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
Web Site: portal.ct.gov/csc

VIA ELECTRONIC MAIL

May 26, 2021

Allison Hebel
Site Acquisition Consultant – Agent for AT&T
Centerline Communications LLC
750 West Center St. Ste 301
West Bridgewater, MA 02379
ahebel@clinellc.com

RE: **EM-CING-132-210426 –** New Cingular Wireless PCS, LLC (AT&T) notice of intent to modify an existing telecommunications facility located at 151 Sand Hill Road, South Windsor, Connecticut.

Dear Ms. Hebel:

The Connecticut Siting Council (Council) is in receipt of your correspondence of May 25, 2021 submitted in response to the Council's May 25, 2021 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,

s/Melanie Bachman

Melanie Bachman
Executive Director

MAB/CW/laf

From: Allison Hebel <ahebel@clinellc.com>
Sent: Tuesday, May 25, 2021 12:29 PM
To: Fontaine, Lisa <Lisa.Fontaine@ct.gov>
Cc: CSC-DL Siting Council <Siting.Council@ct.gov>
Subject: RE: EM-CING-132-210426 Council Incomplete letter for 151 Sand Hill Rd., So. Windsor

Hi Lisa,
Please see attached stamped MA. Let me know if you need anything else.

Allison Hebel | Site Acquisition Consultant
750 West Center St. Suite 301 | West Bridgewater, MA 02379
Phone: 215.588.7035 Fax: 508.819.3017
ahebel@clinellc.com | www.centerlinecommunications.com

CENTERLINE COMMUNICATIONS
750 West Center Street, Suite 301
West Bridgewater, MA 02379
781.713.4725

Revised Mount Analysis Report

Site Number	CT1139
FA Number	10035389
Site Name	South Windsor Sand Hill Rd
Project	LTE 4C/5C/6C/5G/BWE/RETRO
Pace ID	MRCTB048696, MRCTB048654, MRCTB048665, MRCTB048719, MRCTB048688, MRCTB048721
Site Location	151 Sand Hill Road South Windsor, CT 06074 41.8359919° N, 72.5519989° W
Design Codes	TIA-222-H Standards 2018 IBC ASCE 7-16 2018 CT State Building Code
Mount Centerline	170 ft.
Mount Classification	Platform with Handrails

	Stress Ratio	**Overall Result**
Existing Platform with Handrails	**59%**	**PASS**

Client:

at&t Mobility Corp.
55 Cochituate Road
Framingham, MA 01701

at&t

STATE OF CONNECTICUT DEREK J. CREASER LICENSED PROFESSIONAL ENGINEER

Date: 03/17/2021 (Rev. 1)
12/21/2020

DN: CN = Derek J. Creaser, P.E. email = dcreaser@clinellc.com C = US O = Centerline Communications OU = Director - A&E Services
Date: 2021.03.18 08:57:31 -04'00'

Date: 03/17/2021 (Rev. 1)
12/21/2020

Scope of Work:

Centerline Communications was authorized by AT&T to perform a mount analysis of the existing antenna mount to determine its capacity to support the proposed and existing AT&T equipment listed in this report. This mount was analyzed using RISA 3D v17.0.4.

Final Appurtenances Configuration:

Elevation (ft)	Position[1]	Azimuth (degrees)	Quantity	Appurtenance	Sector
170	**MP1**	**40**	**1**	**HPA65R-BU6AA-K Antenna**	Sector 1
170	MP3	40	1	HPA-65R-BUU-H6 Antenna	
170	**MP5**	**40**	**1**	**DMP65R-BU6DA Antenna**	
170	**R1**	**40**	**1**	**8843 B2/B66A RRH**	
170	R4	40	1	RRUS-32 B30 RRH	
170	**R4**	**40**	**1**	**4449 B5/B12 RRH**	
170	MP2	40	1	DC6-48-60-18-8F Squid	
170	**MP6**	**160**	**1**	**HPA65R-BU6AA-K Antenna**	Sector 2
170	MP8	160	1	HPA-65R-BUU-H6 Antenna	
170	**MP10**	**160**	**1**	**DMP65R-BU6DA Antenna**	
170	**R2**	**160**	**1**	**8843 B2/B66A RRH**	
170	R5	160	1	RRUS-32 B30 RRH	
170	**R5**	**160**	**1**	**4449 B5/B12 RRH**	
170	MP7	160	1	DC6-48-60-18-8F Squid	
170	**MP11**	**280**	**1**	**HPA65R-BU6AA-K Antenna**	Sector 3
170	MP12	280	1	HPA-65R-BUU-H6 Antenna	
170	**MP13**	**280**	**1**	**DMP65R-BU6DA Antenna**	
170	**R3**	**280**	**1**	**8843 B2/B66A RRH**	
170	R6	280	1	RRUS-32 B30 RRH	
170	**R6**	**280**	**1**	**4449 B5/B12 RRH**	

Notes:

1. MP represent Mount Pipe and R represent RRH mount.
2. Existing Appurtenance
3. **Proposed Appurtenance**

Design Criteria:

Design Codes:

TIA-222-H Standards
2018 IBC
ASCE 7-16
2018 CT State Building Code

Ultimate Wind Speed	118 mph
Wind Speed with Ice	50 mph
Ice Thickness	1.5 in.
Exposure Category	C
Topographic Method	Method 1, Cat. 1
Risk Category	II
Site Soil Class (Assumed)	D-Stiff Soil
Seismic Design Category	B
Spectral Response Acceleration Parameter at a Short Periods, S_S	0.184 g
Spectral Response Acceleration Parameter at a Period of 1 Second, S_1	0.055 g
Short Period Site Coefficient, F_a	1.6
Long Period Site Coefficient, F_v	2.4

***Refer to calculations for additional design criteria.**

Conclusion:

The results of the analysis concluded that the existing AT&T mounts *are capable* to support the proposed and existing AT&T equipment loads *upon completion* of the modifications. Centerline Communications recommends the following:

- Install (1) 2" STD x 5ft long mount pipes in all sectors.
- Install (1) Site Pro 1 Part #RRUDSM mount in all sectors.

	Stress Ratio	Overall Result
Existing Platform With Handrails	**59%**	**PASS**

Reference Documents:

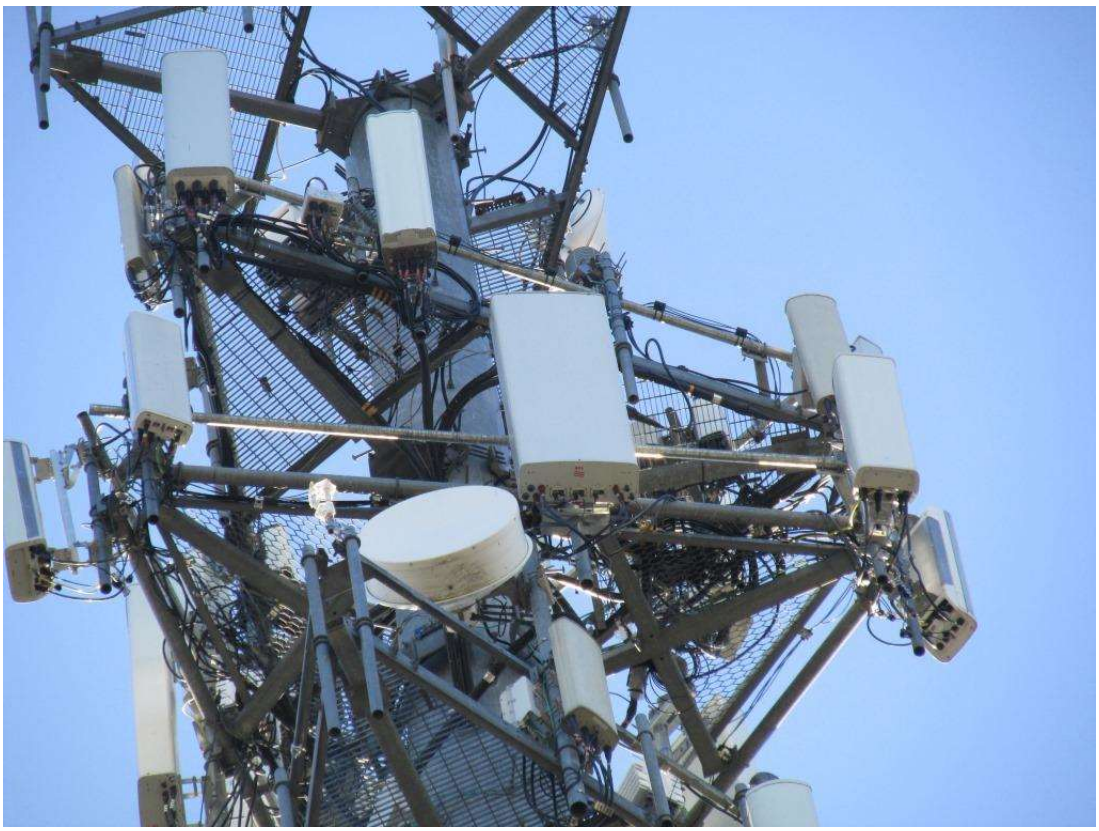
- AT&T RFDS ID #4093558 V2.0, dated 10/13/2020
- Structural Analysis by TES, dated 03/23/2018
- Mount Analysis by Centek Engineering, dated 05/02/2018
- Mount Mapping Report by Trylon, dated 11/30/2020

Assumptions and Limitations:

- The calculations performed by Centerline Communications are limited to the structural members in these calculations only.
- Structural calculations in this report do not check the adequacy of the supporting structure, other mounts, or coax mounting attachments.
- The calculation assumes all structural members to be in good condition i.e. no damage, rust or other defects.

Photos:

Alpha Sector



Beta Sector

Gamma Sector

Overall Tower

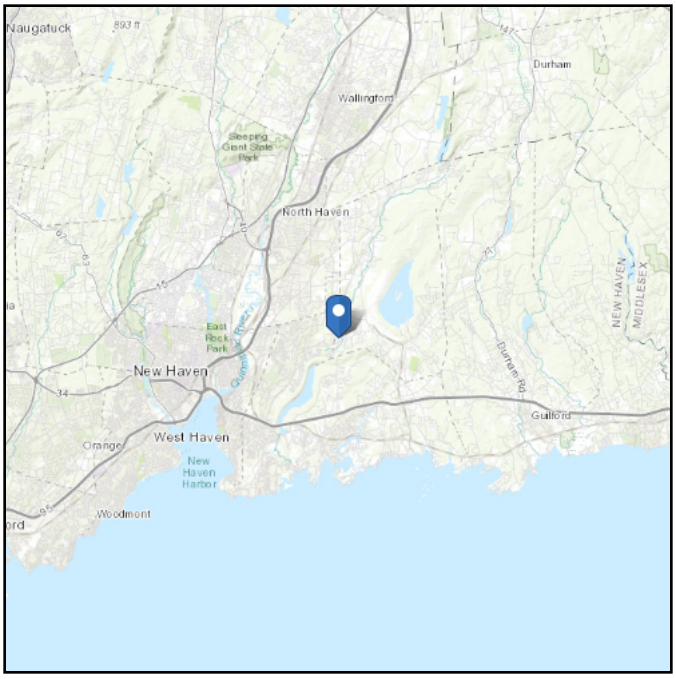
Design Calculations

ASCE 7 Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-16
Risk Category: II
Soil Class: D - Stiff Soil

Elevation: 163.63 ft (NAVD 88)
Latitude: 41.835992
Longitude: -72.551999



Wind

Results:

Wind Speed:	118 Vmph
10-year MRI	75 Vmph
25-year MRI	84 Vmph
50-year MRI	90 Vmph
100-year MRI	97 Vmph
Data Source:	ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4
Date Accessed:	Wed Dec 16 2020

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-16 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 7-16 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.

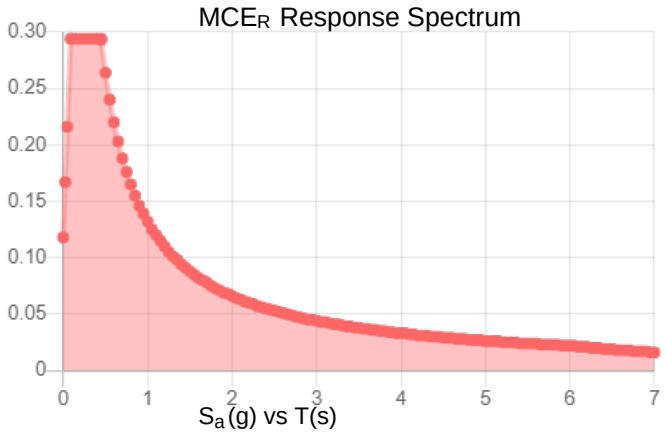
Seismic

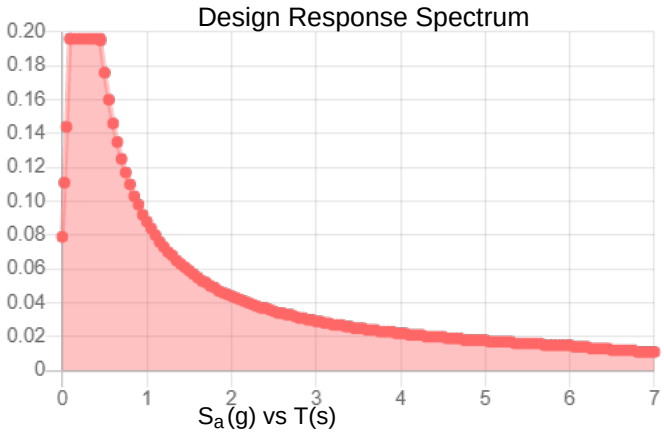
Site Soil Class: D - Stiff Soil

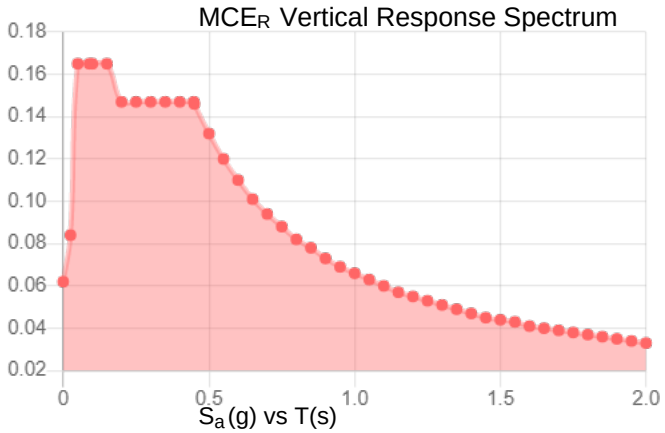
Results:

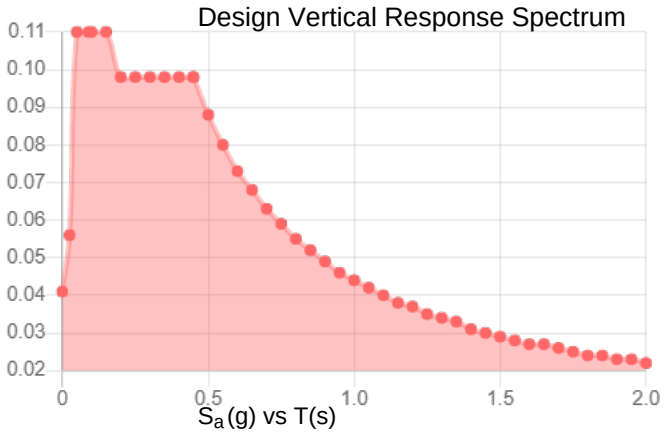
S_S :	0.184	S_{D1} :	0.088
S_1 :	0.055	T_L :	6
F_a :	1.6	PGA :	0.098
F_v :	2.4	PGA_M :	0.157
S_{MS} :	0.294	F_{PGA} :	1.6
S_{M1} :	0.132	I_e :	1
S_{DS} :	0.196	C_v :	0.7

Seismic Design Category B









Data Accessed: Wed Dec 16 2020

Date Source: USGS Seismic Design Maps based on ASCE/SEI 7-16 and ASCE/SEI 7-16 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-16 Ch. 21 are available from USGS.

Ice

Results:

Ice Thickness:	1.50 in.
Concurrent Temperature:	5 F
Gust Speed:	50 mph
Data Source:	Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8
Date Accessed:	Wed Dec 16 2020

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

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 500-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

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Site Details	
Site Name	SOUTH WINDSOR SAND HILL RD
Carrier	AT&T
City, State	SOUTH WINDSOR, CT
Project	LTE 4C/5C/6C/5G/BWE/RETRO

Mount Details		
Mount Type	3-Sided Platform	
Mount Height, z	170	ft
Number of Sectors	3	
Tower Type	Monopole	
Tower Height, h	188	ft

Topographic Factors		
Topographic Procedure	No Topo	
Feature	Flat	
Crest Height, H	N/A	ft
Distance from Crest, x	N/A	ft
Slope (H/L)	N/A	
Topographic Factor, K_{zt}	1.00	

Seismic Factors		
Importance Factor, I_E	1	
Short Period Spectral Acceleration, S_s	0.184	g
1 Second Period Spectral Acceleration, S_1	0.055	g
Long-Period Transition Period, T_L	6	
Design Category	B	
Short Period Site Coefficient, F_a	1.60	
Long-Period Site Coefficient, F_v	2.4	

Site Parameters		
Wind Speed, V	118	mph
Wind Speed with Ice, V_i	50	mph
Design Ice Thickness, t_i	1.5	in
Risk Category	II	
Exposure Category	C	
AMSL	163	ft
Site Soil Class	D-Stiff Soil (Assumed)	

Code	
Building Code	2018 IBC
TIA Code	TIA-222-H
ASCE Code	7-16

Site Constants		
Importance Factor, I	1.00	
Wind Direction Prob. Factor, K_d	0.95	
Velocity Pressure Coefficient, K_z	1.42	
Ground Elevation Factor, K_e	0.99	
Rootop Wind Speed-Up Factor, K_s	1.00	
Gust Effect Factor, G_h	1.00	
Design Ice Thickness, t_{iz}	1.77	in
Velocity Pressure, q_z	47.64	psf
Velocity Pressure with Ice, q_{zi}	8.55	psf
Shielding Factor, K_a	0.90	
Flat Velocity Pressure (Ca =2.0)	95.28	psf
Round Velocity Pressure (Ca = 1.2)	57.17	psf
Round Velocity Pressure with Ice (Ca = 1.2)	10.26	psf
Engineer Initials	**AP**	

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Members Forces								
Member Label	**Shape**	**Type**	**w, lbs/ft**	**q_z, psf**	**w_i, lbs/ft**	**q_{zi}, psf**	**E_v, lbs./ft**	**V_s, lbs/ft**
Horizontal	C6X10.5	Beam	10.45	95.283	17.47	10.26	0.41	1.03
Standoff	HSS4X4X4	Beam	12.33	95.283	16.03	10.26	0.48	1.21
Mount Pipe	PIPE_2.0	Beam	3.47	57.17	8.94	10.26	0.14	0.34
Support Rail	PIPE_2.0	Beam	3.47	57.17	8.94	10.26	0.14	0.34
Corner Plate	PL4.5x1/2	Beam	7.66	95.283	13.591	10.26	0.301	0.75
Support Rail Corner Angle	L2.5x2.5x4	Beam	4.05	95.283	11.449	10.26	0.159	0.4
Cross Member	C6X10.5	Beam	10.45	95.283	17.47	10.26	0.41	1.03

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Sector 1							
		Wind Force				Dimensions	Weights
Appurtenances	Rad. Ht., ft	Front EPA ft^2	Side EPA ft^2	0° Force lbs.	90° Force lbs.	H/W/D, in	$Wt./Wt._{ice}$, lbs.
HPA65R-BU6AA-K Antenna	170	7.85	5.61	336.61	240.36	71.1\11.7\7.7	41.9\206.38
HPA-65R-BUU-H6 Antenna	170	9.66	6.45	414.10	276.56	72\14.8\9	50.7\251.75
DMP65R-BU6DA Antenna	170	12.71	5.62	544.94	240.77	71.2\20.7\7.7	79.4\291.62
8843 B2/B66A RRH	170	1.64	1.35	70.28	58.03	14.9\13.2\10.9	72\74.83
RRUS-32 B30 RRH	170	2.69	1.57	115.44	67.43	26.7\12.1\6.7	60\86.63
4449 B5/B12 RRH	170	1.65	1.30	70.75	55.74	15\13.2\10.4	73\73.33
DC6-48-60-18-8F Squid	170	2.74	2.74	117.30	117.30	31.4\10.24\10.24	26.2\108.1

*Dish force coefficient is calculated per Annex C of TIA-222-H, if available.

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West Bridgewater, MA 02379
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Sector 1 Continue…									
		Wind Force with Ice				Wind Force V = 30 mph		Seismic Force	
Appurtenances	Rad. Ht., ft	Front EPA ft^2	Side EPA ft^2	0° Force lbs.	90° Force lbs.	0° Force lbs.	90° Force lbs.	Ev, lbs	Vs, lbs
HPA65R-BU6AA-K Antenna	170	5.95	4.61	106.23	78.66	21.76	15.54	1.64	4.11
HPA-65R-BUU-H6 Antenna	170	7.08	5.12	128.84	89.05	26.77	17.88	1.99	4.98
DMP65R-BU6DA Antenna	170	8.97	4.62	166.88	78.79	35.22	15.56	3.12	7.79
8843 B2/B66A RRH	170	1.50	1.29	24.16	20.38	4.54	3.75	2.83	7.07
RRUS-32 B30 RRH	170	2.30	1.53	38.42	23.85	7.46	4.36	2.36	5.89
4449 B5/B12 RRH	170	1.51	1.26	24.31	19.67	4.57	3.60	2.87	7.16
DC6-48-60-18-8F Squid	170	2.34	2.34	39.09	39.09	7.58	7.58	1.03	2.57

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Sector 2							
		Wind Force				Dimensions	Weights
Appurtenances	Rad. Ht., ft	Front EPA ft^2	Side EPA ft^2	0° Force lbs.	90° Force lbs.	H/W/D, in	$Wt./Wt._{ice}$, lbs.
HPA65R-BU6AA-K Antenna	170	7.85	5.61	264.42	312.55	71.1\11.7\7.7	41.9\206.38
HPA-65R-BUU-H6 Antenna	170	9.66	6.45	310.94	379.71	72\14.8\9	50.7\251.75
DMP65R-BU6DA Antenna	170	12.71	5.62	316.81	468.90	71.2\20.7\7.7	79.4\291.62
8843 B2/B66A RRH	170	1.64	1.35	61.09	67.21	14.9\13.2\10.9	72\74.83
RRUS-32 B30 RRH	170	2.69	1.57	79.44	103.44	26.7\12.1\6.7	60\86.63
4449 B5/B12 RRH	170	1.65	1.30	59.49	67.00	15\13.2\10.4	73\73.33
DC6-48-60-18-8F Squid	170	2.74	2.74	117.30	117.30	31.4\10.24\10.24	26.2\108.1

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Sector 2 Continue…									
		Wind Force with Ice				Wind Force V = 30 mph		Seismic Force	
Appurtenances	Rad. Ht., ft	Front EPA ft^2	Side EPA ft^2	0° Force lbs.	90° Force lbs.	0° Force lbs.	90° Force lbs.	Ev, lbs	Vs, lbs
HPA65R-BU6AA-K Antenna	170	5.95	4.61	85.55	99.34	17.09	20.20	1.64	4.11
HPA-65R-BUU-H6 Antenna	170	7.08	5.12	99.00	118.89	20.10	24.54	1.99	4.98
DMP65R-BU6DA Antenna	170	8.97	4.62	100.81	144.86	20.48	30.31	3.12	7.79
8843 B2/B66A RRH	170	1.50	1.29	21.32	23.22	3.95	4.34	2.83	7.07
RRUS-32 B30 RRH	170	2.30	1.53	27.49	34.78	5.13	6.69	2.36	5.89
4449 B5/B12 RRH	170	1.51	1.26	20.83	23.15	3.85	4.33	2.87	7.16
DC6-48-60-18-8F Squid	170	2.34	2.34	39.09	39.09	7.58	7.58	1.03	2.57

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Sector 3							
		Wind Force				Dimensions	Weights
Appurtenances	Rad. Ht., ft	Front EPA ft^2	Side EPA ft^2	0° Force lbs.	90° Force lbs.	H/W/D, in	Wt./$Wt._{ice}$, lbs.
HPA65R-BU6AA-K Antenna	170	7.85	5.61	264.42	312.55	71.1\11.7\7.7	41.9\206.38
HPA-65R-BUU-H6 Antenna	170	9.66	6.45	310.94	379.71	72\14.8\9	50.7\251.75
DMP65R-BU6DA Antenna	170	12.71	5.62	316.81	468.90	71.2\20.7\7.7	79.4\291.62
8843 B2/B66A RRH	170	1.64	1.35	61.09	67.21	14.9\13.2\10.9	72\74.83
RRUS-32 B30 RRH	170	2.69	1.57	79.44	103.44	26.7\12.1\6.7	60\86.63
4449 B5/B12 RRH	170	1.65	1.30	59.49	67.00	15\13.2\10.4	73\73.33

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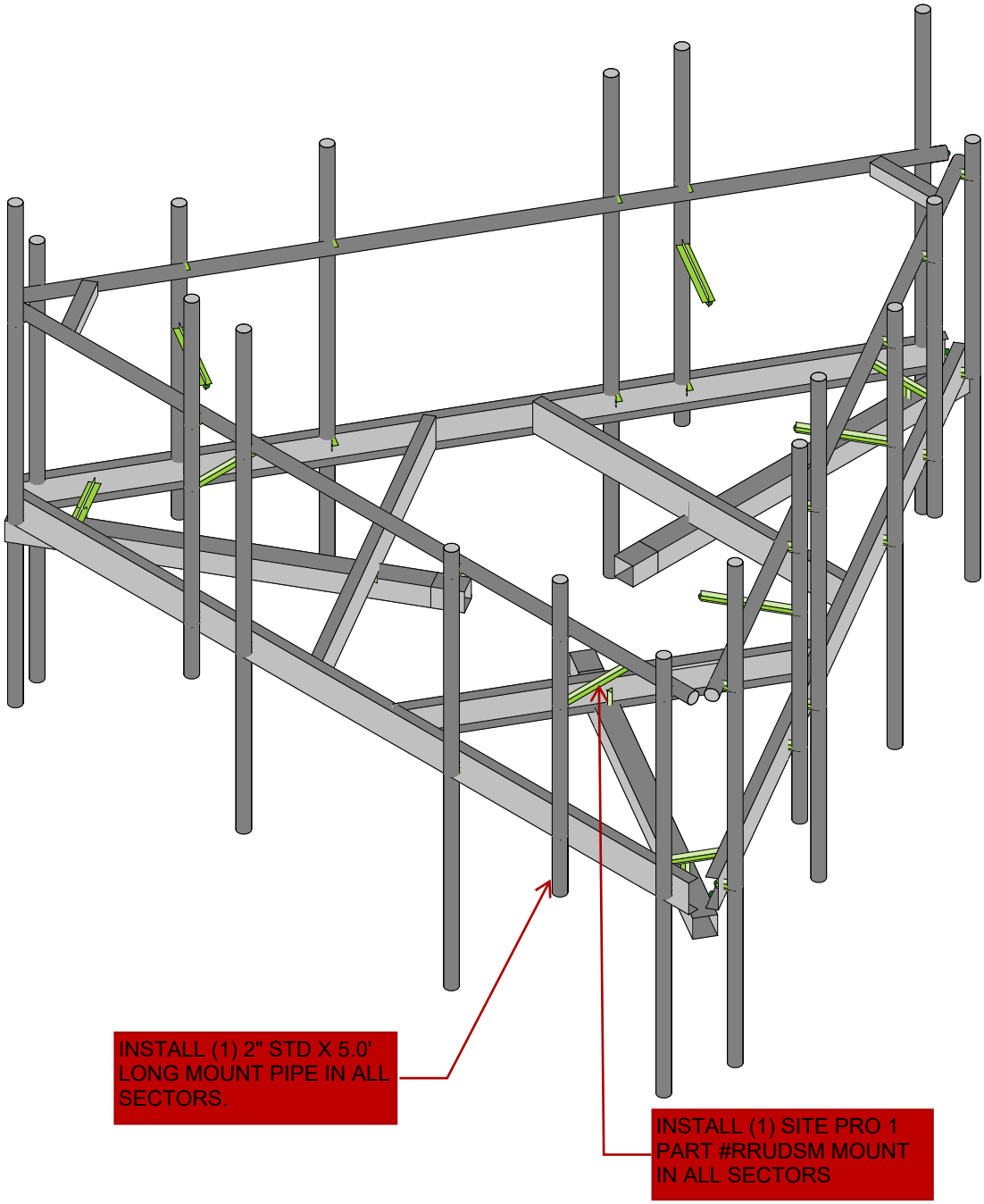
Sector 3 Continue…									
		Wind Force with Ice				Wind Force V = 30 mph		Seismic Force	
Appurtenances	Rad. Ht., ft	Front EPA ft^2	Side EPA ft^2	0° Force lbs.	90° Force lbs.	0° Force lbs.	90° Force lbs.	Ev, lbs	Vs, lbs
HPA65R-BU6AA-K Antenna	170	5.95	4.61	85.55	99.34	17.09	20.20	1.64	4.11
HPA-65R-BUU-H6 Antenna	170	7.08	5.12	99.00	118.89	20.10	24.54	1.99	4.98
DMP65R-BU6DA Antenna	170	8.97	4.62	100.81	144.86	20.48	30.31	3.12	7.79
8843 B2/B66A RRH	170	1.50	1.29	21.32	23.22	3.95	4.34	2.83	7.07
RRUS-32 B30 RRH	170	2.30	1.53	27.49	34.78	5.13	6.69	2.36	5.89
4449 B5/B12 RRH	170	1.51	1.26	20.83	23.15	3.85	4.33	2.87	7.16

Existing Mount Results



Centerline Communication...	CT1139_Mount	Rendered
AP		Mar 16, 2021 at 4:39 PM
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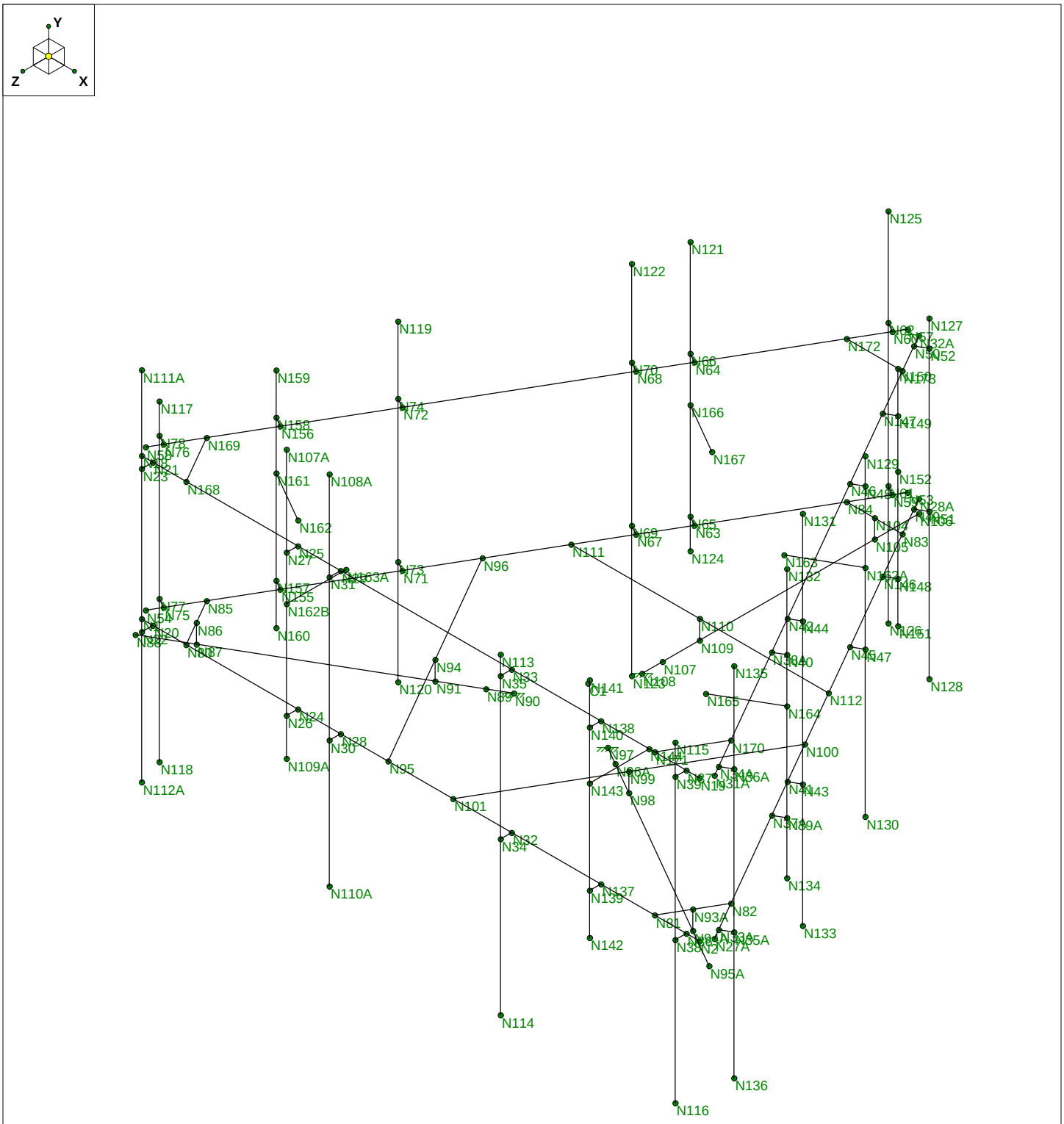

Centerline Communication...	CT1139_Mount	Wireframe
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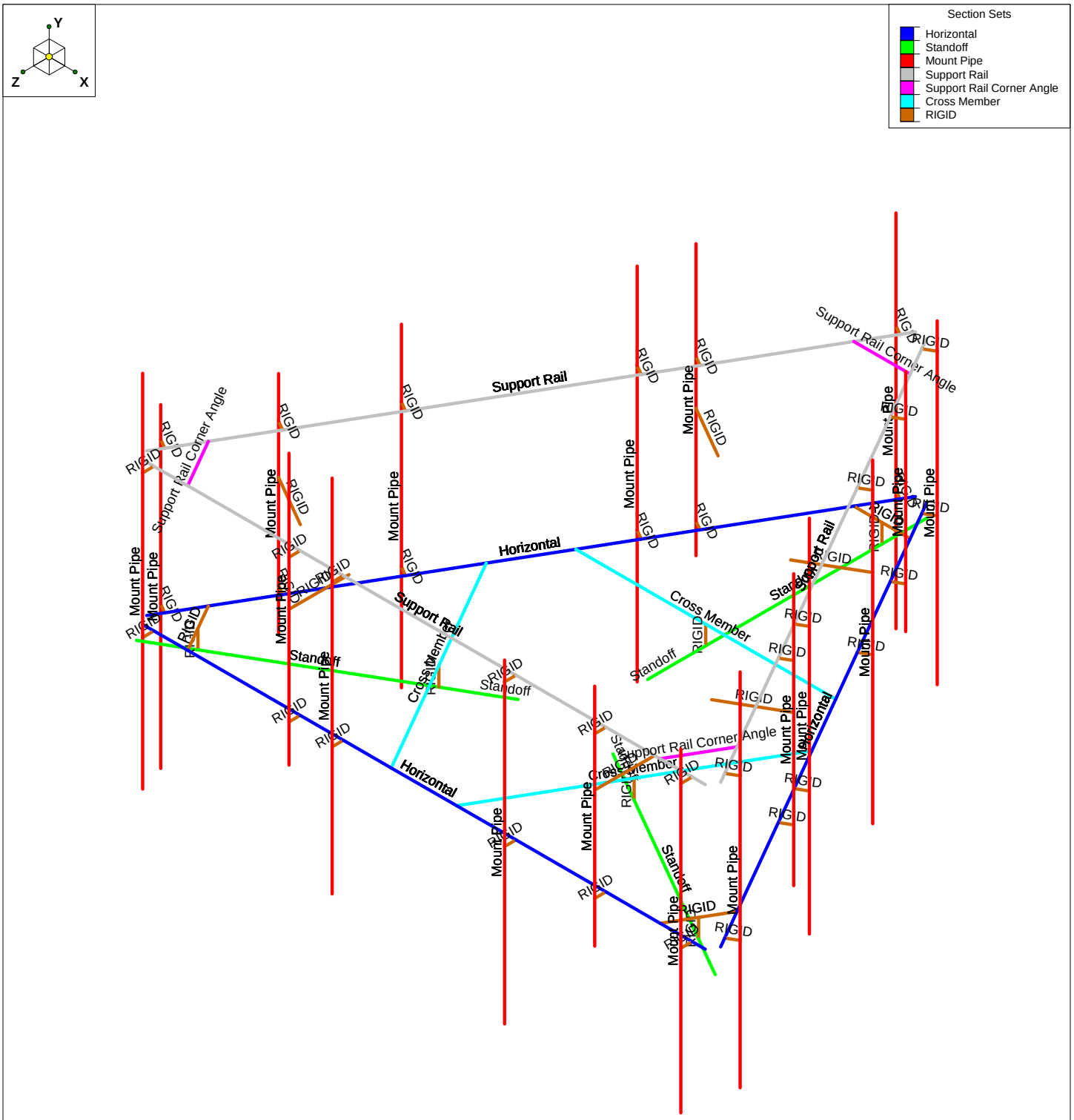
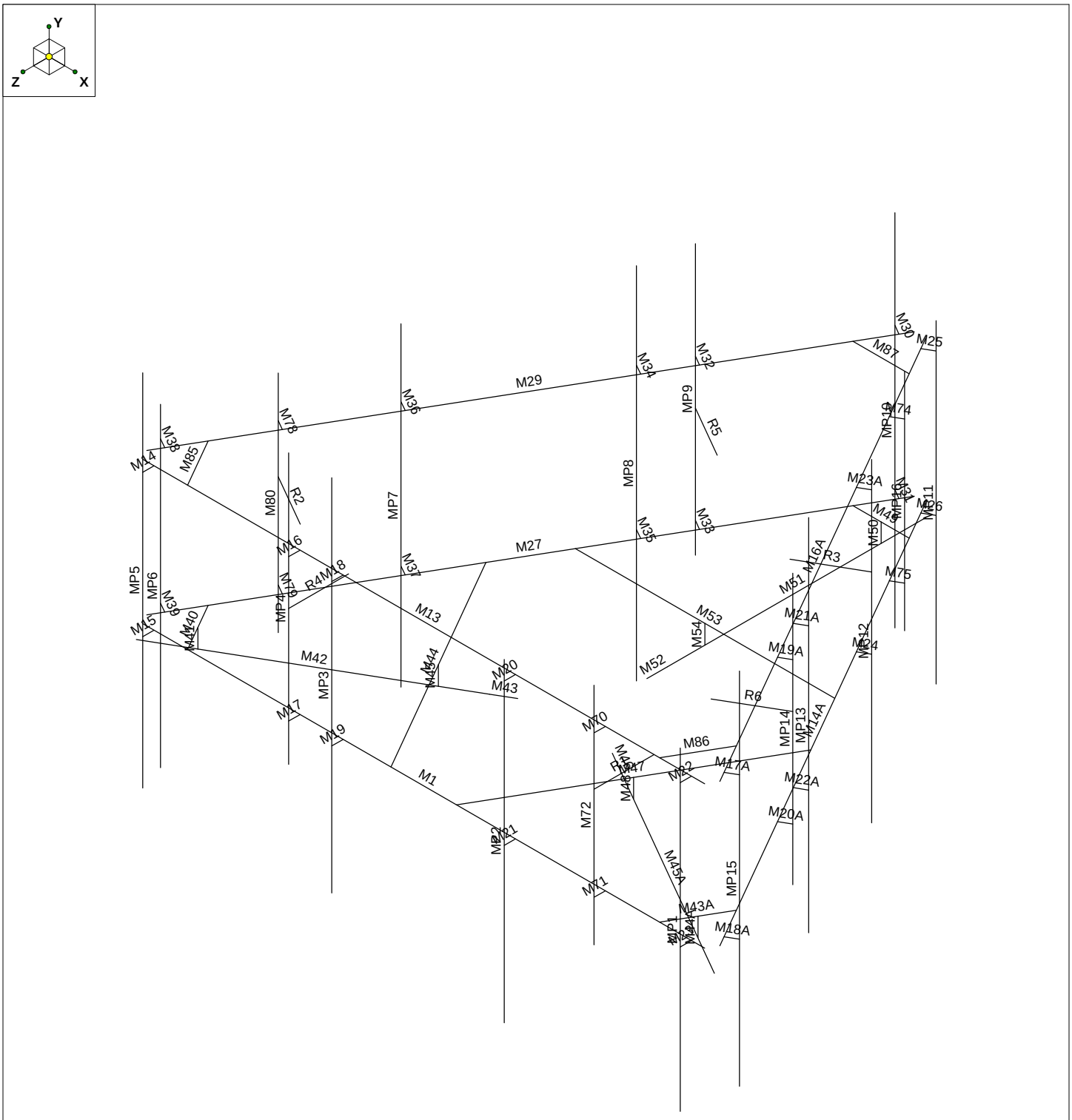
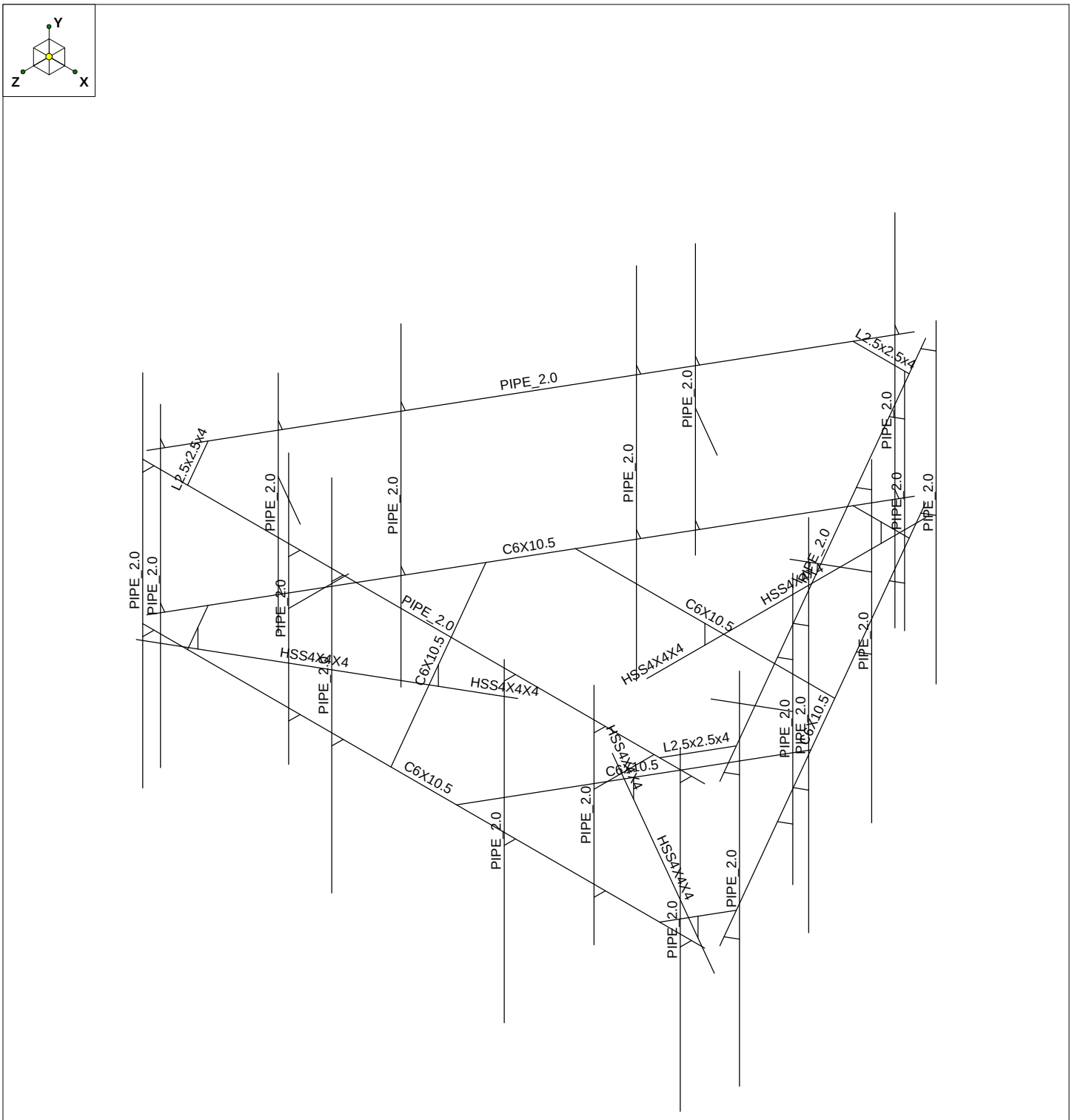


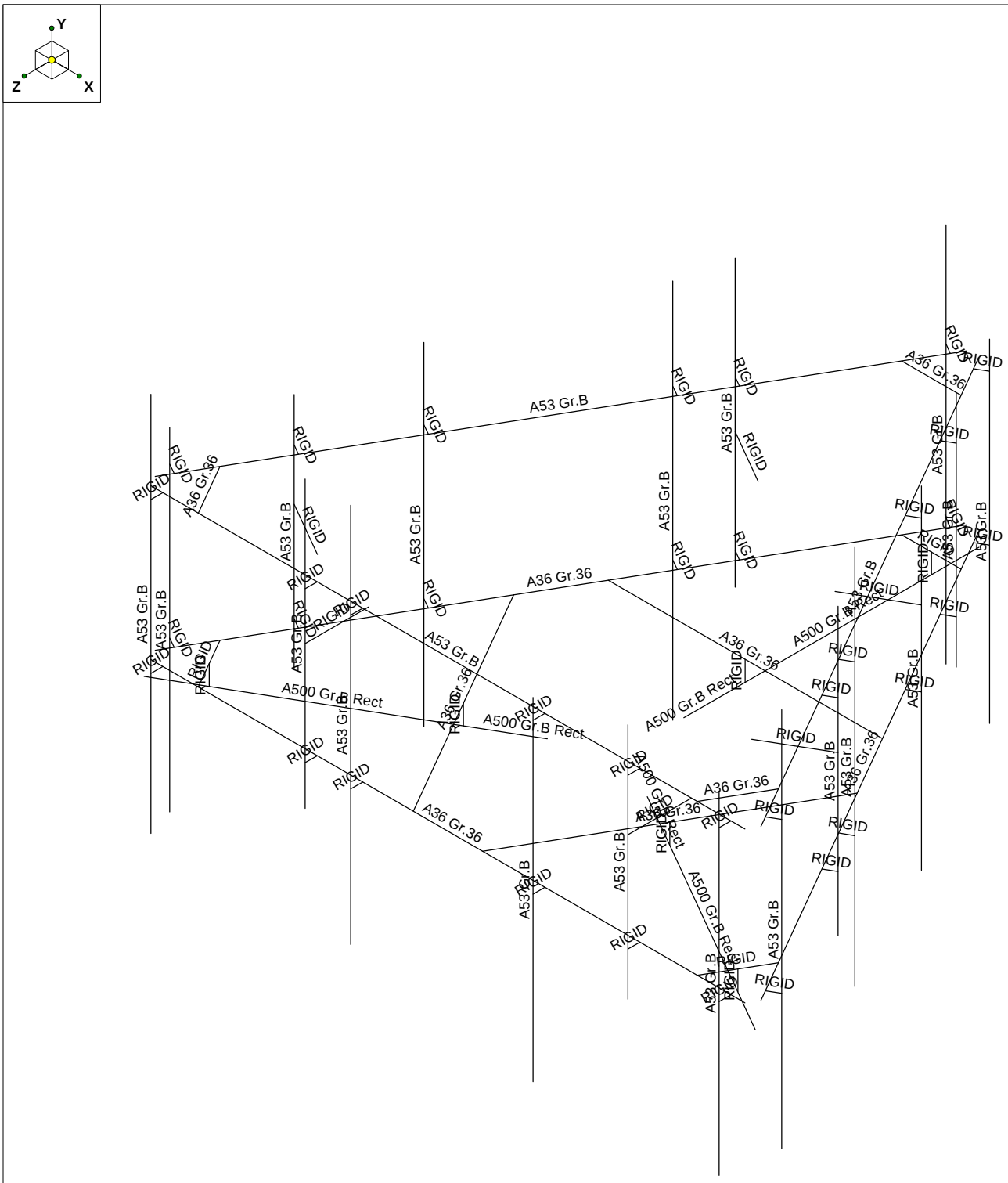
Centerline Communication...		Section Sets
AP	CT1139_Mount	Mar 16, 2021 at 4:39 PM
		CT1139.r3d



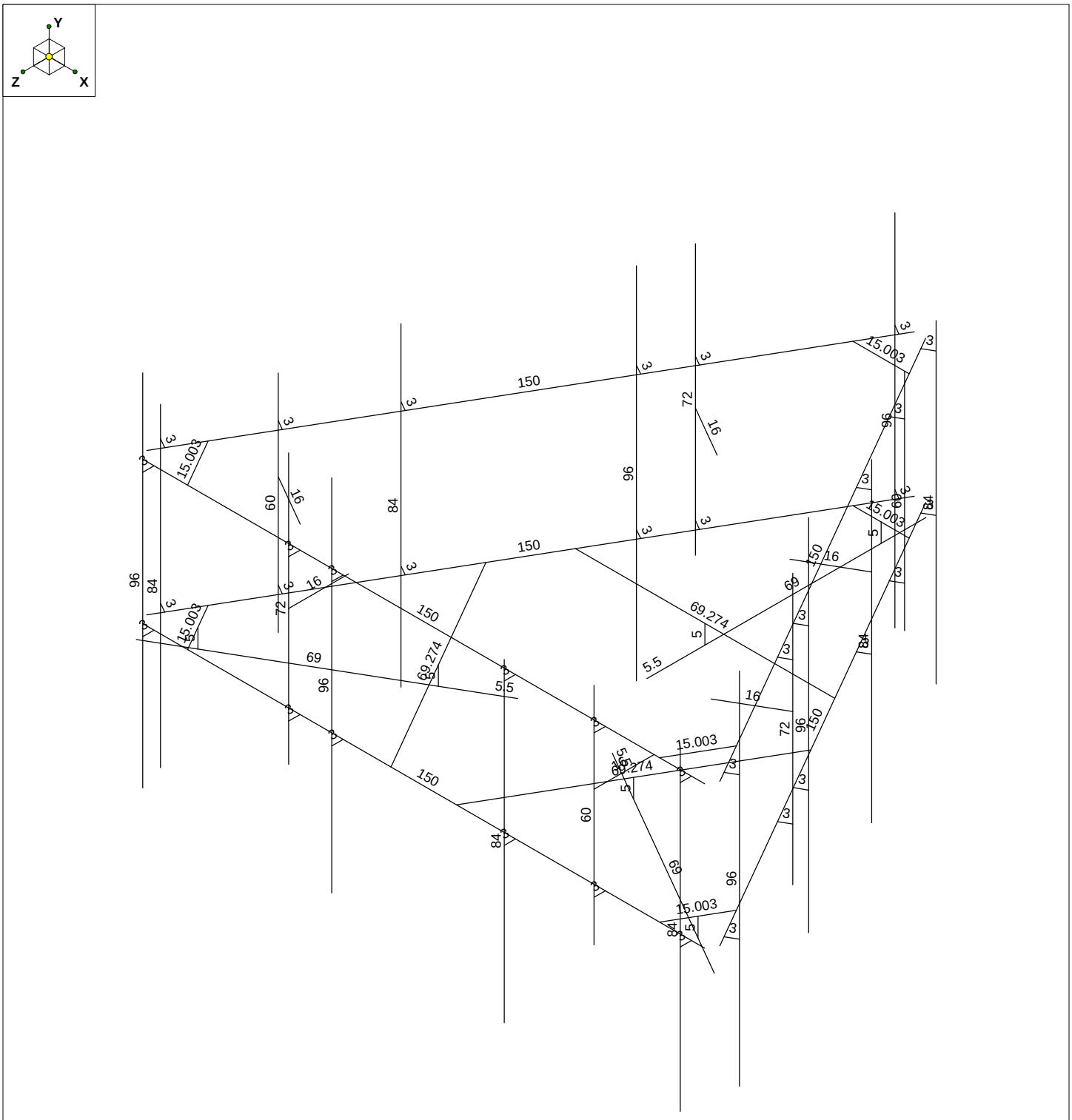
Centerline Communication...	CT1139_Mount	Member Label
AP		Mar 16, 2021 at 4:39 PM
		CT1139.r3d



Centerline Communication...	CT1139_Mount	Member Shape
AP		Mar 16, 2021 at 4:40 PM
		CT1139.r3d

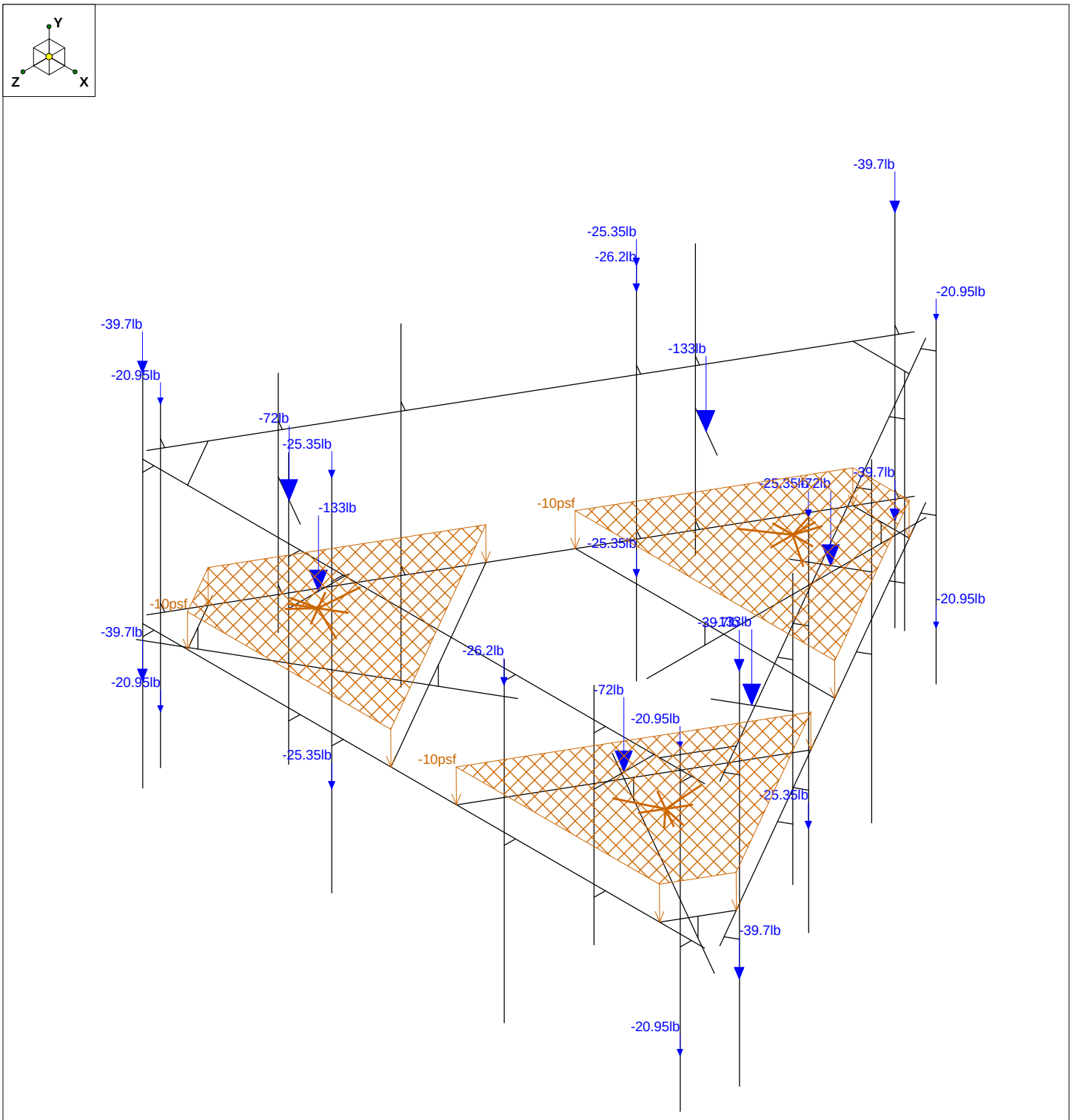


Centerline Communication...		Material Sets
AP	CT1139_Mount	Mar 16, 2021 at 4:40 PM
		CT1139.r3d



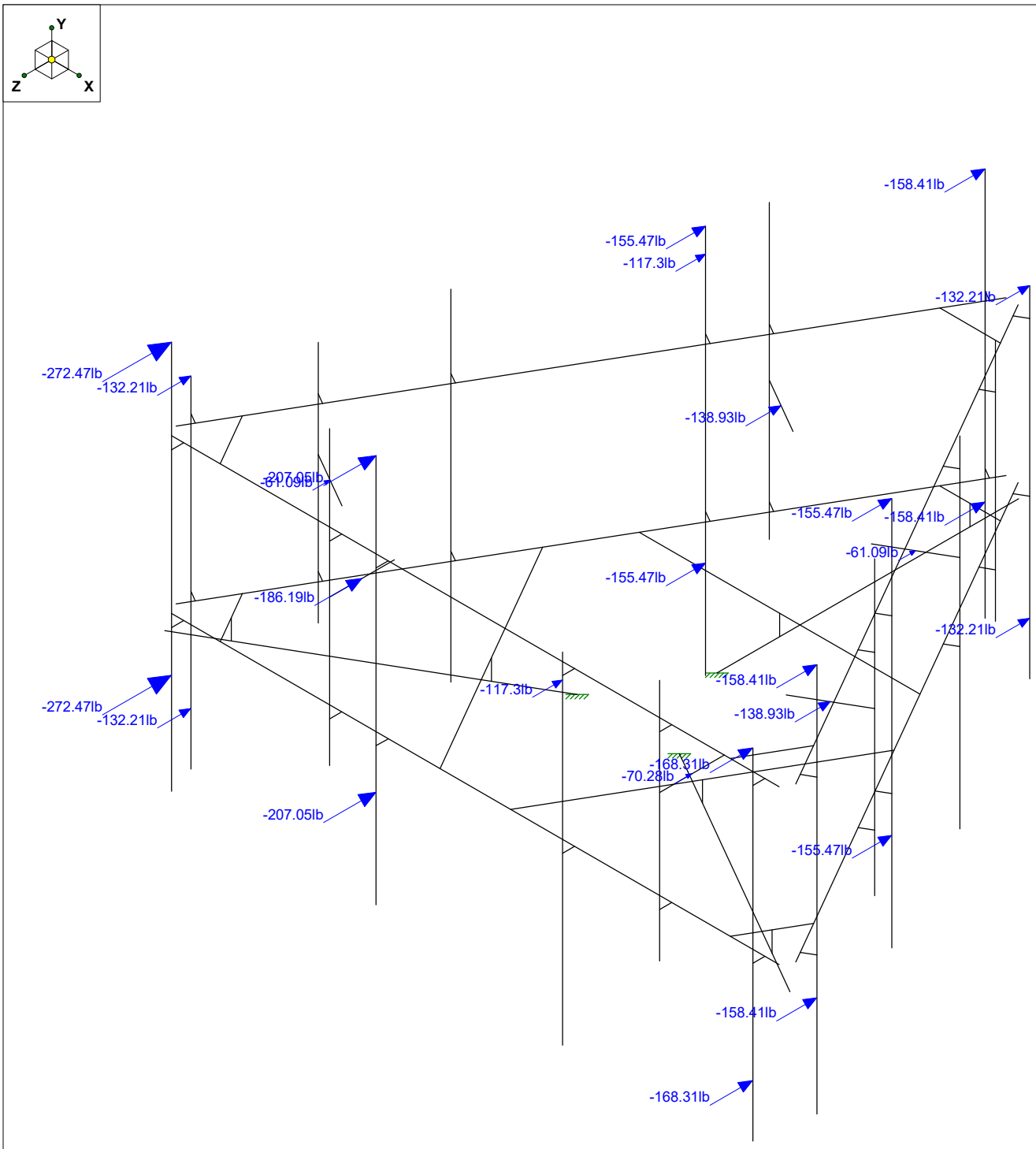
Member Length (in) Displayed

Centerline Communication...	CT1139_Mount	Member Length
AP		Mar 16, 2021 at 4:40 PM
		CT1139.r3d



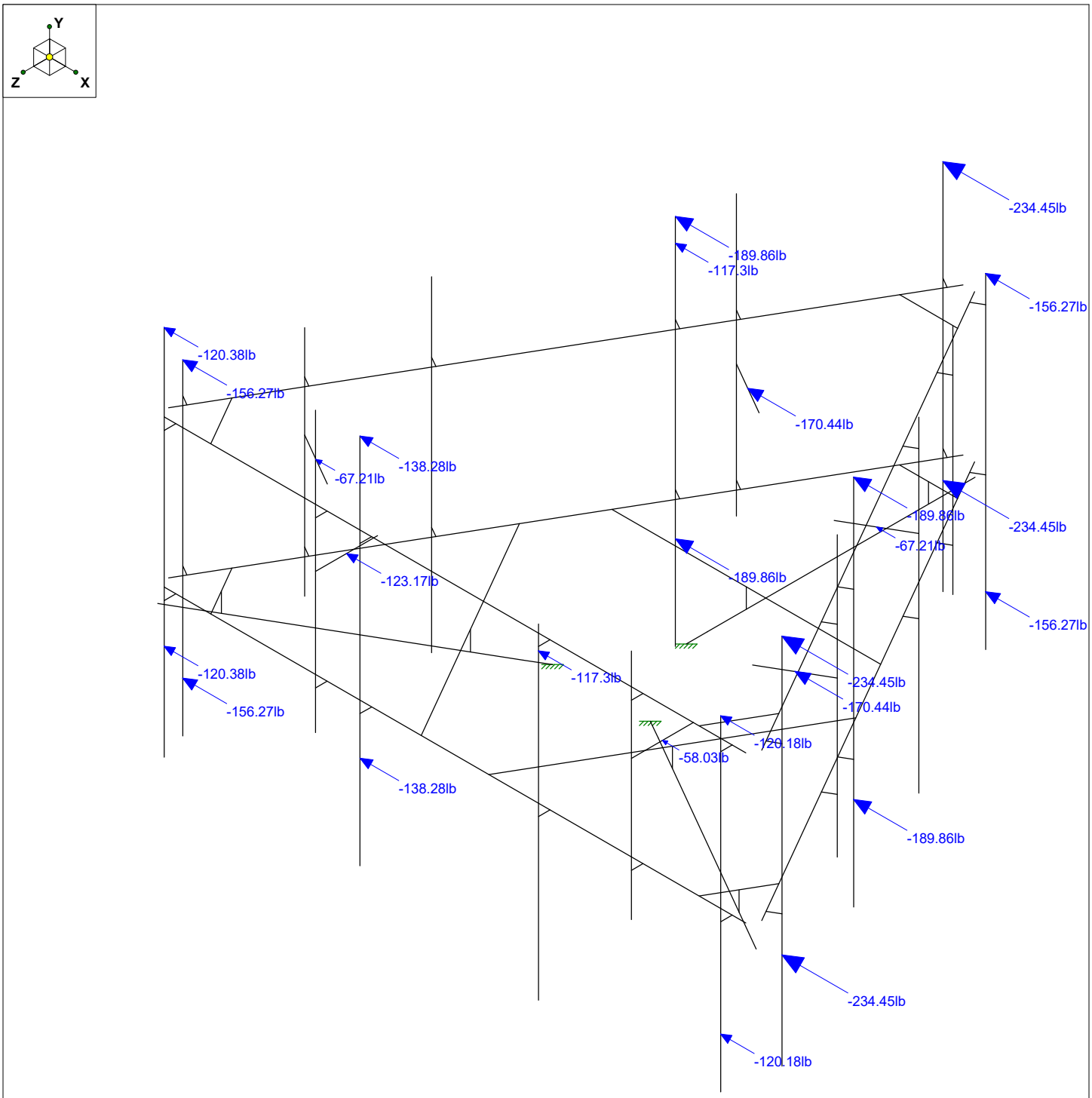
Loads: BLC 1, Dead Load

Centerline Communication...	CT1139_Mount	Dead Load
AP		Mar 16, 2021 at 4:40 PM
		CT1139.r3d



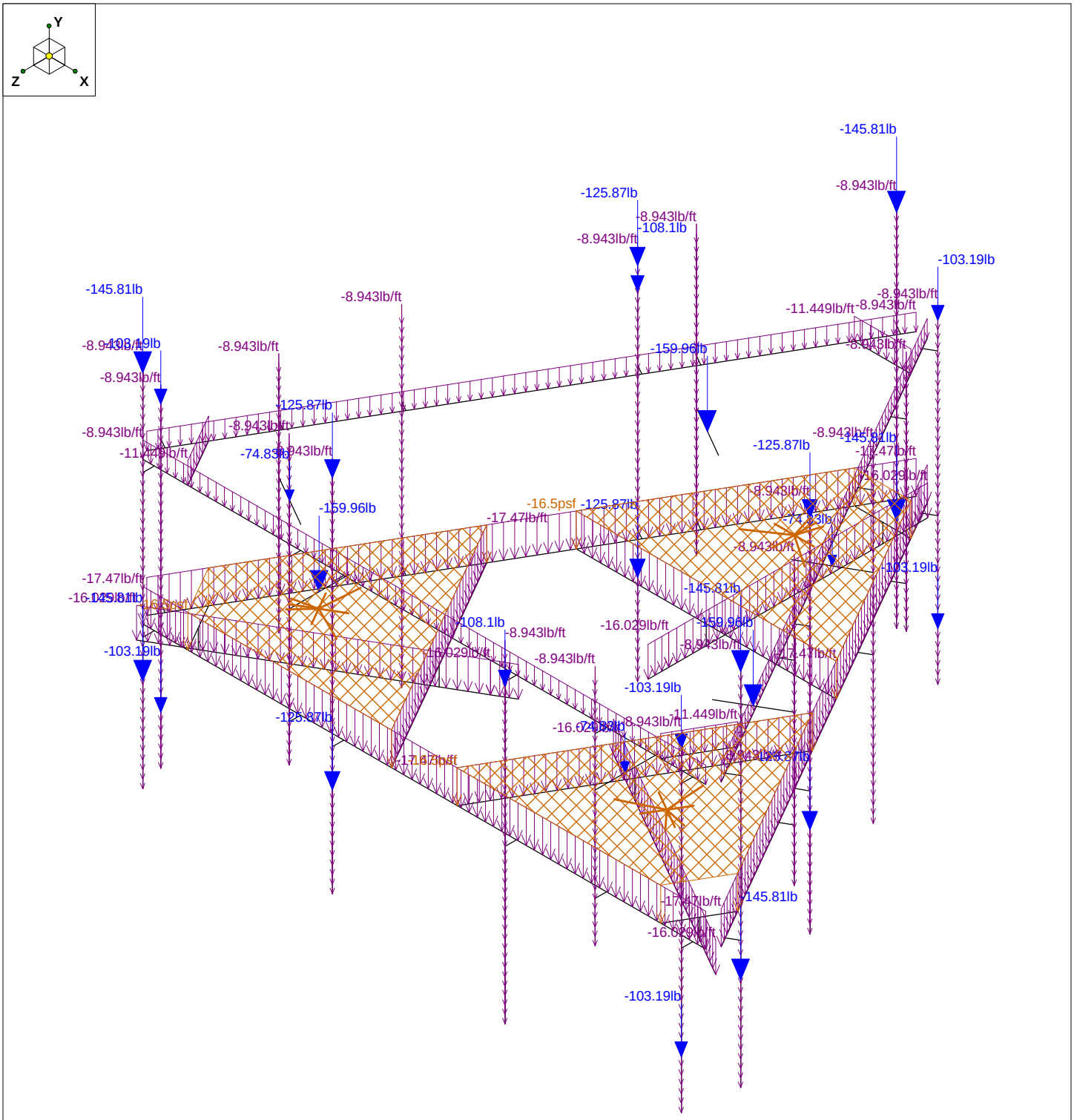
Loads: BLC 2, Wind 0
Envelope Only Solution

Centerline Communication...	CT1139_Mount	WIND 0
AP		Mar 17, 2021 at 10:08 AM
		CT1139.r3d



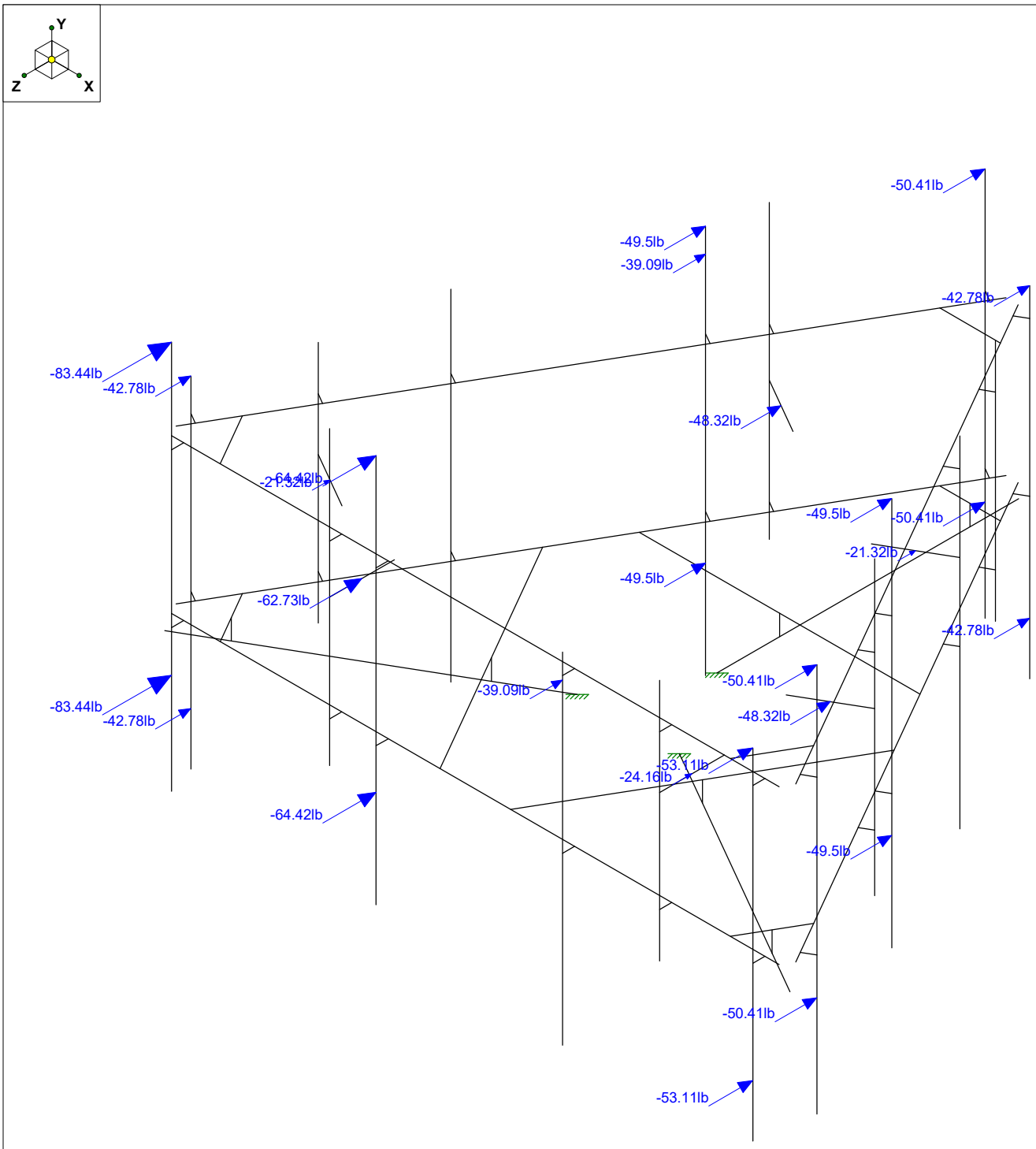
Loads: BLC 5, Wind 90
Envelope Only Solution

Centerline Communication...	CT1139_Mount	WIND 90
AP		Mar 17, 2021 at 10:09 AM
		CT1139.r3d



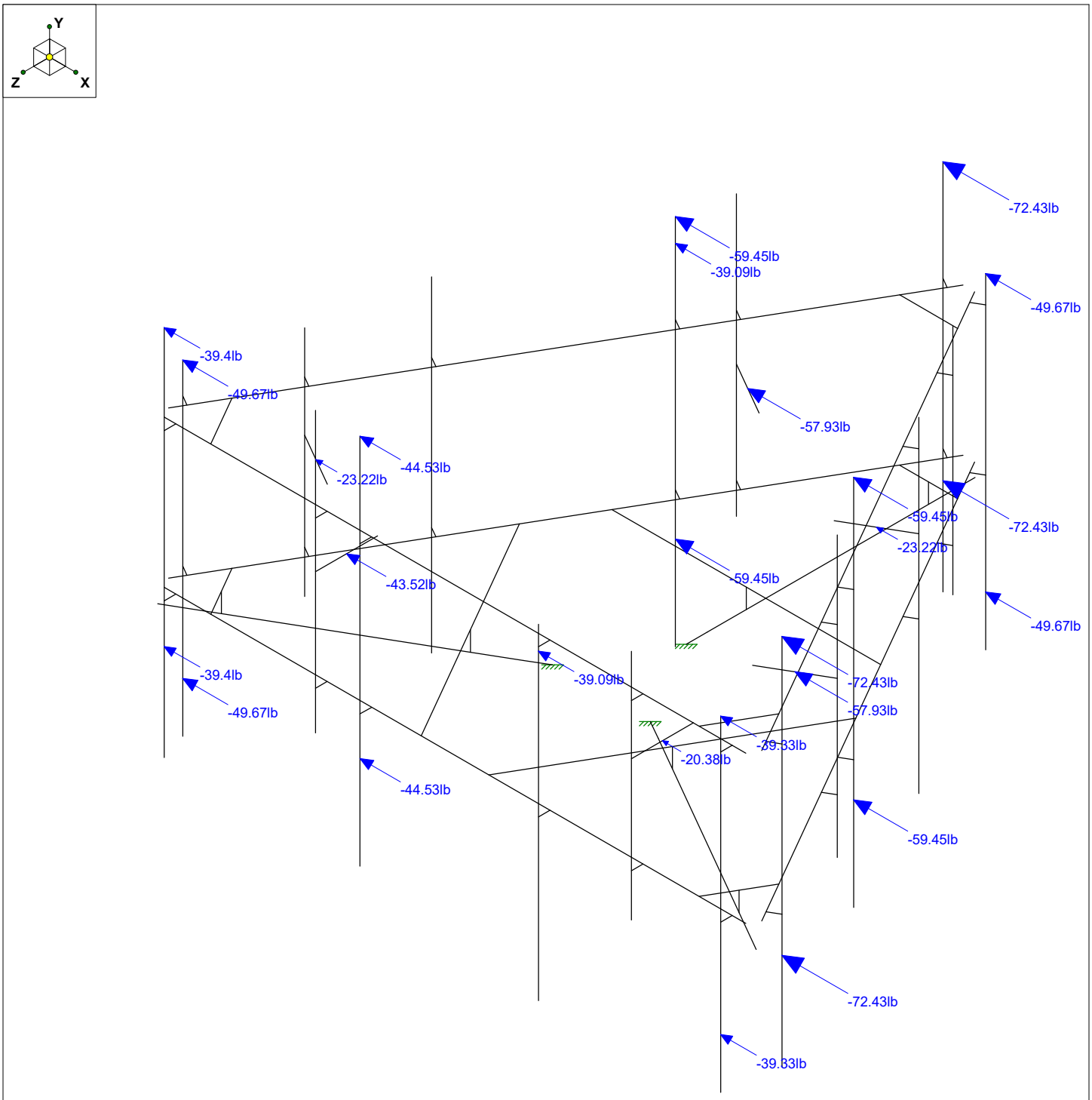
Loads: BLC 9, Ice Weight

Centerline Communication...	CT1139_Mount	Ice Weight
AP		Mar 16, 2021 at 4:41 PM
		CT1139.r3d



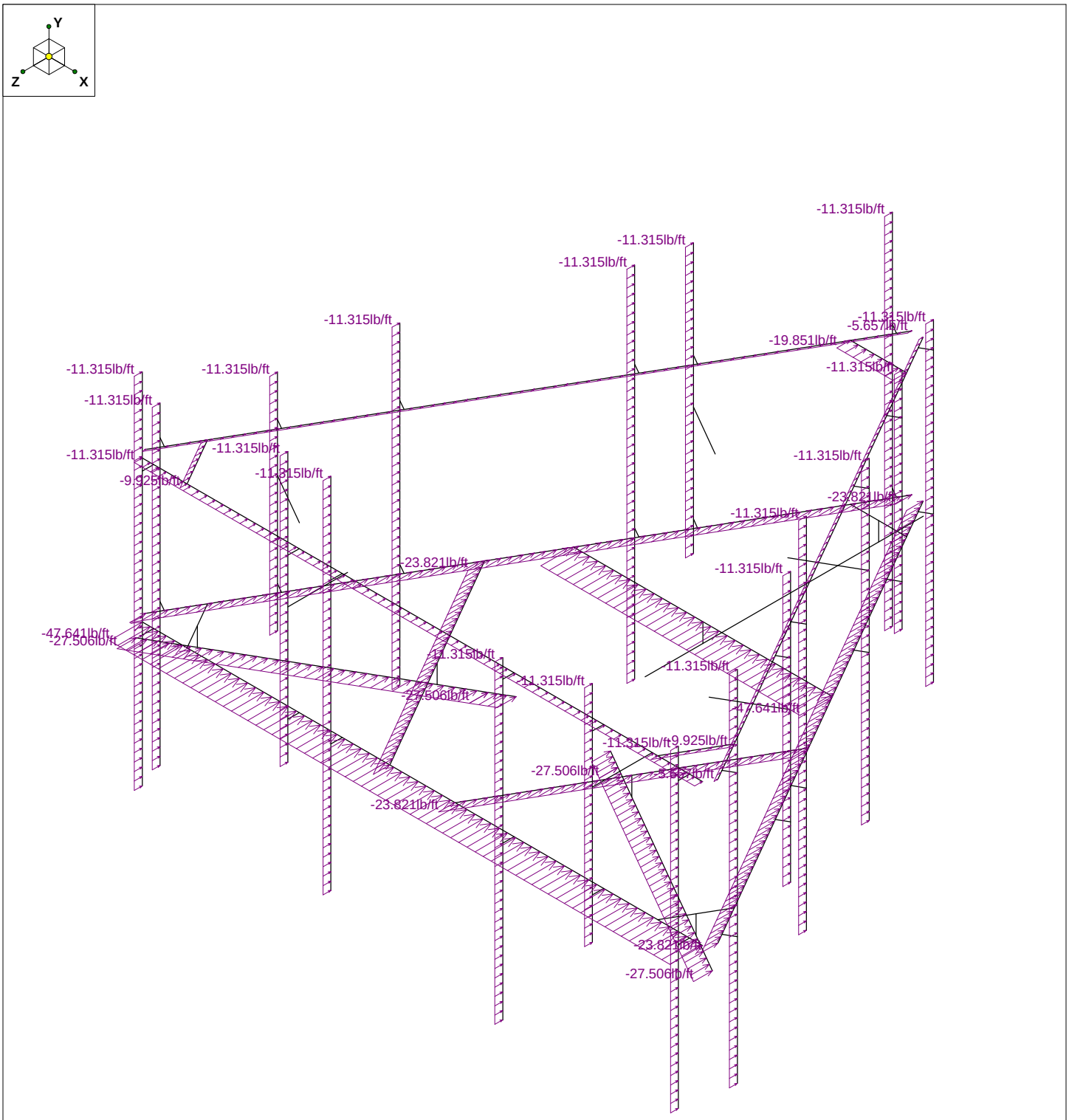
Loads: BLC 10, Ice + Wind 0
Envelope Only Solution

Centerline Communication...	CT1139_Mount	ICE + WIND 0
AP		Mar 17, 2021 at 10:09 AM
		CT1139.r3d



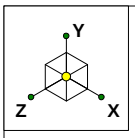
Loads: BLC 13, Ice + Wind 90
Envelope Only Solution

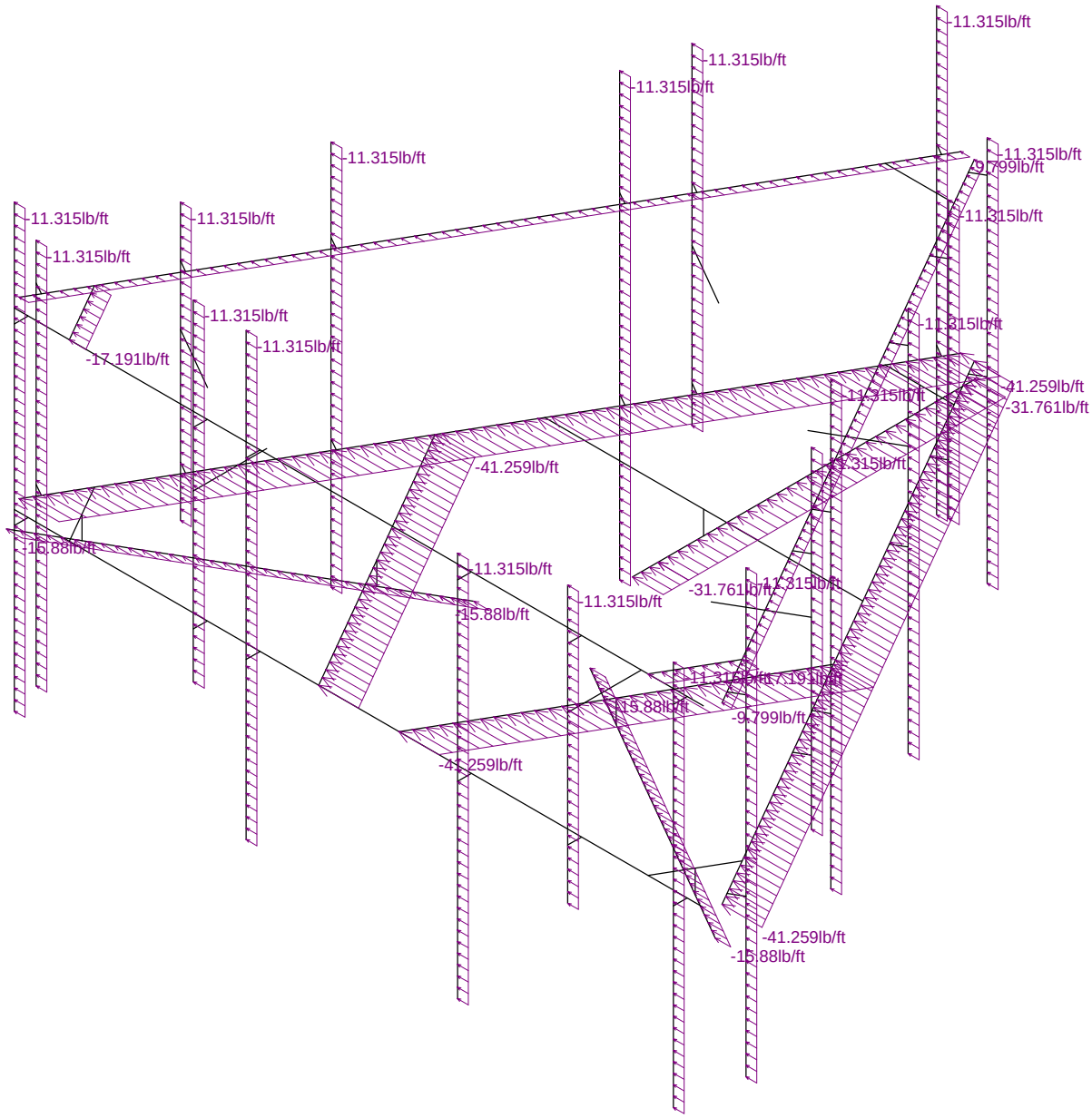
Centerline Communication...	CT1139_Mount	ICE + WIND 90
AP		Mar 17, 2021 at 10:09 AM
		CT1139.r3d



Loads: BLC 17, Distri. Wind Z

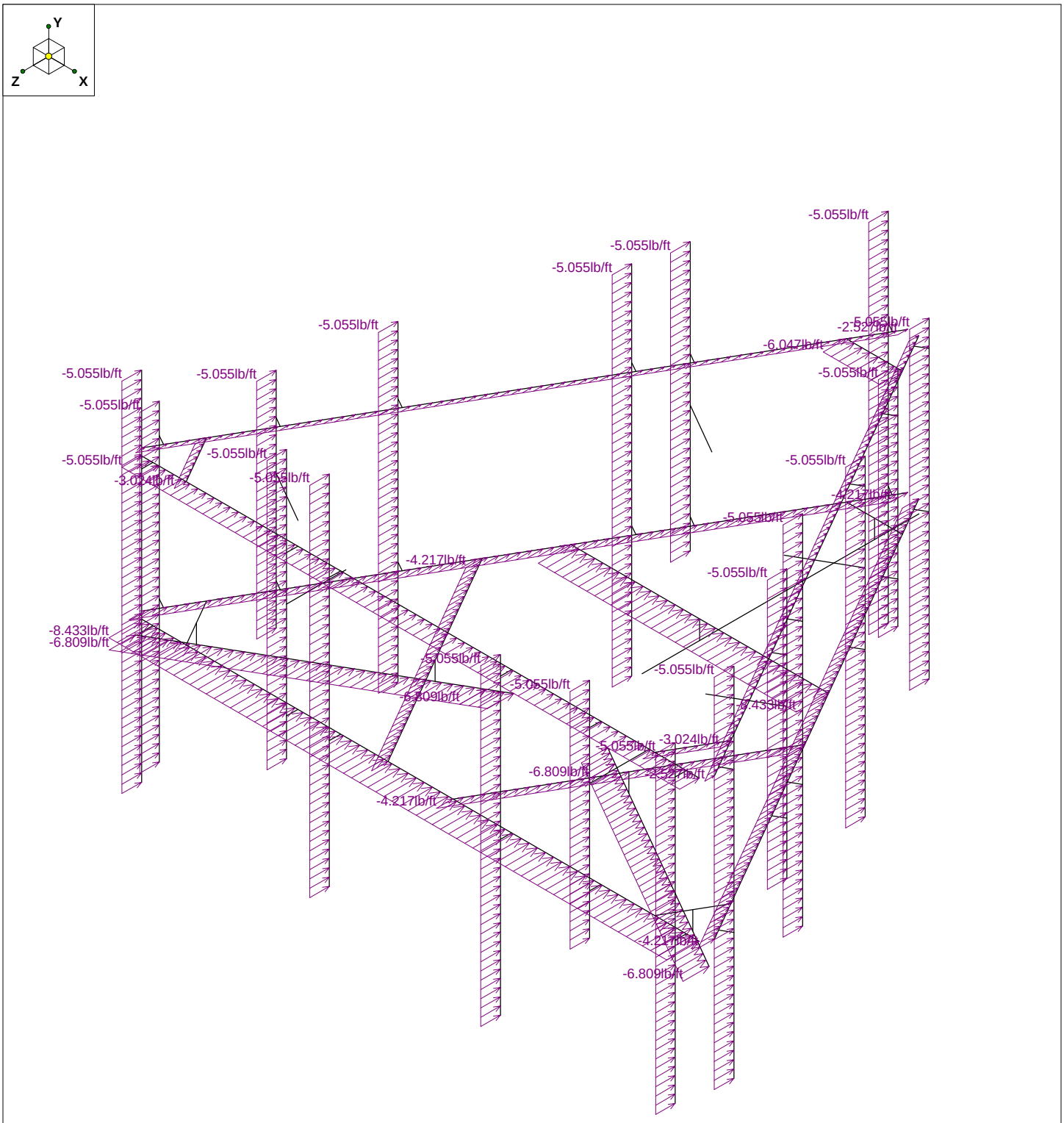
Centerline Communication...		Distr. Wind 0
AP	CT1139_Mount	Mar 16, 2021 at 4:42 PM
		CT1139.r3d





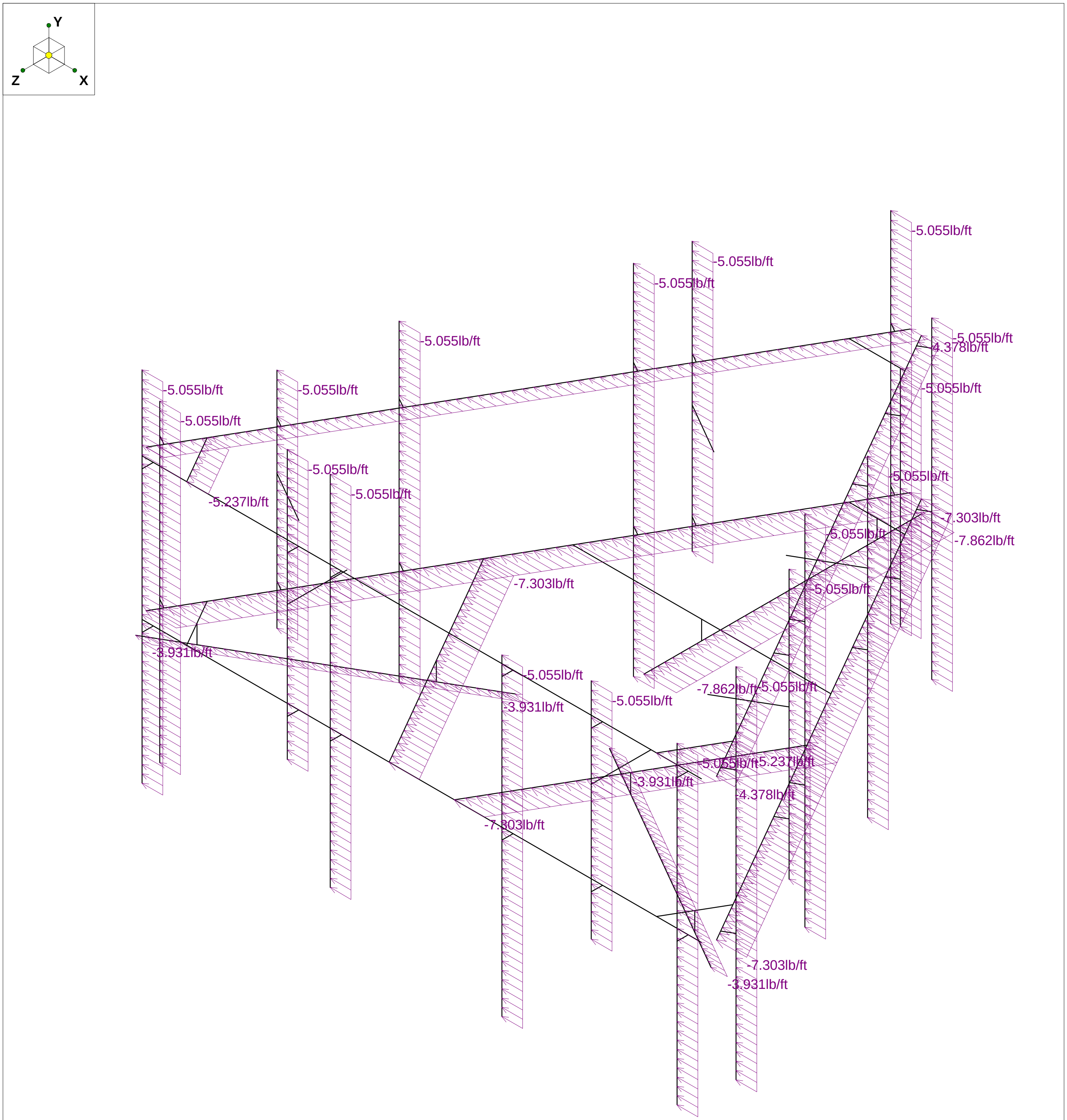
Loads: BLC 18, Distri. Wind X

Centerline Communication...		Distr. Wind 90
AP	CT1139_Mount	Mar 16, 2021 at 4:42 PM
		CT1139.r3d



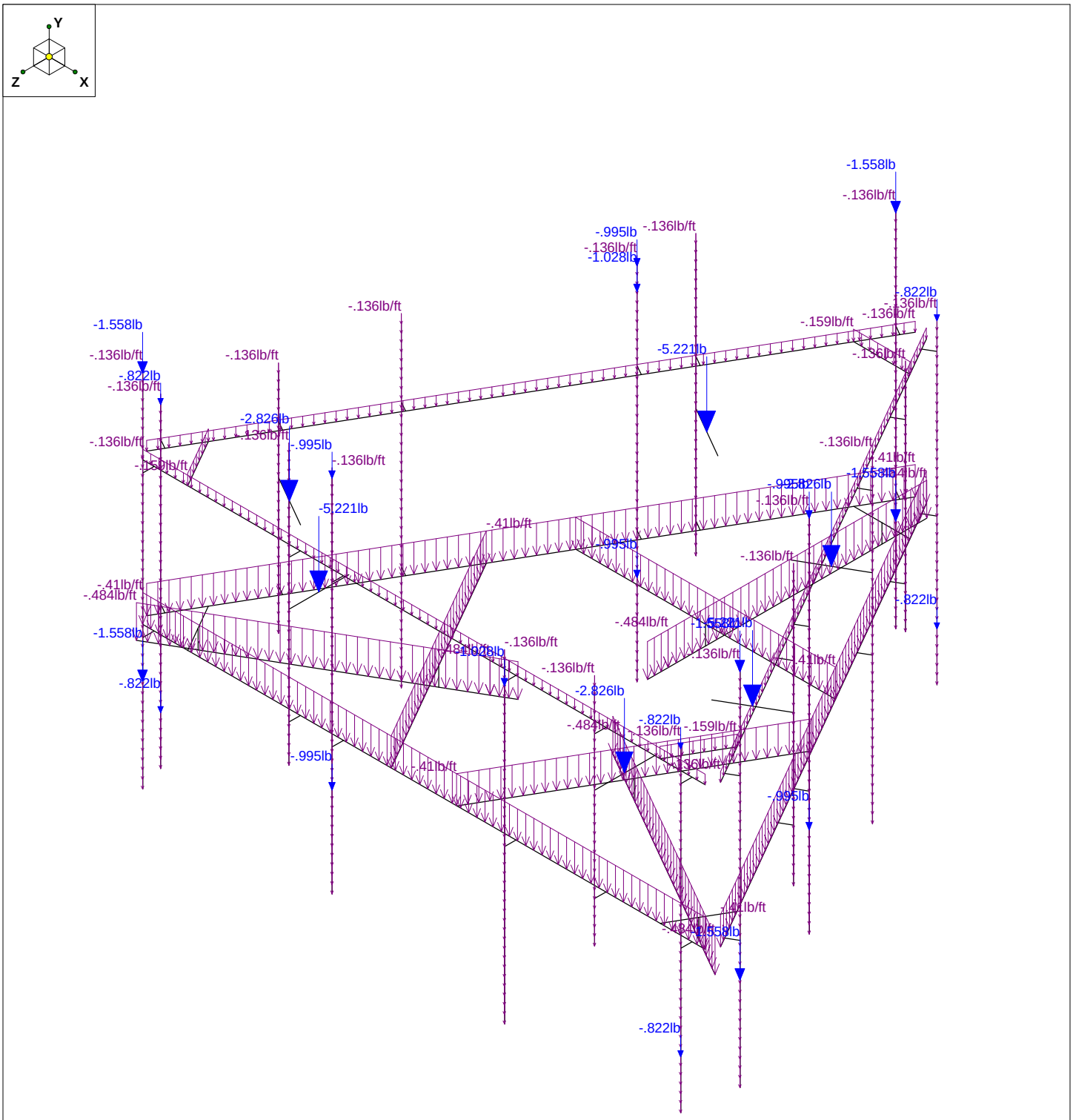
Loads: BLC 19, Distri. Ice + Wind Z

Centerline Communication...	CT1139_Mount	Distr. Ice + Wind 0
AP		Mar 16, 2021 at 4:42 PM
		CT1139.r3d



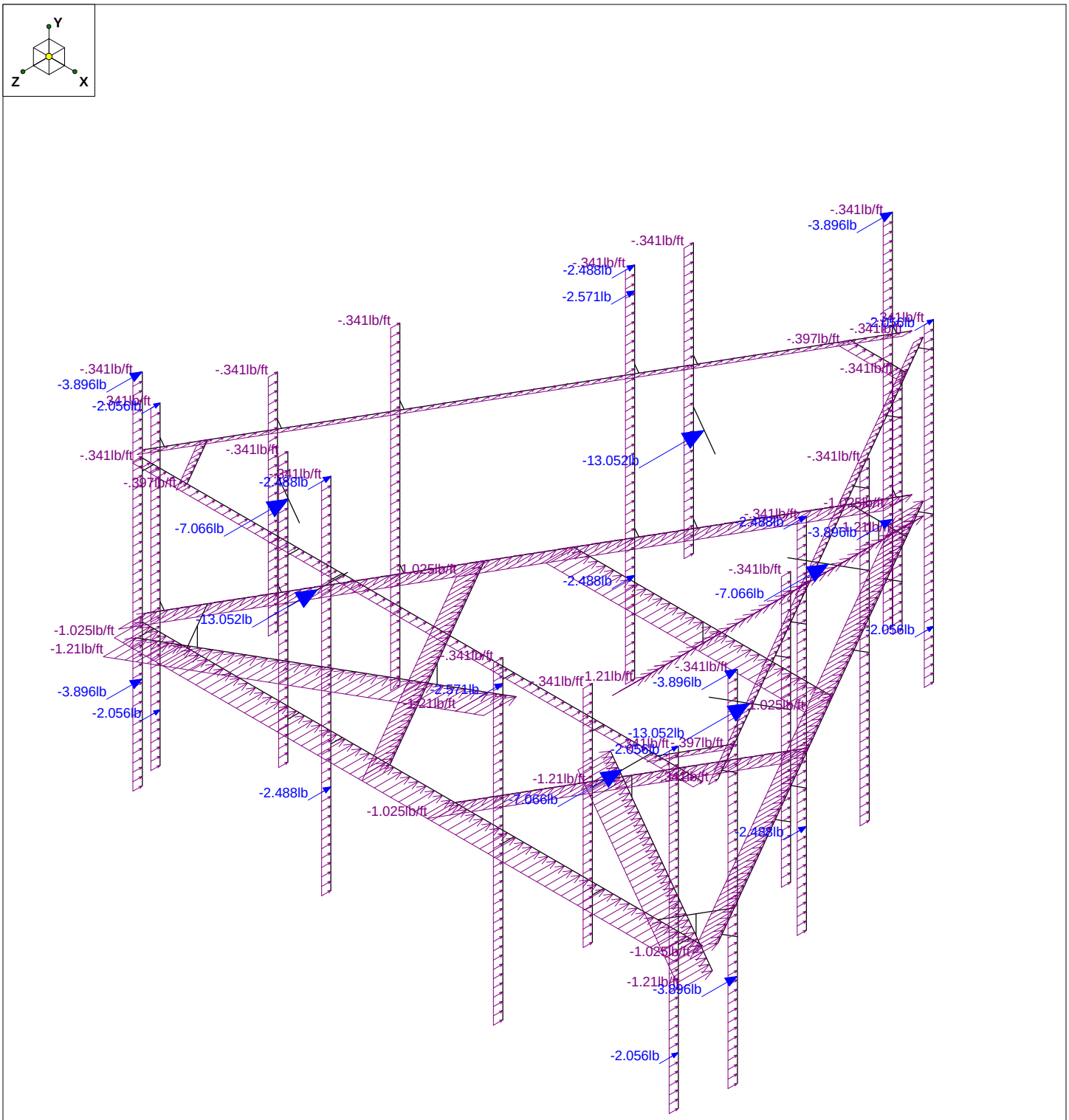
Loads: BLC 20, Distrr. Ice + Wind X

Centerline Communication...	CT1139_Mount	Distr. Ice + Wind 90
AP		Mar 16, 2021 at 4:43 PM
		CT1139.r3d



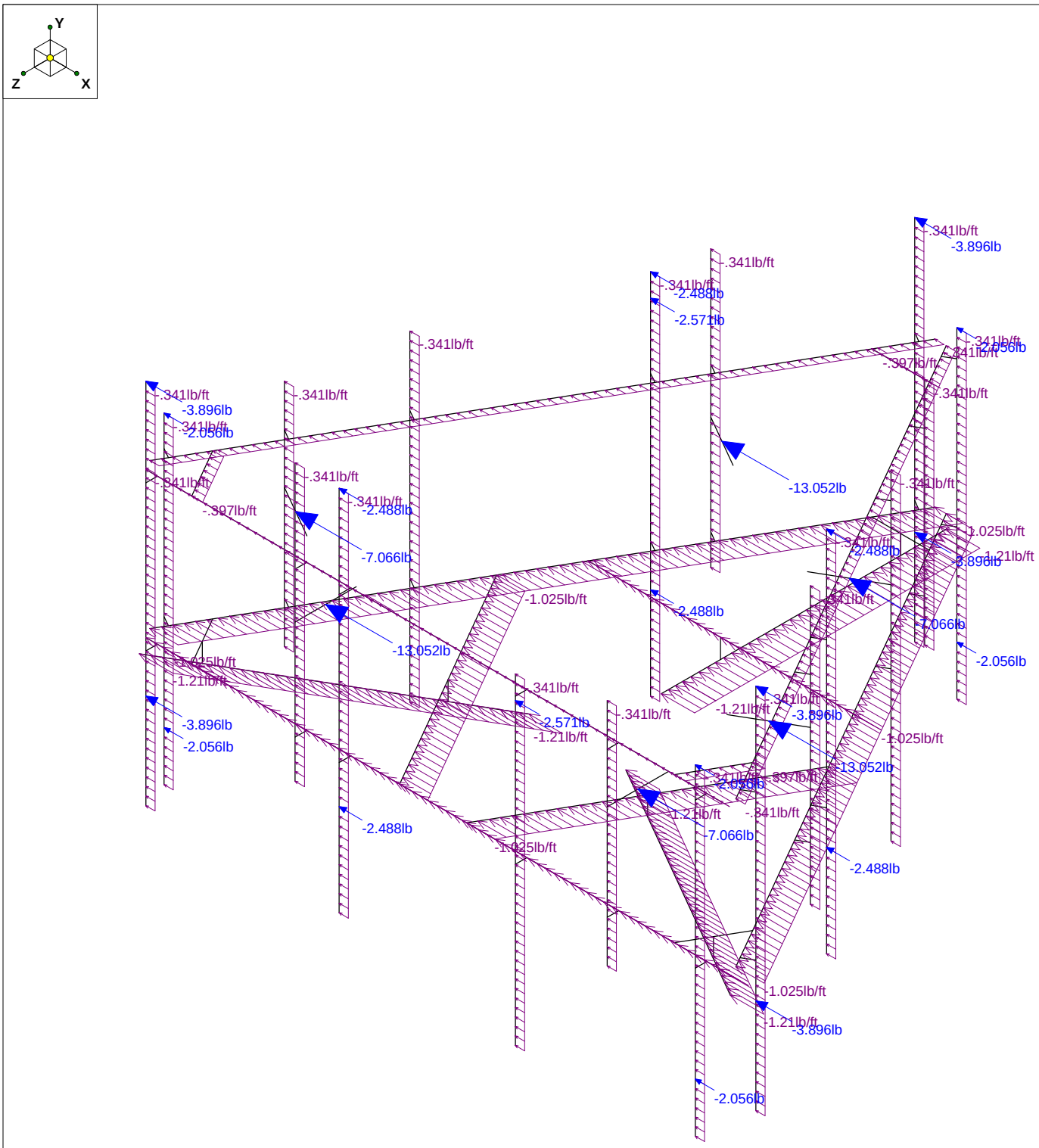
Loads: BLC 21, Seismic Load Y

Centerline Communication...		Seismic Y
AP	CT1139_Mount	Mar 16, 2021 at 4:43 PM
		CT1139.r3d



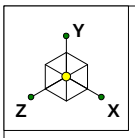
Loads: BLC 22, Seismic Load Z

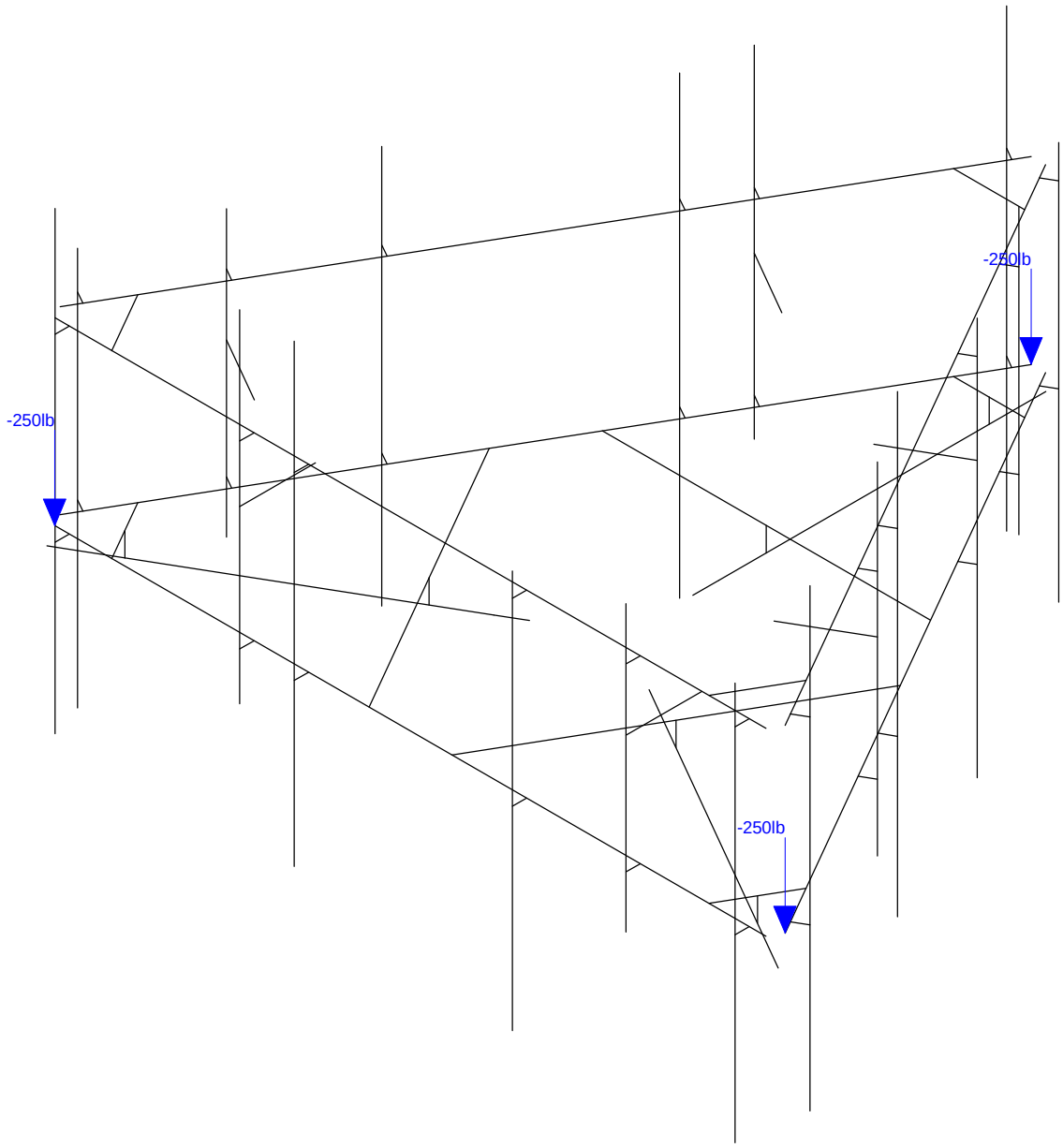
Centerline Communication...		Seismic Z
AP	CT1139_Mount	Mar 16, 2021 at 4:43 PM
		CT1139.r3d



Loads: BLC 23, Seismic Load X

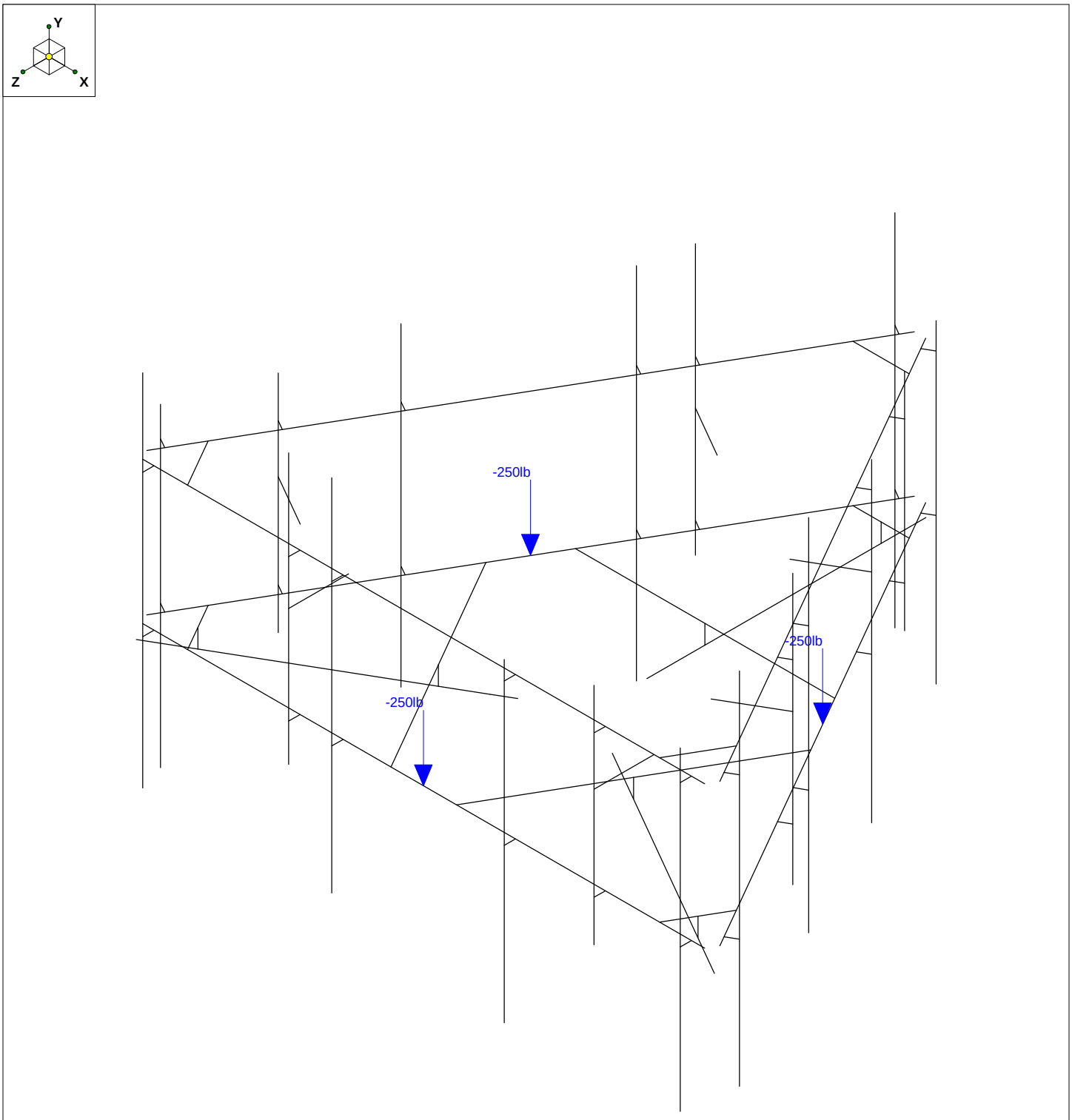
Centerline Communication...		Seismic X
AP	CT1139_Mount	Mar 16, 2021 at 4:43 PM
		CT1139.r3d





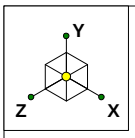
Loads: BLC 24, Live Loads 1

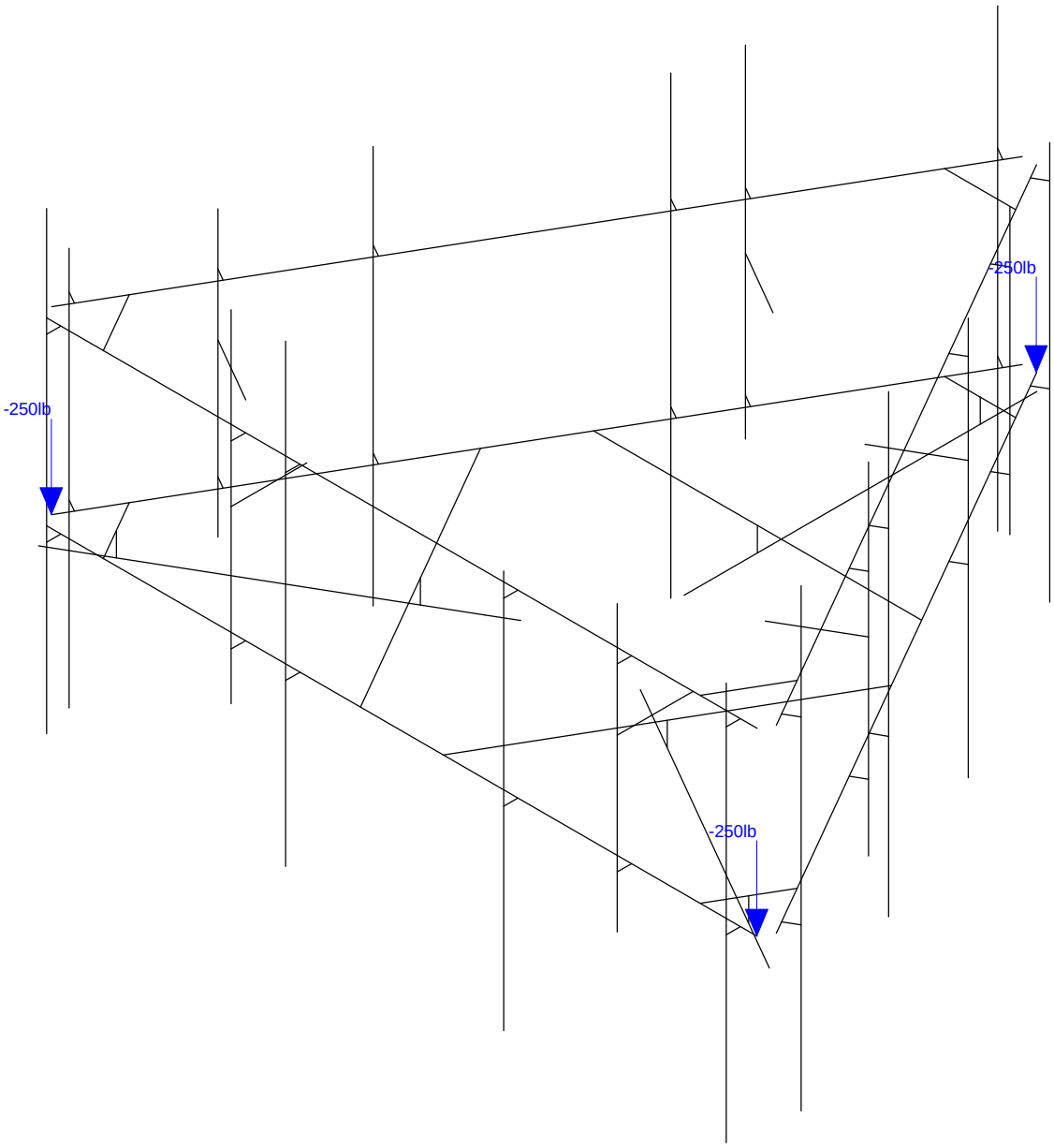
Centerline Communication...	CT1139_Mount	Live Load 1
AP		Dec 21, 2020 at 2:53 PM
		CT1139.r3d



Loads: BLC 25, Live Loads 2

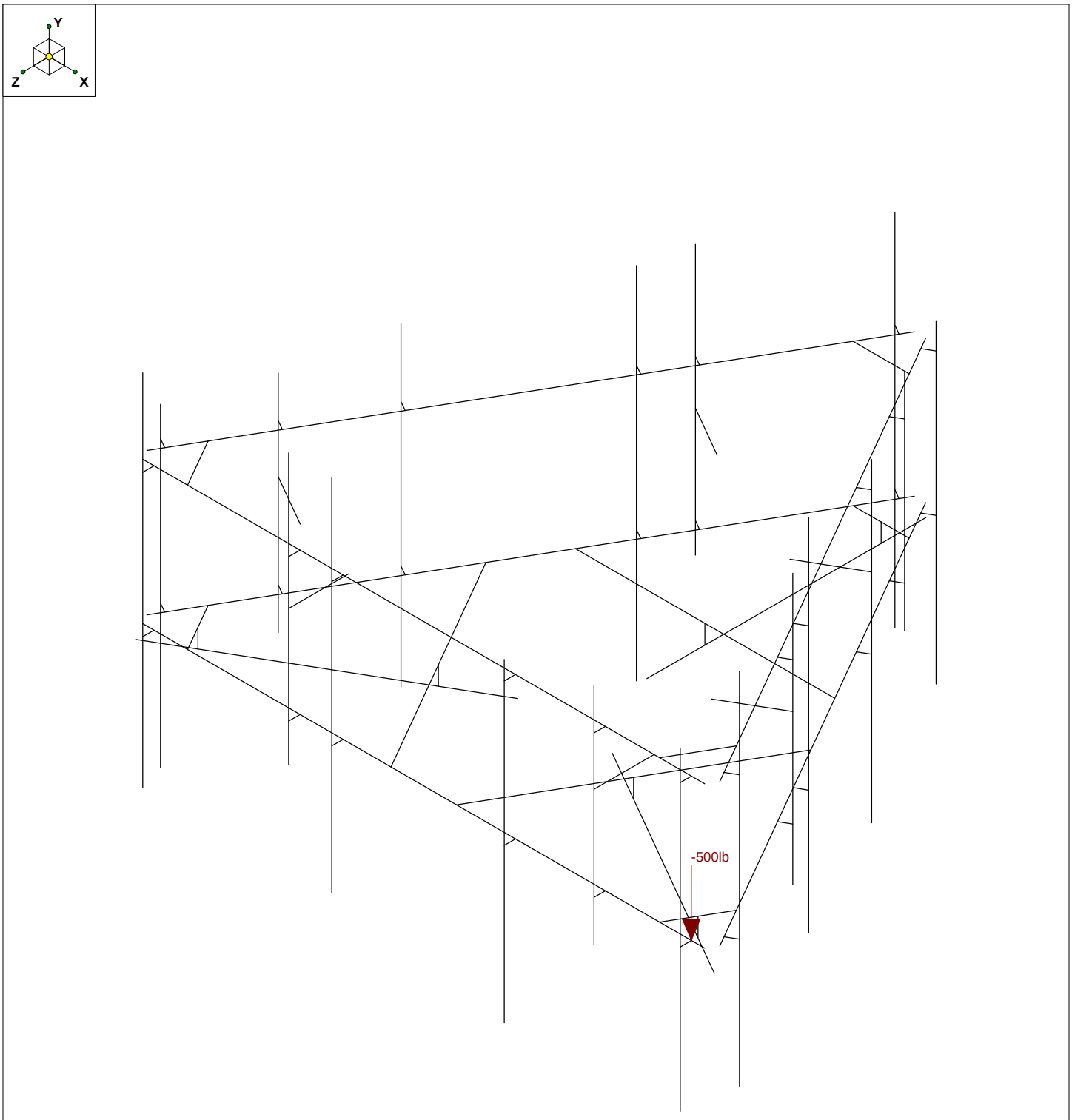
Centerline Communication...	CT1139_Mount	Live Load 2
AP		Dec 21, 2020 at 2:53 PM
		CT1139.r3d





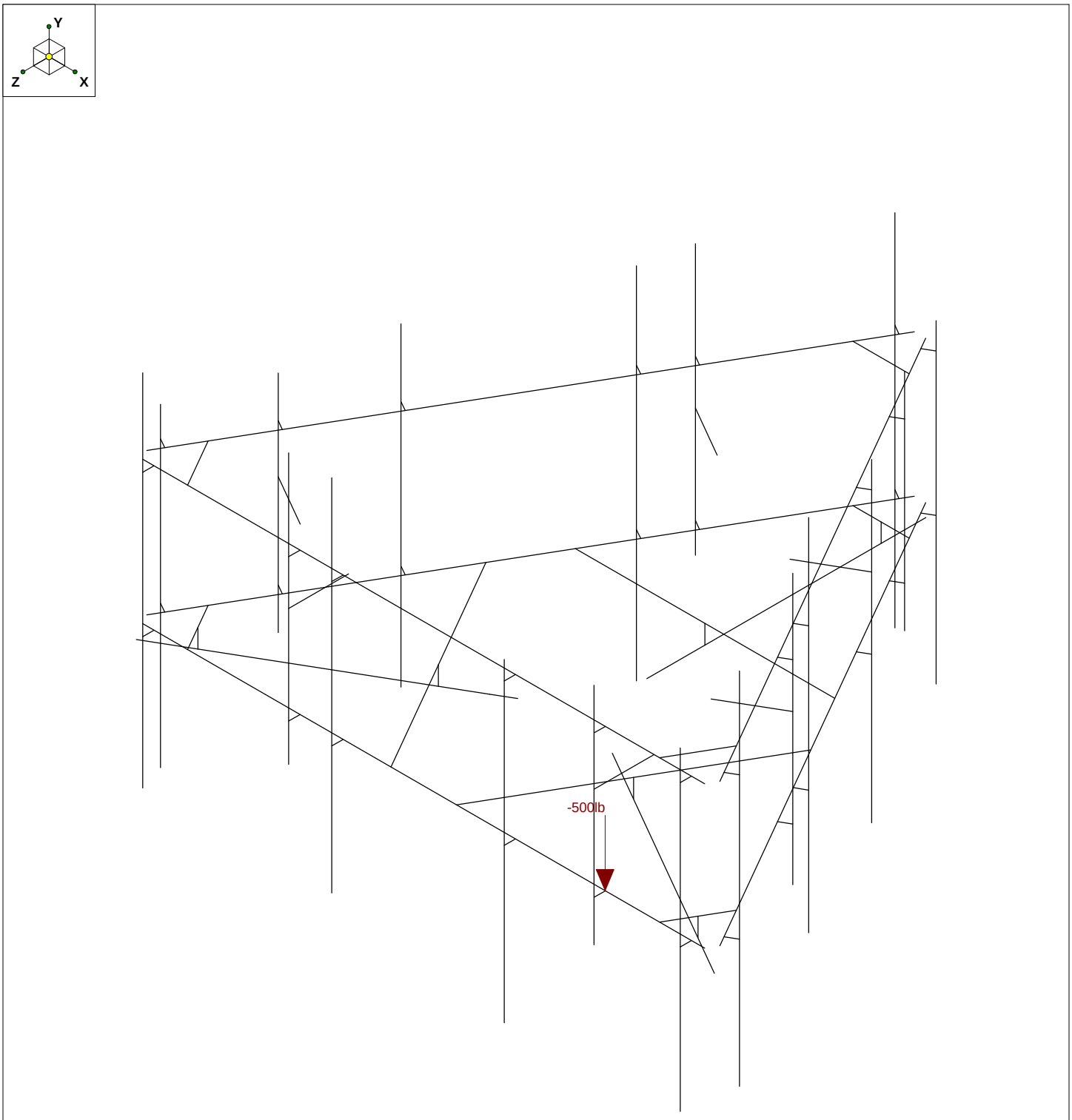
Loads: BLC 26, Live Loads 3

Centerline Communication...	CT1139_Mount	Live Load 3
AP		Dec 21, 2020 at 2:53 PM
		CT1139.r3d



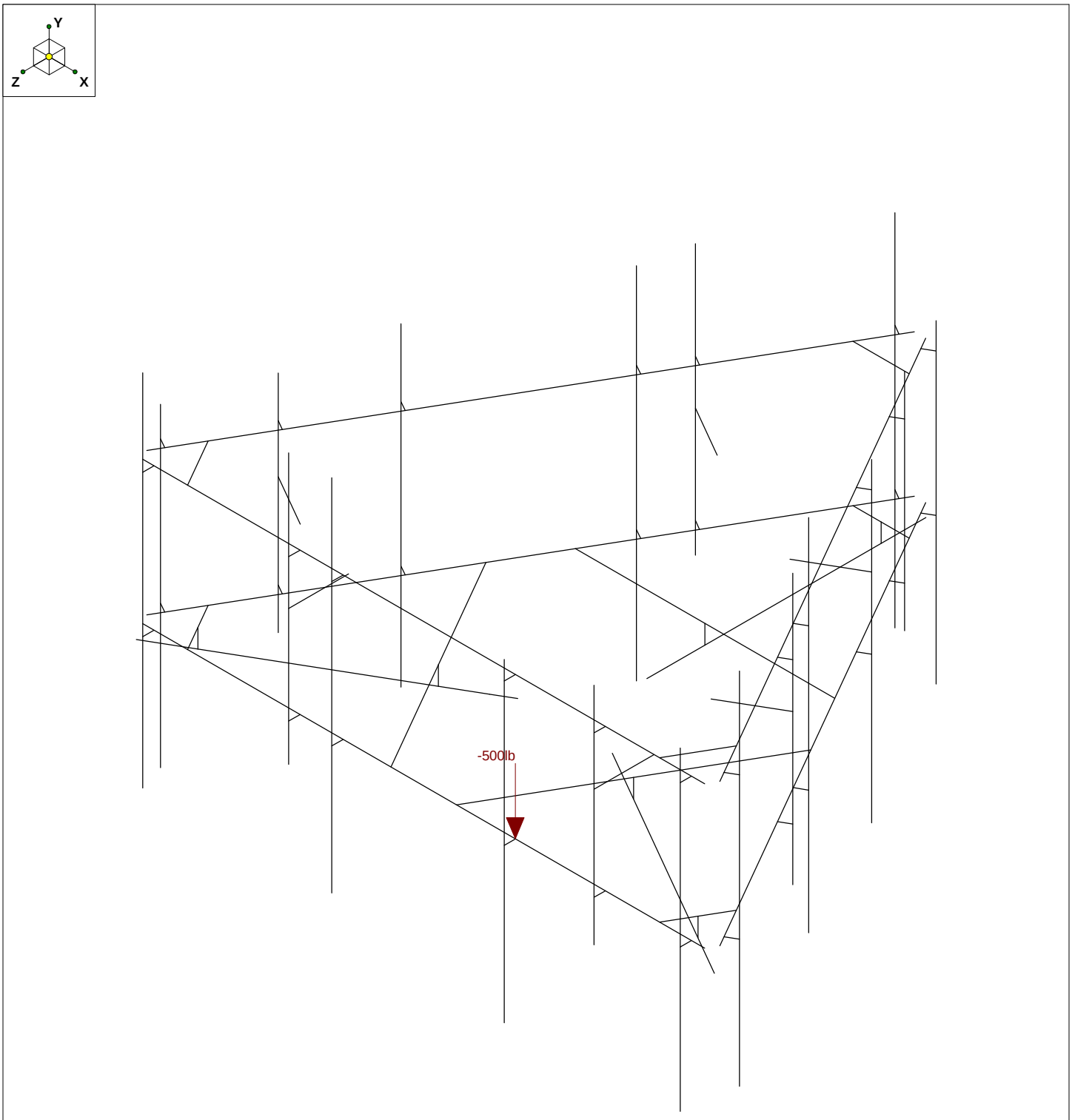
Loads: BLC 27, Maintenance Load 1

Centerline Communication...	CT1139_Mount	Maintenance Load 1
AP		Dec 21, 2020 at 2:53 PM
		CT1139.r3d



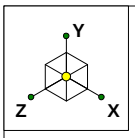
Loads: BLC 28, Maintenance Load 2

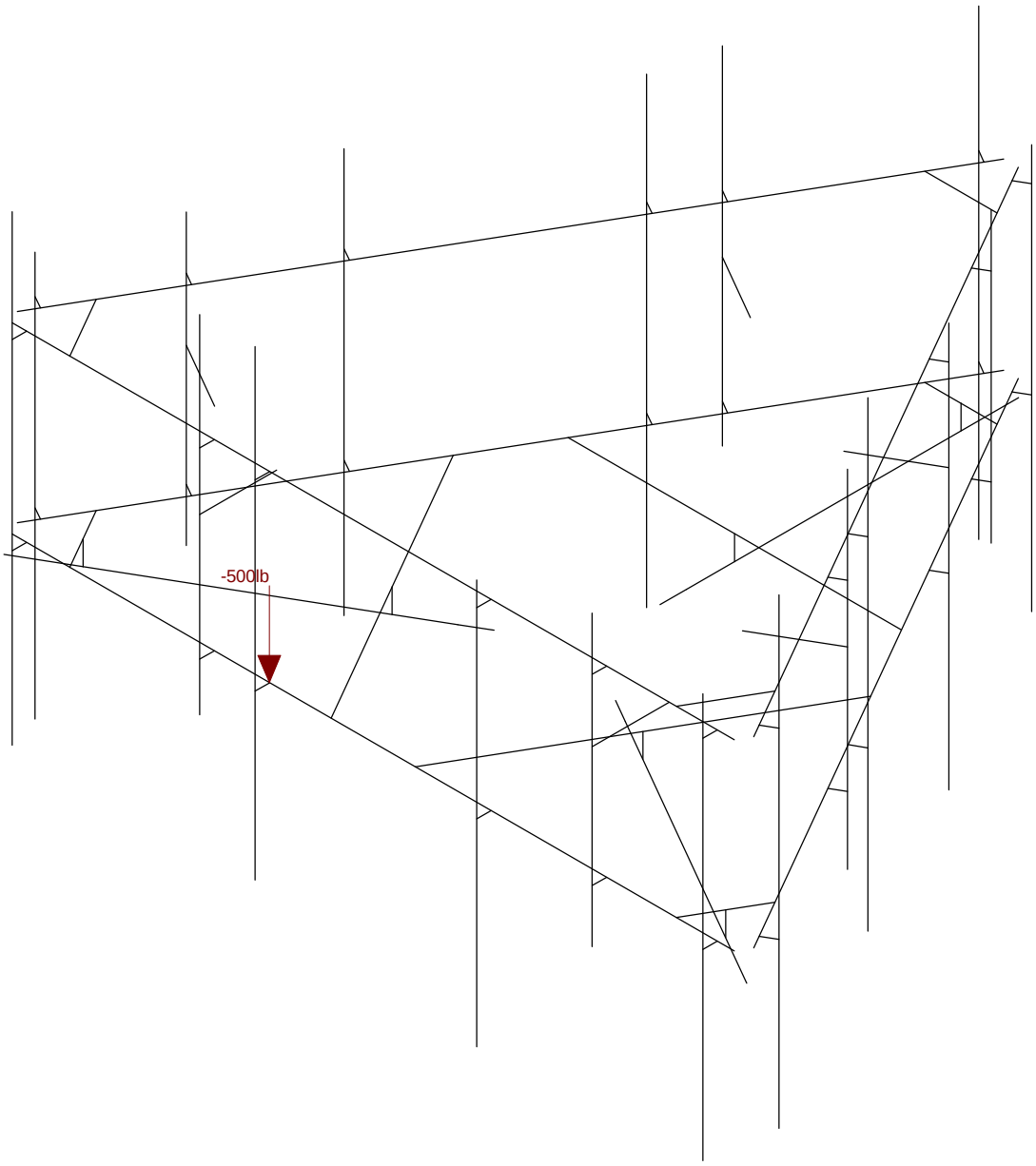
Centerline Communication...	CT1139_Mount	Maintenance Load 2
AP		Dec 21, 2020 at 2:53 PM
		CT1139.r3d



Loads: BLC 29, Maintenance Load 3

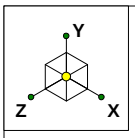
Centerline Communication...	CT1139_Mount	Maintenance Load 3
AP		Dec 21, 2020 at 2:54 PM
		CT1139.r3d

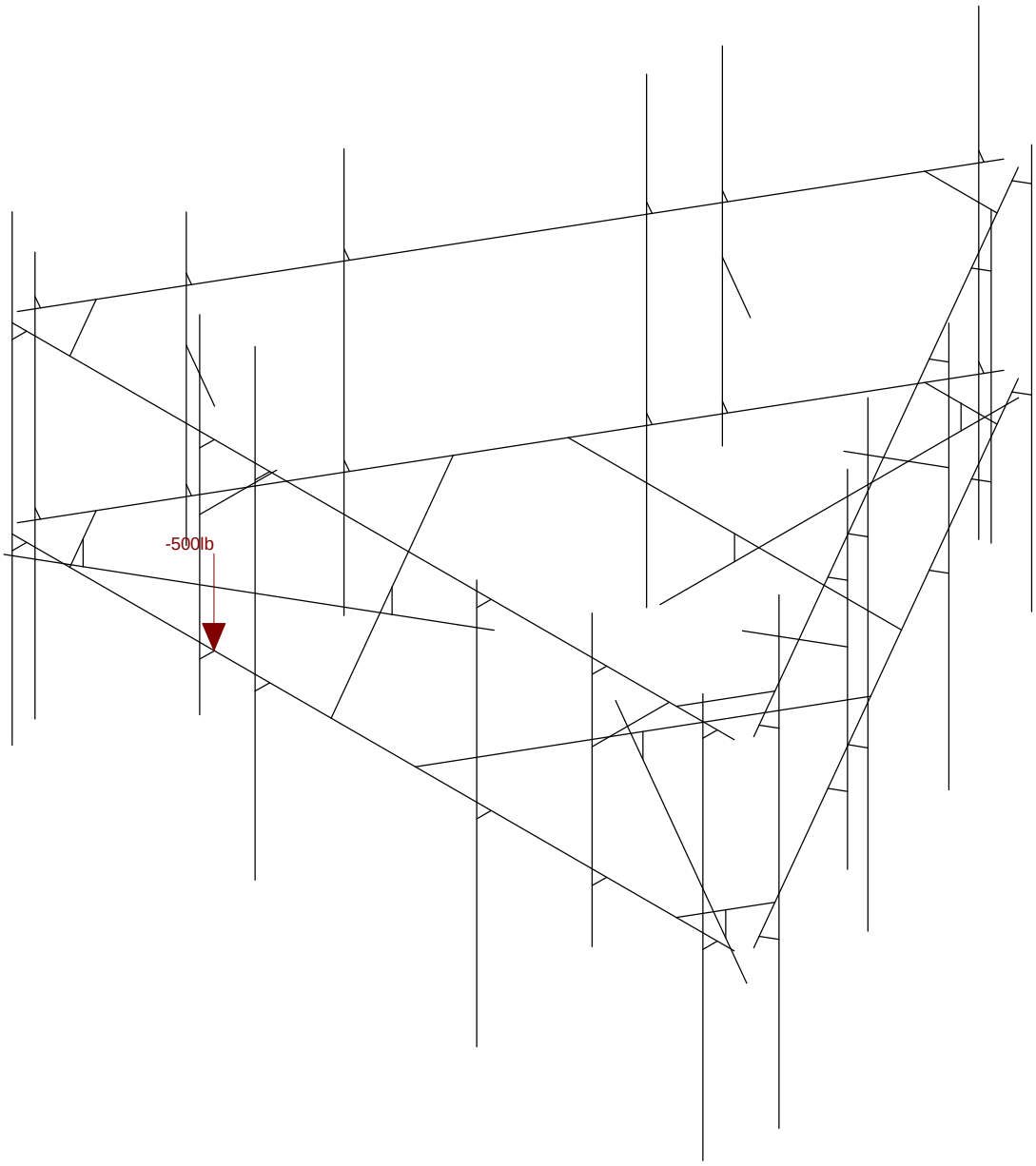




Loads: BLC 30, Maintenance Load 4

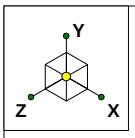
Centerline Communication...	CT1139_Mount	Maintenance Load 4
AP		Dec 21, 2020 at 2:54 PM
		CT1139.r3d

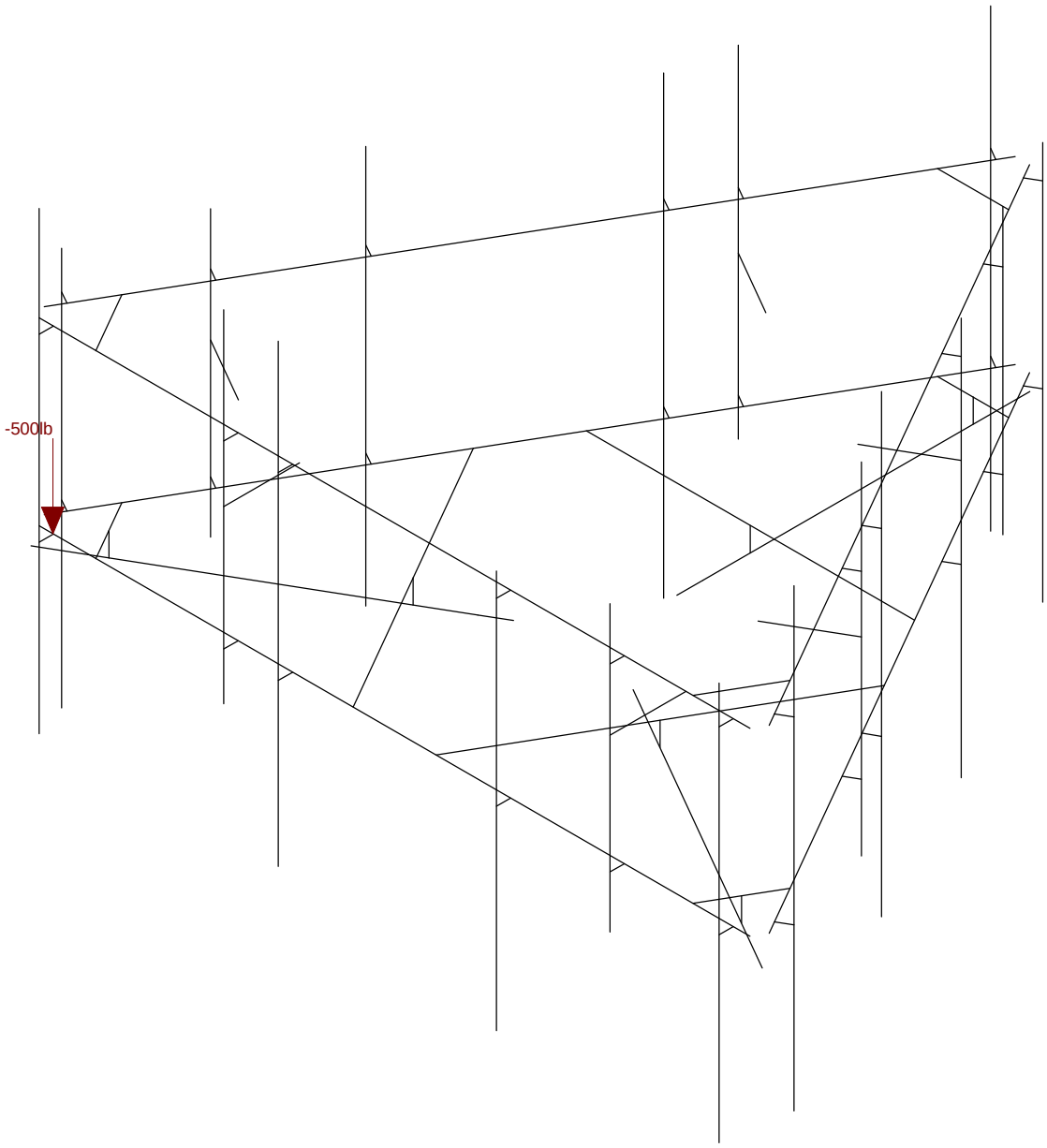




Loads: BLC 31, Maintenance Load 5

Centerline Communication...	CT1139_Mount	Maintenance Load 5
AP		Dec 21, 2020 at 2:54 PM
		CT1139.r3d





Loads: BLC 32, Maintenance Load 6

Centerline Communication...	CT1139_Mount	Maintenance Load 6
AP		Dec 21, 2020 at 2:54 PM
		CT1139.r3d

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/1...	Density[lb/ft^3]	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A992	29000	11154	.3	.65	490	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	.3	.65	490	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	.3	.65	490	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	490	35	1.6	60	1.2
7	A1085	29000	11154	.3	.65	490	50	1.25	65	1.15
8	A913 Gr.65	29000	11154	.3	.65	490	65	1.1	80	1.1

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Horizontal	C6X10.5	Beam	Channel	A36 Gr.36	Typical	3.07	.86	15.1	.128
2	Standoff	HSS4X4X4	Beam	Tube	A500 Gr.B ...	Typical	3.37	7.8	7.8	12.8
3	Mount Pipe	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
4	Support Rail	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
5	Corner Plate	PL4.5x1/2	Beam	RECT	A36 Gr.36	Typical	2.25	.047	3.797	.174
6	Support Rail Corne...	L2.5x2.5x4	Beam	Single Angle	A36 Gr.36	Typical	1.19	.692	.692	.026
7	Cross Member	C6X10.5	Beam	Channel	A36 Gr.36	Typical	3.07	.86	15.1	.128

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	N90	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
2	N97	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
3	N108	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

Hot Rolled Steel Design Parameters

	Label	Shape	Length[in]	Lbyy[in]	Lbzz[in]	Lcomp top[i...	Lcomp bot[i...	L-torq...	Kyy	Kzz	Cb	Functi...
1	M1	Horizontal	150			Lbyy						Lateral
2	M13	Support Rail	150			Lbyy						Lateral
3	M14A	Horizontal	150			Lbyy						Lateral
4	M16A	Support Rail	150			Lbyy						Lateral
5	M27	Horizontal	150			Lbyy						Lateral
6	M29	Support Rail	150			Lbyy						Lateral
7	M42	Standoff	69			Lbyy						Lateral
8	M43	Standoff	5.5			Lbyy						Lateral
9	M44	Cross Member	69.274			Lbyy						Lateral
10	M45A	Standoff	69			Lbyy						Lateral
11	M46	Standoff	5.5			Lbyy						Lateral
12	M47	Cross Member	69.274			Lbyy						Lateral
13	M51	Standoff	69			Lbyy						Lateral
14	M52	Standoff	5.5			Lbyy						Lateral
15	M53	Cross Member	69.274			Lbyy						Lateral
16	MP5	Mount Pipe	96			Lbyy						Lateral
17	MP4	Mount Pipe	72			Lbyy						Lateral
18	MP3	Mount Pipe	96			Lbyy						Lateral
19	MP2	Mount Pipe	84			Lbyy						Lateral
20	MP1	Mount Pipe	84			Lbyy						Lateral
21	MP10	Mount Pipe	96			Lbyy						Lateral
22	MP9	Mount Pipe	72			Lbyy						Lateral
23	MP8	Mount Pipe	96			Lbyy						Lateral
24	MP7	Mount Pipe	84			Lbyy						Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length[in]	Lbyy[in]	Lbzz[in]	Lcomp top[i...	Lcomp bot[i...	L-torq...	Kyy	Kzz	Cb	Functi...
25	MP6	Mount Pipe	84			Lbyy						Lateral
26	MP15	Mount Pipe	96			Lbyy						Lateral
27	MP14	Mount Pipe	72			Lbyy						Lateral
28	MP13	Mount Pipe	96			Lbyy						Lateral
29	MP12	Mount Pipe	84			Lbyy						Lateral
30	MP11	Mount Pipe	84			Lbyy						Lateral
31	M72	Mount Pipe	60			Lbyy						Lateral
32	MP16	Mount Pipe	60			Lbyy						Lateral
33	M80	Mount Pipe	60			Lbyy						Lateral
34	M85	Support Rail Corn...	15.003			Lbyy						Lateral
35	M86	Support Rail Corn...	15.003			Lbyy						Lateral
36	M87	Support Rail Corn...	15.003			Lbyy						Lateral

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	Horizontal	Beam	Channel	A36 Gr.36	Typical
2	M13	N18	N19			Support Rail	Beam	Pipe	A53 Gr.B	Typical
3	M14	N21	N23			RIGID	None	None	RIGID	Typical
4	M15	N20	N22			RIGID	None	None	RIGID	Typical
5	M16	N25	N27			RIGID	None	None	RIGID	Typical
6	M17	N24	N26			RIGID	None	None	RIGID	Typical
7	M18	N29	N31			RIGID	None	None	RIGID	Typical
8	M19	N28	N30			RIGID	None	None	RIGID	Typical
9	M20	N33	N35			RIGID	None	None	RIGID	Typical
10	M21	N32	N34			RIGID	None	None	RIGID	Typical
11	M22	N37	N39			RIGID	None	None	RIGID	Typical
12	M23	N36	N38			RIGID	None	None	RIGID	Typical
13	M14A	N27A	N28A		180	Horizontal	Beam	Channel	A36 Gr.36	Typical
14	M16A	N31A	N32A			Support Rail	Beam	Pipe	A53 Gr.B	Typical
15	M17A	N34A	N36A			RIGID	None	None	RIGID	Typical
16	M18A	N33A	N35A			RIGID	None	None	RIGID	Typical
17	M19A	N38A	N40			RIGID	None	None	RIGID	Typical
18	M20A	N37A	N39A			RIGID	None	None	RIGID	Typical
19	M21A	N42	N44			RIGID	None	None	RIGID	Typical
20	M22A	N41	N43			RIGID	None	None	RIGID	Typical
21	M23A	N46	N48			RIGID	None	None	RIGID	Typical
22	M24	N45	N47			RIGID	None	None	RIGID	Typical
23	M25	N50	N52			RIGID	None	None	RIGID	Typical
24	M26	N49	N51			RIGID	None	None	RIGID	Typical
25	M27	N53	N54		180	Horizontal	Beam	Channel	A36 Gr.36	Typical
26	M29	N57	N58			Support Rail	Beam	Pipe	A53 Gr.B	Typical
27	M30	N60	N62			RIGID	None	None	RIGID	Typical
28	M31	N59	N61			RIGID	None	None	RIGID	Typical
29	M32	N64	N66			RIGID	None	None	RIGID	Typical
30	M33	N63	N65			RIGID	None	None	RIGID	Typical
31	M34	N68	N70			RIGID	None	None	RIGID	Typical
32	M35	N67	N69			RIGID	None	None	RIGID	Typical
33	M36	N72	N74			RIGID	None	None	RIGID	Typical
34	M37	N71	N73			RIGID	None	None	RIGID	Typical
35	M38	N76	N78			RIGID	None	None	RIGID	Typical
36	M39	N75	N77			RIGID	None	None	RIGID	Typical
37	M40	N80	N85			RIGID	None	None	RIGID	Typical
38	M41	N86	N87			RIGID	None	None	RIGID	Typical
39	M42	N88	N89			Standoff	Beam	Tube	A500 Gr....	Typical
40	M43	N89	N90			Standoff	Beam	Tube	A500 Gr....	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
41	M44	N96	N95			Cross Member	Beam	Channel	A36 Gr.36	Typical
42	M45	N91	N94			RIGID	None	None	RIGID	Typical
43	M43A	N82	N81			RIGID	None	None	RIGID	Typical
44	M44A	N93A	N94A			RIGID	None	None	RIGID	Typical
45	M45A	N95A	N96A			Standoff	Beam	Tube	A500 Gr....	Typical
46	M46	N96A	N97			Standoff	Beam	Tube	A500 Gr....	Typical
47	M47	N101	N100			Cross Member	Beam	Channel	A36 Gr.36	Typical
48	M48	N98	N99			RIGID	None	None	RIGID	Typical
49	M49	N84	N83			RIGID	None	None	RIGID	Typical
50	M50	N104	N105			RIGID	None	None	RIGID	Typical
51	M51	N106	N107			Standoff	Beam	Tube	A500 Gr....	Typical
52	M52	N107	N108			Standoff	Beam	Tube	A500 Gr....	Typical
53	M53	N112	N111			Cross Member	Beam	Channel	A36 Gr.36	Typical
54	M54	N109	N110			RIGID	None	None	RIGID	Typical
55	MP5	N111A	N112A			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
56	MP4	N107A	N109A			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
57	MP3	N108A	N110A			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
58	MP2	N113	N114			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
59	MP1	N115	N116			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
60	MP10	N125	N126			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
61	MP9	N121	N124			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
62	MP8	N122	N123			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
63	MP7	N119	N120			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
64	MP6	N117	N118			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
65	MP15	N135	N136			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
66	MP14	N132	N134			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
67	MP13	N131	N133			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
68	MP12	N129	N130			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
69	MP11	N127	N128			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
70	M70	N138	N140			RIGID	None	None	RIGID	Typical
71	M71	N137	N139			RIGID	None	None	RIGID	Typical
72	M72	N141	N142			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
73	R1	N143	N144			RIGID	None	None	RIGID	Typical
74	M74	N147	N149			RIGID	None	None	RIGID	Typical
75	M75	N146	N148			RIGID	None	None	RIGID	Typical
76	MP16	N150	N151			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
77	M78	N156	N158			RIGID	None	None	RIGID	Typical
78	M79	N155	N157			RIGID	None	None	RIGID	Typical
79	M80	N159	N160			Mount Pipe	Beam	Pipe	A53 Gr.B	Typical
80	R2	N161	N162			RIGID	None	None	RIGID	Typical
81	R3	N162A	N163			RIGID	None	None	RIGID	Typical
82	R4	N162B	N163A			RIGID	None	None	RIGID	Typical
83	R6	N164	N165			RIGID	None	None	RIGID	Typical
84	R5	N166	N167			RIGID	None	None	RIGID	Typical
85	M85	N168	N169		180	Support Rail Cor...	Beam	Single Angle	A36 Gr.36	Typical
86	M86	N170	N171		180	Support Rail Cor...	Beam	Single Angle	A36 Gr.36	Typical
87	M87	N172	N173		180	Support Rail Cor...	Beam	Single Angle	A36 Gr.36	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Ra...	Analysis Offs...	Inactive	Seismi...
1	M1						Yes				None
2	M13						Yes				None
3	M14						Yes	** NA **			None
4	M15						Yes	** NA **			None
5	M16						Yes	** NA **			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Ra...	Analysis Offs...	Inactive	Seismi...
6	M17						Yes	** NA **			None
7	M18						Yes	** NA **			None
8	M19						Yes	** NA **			None
9	M20						Yes	** NA **			None
10	M21						Yes	** NA **			None
11	M22						Yes	** NA **			None
12	M23						Yes	** NA **			None
13	M14A						Yes				None
14	M16A						Yes				None
15	M17A						Yes	** NA **			None
16	M18A						Yes	** NA **			None
17	M19A						Yes	** NA **			None
18	M20A						Yes	** NA **			None
19	M21A						Yes	** NA **			None
20	M22A						Yes	** NA **			None
21	M23A						Yes	** NA **			None
22	M24						Yes	** NA **			None
23	M25						Yes	** NA **			None
24	M26						Yes	** NA **			None
25	M27						Yes				None
26	M29						Yes				None
27	M30						Yes	** NA **			None
28	M31						Yes	** NA **			None
29	M32						Yes	** NA **			None
30	M33						Yes	** NA **			None
31	M34						Yes	** NA **			None
32	M35						Yes	** NA **			None
33	M36						Yes	** NA **			None
34	M37						Yes	** NA **			None
35	M38						Yes	** NA **			None
36	M39						Yes	** NA **			None
37	M40						Yes	** NA **			None
38	M41						Yes	** NA **			None
39	M42						Yes				None
40	M43						Yes				None
41	M44						Yes				None
42	M45						Yes	** NA **			None
43	M43A						Yes	** NA **			None
44	M44A						Yes	** NA **			None
45	M45A						Yes				None
46	M46						Yes				None
47	M47						Yes				None
48	M48						Yes	** NA **			None
49	M49						Yes	** NA **			None
50	M50						Yes	** NA **			None
51	M51						Yes				None
52	M52						Yes				None
53	M53						Yes				None
54	M54						Yes	** NA **			None
55	MP5						Yes				None
56	MP4						Yes				None
57	MP3						Yes				None
58	MP2						Yes				None
59	MP1						Yes				None
60	MP10						Yes				None
61	MP9						Yes				None
62	MP8						Yes				None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Ra...	Analysis Offs...	Inactive	Seismi...
63	MP7						Yes				None
64	MP6						Yes				None
65	MP15						Yes				None
66	MP14						Yes				None
67	MP13						Yes				None
68	MP12						Yes				None
69	MP11						Yes				None
70	M70						Yes	** NA **			None
71	M71						Yes	** NA **			None
72	M72						Yes				None
73	R1						Yes	** NA **			None
74	M74						Yes	** NA **			None
75	M75						Yes	** NA **			None
76	MP16						Yes				None
77	M78						Yes	** NA **			None
78	M79						Yes	** NA **			None
79	M80						Yes				None
80	R2						Yes	** NA **			None
81	R3						Yes	** NA **			None
82	R4						Yes	** NA **			None
83	R6						Yes	** NA **			None
84	R5						Yes	** NA **			None
85	M85						Yes				None
86	M86						Yes				None
87	M87						Yes				None

Basic Load Cases

	BLC Description	Category	X Grav...	Y Grav...	Z Grav...	Joint	Point	Distrib...	Area(M...	Surfac...
1	Dead Load	DL		-1			29		3	
2	Wind 0	WLZ					58			
3	Wind 30	None					58			
4	Wind 60	None					58			
5	Wind 90	WLX					58			
6	Wind 120	None					58			
7	Wind 150	None					58			
8	Wind 180	WLZ					58			
9	Ice Weight	DL					29	87	3	
10	Ice + Wind 0	WLZ					58			
11	Ice + Wind 30	None					58			
12	Ice + Wind 60	None					58			
13	Ice + Wind 90	WLX					58			
14	Ice + Wind 120	None					58			
15	Ice + Wind 150	None					58			
16	Ice + Wind 180	WLZ					58			
17	Distri. Wind Z	WLZ						87		
18	Distri. Wind X	WLX						87		
19	Distri. Ice + Win...	WLZ						87		
20	Distrr. Ice + Win...	WLX						87		
21	Seismic Load Y	ELY					29	87		
22	Seismic Load Z	ELZ					29	87		
23	Seismic Load X	ELX					29	87		
24	Live Loads 1	LL					3			
25	Live Loads 2	LL					3			
26	Live Loads 3	LL					3			
27	Maintenance Lo...	None				1				

Basic Load Cases (Continued)

	BLC Description	Category	X Grav...	Y Grav...	Z Grav...	Joint	Point	Distrib...	Area(M...	Surfac...
28	Maintenance Lo...	None				1				
29	Maintenance Lo...	None				1				
30	Maintenance Lo...	None				1				
31	Maintenance Lo...	None				1				
32	Maintenance Lo...	None				1				
33	Maintenance Lo...	None				1				
34	Maintenance Lo...	None				1				
35	Maintenance Lo...	None				1				
36	Maintenance Lo...	None				1				
37	Maintenance Lo...	None				1				
38	Maintenance Lo...	None				1				
39	Maintenance Lo...	None				1				
40	Maintenance Lo...	None				1				
41	Maintenance Lo...	None				1				
42	Maintenance Lo...	None				1				
43	Maintenance Lo...	None				1				
44	Maintenance Lo...	None				1				
45	BLC 1 Transient...	None						33		
46	BLC 9 Transient...	None						33		

Load Combinations

	Description	S...	PDelta	SRSS	B...	Fa...	BLC	Fa...	BLC	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	2	1	17	1	18													
3	1.2D + 1.0W 30°	Yes	Y		1	1.2	3	1	17	.866	18	.5												
4	1.2D + 1.0W 60°	Yes	Y		1	1.2	4	1	17	.5	18	.866												
5	1.2D + 1.0W 90°	Yes	Y		1	1.2	5	1	17		18	1												
6	1.2D + 1.0W 120°	Yes	Y		1	1.2	6	1	17	-.5	18	.866												
7	1.2D + 1.0W 150°	Yes	Y		1	1.2	7	1	17	-.8...	18	.5												
8	1.2D + 1.0W 180°	Yes	Y		1	1.2	8	1	17	-1	18													
9	0.9D + 1.0W 0°	Yes	Y		1	.9	2	1	17	1	18													
10	0.9D + 1.0W 30°	Yes	Y		1	.9	3	1	17	.866	18	.5												
11	0.9D + 1.0W 60°	Yes	Y		1	.9	4	1	17	.5	18	.866												
12	0.9D + 1.0W 90°	Yes	Y		1	.9	5	1	17		18	1												
13	0.9D + 1.0W 120°	Yes	Y		1	.9	6	1	17	-.5	18	.866												
14	0.9D + 1.0W 150°	Yes	Y		1	.9	7	1	17	-.8...	18	.5												
15	0.9D + 1.0W 180°	Yes	Y		1	.9	8	1	17	-1	18													
16	1.2D + 1.0Di + 1....	Yes	Y		1	1.2	9	1	10	1	19	1	20											
17	1.2D + 1.0Di + 1....	Yes	Y		1	1.2	9	1	11	1	19	.866	20	.5										
18	1.2D + 1.0Di + 1....	Yes	Y		1	1.2	9	1	12	1	19	.5	20	.866										
19	1.2D + 1.0Di + 1....	Yes	Y		1	1.2	9	1	13	1	19		20	1										
20	1.2D + 1.0Di + 1....	Yes	Y		1	1.2	9	1	14	1	19	-.5	20	.866										
21	1.2D + 1.0Di + 1....	Yes	Y		1	1.2	9	1	15	1	19	-.8...	20	.5										
22	1.2D + 1.0Di + 1....	Yes	Y		1	1.2	9	1	16	1	19	-1	20											
23	1.2D + 1.0Ev + 1...	Yes	Y		1	1.2	21	1	22	1	23													
24	1.2D + 1.0Ev + 1...	Yes	Y		1	1.2	21	1	22	.866	23	.5												
25	1.2D + 1.0Ev + 1...	Yes	Y		1	1.2	21	1	22	.5	23	.866												
26	1.2D + 1.0Ev + 1...	Yes	Y		1	1.2	21	1	22		23	1												
27	1.2D + 1.0Ev + 1...	Yes	Y		1	1.2	21	1	22	-.5	23	.866												
28	1.2D + 1.0Ev + 1...	Yes	Y		1	1.2	21	1	22	-.8...	23	.5												
29	1.2D + 1.0Ev + 1...	Yes	Y		1	1.2	21	1	22	-1	23													
30	1.0D +1.5Lv + 1....	Yes	Y		1	1	24	1.5	2	.231	17	.231	18											
31	1.0D +1.5Lv + 1....	Yes	Y		1	1	24	1.5	3	.231	17	.2	18	.116										
32	1.0D +1.5Lv + 1....	Yes	Y		1	1	24	1.5	4	.231	17	.116	18	.2										
33	1.0D +1.5Lv + 1....	Yes	Y		1	1	24	1.5	5	.231	17		18	.231										

Load Combinations (Continued)

	Description	S...	PDelta	SRSS	B...	Fa...	BLC	Fa...	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
34	1.0D +1.5Lv + 1....	Yes	Y		1	1	24	1.5	6	.231	17	-.1...	18	.2										
35	1.0D +1.5Lv + 1....	Yes	Y		1	1	24	1.5	7	.231	17	-.2	18	.116										
36	1.0D +1.5Lv + 1....	Yes	Y		1	1	24	1.5	8	.231	17	-.2...	18											
37	1.0D +1.5Lv + 1....	Yes	Y		1	1	25	1.5	2	.231	17		18											
38	1.0D +1.5Lv + 1....	Yes	Y		1	1	25	1.5	3	.231	17	.116	18											
39	1.0D +1.5Lv + 1....	Yes	Y		1	1	25	1.5	4	.231	17	.2	18											
40	1.0D +1.5Lv + 1....	Yes	Y		1	1	25	1.5	5	.231	17		18											
41	1.0D +1.5Lv + 1....	Yes	Y		1	1	25	1.5	6	.231	17	.2	18											
42	1.0D +1.5Lv + 1....	Yes	Y		1	1	25	1.5	7	.231	17	.116	18											
43	1.0D +1.5Lv + 1....	Yes	Y		1	1	25	1.5	8	.231	17		18											
44	1.0D +1.5Lv + 1....	Yes	Y		1	1	26	1.5	2	.231	17	.054	18											
45	1.0D +1.5Lv + 1....	Yes	Y		1	1	26	1.5	3	.231	17	.046	18	.027										
46	1.0D +1.5Lv + 1....	Yes	Y		1	1	26	1.5	4	.231	17	.027	18	.046										
47	1.0D +1.5Lv + 1....	Yes	Y		1	1	26	1.5	5	.231	17		18	.054										
48	1.0D +1.5Lv + 1....	Yes	Y		1	1	26	1.5	6	.231	17	-.0...	18	.046										
49	1.0D +1.5Lv + 1....	Yes	Y		1	1	26	1.5	7	.231	17	-.0...	18	.027										
50	1.0D +1.5Lv + 1....	Yes	Y		1	1	26	1.5	8	.231	17	-.0...	18											
51	1.2D + 1.5Lv	Yes	Y		1	1.2	24	1.5																
52	1.2D + 1.5Lv	Yes	Y		1	1.2	25	1.5																
53	1.2D + 1.5Lv	Yes	Y		1	1.2	26	1.5																
54	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	27	1.5	2	.065	17	.065	18											
55	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	27	1.5	3	.065	17	.056	18	.032										
56	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	27	1.5	4	.065	17	.032	18	.056										
57	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	27	1.5	5	.065	17		18	.065										
58	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	27	1.5	6	.065	17	-.0...	18	.056										
59	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	27	1.5	7	.065	17	-.0...	18	.032										
60	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	27	1.5	8	.065	17	-.0...	18											
61	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	28	1.5	2	.065	17	.065	18											
62	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	28	1.5	3	.065	17	.056	18	.032										
63	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	28	1.5	4	.065	17	.032	18	.056										
64	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	28	1.5	5	.065	17		18	.065										
65	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	28	1.5	6	.065	17	-.0...	18	.056										
66	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	28	1.5	7	.065	17	-.0...	18	.032										
67	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	28	1.5	8	.065	17	-.0...	18											
68	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	29	1.5	2	.065	17	.065	18											
69	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	29	1.5	3	.065	17	.056	18	.032										
70	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	29	1.5	4	.065	17	.032	18	.056										
71	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	29	1.5	5	.065	17		18	.065										
72	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	29	1.5	6	.065	17	-.0...	18	.056										
73	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	29	1.5	7	.065	17	-.0...	18	.032										
74	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	29	1.5	8	.065	17	-.0...	18											
75	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	30	1.5	2	.065	17	.065	18											
76	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	30	1.5	3	.065	17	.056	18	.032										
77	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	30	1.5	4	.065	17	.032	18	.056										
78	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	30	1.5	5	.065	17		18	.065										
79	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	30	1.5	6	.065	17	-.0...	18	.056										
80	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	30	1.5	7	.065	17	-.0...	18	.032										
81	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	30	1.5	8	.065	17	-.0...	18											
82	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	31	1.5	2	.065	17	.065	18											
83	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	31	1.5	3	.065	17	.056	18	.032										
84	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	31	1.5	4	.065	17	.032	18	.056										
85	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	31	1.5	5	.065	17		18	.065										
86	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	31	1.5	6	.065	17	-.0...	18	.056										
87	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	31	1.5	7	.065	17	-.0...	18	.032										
88	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	31	1.5	8	.065	17	-.0...	18											
89	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	32	1.5	2	.065	17	.065	18											
90	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	32	1.5	3	.065	17	.056	18	.032										

Load Combinations (Continued)

	Description	S...	PDelta	SRSS	B...	Fa...	BLC	Fa...	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
91	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	32	1.5	4	.065	17	.032	18	.056												
92	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	32	1.5	5	.065	17		18	.065												
93	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	32	1.5	6	.065	17	-.0...	18	.056												
94	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	32	1.5	7	.065	17	-.0...	18	.032												
95	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	32	1.5	8	.065	17	-.0...	18													
96	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	33	1.5	2	.065	17	.065	18													
97	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	33	1.5	3	.065	17	.056	18	.032												
98	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	33	1.5	4	.065	17	.032	18	.056												
99	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	33	1.5	5	.065	17		18	.065												
100	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	33	1.5	6	.065	17	-.0...	18	.056												
101	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	33	1.5	7	.065	17	-.0...	18	.032												
102	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	33	1.5	8	.065	17	-.0...	18													
103	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	34	1.5	2	.065	17	.065	18													
104	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	34	1.5	3	.065	17	.056	18	.032												
105	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	34	1.5	4	.065	17	.032	18	.056												
106	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	34	1.5	5	.065	17		18	.065												
107	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	34	1.5	6	.065	17	-.0...	18	.056												
108	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	34	1.5	7	.065	17	-.0...	18	.032												
109	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	34	1.5	8	.065	17	-.0...	18													
110	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	35	1.5	2	.065	17	.065	18													
111	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	35	1.5	3	.065	17	.056	18	.032												
112	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	35	1.5	4	.065	17	.032	18	.056												
113	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	35	1.5	5	.065	17		18	.065												
114	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	35	1.5	6	.065	17	-.0...	18	.056												
115	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	35	1.5	7	.065	17	-.0...	18	.032												
116	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	35	1.5	8	.065	17	-.0...	18													
117	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	36	1.5	2	.065	17	.065	18													
118	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	36	1.5	3	.065	17	.056	18	.032												
119	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	36	1.5	4	.065	17	.032	18	.056												
120	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	36	1.5	5	.065	17		18	.065												
121	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	36	1.5	6	.065	17	-.0...	18	.056												
122	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	36	1.5	7	.065	17	-.0...	18	.032												
123	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	36	1.5	8	.065	17	-.0...	18													
124	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	37	1.5	2	.065	17	.065	18													
125	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	37	1.5	3	.065	17	.056	18	.032												
126	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	37	1.5	4	.065	17	.032	18	.056												
127	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	37	1.5	5	.065	17		18	.065												
128	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	37	1.5	6	.065	17	-.0...	18	.056												
129	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	37	1.5	7	.065	17	-.0...	18	.032												
130	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	37	1.5	8	.065	17	-.0...	18													
131	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	38	1.5	2	.065	17	.065	18													
132	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	38	1.5	3	.065	17	.056	18	.032												
133	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	38	1.5	4	.065	17	.032	18	.056												
134	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	38	1.5	5	.065	17		18	.065												
135	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	38	1.5	6	.065	17	-.0...	18	.056												
136	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	38	1.5	7	.065	17	-.0...	18	.032												
137	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	38	1.5	8	.065	17	-.0...	18													
138	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	39	1.5	2	.065	17	.065	18													
139	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	39	1.5	3	.065	17	.056	18	.032												
140	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	39	1.5	4	.065	17	.032	18	.056												
141	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	39	1.5	5	.065	17		18	.065												
142	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	39	1.5	6	.065	17	-.0...	18	.056												
143	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	39	1.5	7	.065	17	-.0...	18	.032												
144	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	39	1.5	8	.065	17	-.0...	18													
145	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	40	1.5	2	.065	17	.065	18													
146	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	40	1.5	3	.065	17	.056	18	.032												
147	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	40	1.5	4	.065	17	.032	18	.056												

Load Combinations (Continued)

	Description	S...	PDelta	SRSS	B...	Fa...	BLC	Fa...	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
148	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	40	1.5	5	.065	17		18	.065										
149	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	40	1.5	6	.065	17	-.0...	18	.056										
150	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	40	1.5	7	.065	17	-.0...	18	.032										
151	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	40	1.5	8	.065	17	-.0...	18											
152	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	41	1.5	2	.065	17	.065	18											
153	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	41	1.5	3	.065	17	.056	18	.032										
154	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	41	1.5	4	.065	17	.032	18	.056										
155	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	41	1.5	5	.065	17		18	.065										
156	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	41	1.5	6	.065	17	-.0...	18	.056										
157	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	41	1.5	7	.065	17	-.0...	18	.032										
158	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	41	1.5	8	.065	17	-.0...	18											
159	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	42	1.5	2	.065	17	.065	18											
160	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	42	1.5	3	.065	17	.056	18	.032										
161	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	42	1.5	4	.065	17	.032	18	.056										
162	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	42	1.5	5	.065	17		18	.065										
163	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	42	1.5	6	.065	17	-.0...	18	.056										
164	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	42	1.5	7	.065	17	-.0...	18	.032										
165	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	42	1.5	8	.065	17	-.0...	18											
166	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	43	1.5	2	.065	17	.065	18											
167	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	43	1.5	3	.065	17	.056	18	.032										
168	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	43	1.5	4	.065	17	.032	18	.056										
169	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	43	1.5	5	.065	17		18	.065										
170	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	43	1.5	6	.065	17	-.0...	18	.056										
171	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	43	1.5	7	.065	17	-.0...	18	.032										
172	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	43	1.5	8	.065	17	-.0...	18											
173	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	44	1.5	2	.065	17	.065	18											
174	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	44	1.5	3	.065	17	.056	18	.032										
175	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	44	1.5	4	.065	17	.032	18	.056										
176	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	44	1.5	5	.065	17		18	.065										
177	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	44	1.5	6	.065	17	-.0...	18	.056										
178	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	44	1.5	7	.065	17	-.0...	18	.032										
179	1.2D + 1.5Lm + 1...	Yes	Y		1	1.2	44	1.5	8	.065	17	-.0...	18											

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
1	N90	max	1518.421	13	4147.576	20	3347.849	16	1618.215	9	1983.432	9	582.776	9
2		min	-4758.629	16	-208.389	9	-2086.517	14	-3635.555	7	-2005.543	8	-5730.462	6
3	N97	max	5463.688	19	3813.806	22	3307.956	17	2056.473	10	1467.481	8	4846.165	22
4		min	338.57	15	-1291.949	11	-1293.321	15	-3243.903	22	-1454.965	9	-3215.458	11
5	N108	max	2145.143	12	4096.451	16	2224.872	9	6661.837	2	252.817	54	348.582	179
6		min	-189.824	54	-1352.578	15	-6307.125	22	-3866.298	15	-2593.978	12	-1299.466	5
7	Totals:	max	7553.007	12	10149.852	19	7777.866	2						
8		min	-.005	8	2673.555	15	-7777.862	15						

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

	Member	Shape	Code Check	Loc[in]	LC	Shea...	Loc.....	L...	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y ...	phi*Mn z-z [l...	...	Eqn
1	M85	L2.5x2.5x4	.588	0	2	.113	15....	y 3	36638.776	38556	1113.554	2537.388	2...	H2-1
2	M87	L2.5x2.5x4	.542	0	11	.111	0	y 12	36638.776	38556	1113.554	2537.388	2...	H2-1
3	M86	L2.5x2.5x4	.512	0	6	.103	15....	y 7	36638.776	38556	1113.554	2537.388	2...	H2-1
4	M43	HSS4X4X4	.479	5.5	7	.144	5.5	y 8	139395.395	139518	16180.5	16180.5	1...	H1-1b
5	M52	HSS4X4X4	.450	5.5	3	.151	5.5	z 5	139395.395	139518	16180.5	16180.5	1...	H1-1b
6	M29	PIPE_2.0	.425	10.937	5	.255	12.5	11	6295.422	32130	1871.625	1871.625	3...	H1-1b
7	MP9	PIPE_2.0	.414	63.75	6	.163	63....	5	20866.733	32130	1871.625	1871.625	2...	H1-1b
8	M46	HSS4X4X4	.405	5.5	22	.140	5.5	y 8	139395.395	139518	16180.5	16180.5	1...	H1-1b

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

	Member	Shape	Code Check	Loc[in]	LC	Shea..	Loc.....	L...	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y ...	phi*Mn z-z [l...	...	Eqn
9	MP8	PIPE_2.0	.400	61	7	.106	23	4	14916.096	32130	1871.625	1871.625	2..	H1-1b
10	MP14	PIPE_2.0	.398	57.75	3	.127	20....	5	20866.733	32130	1871.625	1871.625	2..	H1-1b
11	MP13	PIPE_2.0	.391	63	3	.084	63	12	14916.096	32130	1871.625	1871.625	2..	H1-1b
12	MP7	PIPE_2.0	.383	56	2	.130	56	4	17855.085	32130	1871.625	1871.625	2..	H1-1b
13	MP2	PIPE_2.0	.370	42.875	5	.131	42....	8	17855.085	32130	1871.625	1871.625	1..	H1-1b
14	M13	PIPE_2.0	.370	10.938	10	.256	10....	2	6295.422	32130	1871.625	1871.625	3..	H1-1b
15	M80	PIPE_2.0	.361	48.75	2	.149	48....	3	23808.54	32130	1871.625	1871.625	1..	H1-1b
16	M42	HSS4X4X4	.355	69	6	.144	69 y	8	121489.014	139518	16180.5	16180.5	2..	H1-1b
17	MP12	PIPE_2.0	.344	44.625	11	.116	44....	12	17855.085	32130	1871.625	1871.625	1..	H1-1b
18	M16A	PIPE_2.0	.341	10.937	2	.247	137...	5	6295.422	32130	1871.625	1871.625	3..	H1-1b
19	M1	C6X10.5	.335	65.625	15	.269	65.... z	2	8634.87	99468	2428.235	13667.8	1..	H1-1b
20	M51	HSS4X4X4	.333	69	3	.151	69 z	5	121489.014	139518	16180.5	16180.5	2..	H1-1b
21	M72	PIPE_2.0	.331	48.75	6	.153	48....	7	23808.54	32130	1871.625	1871.625	1..	H1-1b
22	M27	C6X10.5	.330	65.625	11	.280	65.... y	5	8634.87	99468	2428.235	13850.637	1..	H1-1b
23	MP4	PIPE_2.0	.324	61.5	11	.140	61.5	8	20866.733	32130	1871.625	1871.625	2..	H1-1b
24	MP5	PIPE_2.0	.320	23	8	.147	61	2	14916.096	32130	1871.625	1871.625	2..	H1-1b
25	MP10	PIPE_2.0	.312	26	5	.143	64	4	14916.096	32130	1871.625	1871.625	2..	H1-1b
26	M44	C6X10.5	.309	34.637	5	.053	34.... y	19	40366.216	99468	2428.235	16686	1..	H1-1b
27	M53	C6X10.5	.307	34.637	3	.052	34.... y	16	40366.216	99468	2428.235	16686	1..	H1-1b
28	M47	C6X10.5	.301	34.637	22	.050	34.... y	22	40366.216	99468	2428.235	16686	1..	H1-1b
29	MP3	PIPE_2.0	.296	62	11	.102	62	8	14916.096	32130	1871.625	1871.625	1..	H1-1b
30	MP16	PIPE_2.0	.290	11.25	11	.121	48....	12	23808.54	32130	1871.625	1871.625	1..	H1-1b
31	M45A	HSS4X4X4	.288	69	22	.140	69 y	8	121489.014	139518	16180.5	16180.5	2..	H1-1b
32	MP15	PIPE_2.0	.283	24	5	.135	62	6	14916.096	32130	1871.625	1871.625	1..	H1-1b
33	MP6	PIPE_2.0	.233	45.5	2	.136	45.5	3	17855.085	32130	1871.625	1871.625	1..	H1-1b
34	MP1	PIPE_2.0	.233	45.5	7	.136	45.5	7	17855.085	32130	1871.625	1871.625	1..	H1-1b
35	MP11	PIPE_2.0	.218	44.625	12	.128	44....	12	17855.085	32130	1871.625	1871.625	1..	H1-1b
36	M14A	C6X10.5	.210	84.375	13	.244	65.... z	6	8634.87	99468	2428.235	11245.883	1..	H1-1b