	.029	%85.9
38	C	X	.134	%94.4
39	D	X	.029	%85.9
40	E	X	.015	%85.9
41	G	X	.068	%94.4
42	H	X	.015	%85.9
43	I	X	.029	%85.9
44	K	X	.134	%94.4
45	L	X	.029	%85.9

Member Point Loads (BLC 5 : Full Wind Antenna (60 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	A	Z	-.02	%14.1
2	A	Z	-.012	%50
3	C	Z	-.09	%5.6
4	D	Z	-.02	%14.1
5	E	Z	-.02	%14.1
6	E	Z	-.012	%50
7	G	Z	-.09	%5.6
8	H	Z	-.02	%14.1
9	I	Z	-.033	%14.1
10	I	Z	-.009	%50
11	K	Z	-.156	%5.6
12	L	Z	-.033	%14.1
13	A	Z	-.02	%85.9
14	C	Z	-.09	%94.4
15	D	Z	-.02	%85.9
16	E	Z	-.02	%85.9
17	G	Z	-.09	%94.4
18	H	Z	-.02	%85.9
19	I	Z	-.033	%85.9

Member Point Loads (BLC 5 : Full Wind Antenna (60 Deg)) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
20	K	Z	-.156	%94.4
21	L	Z	-.033	%85.9
22	A	X	.034	%14.1
23	A	X	.024	%50
24	C	X	.156	%5.6
25	D	X	.034	%14.1
26	D	X	.003	%50
27	E	X	.034	%14.1
28	E	X	.024	%50
29	G	X	.156	%5.6
30	H	X	.034	%14.1
31	H	X	.007	%50
32	I	X	.058	%14.1
33	I	X	.031	%50
34	K	X	.269	%5.6
35	L	X	.058	%14.1
36	L	X	0	%50
37	A	X	.034	%85.9
38	C	X	.156	%94.4
39	D	X	.034	%85.9
40	E	X	.034	%85.9
41	G	X	.156	%94.4
42	H	X	.034	%85.9
43	I	X	.058	%85.9
44	K	X	.269	%94.4
45	L	X	.058	%85.9

Member Point Loads (BLC 6 : Full Wind Antenna (90 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	A	Z	0	%14.1
2	A	Z	0	%50
3	C	Z	0	%5.6
4	D	Z	0	%14.1
5	E	Z	0	%14.1
6	E	Z	0	%50
7	G	Z	0	%5.6
8	H	Z	0	%14.1
9	I	Z	0	%14.1
10	I	Z	0	%50
11	K	Z	0	%5.6
12	L	Z	0	%14.1
13	A	Z	0	%85.9
14	C	Z	0	%94.4
15	D	Z	0	%85.9
16	E	Z	0	%85.9
17	G	Z	0	%94.4
18	H	Z	0	%85.9
19	I	Z	0	%85.9
20	K	Z	0	%94.4
21	L	Z	0	%85.9
22	A	X	.03	%14.1
23	A	X	.025	%50
24	C	X	.137	%5.6
25	D	X	.03	%14.1
26	D	X	.005	%50
27	E	X	.058	%14.1

Member Point Loads (BLC 6 : Full Wind Antenna (90 Deg)) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
28	E	X	.033	%50
29	G	X	.268	%5.6
30	H	X	.058	%14.1
31	H	X	.003	%50
32	I	X	.058	%14.1
33	I	X	.033	%50
34	K	X	.268	%5.6
35	L	X	.058	%14.1
36	L	X	.003	%50
37	A	X	.03	%85.9
38	C	X	.137	%94.4
39	D	X	.03	%85.9
40	E	X	.058	%85.9
41	G	X	.268	%94.4
42	H	X	.058	%85.9
43	I	X	.058	%85.9
44	K	X	.268	%94.4
45	L	X	.058	%85.9

Member Point Loads (BLC 7 : Full Wind Antenna (120 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	A	Z	.02	%14.1
2	A	Z	.012	%50
3	C	Z	.09	%5.6
4	D	Z	.02	%14.1
5	E	Z	.033	%14.1
6	E	Z	.009	%50
7	G	Z	.156	%5.6
8	H	Z	.033	%14.1
9	I	Z	.02	%14.1
10	I	Z	.012	%50
11	K	Z	.09	%5.6
12	L	Z	.02	%14.1
13	A	Z	.02	%85.9
14	C	Z	.09	%94.4
15	D	Z	.02	%85.9
16	E	Z	.033	%85.9
17	G	Z	.156	%94.4
18	H	Z	.033	%85.9
19	I	Z	.02	%85.9
20	K	Z	.09	%94.4
21	L	Z	.02	%85.9
22	A	X	.034	%14.1
23	A	X	.024	%50
24	C	X	.156	%5.6
25	D	X	.034	%14.1
26	D	X	.003	%50
27	E	X	.058	%14.1
28	E	X	.031	%50
29	G	X	.269	%5.6
30	H	X	.058	%14.1
31	I	X	.034	%14.1
32	I	X	.024	%50
33	K	X	.156	%5.6
34	L	X	.034	%14.1
35	L	X	.007	%50

Member Point Loads (BLC 7 : Full Wind Antenna (120 Deg)) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
36	A	X	.034	%85.9
37	C	X	.156	%94.4
38	D	X	.034	%85.9
39	E	X	.058	%85.9
40	G	X	.269	%94.4
41	H	X	.058	%85.9
42	I	X	.034	%85.9
43	K	X	.156	%94.4
44	L	X	.034	%85.9

Member Point Loads (BLC 8 : Full Wind Antenna (150 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	A	Z	.05	%14.1
2	A	Z	.017	%50
3	C	Z	.232	%5.6
4	D	Z	.05	%14.1
5	E	Z	.05	%14.1
6	E	Z	.017	%50
7	G	Z	.232	%5.6
8	H	Z	.05	%14.1
9	I	Z	.026	%14.1
10	I	Z	.022	%50
11	K	Z	.118	%5.6
12	L	Z	.026	%14.1
13	A	Z	.05	%85.9
14	C	Z	.232	%94.4
15	D	Z	.05	%85.9
16	E	Z	.05	%85.9
17	G	Z	.232	%94.4
18	H	Z	.05	%85.9
19	I	Z	.026	%85.9
20	K	Z	.118	%94.4
21	L	Z	.026	%85.9
22	A	X	.029	%14.1
23	A	X	.016	%50
24	C	X	.134	%5.6
25	D	X	.029	%14.1
26	D	X	.001	%50
27	E	X	.029	%14.1
28	E	X	.016	%50
29	G	X	.134	%5.6
30	H	X	.029	%14.1
31	H	X	.001	%50
32	I	X	.015	%14.1
33	I	X	.013	%50
34	K	X	.068	%5.6
35	L	X	.015	%14.1
36	L	X	.006	%50
37	A	X	.029	%85.9
38	C	X	.134	%94.4
39	D	X	.029	%85.9
40	E	X	.029	%85.9
41	G	X	.134	%94.4
42	H	X	.029	%85.9
43	I	X	.015	%85.9
44	K	X	.068	%94.4

Member Point Loads (BLC 8 : Full Wind Antenna (150 Deg)) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
45	L	X	.015	%85.9

Member Point Loads (BLC 15 : Ice Wind Antenna (0 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	A	Z	-.016	%14.1
2	A	Z	-.005	%50
3	C	Z	-.063	%5.6
4	D	Z	-.016	%14.1
5	E	Z	-.012	%14.1
6	E	Z	-.006	%50
7	G	Z	-.04	%5.6
8	H	Z	-.012	%14.1
9	I	Z	-.012	%14.1
10	I	Z	-.006	%50
11	K	Z	-.04	%5.6
12	L	Z	-.012	%14.1
13	A	Z	-.016	%85.9
14	C	Z	-.063	%94.4
15	D	Z	-.016	%85.9
16	E	Z	-.012	%85.9
17	G	Z	-.04	%94.4
18	H	Z	-.012	%85.9
19	I	Z	-.012	%85.9
20	K	Z	-.04	%94.4
21	L	Z	-.012	%85.9

Member Point Loads (BLC 16 : Ice Wind Antenna (30 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	A	Z	-.013	%14.1
2	A	Z	-.005	%50
3	C	Z	-.048	%5.6
4	D	Z	-.013	%14.1
5	E	Z	-.009	%14.1
6	E	Z	-.006	%50
7	G	Z	-.028	%5.6
8	H	Z	-.009	%14.1
9	I	Z	-.013	%14.1
10	I	Z	-.005	%50
11	K	Z	-.048	%5.6
12	L	Z	-.013	%14.1
13	A	Z	-.013	%85.9
14	C	Z	-.048	%94.4
15	D	Z	-.013	%85.9
16	E	Z	-.009	%85.9
17	G	Z	-.028	%94.4
18	H	Z	-.009	%85.9
19	I	Z	-.013	%85.9
20	K	Z	-.048	%94.4
21	L	Z	-.013	%85.9
22	A	X	.007	%14.1
23	A	X	.005	%50
24	C	X	.028	%5.6
25	D	X	.007	%14.1
26	D	X	0	%50
27	E	X	.005	%14.1
28	E	X	.003	%50

Member Point Loads (BLC 16 : Ice Wind Antenna (30 Deg)) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
29	G	X	.016	%5.6
30	H	X	.005	%14.1
31	H	X	.002	%50
32	I	X	.007	%14.1
33	I	X	.005	%50
34	K	X	.028	%5.6
35	L	X	.007	%14.1
36	L	X	.001	%50
37	A	X	.007	%85.9
38	C	X	.028	%94.4
39	D	X	.007	%85.9
40	E	X	.005	%85.9
41	G	X	.016	%94.4
42	H	X	.005	%85.9
43	I	X	.007	%85.9
44	K	X	.028	%94.4
45	L	X	.007	%85.9

Member Point Loads (BLC 17 : Ice Wind Antenna (60 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	A	Z	-.006	%14.1
2	A	Z	-.003	%50
3	C	Z	-.02	%5.6
4	D	Z	-.006	%14.1
5	E	Z	-.006	%14.1
6	E	Z	-.003	%50
7	G	Z	-.02	%5.6
8	H	Z	-.006	%14.1
9	I	Z	-.008	%14.1
10	I	Z	-.003	%50
11	K	Z	-.031	%5.6
12	L	Z	-.008	%14.1
13	A	Z	-.006	%85.9
14	C	Z	-.02	%94.4
15	D	Z	-.006	%85.9
16	E	Z	-.006	%85.9
17	G	Z	-.02	%94.4
18	H	Z	-.006	%85.9
19	I	Z	-.008	%85.9
20	K	Z	-.031	%94.4
21	L	Z	-.008	%85.9
22	A	X	.01	%14.1
23	A	X	.007	%50
24	C	X	.034	%5.6
25	D	X	.01	%14.1
26	D	X	.002	%50
27	E	X	.01	%14.1
28	E	X	.007	%50
29	G	X	.034	%5.6
30	H	X	.01	%14.1
31	H	X	.003	%50
32	I	X	.014	%14.1
33	I	X	.009	%50
34	K	X	.054	%5.6
35	L	X	.014	%14.1
36	L	X	0	%50

Member Point Loads (BLC 17 : Ice Wind Antenna (60 Deg)) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
37	A	X	.01	%85.9
38	C	X	.034	%94.4
39	D	X	.01	%85.9
40	E	X	.01	%85.9
41	G	X	.034	%94.4
42	H	X	.01	%85.9
43	I	X	.014	%85.9
44	K	X	.054	%94.4
45	L	X	.014	%85.9

Member Point Loads (BLC 18 : Ice Wind Antenna (90 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	A	Z	0	%14.1
2	A	Z	0	%50
3	C	Z	0	%5.6
4	D	Z	0	%14.1
5	E	Z	0	%14.1
6	E	Z	0	%50
7	G	Z	0	%5.6
8	H	Z	0	%14.1
9	I	Z	0	%14.1
10	I	Z	0	%50
11	K	Z	0	%5.6
12	L	Z	0	%14.1
13	A	Z	0	%85.9
14	C	Z	0	%94.4
15	D	Z	0	%85.9
16	E	Z	0	%85.9
17	G	Z	0	%94.4
18	H	Z	0	%85.9
19	I	Z	0	%85.9
20	K	Z	0	%94.4
21	L	Z	0	%85.9
22	A	X	.01	%14.1
23	A	X	.007	%50
24	C	X	.032	%5.6
25	D	X	.01	%14.1
26	D	X	.003	%50
27	E	X	.015	%14.1
28	E	X	.009	%50
29	G	X	.055	%5.6
30	H	X	.015	%14.1
31	H	X	.001	%50
32	I	X	.015	%14.1
33	I	X	.009	%50
34	K	X	.055	%5.6
35	L	X	.015	%14.1
36	L	X	.001	%50
37	A	X	.01	%85.9
38	C	X	.032	%94.4
39	D	X	.01	%85.9
40	E	X	.015	%85.9
41	G	X	.055	%94.4
42	H	X	.015	%85.9
43	I	X	.015	%85.9
44	K	X	.055	%94.4

Member Point Loads (BLC 18 : Ice Wind Antenna (90 Deg)) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
45	L	X	.015	%85.9

Member Point Loads (BLC 19 : Ice Wind Antenna (120 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	A	Z	.006	%14.1
2	A	Z	.003	%50
3	C	Z	.02	%5.6
4	D	Z	.006	%14.1
5	E	Z	.008	%14.1
6	E	Z	.003	%50
7	G	Z	.031	%5.6
8	H	Z	.008	%14.1
9	I	Z	.006	%14.1
10	I	Z	.003	%50
11	K	Z	.02	%5.6
12	L	Z	.006	%14.1
13	A	Z	.006	%85.9
14	C	Z	.02	%94.4
15	D	Z	.006	%85.9
16	E	Z	.008	%85.9
17	G	Z	.031	%94.4
18	H	Z	.008	%85.9
19	I	Z	.006	%85.9
20	K	Z	.02	%94.4
21	L	Z	.006	%85.9
22	A	X	.01	%14.1
23	A	X	.007	%50
24	C	X	.034	%5.6
25	D	X	.01	%14.1
26	D	X	.002	%50
27	E	X	.014	%14.1
28	E	X	.009	%50
29	G	X	.054	%5.6
30	H	X	.014	%14.1
31	I	X	.01	%14.1
32	I	X	.007	%50
33	K	X	.034	%5.6
34	L	X	.01	%14.1
35	L	X	.003	%50
36	A	X	.01	%85.9
37	C	X	.034	%94.4
38	D	X	.01	%85.9
39	E	X	.014	%85.9
40	G	X	.054	%94.4
41	H	X	.014	%85.9
42	I	X	.01	%85.9
43	K	X	.034	%94.4
44	L	X	.01	%85.9

Member Point Loads (BLC 20 : Ice Wind Antenna (150 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	A	Z	.013	%14.1
2	A	Z	.003	%50
3	C	Z	.02	%5.6
4	D	Z	.006	%14.1
5	E	Z	.008	%14.1

Member Point Loads (BLC 20 : Ice Wind Antenna (150 Deg)) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
6	E	Z	.003	%50
7	G	Z	.031	%5.6
8	H	Z	.008	%14.1
9	I	Z	.006	%14.1
10	I	Z	.003	%50
11	K	Z	.02	%5.6
12	L	Z	.006	%14.1
13	A	Z	.013	%85.9
14	C	Z	.02	%94.4
15	D	Z	.006	%85.9
16	E	Z	.008	%85.9
17	G	Z	.031	%94.4
18	H	Z	.008	%85.9
19	I	Z	.006	%85.9
20	K	Z	.02	%94.4
21	L	Z	.006	%85.9
22	A	X	.007	%14.1
23	A	X	.007	%50
24	C	X	.034	%5.6
25	D	X	.01	%14.1
26	D	X	.002	%50
27	E	X	.014	%14.1
28	E	X	.009	%50
29	G	X	.054	%5.6
30	H	X	.014	%14.1
31	I	X	.01	%14.1
32	I	X	.007	%50
33	K	X	.034	%5.6
34	L	X	.01	%14.1
35	L	X	.003	%50
36	A	X	.007	%85.9
37	C	X	.034	%94.4
38	D	X	.01	%85.9
39	E	X	.014	%85.9
40	G	X	.054	%94.4
41	H	X	.014	%85.9
42	I	X	.01	%85.9
43	K	X	.034	%94.4
44	L	X	.01	%85.9

Member Point Loads (BLC 27 : Seismic Antenna (0 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	A	Z	-.001	%50
2	A	Z	-.001	%50
3	A	Z	-.008	%50
4	C	Z	-.014	%50
5	D	Z	-.001	%50
6	D	Z	-.001	%50
7	E	Z	-.001	%50
8	E	Z	-.002	%50
9	E	Z	-.008	%50
10	G	Z	-.014	%50
11	H	Z	-.001	%50
12	H	Z	-.002	%50
13	I	Z	-.001	%50
14	I	Z	-.002	%50

Member Point Loads (BLC 27 : Seismic Antenna (0 Deg)) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
15	I	Z	-.008	%50
16	K	Z	-.014	%50
17	L	Z	-.001	%50
18	L	Z	-.002	%50

Member Point Loads (BLC 28 : Seismic Antenna (90 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	A	X	.001	%50
2	A	X	.001	%50
3	A	X	.008	%50
4	C	X	.014	%50
5	D	X	.001	%50
6	D	X	.001	%50
7	E	X	.001	%50
8	E	X	.002	%50
9	E	X	.008	%50
10	G	X	.014	%50
11	H	X	.001	%50
12	H	X	.002	%50
13	I	X	.001	%50
14	I	X	.002	%50
15	I	X	.008	%50
16	K	X	.014	%50
17	L	X	.001	%50
18	L	X	.002	%50

Member Point Loads (BLC 41 : Seismic Vertical Antennas)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	A	Y	-.003	%50
2	A	Y	-.002	%50
3	A	Y	-.015	%50
4	C	Y	-.026	%50
5	D	Y	-.003	%50
6	D	Y	-.002	%50
7	E	Y	-.003	%50
8	E	Y	-.003	%50
9	E	Y	-.015	%50
10	G	Y	-.026	%50
11	H	Y	-.003	%50
12	H	Y	-.003	%50
13	I	Y	-.003	%50
14	I	Y	-.003	%50
15	I	Y	-.015	%50
16	K	Y	-.026	%50
17	L	Y	-.003	%50
18	L	Y	-.003	%50

Member Distributed Loads (BLC 2 : Ice Dead)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	Y	-.012	-.012	0	%100
2	M2	Y	-.012	-.012	0	%100
3	M3	Y	-.012	-.012	0	%100
4	M4	Y	-.012	-.012	0	%100
5	M5	Y	-.016	-.016	0	%100

Member Distributed Loads (BLC 2 : Ice Dead) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
6	M6	Y	-.016	-.016	0	%100
7	M7	Y	-.016	-.016	0	%100
8	M8	Y	-.012	-.012	0	%100
9	M9	Y	-.012	-.012	0	%100
10	M10	Y	-.016	-.016	0	%100
11	M11	Y	-.016	-.016	0	%100
12	M12	Y	-.016	-.016	0	%100
13	A	Y	-.008	-.008	0	%100
14	D	Y	-.008	-.008	0	%100
15	C	Y	-.009	-.009	0	%100
16	M28	Y	-.015	-.015	0	%100
17	M29	Y	-.015	-.015	0	%100
18	M30	Y	-.015	-.015	0	%100
19	B	Y	-.008	-.008	0	%100
20	I	Y	-.008	-.008	0	%100
21	L	Y	-.008	-.008	0	%100
22	K	Y	-.009	-.009	0	%100
23	J	Y	-.008	-.008	0	%100
24	H	Y	-.008	-.008	0	%100
25	G	Y	-.009	-.009	0	%100
26	E	Y	-.008	-.008	0	%100
27	F	Y	-.008	-.008	0	%100
28	M28A	Y	-.012	-.012	0	%100
29	M29A	Y	-.012	-.012	0	%100
30	M30A	Y	-.012	-.012	0	%100

Member Distributed Loads (BLC 9 : Full Wind Members (0 Deg))

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	Z	-.015	-.015	0	%100
2	M2	Z	-.004	-.004	0	%100
3	M3	Z	-.004	-.004	0	%100
4	M4	Z	-.015	-.015	0	%100
5	M5	Z	0	0	0	%100
6	M6	Z	-.023	-.023	0	%100
7	M7	Z	-.023	-.023	0	%100
8	M8	Z	-.004	-.004	0	%100
9	M9	Z	-.004	-.004	0	%100
10	M10	Z	0	0	0	%100
11	M11	Z	-.017	-.017	0	%100
12	M12	Z	-.017	-.017	0	%100
13	A	Z	-.007	-.007	0	%14.1
14	D	Z	-.007	-.007	0	%14.1
15	C	Z	-.015	-.015	0	%5.6
16	M28	Z	0	0	0	%100
17	M29	Z	-.015	-.015	0	%100
18	M30	Z	-.015	-.015	0	%100
19	I	Z	-.007	-.007	0	%14.1
20	L	Z	-.007	-.007	0	%14.1
21	K	Z	-.015	-.015	0	%5.6
22	H	Z	-.007	-.007	0	%14.1
23	G	Z	-.015	-.015	0	%5.6
24	E	Z	-.007	-.007	0	%14.1
25	M28A	Z	-.018	-.018	0	%100
26	M29A	Z	-.012	-.012	0	%100
27	M30A	Z	-.018	-.018	0	%100
28	A	Z	-.007	-.007	%85.9	%100

Member Distributed Loads (BLC 9 : Full Wind Members (0 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
29	D	Z	-.007	-.007	%85.9	%100
30	C	Z	-.015	-.015	%94.4	%100
31	B	Z	-.007	-.007	0	%100
32	I	Z	-.007	-.007	%85.9	%100
33	L	Z	-.007	-.007	%85.9	%100
34	K	Z	-.015	-.015	%94.4	%100
35	J	Z	-.007	-.007	0	%100
36	H	Z	-.007	-.007	%85.9	%100
37	G	Z	-.015	-.015	%94.4	%100
38	E	Z	-.007	-.007	%85.9	%100
39	F	Z	-.007	-.007	0	%100
40	M1	X	0	0	0	%100
41	M2	X	0	0	0	%100
42	M3	X	0	0	0	%100
43	M4	X	0	0	0	%100
44	M5	X	0	0	0	%100
45	M6	X	0	0	0	%100
46	M7	X	0	0	0	%100
47	M8	X	0	0	0	%100
48	M9	X	0	0	0	%100
49	M10	X	0	0	0	%100
50	M11	X	0	0	0	%100
51	M12	X	0	0	0	%100
52	A	X	0	0	0	%100
53	D	X	0	0	0	%100
54	C	X	0	0	0	%100
55	M28	X	0	0	0	%100
56	M29	X	0	0	0	%100
57	M30	X	0	0	0	%100
58	I	X	0	0	0	%14.1
59	L	X	0	0	0	%14.1
60	K	X	0	0	0	%5.6
61	H	X	0	0	0	%14.1
62	G	X	0	0	0	%5.6
63	E	X	0	0	0	%14.1
64	M28A	X	0	0	0	%100
65	M29A	X	0	0	0	%100
66	M30A	X	0	0	0	%100
67	B	X	0	0	0	%100
68	I	X	0	0	%85.9	%100
69	L	X	0	0	%85.9	%100
70	K	X	0	0	%94.4	%100
71	J	X	0	0	0	%100
72	H	X	0	0	%85.9	%100
73	G	X	0	0	%94.4	%100
74	E	X	0	0	%85.9	%100
75	F	X	0	0	0	%100

Member Distributed Loads (BLC 10 : Full Wind Members (30 Deg))

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	Z	-.01	-.01	0	%100
2	M2	Z	0	0	0	%100
3	M3	Z	-.01	-.01	0	%100
4	M4	Z	-.01	-.01	0	%100
5	M5	Z	-.007	-.007	0	%100
6	M6	Z	-.027	-.027	0	%100

Member Distributed Loads (BLC 10 : Full Wind Members (30 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
7	M7	Z	-.007	-.007	0	%100
8	M8	Z	0	0	0	%100
9	M9	Z	-.01	-.01	0	%100
10	M10	Z	-.005	-.005	0	%100
11	M11	Z	-.005	-.005	0	%100
12	M12	Z	-.02	-.02	0	%100
13	A	Z	-.006	-.006	0	%14.1
14	D	Z	-.006	-.006	0	%14.1
15	C	Z	-.013	-.013	0	%5.6
16	M28	Z	-.004	-.004	0	%100
17	M29	Z	-.004	-.004	0	%100
18	M30	Z	-.018	-.018	0	%100
19	I	Z	-.006	-.006	0	%14.1
20	L	Z	-.006	-.006	0	%14.1
21	K	Z	-.013	-.013	0	%5.6
22	H	Z	-.006	-.006	0	%14.1
23	G	Z	-.013	-.013	0	%5.6
24	E	Z	-.006	-.006	0	%14.1
25	M28A	Z	-.018	-.018	0	%100
26	M29A	Z	-.012	-.012	0	%100
27	M30A	Z	-.012	-.012	0	%100
28	A	Z	-.006	-.006	%85.9	%100
29	D	Z	-.006	-.006	%85.9	%100
30	C	Z	-.013	-.013	%94.4	%100
31	B	Z	-.006	-.006	0	%100
32	I	Z	-.006	-.006	%85.9	%100
33	L	Z	-.006	-.006	%85.9	%100
34	K	Z	-.013	-.013	%94.4	%100
35	J	Z	-.006	-.006	0	%100
36	H	Z	-.006	-.006	%85.9	%100
37	G	Z	-.013	-.013	%94.4	%100
38	E	Z	-.006	-.006	%85.9	%100
39	F	Z	-.006	-.006	0	%100
40	M1	X	.006	.006	0	%100
41	M2	X	0	0	0	%100
42	M3	X	.006	.006	0	%100
43	M4	X	.006	.006	0	%100
44	M5	X	.004	.004	0	%100
45	M6	X	.015	.015	0	%100
46	M7	X	.004	.004	0	%100
47	M8	X	0	0	0	%100
48	M9	X	.006	.006	0	%100
49	M10	X	.003	.003	0	%100
50	M11	X	.003	.003	0	%100
51	M12	X	.012	.012	0	%100
52	A	X	.004	.004	0	%100
53	D	X	.004	.004	0	%100
54	C	X	.007	.007	0	%100
55	M28	X	.003	.003	0	%100
56	M29	X	.003	.003	0	%100
57	M30	X	.01	.01	0	%100
58	I	X	.004	.004	0	%14.1
59	L	X	.004	.004	0	%14.1
60	K	X	.007	.007	0	%5.6
61	H	X	.004	.004	0	%14.1
62	G	X	.007	.007	0	%5.6
63	E	X	.004	.004	0	%14.1

Member Distributed Loads (BLC 10 : Full Wind Members (30 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
64	M28A	X	.01	.01	0	%100
65	M29A	X	.007	.007	0	%100
66	M30A	X	.007	.007	0	%100
67	B	X	.004	.004	0	%100
68	I	X	.004	.004	%85.9	%100
69	L	X	.004	.004	%85.9	%100
70	K	X	.007	.007	%94.4	%100
71	J	X	.004	.004	0	%100
72	H	X	.004	.004	%85.9	%100
73	G	X	.007	.007	%94.4	%100
74	E	X	.004	.004	%85.9	%100
75	F	X	.004	.004	0	%100

Member Distributed Loads (BLC 11 : Full Wind Members (60 Deg))

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	Z	-.002	-.002	0	%100
2	M2	Z	-.002	-.002	0	%100
3	M3	Z	-.008	-.008	0	%100
4	M4	Z	-.002	-.002	0	%100
5	M5	Z	-.012	-.012	0	%100
6	M6	Z	-.012	-.012	0	%100
7	M7	Z	0	0	0	%100
8	M8	Z	-.002	-.002	0	%100
9	M9	Z	-.008	-.008	0	%100
10	M10	Z	-.009	-.009	0	%100
11	M11	Z	0	0	0	%100
12	M12	Z	-.009	-.009	0	%100
13	A	Z	-.004	-.004	0	%14.1
14	D	Z	-.004	-.004	0	%14.1
15	C	Z	-.007	-.007	0	%5.6
16	M28	Z	-.008	-.008	0	%100
17	M29	Z	0	0	0	%100
18	M30	Z	-.008	-.008	0	%100
19	I	Z	-.004	-.004	0	%14.1
20	L	Z	-.004	-.004	0	%14.1
21	K	Z	-.007	-.007	0	%5.6
22	H	Z	-.004	-.004	0	%14.1
23	G	Z	-.007	-.007	0	%5.6
24	E	Z	-.004	-.004	0	%14.1
25	M28A	Z	-.009	-.009	0	%100
26	M29A	Z	-.009	-.009	0	%100
27	M30A	Z	-.006	-.006	0	%100
28	A	Z	-.004	-.004	%85.9	%100
29	D	Z	-.004	-.004	%85.9	%100
30	C	Z	-.007	-.007	%94.4	%100
31	B	Z	-.004	-.004	0	%100
32	I	Z	-.004	-.004	%85.9	%100
33	L	Z	-.004	-.004	%85.9	%100
34	K	Z	-.007	-.007	%94.4	%100
35	J	Z	-.004	-.004	0	%100
36	H	Z	-.004	-.004	%85.9	%100
37	G	Z	-.007	-.007	%94.4	%100
38	E	Z	-.004	-.004	%85.9	%100
39	F	Z	-.004	-.004	0	%100
40	M1	X	.003	.003	0	%100
41	M2	X	.003	.003	0	%100

Member Distributed Loads (BLC 11 : Full Wind Members (60 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
42	M3	X	.013	.013	0	%100
43	M4	X	.003	.003	0	%100
44	M5	X	.02	.02	0	%100
45	M6	X	.02	.02	0	%100
46	M7	X	0	0	0	%100
47	M8	X	.003	.003	0	%100
48	M9	X	.013	.013	0	%100
49	M10	X	.015	.015	0	%100
50	M11	X	0	0	0	%100
51	M12	X	.015	.015	0	%100
52	A	X	.006	.006	0	%100
53	D	X	.006	.006	0	%100
54	C	X	.013	.013	0	%100
55	M28	X	.013	.013	0	%100
56	M29	X	0	0	0	%100
57	M30	X	.013	.013	0	%100
58	I	X	.006	.006	0	%14.1
59	L	X	.006	.006	0	%14.1
60	K	X	.013	.013	0	%5.6
61	H	X	.006	.006	0	%14.1
62	G	X	.013	.013	0	%5.6
63	E	X	.006	.006	0	%14.1
64	M28A	X	.016	.016	0	%100
65	M29A	X	.016	.016	0	%100
66	M30A	X	.011	.011	0	%100
67	B	X	.006	.006	0	%100
68	I	X	.006	.006	%85.9	%100
69	L	X	.006	.006	%85.9	%100
70	K	X	.013	.013	%94.4	%100
71	J	X	.006	.006	0	%100
72	H	X	.006	.006	%85.9	%100
73	G	X	.013	.013	%94.4	%100
74	E	X	.006	.006	%85.9	%100
75	F	X	.006	.006	0	%100

Member Distributed Loads (BLC 12 : Full Wind Members (90 Deg))

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	Z	0	0	0	%100
2	M2	Z	0	0	0	%100
3	M3	Z	0	0	0	%100
4	M4	Z	0	0	0	%100
5	M5	Z	0	0	0	%100
6	M6	Z	0	0	0	%100
7	M7	Z	0	0	0	%100
8	M8	Z	0	0	0	%100
9	M9	Z	0	0	0	%100
10	M10	Z	0	0	0	%100
11	M11	Z	0	0	0	%100
12	M12	Z	0	0	0	%100
13	A	Z	0	0	0	%14.1
14	D	Z	0	0	0	%14.1
15	C	Z	0	0	0	%5.6
16	M28	Z	0	0	0	%100
17	M29	Z	0	0	0	%100
18	M30	Z	0	0	0	%100
19	I	Z	0	0	0	%14.1

Member Distributed Loads (BLC 12 : Full Wind Members (90 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
20	L	Z	0	0	0	%14.1
21	K	Z	0	0	0	%5.6
22	H	Z	0	0	0	%14.1
23	G	Z	0	0	0	%5.6
24	E	Z	0	0	0	%14.1
25	M28A	Z	0	0	0	%100
26	M29A	Z	0	0	0	%100
27	M30A	Z	0	0	0	%100
28	A	Z	0	0	%85.9	%100
29	D	Z	0	0	%85.9	%100
30	C	Z	0	0	%94.4	%100
31	B	Z	0	0	0	%100
32	I	Z	0	0	%85.9	%100
33	L	Z	0	0	%85.9	%100
34	K	Z	0	0	%94.4	%100
35	J	Z	0	0	0	%100
36	H	Z	0	0	%85.9	%100
37	G	Z	0	0	%94.4	%100
38	E	Z	0	0	%85.9	%100
39	F	Z	0	0	0	%100
40	M1	X	0	0	0	%100
41	M2	X	.012	.012	0	%100
42	M3	X	.012	.012	0	%100
43	M4	X	0	0	0	%100
44	M5	X	.031	.031	0	%100
45	M6	X	.008	.008	0	%100
46	M7	X	.008	.008	0	%100
47	M8	X	.012	.012	0	%100
48	M9	X	.012	.012	0	%100
49	M10	X	.023	.023	0	%100
50	M11	X	.006	.006	0	%100
51	M12	X	.006	.006	0	%100
52	A	X	.007	.007	0	%100
53	D	X	.007	.007	0	%100
54	C	X	.015	.015	0	%100
55	M28	X	.02	.02	0	%100
56	M29	X	.005	.005	0	%100
57	M30	X	.005	.005	0	%100
58	I	X	.007	.007	0	%14.1
59	L	X	.007	.007	0	%14.1
60	K	X	.015	.015	0	%5.6
61	H	X	.007	.007	0	%14.1
62	G	X	.015	.015	0	%5.6
63	E	X	.007	.007	0	%14.1
64	M28A	X	.014	.014	0	%100
65	M29A	X	.02	.02	0	%100
66	M30A	X	.014	.014	0	%100
67	B	X	.007	.007	0	%100
68	I	X	.007	.007	%85.9	%100
69	L	X	.007	.007	%85.9	%100
70	K	X	.015	.015	%94.4	%100
71	J	X	.007	.007	0	%100
72	H	X	.007	.007	%85.9	%100
73	G	X	.015	.015	%94.4	%100
74	E	X	.007	.007	%85.9	%100
75	F	X	.007	.007	0	%100

Member Distributed Loads (BLC 13 : Full Wind Members (120 Deg))

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	Z	.002	.002	0	%100
2	M2	Z	.008	.008	0	%100
3	M3	Z	.002	.002	0	%100
4	M4	Z	.002	.002	0	%100
5	M5	Z	.012	.012	0	%100
6	M6	Z	0	0	0	%100
7	M7	Z	.012	.012	0	%100
8	M8	Z	.008	.008	0	%100
9	M9	Z	.002	.002	0	%100
10	M10	Z	.009	.009	0	%100
11	M11	Z	.009	.009	0	%100
12	M12	Z	0	0	0	%100
13	A	Z	.004	.004	0	%14.1
14	D	Z	.004	.004	0	%14.1
15	C	Z	.007	.007	0	%5.6
16	M28	Z	.008	.008	0	%100
17	M29	Z	.008	.008	0	%100
18	M30	Z	0	0	0	%100
19	I	Z	.004	.004	0	%14.1
20	L	Z	.004	.004	0	%14.1
21	K	Z	.007	.007	0	%5.6
22	H	Z	.004	.004	0	%14.1
23	G	Z	.007	.007	0	%5.6
24	E	Z	.004	.004	0	%14.1
25	M28A	Z	.006	.006	0	%100
26	M29A	Z	.009	.009	0	%100
27	M30A	Z	.009	.009	0	%100
28	A	Z	.004	.004	%85.9	%100
29	D	Z	.004	.004	%85.9	%100
30	C	Z	.007	.007	%94.4	%100
31	B	Z	.004	.004	0	%100
32	I	Z	.004	.004	%85.9	%100
33	L	Z	.004	.004	%85.9	%100
34	K	Z	.007	.007	%94.4	%100
35	J	Z	.004	.004	0	%100
36	H	Z	.004	.004	%85.9	%100
37	G	Z	.007	.007	%94.4	%100
38	E	Z	.004	.004	%85.9	%100
39	F	Z	.004	.004	0	%100
40	M1	X	.003	.003	0	%100
41	M2	X	.013	.013	0	%100
42	M3	X	.003	.003	0	%100
43	M4	X	.003	.003	0	%100
44	M5	X	.02	.02	0	%100
45	M6	X	0	0	0	%100
46	M7	X	.02	.02	0	%100
47	M8	X	.013	.013	0	%100
48	M9	X	.003	.003	0	%100
49	M10	X	.015	.015	0	%100
50	M11	X	.015	.015	0	%100
51	M12	X	0	0	0	%100
52	A	X	.006	.006	0	%100
53	D	X	.006	.006	0	%100
54	C	X	.013	.013	0	%100
55	M28	X	.013	.013	0	%100
56	M29	X	.013	.013	0	%100
57	M30	X	0	0	0	%100

Member Distributed Loads (BLC 13 : Full Wind Members (120 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
58	I	X	.006	.006	0	%14.1
59	L	X	.006	.006	0	%14.1
60	K	X	.013	.013	0	%5.6
61	H	X	.006	.006	0	%14.1
62	G	X	.013	.013	0	%5.6
63	E	X	.006	.006	0	%14.1
64	M28A	X	.011	.011	0	%100
65	M29A	X	.016	.016	0	%100
66	M30A	X	.016	.016	0	%100
67	B	X	.006	.006	0	%100
68	I	X	.006	.006	%85.9	%100
69	L	X	.006	.006	%85.9	%100
70	K	X	.013	.013	%94.4	%100
71	J	X	.006	.006	0	%100
72	H	X	.006	.006	%85.9	%100
73	G	X	.013	.013	%94.4	%100
74	E	X	.006	.006	%85.9	%100
75	F	X	.006	.006	0	%100

Member Distributed Loads (BLC 14 : Full Wind Members (150 Deg))

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	Z	.01	.01	0	%100
2	M2	Z	.01	.01	0	%100
3	M3	Z	0	0	0	%100
4	M4	Z	.01	.01	0	%100
5	M5	Z	.007	.007	0	%100
6	M6	Z	.007	.007	0	%100
7	M7	Z	.027	.027	0	%100
8	M8	Z	.01	.01	0	%100
9	M9	Z	0	0	0	%100
10	M10	Z	.005	.005	0	%100
11	M11	Z	.02	.02	0	%100
12	M12	Z	.005	.005	0	%100
13	A	Z	.006	.006	0	%14.1
14	D	Z	.006	.006	0	%14.1
15	C	Z	.013	.013	0	%5.6
16	M28	Z	.004	.004	0	%100
17	M29	Z	.018	.018	0	%100
18	M30	Z	.004	.004	0	%100
19	I	Z	.006	.006	0	%14.1
20	L	Z	.006	.006	0	%14.1
21	K	Z	.013	.013	0	%5.6
22	H	Z	.006	.006	0	%14.1
23	G	Z	.013	.013	0	%5.6
24	E	Z	.006	.006	0	%14.1
25	M28A	Z	.012	.012	0	%100
26	M29A	Z	.012	.012	0	%100
27	M30A	Z	.018	.018	0	%100
28	A	Z	.006	.006	%85.9	%100
29	D	Z	.006	.006	%85.9	%100
30	C	Z	.013	.013	%94.4	%100
31	B	Z	.006	.006	0	%100
32	I	Z	.006	.006	%85.9	%100
33	L	Z	.006	.006	%85.9	%100
34	K	Z	.013	.013	%94.4	%100
35	J	Z	.006	.006	0	%100

Member Distributed Loads (BLC 14 : Full Wind Members (150 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
36	H	Z	.006	.006	%85.9	%100
37	G	Z	.013	.013	%94.4	%100
38	E	Z	.006	.006	%85.9	%100
39	F	Z	.006	.006	0	%100
40	M1	X	.006	.006	0	%100
41	M2	X	.006	.006	0	%100
42	M3	X	0	0	0	%100
43	M4	X	.006	.006	0	%100
44	M5	X	.004	.004	0	%100
45	M6	X	.004	.004	0	%100
46	M7	X	.015	.015	0	%100
47	M8	X	.006	.006	0	%100
48	M9	X	0	0	0	%100
49	M10	X	.003	.003	0	%100
50	M11	X	.012	.012	0	%100
51	M12	X	.003	.003	0	%100
52	A	X	.004	.004	0	%100
53	D	X	.004	.004	0	%100
54	C	X	.007	.007	0	%100
55	M28	X	.003	.003	0	%100
56	M29	X	.01	.01	0	%100
57	M30	X	.003	.003	0	%100
58	I	X	.004	.004	0	%14.1
59	L	X	.004	.004	0	%14.1
60	K	X	.007	.007	0	%5.6
61	H	X	.004	.004	0	%14.1
62	G	X	.007	.007	0	%5.6
63	E	X	.004	.004	0	%14.1
64	M28A	X	.007	.007	0	%100
65	M29A	X	.007	.007	0	%100
66	M30A	X	.01	.01	0	%100
67	B	X	.004	.004	0	%100
68	I	X	.004	.004	%85.9	%100
69	L	X	.004	.004	%85.9	%100
70	K	X	.007	.007	%94.4	%100
71	J	X	.004	.004	0	%100
72	H	X	.004	.004	%85.9	%100
73	G	X	.007	.007	%94.4	%100
74	E	X	.004	.004	%85.9	%100
75	F	X	.004	.004	0	%100

Member Distributed Loads (BLC 21 : Ice Wind Members (0 Deg))

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	Z	-.005	-.005	0	%100
2	M2	Z	-.001	-.001	0	%100
3	M3	Z	-.001	-.001	0	%100
4	M4	Z	-.005	-.005	0	%100
5	M5	Z	0	0	0	%100
6	M6	Z	-.006	-.006	0	%100
7	M7	Z	-.006	-.006	0	%100
8	M8	Z	-.001	-.001	0	%100
9	M9	Z	-.001	-.001	0	%100
10	M10	Z	0	0	0	%100
11	M11	Z	-.005	-.005	0	%100
12	M12	Z	-.005	-.005	0	%100
13	A	Z	-.003	-.003	0	%14.1

Member Distributed Loads (BLC 21 : Ice Wind Members (0 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
14	D	Z	-.003	-.003	0	%14.1
15	C	Z	-.005	-.005	0	%5.6
16	M28	Z	0	0	0	%100
17	M29	Z	-.005	-.005	0	%100
18	M30	Z	-.005	-.005	0	%100
19	I	Z	-.003	-.003	0	%14.1
20	L	Z	-.003	-.003	0	%14.1
21	K	Z	-.005	-.005	0	%5.6
22	H	Z	-.003	-.003	0	%14.1
23	G	Z	-.005	-.005	0	%5.6
24	E	Z	-.003	-.003	0	%14.1
25	M28A	Z	-.005	-.005	0	%100
26	M29A	Z	-.004	-.004	0	%100
27	M30A	Z	-.005	-.005	0	%100
28	A	Z	-.003	-.003	%85.9	%100
29	D	Z	-.003	-.003	%85.9	%100
30	C	Z	-.005	-.005	%94.4	%100
31	B	Z	-.003	-.003	0	%100
32	I	Z	-.003	-.003	%85.9	%100
33	L	Z	-.003	-.003	%85.9	%100
34	K	Z	-.005	-.005	%94.4	%100
35	J	Z	-.003	-.003	0	%100
36	H	Z	-.003	-.003	%85.9	%100
37	G	Z	-.005	-.005	%94.4	%100
38	E	Z	-.003	-.003	%85.9	%100
39	F	Z	-.003	-.003	0	%100
40	M1	X	0	0	0	%100
41	M2	X	0	0	0	%100
42	M3	X	0	0	0	%100
43	M4	X	0	0	0	%100
44	M5	X	0	0	0	%100
45	M6	X	0	0	0	%100
46	M7	X	0	0	0	%100
47	M8	X	0	0	0	%100
48	M9	X	0	0	0	%100
49	M10	X	0	0	0	%100
50	M11	X	0	0	0	%100
51	M12	X	0	0	0	%100
52	A	X	0	0	0	%100
53	D	X	0	0	0	%100
54	C	X	0	0	0	%100
55	M28	X	0	0	0	%100
56	M29	X	0	0	0	%100
57	M30	X	0	0	0	%100
58	I	X	0	0	0	%14.1
59	L	X	0	0	0	%14.1
60	K	X	0	0	0	%5.6
61	H	X	0	0	0	%14.1
62	G	X	0	0	0	%5.6
63	E	X	0	0	0	%14.1
64	M28A	X	0	0	0	%100
65	M29A	X	0	0	0	%100
66	M30A	X	0	0	0	%100
67	B	X	0	0	0	%100
68	I	X	0	0	%85.9	%100
69	L	X	0	0	%85.9	%100
70	K	X	0	0	%94.4	%100

Member Distributed Loads (BLC 21 : Ice Wind Members (0 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
71	J	X	0	0	0	%100
72	H	X	0	0	%85.9	%100
73	G	X	0	0	%94.4	%100
74	E	X	0	0	%85.9	%100
75	F	X	0	0	0	%100

Member Distributed Loads (BLC 22 : Ice Wind Members (30 Deg))

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	Z	-.003	-.003	0	%100
2	M2	Z	0	0	0	%100
3	M3	Z	-.002	-.002	0	%100
4	M4	Z	-.003	-.003	0	%100
5	M5	Z	-.001	-.001	0	%100
6	M6	Z	-.006	-.006	0	%100
7	M7	Z	-.003	-.003	0	%100
8	M8	Z	0	0	0	%100
9	M9	Z	-.002	-.002	0	%100
10	M10	Z	-.001	-.001	0	%100
11	M11	Z	-.002	-.002	0	%100
12	M12	Z	-.005	-.005	0	%100
13	A	Z	-.003	-.003	0	%14.1
14	D	Z	-.003	-.003	0	%14.1
15	C	Z	-.004	-.004	0	%5.6
16	M28	Z	-.001	-.001	0	%100
17	M29	Z	-.003	-.003	0	%100
18	M30	Z	-.005	-.005	0	%100
19	I	Z	-.003	-.003	0	%14.1
20	L	Z	-.003	-.003	0	%14.1
21	K	Z	-.004	-.004	0	%5.6
22	H	Z	-.003	-.003	0	%14.1
23	G	Z	-.004	-.004	0	%5.6
24	E	Z	-.003	-.003	0	%14.1
25	M28A	Z	-.005	-.005	0	%100
26	M29A	Z	-.004	-.004	0	%100
27	M30A	Z	-.004	-.004	0	%100
28	A	Z	-.003	-.003	%85.9	%100
29	D	Z	-.003	-.003	%85.9	%100
30	C	Z	-.004	-.004	%94.4	%100
31	B	Z	-.003	-.003	0	%100
32	I	Z	-.003	-.003	%85.9	%100
33	L	Z	-.003	-.003	%85.9	%100
34	K	Z	-.004	-.004	%94.4	%100
35	J	Z	-.003	-.003	0	%100
36	H	Z	-.003	-.003	%85.9	%100
37	G	Z	-.004	-.004	%94.4	%100
38	E	Z	-.003	-.003	%85.9	%100
39	F	Z	-.003	-.003	0	%100
40	M1	X	.002	.002	0	%100
41	M2	X	0	0	0	%100
42	M3	X	.001	.001	0	%100
43	M4	X	.002	.002	0	%100
44	M5	X	.001	.001	0	%100
45	M6	X	.003	.003	0	%100
46	M7	X	.001	.001	0	%100
47	M8	X	0	0	0	%100
48	M9	X	.001	.001	0	%100

Member Distributed Loads (BLC 22 : Ice Wind Members (30 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
49	M10	X	.001	.001	0	%100
50	M11	X	.001	.001	0	%100
51	M12	X	.003	.003	0	%100
52	A	X	.002	.002	0	%100
53	D	X	.002	.002	0	%100
54	C	X	.002	.002	0	%100
55	M28	X	0	0	0	%100
56	M29	X	.001	.001	0	%100
57	M30	X	.003	.003	0	%100
58	I	X	.002	.002	0	%14.1
59	L	X	.002	.002	0	%14.1
60	K	X	.002	.002	0	%5.6
61	H	X	.002	.002	0	%14.1
62	G	X	.002	.002	0	%5.6
63	E	X	.002	.002	0	%14.1
64	M28A	X	.003	.003	0	%100
65	M29A	X	.002	.002	0	%100
66	M30A	X	.002	.002	0	%100
67	B	X	.002	.002	0	%100
68	I	X	.002	.002	%85.9	%100
69	L	X	.002	.002	%85.9	%100
70	K	X	.002	.002	%94.4	%100
71	J	X	.002	.002	0	%100
72	H	X	.002	.002	%85.9	%100
73	G	X	.002	.002	%94.4	%100
74	E	X	.002	.002	%85.9	%100
75	F	X	.002	.002	0	%100

Member Distributed Loads (BLC 23 : Ice Wind Members (60 Deg))

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	Z	-.001	-.001	0	%100
2	M2	Z	-.001	-.001	0	%100
3	M3	Z	-.002	-.002	0	%100
4	M4	Z	-.001	-.001	0	%100
5	M5	Z	-.002	-.002	0	%100
6	M6	Z	-.003	-.003	0	%100
7	M7	Z	-.001	-.001	0	%100
8	M8	Z	-.001	-.001	0	%100
9	M9	Z	-.002	-.002	0	%100
10	M10	Z	-.002	-.002	0	%100
11	M11	Z	-.001	-.001	0	%100
12	M12	Z	-.002	-.002	0	%100
13	A	Z	-.002	-.002	0	%14.1
14	D	Z	-.002	-.002	0	%14.1
15	C	Z	-.002	-.002	0	%5.6
16	M28	Z	-.001	-.001	0	%100
17	M29	Z	-.001	-.001	0	%100
18	M30	Z	-.002	-.002	0	%100
19	I	Z	-.002	-.002	0	%14.1
20	L	Z	-.002	-.002	0	%14.1
21	K	Z	-.002	-.002	0	%5.6
22	H	Z	-.002	-.002	0	%14.1
23	G	Z	-.002	-.002	0	%5.6
24	E	Z	-.002	-.002	0	%14.1
25	M28A	Z	-.003	-.003	0	%100
26	M29A	Z	-.003	-.003	0	%100

Member Distributed Loads (BLC 23 : Ice Wind Members (60 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
27	M30A	Z	-.002	-.002	0	%100
28	A	Z	-.002	-.002	%85.9	%100
29	D	Z	-.002	-.002	%85.9	%100
30	C	Z	-.002	-.002	%94.4	%100
31	B	Z	-.002	-.002	0	%100
32	I	Z	-.002	-.002	%85.9	%100
33	L	Z	-.002	-.002	%85.9	%100
34	K	Z	-.002	-.002	%94.4	%100
35	J	Z	-.002	-.002	0	%100
36	H	Z	-.002	-.002	%85.9	%100
37	G	Z	-.002	-.002	%94.4	%100
38	E	Z	-.002	-.002	%85.9	%100
39	F	Z	-.002	-.002	0	%100
40	M1	X	.002	.002	0	%100
41	M2	X	.001	.001	0	%100
42	M3	X	.003	.003	0	%100
43	M4	X	.002	.002	0	%100
44	M5	X	.003	.003	0	%100
45	M6	X	.005	.005	0	%100
46	M7	X	.001	.001	0	%100
47	M8	X	.001	.001	0	%100
48	M9	X	.003	.003	0	%100
49	M10	X	.003	.003	0	%100
50	M11	X	.002	.002	0	%100
51	M12	X	.004	.004	0	%100
52	A	X	.003	.003	0	%100
53	D	X	.003	.003	0	%100
54	C	X	.004	.004	0	%100
55	M28	X	.002	.002	0	%100
56	M29	X	.002	.002	0	%100
57	M30	X	.004	.004	0	%100
58	I	X	.003	.003	0	%14.1
59	L	X	.003	.003	0	%14.1
60	K	X	.004	.004	0	%5.6
61	H	X	.003	.003	0	%14.1
62	G	X	.004	.004	0	%5.6
63	E	X	.003	.003	0	%14.1
64	M28A	X	.004	.004	0	%100
65	M29A	X	.004	.004	0	%100
66	M30A	X	.003	.003	0	%100
67	B	X	.003	.003	0	%100
68	I	X	.003	.003	%85.9	%100
69	L	X	.003	.003	%85.9	%100
70	K	X	.004	.004	%94.4	%100
71	J	X	.003	.003	0	%100
72	H	X	.003	.003	%85.9	%100
73	G	X	.004	.004	%94.4	%100
74	E	X	.003	.003	%85.9	%100
75	F	X	.003	.003	0	%100

Member Distributed Loads (BLC 24 : Ice Wind Members (90 Deg))

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	Z	0	0	0	%100
2	M2	Z	0	0	0	%100
3	M3	Z	0	0	0	%100
4	M4	Z	0	0	0	%100

Member Distributed Loads (BLC 24 : Ice Wind Members (90 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
5	M5	Z	0	0	0	%100
6	M6	Z	0	0	0	%100
7	M7	Z	0	0	0	%100
8	M8	Z	0	0	0	%100
9	M9	Z	0	0	0	%100
10	M10	Z	0	0	0	%100
11	M11	Z	0	0	0	%100
12	M12	Z	0	0	0	%100
13	A	Z	0	0	0	%14.1
14	D	Z	0	0	0	%14.1
15	C	Z	0	0	0	%5.6
16	M28	Z	0	0	0	%100
17	M29	Z	0	0	0	%100
18	M30	Z	0	0	0	%100
19	I	Z	0	0	0	%14.1
20	L	Z	0	0	0	%14.1
21	K	Z	0	0	0	%5.6
22	H	Z	0	0	0	%14.1
23	G	Z	0	0	0	%5.6
24	E	Z	0	0	0	%14.1
25	M28A	Z	0	0	0	%100
26	M29A	Z	0	0	0	%100
27	M30A	Z	0	0	0	%100
28	A	Z	0	0	%85.9	%100
29	D	Z	0	0	%85.9	%100
30	C	Z	0	0	%94.4	%100
31	B	Z	0	0	0	%100
32	I	Z	0	0	%85.9	%100
33	L	Z	0	0	%85.9	%100
34	K	Z	0	0	%94.4	%100
35	J	Z	0	0	0	%100
36	H	Z	0	0	%85.9	%100
37	G	Z	0	0	%94.4	%100
38	E	Z	0	0	%85.9	%100
39	F	Z	0	0	0	%100
40	M1	X	.002	.002	0	%100
41	M2	X	.002	.002	0	%100
42	M3	X	.002	.002	0	%100
43	M4	X	.002	.002	0	%100
44	M5	X	.005	.005	0	%100
45	M6	X	.003	.003	0	%100
46	M7	X	.003	.003	0	%100
47	M8	X	.002	.002	0	%100
48	M9	X	.002	.002	0	%100
49	M10	X	.004	.004	0	%100
50	M11	X	.003	.003	0	%100
51	M12	X	.003	.003	0	%100
52	A	X	.003	.003	0	%100
53	D	X	.003	.003	0	%100
54	C	X	.005	.005	0	%100
55	M28	X	.004	.004	0	%100
56	M29	X	.003	.003	0	%100
57	M30	X	.003	.003	0	%100
58	I	X	.003	.003	0	%14.1
59	L	X	.003	.003	0	%14.1
60	K	X	.005	.005	0	%5.6
61	H	X	.003	.003	0	%14.1

Member Distributed Loads (BLC 24 : Ice Wind Members (90 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
62	G	X	.005	.005	0	%5.6
63	E	X	.003	.003	0	%14.1
64	M28A	X	.004	.004	0	%100
65	M29A	X	.006	.006	0	%100
66	M30A	X	.004	.004	0	%100
67	B	X	.003	.003	0	%100
68	I	X	.003	.003	%85.9	%100
69	L	X	.003	.003	%85.9	%100
70	K	X	.005	.005	%94.4	%100
71	J	X	.003	.003	0	%100
72	H	X	.003	.003	%85.9	%100
73	G	X	.005	.005	%94.4	%100
74	E	X	.003	.003	%85.9	%100
75	F	X	.003	.003	0	%100

Member Distributed Loads (BLC 25 : Ice Wind Members (120 Deg))

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	Z	.001	.001	0	%100
2	M2	Z	.002	.002	0	%100
3	M3	Z	.001	.001	0	%100
4	M4	Z	.001	.001	0	%100
5	M5	Z	.002	.002	0	%100
6	M6	Z	.001	.001	0	%100
7	M7	Z	.003	.003	0	%100
8	M8	Z	.002	.002	0	%100
9	M9	Z	.001	.001	0	%100
10	M10	Z	.002	.002	0	%100
11	M11	Z	.002	.002	0	%100
12	M12	Z	.001	.001	0	%100
13	A	Z	.002	.002	0	%14.1
14	D	Z	.002	.002	0	%14.1
15	C	Z	.002	.002	0	%5.6
16	M28	Z	.001	.001	0	%100
17	M29	Z	.002	.002	0	%100
18	M30	Z	.001	.001	0	%100
19	I	Z	.002	.002	0	%14.1
20	L	Z	.002	.002	0	%14.1
21	K	Z	.002	.002	0	%5.6
22	H	Z	.002	.002	0	%14.1
23	G	Z	.002	.002	0	%5.6
24	E	Z	.002	.002	0	%14.1
25	M28A	Z	.002	.002	0	%100
26	M29A	Z	.003	.003	0	%100
27	M30A	Z	.003	.003	0	%100
28	A	Z	.002	.002	%85.9	%100
29	D	Z	.002	.002	%85.9	%100
30	C	Z	.002	.002	%94.4	%100
31	B	Z	.002	.002	0	%100
32	I	Z	.002	.002	%85.9	%100
33	L	Z	.002	.002	%85.9	%100
34	K	Z	.002	.002	%94.4	%100
35	J	Z	.002	.002	0	%100
36	H	Z	.002	.002	%85.9	%100
37	G	Z	.002	.002	%94.4	%100
38	E	Z	.002	.002	%85.9	%100
39	F	Z	.002	.002	0	%100

Member Distributed Loads (BLC 25 : Ice Wind Members (120 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
40	M1	X	.002	.002	0	%100
41	M2	X	.003	.003	0	%100
42	M3	X	.001	.001	0	%100
43	M4	X	.002	.002	0	%100
44	M5	X	.003	.003	0	%100
45	M6	X	.001	.001	0	%100
46	M7	X	.005	.005	0	%100
47	M8	X	.003	.003	0	%100
48	M9	X	.001	.001	0	%100
49	M10	X	.003	.003	0	%100
50	M11	X	.004	.004	0	%100
51	M12	X	.002	.002	0	%100
52	A	X	.003	.003	0	%100
53	D	X	.003	.003	0	%100
54	C	X	.004	.004	0	%100
55	M28	X	.002	.002	0	%100
56	M29	X	.004	.004	0	%100
57	M30	X	.002	.002	0	%100
58	I	X	.003	.003	0	%14.1
59	L	X	.003	.003	0	%14.1
60	K	X	.004	.004	0	%5.6
61	H	X	.003	.003	0	%14.1
62	G	X	.004	.004	0	%5.6
63	E	X	.003	.003	0	%14.1
64	M28A	X	.003	.003	0	%100
65	M29A	X	.004	.004	0	%100
66	M30A	X	.004	.004	0	%100
67	B	X	.003	.003	0	%100
68	I	X	.003	.003	%85.9	%100
69	L	X	.003	.003	%85.9	%100
70	K	X	.004	.004	%94.4	%100
71	J	X	.003	.003	0	%100
72	H	X	.003	.003	%85.9	%100
73	G	X	.004	.004	%94.4	%100
74	E	X	.003	.003	%85.9	%100
75	F	X	.003	.003	0	%100

Member Distributed Loads (BLC 26 : Ice Wind Members (150 Deg))

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	Z	.003	.003	0	%100
2	M2	Z	.002	.002	0	%100
3	M3	Z	0	0	0	%100
4	M4	Z	.003	.003	0	%100
5	M5	Z	.001	.001	0	%100
6	M6	Z	.003	.003	0	%100
7	M7	Z	.006	.006	0	%100
8	M8	Z	.002	.002	0	%100
9	M9	Z	0	0	0	%100
10	M10	Z	.001	.001	0	%100
11	M11	Z	.005	.005	0	%100
12	M12	Z	.002	.002	0	%100
13	A	Z	.003	.003	0	%14.1
14	D	Z	.003	.003	0	%14.1
15	C	Z	.004	.004	0	%5.6
16	M28	Z	.001	.001	0	%100
17	M29	Z	.005	.005	0	%100

Member Distributed Loads (BLC 26 : Ice Wind Members (150 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
18	M30	Z	.003	.003	0	%100
19	I	Z	.003	.003	0	%14.1
20	L	Z	.003	.003	0	%14.1
21	K	Z	.004	.004	0	%5.6
22	H	Z	.003	.003	0	%14.1
23	G	Z	.004	.004	0	%5.6
24	E	Z	.003	.003	0	%14.1
25	M28A	Z	.004	.004	0	%100
26	M29A	Z	.004	.004	0	%100
27	M30A	Z	.005	.005	0	%100
28	A	Z	.003	.003	%85.9	%100
29	D	Z	.003	.003	%85.9	%100
30	C	Z	.004	.004	%94.4	%100
31	B	Z	.003	.003	0	%100
32	I	Z	.003	.003	%85.9	%100
33	L	Z	.003	.003	%85.9	%100
34	K	Z	.004	.004	%94.4	%100
35	J	Z	.003	.003	0	%100
36	H	Z	.003	.003	%85.9	%100
37	G	Z	.004	.004	%94.4	%100
38	E	Z	.003	.003	%85.9	%100
39	F	Z	.003	.003	0	%100
40	M1	X	.002	.002	0	%100
41	M2	X	.001	.001	0	%100
42	M3	X	0	0	0	%100
43	M4	X	.002	.002	0	%100
44	M5	X	.001	.001	0	%100
45	M6	X	.001	.001	0	%100
46	M7	X	.003	.003	0	%100
47	M8	X	.001	.001	0	%100
48	M9	X	0	0	0	%100
49	M10	X	.001	.001	0	%100
50	M11	X	.003	.003	0	%100
51	M12	X	.001	.001	0	%100
52	A	X	.002	.002	0	%100
53	D	X	.002	.002	0	%100
54	C	X	.002	.002	0	%100
55	M28	X	0	0	0	%100
56	M29	X	.003	.003	0	%100
57	M30	X	.001	.001	0	%100
58	I	X	.002	.002	0	%14.1
59	L	X	.002	.002	0	%14.1
60	K	X	.002	.002	0	%5.6
61	H	X	.002	.002	0	%14.1
62	G	X	.002	.002	0	%5.6
63	E	X	.002	.002	0	%14.1
64	M28A	X	.002	.002	0	%100
65	M29A	X	.002	.002	0	%100
66	M30A	X	.003	.003	0	%100
67	B	X	.002	.002	0	%100
68	I	X	.002	.002	%85.9	%100
69	L	X	.002	.002	%85.9	%100
70	K	X	.002	.002	%94.4	%100
71	J	X	.002	.002	0	%100
72	H	X	.002	.002	%85.9	%100
73	G	X	.002	.002	%94.4	%100
74	E	X	.002	.002	%85.9	%100

Member Distributed Loads (BLC 26 : Ice Wind Members (150 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
75	F	X	.002	.002	0	%100

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distribut...	Area(Me...	Surface(...
1	Dead	None		-1			18			
2	Ice Dead	None					18	30		
3	Full Wind Antenna (0 Deg)	None					21			
4	Full Wind Antenna (30 Deg)	None					45			
5	Full Wind Antenna (60 Deg)	None					45			
6	Full Wind Antenna (90 Deg)	None					45			
7	Full Wind Antenna (120 Deg)	None					44			
8	Full Wind Antenna (150 Deg)	None					45			
9	Full Wind Members (0 Deg)	None						75		
10	Full Wind Members (30 Deg)	None						75		
11	Full Wind Members (60 Deg)	None						75		
12	Full Wind Members (90 Deg)	None						75		
13	Full Wind Members (120 Deg)	None						75		
14	Full Wind Members (150 Deg)	None						75		
15	Ice Wind Antenna (0 Deg)	None					21			
16	Ice Wind Antenna (30 Deg)	None					45			
17	Ice Wind Antenna (60 Deg)	None					45			
18	Ice Wind Antenna (90 Deg)	None					45			
19	Ice Wind Antenna (120 Deg)	None					44			
20	Ice Wind Antenna (150 Deg)	None					44			
21	Ice Wind Members (0 Deg)	None						75		
22	Ice Wind Members (30 Deg)	None						75		
23	Ice Wind Members (60 Deg)	None						75		
24	Ice Wind Members (90 Deg)	None						75		
25	Ice Wind Members (120 Deg)	None						75		
26	Ice Wind Members (150 Deg)	None						75		
27	Seismic Antenna (0 Deg)	None					18			
28	Seismic Antenna (90 Deg)	None					18			
29	Seismic Members (0 Deg)	None		-.043	-.107					
30	Seismic Members (30 Deg)	None	.053	-.043	-.093					
31	Seismic Members (60 Deg)	None	.093	-.043	-.053					
32	Seismic Members (90 Deg)	None	.107	-.043	-6.555e-...					
33	Seismic Members (120 Deg)	None	.093	-.043	.053					
34	Seismic Members (150 Deg)	None	.053	-.043	.093					
35	Seismic Members (180 Deg)	None	1.311e-17	-.043	.107					
36	Seismic Members (210 Deg)	None	-.053	-.043	.093					
37	Seismic Members (240 Deg)	None	-.093	-.043	.053					
38	Seismic Members (270 Deg)	None	-.107	-.043	1.966e-17					
39	Seismic Members (300 Deg)	None	-.093	-.043	-.053					
40	Seismic Members (330 Deg)	None	-.053	-.043	-.093					
41	Seismic Vertical Antennas	None					18			
42	Man 1 (500 lbs)	None				1				
43	Man 2 (500 lbs)	None				1				
44	Man 3 (500 lbs)	None				1				
45	Man 4 (250 lbs)	None				1				
46	Man 5 (250 lbs)	None				1				
47	Man 6 (250 lbs)	None				1				

Load Combinations

	Description	S...	PDelta	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
1	1.4D	Yes	Y		1	1.4																		
2	1.2D + 1.0W 0°	Yes	Y		1	1.2	3	1	9	1														
3	1.2D + 1.0W 30°	Yes	Y		1	1.2	4	1	10	1														
4	1.2D + 1.0W 60°	Yes	Y		1	1.2	5	1	11	1														
5	1.2D + 1.0W 90°	Yes	Y		1	1.2	6	1	12	1														
6	1.2D + 1.0W 120°	Yes	Y		1	1.2	7	1	13	1														
7	1.2D + 1.0W 150°	Yes	Y		1	1.2	8	1	14	1														
8	1.2D + 1.0W 180°	Yes	Y		1	1.2	3	-1	9	-1														
9	1.2D + 1.0W 210°	Yes	Y		1	1.2	4	-1	10	-1														
10	1.2D + 1.0W 240°	Yes	Y		1	1.2	5	-1	11	-1														
11	1.2D + 1.0W 270°	Yes	Y		1	1.2	6	-1	12	-1														
12	1.2D + 1.0W 300°	Yes	Y		1	1.2	7	-1	13	-1														
13	1.2D + 1.0W 330°	Yes	Y		1	1.2	8	-1	14	-1														
14	1.2D + 1.0Di + 1.0Wi 0°	Yes	Y		1	1.2	2	1	15	1	21	1												
15	1.2D + 1.0Di + 1.0Wi 30°	Yes	Y		1	1.2	2	1	16	1	22	1												
16	1.2D + 1.0Di + 1.0Wi 60°	Yes	Y		1	1.2	2	1	17	1	23	1												
17	1.2D + 1.0Di + 1.0Wi 90°	Yes	Y		1	1.2	2	1	18	1	24	1												
18	1.2D + 1.0Di + 1.0Wi 120°	Yes	Y		1	1.2	2	1	19	1	25	1												
19	1.2D + 1.0Di + 1.0Wi 150°	Yes	Y		1	1.2	2	1	20	1	26	1												
20	1.2D + 1.0Di + 1.0Wi 180°	Yes	Y		1	1.2	2	1	15	-1	21	-1												
21	1.2D + 1.0Di + 1.0Wi 210°	Yes	Y		1	1.2	2	1	16	-1	22	-1												
22	1.2D + 1.0Di + 1.0Wi 240°	Yes	Y		1	1.2	2	1	17	-1	23	-1												
23	1.2D + 1.0Di + 1.0Wi 270°	Yes	Y		1	1.2	2	1	18	-1	24	-1												
24	1.2D + 1.0Di + 1.0Wi 300°	Yes	Y		1	1.2	2	1	19	-1	25	-1												
25	1.2D + 1.0Di + 1.0Wi 330°	Yes	Y		1	1.2	2	1	20	-1	26	-1												
26	1.2D + 1.5Lm_1 + 1.0W...	Yes	Y		1	1.2	3	.058	9	.058	42	1.5												
27	1.2D + 1.5Lm_1 + 1.0W...	Yes	Y		1	1.2	4	.058	10	.058	42	1.5												
28	1.2D + 1.5Lm_1 + 1.0W...	Yes	Y		1	1.2	5	.058	11	.058	42	1.5												
29	1.2D + 1.5Lm_1 + 1.0W...	Yes	Y		1	1.2	6	.058	12	.058	42	1.5												
30	1.2D + 1.5Lm_1 + 1.0W...	Yes	Y		1	1.2	7	.058	13	.058	42	1.5												
31	1.2D + 1.5Lm_1 + 1.0W...	Yes	Y		1	1.2	8	.058	14	.058	42	1.5												
32	1.2D + 1.5Lm_1 + 1.0W...	Yes	Y		1	1.2	3	-.0...	9	-.0...	42	1.5												
33	1.2D + 1.5Lm_1 + 1.0W...	Yes	Y		1	1.2	4	-.0...	10	-.0...	42	1.5												
34	1.2D + 1.5Lm_1 + 1.0W...	Yes	Y		1	1.2	5	-.0...	11	-.0...	42	1.5												
35	1.2D + 1.5Lm_1 + 1.0W...	Yes	Y		1	1.2	6	-.0...	12	-.0...	42	1.5												
36	1.2D + 1.5Lm_1 + 1.0W...	Yes	Y		1	1.2	7	-.0...	13	-.0...	42	1.5												
37	1.2D + 1.5Lm_1 + 1.0W...	Yes	Y		1	1.2	8	-.0...	14	-.0...	42	1.5												
38	1.2D + 1.5Lm_2 + 1.0W...	Yes	Y		1	1.2	3	.058	9	.058	43	1.5												
39	1.2D + 1.5Lm_2 + 1.0W...	Yes	Y		1	1.2	4	.058	10	.058	43	1.5												
40	1.2D + 1.5Lm_2 + 1.0W...	Yes	Y		1	1.2	5	.058	11	.058	43	1.5												
41	1.2D + 1.5Lm_2 + 1.0W...	Yes	Y		1	1.2	6	.058	12	.058	43	1.5												
42	1.2D + 1.5Lm_2 + 1.0W...	Yes	Y		1	1.2	7	.058	13	.058	43	1.5												
43	1.2D + 1.5Lm_2 + 1.0W...	Yes	Y		1	1.2	8	.058	14	.058	43	1.5												
44	1.2D + 1.5Lm_2 + 1.0W...	Yes	Y		1	1.2	3	-.0...	9	-.0...	43	1.5												
45	1.2D + 1.5Lm_2 + 1.0W...	Yes	Y		1	1.2	4	-.0...	10	-.0...	43	1.5												
46	1.2D + 1.5Lm_2 + 1.0W...	Yes	Y		1	1.2	5	-.0...	11	-.0...	43	1.5												
47	1.2D + 1.5Lm_2 + 1.0W...	Yes	Y		1	1.2	6	-.0...	12	-.0...	43	1.5												
48	1.2D + 1.5Lm_2 + 1.0W...	Yes	Y		1	1.2	7	-.0...	13	-.0...	43	1.5												
49	1.2D + 1.5Lm_2 + 1.0W...	Yes	Y		1	1.2	8	-.0...	14	-.0...	43	1.5												
50	1.2D + 1.5Lm_3 + 1.0W...	Yes	Y		1	1.2	3	.058	9	.058	44	1.5												
51	1.2D + 1.5Lm_3 + 1.0W...	Yes	Y		1	1.2	4	.058	10	.058	44	1.5												
52	1.2D + 1.5Lm_3 + 1.0W...	Yes	Y		1	1.2	5	.058	11	.058	44	1.5												
53	1.2D + 1.5Lm_3 + 1.0W...	Yes	Y		1	1.2	6	.058	12	.058	44	1.5												
54	1.2D + 1.5Lm_3 + 1.0W...	Yes	Y		1	1.2	7	.058	13	.058	44	1.5												
55	1.2D + 1.5Lm_3 + 1.0W...	Yes	Y		1	1.2	8	.058	14	.058	44	1.5												
56	1.2D + 1.5Lm_3 + 1.0W...	Yes	Y		1	1.2	3	-.0...	9	-.0...	44	1.5												

Load Combinations (Continued)

	Description	S...	PDelta	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
57	1.2D + 1.5Lm_3 + 1.0W...	Yes	Y		1	1.2	4	-.0...	10	-.0...	44	1.5												
58	1.2D + 1.5Lm_3 + 1.0W...	Yes	Y		1	1.2	5	-.0...	11	-.0...	44	1.5												
59	1.2D + 1.5Lm_3 + 1.0W...	Yes	Y		1	1.2	6	-.0...	12	-.0...	44	1.5												
60	1.2D + 1.5Lm_3 + 1.0W...	Yes	Y		1	1.2	7	-.0...	13	-.0...	44	1.5												
61	1.2D + 1.5Lm_3 + 1.0W...	Yes	Y		1	1.2	8	-.0...	14	-.0...	44	1.5												
62	1.2D + 1.5Lv_1 0°	Yes	Y		1	1.2	45	1.5																
63	1.2D + 1.5Lv_1 30°	Yes	Y		1	1.2	45	1.5																
64	1.2D + 1.5Lv_1 60°	Yes	Y		1	1.2	45	1.5																
65	1.2D + 1.5Lv_1 90°	Yes	Y		1	1.2	45	1.5																
66	1.2D + 1.5Lv_1 120°	Yes	Y		1	1.2	45	1.5																
67	1.2D + 1.5Lv_1 150°	Yes	Y		1	1.2	45	1.5																
68	1.2D + 1.5Lv_1 180°	Yes	Y		1	1.2	45	1.5																
69	1.2D + 1.5Lv_1 210°	Yes	Y		1	1.2	45	1.5																
70	1.2D + 1.5Lv_1 240°	Yes	Y		1	1.2	45	1.5																
71	1.2D + 1.5Lv_1 270°	Yes	Y		1	1.2	45	1.5																
72	1.2D + 1.5Lv_1 300°	Yes	Y		1	1.2	45	1.5																
73	1.2D + 1.5Lv_1 330°	Yes	Y		1	1.2	45	1.5																
74	1.2D + 1.5Lv_2 0°	Yes	Y		1	1.2	46	1.5																
75	1.2D + 1.5Lv_2 30°	Yes	Y		1	1.2	46	1.5																
76	1.2D + 1.5Lv_2 60°	Yes	Y		1	1.2	46	1.5																
77	1.2D + 1.5Lv_2 90°	Yes	Y		1	1.2	46	1.5																
78	1.2D + 1.5Lv_2 120°	Yes	Y		1	1.2	46	1.5																
79	1.2D + 1.5Lv_2 150°	Yes	Y		1	1.2	46	1.5																
80	1.2D + 1.5Lv_2 180°	Yes	Y		1	1.2	46	1.5																
81	1.2D + 1.5Lv_2 210°	Yes	Y		1	1.2	46	1.5																
82	1.2D + 1.5Lv_2 240°	Yes	Y		1	1.2	46	1.5																
83	1.2D + 1.5Lv_2 270°	Yes	Y		1	1.2	46	1.5																
84	1.2D + 1.5Lv_2 300°	Yes	Y		1	1.2	46	1.5																
85	1.2D + 1.5Lv_2 330°	Yes	Y		1	1.2	46	1.5																
86	1.2D + 1.5Lv_3 0°	Yes	Y		1	1.2	47	1.5																
87	1.2D + 1.5Lv_3 30°	Yes	Y		1	1.2	47	1.5																
88	1.2D + 1.5Lv_3 60°	Yes	Y		1	1.2	47	1.5																
89	1.2D + 1.5Lv_3 90°	Yes	Y		1	1.2	47	1.5																
90	1.2D + 1.5Lv_3 120°	Yes	Y		1	1.2	47	1.5																
91	1.2D + 1.5Lv_3 150°	Yes	Y		1	1.2	47	1.5																
92	1.2D + 1.5Lv_3 180°	Yes	Y		1	1.2	47	1.5																
93	1.2D + 1.5Lv_3 210°	Yes	Y		1	1.2	47	1.5																
94	1.2D + 1.5Lv_3 240°	Yes	Y		1	1.2	47	1.5																
95	1.2D + 1.5Lv_3 270°	Yes	Y		1	1.2	47	1.5																
96	1.2D + 1.5Lv_3 300°	Yes	Y		1	1.2	47	1.5																
97	1.2D + 1.5Lv_3 330°	Yes	Y		1	1.2	47	1.5																
98	1.2D + 1.0EV +1.0 EH 0°	Yes	Y		1	1.2	27	1	28		29	1	40	1										
99	1.2D + 1.0EV +1.0 EH 30°	Yes	Y		1	1.2	27	.866	28	.5	30	1	40	1										
100	1.2D + 1.0EV +1.0 EH 60°	Yes	Y		1	1.2	27	.5	28	.866	31	1	40	1										
101	1.2D + 1.0EV +1.0 EH 90°	Yes	Y		1	1.2	27		28	1	32	1	40	1										
102	1.2D + 1.0EV +1.0 EH 12...	Yes	Y		1	1.2	27	-.5	28	.866	33	1	40	1										
103	1.2D + 1.0EV +1.0 EH 15...	Yes	Y		1	1.2	27	-.8...	28	.5	34	1	40	1										
104	1.2D + 1.0EV +1.0 EH 18...	Yes	Y		1	1.2	27	-1	28		35	1	40	1										
105	1.2D + 1.0EV +1.0 EH 21...	Yes	Y		1	1.2	27	-.8...	28	-.5	36	1	40	1										
106	1.2D + 1.0EV +1.0 EH 24...	Yes	Y		1	1.2	27	-.5	28	-.8...	37	1	40	1										
107	1.2D + 1.0EV +1.0 EH 27...	Yes	Y		1	1.2	27		28	-1	38	1	40	1										
108	1.2D + 1.0EV +1.0 EH 30...	Yes	Y		1	1.2	27	.5	28	-.8...	39	1	40	1										
109	1.2D + 1.0EV +1.0 EH 33...	Yes	Y		1	1.2	27	.866	28	-.5	40	1	40	1										

Envelope Joint Reactions

	Joint		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N53B	max	1.285	10	.988	28	.915	2	-.739	8	1.334	13	.107	4
2		min	-1.259	4	.205	86	-.897	8	-3.213	26	-1.349	7	-.165	34
3	N55	max	1.118	11	.971	57	1.243	3	1.419	59	1.187	9	2.84	58
4		min	-1.092	5	.188	62	-1.234	9	.285	5	-1.239	3	.607	4
5	N57	max	1.083	11	.987	44	1.264	13	1.75	41	1.261	13	-.647	13
6		min	-1.14	5	.204	74	-1.227	7	.324	11	-1.245	7	-2.713	43
7	N56	max	-.334	11	1.175	16	.746	15	0	109	0	109	0	109
8		min	-1.281	16	.352	10	.175	8	0	1	0	1	0	1
9	N57A	max	1.289	23	1.182	24	.75	25	0	109	0	109	0	109
10		min	.334	5	.355	6	.18	8	0	1	0	1	0	1
11	N58	max	.066	11	1.227	20	-.441	2	0	109	0	109	0	109
12		min	-.066	5	.389	2	-1.55	20	0	1	0	1	0	1
13	Totals:	max	3.596	11	6.356	25	3.337	2						
14		min	-3.596	5	2.163	2	-3.337	8						

Envelope AISC 14th(360-10): LRFD Steel Code Checks

	Member	Shape	Code ...	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	phi*Pnc [k]	phi*Pnt [k]	phi*Mn y...	phi*Mn z...	Cb	Eqn
1	M1	L3X3X4	.351	0	21	.490	7	z	8	15.746	46.656	1.688	3.756	3....	H2-1
2	M2	L3X3X4	.357	7	12	.488	7	z	12	15.746	46.656	1.688	2.275	1	H2-1
3	M3	L3X3X4	.424	7	4	.489	7	y	4	3.945	46.656	1.688	2.789	1....	H2-1
4	M4	L3X3X4	.113	3.61	13	.014	0	y	16	15.459	46.656	1.688	3.436	1....	H2-1
5	M5	LL3x3x4x0	.309	0	18	.030	2	y	23	49.885	93.312	6.48	3.069	1....	H1-1b
6	M6	LL3x3x4x0	.335	0	21	.032	2	y	15	49.885	93.312	6.48	3.069	1....	H1-1b
7	M7	LL3x3x4x0	.334	0	14	.033	2	y	18	49.885	93.312	6.48	3.069	1....	H1-1b
8	M8	L3X3X4	.118	7.072	85	.015	7.072	z	21	15.459	46.656	1.688	3.533	1....	H2-1
9	M9	L3X3X4	.117	0	85	.015	0	z	20	15.459	46.656	1.688	3.538	2....	H2-1
10	M10	HSS4.5X4.5...	.126	2	35	.045	2	y	35	118.936	124.416	16.362	16.362	1....	H1-1b
11	M11	HSS4.5X4.5...	.125	2	55	.047	2	y	55	118.936	124.416	16.362	16.362	1....	H1-1b
12	M12	HSS4.5X4.5...	.131	2	15	.046	2	y	39	118.936	124.416	16.362	16.362	1....	H1-1b
13	A	PIPE_2.0	.114	2.708	8	.010	2.708		9	19.36	32.13	1.872	1.872	1....	H1-1b
14	D	PIPE_2.0	.113	2.708	2	.008	.948		2	19.36	32.13	1.872	1.872	1	H1-1b
15	C	PIPE_2.5	.361	4.406	8	.021	.563		8	26.137	50.715	3.596	3.596	1....	H1-1b
16	M28	HSS4X4X4	.273	1.25	16	.052	1.25	z	4	106.751	109.188	12.663	12.663	1....	H1-1b
17	M29	HSS4X4X4	.257	1.25	15	.051	1.25	y	54	106.751	109.188	12.663	12.663	1....	H1-1b
18	M30	HSS4X4X4	.264	1.25	20	.048	1.25	y	40	106.751	109.188	12.663	12.663	1....	H1-1b
19	B	PIPE_2.0	.028	2.708	6	.003	2.708		6	19.36	32.13	1.872	1.872	1....	H1-1b
20	I	PIPE_2.0	.120	2.708	4	.011	2.708		4	19.36	32.13	1.872	1.872	1....	H1-1b
21	L	PIPE_2.0	.113	2.708	10	.008	.948		10	19.36	32.13	1.872	1.872	1....	H1-1b
22	K	PIPE_2.5	.361	4.406	4	.021	.563		4	26.137	50.715	3.596	3.596	1....	H1-1b
23	J	PIPE_2.0	.028	2.708	13	.003	2.708		13	19.36	32.13	1.872	1.872	1....	H1-1b
24	H	PIPE_2.0	.113	2.708	12	.008	.948		12	19.36	32.13	1.872	1.872	1....	H1-1b
25	G	PIPE_2.5	.361	4.406	12	.021	.563		12	26.137	50.715	3.596	3.596	1....	H1-1b
26	E	PIPE_2.0	.117	2.708	12	.010	2.708		12	19.36	32.13	1.872	1.872	1....	H1-1b
27	F	PIPE_2.0	.028	2.708	9	.003	2.708		9	19.36	32.13	1.872	1.872	1....	H1-1b
28	M28A	LL2x2x4x0	.090	3.317	20	.004	6.633	z	9	24.624	61.236	2.894	2.114	1....	H1-1b
29	M29A	LL2x2x4x0	.092	3.317	16	.003	0	z	11	24.624	61.236	2.894	2.114	1....	H1-1b
30	M30A	LL2x2x4x0	.089	3.317	20	.004	0	z	13	24.624	61.236	2.894	2.114	1....	H1-1b

APPENDIX D

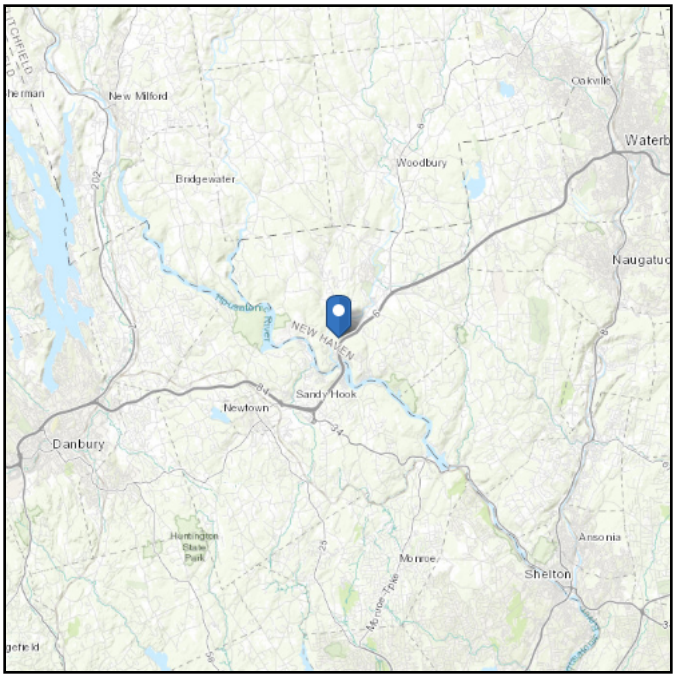
ADDITIONAL CALCUATIONS

ASCE 7 Hazards Report

Address:
No Address at This Location

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

Elevation: 445.14 ft (NAVD 88)
Latitude: 41.452214
Longitude: -73.250347



Wind

Results:

Wind Speed:	Southbury County Vult from WSEL=120mph
10-year MRI	76 Vmph
25-year MRI	85 Vmph
50-year MRI	91 Vmph
100-year MRI	97 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: Thu Apr 25 2019

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.

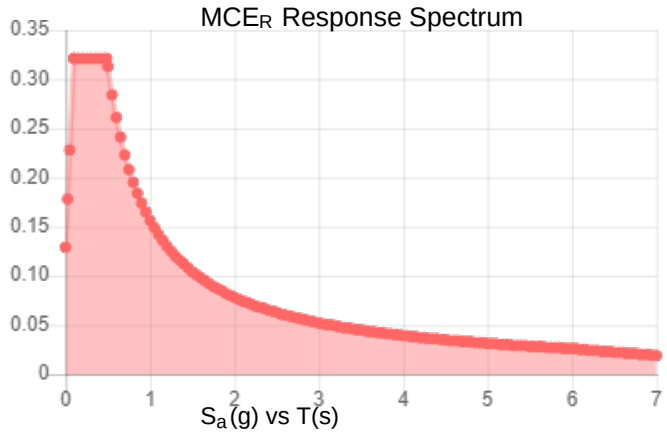
Seismic

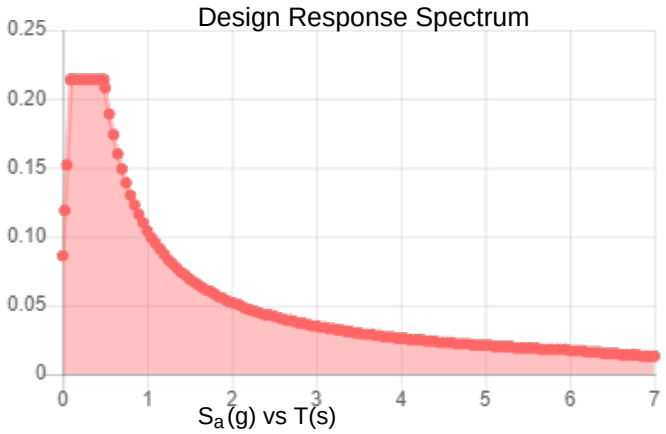
Site Soil Class: D - Stiff Soil

Results:

S_S :	0.201	S_{DS} :	0.214
S_1 :	0.065	S_{D1} :	0.104
F_a :	1.6	T_L :	6
F_v :	2.4	PGA :	0.107
S_{MS} :	0.321	PGA_M :	0.169
S_{M1} :	0.156	F_{PGA} :	1.587
		I_e :	1

Seismic Design Category B





Data Accessed: Thu Apr 25 2019

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:	Thu Apr 25 2019

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.

APPENDIX E

MODIFICATION DRAWINGS

MOUNT REINFORCEMENT DRAWINGS PREPARED FOR CROWN CASTLE

SITE NAME: HORSE HILL
BU NUMBER: 876314

SITE ADDRESS:
214 RUSSIAN VILLAGE RD
SOUTHBURY, CT 06488
NEW HAVEN COUNTY, USA

PROJECT CONTACTS:

1. CROWN PROJECT MANAGER
   CHARLES MCGUIRT
   CHARLES.MCGUIRT@CROWNCASTLE.COM

2. DESIGN ENGINEER - MAIN RFI CONTACT
   ELISA MATHON
   919-674-5835
   ELISA.MATHON@MASTEC.COM

3. ENGINEER OF RECORD
   RAPHAEL I. MOHAMED, PE, PEng
   919-674-5895
   507 AIRPORT BLVD.
   SUITE 111
   MORRISVILLE, NC 27560
   RAPHAEL.MOHAMED@MASTEC.COM

4. FOR FABRICATION AND CONSTRUCTION RELATED INQUIRIES: CONTACT MASTEC DESIGN ENGINEER AND ENGINEER OF RECORD.

TOWER INFORMATION

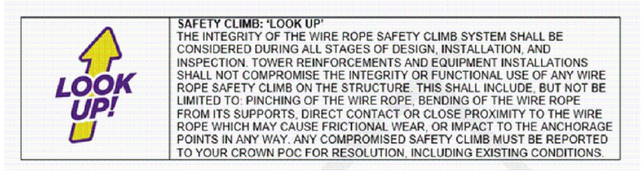
TOWER HEIGHT / TYPE:	130 FT MONOPOLE TOWER
MOUNT HEIGHT/TYPE:	100 FT 14 FT PLATFORM MOUNT
TOWER LOCATION:	LAT: 41° 27' 7.97"
	LONG: -73° 15' 1.25"
MODIFICATION DRAWINGS:	MASTEC
MASTEC PROJECT NUMBER:	18543-MOD1
MA FAILING CCI DOCUMENT ID:	8366050
MOUNT ANALYSIS DATE:	05/30/2019
ORDER NUMBER:	479810, REV. 0
JDE JOB NUMBER:	559320

CODE COMPLIANCE

ANSI/TIA-222-H

2018 CONNECTICUT STATE BUILDING CODE

ATTENTION ALL CONTRACTORS, ANYTIME YOU ACCESS A CROWN SITE FOR ANY REASON YOU ARE TO CALL THE CROWN NOC UPON ARRIVAL AND DEPARTURE, DAILY AT 800-788-7011.



QUALIFIED ENGINEERING SERVICES ARE AVAILABLE FROM MASTEC NETWORK SOLUTIONS TO ASSIST CONTRACTORS IN CLASS IV RIGGING PLAN REVIEWS. FOR REQUESTED QUALIFIED ENGINEERING SERVICES, PLEASE CONTACT RAPHAEL MOHAMED AT (919) 244-5207.

DRAWINGS INCLUDED

SHEET NO.	DESCRIPTION	SHEET NO.	DESCRIPTION
T-1	TITLE SHEET		
N-1	MODIFICATION INSPECTION CHECKLIST		
N-2	GENERAL NOTES		
S-1	MODIFICATION SCHEDULE		
S-2	PLATFORM REINFORCEMENT DETAILS		
S-3	REINFORCEMENT CONNECTION DETAILS		
A-1	MANUFACTURER SPECIFICATIONS I		

NO.	DATE	DESCRIPTION	BY
0	05/31/19	FIRST ISSUE	JMB

REVISIONS

RAPHAEL I. MOHAMED, PE,PEng
SENIOR DIRECTOR OF ENGINEERING
CT PE LICENSE NO. 25112

I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF CONNECTICUT.

MasTec Network Solutions
507 AIRPORT BLVD., SUITE 111
MORRISVILLE, NC 27560

SITE NAME: HORSE HILL

BU NUMBER: 876314

WO NUMBER: 479810
MNS ENG. NUMBER: 18543 - MOD1

SITE ADDRESS:
214 RUSSIAN VILLAGE RD
SOUTHBURY, CT 06488
NEW HAVEN COUNTY, USA

DRAWN BY: JMB

CHECKED BY: EJM

APPROVED BY: RIM

SCALE: N.T.S

TITLE SHEET

T-1

REV 0

MI CHECKLIST

CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY EOR)	REPORT ITEM
PRE-CONSTRUCTION	
X	MI CHECKLIST DRAWING
N/A	EOR APPROVAL
X	FABRICATION INSPECTION
N/A	FABRICATOR CERTIFIED WELD INSPECTION
X	MATERIAL TEST REPORT (MTR)
N/A	FABRICATOR NDE INSPECTION
N/A	NDE REPORT OF BASE PLATE
X	PACKING SLIPS
ADDITIONAL TESTING AND INSPECTIONS:	
CONSTRUCTION	
X	CONSTRUCTION INSPECTIONS
N/A	CONTINUOUS FOUNDATION INSPECTIONS
N/A	CONCRETE COMP. STRENGTH AND SLUMP TESTS
N/A	GROUT COMP. STRENGTH (ASTM C109)
N/A	POST INSTALLED ANCHOR ROD VERIFICATION
N/A	BASE PLATE GROUT VERIFICATION
N/A	CONTRACTOR'S CERTIFIED WELD INSPECTION AND NDE REPORTS
N/A	EARTHWORK: LIFT AND DENSITY
X	ON SITE COLD GALVANIZING VERIFICATION
N/A	GUY WIRE TENSION REPORT
X	GC AS-BUILT DOCUMENTS
ADDITIONAL TESTING AND INSPECTIONS:	
POST-CONSTRUCTION	
X	MI INSPECTOR REDLINE OR RECORD DRAWING(S)
N/A	POST INSTALLED ANCHOR ROD PULL-OUT TESTING
X	PHOTOGRAPHS
ADDITIONAL TESTING AND INSPECTIONS:	

NOTE: X DENOTES A DOCUMENT NEEDED FOR THE PMI REPORT
N/A DENOTES A DOCUMENT THAT IS NOT REQUIRED FOR THE PMI REPORT

MODIFICATION INSPECTION NOTES:

GENERAL:

1. THE MODIFICATION INSPECTION (MI) IS A VISUAL INSPECTION OF THE TOWER MODIFICATIONS AND A REVIEW OF CONSTRUCTION INSPECTIONS AND OTHER REPORTS TO ENSURE THE INSTALLATION WAS CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, NAMELY THE MODIFICATION DRAWINGS, AS DESIGNED BY THE ENGINEER OF RECORD (EOR)
2. THE MI IS TO CONFIRM INSTALLATION CONFIGURATION AND WORKMANSHIP ONLY AND IS NOT A REVIEW OF THE MODIFICATION DESIGN ITSELF, NOR DOES THE MI INSPECTOR TAKE OWNERSHIP OF THE MODIFICATION DESIGN. OWNERSHIP OF THE STRUCTURAL MODIFICATION DESIGN EFFECTIVENESS AND INTEGRITY RESIDES WITH THE EOR AT ALL TIMES.
3. TO ENSURE THAT THE REQUIREMENTS OF THE MI ARE MET IT IS VITAL THAT THE GENERAL CONTRACTOR (GC) AND THE MI INSPECTOR BEGIN COMMUNICATING AND COORDINATING AS SOON AS A PO IS RECEIVED. IT IS EXPECTED THAT EACH PARTY WILL BE PROACTIVE IN REACHING OUT TO THE OTHER PARTY. IF CONTACT INFORMATION IS NOT KNOWN, CONTACT YOUR POINT OF CONTACT (POC).

MI INSPECTOR:

1. THE MI INSPECTOR IS REQUIRED TO CONTACT THE GC AS SOON AS RECEIVING A PO FOR THE MI TO, AT A MINIMUM

   REVIEW THE REQUIREMENTS OF THE MI CHECKLIST WORK WITH THE GC TO DEVELOP A SCHEDULE TO CONDUCT ON-SITE INSPECTIONS, INCLUDING FOUNDATION INSPECTIONS.
2. THE MI IS RESPONSIBLE FOR COLLECTING ALL GENERAL CONTRACTORS (GC) INSPECTION AND TEST REPORTS, REVIEWING THE DOCUMENTS FOR ADHERENCE TO THE CONTRACT DOCUMENTS, CONDUCTING THE IN-FIELD INSPECTIONS. AND SUBMITTING THE MI REPORT.

GENERAL CONTRACTOR:

1. THE GC IS REQUIRED TO CONTACT THE MI INSPECTOR AS SOON AS RECEIVING A PO FOR THE MODIFICATION INSTALLATION OR TURNKEY PROJECT TO, AT A MINIMUM:
   - REVIEW THE REQUIREMENTS OF THE MI CHECKLIST.
   - WORK WITH THE MI INSPECTOR TO DEVELOP A SCHEDULE TO CONDUCT
   - ON-SITE MI INSPECTIONS, INCLUDING FOUNDATION INSPECTIONS.
   - BETTER UNDERSTAND ALL INSPECTION AND TESTING REQUIREMENTS.
2. THE GC SHALL PERFORM AND RECORD THE TEST AND INSPECTION RESULTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE MI CHECKLIST.

MI VERIFICATION INSPECTIONS:

VERIFICATION INSPECTION MAY BE CONDUCTED BY AN INDEPENDENT FIRM AFTER A MODIFICATION PROJECT IS COMPLETED, AS MARKED BY THE OF AN ACCEPTED "PASSING MI" OR "PASS AS NOTED MI" REPORT FOR THE ORIGINAL PROJECT.

REQUIRED PHOTOS:

BETWEEN THE GC AND THE MI INSPECTOR THE FOLLOWING PHOTOGRAPHS, AT A MINIMUM, ARE TO BE TAKEN AND INCLUDED IN THE MI REPORT:

- PRE-CONSTRUCTION GENERAL SITE CONDITION
- PHOTOGRAPHS DURING THE REINFORCEMENT MODIFICATION CONSTRUCTION/ERECTIONS AND INSPECTION:
- RAW MATERIALS
- PHOTOS OF ALL CRITICAL DETAILS
- FOUNDATION MODIFICATIONS
- WELD PREPARATION
- BOLT INSTALLATION AND TORQUE
- FINAL INSTALLED CONDITION
- SURFACE COATING REPAIR
- POST CONSTRUCTION PHOTOGRAPHS
- FINAL IN FIELD CONDITIONS

PHOTOS OF ELEVATED MODIFICATION TAKEN FROM THE GROUND SHALL BE CONSIDERED INADEQUATE.

CORRECTION OF FAILING MI'S:

IF THE MODIFICATION INSTALLATION WOULD FAIL THE MI ("FAILED MI"), THE GC SHALL WORK WITH THE TOWER OWNER TO COORDINATE A REMEDIATION PLAN IN ONE OF TWO WAYS:

- CORRECT FAILING ISSUES TO COMPLY WITH THE SPECIFICATIONS CONTAINED IN THE ORIGINAL CONTRACT DOCUMENTS AND COORDINATE A SUPPLEMENT MI.
- OR, THE GC MAY WORK WITH THE EOR TO RE-ANALYZE THE MODIFICATION/ENFORCEMENT USING THE AS-BUILT CONDITION.

RECOMMENDATIONS:

THE FOLLOWING RECOMMENDATIONS AND SUGGESTIONS ARE OFFERED TO ENHANCE THE EFFICIENCY AND EFFECTIVENESS OF DELIVERING A MI REPORT:

- IT IS SUGGESTED THAT THE GC PROVIDE A MINIMUM OF 5 BUSINESS DAYS NOTICE, PREFERABLY 10, TO THE MI INSPECTOR AS TO WHEN THE SITE WILL BE READY FOR THE MI TO BE CONDUCTED.
- THE GC AND MI INSPECTOR COORDINATE CLOSELY THROUGHOUT THE ENTIRE PROJECT.
- WHEN POSSIBLE IT IS PREFERRED TO HAVE THE GC AND MI INSPECTOR ON-SITE SIMULTANEOUSLY FOR ANY GUY WIRE TENSIONING OR RE-TENSIONING OPERATIONS.
- IT MAY BE BENEFICIAL TO INSTALL ALL TOWER MODIFICATIONS PRIOR TO CONDUCTING THE FOUNDATION INSPECTIONS TO ALLOW FOUNDATION AND MI INSPECTION(S) TO COMMENCE WITH ONE SITE VISIT.
- WHEN POSSIBLE, IT IS PREFERRED TO HAVE THE GC AND MI INSPECTOR ON-SITE DURING THE MI TO HAVE ANY DEFICIENCIES CORRECTED DURING THE INITIAL MI, THEREFORE, THE GC MAY CHOOSE TO COORDINATE THE MI CAREFULLY TO ENSURE ALL CONSTRUCTION FACULTIES ARE AT THEIR DISPOSAL WHEN THE MI INSPECTOR IS ON SITE.

CANCELLATION OR DELAYS IN SCHEDULED MI:

IF THE GC AND MI INSPECTOR AGREE TO A DATE ON WHICH THE MI WILL BE CONDUCTED, AND EITHER PARTY CANCELS OR DELAYS, TOWER OWNER SHALL NOT BE RESPONSIBLE FOR ANY COSTS, FEES, LOSS OF DEPOSITS AND/OR OTHER PENALTIES RELATED TO THE CANCELLATION OR DELAY INCURRED BY EITHER PARTY FOR ANY TIME (E.G. TRAVEL AND LODGING, COSTS OF KEEPING EQUIPMENT ON-SITE, ETC.). IF TOWER OWNER CONTRACTS DIRECTLY FOR A THIRD PARTY MI, EXCEPTIONS MAY BE MADE IN THE EVENT THAT THE DELAY/CANCELLATION IS CAUSED BY WEATHER OR OTHER CONDITIONS THAT MAY COMPROMISE THE SAFETY OF THE PARTIES INVOLVED.

NO.	DATE	DESCRIPTION	BY
0	05/31/19	FIRST ISSUE	JMB

REVISIONS

RAPHAEL I. MOHAMED, PE,PEng
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DRAWN BY: JMB

CHECKED BY: EJM

APPROVED BY: RIM

SCALE: N.T.S

MODIFICATION INSPECTION CHECKLIST

N-1

REV 0

GENERAL NOTES:

1. ALL WORK PRESENTED IN THESE DRAWINGS MUST BE COMPLETED BY THE CONTRACTOR UNLESS OTHERWISE SPECIFIED.
2. THE CONTRACTOR MUST HAVE A MINIMUM OF 5 YEARS OF EXPERIENCE IN TOWER ERECTION AND RETROFIT SIMILAR TO THAT DESCRIBED HEREIN.
3. ALL CONSTRUCTION IS TO BE COMPLETE IN ACCORDANCE WITH THE ANSI/ASSE A10.48 AND ANSI/TIA-322 STANDARDS. THE CONTRACTOR MUST HAVE CONSIDERABLE WORKING KNOWLEDGE IN THESE STANDARDS TO ACCEPT THIS WORK. BY ACCEPTING THIS PROJECT, THE CONTRACTOR IS ATTESTING THAT HE HAS SUFFICIENT EXPERIENCE, ABILITY, AND KNOWLEDGE OF THE WORK TO BE PERFORMED AND IS PROPERLY LICENSED AND REGISTERED TO COMPLETE THIS WORK.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS, ELEVATIONS, AND EXISTING CONDITIONS PRIOR TO BEGINNING ANY MATERIAL ORDERS, FABRICATION OR CONSTRUCTION WORK ON THIS PROJECT. ANY DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE EOR. THE DISCREPANCIES MUST BE RESOLVED BEFORE THE CONTRACTOR MAY PROCEED WITH THE PROJECT.
5. ANY WORK PERFORMED WITHOUT A PREFABRICATION MAPPING IS DONE AT THE RISK OF THE CONTRACTOR AND/OR FABRICATOR.
6. ALL MANUFACTURERS' INSTRUCTIONS FOR INSTALLATION MUST BE FOLLOWED EXACTLY AS SPECIFIED. WHEN CONFLICTING WITH THESE DRAWINGS, THE MANUFACTURER SPECIFICATIONS SHALL GOVERN.
7. ALL MATERIALS AND EQUIPMENT USED IN THE INSTALLATION OF THESE DRAWINGS SHALL BE IN NEW OR GOOD WORKING QUALITY, FREE FROM DEFECTS AND FAULTS AND IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. ALL SUBSTITUTIONS MUST BE GIVEN WRITTEN APPROVAL FROM THE EOR PRIOR TO INSTALLATION. ALL MATERIALS SHALL BE WARRANTED FOR ONE YEAR FROM ACCEPTANCE DATE.
8. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL INTENDED CONSTRUCTION ACTIVITY INCLUDING MATERIALS, ACCESS AND WORK SCHEDULE. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS AND WILL BE RESPONSIBLE FOR ABIDING BY ALL REQUIREMENTS AND CONDITIONS OF THE PERMITS. WHEN APPLICABLE, THE CONTRACTOR MUST NOTIFY THE APPLICABLE JURISDICTION PRIOR TO BEGINNING OF ANY CONSTRUCTION.
9. THE CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION MEANS AND METHODS. INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS, AND RESCUE PLANS. CONSTRUCTION OF THE PROPOSED WORK SHALL MEET ANSI/ASSE A10.48, OSHA, AND GENERAL INDUSTRY STANDARDS. ALL RIGGING PLANS SHALL ADHERE TO ANSI/TIA-322 INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION.
10. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE INSTALLATION PROCEDURE AND SEQUENCE TO INSURE THE SAFETY OF THE STRUCTURE AND ITS COMPONENTS DURING ERECTION AND/OR FIELD ALTERATIONS. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF TEMPORARY BRACING, GUYS OR TIE-DOWNS THAT MAY BE NECESSARY; SUCH MATERIAL SHALL BE REMOVED AFTER THE COMPLETION OF THE PROJECT.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THIS PROJECT AND RELATED WORK COMPLIES WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL SAFETY CODES AND REGULATIONS GOVERNING THIS WORK.
12. THE CLIMBING FACILITIES, SAFETY CLIMB AND ALL PARTS THEREOF SHALL NOT BE IMPEDED, MODIFIED OR ALTERED WITHOUT THE EXPRESS WRITTEN APPROVAL OF THE EOR.
13. INCORRECTLY FABRICATED, DAMAGED, MIS-FITTING, OR NON-CONFORMING MATERIALS AND CONDITIONS SHALL BE REPORTED TO THE EOR PRIOR TO ANY REMEDIAL OR CORRECTING ACTION. ALL ACTIONS SHALL REQUIRE EOR APPROVAL.

STEEL:

1. THE FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE LATEST AISC CODE AND ASTM SPECIFICATIONS.
2. HOLES SHALL NOT BE TORCH CUT THROUGH STRUCTURAL STEEL FOR FABRICATION. ALL STEEL FABRICATION MUST FOLLOW AISC SPECIFICATIONS.
3. HOT-DIP GALVANIZE ALL ITEMS AFTER FABRICATION IN COMPLIANCE WITH ASTM A-123 UNLESS OTHERWISE SPECIFIED. ALL NEW STEEL IS TO BE PAINTED TO MATCH THE EXISTING STEEL.
4. NEW STEEL MEMBERS MUST HAVE SINGLE DRILLED HOLES. SLOTTED AND DOUBLY DRILLED HOLES ARE NOT ACCEPTABLE MEANS OF FABRICATION UNLESS OTHERWISE SPECIFIED.
5. ALL CONNECTIONS NOT DETAILED IN THESE DRAWINGS MUST BE DETAILED BY THE STEEL FABRICATOR IN ACCORDANCE WITH THE LATEST AISC SPECIFICATIONS.
6. ALL BOLTED CONNECTIONS MUST BE INSTALLED TO A SNUG-TIGHTENED CONDITION PER AISC “SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM 325 OR A490 BOLTS” SECTION 8.1 UNLESS OTHERWISE SPECIFIED.
7. CONTRACTOR MAY BE REQUIRED TO STACK WASHERS FOR BOLTS WHERE THREADS ARE EXCLUDED FROM SHEAR PLANE TO OBTAIN SNUG TIGHT INSTALLATION. A NUT LOCKING DEVICE MUST BE INSTALLED ON ALL PROPOSED AND/OR REPLACED BOLTS. GALVANIZED ASTM 325 OR A490 BOLTS SHALL NOT BE REUSED.

COLD GALVANIZATION:

1. ALL DAMAGED SURFACES SHALL BE REPAIRED WITH A COLD-GALVANIZING COATING CONFORMING TO ASTM 780. THIS COATING SHALL BE APPLIED BY BRUSH. THE GALVANIZING COMPOUND SHALL CONTAIN A MINIMUM OF 95% ± PURE ZINC. THE FINISHED COATING SHALL BE A MINIMUM THICKNESS OF 4 MILS.
2. CONTRACTOR TO USE ZINGA OR ZRC COLD GALVANIZATION COMPOUNDS OR APPROVED EQUIVALENTS.
3. CLEAN AREAS TO BE PREPARED AND REMOVE SLAG FROM WELDS FOR TREATMENT ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
4. IF THE TOWER IS PAINTED, ALL TREATED AREAS ARE TO BE BRUSH PAINTED TO MATCH THE TOWER AFTER COLD GALVANIZING COMPOUND IS ALLOWED TO CURE.

U-BOLTS:

1. ALL U-BOLTS ARE TO BE ASTM A36/A307, SAE 429 GR. 2 UNLESS OTHERWISE SPECIFIED.
2. U-BOLTS SHALL MEET REQUIREMENTS OF ASME B18.31.5-2011 BENT BOLTS.
3. U-BOLT ASSEMBLY SHALL COME COMPLETE WITH NUTS (ASTM A563), WASHERS (ASTM F436), AND LOCK WASHERS.
4. FULL U-BOLT ASSEMBLY TO BE HOT-DIP GALVANIZED PER ASTM A153/A153M OR A123, AS APPLICABLE.

MODIFICATION MATERIALS

SCOPE	SHAPE	GRADE	YIELD STRENGTH (Fy)	ULTIMATE STRENGTH (Fu)
ALL	ANGLE	A36	36 KSI	58 KSI
ALL	BOLTS	A325	120 KSI	105 KSI

NO.	DATE	DESCRIPTION	BY
0	05/31/19	FIRST ISSUE	JMB

REVISIONS

RAPHAEL I. MOHAMED, PE,PEng
SENIOR DIRECTOR OF ENGINEERING
CT PE LICENSE NO. 25112

I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF CONNECTICUT.

MasTec Network Solutions
507 AIRPORT BLVD., SUITE 111
MORRISVILLE, NC 27560

SITE NAME: HORSE HILL

BU NUMBER: 876314

WO NUMBER: 479810
MNS ENG. NUMBER: 18543 - MOD1

SITE ADDRESS:
214 RUSSIAN VILLAGE RD
SOUTHBURY, CT 06488
NEW HAVEN COUNTY, USA

DRAWN BY: JMB

CHECKED BY: EJM

APPROVED BY: RIM

SCALE: N.T.S

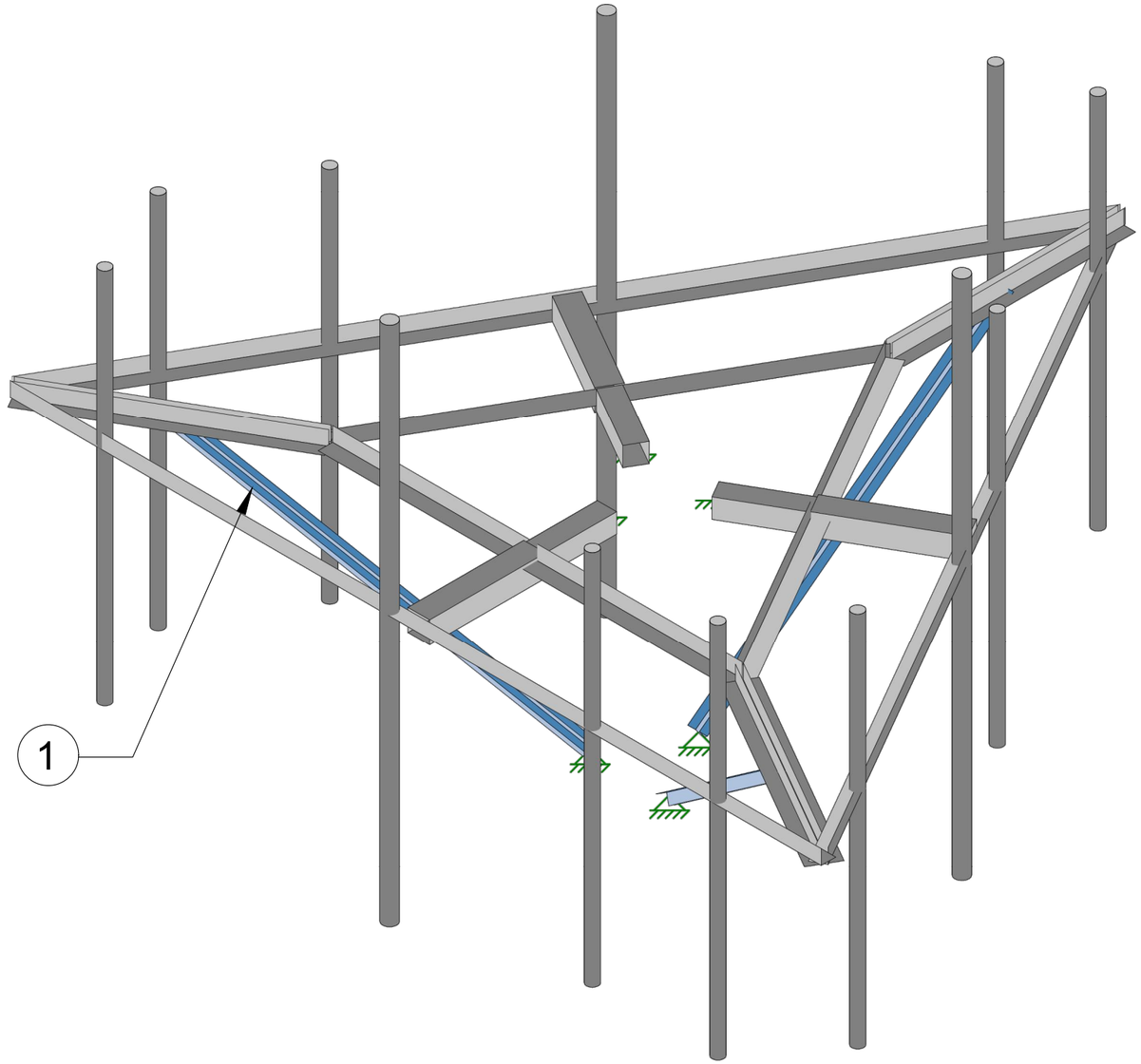
NOTES

N-2

REV 0

MODIFICATION SCHEDULE

SCOPE NO.	MODIFICATION DESCRIPTION	BOTTOM ELEVATION	TOP ELEVATION	SHEET NO.
1	INSTALLATION OF NEW SABRE C10851202DP	-	100'-0" ±	S-2



NOTES:

1. APPURTENANCES MAY INTERFERE WITH PROPOSED MODIFICATIONS.
2. ALL MODIFICATIONS TO BE INSTALLED CONTINUOUSLY THROUGH EXISTING EQUIPMENT. ALL EXISTING EQUIPMENT MUST NOT BE DAMAGED OR TAKEN OFF AIR DURING INSTALLATION OF PROPOSED MODIFICATIONS.
3. ANTENNA AND COAX NOT SHOWN FOR CLARITY. SEE STRUCTURAL ANALYSIS REPORT FOR EXISTING ANTENNA LOADING AND COAX CONFIGURATION.
4. PRIOR TO FABRICATION AND INSTALLATION , CONTRACTOR SHALL FIELD VERIFY ALL LENGTHS AND QUANTITIES GIVEN. INFORMATION PROVIDED IS FOR QUOTING PURPOSES ONLY, AND SHALL NOT BE USED FOR FABRICATION.
5. EXISTING RRU'S AND ANCILLARY EQUIPMENT MAY NEED TO BE TEMPORARILY RELOCATED AS NECESSARY TO COMPLETE THIS MODIFICATION. EQUIPMENT IS NOT TO BE TAKEN OFF AIR AT ANY TIME DURING INSTALLATION. PLEASE CONTACT EOR IF THIS CANNOT BE MET.
6. CONTACT EOR IF PROPOSED MOUNT REINFORCEMENT DIMENSIONS CANNOT BE MET.

NO.	DATE	DESCRIPTION	BY
0	05/31/19	FIRST ISSUE	JMB

REVISIONS

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507 AIRPORT BLVD., SUITE 111
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214 RUSSIAN VILLAGE RD
SOUTHBURY, CT 06488
NEW HAVEN COUNTY, USA

DRAWN BY: JMB

CHECKED BY: EJM

APPROVED BY: RIM

SCALE: N.T.S

MODIFICATION SCHEDULE

S-1

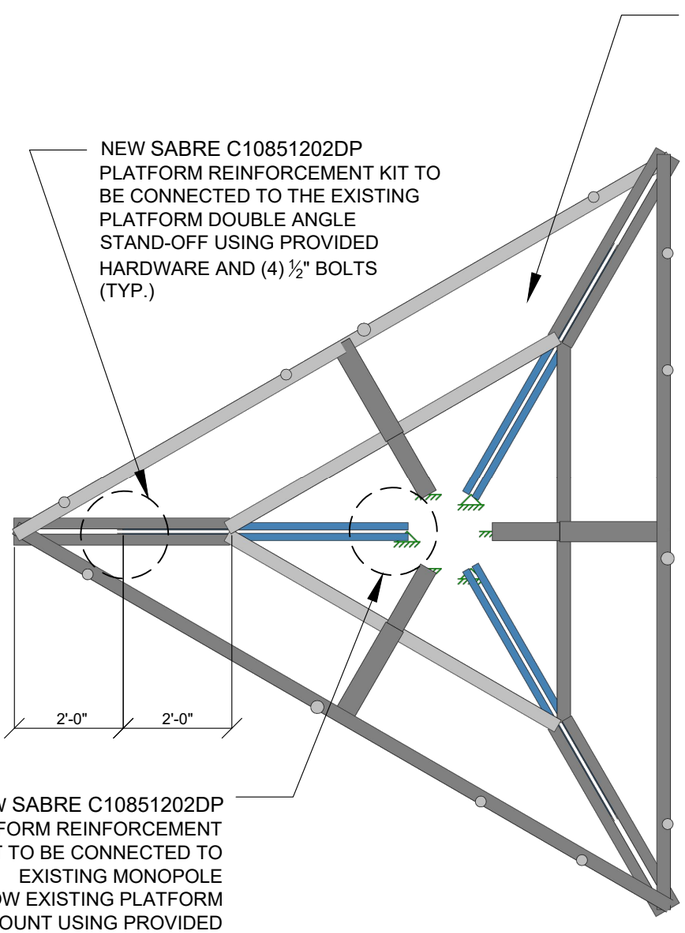
REV 0

NOTES:

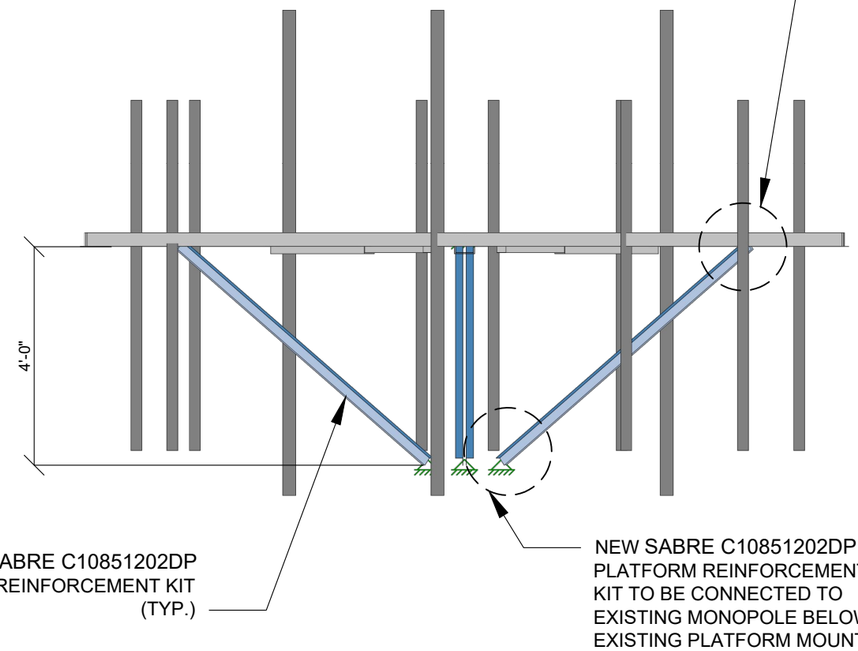
1. CONTRACTOR TO FIELD VERIFY THE REQUIRED LENGTH OF THE NEW ANGLES AND MAY CUT ENDS AS REQUIRED TO AVOID UNNECESSARY OVERHANG AND OVERLAP.
2. TWO COATS OF COLD GALVANIZING COATING MUST BE APPLIED TO ALL CUT ENDS IN ACCORDANCE TO ASTM A780 PRIOR TO INSTALLATION.

NEW PLATFORM STABILIZER KIT MATERIAL LIST

SABRE PART NO.	QTY.	LENGTH	DESCRIPTION
C10851202DP	1	ADJUSTABLE	PLATFORM REINFORCEMENT KIT



1 S-2 C10851202DP INSTALLATION
PLAN VIEW
NTS



2 S-2 C10851202DP INSTALLATION
SIDE VIEW
NTS

NO.	DATE	DESCRIPTION	BY
0	05/31/19	FIRST ISSUE	JMB

REVISIONS

MasTec Network Solutions
507 AIRPORT BLVD., SUITE 111
MORRISVILLE, NC 27560

SITE NAME: HORSE HILL

BU NUMBER: 876314

WO NUMBER: 479810
MNS ENG. NUMBER: 18543 - MOD1

SITE ADDRESS:
214 RUSSIAN VILLAGE RD
SOUTHBURY, CT 06488
NEW HAVEN COUNTY, USA

DRAWN BY: JMB

CHECKED BY: EJM

APPROVED BY: RIM

SCALE: N.T.S

RAPHAEL I. MOHAMED, PE,PEng
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PLATFORM REINFORCEMENT DETAILS

S-2 REV 0

NOTES:

1. CONTRACTOR TO FIELD VERIFY THE REQUIRED LENGTH OF THE NEW ANGLES AND MAY CUT ENDS AS REQUIRED TO AVOID UNNECESSARY OVERHANG AND OVERLAP.
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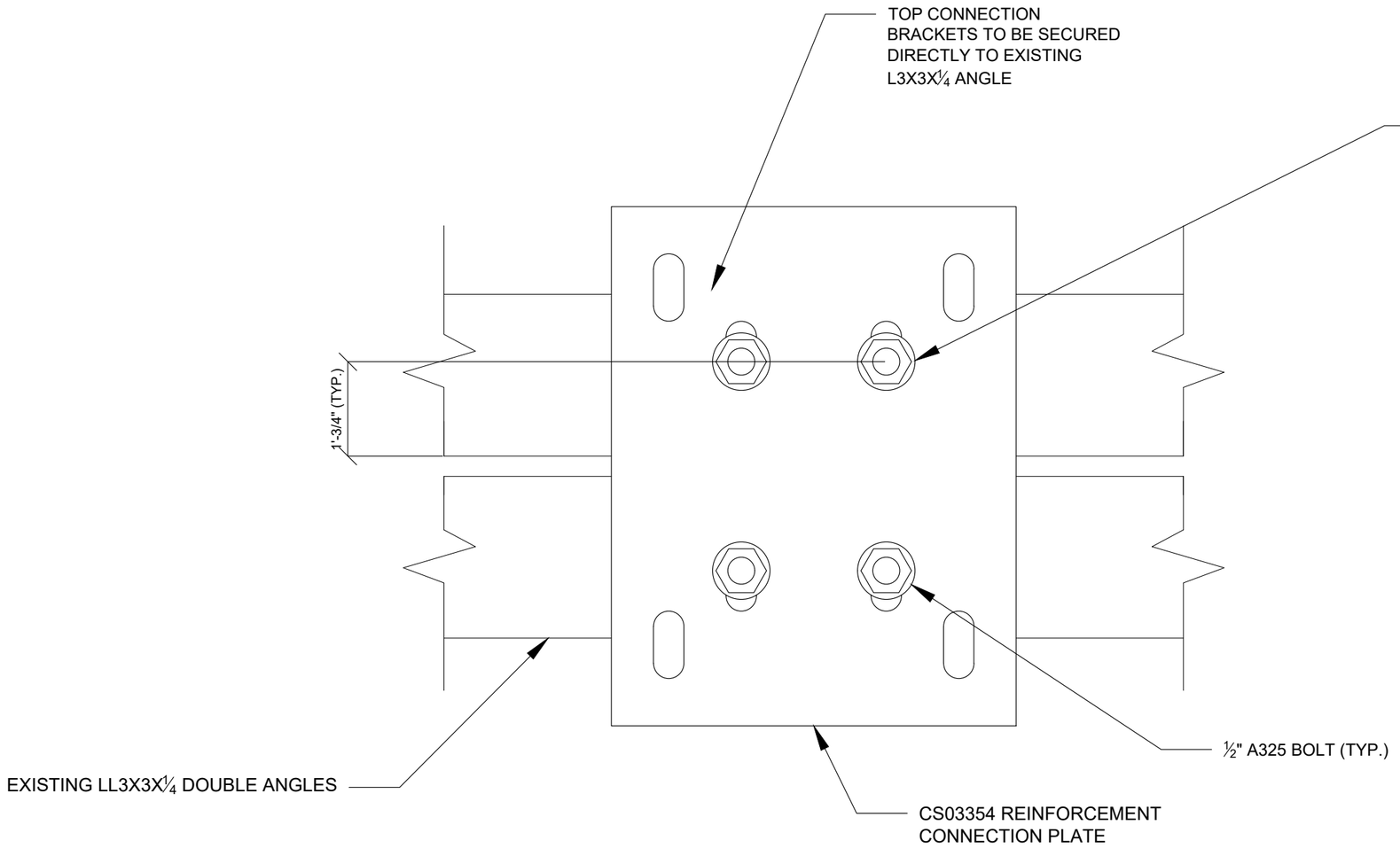
NEW PLATFORM STABILIZER KIT MATERIAL LIST

SABRE PART NO.	QTY.	LENGTH	DESCRIPTION
C10851202DP	1	ADJUSTABLE	PLATFORM REINFORCEMENT KIT



1 / S-3 C10851202DP INSTALLATION

TOP VIEW
NTS

NO.	DATE	DESCRIPTION	BY
0	05/31/19	FIRST ISSUE	JMB

REVISIONS

MasTec Network Solutions
507 AIRPORT BLVD., SUITE 111
MORRISVILLE, NC 27560

STATE OF CONNECTICUT
RAPHAEL MOHAMED
No. 25112
LICENSED
PROFESSIONAL ENGINEER

SITE NAME: HORSE HILL

BU NUMBER: 876314

WO NUMBER: 479810
MNS ENG. NUMBER: 18543 - MOD1

SITE ADDRESS:
214 RUSSIAN VILLAGE RD
SOUTHBURY, CT 06488
NEW HAVEN COUNTY, USA

DRAWN BY: JMB

CHECKED BY: EJM

APPROVED BY: RIM

SCALE: N.T.S

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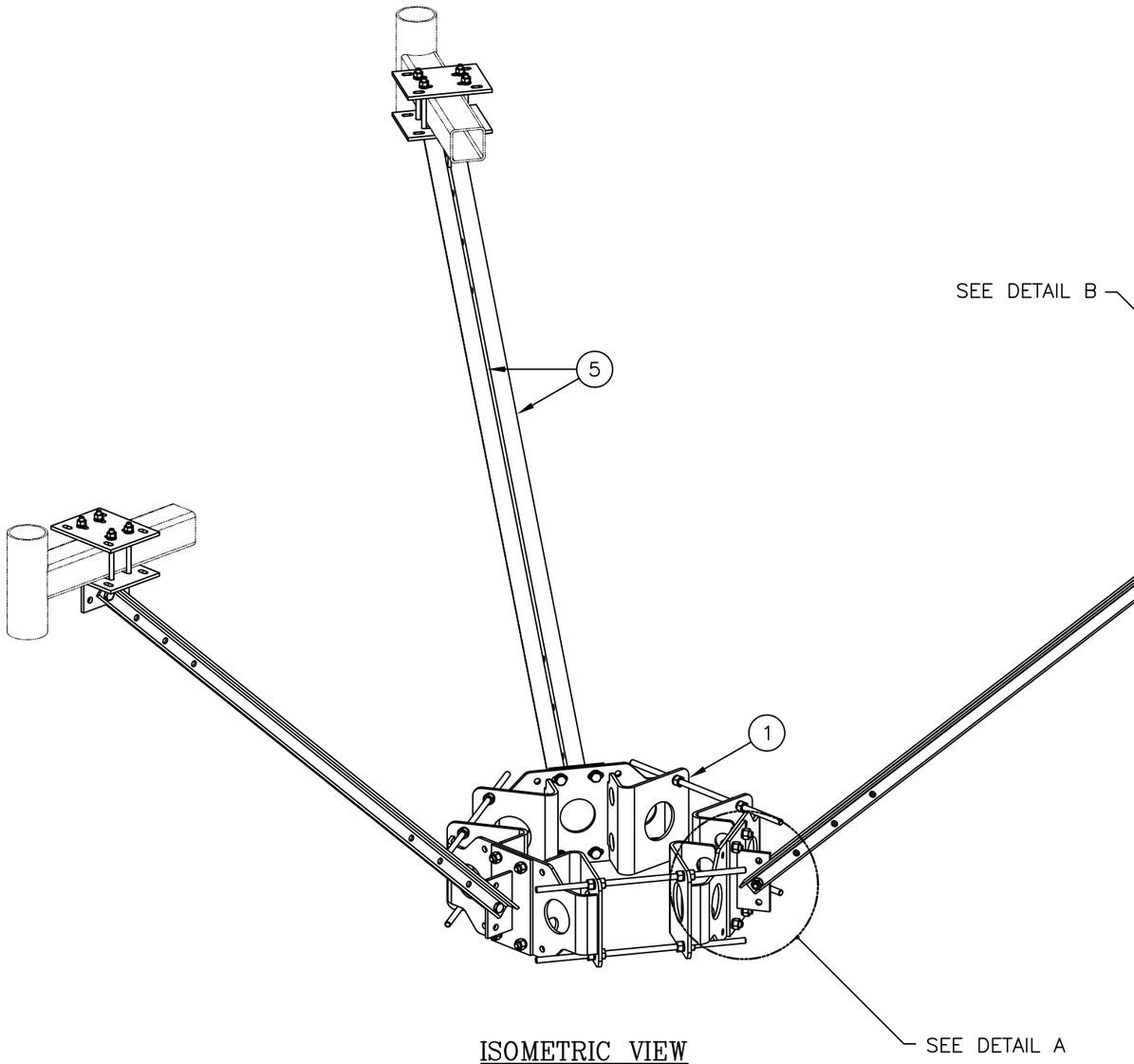
REINFORCEMENT CONNECTION DETAILS

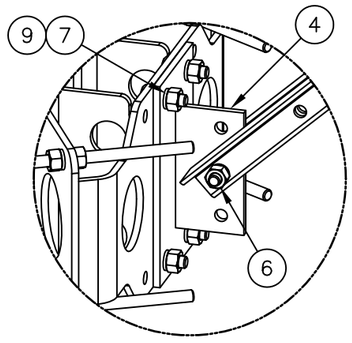
S-3 REV 0

C10851202 PLATFORM REINFORCEMENT KIT

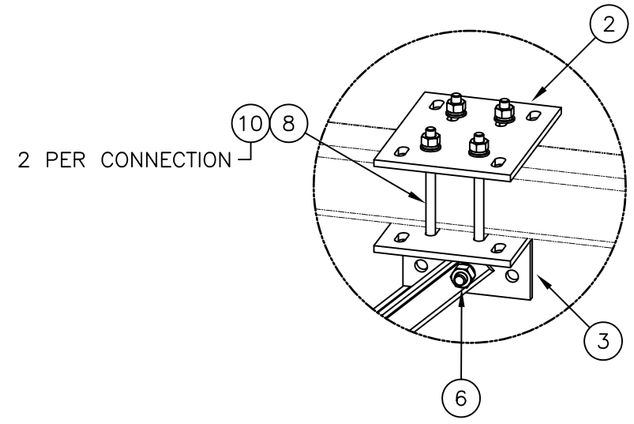
ITEM	QTY.	PART NO.	DESCRIPTION	WEIGHT
1.	1	C10112300	TRI COLLAR BRACKET ASSEMBLY	193
2.	3	CS03354	PLATE, UPPER CONNECTION	22
3.	3	CW01322	WELDMENT, KICKER SUPPORT	31
4.	3	CW01291	WELDMENT, KICKER SUPPORT	32
5.	6	CS03278	ANGLE, KICKER	139
6.	6	C40026024	BOLT ASSEMBLY, 5/8 ø X 2 1/4 A325	3
7.	12	C40026023	BOLT ASSEMBLY, 5/8 ø X 2 A325	6
8.	12	C40024106	BOLT ASSEMBLY, 1/2 ø X 6 1/2 GR5 FULL THD	5
9.	12	C40031003	FLATWASHER, 5/8 ø HARDENED ASTM F436	1
10.	24	C40031002	FLATWASHER, 1/2 ø HARDENED ASTM F436	1
			TOTAL WEIGHT	433



ISOMETRIC VIEW



DETAIL A



DETAIL B

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS INCLUDE
FINISHES AND ARE IN INCHES

TOLERANCES: FRACTIONS ± 1/16"
ANGLES ± 1/2 DEG.
DECIMALS ± .010"

MATERIAL:

TOLERANCES DO NOT APPLY TO RAW MATERIAL

REV	DATE	DRW	CHK	DESCRIPTION
1	02/18/16	WRF	KLE	CHANGED ITEMS 2 AND 3

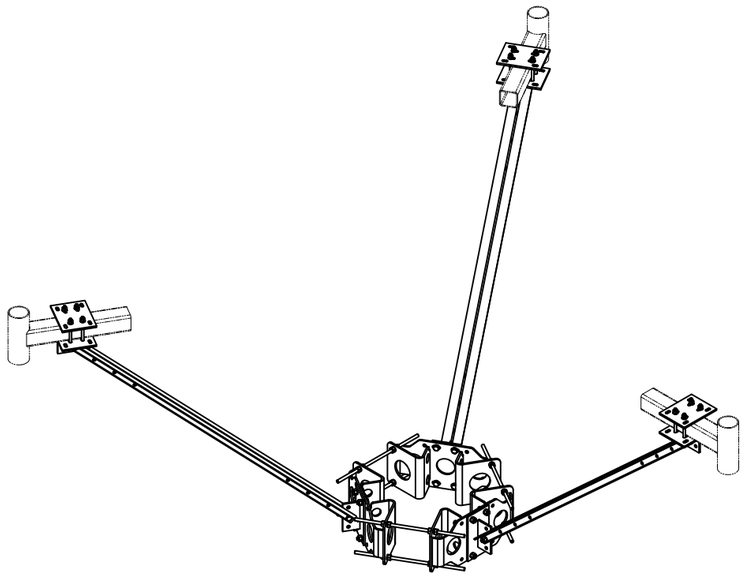
Sabre Industries™
Towers and Poles

PLATFORM REINFORCEMENT KIT (LONG) FOR 10" TO 40" DIA. POLES

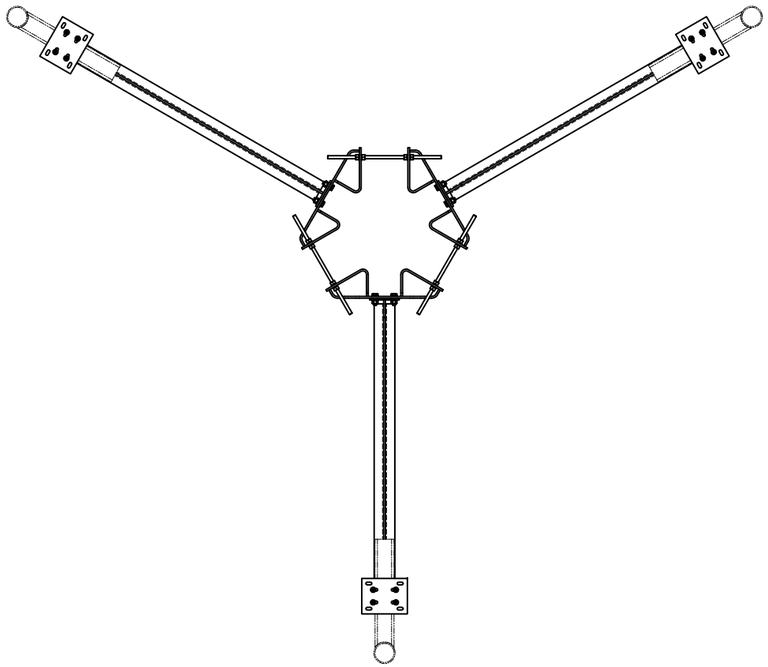
DATE	07/23/15
DRAWN BY	WRF
CHECKED BY	KLE

SIZE	DRAWING NO.	REV
B	C10851202	1

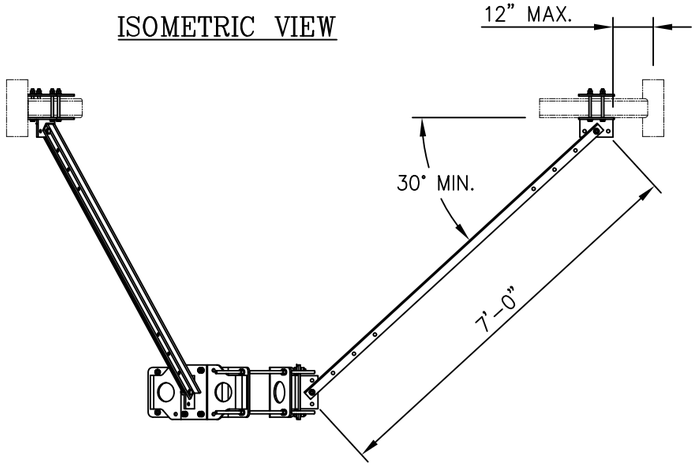
SCALE	PAGE
None	1 OF 2



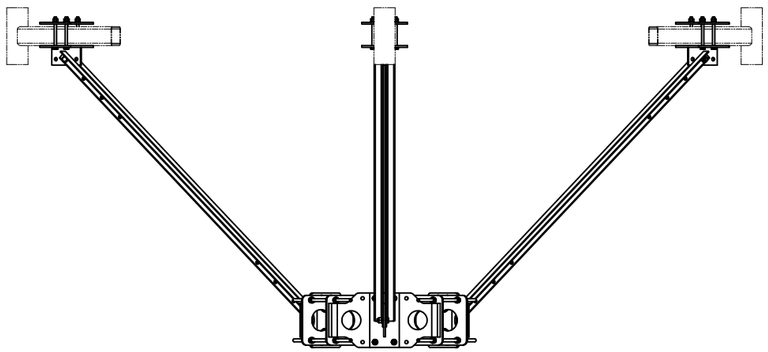
ISOMETRIC VIEW



TOP VIEW



SIDE VIEW



FRONT VIEW

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS INCLUDE FINISHES AND ARE IN INCHES TOLERANCES: FRACTIONS ± 1/16" ANGLES ± 1/2 DEG. DECIMALS ± .010"	MATERIAL: TOLERANCES DO NOT APPLY TO RAW MATERIAL

REV	DATE	DRW	CHK	DESCRIPTION
1	02/18/16	WRF	KLE	CHANGED ITEMS 2 AND 3

Sabre Industries™
Towers and Poles

PLATFORM REINFORCEMENT KIT (LONG) FOR 10" TO 40" DIA. POLES

DATE	07/23/15
DRAWN BY	WRF
CHECKED BY	KLE

SIZE	DRAWING NO.	REV
B	C10851202	1

SCALE	PAGE
None	2 OF 2