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and New York

October 14, 2022

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
880 Post Road East, Westport, Connecticut**

Dear Attorney Bachman:

Cellco Partnership d/b/a Verizon Wireless (“Cellco”) currently maintains an existing wireless telecommunications facility at the above-referenced property address (the “Property”). Cellco’s facility consists of antennas and remote radio heads attached to a Connecticut State Police tower and associated equipment on the ground near the base of the tower. The tower and Cellco’s use of the tower were approved by the Siting Council (“Council”) in March of 1990 (Docket No 123). A copy of the Council’s Docket No. 123 Decision and Order is included in Attachment 1.

On May 18, 2022, Cellco filed a notice of exempt modification seeking Council approval to modify its existing facility at the Property (*See* EM-VER-158-220518). The Council approved EM-VER-158-220518 on July 28, 2022. In addition to the modification approved in EM-VER-158-220518, Cellco now seeks approval to install six (6) interference mitigation filters behind certain antennas on the tower. Specifications for the interference filters are 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 Westport’s Chief Elected Official and Land Use Officer.

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 mounts.
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 interference filters will not change radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. Therefore, no new power density 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 ("SA") and Mount Analysis ("MA"), the existing tower, tower foundation and antenna mounts, with certain modifications, can support Cellco's proposed modifications. Copies 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).

Melanie A. Bachman, Esq.
October 14, 2022
Page 3

Sincerely,

A handwritten signature in black ink, appearing to read "Kenneth C. Baldwin". The signature is fluid and cursive, with a long horizontal stroke at the end.

Kenneth C. Baldwin

Enclosures

Copy to:

Jennifer Tooker, Westport First Selectwoman
Mary Young, Planning and Zoning Director
Connecticut State Police, Property Owner
Alex Tyurin, Verizon Wireless

ATTACHMENT 1

An application of the Department	:	Docket 123
of Public Safety, Division of	:	
State Police, for a Certificate of	:	Connecticut
Environmental Compatibility and Public	:	Siting
Need for the construction, operation,	:	Council
and maintenance of a telecommunications	:	
tower and associated equipment in the	:	
Town of Westport, Connecticut.	:	March 29, 1990

DECISION AND ORDER

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council finds that the effects associated with the construction, operation, and maintenance of a telecommunications tower, building, and associated equipment at the proposed Westport, Connecticut, site including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not significant either alone or cumulatively with other effects, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application, and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by Section 16-50k of the General Statutes of Connecticut (CGS), be issued to Department of Public Safety, Division of State Police, for the construction, operation, and maintenance of a telecommunications tower, associated equipment, and building at the proposed Troop "G" site in Westport, Connecticut.

The facility shall be constructed, operated, and maintained substantially as specified in the Council's record in this proceeding, and subject to the following conditions:

1. The self-supporting lattice tower shall be no taller than necessary to provide the proposed communications and in no event shall the Westport, Troop "G", tower exceed 180 feet above ground level, with antennas and all appurtenances.
2. The facility shall be constructed in accordance with the State of Connecticut Basic Building Code.
3. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of State Agencies. The D&M plan shall include detailed plans for the site's preparation including the tower and building foundation, site access, and erosion and sedimentation controls.
4. The Certificate Holder shall comply with any future radio frequency (RF) standards, promulgated by State or federal regulatory agencies. Upon the establishment of any new governmental RF standards, the facilities granted in this Decision and Order shall be brought into compliance with such standards.

5. The Certificate Holder shall provide the Council a recalculated report of power density if and when circumstances in operation cause a change in power density above the levels originally calculated and provided in the application.
6. The Certificate Holder shall permit public or private entities to share space on the proposed tower for fair consideration, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing.
7. If the facility does not initially provide, or permanently ceases to provide telecommunications service following completion of construction, this Decision and Order shall be void, and the tower and all associated equipment shall be dismantled and removed or reapplication for any new use shall be made to the Council before any such new use is made.
8. Unless otherwise approved by the Council, this Decision and Order shall be void if all construction authorized herein is not completed within three years of the effective date of this Decision and Order.

Pursuant to Section 16-50p, we hereby direct that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed below. A notice of issuance shall be published in the Bridgeport Post, The Hour, and the Advocate.

By this Decision and Order, the Council disposes of the legal rights, duties, and privileges of each party named or admitted to the proceeding in accordance with section 16-50j-17 of the Regulations of State Agencies.

The parties or intervenors to this proceeding are:

<u>Party</u>	<u>Its Representatives</u>
Department of Public Safety Division of State Police	Captain Ronald P. Milkulka Commanding Officer Connecticut State Police Police Support Services 294 Colony Street Building No. 5 Meriden, Connecticut 06450
	L.D. McCallum and Robert F. Vachelli Assistant Attorneys General MacKenzie Hall 110 Sherman Street Hartford, Connecticut 06105

Party

Metro Mobile CTS, of
Fairfield County, Inc.
50 Rockland Road
South Norwalk, Connecticut 06854

Its Representative

Henry H. Sprague, Esq.
Robinson & Cole
One Commercial Plaza
Hartford, Connecticut 06105

Party

Metro Mobile CTS, of
110 East 59th Street
New York, New York 10022

Its Representative

Henry H. Sprague, Esq.
Robinson & Cole
One Commercial Plaza
Hartford, Connecticut 06105

Party

Town of Westport
110 Myrtle Avenue
Westport, Connecticut 06880

Its Representative

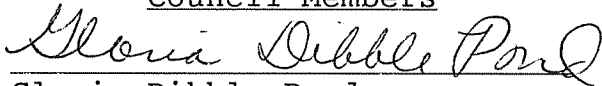



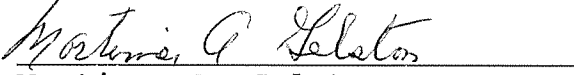
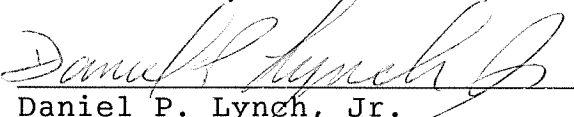
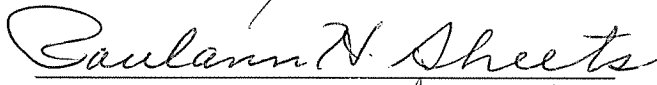
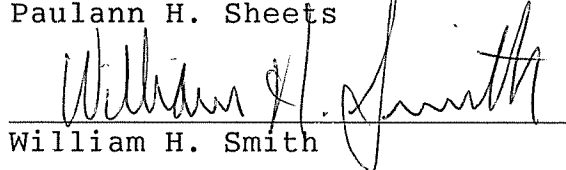
Paul L. Brozdowski
Office of Town Attorney
110 Myrtle Avenue
Westport, Connecticut 06880

4052E

CERTIFICATION

The undersigned members of the Connecticut Siting Council hereby certify that they have heard this case in Docket No. 123 - An application of the Department of Public Safety, Division of State Police for a Certificate of Environmental Compatibility and Public Need for the construction, operation, and maintenance of a telecommunications tower and associated equipment in the Town of Westport, Connecticut or read the record thereof, and that we voted as follows:

Dated at New Britain, Connecticut the 26th day of March, 1990.

<u>Council Members</u>	<u>Vote Cast</u>
 Gloria Dibble Pond Chairperson	Yes
 Commissioner Peter Boucher Designee: Mark Marcus	Abstain
 Commissioner Leslie Carothers Designee: Brian Emerick	Yes
 Harry E. Covey	Yes
 Mortimer A. Gelston	Yes
 Daniel P. Lynch, Jr.	Yes
 Paulann H. Sheets	Abstain
 William H. Smith	Yes
_____ Colin C. Tait	Absent

ATTACHMENT 2

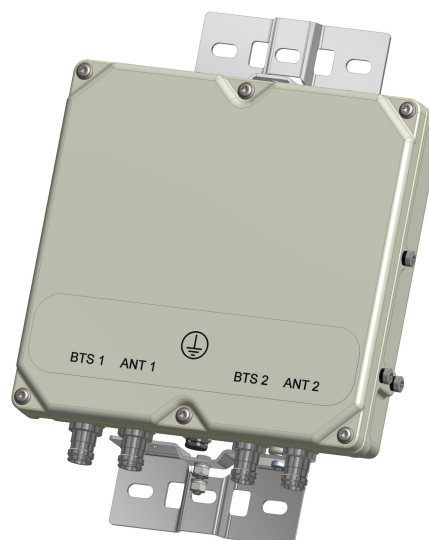
BSF0020F3V1-1

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

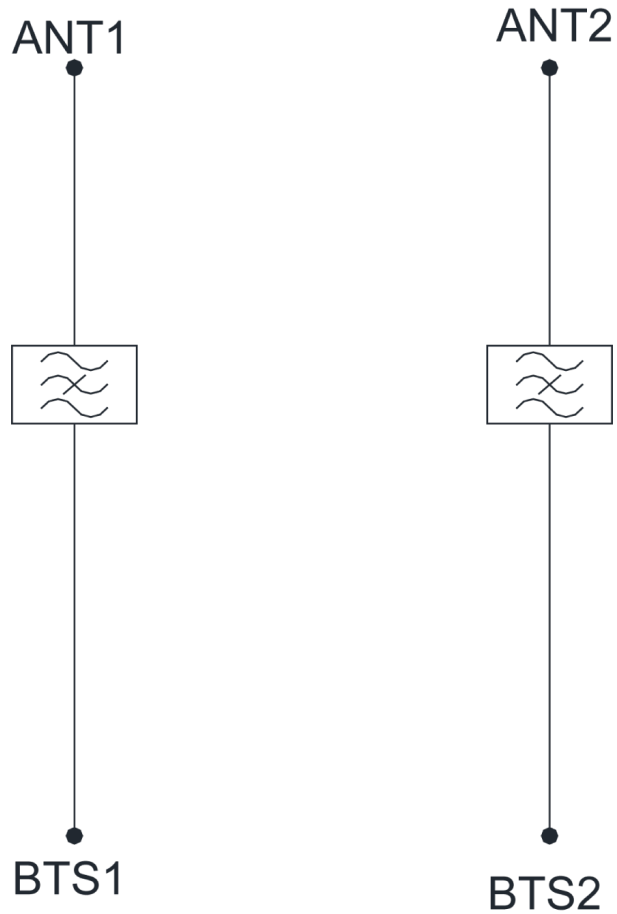
MECHANICAL

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.

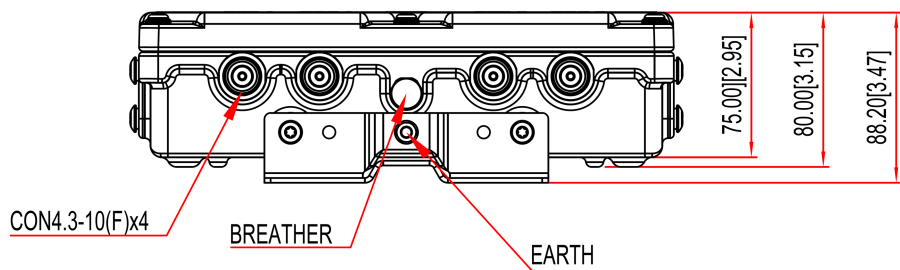
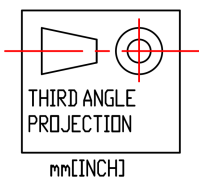
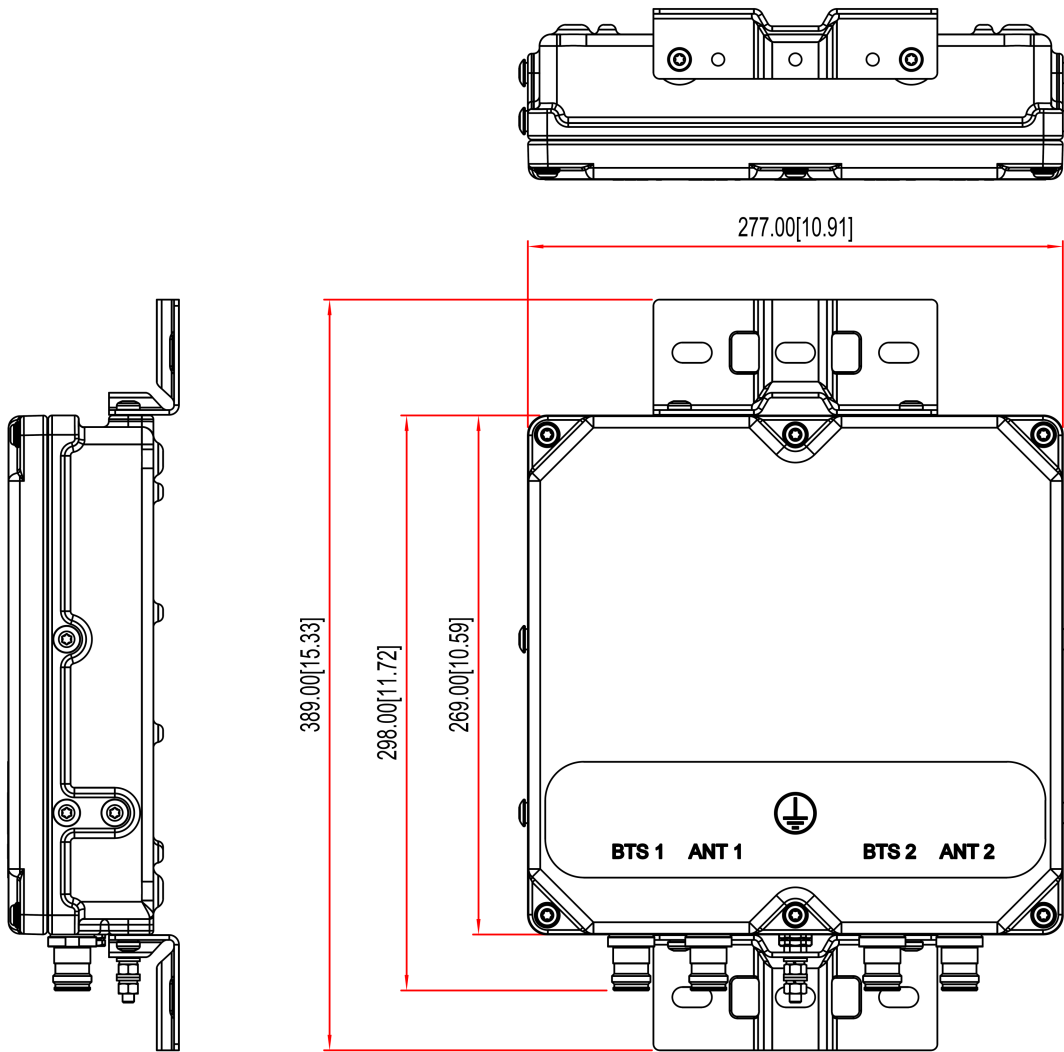
ORDERING INFORMATION

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

Structural Analysis Report

180' Existing Lattice Tower

Verizon Antenna Upgrade

CSP Tower Ref: #32

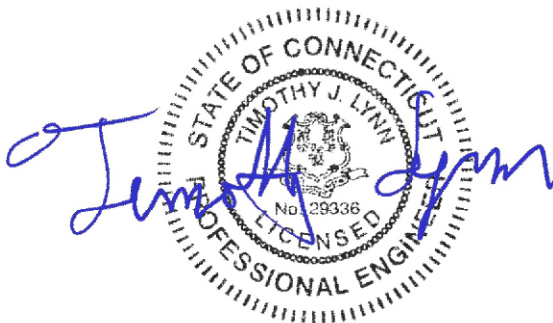
*880 Post Road East
Westport, CT*

CEN TEK Project No. 22027.01

~~Date: April 5, 2022~~

Rev 3: September 20, 2022

Max Stress Ratio = 91%



Prepared for:
Verizon Wireless
20 Alexander Drive
Wallingford, CT 06492

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Introduction

The purpose of this report is to summarize the results of the non-linear, P-Δ structural analysis of the antenna upgrade by Verizon on the existing lattice tower located in Westport, Connecticut.

The host tower is a 180-ft, three legged, lattice tower originally designed and manufactured by Rohn Industries. File no. 26263DL dated February 1, 1991. The tower geometry, structure member sizes and foundation information were taken from a previous structural analysis report prepared by Centek job no. 22089.02 dated September 20, 2022. The tower has been previously reinforced. All previous reinforcements are assumed to be installed. See Primary Assumptions Section below for detailed reinforcement reference reports.

Antenna and appurtenance inventory was taken from the aforementioned structural analysis and information provided by Verizon.

The tower consists of nine (9) vertical sections consisting of steel pipe legs conforming to ASTM A572-50 and steel pipe lateral bracing. The vertical tower sections are connected by bolted flange plates with the diagonal and horizontal bracing to pipe legs consisting of bolted connections. The width of the tower face is 8.5-ft at the top and 27.7-ft at the bottom.

Antenna and Appurtenance Summary

The existing and proposed loads considered in the analysis consist of the following:

Antenna Type	Carrier	Mount	Antenna Centerline Elevation	Cable
(1) Telewave ANT490Y10-WR Yagi	D&K-51 CSP-1 (existing)	Leg Mounted	187'	(1) LDF5-50A
(1) Telewave ANT490Y10-WR Yagi	CSP-22 (existing)	Leg Mounted	181'	(1) LDF5-50A
(1) Celwave PA6-65 Dish	D&K-52 CSP-42 (existing)	Pipe Mounted to tower Leg	177'	(1) EW-63
(3) RFI BPA7496-180-14 Panel Antennas (1) Bird TTA unit	CSP-47,80-82 (existing)	(1) USF12-396 Sector Frame	170'	(3) AVA7-50A (1) LDF4-50A
(1) 3-ft Yagi	CSP (existing)	Pipe Mounted to tower Leg	169'	(1) LDF5-50A
(2) BXA-70063-4CF (1) BXA-70080-4CF (2) JAHH-65B-R3B (1) CBC78T-DS-43	VZW (existing to remove)	See Below Mount	160'	NA

CEN TEK Engineering, Inc.
Structural Analysis - 180-ft Lattice Tower #32 Westport
Antenna Upgrade – Verizon
Westport, CT
Rev 3 ~ September 20, 2022

Antenna Type	Carrier	Mount	Antenna Centerline Elevation	Cable
(4) MX06FRO640-02 (3) MT6407-77A (1) 4439d-25A RRH (1) 4440d-13A RRH (1) OVP Unit (6) BSF0020F3V1-1	VZW (Proposed)	See Below Mount	160'	(1) 12x24 Hybrid Cable
(4) JAHH-65B-R3B (3) XXDWMM-12.5-65-8T (3) B2/B66A RRHs (3) B5/B13 RRHs (3) RT4401-48A RRHs (2) CBC78T-DS-43 (1) OVP Units	VZW (existing to remain)	(3) 15-ft Gate Booms	160'	(6) 1 5/8" Coax Cables (1) 12x24 Hybrid Cable
(3) QD6616-7 (3) DMP65R-BU6DA (3) AIR6419 (3) AIR6449 (3) 4478 B14 RRH Units (3) 4449 B5/12 RRH Units (9) RRUS-32 RRH Units (2) DC6-48-60-18-8F (1) DC9	AT&T (existing)	(3) 14-ft V Frames (p/n VFA14-H10-2120)	133'	(6) 1 1/4" Coax Cables (3) Fiber Cables (7) DC Cables
(6) Ericsson AIR21 (3) Andrew LNX-6515DS (3) RRUS-11 (3) TMAs	T-Mobile (existing)	(3) 12-ft T-Frames	125'	(18) 1 5/8" Coax Cables (1) 6x12 Hybrid Cables
(1) Telewave ANT150D Dipole	CSP (existing)	Pipe Mounted to tower Leg	113'	(1) LDF4-50A
(1) GPS Antenna	D&K-1 CSP-43 (existing)	Leg Mounted	61'	(1) LDF4-50A

Primary Assumptions Used in the Analysis

- The tower structure's theoretical capacity not including any assessment of the condition of the tower.
- The tower carries the horizontal and vertical loads due to the weight of antennas, ice load and wind.
- Tower is properly installed and maintained.
- Tower is in plumb condition.
- Tower loading for antennas and mounts as listed in this report.
- All bolts are appropriately tightened providing the necessary connection continuity.
- All welds are fabricated with ER-70S-6 electrodes.
- All members are assumed to be as specified in the original tower design documents.
- All members are “hot dipped” galvanized in accordance with ASTM A123 and ASTM A153 Standards.
- All member protective coatings are in good condition.
- All tower members were properly designed, detailed, fabricated, installed and have been properly maintained since erection.
- Any deviation from the analyzed antenna loading will require a new analysis for verification of structural adequacy.
- All coax cables should be routed as specified in section 3 of this report.
- **All previous reinforcements per the below listed structural analysis and modification reports are assumed to be installed.**
 - **Structural report prepared by AECOM Corp for AT&T project no. SMK-004 / 60581632 dated 7/13/18.**
 - **Structural report prepared by AECOM Corp for Verizon project no. VZ5-224 / 60620140 dated 7/10/20.**
- **The Verizon antenna mount information was taken from the mount analysis report and modification drawings prepared by Maser Consulting job no. 21777772A dated August 22, 2022**

A n a l y s i s

The existing tower was analyzed using a comprehensive computer program entitled tnxTower. The program analyzes the tower, considering the worst case loading condition. The tower is considered as loaded by concentric forces along the tower, and the model assumes that the tower members are subjected to bending, axial, and shear forces.

The existing tower was analyzed for the controlling basic wind speed with no ice and the applicable wind and ice combination to determine stresses in members as per guidelines of TIA-222-H entitled “Structural Standard for Antenna Support Structures, Antennas and Small Wind Turbine Support Structures”, the American Institute of Steel Construction (AISC) and the Manual of Steel Construction; Load and Resistance Factor Design (LRFD).

The controlling wind speed is determined by evaluating the local available wind speed data as provided in Appendix N of the CSBC¹ and the wind speed data available in the TIA-222-H Standard.

T o w e r L o a d i n g

Tower loading was determined by the basic wind speed as applied to projected surface areas with modification factors per TIA-222-H, gravity loads of the tower structure and its components, and the application of 1.0” radial ice on the tower structure and its components.

Load Cases:	<u>Load Case 1</u> ; 130 mph (Risk Cat III) wind speed w/ no ice plus gravity load – used in calculation of tower stresses and rotation.	<i>[Appendix N of the 2018 CT Building Code]</i>
	<u>Load Case 2</u> ; 50 mph wind speed w/ 1.00” radial ice plus gravity load – used in calculation of tower stresses.	<i>[Annex B of TIA-222-H]</i>
	<u>Load Case 3</u> ; 90 mph wind speed w/ 0.5” radial ice plus gravity load – used in calculation of tower twist and sway.	<i>[TIA-222-F used for calculation of tower twist and sway per the requirements of the CSP]</i>

¹ The 2015 International Building Code as amended by the 2018 Connecticut State Building Code (CSBC).

Tower Capacity

- Calculated stresses **were found to be within allowable limits.**

Tower Section	Elevation	Stress Ratio (percentage of capacity)	Result
Leg (T12)	20.0' - 30.0'	62.3%	PASS
Diagonal (T12)	20.0' - 30.0'	90.6%	PASS
Horizontal (T11)	30.0' - 40.0'	83.8%	PASS

- The tower combined deflection **was found to be within allowable limits.**

Deflection Criteria	Proposed (degrees)	Allowable (degrees)	Result
Sway (Tilt)	0.3973	n/a	n/a
Twist	0.3179	n/a	n/a
Combined	0.7152	0.75	PASS

TIA-222-F standard used for calculation of tower twist and sway per the requirements of the CSP.

Foundation and Anchors

The existing foundation consists of three (3) 4.5-ft diameter x 27-ft long reinforced concrete caissons. The base of the tower is connected to the foundation by means of (10) 1.00"Ø anchor bolts per leg embedded into the concrete foundation structure.

- The tower reactions developed from the governing Load Case were used in the verification of the foundation and anchor bolts:

Load Effect	Proposed Tower Reactions
Leg Shear	52 kips
Leg Compression	355 kips
Leg Tension	311 kips
Base Moment	8,004 ft-kips
Base Shear	89 kips

- The anchor bolts **were found** to be within allowable limits.

Tower Section	Component	Stress Ratio (percentage of capacity)	Result
Anchor Bolts	Combined Compression and Shear	48.3%	PASS

- The foundation was found to be within allowable limits.

Foundation	Design Limit	(percentage of capacity)	Result
(3) Reinforced Concrete Caisson	Uplift	35%	PASS
	Bearing	46%	PASS

Conclusion

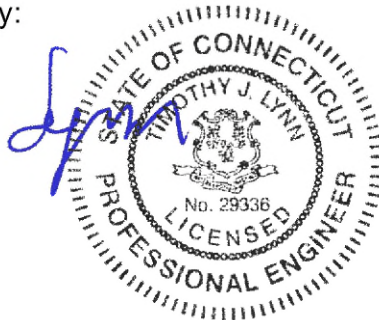
This analysis shows that the subject tower **is adequate** to support the proposed antenna configuration.

The analysis is based, in part, on the information provided to this office by Verizon and the CSP. If the existing conditions are different than the information in this report, Centek Engineering, Inc. must be contacted for resolution of any potential issues.

Please feel free to call with any questions or comments.

Respectfully Submitted by:

Timothy J. Lynn, PE
 Structural Engineer



Standard Conditions for Furnishing of Professional Engineering Services on Existing Structures

All engineering services are performed on the basis that the information used is current and correct. This information may consist of, but is not necessarily limited to:

- Information supplied by the client regarding the structure itself, its foundations, the soil conditions, the antenna and feed line loading on the structure and its components, or other relevant information.
- Information from the field and/or drawings in the possession of Centek Engineering, Inc. or generated by field inspections or measurements of the structure.
- It is the responsibility of the client to ensure that the information provided to Centek Engineering, Inc. and used in the performance of our engineering services is correct and complete. In the absence of information to the contrary, we assume that all structures were constructed in accordance with the drawings and specifications and are in an un-corroded condition and have not deteriorated. It is therefore assumed that its capacity has not significantly changed from the “as new” condition.
- All services will be performed to the codes specified by the client, and we do not imply to meet any other codes or requirements unless explicitly agreed in writing. If wind and ice loads or other relevant parameters are to be different from the minimum values recommended by the codes, the client shall specify the exact requirement. In the absence of information to the contrary, all work will be performed in accordance with the latest revision of ANSI/ASCE10 & ANSI/EIA-222
- All services performed, results obtained, and recommendations made are in accordance with generally accepted engineering principles and practices. Centek Engineering, Inc. is not responsible for the conclusions, opinions and recommendations made by others based on the information we supply.

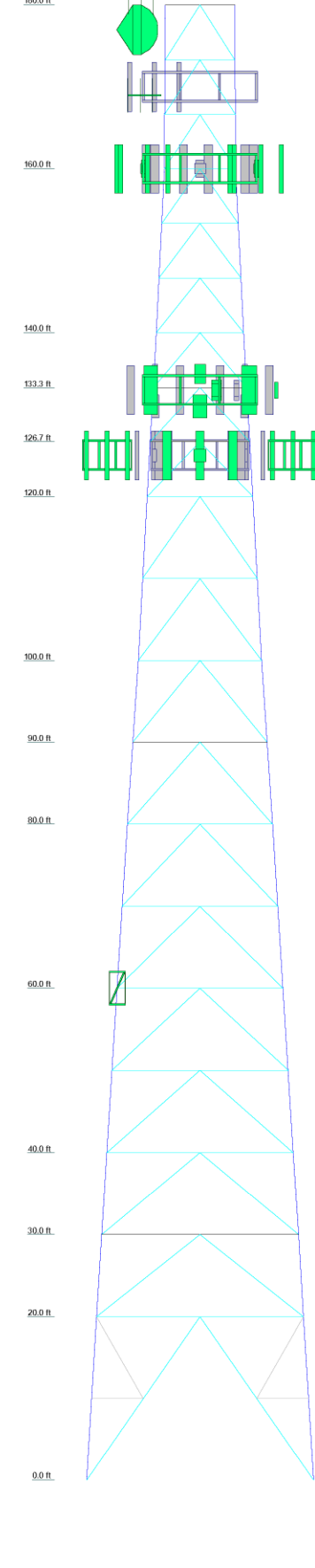
GENERAL DESCRIPTION OF STRUCTURAL ANALYSIS PROGRAM

tnxTower, is an integrated structural analysis and design software package for Designed specifically for the telecommunications industry, tnxTower, formerly RISA Tower, automates much of the tower analysis and design required by the TIA/EIA 222 Standard.

tnxTower Features:

- tnxTower can analyze and design 3- and 4-sided guyed towers, 3- and 4-sided self-supporting towers and either round or tapered ground mounted poles with or without guys.
- The program analyzes towers using the TIA-222-G (2005) standard or any of the previous TIA/EIA standards back to RS-222 (1959). Steel design is checked using the AISC ASD 9th Edition or the AISC LRFD specifications.
- Linear and non-linear (P-delta) analyses can be used in determining displacements and forces in the structure. Wind pressures and forces are automatically calculated.
- Extensive graphics plots include material take-off, shear-moment, leg compression, displacement, twist, feed line, guy anchor and stress plots.
- tnxTower contains unique features such as True Cable behavior, hog rod take-up, foundation stiffness and much more.

Section	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	
Legs	10 @ 0.050x0.375 on ROHN 8 EHL Leg Pipe																							
Diagonals	A572-42	ROHN 3 EH	ROHN 3 STD	ROHN 2 XGS	ROHN 2 XGS	ROHN 2 XGS	ROHN 2 STD	ROHN 2 STD	ROHN 2 STD	ROHN 2 STD	ROHN 2 STD	ROHN 2 STD	ROHN 2 STD	ROHN 2 STD	ROHN 2 STD	ROHN 2 STD	ROHN 2 STD	ROHN 2 STD	ROHN 2 STD	ROHN 2 STD	ROHN 2 STD	ROHN 2 STD	ROHN 2 STD	ROHN 2 STD
Top Chills	N.A.	ROHN 2.5 EH	ROHN 2 STD	N.A.	ROHN 2 STD	ROHN 2 STD	N.A.	ROHN 2 STD	N.A.	ROHN 2 STD	N.A.	ROHN 2 STD	N.A.	ROHN 2 STD	N.A.	ROHN 2 STD	N.A.	ROHN 2 STD	N.A.	ROHN 2 STD	N.A.	ROHN 2 STD	ROHN 1.5 STD	ROHN 1.5 STD
Horizontals	P3.5x.256	N.A.	ROHN 1.5 STD	N.A.	ROHN 1.5 STD	N.A.	ROHN 1.5 STD	N.A.	ROHN 1.5 STD	N.A.	ROHN 1.5 STD	N.A.	ROHN 1.5 STD	N.A.	ROHN 1.5 STD	N.A.	ROHN 1.5 STD	N.A.	ROHN 1.5 STD	N.A.	ROHN 1.5 STD	N.A.	ROHN 1.5 STD	ROHN 1.5 STD
Red Horizontals																								
Red Diagonals																								
Red Pipes																								
Inner Ringing																								
Face Width (ft)	21.677																							
# Panels @ (ft)	1 @ 20																							
Weight (lb)	35598.4																							



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
ANT940Y10-WR (CSP)	187	QD6616-7 (ATI)	133
ANT940Y10-WR (CSP - Yagi Antenna)	181	AR6419 (ATI)	133
PA6-66AC (DNK-52 / CSP-42)	177	AR6449 (ATI)	133
RFI BPS 7496-180-14 Panel Antenna (CSP-80)	170	DMP66R-BURD (ATI)	133
RFI BPS 7496-180-14 Panel Antenna (CSP-81)	170	QD6616-7 (ATI)	133
RFI BPS 7496-180-14 Panel Antenna (CSP-82)	170	AR6419 (ATI)	133
SitePro11 USF 12-306.1 Mount Assembly w/ (3) 96" Mount Pipes (CSP-47, 80, 81, 82)	170	AR6449 (ATI)	133
432E-831-01T TTA Unit (Re-Located TMA (CSP))	170	DMP66R-BURD (ATI)	133
3' Yagi (CSP)	169	RRUS-32 (ATI)	133
B2B66A RRH (Verizon)	160	RRUS-32 (ATI)	133
B5B13 RRH (Verizon)	160	RRUS-32 B66 (ATI)	133
CBRS RRH-RT4401-48A (Verizon)	160	RRUS-32 (ATI)	133
RF44384-25A (B2B66A RRH) (Verizon - Proposed)	160	RRUS-32 (ATI)	133
RF44400-13A (B5B13 RRH) (Verizon - Proposed)	160	RRUS-32 B66 (ATI)	133
JAHH-65B-R3B Panel Antenna (Verizon)	160	RRUS-32 (ATI)	133
JAHH-65B-R3B Panel Antenna (Verizon)	160	RRUS-32 (ATI)	133
XXOWMM-12.5-65-8T-CBRS Panel (Verizon)	160	4478 B14 (ATI)	133
MT6407-77A (Verizon - Proposed)	160	4478 B14 (ATI)	133
CBCT8T-DS-43-2X Diplexer (Verizon)	160	4478 B14 (ATI)	133
B2B66A RRH (Verizon)	160	4449 B5B12 (ATI)	133
B5B13 RRH (Verizon)	160	4449 B5B12 (ATI)	133
CBRS RRH-RT4401-48A (Verizon)	160	4449 B5B12 (ATI)	133
JAHH-65B-R3B Panel Antenna (Verizon)	160	DCS-48-60-18-8F (Squid) Suppressor (ATI)	133
JAHH-65B-R3B Panel Antenna (Verizon)	160	DCS-48-60-18-8F (Squid) Suppressor (ATI)	133
JAHH-65B-R3B Panel Antenna (Verizon)	160	DCS (ATI)	133
XXOWMM-12.5-65-8T-CBRS Panel (Verizon)	160	SitePro VFA14-10 (ATI)	133
MT6407-77A (Verizon - Proposed)	160	SitePro VFA14-10 (ATI)	133
CBCT8T-DS-43-2X Diplexer (Verizon)	160	SitePro VFA14-10 (ATI)	133
B2B66A RRH (Verizon)	160	RRUS-11 (T-Mobile)	125
B5B13 RRH (Verizon)	160	RRUS-11 (T-Mobile)	125
CBRS RRH-RT4401-48A (Verizon)	160	RRUS-11 (T-Mobile)	125
DB-T142-9AB-02 Distribution Box (Verizon)	160	AR21 B2AB4P (T-Mobile)	125
(2) BSF0020F3V1-1 (Verizon - Proposed)	160	AR21 B2AB4P (T-Mobile)	125
(2) BSF0020F3V1-1 (Verizon - Proposed)	160	AR21 B2AB4P (T-Mobile)	125
(2) BSF0020F3V1-1 (Verizon - Proposed)	160	LNK 6515DS (T-Mobile)	125
ROHN 6x15 Boom Gate (1) (Verizon)	160	LNK 6515DS (T-Mobile)	125
ROHN 6x15 Boom Gate (1) (Verizon)	160	LNK 6515DS (T-Mobile)	125
MX06FRO640-02 (Verizon - Proposed)	160	LTF12-372 Sector Mount (1) (T-Mobile)	125
MX06FRO640-02 (Verizon - Proposed)	160	LTF12-372 Sector Mount (1) (T-Mobile)	125
MX06FRO640-02 (Verizon - Proposed)	160	LTF12-372 Sector Mount (1) (T-Mobile)	125
XXOWMM-12.5-65-8T-CBRS Panel (Verizon)	160	AR21 B4AB2P (T-Mobile)	125
MT6407-77A (Verizon - Proposed)	160	AR21 B4AB2P (T-Mobile)	125
MX06FRO640-02 (Verizon - Proposed)	160	AR21 B4AB2P (T-Mobile)	125
MX06FRO640-02 (Verizon - Proposed)	160	AR21 B4AB2P (T-Mobile)	125
MX06FRO640-02 (Verizon - Proposed)	160	Generic Twin TMA unit (T-Mobile)	125
ROHN 6x15 Boom Gate (1) (Verizon)	160	Generic Twin TMA unit (T-Mobile)	125
QD6616-7 (ATI)	133	Generic Twin TMA unit (T-Mobile)	125
AR6419 (ATI)	133	ANT 150D (CSP - 1-Bay Dipole)	113
AR6449 (ATI)	133	# Standoff (DNK-1 / GPS)	60
DMP66R-BURD (ATI)	133	GPS (DNK-1 / GPS)	60

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A572-42	42 ksi	60 ksi

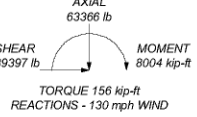
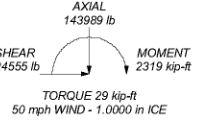
TOWER DESIGN NOTES

1. Tower designed for Exposure C to the TIA-222-H Standard.
2. Tower designed for a 130 mph basic wind in accordance with the TIA-222-H Standard.
3. Tower is also designed for a 50 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 60 mph wind.
5. Tower Risk Category IV.
6. Topographic Category 1 with Crest Height of 0.00 ft.
7. P-Delta for analysis does not apply for this case - TIA-222-H Section 3.5
8. TOWER RATING: 90.6%

ALL REACTIONS ARE FACTORED

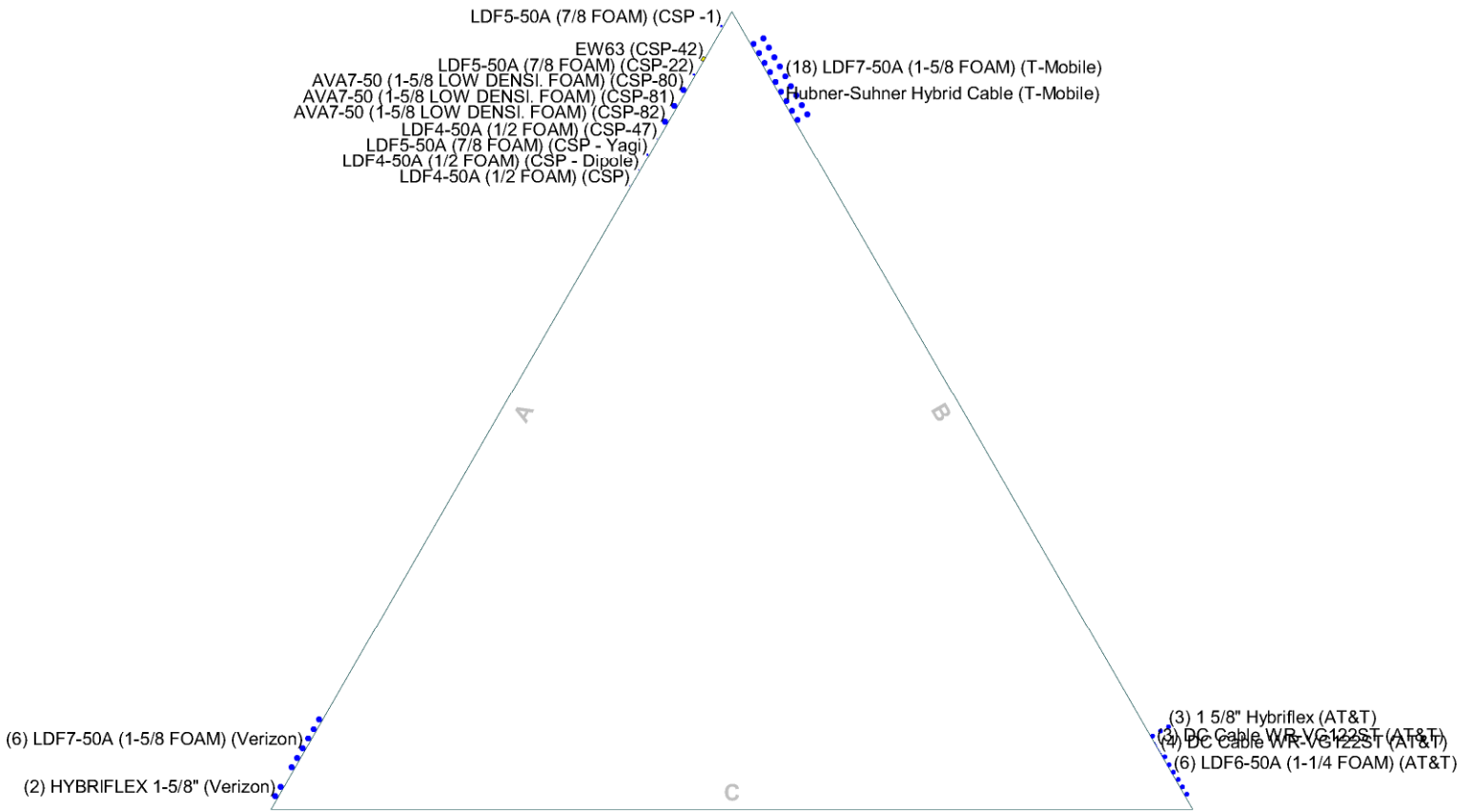
MAX. CORNER REACTIONS AT BASE:
DOWN: 355057 lb
SHEAR: 51495 lb

UPLIFT: -311216 lb
SHEAR: 47092 lb



Feed Line Plan

— Round
 — Flat
 — App In Face
 — App Out Face

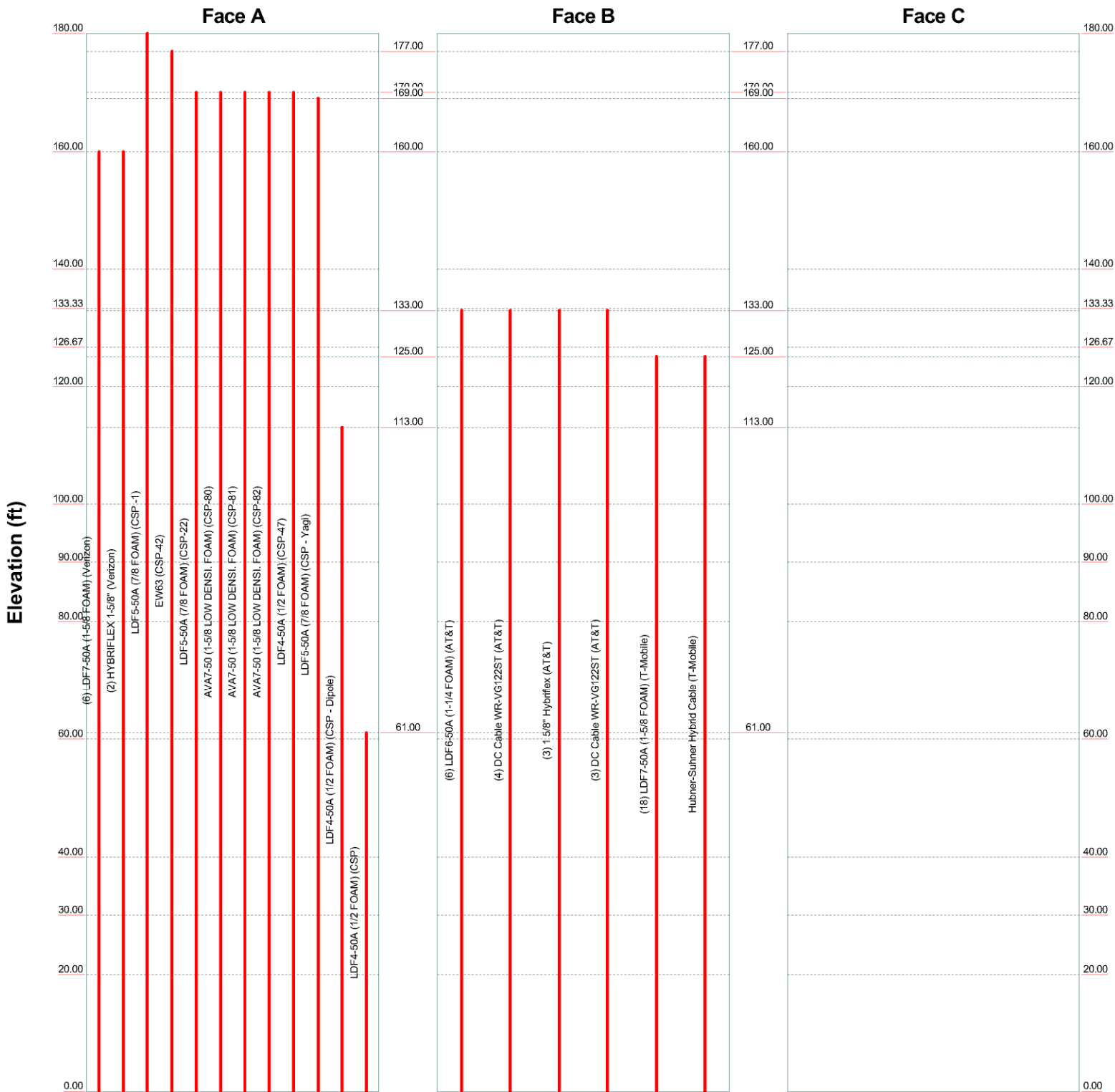


Centek Engineering Inc. 63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587		Job: 22027.01 - Westport			
		Project: 180-ft Lattice Tower (CSP #32)			
Client:	Verizon	Drawn by:	TJL	App'd:	
Code:	TIA-222-H	Date:	09/20/22	Scale:	NTS
Path:		Dwg No.:	E-7		

Feed Line Distribution Chart

0' - 180'

— Round
 — Flat
 — App In Face
 — App Out Face
 — Truss Leg



Centek Engineering Inc.		
63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587		
Job: 22027.01 - Westport		
Project: 180-ft Lattice Tower (CSP #32)		
Client: Verizon	Drawn by: T.JL	App'd:
Code: TIA-222-H	Date: 09/20/22	Scale: NTS
Path:		Dwg No. E-7

tnxTower Centek Engineering Inc. 63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587	Job 22027.01 - Westport	Page 1 of 71
	Project 180-ft Lattice Tower (CSP #32)	Date 07:59:09 09/20/22
	Client Verizon	Designed by TJL

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 8.54 ft at the top and 27.68 ft at the base.

This tower is designed using the TIA-222-H standard.

The following design criteria apply:

Tower base elevation above sea level: 0.00 ft.

Basic wind speed of 130 mph.

Risk Category IV.

Exposure Category C.

Simplified Topographic Factor Procedure for wind speed-up calculations is used.

Topographic Category: 1.

Crest Height: 0.00 ft.

Nominal ice thickness of 1.0000 in.

Ice thickness is considered to increase with height.

Ice density of 56 pcf.

A wind speed of 50 mph is used in combination with ice.

Deflections calculated using a wind speed of 60 mph.

P-Delta for analysis does not apply for this case - TIA-222-H Section 3.5.

Pressures are calculated at each section.

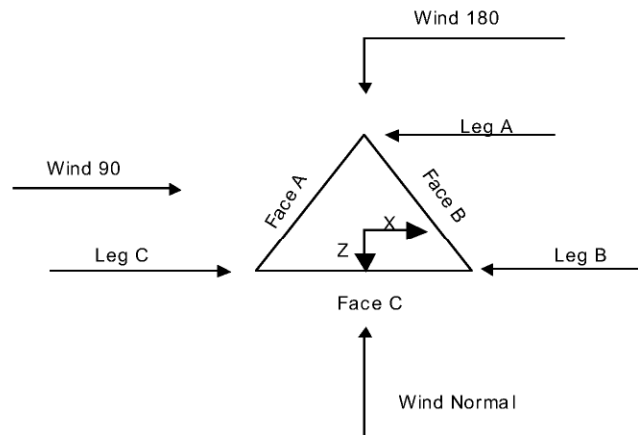
Stress ratio used in tower member design is 1.

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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tnxTower Centek Engineering Inc. 63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587	Job 22027.01 - Westport	Page 2 of 71
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Triangular Tower

Tower Section Geometry

Tower Section	Tower Elevation	Assembly Database	Description	Section Width	Number of Sections	Section Length
	<i>ft</i>			<i>ft</i>		<i>ft</i>
T1	180.00-160.00			8.54	1	20.00
T2	160.00-140.00			8.63	1	20.00
T3	140.00-133.33			10.71	1	6.67
T4	133.33-126.67			11.40	1	6.67
T5	126.67-120.00			12.10	1	6.67
T6	120.00-100.00			12.79	1	20.00
T7	100.00-90.00			15.04	1	10.00
T8	90.00-80.00			16.36	1	10.00
T9	80.00-60.00			17.68	1	20.00
T10	60.00-40.00			20.18	1	20.00
T11	40.00-30.00			22.68	1	10.00
T12	30.00-20.00			23.93	1	10.00
T13	20.00-0.00			25.18	1	20.00

Tower Section Geometry (cont'd)

Tower Section	Tower Elevation	Diagonal Spacing	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset	Bottom Girt Offset
	<i>ft</i>	<i>ft</i>				<i>in</i>	<i>in</i>
T1	180.00-160.00	6.67	K Brace Down	No	Yes	0.0000	0.0000
T2	160.00-140.00	6.67	K Brace Down	No	Yes	0.0000	0.0000

tnxTower Centek Engineering Inc. 63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587	Job	22027.01 - Westport	Page	3 of 71
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	Client	Verizon	Designed by	TJL

Tower Section	Tower Elevation <i>ft</i>	Diagonal Spacing <i>ft</i>	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset <i>in</i>	Bottom Girt Offset <i>in</i>
T3	140.00-133.33	6.67	K Brace Down	No	Yes	0.0000	0.0000
T4	133.33-126.67	6.67	K Brace Down	No	Yes	0.0000	0.0000
T5	126.67-120.00	6.67	K Brace Down	No	Yes	0.0000	0.0000
T6	120.00-100.00	10.00	K Brace Down	No	Yes	0.0000	0.0000
T7	100.00-90.00	10.00	K Brace Down	No	Yes	0.0000	0.0000
T8	90.00-80.00	10.00	K Brace Down	No	Yes	0.0000	0.0000
T9	80.00-60.00	10.00	K Brace Down	No	Yes	0.0000	0.0000
T10	60.00-40.00	10.00	K Brace Down	No	Yes	0.0000	0.0000
T11	40.00-30.00	10.00	K Brace Down	No	Yes	0.0000	0.0000
T12	30.00-20.00	10.00	K Brace Down	No	Yes	0.0000	0.0000
T13	20.00-0.00	20.00	K1 Down	No	Yes	0.0000	0.0000

Tower Section Geometry (cont'd)

Tower Elevation <i>ft</i>	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
T1 180.00-160.00	Pipe	ROHN 3 STD	A572-50 (50 ksi)	Pipe	ROHN 2 STD	A572-50 (50 ksi)
T2 160.00-140.00	Pipe	ROHN 4 STD	A572-50 (50 ksi)	Pipe	ROHN 2 STD	A572-50 (50 ksi)
T3 140.00-133.33	Pipe	ROHN 5 EH	A572-50 (50 ksi)	Pipe	ROHN 2 EH	A572-50 (50 ksi)
T4 133.33-126.67	Pipe	ROHN 5 EH	A572-50 (50 ksi)	Pipe	ROHN 2 EH	A572-50 (50 ksi)
T5 126.67-120.00	Pipe	ROHN 5 EH	A572-50 (50 ksi)	Pipe	ROHN 2 XXS	A572-50 (50 ksi)
T6 120.00-100.00	Pipe	ROHN 6 EHS	A572-50 (50 ksi)	Pipe	Pipe 2.5 XXS	A572-50 (50 ksi)
T7 100.00-90.00	Pipe	ROHN 6 EH	A572-50 (50 ksi)	Pipe	ROHN 3 STD	A572-50 (50 ksi)
T8 90.00-80.00	Pipe	ROHN 6 EH	A572-50 (50 ksi)	Pipe	ROHN 3 STD	A572-50 (50 ksi)
T9 80.00-60.00	Arbitrary Shape	120deg_9.6250x0.375 BU on ROHN 8 EHS	A572-50 (50 ksi)	Pipe	ROHN 3 STD	A572-50 (50 ksi)
T10 60.00-40.00	Arbitrary Shape	1/3 9.6250x0.375 on ROHN 8 EHS Leg Pipe	A572-42 (42 ksi)	Pipe	ROHN 3 EH	A572-50 (50 ksi)
T11 40.00-30.00	Arbitrary Shape	1/3 9.6250x0.375 on ROHN 8 EHS Leg Pipe	A572-42 (42 ksi)	Pipe	ROHN 3 EH	A572-50 (50 ksi)
T12 30.00-20.00	Arbitrary Shape	1/3 9.6250x0.375 on ROHN 8 EHS Leg Pipe	A572-42 (42 ksi)	Pipe	ROHN 3 EH	A572-50 (50 ksi)
T13 20.00-0.00	Arbitrary Shape	1/3 9.6250x0.375 on ROHN 8 EH Leg Pipe	A572-42 (42 ksi)	Pipe	ROHN 3 EH	A572-50 (50 ksi)

Tower Section Geometry (cont'd)

Tower Elevation <i>ft</i>	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
T4 133.33-126.67	Pipe	ROHN 2 STD	A572-50 (50 ksi)	Solid Round		A36 (36 ksi)
T5 126.67-120.00	Pipe	ROHN 2 STD	A572-50	Solid Round		A36

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<i>Tower Elevation</i> <i>ft</i>	<i>Top Girt Type</i>	<i>Top Girt Size</i>	<i>Top Girt Grade</i>	<i>Bottom Girt Type</i>	<i>Bottom Girt Size</i>	<i>Bottom Girt Grade</i>
T8 90.00-80.00	Pipe	ROHN 2 STD	(50 ksi) A572-50	Single Angle		(36 ksi) A36
T12 30.00-20.00	Pipe	ROHN 2.5 EH	(50 ksi) A572-50 (50 ksi)	Single Angle		(36 ksi) A36 (36 ksi)

Tower Section Geometry (cont'd)

<i>Tower Elevation</i> <i>ft</i>	<i>No. of Mid Girts</i>	<i>Mid Girt Type</i>	<i>Mid Girt Size</i>	<i>Mid Girt Grade</i>	<i>Horizontal Type</i>	<i>Horizontal Size</i>	<i>Horizontal Grade</i>
T1 180.00-160.00	None	Flat Bar		A36 (36 ksi)	Pipe	ROHN 1.5 STD	A572-50 (50 ksi)
T2 160.00-140.00	None	Flat Bar		A36 (36 ksi)	Pipe	ROHN 1.5 STD	A572-50 (50 ksi)
T3 140.00-133.33	None	Flat Bar		A36 (36 ksi)	Pipe	ROHN 2 STD	A572-50 (50 ksi)
T4 133.33-126.67	None	Flat Bar		A36 (36 ksi)	Pipe	ROHN 2 STD	A572-50 (50 ksi)
T5 126.67-120.00	None	Flat Bar		A36 (36 ksi)	Pipe	ROHN 2 STD	A572-50 (50 ksi)
T6 120.00-100.00	None	Single Angle		A36 (36 ksi)	Pipe	ROHN 2 STD	A572-50 (50 ksi)
T7 100.00-90.00	None	Flat Bar		A36 (36 ksi)	Pipe	ROHN 2 STD	A572-50 (50 ksi)
T8 90.00-80.00	None	Flat Bar		A36 (36 ksi)	Pipe	ROHN 2 STD	A572-50 (50 ksi)
T9 80.00-60.00	None	Flat Bar		A36 (36 ksi)	Pipe	ROHN 2.5 STD	A572-50 (50 ksi)
T10 60.00-40.00	None	Single Angle		A36 (36 ksi)	Pipe	ROHN 2.5 STD	A572-50 (50 ksi)
T11 40.00-30.00	None	Flat Bar		A36 (36 ksi)	Pipe	ROHN 2.5 STD	A572-50 (50 ksi)
T12 30.00-20.00	None	Flat Bar		A36 (36 ksi)	Pipe	ROHN 2.5 STD	A572-50 (50 ksi)
T13 20.00-0.00	None	Flat Bar		A36 (36 ksi)	Pipe	P3.5x.226	A572-50 (50 ksi)

Tower Section Geometry (cont'd)

<i>Tower Elevation</i> <i>ft</i>	<i>Secondary Horizontal Type</i>	<i>Secondary Horizontal Size</i>	<i>Secondary Horizontal Grade</i>	<i>Inner Bracing Type</i>	<i>Inner Bracing Size</i>	<i>Inner Bracing Grade</i>
T1 180.00-160.00	Solid Round		A36 (36 ksi)	Single Angle	L2x2x1/8	A36 (36 ksi)
T2 160.00-140.00	Solid Round		A36 (36 ksi)	Single Angle	L2x2x1/8	A36 (36 ksi)
T3 140.00-133.33	Solid Round		A36 (36 ksi)	Single Angle	L2x2x1/8	A36 (36 ksi)

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Tower Elevation	Secondary Horizontal Type	Secondary Horizontal Size	Secondary Horizontal Grade	Inner Bracing Type	Inner Bracing Size	Inner Bracing Grade
<i>ft</i>						
T4 133.33-126.67	Solid Round		A36 (36 ksi)	Single Angle	L2x2x1/8	A36 (36 ksi)
T5 126.67-120.00	Solid Round		A36 (36 ksi)	Single Angle	L2x2x1/8	A36 (36 ksi)
T6 120.00-100.00	Single Angle		A36 (36 ksi)	Single Angle	L2 1/2x2 1/2x3/16	A36 (36 ksi)
T7 100.00-90.00	Solid Round		A36 (36 ksi)	Single Angle	L2 1/2x2 1/2x3/16	A36 (36 ksi)
T8 90.00-80.00	Solid Round		A36 (36 ksi)	Single Angle	L2 1/2x2 1/2x3/16	A36 (36 ksi)
T9 80.00-60.00	Solid Round		A36 (36 ksi)	Single Angle	L3x3x3/16	A36 (36 ksi)
T10 60.00-40.00	Single Angle		A36 (36 ksi)	Single Angle	L3 1/2x3 1/2x1/4	A572-50 (50 ksi)
T11 40.00-30.00	Single Angle		A572-50 (50 ksi)	Single Angle	L3 1/2x3 1/2x1/4	A572-50 (50 ksi)
T12 30.00-20.00	Single Angle		A572-50 (50 ksi)	Single Angle	L3 1/2x3 1/2x1/4	A572-50 (50 ksi)
T13 20.00-0.00	Solid Round		A36 (36 ksi)	Pipe	ROHN 2 STD	A572-50 (50 ksi)

Tower Section Geometry (cont'd)

Tower Elevation	Redundant Bracing Grade	Redundant Type	Redundant Size	K Factor
<i>ft</i>				
T13 20.00-0.00	A572-50 (50 ksi)	Horizontal (1) Diagonal (1) Hip (1)	Pipe Pipe Pipe	ROHN 1.5 STD ROHN 2 STD ROHN 2.5 STD
				1 1 1

Tower Section Geometry (cont'd)

Tower Elevation	Gusset Area (per face)	Gusset Thickness	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals	Double Angle Stitch Bolt Spacing Horizontals	Double Angle Stitch Bolt Spacing Redundants
<i>ft</i>	<i>ft²</i>	<i>in</i>					<i>in</i>	<i>in</i>	<i>in</i>
T1 180.00-160.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
T2 160.00-140.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
T3 140.00-133.33	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
T4 133.33-126.67	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
T5 126.67-120.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
T6 120.00-100.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
T7 100.00-90.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000

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Tower Elevation	Gusset Area (per face)	Gusset Thickness	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
ft	ft ²	in							
T8 90.00-80.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
T9 80.00-60.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
T10 60.00-40.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
T11 40.00-30.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
T12 30.00-20.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
T13 20.00-0.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000

Tower Section Geometry (cont'd)

Tower Elevation	Calc K Single Angles	Calc K Solid Rounds	K Factors ¹								
			Legs	X Brace Diags	K Brace Diags	Single Diags	Girts	Horiz.	Sec. Horiz.	Inner Brace	
			X	X	X	X	X	X	X	X	
T1 180.00-160.00	Yes	Yes	1	1	1	1	1	1	1	1	1
T2 160.00-140.00	Yes	Yes	1	1	1	1	1	1	1	1	1
T3 140.00-133.33	Yes	Yes	1	1	1	1	1	1	1	1	1
T4 133.33-126.67	Yes	Yes	1	1	1	1	1	1	1	1	1
T5 126.67-120.00	Yes	Yes	1	1	1	1	1	1	1	1	1
T6 120.00-100.00	Yes	Yes	1	1	1	1	1	1	1	1	1
T7 100.00-90.00	Yes	Yes	1	1	1	1	1	1	1	1	1
T8 90.00-80.00	Yes	Yes	1	1	1	1	1	1	1	1	1
T9 80.00-60.00	Yes	Yes	1	1	1	1	1	1	1	1	1
T10 60.00-40.00	Yes	Yes	1	1	1	1	1	1	1	1	1
T11 40.00-30.00	Yes	Yes	1	1	1	1	1	1	1	1	1
T12 30.00-20.00	Yes	Yes	1	1	1	1	1	1	1	1	1
T13 20.00-0.00	Yes	Yes	1	1	0.5	1	1	1	1	1	1

¹Note: K factors are applied to member segment lengths. K-braces without inner supporting members will have the K factor in the out-of-plane direction applied to the overall length.

Tower Section Geometry (cont'd)

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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.
T8 90.00-80.00	Flange	1.0000	0	0.6250	3	0.6250	2	0.6250	0	0.6250	0	0.6250	2	0.6250	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T9 80.00-60.00	Flange	1.0000	8	0.6250	3	0.6250	2	0.6250	0	0.6250	0	0.6250	2	0.6250	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T10 60.00-40.00	Flange	1.0000	8	0.6250	3	0.6250	2	0.6250	0	0.6250	0	0.6250	2	0.6250	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T11 40.00-30.00	Flange	1.0000	8	0.6250	3	0.6250	2	0.6250	0	0.6250	0	0.6250	2	0.6250	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T12 30.00-20.00	Flange	1.0000	0	0.6250	3	0.6250	2	0.6250	0	0.6250	0	0.6250	2	0.6250	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T13 20.00-0.00	Flange	1.0000	8	0.6250	3	0.6250	2	0.6250	0	0.6250	0	0.7500	2	0.6250	0
		A325N		A325X		A325N		A325N		A325N		A325N		A325N	

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
* LDF6-50A (1-1/4 FOAM) (AT&T)	B	No	No	Ar (CaAa)	133.00 - 0.00	0.0000	0.46	6	6	1.5500	1.5500		0.66
DC Cable WR-VG122S T (AT&T)	B	No	No	Ar (CaAa)	133.00 - 0.00	0.0000	0.43	4	4	0.4000	0.4000		0.25
1 5/8" Hybriflex (AT&T)	B	No	No	Ar (CaAa)	133.00 - 0.00	0.0000	0.41	3	1	1.6250	1.6250		1.13
DC Cable WR-VG122S T (AT&T)	B	No	No	Ar (CaAa)	133.00 - 0.00	0.0000	0.42	3	3	0.4000	0.4000		0.25
* LDF7-50A (1-5/8 FOAM) (T-Mobile)	B	No	No	Ar (CaAa)	125.00 - 0.00	0.0000	-0.41	18	9	1.9800	1.9800		0.82
Hubner-Suhner Hybrid Cable (T-Mobile)	B	No	No	Ar (CaAa)	125.00 - 0.00	0.0000	-0.385	1	1	0.7087	0.7087		0.48
* LDF7-50A (1-5/8 FOAM) (Verizon)	A	No	No	Ar (CaAa)	160.00 - 0.00	0.0000	-0.42	6	6	1.9800	1.9800		0.82
HYBRIFLEX 1-5/8" (Verizon)	A	No	No	Ar (CaAa)	160.00 - 0.00	0.0000	-0.48	2	2	1.9800	1.9800		1.90
* LDF5-50A (7/8 FOAM) (CSP -1)	A	No	No	Ar (CaAa)	180.00 - 0.00	0.0000	0.48	1	1	1.0900	1.0900		0.33
EW63 (CSP-42)	A	No	No	Af (CaAa)	177.00 - 0.00	0.0000	0.44	1	1	1.5742	1.5742		0.51

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	Client	Verizon	Designed by	TJL

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
LDF5-50A (7/8 FOAM) (CSP-22)	A	No	No	Ar (CaAa)	170.00 - 0.00	0.0000	0.42	1	1	1.0900	1.0900		0.33
AVA7-50 (1-5/8 LOW DENS. FOAM) (CSP-80)	A	No	No	Ar (CaAa)	170.00 - 0.00	0.0000	0.4	1	1	1.9800	1.9800		0.72
AVA7-50 (1-5/8 LOW DENS. FOAM) (CSP-81)	A	No	No	Ar (CaAa)	170.00 - 0.00	0.0000	0.38	1	1	1.9800	1.9800		0.72
AVA7-50 (1-5/8 LOW DENS. FOAM) (CSP-82)	A	No	No	Ar (CaAa)	170.00 - 0.00	0.0000	0.36	1	1	1.9800	1.9800		0.72
LDF4-50A (1/2 FOAM) (CSP-47)	A	No	No	Ar (CaAa)	170.00 - 0.00	0.0000	0.34	1	1	0.6300	0.6300		0.15
LDF5-50A (7/8 FOAM) (CSP - Yagi)	A	No	No	Ar (CaAa)	169.00 - 0.00	0.0000	0.32	1	1	1.0900	1.0900		0.33
LDF4-50A (1/2 FOAM) (CSP - Dipole)	A	No	No	Ar (CaAa)	113.00 - 0.00	0.0000	0.3	1	1	0.6300	0.6300		0.15
LDF4-50A (1/2 FOAM) (CSP)	A	No	No	Ar (CaAa)	61.00 - 0.00	0.0000	0.28	1	1	0.6300	0.6300		0.15

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft ²	A_F ft ²	C_{AA} In Face ft ²	C_{AA} Out Face ft ²	Weight lb
T1	180.00-160.00	A	0.000	0.000	15.281	0.000	44.64
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00
T2	160.00-140.00	A	0.000	0.000	56.607	0.000	250.60
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00
T3	140.00-133.33	A	0.000	0.000	18.869	0.000	83.53
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00
T4	133.33-126.67	A	0.000	0.000	18.869	0.000	83.53
		B	0.000	0.000	10.751	0.000	57.63
		C	0.000	0.000	0.000	0.000	0.00
T5	126.67-120.00	A	0.000	0.000	18.869	0.000	83.53
		B	0.000	0.000	29.491	0.000	136.87
		C	0.000	0.000	0.000	0.000	0.00
T6	120.00-100.00	A	0.000	0.000	57.426	0.000	252.55
		B	0.000	0.000	106.647	0.000	486.82
		C	0.000	0.000	0.000	0.000	0.00
T7	100.00-90.00	A	0.000	0.000	28.934	0.000	126.80
		B	0.000	0.000	53.324	0.000	243.41

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Tower Section	Tower Elevation ft	Face	A_R ft ²	A_F ft ²	C_{AA} In Face ft ²	C_{AA} Out Face ft ²	Weight lb
T8	90.00-80.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	28.934	0.000	126.80
		B	0.000	0.000	53.324	0.000	243.41
T9	80.00-60.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	57.930	0.000	253.75
		B	0.000	0.000	106.647	0.000	486.82
T10	60.00-40.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	59.127	0.000	256.60
		B	0.000	0.000	106.647	0.000	486.82
T11	40.00-30.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	29.564	0.000	128.30
		B	0.000	0.000	53.324	0.000	243.41
T12	30.00-20.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	29.564	0.000	128.30
		B	0.000	0.000	53.324	0.000	243.41
T13	20.00-0.00	C	0.000	0.000	0.000	0.000	0.00
		A	0.000	0.000	59.127	0.000	256.60
		B	0.000	0.000	106.647	0.000	486.82
		C	0.000	0.000	0.000	0.000	0.00

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_{AA} In Face ft ²	C_{AA} Out Face ft ²	Weight lb
T1	180.00-160.00	A	1.473	0.000	0.000	43.556	0.000	552.25
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00
T2	160.00-140.00	A	1.454	0.000	0.000	159.660	0.000	2085.47
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00
T3	140.00-133.33	A	1.441	0.000	0.000	53.019	0.000	688.56
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00
T4	133.33-126.67	A	1.434	0.000	0.000	52.912	0.000	685.06
		B		0.000	0.000	35.372	0.000	409.25
		C		0.000	0.000	0.000	0.000	0.00
T5	126.67-120.00	A	1.426	0.000	0.000	52.800	0.000	681.39
		B		0.000	0.000	62.421	0.000	1030.05
		C		0.000	0.000	0.000	0.000	0.00
T6	120.00-100.00	A	1.410	0.000	0.000	162.161	0.000	2068.23
		B		0.000	0.000	211.927	0.000	3664.81
		C		0.000	0.000	0.000	0.000	0.00
T7	100.00-90.00	A	1.389	0.000	0.000	81.789	0.000	1031.26
		B		0.000	0.000	105.592	0.000	1815.50
		C		0.000	0.000	0.000	0.000	0.00
T8	90.00-80.00	A	1.374	0.000	0.000	81.415	0.000	1019.60
		B		0.000	0.000	105.313	0.000	1802.90
		C		0.000	0.000	0.000	0.000	0.00
T9	80.00-60.00	A	1.348	0.000	0.000	161.878	0.000	2002.79
		B		0.000	0.000	209.670	0.000	3562.69
		C		0.000	0.000	0.000	0.000	0.00
T10	60.00-40.00	A	1.303	0.000	0.000	165.850	0.000	1997.61
		B		0.000	0.000	208.057	0.000	3490.53
		C		0.000	0.000	0.000	0.000	0.00
T11	40.00-30.00	A	1.257	0.000	0.000	81.724	0.000	963.64
		B		0.000	0.000	103.204	0.000	1708.73
		C		0.000	0.000	0.000	0.000	0.00

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Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft ²	A_F ft ²	C_{AA} In Face ft ²	C_{AA} Out Face ft ²	Weight lb
T12	30.00-20.00	A	1.216	0.000	0.000	80.630	0.000	932.13
		B		0.000	0.000	102.454	0.000	1675.79
		C		0.000	0.000	0.000	0.000	0.00
T13	20.00-0.00	A	1.109	0.000	0.000	155.667	0.000	1707.74
		B		0.000	0.000	201.077	0.000	3186.11
		C		0.000	0.000	0.000	0.000	0.00

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	-1.5005	-14.6984	-2.0239	-19.4249
T2	160.00-140.00	-19.2261	-5.8802	-22.3942	-7.1105
T3	140.00-133.33	-20.7297	-6.3241	-24.4956	-7.6882
T4	133.33-126.67	-0.9036	2.5057	1.9677	3.9670
T5	126.67-120.00	2.5174	-19.0690	4.1563	-9.2563
T6	120.00-100.00	3.2460	-26.5320	4.6460	-14.7005
T7	100.00-90.00	3.4157	-29.1515	4.9461	-16.4661
T8	90.00-80.00	3.5982	-31.2503	5.2579	-17.6228
T9	80.00-60.00	3.0360	-28.2742	5.1605	-18.0447
T10	60.00-40.00	3.1578	-31.6009	5.2490	-20.8454
T11	40.00-30.00	3.3326	-33.8440	5.5575	-22.2257
T12	30.00-20.00	3.4480	-35.3197	5.7449	-23.0835
T13	20.00-0.00	3.6793	-38.1466	6.0416	-24.4884

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T1	17	LDF5-50A (7/8 FOAM)	160.00 - 180.00	1.0000	1.0000
T1	19	EW63	160.00 - 177.00	1.0000	1.0000
T1	20	LDF5-50A (7/8 FOAM)	160.00 - 170.00	1.0000	1.0000
T1	21	AVA7-50 (1-5/8 LOW DENS. FOAM)	160.00 - 170.00	1.0000	1.0000
T1	22	AVA7-50 (1-5/8 LOW DENS. FOAM)	160.00 - 170.00	1.0000	1.0000
T1	23	AVA7-50 (1-5/8 LOW DENS. FOAM)	160.00 - 170.00	1.0000	1.0000
T1	24	LDF4-50A (1/2 FOAM)	160.00 - 170.00	1.0000	1.0000
T1	25	LDF5-50A (7/8 FOAM)	160.00 - 169.00	1.0000	1.0000
T2	14	LDF7-50A (1-5/8 FOAM)	140.00 - 160.00	1.0000	1.0000
T2	15	HYBRIFLEX 1-5/8"	140.00 - 160.00	1.0000	1.0000
T2	17	LDF5-50A (7/8 FOAM)	140.00 -	1.0000	1.0000

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Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
			160.00		
T2	19	EW63	140.00 -	1.0000	1.0000
			160.00		
T2	20	LDF5-50A (7/8 FOAM)	140.00 -	1.0000	1.0000
			160.00		
T2	21	AVA7-50 (1-5/8 LOW DENS. FOAM)	140.00 -	1.0000	1.0000
			160.00		
T2	22	AVA7-50 (1-5/8 LOW DENS. FOAM)	140.00 -	1.0000	1.0000
			160.00		
T2	23	AVA7-50 (1-5/8 LOW DENS. FOAM)	140.00 -	1.0000	1.0000
			160.00		
T2	24	LDF4-50A (1/2 FOAM)	140.00 -	1.0000	1.0000
			160.00		
T2	25	LDF5-50A (7/8 FOAM)	140.00 -	1.0000	1.0000
			160.00		
T3	14	LDF7-50A (1-5/8 FOAM)	133.33 -	1.0000	1.0000
			140.00		
T3	15	HYBRIFLEX 1-5/8"	133.33 -	1.0000	1.0000
			140.00		
T3	17	LDF5-50A (7/8 FOAM)	133.33 -	1.0000	1.0000
			140.00		
T3	19	EW63	133.33 -	1.0000	1.0000
			140.00		
T3	20	LDF5-50A (7/8 FOAM)	133.33 -	1.0000	1.0000
			140.00		
T3	21	AVA7-50 (1-5/8 LOW DENS. FOAM)	133.33 -	1.0000	1.0000
			140.00		
T3	22	AVA7-50 (1-5/8 LOW DENS. FOAM)	133.33 -	1.0000	1.0000
			140.00		
T3	23	AVA7-50 (1-5/8 LOW DENS. FOAM)	133.33 -	1.0000	1.0000
			140.00		
T3	24	LDF4-50A (1/2 FOAM)	133.33 -	1.0000	1.0000
			140.00		
T3	25	LDF5-50A (7/8 FOAM)	133.33 -	1.0000	1.0000
			140.00		
T4	2	LDF6-50A (1-1/4 FOAM)	126.67 -	1.0000	1.0000
			133.00		
T4	3	DC Cable WR-VG122ST	126.67 -	1.0000	1.0000
			133.00		
T4	4	1 5/8" Hybriflex	126.67 -	1.0000	1.0000
			133.00		
T4	6	DC Cable WR-VG122ST	126.67 -	1.0000	1.0000
			133.00		
T4	14	LDF7-50A (1-5/8 FOAM)	126.67 -	1.0000	1.0000
			133.33		
T4	15	HYBRIFLEX 1-5/8"	126.67 -	1.0000	1.0000
			133.33		
T4	17	LDF5-50A (7/8 FOAM)	126.67 -	1.0000	1.0000
			133.33		
T4	19	EW63	126.67 -	1.0000	1.0000
			133.33		
T4	20	LDF5-50A (7/8 FOAM)	126.67 -	1.0000	1.0000
			133.33		
T4	21	AVA7-50 (1-5/8 LOW DENS. FOAM)	126.67 -	1.0000	1.0000
			133.33		
T4	22	AVA7-50 (1-5/8 LOW DENS. FOAM)	126.67 -	1.0000	1.0000
			133.33		
T4	23	AVA7-50 (1-5/8 LOW DENS. FOAM)	126.67 -	1.0000	1.0000
			133.33		
T4	24	LDF4-50A (1/2 FOAM)	126.67 -	1.0000	1.0000
			133.33		
T4	25	LDF5-50A (7/8 FOAM)	126.67 -	1.0000	1.0000

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	Project 180-ft Lattice Tower (CSP #32)	Date 07:59:09 09/20/22
	Client Verizon	Designed by TJL

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
			133.33		
T5	2	LDF6-50A (1-1/4 FOAM)	120.00 - 126.67	1.0000	1.0000
T5	3	DC Cable WR-VG122ST	120.00 - 126.67	1.0000	1.0000
T5	4	1 5/8" Hybriflex	120.00 - 126.67	1.0000	1.0000
T5	6	DC Cable WR-VG122ST	120.00 - 126.67	1.0000	1.0000
T5	10	LDF7-50A (1-5/8 FOAM)	120.00 - 125.00	1.0000	1.0000
T5	11	Hubner-Suhner Hybrid Cable	120.00 - 125.00	1.0000	1.0000
T5	14	LDF7-50A (1-5/8 FOAM)	120.00 - 126.67	1.0000	1.0000
T5	15	HYBRIFLEX 1-5/8"	120.00 - 126.67	1.0000	1.0000
T5	17	LDF5-50A (7/8 FOAM)	120.00 - 126.67	1.0000	1.0000
T5	19	EW63	120.00 - 126.67	1.0000	1.0000
T5	20	LDF5-50A (7/8 FOAM)	120.00 - 126.67	1.0000	1.0000
T5	21	AVA7-50 (1-5/8 LOW DENS. FOAM)	120.00 - 126.67	1.0000	1.0000
T5	22	AVA7-50 (1-5/8 LOW DENS. FOAM)	120.00 - 126.67	1.0000	1.0000
T5	23	AVA7-50 (1-5/8 LOW DENS. FOAM)	120.00 - 126.67	1.0000	1.0000
T5	24	LDF4-50A (1/2 FOAM)	120.00 - 126.67	1.0000	1.0000
T5	25	LDF5-50A (7/8 FOAM)	120.00 - 126.67	1.0000	1.0000
T6	2	LDF6-50A (1-1/4 FOAM)	100.00 - 120.00	1.0000	1.0000
T6	3	DC Cable WR-VG122ST	100.00 - 120.00	1.0000	1.0000
T6	4	1 5/8" Hybriflex	100.00 - 120.00	1.0000	1.0000
T6	6	DC Cable WR-VG122ST	100.00 - 120.00	1.0000	1.0000
T6	10	LDF7-50A (1-5/8 FOAM)	100.00 - 120.00	1.0000	1.0000
T6	11	Hubner-Suhner Hybrid Cable	100.00 - 120.00	1.0000	1.0000
T6	14	LDF7-50A (1-5/8 FOAM)	100.00 - 120.00	1.0000	1.0000
T6	15	HYBRIFLEX 1-5/8"	100.00 - 120.00	1.0000	1.0000
T6	17	LDF5-50A (7/8 FOAM)	100.00 - 120.00	1.0000	1.0000
T6	19	EW63	100.00 - 120.00	1.0000	1.0000
T6	20	LDF5-50A (7/8 FOAM)	100.00 - 120.00	1.0000	1.0000
T6	21	AVA7-50 (1-5/8 LOW DENS. FOAM)	100.00 - 120.00	1.0000	1.0000
T6	22	AVA7-50 (1-5/8 LOW DENS. FOAM)	100.00 - 120.00	1.0000	1.0000
T6	23	AVA7-50 (1-5/8 LOW DENS. FOAM)	100.00 - 120.00	1.0000	1.0000
T6	24	LDF4-50A (1/2 FOAM)	100.00 - 120.00	1.0000	1.0000

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Project	180-ft Lattice Tower (CSP #32)	Date	07:59:09 09/20/22
Client	Verizon	Designed by	TJL

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
			120.00		
T6	25	LDF5-50A (7/8 FOAM)	100.00 - 120.00	1.0000	1.0000
T6	26	LDF4-50A (1/2 FOAM)	100.00 - 113.00	1.0000	1.0000
T7	2	LDF6-50A (1-1/4 FOAM)	90.00 - 100.00	1.0000	1.0000
T7	3	DC Cable WR-VG122ST	90.00 - 100.00	1.0000	1.0000
T7	4	1 5/8" Hybriflex	90.00 - 100.00	1.0000	1.0000
T7	6	DC Cable WR-VG122ST	90.00 - 100.00	1.0000	1.0000
T7	10	LDF7-50A (1-5/8 FOAM)	90.00 - 100.00	1.0000	1.0000
T7	11	Hubner-Suhner Hybrid Cable	90.00 - 100.00	1.0000	1.0000
T7	14	LDF7-50A (1-5/8 FOAM)	90.00 - 100.00	1.0000	1.0000
T7	15	HYBRIFLEX 1-5/8"	90.00 - 100.00	1.0000	1.0000
T7	17	LDF5-50A (7/8 FOAM)	90.00 - 100.00	1.0000	1.0000
T7	19	EW63	90.00 - 100.00	1.0000	1.0000
T7	20	LDF5-50A (7/8 FOAM)	90.00 - 100.00	1.0000	1.0000
T7	21	AVA7-50 (1-5/8 LOW DENS. FOAM)	90.00 - 100.00	1.0000	1.0000
T7	22	AVA7-50 (1-5/8 LOW DENS. FOAM)	90.00 - 100.00	1.0000	1.0000
T7	23	AVA7-50 (1-5/8 LOW DENS. FOAM)	90.00 - 100.00	1.0000	1.0000
T7	24	LDF4-50A (1/2 FOAM)	90.00 - 100.00	1.0000	1.0000
T7	25	LDF5-50A (7/8 FOAM)	90.00 - 100.00	1.0000	1.0000
T7	26	LDF4-50A (1/2 FOAM)	90.00 - 100.00	1.0000	1.0000
T8	2	LDF6-50A (1-1/4 FOAM)	80.00 - 90.00	1.0000	1.0000
T8	3	DC Cable WR-VG122ST	80.00 - 90.00	1.0000	1.0000
T8	4	1 5/8" Hybriflex	80.00 - 90.00	1.0000	1.0000
T8	6	DC Cable WR-VG122ST	80.00 - 90.00	1.0000	1.0000
T8	10	LDF7-50A (1-5/8 FOAM)	80.00 - 90.00	1.0000	1.0000
T8	11	Hubner-Suhner Hybrid Cable	80.00 - 90.00	1.0000	1.0000
T8	14	LDF7-50A (1-5/8 FOAM)	80.00 - 90.00	1.0000	1.0000
T8	15	HYBRIFLEX 1-5/8"	80.00 - 90.00	1.0000	1.0000
T8	17	LDF5-50A (7/8 FOAM)	80.00 - 90.00	1.0000	1.0000
T8	19	EW63	80.00 - 90.00	1.0000	1.0000
T8	20	LDF5-50A (7/8 FOAM)	80.00 - 90.00	1.0000	1.0000
T8	21	AVA7-50 (1-5/8 LOW DENS. FOAM)	80.00 - 90.00	1.0000	1.0000
T8	22	AVA7-50 (1-5/8 LOW DENS. FOAM)	80.00 - 90.00	1.0000	1.0000
T8	23	AVA7-50 (1-5/8 LOW DENS. FOAM)	80.00 - 90.00	1.0000	1.0000
T8	24	LDF4-50A (1/2 FOAM)	80.00 - 90.00	1.0000	1.0000
T8	25	LDF5-50A (7/8 FOAM)	80.00 - 90.00	1.0000	1.0000
T8	26	LDF4-50A (1/2 FOAM)	80.00 - 90.00	1.0000	1.0000
T9	2	LDF6-50A (1-1/4 FOAM)	60.00 - 80.00	1.0000	1.0000
T9	3	DC Cable WR-VG122ST	60.00 - 80.00	1.0000	1.0000
T9	4	1 5/8" Hybriflex	60.00 - 80.00	1.0000	1.0000
T9	6	DC Cable WR-VG122ST	60.00 - 80.00	1.0000	1.0000
T9	10	LDF7-50A (1-5/8 FOAM)	60.00 - 80.00	1.0000	1.0000
T9	11	Hubner-Suhner Hybrid Cable	60.00 - 80.00	1.0000	1.0000
T9	14	LDF7-50A (1-5/8 FOAM)	60.00 - 80.00	1.0000	1.0000
T9	15	HYBRIFLEX 1-5/8"	60.00 - 80.00	1.0000	1.0000
T9	17	LDF5-50A (7/8 FOAM)	60.00 - 80.00	1.0000	1.0000
T9	19	EW63	60.00 - 80.00	1.0000	1.0000
T9	20	LDF5-50A (7/8 FOAM)	60.00 - 80.00	1.0000	1.0000
T9	21	AVA7-50 (1-5/8 LOW DENS. FOAM)	60.00 - 80.00	1.0000	1.0000
T9	22	AVA7-50 (1-5/8 LOW DENS. FOAM)	60.00 - 80.00	1.0000	1.0000
T9	23	AVA7-50 (1-5/8 LOW DENS. FOAM)	60.00 - 80.00	1.0000	1.0000

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	Project	180-ft Lattice Tower (CSP #32)	Date	07:59:09 09/20/22
	Client	Verizon	Designed by	TJL

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T9	24	LDF4-50A (1/2 FOAM)	60.00 - 80.00	1.0000	1.0000
T9	25	LDF5-50A (7/8 FOAM)	60.00 - 80.00	1.0000	1.0000
T9	26	LDF4-50A (1/2 FOAM)	60.00 - 80.00	1.0000	1.0000
T9	27	LDF4-50A (1/2 FOAM)	60.00 - 61.00	1.0000	1.0000
T10	2	LDF6-50A (1-1/4 FOAM)	40.00 - 60.00	1.0000	1.0000
T10	3	DC Cable WR-VG122ST	40.00 - 60.00	1.0000	1.0000
T10	4	1 5/8" Hybriflex	40.00 - 60.00	1.0000	1.0000
T10	6	DC Cable WR-VG122ST	40.00 - 60.00	1.0000	1.0000
T10	10	LDF7-50A (1-5/8 FOAM)	40.00 - 60.00	1.0000	1.0000
T10	11	Hubner-Suhner Hybrid Cable	40.00 - 60.00	1.0000	1.0000
T10	14	LDF7-50A (1-5/8 FOAM)	40.00 - 60.00	1.0000	1.0000
T10	15	HYBRIFLEX 1-5/8"	40.00 - 60.00	1.0000	1.0000
T10	17	LDF5-50A (7/8 FOAM)	40.00 - 60.00	1.0000	1.0000
T10	19	EW63	40.00 - 60.00	1.0000	1.0000
T10	20	LDF5-50A (7/8 FOAM)	40.00 - 60.00	1.0000	1.0000
T10	21	AVA7-50 (1-5/8 LOW DENS. FOAM)	40.00 - 60.00	1.0000	1.0000
T10	22	AVA7-50 (1-5/8 LOW DENS. FOAM)	40.00 - 60.00	1.0000	1.0000
T10	23	AVA7-50 (1-5/8 LOW DENS. FOAM)	40.00 - 60.00	1.0000	1.0000
T10	24	LDF4-50A (1/2 FOAM)	40.00 - 60.00	1.0000	1.0000
T10	25	LDF5-50A (7/8 FOAM)	40.00 - 60.00	1.0000	1.0000
T10	26	LDF4-50A (1/2 FOAM)	40.00 - 60.00	1.0000	1.0000
T10	27	LDF4-50A (1/2 FOAM)	40.00 - 60.00	1.0000	1.0000
T11	2	LDF6-50A (1-1/4 FOAM)	30.00 - 40.00	1.0000	1.0000
T11	3	DC Cable WR-VG122ST	30.00 - 40.00	1.0000	1.0000
T11	4	1 5/8" Hybriflex	30.00 - 40.00	1.0000	1.0000
T11	6	DC Cable WR-VG122ST	30.00 - 40.00	1.0000	1.0000
T11	10	LDF7-50A (1-5/8 FOAM)	30.00 - 40.00	1.0000	1.0000
T11	11	Hubner-Suhner Hybrid Cable	30.00 - 40.00	1.0000	1.0000
T11	14	LDF7-50A (1-5/8 FOAM)	30.00 - 40.00	1.0000	1.0000
T11	15	HYBRIFLEX 1-5/8"	30.00 - 40.00	1.0000	1.0000
T11	17	LDF5-50A (7/8 FOAM)	30.00 - 40.00	1.0000	1.0000
T11	19	EW63	30.00 - 40.00	1.0000	1.0000
T11	20	LDF5-50A (7/8 FOAM)	30.00 - 40.00	1.0000	1.0000
T11	21	AVA7-50 (1-5/8 LOW DENS. FOAM)	30.00 - 40.00	1.0000	1.0000
T11	22	AVA7-50 (1-5/8 LOW DENS. FOAM)	30.00 - 40.00	1.0000	1.0000
T11	23	AVA7-50 (1-5/8 LOW DENS. FOAM)	30.00 - 40.00	1.0000	1.0000
T11	24	LDF4-50A (1/2 FOAM)	30.00 - 40.00	1.0000	1.0000
T11	25	LDF5-50A (7/8 FOAM)	30.00 - 40.00	1.0000	1.0000
T11	26	LDF4-50A (1/2 FOAM)	30.00 - 40.00	1.0000	1.0000
T11	27	LDF4-50A (1/2 FOAM)	30.00 - 40.00	1.0000	1.0000
T12	2	LDF6-50A (1-1/4 FOAM)	20.00 - 30.00	1.0000	1.0000
T12	3	DC Cable WR-VG122ST	20.00 - 30.00	1.0000	1.0000
T12	4	1 5/8" Hybriflex	20.00 - 30.00	1.0000	1.0000
T12	6	DC Cable WR-VG122ST	20.00 - 30.00	1.0000	1.0000
T12	10	LDF7-50A (1-5/8 FOAM)	20.00 - 30.00	1.0000	1.0000
T12	11	Hubner-Suhner Hybrid Cable	20.00 - 30.00	1.0000	1.0000
T12	14	LDF7-50A (1-5/8 FOAM)	20.00 - 30.00	1.0000	1.0000
T12	15	HYBRIFLEX 1-5/8"	20.00 - 30.00	1.0000	1.0000
T12	17	LDF5-50A (7/8 FOAM)	20.00 - 30.00	1.0000	1.0000
T12	19	EW63	20.00 - 30.00	1.0000	1.0000
T12	20	LDF5-50A (7/8 FOAM)	20.00 - 30.00	1.0000	1.0000
T12	21	AVA7-50 (1-5/8 LOW DENS. FOAM)	20.00 - 30.00	1.0000	1.0000
T12	22	AVA7-50 (1-5/8 LOW DENS. FOAM)	20.00 - 30.00	1.0000	1.0000
T12	23	AVA7-50 (1-5/8 LOW DENS. FOAM)	20.00 - 30.00	1.0000	1.0000

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	Project 180-ft Lattice Tower (CSP #32)	Date 07:59:09 09/20/22
	Client Verizon	Designed by TJL

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
		DENSI. FOAM)			
T12	24	LDF4-50A (1/2 FOAM)	20.00 - 30.00	1.0000	1.0000
T12	25	LDF5-50A (7/8 FOAM)	20.00 - 30.00	1.0000	1.0000
T12	26	LDF4-50A (1/2 FOAM)	20.00 - 30.00	1.0000	1.0000
T12	27	LDF4-50A (1/2 FOAM)	20.00 - 30.00	1.0000	1.0000
T13	2	LDF6-50A (1-1/4 FOAM)	0.00 - 20.00	1.0000	1.0000
T13	3	DC Cable WR-VG122ST	0.00 - 20.00	1.0000	1.0000
T13	4	1 5/8" Hybriflex	0.00 - 20.00	1.0000	1.0000
T13	6	DC Cable WR-VG122ST	0.00 - 20.00	1.0000	1.0000
T13	10	LDF7-50A (1-5/8 FOAM)	0.00 - 20.00	1.0000	1.0000
T13	11	Hubner-Suhner Hybrid Cable	0.00 - 20.00	1.0000	1.0000
T13	14	LDF7-50A (1-5/8 FOAM)	0.00 - 20.00	1.0000	1.0000
T13	15	HYBRIFLEX 1-5/8"	0.00 - 20.00	1.0000	1.0000
T13	17	LDF5-50A (7/8 FOAM)	0.00 - 20.00	1.0000	1.0000
T13	19	EW63	0.00 - 20.00	1.0000	1.0000
T13	20	LDF5-50A (7/8 FOAM)	0.00 - 20.00	1.0000	1.0000
T13	21	AVA7-50 (1-5/8 LOW DENSI. FOAM)	0.00 - 20.00	1.0000	1.0000
T13	22	AVA7-50 (1-5/8 LOW DENSI. FOAM)	0.00 - 20.00	1.0000	1.0000
T13	23	AVA7-50 (1-5/8 LOW DENSI. FOAM)	0.00 - 20.00	1.0000	1.0000
T13	24	LDF4-50A (1/2 FOAM)	0.00 - 20.00	1.0000	1.0000
T13	25	LDF5-50A (7/8 FOAM)	0.00 - 20.00	1.0000	1.0000
T13	26	LDF4-50A (1/2 FOAM)	0.00 - 20.00	1.0000	1.0000
T13	27	LDF4-50A (1/2 FOAM)	0.00 - 20.00	1.0000	1.0000

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	lb	
*									
ROHN 6'x15' Boom Gate (1) (Verizon)	A	None		0.0000	160.00	No Ice 1/2" Ice 1" Ice	17.75 21.10 24.50	17.75 21.10 24.50	600.00 75.00 890.00
ROHN 6'x15' Boom Gate (1) (Verizon)	B	None		0.0000	160.00	No Ice 1/2" Ice 1" Ice	17.75 21.10 24.50	17.75 21.10 24.50	600.00 75.00 890.00
ROHN 6'x15' Boom Gate (1) (Verizon)	C	None		0.0000	160.00	No Ice 1/2" Ice 1" Ice	17.75 21.10 24.50	17.75 21.10 24.50	600.00 75.00 890.00
MX06FRO640-02 (Verizon - Proposed)	A	From Leg	3.00 6.50 0.00	0.0000	160.00	No Ice 1/2" Ice 1" Ice	12.38 12.88 13.38	7.43 7.88 8.33	70.00 151.39 239.61
MX06FRO640-02 (Verizon - Proposed)	A	From Leg	3.00 5.50 0.00	0.0000	160.00	No Ice 1/2" Ice 1" Ice	12.38 12.88 13.38	7.43 7.88 8.33	70.00 151.39 239.61
XXDWMM-12.5-65-8T-CBR S Panel (Verizon)	A	From Leg	3.00 1.00 0.00	0.0000	160.00	No Ice 1/2" Ice 1" Ice	4.80 5.07 5.35	2.40 2.60 2.81	20.00 59.31 102.70

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	Project	180-ft Lattice Tower (CSP #32)	Date	07:59:09 09/20/22
	Client	Verizon	Designed by	TJL

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	lb
MT6407-77A (Verizon - Proposed)	A	From Leg	3.00	0.0000		160.00	No Ice 4.71	1.84	87.00
			-2.00				1/2" Ice 5.00	2.06	116.31
			0.00				1" Ice 5.29	2.29	149.49
MX06FRO640-02 (Verizon - Proposed)	A	From Leg	3.00	0.0000		160.00	No Ice 12.38	7.43	70.00
			-6.50				1/2" Ice 12.88	7.88	151.39
			0.00				1" Ice 13.38	8.33	239.61
MX06FRO640-02 (Verizon - Proposed)	A	From Leg	3.00	0.0000		160.00	No Ice 12.38	7.43	70.00
			-5.50				1/2" Ice 12.88	7.88	151.39
			0.00				1" Ice 13.38	8.33	239.61
B2/B66A RRH (Verizon)	A	From Leg	3.00	0.0000		160.00	No Ice 2.54	1.61	60.00
			0.00				1/2" Ice 2.75	1.79	80.12
			0.00				1" Ice 2.97	1.98	103.35
B5/B13 RRH (Verizon)	A	From Leg	3.00	0.0000		160.00	No Ice 1.87	1.02	70.00
			0.00				1/2" Ice 2.03	1.15	86.42
			0.00				1" Ice 2.21	1.29	105.50
CBRS RRH-RT4401-48A (Verizon)	A	From Leg	3.00	0.0000		160.00	No Ice 0.86	0.42	20.00
			0.00				1/2" Ice 0.98	0.51	26.90
			0.00				1" Ice 1.10	0.61	35.60
RF4439d-25A (B2/B66A RRH) (Verizon - Proposed)	A	From Leg	3.00	0.0000		160.00	No Ice 1.88	1.25	75.00
			0.00				1/2" Ice 2.05	1.39	93.34
			0.00				1" Ice 2.22	1.54	114.47
RF4440d-13A (B5/B13 RRH) (Verizon - Proposed)	A	From Leg	3.00	0.0000		160.00	No Ice 1.88	1.13	75.00
			0.00				1/2" Ice 2.05	1.26	92.34
			0.00				1" Ice 2.22	1.41	112.40
JAHH-65B-R3B Panel Antenna (Verizon)	B	From Leg	3.00	0.0000		160.00	No Ice 9.66	7.71	130.00
			6.50				1/2" Ice 10.22	8.53	204.15
			0.00				1" Ice 10.79	9.37	289.72
JAHH-65B-R3B Panel Antenna (Verizon)	B	From Leg	3.00	0.0000		160.00	No Ice 9.66	7.71	130.00
			5.50				1/2" Ice 10.22	8.53	204.15
			0.00				1" Ice 10.79	9.37	289.72
XXDWMM-12.5-65-8T-CBR S Panel (Verizon)	B	From Leg	3.00	0.0000		160.00	No Ice 4.80	2.40	20.00
			-1.00				1/2" Ice 5.07	2.60	59.31
			0.00				1" Ice 5.35	2.81	102.70
MT6407-77A (Verizon - Proposed)	B	From Leg	3.00	0.0000		160.00	No Ice 4.71	1.84	87.00
			-6.00				1/2" Ice 5.00	2.06	116.31
			0.00				1" Ice 5.29	2.29	149.49
CBC78T-DS-43-2X Diplexer (Verizon)	B	From Leg	3.00	0.0000		160.00	No Ice 0.37	0.51	22.00
			0.00				1/2" Ice 0.45	0.60	28.34
			0.00				1" Ice 0.53	0.70	36.37
B2/B66A RRH (Verizon)	B	From Leg	3.00	0.0000		160.00	No Ice 2.54	1.61	60.00
			0.00				1/2" Ice 2.75	1.79	80.12
			0.00				1" Ice 2.97	1.98	103.35
B5/B13 RRH (Verizon)	B	From Leg	3.00	0.0000		160.00	No Ice 1.87	1.02	70.00
			0.00				1/2" Ice 2.03	1.15	86.42
			0.00				1" Ice 2.21	1.29	105.50
CBRS RRH-RT4401-48A (Verizon)	B	From Leg	3.00	0.0000		160.00	No Ice 0.86	0.42	20.00
			0.00				1/2" Ice 0.98	0.51	26.90
			0.00				1" Ice 1.10	0.61	35.60
JAHH-65B-R3B Panel Antenna (Verizon)	C	From Leg	3.00	0.0000		160.00	No Ice 9.66	7.71	130.00
			6.50				1/2" Ice 10.22	8.53	204.15
			0.00				1" Ice 10.79	9.37	289.72
JAHH-65B-R3B Panel Antenna (Verizon)	C	From Leg	3.00	0.0000		160.00	No Ice 9.66	7.71	130.00
			5.50				1/2" Ice 10.22	8.53	204.15
			0.00				1" Ice 10.79	9.37	289.72
XXDWMM-12.5-65-8T-CBR S Panel (Verizon)	C	From Leg	3.00	0.0000		160.00	No Ice 4.80	2.40	20.00
			-1.00				1/2" Ice 5.07	2.60	59.31
			0.00				1" Ice 5.35	2.81	102.70

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	Project	180-ft Lattice Tower (CSP #32)	Date	07:59:09 09/20/22
	Client	Verizon	Designed by	TJL

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	lb
MT6407-77A (Verizon - Proposed)	C	From Leg	3.00	0.0000		160.00	No Ice 4.71	1.84	87.00
			-6.00				1/2" Ice 5.00	2.06	116.31
			0.00				1" Ice 5.29	2.29	149.49
CBC78T-DS-43-2X Diplexer (Verizon)	C	From Leg	3.00	0.0000		160.00	No Ice 0.37	0.51	22.00
			0.00				1/2" Ice 0.45	0.60	28.34
			0.00				1" Ice 0.53	0.70	36.37
B2/B66A RRH (Verizon)	C	From Leg	3.00	0.0000		160.00	No Ice 2.54	1.61	60.00
			0.00				1/2" Ice 2.75	1.79	80.12
			0.00				1" Ice 2.97	1.98	103.35
B5/B13 RRH (Verizon)	C	From Leg	3.00	0.0000		160.00	No Ice 1.87	1.02	70.00
			0.00				1/2" Ice 2.03	1.15	86.42
			0.00				1" Ice 2.21	1.29	105.50
CBRS RRH-RT4401-48A (Verizon)	C	From Leg	3.00	0.0000		160.00	No Ice 0.86	0.42	20.00
			0.00				1/2" Ice 0.98	0.51	26.90
			0.00				1" Ice 1.10	0.61	35.60
DB-T1-6Z-8AB-0Z Distribution Box (Verizon)	A	From Leg	3.00	0.0000		160.00	No Ice 5.60	2.33	50.00
			0.00				1/2" Ice 5.92	2.56	81.13
			0.00				1" Ice 6.24	2.79	121.22
DB-T1-6Z-8AB-0Z Distribution Box (Verizon)	B	From Leg	3.00	0.0000		160.00	No Ice 5.60	2.33	50.00
			0.00				1/2" Ice 5.92	2.56	81.13
			0.00				1" Ice 6.24	2.79	121.22
(2) BSF0020F3V1-1 (Verizon - Proposed)	A	From Leg	3.00	0.0000		160.00	No Ice 0.96	0.29	20.00
			-6.00				1/2" Ice 1.09	0.36	26.77
			0.00				1" Ice 1.22	0.45	35.33
(2) BSF0020F3V1-1 (Verizon - Proposed)	B	From Leg	3.00	0.0000		160.00	No Ice 0.96	0.29	20.00
			-6.00				1/2" Ice 1.09	0.36	26.77
			0.00				1" Ice 1.22	0.45	35.33
(2) BSF0020F3V1-1 (Verizon - Proposed)	C	From Leg	3.00	0.0000		160.00	No Ice 0.96	0.29	20.00
			-6.00				1/2" Ice 1.09	0.36	26.77
			0.00				1" Ice 1.22	0.45	35.33
LTF12=372 Sector Mount (1) (T-Mobile)	A	None		0.0000		125.00	No Ice 13.60	13.60	465.00
							1/2" Ice 18.40	18.40	600.00
							1" Ice 23.20	23.20	735.00
LTF12=372 Sector Mount (1) (T-Mobile)	B	None		0.0000		125.00	No Ice 13.60	13.60	465.00
							1/2" Ice 18.40	18.40	600.00
							1" Ice 23.20	23.20	735.00
LTF12=372 Sector Mount (1) (T-Mobile)	C	None		0.0000		125.00	No Ice 13.60	13.60	465.00
							1/2" Ice 18.40	18.40	600.00
							1" Ice 23.20	23.20	735.00
AIR21 B4A/B2P (T-Mobile)	A	From Face	3.00	0.0000		125.00	No Ice 6.05	4.36	83.00
			-4.00				1/2" Ice 6.42	4.70	124.90
			0.00				1" Ice 6.80	5.06	171.93
AIR21 B4A/B2P (T-Mobile)	B	From Face	3.00	0.0000		125.00	No Ice 6.05	4.36	83.00
			-4.00				1/2" Ice 6.42	4.70	124.90
			0.00				1" Ice 6.80	5.06	171.93
AIR21 B4A/B2P (T-Mobile)	C	From Face	3.00	0.0000		125.00	No Ice 6.05	4.36	83.00
			-4.00				1/2" Ice 6.42	4.70	124.90
			0.00				1" Ice 6.80	5.06	171.93
Generic Twin TMA unit (T-Mobile)	A	From Face	3.00	0.0000		125.00	No Ice 0.37	0.96	25.00
			0.00				1/2" Ice 0.46	1.09	32.19
			0.00				1" Ice 0.55	1.22	41.21
Generic Twin TMA unit (T-Mobile)	B	From Face	3.00	0.0000		125.00	No Ice 0.37	0.96	25.00
			0.00				1/2" Ice 0.46	1.09	32.19
			0.00				1" Ice 0.55	1.22	41.21
Generic Twin TMA unit (T-Mobile)	C	From Face	3.00	0.0000		125.00	No Ice 0.37	0.96	25.00
			0.00				1/2" Ice 0.46	1.09	32.19
			0.00				1" Ice 0.55	1.22	41.21

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	Project	180-ft Lattice Tower (CSP #32)	Date	07:59:09 09/20/22
	Client	Verizon	Designed by	TJL

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	lb
AIR21 B2A/B4P (T-Mobile)	A	From Face	3.00	0.0000	125.00	No Ice	6.05	4.36	83.00
			0.00			1/2" Ice	6.42	4.70	124.90
			0.00			1" Ice	6.80	5.06	171.93
AIR21 B2A/B4P (T-Mobile)	B	From Face	3.00	0.0000	125.00	No Ice	6.05	4.36	83.00
			0.00			1/2" Ice	6.42	4.70	124.90
			0.00			1" Ice	6.80	5.06	171.93
AIR21 B2A/B4P (T-Mobile)	C	From Face	3.00	0.0000	125.00	No Ice	6.05	4.36	83.00
			0.00			1/2" Ice	6.42	4.70	124.90
			0.00			1" Ice	6.80	5.06	171.93
LNX-6515DS (T-Mobile)	A	From Face	3.00	0.0000	125.00	No Ice	11.45	7.70	55.00
			4.00			1/2" Ice	12.06	8.29	120.87
			0.00			1" Ice	12.69	8.89	194.41
LNX-6515DS (T-Mobile)	B	From Face	3.00	0.0000	125.00	No Ice	11.45	7.70	55.00
			4.00			1/2" Ice	12.06	8.29	120.87
			0.00			1" Ice	12.69	8.89	194.41
LNX-6515DS (T-Mobile)	C	From Face	3.00	0.0000	125.00	No Ice	11.45	7.70	55.00
			4.00			1/2" Ice	12.06	8.29	120.87
			0.00			1" Ice	12.69	8.89	194.41
RRUS-11 (T-Mobile)	A	From Face	3.00	0.0000	125.00	No Ice	2.57	1.07	50.00
			0.00			1/2" Ice	2.76	1.21	69.57
			0.00			1" Ice	2.97	1.36	92.08
RRUS-11 (T-Mobile)	B	From Face	3.00	0.0000	125.00	No Ice	2.57	1.07	50.00
			0.00			1/2" Ice	2.76	1.21	69.57
			0.00			1" Ice	2.97	1.36	92.08
RRUS-11 (T-Mobile)	C	From Face	3.00	0.0000	125.00	No Ice	2.57	1.07	50.00
			0.00			1/2" Ice	2.76	1.21	69.57
			0.00			1" Ice	2.97	1.36	92.08
QD6616-7 (AT&T)	A	From Face	3.00	0.0000	133.00	No Ice	13.58	6.80	130.00
			-6.00			1/2" Ice	14.08	7.27	213.97
			0.00			1" Ice	14.60	7.72	304.84
AIR6419 (AT&T)	A	From Face	3.00	0.0000	133.00	No Ice	3.66	1.66	66.00
			0.00			1/2" Ice	3.91	1.85	91.40
			2.00			1" Ice	4.16	2.05	120.26
AIR6449 (AT&T)	A	From Face	3.00	0.0000	133.00	No Ice	5.65	2.42	103.00
			0.00			1/2" Ice	5.96	2.64	141.45
			-2.00			1" Ice	6.26	2.87	184.10
DMP65R-BU6D (AT&T)	A	From Face	3.00	0.0000	133.00	No Ice	12.71	5.62	96.00
			6.00			1/2" Ice	13.21	6.07	169.96
			0.00			1" Ice	13.71	6.53	250.56
QD6616-7 (AT&T)	B	From Face	3.00	0.0000	133.00	No Ice	13.58	6.80	130.00
			-6.00			1/2" Ice	14.08	7.27	213.97
			0.00			1" Ice	14.60	7.72	304.84
AIR6419 (AT&T)	B	From Face	3.00	0.0000	133.00	No Ice	3.66	1.66	66.00
			0.00			1/2" Ice	3.91	1.85	91.40
			2.00			1" Ice	4.16	2.05	120.26
AIR6449 (AT&T)	B	From Face	3.00	0.0000	133.00	No Ice	5.65	2.42	103.00
			0.00			1/2" Ice	5.96	2.64	141.45
			-2.00			1" Ice	6.26	2.87	184.10
DMP65R-BU6D (AT&T)	B	From Face	3.00	0.0000	133.00	No Ice	12.71	5.62	96.00
			6.00			1/2" Ice	13.21	6.07	169.96
			0.00			1" Ice	13.71	6.53	250.56
QD6616-7 (AT&T)	C	From Face	3.00	0.0000	133.00	No Ice	13.58	6.80	130.00
			-6.00			1/2" Ice	14.08	7.27	213.97
			0.00			1" Ice	14.60	7.72	304.84
AIR6419 (AT&T)	C	From Face	3.00	0.0000	133.00	No Ice	3.66	1.66	66.00
			0.00			1/2" Ice	3.91	1.85	91.40
			2.00			1" Ice	4.16	2.05	120.26

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	Project	180-ft Lattice Tower (CSP #32)	Date	07:59:09 09/20/22
	Client	Verizon	Designed by	TJL

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _{AA}		Weight	
			Horz	Vert			Front	Side		
			ft	ft	°	ft	ft ²	ft ²	lb	
AIR6449 (AT&T)	C	From Face	3.00	0.00	0.0000	133.00	No Ice	5.65	2.42	103.00
			0.00	0.00			1/2" Ice	5.96	2.64	141.45
			-2.00	0.00			1" Ice	6.26	2.87	184.10
DMP65R-BU6D (AT&T)	C	From Face	3.00	0.00	0.0000	133.00	No Ice	12.71	5.62	96.00
			6.00	0.00			1/2" Ice	13.21	6.07	169.96
			0.00	0.00			1" Ice	13.71	6.53	250.56
RRUS-32 B66 (AT&T)	A	From Face	3.00	0.00	0.0000	133.00	No Ice	3.20	1.85	60.00
			6.00	0.00			1/2" Ice	3.46	2.08	81.11
			0.00	0.00			1" Ice	3.73	2.31	105.42
RRUS-32 (AT&T)	A	From Face	3.00	-2.00	0.0000	133.00	No Ice	3.31	2.42	77.00
			0.00	0.00			1/2" Ice	3.56	2.64	104.93
			0.00	0.00			1" Ice	3.81	2.86	136.47
RRUS-32 (AT&T)	A	From Face	3.00	-2.00	0.0000	133.00	No Ice	3.31	2.42	77.00
			0.00	0.00			1/2" Ice	3.56	2.64	104.93
			0.00	0.00			1" Ice	3.81	2.86	136.47
RRUS-32 B66 (AT&T)	B	From Face	3.00	0.00	0.0000	133.00	No Ice	3.20	1.85	60.00
			6.00	0.00			1/2" Ice	3.46	2.08	81.11
			0.00	0.00			1" Ice	3.73	2.31	105.42
RRUS-32 (AT&T)	B	From Face	3.00	-2.00	0.0000	133.00	No Ice	3.31	2.42	77.00
			0.00	0.00			1/2" Ice	3.56	2.64	104.93
			0.00	0.00			1" Ice	3.81	2.86	136.47
RRUS-32 (AT&T)	B	From Face	3.00	-2.00	0.0000	133.00	No Ice	3.31	2.42	77.00
			0.00	0.00			1/2" Ice	3.56	2.64	104.93
			0.00	0.00			1" Ice	3.81	2.86	136.47
RRUS-32 B66 (AT&T)	C	From Face	3.00	0.00	0.0000	133.00	No Ice	3.20	1.85	60.00
			6.00	0.00			1/2" Ice	3.46	2.08	81.11
			0.00	0.00			1" Ice	3.73	2.31	105.42
RRUS-32 (AT&T)	C	From Face	3.00	-2.00	0.0000	133.00	No Ice	3.31	2.42	77.00
			0.00	0.00			1/2" Ice	3.56	2.64	104.93
			0.00	0.00			1" Ice	3.81	2.86	136.47
RRUS-32 (AT&T)	C	From Face	3.00	-2.00	0.0000	133.00	No Ice	3.31	2.42	77.00
			0.00	0.00			1/2" Ice	3.56	2.64	104.93
			0.00	0.00			1" Ice	3.81	2.86	136.47
4478 B14 (AT&T)	A	From Face	3.00	-2.00	0.0000	133.00	No Ice	1.84	1.06	60.00
			0.00	0.00			1/2" Ice	2.01	1.20	75.88
			0.00	0.00			1" Ice	2.19	1.34	94.39
4478 B14 (AT&T)	B	From Face	3.00	-2.00	0.0000	133.00	No Ice	1.84	1.06	60.00
			0.00	0.00			1/2" Ice	2.01	1.20	75.88
			0.00	0.00			1" Ice	2.19	1.34	94.39
4478 B14 (AT&T)	C	From Face	3.00	-2.00	0.0000	133.00	No Ice	1.84	1.06	60.00
			0.00	0.00			1/2" Ice	2.01	1.20	75.88
			0.00	0.00			1" Ice	2.19	1.34	94.39
4449 B5/B12 (AT&T)	A	From Face	3.00	-2.00	0.0000	133.00	No Ice	1.97	1.41	71.00
			0.00	0.00			1/2" Ice	2.14	1.56	89.51
			0.00	0.00			1" Ice	2.33	1.73	110.84
4449 B5/B12 (AT&T)	B	From Face	3.00	-2.00	0.0000	133.00	No Ice	1.97	1.41	71.00
			0.00	0.00			1/2" Ice	2.14	1.56	89.51
			0.00	0.00			1" Ice	2.33	1.73	110.84
4449 B5/B12 (AT&T)	C	From Face	3.00	-2.00	0.0000	133.00	No Ice	1.97	1.41	71.00
			0.00	0.00			1/2" Ice	2.14	1.56	89.51
			0.00	0.00			1" Ice	2.33	1.73	110.84
DC6-48-60-18-8F (Squid) Suppressor (AT&T)	C	From Face	3.00	0.00	0.0000	133.00	No Ice	1.27	1.27	20.00
			0.00	0.00			1/2" Ice	1.46	1.46	35.12
			0.00	0.00			1" Ice	1.66	1.66	52.57
DC6-48-60-18-8F (Squid) Suppressor (AT&T)	A	From Face	3.00	0.00	0.0000	133.00	No Ice	1.27	1.27	20.00
			0.00	0.00			1/2" Ice	1.46	1.46	35.12
			0.00	0.00			1" Ice	1.66	1.66	52.57

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	Project	180-ft Lattice Tower (CSP #32)	Date	07:59:09 09/20/22
	Client	Verizon	Designed by	TJL

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _{AA}		Weight	
			Horz	Vert			Front	Side		
			ft	ft	°	ft	ft ²	ft ²	lb	
DC9	B	From Leg	3.00		0.0000	133.00	No Ice	1.91	1.91	20.00
(AT&T)			-2.00				1/2" Ice	2.10	2.10	39.36
			0.00				1" Ice	2.29	2.29	61.70
SitePro VFA14-10	A	None			0.0000	133.00	No Ice	30.00	30.00	950.00
(AT&T)							1/2" Ice	35.00	35.00	1400.00
							1" Ice	40.00	40.00	1850.00
SitePro VFA14-10	B	None			0.0000	133.00	No Ice	30.00	30.00	950.00
(AT&T)							1/2" Ice	35.00	35.00	1400.00
							1" Ice	40.00	40.00	1850.00
SitePro VFA14-10	C	None			0.0000	133.00	No Ice	30.00	30.00	950.00
(AT&T)							1/2" Ice	35.00	35.00	1400.00
							1" Ice	40.00	40.00	1850.00
* CSP										
ANT940Y10-WR	A	From Leg	0.00		0.0000	187.00	No Ice	0.19	0.19	2.50
(CSP)			0.00				1/2" Ice	0.34	0.34	3.25
			0.00				1" Ice	0.49	0.49	4.00
ANT940Y10-WR	C	From Leg	0.50		0.0000	181.00	No Ice	0.19	0.19	2.50
(CSP - Yagi Antenna)			0.00				1/2" Ice	0.34	0.34	3.25
			0.00				1" Ice	0.49	0.49	4.00
RFI BPS7496-180-14 Panel	A	From Face	4.00		0.0000	170.00	No Ice	5.83	3.75	20.00
Antenna			-6.00				1/2" Ice	6.21	4.13	56.42
(CSP-80)			0.00				1" Ice	6.60	4.51	97.99
RFI BPS7496-180-14 Panel	A	From Face	4.00		0.0000	170.00	No Ice	5.83	3.75	20.00
Antenna			0.00				1/2" Ice	6.21	4.13	56.42
(CSP-81)			0.00				1" Ice	6.60	4.51	97.99
RFI BPS7496-180-14 Panel	A	From Face	4.00		0.0000	170.00	No Ice	5.83	3.75	20.00
Antenna			6.00				1/2" Ice	6.21	4.13	56.42
(CSP-82)			0.00				1" Ice	6.60	4.51	97.99
SitePro1 USF12-396-U	A	From Leg	0.00		0.0000	170.00	No Ice	16.23	9.80	491.09
Mount Assembly w/ (3) 96"			0.00				1/2" Ice	22.18	13.27	630.09
Mount Pipes			0.00				1" Ice	28.15	16.68	815.09
(CSP 47, 80, 81, 82)										
432E-83I-01T TTA Unit	A	From Leg	4.00		0.0000	170.00	No Ice	2.85	0.97	25.00
(Re-Located TMA (CSP))			0.00				1/2" Ice	3.06	1.11	44.70
			0.00				1" Ice	3.28	1.26	67.39
3' Yagi	C	From Leg	0.50		0.0000	169.00	No Ice	2.08	2.08	30.95
(CSP)			0.00				1/2" Ice	3.79	3.79	52.87
			0.00				1" Ice	5.52	5.52	85.27
ANT150D	A	From Leg	0.00		0.0000	113.00	No Ice	0.80	0.80	5.50
(CSP - 1-Bay Dipole)			0.00				1/2" Ice	1.44	1.44	7.15
			0.00				1" Ice	2.08	2.08	8.80
GPS	C	From Leg	4.00		0.0000	60.00	No Ice	1.00	1.00	10.00
(DNK-I / GPS)			0.00				1/2" Ice	1.50	1.50	15.00
			2.00				1" Ice	2.00	2.00	20.00
4' Standoff	C	From Leg	0.00		0.0000	60.00	No Ice	3.42	3.42	110.00
(DNK-I / GPS)			0.00				1/2" Ice	3.67	3.67	147.19
			0.00				1" Ice	3.92	3.92	187.07

Dishes

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Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft	Aperture Area ft ²	Weight lb	
PA6-65AC (DNK-52 / CSP-42)	C	Paraboloid w/Radome	From	1.00	-55.0000		177.00	6.00	No Ice	28.27	90.00
			Leg	0.00					1/2" Ice	29.05	240.00
				0.00						1" Ice	29.83

222-H Verification Constants

Constant	Value
K _d	0.85
Ice Thickness Importance Factor	1.25
Z _g	900
α	9.5
K _{zmin}	0.85
K _c	n/a
K _t	1
f	1
K _e	1

222-H Section Verification ArRr By Element

Section Elevation ft	Elem. Num.	Size	C	C w/Ice	F a c e	e	e w/Ice	A _r ft ²	A _r w/Ice ft ²	A _r R _r ft ²	A _r R _r w/Ice ft ²
T1 180.00-160.00	1	ROHN 3 STD	45.107	31.948	C	0.139	0.285	5.833	10.742	3.165	6.384
	1	ROHN 3 STD	45.107	31.948	A	0.139	0.285	5.833	10.742	3.165	6.384
	2	ROHN 3 STD	45.107	31.948	C	0.139	0.285	5.833	10.742	3.165	6.384
	2	ROHN 3 STD	45.107	31.948	B	0.139	0.285	5.833	10.742	3.165	6.384
	3	ROHN 3 STD	45.107	31.948	B	0.139	0.285	5.833	10.742	3.165	6.384
	3	ROHN 3 STD	45.107	31.948	A	0.139	0.285	5.833	10.742	3.165	6.384
	4	ROHN 1.5 STD	24.486	24.017	C	0.139	0.285	1.306	3.331	0.740	1.980
	5	ROHN 1.5 STD	24.486	24.017	B	0.139	0.285	1.306	3.331	0.740	1.980
	6	ROHN 1.5 STD	24.486	24.017	A	0.139	0.285	1.306	3.331	0.740	1.980
	7	ROHN 1.5 STD	24.486	24.017	C	0.139	0.285	1.315	3.354	0.745	1.993
	8	ROHN 2 STD	30.608	26.372	C	0.139	0.285	1.518	3.401	0.860	2.021
	9	ROHN 2 STD	30.608	26.372	C	0.139	0.285	1.518	3.401	0.860	2.021
	10	ROHN 1.5 STD	24.486	24.017	B	0.139	0.285	1.315	3.354	0.745	1.993
	11	ROHN 2 STD	30.608	26.372	B	0.139	0.285	1.518	3.401	0.860	2.021
	12	ROHN 2 STD	30.608	26.372	B	0.139	0.285	1.518	3.401	0.860	2.021
	13	ROHN 1.5 STD	24.486	24.017	A	0.139	0.285	1.315	3.354	0.745	1.993
	14	ROHN 2 STD	30.608	26.372	A	0.139	0.285	1.518	3.401	0.860	2.021
	15	ROHN 2 STD	30.608	26.372	A	0.139	0.285	1.518	3.401	0.860	2.021
	19	ROHN 1.5 STD	24.486	24.017	C	0.139	0.285	1.311	3.342	0.743	1.986
	20	ROHN 2 STD	30.608	26.372	C	0.139	0.285	1.517	3.398	0.859	2.019
	21	ROHN 2 STD	30.608	26.372	C	0.139	0.285	1.517	3.398	0.859	2.019
	22	ROHN 1.5 STD	24.486	24.017	B	0.139	0.285	1.311	3.342	0.743	1.986
	23	ROHN 2 STD	30.608	26.372	B	0.139	0.285	1.517	3.398	0.859	2.019
	24	ROHN 2 STD	30.608	26.372	B	0.139	0.285	1.517	3.398	0.859	2.019
	25	ROHN 1.5 STD	24.486	24.017	A	0.139	0.285	1.311	3.342	0.743	1.986
	26	ROHN 2 STD	30.608	26.372	A	0.139	0.285	1.517	3.398	0.859	2.019
	27	ROHN 2 STD	30.608	26.372	A	0.139	0.285	1.517	3.398	0.859	2.019
	31	ROHN 2 STD	30.608	26.372	C	0.139	0.285	1.515	3.394	0.858	2.017
	32	ROHN 2 STD	30.608	26.372	C	0.139	0.285	1.515	3.394	0.858	2.017

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Section Elevation	Elem. Num.	Size	C	C w/Ice	F a c e	e	e w/Ice	A _r	A _r w/Ice	A _r R _r	A _r R _r w/Ice
ft								ft ²	ft ²	ft ²	ft ²
	33	ROHN 2 STD	30.608	26.372	B	0.139	0.285	1.515	3.394	0.858	2.017
	34	ROHN 2 STD	30.608	26.372	B	0.139	0.285	1.515	3.394	0.858	2.017
	35	ROHN 2 STD	30.608	26.372	A	0.139	0.285	1.515	3.394	0.858	2.017
	36	ROHN 2 STD	30.608	26.372	A	0.139	0.285	1.515	3.394	0.858	2.017
					A		Sum:	24.699	51.898	13.713	30.840
					B			24.699	51.898	13.713	30.840
					C			24.699	51.898	13.713	30.840
					C	0.143	0.276	7.514	12.370	3.727	7.320
T2 160.00-140.00	40	ROHN 4 STD	57.235	36.242	C	0.143	0.276	7.514	12.370	3.727	7.320
	40	ROHN 4 STD	57.235	36.242	A	0.143	0.276	7.514	12.370	3.727	7.320
	41	ROHN 4 STD	57.235	36.242	C	0.143	0.276	7.514	12.370	3.727	7.320
	41	ROHN 4 STD	57.235	36.242	B	0.143	0.276	7.514	12.370	3.727	7.320
	42	ROHN 4 STD	57.235	36.242	B	0.143	0.276	7.514	12.370	3.727	7.320
	42	ROHN 4 STD	57.235	36.242	A	0.143	0.276	7.514	12.370	3.727	7.320
	43	ROHN 1.5 STD	24.166	23.524	C	0.143	0.276	1.526	3.863	0.865	2.286
	44	ROHN 2 STD	30.207	25.847	C	0.143	0.276	1.634	3.634	0.926	2.150
	45	ROHN 2 STD	30.207	25.847	C	0.143	0.276	1.634	3.634	0.926	2.150
	46	ROHN 1.5 STD	24.166	23.524	B	0.143	0.276	1.526	3.863	0.865	2.286
	47	ROHN 2 STD	30.207	25.847	B	0.143	0.276	1.634	3.634	0.926	2.150
	48	ROHN 2 STD	30.207	25.847	B	0.143	0.276	1.634	3.634	0.926	2.150
	49	ROHN 1.5 STD	24.166	23.524	A	0.143	0.276	1.526	3.863	0.865	2.286
	50	ROHN 2 STD	30.207	25.847	A	0.143	0.276	1.634	3.634	0.926	2.150
	51	ROHN 2 STD	30.207	25.847	A	0.143	0.276	1.634	3.634	0.926	2.150
	55	ROHN 1.5 STD	24.166	23.524	C	0.143	0.276	1.416	3.584	0.803	2.121
	56	ROHN 2 STD	30.207	25.847	C	0.143	0.276	1.589	3.535	0.901	2.092
	57	ROHN 2 STD	30.207	25.847	C	0.143	0.276	1.589	3.535	0.901	2.092
	58	ROHN 1.5 STD	24.166	23.524	B	0.143	0.276	1.416	3.584	0.803	2.121
	59	ROHN 2 STD	30.207	25.847	B	0.143	0.276	1.589	3.535	0.901	2.092
	60	ROHN 2 STD	30.207	25.847	B	0.143	0.276	1.589	3.535	0.901	2.092
	61	ROHN 1.5 STD	24.166	23.524	A	0.143	0.276	1.416	3.584	0.803	2.121
	62	ROHN 2 STD	30.207	25.847	A	0.143	0.276	1.589	3.535	0.901	2.092
	63	ROHN 2 STD	30.207	25.847	A	0.143	0.276	1.589	3.535	0.901	2.092
	67	ROHN 1.5 STD	24.166	23.524	C	0.143	0.276	1.306	3.306	0.741	1.956
	68	ROHN 2 STD	30.207	25.847	C	0.143	0.276	1.546	3.438	0.876	2.035
	69	ROHN 2 STD	30.207	25.847	C	0.143	0.276	1.546	3.438	0.876	2.035
	70	ROHN 1.5 STD	24.166	23.524	B	0.143	0.276	1.306	3.306	0.741	1.956
	71	ROHN 2 STD	30.207	25.847	B	0.143	0.276	1.546	3.438	0.876	2.035
	72	ROHN 2 STD	30.207	25.847	B	0.143	0.276	1.546	3.438	0.876	2.035
	73	ROHN 1.5 STD	24.166	23.524	A	0.143	0.276	1.306	3.306	0.741	1.956
	74	ROHN 2 STD	30.207	25.847	A	0.143	0.276	1.546	3.438	0.876	2.035
	75	ROHN 2 STD	30.207	25.847	A	0.143	0.276	1.546	3.438	0.876	2.035
					A		Sum:	28.812	56.708	15.269	33.556
					B			28.812	56.708	15.269	33.556
					C			28.812	56.708	15.269	33.556
T3 140.00-133.33	79	ROHN 5 EH	70.065	40.908	C	0.151	0.271	3.096	4.700	1.391	2.775
	79	ROHN 5 EH	70.065	40.908	A	0.151	0.271	3.096	4.700	1.391	2.775
	80	ROHN 5 EH	70.065	40.908	C	0.151	0.271	3.096	4.700	1.391	2.775
	80	ROHN 5 EH	70.065	40.908	B	0.151	0.271	3.096	4.700	1.391	2.775
	81	ROHN 5 EH	70.065	40.908	B	0.151	0.271	3.096	4.700	1.391	2.775
	81	ROHN 5 EH	70.065	40.908	A	0.151	0.271	3.096	4.700	1.391	2.775
	82	ROHN 2 STD	29.913	25.465	C	0.151	0.271	2.028	4.488	1.151	2.650
	83	ROHN 2 EH	29.976	25.489	C	0.151	0.271	1.670	3.691	0.948	2.180
	84	ROHN 2 EH	29.976	25.489	C	0.151	0.271	1.670	3.691	0.948	2.180
	85	ROHN 2 STD	29.913	25.465	B	0.151	0.271	2.028	4.488	1.151	2.650
	86	ROHN 2 EH	29.976	25.489	B	0.151	0.271	1.670	3.691	0.948	2.180
	87	ROHN 2 EH	29.976	25.489	B	0.151	0.271	1.670	3.691	0.948	2.180
	88	ROHN 2 STD	29.913	25.465	A	0.151	0.271	2.028	4.488	1.151	2.650
	89	ROHN 2 EH	29.976	25.489	A	0.151	0.271	1.670	3.691	0.948	2.180
	90	ROHN 2 EH	29.976	25.489	A	0.151	0.271	1.670	3.691	0.948	2.180

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Section Elevation ft	Elem. Num.	Size	C	C w/Ice	F a c e	e	e w/Ice	A _r ft ²	A _r w/Ice ft ²	A _r R _r ft ²	A _r R _r w/Ice ft ²	
T4 133.33-126.67	94	ROHN 5 EH	69.697	40.624	A	0.145	0.262	Sum:	11.559	21.270	5.828	12.561
					B			11.559	21.270	5.828	12.561	
					C			11.559	21.270	5.828	12.561	
					C			3.096	4.692	1.388	2.759	
	94	ROHN 5 EH	69.697	40.624	A	0.145	0.262	3.096	4.692	1.388	2.759	
					C			3.096	4.692	1.388	2.759	
					B			3.096	4.692	1.388	2.759	
					B			3.096	4.692	1.388	2.759	
					A			3.096	4.692	1.388	2.759	
					C			2.165	4.779	1.228	2.810	
					B			2.165	4.779	1.228	2.810	
					A			2.165	4.779	1.228	2.810	
					C			2.165	4.779	1.228	2.810	
					C			1.717	3.787	0.974	2.226	
					B			1.717	3.787	0.974	2.226	
T5 126.67-120.00	109	ROHN 5 EH	69.312	40.327	C	0.14	0.253	Sum:	11.792	21.736	5.951	12.781
					B			11.792	21.736	5.951	12.781	
					C			11.792	21.736	5.951	12.781	
					C			3.096	4.684	1.386	2.744	
	109	ROHN 5 EH	69.312	40.327	A	0.14	0.253	3.096	4.684	1.386	2.744	
					C			3.096	4.684	1.386	2.744	
					B			3.096	4.684	1.386	2.744	
					B			3.096	4.684	1.386	2.744	
					A			3.096	4.684	1.386	2.744	
					C			2.303	5.068	1.305	2.969	
					B			2.303	5.068	1.305	2.969	
					A			2.303	5.068	1.305	2.969	
					C			1.763	3.880	0.999	2.273	
					C			1.763	3.880	0.999	2.273	
					B			1.763	3.880	0.999	2.273	
T6 120.00-100.00	124	ROHN 6 EHS	81.556	44.719	C	0.133	0.222	Sum:	12.020	22.194	6.074	13.001
					B			12.020	22.194	6.074	13.001	
					C			12.020	22.194	6.074	13.001	
					C			11.065	15.775	4.541	9.127	
	124	ROHN 6 EHS	81.556	44.719	A	0.133	0.222	11.065	15.775	4.541	9.127	
					C			11.065	15.775	4.541	9.127	
					B			11.065	15.775	4.541	9.127	
					B			11.065	15.775	4.541	9.127	
					A			11.065	15.775	4.541	9.127	
					C			2.645	5.786	1.497	3.348	
					C			2.889	5.722	1.635	3.311	
					C			2.889	5.722	1.635	3.311	
					B			2.645	5.786	1.497	3.348	
					B			2.889	5.722	1.635	3.311	
					A			2.645	5.786	1.497	3.348	
125	ROHN 6 EHS	81.556	44.719	A	0.133	0.222	2.889	5.722	1.635	3.311		
				C			2.889	5.722	1.635	3.311		
				B			2.889	5.722	1.635	3.311		
				B			2.889	5.722	1.635	3.311		
				A			2.889	5.722	1.635	3.311		
				A			2.889	5.722	1.635	3.311		
				C			2.889	5.722	1.635	3.311		
126	ROHN 6 EHS	81.556	44.719	A	0.133	0.222	2.889	5.722	1.635	3.311		
				C			2.889	5.722	1.635	3.311		
				B			2.889	5.722	1.635	3.311		
				B			2.889	5.722	1.635	3.311		
				A			2.889	5.722	1.635	3.311		
				A			2.889	5.722	1.635	3.311		
				C			2.889	5.722	1.635	3.311		
127	ROHN 2 STD	29.237	24.596	A	0.133	0.222	2.645	5.786	1.497	3.348		
				C			2.645	5.786	1.497	3.348		
				C			2.645	5.786	1.497	3.348		
				B			2.645	5.786	1.497	3.348		
				A			2.645	5.786	1.497	3.348		
				A			2.645	5.786	1.497	3.348		
				C			2.645	5.786	1.497	3.348		
128	Pipe 2.5 XXS	35.392	26.964	C	0.133	0.222	2.889	5.722	1.635	3.311		
				C			2.889	5.722	1.635	3.311		
				C			2.889	5.722	1.635	3.311		
				B			2.889	5.722	1.635	3.311		
				B			2.889	5.722	1.635	3.311		
				A			2.889	5.722	1.635	3.311		
				C			2.889	5.722	1.635	3.311		
129	ROHN 2 STD	29.237	24.596	A	0.133	0.222	2.645	5.786	1.497	3.348		
				C			2.645	5.786	1.497	3.348		
				C			2.645	5.786	1.497	3.348		
				B			2.645	5.786	1.497	3.348		
				A			2.645	5.786	1.497	3.348		
				A			2.645	5.786	1.497	3.348		
				C			2.645	5.786	1.497	3.348		
130	Pipe 2.5 XXS	35.392	26.964	A	0.133	0.222	2.889	5.722	1.635	3.311		
				C			2.889	5.722	1.635	3.311		
				C			2.889	5.722	1.635	3.311		
				B			2.889	5.722	1.635	3.311		
				B			2.889	5.722	1.635	3.311		
				A			2.889	5.722	1.635	3.311		
				C			2.889	5.722	1.635	3.311		
131	ROHN 2 STD	29.237	24.596	A	0.133	0.222	2.422	5.299	1.371	3.066		
				C			2.422	5.299	1.371	3.066		
				C			2.422	5.299	1.371	3.066		
				B			2.422	5.299	1.371	3.066		
				A			2.422	5.299	1.371	3.066		
				A			2.422	5.299	1.371	3.066		
				C			2.422	5.299	1.371	3.066		
132	Pipe 2.5 XXS	35.392	26.964	C	0.133	0.222	2.804	5.554	1.587	3.214		
				C			2.804	5.554	1.587	3.214		
				C			2.804	5.554	1.587	3.214		
				B			2.804	5.554	1.587	3.214		
				B			2.804	5.554	1.587	3.214		
				A			2.804	5.554	1.587	3.214		
				C			2.804	5.554	1.587	3.214		
133	ROHN 2 STD	29.237	24.596	A	0.133	0.222	2.804	5.554	1.587	3.214		
				C			2.804	5.554	1.587	3.214		
				C			2.804	5.554	1.587	3.214		
				B			2.804	5.554	1.587	3.214		
				B			2.804	5.554	1.587	3.214		
				A			2.804	5.554	1.587	3.214		
				C			2.804	5.554	1.587	3.214		
134	Pipe 2.5 XXS	35.392	26.964	A	0.133	0.222	2.804	5.554	1.587	3.214		
				C			2.804	5.554	1.587	3.214		
				C			2.804	5.554	1.587	3.214		
				B			2.804	5.554	1.587	3.214		
				B			2.804	5.554	1.587	3.214		
				A			2.804	5.554	1.587	3.214		
				C			2.804	5.554	1.587	3.214		
135	ROHN 2 STD	29.237	24.596	A	0.133	0.222	2.422	5.299	1.371	3.066		
				C			2.422	5.299	1.371	3.066		
				C			2.422	5.299	1.371	3.066		
				B			2.422	5.299	1.371	3.066		
				A			2.422	5.299	1.371	3.066		
				A			2.422	5.299	1.371	3.066		
				C			2.422	5.299	1.371	3.066		
139	Pipe 2.5 XXS	35.392	26.964	C	0.133	0.222	2.804	5.554	1.587	3.214		
				C			2.804	5.554	1.587	3.214		
				C			2.804	5.554	1.587	3.214		
				B			2.804	5.554	1.587	3.214		
				B			2.804	5.554	1.587	3.214		
				A			2.804	5.554	1.587	3.214		
				C			2.804	5.554	1.587	3.214		
140	Pipe 2.5 XXS	35.392	26.964	A	0.133	0.222	2.804	5.554	1.587	3.214		
				C			2.804	5.554	1.587	3.214		
				C			2.804	5.554	1.587	3.214		
				B			2.804	5.554	1.587	3.214		
				B			2.804	5.554	1.587	3.214		
				A			2.804	5.554	1.587	3.214		
				C			2.804	5.554	1.587	3.214		
141	ROHN 2 STD	29.237	24.596	A	0.133	0.222	2.804	5.554	1.587	3.214		
				C			2.804	5.554	1.587	3.214		
				C			2.804	5.554	1.587	3.214		
				B			2.804	5.554	1.587	3.214		
				B			2.804	5.554	1.587	3.214		
				A			2.804	5.554	1.587	3.214		
				C			2.804	5.554	1.587	3.214		

tnxTower Centek Engineering Inc. 63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587	Job	22027.01 - Westport	Page	26 of 71
	Project	180-ft Lattice Tower (CSP #32)	Date	07:59:09 09/20/22
	Client	Verizon	Designed by	TJL

Section Elevation	Elem. Num.	Size	C	C w/Ice	F a c e	e	e w/Ice	A _r	A _r w/Ice	A _r R _r	A _r R _r w/Ice	
ft								ft ²	ft ²	ft ²	ft ²	
T7 100.00-90.00	142	ROHN 2 STD	29.237	24.596	B	0.133	0.222	2.422	5.299	1.371	3.066	
	143	Pipe 2.5 XXS	35.392	26.964	B	0.133	0.222	2.804	5.554	1.587	3.214	
	144	Pipe 2.5 XXS	35.392	26.964	B	0.133	0.222	2.804	5.554	1.587	3.214	
	145	ROHN 2 STD	29.237	24.596	A	0.133	0.222	2.422	5.299	1.371	3.066	
	146	Pipe 2.5 XXS	35.392	26.964	A	0.133	0.222	2.804	5.554	1.587	3.214	
	147	Pipe 2.5 XXS	35.392	26.964	A	0.133	0.222	2.804	5.554	1.587	3.214	
					A			Sum:	38.583	65.187	18.396	37.718
					B				38.583	65.187	18.396	37.718
					C				38.583	65.187	18.396	37.718
	151	ROHN 6 EH	80.307	43.843	C	0.131	0.212	5.537	7.859	2.265	4.533	
	151	ROHN 6 EH	80.307	43.843	A	0.131	0.212	5.537	7.859	2.265	4.533	
	152	ROHN 6 EH	80.307	43.843	C	0.131	0.212	5.537	7.859	2.265	4.533	
	152	ROHN 6 EH	80.307	43.843	B	0.131	0.212	5.537	7.859	2.265	4.533	
	153	ROHN 6 EH	80.307	43.843	B	0.131	0.212	5.537	7.859	2.265	4.533	
153	ROHN 6 EH	80.307	43.843	A	0.131	0.212	5.537	7.859	2.265	4.533		
154	ROHN 2 STD	28.789	24.028	C	0.131	0.212	2.868	6.223	1.623	3.589		
155	ROHN 3 STD	42.426	29.273	C	0.131	0.212	3.643	6.535	2.011	3.769		
156	ROHN 3 STD	42.426	29.273	C	0.131	0.212	3.643	6.535	2.011	3.769		
157	ROHN 2 STD	28.789	24.028	B	0.131	0.212	2.868	6.223	1.623	3.589		
158	ROHN 3 STD	42.426	29.273	B	0.131	0.212	3.643	6.535	2.011	3.769		
159	ROHN 3 STD	42.426	29.273	B	0.131	0.212	3.643	6.535	2.011	3.769		
160	ROHN 2 STD	28.789	24.028	A	0.131	0.212	2.868	6.223	1.623	3.589		
161	ROHN 3 STD	42.426	29.273	A	0.131	0.212	3.643	6.535	2.011	3.769		
162	ROHN 3 STD	42.426	29.273	A	0.131	0.212	3.643	6.535	2.011	3.769		
				A			Sum:	21.227	35.011	10.175	20.193	
				B				21.227	35.011	10.175	20.193	
				C				21.227	35.011	10.175	20.193	
T8 90.00-80.00	166	ROHN 6 EH	79.372	43.191	C	0.124	0.202	5.537	7.833	2.247	4.502	
	166	ROHN 6 EH	79.372	43.191	A	0.124	0.202	5.537	7.833	2.247	4.502	
	167	ROHN 6 EH	79.372	43.191	C	0.124	0.202	5.537	7.833	2.247	4.502	
	167	ROHN 6 EH	79.372	43.191	B	0.124	0.202	5.537	7.833	2.247	4.502	
	168	ROHN 6 EH	79.372	43.191	B	0.124	0.202	5.537	7.833	2.247	4.502	
	168	ROHN 6 EH	79.372	43.191	A	0.124	0.202	5.537	7.833	2.247	4.502	
	169	ROHN 2 STD	28.454	23.607	C	0.124	0.202	3.129	6.749	1.769	3.879	
	170	ROHN 2 STD	28.454	23.607	B	0.124	0.202	3.129	6.749	1.769	3.879	
	171	ROHN 2 STD	28.454	23.607	A	0.124	0.202	3.129	6.749	1.769	3.879	
	172	ROHN 3 STD	41.933	28.791	C	0.124	0.202	3.773	6.735	2.088	3.871	
	173	ROHN 3 STD	41.933	28.791	C	0.124	0.202	3.773	6.735	2.088	3.871	
	174	ROHN 3 STD	41.933	28.791	B	0.124	0.202	3.773	6.735	2.088	3.871	
	175	ROHN 3 STD	41.933	28.791	B	0.124	0.202	3.773	6.735	2.088	3.871	
	176	ROHN 3 STD	41.933	28.791	A	0.124	0.202	3.773	6.735	2.088	3.871	
177	ROHN 3 STD	41.933	28.791	A	0.124	0.202	3.773	6.735	2.088	3.871		
				A			Sum:	21.747	35.885	10.439	20.625	
				B				21.747	35.885	10.439	20.625	
				C				21.747	35.885	10.439	20.625	
T9 80.00-60.00	184	ROHN 2.5 STD	33.748	25.148	C	0.14	0.204	4.360	8.447	2.470	4.859	
	185	ROHN 3 STD	41.084	27.97	C	0.14	0.204	3.995	7.071	2.231	4.067	
	186	ROHN 3 STD	41.084	27.97	C	0.14	0.204	3.995	7.071	2.231	4.067	
	187	ROHN 2.5 STD	33.748	25.148	B	0.14	0.204	4.360	8.447	2.470	4.859	
	188	ROHN 3 STD	41.084	27.97	B	0.14	0.204	3.995	7.071	2.231	4.067	
	189	ROHN 3 STD	41.084	27.97	B	0.14	0.204	3.995	7.071	2.231	4.067	
	190	ROHN 2.5 STD	33.748	25.148	A	0.14	0.204	4.360	8.447	2.470	4.859	
	191	ROHN 3 STD	41.084	27.97	A	0.14	0.204	3.995	7.071	2.231	4.067	
	192	ROHN 3 STD	41.084	27.97	A	0.14	0.204	3.995	7.071	2.231	4.067	
	196	ROHN 2.5 STD	33.748	25.148	C	0.14	0.204	4.060	7.867	2.301	4.525	
	197	ROHN 3 STD	41.084	27.97	C	0.14	0.204	3.862	6.837	2.157	3.932	
	198	ROHN 3 STD	41.084	27.97	C	0.14	0.204	3.862	6.837	2.157	3.932	
	199	ROHN 2.5 STD	33.748	25.148	B	0.14	0.204	4.060	7.867	2.301	4.525	
	200	ROHN 3 STD	41.084	27.97	B	0.14	0.204	3.862	6.837	2.157	3.932	
201	ROHN 3 STD	41.084	27.97	B	0.14	0.204	3.862	6.837	2.157	3.932		

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Project	180-ft Lattice Tower (CSP #32)	Date	07:59:09 09/20/22
Client	Verizon	Designed by	TJL

Section Elevation	Elem. Num.	Size	C	C w/Ice	F a c e	e	e w/Ice	A _r	A _r w/Ice	A _r R _r	A _r R _r w/Ice	
ft								ft ²	ft ²	ft ²	ft ²	
T10 60.00-40.00	202	ROHN 2.5 STD	33.748	25.148	A	0.14	0.204	4.060	7.867	2.301	4.525	
	203	ROHN 3 STD	41.084	27.97	A	0.14	0.204	3.862	6.837	2.157	3.932	
	204	ROHN 3 STD	41.084	27.97	A	0.14	0.204	3.862	6.837	2.157	3.932	
					A		Sum:	24.135	44.130	13.546	25.382	
					B			24.135	44.130	13.546	25.382	
					C			24.135	44.130	13.546	25.382	
		211	ROHN 2.5 STD	32.573	23.885	C	0.129	0.189	4.959	9.454	2.805	5.413
		212	ROHN 3 EH	39.655	26.608	C	0.129	0.189	4.269	7.448	2.404	4.264
		213	ROHN 3 EH	39.655	26.608	C	0.129	0.189	4.269	7.448	2.404	4.264
		214	ROHN 2.5 STD	32.573	23.885	B	0.129	0.189	4.959	9.454	2.805	5.413
		215	ROHN 3 EH	39.655	26.608	B	0.129	0.189	4.269	7.448	2.404	4.264
		216	ROHN 3 EH	39.655	26.608	B	0.129	0.189	4.269	7.448	2.404	4.264
		217	ROHN 2.5 STD	32.573	23.885	A	0.129	0.189	4.959	9.454	2.805	5.413
		218	ROHN 3 EH	39.655	26.608	A	0.129	0.189	4.269	7.448	2.404	4.264
		219	ROHN 3 EH	39.655	26.608	A	0.129	0.189	4.269	7.448	2.404	4.264
		223	ROHN 2.5 STD	32.573	23.885	C	0.129	0.189	4.659	8.883	2.636	5.086
		224	ROHN 3 EH	39.655	26.608	C	0.129	0.189	4.130	7.206	2.326	4.126
		225	ROHN 3 EH	39.655	26.608	C	0.129	0.189	4.130	7.206	2.326	4.126
		226	ROHN 2.5 STD	32.573	23.885	B	0.129	0.189	4.659	8.883	2.636	5.086
		227	ROHN 3 EH	39.655	26.608	B	0.129	0.189	4.130	7.206	2.326	4.126
		228	ROHN 3 EH	39.655	26.608	B	0.129	0.189	4.130	7.206	2.326	4.126
		229	ROHN 2.5 STD	32.573	23.885	A	0.129	0.189	4.659	8.883	2.636	5.086
		230	ROHN 3 EH	39.655	26.608	A	0.129	0.189	4.130	7.206	2.326	4.126
	231	ROHN 3 EH	39.655	26.608	A	0.129	0.189	4.130	7.206	2.326	4.126	
				A		Sum:	26.417	47.644	14.901	27.279		
				B			26.417	47.644	14.901	27.279		
				C			26.417	47.644	14.901	27.279		
T11 40.00-30.00	238	ROHN 2.5 STD	31.373	22.621	C	0.123	0.178	5.258	9.858	2.973	5.629	
	239	ROHN 3 EH	38.193	25.244	C	0.123	0.178	4.410	7.579	2.493	4.328	
	240	ROHN 3 EH	38.193	25.244	C	0.123	0.178	4.410	7.579	2.493	4.328	
	241	ROHN 2.5 STD	31.373	22.621	B	0.123	0.178	5.258	9.858	2.973	5.629	
	242	ROHN 3 EH	38.193	25.244	B	0.123	0.178	4.410	7.579	2.493	4.328	
	243	ROHN 3 EH	38.193	25.244	B	0.123	0.178	4.410	7.579	2.493	4.328	
	244	ROHN 2.5 STD	31.373	22.621	A	0.123	0.178	5.258	9.858	2.973	5.629	
	245	ROHN 3 EH	38.193	25.244	A	0.123	0.178	4.410	7.579	2.493	4.328	
	246	ROHN 3 EH	38.193	25.244	A	0.123	0.178	4.410	7.579	2.493	4.328	
					A		Sum:	14.079	25.017	7.959	14.285	
					B			14.079	25.017	7.959	14.285	
				C			14.079	25.017	7.959	14.285		
T12 30.00-20.00	253	ROHN 2.5 EH	30.281	21.497	C	0.119	0.172	5.558	10.258	3.141	5.849	
	254	ROHN 2.5 EH	30.281	21.497	B	0.119	0.172	5.558	10.258	3.141	5.849	
	255	ROHN 2.5 EH	30.281	21.497	A	0.119	0.172	5.558	10.258	3.141	5.849	
	256	ROHN 3 EH	36.864	24.029	C	0.119	0.172	4.555	7.719	2.574	4.401	
	257	ROHN 3 EH	36.864	24.029	C	0.119	0.172	4.555	7.719	2.574	4.401	
	258	ROHN 3 EH	36.864	24.029	B	0.119	0.172	4.555	7.719	2.574	4.401	
	259	ROHN 3 EH	36.864	24.029	B	0.119	0.172	4.555	7.719	2.574	4.401	
	260	ROHN 3 EH	36.864	24.029	A	0.119	0.172	4.555	7.719	2.574	4.401	
	261	ROHN 3 EH	36.864	24.029	A	0.119	0.172	4.555	7.719	2.574	4.401	
					A		Sum:	14.667	25.696	8.288	14.650	
					B			14.667	25.696	8.288	14.650	
				C			14.667	25.696	8.288	14.650		
T13 20.00-0.00	268	P3.5x.226	39.951	23.889	C	0.108	0.152	8.153	12.675	4.570	7.195	
	269	ROHN 3 EH	34.957	21.968	C	0.108	0.152	6.913	11.295	3.903	6.412	
	270	ROHN 1.5 STD	18.977	15.822	C	0.108	0.152	0.940	2.037	0.531	1.156	
	271	ROHN 2 STD	23.721	17.646	C	0.108	0.152	2.132	4.124	1.204	2.341	
	272	ROHN 3 EH	34.957	21.968	C	0.108	0.152	6.913	11.295	3.903	6.412	
	273	ROHN 1.5 STD	18.977	15.822	C	0.108	0.152	0.940	2.037	0.531	1.156	
	274	ROHN 2 STD	23.721	17.646	C	0.108	0.152	2.132	4.124	1.204	2.341	
	275	P3.5x.226	39.951	23.889	B	0.108	0.152	8.153	12.675	4.570	7.195	
	276	ROHN 3 EH	34.957	21.968	B	0.108	0.152	6.913	11.295	3.903	6.412	

tnxTower Centek Engineering Inc. 63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587	Job 22027.01 - Westport	Page 28 of 71
	Project 180-ft Lattice Tower (CSP #32)	Date 07:59:09 09/20/22
	Client Verizon	Designed by TJL

Section Elevation <i>ft</i>	Elem. Num.	Size	C	C w/Ice	F a c e	e	e w/Ice	A _r <i>ft</i> ²	A _r w/Ice <i>ft</i> ²	A _r R _r <i>ft</i> ²	A _r R _r w/Ice <i>ft</i> ²
	277	ROHN 1.5 STD	18.977	15.822	B	0.108	0.152	0.940	2.037	0.531	1.156
	278	ROHN 2 STD	23.721	17.646	B	0.108	0.152	2.132	4.124	1.204	2.341
	279	ROHN 3 EH	34.957	21.968	B	0.108	0.152	6.913	11.295	3.903	6.412
	280	ROHN 1.5 STD	18.977	15.822	B	0.108	0.152	0.940	2.037	0.531	1.156
	281	ROHN 2 STD	23.721	17.646	B	0.108	0.152	2.132	4.124	1.204	2.341
	283	P3.5x.226	39.951	23.889	A	0.108	0.152	8.153	12.675	4.570	7.195
	284	ROHN 3 EH	34.957	21.968	A	0.108	0.152	6.913	11.295	3.903	6.412
	285	ROHN 1.5 STD	18.977	15.822	A	0.108	0.152	0.940	2.037	0.531	1.156
	286	ROHN 2 STD	23.721	17.646	A	0.108	0.152	2.132	4.124	1.204	2.341
	287	ROHN 3 EH	34.957	21.968	A	0.108	0.152	6.913	11.295	3.903	6.412
	288	ROHN 1.5 STD	18.977	15.822	A	0.108	0.152	0.940	2.037	0.531	1.156
	289	ROHN 2 STD	23.721	17.646	A	0.108	0.152	2.132	4.124	1.204	2.341
					A			Sum:	28.122	47.586	15.844
					B				28.122	47.586	15.844
					C				28.122	47.586	15.844

222-H Section Verification Tables - No Ice

Section Elevation <i>ft</i>	z _{wind} <i>ft</i>	z _{ice} <i>ft</i>	K _z	K _d	K _{zt}	t _z <i>in</i>	q _z <i>psf</i>	F a c e	e	A _r R _r <i>ft</i> ²
T1 180.00-160.00	170.00		1.415	1	1		52	A	0.139	13.713
								B	0.139	13.713
								C	0.139	13.713
T2 160.00-140.00	150.00		1.378	1	1		51	A	0.143	15.269
								B	0.143	15.269
								C	0.143	15.269
T3 140.00-133.33	136.67		1.352	1	1		50	A	0.151	5.828
								B	0.151	5.828
								C	0.151	5.828
T4 133.33-126.67	130.00		1.337	1	1		49	A	0.145	5.951
								B	0.145	5.951
								C	0.145	5.951
T5 126.67-120.00	123.33		1.323	1	1		49	A	0.14	6.074
								B	0.14	6.074
								C	0.14	6.074
T6 120.00-100.00	110.00		1.291	1	1		47	A	0.133	18.396
								B	0.133	18.396
								C	0.133	18.396
T7 100.00-90.00	95.00		1.252	1	1		46	A	0.131	10.175
								B	0.131	10.175
								C	0.131	10.175
T8 90.00-80.00	85.00		1.223	1	1		45	A	0.124	10.439
								B	0.124	10.439
								C	0.124	10.439
T9 80.00-60.00	70.00		1.174	1	1		43	A	0.14	13.546
								B	0.14	13.546
								C	0.14	13.546
T10 60.00-40.00	50.00		1.094	1	1		40	A	0.129	14.901
								B	0.129	14.901
								C	0.129	14.901
T11 40.00-30.00	35.00		1.015	1	1		37	A	0.123	7.959

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	Project	180-ft Lattice Tower (CSP #32)	Date	07:59:09 09/20/22
	Client	Verizon	Designed by	TJL

Section Elevation	z_{wind}	z_{ice}	K_z	K_h	K_{zt}	t_z	q_z	F_{ac}	e	$A_s R_r$
ft	ft	ft				in	psf			ft ²
T12 30.00-20.00	25.00		0.945	1	1		35	B	0.123	7.959
								C	0.123	7.959
								A	0.119	8.288
T13 20.00-0.00	10.00		0.85	1	1		31	B	0.119	8.288
								C	0.119	8.288
								A	0.108	15.844
								B	0.108	15.844
								C	0.108	15.844

222-H Section Verification Tables - Ice

Section Elevation	z_{wind}	z_{ice}	K_z	K_h	K_{zt}	t_z	q_z	F_{ac}	e	$A_s R_r$
ft	ft	ft				in	psf			ft ²
T1 180.00-160.00	170.00	170.00	1.415	1	1	1.4727	8	A	0.285	30.840
								B	0.285	30.840
								C	0.285	30.840
T2 160.00-140.00	150.00	150.00	1.378	1	1	1.4543	7	A	0.276	33.556
								B	0.276	33.556
								C	0.276	33.556
T3 140.00-133.33	136.67	136.67	1.352	1	1	1.4409	7	A	0.271	12.561
								B	0.271	12.561
								C	0.271	12.561
T4 133.33-126.67	130.00	130.00	1.337	1	1	1.4337	7	A	0.262	12.781
								B	0.262	12.781
								C	0.262	12.781
T5 126.67-120.00	123.33	123.33	1.323	1	1	1.4262	7	A	0.253	13.001
								B	0.253	13.001
								C	0.253	13.001
T6 120.00-100.00	110.00	110.00	1.291	1	1	1.4099	7	A	0.222	37.718
								B	0.222	37.718
								C	0.222	37.718
T7 100.00-90.00	95.00	95.00	1.252	1	1	1.3894	7	A	0.212	20.193
								B	0.212	20.193
								C	0.212	20.193
T8 90.00-80.00	85.00	85.00	1.223	1	1	1.3740	7	A	0.202	20.625
								B	0.202	20.625
								C	0.202	20.625
T9 80.00-60.00	70.00	70.00	1.174	1	1	1.3476	6	A	0.204	25.382
								B	0.204	25.382
								C	0.204	25.382
T10 60.00-40.00	50.00	50.00	1.094	1	1	1.3030	6	A	0.189	27.279
								B	0.189	27.279
								C	0.189	27.279
T11 40.00-30.00	35.00	35.00	1.015	1	1	1.2574	6	A	0.178	14.285
								B	0.178	14.285
								C	0.178	14.285
T12 30.00-20.00	25.00	25.00	0.945	1	1	1.2158	5	A	0.172	14.650
								B	0.172	14.650
								C	0.172	14.650
T13 20.00-0.00	10.00	10.00	0.85	1	1	1.1093	5	A	0.152	27.015
								B	0.152	27.015
								C	0.152	27.015

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	Client	Verizon	Designed by	TJL

222-H Section Verification Tables - Service

Section Elevation	z_{wind}	z_{ice}	K_z	K_h	K_{zt}	t_z	q_z	$F_a c e$	e	A, R_f
ft	ft	ft				in	psf			ft ²
T1 180.00-160.00	170.00		1.415	1	1		11	A B C	0.139 0.139 0.139	13.993 13.993 13.993
T2 160.00-140.00	150.00		1.378	1	1		11	A B C	0.143 0.143 0.143	16.334 16.334 16.334
T3 140.00-133.33	136.67		1.352	1	1		11	A B C	0.151 0.151 0.151	6.561 6.561 6.561
T4 133.33-126.67	130.00		1.337	1	1		10	A B C	0.145 0.145 0.145	6.687 6.687 6.687
T5 126.67-120.00	123.33		1.323	1	1		10	A B C	0.14 0.14 0.14	6.810 6.810 6.810
T6 120.00-100.00	110.00		1.291	1	1		10	A B C	0.133 0.133 0.133	21.840 21.840 21.840
T7 100.00-90.00	95.00		1.252	1	1		10	A B C	0.131 0.131 0.131	12.011 12.011 12.011
T8 90.00-80.00	85.00		1.223	1	1		10	A B C	0.124 0.124 0.124	12.296 12.296 12.296
T9 80.00-60.00	70.00		1.174	1	1		9	A B C	0.14 0.14 0.14	13.674 13.674 13.674
T10 60.00-40.00	50.00		1.094	1	1		9	A B C	0.129 0.129 0.129	14.945 14.945 14.945
T11 40.00-30.00	35.00		1.015	1	1		8	A B C	0.123 0.123 0.123	7.959 7.959 7.959
T12 30.00-20.00	25.00		0.945	1	1		7	A B C	0.119 0.119 0.119	8.288 8.288 8.288
T13 20.00-0.00	10.00		0.85	1	1		7	A B C	0.108 0.108 0.108	15.877 15.877 15.877

Tower Pressures - No Ice

$G_H = 0.850$

Section Elevation	z	K_Z	q_z	A_G	$F_a c e$	A_F	A_R	A_{leg}	Leg %	$C_A A_A$ In Face	$C_A A_A$ Out Face
ft	ft		psf	ft ²	ft ²	ft ²	ft ²	ft ²		ft ²	ft ²
T1 180.00-160.00	170.00	1.415	52	177.503	A B C	0.000 0.000 0.000	24.699 24.699 24.699	11.667	47.24 47.24 47.24	15.281 0.000 0.000	0.000 0.000 0.000
T2 160.00-140.00	150.00	1.378	51	200.850	A B	0.000 0.000	28.812 28.812	15.027	52.16 52.16	56.607 0.000	0.000 0.000

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	Project	180-ft Lattice Tower (CSP #32)	Date	07:59:09 09/20/22
	Client	Verizon	Designed by	TJL

Section Elevation ft	z ft	K _Z	q _z psf	A _G ft ²	F a c e	A _F ft ²	A _R ft ²	A _{leg} ft ²	Leg %	C _A A _A In Face ft ²	C _A A _A Out Face ft ²
T3 140.00-133.33	136.67	1.352	50	76.803	C	0.000	28.812		52.16	0.000	0.000
					A	0.000	11.559	6.192	53.57	18.869	0.000
					B	0.000	11.559		53.57	0.000	0.000
					C	0.000	11.559		53.57	0.000	0.000
T4 133.33-126.67	130.00	1.337	49	81.431	A	0.000	11.792	6.192	52.51	18.869	0.000
					B	0.000	11.792		52.51	10.751	0.000
					C	0.000	11.792		52.51	0.000	0.000
T5 126.67-120.00	123.33	1.323	49	86.060	A	0.000	12.020	6.192	51.52	18.869	0.000
					B	0.000	12.020		51.52	29.491	0.000
					C	0.000	12.020		51.52	0.000	0.000
T6 120.00-100.00	110.00	1.291	47	289.399	A	0.000	38.583	22.130	57.36	57.426	0.000
					B	0.000	38.583		57.36	106.647	0.000
					C	0.000	38.583		57.36	0.000	0.000
T7 100.00-90.00	95.00	1.252	46	162.540	A	0.000	21.227	11.074	52.17	28.934	0.000
					B	0.000	21.227		52.17	53.324	0.000
					C	0.000	21.227		52.17	0.000	0.000
T8 90.00-80.00	85.00	1.223	45	175.715	A	0.000	21.747	11.074	50.92	28.934	0.000
					B	0.000	21.747		50.92	53.324	0.000
					C	0.000	21.747		50.92	0.000	0.000
T9 80.00-60.00	70.00	1.174	43	390.971	A	30.496	24.135	30.496	55.82	57.930	0.000
					B	30.496	24.135		55.82	106.647	0.000
					C	30.496	24.135		55.82	0.000	0.000
T10 60.00-40.00	50.00	1.094	40	440.971	A	30.496	26.417	30.496	53.58	59.127	0.000
					B	30.496	26.417		53.58	106.647	0.000
					C	30.496	26.417		53.58	0.000	0.000
T11 40.00-30.00	35.00	1.015	37	239.236	A	15.248	14.079	15.248	51.99	29.564	0.000
					B	15.248	14.079		51.99	53.324	0.000
					C	15.248	14.079		51.99	0.000	0.000
T12 30.00-20.00	25.00	0.945	35	251.736	A	15.248	14.667	15.248	50.97	29.564	0.000
					B	15.248	14.667		50.97	53.324	0.000
					C	15.248	14.667		50.97	0.000	0.000
T13 20.00-0.00	10.00	0.85	31	541.368	A	30.078	28.122	30.078	51.68	59.127	0.000
					B	30.078	28.122		51.68	106.647	0.000
					C	30.078	28.122		51.68	0.000	0.000

Tower Pressure - With Ice

$G_H = 0.850$

Section Elevation ft	z ft	K _Z	q _z psf	t _z in	A _G ft ²	F a c e	A _F ft ²	A _R ft ²	A _{leg} ft ²	Leg %	C _A A _A In Face ft ²	C _A A _A Out Face ft ²
T1 180.00-160.00	170.00	1.415	8	1.4727	182.412	A	0.000	51.898	21.484	41.40	43.556	0.000
						B	0.000	51.898		41.40	0.000	0.000
						C	0.000	51.898		41.40	0.000	0.000
T2 160.00-140.00	150.00	1.378	7	1.4543	205.705	A	0.000	56.708	24.740	43.63	159.660	0.000
						B	0.000	56.708		43.63	0.000	0.000
						C	0.000	56.708		43.63	0.000	0.000
T3 140.00-133.33	136.67	1.352	7	1.4409	78.406	A	0.000	21.270	9.400	44.19	53.019	0.000
						B	0.000	21.270		44.19	0.000	0.000
						C	0.000	21.270		44.19	0.000	0.000
T4 133.33-126.67	130.00	1.337	7	1.4337	83.027	A	0.000	21.736	9.384	43.17	52.912	0.000
						B	0.000	21.736		43.17	35.372	0.000
						C	0.000	21.736		43.17	0.000	0.000
T5 126.67-120.00	123.33	1.323	7	1.4262	87.647	A	0.000	22.194	9.367	42.21	52.800	0.000

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	Client Verizon	Designed by TJL

Section Elevation ft	z ft	K _Z	q _z psf	l _z in	A _G ft ²	F a c e	A _F ft ²	A _R ft ²	A _{leg} ft ²	Leg %	C _A A _A In Face ft ²	C _A A _A Out Face ft ²
126.67-120.00						B	0.000	22.194		42.21	62.421	0.000
						C	0.000	22.194		42.21	0.000	0.000
T6 120.00-100.00	110.00	1.291	7	1.4099	294.106	A	0.000	65.187	31.549	48.40	162.161	0.000
						B	0.000	65.187		48.40	211.927	0.000
						C	0.000	65.187		48.40	0.000	0.000
T7 100.00-90.00	95.00	1.252	7	1.3894	164.861	A	0.000	35.011	15.718	44.90	81.789	0.000
						B	0.000	35.011		44.90	105.592	0.000
						C	0.000	35.011		44.90	0.000	0.000
T8 90.00-80.00	85.00	1.223	7	1.3740	178.010	A	0.000	35.885	15.667	43.66	81.415	0.000
						B	0.000	35.885		43.66	105.313	0.000
						C	0.000	35.885		43.66	0.000	0.000
T9 80.00-60.00	70.00	1.174	6	1.3476	395.472	A	36.501	44.130	36.501	45.27	161.878	0.000
						B	36.501	44.130		45.27	209.670	0.000
						C	36.501	44.130		45.27	0.000	0.000
T10 60.00-40.00	50.00	1.094	6	1.3030	445.323	A	36.302	47.644	36.302	43.24	165.850	0.000
						B	36.302	47.644		43.24	208.057	0.000
						C	36.302	47.644		43.24	0.000	0.000
T11 40.00-30.00	35.00	1.015	6	1.2574	241.335	A	18.049	25.017	18.049	41.91	81.724	0.000
						B	18.049	25.017		41.91	103.204	0.000
						C	18.049	25.017		41.91	0.000	0.000
T12 30.00-20.00	25.00	0.945	5	1.2158	253.766	A	17.957	25.696	17.957	41.14	80.630	0.000
						B	17.957	25.696		41.14	102.454	0.000
						C	17.957	25.696		41.14	0.000	0.000
T13 20.00-0.00	10.00	0.85	5	1.1093	545.073	A	35.021	47.586	35.021	42.39	155.667	0.000
						B	35.021	47.586		42.39	201.077	0.000
						C	35.021	47.586		42.39	0.000	0.000

Tower Pressure - Service

$G_H = 0.850$

Section Elevation ft	z ft	K _Z	q _z psf	A _G ft ²	F a c e	A _F ft ²	A _R ft ²	A _{leg} ft ²	Leg %	C _A A _A In Face ft ²	C _A A _A Out Face ft ²
T1 180.00-160.00	170.00	1.415	11	177.503	A	0.000	24.699	11.667	47.24	15.281	0.000
					B	0.000	24.699		47.24	0.000	0.000
					C	0.000	24.699		47.24	0.000	0.000
T2 160.00-140.00	150.00	1.378	11	200.850	A	0.000	28.812	15.027	52.16	56.607	0.000
					B	0.000	28.812		52.16	0.000	0.000
					C	0.000	28.812		52.16	0.000	0.000
T3 140.00-133.33	136.67	1.352	11	76.803	A	0.000	11.559	6.192	53.57	18.869	0.000
					B	0.000	11.559		53.57	0.000	0.000
					C	0.000	11.559		53.57	0.000	0.000
T4 133.33-126.67	130.00	1.337	10	81.431	A	0.000	11.792	6.192	52.51	18.869	0.000
					B	0.000	11.792		52.51	10.751	0.000
					C	0.000	11.792		52.51	0.000	0.000
T5 126.67-120.00	123.33	1.323	10	86.060	A	0.000	12.020	6.192	51.52	18.869	0.000
					B	0.000	12.020		51.52	29.491	0.000
					C	0.000	12.020		51.52	0.000	0.000
T6 120.00-100.00	110.00	1.291	10	289.399	A	0.000	38.583	22.130	57.36	57.426	0.000
					B	0.000	38.583		57.36	106.647	0.000
					C	0.000	38.583		57.36	0.000	0.000
T7 100.00-90.00	95.00	1.252	10	162.540	A	0.000	21.227	11.074	52.17	28.934	0.000
					B	0.000	21.227		52.17	53.324	0.000

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	Project	180-ft Lattice Tower (CSP #32)	Date	07:59:09 09/20/22
	Client	Verizon	Designed by	TJL

Section Elevation ft	z ft	K _Z	q _z psf	A _G ft ²	F _a c e	A _F ft ²	A _R ft ²	A _{leg} ft ²	Leg %	C _A A _A In Face ft ²	C _A A _A Out Face ft ²
T8 90.00-80.00	85.00	1.223	10	175.715	C	0.000	21.227	11.074	52.17	0.000	0.000
					A	0.000	21.747		50.92	28.934	0.000
					B	0.000	21.747		50.92	53.324	0.000
T9 80.00-60.00	70.00	1.174	9	390.971	C	0.000	21.747	30.496	50.92	0.000	0.000
					A	30.496	24.135		55.82	57.930	0.000
					B	30.496	24.135		55.82	106.647	0.000
T10 60.00-40.00	50.00	1.094	9	440.971	C	30.496	24.135	30.496	55.82	0.000	0.000
					A	30.496	26.417		53.58	59.127	0.000
					B	30.496	26.417		53.58	106.647	0.000
T11 40.00-30.00	35.00	1.015	8	239.236	C	30.496	26.417	15.248	53.58	0.000	0.000
					A	15.248	14.079		51.99	29.564	0.000
					B	15.248	14.079		51.99	53.324	0.000
T12 30.00-20.00	25.00	0.945	7	251.736	C	15.248	14.079	15.248	51.99	0.000	0.000
					A	15.248	14.667		50.97	29.564	0.000
					B	15.248	14.667		50.97	53.324	0.000
T13 20.00-0.00	10.00	0.85	7	541.368	C	15.248	14.667	30.078	50.97	0.000	0.000
					A	30.078	28.122		51.68	59.127	0.000
					B	30.078	28.122		51.68	106.647	0.000
					C	30.078	28.122		51.68	0.000	0.000

Tower Forces - No Ice - Wind Normal To Face

Section Elevation ft	Add Weight lb	Self Weight lb	F _a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F lb	w plf	Ctrl. Face
T1 180.00-160.00	44.64	1250.43	A	0.139	2.812	52	1	1	13.713	2381.65	119.08	C
			B	0.139	2.812	1	1	13.713				
			C	0.139	2.812	1	1	13.713				
T2 160.00-140.00	250.60	1495.62	A	0.143	2.796	51	1	1	15.269	4278.29	213.91	C
			B	0.143	2.796	1	1	15.269				
			C	0.143	2.796	1	1	15.269				
T3 140.00-133.33	83.53	825.91	A	0.151	2.77	50	1	1	5.828	1479.17	221.88	C
			B	0.151	2.77	1	1	5.828				
			C	0.151	2.77	1	1	5.828				
T4 133.33-126.67	141.17	842.18	A	0.145	2.791	49	1	1	5.951	1932.64	289.90	C
			B	0.145	2.791	1	1	5.951				
			C	0.145	2.791	1	1	5.951				
T5 126.67-120.00	220.41	1080.40	A	0.14	2.81	49	1	1	6.074	2705.17	405.78	C
			B	0.14	2.81	1	1	6.074				
			C	0.14	2.81	1	1	6.074				
T6 120.00-100.00	739.37	3821.31	A	0.133	2.834	47	1	1	18.396	8726.63	436.33	C
			B	0.133	2.834	1	1	18.396				
			C	0.133	2.834	1	1	18.396				
T7 100.00-90.00	370.21	1682.80	A	0.131	2.844	46	1	1	10.175	4351.82	435.18	C
			B	0.131	2.844	1	1	10.175				
			C	0.131	2.844	1	1	10.175				
T8 90.00-80.00	370.21	1722.73	A	0.124	2.87	45	1	1	10.439	4290.21	429.02	C
			B	0.124	2.87	1	1	10.439				
			C	0.124	2.87	1	1	10.439				
T9 80.00-60.00	740.57	4897.54	A	0.14	2.81	43	1	1	44.041	10581.06	529.05	C
			B	0.14	2.81	1	1	44.041				
			C	0.14	2.81	1	1	44.041				
T10 60.00-40.00	743.42	5700.46	A	0.129	2.85	40	1	1	45.397	10091.26	504.56	C
			B	0.129	2.85	1	1	45.397				
			C	0.129	2.85	1	1	45.397				
T11	371.71	2942.46	A	0.123	2.875	37	1	1	23.207	4744.96	474.50	C

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	Project	180-ft Lattice Tower (CSP #32)	Date	07:59:09 09/20/22
	Client	Verizon	Designed by	TJL

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z	D _F	D _R	A _E	F	w	Ctrl. Face
ft	lb	lb				psf			ft ²	lb	plf	
40.00-30.00			B	0.123	2.875		1	1	23.207			
			C	0.123	2.875		1	1	23.207			
T12	371.71	3139.03	A	0.119	2.889	35	1	1	23.536	4458.54	445.85	C
30.00-20.00			B	0.119	2.889		1	1	23.536			
			C	0.119	2.889		1	1	23.536			
T13	743.42	6187.56	A	0.108	2.934	31	1	1	45.922	7984.45	399.22	C
20.00-0.00			B	0.108	2.934		1	1	45.922			
			C	0.108	2.934		1	1	45.922			
Sum Weight:	5190.97	35588.43						OTM	5174.30 kip-ft	68005.85		

Tower Forces - No Ice - Wind 45 To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z	D _F	D _R	A _E	F	w	Ctrl. Face
ft	lb	lb				psf			ft ²	lb	plf	
T1	44.64	1250.43	A	0.139	2.812	52	0.825	1	13.713	2381.65	119.08	C
180.00-160.00			B	0.139	2.812		0.825	1	13.713			
			C	0.139	2.812		0.825	1	13.713			
T2	250.60	1495.62	A	0.143	2.796	51	0.825	1	15.269	4278.29	213.91	C
160.00-140.00			B	0.143	2.796		0.825	1	15.269			
			C	0.143	2.796		0.825	1	15.269			
T3	83.53	825.91	A	0.151	2.77	50	0.825	1	5.828	1479.17	221.88	C
140.00-133.33			B	0.151	2.77		0.825	1	5.828			
			C	0.151	2.77		0.825	1	5.828			
T4	141.17	842.18	A	0.145	2.791	49	0.825	1	5.951	1932.64	289.90	C
133.33-126.67			B	0.145	2.791		0.825	1	5.951			
			C	0.145	2.791		0.825	1	5.951			
T5	220.41	1080.40	A	0.14	2.81	49	0.825	1	6.074	2705.17	405.78	C
126.67-120.00			B	0.14	2.81		0.825	1	6.074			
			C	0.14	2.81		0.825	1	6.074			
T6	739.37	3821.31	A	0.133	2.834	47	0.825	1	18.396	8726.63	436.33	C
120.00-100.00			B	0.133	2.834		0.825	1	18.396			
			C	0.133	2.834		0.825	1	18.396			
T7	370.21	1682.80	A	0.131	2.844	46	0.825	1	10.175	4351.82	435.18	C
100.00-90.00			B	0.131	2.844		0.825	1	10.175			
			C	0.131	2.844		0.825	1	10.175			
T8	370.21	1722.73	A	0.124	2.87	45	0.825	1	10.439	4290.21	429.02	C
90.00-80.00			B	0.124	2.87		0.825	1	10.439			
			C	0.124	2.87		0.825	1	10.439			
T9	740.57	4897.54	A	0.14	2.81	43	0.825	1	38.705	10030.77	501.54	C
80.00-60.00			B	0.14	2.81		0.825	1	38.705			
			C	0.14	2.81		0.825	1	38.705			
T10	743.42	5700.46	A	0.129	2.85	40	0.825	1	40.060	9571.24	478.56	C
60.00-40.00			B	0.129	2.85		0.825	1	40.060			
			C	0.129	2.85		0.825	1	40.060			
T11	371.71	2942.46	A	0.123	2.875	37	0.825	1	20.539	4501.65	450.16	C
40.00-30.00			B	0.123	2.875		0.825	1	20.539			
			C	0.123	2.875		0.825	1	20.539			
T12	371.71	3139.03	A	0.119	2.889	35	0.825	1	20.868	4230.73	423.07	C
30.00-20.00			B	0.119	2.889		0.825	1	20.868			
			C	0.119	2.889		0.825	1	20.868			
T13	743.42	6187.56	A	0.108	2.934	31	0.825	1	40.659	7574.12	378.71	C

tnxTower Centek Engineering Inc. 63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587	Job	22027.01 - Westport	Page	35 of 71
	Project	180-ft Lattice Tower (CSP #32)	Date	07:59:09 09/20/22
	Client	Verizon	Designed by	TJL

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z	D _F	D _R	A _E	F	w	Ctrl. Face
ft	lb	lb				psf			ft ²	lb	plf	
20.00-0.00			B	0.108	2.934		0.825	1	40.659			
			C	0.108	2.934		0.825	1	40.659			
Sum Weight:	5190.97	35588.43						OTM	5091.46 kip-ft	66054.09		

Tower Forces - No Ice - Wind 60 To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z	D _F	D _R	A _E	F	w	Ctrl. Face
ft	lb	lb				psf			ft ²	lb	plf	
T1	44.64	1250.43	A	0.139	2.812	52	0.8	1	13.713	2381.65	119.08	C
180.00-160.00			B	0.139	2.812		0.8	1	13.713			
			C	0.139	2.812		0.8	1	13.713			
T2	250.60	1495.62	A	0.143	2.796	51	0.8	1	15.269	4278.29	213.91	C
160.00-140.00			B	0.143	2.796		0.8	1	15.269			
			C	0.143	2.796		0.8	1	15.269			
T3	83.53	825.91	A	0.151	2.77	50	0.8	1	5.828	1479.17	221.88	C
140.00-133.33			B	0.151	2.77		0.8	1	5.828			
			C	0.151	2.77		0.8	1	5.828			
T4	141.17	842.18	A	0.145	2.791	49	0.8	1	5.951	1932.64	289.90	C
133.33-126.67			B	0.145	2.791		0.8	1	5.951			
			C	0.145	2.791		0.8	1	5.951			
T5	220.41	1080.40	A	0.14	2.81	49	0.8	1	6.074	2705.17	405.78	C
126.67-120.00			B	0.14	2.81		0.8	1	6.074			
			C	0.14	2.81		0.8	1	6.074			
T6	739.37	3821.31	A	0.133	2.834	47	0.8	1	18.396	8726.63	436.33	C
120.00-100.00			B	0.133	2.834		0.8	1	18.396			
			C	0.133	2.834		0.8	1	18.396			
T7	370.21	1682.80	A	0.131	2.844	46	0.8	1	10.175	4351.82	435.18	C
100.00-90.00			B	0.131	2.844		0.8	1	10.175			
			C	0.131	2.844		0.8	1	10.175			
T8	370.21	1722.73	A	0.124	2.87	45	0.8	1	10.439	4290.21	429.02	C
90.00-80.00			B	0.124	2.87		0.8	1	10.439			
			C	0.124	2.87		0.8	1	10.439			
T9	740.57	4897.54	A	0.14	2.81	43	0.8	1	37.942	9952.16	497.61	C
80.00-60.00			B	0.14	2.81		0.8	1	37.942			
			C	0.14	2.81		0.8	1	37.942			
T10	743.42	5700.46	A	0.129	2.85	40	0.8	1	39.297	9496.95	474.85	C
60.00-40.00			B	0.129	2.85		0.8	1	39.297			
			C	0.129	2.85		0.8	1	39.297			
T11	371.71	2942.46	A	0.123	2.875	37	0.8	1	20.158	4466.89	446.69	C
40.00-30.00			B	0.123	2.875		0.8	1	20.158			
			C	0.123	2.875		0.8	1	20.158			
T12	371.71	3139.03	A	0.119	2.889	35	0.8	1	20.487	4198.18	419.82	C
30.00-20.00			B	0.119	2.889		0.8	1	20.487			
			C	0.119	2.889		0.8	1	20.487			
T13	743.42	6187.56	A	0.108	2.934	31	0.8	1	39.907	7515.50	375.77	C
20.00-0.00			B	0.108	2.934		0.8	1	39.907			
			C	0.108	2.934		0.8	1	39.907			
Sum Weight:	5190.97	35588.43						OTM	5079.63 kip-ft	65775.27		

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	Project	180-ft Lattice Tower (CSP #32)	Date	07:59:09 09/20/22
	Client	Verizon	Designed by	TJL

Tower Forces - No Ice - Wind 90 To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z	D _F	D _R	A _E	F	w	Ctrl. Face
ft	lb	lb				psf			ft ²	lb	plf	
T1 180.00-160.00	44.64	1250.43	A	0.139	2.812	52	0.85	1	13.713	2381.65	119.08	C
			B	0.139	2.812		0.85	1	13.713			
			C	0.139	2.812		0.85	1	13.713			
T2 160.00-140.00	250.60	1495.62	A	0.143	2.796	51	0.85	1	15.269	4278.29	213.91	C
			B	0.143	2.796		0.85	1	15.269			
			C	0.143	2.796		0.85	1	15.269			
T3 140.00-133.33	83.53	825.91	A	0.151	2.77	50	0.85	1	5.828	1479.17	221.88	C
			B	0.151	2.77		0.85	1	5.828			
			C	0.151	2.77		0.85	1	5.828			
T4 133.33-126.67	141.17	842.18	A	0.145	2.791	49	0.85	1	5.951	1932.64	289.90	C
			B	0.145	2.791		0.85	1	5.951			
			C	0.145	2.791		0.85	1	5.951			
T5 126.67-120.00	220.41	1080.40	A	0.14	2.81	49	0.85	1	6.074	2705.17	405.78	C
			B	0.14	2.81		0.85	1	6.074			
			C	0.14	2.81		0.85	1	6.074			
T6 120.00-100.00	739.37	3821.31	A	0.133	2.834	47	0.85	1	18.396	8726.63	436.33	C
			B	0.133	2.834		0.85	1	18.396			
			C	0.133	2.834		0.85	1	18.396			
T7 100.00-90.00	370.21	1682.80	A	0.131	2.844	46	0.85	1	10.175	4351.82	435.18	C
			B	0.131	2.844		0.85	1	10.175			
			C	0.131	2.844		0.85	1	10.175			
T8 90.00-80.00	370.21	1722.73	A	0.124	2.87	45	0.85	1	10.439	4290.21	429.02	C
			B	0.124	2.87		0.85	1	10.439			
			C	0.124	2.87		0.85	1	10.439			
T9 80.00-60.00	740.57	4897.54	A	0.14	2.81	43	0.85	1	39.467	10109.38	505.47	C
			B	0.14	2.81		0.85	1	39.467			
			C	0.14	2.81		0.85	1	39.467			
T10 60.00-40.00	743.42	5700.46	A	0.129	2.85	40	0.85	1	40.822	9645.53	482.28	C
			B	0.129	2.85		0.85	1	40.822			
			C	0.129	2.85		0.85	1	40.822			
T11 40.00-30.00	371.71	2942.46	A	0.123	2.875	37	0.85	1	20.920	4536.40	453.64	C
			B	0.123	2.875		0.85	1	20.920			
			C	0.123	2.875		0.85	1	20.920			
T12 30.00-20.00	371.71	3139.03	A	0.119	2.889	35	0.85	1	21.249	4263.27	426.33	C
			B	0.119	2.889		0.85	1	21.249			
			C	0.119	2.889		0.85	1	21.249			
T13 20.00-0.00	743.42	6187.56	A	0.108	2.934	31	0.85	1	41.411	7632.74	381.64	C
			B	0.108	2.934		0.85	1	41.411			
			C	0.108	2.934		0.85	1	41.411			
Sum Weight:	5190.97	35588.43						OTM	5103.30 kip-ft	66332.91		

Tower Forces - With Ice - Wind Normal To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z	D _F	D _R	A _E	F	w	Ctrl. Face
ft	lb	lb				psf			ft ²	lb	plf	
T1	552.25	3542.13	A	0.285	2.338	8	1	1	30.840	756.88	37.84	C

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	Project 180-ft Lattice Tower (CSP #32)	Date 07:59:09 09/20/22
	Client Verizon	Designed by TJL

Section Elevation ft	Add Weight lb	Self Weight lb	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F lb	w plf	Ctrl. Face
180.00-160.00			B	0.285	2.338		1	1	30.840			
			C	0.285	2.338		1	1	30.840			
T2	2085.47	3972.41	A	0.276	2.363	7	1	1	33.556	1522.96	76.15	C
160.00-140.00			B	0.276	2.363		1	1	33.556			
			C	0.276	2.363		1	1	33.556			
T3	688.56	1763.59	A	0.271	2.375	7	1	1	12.561	517.83	77.68	C
140.00-133.33			B	0.271	2.375		1	1	12.561			
			C	0.271	2.375		1	1	12.561			
T4	1094.31	1804.53	A	0.262	2.403	7	1	1	12.781	735.90	110.39	C
133.33-126.67			B	0.262	2.403		1	1	12.781			
			C	0.262	2.403		1	1	12.781			
T5	1711.44	2066.51	A	0.253	2.428	7	1	1	13.001	897.80	134.67	C
126.67-120.00			B	0.253	2.428		1	1	13.001			
			C	0.253	2.428		1	1	13.001			
T6	5733.04	6611.25	A	0.222	2.525	7	1	1	37.718	2802.33	140.12	C
120.00-100.00			B	0.222	2.525		1	1	37.718			
			C	0.222	2.525		1	1	37.718			
T7	2846.77	3212.73	A	0.212	2.555	7	1	1	20.193	1383.53	138.35	C
100.00-90.00			B	0.212	2.555		1	1	20.193			
			C	0.212	2.555		1	1	20.193			
T8	2822.50	3293.32	A	0.202	2.591	7	1	1	20.625	1358.21	135.82	C
90.00-80.00			B	0.202	2.591		1	1	20.625			
			C	0.202	2.591		1	1	20.625			
T9	5565.48	9216.41	A	0.204	2.583	6	1	1	61.883	2884.88	144.24	C
80.00-60.00			B	0.204	2.583		1	1	61.883			
			C	0.204	2.583		1	1	61.883			
T10	5488.15	10171.64	A	0.189	2.635	6	1	1	63.581	2738.36	136.92	C
60.00-40.00			B	0.189	2.635		1	1	63.581			
			C	0.189	2.635		1	1	63.581			
T11	2672.37	5180.35	A	0.178	2.67	6	1	1	32.335	1272.63	127.26	C
40.00-30.00			B	0.178	2.67		1	1	32.335			
			C	0.178	2.67		1	1	32.335			
T12	2607.93	5351.10	A	0.172	2.692	5	1	1	32.607	1183.93	118.39	C
30.00-20.00			B	0.172	2.692		1	1	32.607			
			C	0.172	2.692		1	1	32.607			
T13	4893.86	9751.96	A	0.152	2.766	5	1	1	62.036	2076.52	103.83	C
20.00-0.00			B	0.152	2.766		1	1	62.036			
			C	0.152	2.766		1	1	62.036			
Sum Weight:	38762.12	65937.92						OTM	1623.18 kip-ft	20131.76		

Tower Forces - With Ice - Wind 45 To Face

Section Elevation ft	Add Weight lb	Self Weight lb	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F lb	w plf	Ctrl. Face
180.00-160.00			A	0.285	2.338	8	0.825	1	30.840	756.88	37.84	C
			B	0.285	2.338		0.825	1	30.840			
			C	0.285	2.338		0.825	1	30.840			
T2	2085.47	3972.41	A	0.276	2.363	7	0.825	1	33.556	1522.96	76.15	C
160.00-140.00			B	0.276	2.363		0.825	1	33.556			
			C	0.276	2.363		0.825	1	33.556			
T3	688.56	1763.59	A	0.271	2.375	7	0.825	1	12.561	517.83	77.68	C

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	Project 180-ft Lattice Tower (CSP #32)	Date 07:59:09 09/20/22
	Client Verizon	Designed by TJL

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z	D _F	D _R	A _E	F	w	Ctrl. Face
ft	lb	lb				psf			ft ²	lb	plf	
140.00-133.33			B	0.271	2.375		0.825	1	12.561			
			C	0.271	2.375		0.825	1	12.561			
T4	1094.31	1804.53	A	0.262	2.403	7	0.825	1	12.781	735.90	110.39	C
133.33-126.67			B	0.262	2.403		0.825	1	12.781			
			C	0.262	2.403		0.825	1	12.781			
T5	1711.44	2066.51	A	0.253	2.428	7	0.825	1	13.001	897.80	134.67	C
126.67-120.00			B	0.253	2.428		0.825	1	13.001			
			C	0.253	2.428		0.825	1	13.001			
T6	5733.04	6611.25	A	0.222	2.525	7	0.825	1	37.718	2802.33	140.12	C
120.00-100.00			B	0.222	2.525		0.825	1	37.718			
			C	0.222	2.525		0.825	1	37.718			
T7	2846.77	3212.73	A	0.212	2.555	7	0.825	1	20.193	1383.53	138.35	C
100.00-90.00			B	0.212	2.555		0.825	1	20.193			
			C	0.212	2.555		0.825	1	20.193			
T8	2822.50	3293.32	A	0.202	2.591	7	0.825	1	20.625	1358.21	135.82	C
90.00-80.00			B	0.202	2.591		0.825	1	20.625			
			C	0.202	2.591		0.825	1	20.625			
T9	5565.48	9216.41	A	0.204	2.583	6	0.825	1	55.495	2795.31	139.77	C
80.00-60.00			B	0.204	2.583		0.825	1	55.495			
			C	0.204	2.583		0.825	1	55.495			
T10	5488.15	10171.64	A	0.189	2.635	6	0.825	1	57.228	2653.70	132.68	C
60.00-40.00			B	0.189	2.635		0.825	1	57.228			
			C	0.189	2.635		0.825	1	57.228			
T11	2672.37	5180.35	A	0.178	2.67	6	0.825	1	29.176	1233.06	123.31	C
40.00-30.00			B	0.178	2.67		0.825	1	29.176			
			C	0.178	2.67		0.825	1	29.176			
T12	2607.93	5351.10	A	0.172	2.692	5	0.825	1	29.464	1146.95	114.70	C
30.00-20.00			B	0.172	2.692		0.825	1	29.464			
			C	0.172	2.692		0.825	1	29.464			
T13	4893.86	9751.96	A	0.152	2.766	5	0.825	1	55.907	2009.90	100.49	C
20.00-0.00			B	0.152	2.766		0.825	1	55.907			
			C	0.152	2.766		0.825	1	55.907			
Sum Weight:	38762.12	65937.92						OTM	1609.71 kip-ft	19814.36		

Tower Forces - With Ice - Wind 60 To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z	D _F	D _R	A _E	F	w	Ctrl. Face
ft	lb	lb				psf			ft ²	lb	plf	
T1	552.25	3542.13	A	0.285	2.338	8	0.8	1	30.840	756.88	37.84	C
180.00-160.00			B	0.285	2.338		0.8	1	30.840			
			C	0.285	2.338		0.8	1	30.840			
T2	2085.47	3972.41	A	0.276	2.363	7	0.8	1	33.556	1522.96	76.15	C
160.00-140.00			B	0.276	2.363		0.8	1	33.556			
			C	0.276	2.363		0.8	1	33.556			
T3	688.56	1763.59	A	0.271	2.375	7	0.8	1	12.561	517.83	77.68	C
140.00-133.33			B	0.271	2.375		0.8	1	12.561			
			C	0.271	2.375		0.8	1	12.561			
T4	1094.31	1804.53	A	0.262	2.403	7	0.8	1	12.781	735.90	110.39	C
133.33-126.67			B	0.262	2.403		0.8	1	12.781			
			C	0.262	2.403		0.8	1	12.781			
T5	1711.44	2066.51	A	0.253	2.428	7	0.8	1	13.001	897.80	134.67	C

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	Project 180-ft Lattice Tower (CSP #32)	Date 07:59:09 09/20/22
	Client Verizon	Designed by TJL

Section Elevation ft	Add Weight lb	Self Weight lb	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F lb	w plf	Ctrl. Face
126.67-120.00			B	0.253	2.428		0.8	1	13.001			
			C	0.253	2.428		0.8	1	13.001			
T6 120.00-100.00	5733.04	6611.25	A	0.222	2.525	7	0.8	1	37.718	2802.33	140.12	C
			B	0.222	2.525		0.8	1	37.718			
			C	0.222	2.525		0.8	1	37.718			
T7 100.00-90.00	2846.77	3212.73	A	0.212	2.555	7	0.8	1	20.193	1383.53	138.35	C
			B	0.212	2.555		0.8	1	20.193			
			C	0.212	2.555		0.8	1	20.193			
T8 90.00-80.00	2822.50	3293.32	A	0.202	2.591	7	0.8	1	20.625	1358.21	135.82	C
			B	0.202	2.591		0.8	1	20.625			
			C	0.202	2.591		0.8	1	20.625			
T9 80.00-60.00	5565.48	9216.41	A	0.204	2.583	6	0.8	1	54.583	2782.51	139.13	C
			B	0.204	2.583		0.8	1	54.583			
			C	0.204	2.583		0.8	1	54.583			
T10 60.00-40.00	5488.15	10171.64	A	0.189	2.635	6	0.8	1	56.321	2641.61	132.08	C
			B	0.189	2.635		0.8	1	56.321			
			C	0.189	2.635		0.8	1	56.321			
T11 40.00-30.00	2672.37	5180.35	A	0.178	2.67	6	0.8	1	28.725	1227.41	122.74	C
			B	0.178	2.67		0.8	1	28.725			
			C	0.178	2.67		0.8	1	28.725			
T12 30.00-20.00	2607.93	5351.10	A	0.172	2.692	5	0.8	1	29.016	1141.67	114.17	C
			B	0.172	2.692		0.8	1	29.016			
			C	0.172	2.692		0.8	1	29.016			
T13 20.00-0.00	4893.86	9751.96	A	0.152	2.766	5	0.8	1	55.032	2000.38	100.02	C
			B	0.152	2.766		0.8	1	55.032			
			C	0.152	2.766		0.8	1	55.032			
Sum Weight:	38762.12	65937.92						OTM	1607.78 kip-ft	19769.02		

Tower Forces - With Ice - Wind 90 To Face

Section Elevation ft	Add Weight lb	Self Weight lb	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F lb	w plf	Ctrl. Face
T1 180.00-160.00	552.25	3542.13	A	0.285	2.338	8	0.85	1	30.840	756.88	37.84	C
			B	0.285	2.338		0.85	1	30.840			
			C	0.285	2.338		0.85	1	30.840			
T2 160.00-140.00	2085.47	3972.41	A	0.276	2.363	7	0.85	1	33.556	1522.96	76.15	C
			B	0.276	2.363		0.85	1	33.556			
			C	0.276	2.363		0.85	1	33.556			
T3 140.00-133.33	688.56	1763.59	A	0.271	2.375	7	0.85	1	12.561	517.83	77.68	C
			B	0.271	2.375		0.85	1	12.561			
			C	0.271	2.375		0.85	1	12.561			
T4 133.33-126.67	1094.31	1804.53	A	0.262	2.403	7	0.85	1	12.781	735.90	110.39	C
			B	0.262	2.403		0.85	1	12.781			
			C	0.262	2.403		0.85	1	12.781			
T5 126.67-120.00	1711.44	2066.51	A	0.253	2.428	7	0.85	1	13.001	897.80	134.67	C
			B	0.253	2.428		0.85	1	13.001			
			C	0.253	2.428		0.85	1	13.001			
T6 120.00-100.00	5733.04	6611.25	A	0.222	2.525	7	0.85	1	37.718	2802.33	140.12	C
			B	0.222	2.525		0.85	1	37.718			
			C	0.222	2.525		0.85	1	37.718			
T7 100.00-90.00	2846.77	3212.73	A	0.212	2.555	7	0.85	1	20.193	1383.53	138.35	C

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	Project	180-ft Lattice Tower (CSP #32)	Date	07:59:09 09/20/22
	Client	Verizon	Designed by	TJL

Section Elevation ft	Add Weight lb	Self Weight lb	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F lb	w plf	Ctrl. Face
100.00-90.00			B	0.212	2.555		0.85	1	20.193			
			C	0.212	2.555		0.85	1	20.193			
T8	2822.50	3293.32	A	0.202	2.591	7	0.85	1	20.625	1358.21	135.82	C
90.00-80.00			B	0.202	2.591		0.85	1	20.625			
			C	0.202	2.591		0.85	1	20.625			
T9	5565.48	9216.41	A	0.204	2.583	6	0.85	1	56.408	2808.10	140.41	C
80.00-60.00			B	0.204	2.583		0.85	1	56.408			
			C	0.204	2.583		0.85	1	56.408			
T10	5488.15	10171.64	A	0.189	2.635	6	0.85	1	58.136	2665.79	133.29	C
60.00-40.00			B	0.189	2.635		0.85	1	58.136			
			C	0.189	2.635		0.85	1	58.136			
T11	2672.37	5180.35	A	0.178	2.67	6	0.85	1	29.627	1238.72	123.87	C
40.00-30.00			B	0.178	2.67		0.85	1	29.627			
			C	0.178	2.67		0.85	1	29.627			
T12	2607.93	5351.10	A	0.172	2.692	5	0.85	1	29.913	1152.23	115.22	C
30.00-20.00			B	0.172	2.692		0.85	1	29.913			
			C	0.172	2.692		0.85	1	29.913			
T13	4893.86	9751.96	A	0.152	2.766	5	0.85	1	56.783	2019.41	100.97	C
20.00-0.00			B	0.152	2.766		0.85	1	56.783			
			C	0.152	2.766		0.85	1	56.783			
Sum Weight:	38762.12	65937.92						OTM	1611.63 kip-ft	19859.71		

Tower Forces - Service - Wind Normal To Face

Section Elevation ft	Add Weight lb	Self Weight lb	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F lb	w plf	Ctrl. Face
T1	44.64	1250.43	A	0.139	2.812	11	1	1	13.993	514.75	25.74	C
180.00-160.00			B	0.139	2.812		1	1	13.993			
			C	0.139	2.812		1	1	13.993			
T2	250.60	1495.62	A	0.143	2.796	11	1	1	16.334	938.67	46.93	C
160.00-140.00			B	0.143	2.796		1	1	16.334			
			C	0.143	2.796		1	1	16.334			
T3	83.53	825.91	A	0.151	2.77	11	1	1	6.561	333.37	50.00	C
140.00-133.33			B	0.151	2.77		1	1	6.561			
			C	0.151	2.77		1	1	6.561			
T4	141.17	842.18	A	0.145	2.791	10	1	1	6.687	429.97	64.50	C
133.33-126.67			B	0.145	2.791		1	1	6.687			
			C	0.145	2.791		1	1	6.687			
T5	220.41	1080.40	A	0.14	2.81	10	1	1	6.810	594.48	89.17	C
126.67-120.00			B	0.14	2.81		1	1	6.810			
			C	0.14	2.81		1	1	6.810			
T6	739.37	3821.31	A	0.133	2.834	10	1	1	21.840	1942.85	97.14	C
120.00-100.00			B	0.133	2.834		1	1	21.840			
			C	0.133	2.834		1	1	21.840			
T7	370.21	1682.80	A	0.131	2.844	10	1	1	12.011	970.55	97.06	C
100.00-90.00			B	0.131	2.844		1	1	12.011			
			C	0.131	2.844		1	1	12.011			
T8	370.21	1722.73	A	0.124	2.87	10	1	1	12.296	957.31	95.73	C
90.00-80.00			B	0.124	2.87		1	1	12.296			
			C	0.124	2.87		1	1	12.296			
T9	740.57	4897.54	A	0.14	2.81	9	1	1	44.170	2256.78	112.84	C

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	Project	180-ft Lattice Tower (CSP #32)	Date	07:59:09 09/20/22
	Client	Verizon	Designed by	TJL

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z	D _F	D _R	A _E	F	w	Ctrl. Face
ft	lb	lb				psf			ft ²	lb	plf	
80.00-60.00			B	0.14	2.81		1	1	44.170			
			C	0.14	2.81		1	1	44.170			
T10	743.42	5700.46	A	0.129	2.85	9	1	1	45.441	2150.54	107.53	C
60.00-40.00			B	0.129	2.85		1	1	45.441			
			C	0.129	2.85		1	1	45.441			
T11	371.71	2942.46	A	0.123	2.875	8	1	1	23.207	1010.76	101.08	C
40.00-30.00			B	0.123	2.875		1	1	23.207			
			C	0.123	2.875		1	1	23.207			
T12	371.71	3139.03	A	0.119	2.889	7	1	1	23.536	949.75	94.97	C
30.00-20.00			B	0.119	2.889		1	1	23.536			
			C	0.119	2.889		1	1	23.536			
T13	743.42	6187.56	A	0.108	2.934	7	1	1	45.955	1701.38	85.07	C
20.00-0.00			B	0.108	2.934		1	1	45.955			
			C	0.108	2.934		1	1	45.955			
Sum Weight:	5190.97	35588.43						OTM	1132.01 kip-ft	14751.14		

Tower Forces - Service - Wind 45 To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z	D _F	D _R	A _E	F	w	Ctrl. Face
ft	lb	lb				psf			ft ²	lb	plf	
T1	44.64	1250.43	A	0.139	2.812	11	0.825	1	13.993	514.75	25.74	C
180.00-160.00			B	0.139	2.812		0.825	1	13.993			
			C	0.139	2.812		0.825	1	13.993			
T2	250.60	1495.62	A	0.143	2.796	11	0.825	1	16.334	938.67	46.93	C
160.00-140.00			B	0.143	2.796		0.825	1	16.334			
			C	0.143	2.796		0.825	1	16.334			
T3	83.53	825.91	A	0.151	2.77	11	0.825	1	6.561	333.37	50.00	C
140.00-133.33			B	0.151	2.77		0.825	1	6.561			
			C	0.151	2.77		0.825	1	6.561			
T4	141.17	842.18	A	0.145	2.791	10	0.825	1	6.687	429.97	64.50	C
133.33-126.67			B	0.145	2.791		0.825	1	6.687			
			C	0.145	2.791		0.825	1	6.687			
T5	220.41	1080.40	A	0.14	2.81	10	0.825	1	6.810	594.48	89.17	C
126.67-120.00			B	0.14	2.81		0.825	1	6.810			
			C	0.14	2.81		0.825	1	6.810			
T6	739.37	3821.31	A	0.133	2.834	10	0.825	1	21.840	1942.85	97.14	C
120.00-100.00			B	0.133	2.834		0.825	1	21.840			
			C	0.133	2.834		0.825	1	21.840			
T7	370.21	1682.80	A	0.131	2.844	10	0.825	1	12.011	970.55	97.06	C
100.00-90.00			B	0.131	2.844		0.825	1	12.011			
			C	0.131	2.844		0.825	1	12.011			
T8	370.21	1722.73	A	0.124	2.87	10	0.825	1	12.296	957.31	95.73	C
90.00-80.00			B	0.124	2.87		0.825	1	12.296			
			C	0.124	2.87		0.825	1	12.296			
T9	740.57	4897.54	A	0.14	2.81	9	0.825	1	38.833	2139.56	106.98	C
80.00-60.00			B	0.14	2.81		0.825	1	38.833			
			C	0.14	2.81		0.825	1	38.833			
T10	743.42	5700.46	A	0.129	2.85	9	0.825	1	40.104	2039.76	101.99	C
60.00-40.00			B	0.129	2.85		0.825	1	40.104			
			C	0.129	2.85		0.825	1	40.104			
T11	371.71	2942.46	A	0.123	2.875	8	0.825	1	20.539	958.93	95.89	C

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	Project 180-ft Lattice Tower (CSP #32)	Date 07:59:09 09/20/22
	Client Verizon	Designed by TJL

Section Elevation ft	Add Weight lb	Self Weight lb	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F lb	w plf	Ctrl. Face
40.00-30.00			B	0.123	2.875		0.825	1	20.539			
			C	0.123	2.875		0.825	1	20.539			
T12 30.00-20.00	371.71	3139.03	A	0.119	2.889	7	0.825	1	20.868	901.22	90.12	C
			B	0.119	2.889		0.825	1	20.868			
			C	0.119	2.889		0.825	1	20.868			
T13 20.00-0.00	743.42	6187.56	A	0.108	2.934	7	0.825	1	40.692	1613.97	80.70	C
			B	0.108	2.934		0.825	1	40.692			
			C	0.108	2.934		0.825	1	40.692			
Sum Weight:	5190.97	35588.43						OTM	1114.36 kip-ft	14335.38		

Tower Forces - Service - Wind 60 To Face

Section Elevation ft	Add Weight lb	Self Weight lb	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F lb	w plf	Ctrl. Face
T1 180.00-160.00	44.64	1250.43	A	0.139	2.812	11	0.8	1	13.993	514.75	25.74	C
			B	0.139	2.812		0.8	1	13.993			
			C	0.139	2.812		0.8	1	13.993			
T2 160.00-140.00	250.60	1495.62	A	0.143	2.796	11	0.8	1	16.334	938.67	46.93	C
			B	0.143	2.796		0.8	1	16.334			
			C	0.143	2.796		0.8	1	16.334			
T3 140.00-133.33	83.53	825.91	A	0.151	2.77	11	0.8	1	6.561	333.37	50.00	C
			B	0.151	2.77		0.8	1	6.561			
			C	0.151	2.77		0.8	1	6.561			
T4 133.33-126.67	141.17	842.18	A	0.145	2.791	10	0.8	1	6.687	429.97	64.50	C
			B	0.145	2.791		0.8	1	6.687			
			C	0.145	2.791		0.8	1	6.687			
T5 126.67-120.00	220.41	1080.40	A	0.14	2.81	10	0.8	1	6.810	594.48	89.17	C
			B	0.14	2.81		0.8	1	6.810			
			C	0.14	2.81		0.8	1	6.810			
T6 120.00-100.00	739.37	3821.31	A	0.133	2.834	10	0.8	1	21.840	1942.85	97.14	C
			B	0.133	2.834		0.8	1	21.840			
			C	0.133	2.834		0.8	1	21.840			
T7 100.00-90.00	370.21	1682.80	A	0.131	2.844	10	0.8	1	12.011	970.55	97.06	C
			B	0.131	2.844		0.8	1	12.011			
			C	0.131	2.844		0.8	1	12.011			
T8 90.00-80.00	370.21	1722.73	A	0.124	2.87	10	0.8	1	12.296	957.31	95.73	C
			B	0.124	2.87		0.8	1	12.296			
			C	0.124	2.87		0.8	1	12.296			
T9 80.00-60.00	740.57	4897.54	A	0.14	2.81	9	0.8	1	38.071	2122.81	106.14	C
			B	0.14	2.81		0.8	1	38.071			
			C	0.14	2.81		0.8	1	38.071			
T10 60.00-40.00	743.42	5700.46	A	0.129	2.85	9	0.8	1	39.342	2023.94	101.20	C
			B	0.129	2.85		0.8	1	39.342			
			C	0.129	2.85		0.8	1	39.342			
T11 40.00-30.00	371.71	2942.46	A	0.123	2.875	8	0.8	1	20.158	951.53	95.15	C
			B	0.123	2.875		0.8	1	20.158			
			C	0.123	2.875		0.8	1	20.158			
T12 30.00-20.00	371.71	3139.03	A	0.119	2.889	7	0.8	1	20.487	894.29	89.43	C
			B	0.119	2.889		0.8	1	20.487			
			C	0.119	2.889		0.8	1	20.487			
T13	743.42	6187.56	A	0.108	2.934	7	0.8	1	39.940	1601.48	80.07	C

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Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z	D _F	D _R	A _E	F	w	Ctrl. Face
ft	lb	lb				psf			ft ²	lb	plf	
20.00-0.00			B	0.108	2.934		0.8	1	39.940			
			C	0.108	2.934		0.8	1	39.940			
Sum Weight:	5190.97	35588.43						OTM	1111.84 kip-ft	14275.99		

Tower Forces - Service - Wind 90 To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z	D _F	D _R	A _E	F	w	Ctrl. Face
ft	lb	lb				psf			ft ²	lb	plf	
T1	44.64	1250.43	A	0.139	2.812	11	0.85	1	13.993	514.75	25.74	C
180.00-160.00			B	0.139	2.812		0.85	1	13.993			
			C	0.139	2.812		0.85	1	13.993			
T2	250.60	1495.62	A	0.143	2.796	11	0.85	1	16.334	938.67	46.93	C
160.00-140.00			B	0.143	2.796		0.85	1	16.334			
			C	0.143	2.796		0.85	1	16.334			
T3	83.53	825.91	A	0.151	2.77	11	0.85	1	6.561	333.37	50.00	C
140.00-133.33			B	0.151	2.77		0.85	1	6.561			
			C	0.151	2.77		0.85	1	6.561			
T4	141.17	842.18	A	0.145	2.791	10	0.85	1	6.687	429.97	64.50	C
133.33-126.67			B	0.145	2.791		0.85	1	6.687			
			C	0.145	2.791		0.85	1	6.687			
T5	220.41	1080.40	A	0.14	2.81	10	0.85	1	6.810	594.48	89.17	C
126.67-120.00			B	0.14	2.81		0.85	1	6.810			
			C	0.14	2.81		0.85	1	6.810			
T6	739.37	3821.31	A	0.133	2.834	10	0.85	1	21.840	1942.85	97.14	C
120.00-100.00			B	0.133	2.834		0.85	1	21.840			
			C	0.133	2.834		0.85	1	21.840			
T7	370.21	1682.80	A	0.131	2.844	10	0.85	1	12.011	970.55	97.06	C
100.00-90.00			B	0.131	2.844		0.85	1	12.011			
			C	0.131	2.844		0.85	1	12.011			
T8	370.21	1722.73	A	0.124	2.87	10	0.85	1	12.296	957.31	95.73	C
90.00-80.00			B	0.124	2.87		0.85	1	12.296			
			C	0.124	2.87		0.85	1	12.296			
T9	740.57	4897.54	A	0.14	2.81	9	0.85	1	39.595	2156.30	107.82	C
80.00-60.00			B	0.14	2.81		0.85	1	39.595			
			C	0.14	2.81		0.85	1	39.595			
T10	743.42	5700.46	A	0.129	2.85	9	0.85	1	40.867	2055.59	102.78	C
60.00-40.00			B	0.129	2.85		0.85	1	40.867			
			C	0.129	2.85		0.85	1	40.867			
T11	371.71	2942.46	A	0.123	2.875	8	0.85	1	20.920	966.33	96.63	C
40.00-30.00			B	0.123	2.875		0.85	1	20.920			
			C	0.123	2.875		0.85	1	20.920			
T12	371.71	3139.03	A	0.119	2.889	7	0.85	1	21.249	908.15	90.82	C
30.00-20.00			B	0.119	2.889		0.85	1	21.249			
			C	0.119	2.889		0.85	1	21.249			
T13	743.42	6187.56	A	0.108	2.934	7	0.85	1	41.444	1626.46	81.32	C
20.00-0.00			B	0.108	2.934		0.85	1	41.444			
			C	0.108	2.934		0.85	1	41.444			
Sum Weight:	5190.97	35588.43						OTM	1116.88 kip-ft	14394.78		

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Force Totals

Load Case	Vertical Forces lb	Sum of Forces X lb	Sum of Forces Z lb	Sum of Overturning Moments, M_x kip-ft	Sum of Overturning Moments, M_z kip-ft	Sum of Torques kip-ft
Leg Weight	17198.81					
Bracing Weight	18389.62					
Total Member Self-Weight	35588.43			-16.58	2.25	
Total Weight	52804.93			-16.58	2.25	
Wind 0 deg - No Ice		-167.50	-89396.62	-8284.35	30.22	-6.43
Wind 30 deg - No Ice		43253.67	-75897.19	-7102.97	-3996.40	-83.76
Wind 45 deg - No Ice		60995.58	-61723.07	-5785.96	-5647.50	-114.56
Wind 60 deg - No Ice		74384.49	-43440.99	-4079.44	-6892.58	-137.65
Wind 90 deg - No Ice		86287.49	-10.46	-20.11	-7953.24	-155.55
Wind 120 deg - No Ice		76223.15	44483.71	4077.87	-6956.41	-132.13
Wind 135 deg - No Ice		61706.87	62373.23	5759.39	-5664.91	-106.16
Wind 150 deg - No Ice		43327.23	75726.94	7038.00	-4006.52	-73.01
Wind 180 deg - No Ice		188.11	86930.45	8114.82	-29.37	5.61
Wind 210 deg - No Ice		-43098.27	75619.00	7020.57	3973.40	81.67
Wind 225 deg - No Ice		-60736.99	61424.24	5699.90	5606.24	112.50
Wind 240 deg - No Ice		-76060.10	44257.23	4040.69	6933.73	135.57
Wind 270 deg - No Ice		-86229.28	-315.80	-70.80	7947.44	153.80
Wind 300 deg - No Ice		-74416.07	-43695.84	-4121.65	6900.99	131.11
Wind 315 deg - No Ice		-61155.36	-61926.81	-5819.65	5677.92	105.08
Wind 330 deg - No Ice		-43501.19	-76056.20	-7129.44	4041.81	72.05
Member Ice	30349.49					
Total Weight Ice	133427.90			-145.19	3.40	
Wind 0 deg - Ice		-25.46	-24555.22	-2406.30	7.65	0.94
Wind 30 deg - Ice		12019.39	-21018.69	-2091.52	-1101.21	-13.74
Wind 45 deg - Ice		16969.04	-17122.10	-1731.75	-1557.82	-19.83
Wind 60 deg - Ice		20730.83	-12074.67	-1264.45	-1904.69	-24.58
Wind 90 deg - Ice		24002.52	-2.59	-145.91	-2198.96	-28.98
Wind 120 deg - Ice		21029.36	12242.98	979.01	-1915.01	-25.67
Wind 135 deg - Ice		17083.77	17227.20	1442.34	-1560.50	-21.27
Wind 150 deg - Ice		12029.36	20990.92	1795.96	-1102.53	-15.43
Wind 180 deg - Ice		28.70	24155.36	2093.94	-1.42	-1.07
Wind 210 deg - Ice		-11994.91	20974.85	1793.37	1103.68	13.41
Wind 225 deg - Ice		-16928.29	17075.01	1433.02	1557.40	19.51
Wind 240 deg - Ice		-21004.61	12208.92	973.42	1917.69	24.26
Wind 270 deg - Ice		-23993.35	-48.83	-153.58	2204.14	28.70
Wind 300 deg - Ice		-20734.87	-12113.21	-1270.82	1911.95	25.50
Wind 315 deg - Ice		-16992.89	-17152.88	-1736.83	1568.47	21.10
Wind 330 deg - Ice		-12056.77	-21042.81	-2095.53	1114.18	15.28
Total Weight	52804.93			-16.58	2.25	
Wind 0 deg - Service		-35.68	-19307.76	-1794.06	8.91	-1.37
Wind 30 deg - Service		9346.14	-16396.68	-1538.41	-863.73	-17.84
Wind 45 deg - Service		13180.31	-13335.27	-1253.13	-1221.61	-24.40
Wind 60 deg - Service		16074.45	-9386.05	-883.44	-1491.57	-29.32
Wind 90 deg - Service		18645.46	-2.23	-3.84	-1721.50	-33.13
Wind 120 deg - Service		16466.11	9608.17	884.00	-1505.16	-28.15
Wind 135 deg - Service		13331.82	13473.77	1248.36	-1225.32	-22.61
Wind 150 deg - Service		9361.81	16360.41	1525.46	-865.88	-15.55
Wind 180 deg - Service		40.07	18782.42	1758.83	-3.78	1.20
Wind 210 deg - Service		-9313.04	16337.42	1521.75	863.77	17.40
Wind 225 deg - Service		-13125.22	13271.62	1235.69	1217.76	23.96
Wind 240 deg - Service		-16431.38	9559.92	876.08	1505.28	28.88
Wind 270 deg - Service		-18633.06	-67.27	-14.64	1725.21	32.76
Wind 300 deg - Service		-16081.17	-9440.33	-892.43	1498.30	27.93
Wind 315 deg - Service		-13214.34	-13378.67	-1260.31	1233.03	22.38

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Load Case	Vertical Forces lb	Sum of Forces X lb	Sum of Forces Z lb	Sum of Overturning Moments, M_x kip-ft	Sum of Overturning Moments, M_z kip-ft	Sum of Torques kip-ft
Wind 330 deg - Service		-9398.87	-16430.55	-1544.05	878.34	15.35

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 45 deg - No Ice
7	0.9 Dead+1.0 Wind 45 deg - No Ice
8	1.2 Dead+1.0 Wind 60 deg - No Ice
9	0.9 Dead+1.0 Wind 60 deg - No Ice
10	1.2 Dead+1.0 Wind 90 deg - No Ice
11	0.9 Dead+1.0 Wind 90 deg - No Ice
12	1.2 Dead+1.0 Wind 120 deg - No Ice
13	0.9 Dead+1.0 Wind 120 deg - No Ice
14	1.2 Dead+1.0 Wind 135 deg - No Ice
15	0.9 Dead+1.0 Wind 135 deg - No Ice
16	1.2 Dead+1.0 Wind 150 deg - No Ice
17	0.9 Dead+1.0 Wind 150 deg - No Ice
18	1.2 Dead+1.0 Wind 180 deg - No Ice
19	0.9 Dead+1.0 Wind 180 deg - No Ice
20	1.2 Dead+1.0 Wind 210 deg - No Ice
21	0.9 Dead+1.0 Wind 210 deg - No Ice
22	1.2 Dead+1.0 Wind 225 deg - No Ice
23	0.9 Dead+1.0 Wind 225 deg - No Ice
24	1.2 Dead+1.0 Wind 240 deg - No Ice
25	0.9 Dead+1.0 Wind 240 deg - No Ice
26	1.2 Dead+1.0 Wind 270 deg - No Ice
27	0.9 Dead+1.0 Wind 270 deg - No Ice
28	1.2 Dead+1.0 Wind 300 deg - No Ice
29	0.9 Dead+1.0 Wind 300 deg - No Ice
30	1.2 Dead+1.0 Wind 315 deg - No Ice
31	0.9 Dead+1.0 Wind 315 deg - No Ice
32	1.2 Dead+1.0 Wind 330 deg - No Ice
33	0.9 Dead+1.0 Wind 330 deg - No Ice
34	1.2 Dead+1.0 Ice
35	1.2 Dead+1.0 Wind 0 deg+1.0 Ice
36	1.2 Dead+1.0 Wind 30 deg+1.0 Ice
37	1.2 Dead+1.0 Wind 45 deg+1.0 Ice
38	1.2 Dead+1.0 Wind 60 deg+1.0 Ice
39	1.2 Dead+1.0 Wind 90 deg+1.0 Ice
40	1.2 Dead+1.0 Wind 120 deg+1.0 Ice
41	1.2 Dead+1.0 Wind 135 deg+1.0 Ice
42	1.2 Dead+1.0 Wind 150 deg+1.0 Ice
43	1.2 Dead+1.0 Wind 180 deg+1.0 Ice
44	1.2 Dead+1.0 Wind 210 deg+1.0 Ice
45	1.2 Dead+1.0 Wind 225 deg+1.0 Ice
46	1.2 Dead+1.0 Wind 240 deg+1.0 Ice
47	1.2 Dead+1.0 Wind 270 deg+1.0 Ice
48	1.2 Dead+1.0 Wind 300 deg+1.0 Ice
49	1.2 Dead+1.0 Wind 315 deg+1.0 Ice
50	1.2 Dead+1.0 Wind 330 deg+1.0 Ice

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Comb. No.	Description
51	Dead+Wind 0 deg - Service
52	Dead+Wind 30 deg - Service
53	Dead+Wind 45 deg - Service
54	Dead+Wind 60 deg - Service
55	Dead+Wind 90 deg - Service
56	Dead+Wind 120 deg - Service
57	Dead+Wind 135 deg - Service
58	Dead+Wind 150 deg - Service
59	Dead+Wind 180 deg - Service
60	Dead+Wind 210 deg - Service
61	Dead+Wind 225 deg - Service
62	Dead+Wind 240 deg - Service
63	Dead+Wind 270 deg - Service
64	Dead+Wind 300 deg - Service
65	Dead+Wind 315 deg - Service
66	Dead+Wind 330 deg - Service

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T1	180 - 160	Leg	Max Tension	31	2502.81	-0.27	-0.19
			Max. Compression	2	-4181.17	-0.08	0.02
			Max. Mx	12	-395.79	-0.52	-0.04
			Max. My	33	-144.55	-0.02	-0.92
			Max. Vy	3	327.13	0.52	0.30
		Diagonal	Max. Vx	32	-472.47	-0.02	0.75
			Max Tension	5	3947.57	0.00	0.00
			Max. Compression	4	-4014.91	0.00	0.00
			Max. Mx	34	-75.32	0.05	0.00
			Max. Vy	34	24.39	0.00	0.00
		Horizontal	Max Tension	4	2152.00	-0.01	-0.00
			Max. Compression	5	-2157.09	-0.01	-0.00
			Max. Mx	49	-148.67	-0.02	-0.00
			Max. My	3	-306.72	-0.00	0.00
			Max. Vy	49	25.79	-0.02	-0.00
		Top Girt	Max. Vx	3	-0.81	-0.00	0.00
			Max Tension	33	324.49	-0.01	0.00
			Max. Compression	2	-354.75	-0.01	-0.00
			Max. Mx	49	13.73	-0.02	-0.00
			Max. My	3	-50.61	-0.00	0.00
Inner Bracing	Max. Vy	49	-24.91	-0.02	-0.00		
	Max. Vx	3	-0.13	0.00	0.00		
	Max Tension	3	1.85	0.00	0.00		
	Max. Compression	18	-1.85	0.00	0.00		
	Max. Mx	34	-0.11	-0.02	0.00		
T2	160 - 140	Leg	Max. Vy	34	20.88	0.00	0.00
			Max Tension	19	22435.33	-0.10	-0.06
			Max. Compression	2	-29215.53	0.17	0.11
			Max. Mx	18	21519.45	-0.18	-0.11
			Max. My	2	9634.29	-0.09	0.32
		Diagonal	Max. Vy	18	-2441.71	0.09	-0.02
			Max. Vx	10	2450.77	0.02	-0.11
			Max Tension	5	8421.58	0.00	0.00
			Max. Compression	4	-8498.57	0.00	0.00
			Max. Mx	34	-209.60	0.06	0.00
		Horizontal	Max. Vy	34	-29.98	0.00	0.00
			Max Tension	4	5300.05	-0.01	-0.00

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Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment kip-ft	Minor Axis Moment kip-ft		
T3	140 - 133.333	Inner Bracing	Max. Compression	5	-5271.06	-0.01	-0.00		
			Max. Mx	48	-76.38	-0.03	-0.00		
			Max. My	2	2354.00	-0.01	0.01		
			Max. Vy	48	-29.98	-0.03	-0.00		
			Max. Vx	2	-2.43	-0.01	0.01		
			Max Tension	3	4.69	0.00	0.00		
			Max. Compression	18	-6.57	0.00	0.00		
			Max. Mx	34	-3.45	-0.03	0.00		
			Max. Vy	34	24.00	0.00	0.00		
			Max Tension	19	31226.84	-0.18	-0.11		
			Leg	Max. Compression	2	-38564.21	0.16	0.01	
				Max. Mx	18	30337.56	-0.18	-0.11	
		Max. My		2	13924.18	-0.09	0.32		
		Max. Vy		8	-66.95	-0.17	0.10		
		Diagonal		Max. Vx	18	-159.57	0.08	-0.32	
				Max Tension	5	8625.28	0.00	0.00	
				Max. Compression	4	-8735.13	0.00	0.00	
				Max. Mx	34	-232.00	0.08	0.00	
		Horizontal		Max. Vy	34	-36.43	0.00	0.00	
				Max Tension	4	5639.07	-0.02	-0.00	
				Max. Compression	5	-5609.19	-0.01	-0.00	
				Max. Mx	48	-37.44	-0.05	-0.00	
			Max. My	18	-1376.52	-0.03	-0.01		
			Max. Vy	48	-38.47	-0.05	-0.00		
Max. Vx	18		-2.15	0.00	0.00				
Max Tension	3		3.60	0.00	0.00				
Inner Bracing	Max. Compression	18	-6.41	0.00	0.00				
	Max. Mx	34	-4.04	-0.03	0.00				
	Max. Vy	34	-25.42	0.00	0.00				
	Max Tension	19	39742.32	-0.17	-0.01				
	T4	133.333 - 126.667	Leg	Max. Compression	2	-49914.02	1.11	0.05	
				Max. Mx	18	36723.04	-1.18	-0.04	
				Max. My	32	-4614.02	-0.05	1.19	
				Max. Vy	28	-2471.93	-0.17	0.01	
Diagonal				Max. Vx	4	-2367.27	-0.02	-0.04	
				Max Tension	5	11965.02	0.00	0.00	
				Max. Compression	4	-12083.40	0.00	0.00	
				Max. Mx	34	-229.06	0.09	0.00	
Top Girt				Max. Vy	34	-38.51	0.00	0.00	
				Max Tension	7	8107.54	-0.01	0.00	
				Max. Compression	4	-8093.91	-0.02	-0.00	
				Max. Mx	48	-422.65	-0.05	-0.00	
	Max. My	2	460.54	-0.01	0.02				
	Max. Vy	48	-40.96	-0.05	-0.00				
	Max. Vx	2	3.46	0.00	0.00				
	Max Tension	3	6.55	0.00	0.00				
Inner Bracing	Max. Compression	18	-9.52	0.00	0.00				
	Max. Mx	34	-4.27	-0.04	0.00				
	Max. Vy	34	-26.92	0.00	0.00				
	Max Tension	19	51166.53	-1.17	-0.04				
	T5	126.667 - 120	Leg	Max. Compression	2	-64485.98	0.80	-0.02	
				Max. Mx	18	49596.49	-1.18	-0.04	
				Max. My	32	-4678.54	-0.05	1.19	
				Max. Vy	18	-1138.72	-1.18	-0.04	
				Diagonal	Max. Vx	10	1166.25	-0.04	1.19
					Max Tension	5	13818.83	0.00	0.00
					Max. Compression	4	-14003.04	0.00	0.00
					Max. Mx	34	-251.81	0.13	0.00
Top Girt				Max. Vy	34	55.89	0.00	0.00	
				Max Tension	5	9595.63	-0.02	-0.00	

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	Client	Verizon	Designed by	TJL

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment kip-ft	Minor Axis Moment kip-ft	
T6	120 - 100	Inner Bracing	Max. Compression	5	-9594.67	-0.02	-0.00	
			Max. Mx	48	-308.75	-0.06	-0.01	
			Max. My	3	2146.87	-0.00	0.02	
			Max. Vy	48	43.21	-0.06	-0.01	
			Max. Vx	3	-3.45	-0.00	0.02	
			Max Tension	3	5.91	0.00	0.00	
			Max. Compression	18	-10.34	0.00	0.00	
			Max. Mx	34	-5.20	-0.04	0.00	
			Max. Vy	34	-28.40	0.00	0.00	
			Max Tension	19	87356.52	-0.53	0.04	
			Leg	Max. Compression	2	-104216.63	0.27	-0.07
				Max. Mx	18	63511.29	-0.84	0.02
		Max. My		26	-9200.74	-0.02	-1.03	
		Max. Vy		18	-144.87	-0.84	0.02	
		Max. Vx		11	340.20	-0.01	0.86	
		Diagonal		Max Tension	5	18370.94	0.00	0.00
				Max. Compression	4	-18683.90	0.00	0.00
				Max. Mx	34	-337.25	0.28	0.00
		Horizontal		Max. Vy	34	-89.70	0.00	0.00
				Max Tension	4	11131.26	-0.03	-0.00
				Max. Compression	5	-11031.19	-0.02	-0.00
		Inner Bracing		Max. Mx	48	-375.90	-0.08	-0.01
			Max. My	18	-1676.75	-0.04	-0.02	
			Max. Vy	48	-49.44	-0.08	-0.01	
Max. Vx	18		-3.17	-0.04	-0.02			
Max Tension	3		3.43	0.00	0.00			
Max. Compression	18		-11.95	0.00	0.00			
Max. Mx	34		-8.94	-0.07	0.00			
Max. Vy	34		-42.45	0.00	0.00			
T7	100 - 90		Leg	Max Tension	19	109334.80	-0.29	0.07
				Max. Compression	2	-128048.79	0.62	-0.03
				Max. Mx	18	106518.74	-0.66	0.03
			Diagonal	Max. My	11	-7741.50	-0.02	0.85
		Max. Vy		18	150.96	-0.66	0.03	
		Max. Vx		10	-331.86	-0.02	0.85	
		Max Tension		5	17536.73	0.00	0.00	
		Max. Compression		4	-17754.57	0.00	0.00	
		Max. Mx		34	-373.85	0.23	0.00	
		Horizontal	Max. Vy	34	71.24	0.00	0.00	
			Max Tension	7	11283.09	-0.02	0.00	
			Max. Compression	22	-11172.67	0.00	0.00	
Inner Bracing	Max. Mx	48	-673.94	-0.09	-0.01			
	Max. My	18	-502.92	-0.05	-0.02			
	Max. Vy	48	-52.08	-0.09	-0.01			
	Max. Vx	18	2.55	-0.05	-0.02			
	Max Tension	3	2.59	0.00	0.00			
	Max. Compression	43	-10.85	0.00	0.00			
	Max. Mx	34	-9.14	-0.09	0.00			
	Max. Vy	34	-45.29	0.00	0.00			
	T8	90 - 80	Leg	Max Tension	19	129518.54	-0.66	0.03
				Max. Compression	2	-149787.44	0.58	-0.01
				Max. Mx	18	126892.07	-0.66	0.03
			Diagonal	Max. My	11	-8376.36	-0.02	0.99
Max. Vy				18	-116.57	-0.66	0.03	
Max. Vx				10	-300.69	-0.03	0.99	
Max Tension				5	17872.19	0.00	0.00	
Max. Compression				4	-18108.10	0.00	0.00	
Max. Mx				34	-402.90	0.26	0.00	
Top Girt			Max. Vy	34	-76.44	0.00	0.00	
			Max Tension	6	12027.43	-0.03	0.00	
			Max. Compression	23	-11869.75	0.00	0.00	

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	Project	180-ft Lattice Tower (CSP #32)	Date	07:59:09 09/20/22
	Client	Verizon	Designed by	TJL

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T9	80 - 60	Inner Bracing	Max. Mx	48	-536.00	-0.10	-0.01
			Max. My	18	-243.63	-0.06	-0.02
			Max. Vy	48	-55.83	-0.10	-0.01
			Max. Vx	18	-2.22	-0.06	-0.02
			Max Tension	3	1.69	0.00	0.00
			Max. Compression	43	-11.10	0.00	0.00
			Max. Mx	34	-9.58	-0.10	0.00
			Max. Vy	34	48.77	0.00	0.00
			Max Tension	19	169690.01	-1.12	0.03
			Max. Compression	2	-193903.74	1.75	-0.02
		Leg	Max. Mx	18	165947.37	-1.76	0.02
			Max. My	11	-10058.33	-0.02	1.87
			Max. Vy	18	267.90	-1.76	0.02
			Max. Vx	11	-453.12	-0.02	1.87
			Max Tension	5	19435.53	0.00	0.00
			Max. Compression	4	-19757.09	0.00	0.00
			Max. Mx	34	-495.72	0.31	0.00
			Max. Vy	34	-86.22	0.00	0.00
			Max Tension	6	14112.21	-0.07	0.01
			Max. Compression	23	-13921.39	0.00	0.00
T10	60 - 40	Horizontal	Max. Mx	48	-581.30	-0.17	-0.01
			Max. My	3	628.08	-0.04	0.03
			Max. Vy	48	-83.64	-0.17	-0.01
			Max. Vx	18	-2.96	-0.10	-0.03
			Max Tension	3	2.81	0.00	0.00
			Max. Compression	43	-13.04	0.00	0.00
			Max. Mx	34	-11.14	-0.15	0.00
			Max. Vy	34	64.61	0.00	0.00
			Max Tension	19	210895.06	-1.16	0.03
			Max. Compression	2	-240151.77	1.03	-0.03
		Diagonal	Max. Mx	18	186674.02	-1.76	0.02
			Max. My	11	-10465.38	-0.02	1.87
			Max. Vy	8	-310.13	-1.73	0.36
			Max. Vx	10	444.32	-0.03	1.87
			Max Tension	5	20984.15	0.00	0.00
			Max. Compression	4	-21461.91	0.00	0.00
			Max. Mx	34	-618.75	0.43	0.00
			Max. Vy	34	-113.22	0.00	0.00
			Max Tension	6	16154.66	-0.10	0.01
			Max. Compression	23	-15864.60	0.00	0.00
Inner Bracing	Max. Mx	48	-567.35	-0.21	-0.01		
	Max. My	3	1552.76	-0.04	0.03		
	Max. Vy	48	-92.27	-0.21	-0.01		
	Max. Vx	3	-2.73	-0.04	0.03		
	Max Tension	3	0.85	0.00	0.00		
	Max. Compression	43	-15.48	0.00	0.00		
	Max. Mx	34	-13.80	-0.24	0.00		
	Max. Vy	34	90.29	0.00	0.00		
	Max Tension	19	231604.60	-1.10	0.03		
	Max. Compression	2	-263727.46	2.45	-0.02		
T11	40 - 30	Leg	Max. Mx	2	-263727.46	2.45	-0.02
			Max. My	11	-12458.86	-0.05	1.27
			Max. Vy	3	-303.07	2.43	-0.02
			Max. Vx	26	-346.53	-0.05	-1.27
			Max Tension	5	21541.51	0.00	0.00
		Diagonal	Max. Compression	4	-22054.68	0.00	0.00
			Max. Mx	34	-658.67	0.46	0.00
			Max. Vy	34	-117.43	0.00	0.00
			Max Tension	6	17001.68	-0.11	0.01
			Max. Compression	23	-16707.18	0.00	0.00
Horizontal	Max. Mx	48	-634.77	-0.23	-0.01		

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	Project	180-ft Lattice Tower (CSP #32)	Date	07:59:09 09/20/22
	Client	Verizon	Designed by	TJL

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T12	30 - 20	Inner Bracing	Max. My	3	1412.51	-0.06	0.03
			Max. Vy	48	-95.30	-0.23	-0.01
			Max. Vx	3	-2.39	-0.06	0.03
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	43	-15.72	0.00	0.00
			Max. Mx	34	-14.15	-0.26	0.00
			Max. Vy	34	-93.18	0.00	0.00
			Max Tension	19	252171.84	-2.26	0.02
			Max. Compression	2	-287313.38	-2.06	-0.01
			Max. Mx	2	-286657.88	2.45	-0.02
		Leg	Max. My	11	-13967.85	-0.39	4.71
			Max. Vy	2	596.89	2.45	-0.02
			Max. Vx	11	-668.21	-0.39	4.71
			Max Tension	5	22107.54	0.00	0.00
			Max. Compression	4	-22705.76	0.00	0.00
			Max. Mx	34	-714.54	0.49	0.00
			Max. Vy	34	-121.65	0.00	0.00
			Max Tension	6	17741.83	-0.16	0.01
			Max. Compression	23	-17329.14	0.00	0.00
			Max. Mx	48	-360.46	-0.29	-0.01
T13	20 - 0	Diagonal	Max. My	3	860.80	-0.10	0.02
			Max. Vy	48	-115.48	-0.29	-0.01
			Max. Vx	3	2.06	0.00	0.00
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	43	-16.54	0.00	0.00
			Max. Mx	34	-15.19	-0.29	0.00
			Max. Vy	34	96.06	0.00	0.00
			Max Tension	19	271078.18	1.19	0.01
			Max. Compression	2	-310553.16	0.00	-0.00
			Max. Mx	2	-309777.68	7.02	-0.05
		Leg	Max. My	11	-14748.37	-0.39	4.71
			Max. Vy	2	-1032.16	7.02	-0.05
			Max. Vx	11	1138.05	-0.39	4.71
			Max Tension	7	32764.25	-0.15	-0.03
			Max. Compression	14	-33658.23	0.00	0.00
			Max. Mx	6	16903.92	-0.23	0.03
			Max. My	2	-26479.56	-0.03	-0.04
			Max. Vy	50	-80.71	-0.20	0.00
			Max. Vx	2	-3.56	0.00	0.00
			Max Tension	6	18806.18	-0.20	0.01
Horizontal	Max. Compression	15	-18790.40	-0.20	-0.01		
	Max. Mx	48	407.00	-0.41	-0.01		
	Max. My	3	1736.64	-0.07	0.06		
	Max. Vy	48	145.30	-0.41	-0.01		
	Max. Vx	3	4.39	0.00	0.00		
	Max Tension	4	1323.06	0.00	0.00		
	Max. Compression	5	-1180.36	0.00	0.00		
	Max. Mx	34	193.34	0.04	0.00		
	Max. Vy	34	23.11	0.00	0.00		
	Max Tension	4	1262.50	0.00	0.00		
Redund Horiz 1 Bracing	Max. Compression	5	-1113.51	0.00	0.00		
	Max. Mx	34	100.46	0.07	0.00		
	Max. Vy	34	25.88	0.00	0.00		
	Max Tension	3	1.52	0.00	0.00		
	Max. Compression	18	-17.35	0.00	0.00		
	Max. Mx	34	-14.27	0.06	0.00		
	Max. Vy	34	38.89	0.00	0.00		
	Max Tension	1	0.00	0.00	0.00		
	Max. Compression	5	-1113.51	0.00	0.00		
	Max. Mx	34	100.46	0.07	0.00		
Redund Diag 1 Bracing	Max. Vy	34	25.88	0.00	0.00		
	Max Tension	3	1.52	0.00	0.00		
	Max. Compression	18	-17.35	0.00	0.00		
	Max. Mx	34	-14.27	0.06	0.00		
	Max. Vy	34	38.89	0.00	0.00		
	Max Tension	1	0.00	0.00	0.00		
	Max. Compression	18	-17.35	0.00	0.00		
	Max. Mx	34	-14.27	0.06	0.00		
	Max. Vy	34	38.89	0.00	0.00		
	Max Tension	1	0.00	0.00	0.00		
Redund Hip 1 Bracing	Max. Vy	34	25.88	0.00	0.00		
	Max Tension	3	1.52	0.00	0.00		
	Max. Compression	18	-17.35	0.00	0.00		
	Max. Mx	34	-14.27	0.06	0.00		
	Max. Vy	34	38.89	0.00	0.00		
	Max Tension	1	0.00	0.00	0.00		
	Max. Compression	18	-17.35	0.00	0.00		
	Max. Mx	34	-14.27	0.06	0.00		
	Max. Vy	34	38.89	0.00	0.00		
	Max Tension	1	0.00	0.00	0.00		

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	Client	Verizon	Designed by	TJL

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Compression	43	-14.92	0.00	0.00
			Max. Mx	34	-12.92	0.18	0.00
			Max. Vy	34	-57.34	0.00	0.00

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical lb	Horizontal, X lb	Horizontal, Z lb
Leg C	Max. Vert	24	344051.28	42388.79	-27768.40
	Max. H _x	24	344051.28	42388.79	-27768.40
	Max. H _z	7	-297674.97	-36750.34	26841.56
	Min. Vert	9	-306700.29	-38927.48	25797.51
	Min. H _x	9	-306700.29	-38927.48	25797.51
	Min. H _z	22	331325.91	39234.39	-28248.58
Leg B	Max. Vert	12	345613.77	-42558.42	-27786.39
	Max. H _x	29	-307868.53	39077.01	25737.06
	Max. H _z	31	-299460.36	36979.38	26751.80
	Min. Vert	29	-307868.53	39077.01	25737.06
	Min. H _x	12	345613.77	-42558.42	-27786.39
	Min. H _z	14	334526.49	-39873.90	-28518.78
Leg A	Max. Vert	2	355057.22	-130.05	51494.93
	Max. H _x	27	18726.06	12771.09	1539.54
	Max. H _z	2	355057.22	-130.05	51494.93
	Min. Vert	19	-311216.38	108.46	-47091.84
	Min. H _x	10	22099.23	-12813.26	1794.32
	Min. H _z	19	-311216.38	108.46	-47091.84

Tower Mast Reaction Summary

Load Combination	Vertical lb	Shear _x lb	Shear _z lb	Overturning Moment, M _x kip-ft	Overturning Moment, M _z kip-ft	Torque kip-ft
Dead Only	52804.93	-0.00	-0.00	-16.58	2.25	0.00
1.2 Dead+1.0 Wind 0 deg - No Ice	63365.92	-167.50	-89396.62	-8004.09	30.67	-6.43
0.9 Dead+1.0 Wind 0 deg - No Ice	47524.44	-167.50	-89396.62	-7999.12	30.00	-6.43
1.2 Dead+1.0 Wind 30 deg - No Ice	63365.92	43253.67	-75897.19	-6864.82	-3856.54	-83.75
0.9 Dead+1.0 Wind 30 deg - No Ice	47524.44	43253.67	-75897.19	-6859.85	-3857.22	-83.75
1.2 Dead+1.0 Wind 45 deg - No Ice	63365.92	60995.58	-61723.07	-5592.68	-5450.46	-114.56
0.9 Dead+1.0 Wind 45 deg - No Ice	47524.44	60995.58	-61723.07	-5587.70	-5451.13	-114.56
1.2 Dead+1.0 Wind 60 deg - No Ice	63365.92	74384.49	-43440.99	-3944.14	-6652.03	-137.64
0.9 Dead+1.0 Wind 60 deg - No Ice	47524.44	74384.49	-43440.99	-3939.17	-6652.71	-137.64
1.2 Dead+1.0 Wind 90 deg - No Ice	63365.92	86287.49	-10.46	-23.42	-7673.97	-155.55
0.9 Dead+1.0 Wind 90 deg - No Ice	47524.44	86287.49	-10.46	-18.45	-7674.65	-155.55

<p style="text-align: center;">tnxTower</p> <p style="text-align: center;">Centek Engineering Inc. 63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587</p>	Job	22027.01 - Westport	Page	52 of 71
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	Client	Verizon	Designed by	TJL

Load Combination	Vertical lb	Shear _x lb	Shear _z lb	Overturning Moment, M _x kip-ft	Overturning Moment, M _z kip-ft	Torque kip-ft
Ice						
1.2 Dead+1.0 Wind 120 deg - No Ice	63365.92	76223.15	44483.71	3932.77	-6710.38	-132.13
0.9 Dead+1.0 Wind 120 deg - No Ice	47524.44	76223.15	44483.71	3937.74	-6711.05	-132.13
1.2 Dead+1.0 Wind 135 deg - No Ice	63365.92	61706.87	62373.23	5557.24	-5465.63	-106.16
0.9 Dead+1.0 Wind 135 deg - No Ice	47524.44	61706.87	62373.23	5562.21	-5466.30	-106.16
1.2 Dead+1.0 Wind 150 deg - No Ice	63365.92	43327.23	75726.94	6793.22	-3866.66	-73.01
0.9 Dead+1.0 Wind 150 deg - No Ice	47524.44	43327.23	75726.94	6798.20	-3867.33	-73.01
1.2 Dead+1.0 Wind 180 deg - No Ice	63365.92	188.11	86930.45	7834.27	-28.92	5.61
0.9 Dead+1.0 Wind 180 deg - No Ice	47524.44	188.11	86930.45	7839.25	-29.59	5.61
1.2 Dead+1.0 Wind 210 deg - No Ice	63365.92	-43098.27	75619.00	6775.79	3834.44	81.67
0.9 Dead+1.0 Wind 210 deg - No Ice	47524.44	-43098.27	75619.00	6780.77	3833.77	81.67
1.2 Dead+1.0 Wind 225 deg - No Ice	63365.92	-60736.99	61424.24	5499.99	5410.09	112.49
0.9 Dead+1.0 Wind 225 deg - No Ice	47524.44	-60736.99	61424.24	5504.97	5409.42	112.49
1.2 Dead+1.0 Wind 240 deg - No Ice	63365.92	-76060.10	44257.23	3895.58	6688.60	135.57
0.9 Dead+1.0 Wind 240 deg - No Ice	47524.44	-76060.10	44257.23	3900.56	6687.92	135.57
1.2 Dead+1.0 Wind 270 deg - No Ice	63365.92	-86229.28	-315.80	-74.11	7669.07	153.80
0.9 Dead+1.0 Wind 270 deg - No Ice	47524.44	-86229.28	-315.80	-69.14	7668.40	153.80
1.2 Dead+1.0 Wind 300 deg - No Ice	63365.92	-74416.07	-43695.84	-3986.35	6661.35	131.11
0.9 Dead+1.0 Wind 300 deg - No Ice	47524.44	-74416.07	-43695.84	-3981.37	6660.68	131.11
1.2 Dead+1.0 Wind 315 deg - No Ice	63365.92	-61155.36	-61926.81	-5626.37	5481.77	105.08
0.9 Dead+1.0 Wind 315 deg - No Ice	47524.44	-61155.36	-61926.81	-5621.39	5481.10	105.08
1.2 Dead+1.0 Wind 330 deg - No Ice	63365.92	-43501.19	-76056.20	-6891.29	3902.85	72.05
0.9 Dead+1.0 Wind 330 deg - No Ice	47524.44	-43501.19	-76056.20	-6886.32	3902.18	72.05
1.2 Dead+1.0 Ice	143988.88	-0.00	-0.00	-148.51	3.85	0.00
1.2 Dead+1.0 Wind 0 deg+1.0 Ice	143988.88	-25.46	-24555.22	-2319.16	8.10	0.94
1.2 Dead+1.0 Wind 30 deg+1.0 Ice	143988.88	12019.39	-21018.69	-2017.31	-1056.01	-13.74
1.2 Dead+1.0 Wind 45 deg+1.0 Ice	143988.88	16969.04	-17122.10	-1671.87	-1494.18	-19.83
1.2 Dead+1.0 Wind 60 deg+1.0 Ice	143988.88	20730.83	-12074.67	-1223.16	-1826.99	-24.58
1.2 Dead+1.0 Wind 90 deg+1.0 Ice	143988.88	24002.52	-2.59	-149.22	-2109.00	-28.98
1.2 Dead+1.0 Wind 120 deg+1.0 Ice	143988.88	21029.36	12242.98	930.47	-1836.23	-25.66
1.2 Dead+1.0 Wind 135 deg+1.0 Ice	143988.88	17083.77	17227.20	1375.40	-1496.43	-21.27
1.2 Dead+1.0 Wind 150	143988.88	12029.36	20990.92	1715.12	-1057.32	-15.43

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	Client	Verizon	Designed by	TJL

Load Combination	Vertical lb	Shear _x lb	Shear _z lb	Overturning Moment, M _x kip-ft	Overturning Moment, M _z kip-ft	Torque kip-ft
deg+1.0 Ice						
1.2 Dead+1.0 Wind 180	143988.88	28.70	24155.36	2001.42	-0.97	-1.07
deg+1.0 Ice						
1.2 Dead+1.0 Wind 210	143988.88	-11994.91	20974.85	1712.54	1059.37	13.41
deg+1.0 Ice						
1.2 Dead+1.0 Wind 225	143988.88	-16928.29	17075.01	1366.52	1494.67	19.51
deg+1.0 Ice						
1.2 Dead+1.0 Wind 240	143988.88	-21004.61	12208.92	924.89	1839.80	24.26
deg+1.0 Ice						
1.2 Dead+1.0 Wind 270	143988.88	-23993.35	-48.83	-156.89	2115.07	28.70
deg+1.0 Ice						
1.2 Dead+1.0 Wind 300	143988.88	-20734.87	-12113.21	-1229.54	1835.14	25.50
deg+1.0 Ice						
1.2 Dead+1.0 Wind 315	143988.88	-16992.89	-17152.88	-1676.95	1505.73	21.10
deg+1.0 Ice						
1.2 Dead+1.0 Wind 330	143988.88	-12056.77	-21042.81	-2021.32	1069.87	15.28
deg+1.0 Ice						
Dead+Wind 0 deg - Service	52804.93	-35.68	-19307.76	-1746.60	8.21	-1.37
Dead+Wind 30 deg - Service	52804.93	9346.14	-16396.68	-1500.00	-834.46	-17.84
Dead+Wind 45 deg - Service	52804.93	13180.31	-13335.27	-1224.36	-1180.05	-24.40
Dead+Wind 60 deg - Service	52804.93	16074.45	-9386.05	-867.14	-1440.65	-29.32
Dead+Wind 90 deg - Service	52804.93	18645.46	-2.23	-17.33	-1662.26	-33.13
Dead+Wind 120 deg - Service	52804.93	16466.11	9608.17	840.03	-1453.08	-28.15
Dead+Wind 135 deg - Service	52804.93	13331.82	13473.77	1192.13	-1183.28	-22.61
Dead+Wind 150 deg - Service	52804.93	9361.81	16360.41	1460.06	-836.61	-15.55
Dead+Wind 180 deg - Service	52804.93	40.07	18782.42	1685.74	-4.48	1.19
Dead+Wind 210 deg - Service	52804.93	-9313.04	16337.42	1456.35	833.10	17.40
Dead+Wind 225 deg - Service	52804.93	-13125.22	13271.62	1179.93	1174.80	23.96
Dead+Wind 240 deg - Service	52804.93	-16431.38	9559.92	832.11	1451.79	28.88
Dead+Wind 270 deg - Service	52804.93	-18633.06	-67.27	-28.13	1664.57	32.76
Dead+Wind 300 deg - Service	52804.93	-16081.17	-9440.33	-876.13	1445.99	27.93
Dead+Wind 315 deg - Service	52804.93	-13214.34	-13378.67	-1231.54	1190.07	22.38
Dead+Wind 330 deg - Service	52804.93	-9398.87	-16430.55	-1505.64	847.68	15.35

Solution Summary

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX lb	PY lb	PZ lb	PX lb	PY lb	PZ lb	
1	0.00	-52804.93	0.00	0.00	52804.93	0.00	0.000%
2	-167.50	-63365.92	-89396.62	167.50	63365.92	89396.62	0.000%
3	-167.50	-47524.44	-89396.62	167.50	47524.44	89396.62	0.000%
4	43253.67	-63365.92	-75897.19	-43253.67	63365.92	75897.19	0.000%
5	43253.67	-47524.44	-75897.19	-43253.67	47524.44	75897.19	0.000%
6	60995.58	-63365.92	-61723.07	-60995.58	63365.92	61723.07	0.000%
7	60995.58	-47524.44	-61723.07	-60995.58	47524.44	61723.07	0.000%
8	74384.49	-63365.92	-43440.99	-74384.49	63365.92	43440.99	0.000%
9	74384.49	-47524.44	-43440.99	-74384.49	47524.44	43440.99	0.000%
10	86287.49	-63365.92	-10.46	-86287.49	63365.92	10.46	0.000%
11	86287.49	-47524.44	-10.46	-86287.49	47524.44	10.46	0.000%
12	76223.15	-63365.92	44483.71	-76223.15	63365.92	-44483.71	0.000%
13	76223.15	-47524.44	44483.71	-76223.15	47524.44	-44483.71	0.000%
14	61706.87	-63365.92	62373.23	-61706.87	63365.92	-62373.23	0.000%
15	61706.87	-47524.44	62373.23	-61706.87	47524.44	-62373.23	0.000%
16	43327.23	-63365.92	75726.94	-43327.23	63365.92	-75726.94	0.000%
17	43327.23	-47524.44	75726.94	-43327.23	47524.44	-75726.94	0.000%
18	188.11	-63365.92	86930.45	-188.11	63365.92	-86930.45	0.000%
19	188.11	-47524.44	86930.45	-188.11	47524.44	-86930.45	0.000%

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Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX lb	PY lb	PZ lb	PX lb	PY lb	PZ lb	
20	-43098.27	-63365.92	75619.00	43098.27	63365.92	-75619.00	0.000%
21	-43098.27	-47524.44	75619.00	43098.27	47524.44	-75619.00	0.000%
22	-60736.99	-63365.92	61424.24	60736.99	63365.92	-61424.24	0.000%
23	-60736.99	-47524.44	61424.24	60736.99	47524.44	-61424.24	0.000%
24	-76060.10	-63365.92	44257.23	76060.10	63365.92	-44257.23	0.000%
25	-76060.10	-47524.44	44257.23	76060.10	47524.44	-44257.23	0.000%
26	-86229.28	-63365.92	-315.80	86229.28	63365.92	315.80	0.000%
27	-86229.28	-47524.44	-315.80	86229.28	47524.44	315.80	0.000%
28	-74416.07	-63365.92	-43695.84	74416.07	63365.92	43695.84	0.000%
29	-74416.07	-47524.44	-43695.84	74416.07	47524.44	43695.84	0.000%
30	-61155.36	-63365.92	-61926.81	61155.36	63365.92	61926.81	0.000%
31	-61155.36	-47524.44	-61926.81	61155.36	47524.44	61926.81	0.000%
32	-43501.19	-63365.92	-76056.20	43501.19	63365.92	76056.20	0.000%
33	-43501.19	-47524.44	-76056.20	43501.19	47524.44	76056.20	0.000%
34	0.00	-143988.88	0.00	0.00	143988.88	0.00	0.000%
35	-25.46	-143988.88	-24555.22	25.46	143988.88	24555.22	0.000%
36	12019.39	-143988.88	-21018.69	-12019.39	143988.88	21018.69	0.000%
37	16969.04	-143988.88	-17122.10	-16969.04	143988.88	17122.10	0.000%
38	20730.83	-143988.88	-12074.67	-20730.83	143988.88	12074.67	0.000%
39	24002.52	-143988.88	-2.59	-24002.52	143988.88	2.59	0.000%
40	21029.36	-143988.88	12242.98	-21029.36	143988.88	-12242.98	0.000%
41	17083.77	-143988.88	17227.20	-17083.77	143988.88	-17227.20	0.000%
42	12029.36	-143988.88	20990.92	-12029.36	143988.88	-20990.92	0.000%
43	28.70	-143988.88	24155.36	-28.70	143988.88	-24155.36	0.000%
44	-11994.91	-143988.88	20974.85	11994.91	143988.88	-20974.85	0.000%
45	-16928.29	-143988.88	17075.01	16928.29	143988.88	-17075.01	0.000%
46	-21004.61	-143988.88	12208.92	21004.61	143988.88	-12208.92	0.000%
47	-23993.35	-143988.88	-48.83	23993.35	143988.88	48.83	0.000%
48	-20734.87	-143988.88	-12113.21	20734.87	143988.88	12113.21	0.000%
49	-16992.89	-143988.88	-17152.88	16992.89	143988.88	17152.88	0.000%
50	-12056.77	-143988.88	-21042.81	12056.77	143988.88	21042.81	0.000%
51	-35.68	-52804.93	-19307.76	35.68	52804.93	19307.76	0.000%
52	9346.14	-52804.93	-16396.68	-9346.14	52804.93	16396.68	0.000%
53	13180.31	-52804.93	-13335.27	-13180.31	52804.93	13335.27	0.000%
54	16074.45	-52804.93	-9386.05	-16074.45	52804.93	9386.05	0.000%
55	18645.46	-52804.93	-2.23	-18645.46	52804.93	2.23	0.000%
56	16466.11	-52804.93	9608.17	-16466.11	52804.93	-9608.17	0.000%
57	13331.82	-52804.93	13473.77	-13331.82	52804.93	-13473.77	0.000%
58	9361.81	-52804.93	16360.41	-9361.81	52804.93	-16360.41	0.000%
59	40.07	-52804.93	18782.42	-40.07	52804.93	-18782.42	0.000%
60	-9313.04	-52804.93	16337.42	9313.04	52804.93	-16337.42	0.000%
61	-13125.22	-52804.93	13271.62	13125.22	52804.93	-13271.62	0.000%
62	-16431.38	-52804.93	9559.92	16431.38	52804.93	-9559.92	0.000%
63	-18633.06	-52804.93	-67.27	18633.06	52804.93	67.27	0.000%
64	-16081.17	-52804.93	-9440.33	16081.17	52804.93	9440.33	0.000%
65	-13214.34	-52804.93	-13378.67	13214.34	52804.93	13378.67	0.000%
66	-9398.87	-52804.93	-16430.55	9398.87	52804.93	16430.55	0.000%

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	180 - 160	1.966	51	0.0839	0.0576
T2	160 - 140	1.610	51	0.0824	0.0528
T3	140 - 133.333	1.254	51	0.0747	0.0396

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Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T4	133.333 - 126.667	1.146	51	0.0723	0.0367
T5	126.667 - 120	1.037	51	0.0696	0.0343
T6	120 - 100	0.935	51	0.0661	0.0332
T7	100 - 90	0.672	51	0.0530	0.0296
T8	90 - 80	0.555	51	0.0468	0.0263
T9	80 - 60	0.452	51	0.0399	0.0228
T10	60 - 40	0.273	51	0.0309	0.0165
T11	40 - 30	0.138	51	0.0206	0.0110
T12	30 - 20	0.085	51	0.0151	0.0082
T13	20 - 0	0.046	56	0.0094	0.0057

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
187.00	ANT940Y10-WR	51	1.966	0.0839	0.0576	458326
181.00	ANT940Y10-WR	51	1.966	0.0839	0.0576	458326
177.00	PA6-65AC	51	1.913	0.0839	0.0573	458326
170.00	RFI BPS7496-180-14 Panel Antenna	51	1.790	0.0838	0.0562	229162
169.00	3' Yagi	51	1.772	0.0837	0.0560	208329
160.00	ROHN 6'x15' Boom Gate (1)	51	1.610	0.0824	0.0528	137188
133.00	QD6616-7	51	1.140	0.0722	0.0366	195315
125.00	LTF12=372 Sector Mount (1)	51	1.011	0.0688	0.0340	61627
113.00	ANT150D	51	0.837	0.0617	0.0323	81282
60.00	GPS	51	0.273	0.0309	0.0165	101235

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	180 - 160	8.972	2	0.3771	0.2704
T2	160 - 140	7.369	2	0.3723	0.2477
T3	140 - 133.333	5.743	2	0.3407	0.1858
T4	133.333 - 126.667	5.249	2	0.3301	0.1723
T5	126.667 - 120	4.751	2	0.3178	0.1608
T6	120 - 100	4.284	2	0.3019	0.1561
T7	100 - 90	3.083	2	0.2423	0.1389
T8	90 - 80	2.548	2	0.2136	0.1235
T9	80 - 60	2.073	2	0.1822	0.1072
T10	60 - 40	1.257	2	0.1410	0.0776
T11	40 - 30	0.637	2	0.0941	0.0518
T12	30 - 20	0.394	3	0.0690	0.0385
T13	20 - 0	0.212	3	0.0429	0.0267

Critical Deflections and Radius of Curvature - Design Wind

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Elevation	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
187.00	ANT940Y10-WR	2	8.972	0.3771	0.2704	115833
181.00	ANT940Y10-WR	2	8.972	0.3771	0.2704	115833
177.00	PA6-65AC	2	8.735	0.3775	0.2689	115833
170.00	RFI BPS7496-180-14 Panel	2	8.179	0.3775	0.2639	57917
	Antenna					
169.00	3' Yagi	2	8.099	0.3773	0.2629	52652
160.00	ROHN 6'x15' Boom Gate (1)	2	7.369	0.3723	0.2477	35260
133.00	QD6616-7	2	5.224	0.3295	0.1717	43573
125.00	LTF12=372 Sector Mount (1)	2	4.630	0.3142	0.1595	13399
113.00	ANT150D	2	3.836	0.2818	0.1515	17744
60.00	GPS	2	1.257	0.1410	0.0776	22285

Bolt Design Data

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt lb	Allowable Load per Bolt lb	Ratio Load Allowable	Allowable Ratio	Criteria
T1	180	Diagonal	A325N	0.6250	3	1338.30	13805.80	0.097 ✓	1	Bolt Shear
		Horizontal	A325N	0.6250	2	1078.54	13805.80	0.078 ✓	1	Bolt Shear
		Top Girt	A325N	0.6250	2	177.38	13805.80	0.013 ✓	1	Bolt Shear
T2	160	Leg	A325N	0.8750	4	1492.37	41556.00	0.036 ✓	1	Bolt Tension
		Diagonal	A325N	0.6250	3	2832.86	13805.80	0.205 ✓	1	Bolt Shear
		Horizontal	A325N	0.6250	2	2650.03	13805.80	0.192 ✓	1	Bolt Shear
T3	140	Leg	A325N	1.0000	4	7806.71	54517.00	0.143 ✓	1	Bolt Tension
		Diagonal	A325N	0.6250	3	2911.71	13805.80	0.211 ✓	1	Bolt Shear
		Horizontal	A325N	0.6250	2	2819.54	13805.80	0.204 ✓	1	Bolt Shear
T4	133.333	Diagonal	A325N	0.6250	3	4027.80	13805.80	0.292 ✓	1	Bolt Shear
		Top Girt	A325N	0.6250	2	4053.77	13805.80	0.294 ✓	1	Bolt Shear
T5	126.667	Diagonal	A325N	0.6250	3	4667.68	13805.80	0.338 ✓	1	Bolt Shear
		Top Girt	A325N	0.6250	2	4797.81	13805.80	0.348 ✓	1	Bolt Shear
T6	120	Leg	A325N	1.0000	6	10907.10	54517.00	0.200 ✓	1	Bolt Tension
		Diagonal	A325N	0.6250	3	6227.97	13805.80	0.451 ✓	1	Bolt Shear
		Horizontal	A325N	0.6250	2	5565.63	13805.80	0.403 ✓	1	Bolt Shear
T7	100	Leg	A325N	1.0000	6	18222.50	54517.00	0.334 ✓	1	Bolt Tension
		Diagonal	A325N	0.6250	3	5918.19	13805.80	0.429 ✓	1	Bolt Shear
		Horizontal	A325N	0.6250	2	5641.55	13805.80	0.409 ✓	1	Bolt Shear
T8	90	Diagonal	A325N	0.6250	3	6036.04	13805.80	0.437 ✓	1	Bolt Shear
		Top Girt	A325N	0.6250	2	6013.71	13805.80	0.436 ✓	1	Bolt Shear
T9	80	Leg	A325N	1.0000	8	18680.50	54517.00	0.343 ✓	1	Bolt Tension
		Diagonal	A325N	0.6250	3	6585.70	13805.80	0.477 ✓	1	Bolt Shear
		Horizontal	A325N	0.6250	2	7056.11	13805.80	0.511 ✓	1	Bolt Shear
T10	60	Leg	A325N	1.0000	8	23763.40	54517.00	0.436 ✓	1	Bolt Tension

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Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt lb	Allowable Load per Bolt lb	Ratio Load Allowable	Allowable Ratio	Criteria	
T11	40	Diagonal	A325N	0.6250	3	7153.97	13805.80	0.518	✓	1	Bolt Shear
		Horizontal	A325N	0.6250	2	8077.33	13805.80	0.585	✓	1	Bolt Shear
		Leg	A325N	1.0000	8	28950.60	54517.00	0.531	✓	1	Bolt Tension
		Diagonal	A325N	0.6250	3	7351.56	13805.80	0.532	✓	1	Bolt Shear
T12	30	Horizontal	A325N	0.6250	2	8500.84	13805.80	0.616	✓	1	Bolt Shear
		Diagonal	A325N	0.6250	3	7568.59	13805.80	0.548	✓	1	Bolt Shear
		Top Girt	A325N	0.6250	2	8870.92	13805.80	0.643	✓	1	Bolt Shear
T13	20	Leg	A325N	1.0000	8	33884.80	54517.00	0.622	✓	1	Bolt Tension
		Diagonal	A325X	0.6250	3	11219.40	17257.30	0.650	✓	1	Bolt Shear
		Horizontal	A325N	0.7500	2	9403.09	19880.40	0.473	✓	1	Bolt Shear

Compression Checks

Leg Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u lb	φP _n lb	Ratio $\frac{P_u}{\phi P_n}$
T1	180 - 160	ROHN 3 STD	20.00	6.67	68.8 K=1.00	2.2285	-4181.17	70976.40	0.059 ¹ ✓
T2	160 - 140	ROHN 4 STD	20.04	6.68	53.1 K=1.00	3.1741	-29215.50	116229.00	0.251 ¹ ✓
T3	140 - 133.333	ROHN 5 EH	6.68	6.68	43.6 K=1.00	6.1120	-38564.20	239378.00	0.161 ¹ ✓
T4	133.333 - 126.667	ROHN 5 EH	6.68	6.68	43.6 K=1.00	6.1120	-49914.00	239378.00	0.209 ¹ ✓
T5	126.667 - 120	ROHN 5 EH	6.68	6.68	43.6 K=1.00	6.1120	-64486.00	239378.00	0.269 ¹ ✓
T6	120 - 100	ROHN 6 EHS	20.04	10.02	54.0 K=1.00	6.7133	-104217.00	244017.00	0.427 ¹ ✓
T7	100 - 90	ROHN 6 EH	10.03	10.03	54.8 K=1.00	8.4049	-128049.00	303585.00	0.422 ¹ ✓
T8	90 - 80	ROHN 6 EH	10.03	10.03	54.8 K=1.00	8.4049	-149787.00	303585.00	0.493 ¹ ✓
T9	80 - 60	120deg 9.6250x0.375 BU on ROHN 8 EHS	20.05	10.03	42.2 K=1.00	13.6005	-193904.00	537270.00	0.361 ¹ ✓
T10	60 - 40	1/3 9.6250x0.375 on ROHN 8 EHS Leg Pipe	20.05	10.03	42.2 K=1.00	13.6005	-240152.00	460811.00	0.521 ¹ ✓
T11	40 - 30	1/3 9.6250x0.375 on ROHN 8 EHS Leg Pipe	10.03	10.03	42.2 K=1.00	13.6005	-263727.00	460811.00	0.572 ¹ ✓
T12	30 - 20	1/3 9.6250x0.375 on ROHN 8 EHS Leg Pipe	10.03	10.03	42.2 K=1.00	13.6005	-287313.00	460811.00	0.623 ¹ ✓
T13	20 - 0	1/3 9.6250x0.375 on ROHN	20.05	10.03	42.9	16.6002	-310553.00	560408.00	0.554 ¹ ✓

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Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u lb	φP _n lb	Ratio $\frac{P_u}{\phi P_n}$
		8 EH Leg Pipe			K=1.00				✓

¹ P_u / φP_n controls

Diagonal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u lb	φP _n lb	Ratio $\frac{P_u}{\phi P_n}$
T1	180 - 160	ROHN 2 STD	7.94	7.67	117.0 K=1.00	1.0745	-4014.91	17747.50	0.226 ¹ ✓
T2	160 - 140	ROHN 2 STD	8.55	8.25	125.8 K=1.00	1.0745	-8498.57	15331.30	0.554 ¹ ✓
T3	140 - 133.333	ROHN 2 EH	8.77	8.42	131.5 K=1.00	1.4807	-8735.13	19347.50	0.451 ¹ ✓
T4	133.333 - 126.667	ROHN 2 EH	9.00	8.66	135.3 K=1.00	1.4807	-12083.40	18285.10	0.661 ¹ ✓
T5	126.667 - 120	ROHN 2 XXS	9.24	8.91	152.1 K=1.00	2.6559	-14003.00	25935.80	0.540 ¹ ✓
T6	120 - 100	Pipe 2.5 XXS	12.52	12.06	171.4 K=1.00	4.0285	-18683.90	30977.00	0.603 ¹ ✓
T7	100 - 90	ROHN 3 STD	12.92	12.49	128.8 K=1.00	2.2285	-17754.60	30346.40	0.585 ¹ ✓
T8	90 - 80	ROHN 3 STD	13.35	12.93	133.4 K=1.00	2.2285	-18108.10	28290.90	0.640 ¹ ✓
T9	80 - 60	ROHN 3 STD	14.21	13.70	141.3 K=1.00	2.2285	-19757.10	25233.20	0.783 ¹ ✓
T10	60 - 40	ROHN 3 EH	15.12	14.64	154.6 K=1.00	3.0159	-21461.90	28518.80	0.753 ¹ ✓
T11	40 - 30	ROHN 3 EH	15.60	15.12	159.7 K=1.00	3.0159	-22054.70	26718.70	0.825 ¹ ✓
T12	30 - 20	ROHN 3 EH	16.08	15.62	164.9 K=1.00	3.0159	-22705.80	25055.10	0.906 ¹ ✓
T13	20 - 0	ROHN 3 EH	24.33	23.70	125.1 K=0.50	3.0159	-33658.20	43506.30	0.774 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 lb	φP _n lb	Ratio $\frac{P_u}{\phi P_n}$
T1	180 - 160	ROHN 1.5 STD	8.60	4.15	80.0 K=1.00	0.7995	-2157.09	22519.90	0.096 ¹ ✓
T2	160 - 140	ROHN 1.5 STD	10.01	4.82	92.9 K=1.00	0.7995	-5271.06	19142.00	0.275 ¹ ✓

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Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u lb	φP _n lb	Ratio $\frac{P_u}{\phi P_n}$
T3	140 - 133.333	ROHN 2 STD	10.71	5.12	78.1 K=1.00	1.0745	-5609.19	30956.80	0.181 ¹ ✓
T6	120 - 100	ROHN 2 STD	13.92	6.68	101.9 K=1.00	1.0745	-11031.20	22639.20	0.487 ¹ ✓
T7	100 - 90	ROHN 2 STD	15.04	7.24	110.5 K=1.00	1.0745	-11172.70	19817.20	0.564 ¹ ✓
T9	80 - 60	ROHN 2.5 STD	18.93	9.10	115.2 K=1.00	1.7040	-13921.40	28984.30	0.480 ¹ ✓
T10	60 - 40	ROHN 2.5 STD	21.43	10.35	131.1 K=1.00	1.7040	-15864.60	22405.40	0.708 ¹ ✓
T11	40 - 30	ROHN 2.5 STD	22.68	10.97	139.0 K=1.00	1.7040	-16707.20	19925.90	0.838 ¹ ✓
T13	20 - 0	P3.5x.226	25.18	12.23	109.8 K=1.00	2.6795	-18790.40	49951.20	0.376 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 lb	φP _n lb	Ratio $\frac{P_u}{\phi P_n}$
T1	180 - 160	ROHN 1.5 STD	8.54	4.13	79.5 K=1.00	0.7995	-354.75	22660.50	0.016 ¹ ✓
T4	133.333 - 126.667	ROHN 2 STD	11.40	5.47	83.4 K=1.00	1.0745	-8093.91	29081.40	0.278 ¹ ✓
T5	126.667 - 120	ROHN 2 STD	12.10	5.82	88.7 K=1.00	1.0745	-9594.67	27207.90	0.353 ¹ ✓
T8	90 - 80	ROHN 2 STD	16.36	7.90	120.5 K=1.00	1.0745	-11869.70	16719.60	0.710 ¹ ✓
T12	30 - 20	ROHN 2.5 EH	23.93	11.60	150.6 K=1.00	2.2535	-17329.10	22438.80	0.772 ¹ ✓

¹ P_u / φP_n controls

Redundant Horizontal (1) Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u lb	φP _n lb	Ratio $\frac{P_u}{\phi P_n}$
T13	20 - 0	ROHN 1.5 STD	6.29	5.93	114.4 K=1.00	0.7995	-5389.42	13802.80	0.390 ¹ ✓

¹ P_u / φP_n controls

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Redundant Diagonal (1) Design Data (Compression)

Section No.	Elevation <i>ft</i>	Size	<i>L</i> <i>ft</i>	<i>L_u</i> <i>ft</i>	<i>Kl/r</i>	<i>A</i> <i>in²</i>	<i>P_u</i> <i>lb</i>	ϕP_n <i>lb</i>	Ratio $\frac{P_u}{\phi P_n}$
T13	20 - 0	ROHN 2 STD	11.50	10.77	164.2 K=1.00	1.0745	-4923.79	8998.85	0.547 ¹

¹ $P_u / \phi P_n$ controls

Redundant Hip (1) Design Data (Compression)

Section No.	Elevation <i>ft</i>	Size	<i>L</i> <i>ft</i>	<i>L_u</i> <i>ft</i>	<i>Kl/r</i>	<i>A</i> <i>in²</i>	<i>P_u</i> <i>lb</i>	ϕP_n <i>lb</i>	Ratio $\frac{P_u}{\phi P_n}$
T13	20 - 0	ROHN 2.5 STD	6.29	6.29	79.7 K=1.00	1.7040	-17.35	48180.50	0.000 ¹

¹ $P_u / \phi P_n$ controls

Inner Bracing Design Data (Compression)

Section No.	Elevation <i>ft</i>	Size	<i>L</i> <i>ft</i>	<i>L_u</i> <i>ft</i>	<i>Kl/r</i>	<i>A</i> <i>in²</i>	<i>P_u</i> <i>lb</i>	ϕP_n <i>lb</i>	Ratio $\frac{P_u}{\phi P_n}$
T1	180 - 160	L2x2x1/8	4.30	4.30	129.8 K=1.00	0.4844	-1.85	8234.10	0.000 ¹
T2	160 - 140	L2x2x1/8	4.31	4.31	130.2 K=1.00	0.4844	-6.57	8181.36	0.001 ¹
T3	140 - 133.333	L2x2x1/8	5.35	5.35	161.6 K=1.00	0.4844	-6.41	5306.96	0.001 ¹
T4	133.333 - 126.667	L2x2x1/8	5.70	5.70	172.1 K=1.00	0.4844	-9.52	4680.37	0.002 ¹
T5	126.667 - 120	L2x2x1/8	6.05	6.05	182.6 K=1.00	0.4844	-10.34	4158.54	0.002 ¹
T6	120 - 100	L2 1/2x2 1/2x3/16	6.96	6.96	168.7 K=1.00	0.9020	-11.47	9072.37	0.001 ¹
T7	100 - 90	L2 1/2x2 1/2x3/16	7.52	7.52	182.3 K=1.00	0.9020	-10.85	7766.06	0.001 ¹
T8	90 - 80	L2 1/2x2 1/2x3/16	8.18	8.18	198.3 K=1.00	0.9020	-11.10	6565.57	0.002 ¹
T9	80 - 60	L3x3x3/16	9.46	9.46	190.5 K=1.00	1.0900	-13.04	8593.12	0.002 ¹
T10	60 - 40	L3 1/2x3 1/2x1/4	10.71	10.71	185.2 K=1.00	1.6900	-15.48	14095.40	0.001 ¹
T11	40 - 30	L3 1/2x3 1/2x1/4	11.34	11.34	196.1 K=1.00	1.6900	-15.72	12584.30	0.001 ¹

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Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u lb	φP _n lb	Ratio $\frac{P_u}{\phi P_n}$
T12	30 - 20	L3 1/2x3 1/2x1/4	11.96	11.96	206.9 K=1.00	1.6900	-16.54	11303.80	0.001 ¹ ✓
T13	20 - 0	ROHN 2 STD	12.59	12.59	191.9 K=1.00	1.0745	-14.92	6590.81	0.002 ¹ ✓

¹ P_u / φP_n controls

Tension Checks

Leg Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u lb	φP _n lb	Ratio $\frac{P_u}{\phi P_n}$
T1	180 - 160	ROHN 3 STD	20.00	6.67	68.8	2.2285	2502.81	100281.00	0.025 ¹ ✓
T2	160 - 140	ROHN 4 STD	20.04	6.68	53.1	3.1741	22435.30	142832.00	0.157 ¹ ✓
T3	140 - 133.333	ROHN 5 EH	6.68	6.68	43.6	6.1120	31226.80	275039.00	0.114 ¹ ✓
T4	133.333 - 126.667	ROHN 5 EH	6.68	6.68	43.6	6.1120	39742.30	275039.00	0.144 ¹ ✓
T5	126.667 - 120	ROHN 5 EH	6.68	6.68	43.6	6.1120	51166.50	275039.00	0.186 ¹ ✓
T6	120 - 100	ROHN 6 EHS	20.04	10.02	54.0	6.7133	87356.50	302097.00	0.289 ¹ ✓
T7	100 - 90	ROHN 6 EH	10.03	10.03	54.8	8.4049	109335.00	378222.00	0.289 ¹ ✓
T8	90 - 80	ROHN 6 EH	10.03	10.03	54.8	8.4049	129519.00	378222.00	0.342 ¹ ✓
T9	80 - 60	120deg 9.6250x0.375 BU on ROHN 8 EHS	20.05	10.03	42.2	13.6005	169690.00	612023.00	0.277 ¹ ✓
T10	60 - 40	1/3 9.6250x0.375 on ROHN 8 EHS Leg Pipe	20.05	10.03	42.2	13.6005	210895.00	514099.00	0.410 ¹ ✓
T11	40 - 30	1/3 9.6250x0.375 on ROHN 8 EHS Leg Pipe	10.03	10.03	42.2	13.6005	231605.00	514099.00	0.451 ¹ ✓
T12	30 - 20	1/3 9.6250x0.375 on ROHN 8 EHS Leg Pipe	10.03	10.03	42.2	13.6005	252172.00	514099.00	0.491 ¹ ✓
T13	20 - 0	1/3 9.6250x0.375 on ROHN 8 EH Leg Pipe	20.05	10.03	42.9	16.6002	271078.00	627488.00	0.432 ¹ ✓

¹ P_u / φP_n controls

Diagonal Design Data (Tension)

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Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u lb	φP _n lb	Ratio $\frac{P_u}{\phi P_n}$
T1	180 - 160	ROHN 2 STD	7.94	7.67	117.0	1.0745	3947.57	48353.90	0.082 ¹
T2	160 - 140	ROHN 2 STD	8.55	8.25	125.8	1.0745	8421.58	48353.90	0.174 ¹
T3	140 - 133.333	ROHN 2 EH	8.77	8.42	131.5	1.4807	8625.28	66630.70	0.129 ¹
T4	133.333 - 126.667	ROHN 2 EH	9.00	8.66	135.3	1.4807	11965.00	66630.70	0.180 ¹
T5	126.667 - 120	ROHN 2 XXS	9.24	8.91	152.1	2.6559	13818.80	119516.00	0.116 ¹
T6	120 - 100	Pipe 2.5 XXS	12.52	12.06	171.4	4.0285	18370.90	181280.00	0.101 ¹
T7	100 - 90	ROHN 3 STD	12.92	12.49	128.8	2.2285	17536.70	100281.00	0.175 ¹
T8	90 - 80	ROHN 3 STD	13.35	12.93	133.4	2.2285	17872.20	100281.00	0.178 ¹
T9	80 - 60	ROHN 3 STD	14.21	13.70	141.3	2.2285	19435.50	100281.00	0.194 ¹
T10	60 - 40	ROHN 3 EH	15.12	14.64	154.6	3.0159	20984.10	135717.00	0.155 ¹
T11	40 - 30	ROHN 3 EH	15.60	15.12	159.7	3.0159	21541.50	135717.00	0.159 ¹
T12	30 - 20	ROHN 3 EH	16.08	15.62	164.9	3.0159	22107.50	135717.00	0.163 ¹
T13	20 - 0	ROHN 3 EH	24.33	23.70	250.3	3.0159	32764.20	135717.00	0.241 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 lb	φP _n lb	Ratio $\frac{P_u}{\phi P_n}$
T1	180 - 160	ROHN 1.5 STD	8.60	4.15	80.0	0.7995	2152.00	35975.60	0.060 ¹
T2	160 - 140	ROHN 1.5 STD	10.01	4.82	92.9	0.7995	5300.05	35975.60	0.147 ¹
T3	140 - 133.333	ROHN 2 STD	10.71	5.12	78.1	1.0745	5639.07	48353.90	0.117 ¹
T6	120 - 100	ROHN 2 STD	13.92	6.68	101.9	1.0745	11131.30	48353.90	0.230 ¹
T7	100 - 90	ROHN 2 STD	15.04	7.24	110.5	1.0745	11283.10	48353.90	0.233 ¹
T9	80 - 60	ROHN 2.5 STD	18.93	9.10	115.2	1.7040	14112.20	76682.30	0.184 ¹
T10	60 - 40	ROHN 2.5 STD	21.43	10.35	131.1	1.7040	16154.70	76682.30	0.211 ¹
T11	40 - 30	ROHN 2.5 STD	22.68	10.97	139.0	1.7040	17001.70	76682.30	0.222 ¹

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Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u lb	φP _n lb	Ratio $\frac{P_u}{\phi P_n}$
T13	20 - 0	P3.5x.226	25.18	12.23	109.8	2.6795	18806.20	120579.00	0.156 ¹ ✓ ✓

¹ P_u / φP_n controls

Top Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u lb	φP _n lb	Ratio $\frac{P_u}{\phi P_n}$
T1	180 - 160	ROHN 1.5 STD	8.54	4.13	79.5	0.7995	324.49	35975.60	0.009 ¹ ✓
T4	133.333 - 126.667	ROHN 2 STD	11.40	5.47	83.4	1.0745	8107.54	48353.90	0.168 ¹ ✓
T5	126.667 - 120	ROHN 2 STD	12.10	5.82	88.7	1.0745	9595.63	48353.90	0.198 ¹ ✓
T8	90 - 80	ROHN 2 STD	16.36	7.90	120.5	1.0745	12027.40	48353.90	0.249 ¹ ✓
T12	30 - 20	ROHN 2.5 EH	23.93	11.60	150.6	2.2535	17741.80	101409.00	0.175 ¹ ✓

¹ P_u / φP_n controls

Redundant Horizontal (1) Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u lb	φP _n lb	Ratio $\frac{P_u}{\phi P_n}$
T13	20 - 0	ROHN 1.5 STD	6.29	5.93	114.4	0.7995	5389.42	35975.60	0.150 ¹ ✓

¹ P_u / φP_n controls

Redundant Diagonal (1) Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u lb	φP _n lb	Ratio $\frac{P_u}{\phi P_n}$
T13	20 - 0	ROHN 2 STD	11.50	10.77	164.2	1.0745	4923.79	48353.90	0.102 ¹ ✓

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¹ $P_u / \phi P_n$ controls

Redundant Hip (1) Design Data (Tension)

Section No.	Elevation <i>ft</i>	Size	<i>L</i> <i>ft</i>	<i>L_u</i> <i>ft</i>	<i>Kl/r</i>	<i>A</i> <i>in²</i>	<i>P_u</i> <i>lb</i>	ϕP_n <i>lb</i>	Ratio $\frac{P_u}{\phi P_n}$
T13	20 - 0	ROHN 2.5 STD	6.29	6.29	79.7	1.7040	1.52	76682.30	0.000 ¹

¹ $P_u / \phi P_n$ controls

Inner Bracing Design Data (Tension)

Section No.	Elevation <i>ft</i>	Size	<i>L</i> <i>ft</i>	<i>L_u</i> <i>ft</i>	<i>Kl/r</i>	<i>A</i> <i>in²</i>	<i>P_u</i> <i>lb</i>	ϕP_n <i>lb</i>	Ratio $\frac{P_u}{\phi P_n}$
T1	180 - 160	L2x2x1/8	4.30	4.30	82.4	0.4844	1.85	15693.80	0.000 ¹
T2	160 - 140	L2x2x1/8	4.31	4.31	82.6	0.4844	4.69	15693.80	0.000 ¹
T3	140 - 133.333	L2x2x1/8	5.35	5.35	102.6	0.4844	3.60	15693.80	0.000 ¹
T4	133.333 - 126.667	L2x2x1/8	5.70	5.70	109.3	0.4844	6.55	15693.80	0.000 ¹
T5	126.667 - 120	L2x2x1/8	6.05	6.05	115.9	0.4844	5.91	15693.80	0.000 ¹
T6	120 - 100	L2 1/2x2 1/2x3/16	6.40	6.40	98.7	0.9020	3.43	29224.80	0.000 ¹
T7	100 - 90	L2 1/2x2 1/2x3/16	7.52	7.52	116.0	0.9020	2.59	29224.80	0.000 ¹
T8	90 - 80	L2 1/2x2 1/2x3/16	8.18	8.18	126.2	0.9020	1.69	29224.80	0.000 ¹
T9	80 - 60	L3x3x3/16	8.84	8.84	113.0	1.0900	2.81	35316.00	0.000 ¹
T10	60 - 40	L3 1/2x3 1/2x1/4	10.09	10.09	111.1	1.6900	0.85	76050.00	0.000 ¹

¹ $P_u / \phi P_n$ controls

Section Capacity Table

Section No.	Elevation <i>ft</i>	Component Type	Size	Critical Element	<i>P</i> <i>lb</i>	ϕP_{allow} <i>lb</i>	% Capacity	Pass Fail
T1	180 - 160	Leg	ROHN 3 STD	1	-2844.41	70976.40	4.0	Pass
		Leg	ROHN 3 STD	2	-2532.28	70976.40	3.6	Pass
		Leg	ROHN 3 STD	3	-4181.17	70976.40	5.9	Pass
T2	160 - 140	Leg	ROHN 4 STD	40	-25087.70	116229.00	21.6	Pass

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Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
T3	140 - 133.333	Leg	ROHN 4 STD	41	-25008.30	116229.00	21.5	Pass
		Leg	ROHN 4 STD	42	-29215.50	116229.00	25.1	Pass
		Leg	ROHN 5 EH	79	-33738.10	239378.00	14.1	Pass
		Leg	ROHN 5 EH	80	-33772.90	239378.00	14.1	Pass
T4	133.333 - 126.667	Leg	ROHN 5 EH	81	-38564.20	239378.00	16.1	Pass
		Leg	ROHN 5 EH	94	-44486.00	239378.00	18.6	Pass
T5	126.667 - 120	Leg	ROHN 5 EH	95	-44701.60	239378.00	18.7	Pass
		Leg	ROHN 5 EH	96	-49914.00	239378.00	20.9	Pass
		Leg	ROHN 5 EH	109	-58426.10	239378.00	24.4	Pass
		Leg	ROHN 5 EH	110	-58801.40	239378.00	24.6	Pass
T6	120 - 100	Leg	ROHN 5 EH	111	-64486.00	239378.00	26.9	Pass
		Leg	ROHN 6 EHS	124	-96759.40	244017.00	39.7	Pass
		Leg	ROHN 6 EHS	125	-97479.30	244017.00	39.9	Pass
T7	100 - 90	Leg	ROHN 6 EHS	126	-104217.00	244017.00	42.7	Pass
		Leg	ROHN 6 EH	151	-119936.00	303585.00	39.5	Pass
		Leg	ROHN 6 EH	152	-120820.00	303585.00	39.8	Pass
T8	90 - 80	Leg	ROHN 6 EH	153	-128049.00	303585.00	42.2	Pass
		Leg	ROHN 6 EH	166	-141212.00	303585.00	46.5	Pass
		Leg	ROHN 6 EH	167	-142225.00	303585.00	46.8	Pass
T9	80 - 60	Leg	ROHN 6 EH	168	-149787.00	303585.00	49.3	Pass
		Leg	120deg 9.6250x0.375 BU on ROHN 8 EHS	181	-184542.00	537270.00	34.3	Pass
		Leg	120deg 9.6250x0.375 BU on ROHN 8 EHS	182	-185765.00	537270.00	34.6	Pass
T10	60 - 40	Leg	120deg 9.6250x0.375 BU on ROHN 8 EHS	183	-193904.00	537270.00	36.1	Pass
		Leg	1/3 9.6250x0.375 on ROHN 8 EHS Leg Pipe	208	-230263.00	460811.00	50.0	Pass
		Leg	1/3 9.6250x0.375 on ROHN 8 EHS Leg Pipe	209	-231516.00	460811.00	50.2	Pass
T11	40 - 30	Leg	1/3 9.6250x0.375 on ROHN 8 EHS Leg Pipe	210	-240152.00	460811.00	52.1	Pass
		Leg	1/3 9.6250x0.375 on ROHN 8 EHS Leg Pipe	235	-253542.00	460811.00	55.0	Pass
		Leg	1/3 9.6250x0.375 on ROHN 8 EHS Leg Pipe	236	-254874.00	460811.00	55.3	Pass
T12	30 - 20	Leg	1/3 9.6250x0.375 on ROHN 8 EHS Leg Pipe	237	-263727.00	460811.00	57.2	Pass
		Leg	1/3 9.6250x0.375 on ROHN 8 EHS Leg Pipe	250	-276863.00	460811.00	60.1	Pass
		Leg	1/3 9.6250x0.375 on ROHN 8 EHS Leg Pipe	251	-278266.00	460811.00	60.4	Pass
T13	20 - 0	Leg	1/3 9.6250x0.375 on ROHN 8 EHS Leg Pipe	252	-287313.00	460811.00	62.3	Pass
		Leg	1/3 9.6250x0.375 on ROHN 8 EH Leg Pipe	265	-299790.00	560408.00	53.5	Pass
		Leg	1/3 9.6250x0.375 on ROHN 8 EH Leg Pipe	266	-301268.00	560408.00	53.8	Pass
T1	180 - 160	Leg	1/3 9.6250x0.375 on ROHN 8 EH Leg Pipe	267	-310553.00	560408.00	55.4	Pass
		Diagonal	ROHN 2 STD	8	-2225.33	17747.50	12.5	Pass
		Diagonal	ROHN 2 STD	9	-1975.39	17747.50	11.1	Pass
		Diagonal	ROHN 2 STD	11	-2189.60	17747.50	12.3	Pass
		Diagonal	ROHN 2 STD	12	-2296.59	17747.50	12.9	Pass
		Diagonal	ROHN 2 STD	14	-4014.91	17747.50	22.6	Pass
		Diagonal	ROHN 2 STD	15	-3580.06	17747.50	20.2	Pass
		Diagonal	ROHN 2 STD	20	-1748.22	17782.20	9.8	Pass
		Diagonal	ROHN 2 STD	21	-1437.37	17782.20	8.1	Pass
		Diagonal	ROHN 2 STD	23	-985.82	17782.20	5.5	Pass
Diagonal	ROHN 2 STD	24	-1115.52	17782.20	6.3	Pass		

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	Client	Verizon	Designed by	TJL

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
T2	160 - 140	Diagonal	ROHN 2 STD	26	-2751.30	17782.20	15.5	Pass
		Diagonal	ROHN 2 STD	27	-2254.67	17782.20	12.7	Pass
		Diagonal	ROHN 2 STD	31	-513.68	17817.00	2.9	Pass
		Diagonal	ROHN 2 STD	32	-387.62	17817.00	2.2	Pass
		Diagonal	ROHN 2 STD	33	-162.04	17817.00	0.9	Pass
		Diagonal	ROHN 2 STD	34	-154.98	17817.00	0.9	Pass
		Diagonal	ROHN 2 STD	35	-616.68	17817.00	3.5	Pass
		Diagonal	ROHN 2 STD	36	-509.39	17817.00	2.9	Pass
		Diagonal	ROHN 2 STD	44	-5283.07	15331.30	34.5	Pass
		Diagonal	ROHN 2 STD	45	-5178.65	15331.30	33.8	Pass
		Diagonal	ROHN 2 STD	47	-6027.25	15331.30	39.3	Pass
		Diagonal	ROHN 2 STD	48	-6017.61	15331.30	39.3	Pass
		Diagonal	ROHN 2 STD	50	-8498.57	15331.30	55.4	Pass
		Diagonal	ROHN 2 STD	51	-8220.74	15331.30	53.6	Pass
		Diagonal	ROHN 2 STD	56	-5156.55	16154.50	31.9	Pass
		Diagonal	ROHN 2 STD	57	-5034.95	16154.50	31.2	Pass
		Diagonal	ROHN 2 STD	59	-6082.95	16154.50	37.7	Pass
		Diagonal	ROHN 2 STD	60	-6072.11	16154.50	37.6	Pass
		Diagonal	ROHN 2 STD	62	-8485.34	16154.50	52.5	Pass
		T3	140 - 133.333	Diagonal	ROHN 2 STD	63	-8176.46	16154.50
Diagonal	ROHN 2 STD			68	-4924.58	17005.60	29.0	Pass
Diagonal	ROHN 2 STD			69	-4778.21	17005.60	28.1	Pass
Diagonal	ROHN 2 STD			71	-6061.25	17005.60	35.6	Pass
Diagonal	ROHN 2 STD			72	-6052.75	17005.60	35.6	Pass
Diagonal	ROHN 2 STD			74	-8328.68	17005.60	49.0	Pass
Diagonal	ROHN 2 STD			75	-7975.49	17005.60	46.9	Pass
Diagonal	ROHN 2 EH			83	-5520.75	19347.50	28.5	Pass
Diagonal	ROHN 2 EH			84	-5431.89	19347.50	28.1	Pass
Diagonal	ROHN 2 EH			86	-6119.45	19347.50	31.6	Pass
T4	133.333 - 126.667	Diagonal	ROHN 2 EH	87	-6104.25	19347.50	31.6	Pass
		Diagonal	ROHN 2 EH	89	-8735.13	19347.50	45.1	Pass
		Diagonal	ROHN 2 EH	90	-8481.41	19347.50	43.8	Pass
		Diagonal	ROHN 2 EH	100	-9097.64	18285.10	49.8	Pass
T5	126.667 - 120	Diagonal	ROHN 2 EH	101	-9016.17	18285.10	49.3	Pass
		Diagonal	ROHN 2 EH	102	-9480.08	18285.10	51.8	Pass
		Diagonal	ROHN 2 EH	103	-9471.52	18285.10	51.8	Pass
		Diagonal	ROHN 2 EH	104	-12083.40	18285.10	66.1	Pass
		Diagonal	ROHN 2 EH	105	-11852.50	18285.10	64.8	Pass
		Diagonal	ROHN 2 XXS	115	-11117.40	25935.80	42.9	Pass
		Diagonal	ROHN 2 XXS	116	-11041.00	25935.80	42.6	Pass
		Diagonal	ROHN 2 XXS	117	-11599.60	25935.80	44.7	Pass
		Diagonal	ROHN 2 XXS	118	-11586.30	25935.80	44.7	Pass
		Diagonal	ROHN 2 XXS	119	-14003.00	25935.80	54.0	Pass
T6	120 - 100	Diagonal	ROHN 2 XXS	120	-13789.90	25935.80	53.2	Pass
		Diagonal	Pipe 2.5 XXS	128	-14137.70	30977.00	45.6	Pass
		Diagonal	Pipe 2.5 XXS	129	-14060.00	30977.00	45.4	Pass
		Diagonal	Pipe 2.5 XXS	131	-16579.40	30977.00	53.5	Pass
		Diagonal	Pipe 2.5 XXS	132	-16546.80	30977.00	53.4	Pass
		Diagonal	Pipe 2.5 XXS	134	-18683.90	30977.00	60.3	Pass
		Diagonal	Pipe 2.5 XXS	135	-18491.00	30977.00	59.7	Pass
		Diagonal	Pipe 2.5 XXS	140	-14179.00	32743.10	43.3	Pass
		Diagonal	Pipe 2.5 XXS	141	-14092.30	32743.10	43.0	Pass
		Diagonal	Pipe 2.5 XXS	143	-15628.20	32743.10	47.7	Pass
T7	100 - 90	Diagonal	Pipe 2.5 XXS	144	-15597.30	32743.10	47.6	Pass
		Diagonal	Pipe 2.5 XXS	146	-18235.70	32743.10	55.7	Pass
		Diagonal	Pipe 2.5 XXS	147	-18006.90	32743.10	55.0	Pass
		Diagonal	ROHN 3 STD	155	-12997.90	30346.40	42.8	Pass
		Diagonal	ROHN 3 STD	156	-12930.80	30346.40	42.6	Pass
		Diagonal	ROHN 3 STD	158	-16158.90	30346.40	53.2	Pass
Diagonal	ROHN 3 STD	159	-16091.80	30346.40	53.0	Pass		

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	Project	180-ft Lattice Tower (CSP #32)	Date	07:59:09 09/20/22
	Client	Verizon	Designed by	TJL

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
T8	90 - 80	Diagonal	ROHN 3 STD	161	-17754.60	30346.40	58.5	Pass
		Diagonal	ROHN 3 STD	162	-17617.80	30346.40	58.1	Pass
		Diagonal	ROHN 3 STD	172	-13114.20	28290.90	46.4	Pass
		Diagonal	ROHN 3 STD	173	-13053.70	28290.90	46.1	Pass
		Diagonal	ROHN 3 STD	174	-16854.60	28290.90	59.6	Pass
		Diagonal	ROHN 3 STD	175	-16791.20	28290.90	59.4	Pass
T9	80 - 60	Diagonal	ROHN 3 STD	176	-18108.10	28290.90	64.0	Pass
		Diagonal	ROHN 3 STD	177	-17994.60	28290.90	63.6	Pass
		Diagonal	ROHN 3 STD	185	-14369.60	25233.20	56.9	Pass
		Diagonal	ROHN 3 STD	186	-14319.40	25233.20	56.7	Pass
		Diagonal	ROHN 3 STD	188	-19038.00	25233.20	75.4	Pass
		Diagonal	ROHN 3 STD	189	-18893.80	25233.20	74.9	Pass
		Diagonal	ROHN 3 STD	191	-19757.10	25233.20	78.3	Pass
		Diagonal	ROHN 3 STD	192	-19672.60	25233.20	78.0	Pass
		Diagonal	ROHN 3 STD	197	-13773.50	26922.60	51.2	Pass
		Diagonal	ROHN 3 STD	198	-13717.60	26922.60	51.0	Pass
		Diagonal	ROHN 3 STD	200	-18061.50	26922.60	67.1	Pass
		Diagonal	ROHN 3 STD	201	-17984.50	26922.60	66.8	Pass
T10	60 - 40	Diagonal	ROHN 3 STD	203	-19042.80	26922.60	70.7	Pass
		Diagonal	ROHN 3 STD	204	-18943.00	26922.60	70.4	Pass
		Diagonal	ROHN 3 EH	212	-15651.20	28518.80	54.9	Pass
		Diagonal	ROHN 3 EH	213	-15614.30	28518.80	54.8	Pass
		Diagonal	ROHN 3 EH	215	-21050.60	28518.80	73.8	Pass
		Diagonal	ROHN 3 EH	216	-20792.10	28518.80	72.9	Pass
		Diagonal	ROHN 3 EH	218	-21461.90	28518.80	75.3	Pass
		Diagonal	ROHN 3 EH	219	-21396.60	28518.80	75.0	Pass
		Diagonal	ROHN 3 EH	224	-15200.80	30411.50	50.0	Pass
		Diagonal	ROHN 3 EH	225	-15160.70	30411.50	49.9	Pass
		Diagonal	ROHN 3 EH	227	-20289.30	30411.50	66.7	Pass
		Diagonal	ROHN 3 EH	228	-20081.80	30411.50	66.0	Pass
		Diagonal	ROHN 3 EH	230	-20897.80	30411.50	68.7	Pass
		Diagonal	ROHN 3 EH	231	-20819.00	30411.50	68.5	Pass
T11	40 - 30	Diagonal	ROHN 3 EH	239	-16072.10	26718.70	60.2	Pass
		Diagonal	ROHN 3 EH	240	-16036.90	26718.70	60.0	Pass
		Diagonal	ROHN 3 EH	242	-21822.20	26718.70	81.7	Pass
		Diagonal	ROHN 3 EH	243	-21515.10	26718.70	80.5	Pass
		Diagonal	ROHN 3 EH	245	-22054.70	26718.70	82.5	Pass
		Diagonal	ROHN 3 EH	246	-22002.30	26718.70	82.3	Pass
T12	30 - 20	Diagonal	ROHN 3 EH	256	-16724.20	25055.10	66.7	Pass
		Diagonal	ROHN 3 EH	257	-16691.40	25055.10	66.6	Pass
		Diagonal	ROHN 3 EH	258	-22589.00	25055.10	90.2	Pass
		Diagonal	ROHN 3 EH	259	-22251.50	25055.10	88.8	Pass
		Diagonal	ROHN 3 EH	260	-22705.80	25055.10	90.6	Pass
		Diagonal	ROHN 3 EH	261	-22659.70	25055.10	90.4	Pass
		Diagonal	ROHN 3 EH	269	-24153.00	43506.30	55.5	Pass
		Diagonal	ROHN 3 EH	272	-24115.70	43506.30	55.4	Pass
T13	20 - 0	Diagonal	ROHN 3 EH	276	-33658.20	43506.30	77.4	Pass
		Diagonal	ROHN 3 EH	279	-32765.50	43506.30	75.3	Pass
		Diagonal	ROHN 3 EH	284	-33226.80	43506.30	76.4	Pass
		Diagonal	ROHN 3 EH	287	-33411.60	43506.30	76.8	Pass
		Horizontal	ROHN 1.5 STD	7	-1268.15	22519.90	5.6	Pass
		Horizontal	ROHN 1.5 STD	10	-1291.96	22519.90	5.7	Pass
		Horizontal	ROHN 1.5 STD	13	-2157.09	22519.90	9.6	Pass
		Horizontal	ROHN 1.5 STD	19	-1062.26	22590.20	4.7	Pass
T2	160 - 140	Horizontal	ROHN 1.5 STD	22	-725.55	22590.20	3.2	Pass
		Horizontal	ROHN 1.5 STD	25	-1555.96	22590.20	6.9	Pass
		Horizontal	ROHN 1.5 STD	43	-3309.19	19142.00	17.3	Pass
		Horizontal	ROHN 1.5 STD	46	-3780.83	19142.00	19.8	Pass
		Horizontal	ROHN 1.5 STD	49	-5271.06	19142.00	27.5	Pass
		Horizontal	ROHN 1.5 STD	55	-3131.91	20895.80	15.0	Pass
		Horizontal	ROHN 1.5 STD	58	-3681.17	20895.80	17.6	Pass

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Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
T3	140 - 133.333	Horizontal	ROHN 1.5 STD	61	-5054.61	20895.80	24.2	Pass
		Horizontal	ROHN 1.5 STD	67	-3592.12	22661.30	15.9	Pass
		Horizontal	ROHN 1.5 STD	70	-4030.47	22661.30	17.8	Pass
		Horizontal	ROHN 1.5 STD	73	-4909.96	22661.30	21.7	Pass
		Horizontal	ROHN 2 STD	82	-3616.48	30956.80	11.7	Pass
		Horizontal	ROHN 2 STD	85	-3983.54	30956.80	12.9	Pass
T6	120 - 100	Horizontal	ROHN 2 STD	88	-5609.19	30956.80	18.1	Pass
		Horizontal	ROHN 2 STD	127	-8297.26	22639.20	36.6	Pass
		Horizontal	ROHN 2 STD	130	-9976.39	22639.20	44.1	Pass
		Horizontal	ROHN 2 STD	133	-11031.20	22639.20	48.7	Pass
		Horizontal	ROHN 2 STD	139	-7936.63	25586.40	31.0	Pass
		Horizontal	ROHN 2 STD	142	-8951.26	25586.40	35.0	Pass
T7	100 - 90	Horizontal	ROHN 2 STD	145	-10259.30	25586.40	40.1	Pass
		Horizontal	ROHN 2 STD	154	-8105.97	19817.20	40.9	Pass
		Horizontal	ROHN 2 STD	157	-10403.30	19817.20	52.5	Pass
		Horizontal	ROHN 2 STD	160	-11172.70	19817.20	56.4	Pass
T9	80 - 60	Horizontal	ROHN 2.5 STD	184	-9986.73	28984.30	34.5	Pass
		Horizontal	ROHN 2.5 STD	187	-13545.50	28984.30	46.7	Pass
		Horizontal	ROHN 2.5 STD	190	-13921.40	28984.30	48.0	Pass
		Horizontal	ROHN 2.5 STD	196	-9264.98	33028.40	28.1	Pass
		Horizontal	ROHN 2.5 STD	199	-12388.80	33028.40	37.5	Pass
		Horizontal	ROHN 2.5 STD	202	-12917.20	33028.40	39.1	Pass
T10	60 - 40	Horizontal	ROHN 2.5 STD	211	-11386.90	22405.40	50.8	Pass
		Horizontal	ROHN 2.5 STD	214	-15664.80	22405.40	69.9	Pass
		Horizontal	ROHN 2.5 STD	217	-15864.60	22405.40	70.8	Pass
		Horizontal	ROHN 2.5 STD	223	-10820.30	25378.10	42.6	Pass
		Horizontal	ROHN 2.5 STD	226	-14806.20	25378.10	58.3	Pass
		Horizontal	ROHN 2.5 STD	229	-15125.60	25378.10	59.6	Pass
T11	40 - 30	Horizontal	ROHN 2.5 STD	238	-11952.20	19925.90	60.0	Pass
		Horizontal	ROHN 2.5 STD	241	-16614.20	19925.90	83.4	Pass
		Horizontal	ROHN 2.5 STD	244	-16707.20	19925.90	83.8	Pass
T13	20 - 0	Horizontal	P3.5x.226	268	-13159.90	49951.20	26.3	Pass
		Horizontal	P3.5x.226	275	-18790.40	49951.20	37.6	Pass
		Horizontal	P3.5x.226	283	-18676.50	49951.20	37.4	Pass
T1	180 - 160	Top Girt	ROHN 1.5 STD	4	-239.77	22660.50	1.1	Pass
		Top Girt	ROHN 1.5 STD	5	-126.82	22660.50	0.6	Pass
T4	133.333 - 126.667	Top Girt	ROHN 1.5 STD	6	-354.75	22660.50	1.6	Pass
		Top Girt	ROHN 2 STD	97	-6507.70	29081.40	22.4	Pass
		Top Girt	ROHN 2 STD	98	-6748.51	29081.40	23.2	Pass
		Top Girt	ROHN 2 STD	99	-8093.91	29081.40	27.8	Pass
T5	126.667 - 120	Top Girt	ROHN 2 STD	112	-7598.87	27207.90	27.9	Pass
		Top Girt	ROHN 2 STD	113	-8181.32	27207.90	30.1	Pass
		Top Girt	ROHN 2 STD	114	-9594.67	27207.90	35.3	Pass
T8	90 - 80	Top Girt	ROHN 2 STD	169	-8530.85	16719.60	51.0	Pass
		Top Girt	ROHN 2 STD	170	-11219.10	16719.60	67.1	Pass

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	Client	Verizon	Designed by	TJL

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail		
T12	30 - 20	Top Girt	ROHN 2 STD	171	-11869.70	16719.60	71.0	Pass		
		Top Girt	ROHN 2.5 EH	253	-12625.10	22438.80	56.3	Pass		
		Top Girt	ROHN 2.5 EH	254	-17326.80	22438.80	77.2	Pass		
T13	20 - 0	Top Girt	ROHN 2.5 EH	255	-17329.10	22438.80	77.2	Pass		
		Redund Horz 1 Bracing	ROHN 1.5 STD	270	-5202.63	13802.80	37.7	Pass		
		Redund Horz 1 Bracing	ROHN 1.5 STD	273	-5228.28	13802.80	37.9	Pass		
		Redund Horz 1 Bracing	ROHN 1.5 STD	277	-5228.28	13802.80	37.9	Pass		
		Redund Horz 1 Bracing	ROHN 1.5 STD	280	-5389.42	13802.80	39.0	Pass		
		Redund Horz 1 Bracing	ROHN 1.5 STD	285	-5389.42	13802.80	39.0	Pass		
		Redund Horz 1 Bracing	ROHN 1.5 STD	288	-5202.63	13802.80	37.7	Pass		
T13	20 - 0	Redund Diag 1 Bracing	ROHN 2 STD	271	-4753.14	8998.85	52.8	Pass		
		Redund Diag 1 Bracing	ROHN 2 STD	274	-4776.57	8998.85	53.1	Pass		
		Redund Diag 1 Bracing	ROHN 2 STD	278	-4776.57	8998.85	53.1	Pass		
		Redund Diag 1 Bracing	ROHN 2 STD	281	-4923.79	8998.85	54.7	Pass		
		Redund Diag 1 Bracing	ROHN 2 STD	286	-4923.79	8998.85	54.7	Pass		
		Redund Diag 1 Bracing	ROHN 2 STD	289	-4753.14	8998.85	52.8	Pass		
		Redund Hip 1 Bracing	ROHN 2.5 STD	282	-17.24	48180.50	0.2	Pass		
T13	20 - 0	Redund Hip 1 Bracing	ROHN 2.5 STD	290	-17.35	48180.50	0.2	Pass		
		Redund Hip 1 Bracing	ROHN 2.5 STD	291	-17.18	48180.50	0.2	Pass		
		Redund Hip 1 Bracing	ROHN 2.5 STD	291	-17.18	48180.50	0.2	Pass		
T1	180 - 160	Inner Bracing	L2x2x1/8	16	-1.79	8234.10	0.4	Pass		
		Inner Bracing	L2x2x1/8	17	-1.85	8234.10	0.4	Pass		
		Inner Bracing	L2x2x1/8	18	-1.71	8234.10	0.4	Pass		
		Inner Bracing	L2x2x1/8	28	-1.39	8287.35	0.4	Pass		
		Inner Bracing	L2x2x1/8	29	-1.41	8287.35	0.4	Pass		
		Inner Bracing	L2x2x1/8	30	-1.37	8287.35	0.4	Pass		
		Inner Bracing	L2x2x1/8	37	-0.29	8341.12	0.4	Pass		
		Inner Bracing	L2x2x1/8	38	-0.28	8341.12	0.4	Pass		
		Inner Bracing	L2x2x1/8	39	-0.32	8341.12	0.4	Pass		
		T2	160 - 140	Inner Bracing	L2x2x1/8	52	-4.27	6068.75	0.5	Pass
				Inner Bracing	L2x2x1/8	53	-4.40	6068.75	0.5	Pass
				Inner Bracing	L2x2x1/8	54	-4.32	6068.75	0.5	Pass
				Inner Bracing	L2x2x1/8	64	-4.59	7007.17	0.5	Pass
				Inner Bracing	L2x2x1/8	65	-4.79	7007.17	0.5	Pass
Inner Bracing	L2x2x1/8			66	-4.56	7007.17	0.5	Pass		
Inner Bracing	L2x2x1/8			76	-6.25	8181.36	0.4	Pass		
T3	140 - 133.333	Inner Bracing	L2x2x1/8	77	-6.57	8181.36	0.4	Pass		
		Inner Bracing	L2x2x1/8	78	-6.20	8181.36	0.4	Pass		
		Inner Bracing	L2x2x1/8	91	-6.21	5306.96	0.5	Pass		
		Inner Bracing	L2x2x1/8	92	-6.41	5306.96	0.5	Pass		
T4	133.333 - 126.667	Inner Bracing	L2x2x1/8	93	-6.19	5306.96	0.5	Pass		
		Inner Bracing	L2x2x1/8	106	-9.35	4680.37	0.6	Pass		
		Inner Bracing	L2x2x1/8	107	-9.52	4680.37	0.6	Pass		
T5	126.667 - 120	Inner Bracing	L2x2x1/8	108	-9.34	4680.37	0.6	Pass		
		Inner Bracing	L2x2x1/8	121	-10.20	4158.54	0.6	Pass		
		Inner Bracing	L2x2x1/8	122	-10.34	4158.54	0.6	Pass		

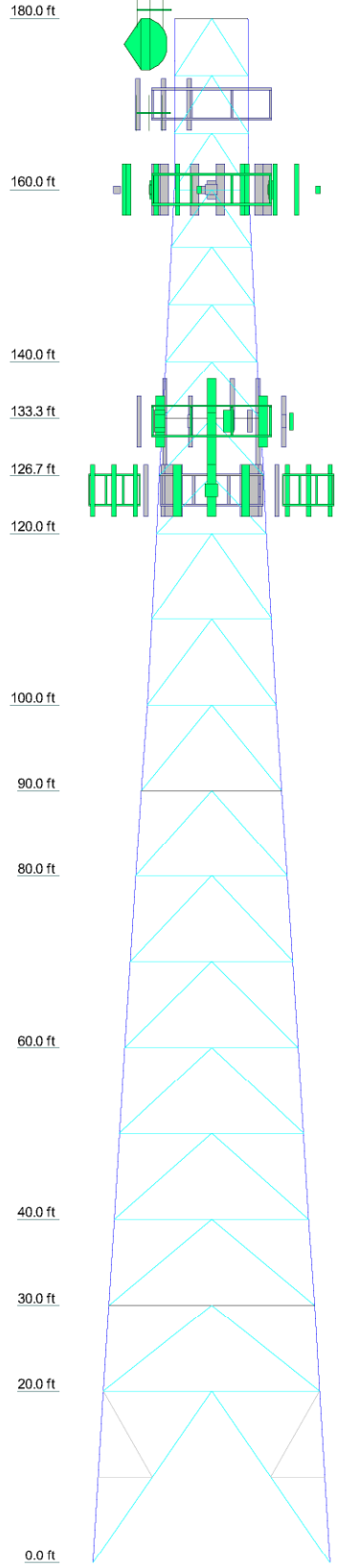
tnxTower Centek Engineering Inc. 63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587	Job	22027.01 - Westport	Page	70 of 71
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	Client	Verizon	Designed by	TJL

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
T6	120 - 100	Inner Bracing	L2x2x1/8	123	-10.19	4158.54	0.6	Pass
		Inner Bracing	L2 1/2x2 1/2x3/16	136	-11.38	9072.37	0.5	Pass
		Inner Bracing	L2 1/2x2 1/2x3/16	137	-11.47	9072.37	0.5	Pass
		Inner Bracing	L2 1/2x2 1/2x3/16	138	-11.37	9072.37	0.5	Pass
		Inner Bracing	L2 1/2x2 1/2x3/16	148	-11.84	10738.30	0.4	Pass
		Inner Bracing	L2 1/2x2 1/2x3/16	149	-11.95	10738.30	0.4	Pass
T7	100 - 90	Inner Bracing	L2 1/2x2 1/2x3/16	150	-11.83	10738.30	0.4	Pass
		Inner Bracing	L2 1/2x2 1/2x3/16	163	-10.74	7766.06	0.5	Pass
		Inner Bracing	L2 1/2x2 1/2x3/16	164	-10.85	7766.06	0.5	Pass
T8	90 - 80	Inner Bracing	L2 1/2x2 1/2x3/16	165	-10.77	7766.06	0.5	Pass
		Inner Bracing	L2 1/2x2 1/2x3/16	178	-11.00	6565.57	0.5	Pass
T9	80 - 60	Inner Bracing	L2 1/2x2 1/2x3/16	179	-11.10	6565.57	0.5	Pass
		Inner Bracing	L2 1/2x2 1/2x3/16	180	-11.02	6565.57	0.5	Pass
		Inner Bracing	L3x3x3/16	193	-12.92	8593.12	0.6	Pass
T10	60 - 40	Inner Bracing	L3x3x3/16	194	-13.04	8593.12	0.6	Pass
		Inner Bracing	L3x3x3/16	195	-12.94	8593.12	0.6	Pass
		Inner Bracing	L3x3x3/16	205	-12.46	9851.38	0.6	Pass
		Inner Bracing	L3x3x3/16	206	-12.60	9851.38	0.6	Pass
		Inner Bracing	L3x3x3/16	207	-12.49	9851.38	0.6	Pass
		Inner Bracing	L3 1/2x3 1/2x1/4	220	-15.37	14095.40	0.4	Pass
T11	40 - 30	Inner Bracing	L3 1/2x3 1/2x1/4	221	-15.48	14095.40	0.4	Pass
		Inner Bracing	L3 1/2x3 1/2x1/4	222	-15.38	14095.40	0.4	Pass
		Inner Bracing	L3 1/2x3 1/2x1/4	232	-14.88	15896.00	0.4	Pass
		Inner Bracing	L3 1/2x3 1/2x1/4	233	-15.00	15896.00	0.4	Pass
		Inner Bracing	L3 1/2x3 1/2x1/4	234	-14.89	15896.00	0.4	Pass
		Inner Bracing	L3 1/2x3 1/2x1/4	247	-15.62	12584.30	0.4	Pass
T12	30 - 20	Inner Bracing	L3 1/2x3 1/2x1/4	248	-15.72	12584.30	0.4	Pass
		Inner Bracing	L3 1/2x3 1/2x1/4	249	-15.63	12584.30	0.4	Pass
		Inner Bracing	L3 1/2x3 1/2x1/4	262	-16.45	11303.80	0.4	Pass
T13	20 - 0	Inner Bracing	L3 1/2x3 1/2x1/4	263	-16.54	11303.80	0.4	Pass
		Inner Bracing	L3 1/2x3 1/2x1/4	264	-16.45	11303.80	0.4	Pass
		Inner Bracing	ROHN 2 STD	292	-14.39	6590.81	0.4	Pass
		Inner Bracing	ROHN 2 STD	293	-14.92	6590.81	0.4	Pass
		Inner Bracing	ROHN 2 STD	294	-14.41	6590.81	0.4	Pass
						Summary		
						Leg (T12)	62.3	Pass
						Diagonal (T12)	90.6	Pass
						Horizontal (T11)	83.8	Pass
						Top Girt (T12)	77.2	Pass
						Redund Horz 1 Bracing (T13)	39.0	Pass
						Redund Diag 1 Bracing (T13)	54.7	Pass
						Redund Hip 1 Bracing (T13)	0.2	Pass
						Inner Bracing (T9)	0.6	Pass
						Bolt Checks	65.0	Pass
						RATING =	90.6	Pass

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	Project 180-ft Lattice Tower (CSP #32)	Date 07:59:09 09/20/22
	Client Verizon	Designed by TJJ

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 (3)/Tnxtower/20200708_VZW_MODification_H_180' SST (1).eri

Section	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Legs	ROHN 3 STD	ROHN 4 STD	ROHN 5 EH	ROHN 2 EHS	ROHN 6 EHS	ROHN 3 STD	ROHN 6 EH	ROHN 3 STD	A	ROHN 8 EHS Leg Pipe	ROHN 3 EH	ROHN 2 STD	ROHN 1.5 STD
Leg Grade													
Diagonals	ROHN 2 STD					ROHN 2.5 XXS							
Diagonal Grade													
Top Girts	ROHN 1.5 STD	ROHN 1.5 STD											
Horizontal													
Red. Horizontal													
Red. Diagonal													
Red. Hip													
Inner Bracing													
Face Width (ft)	8.542	8.625	10.708	11.4033	12.0977	12.792	15.042	16.3595	17.677	20.177	22.677	23.927	25.177
# Panels @ (ft)									10 @ 10				1 @ 20
Weight (lb)													



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
ANT940Y10-WR (CSP)	187	MT6407-77A (Verizon - Proposed)	160
ANT940Y10-WR (CSP - Yagi Antenna)	181	MX06FRO640-02 (Verizon - Proposed)	160
PA6-65AC (DNK-52 / CSP-42)	177	MX06FRO640-02 (Verizon - Proposed)	160
RFI BPS7496-180-14 Panel Antenna (CSP-80)	170	ROHN 6'x15' Boom Gate (1) (Verizon)	160
RFI BPS7496-180-14 Panel Antenna (CSP-81)	170	QD6616-7 (ATTI)	133
RFI BPS7496-180-14 Panel Antenna (CSP-82)	170	AIR6419 (ATTI)	133
SitePro1 USF12-396-U Mount Assembly w/ (3) 96" Mount Pipes (CSP 47, 80, 81, 82)	170	AIR6449 (ATTI)	133
432E-831-01T TTA Unit (Re-Located TMA (CSP))	170	DMP65R-BU6D (ATTI)	133
3' Yagi (CSP)	169	QD6616-7 (ATTI)	133
B2/B66A RRH (Verizon)	160	AIR6419 (ATTI)	133
B5/B13 RRH (Verizon)	160	DMP65R-BU6D (ATTI)	133
CBRS RRH-RT4401-48A (Verizon)	160	RRUS-32 B66 (ATTI)	133
RF4439d-25A (B2/B66A RRH) (Verizon - Proposed)	160	RRUS-32 (ATTI)	133
RF4440d-13A (B5/B13 RRH) (Verizon - Proposed)	160	RRUS-32 (ATTI)	133
JAHH-65B-R3B Panel Antenna (Verizon)	160	RRUS-32 B66 (ATTI)	133
JAHH-65B-R3B Panel Antenna (Verizon)	160	RRUS-32 (ATTI)	133
XXDWM-12.5-65-8T-CBRS Panel (Verizon)	160	RRUS-32 (ATTI)	133
MT6407-77A (Verizon - Proposed)	160	4478 B14 (ATTI)	133
CBC78T-DS-43-2X Diplexer (Verizon)	160	4478 B14 (ATTI)	133
B2/B66A RRH (Verizon)	160	4449 B5/B12 (ATTI)	133
B5/B13 RRH (Verizon)	160	4449 B5/B12 (ATTI)	133
CBRS RRH-RT4401-48A (Verizon)	160	4449 B5/B12 (ATTI)	133
JAHH-65B-R3B Panel Antenna (Verizon)	160	DC6-48-60-18-8F (Squid) Suppressor (ATTI)	133
JAHH-65B-R3B Panel Antenna (Verizon)	160	DC6-48-60-18-8F (Squid) Suppressor (ATTI)	133
XXDWM-12.5-65-8T-CBRS Panel (Verizon)	160	DC9 (ATTI)	133
MT6407-77A (Verizon - Proposed)	160	SitePro VFA14-10 (ATTI)	133
CBC78T-DS-43-2X Diplexer (Verizon)	160	SitePro VFA14-10 (ATTI)	133
B2/B66A RRH (Verizon)	160	SitePro VFA14-10 (ATTI)	133
B5/B13 RRH (Verizon)	160	RRUS-11 (T-Mobile)	125
CBRS RRH-RT4401-48A (Verizon)	160	RRUS-11 (T-Mobile)	125
DB-T1-6Z-8AB-0Z Distribution Box (Verizon)	160	RRUS-11 (T-Mobile)	125
DB-T1-6Z-8AB-0Z Distribution Box (Verizon)	160	AIR21 B4A/B2P (T-Mobile)	125
(2) BSF0020F3V1-1 (Verizon - Proposed)	160	AIR21 B4A/B2P (T-Mobile)	125
(2) BSF0020F3V1-1 (Verizon - Proposed)	160	LNX-6515DS (T-Mobile)	125
(2) BSF0020F3V1-1 (Verizon - Proposed)	160	LNX-6515DS (T-Mobile)	125
ROHN 6'x15' Boom Gate (1) (Verizon)	160	LNX-6515DS (T-Mobile)	125
ROHN 6'x15' Boom Gate (1) (Verizon)	160	LTF12=372 Sector Mount (1) (T-Mobile)	125
MX06FRO640-02 (Verizon - Proposed)	160	LTF12=372 Sector Mount (1) (T-Mobile)	125
MX06FRO640-02 (Verizon - Proposed)	160	LTF12=372 Sector Mount (1) (T-Mobile)	125
XXDWM-12.5-65-8T-CBRS Panel (Verizon)	160	AIR21 B2A/B4P (T-Mobile)	125
		AIR21 B2A/B4P (T-Mobile)	125
		AIR21 B2A/B4P (T-Mobile)	125
		AIR21 B2A/B4P (T-Mobile)	125
		Generic Twin TMA unit (T-Mobile)	125
		Generic Twin TMA unit (T-Mobile)	125
		Generic Twin TMA unit (T-Mobile)	125
		ANT150D (CSP - 1-Bay Dipole)	113
		GPS (DNK-1 / GPS)	60

SHEAR
73831 lb

90 mph

SHEAR
58730 lb

SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	120deg_9.6250x0.375 BU on ROHN 8 EHS	D	ROHN 2 STD
B	1/3 9.6250x0.375 on ROHN 8 EH Leg Pipe	E	ROHN 2.5 EH
C	ROHN 2 XXS		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A572-42	42 ksi	60 ksi

TOWER DESIGN NOTES

- REA (1. Tower designed for a 90 mph basic wind in accordance with the TIA/EIA-222-F Standard.
 2. Tower is also designed for a 90 mph basic wind with 0.50 in ice.
 3. Deflections are based upon a 90 mph wind.

Centek Engineering Inc.		Job: 22027.01 - Westport	
63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587		Project: 180-ft Lattice Tower (CSP #32)	
Client: Verizon	Drawn by: T.JL	App'd:	
Code: TIA/EIA-222-F	Date: 09/20/22	Scale: NTS	
Path:		Dwg No. E-1	

tnxTower Centek Engineering Inc. 63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587	Job	22027.01 - Westport	Page	1 of 3
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	Client	Verizon	Designed by	TJL

Load Combinations

Comb. No.	Description
1	Dead Only
2	Dead+Wind 0 deg - No Ice
3	Dead+Wind 30 deg - No Ice
4	Dead+Wind 45 deg - No Ice
5	Dead+Wind 60 deg - No Ice
6	Dead+Wind 90 deg - No Ice
7	Dead+Wind 120 deg - No Ice
8	Dead+Wind 135 deg - No Ice
9	Dead+Wind 150 deg - No Ice
10	Dead+Wind 180 deg - No Ice
11	Dead+Wind 210 deg - No Ice
12	Dead+Wind 225 deg - No Ice
13	Dead+Wind 240 deg - No Ice
14	Dead+Wind 270 deg - No Ice
15	Dead+Wind 300 deg - No Ice
16	Dead+Wind 315 deg - No Ice
17	Dead+Wind 330 deg - No Ice
18	Dead+Ice
19	Dead+Wind 0 deg+Ice
20	Dead+Wind 30 deg+Ice
21	Dead+Wind 45 deg+Ice
22	Dead+Wind 60 deg+Ice
23	Dead+Wind 90 deg+Ice
24	Dead+Wind 120 deg+Ice
25	Dead+Wind 135 deg+Ice
26	Dead+Wind 150 deg+Ice
27	Dead+Wind 180 deg+Ice
28	Dead+Wind 210 deg+Ice
29	Dead+Wind 225 deg+Ice
30	Dead+Wind 240 deg+Ice
31	Dead+Wind 270 deg+Ice
32	Dead+Wind 300 deg+Ice
33	Dead+Wind 315 deg+Ice
34	Dead+Wind 330 deg+Ice
35	Dead+Wind 0 deg - Service
36	Dead+Wind 30 deg - Service
37	Dead+Wind 45 deg - Service
38	Dead+Wind 60 deg - Service
39	Dead+Wind 90 deg - Service
40	Dead+Wind 120 deg - Service
41	Dead+Wind 135 deg - Service
42	Dead+Wind 150 deg - Service
43	Dead+Wind 180 deg - Service
44	Dead+Wind 210 deg - Service
45	Dead+Wind 225 deg - Service
46	Dead+Wind 240 deg - Service
47	Dead+Wind 270 deg - Service
48	Dead+Wind 300 deg - Service
49	Dead+Wind 315 deg - Service
50	Dead+Wind 330 deg - Service

Maximum Tower Deflections - Service Wind

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Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	180 - 160	7.451	35	0.3275	0.2247
T2	160 - 140	6.059	35	0.3234	0.2008
T3	140 - 133.333	4.636	35	0.2951	0.1358
T4	133.333 - 126.667	4.208	35	0.2852	0.1216
T5	126.667 - 120	3.774	35	0.2739	0.1098
T6	120 - 100	3.371	35	0.2590	0.1025
T7	100 - 90	2.353	35	0.2038	0.0845
T8	90 - 80	1.914	35	0.1776	0.0720
T9	80 - 60	1.533	35	0.1495	0.0600
T10	60 - 40	0.895	35	0.1136	0.0410
T11	40 - 30	0.429	35	0.0744	0.0267
T12	30 - 20	0.254	35	0.0542	0.0197
T13	20 - 0	0.128	35	0.0335	0.0136

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
187.00	ANT940Y10-WR	35	7.451	0.3275	0.2247	114642
181.00	ANT940Y10-WR	35	7.451	0.3275	0.2247	114642
177.00	PA6-65AC	35	7.246	0.3279	0.2231	114642
170.00	RFI BPS7496-180-14 Panel Antenna	35	6.764	0.3280	0.2178	57321
169.00	3' Yagi	35	6.695	0.3278	0.2167	52110
160.00	ROHN 6'x15' Boom Gate (1)	35	6.059	0.3234	0.2008	34824
133.00	QD6616-7	35	4.186	0.2847	0.1210	41064
125.00	LTF12=372 Sector Mount (1)	35	3.670	0.2705	0.1076	13931
113.00	ANT150D	35	2.987	0.2404	0.0966	18051
60.00	GPS	35	0.895	0.1136	0.0410	25871

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	180 - 160	9.102	19	0.3973	0.3179
T2	160 - 140	7.414	19	0.3925	0.2893
T3	140 - 133.333	5.692	19	0.3583	0.2127
T4	133.333 - 126.667	5.171	19	0.3465	0.1937
T5	126.667 - 120	4.646	19	0.3330	0.1769
T6	120 - 100	4.156	19	0.3152	0.1664
T7	100 - 90	2.915	19	0.2490	0.1402
T8	90 - 80	2.376	19	0.2176	0.1227
T9	80 - 60	1.906	19	0.1837	0.1045
T10	60 - 40	1.116	19	0.1400	0.0733
T11	40 - 30	0.537	19	0.0920	0.0480
T12	30 - 20	0.319	19	0.0670	0.0354
T13	20 - 0	0.161	19	0.0415	0.0245

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	Client	Verizon	Designed by	TJL

Critical Deflections and Radius of Curvature - Design Wind

<i>Elevation</i>	<i>Appurtenance</i>	<i>Gov. Load Comb.</i>	<i>Deflection</i>	<i>Tilt</i>	<i>Twist</i>	<i>Radius of Curvature</i>
<i>ft</i>			<i>in</i>	<i>°</i>	<i>°</i>	<i>ft</i>
187.00	ANT940Y10-WR	19	9.102	0.3973	0.3179	97736
181.00	ANT940Y10-WR	19	9.102	0.3973	0.3179	97736
177.00	PA6-65AC	19	8.853	0.3978	0.3161	97736
170.00	RFI BPS7496-180-14 Panel Antenna	19	8.268	0.3980	0.3098	48868
169.00	3' Yagi	19	8.184	0.3978	0.3085	44426
160.00	ROHN 6'x15' Boom Gate (1)	19	7.414	0.3925	0.2893	29587
133.00	QD6616-7	19	5.145	0.3459	0.1928	38989
125.00	LTF12=372 Sector Mount (1)	19	4.519	0.3289	0.1737	11855
113.00	ANT150D	19	3.689	0.2928	0.1578	15247
60.00	GPS	19	1.116	0.1400	0.0733	21044

Anchor Bolt Analysis:

Input Data:

Tower Reactions:

Tension Force =	Tension := 311-kips	(Input From trnTower)
Compression Force =	Compression := 355-kips	(Input From trnTower)
Shear Force =	Shear := 52-kips	(Input From trnTower)

Anchor Bolt Data:

ASTMA354 Grade BC		
Number of Anchor Bolts =	N := 10	(User Input)
Bolt Ultimate Strength =	$F_u := 125$ -ksi	(User Input)
Bolt Yield Strength =	$F_y := 109$ -ksi	(User Input)
Bolt Modulus =	E := 29000-ksi	(User Input)
Diameter of Anchor Bolts =	D := 1.00-in	(User Input)
Threads per Inch =	n := 8	(User Input)
Length from Top of Pier to Bottom of Leveling Nut =	$L_{ar} := 0$ -in	(User Input)

Anchor Bolt Analysis:

Calculated Anchor Bolt Properties:

Gross Area of Bolt =

$$A_g := \frac{\pi}{4} \cdot D^2 = 0.785 \cdot \text{in}^2$$

Net Area of Bolt =

$$A_n := \frac{\pi}{4} \cdot \left(D - \frac{0.9743 \cdot \text{in}}{n} \right)^2 = 0.606 \cdot \text{in}^2$$

Net Diameter =

$$D_n := \frac{2 \cdot \sqrt{A_n}}{\sqrt{\pi}} = 0.878 \cdot \text{in}$$

Radius of Gyration of Bolt =

$$r := \frac{D_n}{4} = 0.22 \cdot \text{in}$$

Elastic Section Modulus of Bolt =

$$S_x := \frac{\pi \cdot D_n^3}{32} = 0.066 \cdot \text{in}^3$$

Plastic Section Modulus of Bolt =

$$Z_x := \frac{D_n^3}{6} = 0.113 \cdot \text{in}^3$$

Anchor Bolt Design Strength:

Resistance Factor for Flexure =

$$\phi_f := 0.9$$

Resistance Factor for Compression =

$$\phi_c := 0.9$$

Resistance Factor for Tension =

$$\phi_t := 0.75$$

Resistance Factor for Shear =

$$\phi_v := 0.75$$

Design Tensile Strength =

$$\Phi R_{nt} := \phi_t \cdot F_u \cdot A_n = 56.8 \cdot \text{k}$$

Design Compression Strength =

$$\Phi R_{nc} := \phi_c \cdot F_y \cdot A_g = 77 \cdot \text{k}$$

Design Shear Strength (Tension) =

$$\Phi R_{nv} := \phi_v \cdot 0.5 F_u \cdot A_g = 36.8 \cdot \text{k}$$

Design Shear Strength (Compression) =

$$\Phi R_{nvc} := \phi_c \cdot 0.6 F_y \cdot A_g \cdot 0.75 = 34.7 \cdot \text{k}$$

Check Anchor Bolt Tension Force:

Maximum Tensile Force = $P_{ut} := \frac{\text{Tension}}{N} = 31.1 \cdot \text{kips}$

Maximum Compressive Force = $P_{uc} := \frac{\text{Compression}}{N} = 35.5 \cdot \text{kips}$

Maximum Shear Force = $V_u := \frac{\text{Shear}}{N} = 5.2 \cdot \text{kips}$

Condition1 = $\left[\text{Condition1} := \text{if} \left[\left[\left(\frac{P_{ut}}{\Phi R_{nt}} \right)^2 + \left(\frac{V_u}{\Phi R_{nv}} \right)^2 \right] \leq 1.00, \text{"OK"}, \text{"Overstressed"} \right] \right]$

Condition1 = "OK"

Condition2 = $\left[\text{Condition2} := \text{if} \left[\left[\left(\frac{P_{uc}}{\Phi R_{nc}} \right) + \left(\frac{V_u}{\Phi R_{nvc}} \right)^2 \right] \leq 1.00, \text{"OK"}, \text{"Overstressed"} \right] \right]$

Condition2 = "OK"

Bolt % of Capacity = $\max \left[\left(\frac{P_{ut}}{\Phi R_{nt}} \right)^2 + \left(\frac{V_u}{\Phi R_{nv}} \right)^2, \left(\frac{P_{uc}}{\Phi R_{nc}} \right) + \left(\frac{V_u}{\Phi R_{nvc}} \right)^2 \right] = 48.3 \cdot \%$

Caisson Foundation:

Input Data:

Tower Data

Uplift =	Uplift := 311-kips	(User Input)
Compression =	Comp := 355-kips	(User Input)
Shear Force =	Shear := 52-kips	(User Input)
Tower Height =	$H_t := 180$ -ft	(User Input)

Footing Data:

Length of Caisson =	$L_c := 27$ -ft	(User Input)
Extension of Caisson Above Grade =	$L_{cag} := 1$ -ft	(User Input)
Diameter of Caisson =	$d_c := 4.5$ -ft	(User Input)
Length of Caisson Above Water Table =	$L_{c.AWT} := 27$ -ft	(User Input)
Length of Caisson Below Water Table =	$L_{c.BWT} := 0$ -ft	(User Input)

Material Properties:

Concrete Compressive Strength =	$f_c := 4000$ -psi	(User Input)
Steel Reinforcement Yield Strength =	$f_y := 60000$ -psi	(User Input)
Ultimate Skin Friction (Above Water Table) =	$\mu_1 := 3.73$ -ksf	(User Input)
Ultimate Skin Friction (Below Water Table) =	$\mu_2 := 3.73$ -ksf	(User Input)
Ultimate Soil Bearing Capacity =	$q_u := 6000$ -psf	(Assumed Conservative User Input)
Unit Weight of Soil =	$\gamma_{soil} := 120$ -pcf	(User Input)
Unit Weight of Concrete =	$\gamma_{conc} := 150$ -pcf	(User Input)
Depth to Neglect =	$n := 5$ -ft	(User Input)
Resistance Factor for Bearing =	$\Phi_{sBearing} := 0.75$	(TIA-222-H 9.7)
Resistance Factor for Friction =	$\Phi_{sFriction} := 0.75$	(TIA-222-H 9.7)

Calculated Properties:

Adjusted Concrete Unit Weight = $\gamma_c := \gamma_{\text{concrete}} - 62.4 \text{ pcf} = 87.6 \text{ pcf}$

Weight of Concrete Caisson (no water) = $WT_{c,\text{comp}} := \frac{\pi}{4} \cdot (d_c^2 \cdot L_c) \cdot \gamma_{\text{concrete}} = 64.412 \cdot \text{kip}$

Weight of Concrete Caisson (water) = $WT_{c,\text{uplift}} := \frac{\pi}{4} \cdot \left[(d_c^2 \cdot L_{c,\text{AWT}}) \cdot \gamma_{\text{concrete}} + (d_c^2 \cdot L_{c,\text{BWT}}) \cdot \gamma_c \right] = 64.412 \cdot \text{kip}$

Check Uplift:

Uplift Resistance from Concrete Weight = $Uplift_{\text{conc}} := (WT_{c,\text{uplift}}) \cdot 0.9 = 57.971 \cdot \text{kips}$

Uplift Resistance from Skin Friction = $Uplift_{\text{SF}} := \Phi_{\text{SF}} \cdot \pi \cdot d_c \cdot \left[(L_{c,\text{AWT}} - L_{\text{cag}} - n) \cdot \mu_1 + L_{c,\text{BWT}} \cdot \mu_2 \right] = 831 \cdot \text{kips}$

Total Uplift Resistance = $Uplift_R := Uplift_{\text{conc}} + Uplift_{\text{SF}} = 888.494 \cdot \text{kips}$

Uplift Check = $\frac{Uplift}{Uplift_R} = 35. \%$

$Uplift_Check := \text{if} \left(\frac{Uplift_R}{Uplift} \geq 1.0, \text{"Okay"}, \text{"No Good"} \right)$

Uplift_Check = "Okay"

Check Compression:

Total Compression Force = $Comp_{\text{tot}} := WT_{c,\text{comp}} + Comp = 419 \cdot \text{kips}$

Compression Resistance from Bearing = $Comp_{\text{bearing}} := \Phi_{\text{Bearing}} \cdot \left(\frac{\pi}{4} \cdot d_c^2 \cdot q_u \right) = 72 \cdot \text{kips}$

Compression Resistance from Skin Friction = $Comp_{\text{SF}} := \Phi_{\text{SF}} \cdot \pi \cdot d_c \cdot \left[(L_{c,\text{AWT}} - L_{\text{cag}} - n) \cdot \mu_1 + L_{c,\text{BWT}} \cdot \mu_2 \right] = 831 \cdot \text{kips}$

Total Compression Resistance = $Comp_R := Comp_{\text{bearing}} + Comp_{\text{SF}} = 902 \cdot \text{kips}$

Compression Check = $\frac{Comp_{\text{tot}}}{Comp_R} = 46.49. \%$

$Compression_Check := \text{if} \left(\frac{Comp_R}{Comp_{\text{tot}}} \geq 1.0, \text{"Okay"}, \text{"No Good"} \right)$

Compression_Check = "Okay"



Maser Consulting Connecticut
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Stamford, CT 06901
203.324.0800
peter.albano@colliersengineering.com

Post-Modification Antenna Mount Analysis Report and PMI Requirements

Mount Fix

SMART Tool Project #: 10115278
Maser Consulting Connecticut Project #: 21777772A (Rev.1)

August 22, 2022

Site Information

Site ID: 469153-VZW / WESTPORT CT
Site Name: WESTPORT CT
Carrier Name: Verizon Wireless
Address: 880 Post Rd. East Unit 1
Westport, Connecticut 06880
Fairfield County
Latitude: 41.137475°
Longitude: -73.334364°

Structure Information

Tower Type: 180-Ft Self Support
Mount Type: 15.00-Ft Sector Frame

FUZE ID # 16242132

Analysis Results

Sector Frame: 74.4% **Pass w/ Modifications***

***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: Selene Chen



Executive Summary:

The objective of this report is to summarize the analysis results of the antenna support mount including the proposed modifications at the subject facility for the final wireless telecommunications configuration, per the applicable codes and standards.

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: 325126, dated October 5, 2021</i>
<i>Mount Mapping Report</i>	<i>Structural Components, Site ID: 16242132, dated October 19, 2021</i>
<i>Previous Mount Analysis Report</i>	<i>Maser Consulting Connecticut Connecticut, Project #: 21777772A, dated November 2, 2021</i>
<i>Mount Modification Drawings</i>	<i>Maser Consulting Connecticut Connecticut, Project #: 21777772A, dated August 22, 2022</i>

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), V_{ULT} : 118 mph
	Ice Wind Speed (3-sec. Gust): 50 mph
	Design Ice Thickness: 1.00 in
	Risk Category: II
	Exposure Category: B
	Topographic Category: 1
	Topographic Feature Considered: N/A
	Topographic Method: N/A
	Ground Elevation Factor, K_e : 0.998
Seismic Parameters:	S_s : 0.228 g
	S_1 : 0.056 g
Maintenance Parameters:	Wind Speed (3-sec. Gust): 30 mph
	Maintenance Live Load, L_v : 250 lbs.
	Maintenance Live 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
159.00	160.00	4	JMA Wireless	MX06FRO640-02	Added
		3	Samsung	MT6407-77A	
		1	Samsung	RF4439d-25A	
		1	Samsung	RF4440d-13A	
		6	KAelus	BSF0020F3V1-1	
		4	Commscope	JAHH-65B-R3B	Retained
		3	Samsung	XXDWMM-12.5-65-8T-CBRS	
		2	Commscope	CBC78T-DS-43-2X	
		3	Samsung	B2/B66A RRH-BR049	
		3	Samsung	B5/B13 RRH-BR04C	
		1	Raycap	RHSDC-6627-PF-48*	

* Equipment to be flush mounted directly to the Self Support. It is not mounted on Sector Frame mounts and is not included in this mount analysis.

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 Maser Consulting Connecticut 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 Maser Consulting Connecticut 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. Maser Consulting Connecticut 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
8. Any mount modifications listed under Sources of Information are assumed to have been installed per the design specifications.

Discrepancies between in-field conditions and the assumptions listed above may render this analysis invalid unless explicitly approved by Maser Consulting Connecticut.

Analysis Results:

Component	Utilization %	Pass/Fail
Standoff Bar	74.4 %	Pass
Face Horizontal	47.9 %	Pass
Standoff Horizontal	44.1 %	Pass
Standoff Diagonal	32.4 %	Pass
Standoff Vertical	3.1 %	Pass
Antenna Pipe	42.6 %	Pass
Unistrut	22.7 %	Pass
Tie Back	6.5 %	Pass
Connection Check	57.8 %	Pass

Structure Rating – (Controlling Utilization of all Components)	74.4%
---	--------------

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	27.8	18.1	34.7	24.9
0.5	39.2	25.8	48.9	35.6
1	49.8	32.9	62.4	45.5

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 will be **SUFFICIENT** for the final loading configuration (attachment 2) **after the modifications detailed in attachment 3 are successfully completed.**

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

Attachments:

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

Mount Desktop – Post Modification Inspection (PMI) Report Requirements

Documents & Photos Required from Contractor – Mount Modification

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

PSLC #: 469153

SMART Project #: 10115278

Fuze Project ID: 16242132

Purpose – to upload the proper documentation to the SMART Tool in order to allow the SMART Tool engineering vendor 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 modification was completed in accordance with the modification drawings.
- Contractor shall relay any data that can impact the performance of the mount or the mount modification, this includes safety issues.

Base Requirements:

- If installation of the modification 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 drawings” showing contractor’s name, 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 post-modification passing mount analysis (MA) contact the SMART Tool vendor immediately.
- Each photo shall be time and date stamped.
- Photos should be high resolution.
- Contractor shall ensure that the safety climb wire rope is 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 of the modifications.
 - Photos of the mount after installation of the modifications; if the mounts are at different rad elevations, pictures must be provided for all elevations that the modifications were installed
- Photos taken at Mount Elevation
 - Photos showing the safety climb wire rope above and below the mount prior to modification.
 - Photos showing the climbing facility and safety climb if present.

- Photos showing each individual sector after installation of modifications. Each entire sector must 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.
- Photos of each installed modification per the modification drawings; pictures shall also include connection hardware (U-bolts, bolts, nuts, all-threaded rods, etc.)
- Photos showing the distances (relative distance between collars) of the installed modifications from the appropriate reference locations shown in the modification drawings.
- Photos showing the installed modifications onto the tower (i.e. ring/collar mounts, tie-backs, V-bracing kits, etc.); if the existing mount elevation needs to be changed according to the modification drawings, an elevation measurement shall be provided before the elevation change.

Material Certification:

- Materials utilized must be as per specification on the drawings or the equivalent as validated by the SMART Tool vendor.
 - If the materials are as specified on the drawings
 - The contractor shall provide the packing list, or the materials certifications for the materials utilized to perform the mount modification
 - Commscope, Metrosite, Perfect Vision, Sabre, and Site Pro have all agreed to support Verizon vendors with the necessary material certifications
 - If seeking permission to use an equivalent
 - It is required that the SMART Tool engineering vendor approval of such is included in the contractor submission package. There may be an additional charge for approval if the equivalent submission doesn't meet specifications as prescribed in the drawings.

All hardware has been properly installed, and the existing hardware was inspected.

The material utilized was as specified on the SMART Tool engineering vendor Mount Modification Drawings 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.

Antenna & Equipment Placement and Geometry Confirmation:

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.

Comments:

Was the mount modification completed in conjunction with the equipment change / installation?

- Yes No

Special Instructions / Validation as required from the MA or Mod Drawings:

Issue:

Contractor shall inspect climbing facilities and safety climb and ensure they are in good condition. Contractor shall install safety climb wire rope guides in locations where wire rope is rubbing against the mount or mount-to-tower connection steel. Wire brush clean any observed corrosion and protect with two (2) coats of cold galvanization (Zinga or Zinc Kote). Contractor shall provide photos of wire rope guide installation as part of PMI documents. Contact EOR if additional guidance is required.

Response:

Special Instruction Confirmation:

- The contractor has read and acknowledges the above special instructions.

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

Comments:

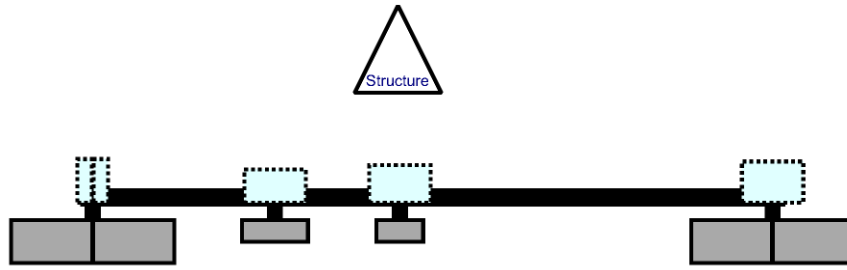
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Certifying Individual:

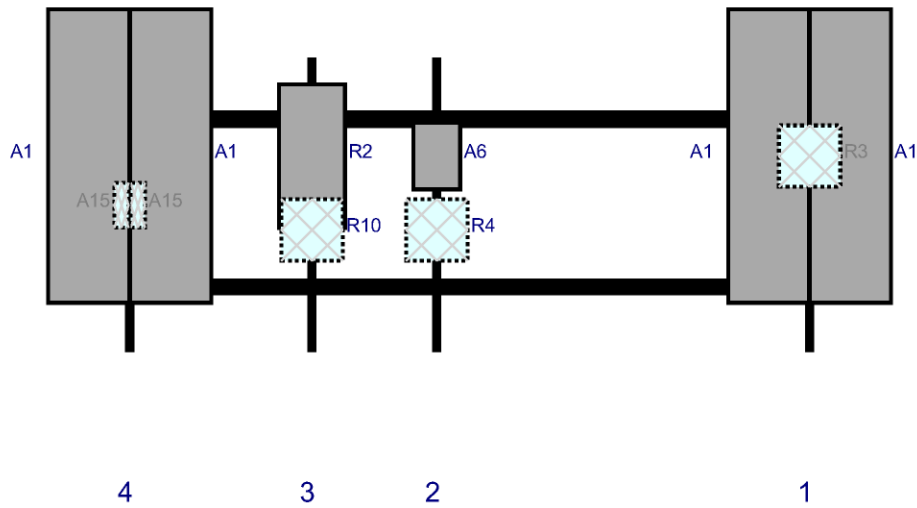
Company:	
Employee Name:	
Contact Phone:	
Email:	
Date:	



Plan View



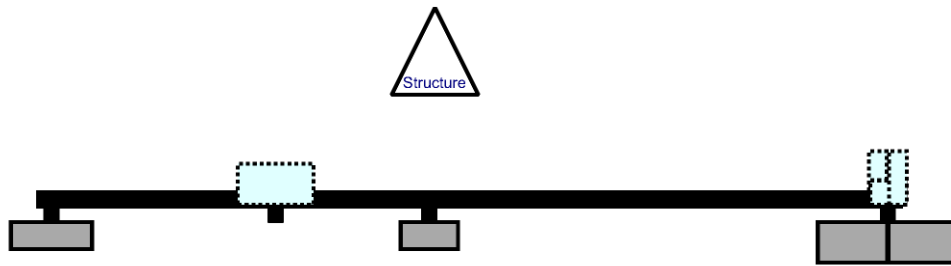
Front View - Looking at Structure



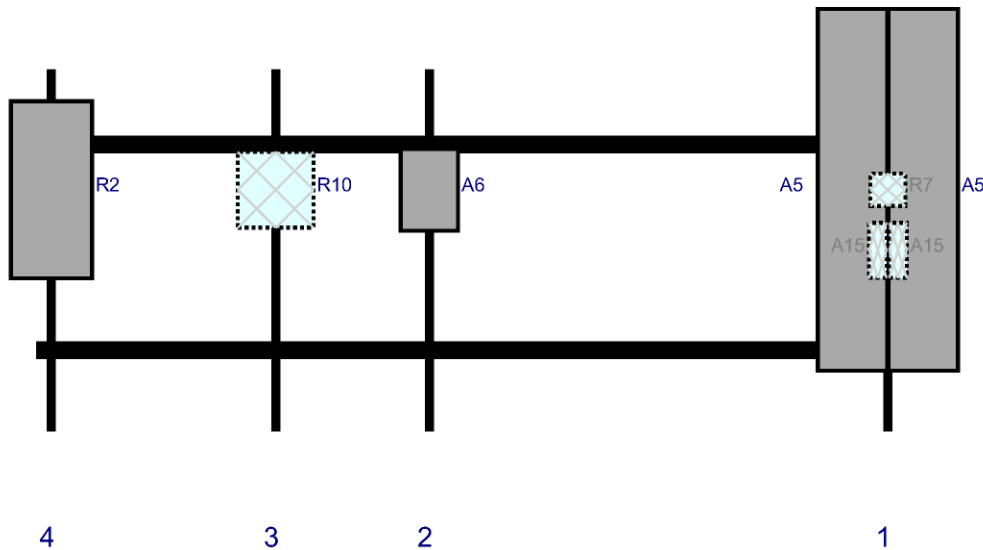
Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A1	MX06FRO640-02	72	19.8	169	1	a	Front	24	-10	Added	
A1	MX06FRO640-02	72	19.8	169	1	b	Front	24	10	Added	
R3	RF4439d-25A	15	15	169	1	a	Behind	24	0	Added	
A6	CBRS RRH + Clip-on Ant	16.2	11.4	78	2	a	Front	24	0	Retained	10/19/2021
R4	RF4440d-13A	15	15	78	2	a	Behind	42	0	Added	
R2	MT6407-77A	35.1	16.1	47.5	3	a	Front	24	0	Added	
R10	B5/B13 RRH-BR04C (RFV01U-D2A)	15	15	47.5	3	a	Behind	42	0	Retained	10/19/2021
A1	MX06FRO640-02	72	19.8	3	4	a	Front	24	-10	Added	
A1	MX06FRO640-02	72	19.8	3	4	b	Front	24	10	Added	
A15	BSF0020F3V1-1	10.91	3.47	3	4	a	Behind	36	2	Added	
A15	BSF0020F3V1-1	10.91	3.47	3	4	b	Behind	36	-2	Added	
OVP	B2/B66A RRH-BR049 (RFV01U-D1A)	15	15			Member				Retained	10/19/2021



Plan View



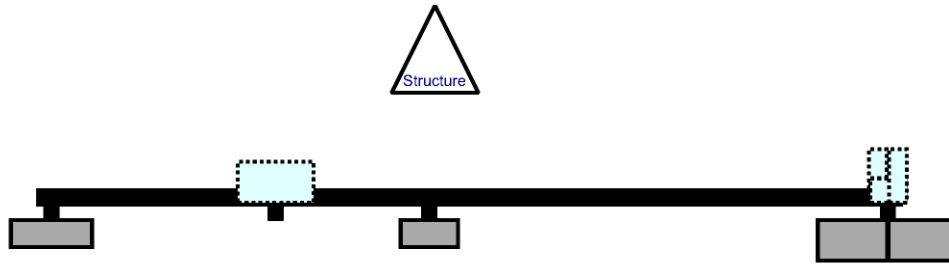
Front View - Looking at Structure



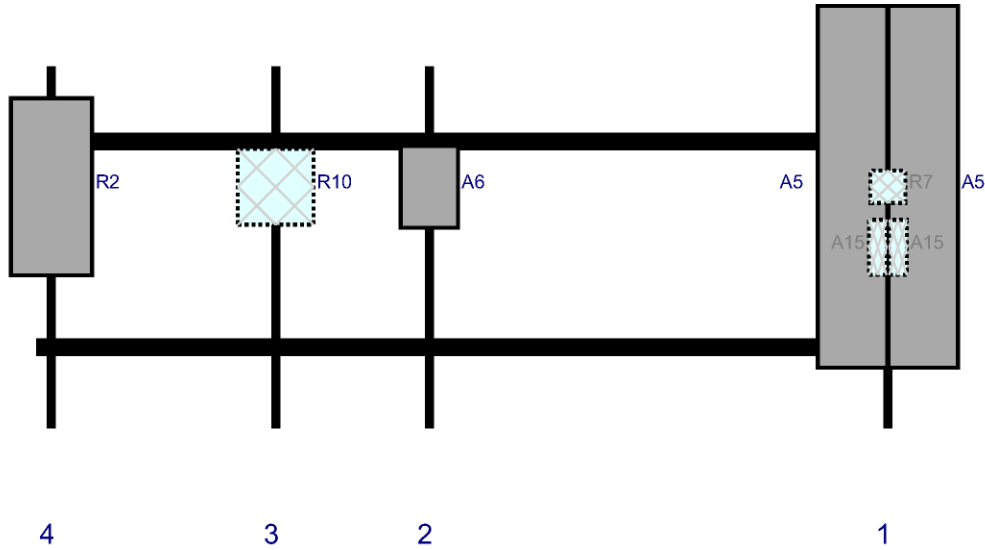
Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A5	JAHH-65B-R3B	72	13.8	169	1	a	Front	24	-7	Retained	10/19/2021
A5	JAHH-65B-R3B	72	13.8	169	1	b	Front	24	7	Retained	10/19/2021
R7	CBC78T-DS-43	6.4	6.9	169	1	a	Behind	24	0	Retained	10/19/2021
A15	BSF0020F3V1-1	10.91	3.47	169	1	a	Behind	36	2	Added	
A15	BSF0020F3V1-1	10.91	3.47	169	1	b	Behind	36	-2	Added	
A6	CBRS RRH + Clip-on Ant	16.2	11.4	78	2	a	Front	24	0	Retained	10/19/2021
R10	B5/B13 RRH-BR04C (RFV01U-D2A)	15	15	47.5	3	a	Behind	24	0	Retained	10/19/2021
R2	MT6407-77A	35.1	16.1	3	4	a	Front	24	0	Added	



Plan View



Front View - Looking at Structure



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
A5	JAHH-65B-R3B	72	13.8	169	1	a	Front	24	-7	Retained	10/19/2021
A5	JAHH-65B-R3B	72	13.8	169	1	b	Front	24	7	Retained	10/19/2021
R7	CBC78T-DS-43	6.4	6.9	169	1	a	Behind	24	0	Retained	10/19/2021
A15	BSF0020F3V1-1	10.91	3.47	169	1	a	Behind	36	2	Added	
A15	BSF0020F3V1-1	10.91	3.47	169	1	b	Behind	36	-2	Added	
A6	CBRS RRH + Clip-on Ant	16.2	11.4	78	2	a	Front	24	0	Retained	10/19/2021
R10	B5/B13 RRH-BR04C (RFV01U-D2A)	15	15	47.5	3	a	Behind	24	0	Retained	10/19/2021
R2	MT6407-77A	35.1	16.1	3	4	a	Front	24	0	Added	



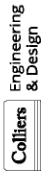
**MOUNT MODIFICATION DRAWINGS
EXISTING 15.00' SECTOR FRAME**

**TOWER OWNER: CSP CORPORATION
TOWER OWNER SITE NUMBER: N/A**

**CARRIER SITE NAME: WESTPORT CT
CARRIER SITE NUMBER: 469153
FUZE ID: 16242132**

**880 POST RD. EAST UNIT 1
WESTPORT, CT 06880
FAIRFIELD COUNTY**

**LATITUDE: 41.137475° N
LONGITUDE: 73.334364° W**



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colliers@colliersengineering.com

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PROJECT NUMBER: 2177772A

REV	DATE	DESCRIPTION	BY	CHKD
1	08/15/2022	ISSUED FOR PERMITS	SC	DA
2	10/10/2022	REVISIONS	SC	DA
3	10/10/2022	REVISIONS	SC	DA
4	10/10/2022	REVISIONS	SC	DA
5	10/10/2022	REVISIONS	SC	DA

SHEET	DESCRIPTION
ST-1	TITLE SHEET
SBOM-1	BILL OF MATERIALS
SGN-1	GENERAL NOTES
SCF-1	CLIMBING FACILITY DETAIL
SS-1	MODIFICATION DETAILS
SS-2	MOUNT PHOTOS
SS-3	SPECIFICATION SHEETS

APPLICANT/LESSEE
COMPANY: VERIZON WIRELESS
CLIENT REPRESENTATIVE
COMPANY: VERIZON WIRELESS
PROJECT MANAGER
CONTACT: PETER ALBANO
PHONE: 856-797-0412
E-MAIL: PETER.ALBANO@COLLIERSENGINEERING.COM

DESIGN CRITERIA
WIND LOADS
BASIC WIND SPEED (3 SECOND GUST), V = 118 MPH
EXPOSURE CATEGORY B
TOPOGRAPHIC CATEGORY 1
MEAN BASE ELEVATION (AMSL) = 63.37
ICE LOADS
ICE WIND SPEED (3 SECOND GUST), V = 50 MPH
ICE THICKNESS = 1.00 IN
SEISMIC LOADS
SEISMIC DESIGN CATEGORY B
SHORT TERM PEAK GROUND MOTION, S _g = 0.28
LONG TERM PEAK GROUND MOTION, S _g = 0.06

PROJECT INFORMATION
PHI LOCATION: https://PHI.VZW.SMART.COM
SMART TOOL PROJECT #: 10115278
VZW LOCATION CODE (RLC): 469153
ANALYSIS DATE: 08/19/2022
CONTRACTOR PMI REQUIREMENTS
PMI REQUIREMENTS EMBEDDED WITHIN MOUNT MODIFICATION REPORT

SHEET INDEX	
ST-1	TITLE SHEET
SBOM-1	BILL OF MATERIALS
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NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

BILL OF MATERIALS

SECTION 1 - VZWSMART KITS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
1	VZWSMART	VZWSMART-SFK1	TIE BACK ASSEMBLY	CONNECT OTHER END TO ADJACENT TOWER LEG. PROPOSED TIE BACK SHALL EXTEND NO MORE THAN 1 FT BEYOND THE TOWER LEG. CONTRACTOR SHALL TRIM AS REQUIRED AND PROTECT CUT END WITH TWO COATS OF ZINCA GR ZINC COTE.	84	84
6	VZWSMART	VZWSMART-FSK1	CROSSOVER PLATE			

SECTION 2 - OTHER REQUIRED PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)

SECTION 3 - REQUIRED SAFETY CLIMB PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
1	PERFECT VISION	PV-CLAMP-LW-01-06	CLAMP BRACKET	OR EOR APPROVED EQUIVALENT		
1	PERFECT VISION	PV-CHX-CG-5M	WIRE ROPE GUIDE	OR EOR APPROVED EQUIVALENT		
					TOTAL:	84

NOTES:

- THE MANUFACTURERS LISTED ARE THE APPROVED VENDORS FOR THE VZW MOUNT KITS. EACH MANUFACTURER WILL BE AWARE OF WHICH KITS HAVE BEEN THROUGH THE VZW APPROVAL PROCESS AND THEY ARE IN TURN APPROVED TO SELL. PLEASE NOTE THAT THE MATERIAL UTILIZED ON THE MOUNT MODIFICATIONS WILL BE REVIEWED AS A PART OF THE DESKTOP PMI COMPLETED BY THE SMART TOOL VENDOR. IT WILL BE REQUIRED THAT THE VZW KITS SPECIFIED ARE UTILIZED IN THE MODIFICATIONS.
- ALL MATERIALS REQUIRED FOR THE DESIGNED MODIFICATIONS BUT NOT LISTED IN THIS SHEET ARE ASSUMED TO BE PROVIDED BY THE CONTRACTOR.

VZWSMART KITS - APPROVED VENDORS

COMMSCOPE	
CONTACT	SALVADOR ANGUIANO
PHONE	(817) 304-7492
EMAIL	SALVADOR.ANGUIANO@COMMSCOPE.COM
WEBSITE	WWW.COMMSCOPE.COM
METROSITE FABRICATORS, LLC	
CONTACT	KENT RAMEY
PHONE	(706) 315-7045 (O), (706) 982-9788 (M)
EMAIL	KENT@METROSITELLC.COM
WEBSITE	METROSITELLC.COM

PERFECTVISION	
CONTACT	WIRELESS SALES
PHONE	(844) 887-6773
EMAIL	WWW.PERFECT-VISION.COM
WEBSITE	WIRELESSALES@PERFECT-VISION.COM
SABRE INDUSTRIES, INC.	
CONTACT	ANGIE WELCH
PHONE	(866) 528-4937
EMAIL	AKWELCH@SABREINDUSTRIES.COM
WEBSITE	WWW.SABRESOLUTIONS.COM

SITE PRO 1	
CONTACT	PAULA BOSWELL
PHONE	(972) 236-9843
EMAIL	PAULA.BOSWELL@VALMONT.COM
WEBSITE	WWW.SITEPRO1.COM
NEWAVE	
CONTACT	NEWAVE SALES TEAM
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BETTER METAL, LLC	
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NO.	REV.	DATE	DESCRIPTION	BY	CHKD	APPD
1			CONSTRUCTION	SC	SH	
2			CONSTRUCTION	SC	SH	
3			CONSTRUCTION	SC	SH	

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3150 W. WINDY HILL ROAD
WESTPORT, CT 06890

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SITE NAME:
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769153
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WESTPORT CT 06890
FAIRFIELD COUNTY

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PHONE: (615) 535-0990 (O), (615) 631-2520 (M)
EMAIL: DLS@BETTERMETAL.COM
WEBSITE: WWW.BETTERMETAL.COM

BILL OF MATERIALS
SHEET NUMBER: SBOM-1

PROJECT NOTES

- SEE MODIFICATION NOTES
- THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, LAWS AND REGULATIONS OF ALL MUNICIPALITIES, UTILITY COMPANIES OR OTHER PUBLIC GOVERNING AUTHORITIES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS THAT MAY BE REQUIRED BY ANY FEDERAL STATE, COUNTY OR MUNICIPAL AUTHORITIES.
- THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER, IN WRITING, OF ANY CONFLICTS, ERRORS OR OMISSIONS PRIOR TO THE SUBMISSION OF BIDS OR PERFORMANCE OF WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES AND STRUCTURES ON THE PROJECT. THE CONTRACTOR SHALL REPAIR ANY DAMAGE AS A RESULT OF THE CONSTRUCTION OF THE FACILITY AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
- THE SCOPE OF WORK FOR THIS PROJECT SHALL INCLUDE PROVIDING ALL MATERIALS, EQUIPMENT AND LABOR REQUIRED TO COMPLETE THIS PROJECT. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES AND THE MANUFACTURER'S RECOMMENDATIONS.
- THE CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO SUBMITTING THE BID TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND CONSTRUCTION DRAWINGS.
- THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS OF THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXISTING CONSTRUCTION SHOWN ON THESE DRAWINGS. DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
- SINCE THE CELL SITE MAY BE ACTIVE, ALL SAFETY PRECAUTIONS MUST BE MAINTAINED. EQUIPMENT SHOULD BE SHUT DOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL PROTECTIVE EQUIPMENT (PPE) SHOULD BE WORN TO ALERT OF ANY POTENTIALLY DANGEROUS EXPOSURE LEVELS.
- NO NOISE, SMOKE, DUST OR ODOOR WILL RESULT FROM THIS FACILITY AS TO CAUSE A NUISANCE.
- THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION (NO HANDICAP ACCESS IS REQUIRED).

- THESE MODIFICATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE TELECOMMUNICATIONS INDUSTRY STANDARD TIA-223-H MATERIALS AND SERVICES PROVIDED BY THE CONTRACTOR SHALL CONFORM TO THE ABOVE MENTIONED CODES.
- CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT DAMAGE TO EXISTING UTILITIES AND STRUCTURES AS A RESULT OF THE CONTRACTOR'S WORK OR FROM DAMAGE DUE TO OTHER CAUSES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS BEFORE BEGINNING WORK. ORDERING MATERIAL AND PREPARING OF SHOP DRAWINGS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND THE ATTENTION OF THE ENGINEER. IF THE CONTRACTOR DISCOVERS ANY EXISTING CONDITIONS THAT ARE NOT REPRESENTED ON THESE DRAWINGS, OR ANY CONDITIONS THAT WOULD INTERFERE WITH THE INSTALLATION OF THE INFRASTRUCTURE, NOTIFY THE ENGINEER IMMEDIATELY.
- IT IS ASSUMED THAT ANY STRUCTURAL MODIFICATION WORK SPECIFIED ON THESE DRAWINGS SHALL BE PERFORMED BY A LICENSED STRUCTURAL ENGINEER WITH TOWER CONSTRUCTION EXPERIENCE.
- THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION METHODS, MEANS, TECHNIQUES, SEQUENCES, AND PROCEDURES.
- ALL CONSTRUCTION MEANS AND METHODS, INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, CLIMBING PLANS, AND RESCUE PLANS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF THE FACILITY. THE CONTRACTOR SHALL MEET AND COMPLY WITH ALL APPLICABLE CODES AND GENERAL INDUSTRY STANDARDS. ALL RIGGING PLANS SHALL ADHERE TO ANSI/TIA-322 (LATEST EDITION) INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR INITIATING, MAINTAINING, AND COMPLETING ALL PROGRAMS IN ACCORDANCE WITH ALL APPLICABLE SAFETY CODES.
- WORK SHALL ONLY BE PERFORMED DURING CALM DRY DAYS WITH WINDS LESS THAN 30 MPH. THE STRUCTURES SHOWN ON THE DRAWINGS IS STRUCTURALLY SOUND ONLY IN THE COMPLETED FORM. THE

CONTRACTOR SHALL BE RESPONSIBLE FOR THE STRENGTH AND STABILITY OF THE STRUCTURE DURING ERECTION. CONTRACTOR SHALL PROVIDE ALL NECESSARY BRACING AND SHORING TO MAINTAIN THE STRUCTURE AS REQUIRED TO RESIST ALL FORCES THAT MAY OCCUR DURING HANDLING AND ERECTION UNTIL THE STRUCTURE IS FULLY COMPLETED. TEMPORARY SUPPORTS, BRACING AND OTHER STRUCTURAL SYSTEMS SHALL BE REMOVED IMMEDIATELY AFTER THE CONSTRUCTION OF THE STRUCTURE SHALL BE MAINTAINED.

ALL INSTALLATIONS PERFORMED ON THE STRUCTURE SHALL BE COMPLETED IN ACCORDANCE WITH THE GOVERNING PROVISIONS OF THE STANDARD FOR INSTALLATION, ALTERATION AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS, ANSI/TIA-322.

CONTRACTOR SHALL SECURE SITE BACK TO EXISTING CONDITION UNDER SUPERVISION OF OWNER. ALL FENCE, STONE, GEOPRAC, GROUNDING, AND OTHER ITEMS SHALL BE REINSTALLED TO THE ORIGINAL CONDITION. REQUIRED TO ACHIEVE OWNER APPROVAL POSITIVE DRAINAGE AWAY FROM TOWER SITE SHALL BE MAINTAINED.

CONNECTIONS BETWEEN ITEMS SUPPORTED BY THE STRUCTURE AND THE STRUCTURE NOT SPECIFICALLY DETAILED IN THE CONTRACT DOCUMENTS SHALL BE DESIGNED, COORDINATED AND INSPECTED BY A PROFESSIONAL ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND SEALED CALCULATIONS DURING SHOP DRAWING REVIEW.

DO NOT SCALE DRAWINGS.

DO NOT USE THESE DRAWINGS FOR ANY OTHER SITE.

ALL MATERIAL UTILIZED FOR THIS PROJECT MUST BE NEW AND FREE OF ANY DEFECTS. MATERIALS SHALL BE STORED PROPERLY TO PREVENT DAMAGE TO ALTERED SIZE AND/OR STRENGTHS, MUST BE APPROVED BY THE OWNER AND ENGINEER IN WRITING.

THE MOUNT UNDER NO CIRCUMSTANCES SHOULD BE USED AS A TIE OFF POINT.

STRUCTURAL STEEL

DESIGN, DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING PUBLICATIONS EXCEPT AS SPECIFICALLY INDICATED IN THE CONTRACT DOCUMENTS.

- AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION (15TH EDITION)
- SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS
- ASC CODE OF STANDARD PRACTICE

STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING UNLESS OTHERWISE SHOWN:

CHANNELS, ANGLES, PLATES, ETC. ASTM A36 (GR 36)
 STEEL PIPE ASTM A53 (GR 35)
 BOLTS ASTM A325
 NUTS ASTM A363
 LOCKING STRUCTURAL GRADE

ALL SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE APPROVED IN WRITING BY THE ENGINEER. CONTRACTOR SHALL PROVIDE DOCUMENTATION TO ENGINEER FOR VERIFYING THE SUBSTITUTE IS SUITABLE FOR USE AND MEETS ORIGINAL DESIGN CRITERIA. DIFFERENCES BETWEEN ORIGINAL DESIGN AND SUBSTITUTE SHALL BE NOTED. ESTIMATES OF COSTS AND COSTS TO THE SUBSTITUTION (INCLUDING REDESIGN COSTS AND COSTS TO SUB-CONTRACTORS) SHALL BE PROVIDED TO THE ENGINEER. CONTRACTOR SHALL PROVIDE ADDITIONAL DOCUMENTATION AND/OR SPECIFICATIONS TO THE ENGINEER AS REQUESTED.

PROVIDE STRUCTURAL STEEL SHOP DRAWINGS TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION.

- SUBMIT SHOP DRAWINGS TO
- PROVIDE MASER CONSULTING CONNECTICUT PROJECT # AND MASER CONSULTING CONNECTICUT PROJECT ENGINEER PROJECT # AND MASER BODY OF THE EMAIL.

DRILL NO HOLES IN ANY NEW OR EXISTING STRUCTURAL STEEL MEMBERS UNLESS SPECIFICALLY NOTED ON STRUCTURAL DRAWINGS WITHOUT THE APPROVAL OF THE ENGINEER.

GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.

ALL NEW STEEL SHALL BE HOT-DIPPED GALVANIZED FOR FULL WEATHER PROTECTION. EXISTING STEEL CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.

CONTRACTOR SHALL PROTECT CUT ENDS OF ALL FIELD-CUT STEEL WITH TWO (2) COATS OF COLD GALVANIZING (ZINGA OR ZINC COTE).

ALL BOLT ASSEMBLIES FOR STRUCTURAL MEMBERS REPRESENTED IN THIS DRAWING REQUIRE LOCKING DEVICES TO BE INSTALLED IN ACCORDANCE WITH TIA-223-H SECTION 4.9.2 REQUIREMENTS.

WHERE CONNECTIONS ARE NOT FULLY DETAILED ON THESE DRAWINGS, FABRICATOR SHALL DESIGN CONNECTIONS TO RESIST LOADS AND FORCES WHERE SHOWN ON DRAWINGS AND AS OUTLINED IN SPECIFICATIONS.

FOR MEMBERS BEING REPLACED, PROVIDE NEW BOLTS AND MATCH EXISTING SIZE AND GRADE TO MEET AISC REQUIREMENTS FOR TIGHTENING BOLT.

DISTANCE AND SPACING.

ALL PROPOSED AND/OR REPLACED BOLTS SHALL BE OF SUFFICIENT LENGTH SUCH THAT THE END OF THE BOLT IS AT LEAST FLUSH WITH THE FACE OF THE NUT. IT IS NOT PERMITTED FOR THE BOLT END TO BE BELOW THE FACE OF THE NUT AFTER TIGHTENING IS COMPLETED.

GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.

ALL EXISTING PAINTED/GALVANIZED SURFACES DAMAGED DURING REHAB WORK SHALL BE REPAINTED OR RE-GALVANIZED. GALVANIZING SHALL BE CLEAN, REPAIRED BY COLD GALVANIZING (ZINGA OR ZINC COTE), AND REPAINTED TO MATCH THE EXISTING FINISH (IF APPLICABLE).

ALL HOLES IN STEEL MEMBERS SHALL BE SIZED 1/16" LARGER THAN THE BOLT DIAMETER. STANDARD HOLES SHALL BE USED UNLESS NOTED OTHERWISE.

WELDING NOTES

ALL WELDING SHALL BE DONE IN ACCORDANCE WITH AWS D1.0 (LATEST EDITION). THIS SHALL INCLUDE A CERTIFIED WELD INSPECTOR (CWI) FOR ACCEPTANCE OR REJECTION OF ALL WELDING OPERATIONS, PRE DURING, AND POST INSTALLATION, USING THE ACCEPTANCE CRITERIA OF AWS D1.1.

CONTRACTOR IS RESPONSIBLE FOR COMMISSIONING A THIRD PARTY WELDING INSPECTOR (CWI) TO CONDUCT WELDING INSPECTION FOR THE PROJECT. A PASSING CWI REPORT SHALL BE PROVIDED TO THE ENGINEER UPON COMPLETION OF THE PROJECT.

THE CERTIFIED WELD INSPECTOR SHALL INDICATE, IN A WRITTEN CWI REPORT, THAT ALL WELDING OPERATIONS PRE DURING, AND POST INSTALLATION WERE CONDUCTED IN ACCORDANCE WITH AWS D1.1 WITH PHOTOGRAPHS AND DOCUMENTATION SUPPORTING THE ACCEPTANCE OR REJECTION OF THE WELDING OPERATIONS. ALL WELDING OPERATIONS DOCUMENTATION AND PHOTOS SHALL BE SUBMITTED DURING THE PMI.

IN CASES WHERE A WELD IS REQUIRED BETWEEN TWO MEMBERS IN WHICH THERE IS A GAP IN BETWEEN, THE WELD IS TO BE BUILT UP SUCH THAT THE SIZE OF WELD ON THE MEMBER IS EQUAL TO THAT SHOWN IN THE DRAWINGS.

OXY FUEL GAS WELDING OR BRAZING IS STRICTLY PROHIBITED. SPECIFICALLY, NO TORCH CUTTING IS PERMITTED ON SITE. ALL HOLES SHALL BE CUT WITH A GRINDER.

CONTRACTOR SHALL EXERCISE CAUTION WHEN WELDING A GALVANIZED SURFACE.

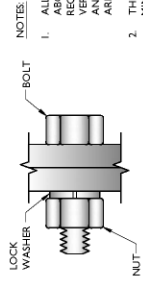
CONTRACTOR SHALL HAVE A FIRE PROTECTION PLAN IN PLACE THAT MEETS ALL LOCAL, STATE AND FEDERAL REQUIREMENTS, AND LOCAL JURISDICTIONAL REQUIREMENTS.

BOLT SCHEDULE (IN.)

BOLT DIAMETER	STANDARD HOLE	SHORT SLOT	MIN. EDGE DISTANCE	SPACING
1/2	9/16	9/16 x 1 1/16	7/8	1 1/2
5/8	1 1/16	1 1/16 x 7/8	1 1/8	1 7/8
3/4	1 3/16	1 3/16 x 1	1 1/4	2 1/4
7/8	1 5/16	1 5/16 x 1 1/8	1 1/2	2 5/8
1	1 1/16	1 1/16 x 5/16	1 3/4	3

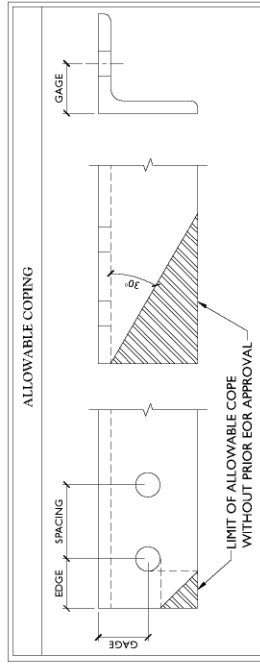
WORKABLE GAGES (IN.)

LEG	GAGE
4	2 1/2
3 1/2	2
3	1 3/4
2 1/2	1 3/8
2	1 1/8



TYP. BOLT ASSEMBLY

- NOTES:**
- ALL DIMENSIONS REPRESENTED IN THE ABOVE TABLES ARE AISC MINIMUM REQUIREMENTS. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS IN FIELD AND NOTIFY ENGINEER IF DISTANCES ARE LESS THAN THOSE PROVIDED.
 - THE DIMENSIONS PROVIDED ARE MINIMUM REQUIREMENTS. ACTUAL DIMENSIONS MAY VARY WITHIN THE DIMENSIONS PROVIDED FROM THE AISC MINIMUM REQUIREMENTS.
 - SHORT SLOT HOLES SHALL ONLY BE USED WHEN DEPICTED IN THE DRAWINGS.
 - MATCH EXISTING GAGES WHEN APPLICABLE UNLESS MINIMUM EDGE DISTANCES ARE COMPROMISED.



NO.	REV.	DATE	DESCRIPTION	BY	CHKD
1	0	03/20/16	ISSUE FOR PERMIT	SC	SH
2	1	03/20/16	ISSUE FOR PERMIT	SC	SH
3	1	03/20/16	ISSUE FOR PERMIT	SC	SH
4	1	03/20/16	ISSUE FOR PERMIT	SC	SH

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 WESTPORT
 FAIRFIELD COUNTY

Colliers Engineering & Design
 10000 03/2016 (Revised 03/2016)
 10000 03/2016 (Revised 03/2016)
 10000 03/2016 (Revised 03/2016)

MODIFICATION NOTES

SGN-1

PROJECT INFORMATION		DATE	
PROJECT NO.	2177772A	DATE	
PROJECT NAME		DATE	
PROJECT LOCATION		DATE	
PROJECT DESCRIPTION		DATE	
PROJECT STATUS		DATE	
PROJECT OWNER		DATE	
PROJECT CONTACT		DATE	
PROJECT ADDRESS		DATE	
PROJECT CITY		DATE	
PROJECT STATE		DATE	
PROJECT ZIP		DATE	

COLLIERS ENGINEERING & DESIGN, INC. 100 WEST MAIN STREET, SUITE 200 WESTPORT, CT 06880

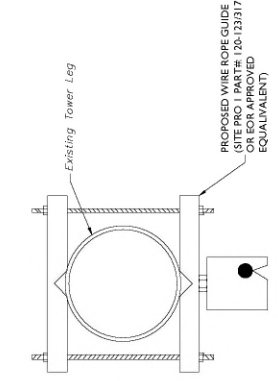
WE AND OUR CONSULTANTS SHALL NOT BE RESPONSIBLE FOR ANY DAMAGE TO THE PROPERTY OR PERSONS UNLESS THEY ARE ACTING UNDER THE DIRECTION OF THE PROFESSIONAL ENGINEER OR ARCHITECT.

SITE NAME:
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880 POST RD. EAST UNIT 1
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FAIRFIELD COUNTY

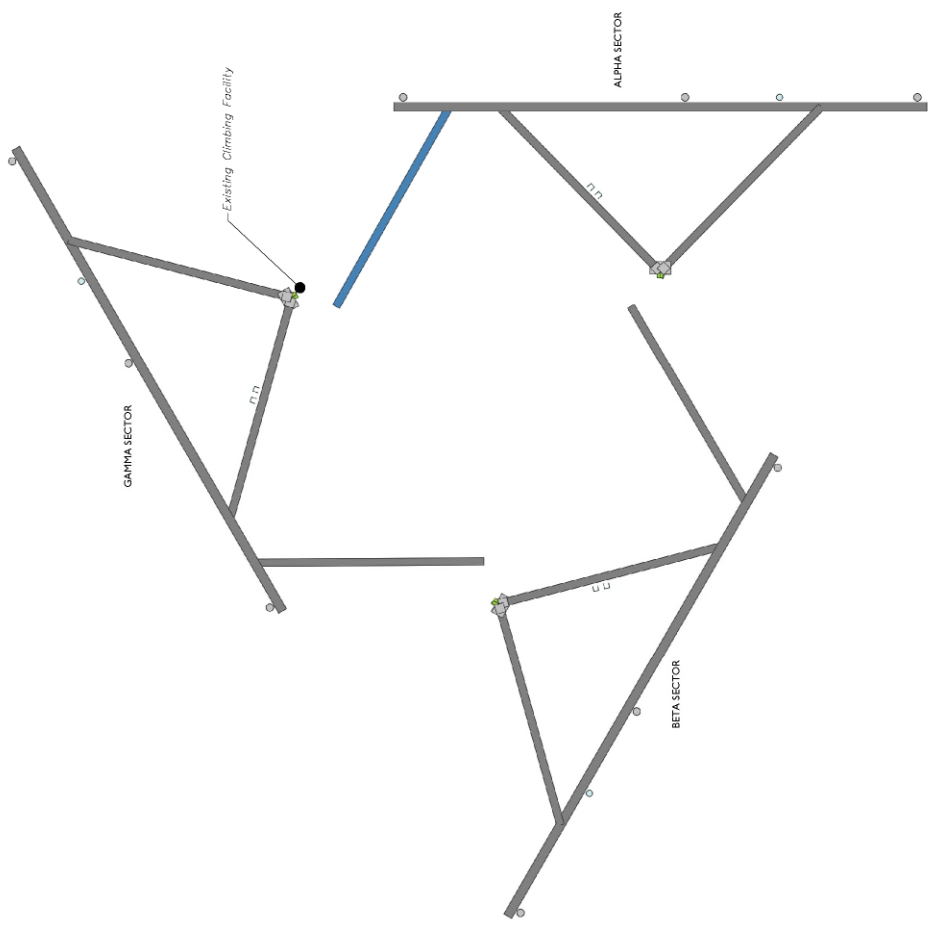
SCALE:
AS SHOWN
DATE: 12/17/2021

PROJECT:
CLIMBING FACILITY DETAIL

PROJECT NUMBER:
SCF-1



2 PROPOSED WIRE ROPE GUIDE ATTACHMENT - PLAN VIEW
SCALE: N.T.S.



1 CLIMBING FACILITY LOCATION
SCALE: N.T.S.

STRUCTURAL NOTES:

- PER THE MOUNT MAPPING COMPLETED BY STRUCTURAL COMPONENTS ON 10/19/2021, THE SAFETY CLIMB AND CLIMBING FACILITIES UP TO THE VERIZON MOUNT ELEVATION (159'-0") ARE IN GOOD CONDITION. MASER DOES NOT WARRANT THIS INFORMATION.
- INSTALL SHALL NOT CAUSE HARM TO THE STRUCTURE, CLIMBING FACILITY, SAFETY CLIMB, OR ANY SYSTEM INSTALLED ON THE STRUCTURE. TIMELY NOTICE AND DOCUMENTATION SHALL BE PROVIDED BY CONTRACTORS TO THE BOR (OF STRUCTURAL DESIGN) IF AN OBSTRUCTION WAS REQUIRED TO MEET THE RF SYSTEM DESIGN REQUIREMENTS AND PERFORMANCES.



Existing Safety Climb

Existing Climbing Facility

CLIMBING FACILITY PHOTO

LEGEND:

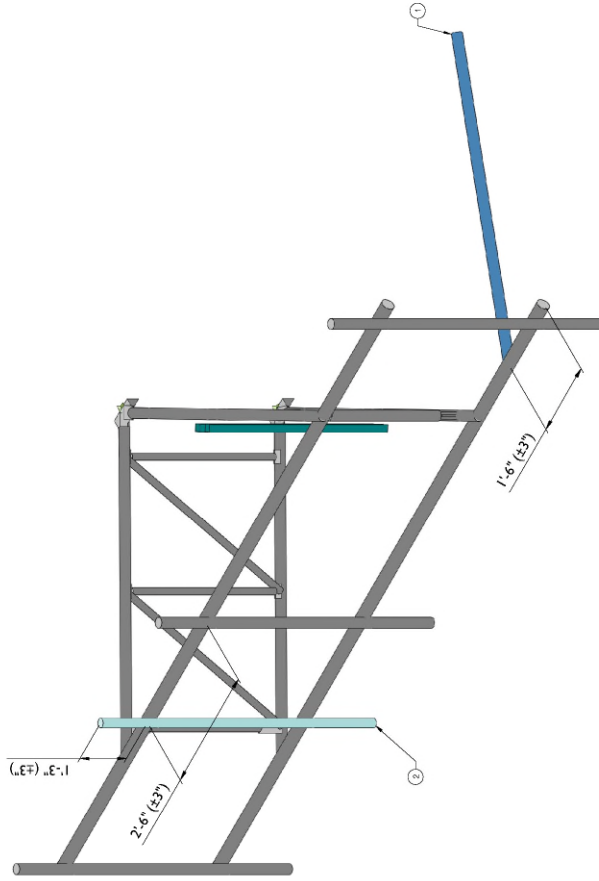
- PROPOSED
- RELOCATED
- EXISTING

MOUNT MODIFICATION SCHEDULE

NO.	ELEVATION	QUANTITY	DESCRIPTION	NOTES
1	159'-0"	1	PROPOSED TIEBACK ASSEMBLY (PART #: VZWSMART-SBK1)	CONNECT NEW TIE BACK TO EXISTING BOTTOM FACE HORIZONTAL. CONNECT OTHER END TO ADJACENT TOWER LEG. PROPOSED TIE-BACK SHALL EXTEND NO MORE THAN 12" BEYOND THE TOWER LEG. CONTRACTOR SHALL TRIM AS REQUIRED AND PROTECT CUT END WITH TWO COATS OF ZINGA OR ZINC. COTE. (ALPHA SECTOR ONLY). SEE GENERAL NOTE A.
2		3	RELOCATED MOUNT PIPE	CONNECT RELOCATED MOUNT PIPE IN POSITION 3 TO EXISTING FACE HORIZONTALS WITH CROSSOVER PLATES (PART #: VZWSMART-MSK1) AT EACH CONNECTION.

GENERAL NOTES:

- A. THREADED ROD FROM PROPOSED KITS SHALL BE TRIMMED TO EXTEND NO MORE THAN 3" BEYOND THE LOCK NUT. TREAT ALL CUT ENDS WITH (2) COATS OF COLD GALVANIZATION (ZINGA OR ZINC KOTE).
- B. REMOVE EXISTING TIE BACK AND ASSOCIATED CONNECTIONS (ALPHA SECTOR ONLY).
- C. MOUNT MEMBERS NOT SHOWN FOR CLARITY. J.I.N.C.



PROPOSED ISOMETRIC VIEW (ALPHA SECTOR SHOWN, SIMILAR ON BETA AND GAMMA SECTORS)

SCALE: N.T.S.

1

Colliers Engineering & Design

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DATE:	AS SHOWN	BY:	2/17/2024
NO.	1	DESCRIPTION	SC
REV.	1	DATE	02/17/2024
		DESCRIPTION	SC

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CT # 240000003

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Professional Engineer
Colliers Engineering & Design
1000 Main Street, Suite 200
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Phone: 203.333.8800
www.colliersengineering.com
CONTRACT NO. 2023-000000-002

MODIFICATION DETAILS

SS-1

NO.	AS SHOWN	EXAMINER	DATE
1	CONSTRUCTION	SC	08/28/2019
2	CONSTRUCTION	SC	08/28/2019
3	CONSTRUCTION	SC	08/28/2019
4	CONSTRUCTION	SC	08/28/2019
5	CONSTRUCTION	SC	08/28/2019
6	CONSTRUCTION	SC	08/28/2019
7	CONSTRUCTION	SC	08/28/2019
8	CONSTRUCTION	SC	08/28/2019
9	CONSTRUCTION	SC	08/28/2019
10	CONSTRUCTION	SC	08/28/2019



MOUNT PHOTO 2



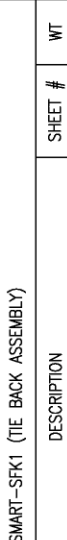
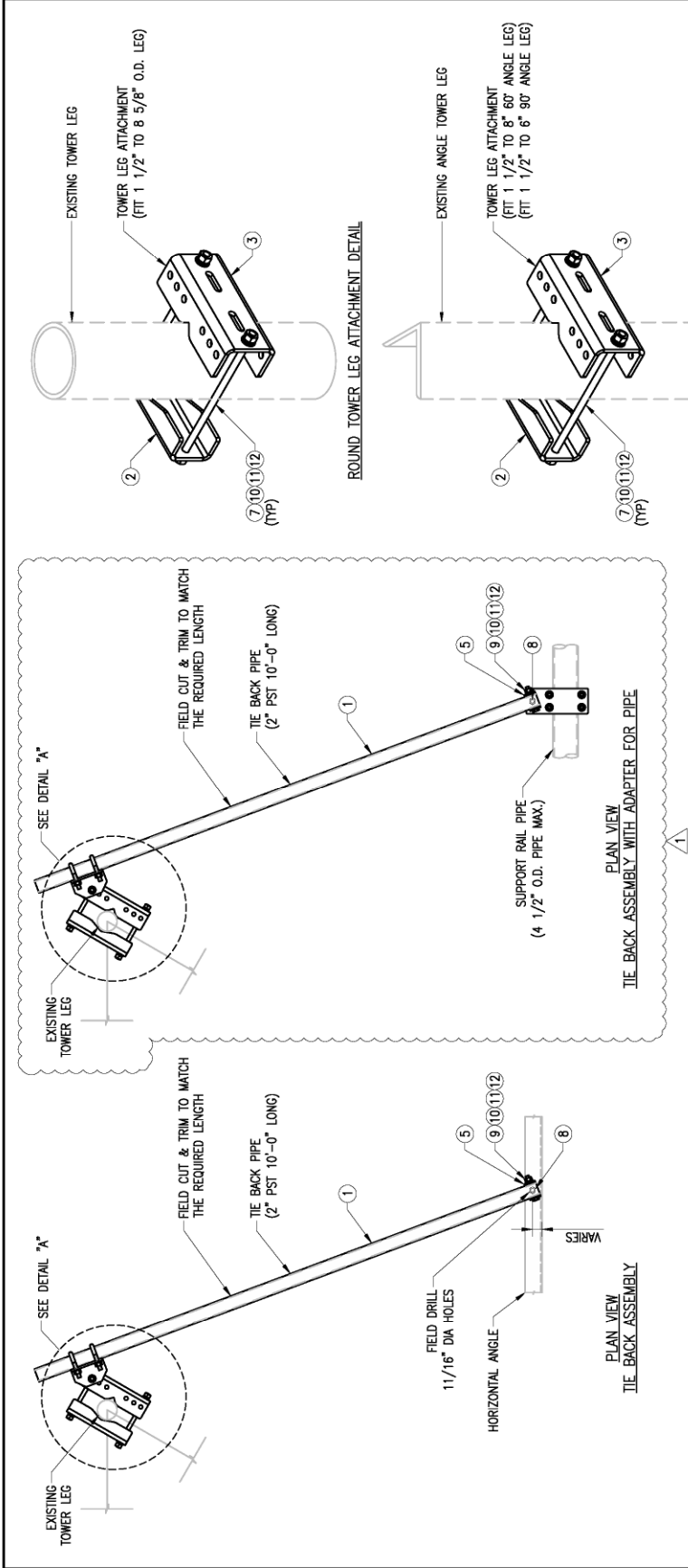
MOUNT PHOTO 4



MOUNT PHOTO 1

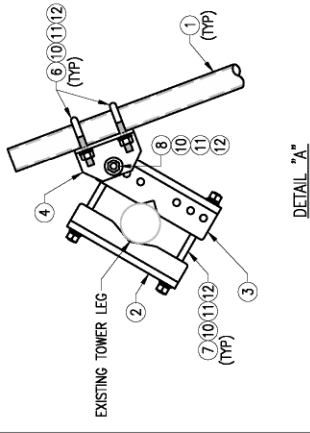
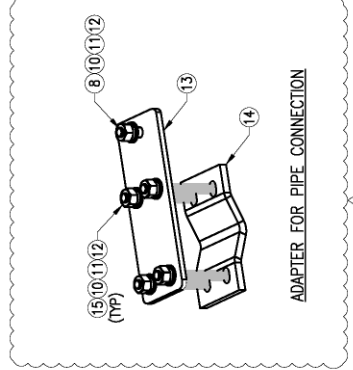


MOUNT PHOTO 3

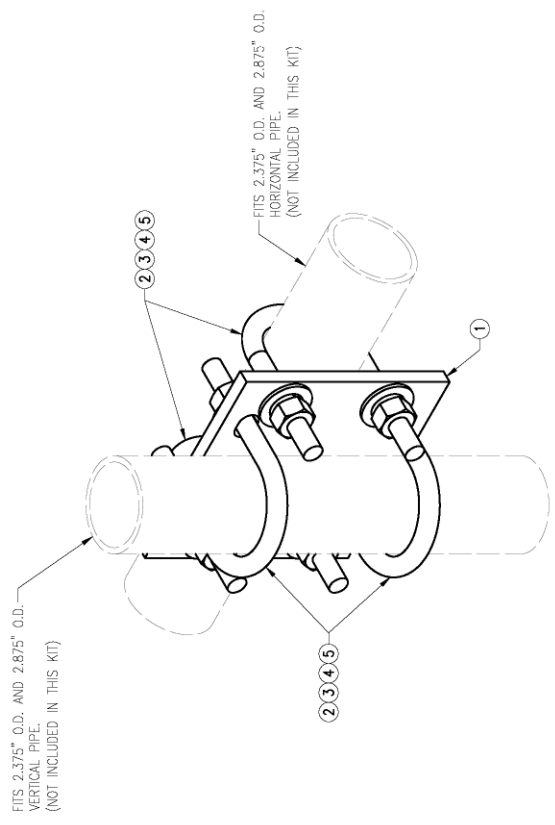
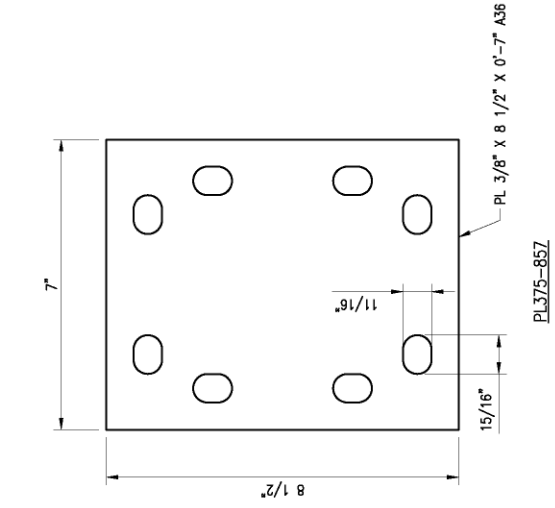


VZSMART-SFK1 (TIE BACK ASSEMBLY)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	PST2375-10	2" PST (2.375" O.D. X 0.154" THK) X 10'-0" A53 GR-3 35KSI	SFK1-F1	38
2	1	BR25-12	PL 3/8" X 8 1/4" X 1'-0" A36 BENT PLATE	SFK1-F2	11
3	1	BP11125-12	PL 3/8" X 11 1/8" X 1'-0" A36 BENT PLATE	SFK1-F3	14
4	1	BR6-9375	PL 3/8" X 6" X 9 3/8" A36 BENT PLATE	SFK1-F4	6
5	1	BP2-875	PL 1/4" X 2" X 8 3/4" A36 BENT PLATE	SFK1-F4	1
6	2	MS02-625-300-500	RU-BOLT 5/8" X 3" LW X 5" LL A36 (OR EQUIV)	RBC-1	2
7	2	---	THREADED ROD 5/8" DIA X 1'-6" F1554-36 HDG	---	0
8	2	---	BOLT 5/8" X 2" A325	---	0
9	1	---	BOLT 5/8" X 4 1/4" A325	---	0
10	15	FW-625	5/8" HDG USS FLAT WASHER	---	1
11	15	LW-625	5/8" HDG LOCK WASHER	---	0
12	15	NUT-625	5/8" HDG HEX NUT	---	2
13	1	PL375-4911	PL 3/8" X 4 1/2" X 11" A36	SFK1-F1	4
14	1	V-CLAMP	PL 1/2" X 4 1/4" X 8 5/8" A36 BEND PLATE	SFK1-F5	5
15	4	---	BOLT 5/8" X 6" FULL THREAD SAE GR 5	---	0
				GALVANIZED WT	84



NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.



VZWSMART-MSK1 (CROSSOVER PLATE)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	PL-375-857	PL 3/8" X 8 1/2" X 0'-7" A36	MSK1-F1	6
2	4	MSD2-625-300-500	RU-BOLT 5/8" X 3" LW X 5" LL A36 (OR EQUIV.)	RBC-1	5
3	8	FW-625	5/8" HDG USS FLAT WASHER	---	1
4	8	LW-625	5/8" HDG LOCK WASHER	---	0
5	8	NUJ-625	5/8" HDG HEX NUT	---	1
GALVANIZED				WT	14

NOTES:
 1. HOT-DIPPED GALVANIZED PER ASTM A123.



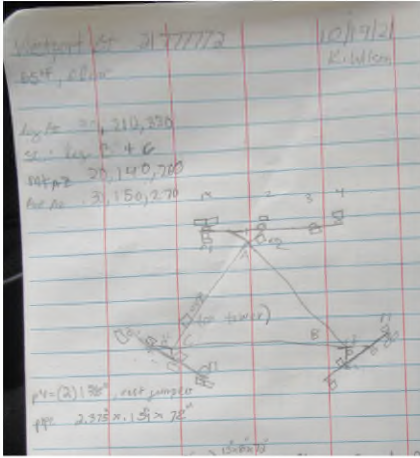


Antenna Mount Mapping Form (PATENT PENDING)

FCC #

Tower Owner:	CSP	Mapping Date:	10/19/2021
Site Name:	WESTPORT_CT	Tower Type:	Self Support
Site Number or ID:	16242132	Tower Height (Ft.):	180
Mapping Contractor:	Structural Components	Mount Elevation (Ft.):	158

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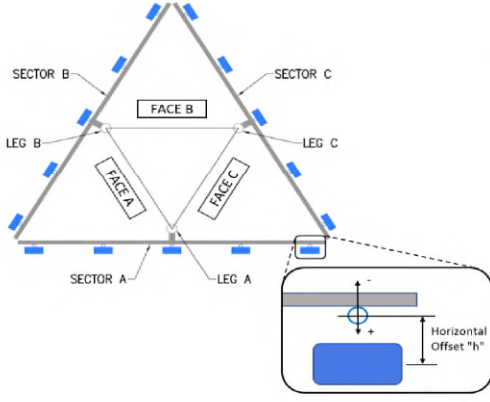
Mount Pipe Configuration and Geometries [Unit = Inches]							
Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."	Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."
A1	2.375 x .154 x 72	56.00	3.00	C1	2.375 x .154 x 72	56.00	3.00
A2	2.375 x .154 x 72	56.00	94.00	C2	2.375 x .154 x 72	56.00	94.00
A3	2.375 x .154 x 72	56.00	148.50	C3	2.375 x .154 x 72	56.00	148.50
A4	2.375 x .154 x 72	56.00	169.00	C4	2.375 x .154 x 72	56.00	169.00
A5				C5			
A6				C6			
B1	2.375 x .154 x 72	56.00	3.00	D1			
B2	2.375 x .154 x 72	56.00	94.00	D2			
B3	2.375 x .154 x 72	56.00	148.50	D3			
B4	2.375 x .154 x 72	56.00	169.00	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.) : 0.5
 Distance from top of bottom support rail to highest tip of ant./eqpt. of Carrier below. (N/A if > 10 ft.) : 0

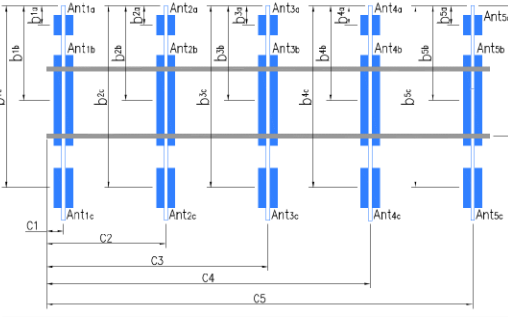
Please enter additional information or comments below.
 safety climb on all 3 legs, all obstructed

Tower Face Width at Mount Elev. (ft.):	105	Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.):	4.5
--	-----	---	-----

For T-Arms/Platforms on monopoles, report the weld size from the main standoff to the plate bolting into the collar mount.



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}	(2) JAHH-65B-R3B	13.00	8.00	72.00	jumpers	161	20.00	14.00	30.00	63
Ant _{1c}	(2) CBC78TDS432X	6.50	9.75	8.00	jumpers	160.417	27.00	-7.00		63
Ant _{2a}										
Ant _{2b}	RT4408-48	8.50	5.50	16.00	jumpers	160.25	29.00	10.00	30.00	
Ant _{2c}										
Ant _{3a}										
Ant _{3b}	RFV01U-D2A	16.00	10.00	15.00	jumpers	160.25	29.00	8.50	30.00	64
Ant _{3c}										
Ant _{4a}										
Ant _{4b}	BXA-70063/4CFEDIN	11.00	5.00	47.00	(2) 1 5/8"	160.25	29.00	11.50	30.00	64
Ant _{4c}										
Ant _{5a}										
Ant _{5b}										
Ant _{5c}										
Ant on Standoff	RFV01U-D1A	16.00	12.00	16.00	jumpers	160				64
Ant on Standoff										
Ant on Tower										
Ant on Tower										



Antenna Layout (Looking Out From Tower)

Observed Safety and Structural Issues During the Mount Mapping

Issue #	Description of Issue	Photo #
1		
2		
3		
4		
5		
6		
7		
8		

Observed Obstructions to Tower Lighting System

If the tower lighting system is being obstructed by the carrier's equipment (for example: a light nested by the antennas), please provide photos and fill in the information below.				Photo #
Description of Obstruction:				
Type of Light:		Photo #		Additional Comments:
Lighting Technology:		Photo #		
Elevation (AGL) at base of light (Ft.):		Photo #		
Is a service loop available?		Photo #		
Is beacon installed on an extension?		Photo #		

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.



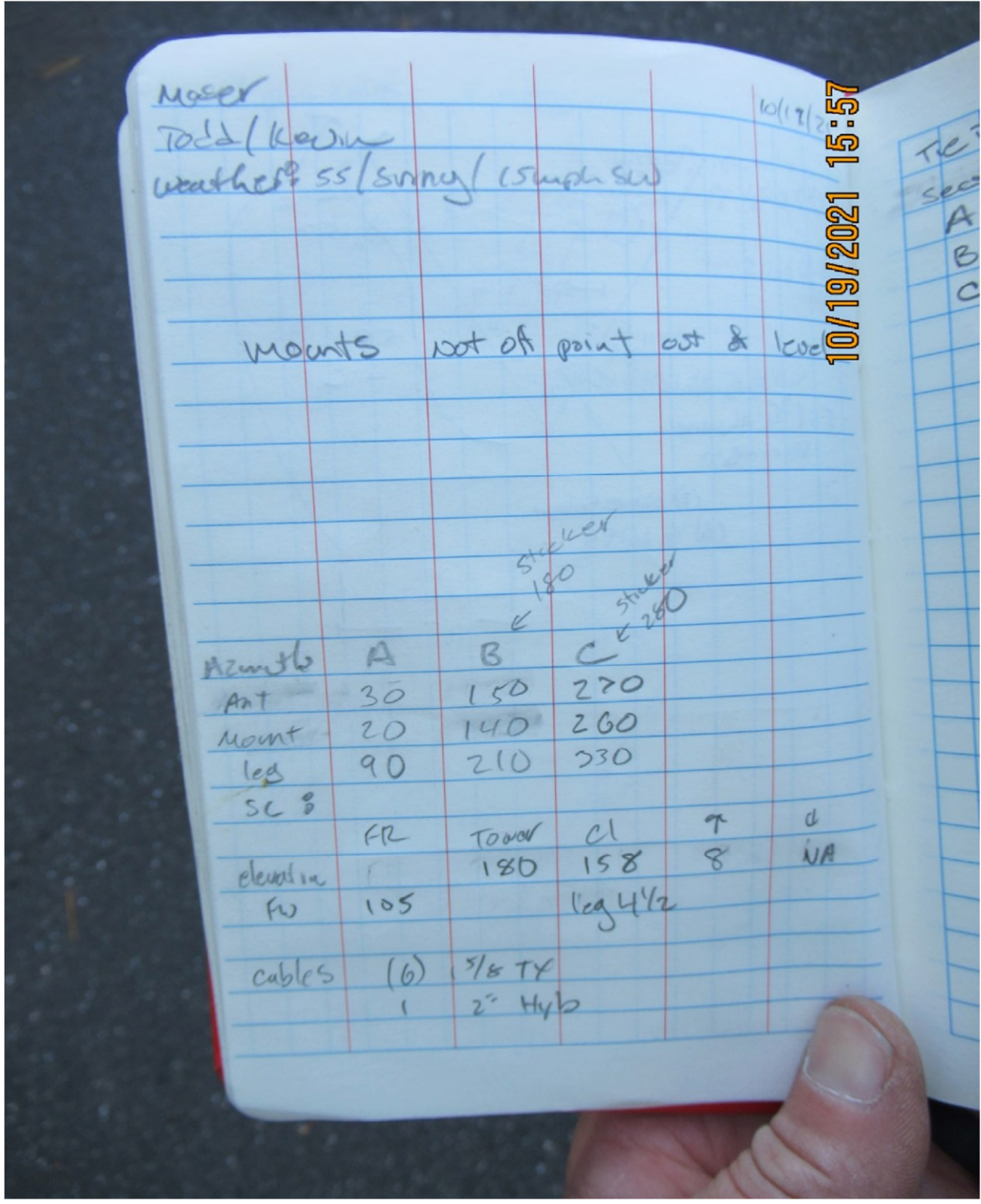
Antenna Mount Mapping Form (PATENT PENDING)

FCC #

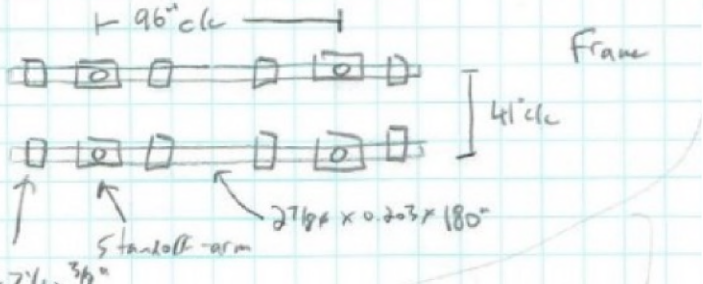
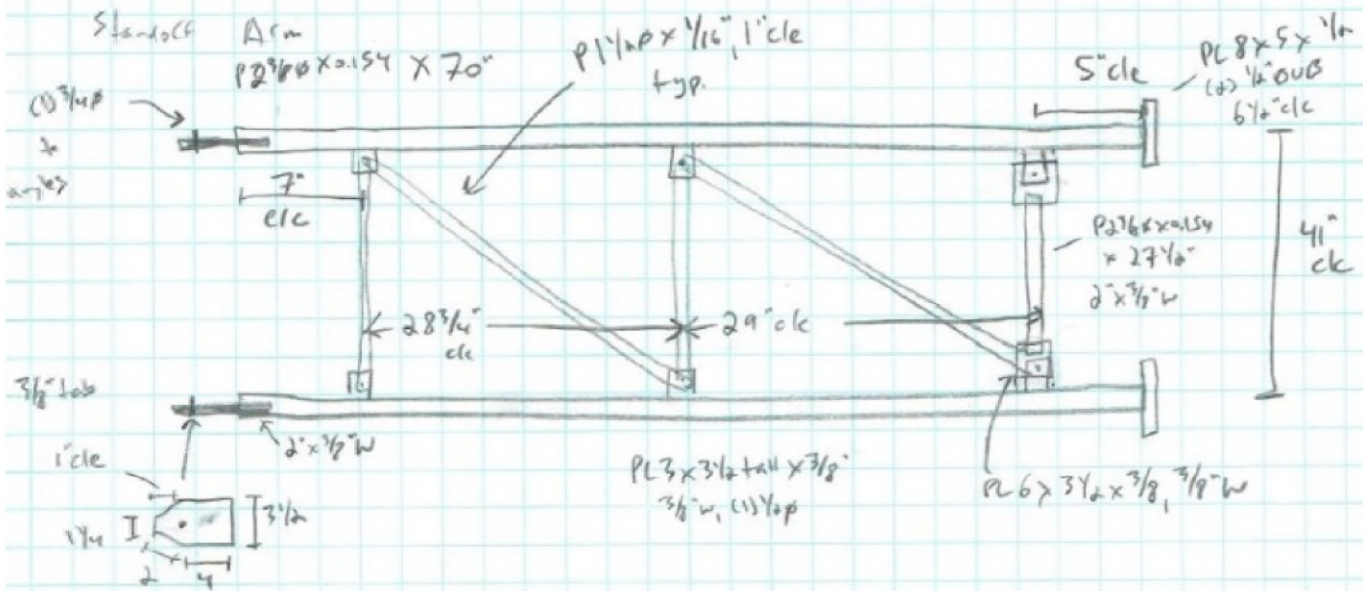
Tower Owner:	CSP	Mapping Date:	10/19/2021
Site Name:	WESTPORT_CT	Tower Type:	Self Support
Site Number or ID:	16242132	Tower Height (FT):	180
Mapping Contractor:	Structural Components	Mount Elevation (FT):	158

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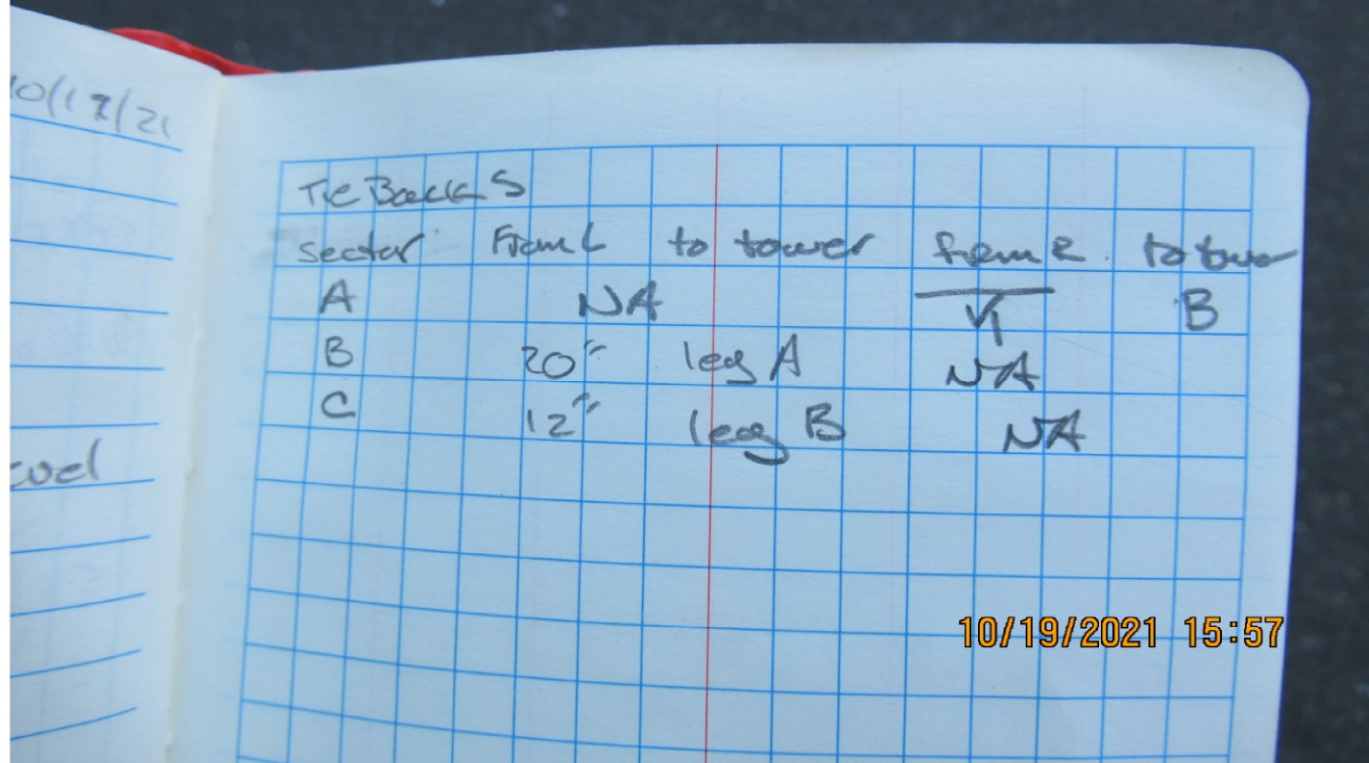
Please Insert Sketches of the Antenna Mount

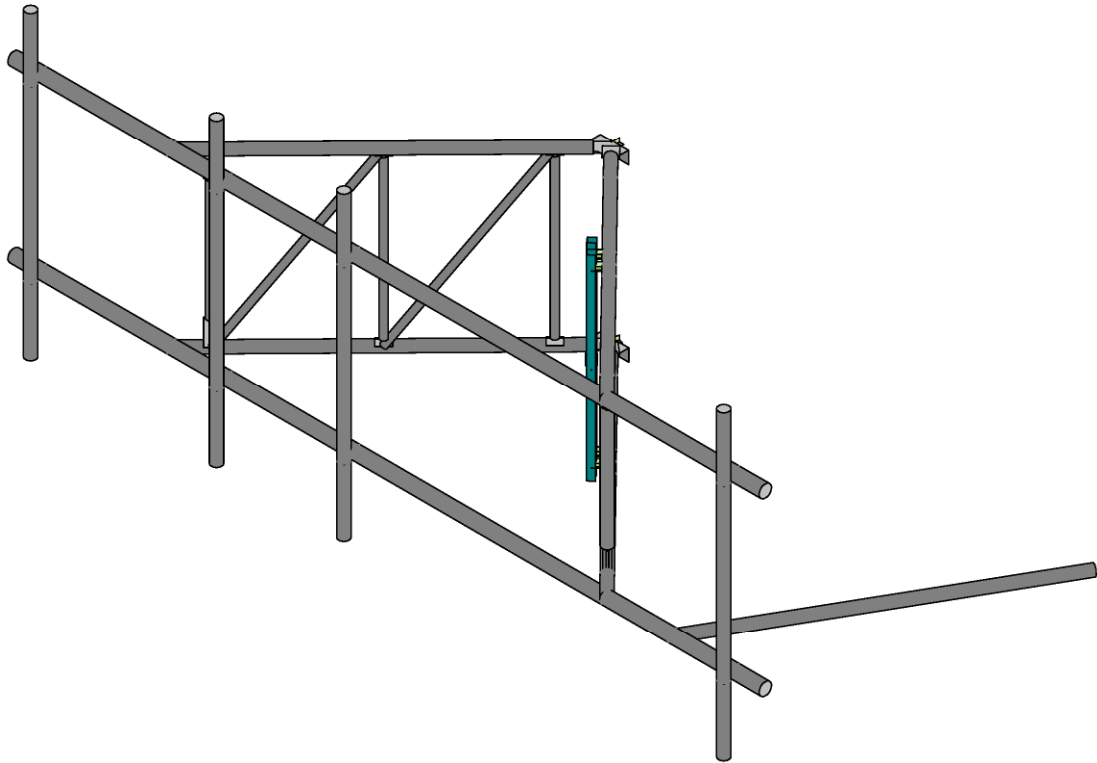
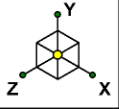


Leg Attach: $L 4 \times 3 \times \frac{3}{8} \times 5 \frac{1}{2}$ LLV
 (+) $\frac{1}{2}$ " ϕ UB, $1 \frac{3}{4}$ " clc
 41" clc



$P L 6 \times 7 \frac{1}{2} \times \frac{3}{8}$
 (+) $\frac{1}{2}$ " ϕ UB + press
 4" clc, $5 \frac{1}{2}$ " clc





Envelope Only Solution

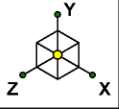
Maser Consulting

469153-VZW_MT_LOT_SectorA_H

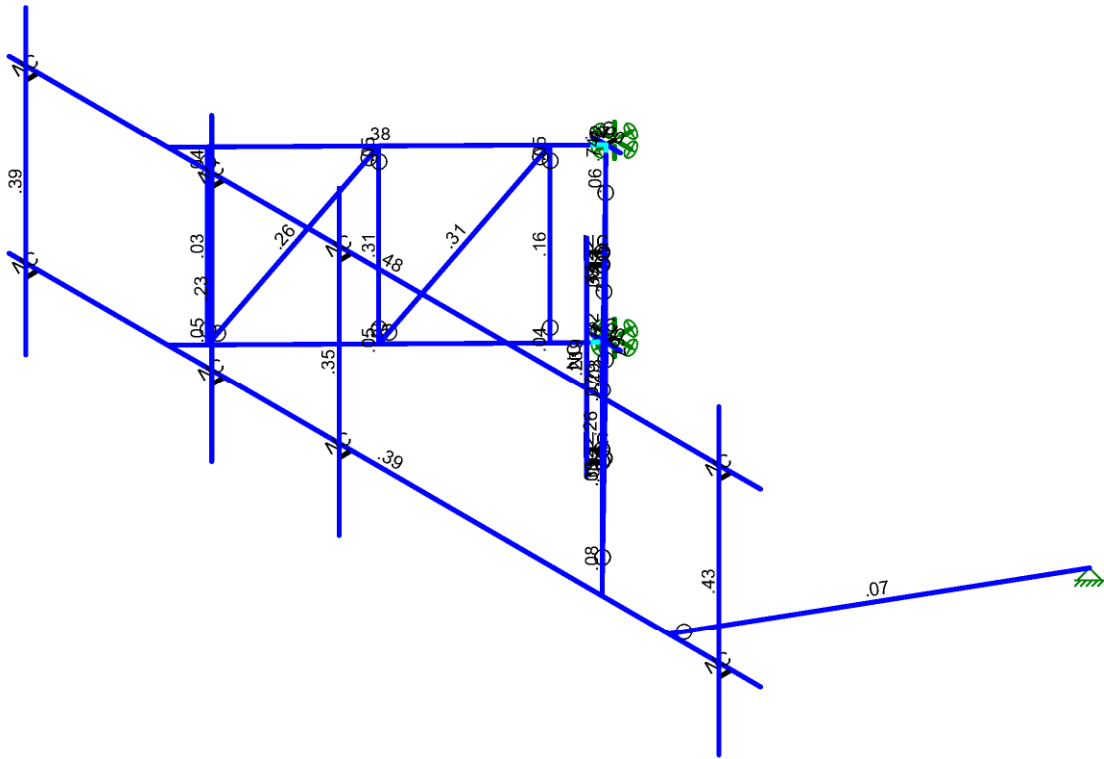
SK - 1

Aug 19, 2022 at 11:09 AM

LOADED_469153-VZW_MT_LOT_...

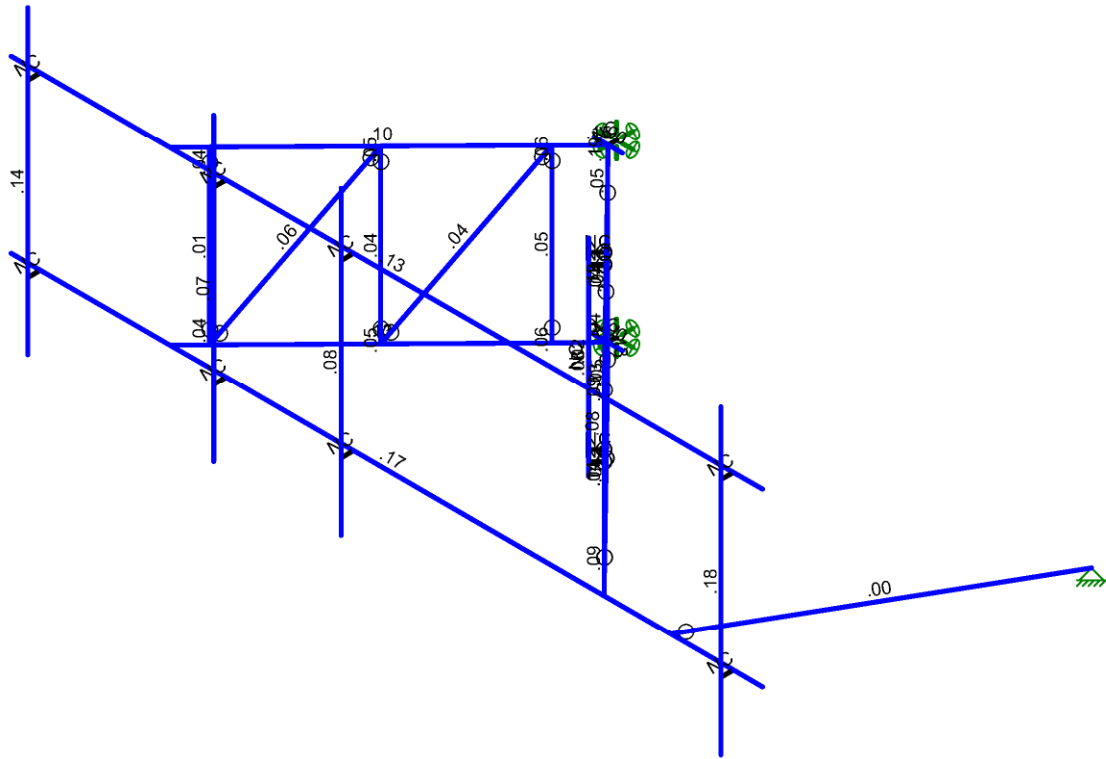
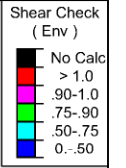
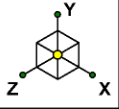


Code Check (Env)	
Black	No Calc
Red	> 1.0
Pink	.90-1.0
Green	.75-.90
Cyan	.50-.75
Blue	0-.50



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

Maser Consulting		SK - 2
	469153-VZW_MT_LOT_SectorA_H	Aug 19, 2022 at 11:09 AM
		LOADED_469153-VZW_MT_LOT_...



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

Maser Consulting	469153-VZW_MT_LOT_SectorA_H	SK - 3
		Aug 19, 2022 at 11:09 AM
		LOADED_469153-VZW_MT_LOT_...

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed Area(Me... Surface(...
1	Antenna D	None					54	
2	Antenna Di	None					54	
3	Antenna Wo (0 Deg)	None					54	
4	Antenna Wo (30 Deg)	None					54	
5	Antenna Wo (60 Deg)	None					54	
6	Antenna Wo (90 Deg)	None					54	
7	Antenna Wo (120 Deg)	None					54	
8	Antenna Wo (150 Deg)	None					54	
9	Antenna Wo (180 Deg)	None					54	
10	Antenna Wo (210 Deg)	None					54	
11	Antenna Wo (240 Deg)	None					54	
12	Antenna Wo (270 Deg)	None					54	
13	Antenna Wo (300 Deg)	None					54	
14	Antenna Wo (330 Deg)	None					54	
15	Antenna Wi (0 Deg)	None					54	
16	Antenna Wi (30 Deg)	None					54	
17	Antenna Wi (60 Deg)	None					54	
18	Antenna Wi (90 Deg)	None					54	
19	Antenna Wi (120 Deg)	None					54	
20	Antenna Wi (150 Deg)	None					54	
21	Antenna Wi (180 Deg)	None					54	
22	Antenna Wi (210 Deg)	None					54	
23	Antenna Wi (240 Deg)	None					54	
24	Antenna Wi (270 Deg)	None					54	
25	Antenna Wi (300 Deg)	None					54	
26	Antenna Wi (330 Deg)	None					54	
27	Antenna Wm (0 Deg)	None					54	
28	Antenna Wm (30 Deg)	None					54	
29	Antenna Wm (60 Deg)	None					54	
30	Antenna Wm (90 Deg)	None					54	
31	Antenna Wm (120 Deg)	None					54	
32	Antenna Wm (150 Deg)	None					54	
33	Antenna Wm (180 Deg)	None					54	
34	Antenna Wm (210 Deg)	None					54	
35	Antenna Wm (240 Deg)	None					54	
36	Antenna Wm (270 Deg)	None					54	
37	Antenna Wm (300 Deg)	None					54	
38	Antenna Wm (330 Deg)	None					54	
39	Structure D	None		-1				
40	Structure Di	None						41
41	Structure Wo (0 Deg)	None						82
42	Structure Wo (30 Deg)	None						82
43	Structure Wo (60 Deg)	None						82
44	Structure Wo (90 Deg)	None						82
45	Structure Wo (120 Deg)	None						82
46	Structure Wo (150 Deg)	None						82
47	Structure Wo (180 Deg)	None						82
48	Structure Wo (210 Deg)	None						82
49	Structure Wo (240 Deg)	None						82
50	Structure Wo (270 Deg)	None						82
51	Structure Wo (300 Deg)	None						82
52	Structure Wo (330 Deg)	None						82
53	Structure Wi (0 Deg)	None						82
54	Structure Wi (30 Deg)	None						82
55	Structure Wi (60 Deg)	None						82
56	Structure Wi (90 Deg)	None						82
57	Structure Wi (120 Deg)	None						82
58	Structure Wi (150 Deg)	None						82



Basic Load Cases (Continued)

BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed Area(Me... Surface(...
59 Structure Wi (180 Deg)	None						82
60 Structure Wi (210 Deg)	None						82
61 Structure Wi (240 Deg)	None						82
62 Structure Wi (270 Deg)	None						82
63 Structure Wi (300 Deg)	None						82
64 Structure Wi (330 Deg)	None						82
65 Structure Wm (0 Deg)	None						82
66 Structure Wm (30 Deg)	None						82
67 Structure Wm (60 Deg)	None						82
68 Structure Wm (90 Deg)	None						82
69 Structure Wm (120 Deg)	None						82
70 Structure Wm (150 Deg)	None						82
71 Structure Wm (180 Deg)	None						82
72 Structure Wm (210 Deg)	None						82
73 Structure Wm (240 Deg)	None						82
74 Structure Wm (270 Deg)	None						82
75 Structure Wm (300 Deg)	None						82
76 Structure Wm (330 Deg)	None						82
77 Lm1	None					1	
78 Lm2	None					1	
79 Lv1	None					1	
80 Lv2	None					1	
81 Antenna Ev	None					54	
82 Antenna Eh (0 Deg)	None					36	
83 Antenna Eh (90 Deg)	None					36	
84 Structure Ev	ELY		-.049				
85 Structure Eh (0 Deg)	ELZ			-.122			
86 Structure Eh (90 Deg)	ELX	.122					

Load Combinations

Description	Solve	PDelta	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
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 D...	Yes	Y	1	1.2	39	1.2	7	1	45	1									
6 1.2D+1.0Wo (150 D...	Yes	Y	1	1.2	39	1.2	8	1	46	1									
7 1.2D+1.0Wo (180 D...	Yes	Y	1	1.2	39	1.2	9	1	47	1									
8 1.2D+1.0Wo (210 D...	Yes	Y	1	1.2	39	1.2	10	1	48	1									
9 1.2D+1.0Wo (240 D...	Yes	Y	1	1.2	39	1.2	11	1	49	1									
10 1.2D+1.0Wo (270 D...	Yes	Y	1	1.2	39	1.2	12	1	50	1									
11 1.2D+1.0Wo (300 D...	Yes	Y	1	1.2	39	1.2	13	1	51	1									
12 1.2D+1.0Wo (330 D...	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	53	1					
14 1.2D + 1.0Di + 1.0Wi...	Yes	Y	1	1.2	39	1.2	2	1	40	1	16	1	54	1					
15 1.2D + 1.0Di + 1.0Wi...	Yes	Y	1	1.2	39	1.2	2	1	40	1	17	1	55	1					
16 1.2D + 1.0Di + 1.0Wi...	Yes	Y	1	1.2	39	1.2	2	1	40	1	18	1	56	1					
17 1.2D + 1.0Di + 1.0Wi...	Yes	Y	1	1.2	39	1.2	2	1	40	1	19	1	57	1					
18 1.2D + 1.0Di + 1.0Wi...	Yes	Y	1	1.2	39	1.2	2	1	40	1	20	1	58	1					
19 1.2D + 1.0Di + 1.0Wi...	Yes	Y	1	1.2	39	1.2	2	1	40	1	21	1	59	1					
20 1.2D + 1.0Di + 1.0Wi...	Yes	Y	1	1.2	39	1.2	2	1	40	1	22	1	60	1					
21 1.2D + 1.0Di + 1.0Wi...	Yes	Y	1	1.2	39	1.2	2	1	40	1	23	1	61	1					
22 1.2D + 1.0Di + 1.0Wi...	Yes	Y	1	1.2	39	1.2	2	1	40	1	24	1	62	1					
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 + 1.0...	Yes	Y	1	1.2	39	1.2	77	1.5	27	1	65	1							
26 1.2D + 1.5Lm1 + 1.0...	Yes	Y	1	1.2	39	1.2	77	1.5	28	1	66	1							



Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
6	N6	-0.447917	-3.416667	0.166667	0	
7	N7	0.114583	-3.416667	0.166667	0	
8	N10	-4.5	0	4.583333	0	
9	N11	4.166667	0	4.583333	0	
10	N11A	-7.666667	0	4.583333	0	
11	N12	7.333333	0	4.583333	0	
12	N14	-4.5	-3.416667	4.583333	0	
13	N15	4.166667	-3.416667	4.583333	0	
14	N16	-7.666667	-3.416667	4.583333	0	
15	N17	7.333333	-3.416667	4.583333	0	
16	N17A	-0.341752	0	0.345119	0	
17	N18	0.008419	0	0.345119	0	
18	N19	-0.341752	-3.416667	0.345119	0	
19	N20	0.008419	-3.416667	0.345119	0	
20	N21	0.38777	0	0.731765	0	
21	N22	0.38777	-3.416667	0.731765	0	
22	N23	2.08026	0	2.456803	0	
23	N24	2.08026	-3.416667	2.456803	0	
24	N25	3.77275	0	4.181841	0	
25	N26	3.77275	-3.416667	4.181841	0	
26	N27	0.38777	-3.291667	0.731765	0	
27	N28	2.08026	-3.291667	2.456803	0	
28	N29	0.38777	-.125	0.731765	0	
29	N30	2.08026	-.125	2.456803	0	
30	N31	3.77275	-2.916667	4.181841	0	
31	N32	3.77275	-.5	4.181841	0	
32	N33	-0.721103	0	0.731765	0	
33	N34	-0.721103	-3.416667	0.731765	0	
34	N35	-2.413593	0	2.456803	0	
35	N36	-2.413593	-3.416667	2.456803	0	
36	N37	-4.106083	0	4.181841	0	
37	N38	-4.106083	-3.416667	4.181841	0	
38	N39	-0.721103	-3.291667	0.731765	0	
39	N40	-2.413593	-3.291667	2.456803	0	
40	N41	-0.721103	-.125	0.731765	0	
41	N42	-2.413593	-.125	2.456803	0	
42	N43	-4.106083	-2.916667	4.181841	0	
43	N44	-4.106083	-.5	4.181841	0	
44	N45	-7.083333	0	4.583333	0	
45	N46	-7.083333	-3.416667	4.583333	0	
46	N47	-7.083333	0	4.833333	0	
47	N48	-7.083333	-3.416667	4.833333	0	
48	N49	-7.083333	1.25	4.833333	0	
49	N50	-7.083333	-4.75	4.833333	0	
50	N51	-3.375	0	4.583333	0	
51	N52	-3.375	-3.416667	4.583333	0	
52	N53	-3.375	0	4.833333	0	
53	N54	-3.375	-3.416667	4.833333	0	
54	N55	-3.375	1.25	4.833333	0	
55	N56	-3.375	-4.75	4.833333	0	
56	N57	-0.833333	0	4.583333	0	
57	N58	-0.833333	-3.416667	4.583333	0	
58	N59	-0.833333	0	4.833333	0	
59	N60	-0.833333	-3.416667	4.833333	0	
60	N61	-0.833333	1.25	4.833333	0	
61	N62	-0.833333	-4.75	4.833333	0	
62	N65	-0.166667	-3.416667	0	0	
63	N65A	6.75	0	4.583333	0	
64	N66	6.75	-3.416667	4.583333	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
65	N67	6.75	0	4.833333	0	
66	N68	6.75	-3.416667	4.833333	0	
67	N69	6.75	1.25	4.833333	0	
68	N70	6.75	-4.75	4.833333	0	
69	N71	8.550037	-3.416667	-0.762613	0	
70	N80	1.671718	0	2.040405	0	
71	N81	1.87963	0	2.252315	0	
72	N98	1.671718	-3.416667	2.040405	0	
73	N99	1.87963	-3.416667	2.252315	0	
74	N77	1.494941	0	2.217181	0	
75	N78	1.702853	0	2.429092	0	
76	N79	1.494941	-3.416667	2.217181	0	
77	N80A	1.702853	-3.416667	2.429092	0	
78	N81A	1.494941	-3.666667	2.217181	0	
79	N82	1.702853	-3.666667	2.429092	0	
80	N83	1.494941	.25	2.217181	0	
81	N84	1.702853	.25	2.429092	0	
82	N85	1.494941	-1.708333	2.217181	0	
83	N86	1.702853	-1.708333	2.429092	0	
84	N85A	5.5	-3.416667	4.583333	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	Column	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
2	Standoff Horizontal	PIPE 2.0	Beam	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
3	Standoff Vertical	PIPE 2.0	Beam	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
4	Standoff Diagonal	1.5 w 0.06 th	Beam	Pipe	A53 Gr. B	Typical	.271	.07	.07	.141
5	TES Standoff Dia...	PIPE 1.5	Beam	Pipe	A53 Gr. B	Typical	.749	.293	.293	.586
6	Face Horizontal	PIPE 2.5	Beam	Pipe	A53 Gr. B	Typical	1.61	1.45	1.45	2.89
7	Tie Back	PIPE 2.0	Beam	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
8	Standoff Bar	PL3/8X3_HRA...	Beam	RECT	A36 Gr.36	Typical	1.125	.013	.844	.049
9	Mount Angle	L4X3X6	Beam	Single Angle	A36 Gr.36	Typical	2.49	1.89	3.94	.123
10	TES Unistrut	L2.5x2.5x3	Beam	Single Angle	A36 Gr.36	Typical	.901	.535	.535	.011

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/1E...	Density[k/ft...	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

Cold Formed Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rul...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Unistrut	P1000 CFB	Beam	None	A570 Gr.33	Typical	.483	.13	.212	.002

Cold Formed Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/1E5 F)	Density[k/ft^3]	Yield[ksi]	Fu[ksi]
1	A570 Gr.33	29500	11346	.3	.65	.49	33	52
2	A607 C1 Gr.55	29500	11346	.3	.65	.49	55	70

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N2	N3		90	Mount Angle	Beam	Single Angle	A36 Gr.36	Typical
2	M2	N1	N4			RIGID	None	None	RIGID	Typical
3	M3	N6	N7		90	Mount Angle	Beam	Single Angle	A36 Gr.36	Typical
4	M5	N1	N17A		90	Standoff Bar	Beam	RECT	A36 Gr.36	Typical
5	M6	N1	N18		90	Standoff Bar	Beam	RECT	A36 Gr.36	Typical
6	M7	N11A	N12			Face Horizontal	Beam	Pipe	A53 Gr. B	Typical
7	M8	N5	N19		90	Standoff Bar	Beam	RECT	A36 Gr.36	Typical
8	M9	N5	N20		90	Standoff Bar	Beam	RECT	A36 Gr.36	Typical
9	M10	N16	N17			Face Horizontal	Beam	Pipe	A53 Gr. B	Typical
10	M11	N17A	N10			Standoff Horiz...	Beam	Pipe	A53 Gr. B	Typical
11	M12	N18	N11			Standoff Horiz...	Beam	Pipe	A53 Gr. B	Typical
12	M13	N19	N14			Standoff Horiz...	Beam	Pipe	A53 Gr. B	Typical
13	M14	N20	N15			Standoff Horiz...	Beam	Pipe	A53 Gr. B	Typical
14	M15	N21	N29	N1		Standoff Bar	Beam	RECT	A36 Gr.36	Typical
15	M16	N21	N24		90	Standoff Diago...	Beam	Pipe	A53 Gr. B	Typical
16	M17	N23	N30	N1		Standoff Bar	Beam	RECT	A36 Gr.36	Typical
17	M18	N23	N26		90	Standoff Diago...	Beam	Pipe	A53 Gr. B	Typical
18	M19	N26	N31	N1		Standoff Bar	Beam	RECT	A36 Gr.36	Typical
19	M20	N27	N22	N1		Standoff Bar	Beam	RECT	A36 Gr.36	Typical
20	M21	N28	N24	N1		Standoff Bar	Beam	RECT	A36 Gr.36	Typical
21	M22	N29	N27	N1		Standoff Diago...	Beam	Pipe	A53 Gr. B	Typical
22	M23	N30	N28	N1		Standoff Diago...	Beam	Pipe	A53 Gr. B	Typical
23	M24	N31	N32	N1		Standoff Vertica	Beam	Pipe	A53 Gr. B	Typical
24	M25	N32	N25	N1		Standoff Bar	Beam	RECT	A36 Gr.36	Typical
25	M26	N33	N41	N1		Standoff Bar	Beam	RECT	A36 Gr.36	Typical
26	M27	N33	N36		90	Standoff Diago...	Beam	Pipe	A53 Gr. B	Typical
27	M28	N35	N42	N1		Standoff Bar	Beam	RECT	A36 Gr.36	Typical
28	M29	N35	N38		90	Standoff Diago...	Beam	Pipe	A53 Gr. B	Typical
29	M30	N38	N43	N1		Standoff Bar	Beam	RECT	A36 Gr.36	Typical
30	M31	N39	N34	N1		Standoff Bar	Beam	RECT	A36 Gr.36	Typical
31	M32	N40	N36	N1		Standoff Bar	Beam	RECT	A36 Gr.36	Typical
32	M33	N41	N39	N1		Standoff Diago...	Beam	Pipe	A53 Gr. B	Typical
33	M34	N42	N40	N1		Standoff Diago...	Beam	Pipe	A53 Gr. B	Typical
34	M35	N43	N44	N1		Standoff Vertical	Beam	Pipe	A53 Gr. B	Typical
35	M36	N44	N37	N1		Standoff Bar	Beam	RECT	A36 Gr.36	Typical
36	M37	N45	N47			RIGID	None	None	RIGID	Typical
37	M38	N46	N48			RIGID	None	None	RIGID	Typical
38	MP4A	N49	N50			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
39	M40	N51	N53			RIGID	None	None	RIGID	Typical
40	M41	N52	N54			RIGID	None	None	RIGID	Typical
41	MP3A	N55	N56			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
42	M43	N57	N59			RIGID	None	None	RIGID	Typical
43	M44	N58	N60			RIGID	None	None	RIGID	Typical
44	MP2A	N61	N62			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
45	M46A	N5	N65			RIGID	None	None	RIGID	Typical
46	M47	N65A	N67			RIGID	None	None	RIGID	Typical
47	M48	N66	N68			RIGID	None	None	RIGID	Typical
48	MP1A	N69	N70			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
49	EQUIP	N83	N81A		50	Unistrut	Beam	None	A570 Gr.33	Typical
50	M51	N84	N82		50	Unistrut	Beam	None	A570 Gr.33	Typical
51	M52	N98	N79			RIGID	None	None	RIGID	Typical
52	M53	N99	N80A			RIGID	None	None	RIGID	Typical
53	M54	N81	N78			RIGID	None	None	RIGID	Typical
54	M55	N80	N77			RIGID	None	None	RIGID	Typical
55	M55A	N85A	N71			Tie Back	Beam	Pipe	A53 Gr. B	Typical
56	OVP	N85	N86			RIGID	None	None	RIGID	Typical

Hot Rolled Steel Design Parameters

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torqu...	Kyy	Kzz	Cb	Function
1	M1	Mount Angle	.563			Lbyy						Lateral
2	M3	Mount Angle	.563			Lbyy						Lateral
3	M5	Standoff Bar	.25			Lbyy						Lateral
4	M6	Standoff Bar	.25			Lbyy						Lateral
5	M7	Face Horizo...	15			Lbyy						Lateral
6	M8	Standoff Bar	.227			Lbyy						Lateral
7	M9	Standoff Bar	.286			Lbyy						Lateral
8	M10	Face Horizo...	15			Lbyy						Lateral
9	M11	Standoff Ho...	5.937			Lbyy						Lateral
10	M12	Standoff Ho...	5.937			Lbyy						Lateral
11	M13	Standoff Ho...	5.937			Lbyy						Lateral
12	M14	Standoff Ho...	5.937			Lbyy						Lateral
13	M15	Standoff Bar	.125			Lbyy						Lateral
14	M16	Standoff Di...	4.185			Lbyy						Lateral
15	M17	Standoff Bar	.125			Lbyy						Lateral
16	M18	Standoff Di...	4.185			Lbyy						Lateral
17	M19	Standoff Bar	.5			Lbyy						Lateral
18	M20	Standoff Bar	.125			Lbyy						Lateral
19	M21	Standoff Bar	.125			Lbyy						Lateral
20	M22	Standoff Di...	3.167			Lbyy						Lateral
21	M23	Standoff Di...	3.167			Lbyy						Lateral
22	M24	Standoff Ve...	2.417			Lbyy						Lateral
23	M25	Standoff Bar	.5			Lbyy						Lateral
24	M26	Standoff Bar	.125			Lbyy						Lateral
25	M27	Standoff Di...	4.185			Lbyy						Lateral
26	M28	Standoff Bar	.125			Lbyy						Lateral
27	M29	Standoff Di...	4.185			Lbyy						Lateral
28	M30	Standoff Bar	.5			Lbyy						Lateral
29	M31	Standoff Bar	.125			Lbyy						Lateral
30	M32	Standoff Bar	.125			Lbyy						Lateral
31	M33	Standoff Di...	3.167			Lbyy						Lateral
32	M34	Standoff Di...	3.167			Lbyy						Lateral
33	M35	Standoff Ve...	2.417			Lbyy						Lateral
34	M36	Standoff Bar	.5			Lbyy						Lateral
35	MP4A	Antenna Pipe	6									Lateral
36	MP3A	Antenna Pipe	6									Lateral
37	MP2A	Antenna Pipe	6									Lateral
38	MP1A	Antenna Pipe	6									Lateral
39	M55A	Tie Back	6.155			Lbyy						Lateral

Cold Formed Steel Design Parameters

	Label	Shape	Length...	Lbyy[ft]	Lbzz[ft]	Lcomp to...	Lcomp bo...	L-torque[ft]	Kyy	Kzz	Cb	R	a[ft]	Funct...
1	EQUIP	Unistrut	3.917			Lbyy								Lateral
2	M51	Unistrut	3.917			Lbyy								Lateral

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	Y	-43.5	.5
2	MP1A	My	-.035	.5
3	MP1A	Mz	-.024	.5
4	MP1A	Y	-43.5	3.5
5	MP1A	My	-.035	3.5
6	MP1A	Mz	-.024	3.5
7	MP1A	Y	-43.5	.5
8	MP1A	My	-.004	.5

Member Point Loads (BLC 1 : Antenna D) (Continued)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
9	MP1A	Mz	.042	.5
10	MP1A	Y	-43.5	3.5
11	MP1A	My	-.004	3.5
12	MP1A	Mz	.042	3.5
13	MP4A	Y	-43.5	.5
14	MP4A	My	-.004	.5
15	MP4A	Mz	-.042	.5
16	MP4A	Y	-43.5	3.5
17	MP4A	My	-.004	3.5
18	MP4A	Mz	-.042	3.5
19	MP4A	Y	-43.5	.5
20	MP4A	My	-.035	.5
21	MP4A	Mz	.024	.5
22	MP4A	Y	-43.5	3.5
23	MP4A	My	-.035	3.5
24	MP4A	Mz	.024	3.5
25	MP3A	Y	-43.55	1
26	MP3A	My	-.022	1
27	MP3A	Mz	0	1
28	MP3A	Y	-43.55	3
29	MP3A	My	-.022	3
30	MP3A	Mz	0	3
31	MP1A	Y	-74.7	2
32	MP1A	My	.034	2
33	MP1A	Mz	-.016	2
34	MP2A	Y	-70.3	3.5
35	MP2A	My	.035	3.5
36	MP2A	Mz	0	3.5
37	MP2A	Y	-11.6	.5
38	MP2A	My	-.006	.5
39	MP2A	Mz	0	.5
40	MP2A	Y	-11.6	3.5
41	MP2A	My	-.006	3.5
42	MP2A	Mz	0	3.5
43	OVP	Y	-84.4	.15
44	OVP	My	0	.15
45	OVP	Mz	0	.15
46	MP3A	Y	-70.3	3.5
47	MP3A	My	.035	3.5
48	MP3A	Mz	0	3.5
49	MP4A	Y	-17.6	3
50	MP4A	My	.009	3
51	MP4A	Mz	.003	3
52	MP4A	Y	-17.6	3
53	MP4A	My	.009	3
54	MP4A	Mz	-.003	3

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	Y	-98.574	.5
2	MP1A	My	-.079	.5
3	MP1A	Mz	-.054	.5
4	MP1A	Y	-98.574	3.5
5	MP1A	My	-.079	3.5
6	MP1A	Mz	-.054	3.5
7	MP1A	Y	-98.574	.5
8	MP1A	My	-.01	.5
9	MP1A	Mz	.095	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
10	MP1A	Y	-98.574	3.5
11	MP1A	My	-.01	3.5
12	MP1A	Mz	.095	3.5
13	MP4A	Y	-98.574	.5
14	MP4A	My	-.01	.5
15	MP4A	Mz	-.095	.5
16	MP4A	Y	-98.574	3.5
17	MP4A	My	-.01	3.5
18	MP4A	Mz	-.095	3.5
19	MP4A	Y	-98.574	.5
20	MP4A	My	-.079	.5
21	MP4A	Mz	.054	.5
22	MP4A	Y	-98.574	3.5
23	MP4A	My	-.079	3.5
24	MP4A	Mz	.054	3.5
25	MP3A	Y	-36.174	1
26	MP3A	My	-.018	1
27	MP3A	Mz	0	1
28	MP3A	Y	-36.174	3
29	MP3A	My	-.018	3
30	MP3A	Mz	0	3
31	MP1A	Y	-45.617	2
32	MP1A	My	.021	2
33	MP1A	Mz	-.01	2
34	MP2A	Y	-43.443	3.5
35	MP2A	My	.022	3.5
36	MP2A	Mz	0	3.5
37	MP2A	Y	-15.178	.5
38	MP2A	My	-.008	.5
39	MP2A	Mz	0	.5
40	MP2A	Y	-15.178	3.5
41	MP2A	My	-.008	3.5
42	MP2A	Mz	0	3.5
43	OVP	Y	-45.617	.15
44	OVP	My	0	.15
45	OVP	Mz	0	.15
46	MP3A	Y	-41.028	3.5
47	MP3A	My	.021	3.5
48	MP3A	Mz	0	3.5
49	MP4A	Y	-18.122	3
50	MP4A	My	.009	3
51	MP4A	Mz	.003	3
52	MP4A	Y	-18.122	3
53	MP4A	My	.009	3
54	MP4A	Mz	-.003	3

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	0	.5
2	MP1A	Z	-197.178	.5
3	MP1A	Mx	.107	.5
4	MP1A	X	0	3.5
5	MP1A	Z	-197.178	3.5
6	MP1A	Mx	.107	3.5
7	MP1A	X	0	.5
8	MP1A	Z	-197.178	.5
9	MP1A	Mx	-.191	.5
10	MP1A	X	0	3.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
11	MP1A	Z	-197.178	3.5
12	MP1A	Mx	-.191	3.5
13	MP4A	X	0	.5
14	MP4A	Z	-197.178	.5
15	MP4A	Mx	.191	.5
16	MP4A	X	0	3.5
17	MP4A	Z	-197.178	3.5
18	MP4A	Mx	.191	3.5
19	MP4A	X	0	.5
20	MP4A	Z	-197.178	.5
21	MP4A	Mx	-.107	.5
22	MP4A	X	0	3.5
23	MP4A	Z	-197.178	3.5
24	MP4A	Mx	-.107	3.5
25	MP3A	X	0	1
26	MP3A	Z	-80.62	1
27	MP3A	Mx	0	1
28	MP3A	X	0	3
29	MP3A	Z	-80.62	3
30	MP3A	Mx	0	3
31	MP1A	X	0	2
32	MP1A	Z	-60.354	2
33	MP1A	Mx	.013	2
34	MP2A	X	0	3.5
35	MP2A	Z	-64.153	3.5
36	MP2A	Mx	0	3.5
37	MP2A	X	0	.5
38	MP2A	Z	-26.244	.5
39	MP2A	Mx	0	.5
40	MP2A	X	0	3.5
41	MP2A	Z	-26.244	3.5
42	MP2A	Mx	0	3.5
43	OVP	X	0	.15
44	OVP	Z	-58.836	.15
45	OVP	Mx	0	.15
46	MP3A	X	0	3.5
47	MP3A	Z	-64.153	3.5
48	MP3A	Mx	0	3.5
49	MP4A	X	0	3
50	MP4A	Z	-32.934	3
51	MP4A	Mx	-.005	3
52	MP4A	X	0	3
53	MP4A	Z	-32.934	3
54	MP4A	Mx	.005	3

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	77.666	.5
2	MP1A	Z	-134.521	.5
3	MP1A	Mx	.011	.5
4	MP1A	X	77.666	3.5
5	MP1A	Z	-134.521	3.5
6	MP1A	Mx	.011	3.5
7	MP1A	X	77.666	.5
8	MP1A	Z	-134.521	.5
9	MP1A	Mx	-.138	.5
10	MP1A	X	77.666	3.5
11	MP1A	Z	-134.521	3.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
12	MP1A	Mx	-.138	3.5
13	MP4A	X	105.856	.5
14	MP4A	Z	-183.348	.5
15	MP4A	Mx	.167	.5
16	MP4A	X	105.856	3.5
17	MP4A	Z	-183.348	3.5
18	MP4A	Mx	.167	3.5
19	MP4A	X	105.856	.5
20	MP4A	Z	-183.348	.5
21	MP4A	Mx	-.185	.5
22	MP4A	X	105.856	3.5
23	MP4A	Z	-183.348	3.5
24	MP4A	Mx	-.185	3.5
25	MP3A	X	34.178	1
26	MP3A	Z	-59.198	1
27	MP3A	Mx	-.017	1
28	MP3A	X	34.178	3
29	MP3A	Z	-59.198	3
30	MP3A	Mx	-.017	3
31	MP1A	X	24.94	2
32	MP1A	Z	-43.198	2
33	MP1A	Mx	.02	2
34	MP2A	X	28.935	3.5
35	MP2A	Z	-50.118	3.5
36	MP2A	Mx	.014	3.5
37	MP2A	X	11.46	.5
38	MP2A	Z	-19.849	.5
39	MP2A	Mx	-.006	.5
40	MP2A	X	11.46	3.5
41	MP2A	Z	-19.849	3.5
42	MP2A	Mx	-.006	3.5
43	OVP	X	24.1	.15
44	OVP	Z	-41.743	.15
45	OVP	Mx	0	.15
46	MP3A	X	28.399	3.5
47	MP3A	Z	-49.189	3.5
48	MP3A	Mx	.014	3.5
49	MP4A	X	16.479	3
50	MP4A	Z	-28.543	3
51	MP4A	Mx	.003	3
52	MP4A	X	16.479	3
53	MP4A	Z	-28.543	3
54	MP4A	Mx	.013	3

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	110.867	.5
2	MP1A	Z	-64.009	.5
3	MP1A	Mx	-.054	.5
4	MP1A	X	110.867	3.5
5	MP1A	Z	-64.009	3.5
6	MP1A	Mx	-.054	3.5
7	MP1A	X	110.867	.5
8	MP1A	Z	-64.009	.5
9	MP1A	Mx	-.073	.5
10	MP1A	X	110.867	3.5
11	MP1A	Z	-64.009	3.5
12	MP1A	Mx	-.073	3.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
13	MP4A	X	159.693	.5
14	MP4A	Z	-92.199	.5
15	MP4A	Mx	.073	.5
16	MP4A	X	159.693	3.5
17	MP4A	Z	-92.199	3.5
18	MP4A	Mx	.073	3.5
19	MP4A	X	159.693	.5
20	MP4A	Z	-92.199	.5
21	MP4A	Mx	-.179	.5
22	MP4A	X	159.693	3.5
23	MP4A	Z	-92.199	3.5
24	MP4A	Mx	-.179	3.5
25	MP3A	X	37.955	1
26	MP3A	Z	-21.914	1
27	MP3A	Mx	-.019	1
28	MP3A	X	37.955	3
29	MP3A	Z	-21.914	3
30	MP3A	Mx	-.019	3
31	MP1A	X	37.278	2
32	MP1A	Z	-21.522	2
33	MP1A	Mx	.021	2
34	MP2A	X	39.236	3.5
35	MP2A	Z	-22.653	3.5
36	MP2A	Mx	.02	3.5
37	MP2A	X	14.091	.5
38	MP2A	Z	-8.135	.5
39	MP2A	Mx	-.007	.5
40	MP2A	X	14.091	3.5
41	MP2A	Z	-8.135	3.5
42	MP2A	Mx	-.007	3.5
43	OVP	X	37.138	.15
44	OVP	Z	-21.442	.15
45	OVP	Mx	0	.15
46	MP3A	X	36.451	3.5
47	MP3A	Z	-21.045	3.5
48	MP3A	Mx	.018	3.5
49	MP4A	X	28.584	3
50	MP4A	Z	-16.503	3
51	MP4A	Mx	.012	3
52	MP4A	X	28.584	3
53	MP4A	Z	-16.503	3
54	MP4A	Mx	.017	3

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	142.551	.5
2	MP1A	Z	0	.5
3	MP1A	Mx	-.115	.5
4	MP1A	X	142.551	3.5
5	MP1A	Z	0	3.5
6	MP1A	Mx	-.115	3.5
7	MP1A	X	142.551	.5
8	MP1A	Z	0	.5
9	MP1A	Mx	-.014	.5
10	MP1A	X	142.551	3.5
11	MP1A	Z	0	3.5
12	MP1A	Mx	-.014	3.5
13	MP4A	X	142.551	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
14	MP4A	Z	0	.5
15	MP4A	Mx	-.014	.5
16	MP4A	X	142.551	3.5
17	MP4A	Z	0	3.5
18	MP4A	Mx	-.014	3.5
19	MP4A	X	142.551	.5
20	MP4A	Z	0	.5
21	MP4A	Mx	-.115	.5
22	MP4A	X	142.551	3.5
23	MP4A	Z	0	3.5
24	MP4A	Mx	-.115	3.5
25	MP3A	X	31.563	1
26	MP3A	Z	0	1
27	MP3A	Mx	-.016	1
28	MP3A	X	31.563	3
29	MP3A	Z	0	3
30	MP3A	Mx	-.016	3
31	MP1A	X	46.682	2
32	MP1A	Z	0	2
33	MP1A	Mx	.021	2
34	MP2A	X	39.024	3.5
35	MP2A	Z	0	3.5
36	MP2A	Mx	.02	3.5
37	MP2A	X	12.946	.5
38	MP2A	Z	0	.5
39	MP2A	Mx	-.006	.5
40	MP2A	X	12.946	3.5
41	MP2A	Z	0	3.5
42	MP2A	Mx	-.006	3.5
43	OVP	X	48.201	.15
44	OVP	Z	0	.15
45	OVP	Mx	0	.15
46	MP3A	X	34.735	3.5
47	MP3A	Z	0	3.5
48	MP3A	Mx	.017	3.5
49	MP4A	X	33.031	3
50	MP4A	Z	0	3
51	MP4A	Mx	.017	3
52	MP4A	X	33.031	3
53	MP4A	Z	0	3
54	MP4A	Mx	.017	3

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	159.693	.5
2	MP1A	Z	92.199	.5
3	MP1A	Mx	-.179	.5
4	MP1A	X	159.693	3.5
5	MP1A	Z	92.199	3.5
6	MP1A	Mx	-.179	3.5
7	MP1A	X	159.693	.5
8	MP1A	Z	92.199	.5
9	MP1A	Mx	.073	.5
10	MP1A	X	159.693	3.5
11	MP1A	Z	92.199	3.5
12	MP1A	Mx	.073	3.5
13	MP4A	X	110.867	.5
14	MP4A	Z	64.009	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
15	MP4A	Mx	-.073	.5
16	MP4A	X	110.867	3.5
17	MP4A	Z	64.009	3.5
18	MP4A	Mx	-.073	3.5
19	MP4A	X	110.867	.5
20	MP4A	Z	64.009	.5
21	MP4A	Mx	-.054	.5
22	MP4A	X	110.867	3.5
23	MP4A	Z	64.009	3.5
24	MP4A	Mx	-.054	3.5
25	MP3A	X	37.955	1
26	MP3A	Z	21.914	1
27	MP3A	Mx	-.019	1
28	MP3A	X	37.955	3
29	MP3A	Z	21.914	3
30	MP3A	Mx	-.019	3
31	MP1A	X	49.498	2
32	MP1A	Z	28.578	2
33	MP1A	Mx	.016	2
34	MP2A	X	39.236	3.5
35	MP2A	Z	22.653	3.5
36	MP2A	Mx	.02	3.5
37	MP2A	X	14.091	.5
38	MP2A	Z	8.135	.5
39	MP2A	Mx	-.007	.5
40	MP2A	X	14.091	3.5
41	MP2A	Z	8.135	3.5
42	MP2A	Mx	-.007	3.5
43	OVP	X	50.953	.15
44	OVP	Z	29.418	.15
45	OVP	Mx	0	.15
46	MP3A	X	36.451	3.5
47	MP3A	Z	21.045	3.5
48	MP3A	Mx	.018	3.5
49	MP4A	X	28.584	3
50	MP4A	Z	16.503	3
51	MP4A	Mx	.017	3
52	MP4A	X	28.584	3
53	MP4A	Z	16.503	3
54	MP4A	Mx	.012	3

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	105.856	.5
2	MP1A	Z	183.348	.5
3	MP1A	Mx	-.185	.5
4	MP1A	X	105.856	3.5
5	MP1A	Z	183.348	3.5
6	MP1A	Mx	-.185	3.5
7	MP1A	X	105.856	.5
8	MP1A	Z	183.348	.5
9	MP1A	Mx	.167	.5
10	MP1A	X	105.856	3.5
11	MP1A	Z	183.348	3.5
12	MP1A	Mx	.167	3.5
13	MP4A	X	77.666	.5
14	MP4A	Z	134.521	.5
15	MP4A	Mx	-.138	.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
16	MP4A	X	77.666	3.5
17	MP4A	Z	134.521	3.5
18	MP4A	Mx	-.138	3.5
19	MP4A	X	77.666	.5
20	MP4A	Z	134.521	.5
21	MP4A	Mx	.011	.5
22	MP4A	X	77.666	3.5
23	MP4A	Z	134.521	3.5
24	MP4A	Mx	.011	3.5
25	MP3A	X	34.178	1
26	MP3A	Z	59.198	1
27	MP3A	Mx	-.017	1
28	MP3A	X	34.178	3
29	MP3A	Z	59.198	3
30	MP3A	Mx	-.017	3
31	MP1A	X	31.996	2
32	MP1A	Z	55.418	2
33	MP1A	Mx	.003	2
34	MP2A	X	28.935	3.5
35	MP2A	Z	50.118	3.5
36	MP2A	Mx	.014	3.5
37	MP2A	X	11.46	.5
38	MP2A	Z	19.849	.5
39	MP2A	Mx	-.006	.5
40	MP2A	X	11.46	3.5
41	MP2A	Z	19.849	3.5
42	MP2A	Mx	-.006	3.5
43	OVP	X	32.077	.15
44	OVP	Z	55.558	.15
45	OVP	Mx	0	.15
46	MP3A	X	28.399	3.5
47	MP3A	Z	49.189	3.5
48	MP3A	Mx	.014	3.5
49	MP4A	X	16.479	3
50	MP4A	Z	28.543	3
51	MP4A	Mx	.013	3
52	MP4A	X	16.479	3
53	MP4A	Z	28.543	3
54	MP4A	Mx	.003	3

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	0	.5
2	MP1A	Z	197.178	.5
3	MP1A	Mx	-.107	.5
4	MP1A	X	0	3.5
5	MP1A	Z	197.178	3.5
6	MP1A	Mx	-.107	3.5
7	MP1A	X	0	.5
8	MP1A	Z	197.178	.5
9	MP1A	Mx	.191	.5
10	MP1A	X	0	3.5
11	MP1A	Z	197.178	3.5
12	MP1A	Mx	.191	3.5
13	MP4A	X	0	.5
14	MP4A	Z	197.178	.5
15	MP4A	Mx	-.191	.5
16	MP4A	X	0	3.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
17	MP4A	Z	197.178	3.5
18	MP4A	Mx	-.191	3.5
19	MP4A	X	0	.5
20	MP4A	Z	197.178	.5
21	MP4A	Mx	.107	.5
22	MP4A	X	0	3.5
23	MP4A	Z	197.178	3.5
24	MP4A	Mx	.107	3.5
25	MP3A	X	0	1
26	MP3A	Z	80.62	1
27	MP3A	Mx	0	1
28	MP3A	X	0	3
29	MP3A	Z	80.62	3
30	MP3A	Mx	0	3
31	MP1A	X	0	2
32	MP1A	Z	60.354	2
33	MP1A	Mx	-.013	2
34	MP2A	X	0	3.5
35	MP2A	Z	64.153	3.5
36	MP2A	Mx	0	3.5
37	MP2A	X	0	.5
38	MP2A	Z	26.244	.5
39	MP2A	Mx	0	.5
40	MP2A	X	0	3.5
41	MP2A	Z	26.244	3.5
42	MP2A	Mx	0	3.5
43	OVP	X	0	.15
44	OVP	Z	58.836	.15
45	OVP	Mx	0	.15
46	MP3A	X	0	3.5
47	MP3A	Z	64.153	3.5
48	MP3A	Mx	0	3.5
49	MP4A	X	0	3
50	MP4A	Z	32.934	3
51	MP4A	Mx	.005	3
52	MP4A	X	0	3
53	MP4A	Z	32.934	3
54	MP4A	Mx	-.005	3

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-77.666	.5
2	MP1A	Z	134.521	.5
3	MP1A	Mx	-.011	.5
4	MP1A	X	-77.666	3.5
5	MP1A	Z	134.521	3.5
6	MP1A	Mx	-.011	3.5
7	MP1A	X	-77.666	.5
8	MP1A	Z	134.521	.5
9	MP1A	Mx	.138	.5
10	MP1A	X	-77.666	3.5
11	MP1A	Z	134.521	3.5
12	MP1A	Mx	.138	3.5
13	MP4A	X	-105.856	.5
14	MP4A	Z	183.348	.5
15	MP4A	Mx	-.167	.5
16	MP4A	X	-105.856	3.5
17	MP4A	Z	183.348	3.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
18	MP4A	Mx	-.167	3.5
19	MP4A	X	-105.856	.5
20	MP4A	Z	183.348	.5
21	MP4A	Mx	.185	.5
22	MP4A	X	-105.856	3.5
23	MP4A	Z	183.348	3.5
24	MP4A	Mx	.185	3.5
25	MP3A	X	-34.178	1
26	MP3A	Z	59.198	1
27	MP3A	Mx	.017	1
28	MP3A	X	-34.178	3
29	MP3A	Z	59.198	3
30	MP3A	Mx	.017	3
31	MP1A	X	-24.94	2
32	MP1A	Z	43.198	2
33	MP1A	Mx	-.02	2
34	MP2A	X	-28.935	3.5
35	MP2A	Z	50.118	3.5
36	MP2A	Mx	-.014	3.5
37	MP2A	X	-11.46	.5
38	MP2A	Z	19.849	.5
39	MP2A	Mx	.006	.5
40	MP2A	X	-11.46	3.5
41	MP2A	Z	19.849	3.5
42	MP2A	Mx	.006	3.5
43	OVP	X	-24.1	.15
44	OVP	Z	41.743	.15
45	OVP	Mx	0	.15
46	MP3A	X	-28.399	3.5
47	MP3A	Z	49.189	3.5
48	MP3A	Mx	-.014	3.5
49	MP4A	X	-16.479	3
50	MP4A	Z	28.543	3
51	MP4A	Mx	-.003	3
52	MP4A	X	-16.479	3
53	MP4A	Z	28.543	3
54	MP4A	Mx	-.013	3

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-110.867	.5
2	MP1A	Z	64.009	.5
3	MP1A	Mx	.054	.5
4	MP1A	X	-110.867	3.5
5	MP1A	Z	64.009	3.5
6	MP1A	Mx	.054	3.5
7	MP1A	X	-110.867	.5
8	MP1A	Z	64.009	.5
9	MP1A	Mx	.073	.5
10	MP1A	X	-110.867	3.5
11	MP1A	Z	64.009	3.5
12	MP1A	Mx	.073	3.5
13	MP4A	X	-159.693	.5
14	MP4A	Z	92.199	.5
15	MP4A	Mx	-.073	.5
16	MP4A	X	-159.693	3.5
17	MP4A	Z	92.199	3.5
18	MP4A	Mx	-.073	3.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
19	MP4A	X	-159.693	.5
20	MP4A	Z	92.199	.5
21	MP4A	Mx	.179	.5
22	MP4A	X	-159.693	3.5
23	MP4A	Z	92.199	3.5
24	MP4A	Mx	.179	3.5
25	MP3A	X	-37.955	1
26	MP3A	Z	21.914	1
27	MP3A	Mx	.019	1
28	MP3A	X	-37.955	3
29	MP3A	Z	21.914	3
30	MP3A	Mx	.019	3
31	MP1A	X	-37.278	2
32	MP1A	Z	21.522	2
33	MP1A	Mx	-.021	2
34	MP2A	X	-39.236	3.5
35	MP2A	Z	22.653	3.5
36	MP2A	Mx	-.02	3.5
37	MP2A	X	-14.091	.5
38	MP2A	Z	8.135	.5
39	MP2A	Mx	.007	.5
40	MP2A	X	-14.091	3.5
41	MP2A	Z	8.135	3.5
42	MP2A	Mx	.007	3.5
43	OVP	X	-37.138	.15
44	OVP	Z	21.442	.15
45	OVP	Mx	0	.15
46	MP3A	X	-36.451	3.5
47	MP3A	Z	21.045	3.5
48	MP3A	Mx	-.018	3.5
49	MP4A	X	-28.584	3
50	MP4A	Z	16.503	3
51	MP4A	Mx	-.012	3
52	MP4A	X	-28.584	3
53	MP4A	Z	16.503	3
54	MP4A	Mx	-.017	3

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-142.551	.5
2	MP1A	Z	0	.5
3	MP1A	Mx	.115	.5
4	MP1A	X	-142.551	3.5
5	MP1A	Z	0	3.5
6	MP1A	Mx	.115	3.5
7	MP1A	X	-142.551	.5
8	MP1A	Z	0	.5
9	MP1A	Mx	.014	.5
10	MP1A	X	-142.551	3.5
11	MP1A	Z	0	3.5
12	MP1A	Mx	.014	3.5
13	MP4A	X	-142.551	.5
14	MP4A	Z	0	.5
15	MP4A	Mx	.014	.5
16	MP4A	X	-142.551	3.5
17	MP4A	Z	0	3.5
18	MP4A	Mx	.014	3.5
19	MP4A	X	-142.551	.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
20	MP4A	Z	0	.5
21	MP4A	Mx	.115	.5
22	MP4A	X	-142.551	3.5
23	MP4A	Z	0	3.5
24	MP4A	Mx	.115	3.5
25	MP3A	X	-31.563	1
26	MP3A	Z	0	1
27	MP3A	Mx	.016	1
28	MP3A	X	-31.563	3
29	MP3A	Z	0	3
30	MP3A	Mx	.016	3
31	MP1A	X	-46.682	2
32	MP1A	Z	0	2
33	MP1A	Mx	-.021	2
34	MP2A	X	-39.024	3.5
35	MP2A	Z	0	3.5
36	MP2A	Mx	-.02	3.5
37	MP2A	X	-12.946	.5
38	MP2A	Z	0	.5
39	MP2A	Mx	.006	.5
40	MP2A	X	-12.946	3.5
41	MP2A	Z	0	3.5
42	MP2A	Mx	.006	3.5
43	OVP	X	-48.201	.15
44	OVP	Z	0	.15
45	OVP	Mx	0	.15
46	MP3A	X	-34.735	3.5
47	MP3A	Z	0	3.5
48	MP3A	Mx	-.017	3.5
49	MP4A	X	-33.031	3
50	MP4A	Z	0	3
51	MP4A	Mx	-.017	3
52	MP4A	X	-33.031	3
53	MP4A	Z	0	3
54	MP4A	Mx	-.017	3

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-159.693	.5
2	MP1A	Z	-92.199	.5
3	MP1A	Mx	.179	.5
4	MP1A	X	-159.693	3.5
5	MP1A	Z	-92.199	3.5
6	MP1A	Mx	.179	3.5
7	MP1A	X	-159.693	.5
8	MP1A	Z	-92.199	.5
9	MP1A	Mx	-.073	.5
10	MP1A	X	-159.693	3.5
11	MP1A	Z	-92.199	3.5
12	MP1A	Mx	-.073	3.5
13	MP4A	X	-110.867	.5
14	MP4A	Z	-64.009	.5
15	MP4A	Mx	.073	.5
16	MP4A	X	-110.867	3.5
17	MP4A	Z	-64.009	3.5
18	MP4A	Mx	.073	3.5
19	MP4A	X	-110.867	.5
20	MP4A	Z	-64.009	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
21	MP4A	Mx	.054	.5
22	MP4A	X	-110.867	3.5
23	MP4A	Z	-64.009	3.5
24	MP4A	Mx	.054	3.5
25	MP3A	X	-37.955	1
26	MP3A	Z	-21.914	1
27	MP3A	Mx	.019	1
28	MP3A	X	-37.955	3
29	MP3A	Z	-21.914	3
30	MP3A	Mx	.019	3
31	MP1A	X	-49.498	2
32	MP1A	Z	-28.578	2
33	MP1A	Mx	-.016	2
34	MP2A	X	-39.236	3.5
35	MP2A	Z	-22.653	3.5
36	MP2A	Mx	-.02	3.5
37	MP2A	X	-14.091	.5
38	MP2A	Z	-8.135	.5
39	MP2A	Mx	.007	.5
40	MP2A	X	-14.091	3.5
41	MP2A	Z	-8.135	3.5
42	MP2A	Mx	.007	3.5
43	OVP	X	-50.953	.15
44	OVP	Z	-29.418	.15
45	OVP	Mx	0	.15
46	MP3A	X	-36.451	3.5
47	MP3A	Z	-21.045	3.5
48	MP3A	Mx	-.018	3.5
49	MP4A	X	-28.584	3
50	MP4A	Z	-16.503	3
51	MP4A	Mx	-.017	3
52	MP4A	X	-28.584	3
53	MP4A	Z	-16.503	3
54	MP4A	Mx	-.012	3

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-105.856	.5
2	MP1A	Z	-183.348	.5
3	MP1A	Mx	.185	.5
4	MP1A	X	-105.856	3.5
5	MP1A	Z	-183.348	3.5
6	MP1A	Mx	.185	3.5
7	MP1A	X	-105.856	.5
8	MP1A	Z	-183.348	.5
9	MP1A	Mx	-.167	.5
10	MP1A	X	-105.856	3.5
11	MP1A	Z	-183.348	3.5
12	MP1A	Mx	-.167	3.5
13	MP4A	X	-77.666	.5
14	MP4A	Z	-134.521	.5
15	MP4A	Mx	.138	.5
16	MP4A	X	-77.666	3.5
17	MP4A	Z	-134.521	3.5
18	MP4A	Mx	.138	3.5
19	MP4A	X	-77.666	.5
20	MP4A	Z	-134.521	.5
21	MP4A	Mx	-.011	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
22	MP4A	X	-77.666	3.5
23	MP4A	Z	-134.521	3.5
24	MP4A	Mx	-.011	3.5
25	MP3A	X	-34.178	1
26	MP3A	Z	-59.198	1
27	MP3A	Mx	.017	1
28	MP3A	X	-34.178	3
29	MP3A	Z	-59.198	3
30	MP3A	Mx	.017	3
31	MP1A	X	-31.996	2
32	MP1A	Z	-55.418	2
33	MP1A	Mx	-.003	2
34	MP2A	X	-28.935	3.5
35	MP2A	Z	-50.118	3.5
36	MP2A	Mx	-.014	3.5
37	MP2A	X	-11.46	.5
38	MP2A	Z	-19.849	.5
39	MP2A	Mx	.006	.5
40	MP2A	X	-11.46	3.5
41	MP2A	Z	-19.849	3.5
42	MP2A	Mx	.006	3.5
43	OVP	X	-32.077	.15
44	OVP	Z	-55.558	.15
45	OVP	Mx	0	.15
46	MP3A	X	-28.399	3.5
47	MP3A	Z	-49.189	3.5
48	MP3A	Mx	-.014	3.5
49	MP4A	X	-16.479	3
50	MP4A	Z	-28.543	3
51	MP4A	Mx	-.013	3
52	MP4A	X	-16.479	3
53	MP4A	Z	-28.543	3
54	MP4A	Mx	-.003	3

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	0	.5
2	MP1A	Z	-38.328	.5
3	MP1A	Mx	.021	.5
4	MP1A	X	0	3.5
5	MP1A	Z	-38.328	3.5
6	MP1A	Mx	.021	3.5
7	MP1A	X	0	.5
8	MP1A	Z	-38.328	.5
9	MP1A	Mx	-.037	.5
10	MP1A	X	0	3.5
11	MP1A	Z	-38.328	3.5
12	MP1A	Mx	-.037	3.5
13	MP4A	X	0	.5
14	MP4A	Z	-38.328	.5
15	MP4A	Mx	.037	.5
16	MP4A	X	0	3.5
17	MP4A	Z	-38.328	3.5
18	MP4A	Mx	.037	3.5
19	MP4A	X	0	.5
20	MP4A	Z	-38.328	.5
21	MP4A	Mx	-.021	.5
22	MP4A	X	0	3.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
23	MP4A	Z	-38.328	3.5
24	MP4A	Mx	-.021	3.5
25	MP3A	X	0	1
26	MP3A	Z	-16.38	1
27	MP3A	Mx	0	1
28	MP3A	X	0	3
29	MP3A	Z	-16.38	3
30	MP3A	Mx	0	3
31	MP1A	X	0	2
32	MP1A	Z	-13.066	2
33	MP1A	Mx	.003	2
34	MP2A	X	0	3.5
35	MP2A	Z	-13.816	3.5
36	MP2A	Mx	0	3.5
37	MP2A	X	0	.5
38	MP2A	Z	-5.789	.5
39	MP2A	Mx	0	.5
40	MP2A	X	0	3.5
41	MP2A	Z	-5.789	3.5
42	MP2A	Mx	0	3.5
43	OVP	X	0	.15
44	OVP	Z	-12.766	.15
45	OVP	Mx	0	.15
46	MP3A	X	0	3.5
47	MP3A	Z	-13.816	3.5
48	MP3A	Mx	0	3.5
49	MP4A	X	0	3
50	MP4A	Z	-3.115	3
51	MP4A	Mx	-.000519	3
52	MP4A	X	0	3
53	MP4A	Z	-3.115	3
54	MP4A	Mx	.000519	3

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	15.289	.5
2	MP1A	Z	-26.481	.5
3	MP1A	Mx	.002	.5
4	MP1A	X	15.289	3.5
5	MP1A	Z	-26.481	3.5
6	MP1A	Mx	.002	3.5
7	MP1A	X	15.289	.5
8	MP1A	Z	-26.481	.5
9	MP1A	Mx	-.027	.5
10	MP1A	X	15.289	3.5
11	MP1A	Z	-26.481	3.5
12	MP1A	Mx	-.027	3.5
13	MP4A	X	20.51	.5
14	MP4A	Z	-35.524	.5
15	MP4A	Mx	.032	.5
16	MP4A	X	20.51	3.5
17	MP4A	Z	-35.524	3.5
18	MP4A	Mx	.032	3.5
19	MP4A	X	20.51	.5
20	MP4A	Z	-35.524	.5
21	MP4A	Mx	-.036	.5
22	MP4A	X	20.51	3.5
23	MP4A	Z	-35.524	3.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
24	MP4A	Mx	-0.036	3.5
25	MP3A	X	7.016	1
26	MP3A	Z	-12.151	1
27	MP3A	Mx	-0.004	1
28	MP3A	X	7.016	3
29	MP3A	Z	-12.151	3
30	MP3A	Mx	-0.004	3
31	MP1A	X	5.499	2
32	MP1A	Z	-9.524	2
33	MP1A	Mx	.005	2
34	MP2A	X	6.288	3.5
35	MP2A	Z	-10.892	3.5
36	MP2A	Mx	.003	3.5
37	MP2A	X	2.562	.5
38	MP2A	Z	-4.438	.5
39	MP2A	Mx	-.001	.5
40	MP2A	X	2.562	3.5
41	MP2A	Z	-4.438	3.5
42	MP2A	Mx	-.001	3.5
43	OVP	X	5.333	.15
44	OVP	Z	-9.237	.15
45	OVP	Mx	0	.15
46	MP3A	X	6.183	3.5
47	MP3A	Z	-10.71	3.5
48	MP3A	Mx	.003	3.5
49	MP4A	X	2.118	3
50	MP4A	Z	-3.669	3
51	MP4A	Mx	.000447	3
52	MP4A	X	2.118	3
53	MP4A	Z	-3.669	3
54	MP4A	Mx	.002	3

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	22.1	.5
2	MP1A	Z	-12.759	.5
3	MP1A	Mx	-.011	.5
4	MP1A	X	22.1	3.5
5	MP1A	Z	-12.759	3.5
6	MP1A	Mx	-.011	3.5
7	MP1A	X	22.1	.5
8	MP1A	Z	-12.759	.5
9	MP1A	Mx	-.015	.5
10	MP1A	X	22.1	3.5
11	MP1A	Z	-12.759	3.5
12	MP1A	Mx	-.015	3.5
13	MP4A	X	31.143	.5
14	MP4A	Z	-17.98	.5
15	MP4A	Mx	.014	.5
16	MP4A	X	31.143	3.5
17	MP4A	Z	-17.98	3.5
18	MP4A	Mx	.014	3.5
19	MP4A	X	31.143	.5
20	MP4A	Z	-17.98	.5
21	MP4A	Mx	-.035	.5
22	MP4A	X	31.143	3.5
23	MP4A	Z	-17.98	3.5
24	MP4A	Mx	-.035	3.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
25	MP3A	X	8.084	1
26	MP3A	Z	-4.667	1
27	MP3A	Mx	-.004	1
28	MP3A	X	8.084	3
29	MP3A	Z	-4.667	3
30	MP3A	Mx	-.004	3
31	MP1A	X	8.355	2
32	MP1A	Z	-4.824	2
33	MP1A	Mx	.005	2
34	MP2A	X	8.746	3.5
35	MP2A	Z	-5.049	3.5
36	MP2A	Mx	.004	3.5
37	MP2A	X	3.286	.5
38	MP2A	Z	-1.897	.5
39	MP2A	Mx	-.002	.5
40	MP2A	X	3.286	3.5
41	MP2A	Z	-1.897	3.5
42	MP2A	Mx	-.002	3.5
43	OVP	X	8.327	.15
44	OVP	Z	-4.808	.15
45	OVP	Mx	0	.15
46	MP3A	X	8.2	3.5
47	MP3A	Z	-4.734	3.5
48	MP3A	Mx	.004	3.5
49	MP4A	X	5.612	3
50	MP4A	Z	-3.24	3
51	MP4A	Mx	.002	3
52	MP4A	X	5.612	3
53	MP4A	Z	-3.24	3
54	MP4A	Mx	.003	3

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	28.21	.5
2	MP1A	Z	0	.5
3	MP1A	Mx	-.023	.5
4	MP1A	X	28.21	3.5
5	MP1A	Z	0	3.5
6	MP1A	Mx	-.023	3.5
7	MP1A	X	28.21	.5
8	MP1A	Z	0	.5
9	MP1A	Mx	-.003	.5
10	MP1A	X	28.21	3.5
11	MP1A	Z	0	3.5
12	MP1A	Mx	-.003	3.5
13	MP4A	X	28.21	.5
14	MP4A	Z	0	.5
15	MP4A	Mx	-.003	.5
16	MP4A	X	28.21	3.5
17	MP4A	Z	0	3.5
18	MP4A	Mx	-.003	3.5
19	MP4A	X	28.21	.5
20	MP4A	Z	0	.5
21	MP4A	Mx	-.023	.5
22	MP4A	X	28.21	3.5
23	MP4A	Z	0	3.5
24	MP4A	Mx	-.023	3.5
25	MP3A	X	6.986	1



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
26	MP3A	Z	0	1
27	MP3A	Mx	-.003	1
28	MP3A	X	6.986	3
29	MP3A	Z	0	3
30	MP3A	Mx	-.003	3
31	MP1A	X	10.366	2
32	MP1A	Z	0	2
33	MP1A	Mx	.005	2
34	MP2A	X	8.86	3.5
35	MP2A	Z	0	3.5
36	MP2A	Mx	.004	3.5
37	MP2A	X	3.129	.5
38	MP2A	Z	0	.5
39	MP2A	Mx	-.002	.5
40	MP2A	X	3.129	3.5
41	MP2A	Z	0	3.5
42	MP2A	Mx	-.002	3.5
43	OVP	X	10.666	.15
44	OVP	Z	0	.15
45	OVP	Mx	0	.15
46	MP3A	X	8.02	3.5
47	MP3A	Z	0	3.5
48	MP3A	Mx	.004	3.5
49	MP4A	X	7.601	3
50	MP4A	Z	0	3
51	MP4A	Mx	.004	3
52	MP4A	X	7.601	3
53	MP4A	Z	0	3
54	MP4A	Mx	.004	3

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	31.143	.5
2	MP1A	Z	17.98	.5
3	MP1A	Mx	-.035	.5
4	MP1A	X	31.143	3.5
5	MP1A	Z	17.98	3.5
6	MP1A	Mx	-.035	3.5
7	MP1A	X	31.143	.5
8	MP1A	Z	17.98	.5
9	MP1A	Mx	.014	.5
10	MP1A	X	31.143	3.5
11	MP1A	Z	17.98	3.5
12	MP1A	Mx	.014	3.5
13	MP4A	X	22.1	.5
14	MP4A	Z	12.759	.5
15	MP4A	Mx	-.015	.5
16	MP4A	X	22.1	3.5
17	MP4A	Z	12.759	3.5
18	MP4A	Mx	-.015	3.5
19	MP4A	X	22.1	.5
20	MP4A	Z	12.759	.5
21	MP4A	Mx	-.011	.5
22	MP4A	X	22.1	3.5
23	MP4A	Z	12.759	3.5
24	MP4A	Mx	-.011	3.5
25	MP3A	X	8.084	1
26	MP3A	Z	4.667	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
27	MP3A	Mx	-.004	1
28	MP3A	X	8.084	3
29	MP3A	Z	4.667	3
30	MP3A	Mx	-.004	3
31	MP1A	X	10.768	2
32	MP1A	Z	6.217	2
33	MP1A	Mx	.004	2
34	MP2A	X	8.746	3.5
35	MP2A	Z	5.049	3.5
36	MP2A	Mx	.004	3.5
37	MP2A	X	3.286	.5
38	MP2A	Z	1.897	.5
39	MP2A	Mx	-.002	.5
40	MP2A	X	3.286	3.5
41	MP2A	Z	1.897	3.5
42	MP2A	Mx	-.002	3.5
43	OVP	X	11.055	.15
44	OVP	Z	6.383	.15
45	OVP	Mx	0	.15
46	MP3A	X	8.2	3.5
47	MP3A	Z	4.734	3.5
48	MP3A	Mx	.004	3.5
49	MP4A	X	5.612	3
50	MP4A	Z	3.24	3
51	MP4A	Mx	.003	3
52	MP4A	X	5.612	3
53	MP4A	Z	3.24	3
54	MP4A	Mx	.002	3

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	20.51	.5
2	MP1A	Z	35.524	.5
3	MP1A	Mx	-.036	.5
4	MP1A	X	20.51	3.5
5	MP1A	Z	35.524	3.5
6	MP1A	Mx	-.036	3.5
7	MP1A	X	20.51	.5
8	MP1A	Z	35.524	.5
9	MP1A	Mx	.032	.5
10	MP1A	X	20.51	3.5
11	MP1A	Z	35.524	3.5
12	MP1A	Mx	.032	3.5
13	MP4A	X	15.289	.5
14	MP4A	Z	26.481	.5
15	MP4A	Mx	-.027	.5
16	MP4A	X	15.289	3.5
17	MP4A	Z	26.481	3.5
18	MP4A	Mx	-.027	3.5
19	MP4A	X	15.289	.5
20	MP4A	Z	26.481	.5
21	MP4A	Mx	.002	.5
22	MP4A	X	15.289	3.5
23	MP4A	Z	26.481	3.5
24	MP4A	Mx	.002	3.5
25	MP3A	X	7.016	1
26	MP3A	Z	12.151	1
27	MP3A	Mx	-.004	1



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
28	MP3A	X	7.016	3
29	MP3A	Z	12.151	3
30	MP3A	Mx	-.004	3
31	MP1A	X	6.892	2
32	MP1A	Z	11.937	2
33	MP1A	Mx	.000601	2
34	MP2A	X	6.288	3.5
35	MP2A	Z	10.892	3.5
36	MP2A	Mx	.003	3.5
37	MP2A	X	2.562	.5
38	MP2A	Z	4.438	.5
39	MP2A	Mx	-.001	.5
40	MP2A	X	2.562	3.5
41	MP2A	Z	4.438	3.5
42	MP2A	Mx	-.001	3.5
43	OVP	X	6.908	.15
44	OVP	Z	11.965	.15
45	OVP	Mx	0	.15
46	MP3A	X	6.183	3.5
47	MP3A	Z	10.71	3.5
48	MP3A	Mx	.003	3.5
49	MP4A	X	2.118	3
50	MP4A	Z	3.669	3
51	MP4A	Mx	.002	3
52	MP4A	X	2.118	3
53	MP4A	Z	3.669	3
54	MP4A	Mx	.000447	3

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	0	.5
2	MP1A	Z	38.328	.5
3	MP1A	Mx	-.021	.5
4	MP1A	X	0	3.5
5	MP1A	Z	38.328	3.5
6	MP1A	Mx	-.021	3.5
7	MP1A	X	0	.5
8	MP1A	Z	38.328	.5
9	MP1A	Mx	.037	.5
10	MP1A	X	0	3.5
11	MP1A	Z	38.328	3.5
12	MP1A	Mx	.037	3.5
13	MP4A	X	0	.5
14	MP4A	Z	38.328	.5
15	MP4A	Mx	-.037	.5
16	MP4A	X	0	3.5
17	MP4A	Z	38.328	3.5
18	MP4A	Mx	-.037	3.5
19	MP4A	X	0	.5
20	MP4A	Z	38.328	.5
21	MP4A	Mx	.021	.5
22	MP4A	X	0	3.5
23	MP4A	Z	38.328	3.5
24	MP4A	Mx	.021	3.5
25	MP3A	X	0	1
26	MP3A	Z	16.38	1
27	MP3A	Mx	0	1
28	MP3A	X	0	3

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
29	MP3A	Z	16.38	3
30	MP3A	Mx	0	3
31	MP1A	X	0	2
32	MP1A	Z	13.066	2
33	MP1A	Mx	-.003	2
34	MP2A	X	0	3.5
35	MP2A	Z	13.816	3.5
36	MP2A	Mx	0	3.5
37	MP2A	X	0	.5
38	MP2A	Z	5.789	.5
39	MP2A	Mx	0	.5
40	MP2A	X	0	3.5
41	MP2A	Z	5.789	3.5
42	MP2A	Mx	0	3.5
43	OVP	X	0	.15
44	OVP	Z	12.766	.15
45	OVP	Mx	0	.15
46	MP3A	X	0	3.5
47	MP3A	Z	13.816	3.5
48	MP3A	Mx	0	3.5
49	MP4A	X	0	3
50	MP4A	Z	3.115	3
51	MP4A	Mx	.000519	3
52	MP4A	X	0	3
53	MP4A	Z	3.115	3
54	MP4A	Mx	-.000519	3

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-15.289	.5
2	MP1A	Z	26.481	.5
3	MP1A	Mx	-.002	.5
4	MP1A	X	-15.289	3.5
5	MP1A	Z	26.481	3.5
6	MP1A	Mx	-.002	3.5
7	MP1A	X	-15.289	.5
8	MP1A	Z	26.481	.5
9	MP1A	Mx	.027	.5
10	MP1A	X	-15.289	3.5
11	MP1A	Z	26.481	3.5
12	MP1A	Mx	.027	3.5
13	MP4A	X	-20.51	.5
14	MP4A	Z	35.524	.5
15	MP4A	Mx	-.032	.5
16	MP4A	X	-20.51	3.5
17	MP4A	Z	35.524	3.5
18	MP4A	Mx	-.032	3.5
19	MP4A	X	-20.51	.5
20	MP4A	Z	35.524	.5
21	MP4A	Mx	.036	.5
22	MP4A	X	-20.51	3.5
23	MP4A	Z	35.524	3.5
24	MP4A	Mx	.036	3.5
25	MP3A	X	-7.016	1
26	MP3A	Z	12.151	1
27	MP3A	Mx	.004	1
28	MP3A	X	-7.016	3
29	MP3A	Z	12.151	3



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
30	MP3A	Mx	.004	3
31	MP1A	X	-5.499	2
32	MP1A	Z	9.524	2
33	MP1A	Mx	-.005	2
34	MP2A	X	-6.288	3.5
35	MP2A	Z	10.892	3.5
36	MP2A	Mx	-.003	3.5
37	MP2A	X	-2.562	.5
38	MP2A	Z	4.438	.5
39	MP2A	Mx	.001	.5
40	MP2A	X	-2.562	3.5
41	MP2A	Z	4.438	3.5
42	MP2A	Mx	.001	3.5
43	OVP	X	-5.333	.15
44	OVP	Z	9.237	.15
45	OVP	Mx	0	.15
46	MP3A	X	-6.183	3.5
47	MP3A	Z	10.71	3.5
48	MP3A	Mx	-.003	3.5
49	MP4A	X	-2.118	3
50	MP4A	Z	3.669	3
51	MP4A	Mx	-.000447	3
52	MP4A	X	-2.118	3
53	MP4A	Z	3.669	3
54	MP4A	Mx	-.002	3

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-22.1	.5
2	MP1A	Z	12.759	.5
3	MP1A	Mx	.011	.5
4	MP1A	X	-22.1	3.5
5	MP1A	Z	12.759	3.5
6	MP1A	Mx	.011	3.5
7	MP1A	X	-22.1	.5
8	MP1A	Z	12.759	.5
9	MP1A	Mx	.015	.5
10	MP1A	X	-22.1	3.5
11	MP1A	Z	12.759	3.5
12	MP1A	Mx	.015	3.5
13	MP4A	X	-31.143	.5
14	MP4A	Z	17.98	.5
15	MP4A	Mx	-.014	.5
16	MP4A	X	-31.143	3.5
17	MP4A	Z	17.98	3.5
18	MP4A	Mx	-.014	3.5
19	MP4A	X	-31.143	.5
20	MP4A	Z	17.98	.5
21	MP4A	Mx	.035	.5
22	MP4A	X	-31.143	3.5
23	MP4A	Z	17.98	3.5
24	MP4A	Mx	.035	3.5
25	MP3A	X	-8.084	1
26	MP3A	Z	4.667	1
27	MP3A	Mx	.004	1
28	MP3A	X	-8.084	3
29	MP3A	Z	4.667	3
30	MP3A	Mx	.004	3

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
31	MP1A	X	-8.355	2
32	MP1A	Z	4.824	2
33	MP1A	Mx	-.005	2
34	MP2A	X	-8.746	3.5
35	MP2A	Z	5.049	3.5
36	MP2A	Mx	-.004	3.5
37	MP2A	X	-3.286	.5
38	MP2A	Z	1.897	.5
39	MP2A	Mx	.002	.5
40	MP2A	X	-3.286	3.5
41	MP2A	Z	1.897	3.5
42	MP2A	Mx	.002	3.5
43	OVP	X	-8.327	.15
44	OVP	Z	4.808	.15
45	OVP	Mx	0	.15
46	MP3A	X	-8.2	3.5
47	MP3A	Z	4.734	3.5
48	MP3A	Mx	-.004	3.5
49	MP4A	X	-5.612	3
50	MP4A	Z	3.24	3
51	MP4A	Mx	-.002	3
52	MP4A	X	-5.612	3
53	MP4A	Z	3.24	3
54	MP4A	Mx	-.003	3

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-28.21	.5
2	MP1A	Z	0	.5
3	MP1A	Mx	.023	.5
4	MP1A	X	-28.21	3.5
5	MP1A	Z	0	3.5
6	MP1A	Mx	.023	3.5
7	MP1A	X	-28.21	.5
8	MP1A	Z	0	.5
9	MP1A	Mx	.003	.5
10	MP1A	X	-28.21	3.5
11	MP1A	Z	0	3.5
12	MP1A	Mx	.003	3.5
13	MP4A	X	-28.21	.5
14	MP4A	Z	0	.5
15	MP4A	Mx	.003	.5
16	MP4A	X	-28.21	3.5
17	MP4A	Z	0	3.5
18	MP4A	Mx	.003	3.5
19	MP4A	X	-28.21	.5
20	MP4A	Z	0	.5
21	MP4A	Mx	.023	.5
22	MP4A	X	-28.21	3.5
23	MP4A	Z	0	3.5
24	MP4A	Mx	.023	3.5
25	MP3A	X	-6.986	1
26	MP3A	Z	0	1
27	MP3A	Mx	.003	1
28	MP3A	X	-6.986	3
29	MP3A	Z	0	3
30	MP3A	Mx	.003	3
31	MP1A	X	-10.366	2



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
32	MP1A	Z	0	2
33	MP1A	Mx	-0.005	2
34	MP2A	X	-8.86	3.5
35	MP2A	Z	0	3.5
36	MP2A	Mx	-0.004	3.5
37	MP2A	X	-3.129	.5
38	MP2A	Z	0	.5
39	MP2A	Mx	.002	.5
40	MP2A	X	-3.129	3.5
41	MP2A	Z	0	3.5
42	MP2A	Mx	.002	3.5
43	OVP	X	-10.666	.15
44	OVP	Z	0	.15
45	OVP	Mx	0	.15
46	MP3A	X	-8.02	3.5
47	MP3A	Z	0	3.5
48	MP3A	Mx	-0.004	3.5
49	MP4A	X	-7.601	3
50	MP4A	Z	0	3
51	MP4A	Mx	-0.004	3
52	MP4A	X	-7.601	3
53	MP4A	Z	0	3
54	MP4A	Mx	-0.004	3

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-31.143	.5
2	MP1A	Z	-17.98	.5
3	MP1A	Mx	.035	.5
4	MP1A	X	-31.143	3.5
5	MP1A	Z	-17.98	3.5
6	MP1A	Mx	.035	3.5
7	MP1A	X	-31.143	.5
8	MP1A	Z	-17.98	.5
9	MP1A	Mx	-0.014	.5
10	MP1A	X	-31.143	3.5
11	MP1A	Z	-17.98	3.5
12	MP1A	Mx	-0.014	3.5
13	MP4A	X	-22.1	.5
14	MP4A	Z	-12.759	.5
15	MP4A	Mx	.015	.5
16	MP4A	X	-22.1	3.5
17	MP4A	Z	-12.759	3.5
18	MP4A	Mx	.015	3.5
19	MP4A	X	-22.1	.5
20	MP4A	Z	-12.759	.5
21	MP4A	Mx	.011	.5
22	MP4A	X	-22.1	3.5
23	MP4A	Z	-12.759	3.5
24	MP4A	Mx	.011	3.5
25	MP3A	X	-8.084	1
26	MP3A	Z	-4.667	1
27	MP3A	Mx	.004	1
28	MP3A	X	-8.084	3
29	MP3A	Z	-4.667	3
30	MP3A	Mx	.004	3
31	MP1A	X	-10.768	2
32	MP1A	Z	-6.217	2

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
33	MP1A	Mx	-.004	2
34	MP2A	X	-8.746	3.5
35	MP2A	Z	-5.049	3.5
36	MP2A	Mx	-.004	3.5
37	MP2A	X	-3.286	.5
38	MP2A	Z	-1.897	.5
39	MP2A	Mx	.002	.5
40	MP2A	X	-3.286	3.5
41	MP2A	Z	-1.897	3.5
42	MP2A	Mx	.002	3.5
43	OVP	X	-11.055	.15
44	OVP	Z	-6.383	.15
45	OVP	Mx	0	.15
46	MP3A	X	-8.2	3.5
47	MP3A	Z	-4.734	3.5
48	MP3A	Mx	-.004	3.5
49	MP4A	X	-5.612	3
50	MP4A	Z	-3.24	3
51	MP4A	Mx	-.003	3
52	MP4A	X	-5.612	3
53	MP4A	Z	-3.24	3
54	MP4A	Mx	-.002	3

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-20.51	.5
2	MP1A	Z	-35.524	.5
3	MP1A	Mx	.036	.5
4	MP1A	X	-20.51	3.5
5	MP1A	Z	-35.524	3.5
6	MP1A	Mx	.036	3.5
7	MP1A	X	-20.51	.5
8	MP1A	Z	-35.524	.5
9	MP1A	Mx	-.032	.5
10	MP1A	X	-20.51	3.5
11	MP1A	Z	-35.524	3.5
12	MP1A	Mx	-.032	3.5
13	MP4A	X	-15.289	.5
14	MP4A	Z	-26.481	.5
15	MP4A	Mx	.027	.5
16	MP4A	X	-15.289	3.5
17	MP4A	Z	-26.481	3.5
18	MP4A	Mx	.027	3.5
19	MP4A	X	-15.289	.5
20	MP4A	Z	-26.481	.5
21	MP4A	Mx	-.002	.5
22	MP4A	X	-15.289	3.5
23	MP4A	Z	-26.481	3.5
24	MP4A	Mx	-.002	3.5
25	MP3A	X	-7.016	1
26	MP3A	Z	-12.151	1
27	MP3A	Mx	.004	1
28	MP3A	X	-7.016	3
29	MP3A	Z	-12.151	3
30	MP3A	Mx	.004	3
31	MP1A	X	-6.892	2
32	MP1A	Z	-11.937	2
33	MP1A	Mx	-.000601	2

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
34	MP2A	X	-6.288	3.5
35	MP2A	Z	-10.892	3.5
36	MP2A	Mx	-.003	3.5
37	MP2A	X	-2.562	.5
38	MP2A	Z	-4.438	.5
39	MP2A	Mx	.001	.5
40	MP2A	X	-2.562	3.5
41	MP2A	Z	-4.438	3.5
42	MP2A	Mx	.001	3.5
43	OVP	X	-6.908	.15
44	OVP	Z	-11.965	.15
45	OVP	Mx	0	.15
46	MP3A	X	-6.183	3.5
47	MP3A	Z	-10.71	3.5
48	MP3A	Mx	-.003	3.5
49	MP4A	X	-2.118	3
50	MP4A	Z	-3.669	3
51	MP4A	Mx	-.002	3
52	MP4A	X	-2.118	3
53	MP4A	Z	-3.669	3
54	MP4A	Mx	-.000447	3

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	0	.5
2	MP1A	Z	-12.745	.5
3	MP1A	Mx	.007	.5
4	MP1A	X	0	3.5
5	MP1A	Z	-12.745	3.5
6	MP1A	Mx	.007	3.5
7	MP1A	X	0	.5
8	MP1A	Z	-12.745	.5
9	MP1A	Mx	-.012	.5
10	MP1A	X	0	3.5
11	MP1A	Z	-12.745	3.5
12	MP1A	Mx	-.012	3.5
13	MP4A	X	0	.5
14	MP4A	Z	-12.745	.5
15	MP4A	Mx	.012	.5
16	MP4A	X	0	3.5
17	MP4A	Z	-12.745	3.5
18	MP4A	Mx	.012	3.5
19	MP4A	X	0	.5
20	MP4A	Z	-12.745	.5
21	MP4A	Mx	-.007	.5
22	MP4A	X	0	3.5
23	MP4A	Z	-12.745	3.5
24	MP4A	Mx	-.007	3.5
25	MP3A	X	0	1
26	MP3A	Z	-5.211	1
27	MP3A	Mx	0	1
28	MP3A	X	0	3
29	MP3A	Z	-5.211	3
30	MP3A	Mx	0	3
31	MP1A	X	0	2
32	MP1A	Z	-3.901	2
33	MP1A	Mx	.000824	2
34	MP2A	X	0	3.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
35	MP2A	Z	-4.147	3.5
36	MP2A	Mx	0	3.5
37	MP2A	X	0	.5
38	MP2A	Z	-1.696	.5
39	MP2A	Mx	0	.5
40	MP2A	X	0	3.5
41	MP2A	Z	-1.696	3.5
42	MP2A	Mx	0	3.5
43	OVP	X	0	.15
44	OVP	Z	-3.803	.15
45	OVP	Mx	0	.15
46	MP3A	X	0	3.5
47	MP3A	Z	-4.147	3.5
48	MP3A	Mx	0	3.5
49	MP4A	X	0	3
50	MP4A	Z	-2.129	3
51	MP4A	Mx	-.000355	3
52	MP4A	X	0	3
53	MP4A	Z	-2.129	3
54	MP4A	Mx	.000355	3

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	5.02	.5
2	MP1A	Z	-8.695	.5
3	MP1A	Mx	.000687	.5
4	MP1A	X	5.02	3.5
5	MP1A	Z	-8.695	3.5
6	MP1A	Mx	.000687	3.5
7	MP1A	X	5.02	.5
8	MP1A	Z	-8.695	.5
9	MP1A	Mx	-.009	.5
10	MP1A	X	5.02	3.5
11	MP1A	Z	-8.695	3.5
12	MP1A	Mx	-.009	3.5
13	MP4A	X	6.842	.5
14	MP4A	Z	-11.851	.5
15	MP4A	Mx	.011	.5
16	MP4A	X	6.842	3.5
17	MP4A	Z	-11.851	3.5
18	MP4A	Mx	.011	3.5
19	MP4A	X	6.842	.5
20	MP4A	Z	-11.851	.5
21	MP4A	Mx	-.012	.5
22	MP4A	X	6.842	3.5
23	MP4A	Z	-11.851	3.5
24	MP4A	Mx	-.012	3.5
25	MP3A	X	2.209	1
26	MP3A	Z	-3.826	1
27	MP3A	Mx	-.001	1
28	MP3A	X	2.209	3
29	MP3A	Z	-3.826	3
30	MP3A	Mx	-.001	3
31	MP1A	X	1.612	2
32	MP1A	Z	-2.792	2
33	MP1A	Mx	.001	2
34	MP2A	X	1.87	3.5
35	MP2A	Z	-3.239	3.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
36	MP2A	Mx	.000935	3.5
37	MP2A	X	.741	.5
38	MP2A	Z	-1.283	.5
39	MP2A	Mx	-.00037	.5
40	MP2A	X	.741	3.5
41	MP2A	Z	-1.283	3.5
42	MP2A	Mx	-.00037	3.5
43	OVP	X	1.558	.15
44	OVP	Z	-2.698	.15
45	OVP	Mx	0	.15
46	MP3A	X	1.836	3.5
47	MP3A	Z	-3.179	3.5
48	MP3A	Mx	.000918	3.5
49	MP4A	X	1.065	3
50	MP4A	Z	-1.845	3
51	MP4A	Mx	.000225	3
52	MP4A	X	1.065	3
53	MP4A	Z	-1.845	3
54	MP4A	Mx	.00084	3

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	7.166	.5
2	MP1A	Z	-4.137	.5
3	MP1A	Mx	-.004	.5
4	MP1A	X	7.166	3.5
5	MP1A	Z	-4.137	3.5
6	MP1A	Mx	-.004	3.5
7	MP1A	X	7.166	.5
8	MP1A	Z	-4.137	.5
9	MP1A	Mx	-.005	.5
10	MP1A	X	7.166	3.5
11	MP1A	Z	-4.137	3.5
12	MP1A	Mx	-.005	3.5
13	MP4A	X	10.322	.5
14	MP4A	Z	-5.959	.5
15	MP4A	Mx	.005	.5
16	MP4A	X	10.322	3.5
17	MP4A	Z	-5.959	3.5
18	MP4A	Mx	.005	3.5
19	MP4A	X	10.322	.5
20	MP4A	Z	-5.959	.5
21	MP4A	Mx	-.012	.5
22	MP4A	X	10.322	3.5
23	MP4A	Z	-5.959	3.5
24	MP4A	Mx	-.012	3.5
25	MP3A	X	2.453	1
26	MP3A	Z	-1.416	1
27	MP3A	Mx	-.001	1
28	MP3A	X	2.453	3
29	MP3A	Z	-1.416	3
30	MP3A	Mx	-.001	3
31	MP1A	X	2.41	2
32	MP1A	Z	-1.391	2
33	MP1A	Mx	.001	2
34	MP2A	X	2.536	3.5
35	MP2A	Z	-1.464	3.5
36	MP2A	Mx	.001	3.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
37	MP2A	X	.911	.5
38	MP2A	Z	-.526	.5
39	MP2A	Mx	-.000456	.5
40	MP2A	X	.911	3.5
41	MP2A	Z	-.526	3.5
42	MP2A	Mx	-.000456	3.5
43	OVP	X	2.4	.15
44	OVP	Z	-1.386	.15
45	OVP	Mx	0	.15
46	MP3A	X	2.356	3.5
47	MP3A	Z	-1.36	3.5
48	MP3A	Mx	.001	3.5
49	MP4A	X	1.848	3
50	MP4A	Z	-1.067	3
51	MP4A	Mx	.000746	3
52	MP4A	X	1.848	3
53	MP4A	Z	-1.067	3
54	MP4A	Mx	.001	3

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	9.214	.5
2	MP1A	Z	0	.5
3	MP1A	Mx	-.007	.5
4	MP1A	X	9.214	3.5
5	MP1A	Z	0	3.5
6	MP1A	Mx	-.007	3.5
7	MP1A	X	9.214	.5
8	MP1A	Z	0	.5
9	MP1A	Mx	-.00093	.5
10	MP1A	X	9.214	3.5
11	MP1A	Z	0	3.5
12	MP1A	Mx	-.00093	3.5
13	MP4A	X	9.214	.5
14	MP4A	Z	0	.5
15	MP4A	Mx	-.00093	.5
16	MP4A	X	9.214	3.5
17	MP4A	Z	0	3.5
18	MP4A	Mx	-.00093	3.5
19	MP4A	X	9.214	.5
20	MP4A	Z	0	.5
21	MP4A	Mx	-.007	.5
22	MP4A	X	9.214	3.5
23	MP4A	Z	0	3.5
24	MP4A	Mx	-.007	3.5
25	MP3A	X	2.04	1
26	MP3A	Z	0	1
27	MP3A	Mx	-.001	1
28	MP3A	X	2.04	3
29	MP3A	Z	0	3
30	MP3A	Mx	-.001	3
31	MP1A	X	3.017	2
32	MP1A	Z	0	2
33	MP1A	Mx	.001	2
34	MP2A	X	2.522	3.5
35	MP2A	Z	0	3.5
36	MP2A	Mx	.001	3.5
37	MP2A	X	.837	.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
38	MP2A	Z	0	.5
39	MP2A	Mx	-.000419	.5
40	MP2A	X	.837	3.5
41	MP2A	Z	0	3.5
42	MP2A	Mx	-.000419	3.5
43	OVP	X	3.116	.15
44	OVP	Z	0	.15
45	OVP	Mx	0	.15
46	MP3A	X	2.245	3.5
47	MP3A	Z	0	3.5
48	MP3A	Mx	.001	3.5
49	MP4A	X	2.135	3
50	MP4A	Z	0	3
51	MP4A	Mx	.001	3
52	MP4A	X	2.135	3
53	MP4A	Z	0	3
54	MP4A	Mx	.001	3

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	10.322	.5
2	MP1A	Z	5.959	.5
3	MP1A	Mx	-.012	.5
4	MP1A	X	10.322	3.5
5	MP1A	Z	5.959	3.5
6	MP1A	Mx	-.012	3.5
7	MP1A	X	10.322	.5
8	MP1A	Z	5.959	.5
9	MP1A	Mx	.005	.5
10	MP1A	X	10.322	3.5
11	MP1A	Z	5.959	3.5
12	MP1A	Mx	.005	3.5
13	MP4A	X	7.166	.5
14	MP4A	Z	4.137	.5
15	MP4A	Mx	-.005	.5
16	MP4A	X	7.166	3.5
17	MP4A	Z	4.137	3.5
18	MP4A	Mx	-.005	3.5
19	MP4A	X	7.166	.5
20	MP4A	Z	4.137	.5
21	MP4A	Mx	-.004	.5
22	MP4A	X	7.166	3.5
23	MP4A	Z	4.137	3.5
24	MP4A	Mx	-.004	3.5
25	MP3A	X	2.453	1
26	MP3A	Z	1.416	1
27	MP3A	Mx	-.001	1
28	MP3A	X	2.453	3
29	MP3A	Z	1.416	3
30	MP3A	Mx	-.001	3
31	MP1A	X	3.199	2
32	MP1A	Z	1.847	2
33	MP1A	Mx	.001	2
34	MP2A	X	2.536	3.5
35	MP2A	Z	1.464	3.5
36	MP2A	Mx	.001	3.5
37	MP2A	X	.911	.5
38	MP2A	Z	.526	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
39	MP2A	Mx	-.000456	.5
40	MP2A	X	.911	3.5
41	MP2A	Z	.526	3.5
42	MP2A	Mx	-.000456	3.5
43	OVP	X	3.293	.15
44	OVP	Z	1.901	.15
45	OVP	Mx	0	.15
46	MP3A	X	2.356	3.5
47	MP3A	Z	1.36	3.5
48	MP3A	Mx	.001	3.5
49	MP4A	X	1.848	3
50	MP4A	Z	1.067	3
51	MP4A	Mx	.001	3
52	MP4A	X	1.848	3
53	MP4A	Z	1.067	3
54	MP4A	Mx	.000746	3

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	6.842	.5
2	MP1A	Z	11.851	.5
3	MP1A	Mx	-.012	.5
4	MP1A	X	6.842	3.5
5	MP1A	Z	11.851	3.5
6	MP1A	Mx	-.012	3.5
7	MP1A	X	6.842	.5
8	MP1A	Z	11.851	.5
9	MP1A	Mx	.011	.5
10	MP1A	X	6.842	3.5
11	MP1A	Z	11.851	3.5
12	MP1A	Mx	.011	3.5
13	MP4A	X	5.02	.5
14	MP4A	Z	8.695	.5
15	MP4A	Mx	-.009	.5
16	MP4A	X	5.02	3.5
17	MP4A	Z	8.695	3.5
18	MP4A	Mx	-.009	3.5
19	MP4A	X	5.02	.5
20	MP4A	Z	8.695	.5
21	MP4A	Mx	.000687	.5
22	MP4A	X	5.02	3.5
23	MP4A	Z	8.695	3.5
24	MP4A	Mx	.000687	3.5
25	MP3A	X	2.209	1
26	MP3A	Z	3.826	1
27	MP3A	Mx	-.001	1
28	MP3A	X	2.209	3
29	MP3A	Z	3.826	3
30	MP3A	Mx	-.001	3
31	MP1A	X	2.068	2
32	MP1A	Z	3.582	2
33	MP1A	Mx	.00018	2
34	MP2A	X	1.87	3.5
35	MP2A	Z	3.239	3.5
36	MP2A	Mx	.000935	3.5
37	MP2A	X	.741	.5
38	MP2A	Z	1.283	.5
39	MP2A	Mx	-.00037	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
40	MP2A	X	.741	3.5
41	MP2A	Z	1.283	3.5
42	MP2A	Mx	-.00037	3.5
43	OVP	X	2.073	.15
44	OVP	Z	3.591	.15
45	OVP	Mx	0	.15
46	MP3A	X	1.836	3.5
47	MP3A	Z	3.179	3.5
48	MP3A	Mx	.000918	3.5
49	MP4A	X	1.065	3
50	MP4A	Z	1.845	3
51	MP4A	Mx	.00084	3
52	MP4A	X	1.065	3
53	MP4A	Z	1.845	3
54	MP4A	Mx	.000225	3

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	0	.5
2	MP1A	Z	12.745	.5
3	MP1A	Mx	-.007	.5
4	MP1A	X	0	3.5
5	MP1A	Z	12.745	3.5
6	MP1A	Mx	-.007	3.5
7	MP1A	X	0	.5
8	MP1A	Z	12.745	.5
9	MP1A	Mx	.012	.5
10	MP1A	X	0	3.5
11	MP1A	Z	12.745	3.5
12	MP1A	Mx	.012	3.5
13	MP4A	X	0	.5
14	MP4A	Z	12.745	.5
15	MP4A	Mx	-.012	.5
16	MP4A	X	0	3.5
17	MP4A	Z	12.745	3.5
18	MP4A	Mx	-.012	3.5
19	MP4A	X	0	.5
20	MP4A	Z	12.745	.5
21	MP4A	Mx	.007	.5
22	MP4A	X	0	3.5
23	MP4A	Z	12.745	3.5
24	MP4A	Mx	.007	3.5
25	MP3A	X	0	1
26	MP3A	Z	5.211	1
27	MP3A	Mx	0	1
28	MP3A	X	0	3
29	MP3A	Z	5.211	3
30	MP3A	Mx	0	3
31	MP1A	X	0	2
32	MP1A	Z	3.901	2
33	MP1A	Mx	-.000824	2
34	MP2A	X	0	3.5
35	MP2A	Z	4.147	3.5
36	MP2A	Mx	0	3.5
37	MP2A	X	0	.5
38	MP2A	Z	1.696	.5
39	MP2A	Mx	0	.5
40	MP2A	X	0	3.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
41	MP2A	Z	1.696	3.5
42	MP2A	Mx	0	3.5
43	OVP	X	0	.15
44	OVP	Z	3.803	.15
45	OVP	Mx	0	.15
46	MP3A	X	0	3.5
47	MP3A	Z	4.147	3.5
48	MP3A	Mx	0	3.5
49	MP4A	X	0	3
50	MP4A	Z	2.129	3
51	MP4A	Mx	.000355	3
52	MP4A	X	0	3
53	MP4A	Z	2.129	3
54	MP4A	Mx	-.000355	3

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-5.02	.5
2	MP1A	Z	8.695	.5
3	MP1A	Mx	-.000687	.5
4	MP1A	X	-5.02	3.5
5	MP1A	Z	8.695	3.5
6	MP1A	Mx	-.000687	3.5
7	MP1A	X	-5.02	.5
8	MP1A	Z	8.695	.5
9	MP1A	Mx	.009	.5
10	MP1A	X	-5.02	3.5
11	MP1A	Z	8.695	3.5
12	MP1A	Mx	.009	3.5
13	MP4A	X	-6.842	.5
14	MP4A	Z	11.851	.5
15	MP4A	Mx	-.011	.5
16	MP4A	X	-6.842	3.5
17	MP4A	Z	11.851	3.5
18	MP4A	Mx	-.011	3.5
19	MP4A	X	-6.842	.5
20	MP4A	Z	11.851	.5
21	MP4A	Mx	.012	.5
22	MP4A	X	-6.842	3.5
23	MP4A	Z	11.851	3.5
24	MP4A	Mx	.012	3.5
25	MP3A	X	-2.209	1
26	MP3A	Z	3.826	1
27	MP3A	Mx	.001	1
28	MP3A	X	-2.209	3
29	MP3A	Z	3.826	3
30	MP3A	Mx	.001	3
31	MP1A	X	-1.612	2
32	MP1A	Z	2.792	2
33	MP1A	Mx	-.001	2
34	MP2A	X	-1.87	3.5
35	MP2A	Z	3.239	3.5
36	MP2A	Mx	-.000935	3.5
37	MP2A	X	-.741	.5
38	MP2A	Z	1.283	.5
39	MP2A	Mx	.00037	.5
40	MP2A	X	-.741	3.5
41	MP2A	Z	1.283	3.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
42	MP2A	Mx	.00037	3.5
43	OVP	X	-1.558	.15
44	OVP	Z	2.698	.15
45	OVP	Mx	0	.15
46	MP3A	X	-1.836	3.5
47	MP3A	Z	3.179	3.5
48	MP3A	Mx	-.000918	3.5
49	MP4A	X	-1.065	3
50	MP4A	Z	1.845	3
51	MP4A	Mx	-.000225	3
52	MP4A	X	-1.065	3
53	MP4A	Z	1.845	3
54	MP4A	Mx	-.00084	3

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-7.166	.5
2	MP1A	Z	4.137	.5
3	MP1A	Mx	.004	.5
4	MP1A	X	-7.166	3.5
5	MP1A	Z	4.137	3.5
6	MP1A	Mx	.004	3.5
7	MP1A	X	-7.166	.5
8	MP1A	Z	4.137	.5
9	MP1A	Mx	.005	.5
10	MP1A	X	-7.166	3.5
11	MP1A	Z	4.137	3.5
12	MP1A	Mx	.005	3.5
13	MP4A	X	-10.322	.5
14	MP4A	Z	5.959	.5
15	MP4A	Mx	-.005	.5
16	MP4A	X	-10.322	3.5
17	MP4A	Z	5.959	3.5
18	MP4A	Mx	-.005	3.5
19	MP4A	X	-10.322	.5
20	MP4A	Z	5.959	.5
21	MP4A	Mx	.012	.5
22	MP4A	X	-10.322	3.5
23	MP4A	Z	5.959	3.5
24	MP4A	Mx	.012	3.5
25	MP3A	X	-2.453	1
26	MP3A	Z	1.416	1
27	MP3A	Mx	.001	1
28	MP3A	X	-2.453	3
29	MP3A	Z	1.416	3
30	MP3A	Mx	.001	3
31	MP1A	X	-2.41	2
32	MP1A	Z	1.391	2
33	MP1A	Mx	-.001	2
34	MP2A	X	-2.536	3.5
35	MP2A	Z	1.464	3.5
36	MP2A	Mx	-.001	3.5
37	MP2A	X	-.911	.5
38	MP2A	Z	.526	.5
39	MP2A	Mx	.000456	.5
40	MP2A	X	-.911	3.5
41	MP2A	Z	.526	3.5
42	MP2A	Mx	.000456	3.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
43	OVP	X	-2.4	.15
44	OVP	Z	1.386	.15
45	OVP	Mx	0	.15
46	MP3A	X	-2.356	3.5
47	MP3A	Z	1.36	3.5
48	MP3A	Mx	-.001	3.5
49	MP4A	X	-1.848	3
50	MP4A	Z	1.067	3
51	MP4A	Mx	-.000746	3
52	MP4A	X	-1.848	3
53	MP4A	Z	1.067	3
54	MP4A	Mx	-.001	3

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-9.214	.5
2	MP1A	Z	0	.5
3	MP1A	Mx	.007	.5
4	MP1A	X	-9.214	3.5
5	MP1A	Z	0	3.5
6	MP1A	Mx	.007	3.5
7	MP1A	X	-9.214	.5
8	MP1A	Z	0	.5
9	MP1A	Mx	.00093	.5
10	MP1A	X	-9.214	3.5
11	MP1A	Z	0	3.5
12	MP1A	Mx	.00093	3.5
13	MP4A	X	-9.214	.5
14	MP4A	Z	0	.5
15	MP4A	Mx	.00093	.5
16	MP4A	X	-9.214	3.5
17	MP4A	Z	0	3.5
18	MP4A	Mx	.00093	3.5
19	MP4A	X	-9.214	.5
20	MP4A	Z	0	.5
21	MP4A	Mx	.007	.5
22	MP4A	X	-9.214	3.5
23	MP4A	Z	0	3.5
24	MP4A	Mx	.007	3.5
25	MP3A	X	-2.04	1
26	MP3A	Z	0	1
27	MP3A	Mx	.001	1
28	MP3A	X	-2.04	3
29	MP3A	Z	0	3
30	MP3A	Mx	.001	3
31	MP1A	X	-3.017	2
32	MP1A	Z	0	2
33	MP1A	Mx	-.001	2
34	MP2A	X	-2.522	3.5
35	MP2A	Z	0	3.5
36	MP2A	Mx	-.001	3.5
37	MP2A	X	-.837	.5
38	MP2A	Z	0	.5
39	MP2A	Mx	.000419	.5
40	MP2A	X	-.837	3.5
41	MP2A	Z	0	3.5
42	MP2A	Mx	.000419	3.5
43	OVP	X	-3.116	.15



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
44	OVP	Z	0	.15
45	OVP	Mx	0	.15
46	MP3A	X	-2.245	3.5
47	MP3A	Z	0	3.5
48	MP3A	Mx	-.001	3.5
49	MP4A	X	-2.135	3
50	MP4A	Z	0	3
51	MP4A	Mx	-.001	3
52	MP4A	X	-2.135	3
53	MP4A	Z	0	3
54	MP4A	Mx	-.001	3

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-10.322	.5
2	MP1A	Z	-5.959	.5
3	MP1A	Mx	.012	.5
4	MP1A	X	-10.322	3.5
5	MP1A	Z	-5.959	3.5
6	MP1A	Mx	.012	3.5
7	MP1A	X	-10.322	.5
8	MP1A	Z	-5.959	.5
9	MP1A	Mx	-.005	.5
10	MP1A	X	-10.322	3.5
11	MP1A	Z	-5.959	3.5
12	MP1A	Mx	-.005	3.5
13	MP4A	X	-7.166	.5
14	MP4A	Z	-4.137	.5
15	MP4A	Mx	.005	.5
16	MP4A	X	-7.166	3.5
17	MP4A	Z	-4.137	3.5
18	MP4A	Mx	.005	3.5
19	MP4A	X	-7.166	.5
20	MP4A	Z	-4.137	.5
21	MP4A	Mx	.004	.5
22	MP4A	X	-7.166	3.5
23	MP4A	Z	-4.137	3.5
24	MP4A	Mx	.004	3.5
25	MP3A	X	-2.453	1
26	MP3A	Z	-1.416	1
27	MP3A	Mx	.001	1
28	MP3A	X	-2.453	3
29	MP3A	Z	-1.416	3
30	MP3A	Mx	.001	3
31	MP1A	X	-3.199	2
32	MP1A	Z	-1.847	2
33	MP1A	Mx	-.001	2
34	MP2A	X	-2.536	3.5
35	MP2A	Z	-1.464	3.5
36	MP2A	Mx	-.001	3.5
37	MP2A	X	-.911	.5
38	MP2A	Z	-.526	.5
39	MP2A	Mx	.000456	.5
40	MP2A	X	-.911	3.5
41	MP2A	Z	-.526	3.5
42	MP2A	Mx	.000456	3.5
43	OVP	X	-3.293	.15
44	OVP	Z	-1.901	.15

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
45	OVP	Mx	0	.15
46	MP3A	X	-2.356	3.5
47	MP3A	Z	-1.36	3.5
48	MP3A	Mx	-.001	3.5
49	MP4A	X	-1.848	3
50	MP4A	Z	-1.067	3
51	MP4A	Mx	-.001	3
52	MP4A	X	-1.848	3
53	MP4A	Z	-1.067	3
54	MP4A	Mx	-.000746	3

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-6.842	.5
2	MP1A	Z	-11.851	.5
3	MP1A	Mx	.012	.5
4	MP1A	X	-6.842	3.5
5	MP1A	Z	-11.851	3.5
6	MP1A	Mx	.012	3.5
7	MP1A	X	-6.842	.5
8	MP1A	Z	-11.851	.5
9	MP1A	Mx	-.011	.5
10	MP1A	X	-6.842	3.5
11	MP1A	Z	-11.851	3.5
12	MP1A	Mx	-.011	3.5
13	MP4A	X	-5.02	.5
14	MP4A	Z	-8.695	.5
15	MP4A	Mx	.009	.5
16	MP4A	X	-5.02	3.5
17	MP4A	Z	-8.695	3.5
18	MP4A	Mx	.009	3.5
19	MP4A	X	-5.02	.5
20	MP4A	Z	-8.695	.5
21	MP4A	Mx	-.000687	.5
22	MP4A	X	-5.02	3.5
23	MP4A	Z	-8.695	3.5
24	MP4A	Mx	-.000687	3.5
25	MP3A	X	-2.209	1
26	MP3A	Z	-3.826	1
27	MP3A	Mx	.001	1
28	MP3A	X	-2.209	3
29	MP3A	Z	-3.826	3
30	MP3A	Mx	.001	3
31	MP1A	X	-2.068	2
32	MP1A	Z	-3.582	2
33	MP1A	Mx	-.00018	2
34	MP2A	X	-1.87	3.5
35	MP2A	Z	-3.239	3.5
36	MP2A	Mx	-.000935	3.5
37	MP2A	X	-.741	.5
38	MP2A	Z	-1.283	.5
39	MP2A	Mx	.00037	.5
40	MP2A	X	-.741	3.5
41	MP2A	Z	-1.283	3.5
42	MP2A	Mx	.00037	3.5
43	OVP	X	-2.073	.15
44	OVP	Z	-3.591	.15
45	OVP	Mx	0	.15

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
46	MP3A	X	-1.836	3.5
47	MP3A	Z	-3.179	3.5
48	MP3A	Mx	-.000918	3.5
49	MP4A	X	-1.065	3
50	MP4A	Z	-1.845	3
51	MP4A	Mx	-.00084	3
52	MP4A	X	-1.065	3
53	MP4A	Z	-1.845	3
54	MP4A	Mx	-.000225	3

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	M10	Y	-500	%96

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	M10	Y	-500	%4

Member Point Loads (BLC 79 : Lv1)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	M10	Y	-250	%50

Member Point Loads (BLC 80 : Lv2)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	M10	Y	-250	0

Member Point Loads (BLC 81 : Antenna Ev)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	Y	-2.116	.5
2	MP1A	My	-.002	.5
3	MP1A	Mz	-.001	.5
4	MP1A	Y	-2.116	3.5
5	MP1A	My	-.002	3.5
6	MP1A	Mz	-.001	3.5
7	MP1A	Y	-2.116	.5
8	MP1A	My	-.000214	.5
9	MP1A	Mz	.002	.5
10	MP1A	Y	-2.116	3.5
11	MP1A	My	-.000214	3.5
12	MP1A	Mz	.002	3.5
13	MP4A	Y	-2.116	.5
14	MP4A	My	-.000214	.5
15	MP4A	Mz	-.002	.5
16	MP4A	Y	-2.116	3.5
17	MP4A	My	-.000214	3.5
18	MP4A	Mz	-.002	3.5
19	MP4A	Y	-2.116	.5
20	MP4A	My	-.002	.5
21	MP4A	Mz	.001	.5
22	MP4A	Y	-2.116	3.5
23	MP4A	My	-.002	3.5
24	MP4A	Mz	.001	3.5
25	MP3A	Y	-2.118	1
26	MP3A	My	-.001	1
27	MP3A	Mz	0	1
28	MP3A	Y	-2.118	3

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
29	MP3A	My	-.001	3
30	MP3A	Mz	0	3
31	MP1A	Y	-3.633	2
32	MP1A	My	.002	2
33	MP1A	Mz	-.000768	2
34	MP2A	Y	-3.419	3.5
35	MP2A	My	.002	3.5
36	MP2A	Mz	0	3.5
37	MP2A	Y	-.564	.5
38	MP2A	My	-.000282	.5
39	MP2A	Mz	0	.5
40	MP2A	Y	-.564	3.5
41	MP2A	My	-.000282	3.5
42	MP2A	Mz	0	3.5
43	OVP	Y	-4.105	.15
44	OVP	My	0	.15
45	OVP	Mz	0	.15
46	MP3A	Y	-3.419	3.5
47	MP3A	My	.002	3.5
48	MP3A	Mz	0	3.5
49	MP4A	Y	-.856	3
50	MP4A	My	.000428	3
51	MP4A	Mz	.000143	3
52	MP4A	Y	-.856	3
53	MP4A	My	.000428	3
54	MP4A	Mz	-.000143	3

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	Z	-5.29	.5
2	MP1A	Mx	.003	.5
3	MP1A	Z	-5.29	3.5
4	MP1A	Mx	.003	3.5
5	MP1A	Z	-5.29	.5
6	MP1A	Mx	-.005	.5
7	MP1A	Z	-5.29	3.5
8	MP1A	Mx	-.005	3.5
9	MP4A	Z	-5.29	.5
10	MP4A	Mx	.005	.5
11	MP4A	Z	-5.29	3.5
12	MP4A	Mx	.005	3.5
13	MP4A	Z	-5.29	.5
14	MP4A	Mx	-.003	.5
15	MP4A	Z	-5.29	3.5
16	MP4A	Mx	-.003	3.5
17	MP3A	Z	-5.296	1
18	MP3A	Mx	0	1
19	MP3A	Z	-5.296	3
20	MP3A	Mx	0	3
21	MP1A	Z	-9.084	2
22	MP1A	Mx	.002	2
23	MP2A	Z	-8.548	3.5
24	MP2A	Mx	0	3.5
25	MP2A	Z	-1.411	.5
26	MP2A	Mx	0	.5
27	MP2A	Z	-1.411	3.5
28	MP2A	Mx	0	3.5
29	OVP	Z	-10.263	.15

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
30	OVP	Mx	0	.15
31	MP3A	Z	-8.548	3.5
32	MP3A	Mx	0	3.5
33	MP4A	Z	-2.14	3
34	MP4A	Mx	-.000357	3
35	MP4A	Z	-2.14	3
36	MP4A	Mx	.000357	3

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	5.29	.5
2	MP1A	Mx	-.004	.5
3	MP1A	X	5.29	3.5
4	MP1A	Mx	-.004	3.5
5	MP1A	X	5.29	.5
6	MP1A	Mx	-.000534	.5
7	MP1A	X	5.29	3.5
8	MP1A	Mx	-.000534	3.5
9	MP4A	X	5.29	.5
10	MP4A	Mx	-.000534	.5
11	MP4A	X	5.29	3.5
12	MP4A	Mx	-.000534	3.5
13	MP4A	X	5.29	.5
14	MP4A	Mx	-.004	.5
15	MP4A	X	5.29	3.5
16	MP4A	Mx	-.004	3.5
17	MP3A	X	5.296	1
18	MP3A	Mx	-.003	1
19	MP3A	X	5.296	3
20	MP3A	Mx	-.003	3
21	MP1A	X	9.084	2
22	MP1A	Mx	.004	2
23	MP2A	X	8.548	3.5
24	MP2A	Mx	.004	3.5
25	MP2A	X	1.411	.5
26	MP2A	Mx	-.000705	.5
27	MP2A	X	1.411	3.5
28	MP2A	Mx	-.000705	3.5
29	OVP	X	10.263	.15
30	OVP	Mx	0	.15
31	MP3A	X	8.548	3.5
32	MP3A	Mx	.004	3.5
33	MP4A	X	2.14	3
34	MP4A	Mx	.001	3
35	MP4A	X	2.14	3
36	MP4A	Mx	.001	3

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	-8.822	-8.822	0	%100
2	M3	Y	-8.822	-8.822	0	%100
3	M5	Y	-5.996	-5.996	0	%100
4	M6	Y	-5.996	-5.996	0	%100
5	M7	Y	-5.784	-5.784	0	%100
6	M8	Y	-5.996	-5.996	0	%100
7	M9	Y	-5.996	-5.996	0	%100
8	M10	Y	-5.784	-5.784	0	%100

Member Distributed Loads (BLC 40 : Structure Di) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
9	M11	Y	-5.069	-5.069	0	%100
10	M12	Y	-5.069	-5.069	0	%100
11	M13	Y	-5.069	-5.069	0	%100
12	M14	Y	-5.069	-5.069	0	%100
13	M15	Y	-5.996	-5.996	0	%100
14	M16	Y	-4.39	-4.39	0	%100
15	M17	Y	-5.996	-5.996	0	%100
16	M18	Y	-4.39	-4.39	0	%100
17	M19	Y	-5.996	-5.996	0	%100
18	M20	Y	-5.996	-5.996	0	%100
19	M21	Y	-5.996	-5.996	0	%100
20	M22	Y	-4.39	-4.39	0	%100
21	M23	Y	-4.39	-4.39	0	%100
22	M24	Y	-5.069	-5.069	0	%100
23	M25	Y	-5.996	-5.996	0	%100
24	M26	Y	-5.996	-5.996	0	%100
25	M27	Y	-4.39	-4.39	0	%100
26	M28	Y	-5.996	-5.996	0	%100
27	M29	Y	-4.39	-4.39	0	%100
28	M30	Y	-5.996	-5.996	0	%100
29	M31	Y	-5.996	-5.996	0	%100
30	M32	Y	-5.996	-5.996	0	%100
31	M33	Y	-4.39	-4.39	0	%100
32	M34	Y	-4.39	-4.39	0	%100
33	M35	Y	-5.069	-5.069	0	%100
34	M36	Y	-5.996	-5.996	0	%100
35	MP4A	Y	-5.069	-5.069	0	%100
36	MP3A	Y	-5.069	-5.069	0	%100
37	MP2A	Y	-5.069	-5.069	0	%100
38	MP1A	Y	-5.069	-5.069	0	%100
39	EQUIP	Y	-6.728	-6.728	0	%100
40	M51	Y	-6.728	-6.728	0	%100
41	M55A	Y	-5.069	-5.069	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	0	0	0	%100
2	M1	Z	-10.292	-10.292	0	%100
3	M3	X	0	0	0	%100
4	M3	Z	-10.292	-10.292	0	%100
5	M5	X	0	0	0	%100
6	M5	Z	-6.31	-6.31	0	%100
7	M6	X	0	0	0	%100
8	M6	Z	-6.31	-6.31	0	%100
9	M7	X	0	0	0	%100
10	M7	Z	-9.863	-9.863	0	%100
11	M8	X	0	0	0	%100
12	M8	Z	-4.36	-4.36	0	%100
13	M9	X	0	0	0	%100
14	M9	Z	-7.51	-7.51	0	%100
15	M10	X	0	0	0	%100
16	M10	Z	-9.863	-9.863	0	%100
17	M11	X	0	0	0	%100
18	M11	Z	-3.996	-3.996	0	%100
19	M12	X	0	0	0	%100
20	M12	Z	-3.996	-3.996	0	%100
21	M13	X	0	0	0	%100
22	M13	Z	-3.996	-3.996	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
23	M14	X	0	0	0	%100
24	M14	Z	-3.996	-3.996	0	%100
25	M15	X	0	0	0	%100
26	M15	Z	-1.358	-1.358	0	%100
27	M16	X	0	0	0	%100
28	M16	Z	-5.411	-5.411	0	%100
29	M17	X	0	0	0	%100
30	M17	Z	-1.358	-1.358	0	%100
31	M18	X	0	0	0	%100
32	M18	Z	-5.411	-5.411	0	%100
33	M19	X	0	0	0	%100
34	M19	Z	-1.823	-1.823	0	%100
35	M20	X	0	0	0	%100
36	M20	Z	-1.358	-1.358	0	%100
37	M21	X	0	0	0	%100
38	M21	Z	-1.358	-1.358	0	%100
39	M22	X	0	0	0	%100
40	M22	Z	-5.915	-5.915	0	%100
41	M23	X	0	0	0	%100
42	M23	Z	-5.915	-5.915	0	%100
43	M24	X	0	0	0	%100
44	M24	Z	-6.218	-6.218	0	%100
45	M25	X	0	0	0	%100
46	M25	Z	-1.823	-1.823	0	%100
47	M26	X	0	0	0	%100
48	M26	Z	-1.358	-1.358	0	%100
49	M27	X	0	0	0	%100
50	M27	Z	-5.411	-5.411	0	%100
51	M28	X	0	0	0	%100
52	M28	Z	-1.358	-1.358	0	%100
53	M29	X	0	0	0	%100
54	M29	Z	-5.411	-5.411	0	%100
55	M30	X	0	0	0	%100
56	M30	Z	-1.823	-1.823	0	%100
57	M31	X	0	0	0	%100
58	M31	Z	-1.358	-1.358	0	%100
59	M32	X	0	0	0	%100
60	M32	Z	-1.358	-1.358	0	%100
61	M33	X	0	0	0	%100
62	M33	Z	-5.915	-5.915	0	%100
63	M34	X	0	0	0	%100
64	M34	Z	-5.915	-5.915	0	%100
65	M35	X	0	0	0	%100
66	M35	Z	-6.218	-6.218	0	%100
67	M36	X	0	0	0	%100
68	M36	Z	-1.823	-1.823	0	%100
69	MP4A	X	0	0	0	%100
70	MP4A	Z	-8.148	-8.148	0	%100
71	MP3A	X	0	0	0	%100
72	MP3A	Z	-8.148	-8.148	0	%100
73	MP2A	X	0	0	0	%100
74	MP2A	Z	-8.148	-8.148	0	%100
75	MP1A	X	0	0	0	%100
76	MP1A	Z	-8.148	-8.148	0	%100
77	EQUIP	X	0	0	0	%100
78	EQUIP	Z	-12.817	-12.817	0	%100
79	M51	X	0	0	0	%100
80	M51	Z	-12.817	-12.817	0	%100
81	M55A	X	0	0	0	%100



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

Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[ft.%]	End Location[ft.%]
82	M55A	Z	-2.001	-2.001	0 %100

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

Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[ft.%]	End Location[ft.%]
1	M1	X	3.859	3.859	0 %100
2	M1	Z	-6.685	-6.685	0 %100
3	M3	X	3.859	3.859	0 %100
4	M3	Z	-6.685	-6.685	0 %100
5	M5	X	.04	.04	0 %100
6	M5	Z	-.069	-.069	0 %100
7	M6	X	.597	.597	0 %100
8	M6	Z	-1.034	-1.034	0 %100
9	M7	X	3.699	3.699	0 %100
10	M7	Z	-6.406	-6.406	0 %100
11	M8	X	.006	.006	0 %100
12	M8	Z	-.011	-.011	0 %100
13	M9	X	.623	.623	0 %100
14	M9	Z	-1.079	-1.079	0 %100
15	M10	X	3.699	3.699	0 %100
16	M10	Z	-6.406	-6.406	0 %100
17	M11	X	.254	.254	0 %100
18	M11	Z	-.44	-.44	0 %100
19	M12	X	3.781	3.781	0 %100
20	M12	Z	-6.549	-6.549	0 %100
21	M13	X	.254	.254	0 %100
22	M13	Z	-.44	-.44	0 %100
23	M14	X	3.781	3.781	0 %100
24	M14	Z	-6.549	-6.549	0 %100
25	M15	X	1.796	1.796	0 %100
26	M15	Z	-3.11	-3.11	0 %100
27	M16	X	3.181	3.181	0 %100
28	M16	Z	-5.51	-5.51	0 %100
29	M17	X	1.796	1.796	0 %100
30	M17	Z	-3.11	-3.11	0 %100
31	M18	X	3.181	3.181	0 %100
32	M18	Z	-5.51	-5.51	0 %100
33	M19	X	1.97	1.97	0 %100
34	M19	Z	-3.412	-3.412	0 %100
35	M20	X	1.796	1.796	0 %100
36	M20	Z	-3.11	-3.11	0 %100
37	M21	X	1.796	1.796	0 %100
38	M21	Z	-3.11	-3.11	0 %100
39	M22	X	2.957	2.957	0 %100
40	M22	Z	-5.122	-5.122	0 %100
41	M23	X	2.957	2.957	0 %100
42	M23	Z	-5.122	-5.122	0 %100
43	M24	X	3.109	3.109	0 %100
44	M24	Z	-5.385	-5.385	0 %100
45	M25	X	1.97	1.97	0 %100
46	M25	Z	-3.412	-3.412	0 %100
47	M26	X	1.796	1.796	0 %100
48	M26	Z	-3.11	-3.11	0 %100
49	M27	X	2.24	2.24	0 %100
50	M27	Z	-3.88	-3.88	0 %100
51	M28	X	1.796	1.796	0 %100
52	M28	Z	-3.11	-3.11	0 %100
53	M29	X	2.24	2.24	0 %100
54	M29	Z	-3.88	-3.88	0 %100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
55	M30	X	1.97	1.97	0	%100
56	M30	Z	-3.412	-3.412	0	%100
57	M31	X	1.796	1.796	0	%100
58	M31	Z	-3.11	-3.11	0	%100
59	M32	X	1.796	1.796	0	%100
60	M32	Z	-3.11	-3.11	0	%100
61	M33	X	2.957	2.957	0	%100
62	M33	Z	-5.122	-5.122	0	%100
63	M34	X	2.957	2.957	0	%100
64	M34	Z	-5.122	-5.122	0	%100
65	M35	X	3.109	3.109	0	%100
66	M35	Z	-5.385	-5.385	0	%100
67	M36	X	1.97	1.97	0	%100
68	M36	Z	-3.412	-3.412	0	%100
69	MP4A	X	4.074	4.074	0	%100
70	MP4A	Z	-7.056	-7.056	0	%100
71	MP3A	X	4.074	4.074	0	%100
72	MP3A	Z	-7.056	-7.056	0	%100
73	MP2A	X	4.074	4.074	0	%100
74	MP2A	Z	-7.056	-7.056	0	%100
75	MP1A	X	4.074	4.074	0	%100
76	MP1A	Z	-7.056	-7.056	0	%100
77	EQUIP	X	6.409	6.409	0	%100
78	EQUIP	Z	-11.1	-11.1	0	%100
79	M51	X	6.409	6.409	0	%100
80	M51	Z	-11.1	-11.1	0	%100
81	M55A	X	.000107	.000107	0	%100
82	M55A	Z	-.000186	-.000186	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	2.228	2.228	0	%100
2	M1	Z	-1.286	-1.286	0	%100
3	M3	X	2.228	2.228	0	%100
4	M3	Z	-1.286	-1.286	0	%100
5	M5	X	.08	.08	0	%100
6	M5	Z	-.046	-.046	0	%100
7	M6	X	1.045	1.045	0	%100
8	M6	Z	-.603	-.603	0	%100
9	M7	X	2.135	2.135	0	%100
10	M7	Z	-1.233	-1.233	0	%100
11	M8	X	.19	.19	0	%100
12	M8	Z	-.11	-.11	0	%100
13	M9	X	.986	.986	0	%100
14	M9	Z	-.569	-.569	0	%100
15	M10	X	2.135	2.135	0	%100
16	M10	Z	-1.233	-1.233	0	%100
17	M11	X	.507	.507	0	%100
18	M11	Z	-.293	-.293	0	%100
19	M12	X	6.617	6.617	0	%100
20	M12	Z	-3.82	-3.82	0	%100
21	M13	X	.507	.507	0	%100
22	M13	Z	-.293	-.293	0	%100
23	M14	X	6.617	6.617	0	%100
24	M14	Z	-3.82	-3.82	0	%100
25	M15	X	6.979	6.979	0	%100
26	M15	Z	-4.029	-4.029	0	%100
27	M16	X	5.528	5.528	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
28	M16	Z	-3.191	-3.191	0	%100
29	M17	X	6.979	6.979	0	%100
30	M17	Z	-4.029	-4.029	0	%100
31	M18	X	5.528	5.528	0	%100
32	M18	Z	-3.191	-3.191	0	%100
33	M19	X	7.079	7.079	0	%100
34	M19	Z	-4.087	-4.087	0	%100
35	M20	X	6.979	6.979	0	%100
36	M20	Z	-4.029	-4.029	0	%100
37	M21	X	6.979	6.979	0	%100
38	M21	Z	-4.029	-4.029	0	%100
39	M22	X	5.122	5.122	0	%100
40	M22	Z	-2.957	-2.957	0	%100
41	M23	X	5.122	5.122	0	%100
42	M23	Z	-2.957	-2.957	0	%100
43	M24	X	5.385	5.385	0	%100
44	M24	Z	-3.109	-3.109	0	%100
45	M25	X	7.079	7.079	0	%100
46	M25	Z	-4.087	-4.087	0	%100
47	M26	X	6.979	6.979	0	%100
48	M26	Z	-4.029	-4.029	0	%100
49	M27	X	3.898	3.898	0	%100
50	M27	Z	-2.25	-2.25	0	%100
51	M28	X	6.979	6.979	0	%100
52	M28	Z	-4.029	-4.029	0	%100
53	M29	X	3.898	3.898	0	%100
54	M29	Z	-2.25	-2.25	0	%100
55	M30	X	7.079	7.079	0	%100
56	M30	Z	-4.087	-4.087	0	%100
57	M31	X	6.979	6.979	0	%100
58	M31	Z	-4.029	-4.029	0	%100
59	M32	X	6.979	6.979	0	%100
60	M32	Z	-4.029	-4.029	0	%100
61	M33	X	5.122	5.122	0	%100
62	M33	Z	-2.957	-2.957	0	%100
63	M34	X	5.122	5.122	0	%100
64	M34	Z	-2.957	-2.957	0	%100
65	M35	X	5.385	5.385	0	%100
66	M35	Z	-3.109	-3.109	0	%100
67	M36	X	7.079	7.079	0	%100
68	M36	Z	-4.087	-4.087	0	%100
69	MP4A	X	7.056	7.056	0	%100
70	MP4A	Z	-4.074	-4.074	0	%100
71	MP3A	X	7.056	7.056	0	%100
72	MP3A	Z	-4.074	-4.074	0	%100
73	MP2A	X	7.056	7.056	0	%100
74	MP2A	Z	-4.074	-4.074	0	%100
75	MP1A	X	7.056	7.056	0	%100
76	MP1A	Z	-4.074	-4.074	0	%100
77	EQUIP	X	11.1	11.1	0	%100
78	EQUIP	Z	-6.409	-6.409	0	%100
79	M51	X	11.1	11.1	0	%100
80	M51	Z	-6.409	-6.409	0	%100
81	M55A	X	1.795	1.795	0	%100
82	M55A	Z	-1.037	-1.037	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[ft,%]	End Location[ft,%]
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Member Distributed Loads (BLC 44 : Structure Wo (90 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M3	X	0	0	0	%100
4	M3	Z	0	0	0	%100
5	M5	X	.655	.655	0	%100
6	M5	Z	0	0	0	%100
7	M6	X	.655	.655	0	%100
8	M6	Z	0	0	0	%100
9	M7	X	0	0	0	%100
10	M7	Z	0	0	0	%100
11	M8	X	.85	.85	0	%100
12	M8	Z	0	0	0	%100
13	M9	X	.535	.535	0	%100
14	M9	Z	0	0	0	%100
15	M10	X	0	0	0	%100
16	M10	Z	0	0	0	%100
17	M11	X	4.151	4.151	0	%100
18	M11	Z	0	0	0	%100
19	M12	X	4.151	4.151	0	%100
20	M12	Z	0	0	0	%100
21	M13	X	4.151	4.151	0	%100
22	M13	Z	0	0	0	%100
23	M14	X	4.151	4.151	0	%100
24	M14	Z	0	0	0	%100
25	M15	X	10.292	10.292	0	%100
26	M15	Z	0	0	0	%100
27	M16	X	5.452	5.452	0	%100
28	M16	Z	0	0	0	%100
29	M17	X	10.292	10.292	0	%100
30	M17	Z	0	0	0	%100
31	M18	X	5.452	5.452	0	%100
32	M18	Z	0	0	0	%100
33	M19	X	10.292	10.292	0	%100
34	M19	Z	0	0	0	%100
35	M20	X	10.292	10.292	0	%100
36	M20	Z	0	0	0	%100
37	M21	X	10.292	10.292	0	%100
38	M21	Z	0	0	0	%100
39	M22	X	5.915	5.915	0	%100
40	M22	Z	0	0	0	%100
41	M23	X	5.915	5.915	0	%100
42	M23	Z	0	0	0	%100
43	M24	X	6.218	6.218	0	%100
44	M24	Z	0	0	0	%100
45	M25	X	10.292	10.292	0	%100
46	M25	Z	0	0	0	%100
47	M26	X	10.292	10.292	0	%100
48	M26	Z	0	0	0	%100
49	M27	X	5.452	5.452	0	%100
50	M27	Z	0	0	0	%100
51	M28	X	10.292	10.292	0	%100
52	M28	Z	0	0	0	%100
53	M29	X	5.452	5.452	0	%100
54	M29	Z	0	0	0	%100
55	M30	X	10.292	10.292	0	%100
56	M30	Z	0	0	0	%100
57	M31	X	10.292	10.292	0	%100
58	M31	Z	0	0	0	%100
59	M32	X	10.292	10.292	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
60	M32	Z	0	0	0	%100
61	M33	X	5.915	5.915	0	%100
62	M33	Z	0	0	0	%100
63	M34	X	5.915	5.915	0	%100
64	M34	Z	0	0	0	%100
65	M35	X	6.218	6.218	0	%100
66	M35	Z	0	0	0	%100
67	M36	X	10.292	10.292	0	%100
68	M36	Z	0	0	0	%100
69	MP4A	X	8.148	8.148	0	%100
70	MP4A	Z	0	0	0	%100
71	MP3A	X	8.148	8.148	0	%100
72	MP3A	Z	0	0	0	%100
73	MP2A	X	8.148	8.148	0	%100
74	MP2A	Z	0	0	0	%100
75	MP1A	X	8.148	8.148	0	%100
76	MP1A	Z	0	0	0	%100
77	EQUIP	X	12.817	12.817	0	%100
78	EQUIP	Z	0	0	0	%100
79	M51	X	12.817	12.817	0	%100
80	M51	Z	0	0	0	%100
81	M55A	X	6.147	6.147	0	%100
82	M55A	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....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	2.228	2.228	0	%100
2	M1	Z	1.286	1.286	0	%100
3	M3	X	2.228	2.228	0	%100
4	M3	Z	1.286	1.286	0	%100
5	M5	X	1.045	1.045	0	%100
6	M5	Z	.603	.603	0	%100
7	M6	X	.08	.08	0	%100
8	M6	Z	.046	.046	0	%100
9	M7	X	2.135	2.135	0	%100
10	M7	Z	1.233	1.233	0	%100
11	M8	X	1.103	1.103	0	%100
12	M8	Z	.637	.637	0	%100
13	M9	X	.035	.035	0	%100
14	M9	Z	.02	.02	0	%100
15	M10	X	2.135	2.135	0	%100
16	M10	Z	1.233	1.233	0	%100
17	M11	X	6.617	6.617	0	%100
18	M11	Z	3.82	3.82	0	%100
19	M12	X	.507	.507	0	%100
20	M12	Z	.293	.293	0	%100
21	M13	X	6.617	6.617	0	%100
22	M13	Z	3.82	3.82	0	%100
23	M14	X	.507	.507	0	%100
24	M14	Z	.293	.293	0	%100
25	M15	X	6.979	6.979	0	%100
26	M15	Z	4.029	4.029	0	%100
27	M16	X	3.898	3.898	0	%100
28	M16	Z	2.25	2.25	0	%100
29	M17	X	6.979	6.979	0	%100
30	M17	Z	4.029	4.029	0	%100
31	M18	X	3.898	3.898	0	%100
32	M18	Z	2.25	2.25	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
33	M19	X	7.079	7.079	0	%100
34	M19	Z	4.087	4.087	0	%100
35	M20	X	6.979	6.979	0	%100
36	M20	Z	4.029	4.029	0	%100
37	M21	X	6.979	6.979	0	%100
38	M21	Z	4.029	4.029	0	%100
39	M22	X	5.122	5.122	0	%100
40	M22	Z	2.957	2.957	0	%100
41	M23	X	5.122	5.122	0	%100
42	M23	Z	2.957	2.957	0	%100
43	M24	X	5.385	5.385	0	%100
44	M24	Z	3.109	3.109	0	%100
45	M25	X	7.079	7.079	0	%100
46	M25	Z	4.087	4.087	0	%100
47	M26	X	6.979	6.979	0	%100
48	M26	Z	4.029	4.029	0	%100
49	M27	X	5.528	5.528	0	%100
50	M27	Z	3.191	3.191	0	%100
51	M28	X	6.979	6.979	0	%100
52	M28	Z	4.029	4.029	0	%100
53	M29	X	5.528	5.528	0	%100
54	M29	Z	3.191	3.191	0	%100
55	M30	X	7.079	7.079	0	%100
56	M30	Z	4.087	4.087	0	%100
57	M31	X	6.979	6.979	0	%100
58	M31	Z	4.029	4.029	0	%100
59	M32	X	6.979	6.979	0	%100
60	M32	Z	4.029	4.029	0	%100
61	M33	X	5.122	5.122	0	%100
62	M33	Z	2.957	2.957	0	%100
63	M34	X	5.122	5.122	0	%100
64	M34	Z	2.957	2.957	0	%100
65	M35	X	5.385	5.385	0	%100
66	M35	Z	3.109	3.109	0	%100
67	M36	X	7.079	7.079	0	%100
68	M36	Z	4.087	4.087	0	%100
69	MP4A	X	7.056	7.056	0	%100
70	MP4A	Z	4.074	4.074	0	%100
71	MP3A	X	7.056	7.056	0	%100
72	MP3A	Z	4.074	4.074	0	%100
73	MP2A	X	7.056	7.056	0	%100
74	MP2A	Z	4.074	4.074	0	%100
75	MP1A	X	7.056	7.056	0	%100
76	MP1A	Z	4.074	4.074	0	%100
77	EQUIP	X	11.1	11.1	0	%100
78	EQUIP	Z	6.409	6.409	0	%100
79	M51	X	11.1	11.1	0	%100
80	M51	Z	6.409	6.409	0	%100
81	M55A	X	7.056	7.056	0	%100
82	M55A	Z	4.074	4.074	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	3.859	3.859	0	%100
2	M1	Z	6.685	6.685	0	%100
3	M3	X	3.859	3.859	0	%100
4	M3	Z	6.685	6.685	0	%100
5	M5	X	.597	.597	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[ft.%]	End Location[ft.%]
6	M5	Z	1.034	1.034	0	%100
7	M6	X	.04	.04	0	%100
8	M6	Z	.069	.069	0	%100
9	M7	X	3.699	3.699	0	%100
10	M7	Z	6.406	6.406	0	%100
11	M8	X	.534	.534	0	%100
12	M8	Z	.924	.924	0	%100
13	M9	X	.074	.074	0	%100
14	M9	Z	.128	.128	0	%100
15	M10	X	3.699	3.699	0	%100
16	M10	Z	6.406	6.406	0	%100
17	M11	X	3.781	3.781	0	%100
18	M11	Z	6.549	6.549	0	%100
19	M12	X	.254	.254	0	%100
20	M12	Z	.44	.44	0	%100
21	M13	X	3.781	3.781	0	%100
22	M13	Z	6.549	6.549	0	%100
23	M14	X	.254	.254	0	%100
24	M14	Z	.44	.44	0	%100
25	M15	X	1.796	1.796	0	%100
26	M15	Z	3.11	3.11	0	%100
27	M16	X	2.24	2.24	0	%100
28	M16	Z	3.88	3.88	0	%100
29	M17	X	1.796	1.796	0	%100
30	M17	Z	3.11	3.11	0	%100
31	M18	X	2.24	2.24	0	%100
32	M18	Z	3.88	3.88	0	%100
33	M19	X	1.97	1.97	0	%100
34	M19	Z	3.412	3.412	0	%100
35	M20	X	1.796	1.796	0	%100
36	M20	Z	3.11	3.11	0	%100
37	M21	X	1.796	1.796	0	%100
38	M21	Z	3.11	3.11	0	%100
39	M22	X	2.957	2.957	0	%100
40	M22	Z	5.122	5.122	0	%100
41	M23	X	2.957	2.957	0	%100
42	M23	Z	5.122	5.122	0	%100
43	M24	X	3.109	3.109	0	%100
44	M24	Z	5.385	5.385	0	%100
45	M25	X	1.97	1.97	0	%100
46	M25	Z	3.412	3.412	0	%100
47	M26	X	1.796	1.796	0	%100
48	M26	Z	3.11	3.11	0	%100
49	M27	X	3.181	3.181	0	%100
50	M27	Z	5.51	5.51	0	%100
51	M28	X	1.796	1.796	0	%100
52	M28	Z	3.11	3.11	0	%100
53	M29	X	3.181	3.181	0	%100
54	M29	Z	5.51	5.51	0	%100
55	M30	X	1.97	1.97	0	%100
56	M30	Z	3.412	3.412	0	%100
57	M31	X	1.796	1.796	0	%100
58	M31	Z	3.11	3.11	0	%100
59	M32	X	1.796	1.796	0	%100
60	M32	Z	3.11	3.11	0	%100
61	M33	X	2.957	2.957	0	%100
62	M33	Z	5.122	5.122	0	%100
63	M34	X	2.957	2.957	0	%100
64	M34	Z	5.122	5.122	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
65	M35	X	3.109	3.109	0	%100
66	M35	Z	5.385	5.385	0	%100
67	M36	X	1.97	1.97	0	%100
68	M36	Z	3.412	3.412	0	%100
69	MP4A	X	4.074	4.074	0	%100
70	MP4A	Z	7.056	7.056	0	%100
71	MP3A	X	4.074	4.074	0	%100
72	MP3A	Z	7.056	7.056	0	%100
73	MP2A	X	4.074	4.074	0	%100
74	MP2A	Z	7.056	7.056	0	%100
75	MP1A	X	4.074	4.074	0	%100
76	MP1A	Z	7.056	7.056	0	%100
77	EQUIP	X	6.409	6.409	0	%100
78	EQUIP	Z	11.1	11.1	0	%100
79	M51	X	6.409	6.409	0	%100
80	M51	Z	11.1	11.1	0	%100
81	M55A	X	3.037	3.037	0	%100
82	M55A	Z	5.261	5.261	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	0	0	0	%100
2	M1	Z	10.292	10.292	0	%100
3	M3	X	0	0	0	%100
4	M3	Z	10.292	10.292	0	%100
5	M5	X	0	0	0	%100
6	M5	Z	.631	.631	0	%100
7	M6	X	0	0	0	%100
8	M6	Z	.631	.631	0	%100
9	M7	X	0	0	0	%100
10	M7	Z	9.863	9.863	0	%100
11	M8	X	0	0	0	%100
12	M8	Z	.436	.436	0	%100
13	M9	X	0	0	0	%100
14	M9	Z	.751	.751	0	%100
15	M10	X	0	0	0	%100
16	M10	Z	9.863	9.863	0	%100
17	M11	X	0	0	0	%100
18	M11	Z	3.996	3.996	0	%100
19	M12	X	0	0	0	%100
20	M12	Z	3.996	3.996	0	%100
21	M13	X	0	0	0	%100
22	M13	Z	3.996	3.996	0	%100
23	M14	X	0	0	0	%100
24	M14	Z	3.996	3.996	0	%100
25	M15	X	0	0	0	%100
26	M15	Z	1.358	1.358	0	%100
27	M16	X	0	0	0	%100
28	M16	Z	5.411	5.411	0	%100
29	M17	X	0	0	0	%100
30	M17	Z	1.358	1.358	0	%100
31	M18	X	0	0	0	%100
32	M18	Z	5.411	5.411	0	%100
33	M19	X	0	0	0	%100
34	M19	Z	1.823	1.823	0	%100
35	M20	X	0	0	0	%100
36	M20	Z	1.358	1.358	0	%100
37	M21	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....	Start Location[ft.%]	End Location[ft.%]
38	M21	Z	1.358	1.358	0	%100
39	M22	X	0	0	0	%100
40	M22	Z	5.915	5.915	0	%100
41	M23	X	0	0	0	%100
42	M23	Z	5.915	5.915	0	%100
43	M24	X	0	0	0	%100
44	M24	Z	6.218	6.218	0	%100
45	M25	X	0	0	0	%100
46	M25	Z	1.823	1.823	0	%100
47	M26	X	0	0	0	%100
48	M26	Z	1.358	1.358	0	%100
49	M27	X	0	0	0	%100
50	M27	Z	5.411	5.411	0	%100
51	M28	X	0	0	0	%100
52	M28	Z	1.358	1.358	0	%100
53	M29	X	0	0	0	%100
54	M29	Z	5.411	5.411	0	%100
55	M30	X	0	0	0	%100
56	M30	Z	1.823	1.823	0	%100
57	M31	X	0	0	0	%100
58	M31	Z	1.358	1.358	0	%100
59	M32	X	0	0	0	%100
60	M32	Z	1.358	1.358	0	%100
61	M33	X	0	0	0	%100
62	M33	Z	5.915	5.915	0	%100
63	M34	X	0	0	0	%100
64	M34	Z	5.915	5.915	0	%100
65	M35	X	0	0	0	%100
66	M35	Z	6.218	6.218	0	%100
67	M36	X	0	0	0	%100
68	M36	Z	1.823	1.823	0	%100
69	MP4A	X	0	0	0	%100
70	MP4A	Z	8.148	8.148	0	%100
71	MP3A	X	0	0	0	%100
72	MP3A	Z	8.148	8.148	0	%100
73	MP2A	X	0	0	0	%100
74	MP2A	Z	8.148	8.148	0	%100
75	MP1A	X	0	0	0	%100
76	MP1A	Z	8.148	8.148	0	%100
77	EQUIP	X	0	0	0	%100
78	EQUIP	Z	12.817	12.817	0	%100
79	M51	X	0	0	0	%100
80	M51	Z	12.817	12.817	0	%100
81	M55A	X	0	0	0	%100
82	M55A	Z	2.001	2.001	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-3.859	-3.859	0	%100
2	M1	Z	6.685	6.685	0	%100
3	M3	X	-3.859	-3.859	0	%100
4	M3	Z	6.685	6.685	0	%100
5	M5	X	-.04	-.04	0	%100
6	M5	Z	.069	.069	0	%100
7	M6	X	-.597	-.597	0	%100
8	M6	Z	1.034	1.034	0	%100
9	M7	X	-3.699	-3.699	0	%100
10	M7	Z	6.406	6.406	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
11	M8	X	-0.06	-0.06	0	%100
12	M8	Z	.011	.011	0	%100
13	M9	X	-.623	-.623	0	%100
14	M9	Z	1.079	1.079	0	%100
15	M10	X	-3.699	-3.699	0	%100
16	M10	Z	6.406	6.406	0	%100
17	M11	X	-.254	-.254	0	%100
18	M11	Z	.44	.44	0	%100
19	M12	X	-3.781	-3.781	0	%100
20	M12	Z	6.549	6.549	0	%100
21	M13	X	-.254	-.254	0	%100
22	M13	Z	.44	.44	0	%100
23	M14	X	-3.781	-3.781	0	%100
24	M14	Z	6.549	6.549	0	%100
25	M15	X	-1.796	-1.796	0	%100
26	M15	Z	3.11	3.11	0	%100
27	M16	X	-3.181	-3.181	0	%100
28	M16	Z	5.51	5.51	0	%100
29	M17	X	-1.796	-1.796	0	%100
30	M17	Z	3.11	3.11	0	%100
31	M18	X	-3.181	-3.181	0	%100
32	M18	Z	5.51	5.51	0	%100
33	M19	X	-1.97	-1.97	0	%100
34	M19	Z	3.412	3.412	0	%100
35	M20	X	-1.796	-1.796	0	%100
36	M20	Z	3.11	3.11	0	%100
37	M21	X	-1.796	-1.796	0	%100
38	M21	Z	3.11	3.11	0	%100
39	M22	X	-2.957	-2.957	0	%100
40	M22	Z	5.122	5.122	0	%100
41	M23	X	-2.957	-2.957	0	%100
42	M23	Z	5.122	5.122	0	%100
43	M24	X	-3.109	-3.109	0	%100
44	M24	Z	5.385	5.385	0	%100
45	M25	X	-1.97	-1.97	0	%100
46	M25	Z	3.412	3.412	0	%100
47	M26	X	-1.796	-1.796	0	%100
48	M26	Z	3.11	3.11	0	%100
49	M27	X	-2.24	-2.24	0	%100
50	M27	Z	3.88	3.88	0	%100
51	M28	X	-1.796	-1.796	0	%100
52	M28	Z	3.11	3.11	0	%100
53	M29	X	-2.24	-2.24	0	%100
54	M29	Z	3.88	3.88	0	%100
55	M30	X	-1.97	-1.97	0	%100
56	M30	Z	3.412	3.412	0	%100
57	M31	X	-1.796	-1.796	0	%100
58	M31	Z	3.11	3.11	0	%100
59	M32	X	-1.796	-1.796	0	%100
60	M32	Z	3.11	3.11	0	%100
61	M33	X	-2.957	-2.957	0	%100
62	M33	Z	5.122	5.122	0	%100
63	M34	X	-2.957	-2.957	0	%100
64	M34	Z	5.122	5.122	0	%100
65	M35	X	-3.109	-3.109	0	%100
66	M35	Z	5.385	5.385	0	%100
67	M36	X	-1.97	-1.97	0	%100
68	M36	Z	3.412	3.412	0	%100
69	MP4A	X	-4.074	-4.074	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
70	MP4A	Z	7.056	7.056	0	%100
71	MP3A	X	-4.074	-4.074	0	%100
72	MP3A	Z	7.056	7.056	0	%100
73	MP2A	X	-4.074	-4.074	0	%100
74	MP2A	Z	7.056	7.056	0	%100
75	MP1A	X	-4.074	-4.074	0	%100
76	MP1A	Z	7.056	7.056	0	%100
77	EQUIP	X	-6.409	-6.409	0	%100
78	EQUIP	Z	11.1	11.1	0	%100
79	M51	X	-6.409	-6.409	0	%100
80	M51	Z	11.1	11.1	0	%100
81	M55A	X	-.000107	-.000107	0	%100
82	M55A	Z	.000186	.000186	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-2.228	-2.228	0	%100
2	M1	Z	1.286	1.286	0	%100
3	M3	X	-2.228	-2.228	0	%100
4	M3	Z	1.286	1.286	0	%100
5	M5	X	-.08	-.08	0	%100
6	M5	Z	.046	.046	0	%100
7	M6	X	-1.045	-1.045	0	%100
8	M6	Z	.603	.603	0	%100
9	M7	X	-2.135	-2.135	0	%100
10	M7	Z	1.233	1.233	0	%100
11	M8	X	-.19	-.19	0	%100
12	M8	Z	.11	.11	0	%100
13	M9	X	-.986	-.986	0	%100
14	M9	Z	.569	.569	0	%100
15	M10	X	-2.135	-2.135	0	%100
16	M10	Z	1.233	1.233	0	%100
17	M11	X	-.507	-.507	0	%100
18	M11	Z	.293	.293	0	%100
19	M12	X	-6.617	-6.617	0	%100
20	M12	Z	3.82	3.82	0	%100
21	M13	X	-.507	-.507	0	%100
22	M13	Z	.293	.293	0	%100
23	M14	X	-6.617	-6.617	0	%100
24	M14	Z	3.82	3.82	0	%100
25	M15	X	-6.979	-6.979	0	%100
26	M15	Z	4.029	4.029	0	%100
27	M16	X	-5.528	-5.528	0	%100
28	M16	Z	3.191	3.191	0	%100
29	M17	X	-6.979	-6.979	0	%100
30	M17	Z	4.029	4.029	0	%100
31	M18	X	-5.528	-5.528	0	%100
32	M18	Z	3.191	3.191	0	%100
33	M19	X	-7.079	-7.079	0	%100
34	M19	Z	4.087	4.087	0	%100
35	M20	X	-6.979	-6.979	0	%100
36	M20	Z	4.029	4.029	0	%100
37	M21	X	-6.979	-6.979	0	%100
38	M21	Z	4.029	4.029	0	%100
39	M22	X	-5.122	-5.122	0	%100
40	M22	Z	2.957	2.957	0	%100
41	M23	X	-5.122	-5.122	0	%100
42	M23	Z	2.957	2.957	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
43	M24	X	-5.385	-5.385	0	%100
44	M24	Z	3.109	3.109	0	%100
45	M25	X	-7.079	-7.079	0	%100
46	M25	Z	4.087	4.087	0	%100
47	M26	X	-6.979	-6.979	0	%100
48	M26	Z	4.029	4.029	0	%100
49	M27	X	-3.898	-3.898	0	%100
50	M27	Z	2.25	2.25	0	%100
51	M28	X	-6.979	-6.979	0	%100
52	M28	Z	4.029	4.029	0	%100
53	M29	X	-3.898	-3.898	0	%100
54	M29	Z	2.25	2.25	0	%100
55	M30	X	-7.079	-7.079	0	%100
56	M30	Z	4.087	4.087	0	%100
57	M31	X	-6.979	-6.979	0	%100
58	M31	Z	4.029	4.029	0	%100
59	M32	X	-6.979	-6.979	0	%100
60	M32	Z	4.029	4.029	0	%100
61	M33	X	-5.122	-5.122	0	%100
62	M33	Z	2.957	2.957	0	%100
63	M34	X	-5.122	-5.122	0	%100
64	M34	Z	2.957	2.957	0	%100
65	M35	X	-5.385	-5.385	0	%100
66	M35	Z	3.109	3.109	0	%100
67	M36	X	-7.079	-7.079	0	%100
68	M36	Z	4.087	4.087	0	%100
69	MP4A	X	-7.056	-7.056	0	%100
70	MP4A	Z	4.074	4.074	0	%100
71	MP3A	X	-7.056	-7.056	0	%100
72	MP3A	Z	4.074	4.074	0	%100
73	MP2A	X	-7.056	-7.056	0	%100
74	MP2A	Z	4.074	4.074	0	%100
75	MP1A	X	-7.056	-7.056	0	%100
76	MP1A	Z	4.074	4.074	0	%100
77	EQUIP	X	-11.1	-11.1	0	%100
78	EQUIP	Z	6.409	6.409	0	%100
79	M51	X	-11.1	-11.1	0	%100
80	M51	Z	6.409	6.409	0	%100
81	M55A	X	-1.795	-1.795	0	%100
82	M55A	Z	1.037	1.037	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M3	X	0	0	0	%100
4	M3	Z	0	0	0	%100
5	M5	X	-655	-655	0	%100
6	M5	Z	0	0	0	%100
7	M6	X	-655	-655	0	%100
8	M6	Z	0	0	0	%100
9	M7	X	0	0	0	%100
10	M7	Z	0	0	0	%100
11	M8	X	-85	-85	0	%100
12	M8	Z	0	0	0	%100
13	M9	X	-535	-535	0	%100
14	M9	Z	0	0	0	%100
15	M10	X	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[ft.%]	End Location[ft.%]
16	M10	Z	0	0	0	%100
17	M11	X	-4.151	-4.151	0	%100
18	M11	Z	0	0	0	%100
19	M12	X	-4.151	-4.151	0	%100
20	M12	Z	0	0	0	%100
21	M13	X	-4.151	-4.151	0	%100
22	M13	Z	0	0	0	%100
23	M14	X	-4.151	-4.151	0	%100
24	M14	Z	0	0	0	%100
25	M15	X	-10.292	-10.292	0	%100
26	M15	Z	0	0	0	%100
27	M16	X	-5.452	-5.452	0	%100
28	M16	Z	0	0	0	%100
29	M17	X	-10.292	-10.292	0	%100
30	M17	Z	0	0	0	%100
31	M18	X	-5.452	-5.452	0	%100
32	M18	Z	0	0	0	%100
33	M19	X	-10.292	-10.292	0	%100
34	M19	Z	0	0	0	%100
35	M20	X	-10.292	-10.292	0	%100
36	M20	Z	0	0	0	%100
37	M21	X	-10.292	-10.292	0	%100
38	M21	Z	0	0	0	%100
39	M22	X	-5.915	-5.915	0	%100
40	M22	Z	0	0	0	%100
41	M23	X	-5.915	-5.915	0	%100
42	M23	Z	0	0	0	%100
43	M24	X	-6.218	-6.218	0	%100
44	M24	Z	0	0	0	%100
45	M25	X	-10.292	-10.292	0	%100
46	M25	Z	0	0	0	%100
47	M26	X	-10.292	-10.292	0	%100
48	M26	Z	0	0	0	%100
49	M27	X	-5.452	-5.452	0	%100
50	M27	Z	0	0	0	%100
51	M28	X	-10.292	-10.292	0	%100
52	M28	Z	0	0	0	%100
53	M29	X	-5.452	-5.452	0	%100
54	M29	Z	0	0	0	%100
55	M30	X	-10.292	-10.292	0	%100
56	M30	Z	0	0	0	%100
57	M31	X	-10.292	-10.292	0	%100
58	M31	Z	0	0	0	%100
59	M32	X	-10.292	-10.292	0	%100
60	M32	Z	0	0	0	%100
61	M33	X	-5.915	-5.915	0	%100
62	M33	Z	0	0	0	%100
63	M34	X	-5.915	-5.915	0	%100
64	M34	Z	0	0	0	%100
65	M35	X	-6.218	-6.218	0	%100
66	M35	Z	0	0	0	%100
67	M36	X	-10.292	-10.292	0	%100
68	M36	Z	0	0	0	%100
69	MP4A	X	-8.148	-8.148	0	%100
70	MP4A	Z	0	0	0	%100
71	MP3A	X	-8.148	-8.148	0	%100
72	MP3A	Z	0	0	0	%100
73	MP2A	X	-8.148	-8.148	0	%100
74	MP2A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
75	MP1A	X	-8.148	-8.148	0	%100
76	MP1A	Z	0	0	0	%100
77	EQUIP	X	-12.817	-12.817	0	%100
78	EQUIP	Z	0	0	0	%100
79	M51	X	-12.817	-12.817	0	%100
80	M51	Z	0	0	0	%100
81	M55A	X	-6.147	-6.147	0	%100
82	M55A	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....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-2.228	-2.228	0	%100
2	M1	Z	-1.286	-1.286	0	%100
3	M3	X	-2.228	-2.228	0	%100
4	M3	Z	-1.286	-1.286	0	%100
5	M5	X	-1.045	-1.045	0	%100
6	M5	Z	-.603	-.603	0	%100
7	M6	X	-.08	-.08	0	%100
8	M6	Z	-.046	-.046	0	%100
9	M7	X	-2.135	-2.135	0	%100
10	M7	Z	-1.233	-1.233	0	%100
11	M8	X	-1.103	-1.103	0	%100
12	M8	Z	-.637	-.637	0	%100
13	M9	X	-.035	-.035	0	%100
14	M9	Z	-.02	-.02	0	%100
15	M10	X	-2.135	-2.135	0	%100
16	M10	Z	-1.233	-1.233	0	%100
17	M11	X	-6.617	-6.617	0	%100
18	M11	Z	-3.82	-3.82	0	%100
19	M12	X	-.507	-.507	0	%100
20	M12	Z	-.293	-.293	0	%100
21	M13	X	-6.617	-6.617	0	%100
22	M13	Z	-3.82	-3.82	0	%100
23	M14	X	-.507	-.507	0	%100
24	M14	Z	-.293	-.293	0	%100
25	M15	X	-6.979	-6.979	0	%100
26	M15	Z	-4.029	-4.029	0	%100
27	M16	X	-3.898	-3.898	0	%100
28	M16	Z	-2.25	-2.25	0	%100
29	M17	X	-6.979	-6.979	0	%100
30	M17	Z	-4.029	-4.029	0	%100
31	M18	X	-3.898	-3.898	0	%100
32	M18	Z	-2.25	-2.25	0	%100
33	M19	X	-7.079	-7.079	0	%100
34	M19	Z	-4.087	-4.087	0	%100
35	M20	X	-6.979	-6.979	0	%100
36	M20	Z	-4.029	-4.029	0	%100
37	M21	X	-6.979	-6.979	0	%100
38	M21	Z	-4.029	-4.029	0	%100
39	M22	X	-5.122	-5.122	0	%100
40	M22	Z	-2.957	-2.957	0	%100
41	M23	X	-5.122	-5.122	0	%100
42	M23	Z	-2.957	-2.957	0	%100
43	M24	X	-5.385	-5.385	0	%100
44	M24	Z	-3.109	-3.109	0	%100
45	M25	X	-7.079	-7.079	0	%100
46	M25	Z	-4.087	-4.087	0	%100
47	M26	X	-6.979	-6.979	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
48	M26	Z	-4.029	-4.029	0	%100
49	M27	X	-5.528	-5.528	0	%100
50	M27	Z	-3.191	-3.191	0	%100
51	M28	X	-6.979	-6.979	0	%100
52	M28	Z	-4.029	-4.029	0	%100
53	M29	X	-5.528	-5.528	0	%100
54	M29	Z	-3.191	-3.191	0	%100
55	M30	X	-7.079	-7.079	0	%100
56	M30	Z	-4.087	-4.087	0	%100
57	M31	X	-6.979	-6.979	0	%100
58	M31	Z	-4.029	-4.029	0	%100
59	M32	X	-6.979	-6.979	0	%100
60	M32	Z	-4.029	-4.029	0	%100
61	M33	X	-5.122	-5.122	0	%100
62	M33	Z	-2.957	-2.957	0	%100
63	M34	X	-5.122	-5.122	0	%100
64	M34	Z	-2.957	-2.957	0	%100
65	M35	X	-5.385	-5.385	0	%100
66	M35	Z	-3.109	-3.109	0	%100
67	M36	X	-7.079	-7.079	0	%100
68	M36	Z	-4.087	-4.087	0	%100
69	MP4A	X	-7.056	-7.056	0	%100
70	MP4A	Z	-4.074	-4.074	0	%100
71	MP3A	X	-7.056	-7.056	0	%100
72	MP3A	Z	-4.074	-4.074	0	%100
73	MP2A	X	-7.056	-7.056	0	%100
74	MP2A	Z	-4.074	-4.074	0	%100
75	MP1A	X	-7.056	-7.056	0	%100
76	MP1A	Z	-4.074	-4.074	0	%100
77	EQUIP	X	-11.1	-11.1	0	%100
78	EQUIP	Z	-6.409	-6.409	0	%100
79	M51	X	-11.1	-11.1	0	%100
80	M51	Z	-6.409	-6.409	0	%100
81	M55A	X	-7.056	-7.056	0	%100
82	M55A	Z	-4.074	-4.074	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-3.859	-3.859	0	%100
2	M1	Z	-6.685	-6.685	0	%100
3	M3	X	-3.859	-3.859	0	%100
4	M3	Z	-6.685	-6.685	0	%100
5	M5	X	-.597	-.597	0	%100
6	M5	Z	-1.034	-1.034	0	%100
7	M6	X	-.04	-.04	0	%100
8	M6	Z	-.069	-.069	0	%100
9	M7	X	-3.699	-3.699	0	%100
10	M7	Z	-6.406	-6.406	0	%100
11	M8	X	-.534	-.534	0	%100
12	M8	Z	-.924	-.924	0	%100
13	M9	X	-.074	-.074	0	%100
14	M9	Z	-.128	-.128	0	%100
15	M10	X	-3.699	-3.699	0	%100
16	M10	Z	-6.406	-6.406	0	%100
17	M11	X	-3.781	-3.781	0	%100
18	M11	Z	-6.549	-6.549	0	%100
19	M12	X	-.254	-.254	0	%100
20	M12	Z	-.44	-.44	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
21	M13	X	-3.781	-3.781	0	%100
22	M13	Z	-6.549	-6.549	0	%100
23	M14	X	-.254	-.254	0	%100
24	M14	Z	-.44	-.44	0	%100
25	M15	X	-1.796	-1.796	0	%100
26	M15	Z	-3.11	-3.11	0	%100
27	M16	X	-2.24	-2.24	0	%100
28	M16	Z	-3.88	-3.88	0	%100
29	M17	X	-1.796	-1.796	0	%100
30	M17	Z	-3.11	-3.11	0	%100
31	M18	X	-2.24	-2.24	0	%100
32	M18	Z	-3.88	-3.88	0	%100
33	M19	X	-1.97	-1.97	0	%100
34	M19	Z	-3.412	-3.412	0	%100
35	M20	X	-1.796	-1.796	0	%100
36	M20	Z	-3.11	-3.11	0	%100
37	M21	X	-1.796	-1.796	0	%100
38	M21	Z	-3.11	-3.11	0	%100
39	M22	X	-2.957	-2.957	0	%100
40	M22	Z	-5.122	-5.122	0	%100
41	M23	X	-2.957	-2.957	0	%100
42	M23	Z	-5.122	-5.122	0	%100
43	M24	X	-3.109	-3.109	0	%100
44	M24	Z	-5.385	-5.385	0	%100
45	M25	X	-1.97	-1.97	0	%100
46	M25	Z	-3.412	-3.412	0	%100
47	M26	X	-1.796	-1.796	0	%100
48	M26	Z	-3.11	-3.11	0	%100
49	M27	X	-3.181	-3.181	0	%100
50	M27	Z	-5.51	-5.51	0	%100
51	M28	X	-1.796	-1.796	0	%100
52	M28	Z	-3.11	-3.11	0	%100
53	M29	X	-3.181	-3.181	0	%100
54	M29	Z	-5.51	-5.51	0	%100
55	M30	X	-1.97	-1.97	0	%100
56	M30	Z	-3.412	-3.412	0	%100
57	M31	X	-1.796	-1.796	0	%100
58	M31	Z	-3.11	-3.11	0	%100
59	M32	X	-1.796	-1.796	0	%100
60	M32	Z	-3.11	-3.11	0	%100
61	M33	X	-2.957	-2.957	0	%100
62	M33	Z	-5.122	-5.122	0	%100
63	M34	X	-2.957	-2.957	0	%100
64	M34	Z	-5.122	-5.122	0	%100
65	M35	X	-3.109	-3.109	0	%100
66	M35	Z	-5.385	-5.385	0	%100
67	M36	X	-1.97	-1.97	0	%100
68	M36	Z	-3.412	-3.412	0	%100
69	MP4A	X	-4.074	-4.074	0	%100
70	MP4A	Z	-7.056	-7.056	0	%100
71	MP3A	X	-4.074	-4.074	0	%100
72	MP3A	Z	-7.056	-7.056	0	%100
73	MP2A	X	-4.074	-4.074	0	%100
74	MP2A	Z	-7.056	-7.056	0	%100
75	MP1A	X	-4.074	-4.074	0	%100
76	MP1A	Z	-7.056	-7.056	0	%100
77	EQUIP	X	-6.409	-6.409	0	%100
78	EQUIP	Z	-11.1	-11.1	0	%100
79	M51	X	-6.409	-6.409	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[ft.%]	End Location[ft.%]
80	M51	Z	-11.1	-11.1	0	%100
81	M55A	X	-3.037	-3.037	0	%100
82	M55A	Z	-5.261	-5.261	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[ft.%]	End Location[ft.%]
1	M1	X	0	0	0	%100
2	M1	Z	-2.699	-2.699	0	%100
3	M3	X	0	0	0	%100
4	M3	Z	-2.699	-2.699	0	%100
5	M5	X	0	0	0	%100
6	M5	Z	-526	-526	0	%100
7	M6	X	0	0	0	%100
8	M6	Z	-526	-526	0	%100
9	M7	X	0	0	0	%100
10	M7	Z	-3.213	-3.213	0	%100
11	M8	X	0	0	0	%100
12	M8	Z	-364	-364	0	%100
13	M9	X	0	0	0	%100
14	M9	Z	-626	-626	0	%100
15	M10	X	0	0	0	%100
16	M10	Z	-3.213	-3.213	0	%100
17	M11	X	0	0	0	%100
18	M11	Z	-1.425	-1.425	0	%100
19	M12	X	0	0	0	%100
20	M12	Z	-1.425	-1.425	0	%100
21	M13	X	0	0	0	%100
22	M13	Z	-1.425	-1.425	0	%100
23	M14	X	0	0	0	%100
24	M14	Z	-1.425	-1.425	0	%100
25	M15	X	0	0	0	%100
26	M15	Z	-1.085	-1.085	0	%100
27	M16	X	0	0	0	%100
28	M16	Z	-2.09	-2.09	0	%100
29	M17	X	0	0	0	%100
30	M17	Z	-1.085	-1.085	0	%100
31	M18	X	0	0	0	%100
32	M18	Z	-2.09	-2.09	0	%100
33	M19	X	0	0	0	%100
34	M19	Z	-1.17	-1.17	0	%100
35	M20	X	0	0	0	%100
36	M20	Z	-1.085	-1.085	0	%100
37	M21	X	0	0	0	%100
38	M21	Z	-1.085	-1.085	0	%100
39	M22	X	0	0	0	%100
40	M22	Z	-2.27	-2.27	0	%100
41	M23	X	0	0	0	%100
42	M23	Z	-2.27	-2.27	0	%100
43	M24	X	0	0	0	%100
44	M24	Z	-2.221	-2.221	0	%100
45	M25	X	0	0	0	%100
46	M25	Z	-1.17	-1.17	0	%100
47	M26	X	0	0	0	%100
48	M26	Z	-1.085	-1.085	0	%100
49	M27	X	0	0	0	%100
50	M27	Z	-2.09	-2.09	0	%100
51	M28	X	0	0	0	%100
52	M28	Z	-1.085	-1.085	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
53	M29	X	0	0	0	%100
54	M29	Z	-2.09	-2.09	0	%100
55	M30	X	0	0	0	%100
56	M30	Z	-1.17	-1.17	0	%100
57	M31	X	0	0	0	%100
58	M31	Z	-1.085	-1.085	0	%100
59	M32	X	0	0	0	%100
60	M32	Z	-1.085	-1.085	0	%100
61	M33	X	0	0	0	%100
62	M33	Z	-2.27	-2.27	0	%100
63	M34	X	0	0	0	%100
64	M34	Z	-2.27	-2.27	0	%100
65	M35	X	0	0	0	%100
66	M35	Z	-2.221	-2.221	0	%100
67	M36	X	0	0	0	%100
68	M36	Z	-1.17	-1.17	0	%100
69	MP4A	X	0	0	0	%100
70	MP4A	Z	-2.905	-2.905	0	%100
71	MP3A	X	0	0	0	%100
72	MP3A	Z	-2.905	-2.905	0	%100
73	MP2A	X	0	0	0	%100
74	MP2A	Z	-2.905	-2.905	0	%100
75	MP1A	X	0	0	0	%100
76	MP1A	Z	-2.905	-2.905	0	%100
77	EQUIP	X	0	0	0	%100
78	EQUIP	Z	-3.612	-3.612	0	%100
79	M51	X	0	0	0	%100
80	M51	Z	-3.612	-3.612	0	%100
81	M55A	X	0	0	0	%100
82	M55A	Z	-.713	-.713	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	1.012	1.012	0	%100
2	M1	Z	-1.753	-1.753	0	%100
3	M3	X	1.012	1.012	0	%100
4	M3	Z	-1.753	-1.753	0	%100
5	M5	X	.033	.033	0	%100
6	M5	Z	-.058	-.058	0	%100
7	M6	X	.497	.497	0	%100
8	M6	Z	-.862	-.862	0	%100
9	M7	X	1.205	1.205	0	%100
10	M7	Z	-2.087	-2.087	0	%100
11	M8	X	.005	.005	0	%100
12	M8	Z	-.009	-.009	0	%100
13	M9	X	.519	.519	0	%100
14	M9	Z	-.899	-.899	0	%100
15	M10	X	1.205	1.205	0	%100
16	M10	Z	-2.087	-2.087	0	%100
17	M11	X	.09	.09	0	%100
18	M11	Z	-.157	-.157	0	%100
19	M12	X	1.348	1.348	0	%100
20	M12	Z	-2.335	-2.335	0	%100
21	M13	X	.09	.09	0	%100
22	M13	Z	-.157	-.157	0	%100
23	M14	X	1.348	1.348	0	%100
24	M14	Z	-2.335	-2.335	0	%100
25	M15	X	.743	.743	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[ft.%]	End Location[ft.%]
26	M15	Z	-1.287	-1.287	0	%100
27	M16	X	1.229	1.229	0	%100
28	M16	Z	-2.128	-2.128	0	%100
29	M17	X	.743	.743	0	%100
30	M17	Z	-1.287	-1.287	0	%100
31	M18	X	1.229	1.229	0	%100
32	M18	Z	-2.128	-2.128	0	%100
33	M19	X	.775	.775	0	%100
34	M19	Z	-1.342	-1.342	0	%100
35	M20	X	.743	.743	0	%100
36	M20	Z	-1.287	-1.287	0	%100
37	M21	X	.743	.743	0	%100
38	M21	Z	-1.287	-1.287	0	%100
39	M22	X	1.135	1.135	0	%100
40	M22	Z	-1.966	-1.966	0	%100
41	M23	X	1.135	1.135	0	%100
42	M23	Z	-1.966	-1.966	0	%100
43	M24	X	1.111	1.111	0	%100
44	M24	Z	-1.924	-1.924	0	%100
45	M25	X	.775	.775	0	%100
46	M25	Z	-1.342	-1.342	0	%100
47	M26	X	.743	.743	0	%100
48	M26	Z	-1.287	-1.287	0	%100
49	M27	X	.865	.865	0	%100
50	M27	Z	-1.498	-1.498	0	%100
51	M28	X	.743	.743	0	%100
52	M28	Z	-1.287	-1.287	0	%100
53	M29	X	.865	.865	0	%100
54	M29	Z	-1.498	-1.498	0	%100
55	M30	X	.775	.775	0	%100
56	M30	Z	-1.342	-1.342	0	%100
57	M31	X	.743	.743	0	%100
58	M31	Z	-1.287	-1.287	0	%100
59	M32	X	.743	.743	0	%100
60	M32	Z	-1.287	-1.287	0	%100
61	M33	X	1.135	1.135	0	%100
62	M33	Z	-1.966	-1.966	0	%100
63	M34	X	1.135	1.135	0	%100
64	M34	Z	-1.966	-1.966	0	%100
65	M35	X	1.111	1.111	0	%100
66	M35	Z	-1.924	-1.924	0	%100
67	M36	X	.775	.775	0	%100
68	M36	Z	-1.342	-1.342	0	%100
69	MP4A	X	1.452	1.452	0	%100
70	MP4A	Z	-2.515	-2.515	0	%100
71	MP3A	X	1.452	1.452	0	%100
72	MP3A	Z	-2.515	-2.515	0	%100
73	MP2A	X	1.452	1.452	0	%100
74	MP2A	Z	-2.515	-2.515	0	%100
75	MP1A	X	1.452	1.452	0	%100
76	MP1A	Z	-2.515	-2.515	0	%100
77	EQUIP	X	1.806	1.806	0	%100
78	EQUIP	Z	-3.128	-3.128	0	%100
79	M51	X	1.806	1.806	0	%100
80	M51	Z	-3.128	-3.128	0	%100
81	M55A	X	3.8e-5	3.8e-5	0	%100
82	M55A	Z	-6.6e-5	-6.6e-5	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	.584	.584	0	%100
2	M1	Z	-.337	-.337	0	%100
3	M3	X	.584	.584	0	%100
4	M3	Z	-.337	-.337	0	%100
5	M5	X	.067	.067	0	%100
6	M5	Z	-.038	-.038	0	%100
7	M6	X	.871	.871	0	%100
8	M6	Z	-.503	-.503	0	%100
9	M7	X	.696	.696	0	%100
10	M7	Z	-.402	-.402	0	%100
11	M8	X	.158	.158	0	%100
12	M8	Z	-.091	-.091	0	%100
13	M9	X	.821	.821	0	%100
14	M9	Z	-.474	-.474	0	%100
15	M10	X	.696	.696	0	%100
16	M10	Z	-.402	-.402	0	%100
17	M11	X	.181	.181	0	%100
18	M11	Z	-.104	-.104	0	%100
19	M12	X	2.359	2.359	0	%100
20	M12	Z	-1.362	-1.362	0	%100
21	M13	X	.181	.181	0	%100
22	M13	Z	-.104	-.104	0	%100
23	M14	X	2.359	2.359	0	%100
24	M14	Z	-1.362	-1.362	0	%100
25	M15	X	1.981	1.981	0	%100
26	M15	Z	-1.144	-1.144	0	%100
27	M16	X	2.135	2.135	0	%100
28	M16	Z	-1.233	-1.233	0	%100
29	M17	X	1.981	1.981	0	%100
30	M17	Z	-1.144	-1.144	0	%100
31	M18	X	2.135	2.135	0	%100
32	M18	Z	-1.233	-1.233	0	%100
33	M19	X	2.001	2.001	0	%100
34	M19	Z	-1.155	-1.155	0	%100
35	M20	X	1.981	1.981	0	%100
36	M20	Z	-1.144	-1.144	0	%100
37	M21	X	1.981	1.981	0	%100
38	M21	Z	-1.144	-1.144	0	%100
39	M22	X	1.966	1.966	0	%100
40	M22	Z	-1.135	-1.135	0	%100
41	M23	X	1.966	1.966	0	%100
42	M23	Z	-1.135	-1.135	0	%100
43	M24	X	1.924	1.924	0	%100
44	M24	Z	-1.111	-1.111	0	%100
45	M25	X	2.001	2.001	0	%100
46	M25	Z	-1.155	-1.155	0	%100
47	M26	X	1.981	1.981	0	%100
48	M26	Z	-1.144	-1.144	0	%100
49	M27	X	1.505	1.505	0	%100
50	M27	Z	-.869	-.869	0	%100
51	M28	X	1.981	1.981	0	%100
52	M28	Z	-1.144	-1.144	0	%100
53	M29	X	1.505	1.505	0	%100
54	M29	Z	-.869	-.869	0	%100
55	M30	X	2.001	2.001	0	%100
56	M30	Z	-1.155	-1.155	0	%100
57	M31	X	1.981	1.981	0	%100
58	M31	Z	-1.144	-1.144	0	%100
59	M32	X	1.981	1.981	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[ft.%]	End Location[ft.%]
60	M32	Z	-1.144	-1.144	0	%100
61	M33	X	1.966	1.966	0	%100
62	M33	Z	-1.135	-1.135	0	%100
63	M34	X	1.966	1.966	0	%100
64	M34	Z	-1.135	-1.135	0	%100
65	M35	X	1.924	1.924	0	%100
66	M35	Z	-1.111	-1.111	0	%100
67	M36	X	2.001	2.001	0	%100
68	M36	Z	-1.155	-1.155	0	%100
69	MP4A	X	2.515	2.515	0	%100
70	MP4A	Z	-1.452	-1.452	0	%100
71	MP3A	X	2.515	2.515	0	%100
72	MP3A	Z	-1.452	-1.452	0	%100
73	MP2A	X	2.515	2.515	0	%100
74	MP2A	Z	-1.452	-1.452	0	%100
75	MP1A	X	2.515	2.515	0	%100
76	MP1A	Z	-1.452	-1.452	0	%100
77	EQUIP	X	3.128	3.128	0	%100
78	EQUIP	Z	-1.806	-1.806	0	%100
79	M51	X	3.128	3.128	0	%100
80	M51	Z	-1.806	-1.806	0	%100
81	M55A	X	.64	.64	0	%100
82	M55A	Z	-.37	-.37	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[ft.%]	End Location[ft.%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M3	X	0	0	0	%100
4	M3	Z	0	0	0	%100
5	M5	X	.546	.546	0	%100
6	M5	Z	0	0	0	%100
7	M6	X	.546	.546	0	%100
8	M6	Z	0	0	0	%100
9	M7	X	0	0	0	%100
10	M7	Z	0	0	0	%100
11	M8	X	.708	.708	0	%100
12	M8	Z	0	0	0	%100
13	M9	X	.446	.446	0	%100
14	M9	Z	0	0	0	%100
15	M10	X	0	0	0	%100
16	M10	Z	0	0	0	%100
17	M11	X	1.48	1.48	0	%100
18	M11	Z	0	0	0	%100
19	M12	X	1.48	1.48	0	%100
20	M12	Z	0	0	0	%100
21	M13	X	1.48	1.48	0	%100
22	M13	Z	0	0	0	%100
23	M14	X	1.48	1.48	0	%100
24	M14	Z	0	0	0	%100
25	M15	X	2.689	2.689	0	%100
26	M15	Z	0	0	0	%100
27	M16	X	2.106	2.106	0	%100
28	M16	Z	0	0	0	%100
29	M17	X	2.689	2.689	0	%100
30	M17	Z	0	0	0	%100
31	M18	X	2.106	2.106	0	%100
32	M18	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....	Start Location[ft.%]	End Location[ft.%]
33	M19	X	2.691	2.691	0	%100
34	M19	Z	0	0	0	%100
35	M20	X	2.689	2.689	0	%100
36	M20	Z	0	0	0	%100
37	M21	X	2.689	2.689	0	%100
38	M21	Z	0	0	0	%100
39	M22	X	2.27	2.27	0	%100
40	M22	Z	0	0	0	%100
41	M23	X	2.27	2.27	0	%100
42	M23	Z	0	0	0	%100
43	M24	X	2.221	2.221	0	%100
44	M24	Z	0	0	0	%100
45	M25	X	2.691	2.691	0	%100
46	M25	Z	0	0	0	%100
47	M26	X	2.689	2.689	0	%100
48	M26	Z	0	0	0	%100
49	M27	X	2.106	2.106	0	%100
50	M27	Z	0	0	0	%100
51	M28	X	2.689	2.689	0	%100
52	M28	Z	0	0	0	%100
53	M29	X	2.106	2.106	0	%100
54	M29	Z	0	0	0	%100
55	M30	X	2.691	2.691	0	%100
56	M30	Z	0	0	0	%100
57	M31	X	2.689	2.689	0	%100
58	M31	Z	0	0	0	%100
59	M32	X	2.689	2.689	0	%100
60	M32	Z	0	0	0	%100
61	M33	X	2.27	2.27	0	%100
62	M33	Z	0	0	0	%100
63	M34	X	2.27	2.27	0	%100
64	M34	Z	0	0	0	%100
65	M35	X	2.221	2.221	0	%100
66	M35	Z	0	0	0	%100
67	M36	X	2.691	2.691	0	%100
68	M36	Z	0	0	0	%100
69	MP4A	X	2.905	2.905	0	%100
70	MP4A	Z	0	0	0	%100
71	MP3A	X	2.905	2.905	0	%100
72	MP3A	Z	0	0	0	%100
73	MP2A	X	2.905	2.905	0	%100
74	MP2A	Z	0	0	0	%100
75	MP1A	X	2.905	2.905	0	%100
76	MP1A	Z	0	0	0	%100
77	EQUIP	X	3.612	3.612	0	%100
78	EQUIP	Z	0	0	0	%100
79	M51	X	3.612	3.612	0	%100
80	M51	Z	0	0	0	%100
81	M55A	X	2.191	2.191	0	%100
82	M55A	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....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	.584	.584	0	%100
2	M1	Z	.337	.337	0	%100
3	M3	X	.584	.584	0	%100
4	M3	Z	.337	.337	0	%100
5	M5	X	.871	.871	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[ft.%]	End Location[ft.%]
6	M5	Z	.503	.503	0	%100
7	M6	X	.067	.067	0	%100
8	M6	Z	.038	.038	0	%100
9	M7	X	.696	.696	0	%100
10	M7	Z	.402	.402	0	%100
11	M8	X	.919	.919	0	%100
12	M8	Z	.531	.531	0	%100
13	M9	X	.029	.029	0	%100
14	M9	Z	.017	.017	0	%100
15	M10	X	.696	.696	0	%100
16	M10	Z	.402	.402	0	%100
17	M11	X	2.359	2.359	0	%100
18	M11	Z	1.362	1.362	0	%100
19	M12	X	.181	.181	0	%100
20	M12	Z	.104	.104	0	%100
21	M13	X	2.359	2.359	0	%100
22	M13	Z	1.362	1.362	0	%100
23	M14	X	.181	.181	0	%100
24	M14	Z	.104	.104	0	%100
25	M15	X	1.981	1.981	0	%100
26	M15	Z	1.144	1.144	0	%100
27	M16	X	1.505	1.505	0	%100
28	M16	Z	.869	.869	0	%100
29	M17	X	1.981	1.981	0	%100
30	M17	Z	1.144	1.144	0	%100
31	M18	X	1.505	1.505	0	%100
32	M18	Z	.869	.869	0	%100
33	M19	X	2.001	2.001	0	%100
34	M19	Z	1.155	1.155	0	%100
35	M20	X	1.981	1.981	0	%100
36	M20	Z	1.144	1.144	0	%100
37	M21	X	1.981	1.981	0	%100
38	M21	Z	1.144	1.144	0	%100
39	M22	X	1.966	1.966	0	%100
40	M22	Z	1.135	1.135	0	%100
41	M23	X	1.966	1.966	0	%100
42	M23	Z	1.135	1.135	0	%100
43	M24	X	1.924	1.924	0	%100
44	M24	Z	1.111	1.111	0	%100
45	M25	X	2.001	2.001	0	%100
46	M25	Z	1.155	1.155	0	%100
47	M26	X	1.981	1.981	0	%100
48	M26	Z	1.144	1.144	0	%100
49	M27	X	2.135	2.135	0	%100
50	M27	Z	1.233	1.233	0	%100
51	M28	X	1.981	1.981	0	%100
52	M28	Z	1.144	1.144	0	%100
53	M29	X	2.135	2.135	0	%100
54	M29	Z	1.233	1.233	0	%100
55	M30	X	2.001	2.001	0	%100
56	M30	Z	1.155	1.155	0	%100
57	M31	X	1.981	1.981	0	%100
58	M31	Z	1.144	1.144	0	%100
59	M32	X	1.981	1.981	0	%100
60	M32	Z	1.144	1.144	0	%100
61	M33	X	1.966	1.966	0	%100
62	M33	Z	1.135	1.135	0	%100
63	M34	X	1.966	1.966	0	%100
64	M34	Z	1.135	1.135	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
65	M35	X	1.924	1.924	0	%100
66	M35	Z	1.111	1.111	0	%100
67	M36	X	2.001	2.001	0	%100
68	M36	Z	1.155	1.155	0	%100
69	MP4A	X	2.515	2.515	0	%100
70	MP4A	Z	1.452	1.452	0	%100
71	MP3A	X	2.515	2.515	0	%100
72	MP3A	Z	1.452	1.452	0	%100
73	MP2A	X	2.515	2.515	0	%100
74	MP2A	Z	1.452	1.452	0	%100
75	MP1A	X	2.515	2.515	0	%100
76	MP1A	Z	1.452	1.452	0	%100
77	EQUIP	X	3.128	3.128	0	%100
78	EQUIP	Z	1.806	1.806	0	%100
79	M51	X	3.128	3.128	0	%100
80	M51	Z	1.806	1.806	0	%100
81	M55A	X	2.515	2.515	0	%100
82	M55A	Z	1.452	1.452	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	1.012	1.012	0	%100
2	M1	Z	1.753	1.753	0	%100
3	M3	X	1.012	1.012	0	%100
4	M3	Z	1.753	1.753	0	%100
5	M5	X	.497	.497	0	%100
6	M5	Z	.862	.862	0	%100
7	M6	X	.033	.033	0	%100
8	M6	Z	.058	.058	0	%100
9	M7	X	1.205	1.205	0	%100
10	M7	Z	2.087	2.087	0	%100
11	M8	X	.445	.445	0	%100
12	M8	Z	.77	.77	0	%100
13	M9	X	.062	.062	0	%100
14	M9	Z	.107	.107	0	%100
15	M10	X	1.205	1.205	0	%100
16	M10	Z	2.087	2.087	0	%100
17	M11	X	1.348	1.348	0	%100
18	M11	Z	2.335	2.335	0	%100
19	M12	X	.09	.09	0	%100
20	M12	Z	.157	.157	0	%100
21	M13	X	1.348	1.348	0	%100
22	M13	Z	2.335	2.335	0	%100
23	M14	X	.09	.09	0	%100
24	M14	Z	.157	.157	0	%100
25	M15	X	.743	.743	0	%100
26	M15	Z	1.287	1.287	0	%100
27	M16	X	.865	.865	0	%100
28	M16	Z	1.498	1.498	0	%100
29	M17	X	.743	.743	0	%100
30	M17	Z	1.287	1.287	0	%100
31	M18	X	.865	.865	0	%100
32	M18	Z	1.498	1.498	0	%100
33	M19	X	.775	.775	0	%100
34	M19	Z	1.342	1.342	0	%100
35	M20	X	.743	.743	0	%100
36	M20	Z	1.287	1.287	0	%100
37	M21	X	.743	.743	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
38	M21	Z	1.287	1.287	0	%100
39	M22	X	1.135	1.135	0	%100
40	M22	Z	1.966	1.966	0	%100
41	M23	X	1.135	1.135	0	%100
42	M23	Z	1.966	1.966	0	%100
43	M24	X	1.111	1.111	0	%100
44	M24	Z	1.924	1.924	0	%100
45	M25	X	.775	.775	0	%100
46	M25	Z	1.342	1.342	0	%100
47	M26	X	.743	.743	0	%100
48	M26	Z	1.287	1.287	0	%100
49	M27	X	1.229	1.229	0	%100
50	M27	Z	2.128	2.128	0	%100
51	M28	X	.743	.743	0	%100
52	M28	Z	1.287	1.287	0	%100
53	M29	X	1.229	1.229	0	%100
54	M29	Z	2.128	2.128	0	%100
55	M30	X	.775	.775	0	%100
56	M30	Z	1.342	1.342	0	%100
57	M31	X	.743	.743	0	%100
58	M31	Z	1.287	1.287	0	%100
59	M32	X	.743	.743	0	%100
60	M32	Z	1.287	1.287	0	%100
61	M33	X	1.135	1.135	0	%100
62	M33	Z	1.966	1.966	0	%100
63	M34	X	1.135	1.135	0	%100
64	M34	Z	1.966	1.966	0	%100
65	M35	X	1.111	1.111	0	%100
66	M35	Z	1.924	1.924	0	%100
67	M36	X	.775	.775	0	%100
68	M36	Z	1.342	1.342	0	%100
69	MP4A	X	1.452	1.452	0	%100
70	MP4A	Z	2.515	2.515	0	%100
71	MP3A	X	1.452	1.452	0	%100
72	MP3A	Z	2.515	2.515	0	%100
73	MP2A	X	1.452	1.452	0	%100
74	MP2A	Z	2.515	2.515	0	%100
75	MP1A	X	1.452	1.452	0	%100
76	MP1A	Z	2.515	2.515	0	%100
77	EQUIP	X	1.806	1.806	0	%100
78	EQUIP	Z	3.128	3.128	0	%100
79	M51	X	1.806	1.806	0	%100
80	M51	Z	3.128	3.128	0	%100
81	M55A	X	1.083	1.083	0	%100
82	M55A	Z	1.875	1.875	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	0	0	0	%100
2	M1	Z	2.699	2.699	0	%100
3	M3	X	0	0	0	%100
4	M3	Z	2.699	2.699	0	%100
5	M5	X	0	0	0	%100
6	M5	Z	.526	.526	0	%100
7	M6	X	0	0	0	%100
8	M6	Z	.526	.526	0	%100
9	M7	X	0	0	0	%100
10	M7	Z	3.213	3.213	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
11	M8	X	0	0	0	%100
12	M8	Z	.364	.364	0	%100
13	M9	X	0	0	0	%100
14	M9	Z	.626	.626	0	%100
15	M10	X	0	0	0	%100
16	M10	Z	3.213	3.213	0	%100
17	M11	X	0	0	0	%100
18	M11	Z	1.425	1.425	0	%100
19	M12	X	0	0	0	%100
20	M12	Z	1.425	1.425	0	%100
21	M13	X	0	0	0	%100
22	M13	Z	1.425	1.425	0	%100
23	M14	X	0	0	0	%100
24	M14	Z	1.425	1.425	0	%100
25	M15	X	0	0	0	%100
26	M15	Z	1.085	1.085	0	%100
27	M16	X	0	0	0	%100
28	M16	Z	2.09	2.09	0	%100
29	M17	X	0	0	0	%100
30	M17	Z	1.085	1.085	0	%100
31	M18	X	0	0	0	%100
32	M18	Z	2.09	2.09	0	%100
33	M19	X	0	0	0	%100
34	M19	Z	1.17	1.17	0	%100
35	M20	X	0	0	0	%100
36	M20	Z	1.085	1.085	0	%100
37	M21	X	0	0	0	%100
38	M21	Z	1.085	1.085	0	%100
39	M22	X	0	0	0	%100
40	M22	Z	2.27	2.27	0	%100
41	M23	X	0	0	0	%100
42	M23	Z	2.27	2.27	0	%100
43	M24	X	0	0	0	%100
44	M24	Z	2.221	2.221	0	%100
45	M25	X	0	0	0	%100
46	M25	Z	1.17	1.17	0	%100
47	M26	X	0	0	0	%100
48	M26	Z	1.085	1.085	0	%100
49	M27	X	0	0	0	%100
50	M27	Z	2.09	2.09	0	%100
51	M28	X	0	0	0	%100
52	M28	Z	1.085	1.085	0	%100
53	M29	X	0	0	0	%100
54	M29	Z	2.09	2.09	0	%100
55	M30	X	0	0	0	%100
56	M30	Z	1.17	1.17	0	%100
57	M31	X	0	0	0	%100
58	M31	Z	1.085	1.085	0	%100
59	M32	X	0	0	0	%100
60	M32	Z	1.085	1.085	0	%100
61	M33	X	0	0	0	%100
62	M33	Z	2.27	2.27	0	%100
63	M34	X	0	0	0	%100
64	M34	Z	2.27	2.27	0	%100
65	M35	X	0	0	0	%100
66	M35	Z	2.221	2.221	0	%100
67	M36	X	0	0	0	%100
68	M36	Z	1.17	1.17	0	%100
69	MP4A	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....	Start Location[ft.%]	End Location[ft.%]
70	MP4A	Z	2.905	2.905	0	%100
71	MP3A	X	0	0	0	%100
72	MP3A	Z	2.905	2.905	0	%100
73	MP2A	X	0	0	0	%100
74	MP2A	Z	2.905	2.905	0	%100
75	MP1A	X	0	0	0	%100
76	MP1A	Z	2.905	2.905	0	%100
77	EQUIP	X	0	0	0	%100
78	EQUIP	Z	3.612	3.612	0	%100
79	M51	X	0	0	0	%100
80	M51	Z	3.612	3.612	0	%100
81	M55A	X	0	0	0	%100
82	M55A	Z	.713	.713	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-1.012	-1.012	0	%100
2	M1	Z	1.753	1.753	0	%100
3	M3	X	-1.012	-1.012	0	%100
4	M3	Z	1.753	1.753	0	%100
5	M5	X	-.033	-.033	0	%100
6	M5	Z	.058	.058	0	%100
7	M6	X	-.497	-.497	0	%100
8	M6	Z	.862	.862	0	%100
9	M7	X	-1.205	-1.205	0	%100
10	M7	Z	2.087	2.087	0	%100
11	M8	X	-.005	-.005	0	%100
12	M8	Z	.009	.009	0	%100
13	M9	X	-.519	-.519	0	%100
14	M9	Z	.899	.899	0	%100
15	M10	X	-1.205	-1.205	0	%100
16	M10	Z	2.087	2.087	0	%100
17	M11	X	-.09	-.09	0	%100
18	M11	Z	.157	.157	0	%100
19	M12	X	-1.348	-1.348	0	%100
20	M12	Z	2.335	2.335	0	%100
21	M13	X	-.09	-.09	0	%100
22	M13	Z	.157	.157	0	%100
23	M14	X	-1.348	-1.348	0	%100
24	M14	Z	2.335	2.335	0	%100
25	M15	X	-.743	-.743	0	%100
26	M15	Z	1.287	1.287	0	%100
27	M16	X	-1.229	-1.229	0	%100
28	M16	Z	2.128	2.128	0	%100
29	M17	X	-.743	-.743	0	%100
30	M17	Z	1.287	1.287	0	%100
31	M18	X	-1.229	-1.229	0	%100
32	M18	Z	2.128	2.128	0	%100
33	M19	X	-.775	-.775	0	%100
34	M19	Z	1.342	1.342	0	%100
35	M20	X	-.743	-.743	0	%100
36	M20	Z	1.287	1.287	0	%100
37	M21	X	-.743	-.743	0	%100
38	M21	Z	1.287	1.287	0	%100
39	M22	X	-1.135	-1.135	0	%100
40	M22	Z	1.966	1.966	0	%100
41	M23	X	-1.135	-1.135	0	%100
42	M23	Z	1.966	1.966	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
43	M24	X	-1.111	-1.111	0	%100
44	M24	Z	1.924	1.924	0	%100
45	M25	X	-.775	-.775	0	%100
46	M25	Z	1.342	1.342	0	%100
47	M26	X	-.743	-.743	0	%100
48	M26	Z	1.287	1.287	0	%100
49	M27	X	-.865	-.865	0	%100
50	M27	Z	1.498	1.498	0	%100
51	M28	X	-.743	-.743	0	%100
52	M28	Z	1.287	1.287	0	%100
53	M29	X	-.865	-.865	0	%100
54	M29	Z	1.498	1.498	0	%100
55	M30	X	-.775	-.775	0	%100
56	M30	Z	1.342	1.342	0	%100
57	M31	X	-.743	-.743	0	%100
58	M31	Z	1.287	1.287	0	%100
59	M32	X	-.743	-.743	0	%100
60	M32	Z	1.287	1.287	0	%100
61	M33	X	-1.135	-1.135	0	%100
62	M33	Z	1.966	1.966	0	%100
63	M34	X	-1.135	-1.135	0	%100
64	M34	Z	1.966	1.966	0	%100
65	M35	X	-1.111	-1.111	0	%100
66	M35	Z	1.924	1.924	0	%100
67	M36	X	-.775	-.775	0	%100
68	M36	Z	1.342	1.342	0	%100
69	MP4A	X	-1.452	-1.452	0	%100
70	MP4A	Z	2.515	2.515	0	%100
71	MP3A	X	-1.452	-1.452	0	%100
72	MP3A	Z	2.515	2.515	0	%100
73	MP2A	X	-1.452	-1.452	0	%100
74	MP2A	Z	2.515	2.515	0	%100
75	MP1A	X	-1.452	-1.452	0	%100
76	MP1A	Z	2.515	2.515	0	%100
77	EQUIP	X	-1.806	-1.806	0	%100
78	EQUIP	Z	3.128	3.128	0	%100
79	M51	X	-1.806	-1.806	0	%100
80	M51	Z	3.128	3.128	0	%100
81	M55A	X	-3.8e-5	-3.8e-5	0	%100
82	M55A	Z	6.6e-5	6.6e-5	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-.584	-.584	0	%100
2	M1	Z	.337	.337	0	%100
3	M3	X	-.584	-.584	0	%100
4	M3	Z	.337	.337	0	%100
5	M5	X	-.067	-.067	0	%100
6	M5	Z	.038	.038	0	%100
7	M6	X	-.871	-.871	0	%100
8	M6	Z	.503	.503	0	%100
9	M7	X	-.696	-.696	0	%100
10	M7	Z	.402	.402	0	%100
11	M8	X	-.158	-.158	0	%100
12	M8	Z	.091	.091	0	%100
13	M9	X	-.821	-.821	0	%100
14	M9	Z	.474	.474	0	%100
15	M10	X	-.696	-.696	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[ft.%]	End Location[ft.%]
16	M10	Z	.402	.402	0	%100
17	M11	X	-.181	-.181	0	%100
18	M11	Z	.104	.104	0	%100
19	M12	X	-2.359	-2.359	0	%100
20	M12	Z	1.362	1.362	0	%100
21	M13	X	-.181	-.181	0	%100
22	M13	Z	.104	.104	0	%100
23	M14	X	-2.359	-2.359	0	%100
24	M14	Z	1.362	1.362	0	%100
25	M15	X	-1.981	-1.981	0	%100
26	M15	Z	1.144	1.144	0	%100
27	M16	X	-2.135	-2.135	0	%100
28	M16	Z	1.233	1.233	0	%100
29	M17	X	-1.981	-1.981	0	%100
30	M17	Z	1.144	1.144	0	%100
31	M18	X	-2.135	-2.135	0	%100
32	M18	Z	1.233	1.233	0	%100
33	M19	X	-2.001	-2.001	0	%100
34	M19	Z	1.155	1.155	0	%100
35	M20	X	-1.981	-1.981	0	%100
36	M20	Z	1.144	1.144	0	%100
37	M21	X	-1.981	-1.981	0	%100
38	M21	Z	1.144	1.144	0	%100
39	M22	X	-1.966	-1.966	0	%100
40	M22	Z	1.135	1.135	0	%100
41	M23	X	-1.966	-1.966	0	%100
42	M23	Z	1.135	1.135	0	%100
43	M24	X	-1.924	-1.924	0	%100
44	M24	Z	1.111	1.111	0	%100
45	M25	X	-2.001	-2.001	0	%100
46	M25	Z	1.155	1.155	0	%100
47	M26	X	-1.981	-1.981	0	%100
48	M26	Z	1.144	1.144	0	%100
49	M27	X	-1.505	-1.505	0	%100
50	M27	Z	.869	.869	0	%100
51	M28	X	-1.981	-1.981	0	%100
52	M28	Z	1.144	1.144	0	%100
53	M29	X	-1.505	-1.505	0	%100
54	M29	Z	.869	.869	0	%100
55	M30	X	-2.001	-2.001	0	%100
56	M30	Z	1.155	1.155	0	%100
57	M31	X	-1.981	-1.981	0	%100
58	M31	Z	1.144	1.144	0	%100
59	M32	X	-1.981	-1.981	0	%100
60	M32	Z	1.144	1.144	0	%100
61	M33	X	-1.966	-1.966	0	%100
62	M33	Z	1.135	1.135	0	%100
63	M34	X	-1.966	-1.966	0	%100
64	M34	Z	1.135	1.135	0	%100
65	M35	X	-1.924	-1.924	0	%100
66	M35	Z	1.111	1.111	0	%100
67	M36	X	-2.001	-2.001	0	%100
68	M36	Z	1.155	1.155	0	%100
69	MP4A	X	-2.515	-2.515	0	%100
70	MP4A	Z	1.452	1.452	0	%100
71	MP3A	X	-2.515	-2.515	0	%100
72	MP3A	Z	1.452	1.452	0	%100
73	MP2A	X	-2.515	-2.515	0	%100
74	MP2A	Z	1.452	1.452	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
75	MP1A	X	-2.515	-2.515	0	%100
76	MP1A	Z	1.452	1.452	0	%100
77	EQUIP	X	-3.128	-3.128	0	%100
78	EQUIP	Z	1.806	1.806	0	%100
79	M51	X	-3.128	-3.128	0	%100
80	M51	Z	1.806	1.806	0	%100
81	M55A	X	-.64	-.64	0	%100
82	M55A	Z	.37	.37	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M3	X	0	0	0	%100
4	M3	Z	0	0	0	%100
5	M5	X	-.546	-.546	0	%100
6	M5	Z	0	0	0	%100
7	M6	X	-.546	-.546	0	%100
8	M6	Z	0	0	0	%100
9	M7	X	0	0	0	%100
10	M7	Z	0	0	0	%100
11	M8	X	-.708	-.708	0	%100
12	M8	Z	0	0	0	%100
13	M9	X	-.446	-.446	0	%100
14	M9	Z	0	0	0	%100
15	M10	X	0	0	0	%100
16	M10	Z	0	0	0	%100
17	M11	X	-1.48	-1.48	0	%100
18	M11	Z	0	0	0	%100
19	M12	X	-1.48	-1.48	0	%100
20	M12	Z	0	0	0	%100
21	M13	X	-1.48	-1.48	0	%100
22	M13	Z	0	0	0	%100
23	M14	X	-1.48	-1.48	0	%100
24	M14	Z	0	0	0	%100
25	M15	X	-2.689	-2.689	0	%100
26	M15	Z	0	0	0	%100
27	M16	X	-2.106	-2.106	0	%100
28	M16	Z	0	0	0	%100
29	M17	X	-2.689	-2.689	0	%100
30	M17	Z	0	0	0	%100
31	M18	X	-2.106	-2.106	0	%100
32	M18	Z	0	0	0	%100
33	M19	X	-2.691	-2.691	0	%100
34	M19	Z	0	0	0	%100
35	M20	X	-2.689	-2.689	0	%100
36	M20	Z	0	0	0	%100
37	M21	X	-2.689	-2.689	0	%100
38	M21	Z	0	0	0	%100
39	M22	X	-2.27	-2.27	0	%100
40	M22	Z	0	0	0	%100
41	M23	X	-2.27	-2.27	0	%100
42	M23	Z	0	0	0	%100
43	M24	X	-2.221	-2.221	0	%100
44	M24	Z	0	0	0	%100
45	M25	X	-2.691	-2.691	0	%100
46	M25	Z	0	0	0	%100
47	M26	X	-2.689	-2.689	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[ft.%]	End Location[ft.%]
48	M26	Z	0	0	0	%100
49	M27	X	-2.106	-2.106	0	%100
50	M27	Z	0	0	0	%100
51	M28	X	-2.689	-2.689	0	%100
52	M28	Z	0	0	0	%100
53	M29	X	-2.106	-2.106	0	%100
54	M29	Z	0	0	0	%100
55	M30	X	-2.691	-2.691	0	%100
56	M30	Z	0	0	0	%100
57	M31	X	-2.689	-2.689	0	%100
58	M31	Z	0	0	0	%100
59	M32	X	-2.689	-2.689	0	%100
60	M32	Z	0	0	0	%100
61	M33	X	-2.27	-2.27	0	%100
62	M33	Z	0	0	0	%100
63	M34	X	-2.27	-2.27	0	%100
64	M34	Z	0	0	0	%100
65	M35	X	-2.221	-2.221	0	%100
66	M35	Z	0	0	0	%100
67	M36	X	-2.691	-2.691	0	%100
68	M36	Z	0	0	0	%100
69	MP4A	X	-2.905	-2.905	0	%100
70	MP4A	Z	0	0	0	%100
71	MP3A	X	-2.905	-2.905	0	%100
72	MP3A	Z	0	0	0	%100
73	MP2A	X	-2.905	-2.905	0	%100
74	MP2A	Z	0	0	0	%100
75	MP1A	X	-2.905	-2.905	0	%100
76	MP1A	Z	0	0	0	%100
77	EQUIP	X	-3.612	-3.612	0	%100
78	EQUIP	Z	0	0	0	%100
79	M51	X	-3.612	-3.612	0	%100
80	M51	Z	0	0	0	%100
81	M55A	X	-2.191	-2.191	0	%100
82	M55A	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....]	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-.584	-.584	0	%100
2	M1	Z	-.337	-.337	0	%100
3	M3	X	-.584	-.584	0	%100
4	M3	Z	-.337	-.337	0	%100
5	M5	X	-.871	-.871	0	%100
6	M5	Z	-.503	-.503	0	%100
7	M6	X	-.067	-.067	0	%100
8	M6	Z	-.038	-.038	0	%100
9	M7	X	-.696	-.696	0	%100
10	M7	Z	-.402	-.402	0	%100
11	M8	X	-.919	-.919	0	%100
12	M8	Z	-.531	-.531	0	%100
13	M9	X	-.029	-.029	0	%100
14	M9	Z	-.017	-.017	0	%100
15	M10	X	-.696	-.696	0	%100
16	M10	Z	-.402	-.402	0	%100
17	M11	X	-2.359	-2.359	0	%100
18	M11	Z	-1.362	-1.362	0	%100
19	M12	X	-.181	-.181	0	%100
20	M12	Z	-.104	-.104	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
21	M13	X	-2.359	-2.359	0	%100
22	M13	Z	-1.362	-1.362	0	%100
23	M14	X	-.181	-.181	0	%100
24	M14	Z	-.104	-.104	0	%100
25	M15	X	-1.981	-1.981	0	%100
26	M15	Z	-1.144	-1.144	0	%100
27	M16	X	-1.505	-1.505	0	%100
28	M16	Z	-.869	-.869	0	%100
29	M17	X	-1.981	-1.981	0	%100
30	M17	Z	-1.144	-1.144	0	%100
31	M18	X	-1.505	-1.505	0	%100
32	M18	Z	-.869	-.869	0	%100
33	M19	X	-2.001	-2.001	0	%100
34	M19	Z	-1.155	-1.155	0	%100
35	M20	X	-1.981	-1.981	0	%100
36	M20	Z	-1.144	-1.144	0	%100
37	M21	X	-1.981	-1.981	0	%100
38	M21	Z	-1.144	-1.144	0	%100
39	M22	X	-1.966	-1.966	0	%100
40	M22	Z	-1.135	-1.135	0	%100
41	M23	X	-1.966	-1.966	0	%100
42	M23	Z	-1.135	-1.135	0	%100
43	M24	X	-1.924	-1.924	0	%100
44	M24	Z	-1.111	-1.111	0	%100
45	M25	X	-2.001	-2.001	0	%100
46	M25	Z	-1.155	-1.155	0	%100
47	M26	X	-1.981	-1.981	0	%100
48	M26	Z	-1.144	-1.144	0	%100
49	M27	X	-2.135	-2.135	0	%100
50	M27	Z	-1.233	-1.233	0	%100
51	M28	X	-1.981	-1.981	0	%100
52	M28	Z	-1.144	-1.144	0	%100
53	M29	X	-2.135	-2.135	0	%100
54	M29	Z	-1.233	-1.233	0	%100
55	M30	X	-2.001	-2.001	0	%100
56	M30	Z	-1.155	-1.155	0	%100
57	M31	X	-1.981	-1.981	0	%100
58	M31	Z	-1.144	-1.144	0	%100
59	M32	X	-1.981	-1.981	0	%100
60	M32	Z	-1.144	-1.144	0	%100
61	M33	X	-1.966	-1.966	0	%100
62	M33	Z	-1.135	-1.135	0	%100
63	M34	X	-1.966	-1.966	0	%100
64	M34	Z	-1.135	-1.135	0	%100
65	M35	X	-1.924	-1.924	0	%100
66	M35	Z	-1.111	-1.111	0	%100
67	M36	X	-2.001	-2.001	0	%100
68	M36	Z	-1.155	-1.155	0	%100
69	MP4A	X	-2.515	-2.515	0	%100
70	MP4A	Z	-1.452	-1.452	0	%100
71	MP3A	X	-2.515	-2.515	0	%100
72	MP3A	Z	-1.452	-1.452	0	%100
73	MP2A	X	-2.515	-2.515	0	%100
74	MP2A	Z	-1.452	-1.452	0	%100
75	MP1A	X	-2.515	-2.515	0	%100
76	MP1A	Z	-1.452	-1.452	0	%100
77	EQUIP	X	-3.128	-3.128	0	%100
78	EQUIP	Z	-1.806	-1.806	0	%100
79	M51	X	-3.128	-3.128	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[ft.%]	End Location[ft.%]
80	M51	Z	-1.806	-1.806	0	%100
81	M55A	X	-2.515	-2.515	0	%100
82	M55A	Z	-1.452	-1.452	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-1.012	-1.012	0	%100
2	M1	Z	-1.753	-1.753	0	%100
3	M3	X	-1.012	-1.012	0	%100
4	M3	Z	-1.753	-1.753	0	%100
5	M5	X	-.497	-.497	0	%100
6	M5	Z	-.862	-.862	0	%100
7	M6	X	-.033	-.033	0	%100
8	M6	Z	-.058	-.058	0	%100
9	M7	X	-1.205	-1.205	0	%100
10	M7	Z	-2.087	-2.087	0	%100
11	M8	X	-.445	-.445	0	%100
12	M8	Z	-.77	-.77	0	%100
13	M9	X	-.062	-.062	0	%100
14	M9	Z	-.107	-.107	0	%100
15	M10	X	-1.205	-1.205	0	%100
16	M10	Z	-2.087	-2.087	0	%100
17	M11	X	-1.348	-1.348	0	%100
18	M11	Z	-2.335	-2.335	0	%100
19	M12	X	-.09	-.09	0	%100
20	M12	Z	-.157	-.157	0	%100
21	M13	X	-1.348	-1.348	0	%100
22	M13	Z	-2.335	-2.335	0	%100
23	M14	X	-.09	-.09	0	%100
24	M14	Z	-.157	-.157	0	%100
25	M15	X	-.743	-.743	0	%100
26	M15	Z	-1.287	-1.287	0	%100
27	M16	X	-.865	-.865	0	%100
28	M16	Z	-1.498	-1.498	0	%100
29	M17	X	-.743	-.743	0	%100
30	M17	Z	-1.287	-1.287	0	%100
31	M18	X	-.865	-.865	0	%100
32	M18	Z	-1.498	-1.498	0	%100
33	M19	X	-.775	-.775	0	%100
34	M19	Z	-1.342	-1.342	0	%100
35	M20	X	-.743	-.743	0	%100
36	M20	Z	-1.287	-1.287	0	%100
37	M21	X	-.743	-.743	0	%100
38	M21	Z	-1.287	-1.287	0	%100
39	M22	X	-1.135	-1.135	0	%100
40	M22	Z	-1.966	-1.966	0	%100
41	M23	X	-1.135	-1.135	0	%100
42	M23	Z	-1.966	-1.966	0	%100
43	M24	X	-1.111	-1.111	0	%100
44	M24	Z	-1.924	-1.924	0	%100
45	M25	X	-.775	-.775	0	%100
46	M25	Z	-1.342	-1.342	0	%100
47	M26	X	-.743	-.743	0	%100
48	M26	Z	-1.287	-1.287	0	%100
49	M27	X	-1.229	-1.229	0	%100
50	M27	Z	-2.128	-2.128	0	%100
51	M28	X	-.743	-.743	0	%100
52	M28	Z	-1.287	-1.287	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
53	M29	X	-1.229	-1.229	0	%100
54	M29	Z	-2.128	-2.128	0	%100
55	M30	X	-.775	-.775	0	%100
56	M30	Z	-1.342	-1.342	0	%100
57	M31	X	-.743	-.743	0	%100
58	M31	Z	-1.287	-1.287	0	%100
59	M32	X	-.743	-.743	0	%100
60	M32	Z	-1.287	-1.287	0	%100
61	M33	X	-1.135	-1.135	0	%100
62	M33	Z	-1.966	-1.966	0	%100
63	M34	X	-1.135	-1.135	0	%100
64	M34	Z	-1.966	-1.966	0	%100
65	M35	X	-1.111	-1.111	0	%100
66	M35	Z	-1.924	-1.924	0	%100
67	M36	X	-.775	-.775	0	%100
68	M36	Z	-1.342	-1.342	0	%100
69	MP4A	X	-1.452	-1.452	0	%100
70	MP4A	Z	-2.515	-2.515	0	%100
71	MP3A	X	-1.452	-1.452	0	%100
72	MP3A	Z	-2.515	-2.515	0	%100
73	MP2A	X	-1.452	-1.452	0	%100
74	MP2A	Z	-2.515	-2.515	0	%100
75	MP1A	X	-1.452	-1.452	0	%100
76	MP1A	Z	-2.515	-2.515	0	%100
77	EQUIP	X	-1.806	-1.806	0	%100
78	EQUIP	Z	-3.128	-3.128	0	%100
79	M51	X	-1.806	-1.806	0	%100
80	M51	Z	-3.128	-3.128	0	%100
81	M55A	X	-1.083	-1.083	0	%100
82	M55A	Z	-1.875	-1.875	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	0	0	0	%100
2	M1	Z	-.665	-.665	0	%100
3	M3	X	0	0	0	%100
4	M3	Z	-.665	-.665	0	%100
5	M5	X	0	0	0	%100
6	M5	Z	-.041	-.041	0	%100
7	M6	X	0	0	0	%100
8	M6	Z	-.041	-.041	0	%100
9	M7	X	0	0	0	%100
10	M7	Z	-.638	-.638	0	%100
11	M8	X	0	0	0	%100
12	M8	Z	-.028	-.028	0	%100
13	M9	X	0	0	0	%100
14	M9	Z	-.049	-.049	0	%100
15	M10	X	0	0	0	%100
16	M10	Z	-.638	-.638	0	%100
17	M11	X	0	0	0	%100
18	M11	Z	-.258	-.258	0	%100
19	M12	X	0	0	0	%100
20	M12	Z	-.258	-.258	0	%100
21	M13	X	0	0	0	%100
22	M13	Z	-.258	-.258	0	%100
23	M14	X	0	0	0	%100
24	M14	Z	-.258	-.258	0	%100
25	M15	X	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
26	M15	Z	-088	-088	0	%100
27	M16	X	0	0	0	%100
28	M16	Z	-.35	-.35	0	%100
29	M17	X	0	0	0	%100
30	M17	Z	-088	-088	0	%100
31	M18	X	0	0	0	%100
32	M18	Z	-.35	-.35	0	%100
33	M19	X	0	0	0	%100
34	M19	Z	-.118	-.118	0	%100
35	M20	X	0	0	0	%100
36	M20	Z	-088	-088	0	%100
37	M21	X	0	0	0	%100
38	M21	Z	-088	-088	0	%100
39	M22	X	0	0	0	%100
40	M22	Z	-.382	-.382	0	%100
41	M23	X	0	0	0	%100
42	M23	Z	-.382	-.382	0	%100
43	M24	X	0	0	0	%100
44	M24	Z	-.402	-.402	0	%100
45	M25	X	0	0	0	%100
46	M25	Z	-.118	-.118	0	%100
47	M26	X	0	0	0	%100
48	M26	Z	-088	-088	0	%100
49	M27	X	0	0	0	%100
50	M27	Z	-.35	-.35	0	%100
51	M28	X	0	0	0	%100
52	M28	Z	-088	-088	0	%100
53	M29	X	0	0	0	%100
54	M29	Z	-.35	-.35	0	%100
55	M30	X	0	0	0	%100
56	M30	Z	-.118	-.118	0	%100
57	M31	X	0	0	0	%100
58	M31	Z	-088	-088	0	%100
59	M32	X	0	0	0	%100
60	M32	Z	-088	-088	0	%100
61	M33	X	0	0	0	%100
62	M33	Z	-.382	-.382	0	%100
63	M34	X	0	0	0	%100
64	M34	Z	-.382	-.382	0	%100
65	M35	X	0	0	0	%100
66	M35	Z	-.402	-.402	0	%100
67	M36	X	0	0	0	%100
68	M36	Z	-.118	-.118	0	%100
69	MP4A	X	0	0	0	%100
70	MP4A	Z	-.527	-.527	0	%100
71	MP3A	X	0	0	0	%100
72	MP3A	Z	-.527	-.527	0	%100
73	MP2A	X	0	0	0	%100
74	MP2A	Z	-.527	-.527	0	%100
75	MP1A	X	0	0	0	%100
76	MP1A	Z	-.527	-.527	0	%100
77	EQUIP	X	0	0	0	%100
78	EQUIP	Z	-.828	-.828	0	%100
79	M51	X	0	0	0	%100
80	M51	Z	-.828	-.828	0	%100
81	M55A	X	0	0	0	%100
82	M55A	Z	-.129	-.129	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	.249	.249	0	%100
2	M1	Z	-.432	-.432	0	%100
3	M3	X	.249	.249	0	%100
4	M3	Z	-.432	-.432	0	%100
5	M5	X	.003	.003	0	%100
6	M5	Z	-.004	-.004	0	%100
7	M6	X	.039	.039	0	%100
8	M6	Z	-.067	-.067	0	%100
9	M7	X	.239	.239	0	%100
10	M7	Z	-.414	-.414	0	%100
11	M8	X	.0004	.0004	0	%100
12	M8	Z	-.000692	-.000692	0	%100
13	M9	X	.04	.04	0	%100
14	M9	Z	-.07	-.07	0	%100
15	M10	X	.239	.239	0	%100
16	M10	Z	-.414	-.414	0	%100
17	M11	X	.016	.016	0	%100
18	M11	Z	-.028	-.028	0	%100
19	M12	X	.244	.244	0	%100
20	M12	Z	-.423	-.423	0	%100
21	M13	X	.016	.016	0	%100
22	M13	Z	-.028	-.028	0	%100
23	M14	X	.244	.244	0	%100
24	M14	Z	-.423	-.423	0	%100
25	M15	X	.116	.116	0	%100
26	M15	Z	-.201	-.201	0	%100
27	M16	X	.206	.206	0	%100
28	M16	Z	-.356	-.356	0	%100
29	M17	X	.116	.116	0	%100
30	M17	Z	-.201	-.201	0	%100
31	M18	X	.206	.206	0	%100
32	M18	Z	-.356	-.356	0	%100
33	M19	X	.127	.127	0	%100
34	M19	Z	-.221	-.221	0	%100
35	M20	X	.116	.116	0	%100
36	M20	Z	-.201	-.201	0	%100
37	M21	X	.116	.116	0	%100
38	M21	Z	-.201	-.201	0	%100
39	M22	X	.191	.191	0	%100
40	M22	Z	-.331	-.331	0	%100
41	M23	X	.191	.191	0	%100
42	M23	Z	-.331	-.331	0	%100
43	M24	X	.201	.201	0	%100
44	M24	Z	-.348	-.348	0	%100
45	M25	X	.127	.127	0	%100
46	M25	Z	-.221	-.221	0	%100
47	M26	X	.116	.116	0	%100
48	M26	Z	-.201	-.201	0	%100
49	M27	X	.145	.145	0	%100
50	M27	Z	-.251	-.251	0	%100
51	M28	X	.116	.116	0	%100
52	M28	Z	-.201	-.201	0	%100
53	M29	X	.145	.145	0	%100
54	M29	Z	-.251	-.251	0	%100
55	M30	X	.127	.127	0	%100
56	M30	Z	-.221	-.221	0	%100
57	M31	X	.116	.116	0	%100
58	M31	Z	-.201	-.201	0	%100
59	M32	X	.116	.116	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[ft.%]	End Location[ft.%]
60	M32	Z	-.201	-.201	0	%100
61	M33	X	.191	.191	0	%100
62	M33	Z	-.331	-.331	0	%100
63	M34	X	.191	.191	0	%100
64	M34	Z	-.331	-.331	0	%100
65	M35	X	.201	.201	0	%100
66	M35	Z	-.348	-.348	0	%100
67	M36	X	.127	.127	0	%100
68	M36	Z	-.221	-.221	0	%100
69	MP4A	X	.263	.263	0	%100
70	MP4A	Z	-.456	-.456	0	%100
71	MP3A	X	.263	.263	0	%100
72	MP3A	Z	-.456	-.456	0	%100
73	MP2A	X	.263	.263	0	%100
74	MP2A	Z	-.456	-.456	0	%100
75	MP1A	X	.263	.263	0	%100
76	MP1A	Z	-.456	-.456	0	%100
77	EQUIP	X	.414	.414	0	%100
78	EQUIP	Z	-.717	-.717	0	%100
79	M51	X	.414	.414	0	%100
80	M51	Z	-.717	-.717	0	%100
81	M55A	X	7e-6	7e-6	0	%100
82	M55A	Z	-1.2e-5	-1.2e-5	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[ft.%]	End Location[ft.%]
1	M1	X	.144	.144	0	%100
2	M1	Z	-.083	-.083	0	%100
3	M3	X	.144	.144	0	%100
4	M3	Z	-.083	-.083	0	%100
5	M5	X	.005	.005	0	%100
6	M5	Z	-.003	-.003	0	%100
7	M6	X	.068	.068	0	%100
8	M6	Z	-.039	-.039	0	%100
9	M7	X	.138	.138	0	%100
10	M7	Z	-.08	-.08	0	%100
11	M8	X	.012	.012	0	%100
12	M8	Z	-.007	-.007	0	%100
13	M9	X	.064	.064	0	%100
14	M9	Z	-.037	-.037	0	%100
15	M10	X	.138	.138	0	%100
16	M10	Z	-.08	-.08	0	%100
17	M11	X	.033	.033	0	%100
18	M11	Z	-.019	-.019	0	%100
19	M12	X	.428	.428	0	%100
20	M12	Z	-.247	-.247	0	%100
21	M13	X	.033	.033	0	%100
22	M13	Z	-.019	-.019	0	%100
23	M14	X	.428	.428	0	%100
24	M14	Z	-.247	-.247	0	%100
25	M15	X	.451	.451	0	%100
26	M15	Z	-.26	-.26	0	%100
27	M16	X	.357	.357	0	%100
28	M16	Z	-.206	-.206	0	%100
29	M17	X	.451	.451	0	%100
30	M17	Z	-.26	-.26	0	%100
31	M18	X	.357	.357	0	%100
32	M18	Z	-.206	-.206	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
33	M19	X	.458	.458	0	%100
34	M19	Z	-.264	-.264	0	%100
35	M20	X	.451	.451	0	%100
36	M20	Z	-.26	-.26	0	%100
37	M21	X	.451	.451	0	%100
38	M21	Z	-.26	-.26	0	%100
39	M22	X	.331	.331	0	%100
40	M22	Z	-.191	-.191	0	%100
41	M23	X	.331	.331	0	%100
42	M23	Z	-.191	-.191	0	%100
43	M24	X	.348	.348	0	%100
44	M24	Z	-.201	-.201	0	%100
45	M25	X	.458	.458	0	%100
46	M25	Z	-.264	-.264	0	%100
47	M26	X	.451	.451	0	%100
48	M26	Z	-.26	-.26	0	%100
49	M27	X	.252	.252	0	%100
50	M27	Z	-.145	-.145	0	%100
51	M28	X	.451	.451	0	%100
52	M28	Z	-.26	-.26	0	%100
53	M29	X	.252	.252	0	%100
54	M29	Z	-.145	-.145	0	%100
55	M30	X	.458	.458	0	%100
56	M30	Z	-.264	-.264	0	%100
57	M31	X	.451	.451	0	%100
58	M31	Z	-.26	-.26	0	%100
59	M32	X	.451	.451	0	%100
60	M32	Z	-.26	-.26	0	%100
61	M33	X	.331	.331	0	%100
62	M33	Z	-.191	-.191	0	%100
63	M34	X	.331	.331	0	%100
64	M34	Z	-.191	-.191	0	%100
65	M35	X	.348	.348	0	%100
66	M35	Z	-.201	-.201	0	%100
67	M36	X	.458	.458	0	%100
68	M36	Z	-.264	-.264	0	%100
69	MP4A	X	.456	.456	0	%100
70	MP4A	Z	-.263	-.263	0	%100
71	MP3A	X	.456	.456	0	%100
72	MP3A	Z	-.263	-.263	0	%100
73	MP2A	X	.456	.456	0	%100
74	MP2A	Z	-.263	-.263	0	%100
75	MP1A	X	.456	.456	0	%100
76	MP1A	Z	-.263	-.263	0	%100
77	EQUIP	X	.717	.717	0	%100
78	EQUIP	Z	-.414	-.414	0	%100
79	M51	X	.717	.717	0	%100
80	M51	Z	-.414	-.414	0	%100
81	M55A	X	.116	.116	0	%100
82	M55A	Z	-.067	-.067	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M3	X	0	0	0	%100
4	M3	Z	0	0	0	%100
5	M5	X	.042	.042	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[ft,%]	End Location[ft,%]
6	M5	Z	0	0	0	%100
7	M6	X	.042	.042	0	%100
8	M6	Z	0	0	0	%100
9	M7	X	0	0	0	%100
10	M7	Z	0	0	0	%100
11	M8	X	.055	.055	0	%100
12	M8	Z	0	0	0	%100
13	M9	X	.035	.035	0	%100
14	M9	Z	0	0	0	%100
15	M10	X	0	0	0	%100
16	M10	Z	0	0	0	%100
17	M11	X	.268	.268	0	%100
18	M11	Z	0	0	0	%100
19	M12	X	.268	.268	0	%100
20	M12	Z	0	0	0	%100
21	M13	X	.268	.268	0	%100
22	M13	Z	0	0	0	%100
23	M14	X	.268	.268	0	%100
24	M14	Z	0	0	0	%100
25	M15	X	.665	.665	0	%100
26	M15	Z	0	0	0	%100
27	M16	X	.352	.352	0	%100
28	M16	Z	0	0	0	%100
29	M17	X	.665	.665	0	%100
30	M17	Z	0	0	0	%100
31	M18	X	.352	.352	0	%100
32	M18	Z	0	0	0	%100
33	M19	X	.665	.665	0	%100
34	M19	Z	0	0	0	%100
35	M20	X	.665	.665	0	%100
36	M20	Z	0	0	0	%100
37	M21	X	.665	.665	0	%100
38	M21	Z	0	0	0	%100
39	M22	X	.382	.382	0	%100
40	M22	Z	0	0	0	%100
41	M23	X	.382	.382	0	%100
42	M23	Z	0	0	0	%100
43	M24	X	.402	.402	0	%100
44	M24	Z	0	0	0	%100
45	M25	X	.665	.665	0	%100
46	M25	Z	0	0	0	%100
47	M26	X	.665	.665	0	%100
48	M26	Z	0	0	0	%100
49	M27	X	.352	.352	0	%100
50	M27	Z	0	0	0	%100
51	M28	X	.665	.665	0	%100
52	M28	Z	0	0	0	%100
53	M29	X	.352	.352	0	%100
54	M29	Z	0	0	0	%100
55	M30	X	.665	.665	0	%100
56	M30	Z	0	0	0	%100
57	M31	X	.665	.665	0	%100
58	M31	Z	0	0	0	%100
59	M32	X	.665	.665	0	%100
60	M32	Z	0	0	0	%100
61	M33	X	.382	.382	0	%100
62	M33	Z	0	0	0	%100
63	M34	X	.382	.382	0	%100
64	M34	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
65	M35	X	.402	.402	0	%100
66	M35	Z	0	0	0	%100
67	M36	X	.665	.665	0	%100
68	M36	Z	0	0	0	%100
69	MP4A	X	.527	.527	0	%100
70	MP4A	Z	0	0	0	%100
71	MP3A	X	.527	.527	0	%100
72	MP3A	Z	0	0	0	%100
73	MP2A	X	.527	.527	0	%100
74	MP2A	Z	0	0	0	%100
75	MP1A	X	.527	.527	0	%100
76	MP1A	Z	0	0	0	%100
77	EQUIP	X	.828	.828	0	%100
78	EQUIP	Z	0	0	0	%100
79	M51	X	.828	.828	0	%100
80	M51	Z	0	0	0	%100
81	M55A	X	.397	.397	0	%100
82	M55A	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....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	.144	.144	0	%100
2	M1	Z	.083	.083	0	%100
3	M3	X	.144	.144	0	%100
4	M3	Z	.083	.083	0	%100
5	M5	X	.068	.068	0	%100
6	M5	Z	.039	.039	0	%100
7	M6	X	.005	.005	0	%100
8	M6	Z	.003	.003	0	%100
9	M7	X	.138	.138	0	%100
10	M7	Z	.08	.08	0	%100
11	M8	X	.071	.071	0	%100
12	M8	Z	.041	.041	0	%100
13	M9	X	.002	.002	0	%100
14	M9	Z	.001	.001	0	%100
15	M10	X	.138	.138	0	%100
16	M10	Z	.08	.08	0	%100
17	M11	X	.428	.428	0	%100
18	M11	Z	.247	.247	0	%100
19	M12	X	.033	.033	0	%100
20	M12	Z	.019	.019	0	%100
21	M13	X	.428	.428	0	%100
22	M13	Z	.247	.247	0	%100
23	M14	X	.033	.033	0	%100
24	M14	Z	.019	.019	0	%100
25	M15	X	.451	.451	0	%100
26	M15	Z	.26	.26	0	%100
27	M16	X	.252	.252	0	%100
28	M16	Z	.145	.145	0	%100
29	M17	X	.451	.451	0	%100
30	M17	Z	.26	.26	0	%100
31	M18	X	.252	.252	0	%100
32	M18	Z	.145	.145	0	%100
33	M19	X	.458	.458	0	%100
34	M19	Z	.264	.264	0	%100
35	M20	X	.451	.451	0	%100
36	M20	Z	.26	.26	0	%100
37	M21	X	.451	.451	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
38	M21	Z	.26	.26	0	%100
39	M22	X	.331	.331	0	%100
40	M22	Z	.191	.191	0	%100
41	M23	X	.331	.331	0	%100
42	M23	Z	.191	.191	0	%100
43	M24	X	.348	.348	0	%100
44	M24	Z	.201	.201	0	%100
45	M25	X	.458	.458	0	%100
46	M25	Z	.264	.264	0	%100
47	M26	X	.451	.451	0	%100
48	M26	Z	.26	.26	0	%100
49	M27	X	.357	.357	0	%100
50	M27	Z	.206	.206	0	%100
51	M28	X	.451	.451	0	%100
52	M28	Z	.26	.26	0	%100
53	M29	X	.357	.357	0	%100
54	M29	Z	.206	.206	0	%100
55	M30	X	.458	.458	0	%100
56	M30	Z	.264	.264	0	%100
57	M31	X	.451	.451	0	%100
58	M31	Z	.26	.26	0	%100
59	M32	X	.451	.451	0	%100
60	M32	Z	.26	.26	0	%100
61	M33	X	.331	.331	0	%100
62	M33	Z	.191	.191	0	%100
63	M34	X	.331	.331	0	%100
64	M34	Z	.191	.191	0	%100
65	M35	X	.348	.348	0	%100
66	M35	Z	.201	.201	0	%100
67	M36	X	.458	.458	0	%100
68	M36	Z	.264	.264	0	%100
69	MP4A	X	.456	.456	0	%100
70	MP4A	Z	.263	.263	0	%100
71	MP3A	X	.456	.456	0	%100
72	MP3A	Z	.263	.263	0	%100
73	MP2A	X	.456	.456	0	%100
74	MP2A	Z	.263	.263	0	%100
75	MP1A	X	.456	.456	0	%100
76	MP1A	Z	.263	.263	0	%100
77	EQUIP	X	.717	.717	0	%100
78	EQUIP	Z	.414	.414	0	%100
79	M51	X	.717	.717	0	%100
80	M51	Z	.414	.414	0	%100
81	M55A	X	.456	.456	0	%100
82	M55A	Z	.263	.263	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	.249	.249	0	%100
2	M1	Z	.432	.432	0	%100
3	M3	X	.249	.249	0	%100
4	M3	Z	.432	.432	0	%100
5	M5	X	.039	.039	0	%100
6	M5	Z	.067	.067	0	%100
7	M6	X	.003	.003	0	%100
8	M6	Z	.004	.004	0	%100
9	M7	X	.239	.239	0	%100
10	M7	Z	.414	.414	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
11	M8	X	.034	.034	0	%100
12	M8	Z	.06	.06	0	%100
13	M9	X	.005	.005	0	%100
14	M9	Z	.008	.008	0	%100
15	M10	X	.239	.239	0	%100
16	M10	Z	.414	.414	0	%100
17	M11	X	.244	.244	0	%100
18	M11	Z	.423	.423	0	%100
19	M12	X	.016	.016	0	%100
20	M12	Z	.028	.028	0	%100
21	M13	X	.244	.244	0	%100
22	M13	Z	.423	.423	0	%100
23	M14	X	.016	.016	0	%100
24	M14	Z	.028	.028	0	%100
25	M15	X	.116	.116	0	%100
26	M15	Z	.201	.201	0	%100
27	M16	X	.145	.145	0	%100
28	M16	Z	.251	.251	0	%100
29	M17	X	.116	.116	0	%100
30	M17	Z	.201	.201	0	%100
31	M18	X	.145	.145	0	%100
32	M18	Z	.251	.251	0	%100
33	M19	X	.127	.127	0	%100
34	M19	Z	.221	.221	0	%100
35	M20	X	.116	.116	0	%100
36	M20	Z	.201	.201	0	%100
37	M21	X	.116	.116	0	%100
38	M21	Z	.201	.201	0	%100
39	M22	X	.191	.191	0	%100
40	M22	Z	.331	.331	0	%100
41	M23	X	.191	.191	0	%100
42	M23	Z	.331	.331	0	%100
43	M24	X	.201	.201	0	%100
44	M24	Z	.348	.348	0	%100
45	M25	X	.127	.127	0	%100
46	M25	Z	.221	.221	0	%100
47	M26	X	.116	.116	0	%100
48	M26	Z	.201	.201	0	%100
49	M27	X	.206	.206	0	%100
50	M27	Z	.356	.356	0	%100
51	M28	X	.116	.116	0	%100
52	M28	Z	.201	.201	0	%100
53	M29	X	.206	.206	0	%100
54	M29	Z	.356	.356	0	%100
55	M30	X	.127	.127	0	%100
56	M30	Z	.221	.221	0	%100
57	M31	X	.116	.116	0	%100
58	M31	Z	.201	.201	0	%100
59	M32	X	.116	.116	0	%100
60	M32	Z	.201	.201	0	%100
61	M33	X	.191	.191	0	%100
62	M33	Z	.331	.331	0	%100
63	M34	X	.191	.191	0	%100
64	M34	Z	.331	.331	0	%100
65	M35	X	.201	.201	0	%100
66	M35	Z	.348	.348	0	%100
67	M36	X	.127	.127	0	%100
68	M36	Z	.221	.221	0	%100
69	MP4A	X	.263	.263	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[ft.%]	End Location[ft.%]
70	MP4A	Z	.456	.456	0	%100
71	MP3A	X	.263	.263	0	%100
72	MP3A	Z	.456	.456	0	%100
73	MP2A	X	.263	.263	0	%100
74	MP2A	Z	.456	.456	0	%100
75	MP1A	X	.263	.263	0	%100
76	MP1A	Z	.456	.456	0	%100
77	EQUIP	X	.414	.414	0	%100
78	EQUIP	Z	.717	.717	0	%100
79	M51	X	.414	.414	0	%100
80	M51	Z	.717	.717	0	%100
81	M55A	X	.196	.196	0	%100
82	M55A	Z	.34	.34	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[ft.%]	End Location[ft.%]
1	M1	X	0	0	0	%100
2	M1	Z	.665	.665	0	%100
3	M3	X	0	0	0	%100
4	M3	Z	.665	.665	0	%100
5	M5	X	0	0	0	%100
6	M5	Z	.041	.041	0	%100
7	M6	X	0	0	0	%100
8	M6	Z	.041	.041	0	%100
9	M7	X	0	0	0	%100
10	M7	Z	.638	.638	0	%100
11	M8	X	0	0	0	%100
12	M8	Z	.028	.028	0	%100
13	M9	X	0	0	0	%100
14	M9	Z	.049	.049	0	%100
15	M10	X	0	0	0	%100
16	M10	Z	.638	.638	0	%100
17	M11	X	0	0	0	%100
18	M11	Z	.258	.258	0	%100
19	M12	X	0	0	0	%100
20	M12	Z	.258	.258	0	%100
21	M13	X	0	0	0	%100
22	M13	Z	.258	.258	0	%100
23	M14	X	0	0	0	%100
24	M14	Z	.258	.258	0	%100
25	M15	X	0	0	0	%100
26	M15	Z	.088	.088	0	%100
27	M16	X	0	0	0	%100
28	M16	Z	.35	.35	0	%100
29	M17	X	0	0	0	%100
30	M17	Z	.088	.088	0	%100
31	M18	X	0	0	0	%100
32	M18	Z	.35	.35	0	%100
33	M19	X	0	0	0	%100
34	M19	Z	.118	.118	0	%100
35	M20	X	0	0	0	%100
36	M20	Z	.088	.088	0	%100
37	M21	X	0	0	0	%100
38	M21	Z	.088	.088	0	%100
39	M22	X	0	0	0	%100
40	M22	Z	.382	.382	0	%100
41	M23	X	0	0	0	%100
42	M23	Z	.382	.382	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
43	M24	X	0	0	0	%100
44	M24	Z	.402	.402	0	%100
45	M25	X	0	0	0	%100
46	M25	Z	.118	.118	0	%100
47	M26	X	0	0	0	%100
48	M26	Z	.088	.088	0	%100
49	M27	X	0	0	0	%100
50	M27	Z	.35	.35	0	%100
51	M28	X	0	0	0	%100
52	M28	Z	.088	.088	0	%100
53	M29	X	0	0	0	%100
54	M29	Z	.35	.35	0	%100
55	M30	X	0	0	0	%100
56	M30	Z	.118	.118	0	%100
57	M31	X	0	0	0	%100
58	M31	Z	.088	.088	0	%100
59	M32	X	0	0	0	%100
60	M32	Z	.088	.088	0	%100
61	M33	X	0	0	0	%100
62	M33	Z	.382	.382	0	%100
63	M34	X	0	0	0	%100
64	M34	Z	.382	.382	0	%100
65	M35	X	0	0	0	%100
66	M35	Z	.402	.402	0	%100
67	M36	X	0	0	0	%100
68	M36	Z	.118	.118	0	%100
69	MP4A	X	0	0	0	%100
70	MP4A	Z	.527	.527	0	%100
71	MP3A	X	0	0	0	%100
72	MP3A	Z	.527	.527	0	%100
73	MP2A	X	0	0	0	%100
74	MP2A	Z	.527	.527	0	%100
75	MP1A	X	0	0	0	%100
76	MP1A	Z	.527	.527	0	%100
77	EQUIP	X	0	0	0	%100
78	EQUIP	Z	.828	.828	0	%100
79	M51	X	0	0	0	%100
80	M51	Z	.828	.828	0	%100
81	M55A	X	0	0	0	%100
82	M55A	Z	.129	.129	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-.249	-.249	0	%100
2	M1	Z	.432	.432	0	%100
3	M3	X	-.249	-.249	0	%100
4	M3	Z	.432	.432	0	%100
5	M5	X	-.003	-.003	0	%100
6	M5	Z	.004	.004	0	%100
7	M6	X	-.039	-.039	0	%100
8	M6	Z	.067	.067	0	%100
9	M7	X	-.239	-.239	0	%100
10	M7	Z	.414	.414	0	%100
11	M8	X	-.0004	-.0004	0	%100
12	M8	Z	.000692	.000692	0	%100
13	M9	X	-.04	-.04	0	%100
14	M9	Z	.07	.07	0	%100
15	M10	X	-.239	-.239	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[ft,%]	End Location[ft,%]
16	M10	Z	.414	.414	0	%100
17	M11	X	-.016	-.016	0	%100
18	M11	Z	.028	.028	0	%100
19	M12	X	-.244	-.244	0	%100
20	M12	Z	.423	.423	0	%100
21	M13	X	-.016	-.016	0	%100
22	M13	Z	.028	.028	0	%100
23	M14	X	-.244	-.244	0	%100
24	M14	Z	.423	.423	0	%100
25	M15	X	-.116	-.116	0	%100
26	M15	Z	.201	.201	0	%100
27	M16	X	-.206	-.206	0	%100
28	M16	Z	.356	.356	0	%100
29	M17	X	-.116	-.116	0	%100
30	M17	Z	.201	.201	0	%100
31	M18	X	-.206	-.206	0	%100
32	M18	Z	.356	.356	0	%100
33	M19	X	-.127	-.127	0	%100
34	M19	Z	.221	.221	0	%100
35	M20	X	-.116	-.116	0	%100
36	M20	Z	.201	.201	0	%100
37	M21	X	-.116	-.116	0	%100
38	M21	Z	.201	.201	0	%100
39	M22	X	-.191	-.191	0	%100
40	M22	Z	.331	.331	0	%100
41	M23	X	-.191	-.191	0	%100
42	M23	Z	.331	.331	0	%100
43	M24	X	-.201	-.201	0	%100
44	M24	Z	.348	.348	0	%100
45	M25	X	-.127	-.127	0	%100
46	M25	Z	.221	.221	0	%100
47	M26	X	-.116	-.116	0	%100
48	M26	Z	.201	.201	0	%100
49	M27	X	-.145	-.145	0	%100
50	M27	Z	.251	.251	0	%100
51	M28	X	-.116	-.116	0	%100
52	M28	Z	.201	.201	0	%100
53	M29	X	-.145	-.145	0	%100
54	M29	Z	.251	.251	0	%100
55	M30	X	-.127	-.127	0	%100
56	M30	Z	.221	.221	0	%100
57	M31	X	-.116	-.116	0	%100
58	M31	Z	.201	.201	0	%100
59	M32	X	-.116	-.116	0	%100
60	M32	Z	.201	.201	0	%100
61	M33	X	-.191	-.191	0	%100
62	M33	Z	.331	.331	0	%100
63	M34	X	-.191	-.191	0	%100
64	M34	Z	.331	.331	0	%100
65	M35	X	-.201	-.201	0	%100
66	M35	Z	.348	.348	0	%100
67	M36	X	-.127	-.127	0	%100
68	M36	Z	.221	.221	0	%100
69	MP4A	X	-.263	-.263	0	%100
70	MP4A	Z	.456	.456	0	%100
71	MP3A	X	-.263	-.263	0	%100
72	MP3A	Z	.456	.456	0	%100
73	MP2A	X	-.263	-.263	0	%100
74	MP2A	Z	.456	.456	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
75	MP1A	X	-.263	-.263	0	%100
76	MP1A	Z	.456	.456	0	%100
77	EQUIP	X	-.414	-.414	0	%100
78	EQUIP	Z	.717	.717	0	%100
79	M51	X	-.414	-.414	0	%100
80	M51	Z	.717	.717	0	%100
81	M55A	X	-7e-6	-7e-6	0	%100
82	M55A	Z	1.2e-5	1.2e-5	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-.144	-.144	0	%100
2	M1	Z	.083	.083	0	%100
3	M3	X	-.144	-.144	0	%100
4	M3	Z	.083	.083	0	%100
5	M5	X	-.005	-.005	0	%100
6	M5	Z	.003	.003	0	%100
7	M6	X	-.068	-.068	0	%100
8	M6	Z	.039	.039	0	%100
9	M7	X	-.138	-.138	0	%100
10	M7	Z	.08	.08	0	%100
11	M8	X	-.012	-.012	0	%100
12	M8	Z	.007	.007	0	%100
13	M9	X	-.064	-.064	0	%100
14	M9	Z	.037	.037	0	%100
15	M10	X	-.138	-.138	0	%100
16	M10	Z	.08	.08	0	%100
17	M11	X	-.033	-.033	0	%100
18	M11	Z	.019	.019	0	%100
19	M12	X	-.428	-.428	0	%100
20	M12	Z	.247	.247	0	%100
21	M13	X	-.033	-.033	0	%100
22	M13	Z	.019	.019	0	%100
23	M14	X	-.428	-.428	0	%100
24	M14	Z	.247	.247	0	%100
25	M15	X	-.451	-.451	0	%100
26	M15	Z	.26	.26	0	%100
27	M16	X	-.357	-.357	0	%100
28	M16	Z	.206	.206	0	%100
29	M17	X	-.451	-.451	0	%100
30	M17	Z	.26	.26	0	%100
31	M18	X	-.357	-.357	0	%100
32	M18	Z	.206	.206	0	%100
33	M19	X	-.458	-.458	0	%100
34	M19	Z	.264	.264	0	%100
35	M20	X	-.451	-.451	0	%100
36	M20	Z	.26	.26	0	%100
37	M21	X	-.451	-.451	0	%100
38	M21	Z	.26	.26	0	%100
39	M22	X	-.331	-.331	0	%100
40	M22	Z	.191	.191	0	%100
41	M23	X	-.331	-.331	0	%100
42	M23	Z	.191	.191	0	%100
43	M24	X	-.348	-.348	0	%100
44	M24	Z	.201	.201	0	%100
45	M25	X	-.458	-.458	0	%100
46	M25	Z	.264	.264	0	%100
47	M26	X	-.451	-.451	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
48	M26	Z	.26	.26	0	%100
49	M27	X	-.252	-.252	0	%100
50	M27	Z	.145	.145	0	%100
51	M28	X	-.451	-.451	0	%100
52	M28	Z	.26	.26	0	%100
53	M29	X	-.252	-.252	0	%100
54	M29	Z	.145	.145	0	%100
55	M30	X	-.458	-.458	0	%100
56	M30	Z	.264	.264	0	%100
57	M31	X	-.451	-.451	0	%100
58	M31	Z	.26	.26	0	%100
59	M32	X	-.451	-.451	0	%100
60	M32	Z	.26	.26	0	%100
61	M33	X	-.331	-.331	0	%100
62	M33	Z	.191	.191	0	%100
63	M34	X	-.331	-.331	0	%100
64	M34	Z	.191	.191	0	%100
65	M35	X	-.348	-.348	0	%100
66	M35	Z	.201	.201	0	%100
67	M36	X	-.458	-.458	0	%100
68	M36	Z	.264	.264	0	%100
69	MP4A	X	-.456	-.456	0	%100
70	MP4A	Z	.263	.263	0	%100
71	MP3A	X	-.456	-.456	0	%100
72	MP3A	Z	.263	.263	0	%100
73	MP2A	X	-.456	-.456	0	%100
74	MP2A	Z	.263	.263	0	%100
75	MP1A	X	-.456	-.456	0	%100
76	MP1A	Z	.263	.263	0	%100
77	EQUIP	X	-.717	-.717	0	%100
78	EQUIP	Z	.414	.414	0	%100
79	M51	X	-.717	-.717	0	%100
80	M51	Z	.414	.414	0	%100
81	M55A	X	-.116	-.116	0	%100
82	M55A	Z	.067	.067	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M3	X	0	0	0	%100
4	M3	Z	0	0	0	%100
5	M5	X	-.042	-.042	0	%100
6	M5	Z	0	0	0	%100
7	M6	X	-.042	-.042	0	%100
8	M6	Z	0	0	0	%100
9	M7	X	0	0	0	%100
10	M7	Z	0	0	0	%100
11	M8	X	-.055	-.055	0	%100
12	M8	Z	0	0	0	%100
13	M9	X	-.035	-.035	0	%100
14	M9	Z	0	0	0	%100
15	M10	X	0	0	0	%100
16	M10	Z	0	0	0	%100
17	M11	X	-.268	-.268	0	%100
18	M11	Z	0	0	0	%100
19	M12	X	-.268	-.268	0	%100
20	M12	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
21	M13	X	-268	-268	0	%100
22	M13	Z	0	0	0	%100
23	M14	X	-268	-268	0	%100
24	M14	Z	0	0	0	%100
25	M15	X	-665	-665	0	%100
26	M15	Z	0	0	0	%100
27	M16	X	-352	-352	0	%100
28	M16	Z	0	0	0	%100
29	M17	X	-665	-665	0	%100
30	M17	Z	0	0	0	%100
31	M18	X	-352	-352	0	%100
32	M18	Z	0	0	0	%100
33	M19	X	-665	-665	0	%100
34	M19	Z	0	0	0	%100
35	M20	X	-665	-665	0	%100
36	M20	Z	0	0	0	%100
37	M21	X	-665	-665	0	%100
38	M21	Z	0	0	0	%100
39	M22	X	-382	-382	0	%100
40	M22	Z	0	0	0	%100
41	M23	X	-382	-382	0	%100
42	M23	Z	0	0	0	%100
43	M24	X	-402	-402	0	%100
44	M24	Z	0	0	0	%100
45	M25	X	-665	-665	0	%100
46	M25	Z	0	0	0	%100
47	M26	X	-665	-665	0	%100
48	M26	Z	0	0	0	%100
49	M27	X	-352	-352	0	%100
50	M27	Z	0	0	0	%100
51	M28	X	-665	-665	0	%100
52	M28	Z	0	0	0	%100
53	M29	X	-352	-352	0	%100
54	M29	Z	0	0	0	%100
55	M30	X	-665	-665	0	%100
56	M30	Z	0	0	0	%100
57	M31	X	-665	-665	0	%100
58	M31	Z	0	0	0	%100
59	M32	X	-665	-665	0	%100
60	M32	Z	0	0	0	%100
61	M33	X	-382	-382	0	%100
62	M33	Z	0	0	0	%100
63	M34	X	-382	-382	0	%100
64	M34	Z	0	0	0	%100
65	M35	X	-402	-402	0	%100
66	M35	Z	0	0	0	%100
67	M36	X	-665	-665	0	%100
68	M36	Z	0	0	0	%100
69	MP4A	X	-527	-527	0	%100
70	MP4A	Z	0	0	0	%100
71	MP3A	X	-527	-527	0	%100
72	MP3A	Z	0	0	0	%100
73	MP2A	X	-527	-527	0	%100
74	MP2A	Z	0	0	0	%100
75	MP1A	X	-527	-527	0	%100
76	MP1A	Z	0	0	0	%100
77	EQUIP	X	-828	-828	0	%100
78	EQUIP	Z	0	0	0	%100
79	M51	X	-828	-828	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[ft.%]	End Location[ft.%]
80	M51	Z	0	0	0	%100
81	M55A	X	-.397	-.397	0	%100
82	M55A	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....]	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-.144	-.144	0	%100
2	M1	Z	-.083	-.083	0	%100
3	M3	X	-.144	-.144	0	%100
4	M3	Z	-.083	-.083	0	%100
5	M5	X	-.068	-.068	0	%100
6	M5	Z	-.039	-.039	0	%100
7	M6	X	-.005	-.005	0	%100
8	M6	Z	-.003	-.003	0	%100
9	M7	X	-.138	-.138	0	%100
10	M7	Z	-.08	-.08	0	%100
11	M8	X	-.071	-.071	0	%100
12	M8	Z	-.041	-.041	0	%100
13	M9	X	-.002	-.002	0	%100
14	M9	Z	-.001	-.001	0	%100
15	M10	X	-.138	-.138	0	%100
16	M10	Z	-.08	-.08	0	%100
17	M11	X	-.428	-.428	0	%100
18	M11	Z	-.247	-.247	0	%100
19	M12	X	-.033	-.033	0	%100
20	M12	Z	-.019	-.019	0	%100
21	M13	X	-.428	-.428	0	%100
22	M13	Z	-.247	-.247	0	%100
23	M14	X	-.033	-.033	0	%100
24	M14	Z	-.019	-.019	0	%100
25	M15	X	-.451	-.451	0	%100
26	M15	Z	-.26	-.26	0	%100
27	M16	X	-.252	-.252	0	%100
28	M16	Z	-.145	-.145	0	%100
29	M17	X	-.451	-.451	0	%100
30	M17	Z	-.26	-.26	0	%100
31	M18	X	-.252	-.252	0	%100
32	M18	Z	-.145	-.145	0	%100
33	M19	X	-.458	-.458	0	%100
34	M19	Z	-.264	-.264	0	%100
35	M20	X	-.451	-.451	0	%100
36	M20	Z	-.26	-.26	0	%100
37	M21	X	-.451	-.451	0	%100
38	M21	Z	-.26	-.26	0	%100
39	M22	X	-.331	-.331	0	%100
40	M22	Z	-.191	-.191	0	%100
41	M23	X	-.331	-.331	0	%100
42	M23	Z	-.191	-.191	0	%100
43	M24	X	-.348	-.348	0	%100
44	M24	Z	-.201	-.201	0	%100
45	M25	X	-.458	-.458	0	%100
46	M25	Z	-.264	-.264	0	%100
47	M26	X	-.451	-.451	0	%100
48	M26	Z	-.26	-.26	0	%100
49	M27	X	-.357	-.357	0	%100
50	M27	Z	-.206	-.206	0	%100
51	M28	X	-.451	-.451	0	%100
52	M28	Z	-.26	-.26	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
53	M29	X	-357	-357	0	%100
54	M29	Z	-206	-206	0	%100
55	M30	X	-458	-458	0	%100
56	M30	Z	-264	-264	0	%100
57	M31	X	-451	-451	0	%100
58	M31	Z	-.26	-.26	0	%100
59	M32	X	-451	-451	0	%100
60	M32	Z	-.26	-.26	0	%100
61	M33	X	-331	-331	0	%100
62	M33	Z	-.191	-.191	0	%100
63	M34	X	-331	-331	0	%100
64	M34	Z	-.191	-.191	0	%100
65	M35	X	-348	-348	0	%100
66	M35	Z	-.201	-.201	0	%100
67	M36	X	-458	-458	0	%100
68	M36	Z	-.264	-.264	0	%100
69	MP4A	X	-456	-456	0	%100
70	MP4A	Z	-.263	-.263	0	%100
71	MP3A	X	-456	-456	0	%100
72	MP3A	Z	-.263	-.263	0	%100
73	MP2A	X	-456	-456	0	%100
74	MP2A	Z	-.263	-.263	0	%100
75	MP1A	X	-456	-456	0	%100
76	MP1A	Z	-.263	-.263	0	%100
77	EQUIP	X	-.717	-.717	0	%100
78	EQUIP	Z	-.414	-.414	0	%100
79	M51	X	-.717	-.717	0	%100
80	M51	Z	-.414	-.414	0	%100
81	M55A	X	-.456	-.456	0	%100
82	M55A	Z	-.263	-.263	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-.249	-.249	0	%100
2	M1	Z	-.432	-.432	0	%100
3	M3	X	-.249	-.249	0	%100
4	M3	Z	-.432	-.432	0	%100
5	M5	X	-.039	-.039	0	%100
6	M5	Z	-.067	-.067	0	%100
7	M6	X	-.003	-.003	0	%100
8	M6	Z	-.004	-.004	0	%100
9	M7	X	-.239	-.239	0	%100
10	M7	Z	-.414	-.414	0	%100
11	M8	X	-.034	-.034	0	%100
12	M8	Z	-.06	-.06	0	%100
13	M9	X	-.005	-.005	0	%100
14	M9	Z	-.008	-.008	0	%100
15	M10	X	-.239	-.239	0	%100
16	M10	Z	-.414	-.414	0	%100
17	M11	X	-.244	-.244	0	%100
18	M11	Z	-.423	-.423	0	%100
19	M12	X	-.016	-.016	0	%100
20	M12	Z	-.028	-.028	0	%100
21	M13	X	-.244	-.244	0	%100
22	M13	Z	-.423	-.423	0	%100
23	M14	X	-.016	-.016	0	%100
24	M14	Z	-.028	-.028	0	%100
25	M15	X	-.116	-.116	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft,%]	End Location[ft,%]
26	M15	Z	-201	-201	0	%100
27	M16	X	-145	-145	0	%100
28	M16	Z	-251	-251	0	%100
29	M17	X	-116	-116	0	%100
30	M17	Z	-201	-201	0	%100
31	M18	X	-145	-145	0	%100
32	M18	Z	-251	-251	0	%100
33	M19	X	-127	-127	0	%100
34	M19	Z	-221	-221	0	%100
35	M20	X	-116	-116	0	%100
36	M20	Z	-201	-201	0	%100
37	M21	X	-116	-116	0	%100
38	M21	Z	-201	-201	0	%100
39	M22	X	-191	-191	0	%100
40	M22	Z	-331	-331	0	%100
41	M23	X	-191	-191	0	%100
42	M23	Z	-331	-331	0	%100
43	M24	X	-201	-201	0	%100
44	M24	Z	-348	-348	0	%100
45	M25	X	-127	-127	0	%100
46	M25	Z	-221	-221	0	%100
47	M26	X	-116	-116	0	%100
48	M26	Z	-201	-201	0	%100
49	M27	X	-206	-206	0	%100
50	M27	Z	-356	-356	0	%100
51	M28	X	-116	-116	0	%100
52	M28	Z	-201	-201	0	%100
53	M29	X	-206	-206	0	%100
54	M29	Z	-356	-356	0	%100
55	M30	X	-127	-127	0	%100
56	M30	Z	-221	-221	0	%100
57	M31	X	-116	-116	0	%100
58	M31	Z	-201	-201	0	%100
59	M32	X	-116	-116	0	%100
60	M32	Z	-201	-201	0	%100
61	M33	X	-191	-191	0	%100
62	M33	Z	-331	-331	0	%100
63	M34	X	-191	-191	0	%100
64	M34	Z	-331	-331	0	%100
65	M35	X	-201	-201	0	%100
66	M35	Z	-348	-348	0	%100
67	M36	X	-127	-127	0	%100
68	M36	Z	-221	-221	0	%100
69	MP4A	X	-263	-263	0	%100
70	MP4A	Z	-456	-456	0	%100
71	MP3A	X	-263	-263	0	%100
72	MP3A	Z	-456	-456	0	%100
73	MP2A	X	-263	-263	0	%100
74	MP2A	Z	-456	-456	0	%100
75	MP1A	X	-263	-263	0	%100
76	MP1A	Z	-456	-456	0	%100
77	EQUIP	X	-414	-414	0	%100
78	EQUIP	Z	-717	-717	0	%100
79	M51	X	-414	-414	0	%100
80	M51	Z	-717	-717	0	%100
81	M55A	X	-196	-196	0	%100
82	M55A	Z	-34	-34	0	%100



Member Area Loads

Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
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	N4	max 1588.249	46	1763.096	16	248.966	1	-.164	73	0	75	.136	28
2		min -1490.767	28	553.334	73	-4338.8	19	-.515	16	0	1	-.104	46
3	N65	max 1414.643	32	1485.928	22	4272.427	24	-.147	65	0	75	.067	28
4		min -1513.104	38	477.328	67	211.819	6	-.453	19	0	1	-.146	46
5	N71	max 674.286	10	29.331	22	1147.81	4	0	75	0	75	0	75
6		min -672.274	4	9.005	67	-1145.598	10	0	1	0	1	0	1
7	Totals:	max 2124.308	10	3261.903	22	3016.37	1						
8		min -2124.309	4	1044.069	67	-3016.372	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	L4X3X6	.000	.281	18	.000	.281	z	24	80199.017	80676	2.686	7.063	1...	H2-1
2	M3	L4X3X6	.000	.24	20	.000	.24	z	24	80199.017	80676	2.686	7.063	1...	H2-1
3	M5	PL3/8X3_HR...	.671	0	47	.154	.25	y	46	34985.705	36450	.284	2.279	1...	H1-1b
4	M6	PL3/8X3_HR...	.744	0	27	.188	.25	y	28	34985.705	36450	.284	2.279	1...	H1-1b
5	M7	PIPE 2.5	.479	11.875	6	.129	11.875		4	10110.272	50715	3.596	3.596	1...	H1-1b
6	M8	PL3/8X3_HR...	.642	0	23	.240	.227	y	46	35243.369	36450	.284	2.279	1...	H1-1b
7	M9	PL3/8X3_HR...	.668	0	29	.125	.286	y	10	34551.762	36450	.284	2.279	1...	H1-1b
8	M10	PIPE 2.5	.390	11.875	12	.175	11.875		4	10110.272	50715	3.596	3.596	1...	H1-1b
9	M11	PIPE 2.0	.375	5.937	7	.105	0		46	21054.34	32130	1.872	1.872	2...	H1-1b
10	M12	PIPE 2.0	.441	5.937	7	.124	0		28	21054.34	32130	1.872	1.872	2...	H1-1b
11	M13	PIPE 2.0	.346	5.937	12	.129	5.381		47	21054.34	32130	1.872	1.872	2...	H1-1b
12	M14	PIPE 2.0	.381	5.937	12	.137	5.381		26	21054.34	32130	1.872	1.872	1...	H1-1b
13	M15	PL3/8X3_HR...	.056	0	27	.054	0	y	47	36078.278	36450	.284	2.279	1...	H1-1b
14	M16	1.5 w 0.06 th	.324	2.049	15	.044	0		3	5200.823	8550.171	.327	.327	1...	H1-1a
15	M17	PL3/8X3_HR...	.078	0	12	.037	0	y	5	36078.278	36450	.284	2.279	1...	H1-1b
16	M18	1.5 w 0.06 th	.263	2.049	27	.084	0		6	5200.823	8550.171	.327	.327	1...	H1-1a
17	M19	PL3/8X3_HR...	.078	0	5	.090	0	y	10	30936.41	36450	.284	2.279	1...	H1-1b
18	M20	PL3/8X3_HR...	.027	.125	49	.054	.125	y	47	36078.278	36450	.284	2.279	1	H1-1b
19	M21	PL3/8X3_HR...	.088	.125	6	.037	.125	y	5	36078.278	36450	.284	2.279	1...	H1-1b
20	M22	1.5 w 0.06 th	.140	3.167	28	.040	0		4	6432.166	8550.171	.327	.327	1...	H1-1b*
21	M23	1.5 w 0.06 th	.286	0	26	.032	3.167		4	6432.166	8550.171	.327	.327	1...	H1-1a
22	M24	PIPE 2.0	.031	0	29	.013	0		10	29957.096	32130	1.872	1.872	1...	H1-1b*
23	M25	PL3/8X3_HR...	.074	.5	12	.090	.5	y	10	30936.41	36450	.284	2.279	1...	H1-1b
24	M26	PL3/8X3_HR...	.055	0	11	.061	0	y	4	36078.278	36450	.284	2.279	1...	H1-1b
25	M27	1.5 w 0.06 th	.313	2.049	24	.040	4.185		4	5200.823	8550.171	.327	.327	1...	H1-1a
26	M28	PL3/8X3_HR...	.053	.125	46	.049	0	y	4	36078.278	36450	.284	2.279	1...	H1-1b*
27	M29	1.5 w 0.06 th	.264	2.049	47	.057	0		1	5200.823	8550.171	.327	.327	1...	H1-1a
28	M30	PL3/8X3_HR...	.048	0	4	.044	0	y	5	30936.41	36450	.284	2.279	1...	H1-1b
29	M31	PL3/8X3_HR...	.037	0	4	.061	.125	y	4	36078.278	36450	.284	2.279	1...	H1-1b
30	M32	PL3/8X3_HR...	.054	.125	46	.049	.125	y	4	36078.278	36450	.284	2.279	1...	H1-1b*
31	M33	1.5 w 0.06 th	.162	3.167	46	.048	0		4	6432.166	8550.171	.327	.327	1...	H1-1b*
32	M34	1.5 w 0.06 th	.307	0	47	.039	3.167		4	6432.166	8550.171	.327	.327	1...	H1-1a
33	M35	PIPE 2.0	.028	0	45	.007	0		5	29957.096	32130	1.872	1.872	1...	H1-1b*
34	M36	PL3/8X3_HR...	.040	.5	39	.044	.5	y	5	30936.41	36450	.284	2.279	1...	H1-1b
35	MP4A	PIPE 2.0	.388	1.25	45	.139	4.625		6	20866.733	32130	1.872	1.872	1...	H1-1b
36	MP3A	PIPE 2.0	.231	4.625	4	.069	3.438		5	20866.733	32130	1.872	1.872	1...	H1-1b
37	MP2A	PIPE 2.0	.349	4.625	4	.082	3.438		4	20866.733	32130	1.872	1.872	1...	H1-1b
38	MP1A	PIPE 2.0	.426	1.25	29	.182	4.625		8	20866.733	32130	1.872	1.872	1...	H1-1b
39	M55A	PIPE 2.0	.065	6.155	4	.003	0		23	20401.184	32130	1.872	1.872	1...	H1-1b*



Company : Maser Consulting
 Designer :
 Job Number :
 Model Name : 469153-VZW_MT_LOT_SectorA_H

Aug 19, 2022
 11:09 AM
 Checked By: _____

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

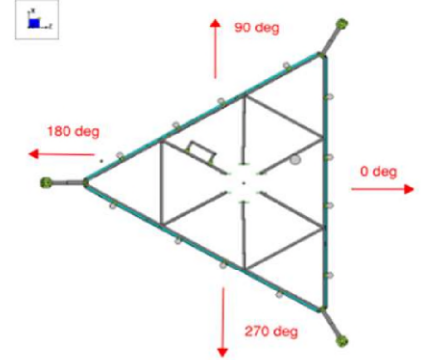
Member	Shape	Code	Loc[ft]	LC	Shear	Loc[ft]	Dir	LC	phi*Pn[lb]	phi*Tn[lb]	phi*Mny...	phi*Mnz...	phi*V...	phi*V...	Cb	Eqn	
1	EQUIP	P1000_C...	.186	1.958	4	.025	3.631	y	6	6880.609	14345.1	.32	.646	2129...	5491...	1.494	H1.2-1
2	M51	P1000_C...	.227	1.958	4	.026	3.631	y	6	6880.609	14345.1	.32	.646	2129...	5491...	1.476	H1.2-1

I. Mount-to-Tower Connection Check

Custom Orientation Required

Yes

Nodes (labeled per Risa)	Orientation (per graphic of typical platform)
N4	0
N65	0



Tower Connection Bolt Checks

Yes

Bolt Orientation

Parallel

Bolt Quantity per Reaction:

2 (Horizontal)

d_x (in) (Delta X of typ. bolt config. sketch):

6.5

d_y (in) (Delta Y of typ. bolt config. sketch):

2

Bolt Type:

A36

Bolt Diameter (in):

0.5

Required Tensile Strength / bolt (kips):

3.7

Required Shear Strength / bolt (kips):

0.9

Tensile Capacity / bolt (kips):

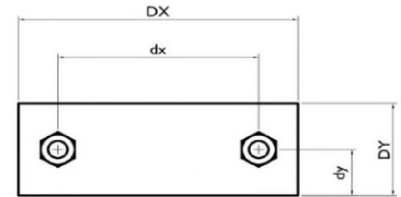
6.4

Shear Capacity / bolt (kips):

3.8

Bolt Overall Utilization:

57.8%



Tower Connection Baseplate Checks

No



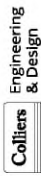
MOUNT MODIFICATION DRAWINGS
EXISTING 15.00' SECTOR FRAME

TOWER OWNER: CSP CORPORATION
TOWER OWNER SITE NUMBER: N/A

CARRIER SITE NAME: WESTPORT CT
CARRIER SITE NUMBER: 469153
FUZE ID: 16242132

880 POST RD. EAST UNIT 1
WESTPORT, CT 06880
FAIRFIELD COUNTY

LATITUDE: 41.137475° N
LONGITUDE: 73.334364° W



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STATE OF CONNECTICUT

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NO. 10177722A

DATE: 08/19/2022

PROJECT: 880 POST RD. EAST UNIT 1

WESTPORT, CT 06880

FAIRFIELD COUNTY

PROJECT NUMBER: 16242132

DATE: 08/19/2022

TIME: 09:49:16 AM

SCALE: AS SHOWN

DRAWN BY: [Redacted]

CHECKED BY: [Redacted]

DATE: 08/19/2022

TIME: 09:49:16 AM

PROJECT: 880 POST RD. EAST UNIT 1

WESTPORT, CT 06880

FAIRFIELD COUNTY

PROJECT NUMBER: 16242132

DATE: 08/19/2022

TIME: 09:49:16 AM

SCALE: AS SHOWN

DRAWN BY: [Redacted]

CHECKED BY: [Redacted]

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DATE: 08/19/2022

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SCALE: AS SHOWN

DRAWN BY: [Redacted]

CHECKED BY: [Redacted]

DATE: 08/19/2022

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PROJECT: 880 POST RD. EAST UNIT 1

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FAIRFIELD COUNTY

PROJECT NUMBER: 16242132

DATE: 08/19/2022

TIME: 09:49:16 AM

SHEET INDEX	
SHEET	DESCRIPTION
ST-1	TITLE SHEET
880M-1	BILL OF MATERIALS
SCN-1	GENERAL NOTES
SCF-1	CLIMBING FACILITY DETAIL
SS-1	MODIFICATION DETAILS
SS-2	MOUNT PHOTOS
	SPECIFICATION SHEETS

PROJECT INFORMATION	
APPLICANT/LESSEE	VERIZON WIRELESS
COMPANY:	VERIZON WIRELESS
CLIENT REPRESENTATIVE	PETER ALBANO
COMPANY:	VERIZON WIRELESS
PROJECT MANAGER	PETER ALBANO
COMPANY:	COLLIERS ENGINEERING & DESIGN CT, P.C.
CONTACT:	PETER ALBANO
PHONE:	856-797-0412
E-MAIL:	PETER.ALBANO@COLLIERSENGINEERING.COM
CONTRACTOR PMI REQUIREMENTS	
PHI LOCATION:	HTTPS://PHI.VZW.SMART.COM
SMART TOOL PROJECT #:	10115278
NZW LOCATION CODE (RLC):	469153
ANALYSIS DATE:	08/19/2022
PMI REQUIREMENTS EMBEDDED WITHIN MOUNT MODIFICATION REPORT	

DESIGN CRITERIA	
WIND LOADS	BASIC WIND SPEED (3 SECOND GUST), V = 118 MPH
	EXPOSURE CATEGORY B
	TOPOGRAPHIC CATEGORY 1
	MEAN BASE ELEVATION (MSL) = 63.37
ICE LOADS	ICE WIND SPEED (3 SECOND GUST), V = 50 MPH
	ICE THICKNESS = 1.00 IN
SEISMIC LOADS	SEISMIC DESIGN CATEGORY B
	SHORT TERM PEAK GROUND MOTION, S _g = 0.28
	LONG TERM PEAK GROUND MOTION, S _g = 0.06

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Deal Sheet

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

BILL OF MATERIALS

SECTION 1 - VZWSMART KITS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
1	VZWSMART	VZWSMART-SFK1	TIE BACK ASSEMBLY	CONNECT OTHER END TO ADJACENT TOWER LEG. PROPOSED TIE BACK SHALL EXTEND NO MORE THAN 12" BEYOND THE TOWER LEG. CONTRACTOR SHALL TRIM AS REQUIRED AND PROTECT CUT END WITH TWO COATS OF ZINCA GR ZINC COTE.	84	84
6	VZWSMART	VZWSMART-MSK1	CROSSOVER PLATE			

SECTION 2 - OTHER REQUIRED PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)

SECTION 3 - REQUIRED SAFETY CLIMB PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
1	PERFECT VISION	PV-CLAMP-LW-01-06	CLAMP BRACKET	OR EOR APPROVED EQUIVALENT		
1	PERFECT VISION	PV-CRUX-CG-SM	WIRE ROPE GUIDE	OR EOR APPROVED EQUIVALENT		
			TOTAL:			84

NOTES:

- THE MANUFACTURERS LISTED ARE THE APPROVED VENDORS FOR THE VZWMOUNT KITS. EACH MANUFACTURER WILL BE AWARE OF WHICH KITS HAVE BEEN THROUGH THE VZWMOUNT APPROVAL PROCESS AND THEY ARE IN TURN APPROVED TO SELL. PLEASE NOTE THAT THE MATERIAL UTILIZED ON THE MOUNT MODIFICATIONS WILL BE REVIEWED AS A PART OF THE DESKTOP PMI COMPLETED BY THE SMART TOOL VENDOR. IT WILL BE REQUIRED THAT THE VZWMOUNT KITS SPECIFIED ARE UTILIZED IN THE MODIFICATIONS.
- ALL MATERIALS REQUIRED FOR THE DESIGNED MODIFICATIONS BUT NOT LISTED IN THIS SHEET ARE ASSUMED TO BE PROVIDED BY THE CONTRACTOR.

VZWSMART KITS - APPROVED VENDORS

COMMSCOPE	
CONTACT	SALVADOR ANGUIANO
PHONE	(817) 304-7492
EMAIL	SALVADOR.ANGUIANO@COMMSCOPE.COM
WEBSITE	WWW.COMMSCOPE.COM
METROSITE FABRICATORS, LLC	
CONTACT	KENT RAMEY
PHONE	(706) 315-7045 (O), (706) 982-9788 (M)
EMAIL	KENT@METROSITELLC.COM
WEBSITE	METROSITEFABRICATORS.COM

PERFECTVISION	
CONTACT	WIRELESS SALES
PHONE	(844) 887-6773
EMAIL	WWW.PERFECTVISION.COM
WEBSITE	WIRELESSSALES@PERFECTVISION.COM
SABRE INDUSTRIES, INC.	
CONTACT	ANGIE WELCH
PHONE	(866) 528-6937
EMAIL	AKWELCH@SABREINDUSTRIES.COM
WEBSITE	WWW.SABRETSOLUTIONS.COM

SITE PRO 1	
CONTACT	PAULA BOSWELL
PHONE	(972) 236-9843
EMAIL	PAULA.BOSWELL@VALMONT.COM
WEBSITE	WWW.SITEPRO1.COM
NEWAVE	
CONTACT	NEWAVE SALES TEAM
PHONE	(971) 239-4762
EMAIL	SALES@NEWAVETC.COM
WEBSITE	WWW.NEWAVETC.COM

BETTER METAL, LLC	
CONTACT	DAVID STANSBERRY
PHONE	(615) 535-0990 (O), (615) 631-2520 (M)
EMAIL	DLS@BETTERMETAL.COM
WEBSITE	WWW.BETTERMETAL.COM



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AS SHOWN	QUANTITY	2177722A
1	MINIATURE	SC
1	MINIATURE	SC
1	MINIATURE	SC
1	MINIATURE	SC
1	MINIATURE	SC
1	MINIATURE	SC
1	MINIATURE	SC
1	MINIATURE	SC

Professional Engineer for Project No. 2177722A
Date: 2/22/22 08:22:09 AM -05:00
WESTPORT CT 06897
DAVID STANSBERRY, P.E.
WESTPORT CT 06897

SITE NAME:
WESTPORT CT
469153
880 POST RD. EAST UNIT 1
WESTPORT CT 06897
FAIRFIELD COUNTY

Colliers Engineering & Design
175 STATE ST
SUITE 200
WESTPORT CT 06897
Phone: 203.333.0000
Fax: 203.333.0001
www.colliersengineering.com

BILL OF MATERIALS
SBOM-1

PROJECT NOTES

- SEE MODIFICATION NOTES
- THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, LAWS AND REGULATIONS OF ALL MUNICIPALITIES, UTILITY COMPANIES OR OTHER PUBLIC GOVERNING AUTHORITIES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS THAT MAY BE REQUIRED BY ANY FEDERAL STATE, COUNTY OR MUNICIPAL AUTHORITIES.
- THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER, IN WRITING, OF ANY CONFLICTS, ERRORS OR OMISSIONS PRIOR TO THE SUBMISSION OF BIDS OR PERFORMANCE OF WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL REPAIR ANY DAMAGE AS A RESULT OF CONSTRUCTION OF THE FACILITY AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
- THE SCOPE OF WORK FOR THIS PROJECT SHALL INCLUDE PROVIDING ALL MATERIALS, EQUIPMENT AND LABOR REQUIRED TO COMPLETE THIS PROJECT, IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- THE CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO SUBMITTING THE BID TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND CONSTRUCTION DRAWINGS.
- THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS OF THE PROJECT SITE PRIOR TO THE BEGINNING OF EXISTING CONSTRUCTION SHOWN ON THESE DRAWINGS. ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
- SINCE THE CELL SITE MAY BE ACTIVE, ALL SAFETY PRECAUTIONS MUST BE MAINTAINED. EQUIPMENT SHOULD BE SHUT DOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL PROTECTIVE EQUIPMENT (PPE) SHOULD BE WORN TO ALERT OF ANY POTENTIALLY DANGEROUS EXPOSURE LEVELS.
- NO NOISE, SMOKE, DUST OR ODOOR WILL RESULT FROM THIS FACILITY AS TO CAUSE A NUISANCE.
- THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION (NO HANDICAP ACCESS IS REQUIRED).

GENERAL NOTES

- THESE MODIFICATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE REGULATORY PROVISIONS OF THE TELECOMMUNICATIONS INDUSTRY STANDARD TIA-223-H MATERIALS AND SERVICES PROVIDED BY THE CONTRACTOR SHALL CONFORM TO THE ABOVE MENTIONED CODES.
- CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT DAMAGE TO EXISTING UTILITIES AND STRUCTURES AS A RESULT OF THE CONTRACTOR'S WORK OR FROM DAMAGE DUE TO OTHER CAUSES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS BEFORE BEGINNING WORK. ORDERING MATERIAL AND PREPARING OF SHOP DRAWINGS SHALL BE THE CONTRACTOR'S RESPONSIBILITY. THE CONTRACT DOCUMENTS SHALL BE SUBJECT TO THE FEDERAL TRADE COMMISSION ATTENTION OF THE ENGINEER. IF THE CONTRACTOR DISCOVERS ANY EXISTING CONDITIONS THAT ARE NOT REPRESENTED ON THESE DRAWINGS, OR ANY CONDITIONS THAT WOULD INTERFERE WITH THE INSTALLATION OF THE INFRASTRUCTURE, NOTIFY THE ENGINEER IMMEDIATELY.
- IT IS ASSUMED THAT ANY STRUCTURAL MODIFICATION WORK SPECIFIED ON THESE DRAWINGS SHALL BE PERFORMED BY A LICENSED STRUCTURAL WORKER WITH TOWER CONSTRUCTION EXPERIENCE.
- THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE TECHNICALLY RESPONSIBLE FOR ALL CONSTRUCTION METHODS, MEANS, TECHNIQUES, SEQUENCES, AND PROCEDURES.
- ALL CONSTRUCTION MEANS AND METHODS, INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS, AND RESCUE PLANS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING ANSI/TIA-322 (LATEST EDITION), OSHA, AND GENERAL INDUSTRY STANDARDS. ALL RIGGING PLANS SHALL ADHERE TO ANSI/TIA-322 (LATEST EDITION) INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR INITIATING, MAINTAINING, AND COMPLETING PROGRAMS IN ACCORDANCE WITH APPLICABLE SAFETY CODES.
- WORK SHALL ONLY BE PERFORMED DURING CALM DRY DAYS WITH WINDS LESS THAN 30 MPH. THE STRUCTURES SHOWN ON THE DRAWINGS IS STRUCTURALLY SOUND ONLY IN THE COMPLETED FORM. THE

- CONTRACTOR SHALL BE RESPONSIBLE FOR THE STRENGTH AND STABILITY OF THE STRUCTURE DURING ERECTION. CONTRACTOR SHALL PROVIDE ALL NECESSARY BRACING AND SHORING TO MAINTAIN THE STRUCTURE AS REQUIRED TO RESIST ALL FORCES THAT MAY OCCUR DURING HANDLING AND ERECTION UNTIL THE STRUCTURE IS FULLY COMPLETED. TEMPORARY SUPPORTS, BRACING AND OTHER STRUCTURAL SYSTEMS SHALL REMAIN IN PLACE UNTIL THE STRUCTURE IS FULLY COMPLETED. PROPERTY AFTER THEIR USE.
- ALL INSTALLATIONS PERFORMED ON THE STRUCTURE SHALL BE COMPLETED IN ACCORDANCE WITH THE GOVERNING PROVISIONS OF THE STANDARD FOR INSTALLATION, ALTERATION AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS, ANSI/TIA-322.
- CONTRACTOR SHALL SECURE SITE BACK TO EXISTING CONDITION UNDER SUPERVISION OF OWNER. ALL FENCE, STONE, GEOPRAC, GROUNDING, AND OTHER STRUCTURES SHALL BE RESTORED TO ORIGINAL CONDITION. REQUIRED TO ACHIEVE OWNER APPROVAL. POSITIVE DRAINAGE AWAY FROM TOWER SITE SHALL BE MAINTAINED.
- CONNECTIONS BETWEEN ITEMS SUPPORTED BY THE STRUCTURE AND THE STRUCTURE NOT SPECIFICALLY DETAILED IN THE CONTRACT DOCUMENTS SHALL BE DESIGNED, COORDINATED AND INSPECTED BY A PROFESSIONAL ENGINEER. ALL CONNECTIONS SHALL BE DESIGNED AND APPROVED BY THE ENGINEER AND SEALED CALCULATIONS DURING SHOP DRAWING REVIEW.
- DO NOT SCALE DRAWINGS.
- DO NOT USE THESE DRAWINGS FOR ANY OTHER SITE.
- ALL MATERIAL UTILIZED FOR THIS PROJECT MUST BE NEW AND FREE OF ANY DEFECTS, AND SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S ALTERED SIZE AND/OR STRENGTHS, MUST BE APPROVED BY THE OWNER AND ENGINEER IN WRITING.
- THE MOUNT UNDER NO CIRCUMSTANCES SHOULD BE USED AS A TIE OFF POINT.

STRUCTURAL STEEL

- DESIGN, DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING PUBLICATIONS EXCEPT AS SPECIFICALLY INDICATED IN THE CONTRACT DOCUMENTS.
 - AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC); MANUAL OF STEEL CONSTRUCTION (15TH EDITION)
 - SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS
 - ASC CODE OF STANDARD PRACTICE
- STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING UNLESS OTHERWISE SHOWN:
 - CHANNELS, ANGLES, PLATES, ETC. ASTM A36 (GR 36)
 - STEEL PIPE ASTM A53 (GR 35)
 - BOLTS ASTM A325
 - NUTS ASTM A563
 - LOCKING STRUCTURAL GRADE

- ALL EXISTING PAINTED/GALVANIZED SURFACES DAMAGED DURING REHAB OR CLEANING SHALL BE REPAIRED WITH A FINISH EQUIVALENT TO OR BETTER THAN THE ORIGINAL FINISH. A PASSING CVI REPORT SHALL BE PROVIDED TO THE ENGINEER UPON COMPLETION OF THE PROJECT.
- THE CERTIFIED WELD INSPECTOR SHALL INDICATE, IN A WRITTEN CVI REPORT, THAT ALL WELDING OPERATIONS PRE, DURING, AND POST INSTALLATION WERE CONDUCTED IN ACCORDANCE WITH AWS D1.1 WITH PHOTOGRAPHS AND DOCUMENTATION SUPPORTING THE ACCEPTANCE OR REJECTION OF THE WELDING OPERATIONS. THE CVI REPORT SHALL INCLUDE DOCUMENTATION AND PHOTOS SHALL BE SUBMITTED DURING THE PMI.
- IN CASES WHERE A WELD IS SPECIFIED BETWEEN TWO MEMBERS IN WHICH THERE IS A GAP IN BETWEEN, THE WELD IS TO BE BUILT UP SUCH THAT THE SIZE OF WELD ON THE MEMBER IS EQUAL TO THAT SHOWN IN THE DRAWINGS.
- OXY FUEL GAS WELDING OR BRAZING IS STRICTLY PROHIBITED. SPECIFICALLY, NO TORCH CUTTING IS PERMITTED ON SITE. ALL HOLES SHALL BE CUT WITH A GRINDER.
- CONTRACTOR SHALL EXERCISE CAUTION WHEN WELDING A GALVANIZED SURFACE.
- CONTRACTOR SHALL HAVE A FIRE PROTECTION PLAN IN PLACE THAT COMPLETES ALL NECESSARY FIRE PROTECTION MEASURES AND LOCAL JURISDICTIONAL REQUIREMENTS.
- CONTRACTOR SHALL HAVE A FIRE PROTECTION PLAN IN PLACE THAT COMPLETES ALL NECESSARY FIRE PROTECTION MEASURES AND LOCAL JURISDICTIONAL REQUIREMENTS.

BOLT SCHEDULE (IN.)

BOLT DIAMETER	STANDARD HOLE	SHORT SLOT	MIN. EDGE DISTANCE	SPACING
1/2	9/16	9/16 x 1 1/16	7/8	1 1/2
5/8	1 1/16	1 1/16 x 7/8	1 1/8	1 7/8
3/4	1 3/16	1 3/16 x 1	1 1/4	2 1/4
7/8	1 5/16	1 5/16 x 1 1/8	1 1/2	2 5/8
1	1 1/16	1 1/16 x 5/16	1 3/4	3

WORKABLE GAGES (IN.)

LEG	GAGE
4	2 1/2
3 1/2	2
3	1 3/4
2 1/2	1 3/8
2	1 1/8

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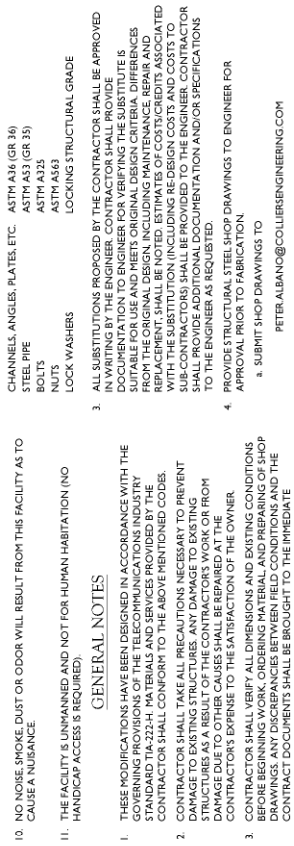
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203.748.8800

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- NOTES:**
- ALL DIMENSIONS REPRESENTED IN THE ABOVE TABLES ARE AISC MINIMUM REQUIREMENTS. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS IN FIELD AND NOTIFY ENGINEER IF DISTANCES ARE LESS THAN THOSE PROVIDED.
 - THE DIMENSIONS PROVIDED ARE MINIMUM REQUIREMENTS. ACTUAL DIMENSIONS MAY VARY WITHIN THE AISC MINIMUM REQUIREMENTS.
 - SHORT SLOT HOLES SHALL ONLY BE USED WHEN DEPICTED IN THE DRAWINGS.
 - MATCH EXISTING GAGES WHERE APPLICABLE UNLESS MINIMUM DISTANCES ARE COMPROMISED.

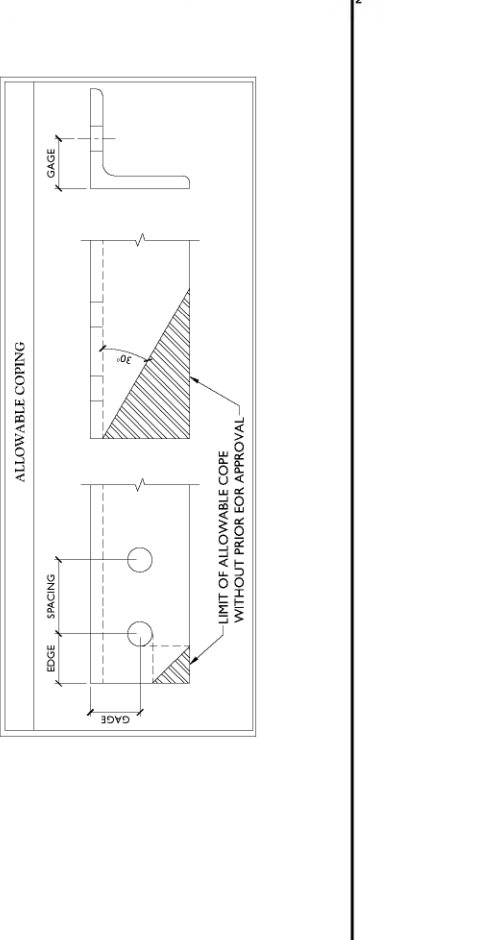
811

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FOR FURTHER INFORMATION VISIT WWW.811.CT.COM

AS SHOWN 31777772A



- PROVIDE STRUCTURAL STEEL SHOP DRAWINGS TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
- SUBMIT SHOP DRAWINGS TO PETER.ABANO@COLLIERSENGINEERING.COM
- PROVIDE MASER CONSULTING CONNECTICUT PROJECT # AND MASER CONSULTING CONNECTICUT PROJECT ENGINEER PROJECT # AND MASER BODY OF THE EMAIL.
- DRILL NO HOLES IN ANY NEW OR EXISTING STRUCTURAL STEEL MEMBERS UNLESS SHOWN ON STRUCTURAL DRAWINGS WITHOUT THE APPROVAL OF THE ENGINEER.
- GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
- ALL NEW STEEL SHALL BE HOT-DIPPED GALVANIZED FOR FULL WEATHER PROTECTION. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.
- CONTRACTOR SHALL PROTECT CUT ENDS OF ALL FIELD-CUT STEEL WITH TWO (2) COATS OF COLD GALVANIZING (ZINGA OR ZINC COTE).
- ALL BOLT ASSEMBLIES FOR STRUCTURAL MEMBERS REPRESENTED IN THIS DRAWING REQUIRE LOCKING DEVICES TO BE INSTALLED IN ACCORDANCE WITH TIA-223-H SECTION 4.9.2 REQUIREMENTS.
- WHERE CONNECTIONS ARE NOT FULLY DETAILED ON THESE DRAWINGS, FABRICATOR SHALL DESIGN CONNECTIONS TO RESIST LOADS AND FORCES WHERE SHOWN ON DRAWINGS AND AS OUTLINED IN SPECIFICATIONS.
- FOR MEMBERS BEING REPLACED, PROVIDE NEW BOLTS AND MATCH EXISTING SIZE AND GRADE TO MEET ALL REQUIREMENTS FOR TENSION RIGHT BOLT.

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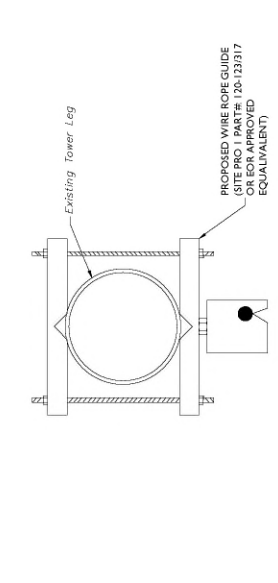
10000 Old Derby Road, Derby, CT 06031

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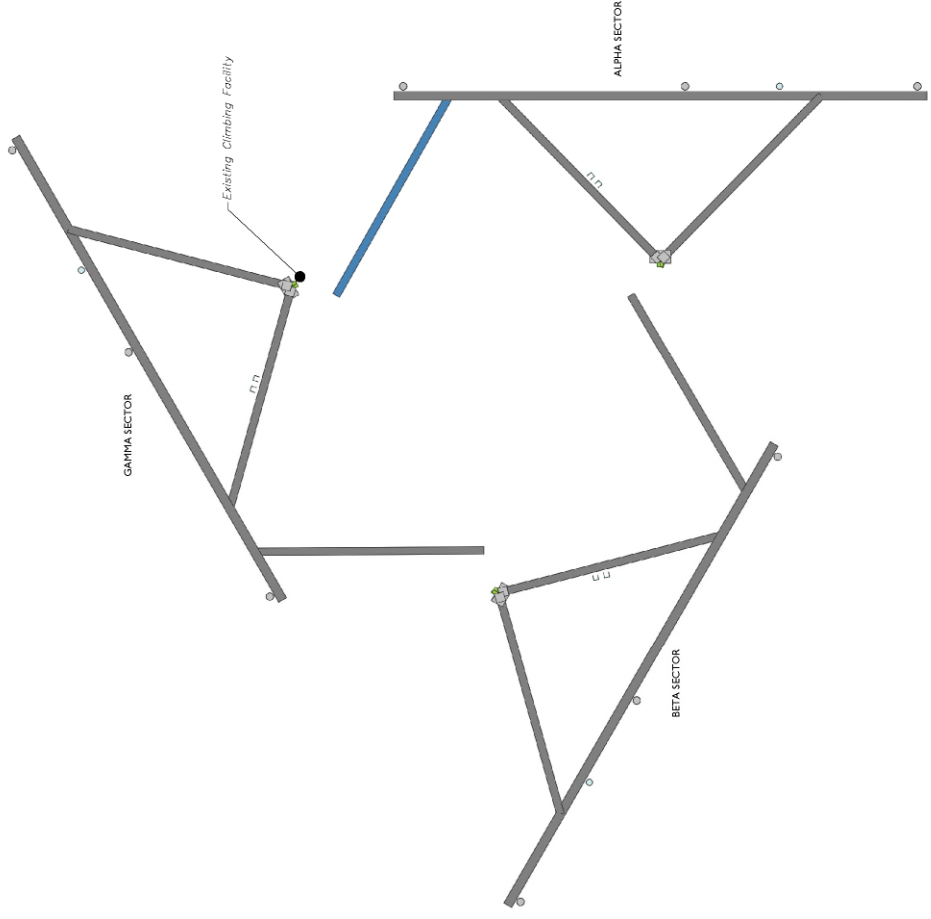
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NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



2 PROPOSED WIRE ROPE GUIDE ATTACHMENT - PLAN VIEW
 SCALE: N/A



1 CLIMBING FACILITY LOCATION
 SCALE: N/A

- STRUCTURAL NOTES:
- PER THE MOUNT MAPPING COMPLETED BY STRUCTURAL COMPONENTS ON 10/19/2021, THE SAFETY CLIMB AND CLIMBING FACILITIES UP TO THE VERIZON MOUNT ELEVATION (159'-0") ARE IN GOOD CONDITION. MASER DOES NOT WARRANT THIS INFORMATION.
 - INSTALL SHALL NOT CAUSE HARM TO THE STRUCTURE, CLIMBING FACILITY, SAFETY CLIMB, OR ANY SYSTEM INSTALLED ON THE STRUCTURE. TIMELY NOTICE AND DOCUMENTATION SHALL BE PROVIDED BY CONTRACTORS TO THE BOR (OF STRUCTURAL DESIGN) IF AN OBSTRUCTION WAS REQUIRED TO MEET THE RF SYSTEM DESIGN REQUIREMENTS AND PERFORMANCES.



CLIMBING FACILITY PHOTO

Existing Safety Climb

Existing Climbing Facility

LEGEND:

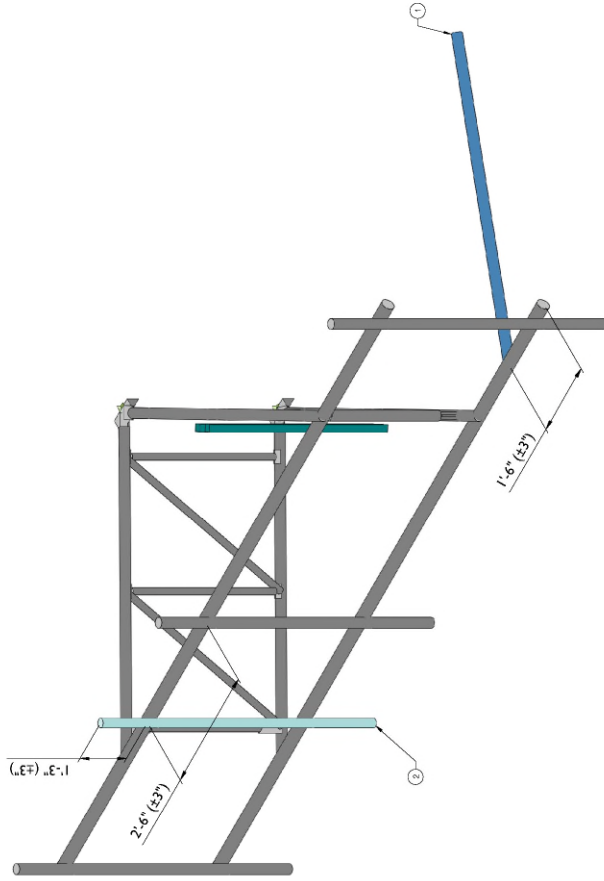
- PROPOSED
- RELOCATED
- EXISTING

MOUNT MODIFICATION SCHEDULE

NO.	ELEVATION	QUANTITY	DESCRIPTION	NOTES
1	159'-0"	1	PROPOSED TIEBACK ASSEMBLY (PART #: VZWSMART-SBK1)	CONNECT NEW TIE BACK TO EXISTING BOTTOM FACE HORIZONTAL. CONNECT OTHER END TO ADJACENT TOWER LEG. PROPOSED TIE-BACK SHALL EXTEND NO MORE THAN 12" BEYOND THE TOWER LEG. CONTRACTOR SHALL TRIM AS REQUIRED AND PROTECT CUT END WITH TWO COATS OF ZINGA OR ZINC. COTE. (ALPHA SECTOR ONLY). SEE GENERAL NOTE A.
2		3	RELOCATED MOUNT PIPE	CONNECT RELOCATED MOUNT PIPE IN POSITION 3 TO EXISTING FACE HORIZONTALS WITH CROSSOVER PLATES (PART #: VZWSMART-MSK1) AT EACH CONNECTION.

GENERAL NOTES:

- A. THREADED ROD FROM PROPOSED KITS SHALL BE TRIMMED TO EXTEND NO MORE THAN 3" BEYOND THE LOCK NUT. TREAT ALL CUT ENDS WITH (2) COATS OF COLD GALVANIZATION (ZINGA OR ZINC KOTE).
- B. REMOVE EXISTING TIE BACK AND ASSOCIATED CONNECTIONS (ALPHA SECTOR ONLY).
- C. MOUNT MEMBERS NOT SHOWN FOR CLARITY J.I.N.C.



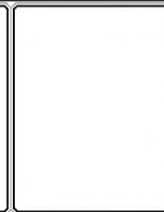
PROPOSED ISOMETRIC VIEW (ALPHA SECTOR SHOWN, SIMILAR ON BETA AND GAMMA SECTORS)

SCALE: N.T.S.

1

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DATE	AS SHOWN	BY	DATE
			2/17/2024
1	ISSUED FOR CONSTRUCTION	SC	DA
2	REVISED	DA	SC
3	ISSUED FOR CONSTRUCTION	DA	SC
4	ISSUED FOR CONSTRUCTION	DA	SC
5	ISSUED FOR CONSTRUCTION	DA	SC
6	ISSUED FOR CONSTRUCTION	DA	SC
7	ISSUED FOR CONSTRUCTION	DA	SC
8	ISSUED FOR CONSTRUCTION	DA	SC
9	ISSUED FOR CONSTRUCTION	DA	SC
10	ISSUED FOR CONSTRUCTION	DA	SC

Professional Engineer for Project No. 17000000
Date: 2/22/2024 08:22:09 AM
Deed Shafa

UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE IN FEET AND INCHES. DIMENSIONS SHALL BE TO THE CENTERLINE UNLESS OTHERWISE NOTED.
UNLESS THEY ARE ACTING UNDER THE DIRECTION OF THE RESPONSIBLE ENGINEER OR PROFESSIONAL ENGINEER, CONSULTANTS SHALL BE RESPONSIBLE FOR THE DESIGN.

SITE NAME:
WESTPORT CT
769153
880 POST RD. EAST UNIT 1
WESTPORT CT 06880
FAIRFIELD COUNTY

Colliers Engineering & Design
10000 E. 120th Street, Suite 100
Overland Park, KS 66204
913.666.1111

MODIFICATION DETAILS
SHEET NO. SS-1

NO.	AS SHOWN	REVISION	DATE
1	ISSUED FOR PERMIT	SC	04/11/2022
2	REVISED	SC	04/11/2022
3	REVISED	SC	04/11/2022
4	REVISED	SC	04/11/2022
5	REVISED	SC	04/11/2022
6	REVISED	SC	04/11/2022
7	REVISED	SC	04/11/2022
8	REVISED	SC	04/11/2022
9	REVISED	SC	04/11/2022
10	REVISED	SC	04/11/2022

Permit Application for Tower at Westport
Date: 2022.08.22 09:49:30 AM EDT

Deal Shiff

VERNON COLLEGE
377 W. HARTFORD AVENUE
VERNON, CT 06061
TEL: 860-865-1234
WWW.VCCT.EDU

SITE NAME:
WESTPORT CT
769153
880 POST RD. EAST UNIT 1
WESTPORT CT 06880
FAIRFIELD COUNTY

STATE OF CONNECTICUT
REGISTERED PROFESSIONAL ENGINEER
No. 2013-000001
PHYSICAL ADDRESS: 2013-000001
COMMERCIAL REGISTERED OFFICE: 2013-000001

PROJECT:
MOUNT PHOTOS
SHEET NO.:
SS-2



MOUNT PHOTO 2



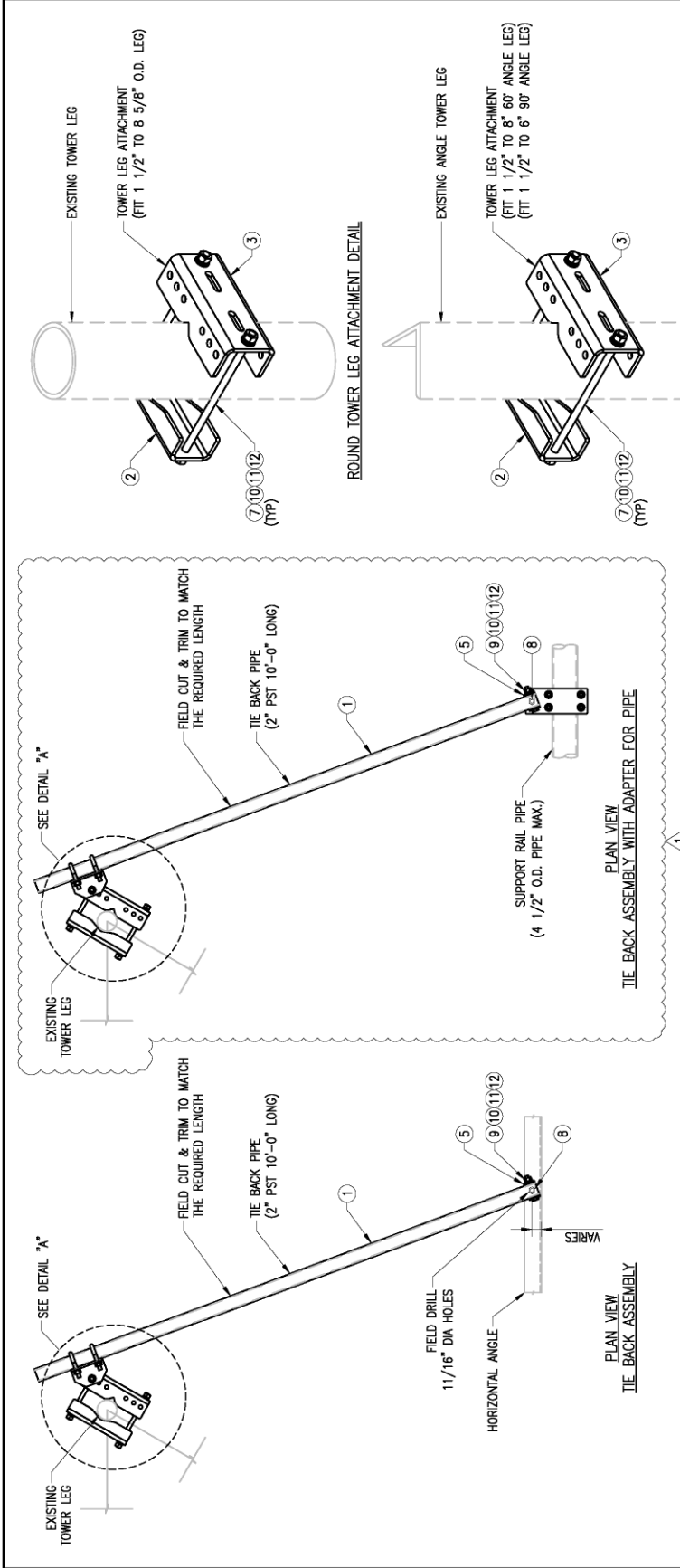
MOUNT PHOTO 4



MOUNT PHOTO 1



MOUNT PHOTO 3

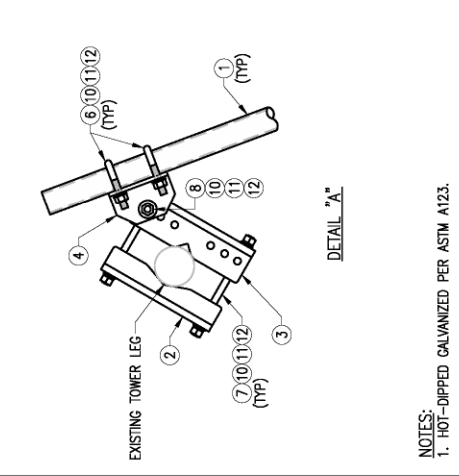
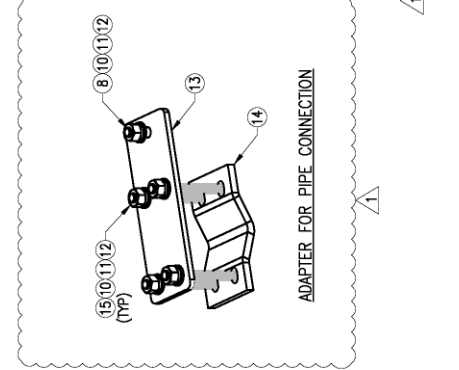


ROUND TOWER LEG ATTACHMENT DETAIL

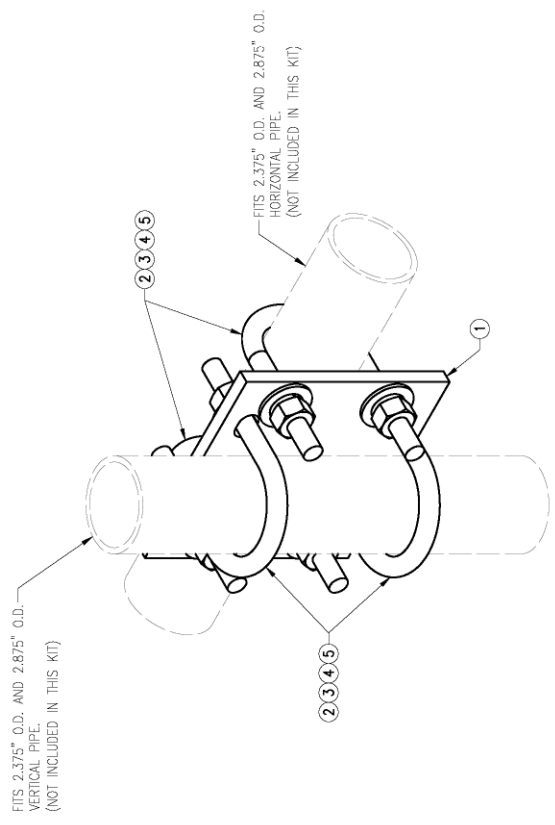
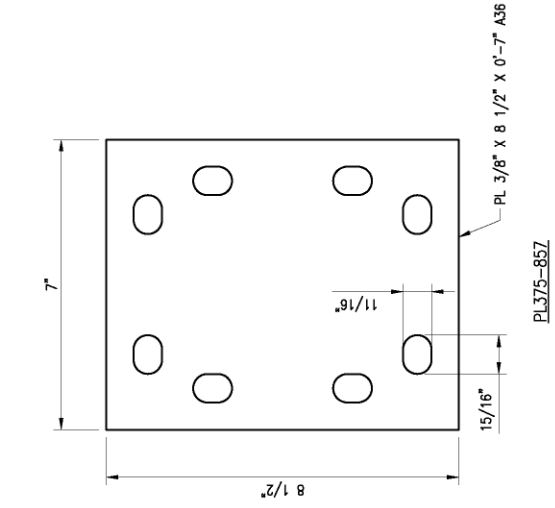
ANGLE TOWER LEG ATTACHMENT DETAIL

VZSMART-SFK1 (TIE BACK ASSEMBLY)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	PS12375-10	2" PST (2.375" O.D. X 0.154" THK) X 10'-0" A53 GR-3 35KSI	SFK1-F1	38
2	1	BR25-12	PL 3/8" X 8 1/4" X 1'-0" A36 BENT PLATE	SFK1-F2	11
3	1	BP11125-12	PL 3/8" X 11 1/8" X 1'-0" A36 BENT PLATE	SFK1-F3	14
4	1	BR6-9375	PL 3/8" X 6" X 9 3/8" A36 BENT PLATE	SFK1-F4	6
5	1	BP2-875	PL 1/4" X 2" X 8 3/4" A36 BENT PLATE	SFK1-F4	1
6	2	MS02-625-300-500	RU-BOLT 5/8" X 3" LW X 5" LL A36 (OR EQUIV)	RBC-1	2
7	2	---	THREADED ROD 5/8" DIA X 1'-6" F1554-36 HDG	---	0
8	2	---	BOLT 5/8" X 2" A325	---	0
9	1	---	BOLT 5/8" X 4 1/4" A325	---	0
10	15	FW-625	5/8" HDG USS FLAT WASHER	---	1
11	15	LW-625	5/8" HDG LOCK WASHER	---	0
12	15	NUT-625	5/8" HDG HEX NUT	---	2
13	1	PL375-4911	PL 3/8" X 4 1/2" X 11" A36	SFK1-F1	4
14	1	V-CLAMP	PL 1/2" X 4 1/4" X 8 5/8" A36 BEND PLATE	SFK1-F5	5
15	4	---	BOLT 5/8" X 6" FULL THREAD SAE GR 5	---	0
				GALVANIZED WT	84



NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.



VZWSMART-MSK1 (CROSSOVER PLATE)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	PL-375-857	PL 3/8" X 8 1/2" X 7" A36	MSK1-F1	6
2	4	MSD2-625-300-500	RU-BOLT 5/8" X 3" LW X 5" LL A36 (OR EQUIV.)	RBC-1	5
3	8	FW-625	5/8" HDG USS FLAT WASHER	---	1
4	8	LW-625	5/8" HDG LOCK WASHER	---	0
5	8	NUJ-625	5/8" HDG HEX NUT	---	1
GALVANIZED				WT	14

NOTES:
 1. HOT-DIPPED GALVANIZED PER ASTM A123.

ATTACHMENT 4



345.20

880

64

1.77 Ac
TC 9550

STATE OF CT

62

63

STATE OF CT

STATE OF CT

61

10.73 Ac

TC 9245

SHERWOOD ISLAND CONNECTOR

STATE OF CT

F CT

Location 880 POST RD E
Acct# 14500
Assessment \$6,899,800
PID 10252

Mblu F09/ / 064/000 /
Owner WESTPORT DRUG ASSOC LLC
Appraisal \$9,856,900
Building Count 2

Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2020	\$5,476,150	\$4,380,750	\$9,856,900
Assessment			
Valuation Year	Improvements	Land	Total
2020	\$3,833,300	\$3,066,500	\$6,899,800

Owner of Record

Owner	WESTPORT DRUG ASSOC LLC	Sale Price	\$12,750,000
Co-Owner		Certificate	
Address	18 EAST 50TH STREET 10TH FL NEW YORK, NY 10022	Book & Page	2662/0036
		Sale Date	03/28/2006
		Instrument	00

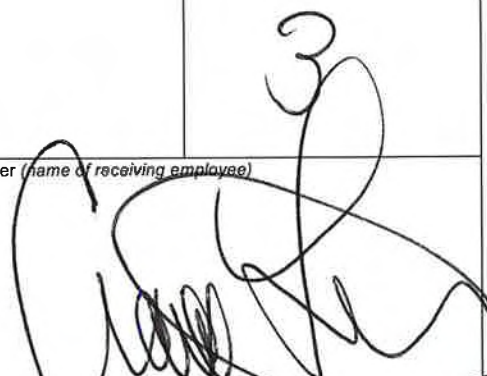



Ownership History


Ownership History					
Owner	Sale Price	Certificate	Book & Page	Instrument	Sale Date
WESTPORT DRUG ASSOC LLC	\$12,750,000		2662/0036	00	03/28/2006
880 POST RD EAST LLC	\$0	1	1747/0159	29	12/29/1999
CONNECTICUT STATE OF	\$0	2	1611/0315	29	07/10/1998

ATTACHMENT 5



WESTPORT
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	TOTAL NO. of Pieces Received at Post Office™	Affix Stamp Here <i>Postmark with Date of Receipt.</i>	
	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.	Jennifer Tooker, First Selectwoman Town of Westport 110 Myrtle Avenue Greenwich, CT 06880				
2.	Mary Young, Planning and Zoning Director Town of Westport 110 Myrtle Avenue Greenwich, CT 06880				
3.	Connecticut State Police Department of Public Safety c/o Brian Benito P.O. Box 2794 Middletown, CT 06457				
4.					
5.					
6.					