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

September 3, 2019

Alex Murshteyn
Centerline Communications, LLC
750 West Center Street, Floor 3
West Bridgewater, MA 02379

RE: **EM-VER-069-190814** – Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 1375 North Road, Killingly, Connecticut.

Dear Mr. Murshteyn:

The Connecticut Siting Council (Council) is in receipt of your correspondence of August 29, 2019 submitted in response to the Council's August 15, 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

Robidoux, Evan

From: Alex Murshteyn <amurshteyn@clinellc.com>
Sent: Thursday, August 29, 2019 6:22 PM
To: Robidoux, Evan
Cc: CSC-DL Siting Council; Emily Hannon; Peter Fales
Subject: RE: Council Incomplete Letter for EM-VER-069-190814-NorthRd-Killingly /// 88011 aka Killingly CT
Attachments: 88011.ZAP-CSC-adminEM.081319.Killingly_CT-competion-info.pdf

All,
Please find the updates you requested below, as provided via UPS earlier today, in order to render the below filing complete.

Thanks,

Alex Murshteyn
508-821-0159

From: Robidoux, Evan <Evan.Robidoux@ct.gov>
Sent: Friday, August 16, 2019 4:50 PM
To: Alex Murshteyn <amurshteyn@clinellc.com>
Cc: CSC-DL Siting Council <Siting.Council@ct.gov>
Subject: Council Incomplete Letter for EM-VER-069-190814-NorthRd-Killingly

Please see the attached correspondence.

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

UPS CampusShip: View/Print Label

1. **Ensure there are no other shipping or tracking labels attached to your package.** Select the Print button on the print dialog box that appears. Note: If your browser does not support this function select Print from the File menu to print the label.

2. **Fold the printed label at the solid line below.** Place the label in a UPS Shipping Pouch. If you do not have a pouch, affix the folded label using clear plastic shipping tape over the entire label.

3. **GETTING YOUR SHIPMENT TO UPS**
   Customers with a Daily Pickup
   Your driver will pickup your shipment(s) as usual.

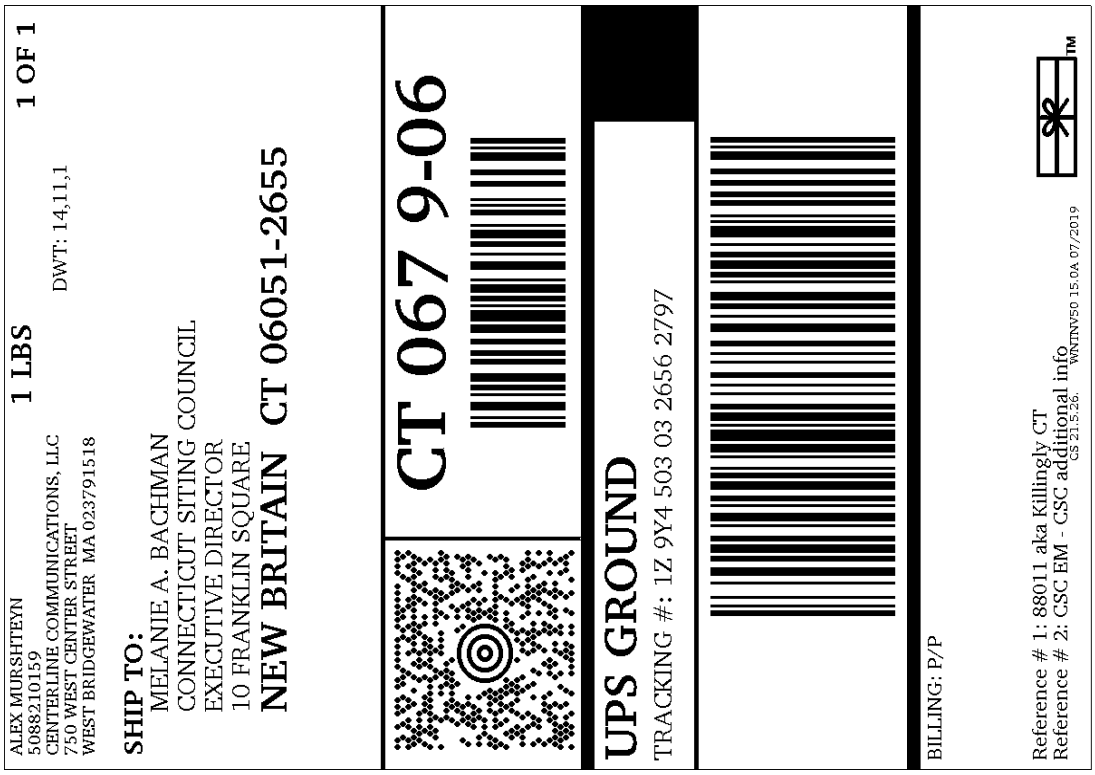
   Customers without a Daily Pickup
   Take your package to any location of The UPS Store®, UPS Access Point(TM) location, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the Resources area of CampusShip and select UPS Locations.
   Schedule a same day or future day Pickup to have a UPS driver pickup all your CampusShip packages.
   Hand the package to any UPS driver in your area.

UPS Access Point™
TOWN LINE GENERAL STORE
450 E CENTER ST
WEST BRIDGEWATER ,MA 02379

UPS Access Point™
M&M SEAFOOD
1124 MAIN ST
BROCKTON ,MA 02301

UPS Access Point™
BOOST MOBILE 649
649 WARREN AVE
BROCKTON ,MA 02301

FOLD HERE



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

August 15, 2019

Alex Murshteyn
Centerline Communications, LLC
750 West Center Street, Floor 3
West Bridgewater, MA 02379

RE: **EM-VER-069-190814 –** Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 1375 North Road, Killingly (a/k/a Dayville), Connecticut.

Dear Mr. Murshteyn:

The Connecticut Siting Council (Council) received a notice of intent to modify the above-referenced facility on August 14, 2019.

According to Section 16-50j-71 of the Regulations of Connecticut State Agencies, "…any modification, as defined in Section 16-50j-2a of the Regulations of Connecticut State Agencies, to an existing tower site, except as specified in Sections 16-50j-72 and 16-50j-88 of the Regulations of Connecticut State Agencies, may have a substantial adverse environmental effect."

Staff has reviewed this exempt modification request for completeness and has identified the following deficiencies in the submittal:

1. The request lacks documentation showing the original facility approval or correspondence stating that there are no records of the original facility approval; and
2. An Antenna Mount Analysis indicating the ability of the existing antenna mount to support the proposed equipment loading has not been provided with the request.

Therefore, the exempt modification request is incomplete at this time. The Council recommends that Centerline Communications provide documentation showing the original facility approval with conditions if any and an Antenna Mount Analysis for the proposed modifications, on or before September 16, 2019. If additional time is needed to gather the requested information, please submit a written request for an extension of time prior to September 16, 2019. **Please provide an electronic version and one hard copy of the response for the incomplete request to be rendered complete and processed.**

This notice of incompletion shall have the effect of tolling the Federal Communications Commission (FCC) 60-day timeframe in accordance with Paragraph 217 of the FCC Wireless Infrastructure Report and Order issued on October 21, 2014 (FCC 14-153).

Thank you for your attention to this matter. Should you have any questions, please feel free to contact me at 860-827-2951.

Sincerely,

Melanie Bachman
Executive Director

MAB/IN/emr

c: The Honorable Jonathan Cesolini, Chairman, Town of Killingly
Mary Calorio, Town Manager, Town of Killingly
Ann-Marie L. Aubrey, Director of Planning and Development, Town of Killingly

Alex Murshteyn

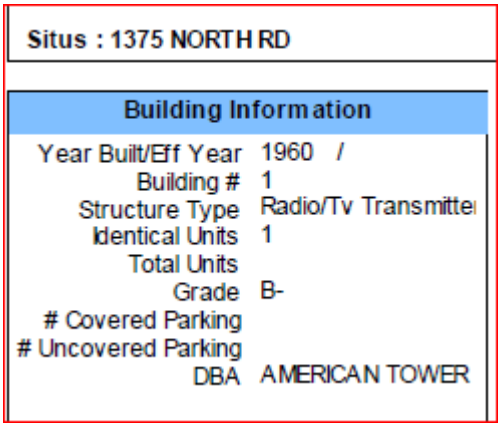
From: Pat Colburn <pcolburn@killinglyct.gov>
Sent: Wednesday, August 21, 2019 12:57 PM
To: Alex Murshteyn
Subject: RE: 1375 North Road /// 88011 aka Killingly CT

Alex,

We have no records that would go back to the sixties.

From: Alex Murshteyn [mailto:amurshteyn@clinellc.com]
Sent: Wednesday, August 21, 2019 12:33 PM
To: Pat Colburn
Subject: 1375 North Road /// 88011 aka Killingly CT

Pat,
Nice to speak with you several minutes ago. As discussed, the communications tower in subject was built in 1960 per the assessor records:



Situs : 1375 NORTH RD

Building Information	
Year Built/Eff Year	1960 /
Building #	1
Structure Type	Radio/Tv Transmitte
Identical Units	1
Total Units	
Grade	B-
# Covered Parking	
# Uncovered Parking	
DBA	AMERICAN TOWER

Would you please confirm that you have no original approvals for this due to the age?

Thanks,

CENTERLINE COMMUNICATIONS

Alex Murshteyn | Site Acquisition Consultant
750 W Center St, Floor 3 | W Bridgewater, MA 02379
Mobile: 508.821.0159 | Fax: 508.819.3017
amurshteyn@clinellc.com | CenterlineCommunications.com

Trylon

Prepared For

AMERICAN TOWER®

Mount Analysis Report

88011

East Killingly North

08/09/2019

PASS - 76%

STATE OF CONNECTICUT
CLIFF ABERNATHY
No. 31022
LICENSED
PROFESSIONAL ENGINEER

DocuSigned by:
2CB41121037E47E...

8/11/2019

Trylon

Analysis Date: 04/11/2019

MOUNT ANALYSIS REPORT

ATC
10 Presidential Way Woburn, MA
01801

Attention: **Blake Paynter**

Subject: Analysis of the Existing V-Frame installed at 266-ft. elevation

Site Data:

Site Code:	88011
Site Name:	East Killingly North
Site Adress:	1375 North Road, Killingly, Windham, CT
Structure Type	Self-Support Tower
Trylon job #:	148221

Dear Blake Paynter,

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

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

The structural evaluation refers to the Existing V-Frame installed at 266-ft. elevation on the existing Self-Support Tower located at 1375 North Road, Killingly, Windham, CT 06239.

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

1. Source of data

Document Type	Source	Date
RFDS	AT&T	01/10/2019

2. Analysis Criteria

Standard	2015 IBC / ASCE 7-10 / TIA-222-G
Basic Design Wind Speed (mph)	89.1
Structure Risk Category	II
Exposure Category	C
Topographic Factor, Kzt	1.000
Seismic Ss	0.172
Maintenace Live Load (lbs)	500

3. Final Equipment Configuration

Mount Centerline 266 ft.

Antennas Centerline [ft]	# of Antennas	Antenna Manufacturer	Antenna Model	Height [in]	Width [in]	Thk. [in]	Weight [lbs]	FAN w/o ice [lbs]	FAN w/ ice [lbs]
266	6	Antel	LPA-80063-4CF-EDIN-6	47.4	15.2	13.2	20	164.90	68.58
266	4	Andrew	JAHH-45B-R3B	72	18	7	84	306.10	120.02
266	2	Andrew	JAHH-65B-R3B	72	13.8	8.2	63	181.67	79.34
266	3	Samsung	B5/B13 RRH-BR04C	19.73	15.88	10.03	84	70.11	32.33
266	3	Samsung	B2/B66A RRH-BR049	19.73	15.88	11.93	89	57.03	27.44
266	1	Raycap	RC3DC-3315-PF-48	28.93	15.73	10.3	32	59.40	26.06
266	1	Commscope	CBC78T-DS-43	6.38	6.93	4.76	10.58	6.795	3.25

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

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

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

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

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

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

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

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

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

Channel, Solid Round, Angle, Plate	ASTM A36 (GR 36)
HSS (Rectangular)	ASTM 500 (GR B-46)
Pipe	ASTM A53 (GR 35)
Connection Bolts	ASTM A325

5. Analysis Results

Mount CL (ft.)	Component	% Capacity	Pass/Fail	Notes
266	Face Horizontals	60	Pass	1,2
	Standoff Members	62	Pass	1,2
	Bracings	34	Pass	1,2
	Mounting Pipes	67	Pass	1,2
	Connections	76	Pass	1,2

Structure Rating (max from all components) =	**76%**

Notes:

1. See additional documentation in "Appendix B - Analysis Output" for calculations supporting the % capacity consumed.

2. All sectors are typical

6. Conclusions and recommendations

Based on information provided, our calculations conclude that the existing Verizon V-Frame located at 266-ft elevation on the existing Self-Support Tower at the specified address, is ADEQUATE to safely support the proposed equipment, subject to the attached Standard Conditions on page 3.

Note : 2 X Andrew JAHH - 65B -R3B antenna is mounted side by side using mounting bracket with 2" spacing.

Category	Classification
Mount Classification (w/ Ice, w/ Vertical Offset):	M750R(500) - 4[16]

Should you have any questions, comments or require additional information, please do not hesitate to call.

Sincerely,

Analysis performed by:

Deby Linsha

Reviewed by:

STATE OF CONNECTICUT
CLIFF ABERNATHY
No. 34022
LICENSED PROFESSIONAL ENGINEER

DocuSigned by:
2C6911210B7E47E...

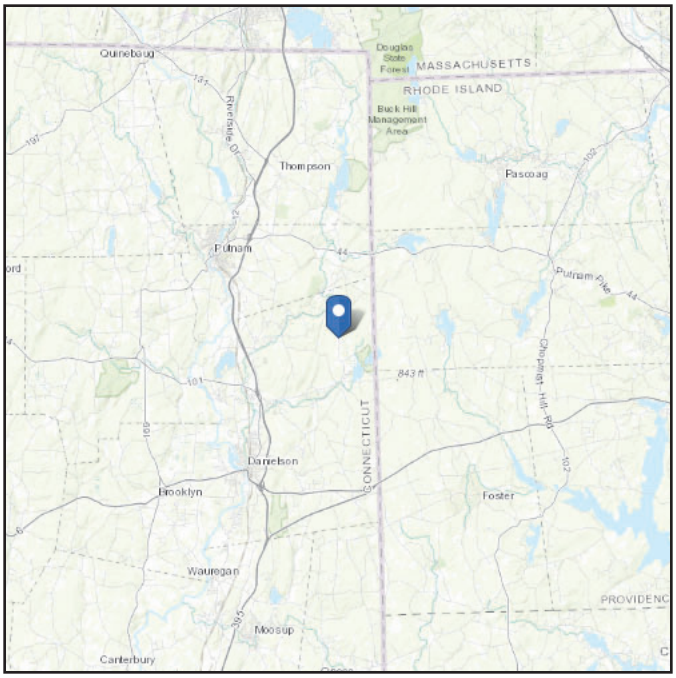
8/11/2019

ASCE 7 Hazards Report

Address:
No Address at This Location

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

Elevation: 737.7 ft (NAVD 88)
Latitude: 41.8715
Longitude: -71.821528



Wind

Results:

Wind Speed:	129 Vmph
10-year MRI	79 Vmph
25-year MRI	89 Vmph
50-year MRI	97 Vmph
100-year MRI	105 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 11 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.

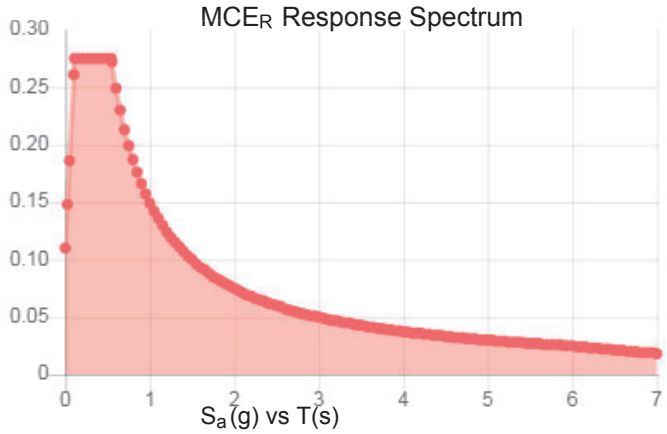
Seismic

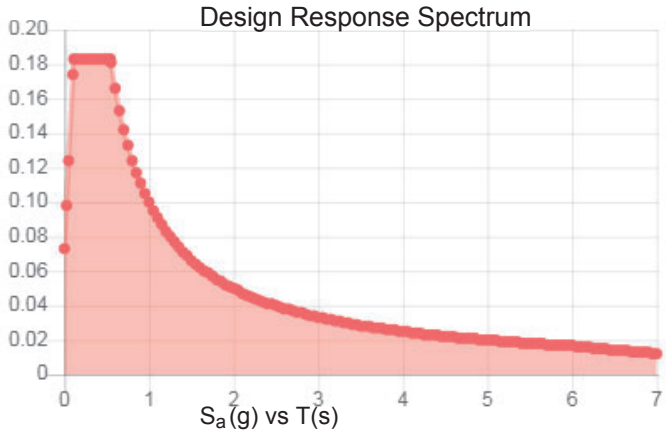
Site Soil Class: D - Stiff Soil

Results:

S_S :	0.172	S_{DS} :	0.183
S_1 :	0.062	S_{D1} :	0.1
F_a :	1.6	T_L :	6
F_v :	2.4	PGA :	0.086
S_{MS} :	0.275	PGA_M :	0.137
S_{M1} :	0.149	F_{PGA} :	1.6
		I_e :	1

Seismic Design Category B





Data Accessed: Thu Apr 11 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 11 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 A

ADDITIONAL CALCULATIONS

Trylon

Analysis Date: 04/11/2019

Wind Input

Basic Design Wind Speed:	V =	89.0786	mph
Basic Wind Speed with Ice:	Vi =	50	mph
Design Ice Thickness:	ti =	0.75	in
Antennas Center Line:	z =	266	ft.
Structure Risk Category:		II	
Exposure Category:		C	
Topographic Category:		1	
Height of crest:		0	ft.
Maintenance Live Load:		500	lbs.
Wind direction probability factor:	Kd =	0.85	
Gust factor:	Gh =	1	
Shielding Factor:	Ka=	1	

Wind Calculations

Importance factor for ice thickness:	I for tiz	1	
Exposure Category Coefficients:	zg=	900	ft.
	α'=	9.5	
	Kzmin=	0.85	
	Kc=	1	
Topographic Category Coefficients:	Kt=	1	
	f=	1	
	Kh=	-	
Velocity pressure coefficient:	Kz=	1.555	
Topographic Factor:	Kzt=	1	
Wind Velocity Pressure without ice:	qz =	26.851	lb./ft2
Wind Velocity Pressure with ice:	qz =	8.460	lb./ft2
Thickness of radial glaze ice at height z:	tiz =	1.848	in

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

Trylon

Analysis Date: 04/11/2019

Detailed Wind Force Calculation Sample

Manufacturer	**Antel**	
Model	**LPA-80063-4CF-EDIN-6**	
Flat or Round	F	
Length of Normal Face	47.4	[in]
Width of Normal Face	15.2	[in]
Length of Transversal Face	47.4	[in]
Width of Transversal Face	13.2	[in]
Weight	20.00	[lbs.]
A_N	720.48	[in^2]
A_T	625.68	[in^2]
C_{aN}	1.23	
C_{aT}	1.25	

Wind Forces without ice

Wind Force 0 degrees	164.90	[lbs.]
Wind Force 30 degrees	160.09	[lbs.]
Wind Force 60 degrees	150.47	[lbs.]
Wind Force 90 degrees	145.66	[lbs.]
Wind Force 120 degrees	150.47	[lbs.]
Wind Force 150 degrees	160.09	[lbs.]

Wind Forces with ice

Wind Force 0 degrees	68.58	[lbs.]
Wind Force 30 degrees	66.95	[lbs.]
Wind Force 60 degrees	63.68	[lbs.]
Wind Force 90 degrees	62.04	[lbs.]
Wind Force 120 degrees	63.68	[lbs.]
Wind Force 150 degrees	66.95	[lbs.]
Weight of ice	196.03	[lbs.]

Member Distributed Loading

Section Set	Length	Width	θ	A_N	A_T	C_{aN}	C_{aT}	W.F.[lbs]	W.F.[lbs/in]
L3x3	74	3	0	222.00	0.00	1.99	1.20	82.3301	1.11257
L3x3	74	3	0	222.00	0.00	1.99	1.20	82.3301	1.11257
L3x3	74	3	0	222.00	0.00	1.99	1.20	82.3301	1.11257
L3x3	74	3	0	222.00	0.00	1.99	1.20	82.3301	1.11257
Tube 3x3	30	3	90	90.00	0.00	1.50	1.20	9.4E-32	3.1E-33
Tube 3x3	30	3	90	90.00	0.00	1.50	1.20	9.4E-32	3.1E-33
1.9" O.D.	28	1.9	0	53.20	0.00	0.97	0.70	9.64143	0.34434
3.5" O.D.	32	3.5	0	112.00	0.00	0.85	0.70	17.7016	0.55318
2.375" O.D.	36	2.375	0	85.50	85.50	0.98	0.98	15.6443	0.43456
2.375" O.D.	36	2.375	0	85.50	85.50	0.98	0.98	15.6443	0.43456
2.375" O.D.	36	2.375	0	85.50	85.50	0.98	0.98	15.6443	0.43456
2.375" O.D.	36	2.375	0	85.50	85.50	0.98	0.98	15.6443	0.43456

SEISMIC CALCULATIONS

Seismic Input

S_S	0.172	
S_1	0.062	
S_{MS}	0.275	
S_{M1}	0.149	
$S_{DS} = 2/3\ S_{MS}$	0.183333333	
$S_{D1} = 2/3\ S_{M1}$	0.099333333	
Seismic Design Category	D	
ρ	1	
a_p (1.00 to 2.50)	1	
R_p (1.00 to 12)	2.5	
I_p (1.00 to 1.50)	1	
z	266	[ft]
h	266	[ft]
z/h < = 1	1	
W_p	812	[lbs]
Σforces	1775	[lbs]

Seismic Design Force

$F_p = [0.4\ a_p\ S_{DS}\ W_p / (R_p/I_p)]\ [1+2(z/h)]$	71.456	[lbs]
$F_{p,\ MAX} = 1.6\ S_{DS}\ I_p\ W_p$	238.187	[lbs]
$F_{p,\ MIN} = 0.3\ S_{DS}\ I_p\ W_p$	44.66	[lbs]

Wind Loads Govern

Trylon

Analysis Date: 04/11/2019

CONNECTION CHECK

Bolt Connections Check

Reactions		
Tension Force (X)	2.169	[kips]
Shear Force (Y)	1.898	[kips]
Shear Force (Z)	1.599	[kips]
Torsional Moment (about x-x)	8.517	[kips-in]
Bending Moment (about y-y)	31.002	[kips-in]
Bending Moment (about z-z)	44.6	[kips-in]

Bolt Properties		
# of Bolts	4	
Distance between bolts, z-z	9	[in]
Distance between bolts, y-y	3	[in]
Bolt Diameter	0.5	[in]
Bolt Grade	A325, D<1	Assumed
An	0.142	[in^2]
Ab	0.196	[in^2]
Yield Strength, min	92	[ksi]
Tensile Strength, min	120	[ksi]

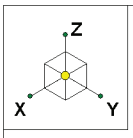
Bolt Strength		
ϕ*Rnt	12.77	[kips]
ϕ*Rnv	7.07	[kips]

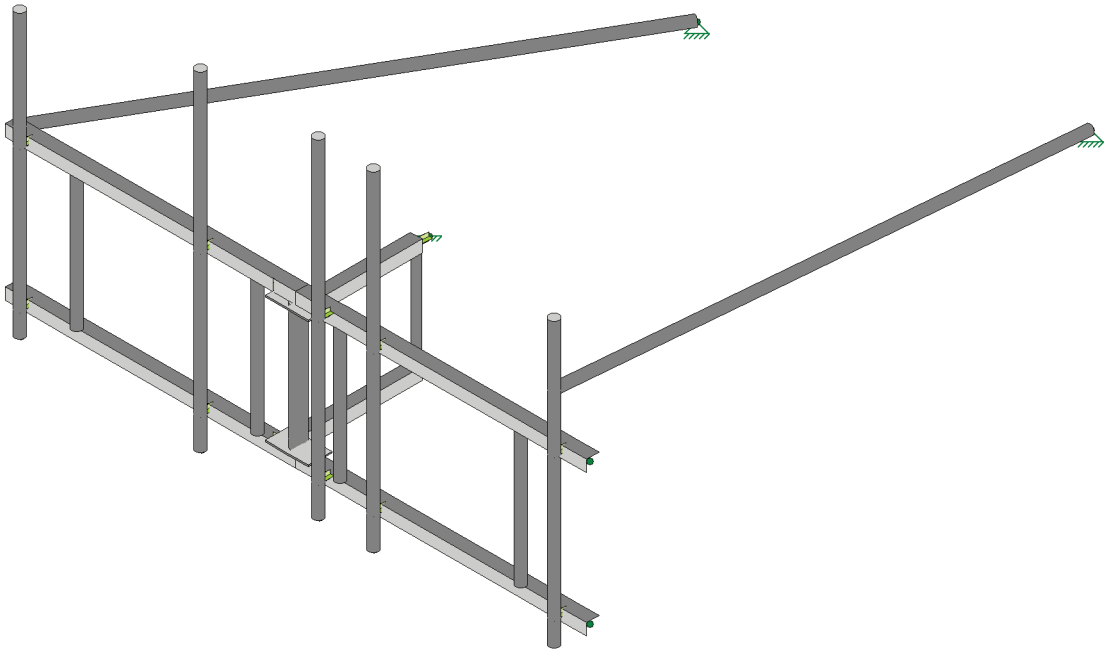
Strength Check		
Tension	75.94%	PASS
Shear	14.87%	PASS
Combined Tension and Shear	59.88%	PASS

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

APPENDIX B

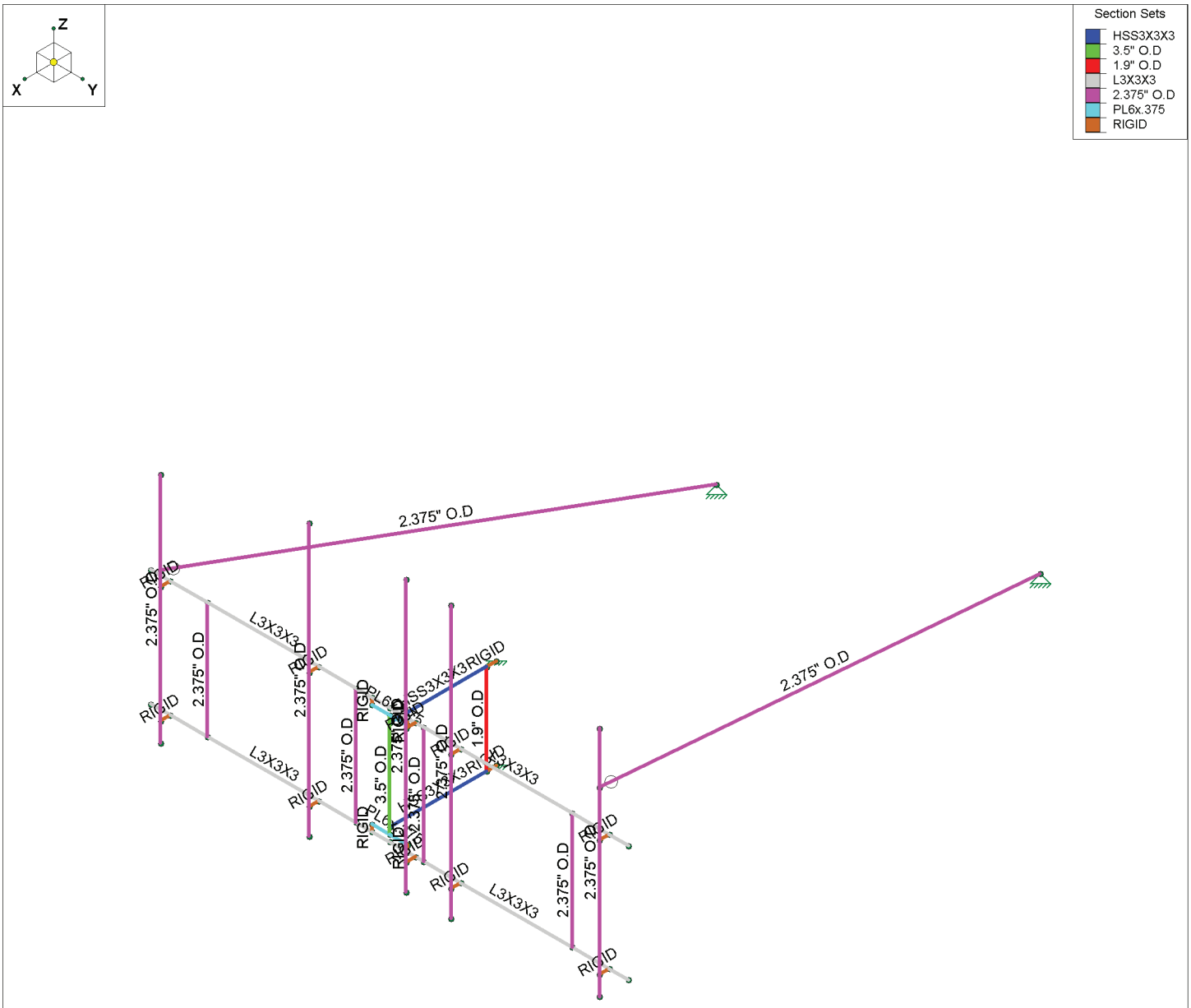
SOFTWARE OUTPUTS





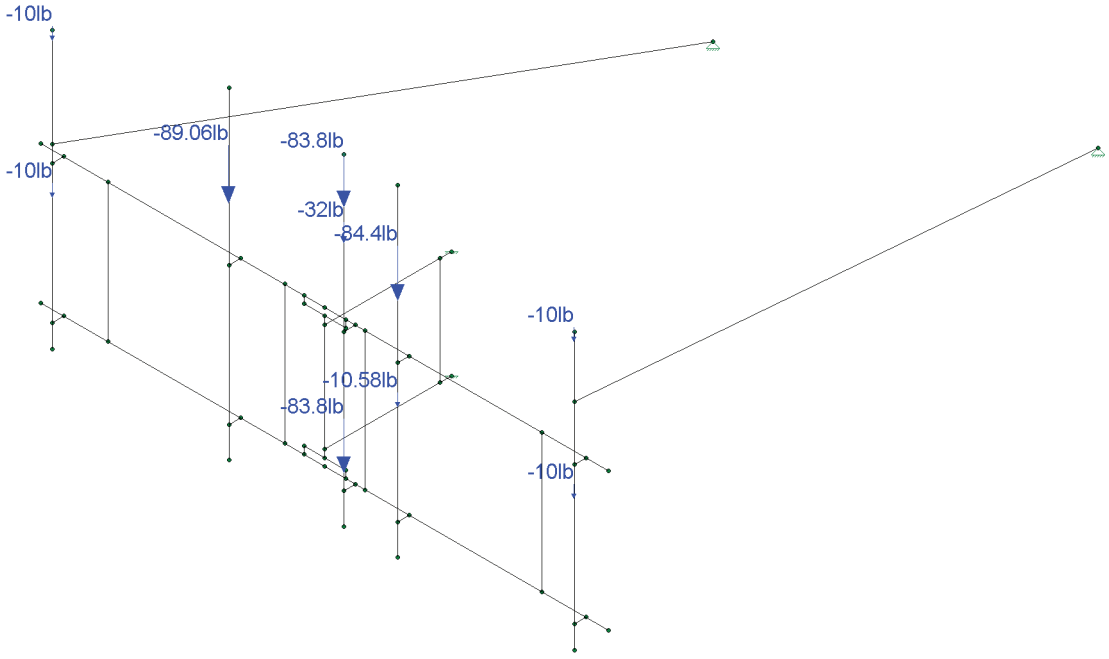
Envelope Only Solution

Trylon	VZW EAST KILLINGLY NORTH_ATC 88011_MOUNT A...	SK - 1
DLR		Apr 11, 2019 at 3:54 PM
148221		EAST KILLINGLY NORTH.r3d



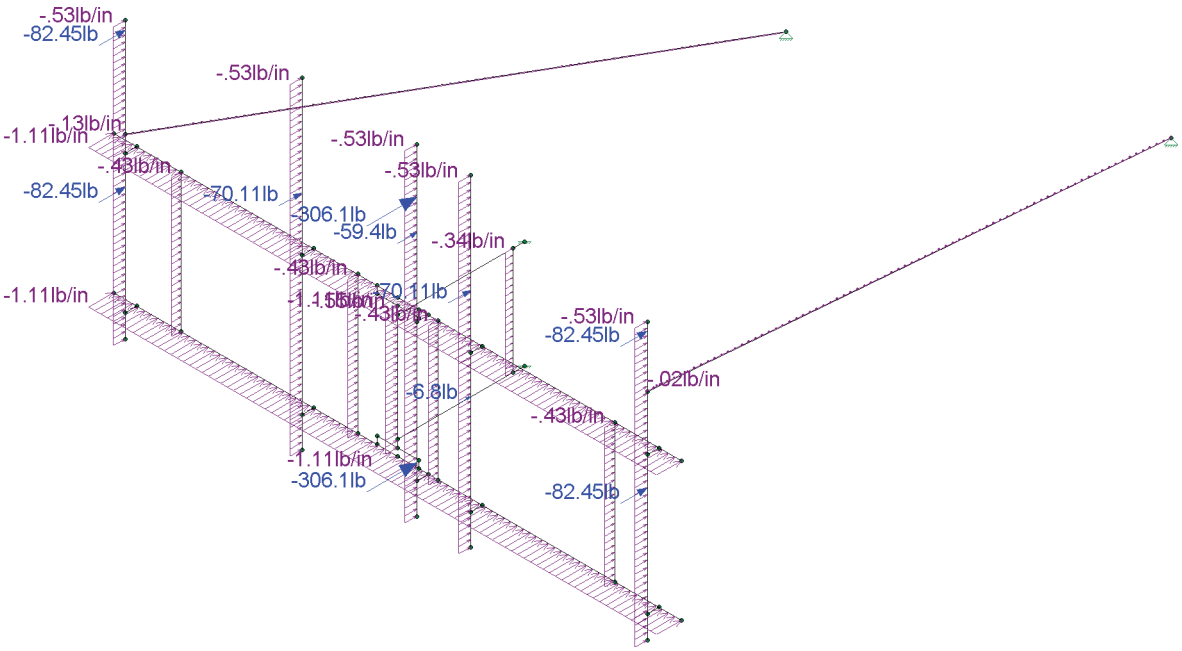
Envelope Only Solution

Trylon	VZW EAST KILLINGLY NORTH_ATC 88011_MOUNT A...	SK - 2
DLR		Apr 11, 2019 at 3:55 PM
148221		EAST KILLINGLY NORTH.r3d



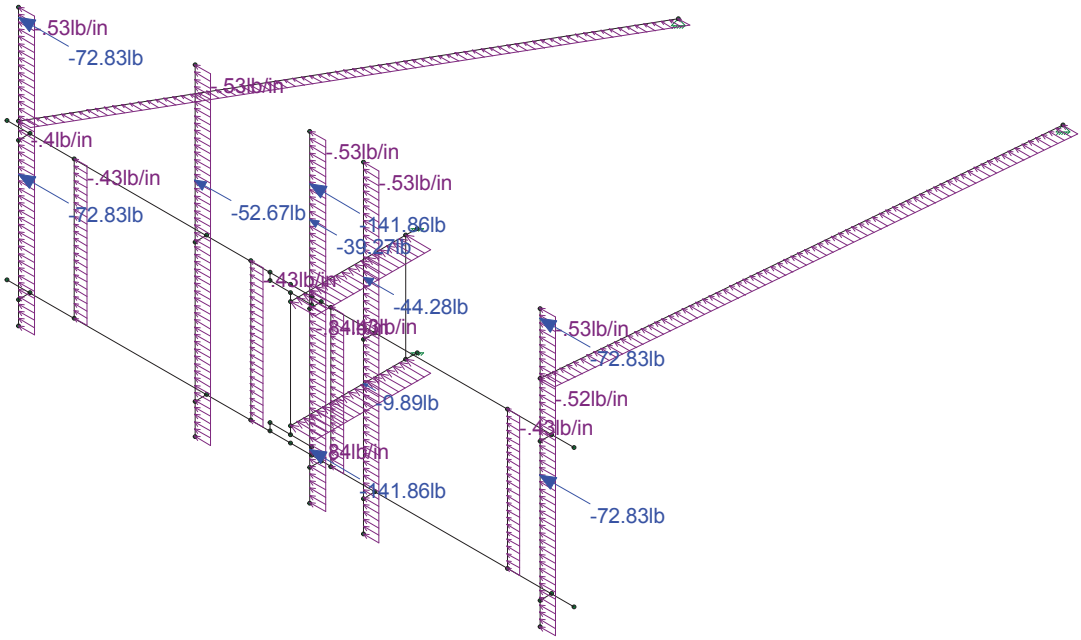
Loads: BLC 2, Weights
Envelope Only Solution

Trylon	VZW EAST KILLINGLY NORTH_ATC 88011_MOUNT A...	SK - 1
DLR		Aug 9, 2019 at 10:07 AM
148221		EAST KILLINGLY NORTH.r3d updat...



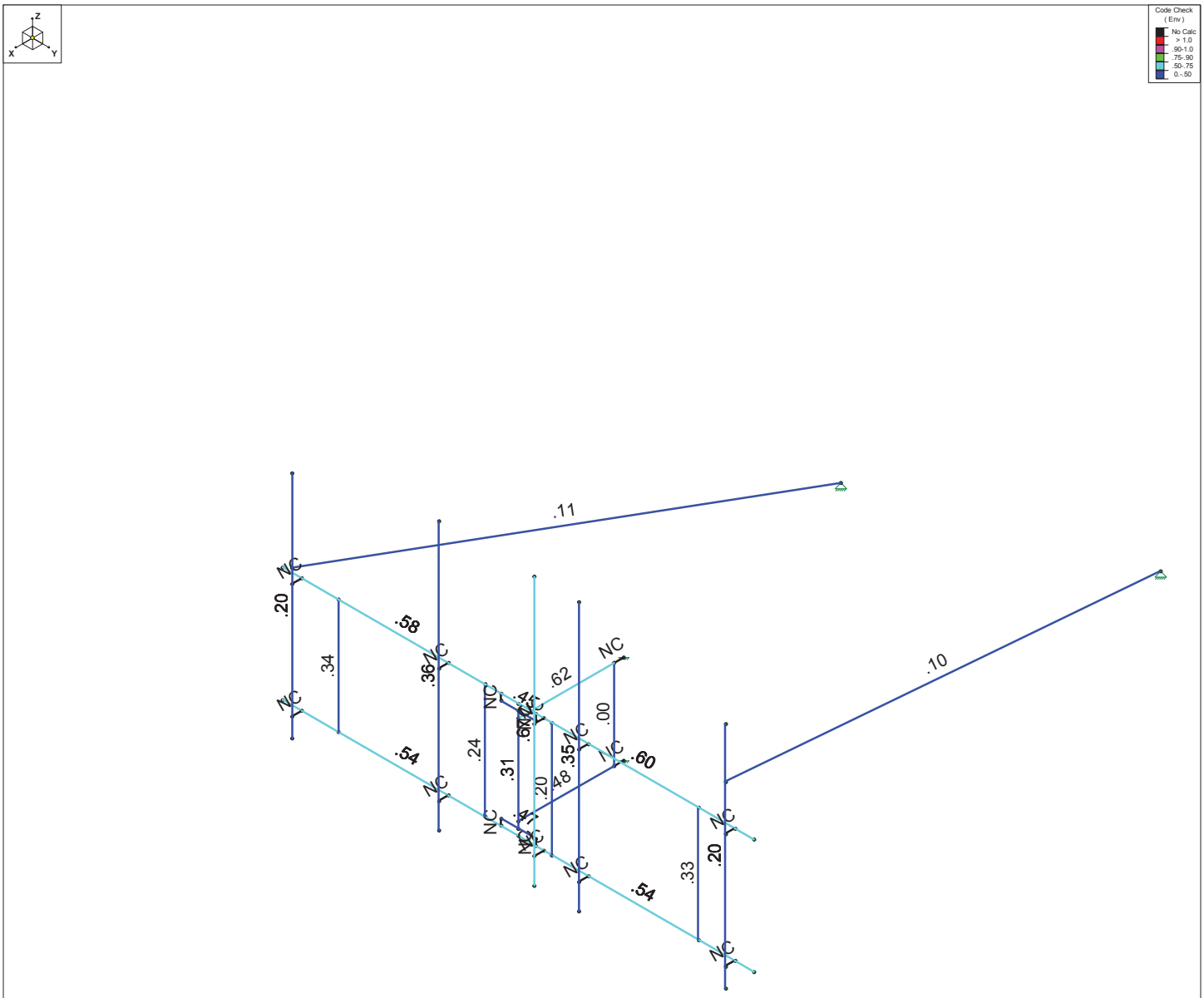
Loads: BLC 4, Wind 0°
Envelope Only Solution

Trylon	VZW EAST KILLINGLY NORTH_ATC 88011_MOUNT A...	SK - 2
DLR		Aug 9, 2019 at 10:07 AM
148221		EAST KILLINGLY NORTH.r3d updat...



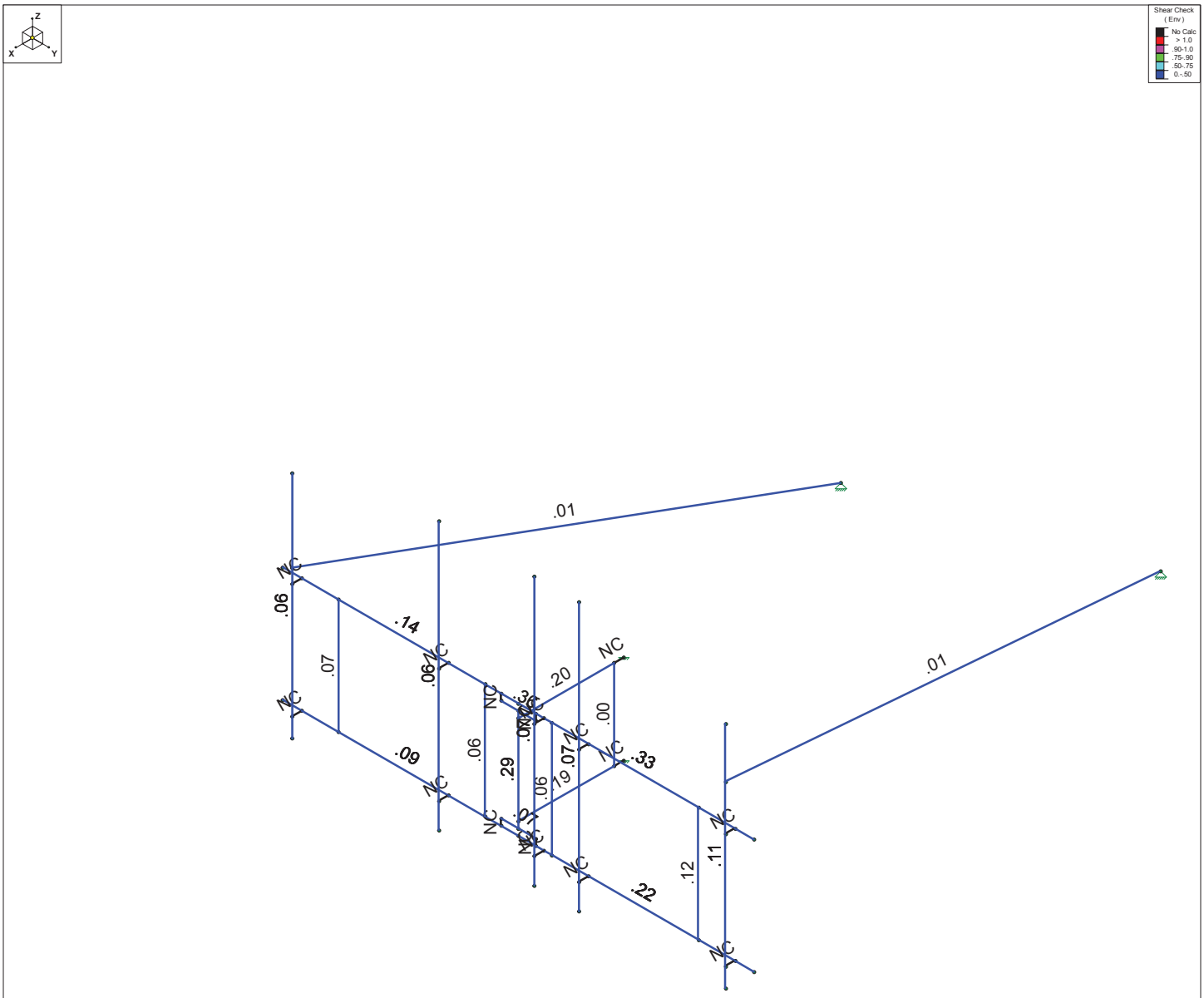
Loads: BLC 7, Wind 90°
Envelope Only Solution

Trylon	VZW EAST KILLINGLY NORTH_ATC 88011_MOUNT A...	SK - 3
DLR		Aug 9, 2019 at 10:07 AM
148221		EAST KILLINGLY NORTH.r3d updat...



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

Trylon	VZW EAST KILLINGLY NORTH_ATC 88011_MOUNT A...	SK - 4
DLR		Aug 9, 2019 at 10:08 AM
148221		EAST KILLINGLY NORTH.r3d updat...



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

Trylon	VZW EAST KILLINGLY NORTH_ATC 88011_MOUNT A...	SK - 5
DLR		Aug 9, 2019 at 10:08 AM
148221		EAST KILLINGLY NORTH.r3d updat...

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	HSS3X3X3	HSS3X3X3	Beam	Tube	A500 Gr.B Rect	Typical	1.89	2.46	2.46	4.03
2	3.5" O.D	HSS3.500X0.216_A1085	Beam	Pipe	A53 Gr.B	Typical	2.23	3.019	3.019	6.037
3	1.9" O.D	HSS1.900X0.188_A1085	Beam	Pipe	A53 Gr.B	Typical	1.007	.374	.374	.747
4	L3X3X3	L3X3X3	Beam	Single Angle	A36 Gr.36	Typical	1.09	.948	.948	.014
5	2.375" O.D	HSS2.375X0.154_A1085	Column	Pipe	A53 Gr.B	Typical	1.075	.669	.669	1.339
6	PL6x.375	PL6x.375	Beam	BAR	A36 Gr.36	Typical	2.25	.026	6.75	.101

Cold Formed Steel Section Sets

	Label	Shape	Type	Design ...	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	CF1	8CU1.25X057	Beam	None	A653 SS Gr33	Typical	.581	.057	4.41	.00063

Design Size and Code Check Parameters

	Label	Max Depth[in]	Min Depth[in]	Max Width[in]	Min Width[in]	Max Bending Chk	Max Shear Chk
1	Typical					1	1

Joint Boundary Conditions

	Joint Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot.[k-ft/rad]	Y Rot.[k-ft/rad]	Z Rot.[k-ft/rad]
1	N62	Reaction	Reaction	Reaction			
2	N60	Reaction	Reaction	Reaction			
3	N4	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
4	N13	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N1	N2		180	L3X3X3	Beam	Single Angle	A36 Gr.36	Typical
2	M2	N2	N3		180	L3X3X3	Beam	Single Angle	A36 Gr.36	Typical
3	M3	N9	N63			HSS3X3X3	Beam	Tube	A500 Gr.B...	Typical
4	M4	N63	N4			RIGID	None	None	RIGID	Typical
5	M5	N7	N5		90	PL6x.375	Beam	BAR	A36 Gr.36	Typical
6	M6	N5	N6			RIGID	None	None	RIGID	Typical
7	M7	N7	N8			RIGID	None	None	RIGID	Typical
8	M9	N10	N11			3.5" O.D	Beam	Pipe	A53 Gr.B	Typical
9	M10	N12	N64			HSS3X3X3	Beam	Tube	A500 Gr.B...	Typical
10	M11	N64	N13			RIGID	None	None	RIGID	Typical
11	M12	N14	N15		180	L3X3X3	Beam	Single Angle	A36 Gr.36	Typical
12	M13	N15	N16		180	L3X3X3	Beam	Single Angle	A36 Gr.36	Typical
13	M14	N20	N18		90	PL6x.375	Beam	BAR	A36 Gr.36	Typical
14	M15	N17	N18			RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
15	M16	N19	N20			RIGID	None	None	RIGID	Typical
16	M17	N21	N22			2.375" O.D	Column	Pipe	A53 Gr.B	Typical
17	M18	N23	N24			RIGID	None	None	RIGID	Typical
18	M19	N25	N26			RIGID	None	None	RIGID	Typical
19	M20	N27	N28			RIGID	None	None	RIGID	Typical
20	M21	N29	N30			2.375" O.D	Column	Pipe	A53 Gr.B	Typical
21	M22	N31	N32			RIGID	None	None	RIGID	Typical
22	M23	N33	N34			2.375" O.D	Column	Pipe	A53 Gr.B	Typical
23	M24	N35	N36			RIGID	None	None	RIGID	Typical
24	M25	N37	N38			RIGID	None	None	RIGID	Typical
25	M26	N39	N40			RIGID	None	None	RIGID	Typical
26	M27	N41	N42			2.375" O.D	Column	Pipe	A53 Gr.B	Typical
27	M28	N43	N44			RIGID	None	None	RIGID	Typical
28	M29	N45	N46			2.375" O.D	Column	Pipe	A53 Gr.B	Typical
29	M30	N47	N48			2.375" O.D	Column	Pipe	A53 Gr.B	Typical
30	M31	N49	N50			2.375" O.D	Column	Pipe	A53 Gr.B	Typical
31	M32	N51	N52			2.375" O.D	Column	Pipe	A53 Gr.B	Typical
32	M33	N53	N54			RIGID	None	None	RIGID	Typical
33	M34	N55	N56			2.375" O.D	Column	Pipe	A53 Gr.B	Typical
34	M35	N57	N58			RIGID	None	None	RIGID	Typical
35	M36	N59	N60			2.375" O.D	Column	Pipe	A53 Gr.B	Typical
36	M37	N61	N62			2.375" O.D	Column	Pipe	A53 Gr.B	Typical
37	M38	N63	N64			1.9" O.D	Beam	Pipe	A53 Gr.B	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	M1						Yes				None
2	M2						Yes				None
3	M3						Yes				None
4	M4						Yes	** NA **			None
5	M5						Yes				None
6	M6						Yes	** NA **			None
7	M7						Yes	** NA **			None
8	M9						Yes				None
9	M10						Yes				None
10	M11						Yes	** NA **			None
11	M12						Yes				None
12	M13						Yes				None
13	M14						Yes				None
14	M15						Yes	** NA **			None
15	M16						Yes	** NA **			None
16	M17						Yes	** NA **			None
17	M18						Yes	** NA **			None
18	M19						Yes	** NA **			None
19	M20						Yes	** NA **			None
20	M21						Yes	** NA **			None
21	M22						Yes	** NA **			None
22	M23						Yes	** NA **			None
23	M24						Yes	** NA **			None
24	M25						Yes	** NA **			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
25	M26						Yes	** NA **			None
26	M27						Yes	** NA **			None
27	M28						Yes	** NA **			None
28	M29						Yes	** NA **			None
29	M30						Yes	** NA **			None
30	M31						Yes	** NA **			None
31	M32						Yes	** NA **			None
32	M33						Yes	** NA **			None
33	M34						Yes	** NA **			None
34	M35						Yes	** NA **			None
35	M36	BenPIN					Yes	** NA **			None
36	M37	BenPIN					Yes	** NA **			None
37	M38						Yes				None

Hot Rolled Steel Design Parameters

	Label	Shape	Length[in]	Lbyy[in]	Lbzz[in]	Lcomp top[in]	Lcomp bot[in]	L-torqu...	Kyy	Kzz	Cb	Function
1	M1	L3X3X3	74	46		Lbyy		46	.65	2.1		Lateral
2	M2	L3X3X3	74	46		Lbyy		46	.65	2.1		Lateral
3	M3	HSS3X3X3	30			Lbyy			.65	.65		Lateral
4	M5	PL6x.375	11			Lbyy						Lateral
5	M9	3.5" O.D	32			Lbyy			.65	.65		Lateral
6	M10	HSS3X3X3	30			Lbyy			.65	.65		Lateral
7	M12	L3X3X3	74	46		Lbyy		46	.65	2.1		Lateral
8	M13	L3X3X3	74	46		Lbyy		46	.65	2.1		Lateral
9	M14	PL6x.375	11			Lbyy						Lateral
10	M17	2.375" O.D	72			Lbyy						Lateral
11	M21	2.375" O.D	84			Lbyy						Lateral
12	M23	2.375" O.D	72			Lbyy						Lateral
13	M27	2.375" O.D	84			Lbyy						Lateral
14	M29	2.375" O.D	36			Lbyy			.65	.65		Lateral
15	M30	2.375" O.D	36			Lbyy			.65	.65		Lateral
16	M31	2.375" O.D	36			Lbyy			.65	.65		Lateral
17	M32	2.375" O.D	36			Lbyy			.65	.65		Lateral
18	M34	2.375" O.D	84			Lbyy						Lateral
19	M36	2.375" O.D	126			Lbyy						Lateral
20	M37	2.375" O.D	126			Lbyy						Lateral
21	M38	1.9" O.D	28			Lbyy			.65	.65		Lateral

Cold Formed Steel Design Parameters

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

Joint Loads and Enforced Displacements (BLC 16 : Lm1)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-in), (in,rad), (lb*s^...
1	N38	L	Z	-500

Joint Loads and Enforced Displacements (BLC 17 : Lm2)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-in), (in,rad), (lb*s^...
1	N44	L	Z	-500

Joint Loads and Enforced Displacements (BLC 18 : Lm3)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-in), (in,rad), (lb*s^...
1	N32	L	Z	-500

Joint Loads and Enforced Displacements (BLC 19 : Lm4)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-in), (in,rad), (lb*s^...
1	N26	L	Z	-500

Joint Loads and Enforced Displacements (BLC 20 : Lv1)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-in), (in,rad), (lb*s^...
1	N15	L	Z	-250

Joint Loads and Enforced Displacements (BLC 21 : Lv2)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-in), (in,rad), (lb*s^...
1	N16	L	Z	-250

Member Point Loads (BLC 2 : Weights)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
1	M23	Z	-10	2.3
2	M23	Z	-10	37.7
3	M27	Z	-41.9	12
4	M27	Z	-41.9	72
5	M21	Z	-41.9	12
6	M21	Z	-41.9	72
7	M17	Z	-10	2.3
8	M17	Z	-10	37.7
9	M27	Z	-84.4	26
10	M21	Z	-89.06	26
11	M34	Z	-21.4	20

Member Point Loads (BLC 3 : ICE Load)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
1	M23	Z	-98.01	2.3
2	M23	Z	-98.01	37.7
3	M27	Z	-143.34	12
4	M27	Z	-143.34	72
5	M21	Z	-143.34	12
6	M21	Z	-143.34	72
7	M17	Z	-98.01	2.3
8	M17	Z	-98.01	37.7
9	M27	Z	-76.59	26
10	M21	Z	-80.6	26
11	M34	Z	-76.01	20

Member Point Loads (BLC 4 : Wind 0°)

Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]

Member Point Loads (BLC 4 : Wind 0°) (Continued)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
1	M23	X	-82.45	2.3
2	M23	X	-82.45	37.7
3	M27	X	-153.05	12
4	M27	X	-153.05	72
5	M21	X	-153.05	12
6	M21	X	-153.05	72
7	M17	X	-82.45	2.3
8	M17	X	-82.45	37.7
9	M27	X	-70.11	26
10	M21	X	-70.11	26
11	M34	X	-47.18	20

Member Point Loads (BLC 5 : Wind 30°)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
1	M23	X	-69.32	2.3
2	M23	X	-69.32	37.7
3	M27	X	-114.77	12
4	M27	X	-114.77	72
5	M21	X	-114.77	12
6	M21	X	-114.77	72
7	M17	X	-69.32	2.3
8	M17	X	-69.32	37.7
9	M27	X	-55.12	26
10	M21	X	-56.94	26
11	M34	X	-37.3	20
12	M23	Y	-40.02	2.3
13	M23	Y	-40.02	37.7
14	M27	Y	-66.26	12
15	M27	Y	-66.26	72
16	M21	Y	-66.26	12
17	M21	Y	-66.26	72
18	M17	Y	-40.02	2.3
19	M17	Y	-40.02	37.7
20	M27	Y	-31.82	26
21	M21	Y	-32.87	26
22	M34	Y	-21.54	20

Member Point Loads (BLC 6 : Wind 60°)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
1	M23	X	-37.62	2.3
2	M23	X	-37.62	37.7
3	M27	X	-45.73	12
4	M27	X	-45.73	72
5	M21	X	-45.73	12
6	M21	X	-45.73	72
7	M17	X	-37.62	2.3
8	M17	X	-37.62	37.7
9	M27	X	-25.37	26
10	M21	X	-28.51	26
11	M34	X	-17.43	20
12	M23	Y	-65.15	2.3

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

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
13	M23	Y	-65.15	37.7
14	M27	Y	-79.21	12
15	M27	Y	-79.21	72
16	M21	Y	-79.21	12
17	M21	Y	-79.21	72
18	M17	Y	-65.15	2.3
19	M17	Y	-65.15	37.7
20	M27	Y	-43.94	26
21	M21	Y	-49.39	26
22	M34	Y	-30.18	20

Member Point Loads (BLC 7 : Wind 90°)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
1	M23	Y	-72.83	2.3
2	M23	Y	-72.83	37.7
3	M27	Y	-70.93	12
4	M27	Y	-70.93	72
5	M21	Y	-70.93	12
6	M21	Y	-70.93	72
7	M17	Y	-72.83	2.3
8	M17	Y	-72.83	37.7
9	M27	Y	-44.28	26
10	M21	Y	-52.67	26
11	M34	Y	-30.74	20

Member Point Loads (BLC 8 : Wind 120°)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
1	M23	X	37.62	2.3
2	M23	X	37.62	37.7
3	M27	X	45.73	12
4	M27	X	45.73	72
5	M21	X	45.73	12
6	M21	X	45.73	72
7	M17	X	37.62	2.3
8	M17	X	37.62	37.7
9	M27	X	25.37	26
10	M21	X	28.51	26
11	M34	X	17.43	20
12	M23	Y	-65.15	2.3
13	M23	Y	-65.15	37.7
14	M27	Y	-79.21	12
15	M27	Y	-79.21	72
16	M21	Y	-79.21	12
17	M21	Y	-79.21	72
18	M17	Y	-65.15	2.3
19	M17	Y	-65.15	37.7
20	M27	Y	-43.94	26
21	M21	Y	-49.39	26
22	M34	Y	-30.18	20

Member Point Loads (BLC 9 : Wind 150°)

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
1	M23	X	69.32	2.3
2	M23	X	69.32	37.7
3	M27	X	114.77	12
4	M27	X	114.77	72
5	M21	X	114.77	12
6	M21	X	114.77	72
7	M17	X	69.32	2.3
8	M17	X	69.32	37.7
9	M27	X	55.12	26
10	M21	X	56.94	26
11	M34	X	37.3	20
12	M23	Y	-40.02	2.3
13	M23	Y	-40.02	37.7
14	M27	Y	-66.26	12
15	M27	Y	-66.26	72
16	M21	Y	-66.26	12
17	M21	Y	-66.26	72
18	M17	Y	-40.02	2.3
19	M17	Y	-40.02	37.7
20	M27	Y	-31.82	26
21	M21	Y	-32.87	26
22	M34	Y	-21.54	20

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

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
1	M23	X	-34.29	2.3
2	M23	X	-34.29	37.7
3	M27	X	-60.01	12
4	M27	X	-60.01	72
5	M21	X	-60.01	12
6	M21	X	-60.01	72
7	M17	X	-34.29	2.3
8	M17	X	-34.29	37.7
9	M27	X	-32.33	26
10	M21	X	-32.33	26
11	M34	X	-21.31	20

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

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
1	M23	X	-28.99	2.3
2	M23	X	-28.99	37.7
3	M27	X	-46.2	12
4	M27	X	-46.2	72
5	M21	X	-46.2	12
6	M21	X	-46.2	72
7	M17	X	-28.99	2.3
8	M17	X	-28.99	37.7
9	M27	X	-25.91	26
10	M21	X	-26.59	26
11	M34	X	-17.15	20
12	M23	Y	-16.74	2.3

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

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
13	M23	Y	-16.74	37.7
14	M27	Y	-26.67	12
15	M27	Y	-26.67	72
16	M21	Y	-26.67	12
17	M21	Y	-26.67	72
18	M17	Y	-16.74	2.3
19	M17	Y	-16.74	37.7
20	M27	Y	-14.96	26
21	M21	Y	-15.35	26
22	M34	Y	-9.9	20

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

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
1	M23	X	-15.92	2.3
2	M23	X	-15.92	37.7
3	M27	X	-20.01	12
4	M27	X	-20.01	72
5	M21	X	-20.01	12
6	M21	X	-20.01	72
7	M17	X	-15.92	2.3
8	M17	X	-15.92	37.7
9	M27	X	-12.54	26
10	M21	X	-13.72	26
11	M34	X	-8.4	20
12	M23	Y	-27.57	2.3
13	M23	Y	-27.57	37.7
14	M27	Y	-34.66	12
15	M27	Y	-34.66	72
16	M21	Y	-34.66	12
17	M21	Y	-34.66	72
18	M17	Y	-27.57	2.3
19	M17	Y	-27.57	37.7
20	M27	Y	-21.72	26
21	M21	Y	-23.76	26
22	M34	Y	-14.55	20

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

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
1	M23	Y	-31.02	2.3
2	M23	Y	-31.02	37.7
3	M27	Y	-33.36	12
4	M27	Y	-33.36	72
5	M21	Y	-33.36	12
6	M21	Y	-33.36	72
7	M17	Y	-31.02	2.3
8	M17	Y	-31.02	37.7
9	M27	Y	-22.67	26
10	M21	Y	-25.81	26
11	M34	Y	-15.3	20

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

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
1	M23	X	15.92	2.3
2	M23	X	15.92	37.7
3	M27	X	20.01	12
4	M27	X	20.01	72
5	M21	X	20.01	12
6	M21	X	20.01	72
7	M17	X	15.92	2.3
8	M17	X	15.92	37.7
9	M27	X	12.54	26
10	M21	X	13.72	26
11	M34	X	8.4	20
12	M23	Y	-27.57	2.3
13	M23	Y	-27.57	37.7
14	M27	Y	-34.66	12
15	M27	Y	-34.66	72
16	M21	Y	-34.66	12
17	M21	Y	-34.66	72
18	M17	Y	-27.57	2.3
19	M17	Y	-27.57	37.7
20	M27	Y	-21.72	26
21	M21	Y	-23.76	26
22	M34	Y	-14.55	20

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

	Member Label	Direction	Magnitude[lb,k-in]	Location[in,%]
1	M23	X	28.99	2.3
2	M23	X	28.99	37.7
3	M27	X	46.2	12
4	M27	X	46.2	72
5	M21	X	46.2	12
6	M21	X	46.2	72
7	M17	X	28.99	2.3
8	M17	X	28.99	37.7
9	M27	X	25.91	26
10	M21	X	26.59	26
11	M34	X	17.15	20
12	M23	Y	-16.74	2.3
13	M23	Y	-16.74	37.7
14	M27	Y	-26.67	12
15	M27	Y	-26.67	72
16	M21	Y	-26.67	12
17	M21	Y	-26.67	72
18	M17	Y	-16.74	2.3
19	M17	Y	-16.74	37.7
20	M27	Y	-14.96	26
21	M21	Y	-15.35	26
22	M34	Y	-9.9	20

Member Distributed Loads (BLC 3 : ICE Load)

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
1	M1	Z	-1.15	-1.15	0	0
2	M2	Z	-1.15	-1.15	0	0
3	M12	Z	-1.15	-1.15	0	0
4	M13	Z	-1.15	-1.15	0	0
5	M3	Z	-1.15	-1.15	0	0
6	M10	Z	-1.15	-1.15	0	0
7	M38	Z	-.71	-.71	0	0
8	M9	Z	-1.01	-1.01	0	0
9	M32	Z	-.79	-.79	0	0
10	M31	Z	-.79	-.79	0	0
11	M29	Z	-.79	-.79	0	0
12	M30	Z	-.79	-.79	0	0
13	M36	Z	-.79	-.79	0	0
14	M37	Z	-.79	-.79	0	0
15	M23	Z	-.79	-.79	0	0
16	M27	Z	-.79	-.79	0	0
17	M34	Z	-.79	-.79	0	0
18	M21	Z	-.79	-.79	0	0
19	M17	Z	-.79	-.79	0	0

Member Distributed Loads (BLC 4 : Wind 0°)

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
1	M1	X	-1.11	-1.11	0	0
2	M2	X	-1.11	-1.11	0	0
3	M12	X	-1.11	-1.11	0	0
4	M13	X	-1.11	-1.11	0	0
5	M3	X	0	0	0	0
6	M10	X	0	0	0	0
7	M38	X	-.34	-.34	0	0
8	M9	X	-.55	-.55	0	0
9	M32	X	-.43	-.43	0	0
10	M31	X	-.43	-.43	0	0
11	M29	X	-.43	-.43	0	0
12	M30	X	-.43	-.43	0	0
13	M36	X	-.02	-.02	0	0
14	M37	X	-.13	-.13	0	0
15	M23	X	-.53	-.53	0	0
16	M27	X	-.53	-.53	0	0
17	M34	X	-.53	-.53	0	0
18	M21	X	-.53	-.53	0	0
19	M17	X	-.53	-.53	0	0

Member Distributed Loads (BLC 5 : Wind 30°)

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
1	M1	X	-.72	-.72	0	0
2	M2	X	-.72	-.72	0	0
3	M12	X	-.72	-.72	0	0
4	M13	X	-.72	-.72	0	0
5	M3	X	-.18	-.18	0	0
6	M10	X	-.18	-.18	0	0

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

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
7	M38	X	-.22	-.22	0	0
8	M9	X	-.36	-.36	0	0
9	M32	X	-.38	-.38	0	0
10	M31	X	-.38	-.38	0	0
11	M29	X	-.38	-.38	0	0
12	M30	X	-.38	-.38	0	0
13	M36	X	-.12	-.12	0	0
14	M37	X	-.35	-.35	0	0
15	M23	X	-.46	-.46	0	0
16	M27	X	-.46	-.46	0	0
17	M34	X	-.46	-.46	0	0
18	M21	X	-.46	-.46	0	0
19	M17	X	-.46	-.46	0	0
20	M1	Y	-.42	-.42	0	0
21	M2	Y	-.42	-.42	0	0
22	M12	Y	-.42	-.42	0	0
23	M13	Y	-.42	-.42	0	0
24	M3	Y	-.1	-.1	0	0
25	M10	Y	-.1	-.1	0	0
26	M38	Y	-.13	-.13	0	0
27	M9	Y	-.21	-.21	0	0
28	M32	Y	-.22	-.22	0	0
29	M31	Y	-.22	-.22	0	0
30	M29	Y	-.22	-.22	0	0
31	M30	Y	-.22	-.22	0	0
32	M36	Y	-.07	-.07	0	0
33	M37	Y	-.2	-.2	0	0
34	M23	Y	-.27	-.27	0	0
35	M27	Y	-.27	-.27	0	0
36	M34	Y	-.27	-.27	0	0
37	M21	Y	-.27	-.27	0	0
38	M17	Y	-.27	-.27	0	0

Member Distributed Loads (BLC 6 : Wind 60°)

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
1	M1	X	-.14	-.14	0	0
2	M2	X	-.14	-.14	0	0
3	M12	X	-.14	-.14	0	0
4	M13	X	-.14	-.14	0	0
5	M3	X	-.31	-.31	0	0
6	M10	X	-.31	-.31	0	0
7	M38	X	-.04	-.04	0	0
8	M9	X	-.07	-.07	0	0
9	M32	X	-.22	-.22	0	0
10	M31	X	-.22	-.22	0	0
11	M29	X	-.22	-.22	0	0
12	M30	X	-.22	-.22	0	0
13	M36	X	-.2	-.2	0	0
14	M37	X	-.27	-.27	0	0
15	M23	X	-.27	-.27	0	0
16	M27	X	-.27	-.27	0	0

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

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
17	M34	X	-.27	-.27	0	0
18	M21	X	-.27	-.27	0	0
19	M17	X	-.27	-.27	0	0
20	M1	Y	-.24	-.24	0	0
21	M2	Y	-.24	-.24	0	0
22	M12	Y	-.24	-.24	0	0
23	M13	Y	-.24	-.24	0	0
24	M3	Y	-.55	-.55	0	0
25	M10	Y	-.55	-.55	0	0
26	M38	Y	-.07	-.07	0	0
27	M9	Y	-.12	-.12	0	0
28	M32	Y	-.38	-.38	0	0
29	M31	Y	-.38	-.38	0	0
30	M29	Y	-.38	-.38	0	0
31	M30	Y	-.38	-.38	0	0
32	M36	Y	-.35	-.35	0	0
33	M37	Y	-.46	-.46	0	0
34	M23	Y	-.46	-.46	0	0
35	M27	Y	-.46	-.46	0	0
36	M34	Y	-.46	-.46	0	0
37	M21	Y	-.46	-.46	0	0
38	M17	Y	-.46	-.46	0	0

Member Distributed Loads (BLC 7 : Wind 90°)

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
1	M1	Y	0	0	0	0
2	M2	Y	0	0	0	0
3	M12	Y	0	0	0	0
4	M13	Y	0	0	0	0
5	M3	Y	-.84	-.84	0	0
6	M10	Y	-.84	-.84	0	0
7	M38	Y	0	0	0	0
8	M9	Y	0	0	0	0
9	M32	Y	-.43	-.43	0	0
10	M31	Y	-.43	-.43	0	0
11	M29	Y	-.43	-.43	0	0
12	M30	Y	-.43	-.43	0	0
13	M36	Y	-.52	-.52	0	0
14	M37	Y	-.4	-.4	0	0
15	M23	Y	-.53	-.53	0	0
16	M27	Y	-.53	-.53	0	0
17	M34	Y	-.53	-.53	0	0
18	M21	Y	-.53	-.53	0	0
19	M17	Y	-.53	-.53	0	0

Member Distributed Loads (BLC 8 : Wind 120°)

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
1	M1	X	.14	.14	0	0
2	M2	X	.14	.14	0	0
3	M12	X	.14	.14	0	0
4	M13	X	.14	.14	0	0

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

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
5	M3	X	.31	.31	0	0
6	M10	X	.31	.31	0	0
7	M38	X	.04	.04	0	0
8	M9	X	.07	.07	0	0
9	M32	X	.22	.22	0	0
10	M31	X	.22	.22	0	0
11	M29	X	.22	.22	0	0
12	M30	X	.22	.22	0	0
13	M36	X	.2	.2	0	0
14	M37	X	.07	.07	0	0
15	M23	X	.27	.27	0	0
16	M27	X	.27	.27	0	0
17	M34	X	.27	.27	0	0
18	M21	X	.27	.27	0	0
19	M17	X	.27	.27	0	0
20	M1	Y	-.24	-.24	0	0
21	M2	Y	-.24	-.24	0	0
22	M12	Y	-.24	-.24	0	0
23	M13	Y	-.24	-.24	0	0
24	M3	Y	-.55	-.55	0	0
25	M10	Y	-.55	-.55	0	0
26	M38	Y	-.07	-.07	0	0
27	M9	Y	-.12	-.12	0	0
28	M32	Y	-.38	-.38	0	0
29	M31	Y	-.38	-.38	0	0
30	M29	Y	-.38	-.38	0	0
31	M30	Y	-.38	-.38	0	0
32	M36	Y	-.35	-.35	0	0
33	M37	Y	-.12	-.12	0	0
34	M23	Y	-.46	-.46	0	0
35	M27	Y	-.46	-.46	0	0
36	M34	Y	-.46	-.46	0	0
37	M21	Y	-.46	-.46	0	0
38	M17	Y	-.46	-.46	0	0

Member Distributed Loads (BLC 9 : Wind 150°)

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
1	M1	X	.72	.72	0	0
2	M2	X	.72	.72	0	0
3	M12	X	.72	.72	0	0
4	M13	X	.72	.72	0	0
5	M3	X	.18	.18	0	0
6	M10	X	.18	.18	0	0
7	M38	X	.22	.22	0	0
8	M9	X	.36	.36	0	0
9	M32	X	.38	.38	0	0
10	M31	X	.38	.38	0	0
11	M29	X	.38	.38	0	0
12	M30	X	.38	.38	0	0
13	M36	X	.12	.12	0	0
14	M37	X	0	0	0	0

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

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
15	M23	X	.46	.46	0	0
16	M27	X	.46	.46	0	0
17	M34	X	.46	.46	0	0
18	M21	X	.46	.46	0	0
19	M17	X	.46	.46	0	0
20	M1	Y	-.42	-.42	0	0
21	M2	Y	-.42	-.42	0	0
22	M12	Y	-.42	-.42	0	0
23	M13	Y	-.42	-.42	0	0
24	M3	Y	-.1	-.1	0	0
25	M10	Y	-.1	-.1	0	0
26	M38	Y	-.13	-.13	0	0
27	M9	Y	-.21	-.21	0	0
28	M32	Y	-.22	-.22	0	0
29	M31	Y	-.22	-.22	0	0
30	M29	Y	-.22	-.22	0	0
31	M30	Y	-.22	-.22	0	0
32	M36	Y	-.07	-.07	0	0
33	M37	Y	0	0	0	0
34	M23	Y	-.27	-.27	0	0
35	M27	Y	-.27	-.27	0	0
36	M34	Y	-.27	-.27	0	0
37	M21	Y	-.27	-.27	0	0
38	M17	Y	-.27	-.27	0	0

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

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
1	M1	X	-.61	-.61	0	0
2	M2	X	-.61	-.61	0	0
3	M12	X	-.61	-.61	0	0
4	M13	X	-.61	-.61	0	0
5	M3	X	-.05	-.05	0	0
6	M10	X	-.05	-.05	0	0
7	M38	X	-.25	-.25	0	0
8	M9	X	-.32	-.32	0	0
9	M32	X	-.28	-.28	0	0
10	M31	X	-.28	-.28	0	0
11	M29	X	-.28	-.28	0	0
12	M30	X	-.28	-.28	0	0
13	M36	X	-.01	-.01	0	0
14	M37	X	-.11	-.11	0	0
15	M23	X	-.33	-.33	0	0
16	M27	X	-.34	-.34	0	0
17	M34	X	-.34	-.34	0	0
18	M21	X	-.34	-.34	0	0
19	M17	X	-.33	-.33	0	0

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

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
1	M1	X	-.4	-.4	0	0
2	M2	X	-.4	-.4	0	0

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

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
3	M12	X	-.4	-.4	0	0
4	M13	X	-.4	-.4	0	0
5	M3	X	-.15	-.15	0	0
6	M10	X	-.15	-.15	0	0
7	M38	X	-.17	-.17	0	0
8	M9	X	-.21	-.21	0	0
9	M32	X	-.24	-.24	0	0
10	M31	X	-.24	-.24	0	0
11	M29	X	-.24	-.24	0	0
12	M30	X	-.24	-.24	0	0
13	M36	X	-.09	-.09	0	0
14	M37	X	-.26	-.26	0	0
15	M23	X	-.28	-.28	0	0
16	M27	X	-.3	-.3	0	0
17	M34	X	-.3	-.3	0	0
18	M21	X	-.3	-.3	0	0
19	M17	X	-.28	-.28	0	0
20	M1	Y	-.23	-.23	0	0
21	M2	Y	-.23	-.23	0	0
22	M12	Y	-.23	-.23	0	0
23	M13	Y	-.23	-.23	0	0
24	M3	Y	-.08	-.08	0	0
25	M10	Y	-.08	-.08	0	0
26	M38	Y	-.1	-.1	0	0
27	M9	Y	-.12	-.12	0	0
28	M32	Y	-.14	-.14	0	0
29	M31	Y	-.14	-.14	0	0
30	M29	Y	-.14	-.14	0	0
31	M30	Y	-.14	-.14	0	0
32	M36	Y	-.05	-.05	0	0
33	M37	Y	-.15	-.15	0	0
34	M23	Y	-.16	-.16	0	0
35	M27	Y	-.17	-.17	0	0
36	M34	Y	-.17	-.17	0	0
37	M21	Y	-.17	-.17	0	0
38	M17	Y	-.16	-.16	0	0

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

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
1	M1	X	-.08	-.08	0	0
2	M2	X	-.08	-.08	0	0
3	M12	X	-.08	-.08	0	0
4	M13	X	-.08	-.08	0	0
5	M3	X	-.2	-.2	0	0
6	M10	X	-.2	-.2	0	0
7	M38	X	-.04	-.04	0	0
8	M9	X	-.05	-.05	0	0
9	M32	X	-.14	-.14	0	0
10	M31	X	-.14	-.14	0	0
11	M29	X	-.14	-.14	0	0
12	M30	X	-.14	-.14	0	0

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

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
13	M36	X	-.15	-.15	0	0
14	M37	X	-.2	-.2	0	0
15	M23	X	-.16	-.16	0	0
16	M27	X	-.17	-.17	0	0
17	M34	X	-.17	-.17	0	0
18	M21	X	-.17	-.17	0	0
19	M17	X	-.16	-.16	0	0
20	M1	Y	-.15	-.15	0	0
21	M2	Y	-.15	-.15	0	0
22	M12	Y	-.15	-.15	0	0
23	M13	Y	-.15	-.15	0	0
24	M3	Y	-.35	-.35	0	0
25	M10	Y	-.35	-.35	0	0
26	M38	Y	-.07	-.07	0	0
27	M9	Y	-.09	-.09	0	0
28	M32	Y	-.24	-.24	0	0
29	M31	Y	-.24	-.24	0	0
30	M29	Y	-.24	-.24	0	0
31	M30	Y	-.24	-.24	0	0
32	M36	Y	-.26	-.26	0	0
33	M37	Y	-.35	-.35	0	0
34	M23	Y	-.28	-.28	0	0
35	M27	Y	-.3	-.3	0	0
36	M34	Y	-.3	-.3	0	0
37	M21	Y	-.3	-.3	0	0
38	M17	Y	-.28	-.28	0	0

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

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
1	M1	Y	-.02	-.02	0	0
2	M2	Y	-.02	-.02	0	0
3	M12	Y	-.02	-.02	0	0
4	M13	Y	-.02	-.02	0	0
5	M3	Y	-.52	-.52	0	0
6	M10	Y	-.52	-.52	0	0
7	M38	Y	-.03	-.03	0	0
8	M9	Y	-.03	-.03	0	0
9	M32	Y	-.28	-.28	0	0
10	M31	Y	-.28	-.28	0	0
11	M29	Y	-.28	-.28	0	0
12	M30	Y	-.28	-.28	0	0
13	M36	Y	-.39	-.39	0	0
14	M37	Y	-.3	-.3	0	0
15	M23	Y	-.33	-.33	0	0
16	M27	Y	-.34	-.34	0	0
17	M34	Y	-.34	-.34	0	0
18	M21	Y	-.34	-.34	0	0
19	M17	Y	-.33	-.33	0	0

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

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]

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

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
1	M1	X	.08	.08	0	0
2	M2	X	.08	.08	0	0
3	M12	X	.08	.08	0	0
4	M13	X	.08	.08	0	0
5	M3	X	.2	.2	0	0
6	M10	X	.2	.2	0	0
7	M38	X	.04	.04	0	0
8	M9	X	.05	.05	0	0
9	M32	X	.14	.14	0	0
10	M31	X	.14	.14	0	0
11	M29	X	.14	.14	0	0
12	M30	X	.14	.14	0	0
13	M36	X	.12	.12	0	0
14	M37	X	.05	.05	0	0
15	M23	X	.16	.16	0	0
16	M27	X	.17	.17	0	0
17	M34	X	.17	.17	0	0
18	M21	X	.17	.17	0	0
19	M17	X	.16	.16	0	0
20	M1	Y	-.15	-.15	0	0
21	M2	Y	-.15	-.15	0	0
22	M12	Y	-.15	-.15	0	0
23	M13	Y	-.15	-.15	0	0
24	M3	Y	-.35	-.35	0	0
25	M10	Y	-.35	-.35	0	0
26	M38	Y	-.07	-.07	0	0
27	M9	Y	-.09	-.09	0	0
28	M32	Y	-.24	-.24	0	0
29	M31	Y	-.24	-.24	0	0
30	M29	Y	-.24	-.24	0	0
31	M30	Y	-.24	-.24	0	0
32	M36	Y	-.21	-.21	0	0
33	M37	Y	-.09	-.09	0	0
34	M23	Y	-.28	-.28	0	0
35	M27	Y	-.3	-.3	0	0
36	M34	Y	-.3	-.3	0	0
37	M21	Y	-.3	-.3	0	0
38	M17	Y	-.28	-.28	0	0

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

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
1	M1	X	.4	.4	0	0
2	M2	X	.4	.4	0	0
3	M12	X	.4	.4	0	0
4	M13	X	.4	.4	0	0
5	M3	X	.15	.15	0	0
6	M10	X	.15	.15	0	0
7	M38	X	.17	.17	0	0
8	M9	X	.21	.21	0	0
9	M32	X	.24	.24	0	0
10	M31	X	.24	.24	0	0

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

	Member Label	Direction	Start Magnitude[lb/in,...	End Magnitude[lb/in,...	Start Location[in,%]	End Location[in,%]
11	M29	X	.24	.24	0	0
12	M30	X	.24	.24	0	0
13	M36	X	.05	.05	0	0
14	M37	X	.01	.01	0	0
15	M23	X	.28	.28	0	0
16	M27	X	.3	.3	0	0
17	M34	X	.3	.3	0	0
18	M21	X	.3	.3	0	0
19	M17	X	.28	.28	0	0
20	M1	Y	-.23	-.23	0	0
21	M2	Y	-.23	-.23	0	0
22	M12	Y	-.23	-.23	0	0
23	M13	Y	-.23	-.23	0	0
24	M3	Y	-.08	-.08	0	0
25	M10	Y	-.08	-.08	0	0
26	M38	Y	-.1	-.1	0	0
27	M9	Y	-.12	-.12	0	0
28	M32	Y	-.14	-.14	0	0
29	M31	Y	-.14	-.14	0	0
30	M29	Y	-.14	-.14	0	0
31	M30	Y	-.14	-.14	0	0
32	M36	Y	-.03	-.03	0	0
33	M37	Y	0	0	0	0
34	M23	Y	-.16	-.16	0	0
35	M27	Y	-.17	-.17	0	0
36	M34	Y	-.17	-.17	0	0
37	M21	Y	-.17	-.17	0	0
38	M17	Y	-.16	-.16	0	0

Member Area Loads

Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
No Data to Print ...						

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(...
1	Self Weight	DL			-1					
2	Weights	DL					11			
3	ICE Load	DL					11	19		
4	Wind 0°	WL					11	19		
5	Wind 30°	WL					22	38		
6	Wind 60°	WL					22	38		
7	Wind 90°	WL					11	19		
8	Wind 120°	WL					22	38		
9	Wind 150°	WL					22	38		
10	Wind 0° with ice	WL					11	19		
11	Wind 30° with ice	WL					22	38		
12	Wind 60° with ice	WL					22	38		
13	Wind 90° with ice	WL					11	19		
14	Wind 120° with ice	WL					22	38		

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(...
15	Wind 150° with ice	WL					22	38		
16	Lm1	LL				1				
17	Lm2	LL				1				
18	Lm3	LL				1				
19	Lm4	LL				1				
20	Lv1	LL				1				
21	Lv2	LL				1				

Load Combinations

	Description	So...	PDelta	S...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...
1	Dead Only	Yes	Y		1	1.4	2	1.4																		
2	1.2D+1.6W_0°	Yes	Y		1	1.2	2	1.2	4	1.6																
3	1.2D+1.6W_30°	Yes	Y		1	1.2	2	1.2	5	1.6																
4	1.2D+1.6W_60°	Yes	Y		1	1.2	2	1.2	6	1.6																
5	1.2D+1.6W_90°	Yes	Y		1	1.2	2	1.2	7	1.6																
6	1.2D+1.6W_120°	Yes	Y		1	1.2	2	1.2	8	1.6																
7	1.2D+1.6W_150°	Yes	Y		1	1.2	2	1.2	9	1.6																
8	1.2D+1.6W_180°	Yes	Y		1	1.2	2	1.2	4	-1.6																
9	1.2D+1.6W_210°	Yes	Y		1	1.2	2	1.2	5	-1.6																
10	1.2D+1.6W_240°	Yes	Y		1	1.2	2	1.2	6	-1.6																
11	1.2D+1.6W_270°	Yes	Y		1	1.2	2	1.2	7	-1.6																
12	1.2D+1.6W_300°	Yes	Y		1	1.2	2	1.2	8	-1.6																
13	1.2D+1.6W_330°	Yes	Y		1	1.2	2	1.2	9	-1.6																
14	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	2	1.2	10	1	3	1														
15	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	2	1.2	11	1	3	1														
16	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	2	1.2	12	1	3	1														
17	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	2	1.2	13	1	3	1														
18	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	2	1.2	14	1	3	1														
19	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	2	1.2	15	1	3	1														
20	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	2	1.2	10	-1	3	1														
21	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	2	1.2	11	-1	3	1														
22	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	2	1.2	12	-1	3	1														
23	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	2	1.2	13	-1	3	1														
24	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	2	1.2	14	-1	3	1														
25	1.2D+1.0Di+1.0...	Yes	Y		1	1.2	2	1.2	15	-1	3	1														
26	1.2D+1.5Lm1+1...	Yes	Y		1	1.2	2	1.2	16	1.5	4	.113														
27	1.2D+1.5Lm1+1...	Yes	Y		1	1.2	2	1.2	16	1.5	5	.113														
28	1.2D+1.5Lm1+1...	Yes	Y		1	1.2	2	1.2	16	1.5	6	.113														
29	1.2D+1.5Lm1+1...	Yes	Y		1	1.2	2	1.2	16	1.5	7	.113														
30	1.2D+1.5Lm1+1...	Yes	Y		1	1.2	2	1.2	16	1.5	8	.113														
31	1.2D+1.5Lm1+1...	Yes	Y		1	1.2	2	1.2	16	1.5	9	.113														
32	1.2D+1.5Lm1+1...	Yes	Y		1	1.2	2	1.2	16	1.5	4	-.113														
33	1.2D+1.5Lm1+1...	Yes	Y		1	1.2	2	1.2	16	1.5	5	-.113														
34	1.2D+1.5Lm1+1...	Yes	Y		1	1.2	2	1.2	16	1.5	6	-.113														
35	1.2D+1.5Lm1+1...	Yes	Y		1	1.2	2	1.2	16	1.5	7	-.113														
36	1.2D+1.5Lm1+1...	Yes	Y		1	1.2	2	1.2	16	1.5	8	-.113														
37	1.2D+1.5Lm1+1...	Yes	Y		1	1.2	2	1.2	16	1.5	9	-.113														
38	1.2D+1.5Lm2+1...	Yes	Y		1	1.2	2	1.2	17	1.5	4	.113														
39	1.2D+1.5Lm2+1...	Yes	Y		1	1.2	2	1.2	17	1.5	5	.113														
40	1.2D+1.5Lm2+1...	Yes	Y		1	1.2	2	1.2	17	1.5	6	.113														

Load Combinations (Continued)

	Description	So...	PDelta	S...	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac...
41	1.2D+1.5Lm2+1...	Yes	Y		1	1.2	2	1.2	17	1.5	7	.113														
42	1.2D+1.5Lm2+1...	Yes	Y		1	1.2	2	1.2	17	1.5	8	.113														
43	1.2D+1.5Lm2+1...	Yes	Y		1	1.2	2	1.2	17	1.5	9	.113														
44	1.2D+1.5Lm2+1...	Yes	Y		1	1.2	2	1.2	17	1.5	4	-.113														
45	1.2D+1.5Lm2+1...	Yes	Y		1	1.2	2	1.2	17	1.5	5	-.113														
46	1.2D+1.5Lm2+1...	Yes	Y		1	1.2	2	1.2	17	1.5	6	-.113														
47	1.2D+1.5Lm2+1...	Yes	Y		1	1.2	2	1.2	17	1.5	7	-.113														
48	1.2D+1.5Lm2+1...	Yes	Y		1	1.2	2	1.2	17	1.5	8	-.113														
49	1.2D+1.5Lm2+1...	Yes	Y		1	1.2	2	1.2	17	1.5	9	-.113														
50	1.2D+1.5Lm3+1...	Yes	Y		1	1.2	2	1.2	18	1.5	4	.113														
51	1.2D+1.5Lm3+1...	Yes	Y		1	1.2	2	1.2	18	1.5	5	.113														
52	1.2D+1.5Lm3+1...	Yes	Y		1	1.2	2	1.2	18	1.5	6	.113														
53	1.2D+1.5Lm3+1...	Yes	Y		1	1.2	2	1.2	18	1.5	7	.113														
54	1.2D+1.5Lm3+1...	Yes	Y		1	1.2	2	1.2	18	1.5	8	.113														
55	1.2D+1.5Lm3+1...	Yes	Y		1	1.2	2	1.2	18	1.5	9	.113														
56	1.2D+1.5Lm3+1...	Yes	Y		1	1.2	2	1.2	18	1.5	4	-.113														
57	1.2D+1.5Lm3+1...	Yes	Y		1	1.2	2	1.2	18	1.5	5	-.113														
58	1.2D+1.5Lm3+1...	Yes	Y		1	1.2	2	1.2	18	1.5	6	-.113														
59	1.2D+1.5Lm3+1...	Yes	Y		1	1.2	2	1.2	18	1.5	7	-.113														
60	1.2D+1.5Lm3+1...	Yes	Y		1	1.2	2	1.2	18	1.5	8	-.113														
61	1.2D+1.5Lm3+1...	Yes	Y		1	1.2	2	1.2	18	1.5	9	-.113														
62	1.2D+1.5Lm4+1...	Yes	Y		1	1.2	2	1.2	19	1.5	4	.113														
63	1.2D+1.5Lm4+1...	Yes	Y		1	1.2	2	1.2	19	1.5	5	.113														
64	1.2D+1.5Lm4+1...	Yes	Y		1	1.2	2	1.2	19	1.5	6	.113														
65	1.2D+1.5Lm4+1...	Yes	Y		1	1.2	2	1.2	19	1.5	7	.113														
66	1.2D+1.5Lm4+1...	Yes	Y		1	1.2	2	1.2	19	1.5	8	.113														
67	1.2D+1.5Lm4+1...	Yes	Y		1	1.2	2	1.2	19	1.5	9	.113														
68	1.2D+1.5Lm4+1...	Yes	Y		1	1.2	2	1.2	19	1.5	4	-.113														
69	1.2D+1.5Lm4+1...	Yes	Y		1	1.2	2	1.2	19	1.5	5	-.113														
70	1.2D+1.5Lm4+1...	Yes	Y		1	1.2	2	1.2	19	1.5	6	-.113														
71	1.2D+1.5Lm4+1...	Yes	Y		1	1.2	2	1.2	19	1.5	7	-.113														
72	1.2D+1.5Lm4+1...	Yes	Y		1	1.2	2	1.2	19	1.5	8	-.113														
73	1.2D+1.5Lm4+1...	Yes	Y		1	1.2	2	1.2	19	1.5	9	-.113														
74	1.2D+1.5Lv1	Yes	Y		1	1.2	2	1.2	20	1.5																
75	1.2D+1.5Lv2	Yes	Y		1	1.2	2	1.2	21	1.5																

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

	Memb...	Shape	Code Check	Loc[in]	LC	Shear Ch...	L...	...	LC	phi*...	phi*...	phi*...	phi*.....	Eqn
1	M2	L3X3X3	.703	6.167	9	.313	6....	z	8	142...	353...	15.8...	25.6...	1 H2...
2	M3	HSS3X3X3	.577	30	10	.189	30	z	34	767...	782...	81.5...	81.5...	H1...
3	M1	L3X3X3	.575	51.646	69	.172	6...	z	8	142...	353...	15.8...	25.6...	1 H2...
4	M12	L3X3X3	.538	51.646	62	.105	6...	y	15	142...	353...	15.8...	25.6...	1 H2...
5	M13	L3X3X3	.537	22.354	26	.154	6....	y	25	142...	353...	15.8...	25.6...	1 H2...
6	M10	HSS3X3X3	.462	30	31	.183	0	z	34	767...	782...	81.5...	81.5...	H1...
7	M5	PL6x.375	.386	5.5	21	.279	5.5	y	8	423...	729...	6.834	109....	H1...
8	M14	PL6x.375	.382	5.5	15	.066	5....	y	2	423...	729...	6.834	109....	H1...
9	M21	HSS2.375...	.381	40.25	63	.066	4...		63	189...	338...	24.0...	24.0...	H1...
10	M27	HSS2.375...	.375	39.375	8	.066	4...		13	189...	338...	24.0...	24.0...	H1...
11	M30	HSS2.375...	.337	36	65	.072	0		63	323...	338...	24.0...	24.0...	H1...
12	M32	HSS2.375...	.328	36	26	.123	0		13	323...	338...	24.0...	24.0...	H1...

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

	Memb...	Shape	Code Check	Loc[in]	LC	Shear Ch...	L...	...	LC	phi*...	phi*...	phi*...	phi*...	...	Eqn
13	M9	HSS3.500...	.300	2	20	.278	2		10	690...	702...	73.5...	73.5...		H1...
14	M29	HSS2.375...	.254	36	63	.069	0		63	323...	338...	24.0...	24.0...		H1...
15	M23	HSS2.375...	.201	30	35	.116	30		13	221...	338...	24.0...	24.0...		H1...
16	M17	HSS2.375...	.200	30	65	.075	30		3	221...	338...	24.0...	24.0...		H1...
17	M31	HSS2.375...	.199	36	36	.055	0		35	323...	338...	24.0...	24.0...		H1...
18	M34	HSS2.375...	.152	40.25	34	.065	4...		34	189...	338...	24.0...	24.0...		H1...
19	M37	HSS2.375...	.109	63	15	.008	0		22	952...	338...	24.0...	24.0...		H1...
20	M36	HSS2.375...	.103	63	23	.008	126		23	952...	338...	24.0...	24.0...		H1...
21	M38	HSS1.900...	.002	28	8	.001	0		8	302...	317...	17.3...	17.3...	1	H1...

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

Member	Shape	Code Check	Loc[...	LC	Shear ...	Loc.....	L...	phi*P...	phi*T...	phi*M...	phi*M...	phi*...	phi*...	Cb	Eqn
No Data to Print ...															