

August 3, 2023

Melanie A. Bachman, Esq.
Executive Director/Staff Attorney
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: **Notice of Exempt Modification – Facility Modification
35 South Bartlett Road, Waterford, Connecticut**

Dear Attorney Bachman:

Cellco Partnership d/b/a Verizon Wireless (“Cellco”) currently maintains a wireless telecommunications facility at the above-referenced address (the “Property”). Cellco’s facility consists of antennas and remote radio heads attached to a tower. Equipment associated with the facility is located on the ground adjacent to the tower. Cellco’s facility was approved by the Siting Council (“Council”) in September of 2015 (PE1133-VER-20150805). A copy of the Council’s PE1133-VER-20150805 approval is included in Attachment 1.

Cellco’s proposed modification involves the installation of four (4) interference mitigation filters (“filters”) on Cellco’s existing antenna platform and mounting assembly. The filter specification sheet is included in Attachment 2.

Please accept this letter as notification pursuant to R.C.S.A. § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Brooklyn’s Chief Elected Official and Land Use Officer. The Town of Waterford is the owner of the Property.

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2).

1. The proposed modifications will not result in an increase in the height of the existing tower. The filters will be installed on Cellco’s existing antenna platform and mounting assembly.

Melanie A. Bachman, Esq.
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2. The proposed modifications will not involve any change to ground-mounted equipment and, therefore, will not require the extension of the site boundary.

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

4. The installation of Cellco's new filters will not result in a change to radio frequency (RF) emissions from the facility. Therefore, no new RF emissions information is included in this filing.

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

6. According to the attached Structural Analysis Report ("SA") and Antenna Mount Analysis Report ("MA"), the existing tower, foundation, antenna platform and mounting assembly can support Cellco's proposed modifications. A copy of the SA and MA are included in Attachment 3.

A copy of the parcel map and Property owner information is included in Attachment 4. A Certificate of Mailing verifying that this filing was sent to municipal officials and the property owner is included in Attachment 5.

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

Sincerely,



Kenneth C. Baldwin

Enclosures

Copy to:

Robert J. Brule, First Selectman
Jonathan Mullen, Planning Director
Kamoya Bautista, Verizon Wireless

ATTACHMENT 1



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

September 28, 2015

Kenneth C. Baldwin, Esq.
Robinson & Cole LLP
280 Trumbull Street
Hartford, CT 06103-3597

RE: PE1133-VER-20150805 – Celco Partnership d/b/a Verizon Wireless sub-petition for a declaratory ruling for approval of an eligible facility request for modifications to an existing telecommunications facility located at 35 South Bartlett Road, Waterford, Connecticut.

Dear Attorney Baldwin:

The Connecticut Siting Council (Council) hereby approves your Eligible Facilities Request (EFR) to install antennas and associated equipment at the above-referenced facility pursuant to the Federal Communications Commission Wireless Infrastructure Report and Order, with the following conditions:

- Install feed lines and remote radio heads in accordance with the structural analysis report prepared by FDH Velocitel dated April 21, 2015 and stamped by Dennis Abel;
- Within 45 days following completion of the equipment installation, Celco shall provide documentation that its installation complied with the recommendations of the structural analysis;
- Within 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
- Any nonfunctioning antenna and associated antenna mounting equipment on this facility owned and operated by the Petitioner shall be removed within 60 days of the date the antenna ceased to function;
- The validity of this action shall expire one year from the date of this letter; and
- The petitioner may file a request for an extension of time beyond the one year deadline provided that such request is submitted to the Council not less than 60 days prior to the expiration.

This decision is under the exclusive jurisdiction of the Council and is not applicable to any other modification or construction. All work is to be implemented as specified in the EFR received August 5, 2015.

Thank you for your attention and cooperation.

Very truly yours,

Melanie Bachman
Acting Executive Director

MB/MP

c: Honorable Daniel M. Steward, First Selectman, Town of Waterford
Mark A. Wujtecwicz, Planner, Town of Waterford

ATTACHMENT 2

BSF0020F3V1-1

TWIN BANDSTOP 900MHZ INTERFERENCE MITIGATION FILTER

The BSF0020 is ideal for co-located 700, 850 and 900 networks. Utilising a 2.6MHz guardband the BSF0020 provides rejection of the 900 UL band while passing 700/850 UL and DL bands. Capable of being used in an outdoor environment the BSF0020 contains two identical bandstop filters, suitable for 2x2 MIMO configuration, offering excellent insertion loss, group delay and rejection.

FEATURES

- Passes full 700 and 850 bands
- Low insertion loss
- Rejection of 900MHz uplink
- DC/AISG pass
- Twin unit
- Dual twin mounting available



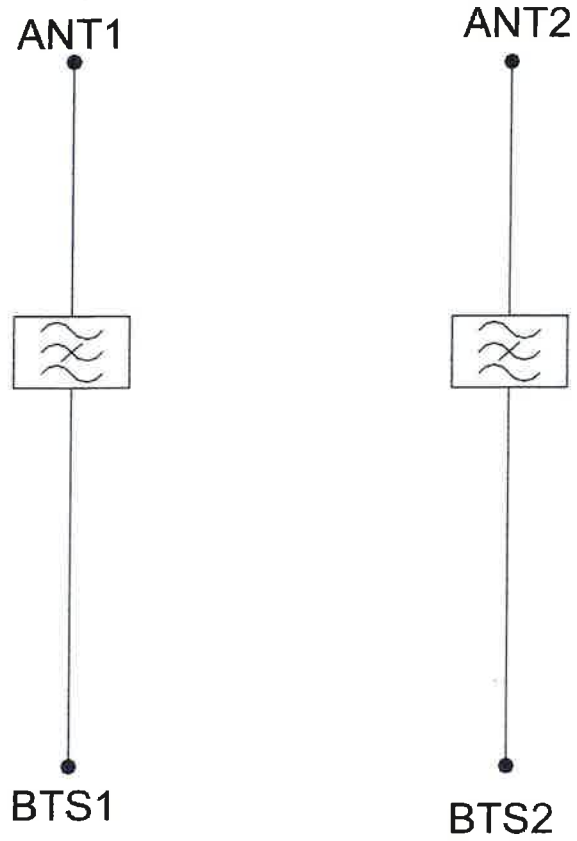
TECHNICAL SPECIFICATIONS

BAND NAME	700 PATH / 850 UPLINK PATH	850 DOWNLINK PATH
Passband	698 - 849MHz	869 - 891.5MHz
Insertion loss	0.1dB typical / 0.3dB maximum	0.5dB typical, 1.45dB maximum
Return loss	24dB typical, 18dB minimum	
Maximum input power (Per Port)	100W average	200W average and 66W per 5MHz
Rejection	53dB minimum @ 894.1 - 896.5MHz	
ELECTRICAL		
Impedance	50Ohms	
Intermodulation products	-160dBc maximum in UL Band (assuming 20MHz Signal), with 2 x 43dBm carriers -153dBc maximum with 2 x 43dBm	
DC / AISG		
Passband	0 - 13MHz	
Insertion loss	0.3dB maximum	
Return loss	15dB minimum	
Input voltage range	± 33V	
DC current rating	2A continuous, 4A peak	
Compliance	3GPP TS 25.461	
ENVIRONMENTAL		
For further details of environmental compliance, please contact Kaelus.		
Temperature range	-20°C to +60°C -4°F to +140°F	
Ingress protection	IP67	
Altitude	2600m 8530ft	
Lightning protection	RF port: ±5kA maximum (8/20us), IEC 61000-4-5 – Unit must be terminated with some lightning protection circuits.	
MTBF	>1,000,000 hours	
Compliance	ETSI EN 300 019 class 4,1H, RoHS, NEBS GR-487-CORE	
MECHANICAL		
Dimensions H x D x W	269 x 277 x 80mm 10.60 x 10.90 x 3.15in (Excluding brackets and connectors)	
Weight	8.0 kg 17.6 lbs (no bracket)	
Finish	Powder coated, light grey (RAL7035)	
Connectors	RF: 4.3-10 (F) x 4	
Mounting	Optional pole/wall bracket supplied with two metal clamps 45-178mm diameter poles or custom bracket. See ordering information.	

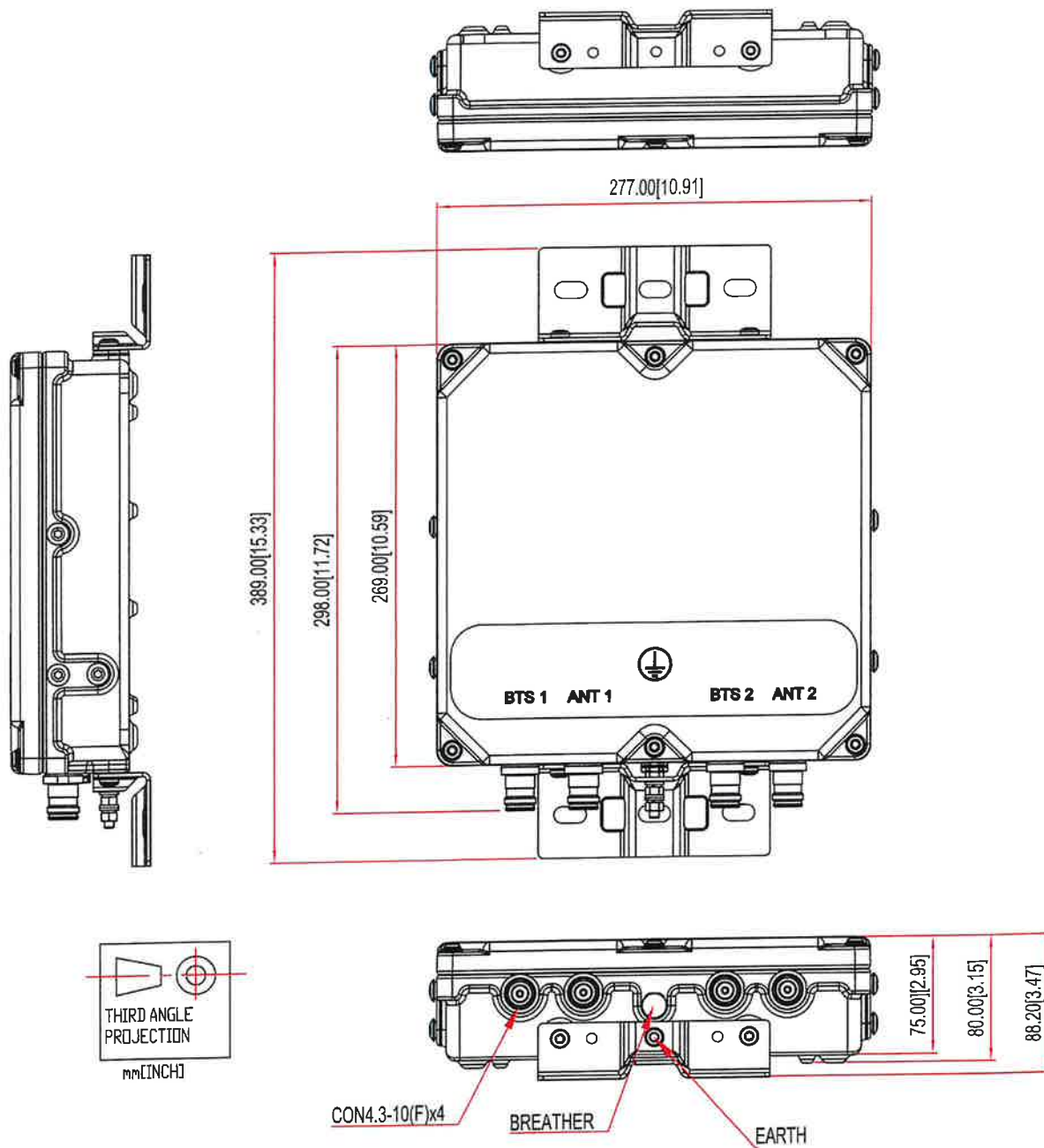
ORDERING INFORMATION

PART NUMBER	CONFIGURATION	OPTIONAL FEATURES	CONNECTORS
BSF0020F3V1	TWIN, 2 in / 2 out	DC/AISG PASS NO BRACKET	4.3-10 (F)
BSF0020F3V1-1	TWIN, 2 in / 2 out	DC/AISG PASS	4.3-10 (F)
BSF0020F3V1-2	QUAD, 4 in / 4 out	DC/AISG PASS	4.3-10 (F)

ELECTRICAL BLOCK DIAGRAM



MECHANICAL BLOCK DIAGRAM



ATTACHMENT 3



SBA Communications Corporation
8051 Congress Avenue
Boca Raton, FL 33487-1307

T + 561.995.7670
F + 561.995.7626

sbsite.com

Structural Analysis Report

Client: Verizon

Client Site ID / Name: 5000244862 / Quaker Hill CT
Application #: 232427, v2

SBA Site ID / Name: CT09680-S / Rogers Hill

180' Self Supporting Tower

35 South Bartlett Road
Quaker Hill, CT 06375

Lat: 41.417653, Long: -72.106728

Project number: CT09680-VZW-070723

Analysis Results

Tower	86.8%	Pass
Foundation	62.3%	Pass

Change in tower stress due to mount modification / replacement	N/A
--	-----

Prepared by:

Daniel Yohannes
Structural Engineer II
214-570-8110 ext 2626
dyohannes@sbsite.com

Reviewed by:

Anantha (Shan) Shanubhogue, P.E.
Senior Manager, Structural Engineering
561-981-7390
SShanubhogue@sbsite.com

July 10, 2023



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Introduction

The purpose of this report is to summarize the analysis results on the 180' Self Supporting Tower to support the proposed antennas and transmissions lines in addition to those currently installed.

Table 1 List of Documents Used

Item	Document
Tower Design	World Tower Company, Inc , Job #: Q071062 , Dated: 12/5/2007
Foundation Design	World Tower Company, Inc , Job #: Q071062F , Dated: 1/8/2008
Geotechnical report	Clarence Welti Associates, Inc. , Dated: 12/17/2007
Modification drawings	N/A
Mount Analysis	Maser Consulting, Project # 20777648A, dated 04/20/2021
Latest SA Report	SBAE, Project # CT09680-VZW-061721, dated 7/21/2021 (Redlined)

Analysis Criteria

Table 2 Code Related Data

Jurisdiction (State/County/City)	Connecticut / New London / Quaker Hill
Governing Codes	ANSI/TIA-222-H , 2021 IBC, 2022 CSBC
Ultimate Wind Speed (3-Sec gust)	126 mph
Wind Speed with Ice (3-Sec gust)	50 mph
Service Wind Speed (3-Sec gust)	60 mph
Ice Thickness	1 in
Risk category	II
Exposure Category	C
Topographic Category	1
Crest Height	0 ft.
Ground Elevation	261.8 ft.
Seismic Parameter S_s	0.194
Seismic Parameter S_1	0.053

This structural analysis is based upon the tower being classified as a Risk category II; however, if a different classification is required subsequent to the date hereof, the tower classification will be changed to meet such requirement and a new structural analysis will be run.

Appurtenance Loading

Existing Loading:

Table 3 Existing Appurtenances

Mount Elev. (ft)	CL Elev. (ft)	Type	Qty	Manufacturer	Model	Feed Line Size	Mount Type Qty.	Carrier
180	187.5	Omni	2	Sinclair	SC488-HF2LNF	(3) 1-5/8"	(3) Standoff w/ tieback	Town of Waterford
	182.5	Omni	1	Telewave	ANT150F2			
	180	TMA	1	dbSpectra	ATSSTMA10			
150	150	Panel	3	Ericsson	Air 21 B2A/B4P	(4) 1-5/8" (9) 1-5/8" Fiber	(3) 12.5' T-Frame (6) V-Bracing Kit [Metrosite MS-C1B-2875P]	T-Mobile
		Panel	3	Ericsson	AIR6449 B41			
		Panel	3	RFS	APXV/AARR24_43-U-NA20			
		Panel	3	Ericsson	AIR32 KRD901146-1_B66A_B2A (Octo)			
		TMA	3	Ericsson	KRY 112 144/1			
		RRU	3	Ericsson	Radio 4449 B71+B85			
		RRU	3	Ericsson	4415 B25			
120	120	Panel	9	Commscope	SBNHH-1D65B	(3) 1-5/8" Hybrid (9) 1-5/8"	(3) Sector Frame [Commscope SF-QV12-B] (6) V-Bracing Kit [VZWSMART-SFK3] (6) Support Rail (3) Side-By-Side Mounting Kit [Commscope BSAMNT-SBS-1-2]	Verizon
		Panel	3	Samsung	MT6407-77A			
		RRU	3	Samsung	B5/B13			
		RRU	3	Samsung	B2/B66A			
		OVP	3	Raycap	RRFDC-3315-PF-48			

Proposed Loading:

Information pertaining to proposed antennas and transmission lines were based upon the Application #: 232427, v2 from Verizon and is listed in Table 4.

Table 4 Proposed Appurtenances

Mount Elev. (ft)	CL Elev. (ft)	Type	Qty	Manufacturer	Model	Feed Line Size	Mount Type Qty.	Carrier
120	120	Panel	9	Commscope	SBNHH-1D65B	(3) 1-5/8" Hybrid (9) 1-5/8"	(3) Sector Frame [Commscope SF-QV12-B] (6) V-Bracing Kit [VZWSMART-SFK3] (6) Support Rail (3) Side-By-Side Mounting Kit [Commscope BSAMNT-SBS-1-2]	Verizon
		Panel	3	Samsung	MT6407-77A			
		RRU	3	Samsung	B5/B13			
		RRU	3	Samsung	B2/B66A			
		OVP	3	Raycap	RRFDC-3315-PF-48			
		Filters	4	Kaelus	BSF0020F3V1-1			

Analysis Results

Tower

The results of the structural analysis are shown below in table 5. Additional information for the tower analysis is provided within the Appendix.

Table 5 Tower Analysis Summary

Structural Component	% capacity	Analysis Result
Leg	72.9	Pass
Diagonal	82.8	Pass
Horizontal	18.7	Pass
Secondary Horizontal	86.8	Pass
Top girt	28.4	Pass
Bottom girt	23.2	Pass
Bolt	86.8	Pass
Anchor Bolt	52.5	Pass

Foundation

The results of the foundation analysis are shown below in table 6. Additional information for the foundation analysis is provided within the Appendix.

Table 6 Foundation Analysis Summary

Structural Component	Max Usage (%)	Analysis Result
Foundation	62.3	Pass

Conclusions

Based on the analysis results, the existing tower and foundation were found to be **sufficient** to safely support the equipment listed in this analysis. No modification to the tower and foundation is needed at this time.

Installation Requirements

This analysis was performed under the assumption that the carrier will place the proposed equipment and feed lines at the installation height listed in Table 4 and in accordance with the coax layout shown. TMAs and RRUs are to be installed on existing mounts behind tenant's antennas unless otherwise noted. No equipment is to be installed directly in the climbing path. All equipment is to be installed per mount manufacturer specifications. In case site conditions do not allow for the required installation parameters to be met the carrier must notify SBA Communications Corporation engineers for approval of an alternative placement.

Assumptions and Limitations

Assumptions

This analysis was completed based on the following assumptions:

- Tower and foundation were built in accordance to manufacturer specifications.
- Tower and foundation has been properly maintained in accordance with the manufacturer's specifications
- All existing structural members were assumed to be in good condition with no physical damage or deterioration associated with corrosion
- Welds and bolts are assumed able to carry their intended original design loads.
- The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Table 3 and 4.
- This analysis may be affected if any assumptions are not valid or have been made in error. SBA should be notified to determine the effect on the structural integrity of the tower.

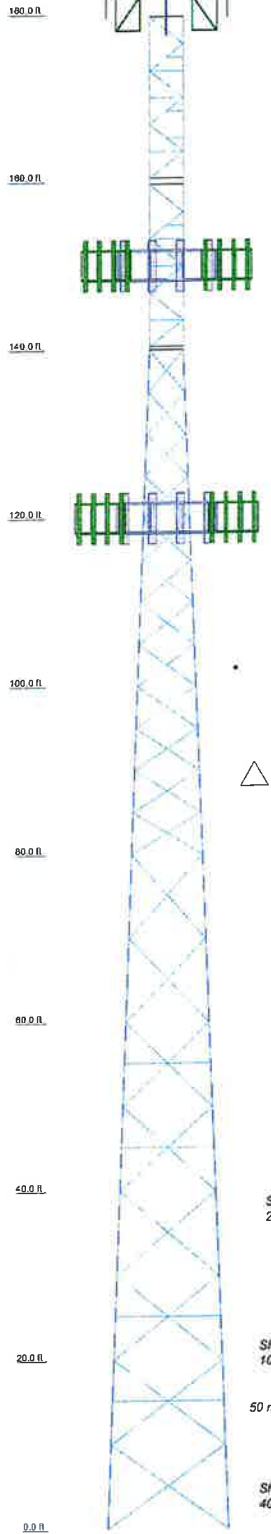
Limitations

The computer generated analysis performed by the tower software is limited to theoretical capacities of the towers structural members and does not account for any missing or damaged members or connections. The tower and foundation are assumed to have been properly designed, fabricated, installed and maintained, barring any conflicting findings from the most recent inspection.

SBA Communications Corporation has used its due diligence to verify the information provided to perform this analysis. It is unreasonable to perform a more detailed inspection of a tower and its components. This report is not a condition assessment of the tower or foundation.

Appendix

Section	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Lugs																		
Lug Grade																		
Diagonals																		
Diagonal Grade																		
Top Chords																		
Return Chords																		
Hardware																		
Hardware Grade																		
Flange Width (in)	14.5																	
# Flanges @ (ft)																		
Weight (lb)	22.6																	



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Lightning Rod	180	12.5" T-Frame	150
(2) SC40B-NF-2LHF (165" x 2.9" x 2.9")	180	(2) V-Bracing Kit (Metalose MS-C16-2075")	150
ANT150F2 (80" x 2.75" x 2.75")	180	(2) V-Bracing Kit (Metalose MS-C16-2075")	150
ANT150F2 (80" x 2.75" x 2.75")	180	(2) V-Bracing Kit (Metalose MS-C16-2075")	150
ATSS1MA10 (21.25" x 13.25" x 9")	180	Air 21 B2A24P (55.9" x 12" x 7.8") w/ mount pipe	150
Standoff w/ setback	180	Air 21 B2A24P (55.9" x 12" x 7.8") w/ mount pipe	150
Standoff w/ setback	180	Seismic Load @ 140	140
Standoff w/ setback	180	M76407-77A (35.12" x 10.00" x 5.51") w/ mount pipe	120
Seismic Load @ 100	180	M76407-77A (35.12" x 10.00" x 5.51") w/ mount pipe	120
Seismic Load @ 160	160	M76407-77A (35.12" x 10.00" x 5.51") w/ mount pipe	120
Air 21 B2A24P (55.9" x 12" x 7.8") w/ mount pipe	150	DS/D13 RRH BR04C (15x15"x8.1")	120
AR6449 B41 (33.1" x 20.5" x 8.2") w/ mount pipe	150	B05B13 RRH BR04C (15x15"x8.1")	120
AR6449 B41 (33.1" x 20.5" x 8.2") w/ mount pipe	150	D2B06A (15" x 15" x 10")	120
AR6449 B41 (33.1" x 20.5" x 8.2") w/ mount pipe	150	D2B06A (15" x 15" x 10")	120
APXWAARR24_43-U-NA20 (95.9" x 24" x 8.7") w/ mount pipe	150	D2B06A (15" x 15" x 10")	120
APXWAARR24_43-U-NA20 (95.9" x 24" x 8.7") w/ mount pipe	150	RFR0C-3315-PT-48 (22.50" x 15.79" x 10.25")	120
APXWAARR24_43-U-NA20 (95.9" x 24" x 8.7") w/ mount pipe	150	RFR0C-3315-PT-48 (22.50" x 15.79" x 10.25")	120
AR332 KR0901148-1_806A_02A (Octo) (56.6" x 12.9" x 8.7") w/ mount pipe	150	RFR0C-3315-PT-48 (22.50" x 15.79" x 10.25")	120
AR332 KR0901148-1_806A_02A (Octo) (56.6" x 12.9" x 8.7") w/ mount pipe	150	(2) BSF0020F3V1.1 (10.6" x 10.9" x 3.15")	120
AR332 KR0901148-1_806A_02A (Octo) (56.6" x 12.9" x 8.7") w/ mount pipe	150	BSF0020F3V1.1 (10.6" x 10.9" x 3.15")	120
KRY 112 144/1 (8.9" x 6.1" x 2.7")	150	Sector Frames [Comoscope SF-QV12.8]	120
KRY 112 144/1 (8.9" x 6.1" x 2.7")	150	Sector Frames [Comoscope SF-QV12.8]	120
KRY 112 144/1 (8.9" x 6.1" x 2.7")	150	Sector Frames [Comoscope SF-QV12.8]	120
Radio 4449 071-B05 (13.1" x 14.9" x 9.2")	150	(2) V-Bracing Kit (VZWSMART-SFK3) - Support Rail	120
Radio 4449 071-B05 (13.1" x 14.9" x 9.2")	150	(2) V-Bracing Kit (VZWSMART-SFK3) - Support Rail	120
Radio 4449 071-B05 (13.1" x 14.9" x 9.2")	150	(2) V-Bracing Kit (VZWSMART-SFK3) - Support Rail	120
Radio 4449 071-B05 (13.1" x 14.9" x 9.2")	150	Side By-Side Mounting Kit (BSMMN7-505-1-2)	120
Radio 4449 071-B05 (13.1" x 14.9" x 9.2")	150	Side By-Side Mounting Kit (BSMMN7-505-1-2)	120
Radio 4449 071-B05 (13.1" x 14.9" x 9.2")	150	Side By-Side Mounting Kit (BSMMN7-505-1-2)	120
4415 B26 (18.5" x 13.4" x 5.9")	150	Side By-Side Mounting Kit (BSMMN7-505-1-2)	120
4415 B26 (18.5" x 13.4" x 5.9")	150	(3) SBNH4-10650 (72" x 11.80" x 7.1") w/ mount pipe	120
4415 B26 (18.5" x 13.4" x 5.9")	150	(3) SBNH4-10650 (72" x 11.80" x 7.1") w/ mount pipe	120
4415 B26 (18.5" x 13.4" x 5.9")	150	(3) SBNH4-10650 (72" x 11.80" x 7.1") w/ mount pipe	120
Seismic Load @ 100	100	Seismic Load @ 80	80
Seismic Load @ 100	100	Seismic Load @ 60	60
Seismic Load @ 100	100	Seismic Load @ 40	40
Seismic Load @ 100	100	Seismic Load @ 20	20
Seismic Load @ 100	100		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

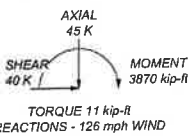
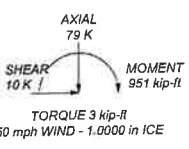
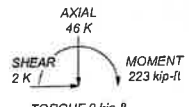
TOWER DESIGN NOTES

- Tower is located in New London County, Connecticut.
- Tower designed for Exposure C to the TIA-222-H Standard.
- Tower designed for a 126 mph basic wind in accordance with the TIA-222-H Standard.
- Tower is also designed for a 50 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
- Deflections are based upon a 60 mph wind.
- Tower Risk Category II.
- Topographic Category 1 with Crest Height of 0.00 ft
- TOWER RATINGS: 88.6%

ALL REACTIONS
ARE FACTORED

MAX. CORNER REACTIONS AT BASE
DOWN: 321 K
SHEAR: 25 K

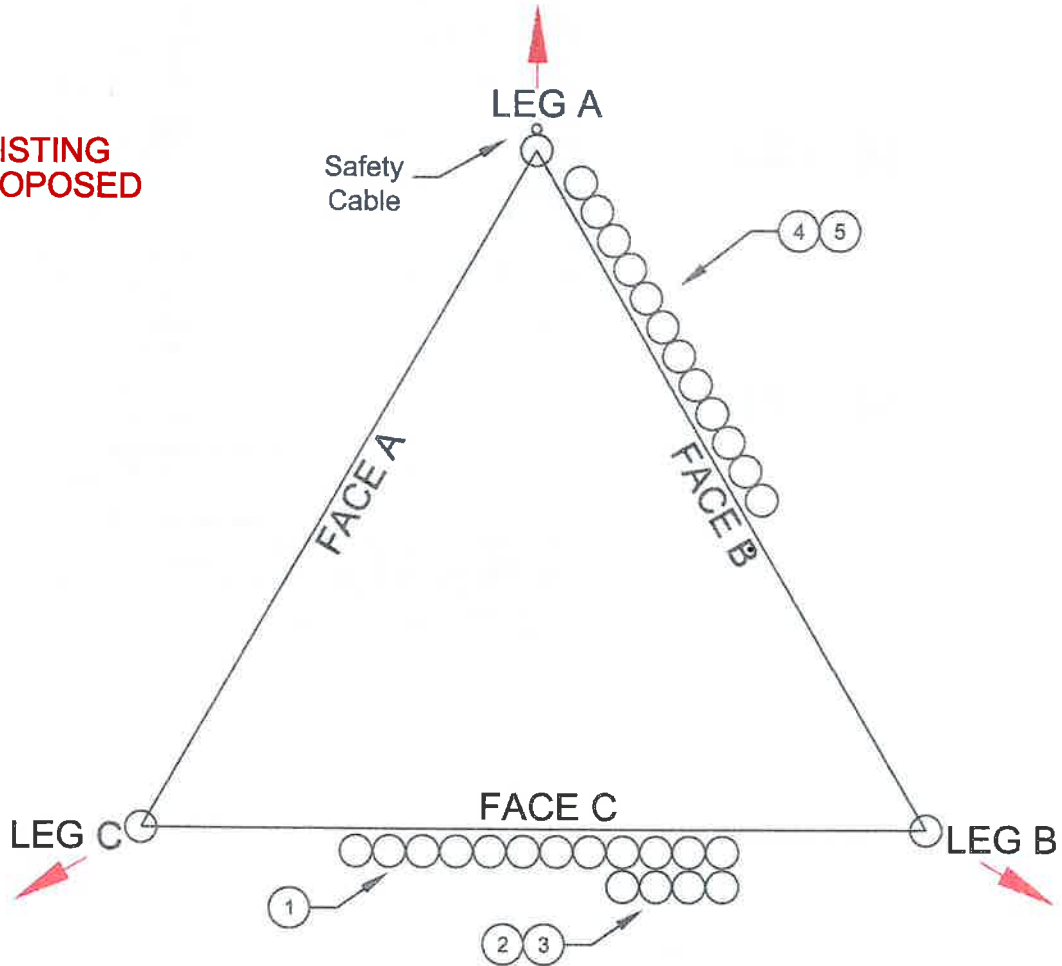
UPLIFT: -284 K
SHEAR: 22 K



SBA Communications		Project: CT09680-VZW-070723	Drawn by: Daniel Johannes	App'd:
8051 Congress Avenue		Client: TIA-222-H	Date: 07/10/23	Scale: NTS
Boca Raton, FL 33487-1307		Phone: 5619957670	FAX: 5619957626	Draw No. E-1

COAX LAYOUT

○ EXISTING
● PROPOSED



CT09680-S					
#	CARRIER	SIZE	QTY.	ELEVATION	NOTES
1	Town of Waterford	1-5/8"	3	180'	
2	T-Mobile	1-5/8"	4	150'	
3		1-5/8"	9		Fiber
4	Verizon	1-5/8"	3	120'	Hybrid
5		1-5/8"	9		

tnxTower SBA Communications 8051 Congress Avenue Boca Raton, FL 33487-1307 Phone: 5619957670 FAX: 5619957626	Job	Page 1 of 25
	Project	Date 15:31:52 07/10/23
	Client	Designed by Daniel Yohannes

Tower Input Data

The main tower is a 3x free standing tower with an overall height of 180.00 ft above the ground line.
The base of the tower is set at an elevation of 0.00 ft above the ground line.
The face width of the tower is 4.00 ft at the top and 14.50 ft at the base.
This tower is designed using the TIA-222-H standard.

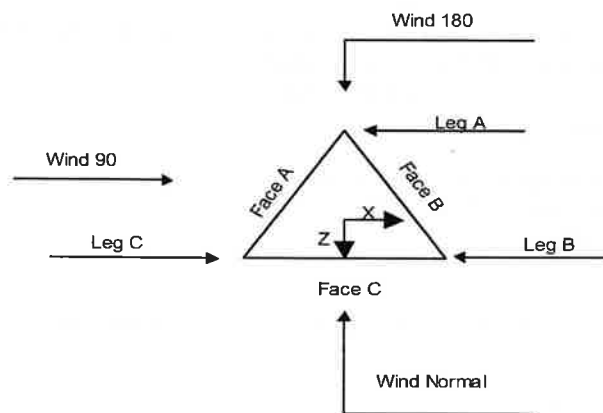
The following design criteria apply:

1. Tower is located in New London County, Connecticut.
2. Tower base elevation above sea level: 261.80 ft.
3. Basic wind speed of 126 mph.
4. Risk Category II.
5. Exposure Category C.
6. Simplified Topographic Factor Procedure for wind speed-up calculations is used.
7. Topographic Category: 1.
8. Crest Height: 0.00 ft.
9. Nominal ice thickness of 1.0000 in.
10. Ice thickness is considered to increase with height.
11. Ice density of 56 pcf.
12. A wind speed of 50 mph is used in combination with ice.
13. Temperature drop of 50 °F.
14. Deflections calculated using a wind speed of 60 mph.
15. A non-linear (P-delta) analysis was used.
16. Pressures are calculated at each section.
17. Stress ratio used in tower member design is 1.
18. Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

- | | | |
|--|---|---|
| <ul style="list-style-type: none"> Consider Moments - Legs Consider Moments - Horizontals Consider Moments - Diagonals Use Moment Magnification √ Use Code Stress Ratios √ Use Code Safety Factors - Guys Escalate Ice Always Use Max Kz Use Special Wind Profile √ Include Bolts In Member Capacity Leg Bolts Are At Top Of Section √ Secondary Horizontal Braces Leg Use Diamond Inner Bracing (4 Sided) √ SR Members Have Cut Ends SR Members Are Concentric | <ul style="list-style-type: none"> Distribute Leg Loads As Uniform Assume Legs Pinned √ Assume Rigid Index Plate √ Use Clear Spans For Wind Area √ Use Clear Spans For KL/r Retension Guys To Initial Tension √ Bypass Mast Stability Checks √ Use Azimuth Dish Coefficients √ Project Wind Area of Appurt. Autocalc Torque Arm Areas Add IBC .6D+W Combination √ Sort Capacity Reports By Component Triangulate Diamond Inner Bracing Treat Feed Line Bundles As Cylinder Ignore KL/ry For 60 Deg. Angle Legs | <ul style="list-style-type: none"> Use ASCE 10 X-Brace Ly Rules √ Calculate Redundant Bracing Forces Ignore Redundant Members in FEA SR Leg Bolts Resist Compression All Leg Panels Have Same Allowable Offset Girt At Foundation √ Consider Feed Line Torque √ Include Angle Block Shear Check Use TIA-222-H Bracing Resist. Exemption Use TIA-222-H Tension Splice Exemption <li style="text-align: center;">Poles √ Include Shear-Torsion Interaction Always Use Sub-Critical Flow Use Top Mounted Sockets Pole Without Linear Attachments Pole With Shroud Or No Appurtenances Outside and Inside Corner Radii Are Known |
|--|---|---|

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Triangular Tower

Tower Section Geometry

<i>Tower Section</i>	<i>Tower Elevation</i>	<i>Assembly Database</i>	<i>Description</i>	<i>Section Width</i>	<i>Number of Sections</i>	<i>Section Length</i>
	<i>ft</i>			<i>ft</i>		<i>ft</i>
T1	180.00-160.00			4.00	1	20.00
T2	160.00-140.00			4.00	1	20.00
T3	140.00-120.00			4.00	1	20.00
T4	120.00-100.00			5.50	1	20.00
T5	100.00-80.00			7.00	1	20.00
T6	80.00-60.00			8.50	1	20.00
T7	60.00-40.00			10.00	1	20.00
T8	40.00-20.00			11.50	1	20.00
T9	20.00-0.00			13.00	1	20.00

Tower Section Geometry (cont'd)

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Tower Section	Tower Elevation ft	Diagonal Spacing ft	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset in	Bottom Girt Offset in
T1	180.00-160.00	3.21	K Brace Left	No	Yes+Steps	4.5000	4.5000
T2	160.00-140.00	3.21	K Brace Left	No	Yes+Steps	4.5000	4.5000
T3	140.00-120.00	5.00	X Brace	No	No	0.0000	0.0000
T4	120.00-100.00	5.00	X Brace	No	No	0.0000	0.0000
T5	100.00-80.00	5.00	X Brace	No	No	0.0000	0.0000
T6	80.00-60.00	10.00	X Brace	No	Yes	0.0000	0.0000
T7	60.00-40.00	10.00	X Brace	No	Yes	0.0000	0.0000
T8	40.00-20.00	10.00	X Brace	No	Yes	0.0000	0.0000
T9	20.00-0.00	10.00	X Brace	No	Yes	0.0000	0.0000

Tower Section Geometry (cont'd)

Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
T1 180.00-160.00	Solid Round	1 1/2	A572-50 (50 ksi)	Solid Round	1	A36 (36 ksi)
T2 160.00-140.00	Solid Round	2	A572-50 (50 ksi)	Solid Round	1 1/4	A36 (36 ksi)
T3 140.00-120.00	Solid Round	2 3/4	A572-50 (50 ksi)	Single Angle	L2x2x3/16	A36 (36 ksi)
T4 120.00-100.00	Solid Round	3	A572-50 (50 ksi)	Single Angle	L2x2x1/4	A36 (36 ksi)
T5 100.00-80.00	Solid Round	3 1/2	A572-50 (50 ksi)	Single Angle	L2x2x1/4	A36 (36 ksi)
T6 80.00-60.00	Solid Round	3 1/2	A572-50 (50 ksi)	Single Angle	L3x3x3/16	A36 (36 ksi)
T7 60.00-40.00	Solid Round	3 3/4	A572-50 (50 ksi)	Single Angle	L3x3x3/16	A36 (36 ksi)
T8 40.00-20.00	Solid Round	4	A572-50 (50 ksi)	Single Angle	L3x3x3/16	A36 (36 ksi)
T9 20.00-0.00	Solid Round	4	A572-50 (50 ksi)	Single Angle	L3x3x1/4	A36 (36 ksi)

Tower Section Geometry (cont'd)

Tower Elevation ft	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
T1 180.00-160.00	Solid Round	1	A36 (36 ksi)	Solid Round	1	A36 (36 ksi)
T2 160.00-140.00	Solid Round	1	A36 (36 ksi)	Solid Round	1	A36 (36 ksi)
T3 140.00-120.00	Single Angle	L2x2x1/8	A36 (36 ksi)	Solid Round		A36 (36 ksi)

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Tower Section Geometry (cont'd)

Tower Elevation <i>ft</i>	No. of Mid Girts	Mid Girt Type	Mid Girt Size	Mid Girt Grade	Horizontal Type	Horizontal Size	Horizontal Grade
T1 180.00-160.00	None	Flat Bar		A36 (36 ksi)	Solid Round	1	A36 (36 ksi)
T2 160.00-140.00	None	Flat Bar		A36 (36 ksi)	Solid Round	1	A36 (36 ksi)

Tower Section Geometry (cont'd)

Tower Elevation <i>ft</i>	Secondary Horizontal Type	Secondary Horizontal Size	Secondary Horizontal Grade	Inner Bracing Type	Inner Bracing Size	Inner Bracing Grade
T1 180.00-160.00	Solid Round	1	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T2 160.00-140.00	Solid Round	1	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T6 80.00-60.00	Equal Angle	L2x2x1/8	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T7 60.00-40.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T8 40.00-20.00	Equal Angle	L2 1/2x2 1/2x3/16	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T9 20.00-0.00	Equal Angle	L2 1/2x2 1/2x3/16	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)

Tower Section Geometry (cont'd)

Tower Elevation <i>ft</i>	Gusset Area (per face) <i>ft²</i>	Gusset Thickness <i>in</i>	Gusset Grade	Adjust. Factor <i>A_f</i>	Adjust. Factor <i>A_r</i>	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals <i>in</i>	Double Angle Stitch Bolt Spacing Horizontals <i>in</i>	Double Angle Stitch Bolt Spacing Redundants <i>in</i>
T1 180.00-160.00	0.00	0.0000	A36 (36 ksi)	1	1	1.05	36.0000	36.0000	36.0000
T2 160.00-140.00	0.00	0.0000	A36 (36 ksi)	1	1	1.05	36.0000	36.0000	36.0000
T3 140.00-120.00	0.00	0.0000	A36 (36 ksi)	1	1	1.05	36.0000	36.0000	36.0000
T4 120.00-100.00	0.00	0.0000	A36 (36 ksi)	1	1	1.05	36.0000	36.0000	36.0000
T5 100.00-80.00	0.00	0.0000	A36 (36 ksi)	1	1	1.05	36.0000	36.0000	36.0000
T6 80.00-60.00	0.00	0.0000	A36 (36 ksi)	1	1	1.05	36.0000	36.0000	36.0000

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Tower Elevation ft	Leg Connection Type	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
		Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.
T3 140.00-120.00	Flange	1.0000 A325N	4	0.6250 A325N	1	0.6250 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T4 120.00-100.00	Flange	1.0000 A325N	6	0.6250 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T5 100.00-80.00	Flange	1.0000 A325N	6	0.6250 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T6 80.00-60.00	Flange	1.2500 A325N >1"	6	0.7500 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	1
T7 60.00-40.00	Flange	1.2500 A325N >1"	6	0.7500 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	1
T8 40.00-20.00	Flange	1.2500 A325N >1"	6	0.7500 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	1
T9 20.00-0.00	Flange	1.2500 A354-BC	0	0.7500 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	1

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
Safety Cable	A	No	No	Ar (CaAa)	180.00 - 5.00	0.0000	0.5	1	1	0.5000	0.3750		0.22
*** 1-5/8"	C	No	No	Ar (CaAa)	180.00 - 5.00	0.0000	0.15	3	3	0.5000	1.9800		1.04
Feedline Ladder (Af)	C	No	No	Af (CaAa)	180.00 - 5.00	0.0000	0	1	1	0.5000	3.0000		8.40
*** 1-5/8"	C	No	No	Ar (CaAa)	150.00 - 5.00	0.0000	0.05	4	4	0.5000	1.9800		1.04
1-5/8" Fiber	C	No	No	Ar (CaAa)	150.00 - 5.00	0.0000	-0.05	9	5	0.5000	1.6250		1.10
*** 1-5/8" Hybrid	B	No	No	Ar (CaAa)	120.00 - 5.00	0.0000	-0.35	3	3	0.5000	2.0000		1.10
1-5/8"	B	No	No	Ar (CaAa)	120.00 - 5.00	0.0000	-0.2	9	9	0.5000	1.9800		1.04
Feedline Ladder (Af)	B	No	No	Af (CaAa)	120.00 - 5.00	0.0000	0.25	1	1	0.5000	3.0000		8.40

Feed Line/Linear Appurtenances - Entered As Area

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Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	C _A A _A ft ² /ft	Weight plf

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A _R ft ²	A _F ft ²	C _A A _A In Face ft ²	C _A A _A Out Face ft ²	Weight K
T1	180.00-160.00	A	0.000	0.000	0.750	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	21.880	0.000	0.23
T2	160.00-140.00	A	0.000	0.000	0.750	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	44.425	0.000	0.37
T3	140.00-120.00	A	0.000	0.000	0.750	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	66.970	0.000	0.51
T4	120.00-100.00	A	0.000	0.000	0.750	0.000	0.00
		B	0.000	0.000	57.640	0.000	0.42
		C	0.000	0.000	66.970	0.000	0.51
T5	100.00-80.00	A	0.000	0.000	0.750	0.000	0.00
		B	0.000	0.000	57.640	0.000	0.42
		C	0.000	0.000	66.970	0.000	0.51
T6	80.00-60.00	A	0.000	0.000	0.750	0.000	0.00
		B	0.000	0.000	57.640	0.000	0.42
		C	0.000	0.000	66.970	0.000	0.51
T7	60.00-40.00	A	0.000	0.000	0.750	0.000	0.00
		B	0.000	0.000	57.640	0.000	0.42
		C	0.000	0.000	66.970	0.000	0.51
T8	40.00-20.00	A	0.000	0.000	0.750	0.000	0.00
		B	0.000	0.000	57.640	0.000	0.42
		C	0.000	0.000	66.970	0.000	0.51
T9	20.00-0.00	A	0.000	0.000	0.563	0.000	0.00
		B	0.000	0.000	43.230	0.000	0.32
		C	0.000	0.000	50.227	0.000	0.38

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A _R ft ²	A _F ft ²	C _A A _A In Face ft ²	C _A A _A Out Face ft ²	Weight K
T1	180.00-160.00	A	1.178	0.000	0.000	5.463	0.000	0.05
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	40.357	0.000	0.57
T2	160.00-140.00	A	1.163	0.000	0.000	5.404	0.000	0.05
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	73.160	0.000	1.02
T3	140.00-120.00	A	1.147	0.000	0.000	5.338	0.000	0.05

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Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft ²	A_F ft ²	$C_A A_A$ In Face ft ²	$C_A A_A$ Out Face ft ²	Weight K
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	105.727	0.000	1.47
T4	120.00-100.00	A	1.128	0.000	0.000	5.262	0.000	0.05
		B		0.000	0.000	101.095	0.000	1.29
		C		0.000	0.000	105.276	0.000	1.46
T5	100.00-80.00	A	1.106	0.000	0.000	5.172	0.000	0.04
		B		0.000	0.000	100.727	0.000	1.28
		C		0.000	0.000	104.745	0.000	1.44
T6	80.00-60.00	A	1.078	0.000	0.000	5.062	0.000	0.04
		B		0.000	0.000	100.277	0.000	1.26
		C		0.000	0.000	104.095	0.000	1.42
T7	60.00-40.00	A	1.042	0.000	0.000	4.920	0.000	0.04
		B		0.000	0.000	99.692	0.000	1.23
		C		0.000	0.000	103.250	0.000	1.39
T8	40.00-20.00	A	0.991	0.000	0.000	4.712	0.000	0.04
		B		0.000	0.000	98.843	0.000	1.19
		C		0.000	0.000	102.023	0.000	1.35
T9	20.00-0.00	A	0.887	0.000	0.000	3.225	0.000	0.02
		B		0.000	0.000	72.870	0.000	0.84
		C		0.000	0.000	74.695	0.000	0.96

Feed Line Center of Pressure

Section	Elevation ft	CP_x in	CP_z in	CP_x Ice in	CP_z Ice in
T1	180.00-160.00	-1.7520	2.9843	-1.4902	1.6316
T2	160.00-140.00	-0.9984	4.4468	-1.1304	3.1483
T3	140.00-120.00	-0.5941	4.7708	-0.9807	4.5624
T4	120.00-100.00	1.8882	-5.0694	1.6615	-4.1128
T5	100.00-80.00	2.1442	-5.8447	1.8923	-4.8289
T6	80.00-60.00	2.2700	-6.2808	2.0680	-5.4469
T7	60.00-40.00	2.4853	-6.9334	2.2544	-6.1020
T8	40.00-20.00	2.6276	-7.3805	2.3829	-6.6724
T9	20.00-0.00	2.2992	-6.4763	2.0721	-6.1301

Shielding Factor K_a

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T1	1	Safety Cable	160.00 - 180.00	0.6000	0.6000
T1	3	1-5/8"	160.00 - 180.00	0.6000	0.6000
T1	4	Feedline Ladder (AF)	160.00 - 180.00	0.6000	0.6000

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Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T2	1	Safety Cable	140.00 - 160.00	0.6000	0.6000
T2	3	1-5/8"	140.00 - 160.00	0.6000	0.6000
T2	4	Feedline Ladder (Af)	140.00 - 160.00	0.6000	0.6000
T2	6	1-5/8"	140.00 - 150.00	0.6000	0.6000
T2	7	1-5/8" Fiber	140.00 - 150.00	0.6000	0.6000
T3	1	Safety Cable	120.00 - 140.00	0.6000	0.6000
T3	3	1-5/8"	120.00 - 140.00	0.6000	0.6000
T3	4	Feedline Ladder (Af)	120.00 - 140.00	0.6000	0.6000
T3	6	1-5/8"	120.00 - 140.00	0.6000	0.6000
T3	7	1-5/8" Fiber	120.00 - 140.00	0.6000	0.6000
T4	1	Safety Cable	100.00 - 120.00	0.6000	0.6000
T4	3	1-5/8"	100.00 - 120.00	0.6000	0.6000
T4	4	Feedline Ladder (Af)	100.00 - 120.00	0.6000	0.6000
T4	6	1-5/8"	100.00 - 120.00	0.6000	0.6000
T4	7	1-5/8" Fiber	100.00 - 120.00	0.6000	0.6000
T4	9	1-5/8" Hybrid	100.00 - 120.00	0.6000	0.6000
T4	10	1-5/8"	100.00 - 120.00	0.6000	0.6000
T4	11	Feedline Ladder (Af)	100.00 - 120.00	0.6000	0.6000
T5	1	Safety Cable	80.00 - 100.00	0.6000	0.6000
T5	3	1-5/8"	80.00 - 100.00	0.6000	0.6000
T5	4	Feedline Ladder (Af)	80.00 - 100.00	0.6000	0.6000
T5	6	1-5/8"	80.00 - 100.00	0.6000	0.6000
T5	7	1-5/8" Fiber	80.00 - 100.00	0.6000	0.6000
T5	9	1-5/8" Hybrid	80.00 - 100.00	0.6000	0.6000
T5	10	1-5/8"	80.00 - 100.00	0.6000	0.6000
T5	11	Feedline Ladder (Af)	80.00 - 100.00	0.6000	0.6000
T6	1	Safety Cable	60.00 - 80.00	0.6000	0.6000
T6	3	1-5/8"	60.00 - 80.00	0.6000	0.6000
T6	4	Feedline Ladder (Af)	60.00 - 80.00	0.6000	0.6000
T6	6	1-5/8"	60.00 - 80.00	0.6000	0.6000
T6	7	1-5/8" Fiber	60.00 - 80.00	0.6000	0.6000
T6	9	1-5/8" Hybrid	60.00 - 80.00	0.6000	0.6000
T6	10	1-5/8"	60.00 - 80.00	0.6000	0.6000
T6	11	Feedline Ladder (Af)	60.00 - 80.00	0.6000	0.6000
T7	1	Safety Cable	40.00 - 60.00	0.6000	0.6000
T7	3	1-5/8"	40.00 - 60.00	0.6000	0.6000
T7	4	Feedline Ladder (Af)	40.00 - 60.00	0.6000	0.6000
T7	6	1-5/8"	40.00 - 60.00	0.6000	0.6000
T7	7	1-5/8" Fiber	40.00 - 60.00	0.6000	0.6000
T7	9	1-5/8" Hybrid	40.00 - 60.00	0.6000	0.6000

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Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T7	10	1-5/8"	40.00 - 60.00	0.6000	0.6000
T7	11	Feedline Ladder (Af)	40.00 - 60.00	0.6000	0.6000
T8	1	Safety Cable	20.00 - 40.00	0.6000	0.6000
T8	3	1-5/8"	20.00 - 40.00	0.6000	0.6000
T8	4	Feedline Ladder (Af)	20.00 - 40.00	0.6000	0.6000
T8	6	1-5/8"	20.00 - 40.00	0.6000	0.6000
T8	7	1-5/8" Fiber	20.00 - 40.00	0.6000	0.6000
T8	9	1-5/8" Hybrid	20.00 - 40.00	0.6000	0.6000
T8	10	1-5/8"	20.00 - 40.00	0.6000	0.6000
T8	11	Feedline Ladder (Af)	20.00 - 40.00	0.6000	0.6000
T9	1	Safety Cable	5.00 - 20.00	0.6000	0.6000
T9	3	1-5/8"	5.00 - 20.00	0.6000	0.6000
T9	4	Feedline Ladder (Af)	5.00 - 20.00	0.6000	0.6000
T9	6	1-5/8"	5.00 - 20.00	0.6000	0.6000
T9	7	1-5/8" Fiber	5.00 - 20.00	0.6000	0.6000
T9	9	1-5/8" Hybrid	5.00 - 20.00	0.6000	0.6000
T9	10	1-5/8"	5.00 - 20.00	0.6000	0.6000
T9	11	Feedline Ladder (Af)	5.00 - 20.00	0.6000	0.6000

User Defined Loads - Seismic

Description	Elevation	Offset From Centroid	Azimuth Angle	E_v	E_{hx}	E_{hz}	E_h
	ft	ft	°	K	K	K	K
Seismic Load @180	180.00	0.00	0.0000	0.07	0.00	0.00	0.14
Seismic Load @160	160.00	0.00	0.0000	0.22	0.00	0.00	0.47
Seismic Load @140	140.00	0.00	0.0000	0.09	0.00	0.00	0.14
Seismic Load @120	120.00	0.00	0.0000	0.29	0.00	0.00	0.46
Seismic Load @100	100.00	0.00	0.0000	0.16	0.00	0.00	0.17
Seismic Load @80	80.00	0.00	0.0000	0.15	0.00	0.00	0.13
Seismic Load @60	60.00	0.00	0.0000	0.17	0.00	0.00	0.11
Seismic Load @40	40.00	0.00	0.0000	0.19	0.00	0.00	0.07
Seismic Load @20	20.00	0.00	0.0000	0.19	0.00	0.00	0.03

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert	Azimuth Adjustment	Placement	C_{AA} Front	C_{AA} Side	Weight	
			ft ft ft	°	ft	ft ²	ft ²	K	
Lightning Rod	A	From Leg	0.00	0.0000	180.00	No Ice	0.25	0.25	0.04
			0.00			1/2" Ice	0.66	0.66	0.07
			2.00			1" Ice	1.07	1.07	0.10

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Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	C _{AA} Front ft ²	C _{AA} Side ft ²	Weight K

(2) SC488-HF2LNF (183" x 2.9" x 2.9")	A	From Leg	6.00 0.00 7.50	0.0000	180.00	No Ice 4.42 1/2" Ice 5.98 1" Ice 7.54	4.42 5.98 7.54	0.03 0.06 0.09
ANT150F2 (60" x 2.75" x 2.75")	B	From Leg	6.00 0.00 2.50	0.0000	180.00	No Ice 1.31 1/2" Ice 1.74 1" Ice 2.16	1.31 1.74 2.16	0.01 0.02 0.03
ANT150F2 (60" x 2.75" x 2.75")	C	From Leg	6.00 0.00 2.50	0.0000	180.00	No Ice 1.31 1/2" Ice 1.74 1" Ice 2.16	1.31 1.74 2.16	0.01 0.02 0.03
ATSSTMA10 (21.25" x 13.25" x 9")	B	From Leg	6.00 0.00 0.00	0.0000	180.00	No Ice 2.35 1/2" Ice 2.52 1" Ice 2.69	2.35 2.52 2.69	0.03 0.04 0.06
Standoff w/ tieback	A	From Leg	3.00 0.00 0.00	0.0000	180.00	No Ice 1.84 1/2" Ice 2.24 1" Ice 2.64	1.84 2.24 2.64	0.15 0.18 0.21
Standoff w/ tieback	B	From Leg	3.00 0.00 0.00	0.0000	180.00	No Ice 1.84 1/2" Ice 2.24 1" Ice 2.64	1.84 2.24 2.64	0.15 0.18 0.21
Standoff w/ tieback	C	From Leg	3.00 0.00 0.00	0.0000	180.00	No Ice 1.84 1/2" Ice 2.24 1" Ice 2.64	1.84 2.24 2.64	0.15 0.18 0.21

Air 21 B2A/B4P (55.9" x 12" x 7.8") w/ mount pipe	A	From Leg	3.00 0.00 0.00	0.0000	150.00	No Ice 6.83 1/2" Ice 7.54 1" Ice 8.25	6.16 7.31 8.47	0.12 0.18 0.23
Air 21 B2A/B4P (55.9" x 12" x 7.8") w/ mount pipe	B	From Leg	3.00 0.00 0.00	0.0000	150.00	No Ice 6.83 1/2" Ice 7.54 1" Ice 8.25	6.16 7.31 8.47	0.12 0.18 0.23
Air 21 B2A/B4P (55.9" x 12" x 7.8") w/ mount pipe	C	From Leg	3.00 0.00 0.00	0.0000	150.00	No Ice 6.83 1/2" Ice 7.54 1" Ice 8.25	6.16 7.31 8.47	0.12 0.18 0.23
AIR6449 B41 (33.1" x 20.5" x 8.3") w/ mount pipe	A	From Leg	3.00 0.00 0.00	0.0000	150.00	No Ice 6.90 1/2" Ice 7.69 1" Ice 8.48	4.32 5.35 6.38	0.13 0.18 0.24
AIR6449 B41 (33.1" x 20.5" x 8.3") w/ mount pipe	B	From Leg	3.00 0.00 0.00	0.0000	150.00	No Ice 6.90 1/2" Ice 7.69 1" Ice 8.48	4.32 5.35 6.38	0.13 0.18 0.24
AIR6449 B41 (33.1" x 20.5" x 8.3") w/ mount pipe	C	From Leg	3.00 0.00 0.00	0.0000	150.00	No Ice 6.90 1/2" Ice 7.69 1" Ice 8.48	4.32 5.35 6.38	0.13 0.18 0.24
APXVAARR24_43-U-NA20 (95.9" x 24" x 8.7") w/ mount pipe	A	From Leg	3.00 0.00 0.00	0.0000	150.00	No Ice 20.24 1/2" Ice 20.90 1" Ice 21.56	10.79 12.19 13.58	0.16 0.30 0.44
APXVAARR24_43-U-NA20 (95.9" x 24" x 8.7") w/ mount pipe	B	From Leg	3.00 0.00 0.00	0.0000	150.00	No Ice 20.24 1/2" Ice 20.90 1" Ice 21.56	10.79 12.19 13.58	0.16 0.30 0.44
APXVAARR24_43-U-NA20 (95.9" x 24" x 8.7") w/ mount pipe	C	From Leg	3.00 0.00 0.00	0.0000	150.00	No Ice 20.24 1/2" Ice 20.90 1" Ice 21.56	10.79 12.19 13.58	0.16 0.30 0.44
AIR32 KRD901146-1_B66A_B2A (Octo) (56.6" x 12.9" x 8.7") w/ mount pipe	A	From Leg	3.00 0.00 0.00	0.0000	150.00	No Ice 7.29 1/2" Ice 8.00 1" Ice 8.71	6.61 7.77 8.93	0.16 0.22 0.28

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Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _{AA} Front	C _{AA} Side	Weight
			Horz	Vert					
			ft	ft	°	ft	ft ²	ft ²	K
AIR32 KRD901146-	B	From Leg	3.00		0.0000	150.00	No Ice 7.29	6.61	0.16
1_B66A_B2A (Octo) (56.6" x 12.9" x 8.7") w/ mount pipe			0.00				1/2" Ice 8.00	7.77	0.22
AIR32 KRD901146-	C	From Leg	3.00		0.0000	150.00	No Ice 7.29	6.61	0.16
1_B66A_B2A (Octo) (56.6" x 12.9" x 8.7") w/ mount pipe			0.00				1/2" Ice 8.00	7.77	0.22
KRY 112 144/1 (6.9" x 6.1" x 2.7")	A	From Leg	3.00		0.0000	150.00	No Ice 0.35	0.16	0.01
			0.00				1/2" Ice 0.42	0.21	0.01
			0.00				1" Ice 0.49	0.26	0.02
KRY 112 144/1 (6.9" x 6.1" x 2.7")	B	From Leg	3.00		0.0000	150.00	No Ice 0.35	0.16	0.01
			0.00				1/2" Ice 0.42	0.21	0.01
			0.00				1" Ice 0.49	0.26	0.02
KRY 112 144/1 (6.9" x 6.1" x 2.7")	C	From Leg	3.00		0.0000	150.00	No Ice 0.35	0.16	0.01
			0.00				1/2" Ice 0.42	0.21	0.01
			0.00				1" Ice 0.49	0.26	0.02
Radio 4449 B71+B85 (13.1" x 14.9" x 9.2")	A	From Leg	3.00		0.0000	150.00	No Ice 1.73	1.16	0.07
			0.00				1/2" Ice 1.90	1.29	0.09
			0.00				1" Ice 2.07	1.44	0.11
Radio 4449 B71+B85 (13.1" x 14.9" x 9.2")	B	From Leg	3.00		0.0000	150.00	No Ice 1.73	1.16	0.07
			0.00				1/2" Ice 1.90	1.29	0.09
			0.00				1" Ice 2.07	1.44	0.11
Radio 4449 B71+B85 (13.1" x 14.9" x 9.2")	C	From Leg	3.00		0.0000	150.00	No Ice 1.73	1.16	0.07
			0.00				1/2" Ice 1.90	1.29	0.09
			0.00				1" Ice 2.07	1.44	0.11
4415 B25 (16.5" x 13.4" x 5.9")	A	From Leg	3.00		0.0000	150.00	No Ice 1.84	0.82	0.05
			0.00				1/2" Ice 2.01	0.94	0.06
			0.00				1" Ice 2.19	1.07	0.08
4415 B25 (16.5" x 13.4" x 5.9")	B	From Leg	3.00		0.0000	150.00	No Ice 1.84	0.82	0.05
			0.00				1/2" Ice 2.01	0.94	0.06
			0.00				1" Ice 2.19	1.07	0.08
4415 B25 (16.5" x 13.4" x 5.9")	C	From Leg	3.00		0.0000	150.00	No Ice 1.84	0.82	0.05
			0.00				1/2" Ice 2.01	0.94	0.06
			0.00				1" Ice 2.19	1.07	0.08
12.5' T-Frame	A	From Leg	1.50		0.0000	150.00	No Ice 9.72	7.05	0.28
			0.00				1/2" Ice 13.66	9.87	0.40
			0.00				1" Ice 17.60	12.69	0.52
12.5' T-Frame	B	From Leg	1.50		0.0000	150.00	No Ice 9.72	7.05	0.28
			0.00				1/2" Ice 13.66	9.87	0.40
			0.00				1" Ice 17.60	12.69	0.52
12.5' T-Frame	C	From Leg	1.50		0.0000	150.00	No Ice 9.72	7.05	0.28
			0.00				1/2" Ice 13.66	9.87	0.40
			0.00				1" Ice 17.60	12.69	0.52
(2) V-Bracing Kit [Metrosite MS-C1B-2875P]	A	From Leg	1.50		0.0000	150.00	No Ice 3.77	2.91	0.11
			0.00				1/2" Ice 4.71	3.64	0.14
			0.00				1" Ice 5.66	4.37	0.17
(2) V-Bracing Kit [Metrosite MS-C1B-2875P]	B	From Leg	1.50		0.0000	150.00	No Ice 3.77	2.91	0.11
			0.00				1/2" Ice 4.71	3.64	0.14
			0.00				1" Ice 5.66	4.37	0.17
(2) V-Bracing Kit [Metrosite MS-C1B-2875P]	C	From Leg	1.50		0.0000	150.00	No Ice 3.77	2.91	0.11
			0.00				1/2" Ice 4.71	3.64	0.14
			0.00				1" Ice 5.66	4.37	0.17

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Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _A A		Weight
			Horz	Vert			Front	Side	
			ft	ft	°	ft	ft ²	ft ²	K
(3) SBNHH-1D65B (72" x 11.85" x 7.1") w/ mount pipe	A	From Leg	3.00	0.0000	120.00	No Ice	8.53	7.24	0.08
			0.00	0.00		1/2" Ice	9.19	8.49	0.15
			0.00	0.00		1" Ice	9.85	9.75	0.21
(3) SBNHH-1D65B (72" x 11.85" x 7.1") w/ mount pipe	B	From Leg	3.00	0.0000	120.00	No Ice	8.53	7.24	0.08
			0.00	0.00		1/2" Ice	9.19	8.49	0.15
			0.00	0.00		1" Ice	9.85	9.75	0.21
(3) SBNHH-1D65B (72" x 11.85" x 7.1") w/ mount pipe	C	From Leg	3.00	0.0000	120.00	No Ice	8.53	7.24	0.08
			0.00	0.00		1/2" Ice	9.19	8.49	0.15
			0.00	0.00		1" Ice	9.85	9.75	0.21
MT6407-77A (35.12" x 16.06" x 5.51") w/ mount pipe	A	From Leg	3.00	0.0000	120.00	No Ice	5.91	3.74	0.12
			0.00	0.00		1/2" Ice	6.67	4.77	0.16
			0.00	0.00		1" Ice	7.43	5.80	0.21
MT6407-77A (35.12" x 16.06" x 5.51") w/ mount pipe	B	From Leg	3.00	0.0000	120.00	No Ice	5.91	3.74	0.12
			0.00	0.00		1/2" Ice	6.67	4.77	0.16
			0.00	0.00		1" Ice	7.43	5.80	0.21
MT6407-77A (35.12" x 16.06" x 5.51") w/ mount pipe	C	From Leg	3.00	0.0000	120.00	No Ice	5.91	3.74	0.12
			0.00	0.00		1/2" Ice	6.67	4.77	0.16
			0.00	0.00		1" Ice	7.43	5.80	0.21
B5/B13 RRH BR04C (15"x15"x8.1")	A	From Leg	3.00	0.0000	120.00	No Ice	1.88	1.01	0.07
			0.00	0.00		1/2" Ice	2.05	1.14	0.09
			0.00	0.00		1" Ice	2.22	1.28	0.11
B5/B13 RRH BR04C (15"x15"x8.1")	B	From Leg	3.00	0.0000	120.00	No Ice	1.88	1.01	0.07
			0.00	0.00		1/2" Ice	2.05	1.14	0.09
			0.00	0.00		1" Ice	2.22	1.28	0.11
B5/B13 RRH BR04C (15"x15"x8.1")	C	From Leg	3.00	0.0000	120.00	No Ice	1.88	1.01	0.07
			0.00	0.00		1/2" Ice	2.05	1.14	0.09
			0.00	0.00		1" Ice	2.22	1.28	0.11
B2/B66A (15" x 15" x 10")	A	From Leg	3.00	0.0000	120.00	No Ice	1.88	1.25	0.08
			0.00	0.00		1/2" Ice	2.03	1.38	0.10
			0.00	0.00		1" Ice	2.18	1.50	0.11
B2/B66A (15" x 15" x 10")	B	From Leg	3.00	0.0000	120.00	No Ice	1.88	1.25	0.08
			0.00	0.00		1/2" Ice	2.03	1.38	0.10
			0.00	0.00		1" Ice	2.18	1.50	0.11
B2/B66A (15" x 15" x 10")	C	From Leg	3.00	0.0000	120.00	No Ice	1.88	1.25	0.08
			0.00	0.00		1/2" Ice	2.03	1.38	0.10
			0.00	0.00		1" Ice	2.18	1.50	0.11
RRFDC-3315-PF-48 (22.98" x 15.79" x 10.25")	A	From Leg	3.00	0.0000	120.00	No Ice	3.02	1.96	0.03
			0.00	0.00		1/2" Ice	3.22	2.13	0.05
			0.00	0.00		1" Ice	3.41	2.30	0.08
RRFDC-3315-PF-48 (22.98" x 15.79" x 10.25")	B	From Leg	3.00	0.0000	120.00	No Ice	3.02	1.96	0.03
			0.00	0.00		1/2" Ice	3.22	2.13	0.05
			0.00	0.00		1" Ice	3.41	2.30	0.08
RRFDC-3315-PF-48 (22.98" x 15.79" x 10.25")	C	From Leg	3.00	0.0000	120.00	No Ice	3.02	1.96	0.03
			0.00	0.00		1/2" Ice	3.22	2.13	0.05
			0.00	0.00		1" Ice	3.41	2.30	0.08
(2) BSF0020F3V1-1 (10.6" x 10.9" x 3.15")	A	From Leg	3.00	0.0000	120.00	No Ice	0.96	0.29	0.02
			0.00	0.00		1/2" Ice	1.07	0.37	0.02
			0.00	0.00		1" Ice	1.18	0.45	0.03
BSF0020F3V1-1 (10.6" x 10.9" x 3.15")	B	From Leg	3.00	0.0000	120.00	No Ice	0.96	0.29	0.02
			0.00	0.00		1/2" Ice	1.07	0.37	0.02
			0.00	0.00		1" Ice	1.18	0.45	0.03
BSF0020F3V1-1 (10.6" x 10.9" x 3.15")	C	From Leg	3.00	0.0000	120.00	No Ice	0.96	0.29	0.02
			0.00	0.00		1/2" Ice	1.07	0.37	0.02
			0.00	0.00		1" Ice	1.18	0.45	0.03

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Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	C _{AA} Front ft ²	C _{AA} Side ft ²	Weight K
			0.00			1" Ice 1.18	0.45	0.03
Sector Frames [Commscope SF-QV12-B]	A	From Leg	1.50	0.0000	120.00	No Ice 19.94	8.22	0.42
			0.00			1/2" Ice 24.47	11.99	0.65
			0.00			1" Ice 29.00	15.76	0.88
Sector Frames [Commscope SF-QV12-B]	B	From Leg	1.50	0.0000	120.00	No Ice 19.94	8.22	0.42
			0.00			1/2" Ice 24.47	11.99	0.65
			0.00			1" Ice 29.00	15.76	0.88
Sector Frames [Commscope SF-QV12-B]	C	From Leg	1.50	0.0000	120.00	No Ice 19.94	8.22	0.42
			0.00			1/2" Ice 24.47	11.99	0.65
			0.00			1" Ice 29.00	15.76	0.88
(2) V-Bracing Kit [VZWSMART-SFK3] + Support Rail	A	From Leg	1.50	0.0000	120.00	No Ice 6.74	5.88	0.12
			0.00			1/2" Ice 8.43	7.35	0.15
			0.00			1" Ice 10.11	8.82	0.18
(2) V-Bracing Kit [VZWSMART-SFK3] + Support Rail	B	From Leg	1.50	0.0000	120.00	No Ice 6.74	5.88	0.12
			0.00			1/2" Ice 8.43	7.35	0.15
			0.00			1" Ice 10.11	8.82	0.18
(2) V-Bracing Kit [VZWSMART-SFK3] + Support Rail	C	From Leg	1.50	0.0000	120.00	No Ice 6.74	5.88	0.12
			0.00			1/2" Ice 8.43	7.35	0.15
			0.00			1" Ice 10.11	8.82	0.18
Side-By-Side Mounting Kit [BSAMNT-SBS-1-2]	A	From Leg	3.00	0.0000	120.00	No Ice 0.22	0.30	0.07
			0.00			1/2" Ice 0.26	0.35	0.09
			0.00			1" Ice 0.30	0.40	0.10
Side-By-Side Mounting Kit [BSAMNT-SBS-1-2]	B	From Leg	3.00	0.0000	120.00	No Ice 0.22	0.30	0.07
			0.00			1/2" Ice 0.26	0.35	0.09
			0.00			1" Ice 0.30	0.40	0.10
Side-By-Side Mounting Kit [BSAMNT-SBS-1-2]	C	From Leg	3.00	0.0000	120.00	No Ice 0.22	0.30	0.07
			0.00			1/2" Ice 0.26	0.35	0.09
			0.00			1" Ice 0.30	0.40	0.10

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice
3	0.9 Dead+1.0 Wind 0 deg - No Ice
4	1.2 Dead+1.0 Wind 30 deg - No Ice
5	0.9 Dead+1.0 Wind 30 deg - No Ice
6	1.2 Dead+1.0 Wind 60 deg - No Ice
7	0.9 Dead+1.0 Wind 60 deg - No Ice
8	1.2 Dead+1.0 Wind 90 deg - No Ice
9	0.9 Dead+1.0 Wind 90 deg - No Ice
10	1.2 Dead+1.0 Wind 120 deg - No Ice
11	0.9 Dead+1.0 Wind 120 deg - No Ice
12	1.2 Dead+1.0 Wind 150 deg - No Ice
13	0.9 Dead+1.0 Wind 150 deg - No Ice
14	1.2 Dead+1.0 Wind 180 deg - No Ice

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Comb. No.	Description
15	0.9 Dead+1.0 Wind 180 deg - No Ice
16	1.2 Dead+1.0 Wind 210 deg - No Ice
17	0.9 Dead+1.0 Wind 210 deg - No Ice
18	1.2 Dead+1.0 Wind 240 deg - No Ice
19	0.9 Dead+1.0 Wind 240 deg - No Ice
20	1.2 Dead+1.0 Wind 270 deg - No Ice
21	0.9 Dead+1.0 Wind 270 deg - No Ice
22	1.2 Dead+1.0 Wind 300 deg - No Ice
23	0.9 Dead+1.0 Wind 300 deg - No Ice
24	1.2 Dead+1.0 Wind 330 deg - No Ice
25	0.9 Dead+1.0 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service
51	1.2 Dead+1.0 Ev+1.0 Eh 0 deg
52	0.9 Dead-1.0 Ev+1.0 Eh 0 deg
53	1.2 Dead+1.0 Ev+1.0 Eh 30 deg
54	0.9 Dead-1.0 Ev+1.0 Eh 30 deg
55	1.2 Dead+1.0 Ev+1.0 Eh 60 deg
56	0.9 Dead-1.0 Ev+1.0 Eh 60 deg
57	1.2 Dead+1.0 Ev+1.0 Eh 90 deg
58	0.9 Dead-1.0 Ev+1.0 Eh 90 deg
59	1.2 Dead+1.0 Ev+1.0 Eh 120 deg
60	0.9 Dead-1.0 Ev+1.0 Eh 120 deg
61	1.2 Dead+1.0 Ev+1.0 Eh 150 deg
62	0.9 Dead-1.0 Ev+1.0 Eh 150 deg
63	1.2 Dead+1.0 Ev+1.0 Eh 180 deg
64	0.9 Dead-1.0 Ev+1.0 Eh 180 deg
65	1.2 Dead+1.0 Ev+1.0 Eh 210 deg
66	0.9 Dead-1.0 Ev+1.0 Eh 210 deg
67	1.2 Dead+1.0 Ev+1.0 Eh 240 deg
68	0.9 Dead-1.0 Ev+1.0 Eh 240 deg
69	1.2 Dead+1.0 Ev+1.0 Eh 270 deg
70	0.9 Dead-1.0 Ev+1.0 Eh 270 deg
71	1.2 Dead+1.0 Ev+1.0 Eh 300 deg
72	0.9 Dead-1.0 Ev+1.0 Eh 300 deg

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Comb. No.	Description
73	1.2 Dead+1.0 Ev+1.0 Eh 330 deg
74	0.9 Dead-1.0 Ev+1.0 Eh 330 deg

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	180 - 160	4.924	40	0.2401	0.0650
T2	160 - 140	3.927	46	0.2286	0.0356
T3	140 - 120	2.991	46	0.2018	0.0193
T4	120 - 100	2.193	40	0.1710	0.0145
T5	100 - 80	1.521	40	0.1378	0.0124
T6	80 - 60	0.978	40	0.1092	0.0098
T7	60 - 40	0.558	40	0.0785	0.0071
T8	40 - 20	0.262	40	0.0506	0.0044
T9	20 - 0	0.075	40	0.0256	0.0018

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
180.00	Lightning Rod	40	4.924	0.2401	0.0650	337281
160.00	Seismic Load @160	46	3.927	0.2286	0.0356	81482
150.00	Air 21 B2A/B4P (55.9" x 12" x 7.8") w/ mount pipe	46	3.446	0.2166	0.0256	43914
140.00	Seismic Load @140	46	2.991	0.2018	0.0193	30274
120.00	(3) SBNHH-1D65B (72" x 11.85" x 7.1") w/ mount pipe	40	2.193	0.1710	0.0145	39790
100.00	Seismic Load @100	40	1.521	0.1378	0.0124	35238
80.00	Seismic Load @80	40	0.978	0.1092	0.0098	39693
60.00	Seismic Load @60	40	0.558	0.0785	0.0071	37393
40.00	Seismic Load @40	40	0.262	0.0506	0.0044	48271
20.00	Seismic Load @20	40	0.075	0.0256	0.0018	35181

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	180 - 160	21.859	2	1.0652	0.2783
T2	160 - 140	17.410	2	1.0166	0.1496
T3	140 - 120	13.245	2	0.8972	0.0851
T4	120 - 100	9.701	4	0.7597	0.0640
T5	100 - 80	6.725	4	0.6108	0.0549
T6	80 - 60	4.322	4	0.4834	0.0434

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Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T7	60 - 40	2.467	4	0.3471	0.0311
T8	40 - 20	1.156	4	0.2237	0.0194
T9	20 - 0	0.330	4	0.1130	0.0081

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
180.00	Lightning Rod	2	21.859	1.0652	0.2783	78840
160.00	Seismic Load @160	2	17.410	1.0166	0.1496	18944
150.00	Air 21 B2A/B4P (55.9" x 12" x 7.8") w/ mount pipe	2	15.267	0.9631	0.1093	9928
140.00	Seismic Load @140	2	13.245	0.8972	0.0851	6906
120.00	(3) SBNHH-1D65B (72" x 11.85" x 7.1") w/ mount pipe	4	9.701	0.7597	0.0640	9001
100.00	Seismic Load @100	4	6.725	0.6108	0.0549	7951
80.00	Seismic Load @80	4	4.322	0.4834	0.0434	8934
60.00	Seismic Load @60	4	2.467	0.3471	0.0311	8419
40.00	Seismic Load @40	4	1.156	0.2237	0.0194	10908
20.00	Seismic Load @20	4	0.330	0.1130	0.0081	7961

Bolt Design Data

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt K	Allowable Load per Bolt K	Ratio Load Allowable	Allowable Ratio	Criteria
T1	180	Leg	A325N	0.7500	4	2.34	30.10	0.078 ✓	1	Bolt Tension
T2	160	Leg	A325N	0.7500	4	9.87	30.10	0.328 ✓	1	Bolt Tension
T3	140	Leg	A325N	1.0000	4	16.90	54.52	0.310 ✓	1	Bolt Tension
		Diagonal	A325N	0.6250	1	3.56	6.83	0.522 ✓	1	Member Block Shear
		Top Girt	A325N	0.6250	1	1.29	4.55	0.284 ✓	1	Member Block Shear
T4	120	Leg	A325N	1.0000	6	18.52	54.52	0.340 ✓	1	Bolt Tension
		Diagonal	A325N	0.6250	1	5.43	9.11	0.596 ✓	1	Member Block Shear
T5	100	Leg	A325N	1.0000	6	25.14	54.52	0.461 ✓	1	Bolt Tension
		Diagonal	A325N	0.6250	1	5.51	9.11	0.605 ✓	1	Member Block Shear
T6	80	Leg	A325N	1.2500	6	30.27	76.32	0.397 ✓	1	Bolt Tension
		Diagonal	A325N	0.7500	1	7.45	9.46	0.787 ✓	1	Member Bearing
		Secondary Horizontal	A325N	0.6250	1	3.95	4.55	0.868 ✓	1	Member Block Shear

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Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt K	Allowable Load per Bolt K	Ratio Load Allowable	Allowable Ratio	Criteria
T7	60	Leg	A325N >1"	1.2500	6	35.86	76.32	0.470 ✓	1	Bolt Tension
		Diagonal	A325N	0.7500	1	7.62	9.46	0.806 ✓	1	Member Bearing
		Secondary Horizontal	A325N	0.6250	1	4.46	6.83	0.653 ✓	1	Member Block Shear
T8	40	Leg	A325N >1"	1.2500	6	41.14	76.32	0.539 ✓	1	Bolt Tension
		Diagonal	A325N	0.7500	1	7.84	9.46	0.828 ✓	1	Member Bearing
		Secondary Horizontal	A325N	0.6250	1	4.90	7.83	0.626 ✓	1	Member Bearing
T9	20	Diagonal	A325N	0.7500	1	7.89	12.62	0.626 ✓	1	Member Bearing
		Secondary Horizontal	A325N	0.6250	1	5.52	7.83	0.704 ✓	1	Member Bearing

Compression Checks

Leg Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio P _u / φP _n
T1	180 - 160	1 1/2	20.00	3.21	102.7 K=1.00	1.7672	-9.76	36.79	0.265 ¹ ✓
T2	160 - 140	2	20.00	3.21	77.0 K=1.00	3.1416	-40.48	91.64	0.442 ¹ ✓
T3	140 - 120	2 3/4	20.02	5.00	87.4 K=1.00	5.9396	-74.71	152.99	0.488 ¹ ✓
T4	120 - 100	3	20.02	5.00	80.1 K=1.00	7.0686	-124.12	199.04	0.624 ¹ ✓
T5	100 - 80	3 1/2	20.02	5.00	68.6 K=1.00	9.6211	-167.76	306.80	0.547 ¹ ✓
T6	80 - 60	3 1/2	20.02	5.20	71.3 K=1.00	9.6211	-202.20	298.51	0.677 ¹ ✓
T7	60 - 40	3 3/4	20.02	5.17	66.2 K=1.00	11.0447	-240.26	360.68	0.666 ¹ ✓
T8	40 - 20	4	20.02	5.15	61.8 K=1.00	12.5664	-276.98	427.55	0.648 ¹ ✓
T9	20 - 0	4	20.02	5.14	61.7 K=1.00	12.5664	-312.17	428.28	0.729 ¹ ✓

¹ P_u / φP_n controls

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Diagonal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	180 - 160	1	5.13	4.97	166.9 K=0.70	0.7854	-2.40	6.37	0.377 ¹ ✓
T2	160 - 140	1 1/4	5.13	4.91	132.1 K=0.70	1.2272	-8.08	15.87	0.509 ¹ ✓
T3	140 - 120	L2x2x3/16	6.52	3.13	101.5 K=1.06	0.7150	-3.72	17.40	0.214 ¹ ✓
T4	120 - 100	L2x2x1/4	8.45	4.07	124.8 K=1.00	0.9380	-5.42	17.23	0.315 ¹ ✓
T5	100 - 80	L2x2x1/4	9.70	4.67	143.3 K=1.00	0.9380	-5.51	13.07	0.421 ¹ ✓
T6	80 - 60	L3x3x3/16	13.88	6.87	138.2 K=1.00	1.0900	-7.62	16.33	0.467 ¹ ✓
T7	60 - 40	L3x3x3/16	14.96	7.39	148.7 K=1.00	1.0900	-7.87	14.10	0.558 ¹ ✓
T8	40 - 20	L3x3x3/16	16.11	7.94	160.0 K=1.00	1.0900	-8.15	12.19	0.668 ¹ ✓
T9	20 - 0	L3x3x1/4	17.31	8.54	173.2 K=1.00	1.4400	-8.29	13.74	0.604 ¹ ✓

¹ P_u / φP_n controls

Horizontal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	180 - 160	1	4.00	3.88	130.2 K=0.70	0.7854	-0.28	10.42	0.026 ¹ ✓
T2	160 - 140	1	4.00	3.83	128.8 K=0.70	0.7854	-1.99	10.63	0.187 ¹ ✓

¹ P_u / φP_n controls

Secondary Horizontal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	180 - 160	1	2.00	1.94	83.9 K=0.90	0.7854	-0.00	17.56	0.000 ¹ ✓

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Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T2	160 - 140	1	2.00	1.92	83.7 K=0.91	0.7854	-0.00	17.59	0.000 ¹ ✓
T6	80 - 60	L2x2x1/8	9.61	4.54	137.0 K=1.00	0.4844	-3.95	7.38	0.536 ¹ ✓
T7	60 - 40	L2x2x3/16	11.11	5.28	160.8 K=1.00	0.7150	-4.46	7.91	0.564 ¹ ✓
T8	40 - 20	L2 1/2x2 1/2x3/16	12.61	6.02	146.0 K=1.00	0.9020	-4.90	12.12	0.405 ¹ ✓
T9	20 - 0	L2 1/2x2 1/2x3/16	14.12	6.77	164.1 K=1.00	0.9020	-5.52	9.58	0.576 ¹ ✓

¹ P_u / φP_n controls

Top Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	180 - 160	1	4.00	3.88	130.2 K=0.70	0.7854	-0.85	10.42	0.082 ¹ ✓
T2	160 - 140	1	4.00	3.83	128.8 K=0.70	0.7854	-1.25	10.63	0.118 ¹ ✓
T3	140 - 120	L2x2x1/8	4.00	3.53	113.3 K=1.06	0.4844	-1.29	10.28	0.126 ¹ ✓

¹ P_u / φP_n controls

Bottom Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	180 - 160	1	4.00	3.88	130.2 K=0.70	0.7854	-1.00	10.42	0.096 ¹ ✓
T2	160 - 140	1	4.00	3.83	128.8 K=0.70	0.7854	-2.47	10.63	0.232 ¹ ✓

¹ P_u / φP_n controls

Tension Checks

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Leg Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio P _u / φP _n
T1	180 - 160	1 1/2	20.00	0.38	12.0	1.7672	9.36	79.52	0.118 ¹
T2	160 - 140	2	20.00	0.38	9.0	3.1416	39.48	141.37	0.279 ¹
T3	140 - 120	2 3/4	20.02	5.00	87.4	5.9396	67.59	267.28	0.253 ¹
T4	120 - 100	3	20.02	5.00	80.1	7.0686	111.12	318.09	0.349 ¹
T5	100 - 80	3 1/2	20.02	5.00	68.6	9.6211	150.84	432.95	0.348 ¹
T6	80 - 60	3 1/2	20.02	4.81	66.0	9.6211	181.79	432.95	0.420 ¹
T7	60 - 40	3 3/4	20.02	4.84	61.9	11.0447	215.35	497.01	0.433 ¹
T8	40 - 20	4	20.02	4.86	58.3	12.5664	247.09	565.49	0.437 ¹
T9	20 - 0	4	20.02	4.87	58.5	12.5664	277.01	565.49	0.490 ¹

¹ P_u / φP_n controls

Diagonal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio P _u / φP _n
T1	180 - 160	1	5.13	4.97	238.4	0.7854	2.40	25.45	0.094 ¹
T2	160 - 140	1 1/4	5.13	4.91	188.7	1.2272	8.08	39.76	0.203 ¹
T3	140 - 120	L2x2x3/16	6.52	3.13	63.2	0.4308	3.56	18.74	0.190 ¹
T4	120 - 100	L2x2x1/4	7.86	3.78	76.8	0.5629	5.43	24.49	0.222 ¹
T5	100 - 80	L2x2x1/4	9.70	4.67	94.4	0.5629	5.51	24.49	0.225 ¹
T6	80 - 60	L3x3x3/16	13.88	6.87	89.5	0.6945	7.45	30.21	0.247 ¹
T7	60 - 40	L3x3x3/16	14.96	7.39	96.1	0.6945	7.62	30.21	0.252 ¹
T8	40 - 20	L3x3x3/16	16.11	7.94	103.3	0.6945	7.84	30.21	0.259 ¹

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Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T9	20 - 0	L3x3x1/4	16.70	8.25	108.1	0.9159	7.89	39.84	0.198 ¹ ✓

¹ P_u / φP_n controls

Horizontal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	180 - 160	1	4.00	3.88	186.0	0.7854	0.28	25.45	0.011 ¹ ✓
T2	160 - 140	1	4.00	3.83	184.0	0.7854	2.02	25.45	0.079 ¹ ✓

¹ P_u / φP_n controls

Secondary Horizontal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	180 - 160	1	2.00	1.94	93.0	0.7854	0.00	25.45	0.000 ¹ ✓
T2	160 - 140	1	2.00	1.92	92.0	0.7854	0.00	25.45	0.000 ¹ ✓
T6	80 - 60	L2x2x1/8	8.86	4.16	164.2	0.2930	3.95	12.74	0.310 ¹ ✓
T7	60 - 40	L2x2x3/16	11.11	5.28	210.0	0.4308	4.46	18.74	0.238 ¹ ✓
T8	40 - 20	L2 1/2x2 1/2x3/16	11.86	5.65	177.8	0.5710	4.90	24.84	0.197 ¹ ✓
T9	20 - 0	L2 1/2x2 1/2x3/16	14.12	6.77	212.6	0.5710	5.52	24.84	0.222 ¹ ✓

¹ P_u / φP_n controls

Top Girt Design Data (Tension)

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Section No.	Elevation ft	Size	L ft	L _u ft	KI/r	A in ²	P _u K	φP _n K	Ratio P _u / φP _n
T1	180 - 160	1	4.00	3.88	186.0	0.7854	0.87	25.45	0.034 ¹
T2	160 - 140	1	4.00	3.83	184.0	0.7854	1.19	25.45	0.047 ¹
T3	140 - 120	L2x2x1/8	4.00	3.53	72.3	0.2930	1.29	12.74	0.102 ¹

¹ P_u / φP_n controls

Bottom Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	KI/r	A in ²	P _u K	φP _n K	Ratio P _u / φP _n
T1	180 - 160	1	4.00	3.88	186.0	0.7854	1.06	25.45	0.042 ¹
T2	160 - 140	1	4.00	3.83	184.0	0.7854	2.56	25.45	0.101 ¹

¹ P_u / φP_n controls

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	φP _{allow} K	% Capacity	Pass Fail
T1	180 - 160	Leg	1 1/2	3	-9.76	36.79	26.5	Pass
T2	160 - 140	Leg	2	51	-40.48	91.64	44.2	Pass
T3	140 - 120	Leg	2 3/4	99	-74.71	152.99	48.8	Pass
T4	120 - 100	Leg	3	129	-124.12	199.04	62.4	Pass
T5	100 - 80	Leg	3 1/2	156	-167.76	306.80	54.7	Pass
T6	80 - 60	Leg	3 1/2	183	-202.20	298.51	67.7	Pass
T7	60 - 40	Leg	3 3/4	204	-240.26	360.68	66.6	Pass
T8	40 - 20	Leg	4	225	-276.98	427.55	64.8	Pass
T9	20 - 0	Leg	4	246	-312.17	428.28	72.9	Pass
T1	180 - 160	Diagonal	1	11	-2.40	6.37	37.7	Pass
T2	160 - 140	Diagonal	1 1/4	60	-8.08	15.87	50.9	Pass
T3	140 - 120	Diagonal	L2x2x3/16	124	-3.72	17.40	21.4	Pass
T4	120 - 100	Diagonal	L2x2x1/4	134	-5.42	17.23	52.2 (b) 31.5	Pass
T5	100 - 80	Diagonal	L2x2x1/4	161	-5.51	13.07	59.6 (b) 42.1	Pass
T6	80 - 60	Diagonal	L3x3x3/16	188	-7.62	16.33	60.5 (b) 46.7	Pass
T7	60 - 40	Diagonal	L3x3x3/16	209	-7.87	14.10	78.7 (b) 55.8 80.6 (b)	Pass

tnxTower SBA Communications 8051 Congress Avenue Boca Raton, FL 33487-1307 Phone: 5619957670 FAX: 5619957626	Job	Page 25 of 25
	Project	Date 15:31:52 07/10/23
	Client	Designed by Daniel Yohannes

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	θP_{allow} K	% Capacity	Pass Fail	
T8	40 - 20	Diagonal	L3x3x3/16	230	-8.15	12.19	66.8 82.8 (b)	Pass	
T9	20 - 0	Diagonal	L3x3x1/4	251	-8.29	13.74	60.4 62.6 (b)	Pass	
T1	180 - 160	Horizontal	1	22	-0.28	10.42	2.6	Pass	
T2	160 - 140	Horizontal	1	77	-1.99	10.63	18.7	Pass	
T1	180 - 160	Secondary Horizontal	1	41	-0.00	17.56	0.1	Pass	
T2	160 - 140	Secondary Horizontal	1	75	-0.00	17.59	0.1	Pass	
T6	80 - 60	Secondary Horizontal	L2x2x1/8	191	-3.95	7.38	53.6 86.8 (b)	Pass	
T7	60 - 40	Secondary Horizontal	L2x2x3/16	212	-4.46	7.91	56.4 65.3 (b)	Pass	
T8	40 - 20	Secondary Horizontal	L2 1/2x2 1/2x3/16	233	-4.90	12.12	40.5 62.6 (b)	Pass	
T9	20 - 0	Secondary Horizontal	L2 1/2x2 1/2x3/16	254	-5.52	9.58	57.6 70.4 (b)	Pass	
T1	180 - 160	Top Girt	1	5	-0.85	10.42	8.2	Pass	
T2	160 - 140	Top Girt	1	53	-1.25	10.63	11.8	Pass	
T3	140 - 120	Top Girt	L2x2x1/8	101	-1.29	10.28	12.6 28.4 (b)	Pass	
T1	180 - 160	Bottom Girt	1	8	-1.00	10.42	9.6	Pass	
T2	160 - 140	Bottom Girt	1	56	-2.47	10.63	23.2	Pass	
							Summary		
							Leg (T9)	72.9	Pass
							Diagonal (T8)	82.8	Pass
							Horizontal (T2)	18.7	Pass
							Secondary Horizontal (T6)	86.8	Pass
							Top Girt (T3)	28.4	Pass
							Bottom Girt (T2)	23.2	Pass
							Bolt Checks	86.8	Pass
							RATING =	86.8	Pass

Self Support Anchor Bolt Check

Project Information

SBA Project # : CT09680-VZW-070723

Code : H

Leg Reaction

Uplift(kips):	<u>284</u>	Shear (kips) :	<u>22</u>
Comp(kips):	<u>321</u>	Shear (kips) :	<u>25</u>

Grout

- 5,000 psi Grout Present
- Use Section 15.7 exemption

Strength Reduction Factors

Tension :	<u>0.75</u>
Compression :	<u>0.90</u>
Shear :	<u>0.75</u>
Flexure :	<u>0.9</u>

Bolt Capacity : 52.5% **Pass**

Bolt Information

Quantity :	<u>6</u>
Diameter (in) :	<u>1.25</u>
Assumed lar (in) :	<u>1.25</u>
Bolt Fy (ksi) :	<u>109</u>
Bolt Fu (AISC Table 2-6) (ksi):	<u>125</u>
# of threads (AISC Table 7-17) :	<u>7</u>

Project#: **CT09680-VZW-070723**

Analysis complete

Tower Data

Tower type :	SST
Height (ft) :	180
Base face width (ft) :	14.5
Number of sections :	9

Structure Date

Risk category :	II
Site class :	D (default)

Seismic Date

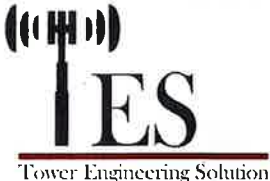
Short period (S_s):	0.194
1sec period (S_1):	0.053
Long period transition (T_L) (Fig B-19):	6

I =	1.00
F_a =	1.60
F_v =	2.40
T (sec) =	0.91
R =	3.00
K_e =	1.21
C_s =	0.05
V_s (kip) =	1.73
T_s (sec) =	0.41

Note:

- 1: Get self weight & add weight (feedline) from "Mast Forces table (tnxTower Reports)"
- 2: Get appurtenance weight from "Appurt. Pressure table (tnxTower Reports)"
- 3: Get the guy weight from "WEIGHTAUXDATA" excel file from the tnx out put files

Section	Top Elev	Top width	Self Weight	Add Weight (feedline)	Appurtenance Weight	Guy Weight	Total Weight	Tnx User Forces	
	ft	ft	kip	kip	kip	kip	kip	$E_h (F_x)$	* E_v
1	180	4	0.91	0.23	0.6	0.00	1.74	0.14	0.07
2	160	4	1.35	0.38	3.6	0.00	5.33	0.47	0.22
3	140	4	1.72	0.52	0.00	0.00	2.24	0.14	0.09
4	120	5.5	2.16	0.94	3.89	0.00	6.99	0.46	0.29
5	100	7	2.81	0.94	0.00	0.00	3.75	0.17	0.16
6	80	8.5	2.8	0.94	0.00	0.00	3.74	0.13	0.15
7	60	10	3.22	0.94	0.00	0.00	4.16	0.11	0.17
8	40	11.5	3.67	0.94	0	0.00	4.61	0.07	0.19
9	20	13	4.01	0.7	0	0.00	4.71	0.03	0.19
	8.2		22.65	6.53	8.09		37.27	1.73	

	Mat Foundation Design for Self Supporting Tower			Date 7/10/2023
	Customer Name:		TIA Standard:	TIA-222-H
	Site Name:		Structure Height (Ft.):	180
	Site Number:	CT09680-VZW-070723	Engineer Name:	D. Johannes
Engr. Number:		Engineer Login ID:		

Foundation Info Obtained from:

Drawings/Calculations

Analysis or Design?

Analysis

Number of Tower Legs:

3 Legs

Base Reactions (Factored):

(1). Individual Leg:

Axial Load (Kips):	321.0	Uplift Force (Kips):	284.0
Shear Force (Kips):	25.0		

(2). Tower Base:

Total Vertical Load (Kips):	45.0	Total Shear Force (Kips):	40.0
Moment (Kips-ft):	3870.0		

Foundation Geometries:

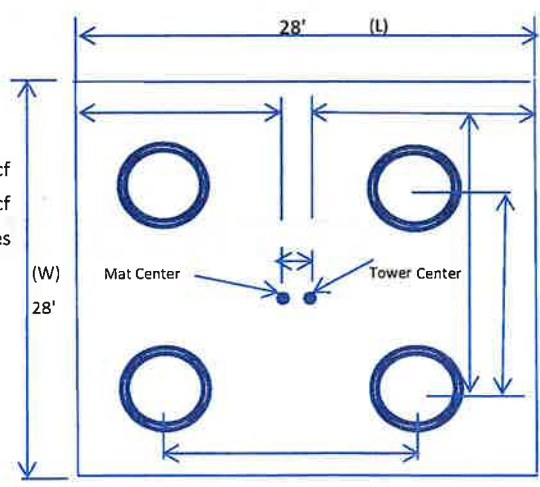
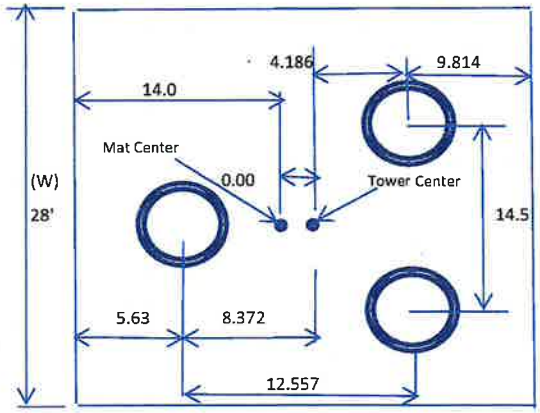
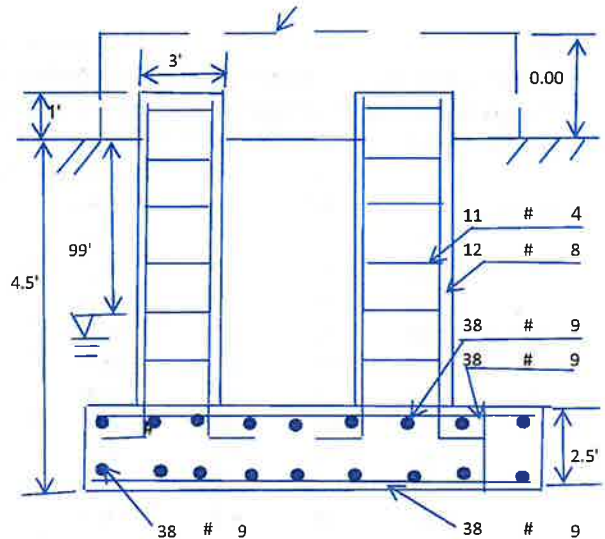
Leg distance (Center-to-Center ft.):	14.5	Mods required -Yes/No ?:	No
Diameter of Pier (ft.):	Round 3.0	Pier Height A. G. (ft.):	1.00
Tower center to mat center (ft.):	0	Depth of Base BG (ft.):	4.5
Length of Pad (ft.):	28	Width of Pad (ft.):	28
Thickness of Pad (ft):	2.50		

Material Properties and Rebar Info:

Concrete Strength (psi):	4000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	60	
Vertical Rebar Size #:	8	Tie / Stirrup Size #:	4	
Qty. of Vertical Rebars:	12	Tie Spacing (in):	6.0	
Pad Rebar Yield (Ksi):	60	Pad Steel Rebar Size (#):	9	
Concrete Cover (in.):	3	Unit Weight of Concrete:	150.0	pcf
Rebar at the bottom of the concrete pad:				
Qty. of Rebar in Pad (L):	38	Qty. of Rebar in Pad (W):	38	
Rebar at the top of the concrete pad:				
Qty. of Rebar in Pad (L):	38	Qty. of Rebar in Pad (W):	38	

Soil Design Parameters:

Soil Unit Weight (pcf):	110.0	Soil Buoyant Weight:	47.6	Pcf
Water Table B.G.S. (ft):	99.0	Unit Weight of Water:	62.4	pcf
Ultimate Bearing Pressure (psf):	12000	Consider ties in concrete shear strength:	Yes	
Consider Soil Lateral Resistance ?	No			



Foundation Analysis and Design:

Uplift Strength Reduction Factor:	0.75	Compression Strength Reduction Factor:	0.75
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Total Dry Soil Volume (cu. Ft.):	1525.59	Total Dry Soil Weight (Kips):	167.81
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	167.81	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	2023.62	Total Dry Concrete Weight (Kips):	303.54
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	303.54	Total Vertical Load on Base (Kips):	516.36

Load/
Capacity
Ratio

Check Soil Capacities:

Calculated Maxium Net Soil Pressure under the base (psf):	2070.16	<	Allowable Factored Soil Bearing (psf):	9000	0.23	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	6569.1	>	Design Factored Momont (kips-ft.):	4090	0.62	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	1.61		OK!			

Check the capacities of Reinforceing Concrete:

Strength reduction factor (Flexure and axial tension):	0.90	Strength reduction factor (Shear):	0.75
Strength reduction factor (Axial compression):	0.65	Wind Load Factor on Concrete Design:	1.00

Load/
Capacity
Ratio

(1) Concrete Pier:

Vertical Steel Rebar Area (sq. in./each):	0.79	Tie / Stirrup Area (sq. in./each):	0.20			
Calculated Moment Capacity (Mn,Kips-Ft):	293.6	>	Design Factored Moment (Mu, Kips-Ft)	75.0	0.26	OK!
Calculated Shear Capacity (Kips):	123.2	>	Design Factored Shear (Kips):	25.0	0.20	OK!
Calculated Tension Capacity (Tn, Kips):	511.9	>	Design Factored Tension (Tu Kips):	284.0	0.55	OK!
Calculated Compression Capacity (Pn, Kips):	1782.8	>	Design Factored Axial Load (Pu Kips):	321.0	0.18	OK!
Moment & Tension Strength Combination:	0.26	OK!	Check Tie Spacing (Design/Req'd):	0.50		
Pier Reinforcement Ratio:	0.009		Reinforcement Ratio is satisfied per ACI			

(2).Concrete Pad:

One-Way Design Shear Capacity (L or W Direction, Kips):	842.7	>	One-Way Factored Shear (L/W-Dir Kips)	246.9	0.29	OK!
One-Way Design Shear Capacity (Diagonal Dir., Kips):	780.9	>	One-Way Factored Shear (Dia. Dir, Kips)	185.3	0.24	OK!
Lower Steel Pad Reinforcement Ratio (L or W-Direct.):	0.0043		Lower Steel Reinf. Ratio (Dia. Dir.):	0.0038		
Lower Steel Pad Moment Capacity (L or W-Dir. Kips-ft):	4350.2	>	Moment at Bottom (L-Direct. K-Ft):	1429.7	0.33	OK!
Lower Steel Pad Moment Capacity (Dia. Direction,K-ft):	4282.3	>	Moment at Bottom (Dia. Dir. K-Ft):	1439.9	0.34	OK!
Upper Steel Pad Reinforcement Ratio (L or W -Direction):	0.0043		Upper Steel Reinf. Ratio (Dia. Dir.):	0.0038		
Upper Steel Pad Moment Capacity (L or W-Dir., Kips-ft):	4350.2	>	Moment at the top (L-Dir Kips-Ft):	672.3	0.15	OK!
Upper Steel Pad Moment Capacity (Dia. Direction, K-ft):	4282.3	>	Moment at the top (Dia. Dir., K-Ft):	456.9	0.11	OK!
Punching Failure Capacity From Down Load (Kips):	983.9	>	Punch. Failure Factored Shear (K):	321.0	0.33	OK!
Punching Failure Capacity From Uplift (Kips):	873.6	>	Punch. Failure Factored Shear (K):	284.0	0.33	OK!

(3). Check Max. eccentricity of Loading:

The maximum eccentricity of Loading:	7.92	ft.	Allowable eccentricity (0.45 W, ft.):	12.6		OK!
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Reinforce Concrete Pad by enlarging the size of pier (Yes/No):

No



Colliers Engineering & Design CT. P.C.
1055 Washington Boulevard
Stamford, CT 06901
203.324.0800
peter.albano@collierseng.com

Antenna Mount Analysis Report and PMI Requirements

Mount ReAnalysis

SMART Tool Project #: 10206280
Colliers Engineering & Design CT. P.C. Project #: 23777045 (Rev. 1)

July 10, 2023

Site Information

Site ID: 5000244862-VZW / Quaker Hill CT - A
Site Name: Quaker Hill CT - A
Carrier Name: Verizon Wireless
Address: 35 South Bartlett Road
Quaker Hill, Connecticut 06375
New London County
Latitude: 41.41765277°
Longitude: -72.10672777°

Structure Information

Tower Type: 160-Ft Self Support
Mount Type: 12.50-Ft Sector Frame

FUZE ID # 17123917

Analysis Results

Sector Frame: 63.4% Pass*

***Antennas and equipment to be installed in compliance with PMI Requirements of this mount analysis.**

***Contractor PMI Requirements:

Included at the end of this MA report

Available & Submitted via portal at <https://pmi.vzwsmart.com>

**For additional questions and support, please reach out to:
pmisupport@colliersengineering.com**

Report Prepared By: Frank Centone



Executive Summary:

The objective of this report is to determine the capacity of the antenna support mount at the subject facility for the final wireless telecommunications configuration, per the applicable codes and standards. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

This analysis is inclusive of the mount structure only and does not address the structural capacity of the supporting structure. This mounting frame was not analyzed as an anchor attachment point for fall protection. All climbing activities are required to have a fall protection plan completed by a competent person.

Sources of Information:

Document Type	Remarks
<i>Radio Frequency Data Sheet (RFDS)</i>	<i>Verizon RFDS, Site ID: 5001350, dated February 10, 2021</i>
<i>Mount Mapping Report</i>	<i>Hudson Design Group LLC, Site ID: 467959, dated February 9, 2021</i>
<i>Previous Mount Analysis Report</i>	<i>Maser Consulting, Project #: 20777648, dated April 20, 2021</i>
<i>Post-Modification Inspection Report</i>	<i>Maser Consulting, Project #: 20777648, dated July 25, 2022</i>
<i>Filter Added Scope</i>	<i>Provided by Verizon Wireless</i>

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H 2022 Connecticut State Building Code (CSBC), Effective October 1, 2022
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), V_{ULT} : 126 mph Ice Wind Speed (3-sec. Gust): 50 mph Design Ice Thickness: 1.00 in Risk Category: II Exposure Category: C Topographic Category: 1 Topographic Feature Considered: N/A Topographic Method: N/A Ground Elevation Factor, K_g : 0.991
Seismic Parameters:	S_s : 0.194 g S_1 : 0.053 g
Maintenance Parameters:	Wind Speed (3-sec. Gust): 30 mph Maintenance Load, L_v : 250 lbs. Maintenance Load, L_m : 500 lbs.
Analysis Software:	RISA-3D (V17)

Final Loading Configuration:

The following equipment has been considered for the analysis of the mounts:

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
119.50	120.00	3	Samsung	MT6407-77A	Retained
		9	Andrew	SBNHH-1D65B	
		3	Samsung	B2/B66A RRH-BR049	
		3	Samsung	B5/B13 RRH-BR04C	
		3	Raycap	RRFDC-3315-PF-48	
		4	KAelus	BSF0020F3V1-1	Added

It is acceptable to install up to any three (3) of the OVP model numbers listed below as required at any location other than the mount face without affecting the structural capacity of the mount. If OVP units are installed on the mount face, a mount re-analysis may be required unless replacing an existing OVP.

Model Number	Ports	AKA
DB-B1-6C-12AB-0Z	6	OVP-6
RVZDC-6627-PF-48	12	OVP-12

Standard Conditions:

1. All engineering services are performed on the basis that the information provided to Colliers Engineering & Design CT. P.C. and used in this analysis is current and correct. The existing equipment loading has been applied at locations determined from the supplied documentation. Any deviation from the loading locations specified in this report shall be communicated to Colliers Engineering & Design CT. P.C. to verify deviation will not adversely impact the analysis.
2. Mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer's specifications.

Obvious safety and structural issues/deficiencies noticed at the time of the mount mapping and reported in the Mount Mapping Report are assumed to be corrected and documented as part of the PMI process and are not considered in the mount analysis.

The mount analysis and the mount mapping are not a condition assessment of the mount. Proper maintenance and condition assessments are still required post analysis.

3. For mount analyses completed from other data sources (including new replacement mounts) and not specifically mapped in accordance with the NSTD-446 Standard, the mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer's specifications.
4. All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected member unless otherwise specified in this report.
5. The mount was checked up to, and including, the bolts that fasten it to the mount collar/attachment and threaded rod connections in collar members if applicable. Local deformation and interaction between the mount collar/attachment and the supporting tower structure are outside the scope of this analysis.

6. All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. Colliers Engineering & Design CT. P.C. is not responsible for the conclusion, opinions, and recommendations made by others based on the information supplied.
7. Structural Steel Grades have been assumed as follows, if applicable, unless otherwise noted in this analysis:
 - o Channel, Solid Round, Angle, Plate ASTM A36 (Gr. 36)
 - o HSS (Rectangular) ASTM 500 (Gr. B-46)
 - o Pipe ASTM A53 (Gr. B-35)
 - o Threaded Rod F1554 (Gr. 36)
 - o Bolts ASTM A325

Discrepancies between in-field conditions and the assumptions listed above may render this analysis invalid unless explicitly approved by Colliers Engineering & Design CT. P.C..

Analysis Results:

Component	Utilization %	Pass/Fail
Face Horizontal	63.4 %	Pass
Antenna Pipe	54.5 %	Pass
Standoff Horizontal	25.0 %	Pass
Standoff Vertical	18.0 %	Pass
Standoff Diagonal	10.5 %	Pass
Back Plate 2	30.7 %	Pass
Back Plate 1	29.5 %	Pass
Tie Back	3.7 %	Pass
Mod Face horizontal	51.5 %	Pass
Mod V kit	12.1 %	Pass
Connection Check	7.0 %	Pass

Structure Rating – (Controlling Utilization of all Components)	63.4%
---	--------------

BASELINE mount weight per SBA agreement: 2371.11 lbs

Increase in mount weight due to Verizon loading change per SBA agreement: No Change

The weights listed above include 3 sectors.

Mount Steel (EPA)a per ANSI/TIA-222-H Section 2.6.11.2:

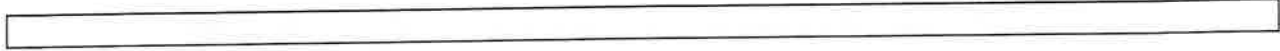
Ice Thickness (In)	Mount Pipes Excluded		Mount Pipes Included	
	Front (EPA)a (Sq. Ft.)	Side (EPA)a (Sq. Ft.)	Front (EPA)a (Sq. Ft.)	Side (EPA)a (Sq. Ft.)
0	43.7	12.3	53.2	21.8
0.5	57.0	17.4	70.5	30.9
1	69.8	21.9	87.3	39.4

Notes:

- (EPA)a values listed above may be used in the absence of more precise information
- (EPA)a values in the table above include 1 sector(s).
- Ka factors included in (EPA)a calculations

Requirements:

The existing mounts are **SUFFICIENT** for the final loading configuration shown in attachment 2 and do not require modifications. Additional requirements are noted below.



If required, ANSI/ASSP rigging plan review services compliant with the requirements of ANSI/TIA 322 are available for a Construction Class IV site or other. Separate review fees will apply.

Attachments:

1. **Contractor Required Post Installation Inspection (PMI) Report Deliverables**
2. Antenna Placement Diagrams
3. Mount Photos
4. Mount Mapping Report (for reference only)
5. Analysis Calculations

Mount Desktop – Post Modification Inspection (PMI) Report Requirements

Documents & Photos Required from Contractor – **Passing Mount Analysis**

Passing Mount Analysis requires a PMI due to a modification in loading.

Electronic pdf version of this can be downloaded at <https://pmi.vzwsmart.com>.

For additional questions and support, please reach out to pmisupport@colliersengineering.com

MDG #: 5000244862

SMART Project #: 10206280

Fuze Project ID: 17123917

Purpose – to provide SMART Tool structural vendor the proper documentation in order to complete the required Mount Desktop review of the Post Modification Inspection Report.

- Contractor is responsible for making certain the photos provided as noted below provide confirmation that the installation was completed in accordance with this Passing Mount Analysis.
- Contractor shall relay any data that can impact the performance of the mount, this includes safety issues.

Base Requirements:

- If installation will cause damage to the structure, the climbing facility, or safety climb if present or any installed system, SMART Tool vendor to be notified prior to install. Any special photos outside of the standard requirements will be indicated on the drawings.
- Provide “as built mount drawings” showing contractor’s name, contact information, preparer’s signature, and date. Any deviations from the drawings (Proposed modification) shall be shown. NOTE: If loading is different than what is conveyed in the passing mount analysis (MA) contact the SMART Tool vendor immediately.
- Each photo should be time and date stamped
- Photos should be high resolution.
- Contractor shall ensure that the safety climb wire rope is supported and not adversely impacted by the install of the modification components. This may involve the install of wire rope guides, or other items to protect the wire rope. If there is conflict, contact the SMART Tool engineer for recommendations.
- The PMI can be accessed at the following portal: <https://pmi.vzwsmart.com>

Photo Requirements:

- Photos taken at ground level
 - Photo of Gate Signs showing the tower owner, site name, and number.
 - Overall tower structure after installation.
 - Photos of the mount after installation; if the mounts are at different rad elevations, pictures must be provided for all elevations that equipment was installed.
- Photos taken at Mount Elevation
 - Photos showing the safety climb wire rope above and below the mount prior to installation.
 - Photos showing the climbing facility and safety climb if present.

- Photos showing each individual sector after installation. Each entire sector shall be in one photo to show the interconnection of members.
 - These photos shall also certify that the placement and geometry of the equipment on the mount is as depicted in the antenna placement diagram in this form.
- Photos that show the model number of each antenna and piece of equipment installed per sector.

Antenna & equipment placement and Geometry Confirmation:

- The contractor shall certify that the antenna & equipment placement and geometry is in accordance with the sketch and table as included in the mount analysis and noted below.

The contractor certifies that the photos support and the equipment on the mount is as depicted on the sketch and table included in this form and with the mount analysis provided.

OR

The contractor notes that the equipment on the mount is not in accordance with the sketch and has noted the differences below and provided photo documentation of any alterations.

Special Instructions / Validation as required from the MA or any other information the contractor deems necessary to share that was identified:

Issue:

Response:

Special Instruction Confirmation:

The contractor has read and acknowledges the above special instructions.

All hardware listed in the Special Instructions above (if applicable) has been properly installed, and the existing hardware was inspected.

The material utilized was as specified in the SMART Tool engineering vendor Special Instructions above (if applicable) and included in the material certification folder is a packing list or invoice for these materials.

OR

The material utilized was approved by a SMART Tool engineering vendor as an "equivalent" and this approval is included as part of the contractor submission.

Comments:

--

Contractor certifies that the climbing facility / safety climb was not damaged prior to starting work:

Yes No

Contractor certifies no new damage created during the current installation:

Yes No

Contractor to certify the condition of the safety climb and verify no damage when leaving the site:

Safety Climb in Good Condition Safety Climb Damaged

Certifying Individual:

Company:	
Employee Name:	
Contact Phone:	
Email:	
Date:	

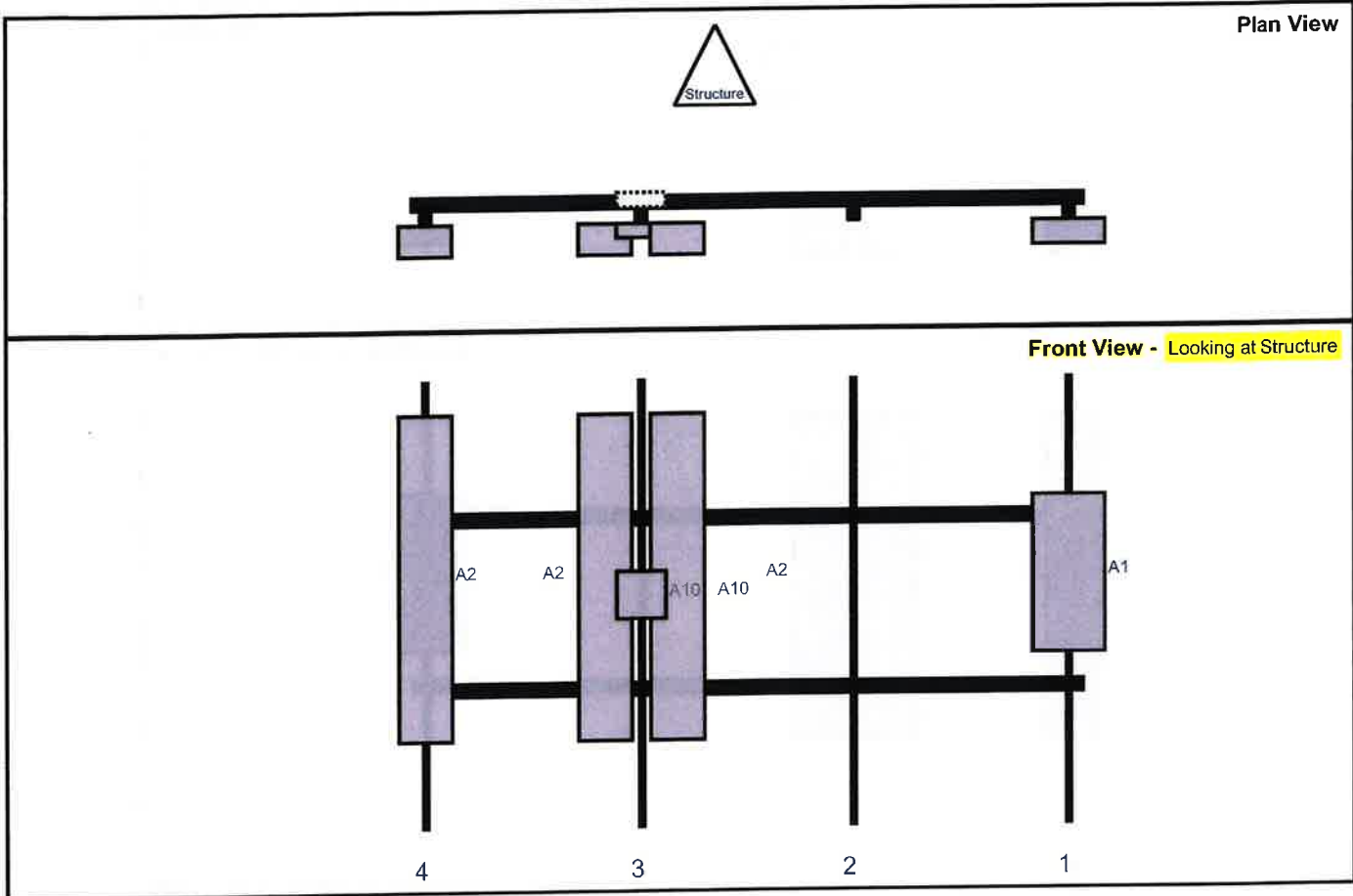
Sector: A
 Structure Type: Self Support
 Mount Elev: 119.50

10206280

7/10/2023



Page: 1



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A1	MT6407-77A	35.1	16.1	146.5	1	a	Front	44.04	0	Retained	06/30/2022
A2	SBNHH-1D65B	72.6	11.9	51.5	3	a	Front	44.04	8	Retained	06/30/2022
A2	SBNHH-1D65B	72.6	11.9	51.5	3	b	Front	44.04	-8	Retained	06/30/2022
A10	BSF0020F3V1-1	10.6	10.9	51.5	3	a	Behind	48	0	Added	
A10	BSF0020F3V1-1	10.6	10.9	51.5	3	b	Front	48	0	Added	
A2	SBNHH-1D65B	72.6	11.9	3.5	4	a	Front	44.04	0	Retained	06/30/2022
M19	B2/B66A RRH-BR049	15	15				Member			Retained	06/30/2022
M29	B5/B13 RRH-BR04C	15	15				Member			Retained	06/30/2022
M30	RRFDC-3315-PF-48	19.1	15.7				Member			Retained	06/30/2022

Structure: 5000244862-VZW - Quaker Hill CT - A

Sector: B

7/10/2023

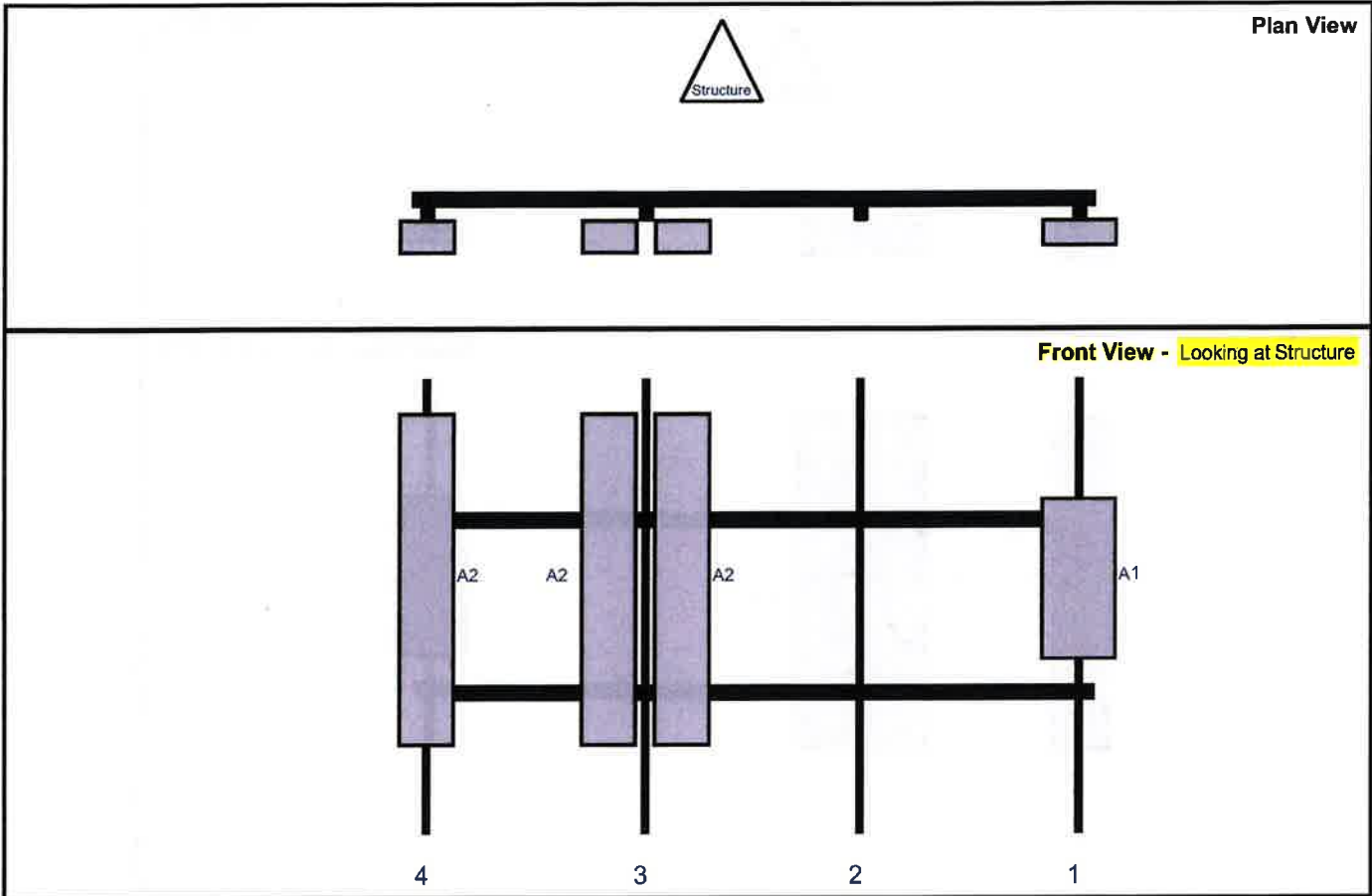
Structure Type: Self Support

10206280



Mount Elev: 119.50

Page: 2



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A1	MT6407-77A	35.1	16.1	146.5	1	a	Front	44.04	0	Retained	06/30/2022
A2	SBNHH-1D65B	72.6	11.9	51.5	3	a	Front	44.04	8	Retained	06/30/2022
A2	SBNHH-1D65B	72.6	11.9	51.5	3	b	Front	44.04	-8	Retained	06/30/2022
A2	SBNHH-1D65B	72.6	11.9	3.5	4	a	Front	44.04	0	Retained	06/30/2022

Sector: C

7/10/2023

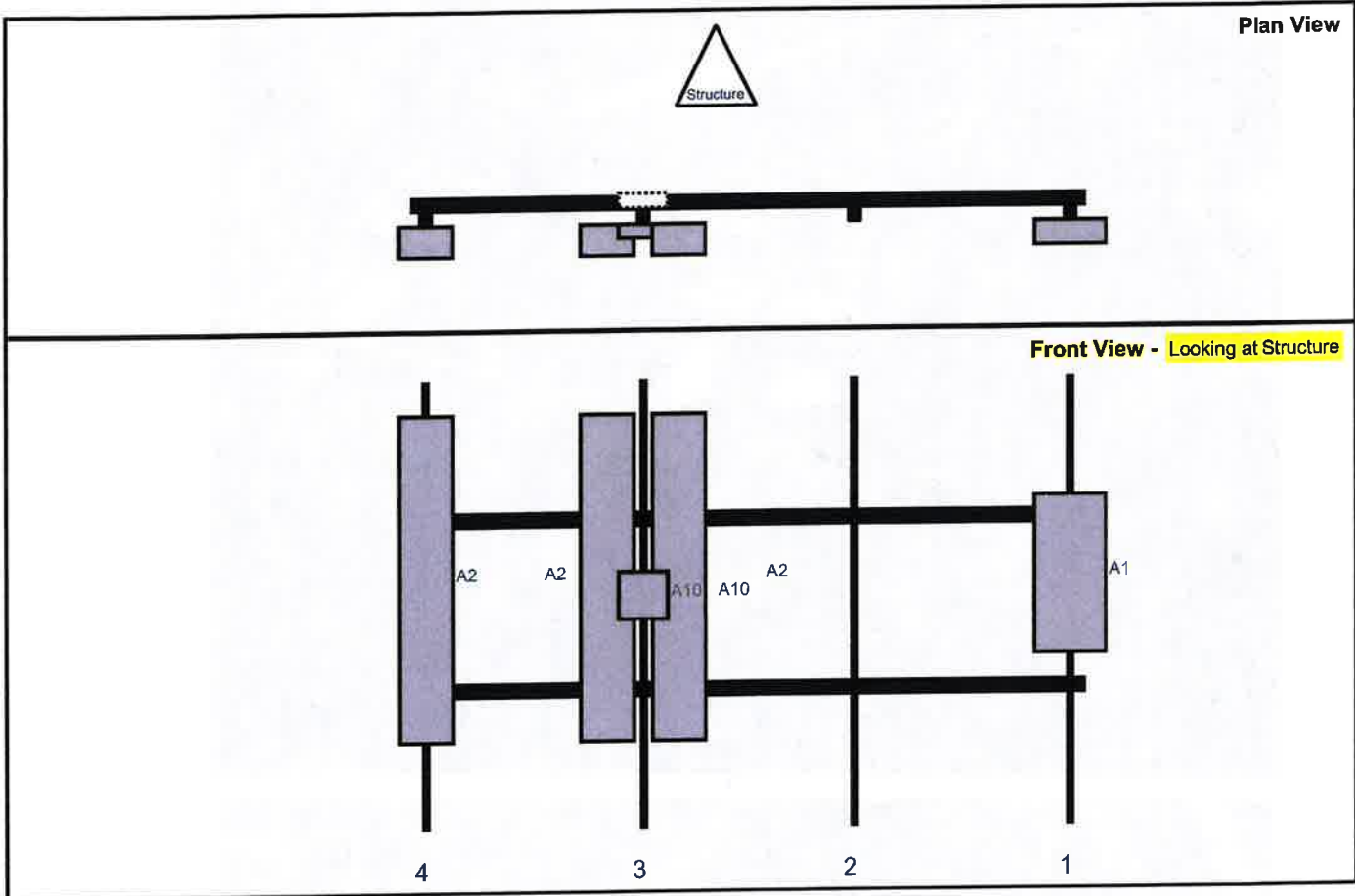
Structure Type: Self Support

10206280

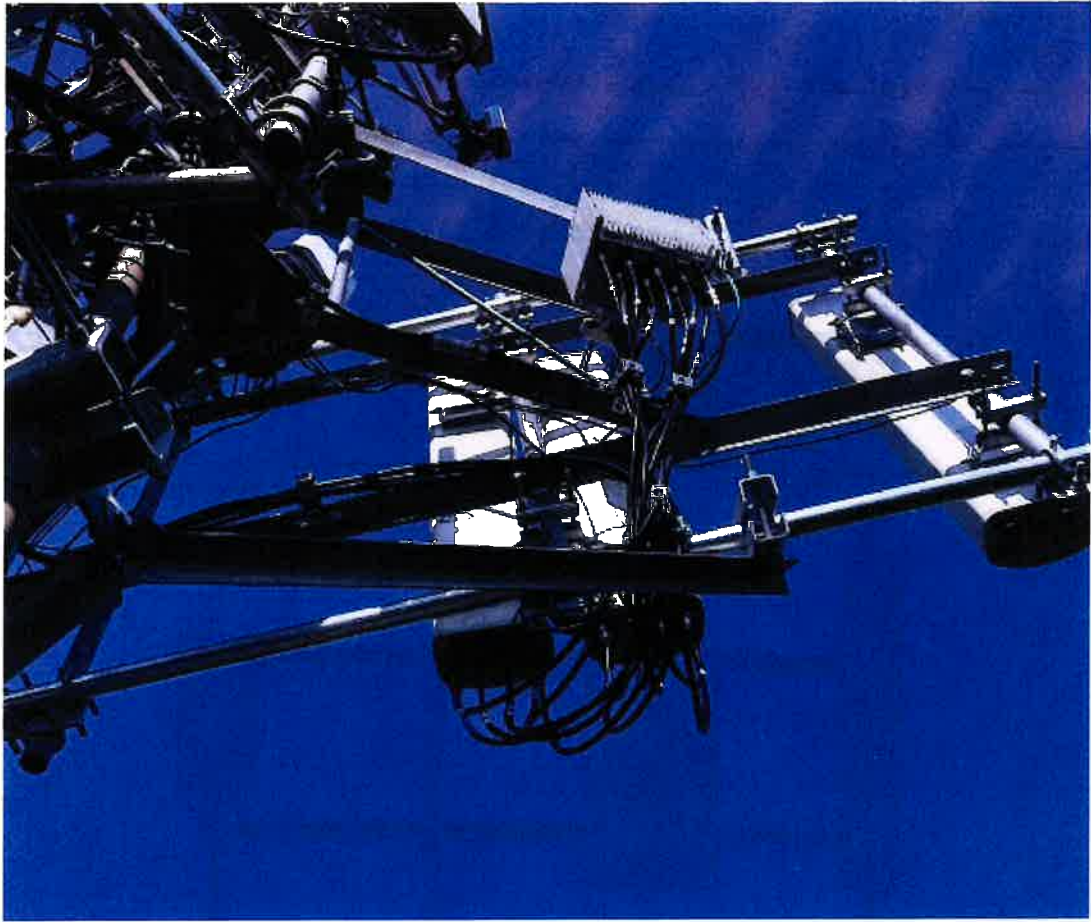


Mount Elev: 119.50

Page: 3

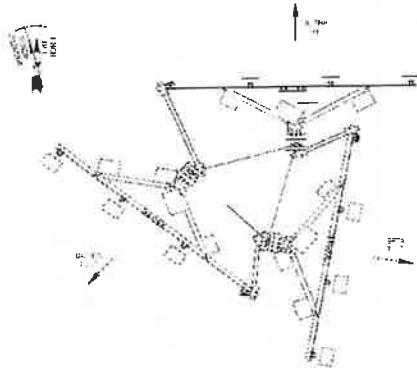


Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A1	MT6407-77A	35.1	16.1	146.5	1	a	Front	44.04	0	Retained	06/30/2022
A2	SBNHH-1D65B	72.6	11.9	51.5	3	a	Front	44.04	8	Retained	06/30/2022
A2	SBNHH-1D65B	72.6	11.9	51.5	3	b	Front	44.04	-8	Retained	06/30/2022
A10	BSF0020F3V1-1	10.6	10.9	51.5	3	a	Behind	48	0	Added	
A10	BSF0020F3V1-1	10.6	10.9	51.5	3	b	Front	48	0	Added	
A2	SBNHH-1D65B	72.6	11.9	3.5	4	a	Front	44.04	0	Retained	06/30/2022



Antenna Mount Mapping Form (PATENT PENDING)				FCC #
				1262077
Tower Owner:	SBA	Mapping Date:	2/9/2021	
Site Name:	Quacker Hill CT	Tower Type:	Self Support	
Site Number or ID:	467959	Tower Height (Ft.):	160	
Mapping Contractor:	Hudson Design Group LLC	Mount Elevation (Ft.):	120	

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Mount Pipe Configuration and Geometries [Unit = Inches]							
Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "v"	Horizontal Offset "C1, C2, C3, etc."	Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "v"	Horizontal Offset "C1, C2, C3, etc."
A1	PIPE 2"Ø STD. X 100" LONG	69.00	3.00	C1	PIPE 2"Ø STD. X 100" LONG	69.00	3.00
A2	PIPE 2"Ø STD. X 100" LONG	69.00	51.00	C2	PIPE 2"Ø STD. X 100" LONG	69.00	51.00
A3	PIPE 2"Ø STD. X 100" LONG	69.00	98.00	C3	PIPE 2"Ø STD. X 100" LONG	69.00	98.00
A4	PIPE 2"Ø STD. X 100" LONG	69.00	146.00	C4	PIPE 2"Ø STD. X 100" LONG	69.00	146.00
A5				C5			
A6				C6			
B1	PIPE 2"Ø STD. X 100" LONG	69.00	3.00	D1			
B2	PIPE 2"Ø STD. X 100" LONG	69.00	51.00	D2			
B3	PIPE 2"Ø STD. X 100" LONG	69.00	98.00	D3			
B4	PIPE 2"Ø STD. X 100" LONG	69.00	146.00	D4			
B5				D5			
B6				D6			

Distance between bottom rail and mount CL elevation (dim d). Unit is inches. See 'Mount Elev Ref' tab for details. : _____

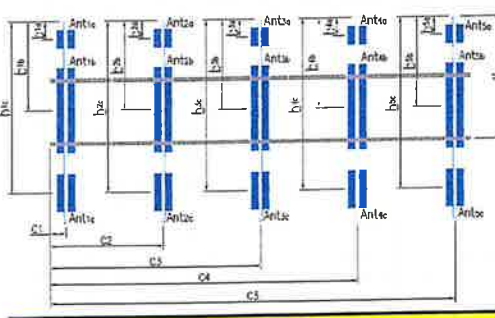
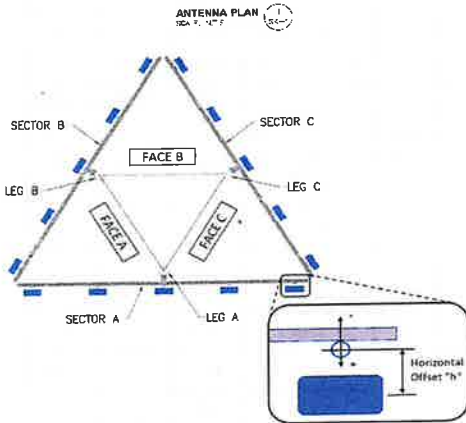
Distance from top of bottom support rail to lowest tip of ant./eqpt. of Carrier above. (N/A if > 10 ft.) : 20

Distance from top of bottom support rail to highest tip of ant./eqpt. of Carrier below. (N/A if > 10 ft.) : _____

Please enter additional information or comments below.

ALL RRH AND OVP UNITS MOUNTED TO STANDOFF

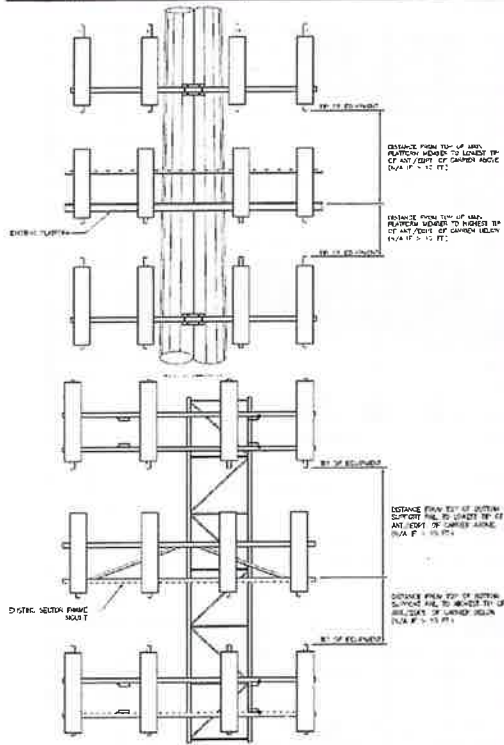
Tower Face Width at Mount Elev. (ft.): 5.5 | Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.): 2.75



Antenna Layout (Looking Out From Tower)

Ants. Items	Enter antenna model. If not labeled, enter "Unknown".					Mounting Locations [Units are inches and degrees]				Photos of antennas
	Antenna Models if Known	Width (in.)	Depth (in.)	Height (in.)	Coax Size and Qty	Antenna Center-line (Ft.)	Vertical Distances "b _{1a} , b _{2a} , b _{3a} , b _{1b} ,..." (Inches)	Horiz. Offset "h" (Use "-" if Ant. is behind)	Antenna Azimuth (Degrees)	
Sector A										
Ant _{1a}										
Ant _{1b}										
Ant _{1c}										
Ant _{2a}										
Ant _{2b}	SBNHH-1D65B	12.00	7.50	73.00		121.167	55.00	8.00	0.00	134
Ant _{2c}										
Ant _{3a}										
Ant _{3b}	SBNHH-1D65B	12.00	7.50	73.00		121.167	55.00	8.00	0.00	138
Ant _{3c}										
Ant _{4a}										
Ant _{4b}	SBNHH-1D65B	12.00	7.50	73.00		121.167	55.00	8.00	0.00	139
Ant _{4c}										
Ant _{5a}										
Ant _{5b}										
Ant _{5c}										
Ant on Standoff	B4 RRH2X60-4R	11.00	5.50	36.00			20.00	-6.00		117
Ant on Standoff	B13 RRH4X30	12.00	9.00	21.50			20.00	-6.00		131
Ant on Tower	B25 RRH4X30	12.00	9.00	21.50			20.00	6.00		128
Ant on Tower	RRFDC-3315-PF-48	15.00	10.00	28.00			34.00	5.00		121

Mount Azimuth (Degree) for Each Sector				Tower Leg Azimuth (Degree) for Each Sector				Sector B										
Sector A:	0.00	Deg	Leg A:	45.00	Deg	Ant _{1a}												
Sector B:	100.00	Deg	Leg B:	165.00	Deg	Ant _{1b}												
Sector C:	220.00	Deg	Leg C:	285.00	Deg	Ant _{1c}												
Sector D:			Leg D:			Ant _{1d}												
Climbing Facility Information						Ant _{2c}												
Location:	45.00	Deg	On Leg A			Ant _{3a}												
Climbing Facility	Corrosion Type:			Good condition.		Ant _{3b}	SBNHH-1D65B	12.00	7.50	73.00	121.167	55.00	8.00	100.00	138			
	Access:			Climbing path was unobstructed.		Ant _{3c}												
	Condition:			Good condition.		Ant _{3d}												
						Ant _{4a}	SBNHH-1D65B	12.00	7.50	73.00	121.167	55.00	8.00	100.00	139			
						Ant _{4b}												
						Ant _{4c}												
						Ant _{4d}												
						Ant _{5a}												
						Ant _{5b}												
						Ant _{5c}												
						Ant on Standoff	B4 RRH2X60-4R	11.00	5.50	36.00		20.00	-6.00		117			
						Ant on Standoff	B13 RRH4X30	12.00	9.00	21.50		20.00	-6.00		131			
						Ant on Tower	B25 RRH4X30	12.00	9.00	21.50		20.00	-6.00		128			
						Ant on Tower	RRFDC-3315-PF-48	15.00	10.00	28.00		34.00	5.00		121			
						Sector C												
						Ant _{1a}												
						Ant _{1b}												
						Ant _{1c}												
						Ant _{1d}												
						Ant _{2a}	SBNHH-1D65B	12.00	7.50	73.00	121.167	55.00	8.00	220.00	134			
						Ant _{2b}												
						Ant _{2c}												
						Ant _{3a}												
						Ant _{3b}	SBNHH-1D65B	12.00	7.50	73.00	121.167	55.00	8.00	220.00	138			
						Ant _{3c}												
						Ant _{4a}												
						Ant _{4b}	SBNHH-1D65B	12.00	7.50	73.00	121.167	55.00	8.00	220.00	139			
						Ant _{4c}												
						Ant _{4d}												
						Ant _{5a}												
						Ant _{5b}												
						Ant _{5c}												
						Ant on Standoff	B4 RRH2X60-4R	11.00	5.50	36.00		20.00	-6.00		117			
						Ant on Standoff	B13 RRH4X30	12.00	9.00	21.50		20.00	-6.00		131			
						Ant on Tower	B25 RRH4X30	12.00	9.00	21.50		20.00	-6.00		128			
						Ant on Tower	RRFDC-3315-PF-48	15.00	10.00	28.00		34.00	5.00		121			
						Sector D												
						Ant _{1a}												
						Ant _{1b}												
						Ant _{1c}												
						Ant _{1d}												
						Ant _{2a}												
						Ant _{2b}												
						Ant _{2c}												
						Ant _{3a}												
						Ant _{3b}												
						Ant _{3c}												
						Ant _{4a}												
						Ant _{4b}												
						Ant _{4c}												
						Ant _{4d}												
						Ant _{5a}												
						Ant _{5b}												
						Ant _{5c}												
						Ant on Standoff												
						Ant on Standoff												
						Ant on Tower												
						Ant on Tower												



Observed Safety and Structural Issues During the Mount Mapping		
Issue #	Description of Issue	Photo #

1		
2	(3) 1-1/4"Ø HYBRID	32
3		
4		
5		
6		
7		
8		

Mapping Notes

1. Please report any visible structural or safety issues observed on the antenna mounts (Damaged members, loose connections, tilting mounts, safety climb issues, etc.)
2. If the thickness of the existing pipes or tubing can't be obtained from a general tool (such as Caliper), please use an ultrasonic measurement tool (thickness gauge) to measure the thickness.
3. Please create all required detail sketches of the mounts and insert them into the "Sketches" tab.
4. Please measure and enter the bolt sizes and types under the Members Box in the spreadsheet of the mount type.
5. Take and label the photos of the tower, mounts, connections, antennas and all measurements. Minimum 50 photos are required.
6. Please measure and report the size and length of all existing antenna mounting pipes.
7. Please measure and report the antenna information for all sectors.
8. Don't delete or rearrange any sheet or contents of any sheet from this mapping form.

Standard Conditions

1. Obvious safety and structural issues/deficiencies noticed at the time of the mount mapping are to be reported in this mapping. However, this mount mapping is not a condition assessment of the mount.



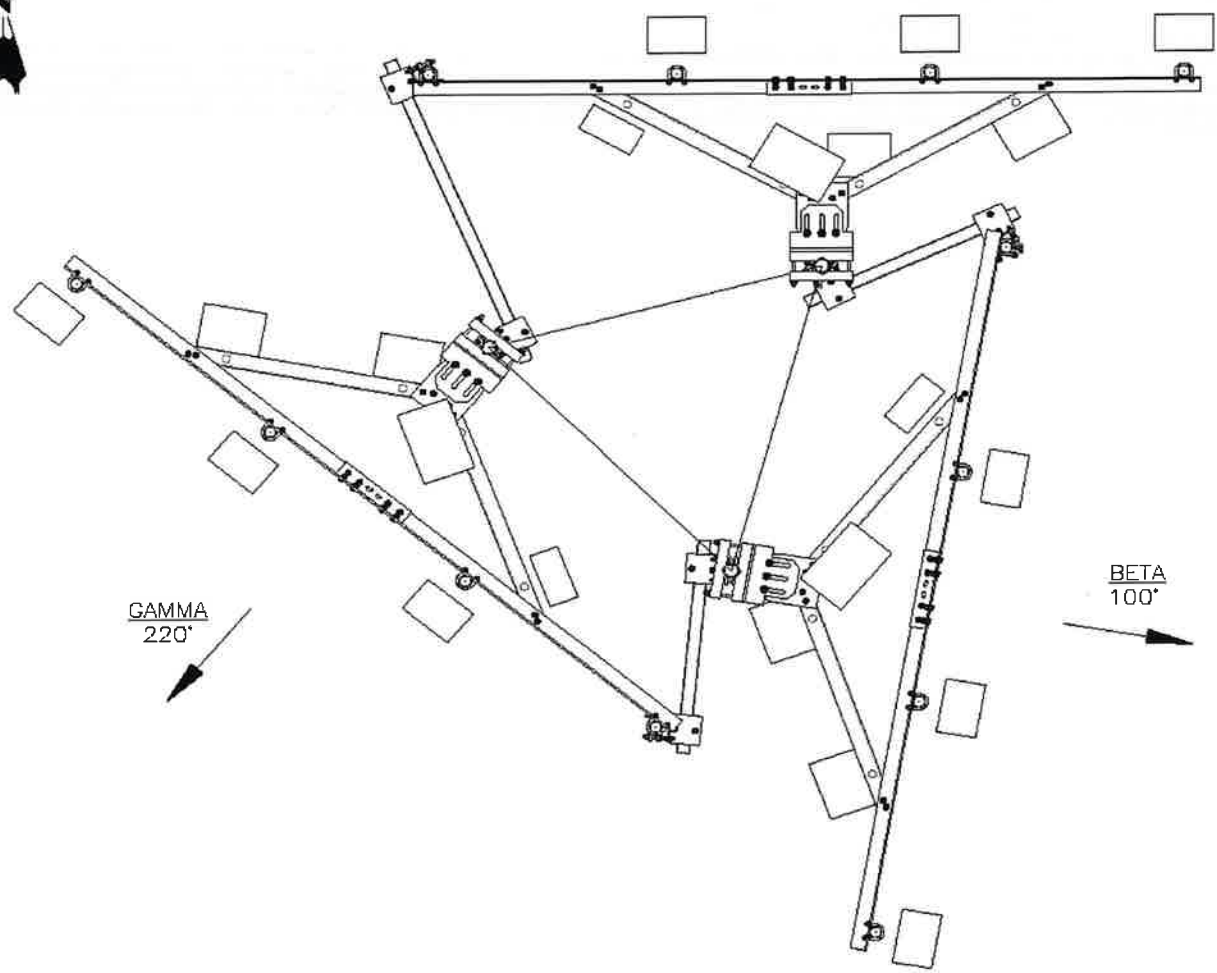
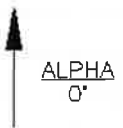
Antenna Mount Mapping Form (PATENT PENDING)

FCC #
1262077

Tower Owner:	SBA	Mapping Date:	2/9/2021
Site Name:	Quacker Hill CT	Tower Type:	Self Support
Site Number or ID:	467959	Tower Height (FL):	160
Mapping Contractor:	Hudson Design Group LLC	Mount Elevation (FL):	120

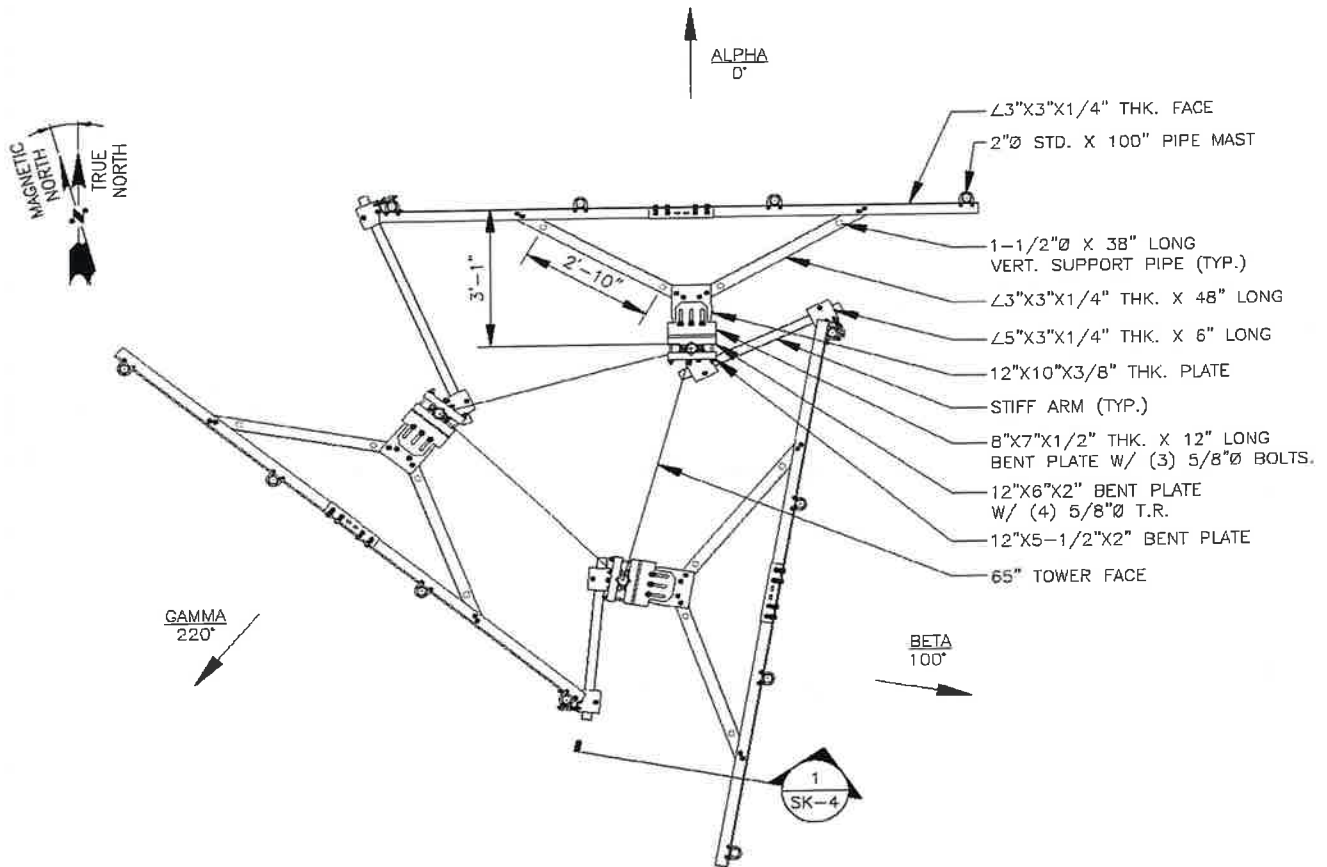
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Please Insert Sketches of the Antenna Mount



ANTENNA PLAN
SCALE: N.T.S

1
SK-1

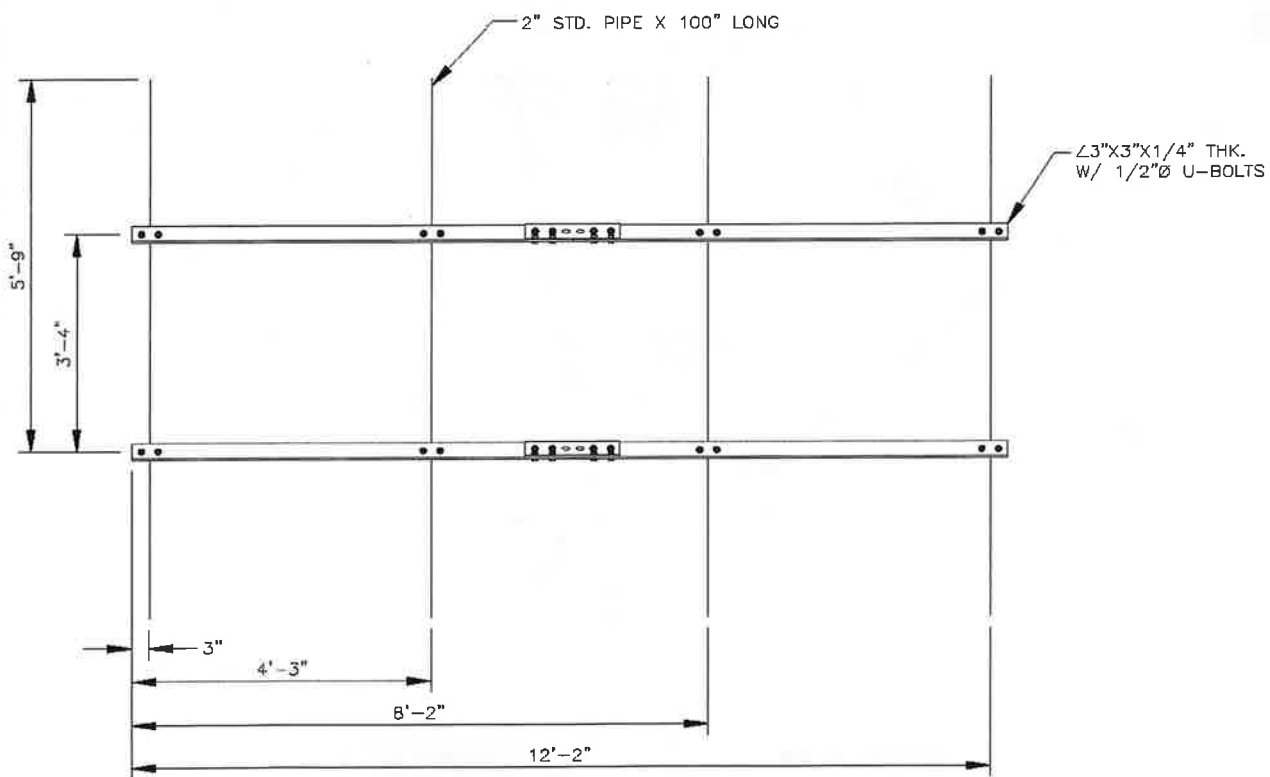


MOUNT PLAN
SCALE: N.T.S

1
SK-2

NOTE: ANTENNAS NOT SHOWN FOR CLARITY

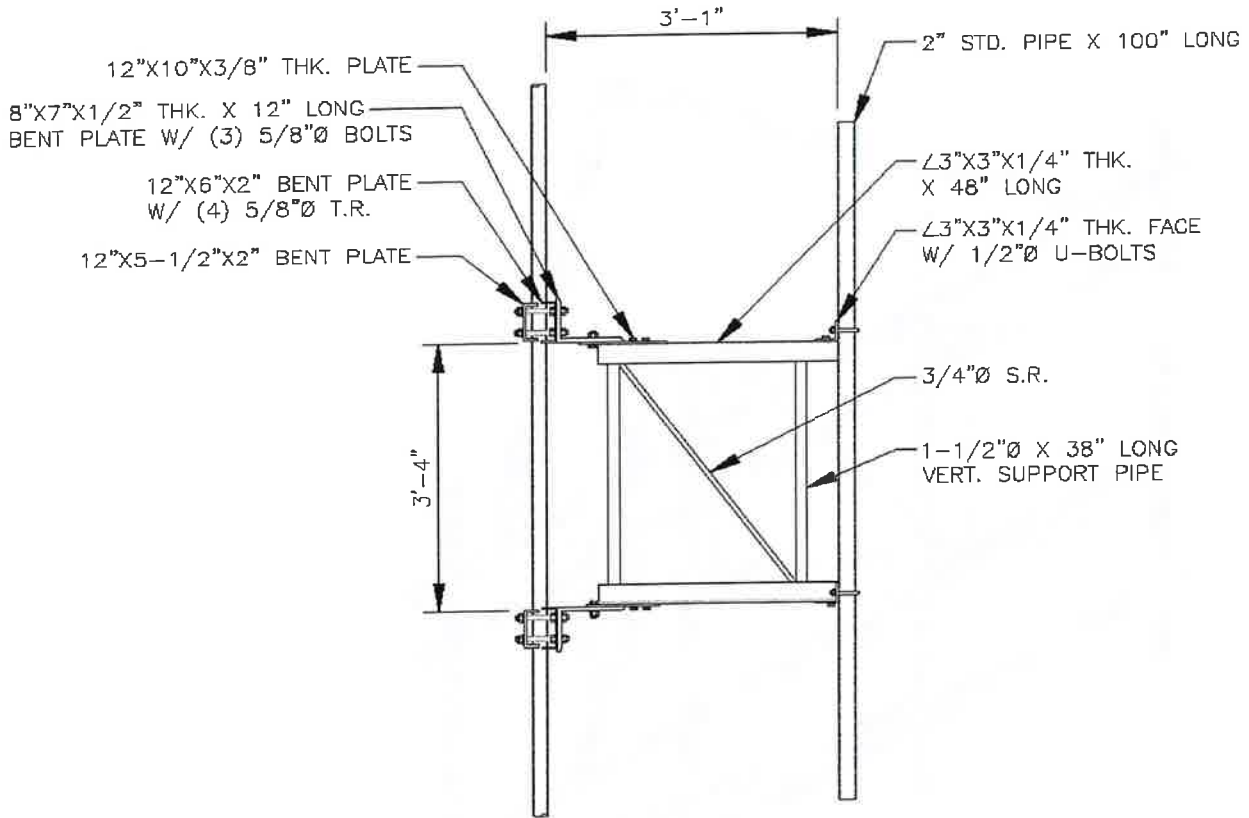
Please Insert Sketches of the Antenna Mount, cont'd



MOUNT ELEVATION

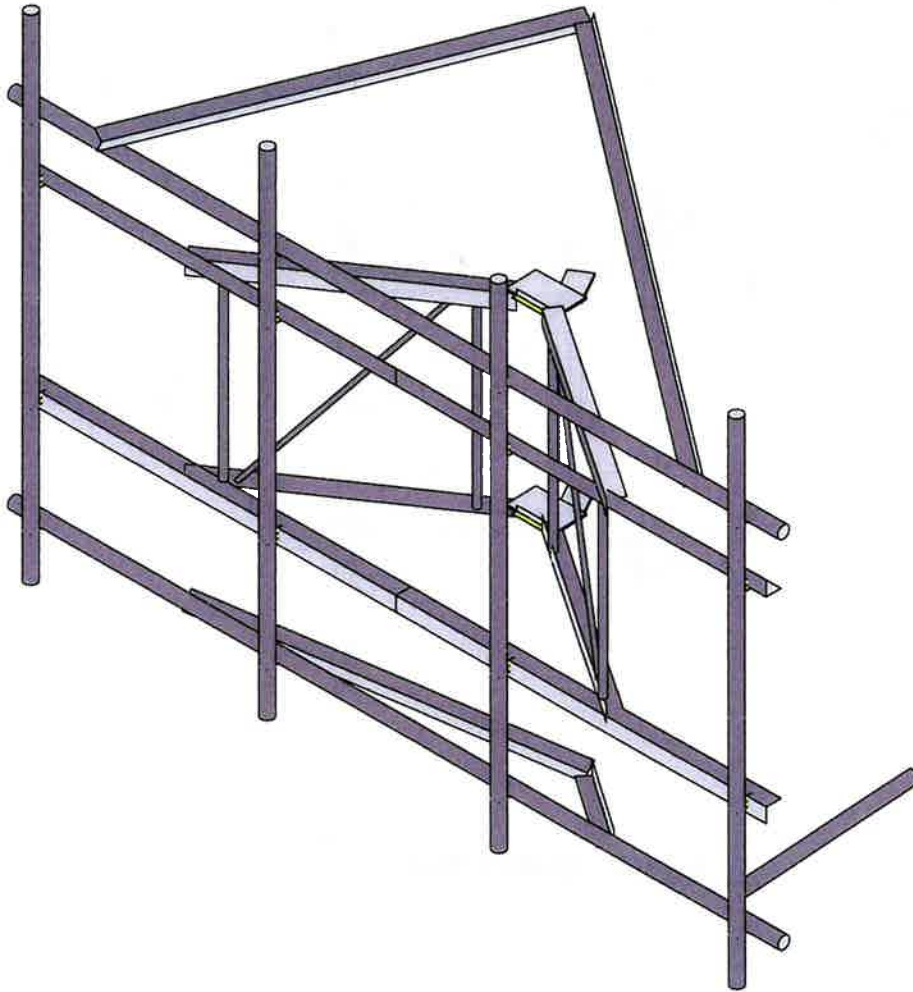
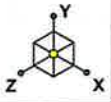
SCALE: N.T.S

1
SK-3



MOUNT ELEVATION
SCALE: N.T.S





Envelope Only Solution

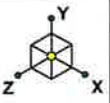
Colliers Engineering & De...

5000244862-VZW_MT_LOT_SectorA_H

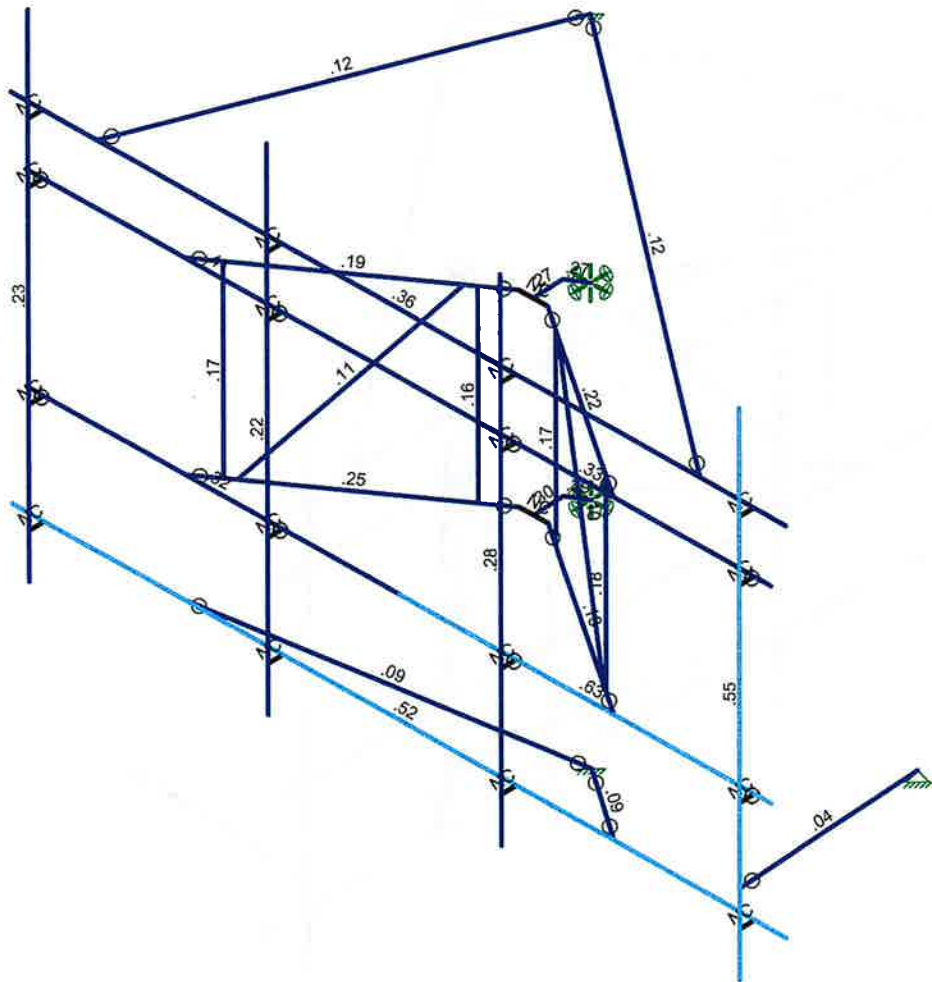
SK - 1

July 5, 2023 at 9:40 AM

5000244862-VZW_MT_LOT_A_H....

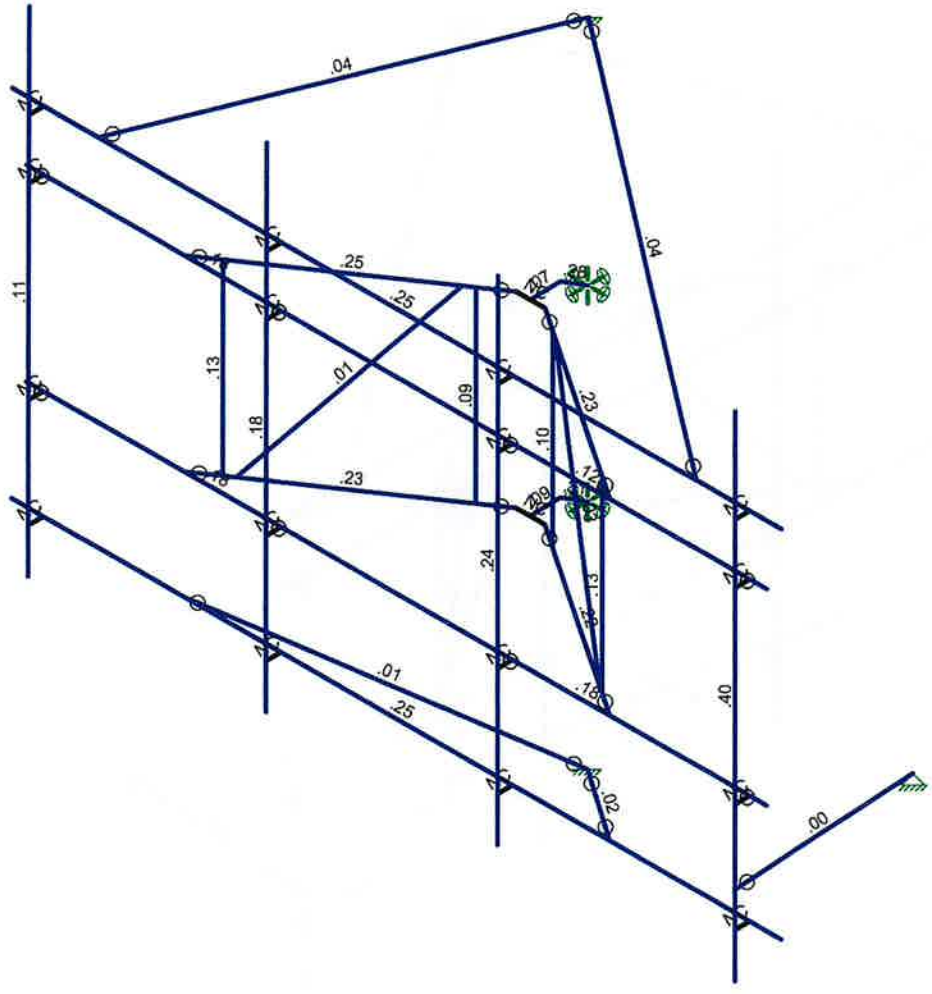
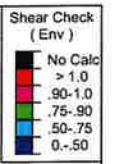


Code Check (Env)	
Black	No Calc
Red	> 1.0
Orange	.90-1.0
Yellow	.75-90
Light Blue	50-75
Dark Blue	0-.50



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

Colliers Engineering & De...	5000244862-VZW_MT_LOT_SectorA_H	SK - 2
		July 5, 2023 at 9:40 AM
		5000244862-VZW_MT_LOT_A_H....



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

Colliers Engineering & De...	5000244862-VZW_MT_LOT_SectorA_H	SK - 3
		July 5, 2023 at 9:40 AM
		5000244862-VZW_MT_LOT_A_H...



Company : Colliers Engineering & Design
 Designer :
 Job Number :
 Model Name : 5000244862-VZW_MT_LOT_SectorA_H

July 5, 2023
 9:40 AM
 Checked By: _____

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed Area(Me...	Surface(...
1	Antenna D	None					36		
2	Antenna Di	None					36		
3	Antenna Wo (0 Deg)	None					36		
4	Antenna Wo (30 Deg)	None					36		
5	Antenna Wo (60 Deg)	None					36		
6	Antenna Wo (90 Deg)	None					36		
7	Antenna Wo (120 Deg)	None					36		
8	Antenna Wo (150 Deg)	None					36		
9	Antenna Wo (180 Deg)	None					36		
10	Antenna Wo (210 Deg)	None					36		
11	Antenna Wo (240 Deg)	None					36		
12	Antenna Wo (270 Deg)	None					36		
13	Antenna Wo (300 Deg)	None					36		
14	Antenna Wo (330 Deg)	None					36		
15	Antenna Wi (0 Deg)	None					36		
16	Antenna Wi (30 Deg)	None					36		
17	Antenna Wi (60 Deg)	None					36		
18	Antenna Wi (90 Deg)	None					36		
19	Antenna Wi (120 Deg)	None					36		
20	Antenna Wi (150 Deg)	None					36		
21	Antenna Wi (180 Deg)	None					36		
22	Antenna Wi (210 Deg)	None					36		
23	Antenna Wi (240 Deg)	None					36		
24	Antenna Wi (270 Deg)	None					36		
25	Antenna Wi (300 Deg)	None					36		
26	Antenna Wi (330 Deg)	None					36		
27	Antenna Wm (0 Deg)	None					36		
28	Antenna Wm (30 Deg)	None					36		
29	Antenna Wm (60 Deg)	None					36		
30	Antenna Wm (90 Deg)	None					36		
31	Antenna Wm (120 Deg)	None					36		
32	Antenna Wm (150 Deg)	None					36		
33	Antenna Wm (180 Deg)	None					36		
34	Antenna Wm (210 Deg)	None					36		
35	Antenna Wm (240 Deg)	None					36		
36	Antenna Wm (270 Deg)	None					36		
37	Antenna Wm (300 Deg)	None					36		
38	Antenna Wm (330 Deg)	None					36		
39	Structure D	None		-1					
40	Structure Di	None						29	
41	Structure Wo (0 Deg)	None						58	
42	Structure Wo (30 Deg)	None						58	
43	Structure Wo (60 Deg)	None						58	
44	Structure Wo (90 Deg)	None						58	
45	Structure Wo (120 Deg)	None						58	
46	Structure Wo (150 Deg)	None						58	
47	Structure Wo (180 Deg)	None						58	
48	Structure Wo (210 Deg)	None						58	
49	Structure Wo (240 Deg)	None						58	
50	Structure Wo (270 Deg)	None						58	
51	Structure Wo (300 Deg)	None						58	
52	Structure Wo (330 Deg)	None						58	
53	Structure Wi (0 Deg)	None						58	
54	Structure Wi (30 Deg)	None						58	
55	Structure Wi (60 Deg)	None						58	
56	Structure Wi (90 Deg)	None						58	



Basic Load Cases (Continued)

BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed Area(Me... Surface(...
57 Structure Wi (120 Deg)	None						58
58 Structure Wi (150 Deg)	None						58
59 Structure Wi (180 Deg)	None						58
60 Structure Wi (210 Deg)	None						58
61 Structure Wi (240 Deg)	None						58
62 Structure Wi (270 Deg)	None						58
63 Structure Wi (300 Deg)	None						58
64 Structure Wi (330 Deg)	None						58
65 Structure Wm (0 Deg)	None						58
66 Structure Wm (30 Deg)	None						58
67 Structure Wm (60 Deg)	None						58
68 Structure Wm (90 Deg)	None						58
69 Structure Wm (120 Deg)	None						58
70 Structure Wm (150 Deg)	None						58
71 Structure Wm (180 Deg)	None						58
72 Structure Wm (210 Deg)	None						58
73 Structure Wm (240 Deg)	None						58
74 Structure Wm (270 Deg)	None						58
75 Structure Wm (300 Deg)	None						58
76 Structure Wm (330 Deg)	None						58
77 Lm1	None					1	
78 Lm2	None					1	
79 Lv1	None					1	
80 Lv2	None					1	
81 Antenna Ev	None					36	
82 Antenna Eh (0 Deg)	None					24	
83 Antenna Eh (90 Deg)	None					24	
84 Structure Ev	ELY		-.041				
85 Structure Eh (0 Deg)	ELZ			-.103			
86 Structure Eh (90 Deg)	ELX	.103					

Load Combinations

Description	So...	P...	S...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...
1 1.2D+1.0Wo (0 Deg)	Yes	Y		1	1.2	39	1.2	3	1	41	1		
2 1.2D+1.0Wo (30 Deg)	Yes	Y		1	1.2	39	1.2	4	1	42	1		
3 1.2D+1.0Wo (60 Deg)	Yes	Y		1	1.2	39	1.2	5	1	43	1		
4 1.2D+1.0Wo (90 Deg)	Yes	Y		1	1.2	39	1.2	6	1	44	1		
5 1.2D+1.0Wo (120 Deg)	Yes	Y		1	1.2	39	1.2	7	1	45	1		
6 1.2D+1.0Wo (150 Deg)	Yes	Y		1	1.2	39	1.2	8	1	46	1		
7 1.2D+1.0Wo (180 Deg)	Yes	Y		1	1.2	39	1.2	9	1	47	1		
8 1.2D+1.0Wo (210 Deg)	Yes	Y		1	1.2	39	1.2	10	1	48	1		
9 1.2D+1.0Wo (240 Deg)	Yes	Y		1	1.2	39	1.2	11	1	49	1		
10 1.2D+1.0Wo (270 Deg)	Yes	Y		1	1.2	39	1.2	12	1	50	1		
11 1.2D+1.0Wo (300 Deg)	Yes	Y		1	1.2	39	1.2	13	1	51	1		
12 1.2D+1.0Wo (330 Deg)	Yes	Y		1	1.2	39	1.2	14	1	52	1		
13 1.2D + 1.0Di + 1.0Wi (...)	Yes	Y		1	1.2	39	1.2	2	1	40	1	15	1
14 1.2D + 1.0Di + 1.0Wi (...)	Yes	Y		1	1.2	39	1.2	2	1	40	1	16	1
15 1.2D + 1.0Di + 1.0Wi (...)	Yes	Y		1	1.2	39	1.2	2	1	40	1	17	1
16 1.2D + 1.0Di + 1.0Wi (...)	Yes	Y		1	1.2	39	1.2	2	1	40	1	18	1
17 1.2D + 1.0Di + 1.0Wi (...)	Yes	Y		1	1.2	39	1.2	2	1	40	1	19	1
18 1.2D + 1.0Di + 1.0Wi (...)	Yes	Y		1	1.2	39	1.2	2	1	40	1	20	1
19 1.2D + 1.0Di + 1.0Wi (...)	Yes	Y		1	1.2	39	1.2	2	1	40	1	21	1
20 1.2D + 1.0Di + 1.0Wi (...)	Yes	Y		1	1.2	39	1.2	2	1	40	1	22	1
21 1.2D + 1.0Di + 1.0Wi (...)	Yes	Y		1	1.2	39	1.2	2	1	40	1	23	1
22 1.2D + 1.0Di + 1.0Wi (...)	Yes	Y		1	1.2	39	1.2	2	1	40	1	24	1



Load Combinations (Continued)

	Description	So.	P.	S.	BLCFac.	BLCFac.	BLCFac.	BLCFac.	BLCFac.	BLCFac.	BLCFac.	BLCFac.	BLCFac.	BLCFac.	BLCFac.	BLCFac.
23	1.2D + 1.0Di + 1.0Wi (...)	Yes	Y		1	1.2	39	1.2	2	1	40	1	25	1	63	1
24	1.2D + 1.0Di + 1.0Wi (...)	Yes	Y		1	1.2	39	1.2	2	1	40	1	26	1	64	1
25	1.2D + 1.5Lm1 + 1.0W...	Yes	Y		1	1.2	39	1.2	77	1.5	27	1	65	1		
26	1.2D + 1.5Lm1 + 1.0W...	Yes	Y		1	1.2	39	1.2	77	1.5	28	1	66	1		
27	1.2D + 1.5Lm1 + 1.0W...	Yes	Y		1	1.2	39	1.2	77	1.5	29	1	67	1		
28	1.2D + 1.5Lm1 + 1.0W...	Yes	Y		1	1.2	39	1.2	77	1.5	30	1	68	1		
29	1.2D + 1.5Lm1 + 1.0W...	Yes	Y		1	1.2	39	1.2	77	1.5	31	1	69	1		
30	1.2D + 1.5Lm1 + 1.0W...	Yes	Y		1	1.2	39	1.2	77	1.5	32	1	70	1		
31	1.2D + 1.5Lm1 + 1.0W...	Yes	Y		1	1.2	39	1.2	77	1.5	33	1	71	1		
32	1.2D + 1.5Lm1 + 1.0W...	Yes	Y		1	1.2	39	1.2	77	1.5	34	1	72	1		
33	1.2D + 1.5Lm1 + 1.0W...	Yes	Y		1	1.2	39	1.2	77	1.5	35	1	73	1		
34	1.2D + 1.5Lm1 + 1.0W...	Yes	Y		1	1.2	39	1.2	77	1.5	36	1	74	1		
35	1.2D + 1.5Lm1 + 1.0W...	Yes	Y		1	1.2	39	1.2	77	1.5	37	1	75	1		
36	1.2D + 1.5Lm1 + 1.0W...	Yes	Y		1	1.2	39	1.2	77	1.5	38	1	76	1		
37	1.2D + 1.5Lm2 + 1.0W...	Yes	Y		1	1.2	39	1.2	78	1.5	27	1	65	1		
38	1.2D + 1.5Lm2 + 1.0W...	Yes	Y		1	1.2	39	1.2	78	1.5	28	1	66	1		
39	1.2D + 1.5Lm2 + 1.0W...	Yes	Y		1	1.2	39	1.2	78	1.5	29	1	67	1		
40	1.2D + 1.5Lm2 + 1.0W...	Yes	Y		1	1.2	39	1.2	78	1.5	30	1	68	1		
41	1.2D + 1.5Lm2 + 1.0W...	Yes	Y		1	1.2	39	1.2	78	1.5	31	1	69	1		
42	1.2D + 1.5Lm2 + 1.0W...	Yes	Y		1	1.2	39	1.2	78	1.5	32	1	70	1		
43	1.2D + 1.5Lm2 + 1.0W...	Yes	Y		1	1.2	39	1.2	78	1.5	33	1	71	1		
44	1.2D + 1.5Lm2 + 1.0W...	Yes	Y		1	1.2	39	1.2	78	1.5	34	1	72	1		
45	1.2D + 1.5Lm2 + 1.0W...	Yes	Y		1	1.2	39	1.2	78	1.5	35	1	73	1		
46	1.2D + 1.5Lm2 + 1.0W...	Yes	Y		1	1.2	39	1.2	78	1.5	36	1	74	1		
47	1.2D + 1.5Lm2 + 1.0W...	Yes	Y		1	1.2	39	1.2	78	1.5	37	1	75	1		
48	1.2D + 1.5Lm2 + 1.0W...	Yes	Y		1	1.2	39	1.2	78	1.5	38	1	76	1		
49	1.2D + 1.5Lv1	Yes	Y		1	1.2	39	1.2	79	1.5						
50	1.2D + 1.5Lv2	Yes	Y		1	1.2	39	1.2	80	1.5						
51	1.4D	Yes	Y		1	1.4	39	1.4								
52	1.2D + 1.0Ev + 1.0Eh...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	1	83	ELZ 1 ELX
53	1.2D + 1.0Ev + 1.0Eh...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	.866	83	.5 ELZ .866 ELX .5
54	1.2D + 1.0Ev + 1.0Eh...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	.5	83	.866 ELZ .5 ELX .866
55	1.2D + 1.0Ev + 1.0Eh...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82		83	1 ELZ ELX 1
56	1.2D + 1.0Ev + 1.0Eh...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	-.5	83	.866 ELZ -.5 ELX .866
57	1.2D + 1.0Ev + 1.0Eh...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	-.866	83	.5 ELZ -.866 ELX .5
58	1.2D + 1.0Ev + 1.0Eh...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	-1	83	ELZ -1 ELX
59	1.2D + 1.0Ev + 1.0Eh...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	-.866	83	-.5 ELZ -.866 ELX -.5
60	1.2D + 1.0Ev + 1.0Eh...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	-.5	83	-.866 ELZ -.5 ELX -.866
61	1.2D + 1.0Ev + 1.0Eh...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82		83	-1 ELZ ELX -1
62	1.2D + 1.0Ev + 1.0Eh...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	.5	83	-.866 ELZ .5 ELX -.866
63	1.2D + 1.0Ev + 1.0Eh...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	.866	83	-.5 ELZ .866 ELX -.5
64	0.9D - 1.0Ev + 1.0Eh (...)	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	1	83	ELZ 1 ELX
65	0.9D - 1.0Ev + 1.0Eh (...)	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	.866	83	.5 ELZ .866 ELX .5
66	0.9D - 1.0Ev + 1.0Eh (...)	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	.5	83	.866 ELZ .5 ELX .866
67	0.9D - 1.0Ev + 1.0Eh (...)	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82		83	1 ELZ ELX 1
68	0.9D - 1.0Ev + 1.0Eh (...)	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	-.5	83	.866 ELZ -.5 ELX .866
69	0.9D - 1.0Ev + 1.0Eh (...)	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	-.866	83	.5 ELZ -.866 ELX .5
70	0.9D - 1.0Ev + 1.0Eh (...)	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	-1	83	ELZ -1 ELX
71	0.9D - 1.0Ev + 1.0Eh (...)	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	-.866	83	-.5 ELZ -.866 ELX -.5
72	0.9D - 1.0Ev + 1.0Eh (...)	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	-.5	83	-.866 ELZ -.5 ELX -.866
73	0.9D - 1.0Ev + 1.0Eh (...)	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82		83	-1 ELZ ELX -1
74	0.9D - 1.0Ev + 1.0Eh (...)	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	.5	83	-.866 ELZ .5 ELX -.866
75	0.9D - 1.0Ev + 1.0Eh (...)	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	.866	83	-.5 ELZ .866 ELX -.5



Company : Colliers Engineering & Design
 Designer :
 Job Number :
 Model Name : 5000244862-VZW_MT_LOT_SectorA_H

July 5, 2023
 9:40 AM
 Checked By: _____

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	N1	0	-.625	0	0	
2	N2	-12.5	-.625	0	0	
3	N6	-0.291667	-.625	0	0	
4	N10	-0.291667	-.625	.25	0	
5	N11	0	2.541667	0	0	
6	N12	-12.5	2.541667	0	0	
7	N16	-0.291667	2.541667	0	0	
8	N20	-0.291667	2.541667	.25	0	
9	N24	-0.291667	5.125	.25	0	
10	N26	-0.291667	-3.208333	.25	0	
11	N32	-9.836552	-.625	0	0	
12	N33	-9.836552	2.541667	0	0	
13	N34	-6.25	-.625	0	0	
14	N35	-6.25	2.541667	0	0	
15	N36	-6.491537	-.625	-2.25	0	
16	N37	-6.491537	2.541667	-2.25	0	
17	N38	-9.451569	2.541667	-0.258956	0	
18	N41	-9.451569	-.625	-0.258956	0	
19	N42	-9.313277	2.541667	-0.351977	0	
20	N45	-9.313277	-.625	-0.351977	0	
21	N46	-7.031452	2.541667	-1.886831	0	
22	N49	-7.031452	-.625	-1.886831	0	
23	N50	-6.893159	2.541667	-1.979852	0	
24	N53	-6.893159	-.625	-1.979852	0	
25	N59	-6.265624	-.625	-2.774525	0	
26	N60	-6.265624	2.541667	-2.774525	0	
27	N61A	-5.976949	-.625	-2.941192	0	
28	N62	-5.976949	2.541667	-2.941192	0	
29	N61B	-6	2.541667	-2.25	0	
30	N63	-6.25	-.625	-2.25	0	
31	N64	-6.25	2.541667	-2.25	0	
32	N63A	-6	-0.625	-2.25	0	
33	N55	-2.663448	-.625	0	0	
34	N56	-2.663448	2.541667	0	0	
35	N59A	-3.047457	2.541667	-0.258956	0	
36	N60A	-3.047457	-.625	-0.258956	0	
37	N61	-3.186723	2.541667	-0.351977	0	
38	N62A	-3.185399	-.625	-0.351977	0	
39	N63B	-5.461452	2.541667	-1.886831	0	
40	N64A	-5.468548	-.625	-1.886831	0	
41	N65	-5.599394	2.541667	-1.979852	0	
42	N66	-5.599394	-.625	-1.979852	0	
43	N47	-4.291667	-.625	0	0	
44	N48	-4.291667	-.625	.25	0	
45	N49A	-4.291667	2.541667	0	0	
46	N50A	-4.291667	2.541667	.25	0	
47	N51	-4.291667	5.125	.25	0	
48	N52	-4.291667	-3.208333	.25	0	
49	N53A	-8.208333	-.625	0	0	
50	N54	-8.208333	-.625	.25	0	
51	N55A	-8.208333	2.541667	0	0	
52	N56A	-8.208333	2.541667	.25	0	
53	N57	-8.208333	5.125	.25	0	
54	N58	-8.208333	-3.208333	.25	0	
55	N59B	-12.208333	-.625	0	0	
56	N60B	-12.208333	-.625	.25	0	



Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
57	N61C	-12.208333	2.541667	0	0	
58	N62B	-12.208333	2.541667	.25	0	
59	N63C	-12.208333	5.125	.25	0	
60	N64B	-12.208333	-3.208333	.25	0	
61	N63D	-4.291667	3.208333	.25	0	
62	N64C	-4.291667	-0.291667	.25	0	
63	N65A	-4.291667	1.458333	.25	0	
64	N66A	-12.208333	0.958333	.25	0	
65	N67	-4.291667	2.458333	.25	0	
66	N68	-4.291667	0.458333	.25	0	
67	N69	-3.226949	-.625	-7.704332	0	
68	N71	-0.476949	-1.875	-2.941192	0	
69	N72	-0.476949	2.541667	-2.941192	0	
70	N71A	-0.291667	-1.875	.25	0	
71	N74	-0.291667	0.708333	.25	0	
72	N74A	-5.976949	6.458333	-2.941192	0	
73	N75	.25	3.541667	0	0	
74	N76	-12.75	3.541667	0	0	
75	N77	-0.291667	3.541667	0	0	
76	N78	-0.291667	3.541667	.25	0	
77	N80	-6.25	3.541667	0	0	
78	N82	-4.291667	3.541667	0	0	
79	N83	-4.291667	3.541667	.25	0	
80	N84	-8.208333	3.541667	0	0	
81	N85	-8.208333	3.541667	.25	0	
82	N86	-12.208333	3.541667	0	0	
83	N87	-12.208333	3.541667	.25	0	
84	N89	-11.3	3.541667	0	0	
85	N90	-1.2	3.541667	0	0	
86	N92	.25	-2.458333	0	0	
87	N93	-12.75	-2.458333	0	0	
88	N94	-0.291667	-2.458333	0	0	
89	N95	-0.291667	-2.458333	.25	0	
90	N96	-9.836552	-2.458333	0	0	
91	N97	-6.25	-2.458333	0	0	
92	N98	-2.663448	-2.458333	0	0	
93	N99	-4.291667	-2.458333	0	0	
94	N100	-4.291667	-2.458333	.25	0	
95	N101	-8.208333	-2.458333	0	0	
96	N102	-8.208333	-2.458333	.25	0	
97	N103	-12.208333	-2.458333	0	0	
98	N104	-12.208333	-2.458333	.25	0	
99	N105	-9.5	-2.458333	0	0	
100	N106	-11.3	-2.458333	0	0	
101	N107	-1.2	-2.458333	0	0	
102	N108	-5.976949	-4.541667	-2.941192	0	
103	N104A	-11.5	2.541667	0	0	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design R...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Antenna Pipe	PIPE 2.0	Beam	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
2	Mod Tieback	PIPE 2.5	Beam	Pipe	A53 Gr. B	Typical	1.61	1.45	1.45	2.89
3	Mod Face horizontal	PIPE 2.0	Beam	Pipe	A500 Gr. B ...	Typical	1.02	.627	.627	1.25
4	Face Horizontal	L3X3X4	Beam	Single Angle	A36 Gr.36	Typical	1.44	1.23	1.23	.031
5	Standoff Horizontal	L3X3X4	Beam	Single Angle	A36 Gr.36	Typical	1.44	1.23	1.23	.031



Hot Rolled Steel Section Sets (Continued)

Label	Shape	Type	Design List	Material	Design R...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]	
6	Mod V kit	L2.5x2.5x4	Beam	Single Angle	A36 Gr.36	Typical	1.19	.692	.692	.026
7	Standoff Vertical	PIPE 1.0	Beam	Pipe	A53 Gr. B	Typical	.469	.083	.083	.166
8	Standoff Diagonal	SR 0.75	Beam	RECT	A36 Gr.36	Typical	.442	.016	.016	.031
9	Back Plate 1	PL3/8x10	Beam	RECT	A36 Gr.36	Typical	3.75	.044	31.25	.172
10	Back Plate 2	PL1/2X7_HRA	Beam	RECT	A36 Gr.36	Typical	3.5	.073	14.292	.279
11	Tie Back	PIPE 2.0	Beam	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25

Hot Rolled Steel Properties

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

Member Primary Data

Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N2	N34	180	Face Horizontal	Beam	Single Angle	A36 Gr.36	Typical
2	M5	N10	N6		RIGID	None	None	RIGID	Typical
3	M6	N12	N35	270	Face Horizontal	Beam	Single Angle	A36 Gr.36	Typical
4	M10	N20	N16		RIGID	None	None	RIGID	Typical
5	MP1A	N24	N26		Antenna Pipe	Beam	Pipe	A53 Gr. B	Typical
6	M15	N33	N37	180	Standoff Horiz...	Beam	Single Angle	A36 Gr.36	Typical
7	M18	N32	N36	270	Standoff Horiz...	Beam	Single Angle	A36 Gr.36	Typical
8	M19	N38	N41	45	Standoff Vertical	Beam	Pipe	A53 Gr. B	Typical
9	M20	N50	N53	45	Standoff Vertical	Beam	Pipe	A53 Gr. B	Typical
10	M23	N46	N45		Standoff Diago...	Beam	RECT	A36 Gr.36	Typical
11	M31	N60	N62	90	Back Plate 2	Beam	RECT	A36 Gr.36	Typical
12	M32	N59	N61A	90	Back Plate 2	Beam	RECT	A36 Gr.36	Typical
13	M31A	N64	N60	90	Back Plate 1	Beam	RECT	A36 Gr.36	Typical
14	M32A	N63	N59	90	Back Plate 1	Beam	RECT	A36 Gr.36	Typical
15	M33	N61B	N37		RIGID	None	None	RIGID	Typical
16	M31B	N63A	N36		RIGID	None	None	RIGID	Typical
17	M27	N56	N61B	90	Standoff Horiz...	Beam	Single Angle	A36 Gr.36	Typical
18	M28	N55	N63A		Standoff Horiz...	Beam	Single Angle	A36 Gr.36	Typical
19	M29	N59A	N60A	45	Standoff Vertical	Beam	Pipe	A53 Gr. B	Typical
20	M30	N65	N66	45	Standoff Vertical	Beam	Pipe	A53 Gr. B	Typical
21	M31C	N63B	N62A		Standoff Diago...	Beam	RECT	A36 Gr.36	Typical
22	M23A	N48	N47		RIGID	None	None	RIGID	Typical
23	M24	N50A	N49A		RIGID	None	None	RIGID	Typical
24	MP2A	N51	N52		Antenna Pipe	Beam	Pipe	A53 Gr. B	Typical
25	M26	N54	N53A		RIGID	None	None	RIGID	Typical
26	M27A	N56A	N55A		RIGID	None	None	RIGID	Typical
27	MP3A	N57	N58		Antenna Pipe	Beam	Pipe	A53 Gr. B	Typical
28	M29A	N60B	N59B		RIGID	None	None	RIGID	Typical
29	M30A	N62B	N61C		RIGID	None	None	RIGID	Typical
30	MP4A	N63C	N64B		Antenna Pipe	Beam	Pipe	A53 Gr. B	Typical
31	M32B	N34	N1	180	Face Horizontal	Beam	Single Angle	A36 Gr.36	Typical
32	M33A	N35	N11	270	Face Horizontal	Beam	Single Angle	A36 Gr.36	Typical
33	M33B	N71A	N71		Tie Back	Beam	Pipe	A53 Gr. B	Typical
34	M36	N78	N77		RIGID	None	None	RIGID	Typical
35	M37	N83	N82		RIGID	None	None	RIGID	Typical
36	M38	N85	N84		RIGID	None	None	RIGID	Typical



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 Designer :
 Job Number :
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Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
37	M39	N87	N86			RIGID	None	None	RIGID	Typical
38	M40	N76	N75		270	Mod Face hori...	Beam	Pipe	A500 Gr. ...	Typical
39	M40A	N74A	N89		270	Mod V kit	Beam	Single Angle	A36 Gr.36	Typical
40	M41	N74A	N90			Mod V kit	Beam	Single Angle	A36 Gr.36	Typical
41	M44	N95	N94			RIGID	None	None	RIGID	Typical
42	M45	N100	N99			RIGID	None	None	RIGID	Typical
43	M46	N102	N101			RIGID	None	None	RIGID	Typical
44	M47	N104	N103			RIGID	None	None	RIGID	Typical
45	M48	N93	N92		270	Mod Face hori...	Beam	Pipe	A500 Gr. ...	Typical
46	M49	N108	N96		270	Mod V kit	Beam	Single Angle	A36 Gr.36	Typical
47	M50	N108	N98			Mod V kit	Beam	Single Angle	A36 Gr.36	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset(in)	J Offset(in)	T/C Only	Physical	Defl Rat.	Analysis ...	Inactive	Seismic...
1	M1						Yes				None
2	M5	OOOXOX					Yes	** NA **			None
3	M6						Yes				None
4	M10	OOOXOX					Yes	** NA **			None
5	MP1A						Yes				None
6	M15	BenPIN	OOOOXX				Yes	Default			None
7	M18	BenPIN	OOOOXX				Yes	Default			None
8	M19						Yes				None
9	M20						Yes				None
10	M23						Yes	Default			None
11	M31						Yes				None
12	M32						Yes				None
13	M31A						Yes				None
14	M32A						Yes				None
15	M33						Yes	** NA **			None
16	M31B						Yes	** NA **			None
17	M27	BenPIN	OOOOXX				Yes	Default			None
18	M28	BenPIN	OOOOXX				Yes	Default			None
19	M29						Yes				None
20	M30						Yes				None
21	M31C						Yes	Default			None
22	M23A	OOOXOX					Yes	** NA **			None
23	M24	OOOXOX					Yes	** NA **			None
24	MP2A						Yes				None
25	M26	OOOXOX					Yes	** NA **			None
26	M27A	OOOXOX					Yes	** NA **			None
27	MP3A						Yes				None
28	M29A	OOOXOX					Yes	** NA **			None
29	M30A	OOOXOX					Yes	** NA **			None
30	MP4A						Yes				None
31	M32B						Yes				None
32	M33A						Yes				None
33	M33B	BenPIN					Yes	Default			None
34	M36						Yes	** NA **			None
35	M37						Yes	** NA **			None
36	M38						Yes	** NA **			None
37	M39						Yes	** NA **			None
38	M40						Yes	Default			None
39	M40A	BenPIN	BenPIN				Yes				None
40	M41	BenPIN	BenPIN				Yes				None
41	M44						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...
42	M45						Yes	** NA **			None
43	M46						Yes	** NA **			None
44	M47						Yes	** NA **			None
45	M48						Yes	Default			None
46	M49	BenPIN	BenPIN				Yes				None
47	M50	BenPIN	BenPIN				Yes				None

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	Y	-43.55	2.67
2	MP1A	My	-.022	2.67
3	MP1A	Mz	0	2.67
4	MP1A	Y	-43.55	4.67
5	MP1A	My	-.022	4.67
6	MP1A	Mz	0	4.67
7	MP3A	Y	-20	1.92
8	MP3A	My	-.013	1.92
9	MP3A	Mz	.013	1.92
10	MP3A	Y	-20	5.42
11	MP3A	Mv	-.013	5.42
12	MP3A	Mz	.013	5.42
13	MP3A	Y	-20	1.92
14	MP3A	My	-.013	1.92
15	MP3A	Mz	-.013	1.92
16	MP3A	Y	-20	5.42
17	MP3A	Mv	-.013	5.42
18	MP3A	Mz	-.013	5.42
19	MP4A	Y	-20	1.92
20	MP4A	My	-.013	1.92
21	MP4A	Mz	0	1.92
22	MP4A	Y	-20	5.42
23	MP4A	My	-.013	5.42
24	MP4A	Mz	0	5.42
25	M19	Y	-84.4	1
26	M19	My	.042	1
27	M19	Mz	0	1
28	M29	Y	-70.3	1
29	M29	My	.035	1
30	M29	Mz	0	1
31	M30	Y	-26.9	1.5
32	M30	My	0	1.5
33	M30	Mz	0	1.5
34	MP3A	Y	-17.6	4
35	MP3A	Mv	.009	4
36	MP3A	Mz	0	4

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	Y	-35.041	2.67
2	MP1A	My	-.018	2.67
3	MP1A	Mz	0	2.67
4	MP1A	Y	-35.041	4.67
5	MP1A	Mv	-.018	4.67
6	MP1A	Mz	0	4.67
7	MP3A	Y	-60.087	1.92



Member Point Loads (BLC 2 : Antenna Di) (Continued)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
8	MP3A	My	-.04	1.92
9	MP3A	Mz	.04	1.92
10	MP3A	Y	-60.087	5.42
11	MP3A	My	-.04	5.42
12	MP3A	Mz	.04	5.42
13	MP3A	Y	-60.087	1.92
14	MP3A	My	-.04	1.92
15	MP3A	Mz	-.04	1.92
16	MP3A	Y	-60.087	5.42
17	MP3A	My	-.04	5.42
18	MP3A	Mz	-.04	5.42
19	MP4A	Y	-60.087	1.92
20	MP4A	My	-.04	1.92
21	MP4A	Mz	0	1.92
22	MP4A	Y	-60.087	5.42
23	MP4A	My	-.04	5.42
24	MP4A	Mz	0	5.42
25	M19	Y	-44.168	1
26	M19	My	.022	1
27	M19	Mz	0	1
28	M29	Y	-39.716	1
29	M29	My	.02	1
30	M29	Mz	0	1
31	M30	Y	-54.397	1.5
32	M30	My	0	1.5
33	M30	Mz	0	1.5
34	MP3A	Y	-17.041	4
35	MP3A	My	.009	4
36	MP3A	Mz	0	4

Member Point Loads (BLC 3 : Antenna Wo (0 Deg))

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP1A	X	0	2.67
2	MP1A	Z	-107.987	2.67
3	MP1A	Mx	0	2.67
4	MP1A	X	0	4.67
5	MP1A	Z	-107.987	4.67
6	MP1A	Mx	0	4.67
7	MP3A	X	0	1.92
8	MP3A	Z	-126.598	1.92
9	MP3A	Mx	-.084	1.92
10	MP3A	X	0	5.42
11	MP3A	Z	-126.598	5.42
12	MP3A	Mx	-.084	5.42
13	MP3A	X	0	1.92
14	MP3A	Z	-126.598	1.92
15	MP3A	Mx	.084	1.92
16	MP3A	X	0	5.42
17	MP3A	Z	-126.598	5.42
18	MP3A	Mx	.084	5.42
19	MP4A	X	0	1.92
20	MP4A	Z	-126.598	1.92
21	MP4A	Mx	0	1.92
22	MP4A	X	0	5.42
23	MP4A	Z	-126.598	5.42
24	MP4A	Mx	0	5.42



Member Point Loads (BLC 3 : Antenna Wo (0 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
25	M19	X	0	1
26	M19	Z	-71.226	1
27	M19	Mx	0	1
28	M29	X	0	1
29	M29	Z	-71.226	1
30	M29	Mx	0	1
31	M30	X	0	1.5
32	M30	Z	-114.88	1.5
33	M30	Mx	0	1.5
34	MP3A	X	0	4
35	MP3A	Z	-44.114	4
36	MP3A	Mx	0	4

Member Point Loads (BLC 4 : Antenna Wo (30 Deg))

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	45.78	2.67
2	MP1A	Z	-79.293	2.67
3	MP1A	Mx	-.023	2.67
4	MP1A	X	45.78	4.67
5	MP1A	Z	-79.293	4.67
6	MP1A	Mx	-.023	4.67
7	MP3A	X	54.281	1.92
8	MP3A	Z	-94.017	1.92
9	MP3A	Mx	-.099	1.92
10	MP3A	X	54.281	5.42
11	MP3A	Z	-94.017	5.42
12	MP3A	Mx	-.099	5.42
13	MP3A	X	54.281	1.92
14	MP3A	Z	-94.017	1.92
15	MP3A	Mx	.026	1.92
16	MP3A	X	54.281	5.42
17	MP3A	Z	-94.017	5.42
18	MP3A	Mx	.026	5.42
19	MP4A	X	54.281	1.92
20	MP4A	Z	-94.017	1.92
21	MP4A	Mx	-.036	1.92
22	MP4A	X	54.281	5.42
23	MP4A	Z	-94.017	5.42
24	MP4A	Mx	-.036	5.42
25	M19	X	32.683	1
26	M19	Z	-56.609	1
27	M19	Mx	.016	1
28	M29	X	31.592	1
29	M29	Z	-54.719	1
30	M29	Mx	.016	1
31	M30	X	52.405	1.5
32	M30	Z	-90.769	1.5
33	M30	Mx	0	1.5
34	MP3A	X	18.215	4
35	MP3A	Z	-31.55	4
36	MP3A	Mx	.009	4

Member Point Loads (BLC 5 : Antenna Wo (60 Deg))

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	50.84	2.67
2	MP1A	Z	-29.352	2.67



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
3	MP1A	Mx	-.025	2.67
4	MP1A	X	50.84	4.67
5	MP1A	Z	-29.352	4.67
6	MP1A	Mx	-.025	4.67
7	MP3A	X	62.778	1.92
8	MP3A	Z	-36.245	1.92
9	MP3A	Mx	-.066	1.92
10	MP3A	X	62.778	5.42
11	MP3A	Z	-36.245	5.42
12	MP3A	Mx	-.066	5.42
13	MP3A	X	62.778	1.92
14	MP3A	Z	-36.245	1.92
15	MP3A	Mx	-.018	1.92
16	MP3A	X	62.778	5.42
17	MP3A	Z	-36.245	5.42
18	MP3A	Mx	-.018	5.42
19	MP4A	X	62.778	1.92
20	MP4A	Z	-36.245	1.92
21	MP4A	Mx	-.042	1.92
22	MP4A	X	62.778	5.42
23	MP4A	Z	-36.245	5.42
24	MP4A	Mx	-.042	5.42
25	M19	X	46.461	1
26	M19	Z	-26.825	1
27	M19	Mx	.023	1
28	M29	X	40.791	1
29	M29	Z	-23.55	1
30	M29	Mx	.02	1
31	M30	X	73.328	1.5
32	M30	Z	-42.336	1.5
33	M30	Mx	0	1.5
34	MP3A	X	18.242	4
35	MP3A	Z	-10.532	4
36	MP3A	Mx	.009	4

Member Point Loads (BLC 6 : Antenna Wo (90 Deg))

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	42.277	2.67
2	MP1A	Z	0	2.67
3	MP1A	Mx	-.021	2.67
4	MP1A	X	42.277	4.67
5	MP1A	Z	0	4.67
6	MP1A	Mx	-.021	4.67
7	MP3A	X	54.453	1.92
8	MP3A	Z	0	1.92
9	MP3A	Mx	-.036	1.92
10	MP3A	X	54.453	5.42
11	MP3A	Z	0	5.42
12	MP3A	Mx	-.036	5.42
13	MP3A	X	54.453	1.92
14	MP3A	Z	0	1.92
15	MP3A	Mx	-.036	1.92
16	MP3A	X	54.453	5.42
17	MP3A	Z	0	5.42
18	MP3A	Mx	-.036	5.42
19	MP4A	X	54.453	1.92



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
20	MP4A	Z	0	1.92
21	MP4A	Mx	-.036	1.92
22	MP4A	X	54.453	5.42
23	MP4A	Z	0	5.42
24	MP4A	Mx	-.036	5.42
25	M19	X	47.79	1
26	M19	Z	0	1
27	M19	Mx	.024	1
28	M29	X	39.059	1
29	M29	Z	0	1
30	M29	Mx	.02	1
31	M30	X	74.603	1.5
32	M30	Z	0	1.5
33	M30	Mx	0	1.5
34	MP3A	X	13.38	4
35	MP3A	Z	0	4
36	MP3A	Mx	.007	4

Member Point Loads (BLC 7 : Antenna Wo (120 Deg))

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	50.84	2.67
2	MP1A	Z	29.352	2.67
3	MP1A	Mx	-.025	2.67
4	MP1A	X	50.84	4.67
5	MP1A	Z	29.352	4.67
6	MP1A	Mx	-.025	4.67
7	MP3A	X	62.778	1.92
8	MP3A	Z	36.245	1.92
9	MP3A	Mx	-.018	1.92
10	MP3A	X	62.778	5.42
11	MP3A	Z	36.245	5.42
12	MP3A	Mx	-.018	5.42
13	MP3A	X	62.778	1.92
14	MP3A	Z	36.245	1.92
15	MP3A	Mx	-.066	1.92
16	MP3A	X	62.778	5.42
17	MP3A	Z	36.245	5.42
18	MP3A	Mx	-.066	5.42
19	MP4A	X	62.778	1.92
20	MP4A	Z	36.245	1.92
21	MP4A	Mx	-.042	1.92
22	MP4A	X	62.778	5.42
23	MP4A	Z	36.245	5.42
24	MP4A	Mx	-.042	5.42
25	M19	X	46.461	1
26	M19	Z	26.825	1
27	M19	Mx	.023	1
28	M29	X	40.791	1
29	M29	Z	23.55	1
30	M29	Mx	.02	1
31	M30	X	73.328	1.5
32	M30	Z	42.336	1.5
33	M30	Mx	0	1.5
34	MP3A	X	18.242	4
35	MP3A	Z	10.532	4
36	MP3A	Mx	.009	4



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 Designer :
 Job Number :
 Model Name : 5000244862-VZW_MT_LOT_SectorA_H

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Member Point Loads (BLC 8 : Antenna Wo (150 Deg))

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	45.78	2.67
2	MP1A	Z	79.293	2.67
3	MP1A	Mx	-.023	2.67
4	MP1A	X	45.78	4.67
5	MP1A	Z	79.293	4.67
6	MP1A	Mx	-.023	4.67
7	MP3A	X	54.281	1.92
8	MP3A	Z	94.017	1.92
9	MP3A	Mx	.026	1.92
10	MP3A	X	54.281	5.42
11	MP3A	Z	94.017	5.42
12	MP3A	Mx	.026	5.42
13	MP3A	X	54.281	1.92
14	MP3A	Z	94.017	1.92
15	MP3A	Mx	-.099	1.92
16	MP3A	X	54.281	5.42
17	MP3A	Z	94.017	5.42
18	MP3A	Mx	-.099	5.42
19	MP4A	X	54.281	1.92
20	MP4A	Z	94.017	1.92
21	MP4A	Mx	-.036	1.92
22	MP4A	X	54.281	5.42
23	MP4A	Z	94.017	5.42
24	MP4A	Mx	-.036	5.42
25	M19	X	32.683	1
26	M19	Z	56.609	1
27	M19	Mx	.016	1
28	M29	X	31.592	1
29	M29	Z	54.719	1
30	M29	Mx	.016	1
31	M30	X	52.405	1.5
32	M30	Z	90.769	1.5
33	M30	Mx	0	1.5
34	MP3A	X	18.215	4
35	MP3A	Z	31.55	4
36	MP3A	Mx	.009	4

Member Point Loads (BLC 9 : Antenna Wo (180 Deg))

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	0	2.67
2	MP1A	Z	107.987	2.67
3	MP1A	Mx	0	2.67
4	MP1A	X	0	4.67
5	MP1A	Z	107.987	4.67
6	MP1A	Mx	0	4.67
7	MP3A	X	0	1.92
8	MP3A	Z	126.598	1.92
9	MP3A	Mx	.084	1.92
10	MP3A	X	0	5.42
11	MP3A	Z	126.598	5.42
12	MP3A	Mx	.084	5.42
13	MP3A	X	0	1.92
14	MP3A	Z	126.598	1.92
15	MP3A	Mx	-.084	1.92
16	MP3A	X	0	5.42
17	MP3A	Z	126.598	5.42



Member Point Loads (BLC 9 : Antenna Wo (180 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
18	MP3A	Mx	-.084	5.42
19	MP4A	X	0	1.92
20	MP4A	Z	126.598	1.92
21	MP4A	Mx	0	1.92
22	MP4A	X	0	5.42
23	MP4A	Z	126.598	5.42
24	MP4A	Mx	0	5.42
25	M19	X	0	1
26	M19	Z	71.226	1
27	M19	Mx	0	1
28	M29	X	0	1
29	M29	Z	71.226	1
30	M29	Mx	0	1
31	M30	X	0	1.5
32	M30	Z	114.88	1.5
33	M30	Mx	0	1.5
34	MP3A	X	0	4
35	MP3A	Z	44.114	4
36	MP3A	Mx	0	4

Member Point Loads (BLC 10 : Antenna Wo (210 Deg))

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-45.78	2.67
2	MP1A	Z	79.293	2.67
3	MP1A	Mx	.023	2.67
4	MP1A	X	-45.78	4.67
5	MP1A	Z	79.293	4.67
6	MP1A	Mx	.023	4.67
7	MP3A	X	-54.281	1.92
8	MP3A	Z	94.017	1.92
9	MP3A	Mx	.099	1.92
10	MP3A	X	-54.281	5.42
11	MP3A	Z	94.017	5.42
12	MP3A	Mx	.099	5.42
13	MP3A	X	-54.281	1.92
14	MP3A	Z	94.017	1.92
15	MP3A	Mx	-.026	1.92
16	MP3A	X	-54.281	5.42
17	MP3A	Z	94.017	5.42
18	MP3A	Mx	-.026	5.42
19	MP4A	X	-54.281	1.92
20	MP4A	Z	94.017	1.92
21	MP4A	Mx	.036	1.92
22	MP4A	X	-54.281	5.42
23	MP4A	Z	94.017	5.42
24	MP4A	Mx	.036	5.42
25	M19	X	-32.683	1
26	M19	Z	56.609	1
27	M19	Mx	-.016	1
28	M29	X	-31.592	1
29	M29	Z	54.719	1
30	M29	Mx	-.016	1
31	M30	X	-52.405	1.5
32	M30	Z	90.769	1.5
33	M30	Mx	0	1.5
34	MP3A	X	-18.215	4



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Member Point Loads (BLC 10 : Antenna Wo (210 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
35	MP3A	Z	31.55	4
36	MP3A	Mx	-.009	4

Member Point Loads (BLC 11 : Antenna Wo (240 Deg))

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-50.84	2.67
2	MP1A	Z	29.352	2.67
3	MP1A	Mx	.025	2.67
4	MP1A	X	-50.84	4.67
5	MP1A	Z	29.352	4.67
6	MP1A	Mx	.025	4.67
7	MP3A	X	-62.778	1.92
8	MP3A	Z	36.245	1.92
9	MP3A	Mx	.066	1.92
10	MP3A	X	-62.778	5.42
11	MP3A	Z	36.245	5.42
12	MP3A	Mx	.066	5.42
13	MP3A	X	-62.778	1.92
14	MP3A	Z	36.245	1.92
15	MP3A	Mx	.018	1.92
16	MP3A	X	-62.778	5.42
17	MP3A	Z	36.245	5.42
18	MP3A	Mx	.018	5.42
19	MP4A	X	-62.778	1.92
20	MP4A	Z	36.245	1.92
21	MP4A	Mx	.042	1.92
22	MP4A	X	-62.778	5.42
23	MP4A	Z	36.245	5.42
24	MP4A	Mx	.042	5.42
25	M19	X	-46.461	1
26	M19	Z	26.825	1
27	M19	Mx	-.023	1
28	M29	X	-40.791	1
29	M29	Z	23.55	1
30	M29	Mx	-.02	1
31	M30	X	-73.328	1.5
32	M30	Z	42.336	1.5
33	M30	Mx	0	1.5
34	MP3A	X	-18.242	4
35	MP3A	Z	10.532	4
36	MP3A	Mx	-.009	4

Member Point Loads (BLC 12 : Antenna Wo (270 Deg))

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-42.277	2.67
2	MP1A	Z	0	2.67
3	MP1A	Mx	.021	2.67
4	MP1A	X	-42.277	4.67
5	MP1A	Z	0	4.67
6	MP1A	Mx	.021	4.67
7	MP3A	X	-54.453	1.92
8	MP3A	Z	0	1.92
9	MP3A	Mx	.036	1.92
10	MP3A	X	-54.453	5.42
11	MP3A	Z	0	5.42
12	MP3A	Mx	.036	5.42



Member Point Loads (BLC 12 : Antenna Wo (270 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
13	MP3A	X	-54.453	1.92
14	MP3A	Z	0	1.92
15	MP3A	Mx	.036	1.92
16	MP3A	X	-54.453	5.42
17	MP3A	Z	0	5.42
18	MP3A	Mx	.036	5.42
19	MP4A	X	-54.453	1.92
20	MP4A	Z	0	1.92
21	MP4A	Mx	.036	1.92
22	MP4A	X	-54.453	5.42
23	MP4A	Z	0	5.42
24	MP4A	Mx	.036	5.42
25	M19	X	-47.79	1
26	M19	Z	0	1
27	M19	Mx	-.024	1
28	M29	X	-39.059	1
29	M29	Z	0	1
30	M29	Mx	-.02	1
31	M30	X	-74.603	1.5
32	M30	Z	0	1.5
33	M30	Mx	0	1.5
34	MP3A	X	-13.38	4
35	MP3A	Z	0	4
36	MP3A	Mx	-.007	4

Member Point Loads (BLC 13 : Antenna Wo (300 Deg))

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-50.84	2.67
2	MP1A	Z	-29.352	2.67
3	MP1A	Mx	.025	2.67
4	MP1A	X	-50.84	4.67
5	MP1A	Z	-29.352	4.67
6	MP1A	Mx	.025	4.67
7	MP3A	X	-62.778	1.92
8	MP3A	Z	-36.245	1.92
9	MP3A	Mx	.018	1.92
10	MP3A	X	-62.778	5.42
11	MP3A	Z	-36.245	5.42
12	MP3A	Mx	.018	5.42
13	MP3A	X	-62.778	1.92
14	MP3A	Z	-36.245	1.92
15	MP3A	Mx	.066	1.92
16	MP3A	X	-62.778	5.42
17	MP3A	Z	-36.245	5.42
18	MP3A	Mx	.066	5.42
19	MP4A	X	-62.778	1.92
20	MP4A	Z	-36.245	1.92
21	MP4A	Mx	.042	1.92
22	MP4A	X	-62.778	5.42
23	MP4A	Z	-36.245	5.42
24	MP4A	Mx	.042	5.42
25	M19	X	-46.461	1
26	M19	Z	-26.825	1
27	M19	Mx	-.023	1
28	M29	X	-40.791	1
29	M29	Z	-23.55	1



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Member Point Loads (BLC 13 : Antenna Wo (300 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
30	M29	Mx	-.02	1
31	M30	X	-73.328	1.5
32	M30	Z	-42.336	1.5
33	M30	Mx	0	1.5
34	MP3A	X	-18.242	4
35	MP3A	Z	-10.532	4
36	MP3A	Mx	-.009	4

Member Point Loads (BLC 14 : Antenna Wo (330 Deg))

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-45.78	2.67
2	MP1A	Z	-79.293	2.67
3	MP1A	Mx	.023	2.67
4	MP1A	X	-45.78	4.67
5	MP1A	Z	-79.293	4.67
6	MP1A	Mx	.023	4.67
7	MP3A	X	-54.281	1.92
8	MP3A	Z	-94.017	1.92
9	MP3A	Mx	-.026	1.92
10	MP3A	X	-54.281	5.42
11	MP3A	Z	-94.017	5.42
12	MP3A	Mx	-.026	5.42
13	MP3A	X	-54.281	1.92
14	MP3A	Z	-94.017	1.92
15	MP3A	Mx	.099	1.92
16	MP3A	X	-54.281	5.42
17	MP3A	Z	-94.017	5.42
18	MP3A	Mx	.099	5.42
19	MP4A	X	-54.281	1.92
20	MP4A	Z	-94.017	1.92
21	MP4A	Mx	.036	1.92
22	MP4A	X	-54.281	5.42
23	MP4A	Z	-94.017	5.42
24	MP4A	Mx	.036	5.42
25	M19	X	-32.683	1
26	M19	Z	-56.609	1
27	M19	Mx	-.016	1
28	M29	X	-31.592	1
29	M29	Z	-54.719	1
30	M29	Mx	-.016	1
31	M30	X	-52.405	1.5
32	M30	Z	-90.769	1.5
33	M30	Mx	0	1.5
34	MP3A	X	-18.215	4
35	MP3A	Z	-31.55	4
36	MP3A	Mx	-.009	4

Member Point Loads (BLC 15 : Antenna Wi (0 Deg))

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	0	2.67
2	MP1A	Z	-18.877	2.67
3	MP1A	Mx	0	2.67
4	MP1A	X	0	4.67
5	MP1A	Z	-18.877	4.67
6	MP1A	Mx	0	4.67
7	MP3A	X	0	1.92



Member Point Loads (BLC 15 : Antenna Wi (0 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
8	MP3A	Z	-32	1.92
9	MP3A	Mx	-.021	1.92
10	MP3A	X	0	5.42
11	MP3A	Z	-32	5.42
12	MP3A	Mx	-.021	5.42
13	MP3A	X	0	1.92
14	MP3A	Z	-32	1.92
15	MP3A	Mx	.021	1.92
16	MP3A	X	0	5.42
17	MP3A	Z	-32	5.42
18	MP3A	Mx	.021	5.42
19	MP4A	X	0	1.92
20	MP4A	Z	-32	1.92
21	MP4A	Mx	0	1.92
22	MP4A	X	0	5.42
23	MP4A	Z	-32	5.42
24	MP4A	Mx	0	5.42
25	M19	X	0	1
26	M19	Z	-15.897	1
27	M19	Mx	0	1
28	M29	X	0	1
29	M29	Z	-15.897	1
30	M29	Mx	0	1
31	M30	X	0	1.5
32	M30	Z	-20.719	1.5
33	M30	Mx	0	1.5
34	MP3A	X	0	4
35	MP3A	Z	-8.73	4
36	MP3A	Mx	0	4

Member Point Loads (BLC 16 : Antenna Wi (30 Deg))

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	8.083	2.67
2	MP1A	Z	-14	2.67
3	MP1A	Mx	-.004	2.67
4	MP1A	X	8.083	4.67
5	MP1A	Z	-14	4.67
6	MP1A	Mx	-.004	4.67
7	MP3A	X	14.757	1.92
8	MP3A	Z	-25.56	1.92
9	MP3A	Mx	-.027	1.92
10	MP3A	X	14.757	5.42
11	MP3A	Z	-25.56	5.42
12	MP3A	Mx	-.027	5.42
13	MP3A	X	14.757	1.92
14	MP3A	Z	-25.56	1.92
15	MP3A	Mx	.007	1.92
16	MP3A	X	14.757	5.42
17	MP3A	Z	-25.56	5.42
18	MP3A	Mx	.007	5.42
19	MP4A	X	14.757	1.92
20	MP4A	Z	-25.56	1.92
21	MP4A	Mx	-.01	1.92
22	MP4A	X	14.757	5.42
23	MP4A	Z	-25.56	5.42
24	MP4A	Mx	-.01	5.42



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
25	M19	X	7.343	1
26	M19	Z	-12.718	1
27	M19	Mx	.004	1
28	M29	X	7.113	1
29	M29	Z	-12.319	1
30	M29	Mx	.004	1
31	M30	X	9.526	1.5
32	M30	Z	-16.499	1.5
33	M30	Mx	0	1.5
34	MP3A	X	3.684	4
35	MP3A	Z	-6.38	4
36	MP3A	Mx	.002	4

Member Point Loads (BLC 17 : Antenna Wi (60 Deg))

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	9.303	2.67
2	MP1A	Z	-5.371	2.67
3	MP1A	Mx	-.005	2.67
4	MP1A	X	9.303	4.67
5	MP1A	Z	-5.371	4.67
6	MP1A	Mx	-.005	4.67
7	MP3A	X	21.255	1.92
8	MP3A	Z	-12.271	1.92
9	MP3A	Mx	-.022	1.92
10	MP3A	X	21.255	5.42
11	MP3A	Z	-12.271	5.42
12	MP3A	Mx	-.022	5.42
13	MP3A	X	21.255	1.92
14	MP3A	Z	-12.271	1.92
15	MP3A	Mx	-.006	1.92
16	MP3A	X	21.255	5.42
17	MP3A	Z	-12.271	5.42
18	MP3A	Mx	-.006	5.42
19	MP4A	X	21.255	1.92
20	MP4A	Z	-12.271	1.92
21	MP4A	Mx	-.014	1.92
22	MP4A	X	21.255	5.42
23	MP4A	Z	-12.271	5.42
24	MP4A	Mx	-.014	5.42
25	M19	X	10.62	1
26	M19	Z	-6.131	1
27	M19	Mx	.005	1
28	M29	X	9.424	1
29	M29	Z	-5.441	1
30	M29	Mx	.005	1
31	M30	X	13.612	1.5
32	M30	Z	-7.859	1.5
33	M30	Mx	0	1.5
34	MP3A	X	4.02	4
35	MP3A	Z	-2.321	4
36	MP3A	Mx	.002	4

Member Point Loads (BLC 18 : Antenna Wi (90 Deg))

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	8.031	2.67
2	MP1A	Z	0	2.67



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
3	MP1A	Mx	-.004	2.67
4	MP1A	X	8.031	4.67
5	MP1A	Z	0	4.67
6	MP1A	Mx	-.004	4.67
7	MP3A	X	22.057	1.92
8	MP3A	Z	0	1.92
9	MP3A	Mx	-.015	1.92
10	MP3A	X	22.057	5.42
11	MP3A	Z	0	5.42
12	MP3A	Mx	-.015	5.42
13	MP3A	X	22.057	1.92
14	MP3A	Z	0	1.92
15	MP3A	Mx	-.015	1.92
16	MP3A	X	22.057	5.42
17	MP3A	Z	0	5.42
18	MP3A	Mx	-.015	5.42
19	MP4A	X	22.057	1.92
20	MP4A	Z	0	1.92
21	MP4A	Mx	-.015	1.92
22	MP4A	X	22.057	5.42
23	MP4A	Z	0	5.42
24	MP4A	Mx	-.015	5.42
25	M19	X	11.051	1
26	M19	Z	0	1
27	M19	Mx	.006	1
28	M29	X	9.21	1
29	M29	Z	0	1
30	M29	Mx	.005	1
31	M30	X	14.05	1.5
32	M30	Z	0	1.5
33	M30	Mx	0	1.5
34	MP3A	X	3.279	4
35	MP3A	Z	0	4
36	MP3A	Mx	.002	4

Member Point Loads (BLC 19 : Antenna Wi (120 Deg))

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	9.303	2.67
2	MP1A	Z	5.371	2.67
3	MP1A	Mx	-.005	2.67
4	MP1A	X	9.303	4.67
5	MP1A	Z	5.371	4.67
6	MP1A	Mx	-.005	4.67
7	MP3A	X	21.255	1.92
8	MP3A	Z	12.271	1.92
9	MP3A	Mx	-.006	1.92
10	MP3A	X	21.255	5.42
11	MP3A	Z	12.271	5.42
12	MP3A	Mx	-.006	5.42
13	MP3A	X	21.255	1.92
14	MP3A	Z	12.271	1.92
15	MP3A	Mx	-.022	1.92
16	MP3A	X	21.255	5.42
17	MP3A	Z	12.271	5.42
18	MP3A	Mx	-.022	5.42
19	MP4A	X	21.255	1.92



Member Point Loads (BLC 19 : Antenna Wi (120 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
20	MP4A	Z	12.271	1.92
21	MP4A	Mx	-.014	1.92
22	MP4A	X	21.255	5.42
23	MP4A	Z	12.271	5.42
24	MP4A	Mx	-.014	5.42
25	M19	X	10.62	1
26	M19	Z	6.131	1
27	M19	Mx	.005	1
28	M29	X	9.424	1
29	M29	Z	5.441	1
30	M29	Mx	.005	1
31	M30	X	13.612	1.5
32	M30	Z	7.859	1.5
33	M30	Mx	0	1.5
34	MP3A	X	4.02	4
35	MP3A	Z	2.321	4
36	MP3A	Mx	.002	4

Member Point Loads (BLC 20 : Antenna Wi (150 Deg))

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	8.083	2.67
2	MP1A	Z	14	2.67
3	MP1A	Mx	-.004	2.67
4	MP1A	X	8.083	4.67
5	MP1A	Z	14	4.67
6	MP1A	Mx	-.004	4.67
7	MP3A	X	14.757	1.92
8	MP3A	Z	25.56	1.92
9	MP3A	Mx	.007	1.92
10	MP3A	X	14.757	5.42
11	MP3A	Z	25.56	5.42
12	MP3A	Mx	.007	5.42
13	MP3A	X	14.757	1.92
14	MP3A	Z	25.56	1.92
15	MP3A	Mx	-.027	1.92
16	MP3A	X	14.757	5.42
17	MP3A	Z	25.56	5.42
18	MP3A	Mx	-.027	5.42
19	MP4A	X	14.757	1.92
20	MP4A	Z	25.56	1.92
21	MP4A	Mx	-.01	1.92
22	MP4A	X	14.757	5.42
23	MP4A	Z	25.56	5.42
24	MP4A	Mx	-.01	5.42
25	M19	X	7.343	1
26	M19	Z	12.718	1
27	M19	Mx	.004	1
28	M29	X	7.113	1
29	M29	Z	12.319	1
30	M29	Mx	.004	1
31	M30	X	9.526	1.5
32	M30	Z	16.499	1.5
33	M30	Mx	0	1.5
34	MP3A	X	3.684	4
35	MP3A	Z	6.38	4
36	MP3A	Mx	.002	4



Member Point Loads (BLC 21 : Antenna Wi (180 Deg))

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	0	2.67
2	MP1A	Z	18.877	2.67
3	MP1A	Mx	0	2.67
4	MP1A	X	0	4.67
5	MP1A	Z	18.877	4.67
6	MP1A	Mx	0	4.67
7	MP3A	X	0	1.92
8	MP3A	Z	32	1.92
9	MP3A	Mx	.021	1.92
10	MP3A	X	0	5.42
11	MP3A	Z	32	5.42
12	MP3A	Mx	.021	5.42
13	MP3A	X	0	1.92
14	MP3A	Z	32	1.92
15	MP3A	Mx	-.021	1.92
16	MP3A	X	0	5.42
17	MP3A	Z	32	5.42
18	MP3A	Mx	-.021	5.42
19	MP4A	X	0	1.92
20	MP4A	Z	32	1.92
21	MP4A	Mx	0	1.92
22	MP4A	X	0	5.42
23	MP4A	Z	32	5.42
24	MP4A	Mx	0	5.42
25	M19	X	0	1
26	M19	Z	15.897	1
27	M19	Mx	0	1
28	M29	X	0	1
29	M29	Z	15.897	1
30	M29	Mx	0	1
31	M30	X	0	1.5
32	M30	Z	20.719	1.5
33	M30	Mx	0	1.5
34	MP3A	X	0	4
35	MP3A	Z	8.73	4
36	MP3A	Mx	0	4

Member Point Loads (BLC 22 : Antenna Wi (210 Deg))

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-8.083	2.67
2	MP1A	Z	14	2.67
3	MP1A	Mx	.004	2.67
4	MP1A	X	-8.083	4.67
5	MP1A	Z	14	4.67
6	MP1A	Mx	.004	4.67
7	MP3A	X	-14.757	1.92
8	MP3A	Z	25.56	1.92
9	MP3A	Mx	.027	1.92
10	MP3A	X	-14.757	5.42
11	MP3A	Z	25.56	5.42
12	MP3A	Mx	.027	5.42
13	MP3A	X	-14.757	1.92
14	MP3A	Z	25.56	1.92
15	MP3A	Mx	-.007	1.92
16	MP3A	X	-14.757	5.42
17	MP3A	Z	25.56	5.42



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Member Point Loads (BLC 22 : Antenna Wi (210 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
18	MP3A	Mx	-.007	5.42
19	MP4A	X	-14.757	1.92
20	MP4A	Z	25.56	1.92
21	MP4A	Mx	.01	1.92
22	MP4A	X	-14.757	5.42
23	MP4A	Z	25.56	5.42
24	MP4A	Mx	.01	5.42
25	M19	X	-7.343	1
26	M19	Z	12.718	1
27	M19	Mx	-.004	1
28	M29	X	-7.113	1
29	M29	Z	12.319	1
30	M29	Mx	-.004	1
31	M30	X	-9.526	1.5
32	M30	Z	16.499	1.5
33	M30	Mx	0	1.5
34	MP3A	X	-3.684	4
35	MP3A	Z	6.38	4
36	MP3A	Mx	-.002	4

Member Point Loads (BLC 23 : Antenna Wi (240 Deg))

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-9.303	2.67
2	MP1A	Z	5.371	2.67
3	MP1A	Mx	.005	2.67
4	MP1A	X	-9.303	4.67
5	MP1A	Z	5.371	4.67
6	MP1A	Mx	.005	4.67
7	MP3A	X	-21.255	1.92
8	MP3A	Z	12.271	1.92
9	MP3A	Mx	.022	1.92
10	MP3A	X	-21.255	5.42
11	MP3A	Z	12.271	5.42
12	MP3A	Mx	.022	5.42
13	MP3A	X	-21.255	1.92
14	MP3A	Z	12.271	1.92
15	MP3A	Mx	.006	1.92
16	MP3A	X	-21.255	5.42
17	MP3A	Z	12.271	5.42
18	MP3A	Mx	.006	5.42
19	MP4A	X	-21.255	1.92
20	MP4A	Z	12.271	1.92
21	MP4A	Mx	.014	1.92
22	MP4A	X	-21.255	5.42
23	MP4A	Z	12.271	5.42
24	MP4A	Mx	.014	5.42
25	M19	X	-10.62	1
26	M19	Z	6.131	1
27	M19	Mx	-.005	1
28	M29	X	-9.424	1
29	M29	Z	5.441	1
30	M29	Mx	-.005	1
31	M30	X	-13.612	1.5
32	M30	Z	7.859	1.5
33	M30	Mx	0	1.5
34	MP3A	X	-4.02	4



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Member Point Loads (BLC 23 : Antenna Wi (240 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
35	MP3A	Z	2.321	4
36	MP3A	Mx	-.002	4

Member Point Loads (BLC 24 : Antenna Wi (270 Deg))

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-8.031	2.67
2	MP1A	Z	0	2.67
3	MP1A	Mx	.004	2.67
4	MP1A	X	-8.031	4.67
5	MP1A	Z	0	4.67
6	MP1A	Mx	.004	4.67
7	MP3A	X	-22.057	1.92
8	MP3A	Z	0	1.92
9	MP3A	Mx	.015	1.92
10	MP3A	X	-22.057	5.42
11	MP3A	Z	0	5.42
12	MP3A	Mx	.015	5.42
13	MP3A	X	-22.057	1.92
14	MP3A	Z	0	1.92
15	MP3A	Mx	.015	1.92
16	MP3A	X	-22.057	5.42
17	MP3A	Z	0	5.42
18	MP3A	Mx	.015	5.42
19	MP4A	X	-22.057	1.92
20	MP4A	Z	0	1.92
21	MP4A	Mx	.015	1.92
22	MP4A	X	-22.057	5.42
23	MP4A	Z	0	5.42
24	MP4A	Mx	.015	5.42
25	M19	X	-11.051	1
26	M19	Z	0	1
27	M19	Mx	-.006	1
28	M29	X	-9.21	1
29	M29	Z	0	1
30	M29	Mx	-.005	1
31	M30	X	-14.05	1.5
32	M30	Z	0	1.5
33	M30	Mx	0	1.5
34	MP3A	X	-3.279	4
35	MP3A	Z	0	4
36	MP3A	Mx	-.002	4

Member Point Loads (BLC 25 : Antenna Wi (300 Deg))

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-9.303	2.67
2	MP1A	Z	-5.371	2.67
3	MP1A	Mx	.005	2.67
4	MP1A	X	-9.303	4.67
5	MP1A	Z	-5.371	4.67
6	MP1A	Mx	.005	4.67
7	MP3A	X	-21.255	1.92
8	MP3A	Z	-12.271	1.92
9	MP3A	Mx	.006	1.92
10	MP3A	X	-21.255	5.42
11	MP3A	Z	-12.271	5.42
12	MP3A	Mx	.006	5.42



Member Point Loads (BLC 25 : Antenna Wi (300 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
13	MP3A	X	-21.255	1.92
14	MP3A	Z	-12.271	1.92
15	MP3A	Mx	.022	1.92
16	MP3A	X	-21.255	5.42
17	MP3A	Z	-12.271	5.42
18	MP3A	Mx	.022	5.42
19	MP4A	X	-21.255	1.92
20	MP4A	Z	-12.271	1.92
21	MP4A	Mx	.014	1.92
22	MP4A	X	-21.255	5.42
23	MP4A	Z	-12.271	5.42
24	MP4A	Mx	.014	5.42
25	M19	X	-10.62	1
26	M19	Z	-6.131	1
27	M19	Mx	-.005	1
28	M29	X	-9.424	1
29	M29	Z	-5.441	1
30	M29	Mx	-.005	1
31	M30	X	-13.612	1.5
32	M30	Z	-7.859	1.5
33	M30	Mx	0	1.5
34	MP3A	X	-4.02	4
35	MP3A	Z	-2.321	4
36	MP3A	Mx	-.002	4

Member Point Loads (BLC 26 : Antenna Wi (330 Deg))

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-8.083	2.67
2	MP1A	Z	-14	2.67
3	MP1A	Mx	.004	2.67
4	MP1A	X	-8.083	4.67
5	MP1A	Z	-14	4.67
6	MP1A	Mx	.004	4.67
7	MP3A	X	-14.757	1.92
8	MP3A	Z	-25.56	1.92
9	MP3A	Mx	-.007	1.92
10	MP3A	X	-14.757	5.42
11	MP3A	Z	-25.56	5.42
12	MP3A	Mx	-.007	5.42
13	MP3A	X	-14.757	1.92
14	MP3A	Z	-25.56	1.92
15	MP3A	Mx	.027	1.92
16	MP3A	X	-14.757	5.42
17	MP3A	Z	-25.56	5.42
18	MP3A	Mx	.027	5.42
19	MP4A	X	-14.757	1.92
20	MP4A	Z	-25.56	1.92
21	MP4A	Mx	.01	1.92
22	MP4A	X	-14.757	5.42
23	MP4A	Z	-25.56	5.42
24	MP4A	Mx	.01	5.42
25	M19	X	-7.343	1
26	M19	Z	-12.718	1
27	M19	Mx	-.004	1
28	M29	X	-7.113	1
29	M29	Z	-12.319	1



Member Point Loads (BLC 26 : Antenna Wi (330 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
30	M29	Mx	-.004	1
31	M30	X	-9.526	1.5
32	M30	Z	-16.499	1.5
33	M30	Mx	0	1.5
34	MP3A	X	-3.684	4
35	MP3A	Z	-6.38	4
36	MP3A	Mx	-.002	4

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	0	2.67
2	MP1A	Z	-6.026	2.67
3	MP1A	Mx	0	2.67
4	MP1A	X	0	4.67
5	MP1A	Z	-6.026	4.67
6	MP1A	Mx	0	4.67
7	MP3A	X	0	1.92
8	MP3A	Z	-7.064	1.92
9	MP3A	Mx	-.005	1.92
10	MP3A	X	0	5.42
11	MP3A	Z	-7.064	5.42
12	MP3A	Mx	-.005	5.42
13	MP3A	X	0	1.92
14	MP3A	Z	-7.064	1.92
15	MP3A	Mx	.005	1.92
16	MP3A	X	0	5.42
17	MP3A	Z	-7.064	5.42
18	MP3A	Mx	.005	5.42
19	MP4A	X	0	1.92
20	MP4A	Z	-7.064	1.92
21	MP4A	Mx	0	1.92
22	MP4A	X	0	5.42
23	MP4A	Z	-7.064	5.42
24	MP4A	Mx	0	5.42
25	M19	X	0	1
26	M19	Z	-3.974	1
27	M19	Mx	0	1
28	M29	X	0	1
29	M29	Z	-3.974	1
30	M29	Mx	0	1
31	M30	X	0	1.5
32	M30	Z	-6.41	1.5
33	M30	Mx	0	1.5
34	MP3A	X	0	4
35	MP3A	Z	-2.462	4
36	MP3A	Mx	0	4

Member Point Loads (BLC 28 : Antenna Wm (30 Deg))

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	2.555	2.67
2	MP1A	Z	-4.425	2.67
3	MP1A	Mx	-.001	2.67
4	MP1A	X	2.555	4.67
5	MP1A	Z	-4.425	4.67
6	MP1A	Mx	-.001	4.67
7	MP3A	X	3.029	1.92



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Member Point Loads (BLC 28 : Antenna Wm (30 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
8	MP3A	Z	-5.246	1.92
9	MP3A	Mx	-.006	1.92
10	MP3A	X	3.029	5.42
11	MP3A	Z	-5.246	5.42
12	MP3A	Mx	-.006	5.42
13	MP3A	X	3.029	1.92
14	MP3A	Z	-5.246	1.92
15	MP3A	Mx	.001	1.92
16	MP3A	X	3.029	5.42
17	MP3A	Z	-5.246	5.42
18	MP3A	Mx	.001	5.42
19	MP4A	X	3.029	1.92
20	MP4A	Z	-5.246	1.92
21	MP4A	Mx	-.002	1.92
22	MP4A	X	3.029	5.42
23	MP4A	Z	-5.246	5.42
24	MP4A	Mx	-.002	5.42
25	M19	X	1.824	1
26	M19	Z	-3.159	1
27	M19	Mx	.000912	1
28	M29	X	1.763	1
29	M29	Z	-3.053	1
30	M29	Mx	.000881	1
31	M30	X	2.924	1.5
32	M30	Z	-5.065	1.5
33	M30	Mx	0	1.5
34	MP3A	X	1.016	4
35	MP3A	Z	-1.76	4
36	MP3A	Mx	.000508	4

Member Point Loads (BLC 29 : Antenna Wm (60 Deg))

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	2.837	2.67
2	MP1A	Z	-1.638	2.67
3	MP1A	Mx	-.001	2.67
4	MP1A	X	2.837	4.67
5	MP1A	Z	-1.638	4.67
6	MP1A	Mx	-.001	4.67
7	MP3A	X	3.503	1.92
8	MP3A	Z	-2.022	1.92
9	MP3A	Mx	-.004	1.92
10	MP3A	X	3.503	5.42
11	MP3A	Z	-2.022	5.42
12	MP3A	Mx	-.004	5.42
13	MP3A	X	3.503	1.92
14	MP3A	Z	-2.022	1.92
15	MP3A	Mx	-.000987	1.92
16	MP3A	X	3.503	5.42
17	MP3A	Z	-2.022	5.42
18	MP3A	Mx	-.000987	5.42
19	MP4A	X	3.503	1.92
20	MP4A	Z	-2.022	1.92
21	MP4A	Mx	-.002	1.92
22	MP4A	X	3.503	5.42
23	MP4A	Z	-2.022	5.42
24	MP4A	Mx	-.002	5.42



Member Point Loads (BLC 29 : Antenna Wm (60 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
25	M19	X	2.593	1
26	M19	Z	-1.497	1
27	M19	Mx	.001	1
28	M29	X	2.276	1
29	M29	Z	-1.314	1
30	M29	Mx	.001	1
31	M30	X	4.092	1.5
32	M30	Z	-2.362	1.5
33	M30	Mx	0	1.5
34	MP3A	X	1.018	4
35	MP3A	Z	-.588	4
36	MP3A	Mx	.000509	4

Member Point Loads (BLC 30 : Antenna Wm (90 Deg))

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	2.359	2.67
2	MP1A	Z	0	2.67
3	MP1A	Mx	-.001	2.67
4	MP1A	X	2.359	4.67
5	MP1A	Z	0	4.67
6	MP1A	Mx	-.001	4.67
7	MP3A	X	3.038	1.92
8	MP3A	Z	0	1.92
9	MP3A	Mx	-.002	1.92
10	MP3A	X	3.038	5.42
11	MP3A	Z	0	5.42
12	MP3A	Mx	-.002	5.42
13	MP3A	X	3.038	1.92
14	MP3A	Z	0	1.92
15	MP3A	Mx	-.002	1.92
16	MP3A	X	3.038	5.42
17	MP3A	Z	0	5.42
18	MP3A	Mx	-.002	5.42
19	MP4A	X	3.038	1.92
20	MP4A	Z	0	1.92
21	MP4A	Mx	-.002	1.92
22	MP4A	X	3.038	5.42
23	MP4A	Z	0	5.42
24	MP4A	Mx	-.002	5.42
25	M19	X	2.667	1
26	M19	Z	0	1
27	M19	Mx	.001	1
28	M29	X	2.18	1
29	M29	Z	0	1
30	M29	Mx	.001	1
31	M30	X	4.163	1.5
32	M30	Z	0	1.5
33	M30	Mx	0	1.5
34	MP3A	X	.747	4
35	MP3A	Z	0	4
36	MP3A	Mx	.000374	4

Member Point Loads (BLC 31 : Antenna Wm (120 Deg))

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	2.837	2.67
2	MP1A	Z	1.638	2.67



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Member Point Loads (BLC 31 : Antenna Wm (120 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
3	MP1A	Mx	-.001	2.67
4	MP1A	X	2.837	4.67
5	MP1A	Z	1.638	4.67
6	MP1A	Mx	-.001	4.67
7	MP3A	X	3.503	1.92
8	MP3A	Z	2.022	1.92
9	MP3A	Mx	-.000987	1.92
10	MP3A	X	3.503	5.42
11	MP3A	Z	2.022	5.42
12	MP3A	Mx	-.000987	5.42
13	MP3A	X	3.503	1.92
14	MP3A	Z	2.022	1.92
15	MP3A	Mx	-.004	1.92
16	MP3A	X	3.503	5.42
17	MP3A	Z	2.022	5.42
18	MP3A	Mx	-.004	5.42
19	MP4A	X	3.503	1.92
20	MP4A	Z	2.022	1.92
21	MP4A	Mx	-.002	1.92
22	MP4A	X	3.503	5.42
23	MP4A	Z	2.022	5.42
24	MP4A	Mx	-.002	5.42
25	M19	X	2.593	1
26	M19	Z	1.497	1
27	M19	Mx	.001	1
28	M29	X	2.276	1
29	M29	Z	1.314	1
30	M29	Mx	.001	1
31	M30	X	4.092	1.5
32	M30	Z	2.362	1.5
33	M30	Mx	0	1.5
34	MP3A	X	1.018	4
35	MP3A	Z	.588	4
36	MP3A	Mx	.000509	4

Member Point Loads (BLC 32 : Antenna Wm (150 Deg))

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	2.555	2.67
2	MP1A	Z	4.425	2.67
3	MP1A	Mx	-.001	2.67
4	MP1A	X	2.555	4.67
5	MP1A	Z	4.425	4.67
6	MP1A	Mx	-.001	4.67
7	MP3A	X	3.029	1.92
8	MP3A	Z	5.246	1.92
9	MP3A	Mx	.001	1.92
10	MP3A	X	3.029	5.42
11	MP3A	Z	5.246	5.42
12	MP3A	Mx	.001	5.42
13	MP3A	X	3.029	1.92
14	MP3A	Z	5.246	1.92
15	MP3A	Mx	-.006	1.92
16	MP3A	X	3.029	5.42
17	MP3A	Z	5.246	5.42
18	MP3A	Mx	-.006	5.42
19	MP4A	X	3.029	1.92



Member Point Loads (BLC 32 : Antenna Wm (150 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb. k-ft]	Location[ft. %]
20	MP4A	Z	5.246	1.92
21	MP4A	Mx	-.002	1.92
22	MP4A	X	3.029	5.42
23	MP4A	Z	5.246	5.42
24	MP4A	Mx	-.002	5.42
25	M19	X	1.824	1
26	M19	Z	3.159	1
27	M19	Mx	.000912	1
28	M29	X	1.763	1
29	M29	Z	3.053	1
30	M29	Mx	.000881	1
31	M30	X	2.924	1.5
32	M30	Z	5.065	1.5
33	M30	Mx	0	1.5
34	MP3A	X	1.016	4
35	MP3A	Z	1.76	4
36	MP3A	Mx	.000508	4

Member Point Loads (BLC 33 : Antenna Wm (180 Deg))

	Member Label	Direction	Magnitude[lb. k-ft]	Location[ft. %]
1	MP1A	X	0	2.67
2	MP1A	Z	6.026	2.67
3	MP1A	Mx	0	2.67
4	MP1A	X	0	4.67
5	MP1A	Z	6.026	4.67
6	MP1A	Mx	0	4.67
7	MP3A	X	0	1.92
8	MP3A	Z	7.064	1.92
9	MP3A	Mx	.005	1.92
10	MP3A	X	0	5.42
11	MP3A	Z	7.064	5.42
12	MP3A	Mx	.005	5.42
13	MP3A	X	0	1.92
14	MP3A	Z	7.064	1.92
15	MP3A	Mx	-.005	1.92
16	MP3A	X	0	5.42
17	MP3A	Z	7.064	5.42
18	MP3A	Mx	-.005	5.42
19	MP4A	X	0	1.92
20	MP4A	Z	7.064	1.92
21	MP4A	Mx	0	1.92
22	MP4A	X	0	5.42
23	MP4A	Z	7.064	5.42
24	MP4A	Mx	0	5.42
25	M19	X	0	1
26	M19	Z	3.974	1
27	M19	Mx	0	1
28	M29	X	0	1
29	M29	Z	3.974	1
30	M29	Mx	0	1
31	M30	X	0	1.5
32	M30	Z	6.41	1.5
33	M30	Mx	0	1.5
34	MP3A	X	0	4
35	MP3A	Z	2.462	4
36	MP3A	Mx	0	4



Member Point Loads (BLC 34 : Antenna Wm (210 Deg))

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-2.555	2.67
2	MP1A	Z	4.425	2.67
3	MP1A	Mx	.001	2.67
4	MP1A	X	-2.555	4.67
5	MP1A	Z	4.425	4.67
6	MP1A	Mx	.001	4.67
7	MP3A	X	-3.029	1.92
8	MP3A	Z	5.246	1.92
9	MP3A	Mx	.006	1.92
10	MP3A	X	-3.029	5.42
11	MP3A	Z	5.246	5.42
12	MP3A	Mx	.006	5.42
13	MP3A	X	-3.029	1.92
14	MP3A	Z	5.246	1.92
15	MP3A	Mx	-.001	1.92
16	MP3A	X	-3.029	5.42
17	MP3A	Z	5.246	5.42
18	MP3A	Mx	-.001	5.42
19	MP4A	X	-3.029	1.92
20	MP4A	Z	5.246	1.92
21	MP4A	Mx	.002	1.92
22	MP4A	X	-3.029	5.42
23	MP4A	Z	5.246	5.42
24	MP4A	Mx	.002	5.42
25	M19	X	-1.824	1
26	M19	Z	3.159	1
27	M19	Mx	-.000912	1
28	M29	X	-1.763	1
29	M29	Z	3.053	1
30	M29	Mx	-.000881	1
31	M30	X	-2.924	1.5
32	M30	Z	5.065	1.5
33	M30	Mx	0	1.5
34	MP3A	X	-1.016	4
35	MP3A	Z	1.76	4
36	MP3A	Mx	-.000508	4

Member Point Loads (BLC 35 : Antenna Wm (240 Deg))

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-2.837	2.67
2	MP1A	Z	1.638	2.67
3	MP1A	Mx	.001	2.67
4	MP1A	X	-2.837	4.67
5	MP1A	Z	1.638	4.67
6	MP1A	Mx	.001	4.67
7	MP3A	X	-3.503	1.92
8	MP3A	Z	2.022	1.92
9	MP3A	Mx	.004	1.92
10	MP3A	X	-3.503	5.42
11	MP3A	Z	2.022	5.42
12	MP3A	Mx	.004	5.42
13	MP3A	X	-3.503	1.92
14	MP3A	Z	2.022	1.92
15	MP3A	Mx	.000987	1.92
16	MP3A	X	-3.503	5.42
17	MP3A	Z	2.022	5.42



Member Point Loads (BLC 35 : Antenna Wm (240 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
18	MP3A	Mx	.000987	5.42
19	MP4A	X	-3.503	1.92
20	MP4A	Z	2.022	1.92
21	MP4A	Mx	.002	1.92
22	MP4A	X	-3.503	5.42
23	MP4A	Z	2.022	5.42
24	MP4A	Mx	.002	5.42
25	M19	X	-2.593	1
26	M19	Z	1.497	1
27	M19	Mx	-.001	1
28	M29	X	-2.276	1
29	M29	Z	1.314	1
30	M29	Mx	-.001	1
31	M30	X	-4.092	1.5
32	M30	Z	2.362	1.5
33	M30	Mx	0	1.5
34	MP3A	X	-1.018	4
35	MP3A	Z	.588	4
36	MP3A	Mx	-.000509	4

Member Point Loads (BLC 36 : Antenna Wm (270 Deg))

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-2.359	2.67
2	MP1A	Z	0	2.67
3	MP1A	Mx	.001	2.67
4	MP1A	X	-2.359	4.67
5	MP1A	Z	0	4.67
6	MP1A	Mx	.001	4.67
7	MP3A	X	-3.038	1.92
8	MP3A	Z	0	1.92
9	MP3A	Mx	.002	1.92
10	MP3A	X	-3.038	5.42
11	MP3A	Z	0	5.42
12	MP3A	Mx	.002	5.42
13	MP3A	X	-3.038	1.92
14	MP3A	Z	0	1.92
15	MP3A	Mx	.002	1.92
16	MP3A	X	-3.038	5.42
17	MP3A	Z	0	5.42
18	MP3A	Mx	.002	5.42
19	MP4A	X	-3.038	1.92
20	MP4A	Z	0	1.92
21	MP4A	Mx	.002	1.92
22	MP4A	X	-3.038	5.42
23	MP4A	Z	0	5.42
24	MP4A	Mx	.002	5.42
25	M19	X	-2.667	1
26	M19	Z	0	1
27	M19	Mx	-.001	1
28	M29	X	-2.18	1
29	M29	Z	0	1
30	M29	Mx	-.001	1
31	M30	X	-4.163	1.5
32	M30	Z	0	1.5
33	M30	Mx	0	1.5
34	MP3A	X	-.747	4



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Member Point Loads (BLC 36 : Antenna Wm (270 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
35	MP3A	Z	0	4
36	MP3A	Mx	-.000374	4

Member Point Loads (BLC 37 : Antenna Wm (300 Deg))

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-2.837	2.67
2	MP1A	Z	-1.638	2.67
3	MP1A	Mx	.001	2.67
4	MP1A	X	-2.837	4.67
5	MP1A	Z	-1.638	4.67
6	MP1A	Mx	.001	4.67
7	MP3A	X	-3.503	1.92
8	MP3A	Z	-2.022	1.92
9	MP3A	Mx	.000987	1.92
10	MP3A	X	-3.503	5.42
11	MP3A	Z	-2.022	5.42
12	MP3A	Mx	.000987	5.42
13	MP3A	X	-3.503	1.92
14	MP3A	Z	-2.022	1.92
15	MP3A	Mx	.004	1.92
16	MP3A	X	-3.503	5.42
17	MP3A	Z	-2.022	5.42
18	MP3A	Mx	.004	5.42
19	MP4A	X	-3.503	1.92
20	MP4A	Z	-2.022	1.92
21	MP4A	Mx	.002	1.92
22	MP4A	X	-3.503	5.42
23	MP4A	Z	-2.022	5.42
24	MP4A	Mx	.002	5.42
25	M19	X	-2.593	1
26	M19	Z	-1.497	1
27	M19	Mx	-.001	1
28	M29	X	-2.276	1
29	M29	Z	-1.314	1
30	M29	Mx	-.001	1
31	M30	X	-4.092	1.5
32	M30	Z	-2.362	1.5
33	M30	Mx	0	1.5
34	MP3A	X	-1.018	4
35	MP3A	Z	-.588	4
36	MP3A	Mx	-.000509	4

Member Point Loads (BLC 38 : Antenna Wm (330 Deg))

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-2.555	2.67
2	MP1A	Z	-4.425	2.67
3	MP1A	Mx	.001	2.67
4	MP1A	X	-2.555	4.67
5	MP1A	Z	-4.425	4.67
6	MP1A	Mx	.001	4.67
7	MP3A	X	-3.029	1.92
8	MP3A	Z	-5.246	1.92
9	MP3A	Mx	-.001	1.92
10	MP3A	X	-3.029	5.42
11	MP3A	Z	-5.246	5.42
12	MP3A	Mx	-.001	5.42



Member Point Loads (BLC 38 : Antenna Wm (330 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
13	MP3A	X	-3.029	1.92
14	MP3A	Z	-5.246	1.92
15	MP3A	Mx	.006	1.92
16	MP3A	X	-3.029	5.42
17	MP3A	Z	-5.246	5.42
18	MP3A	Mx	.006	5.42
19	MP4A	X	-3.029	1.92
20	MP4A	Z	-5.246	1.92
21	MP4A	Mx	.002	1.92
22	MP4A	X	-3.029	5.42
23	MP4A	Z	-5.246	5.42
24	MP4A	Mx	.002	5.42
25	M19	X	-1.824	1
26	M19	Z	-3.159	1
27	M19	Mx	-.000912	1
28	M29	X	-1.763	1
29	M29	Z	-3.053	1
30	M29	Mx	-.000881	1
31	M30	X	-2.924	1.5
32	M30	Z	-5.065	1.5
33	M30	Mx	0	1.5
34	MP3A	X	-1.016	4
35	MP3A	Z	-1.76	4
36	MP3A	Mx	-.000508	4

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	M46	Y	-500	%100

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	M47	Y	-500	%100

Member Point Loads (BLC 79 : Lv1)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	M48	Y	-250	%50

Member Point Loads (BLC 80 : Lv2)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	M48	Y	-250	0

Member Point Loads (BLC 81 : Antenna Ev)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	Y	-1.802	2.67
2	MP1A	My	-.000901	2.67
3	MP1A	Mz	0	2.67
4	MP1A	Y	-1.802	4.67
5	MP1A	Mv	-.000901	4.67
6	MP1A	Mz	0	4.67
7	MP3A	Y	-.828	1.92
8	MP3A	Mv	-.000552	1.92
9	MP3A	Mz	.000552	1.92
10	MP3A	Y	-.828	5.42
11	MP3A	Mv	-.000552	5.42



Member Point Loads (BLC 81 : Antenna Ev) (Continued)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
12	MP3A	Mz	.000552	5.42
13	MP3A	Y	-.828	1.92
14	MP3A	Mv	-.000552	1.92
15	MP3A	Mz	-.000552	1.92
16	MP3A	Y	-.828	5.42
17	MP3A	Mv	-.000552	5.42
18	MP3A	Mz	-.000552	5.42
19	MP4A	Y	-.828	1.92
20	MP4A	Mv	-.000552	1.92
21	MP4A	Mz	0	1.92
22	MP4A	Y	-.828	5.42
23	MP4A	Mv	-.000552	5.42
24	MP4A	Mz	0	5.42
25	M19	Y	-3.493	1
26	M19	Mv	.002	1
27	M19	Mz	0	1
28	M29	Y	-2.909	1
29	M29	Mv	.001	1
30	M29	Mz	0	1
31	M30	Y	-1.113	1.5
32	M30	Mv	0	1.5
33	M30	Mz	0	1.5
34	MP3A	Y	-.728	4
35	MP3A	Mv	.000364	4
36	MP3A	Mz	0	4

Member Point Loads (BLC 82 : Antenna Eh (0 Deg))

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP1A	Z	-4.506	2.67
2	MP1A	Mx	0	2.67
3	MP1A	Z	-4.506	4.67
4	MP1A	Mx	0	4.67
5	MP3A	Z	-2.069	1.92
6	MP3A	Mx	-.001	1.92
7	MP3A	Z	-2.069	5.42
8	MP3A	Mx	-.001	5.42
9	MP3A	Z	-2.069	1.92
10	MP3A	Mx	.001	1.92
11	MP3A	Z	-2.069	5.42
12	MP3A	Mx	.001	5.42
13	MP4A	Z	-2.069	1.92
14	MP4A	Mx	0	1.92
15	MP4A	Z	-2.069	5.42
16	MP4A	Mx	0	5.42
17	M19	Z	-8.733	1
18	M19	Mx	0	1
19	M29	Z	-7.274	1
20	M29	Mx	0	1
21	M30	Z	-2.783	1.5
22	M30	Mx	0	1.5
23	MP3A	Z	-1.821	4
24	MP3A	Mx	0	4

Member Point Loads (BLC 83 : Antenna Eh (90 Deg))

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP1A	X	4.506	2.67

Member Point Loads (BLC 83 : Antenna Eh (90 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
2	MP1A	Mx	-0.02	2.67
3	MP1A	X	4.506	4.67
4	MP1A	Mx	-0.02	4.67
5	MP3A	X	2.069	1.92
6	MP3A	Mx	-0.01	1.92
7	MP3A	X	2.069	5.42
8	MP3A	Mx	-0.01	5.42
9	MP3A	X	2.069	1.92
10	MP3A	Mx	-0.01	1.92
11	MP3A	X	2.069	5.42
12	MP3A	Mx	-0.01	5.42
13	MP4A	X	2.069	1.92
14	MP4A	Mx	-0.01	1.92
15	MP4A	X	2.069	5.42
16	MP4A	Mx	-0.01	5.42
17	M19	X	8.733	1
18	M19	Mx	.004	1
19	M29	X	7.274	1
20	M29	Mx	.004	1
21	M30	X	2.783	1.5
22	M30	Mx	0	1.5
23	MP3A	X	1.821	4
24	MP3A	Mx	.000911	4

Member Distributed Loads (BLC 40 : Structure Di)

	Member Label	Direction	Start Magnitude[lb/ft.]	End Magnitude[lb/ft.]	Start Location[ft.%]	End Location[ft.%]
1	M1	Y	-7.476	-7.476	0	%100
2	M6	Y	-7.476	-7.476	0	%100
3	MP1A	Y	-4.88	-4.88	0	%100
4	M15	Y	-7.476	-7.476	0	%100
5	M18	Y	-7.476	-7.476	0	%100
6	M19	Y	-3.408	-3.408	0	%100
7	M20	Y	-3.408	-3.408	0	%100
8	M23	Y	-2.622	-2.622	0	%100
9	M31	Y	-11.332	-11.332	0	%100
10	M32	Y	-11.332	-11.332	0	%100
11	M31A	Y	-15.485	-15.485	0	%100
12	M32A	Y	-15.485	-15.485	0	%100
13	M27	Y	-7.476	-7.476	0	%100
14	M28	Y	-7.476	-7.476	0	%100
15	M29	Y	-3.408	-3.408	0	%100
16	M30	Y	-3.408	-3.408	0	%100
17	M31C	Y	-2.622	-2.622	0	%100
18	MP2A	Y	-4.88	-4.88	0	%100
19	MP3A	Y	-4.88	-4.88	0	%100
20	MP4A	Y	-4.88	-4.88	0	%100
21	M32B	Y	-7.476	-7.476	0	%100
22	M33A	Y	-7.476	-7.476	0	%100
23	M33B	Y	-4.88	-4.88	0	%100
24	M40	Y	-4.88	-4.88	0	%100
25	M40A	Y	-6.493	-6.493	0	%100
26	M41	Y	-6.493	-6.493	0	%100
27	M48	Y	-4.88	-4.88	0	%100
28	M49	Y	-6.493	-6.493	0	%100
29	M50	Y	-6.493	-6.493	0	%100



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Member Distributed Loads (BLC 41 : Structure Wo (0 Deg))

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	0	0	0	%100
2	M1	Z	-22.976	-22.976	0	%100
3	M6	X	0	0	0	%100
4	M6	Z	-22.976	-22.976	0	%100
5	MP1A	X	0	0	0	%100
6	MP1A	Z	-10.914	-10.914	0	%100
7	M15	X	0	0	0	%100
8	M15	Z	-13.479	-13.479	0	%100
9	M18	X	0	0	0	%100
10	M18	Z	-13.479	-13.479	0	%100
11	M19	X	0	0	0	%100
12	M19	Z	-6.043	-6.043	0	%100
13	M20	X	0	0	0	%100
14	M20	Z	-6.043	-6.043	0	%100
15	M23	X	0	0	0	%100
16	M23	Z	-2.985	-2.985	0	%100
17	M31	X	0	0	0	%100
18	M31	Z	-1.723	-1.723	0	%100
19	M32	X	0	0	0	%100
20	M32	Z	-1.723	-1.723	0	%100
21	M31A	X	0	0	0	%100
22	M31A	Z	-.002	-.002	0	%100
23	M32A	X	0	0	0	%100
24	M32A	Z	-.002	-.002	0	%100
25	M27	X	0	0	0	%100
26	M27	Z	-13.45	-13.45	0	%100
27	M28	X	0	0	0	%100
28	M28	Z	-13.45	-13.45	0	%100
29	M29	X	0	0	0	%100
30	M29	Z	-6.043	-6.043	0	%100
31	M30	X	0	0	0	%100
32	M30	Z	-6.043	-6.043	0	%100
33	M31C	X	0	0	0	%100
34	M31C	Z	-2.984	-2.984	0	%100
35	MP2A	X	0	0	0	%100
36	MP2A	Z	-10.914	-10.914	0	%100
37	MP3A	X	0	0	0	%100
38	MP3A	Z	-10.914	-10.914	0	%100
39	MP4A	X	0	0	0	%100
40	MP4A	Z	-10.914	-10.914	0	%100
41	M32B	X	0	0	0	%100
42	M32B	Z	-22.976	-22.976	0	%100
43	M33A	X	0	0	0	%100
44	M33A	Z	-22.976	-22.976	0	%100
45	M33B	X	0	0	0	%100
46	M33B	Z	-.031	-.031	0	%100
47	M40	X	0	0	0	%100
48	M40	Z	-10.914	-10.914	0	%100
49	M40A	X	0	0	0	%100
50	M40A	Z	-15.506	-15.506	0	%100
51	M41	X	0	0	0	%100
52	M41	Z	-15.004	-15.004	0	%100
53	M48	X	0	0	0	%100
54	M48	Z	-10.914	-10.914	0	%100
55	M49	X	0	0	0	%100
56	M49	Z	-13.207	-13.207	0	%100
57	M50	X	0	0	0	%100



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Member Distributed Loads (BLC 41 : Structure Wo (0 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft.F...]	Start Location[ft.%]	End Location[ft.%]
58	M50	Z	-11.931	-11.931	0	%100

Member Distributed Loads (BLC 42 : Structure Wo (30 Deg))

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft.F...]	Start Location[ft.%]	End Location[ft.%]
1	M1	X	8.616	8.616	0	%100
2	M1	Z	-14.923	-14.923	0	%100
3	M6	X	8.616	8.616	0	%100
4	M6	Z	-14.923	-14.923	0	%100
5	MP1A	X	5.457	5.457	0	%100
6	MP1A	Z	-9.451	-9.451	0	%100
7	M15	X	1.891	1.891	0	%100
8	M15	Z	-3.275	-3.275	0	%100
9	M18	X	1.891	1.891	0	%100
10	M18	Z	-3.275	-3.275	0	%100
11	M19	X	3.021	3.021	0	%100
12	M19	Z	-5.233	-5.233	0	%100
13	M20	X	3.021	3.021	0	%100
14	M20	Z	-5.233	-5.233	0	%100
15	M23	X	1.125	1.125	0	%100
16	M23	Z	-1.949	-1.949	0	%100
17	M31	X	.287	.287	0	%100
18	M31	Z	-.497	-.497	0	%100
19	M32	X	.287	.287	0	%100
20	M32	Z	-.497	-.497	0	%100
21	M31A	X	.238	.238	0	%100
22	M31A	Z	-.412	-.412	0	%100
23	M32A	X	.238	.238	0	%100
24	M32A	Z	-.412	-.412	0	%100
25	M27	X	9.736	9.736	0	%100
26	M27	Z	-16.863	-16.863	0	%100
27	M28	X	9.736	9.736	0	%100
28	M28	Z	-16.863	-16.863	0	%100
29	M29	X	3.021	3.021	0	%100
30	M29	Z	-5.233	-5.233	0	%100
31	M30	X	3.021	3.021	0	%100
32	M30	Z	-5.233	-5.233	0	%100
33	M31C	X	1.72	1.72	0	%100
34	M31C	Z	-2.978	-2.978	0	%100
35	MP2A	X	5.457	5.457	0	%100
36	MP2A	Z	-9.451	-9.451	0	%100
37	MP3A	X	5.457	5.457	0	%100
38	MP3A	Z	-9.451	-9.451	0	%100
39	MP4A	X	5.457	5.457	0	%100
40	MP4A	Z	-9.451	-9.451	0	%100
41	M32B	X	8.616	8.616	0	%100
42	M32B	Z	-14.923	-14.923	0	%100
43	M33A	X	8.616	8.616	0	%100
44	M33A	Z	-14.923	-14.923	0	%100
45	M33B	X	1.377	1.377	0	%100
46	M33B	Z	-2.385	-2.385	0	%100
47	M40	X	4.093	4.093	0	%100
48	M40	Z	-7.089	-7.089	0	%100
49	M40A	X	3.864	3.864	0	%100
50	M40A	Z	-6.693	-6.693	0	%100
51	M41	X	9.567	9.567	0	%100
52	M41	Z	-16.571	-16.571	0	%100



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 Designer :
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Member Distributed Loads (BLC 42 : Structure Wo (30 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
53	M48	X	4.093	4.093	0	%100
54	M48	Z	-7.089	-7.089	0	%100
55	M49	X	2.693	2.693	0	%100
56	M49	Z	-4.664	-4.664	0	%100
57	M50	X	9.025	9.025	0	%100
58	M50	Z	-15.632	-15.632	0	%100

Member Distributed Loads (BLC 43 : Structure Wo (60 Deg))

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	4.974	4.974	0	%100
2	M1	Z	-2.872	-2.872	0	%100
3	M6	X	4.974	4.974	0	%100
4	M6	Z	-2.872	-2.872	0	%100
5	MP1A	X	9.451	9.451	0	%100
6	MP1A	Z	-5.457	-5.457	0	%100
7	M15	X	.08	.08	0	%100
8	M15	Z	-.046	-.046	0	%100
9	M18	X	.08	.08	0	%100
10	M18	Z	-.046	-.046	0	%100
11	M19	X	5.233	5.233	0	%100
12	M19	Z	-3.021	-3.021	0	%100
13	M20	X	5.233	5.233	0	%100
14	M20	Z	-3.021	-3.021	0	%100
15	M23	X	1.708	1.708	0	%100
16	M23	Z	-.986	-.986	0	%100
17	M31	X	0	0	0	%100
18	M31	Z	0	0	0	%100
19	M32	X	0	0	0	%100
20	M32	Z	0	0	0	%100
21	M31A	X	1.157	1.157	0	%100
22	M31A	Z	-.668	-.668	0	%100
23	M32A	X	1.157	1.157	0	%100
24	M32A	Z	-.668	-.668	0	%100
25	M27	X	13.688	13.688	0	%100
26	M27	Z	-7.903	-7.903	0	%100
27	M28	X	13.688	13.688	0	%100
28	M28	Z	-7.903	-7.903	0	%100
29	M29	X	5.233	5.233	0	%100
30	M29	Z	-3.021	-3.021	0	%100
31	M30	X	5.233	5.233	0	%100
32	M30	Z	-3.021	-3.021	0	%100
33	M31C	X	2.738	2.738	0	%100
34	M31C	Z	-1.581	-1.581	0	%100
35	MP2A	X	9.451	9.451	0	%100
36	MP2A	Z	-5.457	-5.457	0	%100
37	MP3A	X	9.451	9.451	0	%100
38	MP3A	Z	-5.457	-5.457	0	%100
39	MP4A	X	9.451	9.451	0	%100
40	MP4A	Z	-5.457	-5.457	0	%100
41	M32B	X	4.974	4.974	0	%100
42	M32B	Z	-2.872	-2.872	0	%100
43	M33A	X	4.974	4.974	0	%100
44	M33A	Z	-2.872	-2.872	0	%100
45	M33B	X	6.31	6.31	0	%100
46	M33B	Z	-3.643	-3.643	0	%100
47	M40	X	2.363	2.363	0	%100



Member Distributed Loads (BLC 43 : Structure Wo (60 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
48	M40	Z	-1.364	-1.364	0	%100
49	M40A	X	3.105	3.105	0	%100
50	M40A	Z	-1.793	-1.793	0	%100
51	M41	X	13.633	13.633	0	%100
52	M41	Z	-7.871	-7.871	0	%100
53	M48	X	2.363	2.363	0	%100
54	M48	Z	-1.364	-1.364	0	%100
55	M49	X	2.807	2.807	0	%100
56	M49	Z	-1.621	-1.621	0	%100
57	M50	X	14.847	14.847	0	%100
58	M50	Z	-8.572	-8.572	0	%100

Member Distributed Loads (BLC 44 : Structure Wo (90 Deg))

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M6	X	0	0	0	%100
4	M6	Z	0	0	0	%100
5	MP1A	X	10.914	10.914	0	%100
6	MP1A	Z	0	0	0	%100
7	M15	X	6.099	6.099	0	%100
8	M15	Z	0	0	0	%100
9	M18	X	6.099	6.099	0	%100
10	M18	Z	0	0	0	%100
11	M19	X	6.043	6.043	0	%100
12	M19	Z	0	0	0	%100
13	M20	X	6.043	6.043	0	%100
14	M20	Z	0	0	0	%100
15	M23	X	2.426	2.426	0	%100
16	M23	Z	0	0	0	%100
17	M31	X	.574	.574	0	%100
18	M31	Z	0	0	0	%100
19	M32	X	.574	.574	0	%100
20	M32	Z	0	0	0	%100
21	M31A	X	1.722	1.722	0	%100
22	M31A	Z	0	0	0	%100
23	M32A	X	1.722	1.722	0	%100
24	M32A	Z	0	0	0	%100
25	M27	X	6.117	6.117	0	%100
26	M27	Z	0	0	0	%100
27	M28	X	6.117	6.117	0	%100
28	M28	Z	0	0	0	%100
29	M29	X	6.043	6.043	0	%100
30	M29	Z	0	0	0	%100
31	M30	X	6.043	6.043	0	%100
32	M30	Z	0	0	0	%100
33	M31C	X	2.43	2.43	0	%100
34	M31C	Z	0	0	0	%100
35	MP2A	X	10.914	10.914	0	%100
36	MP2A	Z	0	0	0	%100
37	MP3A	X	10.914	10.914	0	%100
38	MP3A	Z	0	0	0	%100
39	MP4A	X	10.914	10.914	0	%100
40	MP4A	Z	0	0	0	%100
41	M32B	X	0	0	0	%100
42	M32B	Z	0	0	0	%100



Member Distributed Loads (BLC 44 : Structure Wo (90 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
43	M33A	X	0	0	0	%100
44	M33A	Z	0	0	0	%100
45	M33B	X	9.095	9.095	0	%100
46	M33B	Z	0	0	0	%100
47	M40	X	0	0	0	%100
48	M40	Z	0	0	0	%100
49	M40A	X	7.221	7.221	0	%100
50	M40A	Z	0	0	0	%100
51	M41	X	8.218	8.218	0	%100
52	M41	Z	0	0	0	%100
53	M48	X	0	0	0	%100
54	M48	Z	0	0	0	%100
55	M49	X	8.919	8.919	0	%100
56	M49	Z	0	0	0	%100
57	M50	X	10.117	10.117	0	%100
58	M50	Z	0	0	0	%100

Member Distributed Loads (BLC 45 : Structure Wo (120 Deg))

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	4.974	4.974	0	%100
2	M1	Z	2.872	2.872	0	%100
3	M6	X	4.974	4.974	0	%100
4	M6	Z	2.872	2.872	0	%100
5	MP1A	X	9.451	9.451	0	%100
6	MP1A	Z	5.457	5.457	0	%100
7	M15	X	13.679	13.679	0	%100
8	M15	Z	7.898	7.898	0	%100
9	M18	X	13.679	13.679	0	%100
10	M18	Z	7.898	7.898	0	%100
11	M19	X	5.233	5.233	0	%100
12	M19	Z	3.021	3.021	0	%100
13	M20	X	5.233	5.233	0	%100
14	M20	Z	3.021	3.021	0	%100
15	M23	X	2.737	2.737	0	%100
16	M23	Z	1.58	1.58	0	%100
17	M31	X	1.492	1.492	0	%100
18	M31	Z	.862	.862	0	%100
19	M32	X	1.492	1.492	0	%100
20	M32	Z	.862	.862	0	%100
21	M31A	X	1.08	1.08	0	%100
22	M31A	Z	.624	.624	0	%100
23	M32A	X	1.08	1.08	0	%100
24	M32A	Z	.624	.624	0	%100
25	M27	X	.082	.082	0	%100
26	M27	Z	.047	.047	0	%100
27	M28	X	.082	.082	0	%100
28	M28	Z	.047	.047	0	%100
29	M29	X	5.233	5.233	0	%100
30	M29	Z	3.021	3.021	0	%100
31	M30	X	5.233	5.233	0	%100
32	M30	Z	3.021	3.021	0	%100
33	M31C	X	1.71	1.71	0	%100
34	M31C	Z	.987	.987	0	%100
35	MP2A	X	9.451	9.451	0	%100
36	MP2A	Z	5.457	5.457	0	%100
37	MP3A	X	9.451	9.451	0	%100



Member Distributed Loads (BLC 45 : Structure Wo (120 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
38	MP3A	Z	5.457	5.457	0	%100
39	MP4A	X	9.451	9.451	0	%100
40	MP4A	Z	5.457	5.457	0	%100
41	M32B	X	4.974	4.974	0	%100
42	M32B	Z	2.872	2.872	0	%100
43	M33A	X	4.974	4.974	0	%100
44	M33A	Z	2.872	2.872	0	%100
45	M33B	X	5.518	5.518	0	%100
46	M33B	Z	3.186	3.186	0	%100
47	M40	X	2.363	2.363	0	%100
48	M40	Z	1.364	1.364	0	%100
49	M40A	X	12.989	12.989	0	%100
50	M40A	Z	7.499	7.499	0	%100
51	M41	X	3.539	3.539	0	%100
52	M41	Z	2.043	2.043	0	%100
53	M48	X	2.363	2.363	0	%100
54	M48	Z	1.364	1.364	0	%100
55	M49	X	14.498	14.498	0	%100
56	M49	Z	8.37	8.37	0	%100
57	M50	X	3.462	3.462	0	%100
58	M50	Z	1.999	1.999	0	%100

Member Distributed Loads (BLC 46 : Structure Wo (150 Deg))

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	8.616	8.616	0	%100
2	M1	Z	14.923	14.923	0	%100
3	M6	X	8.616	8.616	0	%100
4	M6	Z	14.923	14.923	0	%100
5	MP1A	X	5.457	5.457	0	%100
6	MP1A	Z	9.451	9.451	0	%100
7	M15	X	9.743	9.743	0	%100
8	M15	Z	16.875	16.875	0	%100
9	M18	X	9.743	9.743	0	%100
10	M18	Z	16.875	16.875	0	%100
11	M19	X	3.021	3.021	0	%100
12	M19	Z	5.233	5.233	0	%100
13	M20	X	3.021	3.021	0	%100
14	M20	Z	5.233	5.233	0	%100
15	M23	X	1.72	1.72	0	%100
16	M23	Z	2.979	2.979	0	%100
17	M31	X	1.149	1.149	0	%100
18	M31	Z	1.99	1.99	0	%100
19	M32	X	1.149	1.149	0	%100
20	M32	Z	1.99	1.99	0	%100
21	M31A	X	.194	.194	0	%100
22	M31A	Z	.335	.335	0	%100
23	M32A	X	.194	.194	0	%100
24	M32A	Z	.335	.335	0	%100
25	M27	X	1.881	1.881	0	%100
26	M27	Z	3.258	3.258	0	%100
27	M28	X	1.881	1.881	0	%100
28	M28	Z	3.258	3.258	0	%100
29	M29	X	3.021	3.021	0	%100
30	M29	Z	5.233	5.233	0	%100
31	M30	X	3.021	3.021	0	%100
32	M30	Z	5.233	5.233	0	%100



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 Job Number :
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Member Distributed Loads (BLC 46 : Structure Wo (150 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
33	M31C	X	1.126	1.126	0	%100
34	M31C	Z	1.95	1.95	0	%100
35	MP2A	X	5.457	5.457	0	%100
36	MP2A	Z	9.451	9.451	0	%100
37	MP3A	X	5.457	5.457	0	%100
38	MP3A	Z	9.451	9.451	0	%100
39	MP4A	X	5.457	5.457	0	%100
40	MP4A	Z	9.451	9.451	0	%100
41	M32B	X	8.616	8.616	0	%100
42	M32B	Z	14.923	14.923	0	%100
43	M33A	X	8.616	8.616	0	%100
44	M33A	Z	14.923	14.923	0	%100
45	M33B	X	.92	.92	0	%100
46	M33B	Z	1.593	1.593	0	%100
47	M40	X	4.093	4.093	0	%100
48	M40	Z	7.089	7.089	0	%100
49	M40A	X	9.571	9.571	0	%100
50	M40A	Z	16.577	16.577	0	%100
51	M41	X	3.74	3.74	0	%100
52	M41	Z	6.477	6.477	0	%100
53	M48	X	4.093	4.093	0	%100
54	M48	Z	7.089	7.089	0	%100
55	M49	X	9.443	9.443	0	%100
56	M49	Z	16.355	16.355	0	%100
57	M50	X	2.452	2.452	0	%100
58	M50	Z	4.247	4.247	0	%100

Member Distributed Loads (BLC 47 : Structure Wo (180 Deg))

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	0	0	0	%100
2	M1	Z	22.976	22.976	0	%100
3	M6	X	0	0	0	%100
4	M6	Z	22.976	22.976	0	%100
5	MP1A	X	0	0	0	%100
6	MP1A	Z	10.914	10.914	0	%100
7	M15	X	0	0	0	%100
8	M15	Z	13.479	13.479	0	%100
9	M18	X	0	0	0	%100
10	M18	Z	13.479	13.479	0	%100
11	M19	X	0	0	0	%100
12	M19	Z	6.043	6.043	0	%100
13	M20	X	0	0	0	%100
14	M20	Z	6.043	6.043	0	%100
15	M23	X	0	0	0	%100
16	M23	Z	2.985	2.985	0	%100
17	M31	X	0	0	0	%100
18	M31	Z	1.723	1.723	0	%100
19	M32	X	0	0	0	%100
20	M32	Z	1.723	1.723	0	%100
21	M31A	X	0	0	0	%100
22	M31A	Z	.002	.002	0	%100
23	M32A	X	0	0	0	%100
24	M32A	Z	.002	.002	0	%100
25	M27	X	0	0	0	%100
26	M27	Z	13.45	13.45	0	%100
27	M28	X	0	0	0	%100



Member Distributed Loads (BLC 47 : Structure Wo (180 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
28	M28	Z	13.45	13.45	0	%100
29	M29	X	0	0	0	%100
30	M29	Z	6.043	6.043	0	%100
31	M30	X	0	0	0	%100
32	M30	Z	6.043	6.043	0	%100
33	M31C	X	0	0	0	%100
34	M31C	Z	2.984	2.984	0	%100
35	MP2A	X	0	0	0	%100
36	MP2A	Z	10.914	10.914	0	%100
37	MP3A	X	0	0	0	%100
38	MP3A	Z	10.914	10.914	0	%100
39	MP4A	X	0	0	0	%100
40	MP4A	Z	10.914	10.914	0	%100
41	M32B	X	0	0	0	%100
42	M32B	Z	22.976	22.976	0	%100
43	M33A	X	0	0	0	%100
44	M33A	Z	22.976	22.976	0	%100
45	M33B	X	0	0	0	%100
46	M33B	Z	.031	.031	0	%100
47	M40	X	0	0	0	%100
48	M40	Z	10.914	10.914	0	%100
49	M40A	X	0	0	0	%100
50	M40A	Z	15.506	15.506	0	%100
51	M41	X	0	0	0	%100
52	M41	Z	15.004	15.004	0	%100
53	M48	X	0	0	0	%100
54	M48	Z	10.914	10.914	0	%100
55	M49	X	0	0	0	%100
56	M49	Z	13.207	13.207	0	%100
57	M50	X	0	0	0	%100
58	M50	Z	11.931	11.931	0	%100

Member Distributed Loads (BLC 48 : Structure Wo (210 Deg))

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-8.616	-8.616	0	%100
2	M1	Z	14.923	14.923	0	%100
3	M6	X	-8.616	-8.616	0	%100
4	M6	Z	14.923	14.923	0	%100
5	MP1A	X	-5.457	-5.457	0	%100
6	MP1A	Z	9.451	9.451	0	%100
7	M15	X	-1.891	-1.891	0	%100
8	M15	Z	3.275	3.275	0	%100
9	M18	X	-1.891	-1.891	0	%100
10	M18	Z	3.275	3.275	0	%100
11	M19	X	-3.021	-3.021	0	%100
12	M19	Z	5.233	5.233	0	%100
13	M20	X	-3.021	-3.021	0	%100
14	M20	Z	5.233	5.233	0	%100
15	M23	X	-1.125	-1.125	0	%100
16	M23	Z	1.949	1.949	0	%100
17	M31	X	-.287	-.287	0	%100
18	M31	Z	.497	.497	0	%100
19	M32	X	-.287	-.287	0	%100
20	M32	Z	.497	.497	0	%100
21	M31A	X	-.238	-.238	0	%100
22	M31A	Z	.412	.412	0	%100



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 Designer :
 Job Number :
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Member Distributed Loads (BLC 48 : Structure Wo (210 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
23	M32A	X	- 238	- 238	0	%100
24	M32A	Z	.412	.412	0	%100
25	M27	X	-9.736	-9.736	0	%100
26	M27	Z	16.863	16.863	0	%100
27	M28	X	-9.736	-9.736	0	%100
28	M28	Z	16.863	16.863	0	%100
29	M29	X	-3.021	-3.021	0	%100
30	M29	Z	5.233	5.233	0	%100
31	M30	X	-3.021	-3.021	0	%100
32	M30	Z	5.233	5.233	0	%100
33	M31C	X	-1.72	-1.72	0	%100
34	M31C	Z	2.978	2.978	0	%100
35	MP2A	X	-5.457	-5.457	0	%100
36	MP2A	Z	9.451	9.451	0	%100
37	MP3A	X	-5.457	-5.457	0	%100
38	MP3A	Z	9.451	9.451	0	%100
39	MP4A	X	-5.457	-5.457	0	%100
40	MP4A	Z	9.451	9.451	0	%100
41	M32B	X	-8.616	-8.616	0	%100
42	M32B	Z	14.923	14.923	0	%100
43	M33A	X	-8.616	-8.616	0	%100
44	M33A	Z	14.923	14.923	0	%100
45	M33B	X	-1.377	-1.377	0	%100
46	M33B	Z	2.385	2.385	0	%100
47	M40	X	-4.093	-4.093	0	%100
48	M40	Z	7.089	7.089	0	%100
49	M40A	X	-3.864	-3.864	0	%100
50	M40A	Z	6.693	6.693	0	%100
51	M41	X	-9.567	-9.567	0	%100
52	M41	Z	16.571	16.571	0	%100
53	M48	X	-4.093	-4.093	0	%100
54	M48	Z	7.089	7.089	0	%100
55	M49	X	-2.693	-2.693	0	%100
56	M49	Z	4.664	4.664	0	%100
57	M50	X	-9.025	-9.025	0	%100
58	M50	Z	15.632	15.632	0	%100

Member Distributed Loads (BLC 49 : Structure Wo (240 Deg))

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-4.974	-4.974	0	%100
2	M1	Z	2.872	2.872	0	%100
3	M6	X	-4.974	-4.974	0	%100
4	M6	Z	2.872	2.872	0	%100
5	MP1A	X	-9.451	-9.451	0	%100
6	MP1A	Z	5.457	5.457	0	%100
7	M15	X	-.08	-.08	0	%100
8	M15	Z	.046	.046	0	%100
9	M18	X	-.08	-.08	0	%100
10	M18	Z	.046	.046	0	%100
11	M19	X	-5.233	-5.233	0	%100
12	M19	Z	3.021	3.021	0	%100
13	M20	X	-5.233	-5.233	0	%100
14	M20	Z	3.021	3.021	0	%100
15	M23	X	-1.708	-1.708	0	%100
16	M23	Z	.986	.986	0	%100
17	M31	X	0	0	0	%100



Member Distributed Loads (BLC 49 : Structure Wo (240 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
18	M31	Z	0	0	0	%100
19	M32	X	0	0	0	%100
20	M32	Z	0	0	0	%100
21	M31A	X	-1.157	-1.157	0	%100
22	M31A	Z	.668	.668	0	%100
23	M32A	X	-1.157	-1.157	0	%100
24	M32A	Z	.668	.668	0	%100
25	M27	X	-13.688	-13.688	0	%100
26	M27	Z	7.903	7.903	0	%100
27	M28	X	-13.688	-13.688	0	%100
28	M28	Z	7.903	7.903	0	%100
29	M29	X	-5.233	-5.233	0	%100
30	M29	Z	3.021	3.021	0	%100
31	M30	X	-5.233	-5.233	0	%100
32	M30	Z	3.021	3.021	0	%100
33	M31C	X	-2.738	-2.738	0	%100
34	M31C	Z	1.581	1.581	0	%100
35	MP2A	X	-9.451	-9.451	0	%100
36	MP2A	Z	5.457	5.457	0	%100
37	MP3A	X	-9.451	-9.451	0	%100
38	MP3A	Z	5.457	5.457	0	%100
39	MP4A	X	-9.451	-9.451	0	%100
40	MP4A	Z	5.457	5.457	0	%100
41	M32B	X	-4.974	-4.974	0	%100
42	M32B	Z	2.872	2.872	0	%100
43	M33A	X	-4.974	-4.974	0	%100
44	M33A	Z	2.872	2.872	0	%100
45	M33B	X	-6.31	-6.31	0	%100
46	M33B	Z	3.643	3.643	0	%100
47	M40	X	-2.363	-2.363	0	%100
48	M40	Z	1.364	1.364	0	%100
49	M40A	X	-3.105	-3.105	0	%100
50	M40A	Z	1.793	1.793	0	%100
51	M41	X	-13.633	-13.633	0	%100
52	M41	Z	7.871	7.871	0	%100
53	M48	X	-2.363	-2.363	0	%100
54	M48	Z	1.364	1.364	0	%100
55	M49	X	-2.807	-2.807	0	%100
56	M49	Z	1.621	1.621	0	%100
57	M50	X	-14.847	-14.847	0	%100
58	M50	Z	8.572	8.572	0	%100

Member Distributed Loads (BLC 50 : Structure Wo (270 Deg))

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M6	X	0	0	0	%100
4	M6	Z	0	0	0	%100
5	MP1A	X	-10.914	-10.914	0	%100
6	MP1A	Z	0	0	0	%100
7	M15	X	-6.099	-6.099	0	%100
8	M15	Z	0	0	0	%100
9	M18	X	-6.099	-6.099	0	%100
10	M18	Z	0	0	0	%100
11	M19	X	-6.043	-6.043	0	%100
12	M19	Z	0	0	0	%100



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Member Distributed Loads (BLC 50 : Structure Wo (270 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
13	M20	X	-6.043	-6.043	0	%100
14	M20	Z	0	0	0	%100
15	M23	X	-2.426	-2.426	0	%100
16	M23	Z	0	0	0	%100
17	M31	X	-.574	-.574	0	%100
18	M31	Z	0	0	0	%100
19	M32	X	-.574	-.574	0	%100
20	M32	Z	0	0	0	%100
21	M31A	X	-1.722	-1.722	0	%100
22	M31A	Z	0	0	0	%100
23	M32A	X	-1.722	-1.722	0	%100
24	M32A	Z	0	0	0	%100
25	M27	X	-6.117	-6.117	0	%100
26	M27	Z	0	0	0	%100
27	M28	X	-6.117	-6.117	0	%100
28	M28	Z	0	0	0	%100
29	M29	X	-6.043	-6.043	0	%100
30	M29	Z	0	0	0	%100
31	M30	X	-6.043	-6.043	0	%100
32	M30	Z	0	0	0	%100
33	M31C	X	-2.43	-2.43	0	%100
34	M31C	Z	0	0	0	%100
35	MP2A	X	-10.914	-10.914	0	%100
36	MP2A	Z	0	0	0	%100
37	MP3A	X	-10.914	-10.914	0	%100
38	MP3A	Z	0	0	0	%100
39	MP4A	X	-10.914	-10.914	0	%100
40	MP4A	Z	0	0	0	%100
41	M32B	X	0	0	0	%100
42	M32B	Z	0	0	0	%100
43	M33A	X	0	0	0	%100
44	M33A	Z	0	0	0	%100
45	M33B	X	-9.095	-9.095	0	%100
46	M33B	Z	0	0	0	%100
47	M40	X	0	0	0	%100
48	M40	Z	0	0	0	%100
49	M40A	X	-7.221	-7.221	0	%100
50	M40A	Z	0	0	0	%100
51	M41	X	-8.218	-8.218	0	%100
52	M41	Z	0	0	0	%100
53	M48	X	0	0	0	%100
54	M48	Z	0	0	0	%100
55	M49	X	-8.919	-8.919	0	%100
56	M49	Z	0	0	0	%100
57	M50	X	-10.117	-10.117	0	%100
58	M50	Z	0	0	0	%100

Member Distributed Loads (BLC 51 : Structure Wo (300 Deg))

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-4.974	-4.974	0	%100
2	M1	Z	-2.872	-2.872	0	%100
3	M6	X	-4.974	-4.974	0	%100
4	M6	Z	-2.872	-2.872	0	%100
5	MP1A	X	-9.451	-9.451	0	%100
6	MP1A	Z	-5.457	-5.457	0	%100
7	M15	X	-13.679	-13.679	0	%100



Member Distributed Loads (BLC 51 : Structure Wo (300 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft.F...]	Start Location[ft.%]	End Location[ft.%]
8	M15	Z	-7.898	-7.898	0	%100
9	M18	X	-13.679	-13.679	0	%100
10	M18	Z	-7.898	-7.898	0	%100
11	M19	X	-5.233	-5.233	0	%100
12	M19	Z	-3.021	-3.021	0	%100
13	M20	X	-5.233	-5.233	0	%100
14	M20	Z	-3.021	-3.021	0	%100
15	M23	X	-2.737	-2.737	0	%100
16	M23	Z	-1.58	-1.58	0	%100
17	M31	X	-1.492	-1.492	0	%100
18	M31	Z	-862	-862	0	%100
19	M32	X	-1.492	-1.492	0	%100
20	M32	Z	-862	-862	0	%100
21	M31A	X	-1.08	-1.08	0	%100
22	M31A	Z	-624	-624	0	%100
23	M32A	X	-1.08	-1.08	0	%100
24	M32A	Z	-624	-624	0	%100
25	M27	X	-0.82	-0.82	0	%100
26	M27	Z	-0.47	-0.47	0	%100
27	M28	X	-0.82	-0.82	0	%100
28	M28	Z	-0.47	-0.47	0	%100
29	M29	X	-5.233	-5.233	0	%100
30	M29	Z	-3.021	-3.021	0	%100
31	M30	X	-5.233	-5.233	0	%100
32	M30	Z	-3.021	-3.021	0	%100
33	M31C	X	-1.71	-1.71	0	%100
34	M31C	Z	-987	-987	0	%100
35	MP2A	X	-9.451	-9.451	0	%100
36	MP2A	Z	-5.457	-5.457	0	%100
37	MP3A	X	-9.451	-9.451	0	%100
38	MP3A	Z	-5.457	-5.457	0	%100
39	MP4A	X	-9.451	-9.451	0	%100
40	MP4A	Z	-5.457	-5.457	0	%100
41	M32B	X	-4.974	-4.974	0	%100
42	M32B	Z	-2.872	-2.872	0	%100
43	M33A	X	-4.974	-4.974	0	%100
44	M33A	Z	-2.872	-2.872	0	%100
45	M33B	X	-5.518	-5.518	0	%100
46	M33B	Z	-3.186	-3.186	0	%100
47	M40	X	-2.363	-2.363	0	%100
48	M40	Z	-1.364	-1.364	0	%100
49	M40A	X	-12.989	-12.989	0	%100
50	M40A	Z	-7.499	-7.499	0	%100
51	M41	X	-3.539	-3.539	0	%100
52	M41	Z	-2.043	-2.043	0	%100
53	M48	X	-2.363	-2.363	0	%100
54	M48	Z	-1.364	-1.364	0	%100
55	M49	X	-14.498	-14.498	0	%100
56	M49	Z	-8.37	-8.37	0	%100
57	M50	X	-3.462	-3.462	0	%100
58	M50	Z	-1.999	-1.999	0	%100

Member Distributed Loads (BLC 52 : Structure Wo (330 Deg))

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft.F...]	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-8.616	-8.616	0	%100
2	M1	Z	-14.923	-14.923	0	%100



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Member Distributed Loads (BLC 52 : Structure Wo (330 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
3	M6	X	-8.616	-8.616	0	%100
4	M6	Z	-14.923	-14.923	0	%100
5	MP1A	X	-5.457	-5.457	0	%100
6	MP1A	Z	-9.451	-9.451	0	%100
7	M15	X	-9.743	-9.743	0	%100
8	M15	Z	-16.875	-16.875	0	%100
9	M18	X	-9.743	-9.743	0	%100
10	M18	Z	-16.875	-16.875	0	%100
11	M19	X	-3.021	-3.021	0	%100
12	M19	Z	-5.233	-5.233	0	%100
13	M20	X	-3.021	-3.021	0	%100
14	M20	Z	-5.233	-5.233	0	%100
15	M23	X	-1.72	-1.72	0	%100
16	M23	Z	-2.979	-2.979	0	%100
17	M31	X	-1.149	-1.149	0	%100
18	M31	Z	-1.99	-1.99	0	%100
19	M32	X	-1.149	-1.149	0	%100
20	M32	Z	-1.99	-1.99	0	%100
21	M31A	X	-.194	-.194	0	%100
22	M31A	Z	-.335	-.335	0	%100
23	M32A	X	-.194	-.194	0	%100
24	M32A	Z	-.335	-.335	0	%100
25	M27	X	-1.881	-1.881	0	%100
26	M27	Z	-3.258	-3.258	0	%100
27	M28	X	-1.881	-1.881	0	%100
28	M28	Z	-3.258	-3.258	0	%100
29	M29	X	-3.021	-3.021	0	%100
30	M29	Z	-5.233	-5.233	0	%100
31	M30	X	-3.021	-3.021	0	%100
32	M30	Z	-5.233	-5.233	0	%100
33	M31C	X	-1.126	-1.126	0	%100
34	M31C	Z	-1.95	-1.95	0	%100
35	MP2A	X	-5.457	-5.457	0	%100
36	MP2A	Z	-9.451	-9.451	0	%100
37	MP3A	X	-5.457	-5.457	0	%100
38	MP3A	Z	-9.451	-9.451	0	%100
39	MP4A	X	-5.457	-5.457	0	%100
40	MP4A	Z	-9.451	-9.451	0	%100
41	M32B	X	-8.616	-8.616	0	%100
42	M32B	Z	-14.923	-14.923	0	%100
43	M33A	X	-8.616	-8.616	0	%100
44	M33A	Z	-14.923	-14.923	0	%100
45	M33B	X	-.92	-.92	0	%100
46	M33B	Z	-1.593	-1.593	0	%100
47	M40	X	-4.093	-4.093	0	%100
48	M40	Z	-7.089	-7.089	0	%100
49	M40A	X	-9.571	-9.571	0	%100
50	M40A	Z	-16.577	-16.577	0	%100
51	M41	X	-3.74	-3.74	0	%100
52	M41	Z	-6.477	-6.477	0	%100
53	M48	X	-4.093	-4.093	0	%100
54	M48	Z	-7.089	-7.089	0	%100
55	M49	X	-9.443	-9.443	0	%100
56	M49	Z	-16.355	-16.355	0	%100
57	M50	X	-2.452	-2.452	0	%100
58	M50	Z	-4.247	-4.247	0	%100



Member Distributed Loads (BLC 53 : Structure Wi (0 Deg))

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	0	0	0	%100
2	M1	Z	-5.181	-5.181	0	%100
3	M6	X	0	0	0	%100
4	M6	Z	-5.181	-5.181	0	%100
5	MP1A	X	0	0	0	%100
6	MP1A	Z	-3.312	-3.312	0	%100
7	M15	X	0	0	0	%100
8	M15	Z	-3.128	-3.128	0	%100
9	M18	X	0	0	0	%100
10	M18	Z	-3.128	-3.128	0	%100
11	M19	X	0	0	0	%100
12	M19	Z	-2.308	-2.308	0	%100
13	M20	X	0	0	0	%100
14	M20	Z	-2.308	-2.308	0	%100
15	M23	X	0	0	0	%100
16	M23	Z	-1.791	-1.791	0	%100
17	M31	X	0	0	0	%100
18	M31	Z	-0.976	-0.976	0	%100
19	M32	X	0	0	0	%100
20	M32	Z	-0.976	-0.976	0	%100
21	M31A	X	0	0	0	%100
22	M31A	Z	-0.001	-0.001	0	%100
23	M32A	X	0	0	0	%100
24	M32A	Z	-0.001	-0.001	0	%100
25	M27	X	0	0	0	%100
26	M27	Z	-3.121	-3.121	0	%100
27	M28	X	0	0	0	%100
28	M28	Z	-3.121	-3.121	0	%100
29	M29	X	0	0	0	%100
30	M29	Z	-2.308	-2.308	0	%100
31	M30	X	0	0	0	%100
32	M30	Z	-2.308	-2.308	0	%100
33	M31C	X	0	0	0	%100
34	M31C	Z	-1.79	-1.79	0	%100
35	MP2A	X	0	0	0	%100
36	MP2A	Z	-3.312	-3.312	0	%100
37	MP3A	X	0	0	0	%100
38	MP3A	Z	-3.312	-3.312	0	%100
39	MP4A	X	0	0	0	%100
40	MP4A	Z	-3.312	-3.312	0	%100
41	M32B	X	0	0	0	%100
42	M32B	Z	-5.181	-5.181	0	%100
43	M33A	X	0	0	0	%100
44	M33A	Z	-5.181	-5.181	0	%100
45	M33B	X	0	0	0	%100
46	M33B	Z	-0.009	-0.009	0	%100
47	M40	X	0	0	0	%100
48	M40	Z	-3.312	-3.312	0	%100
49	M40A	X	0	0	0	%100
50	M40A	Z	-3.715	-3.715	0	%100
51	M41	X	0	0	0	%100
52	M41	Z	-3.595	-3.595	0	%100
53	M48	X	0	0	0	%100
54	M48	Z	-3.312	-3.312	0	%100
55	M49	X	0	0	0	%100
56	M49	Z	-3.165	-3.165	0	%100
57	M50	X	0	0	0	%100



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Member Distributed Loads (BLC 53 : Structure Wi (0 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft.F...]	Start Location[ft.%]	End Location[ft.%]
58	M50	Z	-2.885	-2.885	0	%100

Member Distributed Loads (BLC 54 : Structure Wi (30 Deg))

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft.F...]	Start Location[ft.%]	End Location[ft.%]
1	M1	X	1.943	1.943	0	%100
2	M1	Z	-3.365	-3.365	0	%100
3	M6	X	1.943	1.943	0	%100
4	M6	Z	-3.365	-3.365	0	%100
5	MP1A	X	1.656	1.656	0	%100
6	MP1A	Z	-2.868	-2.868	0	%100
7	M15	X	.439	.439	0	%100
8	M15	Z	-.76	-.76	0	%100
9	M18	X	.439	.439	0	%100
10	M18	Z	-.76	-.76	0	%100
11	M19	X	1.154	1.154	0	%100
12	M19	Z	-1.999	-1.999	0	%100
13	M20	X	1.154	1.154	0	%100
14	M20	Z	-1.999	-1.999	0	%100
15	M23	X	.675	.675	0	%100
16	M23	Z	-1.17	-1.17	0	%100
17	M31	X	.163	.163	0	%100
18	M31	Z	-.282	-.282	0	%100
19	M32	X	.163	.163	0	%100
20	M32	Z	-.282	-.282	0	%100
21	M31A	X	.169	.169	0	%100
22	M31A	Z	-.292	-.292	0	%100
23	M32A	X	.169	.169	0	%100
24	M32A	Z	-.292	-.292	0	%100
25	M27	X	2.259	2.259	0	%100
26	M27	Z	-3.913	-3.913	0	%100
27	M28	X	2.259	2.259	0	%100
28	M28	Z	-3.913	-3.913	0	%100
29	M29	X	1.154	1.154	0	%100
30	M29	Z	-1.999	-1.999	0	%100
31	M30	X	1.154	1.154	0	%100
32	M30	Z	-1.999	-1.999	0	%100
33	M31C	X	1.032	1.032	0	%100
34	M31C	Z	-1.787	-1.787	0	%100
35	MP2A	X	1.656	1.656	0	%100
36	MP2A	Z	-2.868	-2.868	0	%100
37	MP3A	X	1.656	1.656	0	%100
38	MP3A	Z	-2.868	-2.868	0	%100
39	MP4A	X	1.656	1.656	0	%100
40	MP4A	Z	-2.868	-2.868	0	%100
41	M32B	X	1.943	1.943	0	%100
42	M32B	Z	-3.365	-3.365	0	%100
43	M33A	X	1.943	1.943	0	%100
44	M33A	Z	-3.365	-3.365	0	%100
45	M33B	X	.421	.421	0	%100
46	M33B	Z	-.729	-.729	0	%100
47	M40	X	1.242	1.242	0	%100
48	M40	Z	-2.151	-2.151	0	%100
49	M40A	X	.926	.926	0	%100
50	M40A	Z	-1.604	-1.604	0	%100
51	M41	X	2.292	2.292	0	%100
52	M41	Z	-3.971	-3.971	0	%100



Member Distributed Loads (BLC 54 : Structure Wi (30 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
53	M48	X	1.242	1.242	0	%100
54	M48	Z	-2.151	-2.151	0	%100
55	M49	X	.645	.645	0	%100
56	M49	Z	-1.118	-1.118	0	%100
57	M50	X	2.182	2.182	0	%100
58	M50	Z	-3.78	-3.78	0	%100

Member Distributed Loads (BLC 55 : Structure Wi (60 Deg))

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	1.122	1.122	0	%100
2	M1	Z	-.648	-.648	0	%100
3	M6	X	1.122	1.122	0	%100
4	M6	Z	-.648	-.648	0	%100
5	MP1A	X	2.868	2.868	0	%100
6	MP1A	Z	-1.656	-1.656	0	%100
7	M15	X	.018	.018	0	%100
8	M15	Z	-.011	-.011	0	%100
9	M18	X	.018	.018	0	%100
10	M18	Z	-.011	-.011	0	%100
11	M19	X	1.999	1.999	0	%100
12	M19	Z	-1.154	-1.154	0	%100
13	M20	X	1.999	1.999	0	%100
14	M20	Z	-1.154	-1.154	0	%100
15	M23	X	1.025	1.025	0	%100
16	M23	Z	-.592	-.592	0	%100
17	M31	X	0	0	0	%100
18	M31	Z	0	0	0	%100
19	M32	X	0	0	0	%100
20	M32	Z	0	0	0	%100
21	M31A	X	.819	.819	0	%100
22	M31A	Z	-.473	-.473	0	%100
23	M32A	X	.819	.819	0	%100
24	M32A	Z	-.473	-.473	0	%100
25	M27	X	3.176	3.176	0	%100
26	M27	Z	-1.834	-1.834	0	%100
27	M28	X	3.176	3.176	0	%100
28	M28	Z	-1.834	-1.834	0	%100
29	M29	X	1.999	1.999	0	%100
30	M29	Z	-1.154	-1.154	0	%100
31	M30	X	1.999	1.999	0	%100
32	M30	Z	-1.154	-1.154	0	%100
33	M31C	X	1.643	1.643	0	%100
34	M31C	Z	-.949	-.949	0	%100
35	MP2A	X	2.868	2.868	0	%100
36	MP2A	Z	-1.656	-1.656	0	%100
37	MP3A	X	2.868	2.868	0	%100
38	MP3A	Z	-1.656	-1.656	0	%100
39	MP4A	X	2.868	2.868	0	%100
40	MP4A	Z	-1.656	-1.656	0	%100
41	M32B	X	1.122	1.122	0	%100
42	M32B	Z	-.648	-.648	0	%100
43	M33A	X	1.122	1.122	0	%100
44	M33A	Z	-.648	-.648	0	%100
45	M33B	X	1.929	1.929	0	%100
46	M33B	Z	-1.114	-1.114	0	%100
47	M40	X	.717	.717	0	%100



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Member Distributed Loads (BLC 55 : Structure Wi (60 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft.F...]	Start Location[ft.%]	End Location[ft.%]
48	M40	Z	-.414	-.414	0	%100
49	M40A	X	.744	.744	0	%100
50	M40A	Z	-.43	-.43	0	%100
51	M41	X	3.267	3.267	0	%100
52	M41	Z	-1.886	-1.886	0	%100
53	M48	X	.717	.717	0	%100
54	M48	Z	-.414	-.414	0	%100
55	M49	X	.673	.673	0	%100
56	M49	Z	-.388	-.388	0	%100
57	M50	X	3.59	3.59	0	%100
58	M50	Z	-2.073	-2.073	0	%100

Member Distributed Loads (BLC 56 : Structure Wi (90 Deg))

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft.F...]	Start Location[ft.%]	End Location[ft.%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M6	X	0	0	0	%100
4	M6	Z	0	0	0	%100
5	MP1A	X	3.312	3.312	0	%100
6	MP1A	Z	0	0	0	%100
7	M15	X	1.415	1.415	0	%100
8	M15	Z	0	0	0	%100
9	M18	X	1.415	1.415	0	%100
10	M18	Z	0	0	0	%100
11	M19	X	2.308	2.308	0	%100
12	M19	Z	0	0	0	%100
13	M20	X	2.308	2.308	0	%100
14	M20	Z	0	0	0	%100
15	M23	X	1.456	1.456	0	%100
16	M23	Z	0	0	0	%100
17	M31	X	.325	.325	0	%100
18	M31	Z	0	0	0	%100
19	M32	X	.325	.325	0	%100
20	M32	Z	0	0	0	%100
21	M31A	X	1.219	1.219	0	%100
22	M31A	Z	0	0	0	%100
23	M32A	X	1.219	1.219	0	%100
24	M32A	Z	0	0	0	%100
25	M27	X	1.419	1.419	0	%100
26	M27	Z	0	0	0	%100
27	M28	X	1.419	1.419	0	%100
28	M28	Z	0	0	0	%100
29	M29	X	2.308	2.308	0	%100
30	M29	Z	0	0	0	%100
31	M30	X	2.308	2.308	0	%100
32	M30	Z	0	0	0	%100
33	M31C	X	1.458	1.458	0	%100
34	M31C	Z	0	0	0	%100
35	MP2A	X	3.312	3.312	0	%100
36	MP2A	Z	0	0	0	%100
37	MP3A	X	3.312	3.312	0	%100
38	MP3A	Z	0	0	0	%100
39	MP4A	X	3.312	3.312	0	%100
40	MP4A	Z	0	0	0	%100
41	M32B	X	0	0	0	%100
42	M32B	Z	0	0	0	%100



Member Distributed Loads (BLC 56 : Structure Wi (90 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
43	M33A	X	0	0	0	%100
44	M33A	Z	0	0	0	%100
45	M33B	X	2.781	2.781	0	%100
46	M33B	Z	0	0	0	%100
47	M40	X	0	0	0	%100
48	M40	Z	0	0	0	%100
49	M40A	X	1.73	1.73	0	%100
50	M40A	Z	0	0	0	%100
51	M41	X	1.969	1.969	0	%100
52	M41	Z	0	0	0	%100
53	M48	X	0	0	0	%100
54	M48	Z	0	0	0	%100
55	M49	X	2.137	2.137	0	%100
56	M49	Z	0	0	0	%100
57	M50	X	2.446	2.446	0	%100
58	M50	Z	0	0	0	%100

Member Distributed Loads (BLC 57 : Structure Wi (120 Deg))

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	1.122	1.122	0	%100
2	M1	Z	.648	.648	0	%100
3	M6	X	1.122	1.122	0	%100
4	M6	Z	.648	.648	0	%100
5	MP1A	X	2.868	2.868	0	%100
6	MP1A	Z	1.656	1.656	0	%100
7	M15	X	3.174	3.174	0	%100
8	M15	Z	1.833	1.833	0	%100
9	M18	X	3.174	3.174	0	%100
10	M18	Z	1.833	1.833	0	%100
11	M19	X	1.999	1.999	0	%100
12	M19	Z	1.154	1.154	0	%100
13	M20	X	1.999	1.999	0	%100
14	M20	Z	1.154	1.154	0	%100
15	M23	X	1.642	1.642	0	%100
16	M23	Z	.948	.948	0	%100
17	M31	X	.845	.845	0	%100
18	M31	Z	.488	.488	0	%100
19	M32	X	.845	.845	0	%100
20	M32	Z	.488	.488	0	%100
21	M31A	X	.765	.765	0	%100
22	M31A	Z	.442	.442	0	%100
23	M32A	X	.765	.765	0	%100
24	M32A	Z	.442	.442	0	%100
25	M27	X	.019	.019	0	%100
26	M27	Z	.011	.011	0	%100
27	M28	X	.019	.019	0	%100
28	M28	Z	.011	.011	0	%100
29	M29	X	1.999	1.999	0	%100
30	M29	Z	1.154	1.154	0	%100
31	M30	X	1.999	1.999	0	%100
32	M30	Z	1.154	1.154	0	%100
33	M31C	X	1.026	1.026	0	%100
34	M31C	Z	.592	.592	0	%100
35	MP2A	X	2.868	2.868	0	%100
36	MP2A	Z	1.656	1.656	0	%100
37	MP3A	X	2.868	2.868	0	%100



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Member Distributed Loads (BLC 57 : Structure Wi (120 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
38	MP3A	Z	1.656	1.656	0	%100
39	MP4A	X	2.868	2.868	0	%100
40	MP4A	Z	1.656	1.656	0	%100
41	M32B	X	1.122	1.122	0	%100
42	M32B	Z	.648	.648	0	%100
43	M33A	X	1.122	1.122	0	%100
44	M33A	Z	.648	.648	0	%100
45	M33B	X	1.687	1.687	0	%100
46	M33B	Z	.974	.974	0	%100
47	M40	X	.717	.717	0	%100
48	M40	Z	.414	.414	0	%100
49	M40A	X	3.112	3.112	0	%100
50	M40A	Z	1.797	1.797	0	%100
51	M41	X	.848	.848	0	%100
52	M41	Z	.49	.49	0	%100
53	M48	X	.717	.717	0	%100
54	M48	Z	.414	.414	0	%100
55	M49	X	3.474	3.474	0	%100
56	M49	Z	2.006	2.006	0	%100
57	M50	X	.837	.837	0	%100
58	M50	Z	.483	.483	0	%100

Member Distributed Loads (BLC 58 : Structure Wi (150 Deg))

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	1.943	1.943	0	%100
2	M1	Z	3.365	3.365	0	%100
3	M6	X	1.943	1.943	0	%100
4	M6	Z	3.365	3.365	0	%100
5	MP1A	X	1.656	1.656	0	%100
6	MP1A	Z	2.868	2.868	0	%100
7	M15	X	2.261	2.261	0	%100
8	M15	Z	3.916	3.916	0	%100
9	M18	X	2.261	2.261	0	%100
10	M18	Z	3.916	3.916	0	%100
11	M19	X	1.154	1.154	0	%100
12	M19	Z	1.999	1.999	0	%100
13	M20	X	1.154	1.154	0	%100
14	M20	Z	1.999	1.999	0	%100
15	M23	X	1.032	1.032	0	%100
16	M23	Z	1.787	1.787	0	%100
17	M31	X	.651	.651	0	%100
18	M31	Z	1.127	1.127	0	%100
19	M32	X	.651	.651	0	%100
20	M32	Z	1.127	1.127	0	%100
21	M31A	X	.137	.137	0	%100
22	M31A	Z	.237	.237	0	%100
23	M32A	X	.137	.137	0	%100
24	M32A	Z	.237	.237	0	%100
25	M27	X	.436	.436	0	%100
26	M27	Z	.756	.756	0	%100
27	M28	X	.436	.436	0	%100
28	M28	Z	.756	.756	0	%100
29	M29	X	1.154	1.154	0	%100
30	M29	Z	1.999	1.999	0	%100
31	M30	X	1.154	1.154	0	%100
32	M30	Z	1.999	1.999	0	%100



Member Distributed Loads (BLC 58 : Structure Wi (150 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
33	M31C	X	.676	.676	0	%100
34	M31C	Z	1.17	1.17	0	%100
35	MP2A	X	1.656	1.656	0	%100
36	MP2A	Z	2.868	2.868	0	%100
37	MP3A	X	1.656	1.656	0	%100
38	MP3A	Z	2.868	2.868	0	%100
39	MP4A	X	1.656	1.656	0	%100
40	MP4A	Z	2.868	2.868	0	%100
41	M32B	X	1.943	1.943	0	%100
42	M32B	Z	3.365	3.365	0	%100
43	M33A	X	1.943	1.943	0	%100
44	M33A	Z	3.365	3.365	0	%100
45	M33B	X	.281	.281	0	%100
46	M33B	Z	.487	.487	0	%100
47	M40	X	1.242	1.242	0	%100
48	M40	Z	2.151	2.151	0	%100
49	M40A	X	2.293	2.293	0	%100
50	M40A	Z	3.972	3.972	0	%100
51	M41	X	.896	.896	0	%100
52	M41	Z	1.552	1.552	0	%100
53	M48	X	1.242	1.242	0	%100
54	M48	Z	2.151	2.151	0	%100
55	M49	X	2.263	2.263	0	%100
56	M49	Z	3.919	3.919	0	%100
57	M50	X	.593	.593	0	%100
58	M50	Z	1.027	1.027	0	%100

Member Distributed Loads (BLC 59 : Structure Wi (180 Deg))

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	0	0	0	%100
2	M1	Z	5.181	5.181	0	%100
3	M6	X	0	0	0	%100
4	M6	Z	5.181	5.181	0	%100
5	MP1A	X	0	0	0	%100
6	MP1A	Z	3.312	3.312	0	%100
7	M15	X	0	0	0	%100
8	M15	Z	3.128	3.128	0	%100
9	M18	X	0	0	0	%100
10	M18	Z	3.128	3.128	0	%100
11	M19	X	0	0	0	%100
12	M19	Z	2.308	2.308	0	%100
13	M20	X	0	0	0	%100
14	M20	Z	2.308	2.308	0	%100
15	M23	X	0	0	0	%100
16	M23	Z	1.791	1.791	0	%100
17	M31	X	0	0	0	%100
18	M31	Z	.976	.976	0	%100
19	M32	X	0	0	0	%100
20	M32	Z	.976	.976	0	%100
21	M31A	X	0	0	0	%100
22	M31A	Z	.001	.001	0	%100
23	M32A	X	0	0	0	%100
24	M32A	Z	.001	.001	0	%100
25	M27	X	0	0	0	%100
26	M27	Z	3.121	3.121	0	%100
27	M28	X	0	0	0	%100



Member Distributed Loads (BLC 59 : Structure Wi (180 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
28	M28	Z	3.121	3.121	0	%100
29	M29	X	0	0	0	%100
30	M29	Z	2.308	2.308	0	%100
31	M30	X	0	0	0	%100
32	M30	Z	2.308	2.308	0	%100
33	M31C	X	0	0	0	%100
34	M31C	Z	1.79	1.79	0	%100
35	MP2A	X	0	0	0	%100
36	MP2A	Z	3.312	3.312	0	%100
37	MP3A	X	0	0	0	%100
38	MP3A	Z	3.312	3.312	0	%100
39	MP4A	X	0	0	0	%100
40	MP4A	Z	3.312	3.312	0	%100
41	M32B	X	0	0	0	%100
42	M32B	Z	5.181	5.181	0	%100
43	M33A	X	0	0	0	%100
44	M33A	Z	5.181	5.181	0	%100
45	M33B	X	0	0	0	%100
46	M33B	Z	.009	.009	0	%100
47	M40	X	0	0	0	%100
48	M40	Z	3.312	3.312	0	%100
49	M40A	X	0	0	0	%100
50	M40A	Z	3.715	3.715	0	%100
51	M41	X	0	0	0	%100
52	M41	Z	3.595	3.595	0	%100
53	M48	X	0	0	0	%100
54	M48	Z	3.312	3.312	0	%100
55	M49	X	0	0	0	%100
56	M49	Z	3.165	3.165	0	%100
57	M50	X	0	0	0	%100
58	M50	Z	2.885	2.885	0	%100

Member Distributed Loads (BLC 60 : Structure Wi (210 Deg))

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-1.943	-1.943	0	%100
2	M1	Z	3.365	3.365	0	%100
3	M6	X	-1.943	-1.943	0	%100
4	M6	Z	3.365	3.365	0	%100
5	MP1A	X	-1.656	-1.656	0	%100
6	MP1A	Z	2.868	2.868	0	%100
7	M15	X	-.439	-.439	0	%100
8	M15	Z	.76	.76	0	%100
9	M18	X	-.439	-.439	0	%100
10	M18	Z	.76	.76	0	%100
11	M19	X	-1.154	-1.154	0	%100
12	M19	Z	1.999	1.999	0	%100
13	M20	X	-1.154	-1.154	0	%100
14	M20	Z	1.999	1.999	0	%100
15	M23	X	-.675	-.675	0	%100
16	M23	Z	1.17	1.17	0	%100
17	M31	X	-.163	-.163	0	%100
18	M31	Z	.282	.282	0	%100
19	M32	X	-.163	-.163	0	%100
20	M32	Z	.282	.282	0	%100
21	M31A	X	-.169	-.169	0	%100
22	M31A	Z	.292	.292	0	%100



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Member Distributed Loads (BLC 60 : Structure Wi (210 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
23	M32A	X	-.169	-.169	0	%100
24	M32A	Z	.292	.292	0	%100
25	M27	X	-2.259	-2.259	0	%100
26	M27	Z	3.913	3.913	0	%100
27	M28	X	-2.259	-2.259	0	%100
28	M28	Z	3.913	3.913	0	%100
29	M29	X	-1.154	-1.154	0	%100
30	M29	Z	1.999	1.999	0	%100
31	M30	X	-1.154	-1.154	0	%100
32	M30	Z	1.999	1.999	0	%100
33	M31C	X	-1.032	-1.032	0	%100
34	M31C	Z	1.787	1.787	0	%100
35	MP2A	X	-1.656	-1.656	0	%100
36	MP2A	Z	2.868	2.868	0	%100
37	MP3A	X	-1.656	-1.656	0	%100
38	MP3A	Z	2.868	2.868	0	%100
39	MP4A	X	-1.656	-1.656	0	%100
40	MP4A	Z	2.868	2.868	0	%100
41	M32B	X	-1.943	-1.943	0	%100
42	M32B	Z	3.365	3.365	0	%100
43	M33A	X	-1.943	-1.943	0	%100
44	M33A	Z	3.365	3.365	0	%100
45	M33B	X	-.421	-.421	0	%100
46	M33B	Z	.729	.729	0	%100
47	M40	X	-1.242	-1.242	0	%100
48	M40	Z	2.151	2.151	0	%100
49	M40A	X	-.926	-.926	0	%100
50	M40A	Z	1.604	1.604	0	%100
51	M41	X	-2.292	-2.292	0	%100
52	M41	Z	3.971	3.971	0	%100
53	M48	X	-1.242	-1.242	0	%100
54	M48	Z	2.151	2.151	0	%100
55	M49	X	-.645	-.645	0	%100
56	M49	Z	1.118	1.118	0	%100
57	M50	X	-2.182	-2.182	0	%100
58	M50	Z	3.78	3.78	0	%100

Member Distributed Loads (BLC 61 : Structure Wi (240 Deg))

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-1.122	-1.122	0	%100
2	M1	Z	.648	.648	0	%100
3	M6	X	-1.122	-1.122	0	%100
4	M6	Z	.648	.648	0	%100
5	MP1A	X	-2.868	-2.868	0	%100
6	MP1A	Z	1.656	1.656	0	%100
7	M15	X	-.018	-.018	0	%100
8	M15	Z	.011	.011	0	%100
9	M18	X	-.018	-.018	0	%100
10	M18	Z	.011	.011	0	%100
11	M19	X	-1.999	-1.999	0	%100
12	M19	Z	1.154	1.154	0	%100
13	M20	X	-1.999	-1.999	0	%100
14	M20	Z	1.154	1.154	0	%100
15	M23	X	-1.025	-1.025	0	%100
16	M23	Z	.592	.592	0	%100
17	M31	X	0	0	0	%100



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Member Distributed Loads (BLC 61 : Structure Wi (240 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
18	M31	Z	0	0	0	%100
19	M32	X	0	0	0	%100
20	M32	Z	0	0	0	%100
21	M31A	X	-819	-819	0	%100
22	M31A	Z	.473	.473	0	%100
23	M32A	X	-819	-819	0	%100
24	M32A	Z	.473	.473	0	%100
25	M27	X	-3.176	-3.176	0	%100
26	M27	Z	1.834	1.834	0	%100
27	M28	X	-3.176	-3.176	0	%100
28	M28	Z	1.834	1.834	0	%100
29	M29	X	-1.999	-1.999	0	%100
30	M29	Z	1.154	1.154	0	%100
31	M30	X	-1.999	-1.999	0	%100
32	M30	Z	1.154	1.154	0	%100
33	M31C	X	-1.643	-1.643	0	%100
34	M31C	Z	.949	.949	0	%100
35	MP2A	X	-2.868	-2.868	0	%100
36	MP2A	Z	1.656	1.656	0	%100
37	MP3A	X	-2.868	-2.868	0	%100
38	MP3A	Z	1.656	1.656	0	%100
39	MP4A	X	-2.868	-2.868	0	%100
40	MP4A	Z	1.656	1.656	0	%100
41	M32B	X	-1.122	-1.122	0	%100
42	M32B	Z	.648	.648	0	%100
43	M33A	X	-1.122	-1.122	0	%100
44	M33A	Z	.648	.648	0	%100
45	M33B	X	-1.929	-1.929	0	%100
46	M33B	Z	1.114	1.114	0	%100
47	M40	X	-.717	-.717	0	%100
48	M40	Z	.414	.414	0	%100
49	M40A	X	-.744	-.744	0	%100
50	M40A	Z	.43	.43	0	%100
51	M41	X	-3.267	-3.267	0	%100
52	M41	Z	1.886	1.886	0	%100
53	M48	X	-.717	-.717	0	%100
54	M48	Z	.414	.414	0	%100
55	M49	X	-.673	-.673	0	%100
56	M49	Z	.388	.388	0	%100
57	M50	X	-3.59	-3.59	0	%100
58	M50	Z	2.073	2.073	0	%100

Member Distributed Loads (BLC 62 : Structure Wi (270 Deg))

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M6	X	0	0	0	%100
4	M6	Z	0	0	0	%100
5	MP1A	X	-3.312	-3.312	0	%100
6	MP1A	Z	0	0	0	%100
7	M15	X	-1.415	-1.415	0	%100
8	M15	Z	0	0	0	%100
9	M18	X	-1.415	-1.415	0	%100
10	M18	Z	0	0	0	%100
11	M19	X	-2.308	-2.308	0	%100
12	M19	Z	0	0	0	%100



Member Distributed Loads (BLC 62 : Structure Wi (270 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
13	M20	X	-2.308	-2.308	0	%100
14	M20	Z	0	0	0	%100
15	M23	X	-1.456	-1.456	0	%100
16	M23	Z	0	0	0	%100
17	M31	X	-.325	-.325	0	%100
18	M31	Z	0	0	0	%100
19	M32	X	-.325	-.325	0	%100
20	M32	Z	0	0	0	%100
21	M31A	X	-1.219	-1.219	0	%100
22	M31A	Z	0	0	0	%100
23	M32A	X	-1.219	-1.219	0	%100
24	M32A	Z	0	0	0	%100
25	M27	X	-1.419	-1.419	0	%100
26	M27	Z	0	0	0	%100
27	M28	X	-1.419	-1.419	0	%100
28	M28	Z	0	0	0	%100
29	M29	X	-2.308	-2.308	0	%100
30	M29	Z	0	0	0	%100
31	M30	X	-2.308	-2.308	0	%100
32	M30	Z	0	0	0	%100
33	M31C	X	-1.458	-1.458	0	%100
34	M31C	Z	0	0	0	%100
35	MP2A	X	-3.312	-3.312	0	%100
36	MP2A	Z	0	0	0	%100
37	MP3A	X	-3.312	-3.312	0	%100
38	MP3A	Z	0	0	0	%100
39	MP4A	X	-3.312	-3.312	0	%100
40	MP4A	Z	0	0	0	%100
41	M32B	X	0	0	0	%100
42	M32B	Z	0	0	0	%100
43	M33A	X	0	0	0	%100
44	M33A	Z	0	0	0	%100
45	M33B	X	-2.781	-2.781	0	%100
46	M33B	Z	0	0	0	%100
47	M40	X	0	0	0	%100
48	M40	Z	0	0	0	%100
49	M40A	X	-1.73	-1.73	0	%100
50	M40A	Z	0	0	0	%100
51	M41	X	-1.969	-1.969	0	%100
52	M41	Z	0	0	0	%100
53	M48	X	0	0	0	%100
54	M48	Z	0	0	0	%100
55	M49	X	-2.137	-2.137	0	%100
56	M49	Z	0	0	0	%100
57	M50	X	-2.446	-2.446	0	%100
58	M50	Z	0	0	0	%100

Member Distributed Loads (BLC 63 : Structure Wi (300 Deg))

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-1.122	-1.122	0	%100
2	M1	Z	-.648	-.648	0	%100
3	M6	X	-1.122	-1.122	0	%100
4	M6	Z	-.648	-.648	0	%100
5	MP1A	X	-2.868	-2.868	0	%100
6	MP1A	Z	-1.656	-1.656	0	%100
7	M15	X	-3.174	-3.174	0	%100



Member Distributed Loads (BLC 63 : Structure Wi (300 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft.F...]	Start Location[ft.%]	End Location[ft.%]
8	M15	Z	-1.833	-1.833	0	%100
9	M18	X	-3.174	-3.174	0	%100
10	M18	Z	-1.833	-1.833	0	%100
11	M19	X	-1.999	-1.999	0	%100
12	M19	Z	-1.154	-1.154	0	%100
13	M20	X	-1.999	-1.999	0	%100
14	M20	Z	-1.154	-1.154	0	%100
15	M23	X	-1.642	-1.642	0	%100
16	M23	Z	-.948	-.948	0	%100
17	M31	X	-.845	-.845	0	%100
18	M31	Z	-.488	-.488	0	%100
19	M32	X	-.845	-.845	0	%100
20	M32	Z	-.488	-.488	0	%100
21	M31A	X	-.765	-.765	0	%100
22	M31A	Z	-.442	-.442	0	%100
23	M32A	X	-.765	-.765	0	%100
24	M32A	Z	-.442	-.442	0	%100
25	M27	X	-.019	-.019	0	%100
26	M27	Z	-.011	-.011	0	%100
27	M28	X	-.019	-.019	0	%100
28	M28	Z	-.011	-.011	0	%100
29	M29	X	-1.999	-1.999	0	%100
30	M29	Z	-1.154	-1.154	0	%100
31	M30	X	-1.999	-1.999	0	%100
32	M30	Z	-1.154	-1.154	0	%100
33	M31C	X	-1.026	-1.026	0	%100
34	M31C	Z	-.592	-.592	0	%100
35	MP2A	X	-2.868	-2.868	0	%100
36	MP2A	Z	-1.656	-1.656	0	%100
37	MP3A	X	-2.868	-2.868	0	%100
38	MP3A	Z	-1.656	-1.656	0	%100
39	MP4A	X	-2.868	-2.868	0	%100
40	MP4A	Z	-1.656	-1.656	0	%100
41	M32B	X	-1.122	-1.122	0	%100
42	M32B	Z	-.648	-.648	0	%100
43	M33A	X	-1.122	-1.122	0	%100
44	M33A	Z	-.648	-.648	0	%100
45	M33B	X	-1.687	-1.687	0	%100
46	M33B	Z	-.974	-.974	0	%100
47	M40	X	-.717	-.717	0	%100
48	M40	Z	-.414	-.414	0	%100
49	M40A	X	-3.112	-3.112	0	%100
50	M40A	Z	-1.797	-1.797	0	%100
51	M41	X	-.848	-.848	0	%100
52	M41	Z	-.49	-.49	0	%100
53	M48	X	-.717	-.717	0	%100
54	M48	Z	-.414	-.414	0	%100
55	M49	X	-3.474	-3.474	0	%100
56	M49	Z	-2.006	-2.006	0	%100
57	M50	X	-.837	-.837	0	%100
58	M50	Z	-.483	-.483	0	%100

Member Distributed Loads (BLC 64 : Structure Wi (330 Deg))

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft.F...]	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-1.943	-1.943	0	%100
2	M1	Z	-3.365	-3.365	0	%100



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Member Distributed Loads (BLC 64 : Structure Wi (330 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.-%]	End Location[ft.-%]
3	M6	X	-1.943	-1.943	0	%100
4	M6	Z	-3.365	-3.365	0	%100
5	MP1A	X	-1.656	-1.656	0	%100
6	MP1A	Z	-2.868	-2.868	0	%100
7	M15	X	-2.261	-2.261	0	%100
8	M15	Z	-3.916	-3.916	0	%100
9	M18	X	-2.261	-2.261	0	%100
10	M18	Z	-3.916	-3.916	0	%100
11	M19	X	-1.154	-1.154	0	%100
12	M19	Z	-1.999	-1.999	0	%100
13	M20	X	-1.154	-1.154	0	%100
14	M20	Z	-1.999	-1.999	0	%100
15	M23	X	-1.032	-1.032	0	%100
16	M23	Z	-1.787	-1.787	0	%100
17	M31	X	-.651	-.651	0	%100
18	M31	Z	-1.127	-1.127	0	%100
19	M32	X	-.651	-.651	0	%100
20	M32	Z	-1.127	-1.127	0	%100
21	M31A	X	-.137	-.137	0	%100
22	M31A	Z	-.237	-.237	0	%100
23	M32A	X	-.137	-.137	0	%100
24	M32A	Z	-.237	-.237	0	%100
25	M27	X	-.436	-.436	0	%100
26	M27	Z	-.756	-.756	0	%100
27	M28	X	-.436	-.436	0	%100
28	M28	Z	-.756	-.756	0	%100
29	M29	X	-1.154	-1.154	0	%100
30	M29	Z	-1.999	-1.999	0	%100
31	M30	X	-1.154	-1.154	0	%100
32	M30	Z	-1.999	-1.999	0	%100
33	M31C	X	-.676	-.676	0	%100
34	M31C	Z	-1.17	-1.17	0	%100
35	MP2A	X	-1.656	-1.656	0	%100
36	MP2A	Z	-2.868	-2.868	0	%100
37	MP3A	X	-1.656	-1.656	0	%100
38	MP3A	Z	-2.868	-2.868	0	%100
39	MP4A	X	-1.656	-1.656	0	%100
40	MP4A	Z	-2.868	-2.868	0	%100
41	M32B	X	-1.943	-1.943	0	%100
42	M32B	Z	-3.365	-3.365	0	%100
43	M33A	X	-1.943	-1.943	0	%100
44	M33A	Z	-3.365	-3.365	0	%100
45	M33B	X	-.281	-.281	0	%100
46	M33B	Z	-.487	-.487	0	%100
47	M40	X	-1.242	-1.242	0	%100
48	M40	Z	-2.151	-2.151	0	%100
49	M40A	X	-2.293	-2.293	0	%100
50	M40A	Z	-3.972	-3.972	0	%100
51	M41	X	-.896	-.896	0	%100
52	M41	Z	-1.552	-1.552	0	%100
53	M48	X	-1.242	-1.242	0	%100
54	M48	Z	-2.151	-2.151	0	%100
55	M49	X	-2.263	-2.263	0	%100
56	M49	Z	-3.919	-3.919	0	%100
57	M50	X	-.593	-.593	0	%100
58	M50	Z	-1.027	-1.027	0	%100



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Member Distributed Loads (BLC 65 : Structure Wm (0 Deg))

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	0	0	0	%100
2	M1	Z	-1.282	-1.282	0	%100
3	M6	X	0	0	0	%100
4	M6	Z	-1.282	-1.282	0	%100
5	MP1A	X	0	0	0	%100
6	MP1A	Z	-.609	-.609	0	%100
7	M15	X	0	0	0	%100
8	M15	Z	-.752	-.752	0	%100
9	M18	X	0	0	0	%100
10	M18	Z	-.752	-.752	0	%100
11	M19	X	0	0	0	%100
12	M19	Z	-.337	-.337	0	%100
13	M20	X	0	0	0	%100
14	M20	Z	-.337	-.337	0	%100
15	M23	X	0	0	0	%100
16	M23	Z	-.167	-.167	0	%100
17	M31	X	0	0	0	%100
18	M31	Z	-.096	-.096	0	%100
19	M32	X	0	0	0	%100
20	M32	Z	-.096	-.096	0	%100
21	M31A	X	0	0	0	%100
22	M31A	Z	-8.5e-5	-8.5e-5	0	%100
23	M32A	X	0	0	0	%100
24	M32A	Z	-8.5e-5	-8.5e-5	0	%100
25	M27	X	0	0	0	%100
26	M27	Z	-.751	-.751	0	%100
27	M28	X	0	0	0	%100
28	M28	Z	-.751	-.751	0	%100
29	M29	X	0	0	0	%100
30	M29	Z	-.337	-.337	0	%100
31	M30	X	0	0	0	%100
32	M30	Z	-.337	-.337	0	%100
33	M31C	X	0	0	0	%100
34	M31C	Z	-.167	-.167	0	%100
35	MP2A	X	0	0	0	%100
36	MP2A	Z	-.609	-.609	0	%100
37	MP3A	X	0	0	0	%100
38	MP3A	Z	-.609	-.609	0	%100
39	MP4A	X	0	0	0	%100
40	MP4A	Z	-.609	-.609	0	%100
41	M32B	X	0	0	0	%100
42	M32B	Z	-1.282	-1.282	0	%100
43	M33A	X	0	0	0	%100
44	M33A	Z	-1.282	-1.282	0	%100
45	M33B	X	0	0	0	%100
46	M33B	Z	-.002	-.002	0	%100
47	M40	X	0	0	0	%100
48	M40	Z	-.609	-.609	0	%100
49	M40A	X	0	0	0	%100
50	M40A	Z	-.865	-.865	0	%100
51	M41	X	0	0	0	%100
52	M41	Z	-.837	-.837	0	%100
53	M48	X	0	0	0	%100
54	M48	Z	-.609	-.609	0	%100
55	M49	X	0	0	0	%100
56	M49	Z	-.737	-.737	0	%100
57	M50	X	0	0	0	%100



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Member Distributed Loads (BLC 65 : Structure Wm (0 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft...	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
58	M50	Z	- .666	- .666	0	%100

Member Distributed Loads (BLC 66 : Structure Wm (30 Deg))

	Member Label	Direction	Start Magnitude[lb/ft...	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	.481	.481	0	%100
2	M1	Z	-.833	-.833	0	%100
3	M6	X	.481	.481	0	%100
4	M6	Z	-.833	-.833	0	%100
5	MP1A	X	.304	.304	0	%100
6	MP1A	Z	-.527	-.527	0	%100
7	M15	X	.106	.106	0	%100
8	M15	Z	-.183	-.183	0	%100
9	M18	X	.106	.106	0	%100
10	M18	Z	-.183	-.183	0	%100
11	M19	X	.169	.169	0	%100
12	M19	Z	-.292	-.292	0	%100
13	M20	X	.169	.169	0	%100
14	M20	Z	-.292	-.292	0	%100
15	M23	X	.063	.063	0	%100
16	M23	Z	-.109	-.109	0	%100
17	M31	X	.016	.016	0	%100
18	M31	Z	-.028	-.028	0	%100
19	M32	X	.016	.016	0	%100
20	M32	Z	-.028	-.028	0	%100
21	M31A	X	.013	.013	0	%100
22	M31A	Z	-.023	-.023	0	%100
23	M32A	X	.013	.013	0	%100
24	M32A	Z	-.023	-.023	0	%100
25	M27	X	.543	.543	0	%100
26	M27	Z	-.941	-.941	0	%100
27	M28	X	.543	.543	0	%100
28	M28	Z	-.941	-.941	0	%100
29	M29	X	.169	.169	0	%100
30	M29	Z	-.292	-.292	0	%100
31	M30	X	.169	.169	0	%100
32	M30	Z	-.292	-.292	0	%100
33	M31C	X	.096	.096	0	%100
34	M31C	Z	-.166	-.166	0	%100
35	MP2A	X	.304	.304	0	%100
36	MP2A	Z	-.527	-.527	0	%100
37	MP3A	X	.304	.304	0	%100
38	MP3A	Z	-.527	-.527	0	%100
39	MP4A	X	.304	.304	0	%100
40	MP4A	Z	-.527	-.527	0	%100
41	M32B	X	.481	.481	0	%100
42	M32B	Z	-.833	-.833	0	%100
43	M33A	X	.481	.481	0	%100
44	M33A	Z	-.833	-.833	0	%100
45	M33B	X	.077	.077	0	%100
46	M33B	Z	-.133	-.133	0	%100
47	M40	X	.228	.228	0	%100
48	M40	Z	-.396	-.396	0	%100
49	M40A	X	.216	.216	0	%100
50	M40A	Z	-.373	-.373	0	%100
51	M41	X	.534	.534	0	%100
52	M41	Z	-.925	-.925	0	%100



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Member Distributed Loads (BLC 66 : Structure Wm (30 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
53	M48	X	.228	.228	0	%100
54	M48	Z	-.396	-.396	0	%100
55	M49	X	.15	.15	0	%100
56	M49	Z	-.26	-.26	0	%100
57	M50	X	.504	.504	0	%100
58	M50	Z	-.872	-.872	0	%100

Member Distributed Loads (BLC 67 : Structure Wm (60 Deg))

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	.278	.278	0	%100
2	M1	Z	-.16	-.16	0	%100
3	M6	X	.278	.278	0	%100
4	M6	Z	-.16	-.16	0	%100
5	MP1A	X	.527	.527	0	%100
6	MP1A	Z	-.304	-.304	0	%100
7	M15	X	.004	.004	0	%100
8	M15	Z	-.003	-.003	0	%100
9	M18	X	.004	.004	0	%100
10	M18	Z	-.003	-.003	0	%100
11	M19	X	.292	.292	0	%100
12	M19	Z	-.169	-.169	0	%100
13	M20	X	.292	.292	0	%100
14	M20	Z	-.169	-.169	0	%100
15	M23	X	.095	.095	0	%100
16	M23	Z	-.055	-.055	0	%100
17	M31	X	0	0	0	%100
18	M31	Z	0	0	0	%100
19	M32	X	0	0	0	%100
20	M32	Z	0	0	0	%100
21	M31A	X	.065	.065	0	%100
22	M31A	Z	-.037	-.037	0	%100
23	M32A	X	.065	.065	0	%100
24	M32A	Z	-.037	-.037	0	%100
25	M27	X	.764	.764	0	%100
26	M27	Z	-.441	-.441	0	%100
27	M28	X	.764	.764	0	%100
28	M28	Z	-.441	-.441	0	%100
29	M29	X	.292	.292	0	%100
30	M29	Z	-.169	-.169	0	%100
31	M30	X	.292	.292	0	%100
32	M30	Z	-.169	-.169	0	%100
33	M31C	X	.153	.153	0	%100
34	M31C	Z	-.088	-.088	0	%100
35	MP2A	X	.527	.527	0	%100
36	MP2A	Z	-.304	-.304	0	%100
37	MP3A	X	.527	.527	0	%100
38	MP3A	Z	-.304	-.304	0	%100
39	MP4A	X	.527	.527	0	%100
40	MP4A	Z	-.304	-.304	0	%100
41	M32B	X	.278	.278	0	%100
42	M32B	Z	-.16	-.16	0	%100
43	M33A	X	.278	.278	0	%100
44	M33A	Z	-.16	-.16	0	%100
45	M33B	X	.352	.352	0	%100
46	M33B	Z	-.203	-.203	0	%100
47	M40	X	.132	.132	0	%100



Member Distributed Loads (BLC 67 : Structure Wm (60 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft.F...]	Start Location[ft.%]	End Location[ft.%]
48	M40	Z	-.076	-.076	0	%100
49	M40A	X	.173	.173	0	%100
50	M40A	Z	-.1	-.1	0	%100
51	M41	X	.761	.761	0	%100
52	M41	Z	-.439	-.439	0	%100
53	M48	X	.132	.132	0	%100
54	M48	Z	-.076	-.076	0	%100
55	M49	X	.157	.157	0	%100
56	M49	Z	-.09	-.09	0	%100
57	M50	X	.828	.828	0	%100
58	M50	Z	-.478	-.478	0	%100

Member Distributed Loads (BLC 68 : Structure Wm (90 Deg))

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft.F...]	Start Location[ft.%]	End Location[ft.%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M6	X	0	0	0	%100
4	M6	Z	0	0	0	%100
5	MP1A	X	.609	.609	0	%100
6	MP1A	Z	0	0	0	%100
7	M15	X	.34	.34	0	%100
8	M15	Z	0	0	0	%100
9	M18	X	.34	.34	0	%100
10	M18	Z	0	0	0	%100
11	M19	X	.337	.337	0	%100
12	M19	Z	0	0	0	%100
13	M20	X	.337	.337	0	%100
14	M20	Z	0	0	0	%100
15	M23	X	.135	.135	0	%100
16	M23	Z	0	0	0	%100
17	M31	X	.032	.032	0	%100
18	M31	Z	0	0	0	%100
19	M32	X	.032	.032	0	%100
20	M32	Z	0	0	0	%100
21	M31A	X	.096	.096	0	%100
22	M31A	Z	0	0	0	%100
23	M32A	X	.096	.096	0	%100
24	M32A	Z	0	0	0	%100
25	M27	X	.341	.341	0	%100
26	M27	Z	0	0	0	%100
27	M28	X	.341	.341	0	%100
28	M28	Z	0	0	0	%100
29	M29	X	.337	.337	0	%100
30	M29	Z	0	0	0	%100
31	M30	X	.337	.337	0	%100
32	M30	Z	0	0	0	%100
33	M31C	X	.136	.136	0	%100
34	M31C	Z	0	0	0	%100
35	MP2A	X	.609	.609	0	%100
36	MP2A	Z	0	0	0	%100
37	MP3A	X	.609	.609	0	%100
38	MP3A	Z	0	0	0	%100
39	MP4A	X	.609	.609	0	%100
40	MP4A	Z	0	0	0	%100
41	M32B	X	0	0	0	%100
42	M32B	Z	0	0	0	%100



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Member Distributed Loads (BLC 68 : Structure Wm (90 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
43	M33A	X	0	0	0	%100
44	M33A	Z	0	0	0	%100
45	M33B	X	.507	.507	0	%100
46	M33B	Z	0	0	0	%100
47	M40	X	0	0	0	%100
48	M40	Z	0	0	0	%100
49	M40A	X	.403	.403	0	%100
50	M40A	Z	0	0	0	%100
51	M41	X	.459	.459	0	%100
52	M41	Z	0	0	0	%100
53	M48	X	0	0	0	%100
54	M48	Z	0	0	0	%100
55	M49	X	.498	.498	0	%100
56	M49	Z	0	0	0	%100
57	M50	X	.565	.565	0	%100
58	M50	Z	0	0	0	%100

Member Distributed Loads (BLC 69 : Structure Wm (120 Deg))

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	.278	.278	0	%100
2	M1	Z	.16	.16	0	%100
3	M6	X	.278	.278	0	%100
4	M6	Z	.16	.16	0	%100
5	MP1A	X	.527	.527	0	%100
6	MP1A	Z	.304	.304	0	%100
7	M15	X	.763	.763	0	%100
8	M15	Z	.441	.441	0	%100
9	M18	X	.763	.763	0	%100
10	M18	Z	.441	.441	0	%100
11	M19	X	.292	.292	0	%100
12	M19	Z	.169	.169	0	%100
13	M20	X	.292	.292	0	%100
14	M20	Z	.169	.169	0	%100
15	M23	X	.153	.153	0	%100
16	M23	Z	.088	.088	0	%100
17	M31	X	.083	.083	0	%100
18	M31	Z	.048	.048	0	%100
19	M32	X	.083	.083	0	%100
20	M32	Z	.048	.048	0	%100
21	M31A	X	.06	.06	0	%100
22	M31A	Z	.035	.035	0	%100
23	M32A	X	.06	.06	0	%100
24	M32A	Z	.035	.035	0	%100
25	M27	X	.005	.005	0	%100
26	M27	Z	.003	.003	0	%100
27	M28	X	.005	.005	0	%100
28	M28	Z	.003	.003	0	%100
29	M29	X	.292	.292	0	%100
30	M29	Z	.169	.169	0	%100
31	M30	X	.292	.292	0	%100
32	M30	Z	.169	.169	0	%100
33	M31C	X	.095	.095	0	%100
34	M31C	Z	.055	.055	0	%100
35	MP2A	X	.527	.527	0	%100
36	MP2A	Z	.304	.304	0	%100
37	MP3A	X	.527	.527	0	%100



Member Distributed Loads (BLC 69 : Structure Wm (120 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
38	MP3A	Z	.304	.304	0	%100
39	MP4A	X	.527	.527	0	%100
40	MP4A	Z	.304	.304	0	%100
41	M32B	X	.278	.278	0	%100
42	M32B	Z	.16	.16	0	%100
43	M33A	X	.278	.278	0	%100
44	M33A	Z	.16	.16	0	%100
45	M33B	X	.308	.308	0	%100
46	M33B	Z	.178	.178	0	%100
47	M40	X	.132	.132	0	%100
48	M40	Z	.076	.076	0	%100
49	M40A	X	.725	.725	0	%100
50	M40A	Z	.418	.418	0	%100
51	M41	X	.197	.197	0	%100
52	M41	Z	.114	.114	0	%100
53	M48	X	.132	.132	0	%100
54	M48	Z	.076	.076	0	%100
55	M49	X	.809	.809	0	%100
56	M49	Z	.467	.467	0	%100
57	M50	X	.193	.193	0	%100
58	M50	Z	.112	.112	0	%100

Member Distributed Loads (BLC 70 : Structure Wm (150 Deg))

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	.481	.481	0	%100
2	M1	Z	.833	.833	0	%100
3	M6	X	.481	.481	0	%100
4	M6	Z	.833	.833	0	%100
5	MP1A	X	.304	.304	0	%100
6	MP1A	Z	.527	.527	0	%100
7	M15	X	.544	.544	0	%100
8	M15	Z	.942	.942	0	%100
9	M18	X	.544	.544	0	%100
10	M18	Z	.942	.942	0	%100
11	M19	X	.169	.169	0	%100
12	M19	Z	.292	.292	0	%100
13	M20	X	.169	.169	0	%100
14	M20	Z	.292	.292	0	%100
15	M23	X	.096	.096	0	%100
16	M23	Z	.166	.166	0	%100
17	M31	X	.064	.064	0	%100
18	M31	Z	.111	.111	0	%100
19	M32	X	.064	.064	0	%100
20	M32	Z	.111	.111	0	%100
21	M31A	X	.011	.011	0	%100
22	M31A	Z	.019	.019	0	%100
23	M32A	X	.011	.011	0	%100
24	M32A	Z	.019	.019	0	%100
25	M27	X	.105	.105	0	%100
26	M27	Z	.182	.182	0	%100
27	M28	X	.105	.105	0	%100
28	M28	Z	.182	.182	0	%100
29	M29	X	.169	.169	0	%100
30	M29	Z	.292	.292	0	%100
31	M30	X	.169	.169	0	%100
32	M30	Z	.292	.292	0	%100



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Member Distributed Loads (BLC 70 : Structure Wm (150 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
33	M31C	X	.063	.063	0	%100
34	M31C	Z	.109	.109	0	%100
35	MP2A	X	.304	.304	0	%100
36	MP2A	Z	.527	.527	0	%100
37	MP3A	X	.304	.304	0	%100
38	MP3A	Z	.527	.527	0	%100
39	MP4A	X	.304	.304	0	%100
40	MP4A	Z	.527	.527	0	%100
41	M32B	X	.481	.481	0	%100
42	M32B	Z	.833	.833	0	%100
43	M33A	X	.481	.481	0	%100
44	M33A	Z	.833	.833	0	%100
45	M33B	X	.051	.051	0	%100
46	M33B	Z	.089	.089	0	%100
47	M40	X	.228	.228	0	%100
48	M40	Z	.396	.396	0	%100
49	M40A	X	.534	.534	0	%100
50	M40A	Z	.925	.925	0	%100
51	M41	X	.209	.209	0	%100
52	M41	Z	.361	.361	0	%100
53	M48	X	.228	.228	0	%100
54	M48	Z	.396	.396	0	%100
55	M49	X	.527	.527	0	%100
56	M49	Z	.913	.913	0	%100
57	M50	X	.137	.137	0	%100
58	M50	Z	.237	.237	0	%100

Member Distributed Loads (BLC 71 : Structure Wm (180 Deg))

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	0	0	0	%100
2	M1	Z	1.282	1.282	0	%100
3	M6	X	0	0	0	%100
4	M6	Z	1.282	1.282	0	%100
5	MP1A	X	0	0	0	%100
6	MP1A	Z	.609	.609	0	%100
7	M15	X	0	0	0	%100
8	M15	Z	.752	.752	0	%100
9	M18	X	0	0	0	%100
10	M18	Z	.752	.752	0	%100
11	M19	X	0	0	0	%100
12	M19	Z	.337	.337	0	%100
13	M20	X	0	0	0	%100
14	M20	Z	.337	.337	0	%100
15	M23	X	0	0	0	%100
16	M23	Z	.167	.167	0	%100
17	M31	X	0	0	0	%100
18	M31	Z	.096	.096	0	%100
19	M32	X	0	0	0	%100
20	M32	Z	.096	.096	0	%100
21	M31A	X	0	0	0	%100
22	M31A	Z	8.5e-5	8.5e-5	0	%100
23	M32A	X	0	0	0	%100
24	M32A	Z	8.5e-5	8.5e-5	0	%100
25	M27	X	0	0	0	%100
26	M27	Z	.751	.751	0	%100
27	M28	X	0	0	0	%100



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Member Distributed Loads (BLC 72 : Structure Wm (210 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
23	M32A	X	-.013	-.013	0	%100
24	M32A	Z	.023	.023	0	%100
25	M27	X	-.543	-.543	0	%100
26	M27	Z	.941	.941	0	%100
27	M28	X	-.543	-.543	0	%100
28	M28	Z	.941	.941	0	%100
29	M29	X	-.169	-.169	0	%100
30	M29	Z	.292	.292	0	%100
31	M30	X	-.169	-.169	0	%100
32	M30	Z	.292	.292	0	%100
33	M31C	X	-.096	-.096	0	%100
34	M31C	Z	.166	.166	0	%100
35	MP2A	X	-.304	-.304	0	%100
36	MP2A	Z	.527	.527	0	%100
37	MP3A	X	-.304	-.304	0	%100
38	MP3A	Z	.527	.527	0	%100
39	MP4A	X	-.304	-.304	0	%100
40	MP4A	Z	.527	.527	0	%100
41	M32B	X	-.481	-.481	0	%100
42	M32B	Z	.833	.833	0	%100
43	M33A	X	-.481	-.481	0	%100
44	M33A	Z	.833	.833	0	%100
45	M33B	X	-.077	-.077	0	%100
46	M33B	Z	.133	.133	0	%100
47	M40	X	-.228	-.228	0	%100
48	M40	Z	.396	.396	0	%100
49	M40A	X	-.216	-.216	0	%100
50	M40A	Z	.373	.373	0	%100
51	M41	X	-.534	-.534	0	%100
52	M41	Z	.925	.925	0	%100
53	M48	X	-.228	-.228	0	%100
54	M48	Z	.396	.396	0	%100
55	M49	X	-.15	-.15	0	%100
56	M49	Z	.26	.26	0	%100
57	M50	X	-.504	-.504	0	%100
58	M50	Z	.872	.872	0	%100

Member Distributed Loads (BLC 73 : Structure Wm (240 Deg))

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-.278	-.278	0	%100
2	M1	Z	.16	.16	0	%100
3	M6	X	-.278	-.278	0	%100
4	M6	Z	.16	.16	0	%100
5	MP1A	X	-.527	-.527	0	%100
6	MP1A	Z	.304	.304	0	%100
7	M15	X	-.004	-.004	0	%100
8	M15	Z	.003	.003	0	%100
9	M18	X	-.004	-.004	0	%100
10	M18	Z	.003	.003	0	%100
11	M19	X	-.292	-.292	0	%100
12	M19	Z	.169	.169	0	%100
13	M20	X	-.292	-.292	0	%100
14	M20	Z	.169	.169	0	%100
15	M23	X	-.095	-.095	0	%100
16	M23	Z	.055	.055	0	%100
17	M31	X	0	0	0	%100



Member Distributed Loads (BLC 73 : Structure Wm (240 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
18	M31	Z	0	0	0	%100
19	M32	X	0	0	0	%100
20	M32	Z	0	0	0	%100
21	M31A	X	-.065	-.065	0	%100
22	M31A	Z	.037	.037	0	%100
23	M32A	X	-.065	-.065	0	%100
24	M32A	Z	.037	.037	0	%100
25	M27	X	-.764	-.764	0	%100
26	M27	Z	.441	.441	0	%100
27	M28	X	-.764	-.764	0	%100
28	M28	Z	.441	.441	0	%100
29	M29	X	-.292	-.292	0	%100
30	M29	Z	.169	.169	0	%100
31	M30	X	-.292	-.292	0	%100
32	M30	Z	.169	.169	0	%100
33	M31C	X	-.153	-.153	0	%100
34	M31C	Z	.088	.088	0	%100
35	MP2A	X	-.527	-.527	0	%100
36	MP2A	Z	.304	.304	0	%100
37	MP3A	X	-.527	-.527	0	%100
38	MP3A	Z	.304	.304	0	%100
39	MP4A	X	-.527	-.527	0	%100
40	MP4A	Z	.304	.304	0	%100
41	M32B	X	-.278	-.278	0	%100
42	M32B	Z	.16	.16	0	%100
43	M33A	X	-.278	-.278	0	%100
44	M33A	Z	.16	.16	0	%100
45	M33B	X	-.352	-.352	0	%100
46	M33B	Z	.203	.203	0	%100
47	M40	X	-.132	-.132	0	%100
48	M40	Z	.076	.076	0	%100
49	M40A	X	-.173	-.173	0	%100
50	M40A	Z	.1	.1	0	%100
51	M41	X	-.761	-.761	0	%100
52	M41	Z	.439	.439	0	%100
53	M48	X	-.132	-.132	0	%100
54	M48	Z	.076	.076	0	%100
55	M49	X	-.157	-.157	0	%100
56	M49	Z	.09	.09	0	%100
57	M50	X	-.828	-.828	0	%100
58	M50	Z	.478	.478	0	%100

Member Distributed Loads (BLC 74 : Structure Wm (270 Deg))

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M6	X	0	0	0	%100
4	M6	Z	0	0	0	%100
5	MP1A	X	-.609	-.609	0	%100
6	MP1A	Z	0	0	0	%100
7	M15	X	-.34	-.34	0	%100
8	M15	Z	0	0	0	%100
9	M18	X	-.34	-.34	0	%100
10	M18	Z	0	0	0	%100
11	M19	X	-.337	-.337	0	%100
12	M19	Z	0	0	0	%100



Company : Colliers Engineering & Design
 Designer :
 Job Number :
 Model Name : 5000244862-VZW_MT_LOT_SectorA_H

July 5, 2023
 9:40 AM
 Checked By: _____

Member Distributed Loads (BLC 74 : Structure Wm (270 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
13	M20	X	- .337	- .337	0	%100
14	M20	Z	0	0	0	%100
15	M23	X	- .135	- .135	0	%100
16	M23	Z	0	0	0	%100
17	M31	X	- .032	- .032	0	%100
18	M31	Z	0	0	0	%100
19	M32	X	- .032	- .032	0	%100
20	M32	Z	0	0	0	%100
21	M31A	X	- .096	- .096	0	%100
22	M31A	Z	0	0	0	%100
23	M32A	X	- .096	- .096	0	%100
24	M32A	Z	0	0	0	%100
25	M27	X	- .341	- .341	0	%100
26	M27	Z	0	0	0	%100
27	M28	X	- .341	- .341	0	%100
28	M28	Z	0	0	0	%100
29	M29	X	- .337	- .337	0	%100
30	M29	Z	0	0	0	%100
31	M30	X	- .337	- .337	0	%100
32	M30	Z	0	0	0	%100
33	M31C	X	- .136	- .136	0	%100
34	M31C	Z	0	0	0	%100
35	MP2A	X	- .609	- .609	0	%100
36	MP2A	Z	0	0	0	%100
37	MP3A	X	- .609	- .609	0	%100
38	MP3A	Z	0	0	0	%100
39	MP4A	X	- .609	- .609	0	%100
40	MP4A	Z	0	0	0	%100
41	M32B	X	0	0	0	%100
42	M32B	Z	0	0	0	%100
43	M33A	X	0	0	0	%100
44	M33A	Z	0	0	0	%100
45	M33B	X	- .507	- .507	0	%100
46	M33B	Z	0	0	0	%100
47	M40	X	0	0	0	%100
48	M40	Z	0	0	0	%100
49	M40A	X	- .403	- .403	0	%100
50	M40A	Z	0	0	0	%100
51	M41	X	- .459	- .459	0	%100
52	M41	Z	0	0	0	%100
53	M48	X	0	0	0	%100
54	M48	Z	0	0	0	%100
55	M49	X	- .498	- .498	0	%100
56	M49	Z	0	0	0	%100
57	M50	X	- .565	- .565	0	%100
58	M50	Z	0	0	0	%100

Member Distributed Loads (BLC 75 : Structure Wm (300 Deg))

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	- .278	- .278	0	%100
2	M1	Z	- .16	- .16	0	%100
3	M6	X	- .278	- .278	0	%100
4	M6	Z	- .16	- .16	0	%100
5	MP1A	X	- .527	- .527	0	%100
6	MP1A	Z	- .304	- .304	0	%100
7	M15	X	- .763	- .763	0	%100



Member Distributed Loads (BLC 75 : Structure Wm (300 Deg)) (Continued)

Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
8	M15	Z	-441	-441	0 %100
9	M18	X	-763	-763	0 %100
10	M18	Z	-441	-441	0 %100
11	M19	X	-292	-292	0 %100
12	M19	Z	-169	-169	0 %100
13	M20	X	-292	-292	0 %100
14	M20	Z	-169	-169	0 %100
15	M23	X	-153	-153	0 %100
16	M23	Z	-088	-088	0 %100
17	M31	X	-083	-083	0 %100
18	M31	Z	-048	-048	0 %100
19	M32	X	-083	-083	0 %100
20	M32	Z	-048	-048	0 %100
21	M31A	X	-06	-06	0 %100
22	M31A	Z	-035	-035	0 %100
23	M32A	X	-06	-06	0 %100
24	M32A	Z	-035	-035	0 %100
25	M27	X	-005	-005	0 %100
26	M27	Z	-003	-003	0 %100
27	M28	X	-005	-005	0 %100
28	M28	Z	-003	-003	0 %100
29	M29	X	-292	-292	0 %100
30	M29	Z	-169	-169	0 %100
31	M30	X	-292	-292	0 %100
32	M30	Z	-169	-169	0 %100
33	M31C	X	-095	-095	0 %100
34	M31C	Z	-055	-055	0 %100
35	MP2A	X	-527	-527	0 %100
36	MP2A	Z	-304	-304	0 %100
37	MP3A	X	-527	-527	0 %100
38	MP3A	Z	-304	-304	0 %100
39	MP4A	X	-527	-527	0 %100
40	MP4A	Z	-304	-304	0 %100
41	M32B	X	-278	-278	0 %100
42	M32B	Z	-16	-16	0 %100
43	M33A	X	-278	-278	0 %100
44	M33A	Z	-16	-16	0 %100
45	M33B	X	-308	-308	0 %100
46	M33B	Z	-178	-178	0 %100
47	M40	X	-132	-132	0 %100
48	M40	Z	-076	-076	0 %100
49	M40A	X	-725	-725	0 %100
50	M40A	Z	-418	-418	0 %100
51	M41	X	-197	-197	0 %100
52	M41	Z	-114	-114	0 %100
53	M48	X	-132	-132	0 %100
54	M48	Z	-076	-076	0 %100
55	M49	X	-809	-809	0 %100
56	M49	Z	-467	-467	0 %100
57	M50	X	-193	-193	0 %100
58	M50	Z	-112	-112	0 %100

Member Distributed Loads (BLC 76 : Structure Wm (330 Deg))

Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-481	-481	0 %100
2	M1	Z	-833	-833	0 %100



Company : Colliers Engineering & Design
 Designer :
 Job Number :
 Model Name : 5000244862-VZW_MT_LOT_SectorA_H

July 5, 2023
 9:40 AM
 Checked By: _____

Member Distributed Loads (BLC 76 : Structure Wm (330 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
3	M6	X	-481	-481	0	%100
4	M6	Z	-833	-833	0	%100
5	MP1A	X	-304	-304	0	%100
6	MP1A	Z	-527	-527	0	%100
7	M15	X	-544	-544	0	%100
8	M15	Z	-942	-942	0	%100
9	M18	X	-544	-544	0	%100
10	M18	Z	-942	-942	0	%100
11	M19	X	-169	-169	0	%100
12	M19	Z	-292	-292	0	%100
13	M20	X	-169	-169	0	%100
14	M20	Z	-292	-292	0	%100
15	M23	X	-096	-096	0	%100
16	M23	Z	-166	-166	0	%100
17	M31	X	-064	-064	0	%100
18	M31	Z	-111	-111	0	%100
19	M32	X	-064	-064	0	%100
20	M32	Z	-111	-111	0	%100
21	M31A	X	-011	-011	0	%100
22	M31A	Z	-019	-019	0	%100
23	M32A	X	-011	-011	0	%100
24	M32A	Z	-019	-019	0	%100
25	M27	X	-105	-105	0	%100
26	M27	Z	-182	-182	0	%100
27	M28	X	-105	-105	0	%100
28	M28	Z	-182	-182	0	%100
29	M29	X	-169	-169	0	%100
30	M29	Z	-292	-292	0	%100
31	M30	X	-169	-169	0	%100
32	M30	Z	-292	-292	0	%100
33	M31C	X	-063	-063	0	%100
34	M31C	Z	-109	-109	0	%100
35	MP2A	X	-304	-304	0	%100
36	MP2A	Z	-527	-527	0	%100
37	MP3A	X	-304	-304	0	%100
38	MP3A	Z	-527	-527	0	%100
39	MP4A	X	-304	-304	0	%100
40	MP4A	Z	-527	-527	0	%100
41	M32B	X	-481	-481	0	%100
42	M32B	Z	-833	-833	0	%100
43	M33A	X	-481	-481	0	%100
44	M33A	Z	-833	-833	0	%100
45	M33B	X	-051	-051	0	%100
46	M33B	Z	-089	-089	0	%100
47	M40	X	-228	-228	0	%100
48	M40	Z	-396	-396	0	%100
49	M40A	X	-534	-534	0	%100
50	M40A	Z	-925	-925	0	%100
51	M41	X	-209	-209	0	%100
52	M41	Z	-361	-361	0	%100
53	M48	X	-228	-228	0	%100
54	M48	Z	-396	-396	0	%100
55	M49	X	-527	-527	0	%100
56	M49	Z	-913	-913	0	%100
57	M50	X	-137	-137	0	%100
58	M50	Z	-237	-237	0	%100



Member Area Loads

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

Envelope Joint Reactions

Joint	X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1 N61A	max 348.674	8	804.507	24	1271.113	12	-.124	73	0	75	-.03	6
2	min -156.674	2	254.625	69	-1071.891	6	-.404	15	0	1	-.167	24
3 N62	max 477.872	7	721.466	18	1206.806	2	-.071	12	0	75	-.049	72
4	min -348.221	1	165.033	12	-1146.478	8	-.375	18	0	1	-.156	14
5 N71	max 69.875	6	15.353	24	1050.931	6	0	75	0	75	0	75
6	min -50.914	12	3.932	5	-1078.296	12	0	1	0	1	0	1
7 N74A	max 815.68	12	965.381	6	432.041	12	.003	38	.006	12	.006	6
8	min -959.5	6	-302.572	12	-993.138	6	0	8	-.006	6	-.006	12
9 N108	max 741.842	12	835.177	12	1203.839	12	.003	6	.001	6	.002	6
10	min -894.694	6	-512.695	6	-811.907	6	-.003	12	-.002	12	-.002	12
11 Totals:	max 1577.159	11	2605.97	24	3146.342	1						
12	min -1577.157	5	835.474	69	-3146.347	7						

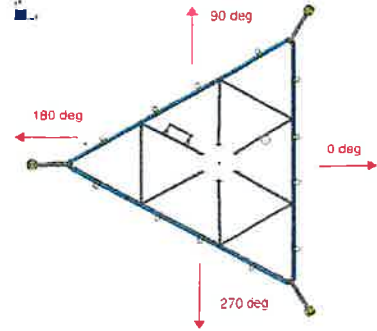
Envelope AISC 15th(360-16): LRFD Steel Code Checks

Member	Shape	Code C...	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y...	phi*Mn z...	Cb	Eqn
1 M1	L3X3X4	.321	2.669	6	.178	4.232	z	35	19638.824	46656	1.688	3.396	1...	H2-1
2 M6	L3X3X4	.410	2.604	37	.179	2.604	y	48	19638.824	46656	1.688	3.401	1...	H2-1
3 MP1A	PIPE 2.0	.545	7.031	12	.399	5.729	y	6	13973.503	32130	1.872	1.872	2...	H3-6
4 M15	L3X3X4	.189	3.359	13	.249	.462	y	36	32550.853	46656	1.688	3.744	1...	H2-1
5 M18	L3X3X4	.250	3.569	12	.226	.462	z	36	32550.853	46656	1.688	3.756	1...	H2-1
6 M19	PIPE 1.0	.165	.99	12	.127	0		5	12039.608	14773.5	.465	.465	1...	H1-1b
7 M20	PIPE 1.0	.163	0	23	.088	3.167		12	12039.608	14773.5	.465	.465	2...	H1-1b
8 M23	SR 0.75	.105	4.194	13	.011	0		8	2827.066	14313.866	.179	.179	2...	H1-1b
9 M31	PL1/2X7 HRA	.272	.333	18	.275	0	y	18	108906.6...	113400	1.181	16.538	1...	H1-1b
10 M32	PL1/2X7 HRA	.285	.333	14	.307	0	y	17	108906.6...	113400	1.181	16.538	1...	H1-1b
11 M31A	PL3/8x10	.271	.525	18	.074	0	y	6	101674.5...	121500	.949	25.313	1...	H1-1b
12 M32A	PL3/8x10	.295	.525	18	.090	0	y	18	101674.5...	121500	.949	25.313	1...	H1-1b
13 M27	L3X3X4	.216	3.354	14	.228	4.024	z	18	32591.649	46656	1.688	3.755	1...	H2-1
14 M28	L3X3X4	.133	.629	6	.216	4.024	y	15	32591.649	46656	1.688	3.756	1...	H2-1
15 M29	PIPE 1.0	.180	.99	2	.133	0		12	12039.608	14773.5	.465	.465	2...	H1-1b
16 M30	PIPE 1.0	.170	0	6	.099	0		6	12039.608	14773.5	.465	.465	2...	H1-1b
17 M31C	SR 0.75	.100	4.191	14	.027	0		6	2831.301	14313.866	.179	.179	2...	H1-1b
18 MP2A	PIPE 2.0	.276	7.552	6	.238	1.649		6	13973.503	32130	1.872	1.872	1...	H1-1b
19 MP3A	PIPE 2.0	.224	7.552	12	.177	2.517		12	13973.503	32130	1.872	1.872	1...	H1-1b
20 MP4A	PIPE 2.0	.227	1.649	48	.111	5.729		47	13973.503	32130	1.872	1.872	3...	H1-1b
21 M32B	L3X3X4	.634	3.581	6	.177	3.646	z	12	19638.824	46656	1.688	3.292	1...	H2-1
22 M33A	L3X3X4	.326	3.581	1	.118	2.018	y	6	19638.824	46656	1.688	3.329	1...	H2-1
23 M33B	PIPE 2.0	.037	0	6	.002	3.197		10	28425.244	32130	1.872	1.872	1...	H1-1b*
24 M40	PIPE 2.0	.364	11.51	6	.251	11.646		6	5820.472	38556	2.246	2.246	4...	H1-1b
25 M40A	L2.5x2.5x4	.117	3.372	12	.037	6.745	y	12	9534.091	38556	1.114	2.088	1...	H2-1
26 M41	L2.5x2.5x4	.121	3.095	12	.037	6.323	z	6	10849.516	38556	1.114	2.125	1...	H2-1
27 M48	PIPE 2.0	.515	10.156	12	.250	10.156		12	5820.472	38556	2.246	2.246	1...	H1-1b
28 M49	L2.5x2.5x4	.093	2.64	12	.014	0	z	42	15520.117	38556	1.114	2.222	1...	H2-1
29 M50	L2.5x2.5x4	.094	2.295	12	.022	0	y	6	17636.274	38556	1.114	2.26	1...	H2-1

I. Mount-to-Tower Connection Check

Custom Orientation Required Yes

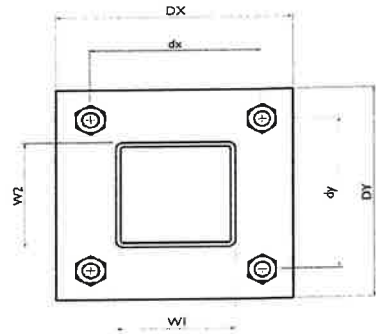
Nodes (labeled per Risa)	Orientation (per graphic of typical platform)
N62	60
N61A	60



Tower Connection Bolt Checks Yes

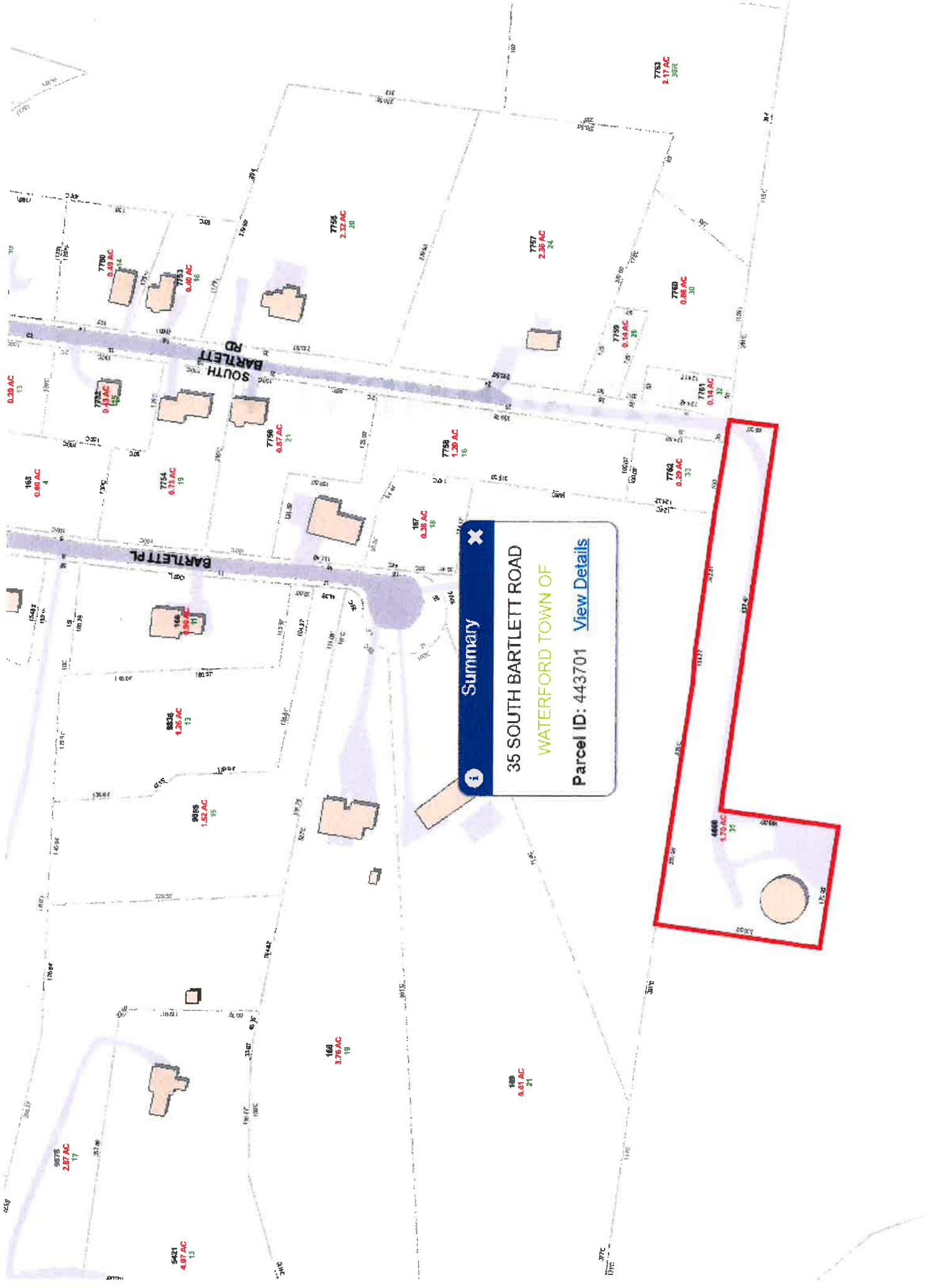
Bolt Orientation Parallel

Bolt Quantity per Reaction:	4
d_x (in) (Delta X of typ. bolt config. sketch):	10
d_y (in) (Delta Y of typ. bolt config. sketch):	2
Bolt Type:	A307
Bolt Diameter (in):	0.625
Required Tensile Strength / bolt (kips):	0.2
Required Shear Strength / bolt (kips):	0.4
Tensile Capacity / bolt (kips):	10.4
Shear Capacity / bolt (kips):	6.2
Bolt Overall Utilization:	7.0%



Tower Connection Baseplate Checks No

ATTACHMENT 4



Summary

35 SOUTH BARTLETT ROAD

WATERFORD TOWN OF

Parcel ID: 443701 [View Details](#)

0.39 AC

168
0.00 AC

7790
0.43 AC

0.40 AC

7754
0.13 AC

7799
0.87 AC

7758
2.32 AC

7798
1.20 AC

167
0.38 AC

169
6.01 AC

168
3.76 AC

5491
4.07 AC

5675
2.87 AC

8808
1.35 AC

8809
1.52 AC

166
1.97 AC

165
1.25 AC

7760
0.29 AC

7761
0.19 AC

7759
0.10 AC

7760
0.88 AC

7757
2.39 AC

7763
2.11 AC

4880
1.70 AC

4881
1.52 AC

35 SOUTH BARTLETT ROAD

Location 35 SOUTH BARTLETT ROAD

Mblu 11 / 4866 / /

Acct# 00443701

Owner WATERFORD TOWN OF

Assessment \$562,060

Appraisal \$802,930

PID 4866

Building Count 1

Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2022	\$581,250	\$221,680	\$802,930

Assessment			
Valuation Year	Improvements	Land	Total
2022	\$406,880	\$155,180	\$562,060

Parcel Addresses

Additional Addresses
No Additional Addresses available for this parcel

Owner of Record

Owner WATERFORD TOWN OF
Co-Owner

Sale Price \$53,000
Certificate
Book & Page 0777/0090
Sale Date 04/22/2005
Instrument 00

Ownership History

Ownership History					
Owner	Sale Price	Certificate	Book & Page	Instrument	Sale Date
WATERFORD TOWN OF	\$53,000		0777/0090	00	04/22/2005
MASHANTUCKET PEQUOT TRIBE THE	\$0		0743/0219	00	12/07/2004

Building Information

Building 1 : Section 1

Year Built:

Living Area: 0

Replacement Cost: \$0

Building Percent Good:

Building Attributes	
Field	Description
Style	Outbuildings
Model	
Grade:	
Stories	
Occupancy	
Exterior Wall 1	
Exterior Wall 2	
Roof Structure	
Roof Cover	
Interior Wall 1	
Interior Wall 2	
Interior Flr 1	
Interior Flr 2	
Heat Fuel	
Heat Type:	
AC %	
Total Bedrooms:	
Full Bthrms:	
Half Baths:	
Extra Fixtures	
Total Rooms:	
Bath Style:	
Kitchen Style:	
Num Kitchens	
Fireplace(s)	
Extra Opening(s)	
Gas Fireplace(s)	
% Attic Fin	
LF Dormer	
Foundation	
Bsmt Gar(s)	
Bsmt %	
SF FBM	
SF Rec Rm	

Building Photo



(<https://images.vgsi.com/photos/WaterfordCTPhotos/default.jpg>)

Building Layout

Building Layout

(https://images.vgsi.com/photos/WaterfordCTPhotos/Sketches/4866_4866)

Building Sub-Areas (sq ft)	Legend
No Data for Building Sub-Areas	

Fin Bsmt Qual	
Bsmt Access	

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code 909
Description Exempt Vac w/ OB
Zone IP-1
Neighborhood IND1
Alt Land Appr No
Category

Land Line Valuation

Size (Acres) 1.7
Frontage 0
Depth 0
Assessed Value \$155,180
Appraised Value \$221,680

Outbuildings

Outbuildings						Legend
Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
LSUM	Lump Sum			775000.00 UNITS	\$581,250	1

Valuation History

Appraisal			
Valuation Year	Improvements	Land	Total
2022	\$581,250	\$221,680	\$802,930
2021	\$697,500	\$221,680	\$919,180

Assessment			
Valuation Year	Improvements	Land	Total
2022	\$406,880	\$155,180	\$562,060
2021	\$488,250	\$155,180	\$643,430

ATTACHMENT 5

Certificate of Mailing — Firm



Name and Address of Sender Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103	TOTAL NO. of Pieces Listed by Sender 1 2	TOTAL NO. of Pieces Received at Post Office™ 1 2	Affix Stamp Here <i>Postmark with Date of Receipt.</i> ZIP 06103 041L12209937
	Postmaster, per (name of receiving employee) 		

USPS® Tracking Number Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	Robert J. Brule, First Selectman Town of Waterford 15 Rope Ferry Road Waterford, CT 06385				
2.	Jonathan Mullen, Planning Director Town of Waterford 15 Rope Ferry Road Waterford, CT 06385				
3.					
4.					
5.					
6.					