



September 17, 2019

Melanie A. Bachman Acting Executive Director Connecticut Siting Council 10 Franklin Square New Britain, CT 06051

RE: Notice of Exempt Modification for Verizon Wireless: 829046

Verizon Site ID:20840

56 Norfield Rd. Weston, CT 06883

Latitude: 41° -12' 8.4"/ Longitude: -73° -22' 46.6"

Dear Ms. Bachman:

Verizon currently maintains twelve (12) antennas at the 150-foot level of the existing 190-foot monopole tower at 56 Norfield Road, Weston CT 06883. The tower is owned by Crown Castle and the Town of Weston is the property owner. Verizon now intends to replace six (6) antennas with six (6) new antennas. Verizon also intends to replace six (6) remote radios, one (1) hybrid cable, six (6) coaxial cables and one (1) OVP.

A request for the original zoning document (s) was sent on September 10, 2019 and a reply from the town Administrator was received stating that no original zoning documents exist. A copy of the correspondence is included with this letter.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies § 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.S.C.A. § 16-50j-73, a copy of this letter is being sent to the First-Selectman – Mr. Chris Spaulding, Town of Weston and Planning & Zoning Department, Town of Weston. The property owner is the Town of Weston and Crown Castle is the tower owner.

- 1. The proposed modifications will not result in an increase in the height of the existing tower.
- 2. The proposed modifications will not require the extension of the site boundary.
- 3. The proposed modification will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.

The Foundation for a Wireless World.

CrownCastle.com

- 4. The operation of the replacement antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communication Commission safety standard.
- 5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
- 6. The existing structure and its foundation can support the proposed loading.

For the foregoing reasons, Verizon respectfully submits that the proposed modifications to the above-reference telecommunications facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2). Please send approval/rejection letter to Attn: Jeffrey Barbadora.

Jeffrey Barbadora

Sincerely/

Real Estate Specialist

12 Gill Street, Suite 5800, Woburn, MA 01801

781-729-0053

Jeff.Barbadora@crowncastle.com

Attachments:

Tab 1: Exhibit-1: Compound plan and elevation depicting the planned changes

Tab 2: Exhibit-2: Structural Modification Report

Tab 3: Exhibit-3: General Power Density Table Report (RF Emissions Analysis Report)

First-Selectman – Mr. Chris Spaulding Town of Weston 56 Norfield Road Weston, CT 06883 203-222-2656

Planning and Zoning Department Town of Weston Town Hall Annex 24 School Road Weston, CT 06883 203-222-2618

Barbadora, Jeff

From:

Barbadora, Jeff

Sent:

Tuesday, September 10, 2019 1:24 PM

To:

Jonathan Luiz Donna Anastasia

Cc: Subject:

RE: 56 Norfield Road, Weston, CT - 829046

Okay, thank you very much Jonathan.

Thanks,

Jeffrey Barbadora

781-970-0053 12 Gill Street, Suite 5800, Woburn, MA 01801 CrownCastle.com

From: Jonathan Luiz <jluiz@westonct.gov> Sent: Tuesday, September 10, 2019 1:16 PM

To: Barbadora, Jeff < Jeff.Barbadora@crowncastle.com> Cc: Donna Anastasia < danastasia@westonct.gov> Subject: Re: 56 Norfield Road, Weston, CT - 829046

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hello Jeffrey,

The Tower is owned by the Town and located on Town-owned property. The Town is exempt from the local zoning regulations. Please make sure that the proposal will be in accordance will all existing agreements with the Town.

Sincerely, Jonathan Luiz Weston Town Administrator

On Tue, Sep 10, 2019 at 1:10 PM Donna Anastasia < danastasia@westonct.gov > wrote:

Hi This is something I believe is for you

------ Forwarded message -----

From: Barbadora, Jeff < Jeff.Barbadora@crowncastle.com >

Date: Tue, Sep 10, 2019 at 12:41 PM

Subject: 56 Norfield Road, Weston, CT - 829046

To: danastasia@westonct.gov < danastasia@westonct.gov >

My office is preparing to file with the ntennas at the cell tower on Town	e Connecticut	Siting Coun	sel (CSC) for Verizo	on to remove ar	nd replace their
ocument with the file package, if a f the tower?	vailable. Woul	d you know	vif there is an orig	inal zoning docu	iment for the appr
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appreciate your time on this matte	r.				
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ownCastle.com			·		•
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authorized. If you are not an intend	aea recipient,	piease dele			
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CONFIDENTIALITY(NOTICE):

Weston Town Administrator

Jonathan Luiz

This is a staff email account managed by the Town of Weston. This e-mail message from the Town of Weston, including any attachments, is for the sole use of the intended recipient(s) and may contain information that is privileged, confidential and/or exempt from disclosure under applicable law. If you are not the intended recipient or authorized to receive information for the recipient, you are hereby notified that any review, use, disclosure, distribution, copying, printing, or action taken in reliance on the contents of this email is strictly prohibited. If you receive this communication in error, please, immediately contact the sender and destroy the material in its entirety. Please note that messages to or from the Town of Weston domain may be subject to the Freedom of Information Act (Conn. Gen. Stat. sections 1-200 et seq.) Thank you.

The Assessor's office is responsible for the maintenance of records on the ownership of properties. Assessments are computed at 70% of the estimated market value of real property at the time of the last revaluation which was 2018.



Town of Weston, CT

Information on the Property Records for the Municipality of Weston was last updated on 9/17/2019.

Parcel Information

Location:	56 NORFIELD ROAD	Property Use:	Miscellaneous Areas	Primary Use:	Support Area
Unique ID:	20010013	Map Block Lot:	22 6 28A	Acres:	0.00
490 Acres:	0.00	Zone:	C	Volume / Page:	
Developers Map / Lot:		Census:			

Value Information

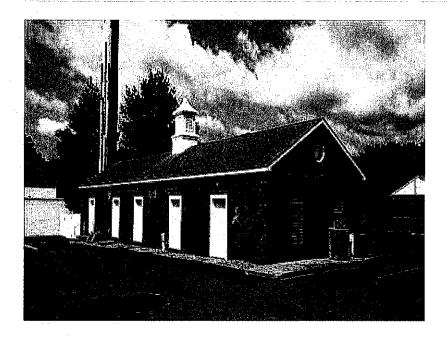
	Appraised Value	Assessed Value
Land	0	0
Buildings	51,449	36,010
Detached Outbuildings	275,000	192,500
Total		228,510

Owner's Information

Owner's Data

VOICESTREAM WIRELESS ATTN. MARTHA JACKLE 12920 S.E. 38TH STREET BELLEVUE, WA 98006

Building 1



80 24 1S UTILITY BLDG-

Category:	Inc	dustrial	Use:		Utility Bui	ilding	G	LA:		1	L,920
	**		 · ·				er er er		***		
Stories:	1.0	00	Constru	iction:	Masonry		, A	ear Bui	ilt:	. 2	2007

	Heating:	Forced Hot Air	Fuel:	Natural Gas	Cooling Percent:	100
-	Siding:	Masonry/Masonry	Roof Material:	Asphalt	Beds/Units:	0

Speci	ial F	eature	5
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Attached Components

Detached Outbuildings

Туре:	Year Built:	Length:	Width:	Area:
Cell Tower	2007	4.00	0.00	4

Owner History - Sales

Owner Name	Volume	Page	Sale Date	Deed Type	Valid Sale	Sale Price	
VOICESTREAM WIRELESS	0000	0000			No	\$0	The second second

Information Published With Permission From The Assessor

Site Name: WESTON CT Cumulative Power Density

42.65%						xposure	missible E	Total Percentage of Maximum Permissible Exposure
7.27%	0.497333333	0.0362	153	2354.28	589	4	746	VZW 700
14.73%	1.0	0.1473	153	9590.88	2398	4	2145	VZW AWS
3.55%	0.586666667	0.0208	153	1354.72	339	4	880	VZW Cellular LTE
3.96%	0.579333333	0.0230	153	1494	498	ω	869	VZW Cellular CDMA
13.13%	1.0	0.1313	153	8547.88	2137	4	1970	VZW PCS
(%)	(mW/cm^2)	(mW/cm^2)	(feet)	(watts)	(watts)		(MHz)	
Fraction of MPE	Maximum Permissible Exposure*	Calculated Power Density	Distance to Target	Total ERP	ERP Per	Number of Trans.	Operating Number Frequency of Trans.	Operator

*Guidelines adopted by the FCC on August 1, 1996, 47 CFR Section 1.13101 based on NCRP Report 86, 1986 and generally on ANSI/IEEE C95.1-19

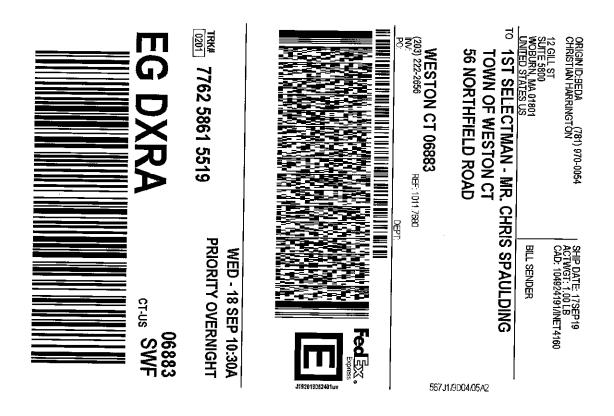
MHz = Megahertz

mW/cm^2 = milliwatts per square centimeter

ERP = Effective Radiated Power

Absolute worst case maximum values used, including the following assumptions:

- 1. closest accessible point is distance from antenna to base of pole;
- 2. continuous transmission from all available channels at full power for indefinite time period; and,
- 3. all RF energy is assumed to be directed solely to the base of the pole.



After printing this label:

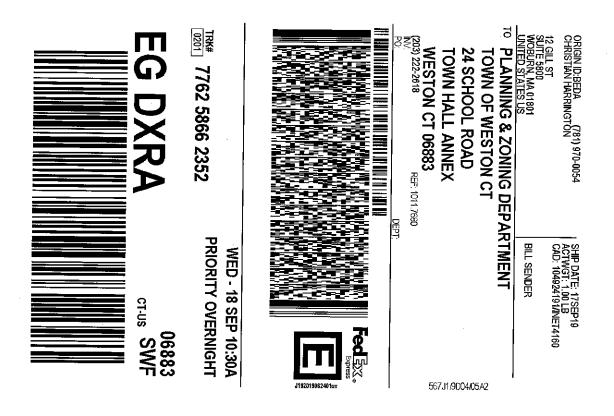
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.

2. Fold the printed page along the horizontal line.

3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.



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Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

Date:

July 15, 2019

Charles McGuirt Crown Castle 3530 Toringdon Way, Suite 300 Charlotte, NC 28277 (704) 405-6607

Engineered Tower Solutions, PLLC 8120 Sheridan Blvd, Suite A-311 Westminster, CO 80003 (919) 782-2710 brandon.little@ets-pllc.com

Subject:

Mount Analysis Report

Carrier Designation:

Verizon Wireless Equipment Change-Out

Carrier Site Number:

Carrier Site Name:

Weston CT

Crown Castle Designation:

Crown Castle BU Number:

829046

Crown Castle Site Name:

Weston/ Rt-57/ Norfield R

Crown Castle JDE Number: Crown Castle Order Number: 582614 499102 Rev. 0

Engineering Firm Designation:

ETS Report Designation:

194467.14

Site Data:

56 Norfield Rd. (Town Hall), Weston, Fairfield County, CT 06883

Latitude: 41° 12' 8.40" Longitude: -73° 22' 46.60"

Structure Information:

Tower Height & Type:

190.0 ft Monopole

Mount Elevation:

150.0 ft

Mount Type:

14.0 ft Platform Mount

Dear Charles McGuirt.

Engineered Tower Solutions, PLLC is pleased to submit this "Mount Analysis Report" to determine the structural integrity of Verizon Wireless's antenna mounting system with the proposed appurtenance and equipment addition on the abovementioned supporting tower structure. Analysis of the existing supporting tower structure is to be completed by others and therefore is not part of this analysis. Analysis of the antenna mounting system as a tie-off point for fall protection or rigging is not part of this document.

The purpose of the analysis is to determine acceptability of the mount stress level. Based on our analysis we have determined the mount stress level to be:

Sufficient **Platform Mount**

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

Mount structural analysis prepared by: Brandon R. Little, El

Respectfully Submitted by:

Frederic G. Bost, PE, CWI, GC Owner/President (919) 782-2710 Geoff.Bost@ets-pllc.com

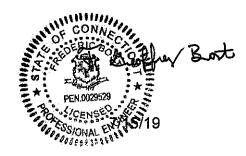


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1) INTRODUCTION

This mount is an existing 14.0 ft Platform Mount. This mount is installed at the 150.0 ft elevation of the 190.0 ft Monopole. Engineered Tower Solutions, PLLC, did not visit the site. A mapping and/or mount manufacturer drawings were not provided. Therefore, per direction of Crown Castle, photos of the tower were compared with other mounts within our database and a similar and comparable mount was used to perform this mount analysis.

2) ANALYSIS CRITERIA

Building Code: 2015 IBC TIA-222 Revision: TIA-222-H Risk Category: H Wind Speed: 120 mph **Exposure Category:** В Topographic Factor at Base: 1.000 **Topographic Factor at Mount:** 1.000 Ice Thickness: 1.50 in Wind Speed with Ice: 50 mph Seismic Ss: 0.226 Seismic S1: 0.067 Live Loading Wind Speed: 30 mph Man Live Load at Mid/End-Points: 250 lb Man Live Load at Mount Pipes: 500 lb

Table 1 - Proposed Equipment Configuration

Iable I - LIC	ihosen Ednik	mient comig	jurativii		
Mount Centerline (ft)		Number of Antennas	Antenna	7. Antenna Model	Mount //Modification Details
		2	Antel	LPA-80080/6CF	
		4	Decibel	DB846F65ZAXY	
		6	Quintel Technology	QS6656-5D	
150.0	150.0	1	RFS/Celwave	DB-C1-12C-24AB-0Z	14.0 ft Platform Mount
150.0	150.0	3	Samsung Telecommunications	RFV01U-D1A	14.0 R Flationn Modifi
		3	Samsung Telecommunications	RFV01U-D2A	

3) ANALYSIS PROCEDURE

Table 2 - Documents Provided

Document	Remarks Remarks	Reference	Source
Carrier Application	Verizon Wireless	07/02/2019	CCISites
4-Structural Analysis Report	Black & Veatch Corp.	7536644	CCISites
Structure Level Drawings (Proposed)	Verizon Wireless	07/02/2019	CCISites

3.1) Analysis Method

RISA-3D (version 17.0.2), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases.

A tool internally developed, using Microsoft Excel, by ETS, PLLC was used to calculate wind loading on all appurtenances, dishes, and mount members for various load cases. Selected output from the analysis is included in Appendix B.

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

3.2) Assumptions

- Engineered Tower Solutions, PLLC, did not visit the site. A mapping and/or mount manufacturer drawings were not provided. Therefore, per direction of Crown Castle, photos of the tower were compared with other mounts within our database and a similar and comparable mount was used to perform this mount analysis.
- 2) The antenna mounting system was properly fabricated, installed and maintained in good condition in accordance with its original design and manufacturer's specification.
- The configuration of antennas, mounts and other appurtenances are as specified in Table 1 and the referenced drawings.
- 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) This Structural Analysis is not a condition assessment of the mount and is an evaluation of the theoretical structural capacity.
- 6) This analysis is based from the information supplied, and therefore, this report's results are as accurate as the supplied data.
- 7) Engineered Tower Solutions, PLLC makes no warranties, expressed and/or implied, in connection with this report, and disclaims any liability associated with material, fabrication, or erection of the mount. Engineered Tower Solutions, PLLC will not be held responsible from any consequential or incidental damages sustained by any person, firm, or organization as a result of the contents of this report. The maximum liability of Engineered Tower Solutions, PLLC pursuant to this report will be limited to the total fee received for compilation of this report.
- It is the tower owner's responsibility to verify that the mount modeled and analyzed is the correct structure modeled.
- 9) The use of this report shall be limited to the purpose for which it was commissioned and may not be used for any other purposes without the written consent of Engineered Tower Solutions, PLLC.
- 10) Steel grades have been assumed as follows:

Channel, Solid Round, Angle, Plate ASTM A36 (Gr 36) HSS (Rectangular) ASTM A500 (Gr B-46) b) HSS (Round) ASTM A500 (Gr B-42) C) d) Pipe ASTM A53 (Gr 35) Connection Bolts ASTM A325 e) Unistrut ASTM A653 SS (Gr 33)

This analysis may be affected if any assumptions are not valid or have been made in error. Engineered Tower Solutions, PLLC should be notified to determine the effect on the structural integrity of the tower.

4) ANALYSIS RESULTS

Table 3 - Mount Component Stresses vs. Capacity (Platform Mount)

Notes	Component	Critical Member	Centerline (ft)	% Capacity	Pass / Fail
1	Face Mount (3.0SCH40)	FM3		45.1	PASS
1	Grate Support (L1.5x2.5x1/4)	GRATE7	150.0	99.4	PASS
1	Mount Pipe (2.0SCH40)	MP15	150.0	14,9	PASS
1	Sidearm (HSS3x3x3/8)	SA-BOT-2		77,1	PASS

Notes:

¹⁾ See additional documentation in "Appendix C – Software Analysis Output" for calculations supporting the % capacity

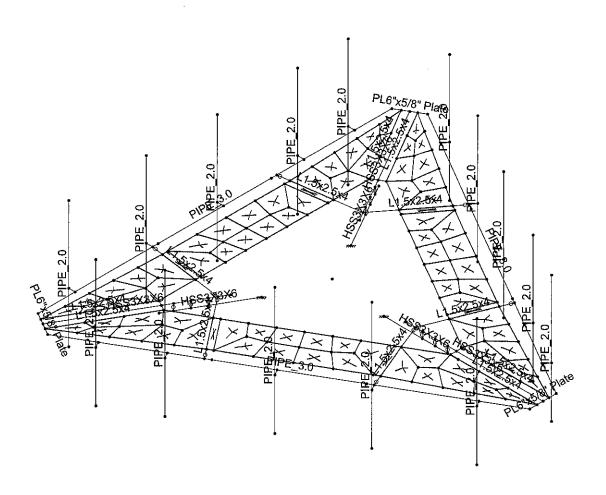
	and the second s		 · ·	
				20 10/
	r Mount Rating			

4.1) Recommendations

The mount has sufficient capacity to carry the proposed loading configuration. No modifications are required at this time.

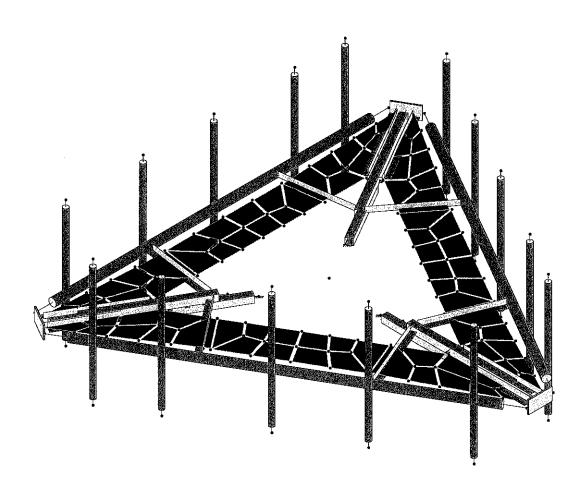
APPENDIX A WIRE FRAME AND RENDERED MODELS





ETS, PLLC		SK - 1
BRL	829046 - Weston/ Rt-57/ Norfield R Mount Analysis	July 15, 2019 at 5:03 PM
194467.14		829046_Loaded.r3d





ETS, PLLC		SK - 2
BRL	829046 - Weston/ Rt-57/ Norfield R Mount Analysis	July 15, 2019 at 5:03 PM
194467.14		829046_Loaded.r3d

APPENDIX B SOFTWARE INPUT CALCULATIONS



Address:

No Address at This Location

ASCE 7 Hazards Report

Standard:

ASCE/SEI 7-10

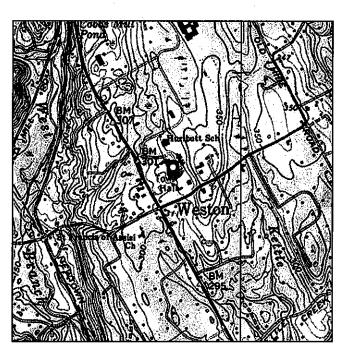
Elevation: 321.79 ft (NAVD 88)

Risk Category: II

Soil Class:

D - Stiff Soil

Latitude: 41.202333 Longitude: -73.379611





Wind

Results:

Wind Speed:

119 Vmph

120 mph per WSEL

10-year MRI 25-year MRI 76 Vmph 86 Vmph

50-year MRI

91 Vmph

100-year MRI

98 Vmph

Data Source:

ASCE/SEI 7-10, Fig. 26.5-1A and Figs. CC-1-CC-4, incorporating errata of

March 12, 2014

Date Accessed:

Fri Jul 12 2019

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-10 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

Site is in a hurricane-prone region as defined in ASCE/SEI 7-10 Section 26.2. Glazed openings need not be protected against wind-borne debris.

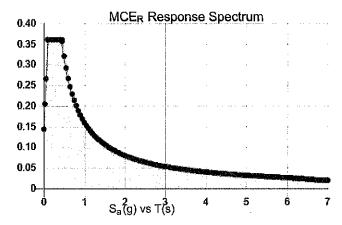
Mountainous terrain, gorges, ocean promontories, and special wind regions should be examined for unusual wind conditions.

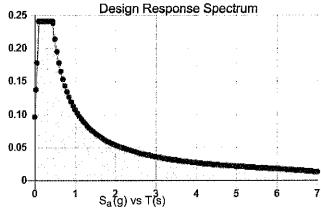


Site Soil Class: Results:	D - Stiff Soil			
Ss:	0.226	S _{DS} :	0.241	
S_1 :	0.067	S _{D1} :	0.107	
F_a :	1.6	T_L :	6	
F _v :	2.4	PGA:	0.126	
S _{MS} :	0.361	PGA _M :	0.195	
S _{M1} :	0.16	F _{PGA} :	1.548	
		l _e :	1	

Seismic Design Category

В





Data Accessed:

Fri Jul 12 2019

Date Source:

USGS Seismic Design Maps based on ASCE/SEI 7-10, incorporating Supplement 1 and errata of March 31, 2013, and ASCE/SEI 7-10 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-10 Ch. 21 are available from USGS.

Page 2 of 3



ice

Results:

Ice Thickness: 0.75 in.

: 15 F

Concurrent Temperature: Gust Speed:

50 mph

Data Source:

Standard ASCE/SEI 7-10, Figs. 10-2 through 10-8

Date Accessed:

Fri Jul 12 2019

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

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 50-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

The ASCE 7 Hazard Tool is provided for your convenience, for informational purposes only, and is provided "as is" and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE 7 standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

ASCE does not intend, nor should anyone interpret, the results provided by this Tool to replace the sound judgment of a competent professional, having knowledge and experience in the appropriate field(s) of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the contents of this Tool or the ASCE 7 standard.

In using this Tool, you expressly assume all risks associated with your use. Under no circumstances shall ASCE or its officers, directors, employees, members, affiliates, or agents be liable to you or any other person for any direct, indirect, special, incidental, or consequential damages arising from or related to your use of, or reliance on, the Tool or any information obtained therein. To the fullest extent permitted by law, you agree to release and hold harmless ASCE from any and all liability of any nature arising out of or resulting from any use of data provided by the ASCE 7 Hazard Tool.





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APPENDIX C SOFTWARE ANALYSIS OUTPUT



: ETS, PLLC : BRL : 194467.14 : 829046 - Weston/ Rt-57/ Norfield R Mount Analysis

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Member Primary Data

<u>ıvıem</u>	<u>ber Primary D</u>	ata									
	Label	I Joint	J Joint	K Joint Ro	otate(Section	/Shape	Туре	Design List	Material	Design R
1	FM1	N5	N6		,	PIPE	3.0	None	None	A53 Gr.B	Typical
2	FM2	N1	N4	1 1			3.0	None	None	A53 Gr.B	Typical
3	FM3	N2	N3			PIPE		None	None	A53 Gr.B	Typical
4	GRATE1	N101	N102				2.5x4	Beam	Single Angle	A36 Gr.36	Typical
5	GRATE2	N49	N44		-		2.5x4	None	None	A36 Gr.36	Typical
6	GRATE3	N74B	N75B				2.5x4	None	None	A36 Gr.36	Typical
7	GRATE4	N77	N76A				2.5x4	None	None	A36 Gr.36	Typical
8	GRATE5	N46	N52		-		2.5x4	None	None	A36 Gr.36	Typical
9	GRATE6	N98	N97			1150	2.5x4	Beam	Single Angle	A36 Gr.36	Typical
10	GRATE7	N95A	N96	 		1150	2.5x4	Beam	Single Angle	A36 Gr.36	Typical
11	GRATE8	N50	N46		-		2.5x4	None	None	A36 Gr.36	Typical
12			N81				2.5x4 2.5x4		None	A36 Gr.36	Typical
	GRATE9	N80						None	None		Typical
13	GRATE10	N79	N78				2.5x4	None	None	A36 Gr.36	
14	GRATE11	N45	N47				2.5x4	None	None	A36 Gr.36	Typical
15	GRATE12	N95	N94				2.5x4	Beam	Single Angle	A36 Gr.36	Typical
16	GRATE13	N92	N93				2.5x4	Beam	Single Angle	A36 Gr.36	Typical
17	GRATE14	N48	N45				2.5x4	None	None	A36 Gr.36	Typical
18	GRATE15	N82	N83	ļ .			2.5x4	None	None	A36 Gr.36	Typical
19	GRATE16	N85	N84				2.5x4	None	None	A36 Gr.36	Typical
20	GRATE17	N44	N51				2.5x4	None	None	A36 Gr.36	Typical
21	GRATE18	N104	N103				2.5x4	Beam	Single Angle	A36 Gr.36	Typical
22	MP1	N120	N251A			PIPE		Column	Pipe	A53 Gr.B	Typical_
23	MP2	N268	N267			PIPE		Column	Pipe	A53 Gr.B	Typical
24	MP3	N124	N123			PIPE		Column	Pipe	A53 Gr.B	Typical
25	MP4	N261A				PIPE		Column	Pipe	A53 Gr.B	Typical
26	MP5	N122	N252A			PIPE		Column	Pipe	A53 Gr.B	Typical
27	MP6	N161	N255A			PIPE		Column	Pipe	A53 Gr.B	Typical
28	MP7	N293	N292			PIPE		Column	Pipe	A53 Gr.B	Typical
29	MP8	N165	N164			PIPE		Column	Pipe	A53 Gr.B	Typical
30	MP9	N287	N288			PIPE		Column	Pipe	A53 Gr.B	Typical
31	MP10	N163	N256A			PIPE		Column	Pipe	A53 Gr.B	Typical
32	MP11	N140	N253A			PIPE		Column	Pipe	A53 Gr.B	Typical
33	MP12	N280	N279			PIPE		Column	Pipe	A53 Gr.B	Typical
34	MP13	N144	N143			PIPE		Column	Pipe	A53 Gr.B	Typical
35	MP14	N274	N275			PIPE		Column	Pipe	A53 Gr.B	Typical
36	MP15	N142	N254A			PIPE	2.0	Column	Pipe	A53 Gr.B	Typical
37	PL-BOT-1	N1	N2		F	PL6"x5/	8" Plate	None	None	A36 Gr.36	Typical
38	PL-BOT-2	N3	N5		F	PL6"x5/	8" Plate	None	None	A36 Gr.36	Typical
39	PL-BOT-3	N4	N6		F	PL6"x5/	8" Plate	None	None	A36 Gr.36	Typical
40	R1	N41	N23			RIC		None	None	RIGID	Typical
41	R2	N42	N24			RIC	SID	None	None	RIGID	Typical
42	R3	N43	N25			RIC		None	None	RIGID	Typical
43	R4	N38	N19			RIC	SID	None	None	RIGID	Typical
44	R5	N39	N20			RIC		None	None	RIGID	Typical
45	R6	N40	N21			RIC	SID	None	None	RIGID	Typical
46	R7	N35	N15			RIC	SID	None	None	RIGID	Typical
47	R8	N36	N16		į	RIC	SID	None	None	RIGID	Typical
48	R9	N37	N17			RIC	SID	None	None	RIGID	Typical
49	R10	N66	N74B			RIC		None	None	RIGID	Typical
50	R11	N65	N86			RIC		None	None	RIGID	Typical
51	R12	N76A	N68			RIC		None	None	RIGID	Typical
52	R13	N87	N67			RIC		None	None	RIGID	Typical
53	R14	N80	N70			RIC		None	None	RIGID	Typical
54	R15	N89	N69			RIC		None	None	RIGID	Typical
55	R16	N88	N71A			RIC	SID	None	None	RIGID	Typical
56	R17	N78	N72A			RIC	SID	None	None	RIGID	Typical
										_	



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Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(Section/Shape	Туре	Design List	Material	Design R
57	R18	N82	N74	1 COUNT	11010101	RIGID	None	None	RIGID	Typical
58	R19	N90	N73A	, ,		RIGID	None	None	RIGID	Typical
59	R20	N84	N76			RIGID	None	None	RIGID	Typical
60	R21	N91	N75			RIGID	None	None	RIGID	Typical
61	R22	N92	N94			RIGID	None	None	RIGID	Typical
62	R23	N95A	N97			RIGID	None	None	RIGID	Typical
63	R24	N101	N103			RIGID	None	None	RIGID	Typical
64	R25	N104A	N112			RIGID	None	None	RIGID	Typical
65	R27	N108	N116			RIGID	None	None	RIGID	Typical
66	R29	N110	N118			RIGID	None	None	RIGID	Typical
67	R31	N125	N132			RIGID	None	None	RIGID	Typical
68	R33	N128	N136			RIGID	None	None	RIGID	Typical
69	R35	N130	N138			RIGID	None	None	RIGID	Typical
70	R37	N146	N153			RIGID	None	None	RIGID	Typical
71	R39	N149	N157			RIGID	None	None	RIGID	Typical
72	R41	N151	N159			RIGID	None	None	RIGID	Typical
73	R43	N257B	N259B			RIGID	None	None	RIGID	Typical
74	R45	N49	N265].	RIGID	None	None	RIGID	Typical
75	R47	N270	N272			RIGID	None	None	RIGID	Typical
76	R49	N48	N277			RIGID	None	None	RIGID	Typical
77	R51	N283	N285			RIGID	None	None	RIGID _	Typical
78	R53	N50	N290			RIGID	None	None	RIGID	Typical
79	SA-BOT-1	N257A	N32			HSS3X3X6	Beam	Tube	A500 Gr.B Rect	
80	SA-BOT-2	N258A	N30			HSS3X3X6	Beam	Tube	A500 Gr.B Rect	· / - (
81	SA-BOT-3	N259A	N34			HSS3X3X6	Beam	Tube	A500 Gr.B Rect	
82	SA-TOP-1	N18	N27			HSS3X3X6	Beam	Tube	A500 Gr.B Rect	
83	SA-TOP-2	N71B	N26			HSS3X3X6	Beam	Tube	A500 Gr.B Rect	
84	SA-TOP-3	N69A	N28			HSS3X3X6	Beam	Tube	A500 Gr.B Rect	Typical

Material Takeoff

	Material	Size	Pieces	Length[in]	Weight[K]
1	General				
2	RIGID		39	120.9	0
3	Total General		39	120.9	00
.4	· ·				
5	Hot Rolled Steel				
6	A36 Gr.36	L1.5x2.5x4	18	608	.2
7	A36 Gr.36	PL6"x5/8" Plate	3	37.8	.0
8	A500 Gr.B Rect	HSS3X3X6	6	303.1	3
9	A53 Gr.B	PIPE 2.0	15	900	3
10	A53 Gr.B	PIPE 3.0	3	504	3
11	Total HR Steel		45	2352.9	1.1
12					
13	Plate Elements	Thickness (in)		Volume (yds^3)	
14	WorkPlatform	.1	84	0.	.3
15	Total Plates		84	0	.3

Member Point Loads (BLC 1 : Dead Load)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Y	-260.6	%40
2	MP2	Υ	-21	%50
3	MP3	Υ	0	<u>%50</u>
4	MP4	Υ	-88	%50
5	MP5	Y	-21	%50



Company : ETS, PLLC
Designer : BRL
Job Number : 194467.14
Model Name : 829046 - Weston/ Rt-57/ Norfield R Mount Analysis

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Member Point Loads (BLC 1 : Dead Load) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
6	MP6	Υ .	-242.7	%40
7	MP7	Υ	-88	%50
8	MP8	Υ	0	%50
9	MP9	Υ	-21	%50
10	MP10	Y	-21	%50
11	MP11	Υ	-256.8	%40
12	MP12	Υ	-88	%50
13	MP13	Υ	0	%50
14	MP14	Υ	-21	%50
15	MP15	Y	-21	%50

Member Point Loads (BLC 2 : Wind Load (0 deg))

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in,%]
1	MP1	Χ	269.8	%40
2	MP2	X	0	%50
3	MP3	X	41,1	%50
4	MP4	X	O	%50
5	MP5	X	0	%50
6	MP6	X	121.9	%40
7	MP7	X	30.8	%50
8	MP8	X	41.1	%50
9	MP9	X	30.8	%50
10	MP10	X	30.8	%50
11	MP11	X	128	%40
12	MP12	X	30.8	%50
13	MP13	X	41,1	%50
14	MP14	X	30.9	%50
15	MP15	X	30,9	%50
16	MP1	Z	0	%40
17	MP2	Z	0	%50
18	MP3	Z	0	%50
19	MP4	Z	0	%50
20	MP5	Z	0	%50
21	MP6	Ζ	0	%40
22	MP7	Z	0	%50
23	MP8	Z	0	%50
24	MP9	Z	0	%50
25	MP10	Z	0 .	%50
26	MP11	Z	0	%40
27	MP12	Z	0	%50
28	MP13	Z	0	%50
29	MP14	Z	0	%50
30	MP15	Z	0	%50

Member Point Loads (BLC 3: Wind Load (30 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	222.5	%40
2	MP2	X	8.9	%50
3	MP3	X	35.6	%50
4	MP4	X	8.9	%50
5	MP5	X	8.9	%50
6	MP6	X	103.3	%40
7	MP7	X	35.6	%50
8	MP8	X	35.6	%50
9	MP9	X	35.6	%50
10	MP10	X	35.6	%50



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Member Point Loads (BLC 3: Wind Load (30 deg)) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
11	MP11	Χ	111.8	%40
12	MP12	Χ	8.9	%50
13	MP13	X	35.6	%50
14	MP14	X	9.1	<u>%50</u>
15	MP15	X	9,1	%50
16	MP1	<u>Z</u>	128.5	%40
17	MP2	Z	5.1	%50
18	MP3	Z	20.5	%50
19	MP4	Z	5.1	%50
20	MP5	Z	5.1	%50
21	MP6	Z	59.7	%40
22	MP7	Z	20.5	%50
23	MP8	Z	20,5	%50
24	MP9	Z	20.5	%50
25	MP10	Z	20.5	%50
26	MP11	Z	64.6	%40
27	MP12	Z	5.1	%50
28	MP13	Z	20.5	%50
29	MP14	Z	5.3	%50
30	MP15	Z	5.3	%50

Member Point Loads (BLC 4: Wind Load (60 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	115.5	%40
2	MP2	Χ	15.4	%50
3	MP3	Х	20.5	%50
4	MP4	X	15.4	%50
5	MP5	X	15.4	%50
6	MP6	Χ	60.9	%40
7	MP7	Χ	15.4	%5 0
8	MP8	X	20.5	%50
9	MP9	X	15.4	%50
10	MP10	Χ	15.4	%50
11	MP11	Х	64.8	%40
12	MP12	X	0	%50
13	MP13	X	20.5	%50
14	MP14	X	.2	%50
15	MP15	Χ	.2	%50
16	MP1	Z	200.1	%40
17	MP2	Z	26.7	<u>%50</u>
18	MP3	Z	35.6	%50
19	MP4	Z	26.7	%50
20	MP5	Z	26.7	%50
21	MP6	Z	105.6	%40
22	MP7	Z	26.7	%50
23	MP8	Z	35.6	%50
24	MP9	Z	26.7	%50
25	MP10	Z	26.7	%50
26	MP11	Z	112.3	%40
27	MP12	Z	0	%50
- 28	MP13	Z	35.6	%50
29	MP14	Z	.3	%50
30	MP15	Z	.3	%50

Member Point Loads (BLC 5: Wind Load (90 deg))

Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
WCINDOI LADOI	Direction	iriagintado[ib;ib it]	200411011[111,70]



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Member Point Loads (BLC 5 : Wind Load (90 deg)) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	0	%40
2	MP2	X	0	%50
3	MP3	X	0	%50
4	MP4	X	0	%50
5	MP5	X	0	%50
6	MP6	X	0	%40
7	MP7	Х	0	%50
8	MP8	X	0	%50
9	MP9	Х	0	%50
10	MP10	Χ	0	%50
11	MP11	Χ	0	%40
_12	MP12	Χ	0	%50
13	MP13	X	0	%50
14	MP14	X	0	%50
15	MP15	X	0	%50
16	MP1	Z	218.2	%40
17	MP2	Z	41,1	%50
18	MP3	Z	41.1	%50
19	MP4	Z	41.1	%50
20	MP5	Z	41.1	%50
21	MP6	Z	127	%40
22	MP7	Z	10.3	%50
23	MP8	Z	41.1	%50
24	MP9	Z	10.3	%50
25	MP10	Z	10.3	%50
26	MP11	Z	129,1	%40
27	MP12	Z	10.3	%50
28	MP13	Z	41.1	%50
29	MP14	Z	10.5	%50
30	MP15	Z	10.5	%50

Member Point Loads (BLC 6: Wind Load (120 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-115.5	%40
2	MP2	X	-15.4	%50
3	MP3	X	-20.5	%50
4	MP4	×	-15.4	%50
5	MP5	X	-15.4	%50
6	MP6	X	-64.8	%40
7	MP7	_X	0	%50
8	MP8	X	<i>-</i> 20.5	%50
9	MP9	X	0	%50
10	MP10	X	0	%50
11	MP11	X	-64	%40
12	MP12	X	-15.4	%50
13	MP13	X	-20.5	%50
14	MP14	X	-15.4	%50
15	MP15	X	-15.4	%50
16	MP1	Z	200.1	%40
17	MP2	Z	26,7	%50
18	MP3	Z	35.6	%50
19	MP4	Z	26,7	%50
20	MP5	Z	26.7	%50
21	MP6	Z	112.3	%40
22	MP7	Z	. 0	%50
23	MP8	Z	35.6	%50



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Member Point Loads (BLC 6 : Wind Load (120 deg)) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
24	MP9	Z	0	%50
_ 25	MP10	Z	0	%50
26	MP11	Z	110.9	%40
27	MP12	Z	26.7	%50
28	MP13	Z	35.6	%50
29	MP14	Z	26.8	%50
30	MP15	Z	26,8	%50

Member Point Loads (BLC 7 : Wind Load (150 deg))

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in.%]
1	MP1	X	-222.5	%40
2	MP2	X	-8.9	%50
3	MP3	X	-35,6	%50
4	MP4	X	-8.9	%50
5	MP5	X	-8.9	%50
6	MP6	X	-110	%40
7	MP7	X	-8.9	%50
8	MP8	X	-35.6	%50
9	MP9	X	-8.9	%50
10	MP10	X	-8.9	%50
11	MP11	X	-110.4	%40
12	MP12	X	-35.6	%50
13	MP13	X	-35.6	%50
14	MP14	X	-35.6	%50
15	MP15	X	-35.6	%50
16	MP1	Z	128.5	%40
17	MP2	Z	5.1	%50
18	MP3	Z	20,5	%50
19	MP4	Z	5.1	%50
20	MP5	Z	5.1	%50
21	MP6	Z	63.5	%40
22	MP7	Z	5.1	%50
23	MP8	Z	20.5	%50
24	MP9	Z	5.1	%50
25	MP10	Z	5.1	%50
26	MP11	Z	63.8	%40
27	MP12	Z	20.5	%50
28	MP13	Z	20.5	%50
29	MP14	Z	20.5	%50
30	MP15	Z	20.5	%50

Member Point Loads (BLC 8 : Wind Load (180 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-269.8	%40
2	MP2	X	0	%50
3	MP3	X	-41.1	%50
4	MP4	X	0	%50
5	MP5	X	0	%50
6	MP6	X	-121.9	%40
7_	MP7	X	-30.8	%50
8	MP8	X	-41.1	%50
9	MP9	X	-30,8	%50
10	MP10	X	-30.8	%50
11	MP11	X	-128	%40
12	MP12	X	-30.8	%50
13	MP13	Х	-41.1	%50



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Member Point Loads (BLC 8: Wind Load (180 deg)) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in.%]
14	MP14	X	-30.9	%50
15	MP15	Χ	-30.9	%50
16	MP1	Ζ	0	%40
17	MP2	Z	0	%50
18	MP3	Z	0	%50
19	MP4	Z	0	%50
20	MP5	Z	0	%50
21	MP6	Z	0	%40
22	MP7	Ζ	0:	%50
23	MP8	Z	0	%50
24	MP9	Z	0	%50
25	MP10	Z	0	%50
26	MP11	Z	0	%40
27	MP12	Z	0	%50
28	MP13	Z	0	%50
29	MP14	Z	0	%50
30	MP15	Z	0	%50

Member Point Loads (BLC 9: Wind Load (210 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-222.5	%40
2	MP2	Χ	-8.9	%50
3	MP3	Χ	-35.6	%50
4	MP4	X	-8.9	%50
5	MP5	Χ	-8.9	%50
6	MP6	X	-103.3	%40
7	MP7	X	-35.6	%50
8	MP8	X	-35.6	%50
9	MP9	X	-35.6	%50
10	MP10	Χ	-35.6	%50
11	MP11	Χ	-111.8	%40
12	MP12	Χ	-8.9	%50
13	MP13	X	-35.6	%50
14	MP14	X	-9.1	%50
15	MP15	X	-9.1	%50
- 16	MP1	Z	-128.5	%40
17	MP2	Z	-5.1	%50
18	MP3	Z Z	-20.5	%50
19	MP4	Z	-5.1	%50
20	MP5	Z	-5.1	%50
21	MP6	Z	-59.7	%40
22	MP7	Z	-20.5	%50
23	MP8	Z	-20.5	<u>%50</u>
24	MP9	Z	-20.5	%50
25	MP10	Z	-20.5	%50
26	MP11	Z	-64.6	%40
27	MP12	Z 7	-5.1	%50
28	MP13		-20.5	%50
29	MP14	Z	-5.3	%50
30	MP15	Z	-5.3	%50

Member Point Loads (BLC 10: Wind Load (240 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	115.5	%40 ·
2	MP2	X	-15.4	%50
3	MP3	X	-20,5	%50



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Member Point Loads (BLC 10 : Wind Load (240 deg)) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
4	MP4	Χ	-15.4	%50
5	MP5	X	-15.4	%50
6	MP6	Χ	-60.9	%40
7	MP7	Х	-15.4	%50
8	MP8	Х	-20.5	%50
9	MP9	X	-15.4	%50
10	MP10	Χ	-15.4	%50
11	MP11	Х	-64.8	%40
12	MP12	Χ	0	%50
13	MP13	Х	-20.5	%50
14	MP14	X	2	%50
15	MP15	Х	2	%50
16	MP1	Z	-200.1	%40
17	MP2	Z	-26.7	%50
18	MP3	Z	-35.6	%50
19	MP4	Z	-26.7	%50
20	MP5	Z	-26.7	%50
21	MP6	Z	-105.6	%40
22	MP7	Z	-26.7	%50
23	MP8	Z	-35,6	%50
24	MP9	Z	-26.7	%50
25	MP10	Z	-26.7	%50
26	MP11	Z	-112.3	%40
27	MP12	Z	0	%50
28	MP13	Z	-35.6	%50
29	MP14	Z	3	%50
30	MP15	Z	-,3	%50

Member Point Loads (BLC 11: Wind Load (270 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	0 0	%40
2	MP2	X	0	%50
3	MP3	Х	0	%50
4	MP4	X	0	%50
5	MP5	X	0	%50
6	MP6	X	0	%40
7	MP7	X	0	%50
8	MP8	X	0	%50
9	MP9	X	0	%50
10	MP10	Х	0	%50
11	MP11	X	0	%40
12	MP12	Х	0	%50
13	MP13	Х	0	%50
14	MP14	X	0	%50
15	MP15	X	0	%50
16	MP1	Z	-218.2	%40
17	MP2	Z	-41.1	%50
18	MP3	Z	-41.1	%50
19	MP4	Z	-41.1	%50
20	MP5	Z	-41.1	%50
21	MP6	Z	-127	%40
22	MP7	Z	-10.3	%50
23	MP8	Z	-41.1	%50
24	MP9	. Z	-10.3	%50
25	MP10	Z	-10.3	%50
26	MP11	Z	-129.1	%40



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Member Point Loads (BLC 11 : Wind Load (270 deg)) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
27	MP12	Z	-10.3	%50
28	MP13	Z	-41.1	%50
29	MP14	Z	-10.5	%50
30	MP15	Z	-10.5	%50

Member Point Loads (BLC 12: Wind Load (300 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1 1	MP1	Χ	115.5	%40
2	MP2	Χ	15.4	%50
_ 3	MP3	X	20.5	%50
4	MP4	X	15.4	%50
5	MP5	Х	15.4	%50
6	MP6	. X	64.8	%40
7	MP7	Χ	0	%50
8	MP8	Χ	20.5	%50
9	MP9	X	0	%50
10	MP10	X	0	%50
11	MP11	X	64	%40
12	MP12	X	15.4	%50
13	MP13	Χ	20.5	%50
14	MP14	X	15.4	%50
15	MP15	X	15.4	%50
16	MP1	Z	-200.1	%40
17	MP2	Z	-26.7	%50
18	MP3	Z	-35.6	%50
19	MP4	Z	-26.7	%50
20	MP5	Ζ	-26.7	%50
21	MP6	Z	-112.3	%40
22	MP7	Z	0	%50
23	MP8	Z	-35.6	%50
24	MP9	Z	.0	%50
25	MP10	Z	0	%50
26	MP11	Z	-110.9	%40
27	MP12	Z	-26.7	%50
28	MP13	Z	-35.6	%50
29	MP14	Z	-26.8	%50
30	MP15	Z	-26.8	%50

Member Point Loads (BLC 13: Wind Load (330 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Χ	222.5	%40
2	MP2	X	8.9	%50
3	MP3	X	35.6	%50
4	MP4	X	8.9	%50
5	MP5	X	8.9	%50
6	MP6	Χ	110	%40
7	MP7	X	8.9	%50
8	MP8	Χ	35,6	%50
9	MP9	Χ	8.9	%50
10	MP10	. X	8.9	%50
11	MP11	X	110.4	%40
12	MP12	Χ	35.6	%50
13	MP13	X	35.6	%50
14	MP14	X	35.6	%50
15	MP15	X	35.6	%50
16	MP1	Z	-128.5	%40



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Member Point Loads (BLC 13 : Wind Load (330 deg)) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[iπ,%]
17	MP2	Z	-5.1	%50
18	MP3	Z	-20.5	%50
19	MP4	Z ·	-5.1	%50
20	MP5	Z	-5.1	%50
21	MP6	Z	-63.5	%40
22	MP7	Ζ	-5.1	%50
23	MP8	Z	-20 <u>,5</u>	%50
24	MP9	Ζ	-5.1	%50
25	MP10	Z	-5.1	<u>%50</u>
26	MP11	Z	-63.8	%40
27	MP12	Ζ	-20.5	%50
28	MP13	Z	-20.5	%50
29	MP14	Ζ	-20.5	%50
30	MP15	Z	-20.5	%50

Member Point Loads (BLC 14 : Ice Load)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Υ	-481	%40
2	MP2	Y .	-234.2	%50
3	MP3	Υ	-43,9	%50
4	MP4	. Y	-262.9	%50
5	MP5	Υ	-234.2	%50
6	MP6	Υ	-365.7	%40
7	MP7	Υ	-262.9	%50
8	MP8	Υ	-43.9	%50
9	MP9	Υ	-234.2	%50
10	MP10	Υ	-234,2	%50
11	MP11	Υ	-368.3	%40
12	MP12	Υ	-262.9	%50
13	MP13	Υ	-43.9	%50
14	MP14	Υ	-245.9	%50
15	MP15	Υ	-245.9	%50

Member Point Loads (BLC 15 : Wind on Ice (0 deg))

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in,%]
1	MP1	X	54.9	%40
2	MP2	Χ	.9	%50
3	MP3	Χ	13.8	%50
- 4	MP4	X	.9.	%50
5	MP5	Χ	.9	%50
6	MP6	X	31.5	%40
7	MP7	X	10.5	%50
8	MP8	X	13.8	%50
9	MP9	X	10.5	%50
10	MP10	X	10.5	%50
11	MP11	Χ	32.7	%40
12	MP12	Χ	10.5	%50
13	MP13	X	13.8	%50
14	MP14	X	10.6	%50
15	MP15	X	10.6	<u>%50</u>
16	MP1	Z	0	%40
17	MP2	Z	0	%50
18	MP3	Z	0	%50
19	MP4	Z	0	%50
20	MP5	Ζ	0	%50
21	MP6	Z	0	%40



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Member Point Loads (BLC 15: Wind on Ice (0 deg)) (Continued)

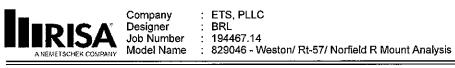
	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
22	MP7	Z	0	%50
23	MP8	Z	0	%50
24	MP9	Z	0	%50
25	MP10	Z	0	%50
26	MP11	Ζ	0	%40
27	MP12	Z	0	%50
28	MP13	Z	0	%50
29	MP14	Z	0	%50
30	MP15	Z	0	%50

Member Point Loads (BLC 16 : Wind on Ice (30 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	47.5	%40
2	MP2	X	3.5	%50
3	MP3	X	11.9	%50
4	MP4	X	3.5	%50
5	MP5	X	3.5	%50
6	MP6	X	28.5	%40
7	MP7	X	11.9	%50
8	MP8	X	11,9	%50
9	MP9	X	11.9	<u>%50</u>
10	MP10	X	11.9	%50
11	MP11	X	<u>25.1</u>	%40
12	MP12	X	3.5	<u>%50</u>
13	MP13	X	11.9	<u>%50</u>
14	MP14	X	3.6	<u>%50</u>
15	MP15	X	3.6	%50
16	MP1	Z	27.4	%40
17	MP2	Z	2	%50
18	MP3	Z	6.9	%50
19	MP4	Z	2	<u>%50</u>
20	MP5	Z	2	<u>%50</u>
21	MP6	Z	16.5	%40
22	MP7	Z	6.9	%50
23	MP8	Z	6.9	%50
24	MP9	Z	6.9	%50
25	MP10	Z	6,9	%50
26	MP11	Z	14.5	%40
27	MP12	Z	2	<u>%50</u>
28	MP13	Z	6.9	%50
29	MP14	Z	2.1	%50
30	MP15	Z	2.1	%50

Member Point Loads (BLC 17: Wind on Ice (60 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	27.3	%40
2	MP2	X	5.3	%50
3	MP3	X	6.9	%50
4	MP4	X	5.3	%50
5	MP5	X	5.3	%50
6	MP6	X	15.7	%40
7	MP7	X	5.3	%50
8	MP8	X	6.9	%50
9	MP9	X	5.3	%50
10	MP10	X	5.3	%50
11	MP11	X	13.6	%40



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Member Point Loads (BLC 17: Wind on Ice (60 deg)) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
12	MP12	X .	.4	%50
13	MP13	X	6.9	%50
14	MP14	X	.5	%50
15	MP15	X	.5	%50
16	MP1	Z	47.3	%40
17	MP2	Z	9.1	<u>%50</u>
18	MP3	Z	11.9	%50
19	MP4	Z	9.1	%50
20	MP5	Z	9.1	%50
21	MP6	Z	27.3	<u>%40</u>
22	MP7	Z	9.1	%50
23	MP8	Z	11.9	%50
24	MP9	Z	9.1	%50
25	MP10	Z	9.1	%50
26	MP11	Z	23,5	%40
27	MP12	Z	7	<u>%50</u>
28	MP13	Z	11.9	%50
29	MP14	Z	.9	%50
30	MP15	Z	.9	%50

Member Point Loads (BLC 18: Wind on Ice (90 deg))

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in,%]
1	MP1	X	0	%40
2	MP2	Χ	0	%50
3	MP3	X	0	<u>%50</u>
4	MP4	Χ	0	%50
5	MP5	Χ	0	<u>%50</u>
6	MP6	X	0	%40
7	MP7	Х	0	%50
8	MP8	X	0	%50
9	MP9	X	0	%50
10	MP10	Χ	0	%50
11	MP11	Х	0	%40
12	MP12	Χ	0	%50
13	MP13	X	0	%50
14	MP14	. X	0	%50
15	MP15	X	0	%50
16	MP1	Z	54.6	<u>%40</u>
17	MP2	Z	13.8	%50
18	MP3	. Z	13.8	<u>%50</u>
19	MP4	Z	13.8	%50
20	MP5	Z	13.8	%50
21	MP6	Z	28.6	%40
22	MP7	Z	4.1	%50
23	MP8	Z	13,8	%50
24	MP9	Z	4.1	%50
25	MP10	Z	4.1	%50
26	MP11	Z	29	%40
27	MP12	Z	4.1	<u>%50</u>
28	MP13	Z	13.8	%50
29	MP14	Z	4.2	%50
30	MP15	Z	4.2	%50

Member Point Loads (BLC 19: Wind on Ice (120 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-27.3	%40



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Member Point Loads (BLC 19: Wind on Ice (120 deg)) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
2	MP2	X	-5,3	%50
3	MP3	X	-6.9	%50
4	MP4	X	-5.3	%50
5	MP5	X	-5.3	%50
6	MP6	Χ	-13.6	%40
7	MP7	Χ	4	%50
8	MP8	Χ	-6.9	%50
9	MP9	X	4	%50
_10	MP10	X	4	%50
11	MP11	Χ	-16.3	%40
12	MP12	Χ	-5.3	%50
13	MP13	Χ	-6.9	%50
14	MP14	Χ	-5.3	%50
15	MP15	X	-5.3	%50
_16	MP1	Z	47.3	%40
_ 17	MP2	Z	9.1	%50
18	MP3	Z	11.9	%50
19	MP4	Z	9.1	%50
20	MP5	Z	9.1	%50
21	MP6	Z	23.5	%40
22	MP7	Z	.7	%50
23	MP8	Z	11.9	%50
24	MP9	Z :	.7.	%50
25	MP10	Z	.7	%50
26	MP11	Z	28.3	%40
27	MP12	Z	9.1	%50
28	MP13	Z	11.9	%50
29	MP14	Z	9.1	%50
30	MP15	Z	9.1	%50

Member Point Loads (BLC 20 : Wind on Ice (150 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-47.5	%40
2	MP2	X	-3.5	%50
3	MP3	X	-11.9	%50
4	MP4	X	-3.5	%50
5	MP5	Х	-3.5	%50
6	MP6	X	-24.7	%40
7	MP7	Х	-3.5	%50
8	MP8	X	-11.9	%50
9	MP9	X	- 3.5	%50
10	MP10	X	-3.5	%50
11	MP11	X	-29.9	%40
12	MP12	X	-11.9	%50
13	MP13	X	-11.9	%50
14	MP14	X	-11.9	%50
15	MP15	X	-11.9	%50
16	MP1	Z	27.4	%40
17	MP2	Z	2	%50
_18	MP3	Z	6.9	%50
_ 19	MP4	Z	2	%50
20	MP5	Z	2	%50
21	MP6	Z	14.3	%40
22	MP7	Z	2	%50
23	MP8	Z	6.9	%50
24	MP9	Z	2	%50



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Member Point Loads (BLC 20 : Wind on Ice (150 deg)) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
25	MP10	Z	2	%50
26	MP11	Z	17.3	%40
27	MP12	Z	6,9	%50
28	MP13	Z	6.9	%50
29	MP14	Z	6.9	%50
30	MP15	Z	6.9	%50

Member Point Loads (BLC 21: Wind on Ice (180 deg))

	Member Label	Direction	Magnitude[]b.lb-ft]	Location[in.%]
1	MP1	X	-54.9	%40
2	MP2	X	9	%50
3	MP3	X	-13.8	%50
4	MP4	X	9	%50
5	MP5	X	-,9	%50
6	MP6	X	-31,5	%40
7	MP7	X	-10.5	%50
8	MP8	X	-13.8	%50
9	MP9	X	-10.5	%50
10	MP10	X	-10.5	%50
11	MP11	X	-32.7	%40
12	MP12	Х	-10.5	%50
13	MP13	X	-13.8	%50
14	MP14	X	-10.6	%50
15	MP15	X	-10.6	%50
16	MP1	Z	0	%40
17	MP2	Z	0	%50
18	MP3	Z	0	%50
19	MP4	Z	0	%50
20	MP5	Z	0 .	%50
21	MP6	Z	0	%40
22	MP7	Z	0	%50
23	MP8	Z	0	%50
24	MP9	Z	0	%50
25	MP10	Z	0	%50
26	MP11	Z	0	%40
27	MP12	Z	0	%50
28	MP13	Z	0	%50
29	MP14	Z	0	%50
30	MP15	Z	0	%50

Member Point Loads (BLC 22: Wind on Ice (210 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1 1	MP1	X	-47.5	%40
2	MP2	X	-3.5	%50
3	MP3	X	-11.9	%50
4	MP4	X	-3,5	%50
5	MP5	X	-3.5	%50
6	MP6	X	-28.5	%40
7	MP7	Х	-11.9	%50
8	MP8	X	-11.9	%50
9	MP9	X	-11.9	%50
10	MP10	X	-11.9	%50
11	MP11	X	-25.1	%40
12	MP12	. X	-3.5	%50
13	MP13	X	-11.9	%50
14	MP14	X	-3.6	%50



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Member Point Loads (BLC 22 : Wind on Ice (210 deg)) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
15	MP15	Χ	-3.6	%50
16	MP1	Z	-27.4	%40
17	MP2	Ζ	-2	%50
18	MP3	Ζ	-6.9	%50
19	MP4	Z	-2	%50
20	MP5	Z	-2	%50
21	MP6	Z	-16.5	%40
22	MP7	Ζ	-6.9	%50
23	MP8	Z	-6.9	%50
24	MP9	Z	-6,9	<u> %50</u>
25	MP10	Z	-6.9	%50
26	MP11	Ζ	-14.5	%40
27	MP12	Ζ	-2	%50
28	MP13	Ζ	-6.9	%50
29	MP14	Z	-2.1	%50
30	MP15	Z	-2.1	%50

Member Point Loads (BLC 23 : Wind on Ice (240 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-27.3	%40
2	MP2	Χ	-5.3	%50
3	MP3	Χ	-6.9	%50
4	MP4	X	-5.3	%50
5	MP5	Χ	-5.3	%50
6	MP6	Χ	-15.7	%40
7	MP7	Χ	-5,3	%50
8	MP8	X	-6.9	%50
9	MP9	X	-5,3	%50
10	MP10	Χ	-5.3	%50
11	MP11	X	-13.6	%40
12	MP12	X	-,4	%50
13	MP13	Χ	-6.9	%50
14	MP14	Χ	5	%50
15	MP15	X	5	%50
16	MP1	Z	-47.3	%40
17	MP2	Z	-9.1	%50
18	MP3	Z	-11.9	%50
19	MP4	Z	-9.1	%50
20	MP5	Z	-9.1	%50
21	MP6	Z	<i>-</i> 27.3	%40
22	MP7	Z	-9.1	%50
23	MP8	Z	-11.9	%50
24	MP9	Z	-9.1	%50
25	MP10	Z	-9 .1	%50
26	MP11	Z	-23.5	%40
27	MP12	Z	7	%50
28	MP13	Z.	-11.9	%50
29	MP14	Z	9	%50
30	MP15	Z	9	%50

Member Point Loads (BLC 24: Wind on Ice (270 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	0	%40
. 2	MP2	Х	0	%50
3	MP3	X	0	%50
4	MP4	X	0	%50



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Member Point Loads (BLC 24: Wind on Ice (270 deg)) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
5	MP5	X	0	<u>%50</u>
6	MP6	X	0	%40
7	MP7	X	0	%50
8	MP8	X	0	%50
9	MP9	X	0	%50
10	MP10	X	0	%50
11	MP11	X	0	<u>~40</u>
12	MP12	X	0	%50
13	MP13	X	0	<u>%50</u>
14	MP14	X	0	%50
15	MP15	X	0	%50
16	MP1	Z	-54.6	%40
17	MP2	Z	-13.8	%50
18	MP3	Z	-13.8	%50
19	MP4	Z	-13.8	%50
20	MP5	Z	-13.8	%50
21	MP6	Z	-28,6	%40
22	MP7	Z	-4.1	%50
23	MP8	Z	- 13.8	%50
24	MP9	Z	-4.1	%50
25	MP10	Z	-4.1	%50
26	MP11	Z	-29	%40
27	MP12	Z	-4.1	%50
28	MP13	Z	-13.8	%50
29	MP14	Z	~4,2	%50
30	MP15	Z	-4.2	%50

Member Point Loads (BLC 25 : Wind on Ice (300 deg))

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in,%]
1	MP1	X	27.3	%40
2	MP2	X	5.3	%50
3	MP3	X	6.9	%50
4	MP4	X	5.3	%50
5	MP5	X	5.3	%50
6	MP6	X	13.6	%40
7	MP7	X	.4	%50
8	MP8	X	6.9	%50
9	MP9	X	4	%50
10	MP10	X	.4	%50
11	MP11	X	16.3	%40
12	MP12	X	5.3	%50
13	MP13	Χ	6.9	%50
14	MP14	X	5.3	%50
15	MP15	X	5.3	<u> </u>
16	MP1	Z	-47.3	%40
17	MP2	Z	<u>-9.1</u>	%50
18	MP3	Z	- 11.9	%50
19	MP4	Z	- 9,1	%50
20	MP5	Z	<u>-9.1</u>	%50
21	MP6	Z	-23.5	%40
22	MP7	Z	7	%50
23	MP8	Z	-11.9	%50
24	MP9	Z	7	%50
25	MP10	Z	7	%50
26	MP11	Z	-28.3	%40
27	MP12	Z	-9.1	<u>%50</u>



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Member Point Loads (BLC 25 : Wind on Ice (300 deg)) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
28	MP13	Ζ	-11.9	%50
29	MP14	Z	-9.1	%50
30	MP15	Z	- 9.1	%50

Member Point Loads (BLC 26: Wind on Ice (330 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	47.5	%40
2	MP2	X	3.5	%50
3	MP3	X	11.9	%50
4	MP4	X	3.5	%50
5	MP5	X	3.5	%50
6	MP6	X	24.7	%40
7	MP7	Χ	3.5	<u>%50</u>
8	MP8	X	11.9	%50
9	MP9	X	3.5	%50
10	MP10	X	3.5	%50
11	MP11	X	29.9	%40
12	MP12	X	11.9	%50
13	MP13	X	11.9	%50
14	MP14	X	11.9	%50
15	MP15	X	11.9	%50
16	MP1	Z	-27.4	%40
17	MP2	Z	-2	%50
18	MP3	Z	-6.9	%50
19	MP4	Z	-2	%50
20	MP5	Z	-2	%50
21	MP6	Z	-14.3	%40
22	MP7	Z	-2	%50
23	MP8	Z	-6.9	%50
24	MP9	Z	-2	%50
25	MP10	Z	-2	%50
26	MP11	Z	-17.3	%40
27	MP12	Z	-6.9	%50
28	MP13	Z	-6.9	%50
29	MP14	Z	-6.9	%50
30	MP15	Z	-6.9	%50

Member Point Loads (BLC 27 : Horizontal Seismic, Eh (0))

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in,%]
1	MP1	X	260.6	<u>%40</u>
2	MP2	Χ	21	%50
3	MP3	X	0	<u></u> %50
4	MP4	X	88	%50
5	MP5	X	21	%50
6	MP6	X	242.7	%40
7	MP7	Χ	88	<u>%50</u>
8	MP8	. X	0	%50
9	MP9	Χ	21	<u>%</u> 50
10	MP10	X	21	<u>%50</u>
11	MP11	Χ	256.8	%40
12	MP12	Χ	88	%50
13	MP13	X	0	%50
14	MP14	X	21	%50
15	MP15	X	21	%50
16	MP1	Z	0	%40
17	MP2	Z	0	<u>%</u> 50



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Member Point Loads (BLC 27 : Horizontal Seismic, Eh (0)) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
18	MP3	Z	0	%50
19	MP4	Z	0	<u>%50</u>
20	MP5	Z	0	%50
21	MP6	<u>Z</u>	0	<u>%40</u>
22	MP7	Z	0	<u>%50</u>
23	MP8	Z	0	<u>%50</u>
24	MP9	Z	0	%50
25	MP10	Z	0	<u> </u>
26	MP11	Z	0	%40
27	MP12	Z	0	%50
28	MP13	Z	0	%50
29	MP14	Z	0	%50
30	MP15	Z	0.	%50

Member Point Loads (BLC 28 : Horizontal Seismic, Eh (30))

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in,%]
1	MP1	X	225.7	%40
2	MP2	X	18.2	%50
3	MP3	Х	0	%50
4	MP4	X	76.2	%50
5	MP5	X	18.2	%50
6	MP6	X	210,2	%40
7	MP7	X	76.2	%50
- 8	MP8	X	0	%50
9	MP9	X	18.2	%50
10	MP10	X	18.2	%50
11	MP11	X	222.4	%40
12	MP12	X	76.2	%50
13	MP13	X	0	%50
14	MP14	X	18.2	%50
15	MP15	X	18.2	%50
16	MP1	Z	130.3	%40
17	MP2	Z	10.5	%50
18	MP3	Z	0	%50
19	MP4	Z	44	%50
20	MP5	Z	10.5	%50
21	MP6	Z	121,4	<u>%40</u>
22	MP7	. Z	44	%50
23	MP8	Z	0	%50
24	MP9	Z	10.5	%50
25	MP10	Z	10.5	%50
26	MP11	Z	128.4	%40
27	MP12	Z	44	%50
28	MP13	Z	0	<u>%</u> 50
29	MP14	Z	10,5	%50
30	MP15	Z	10.5	%50

Member Point Loads (BLC 29 : Horizontal Seismic, Eh (60))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	130.3	%40
2	MP2	X	10.5	%50
3	MP3	X	0	%50
4	MP4	X	44	%50
5	MP5	X	10.5	%50
6	MP6	X	121.4	%40
7	MP7	X	44	%50



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Member Point Loads (BLC 29 : Horizontal Seismic, Eh (60)) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
8	MP8	X	. 0	%50
9	MP9	X	10.5	%50
10	MP10	X	10.5	%50
11	MP11	X	128.4	%40
12	MP12	X	44	%50
13	MP13	X	0	%50
14	MP14	X	10.5	%50
15	MP15	X	10.5	%50
16	MP1	Z	225.7	%40
17	MP2	Z	18.2	%50
18	MP3	Z	0	%50
19	MP4	Z	76.2	%50
20	MP5	Z	18.2	%50
21	MP6	Z	210.2	%40
22	MP7	Z	76.2	%50
23	MP8	Z	0	%50
24	MP9	Z	18.2	%50
25	MP10	Z	18.2	%50
26	MP11	Z	222.4	%40
27	MP12	Z	76.2	%50
28	MP13	Z	0.	%50
29	MP14	Ζ	18.2	%50
30	MP15	Z	18.2	%50

Member Point Loads (BLC 30: Horizontal Seismic, Eh (90))

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in,%]
1	MP1	X	0	%40
2	MP2	X	0	%50
3	MP3	X	0	%50
4	MP4	X	0	%50
5	MP5	X	0	%50
6	MP6	X	. 0	%40
7	MP7	Х	0	%50
8	MP8	Х	0	%50
9	MP9	Х	0	%50
10	MP10	Х	0	%50
11	MP11	X	0	%40
12	MP12	X	0	%50
13	MP13	Х	0	%50
14	MP14	X	0	%50
15	MP15	X	0	%50
16	MP1	Z	260.6	%40
17	MP2	Z	21	%50
18	MP3	Z	0	%50
19	MP4	Z	88	%50
20	MP5	Z	21	%50
21	MP6	Z	242.7	%40
22	MP7	Z	88	%50
23	MP8	Z	0	%50
24	MP9	Z	21	%50
25	MP10	Z	21	%50
26	MP11	Z	256.8	%40
27	MP12	Z	88	%50
28	MP13	Z	0	%50
29	MP14	Z	21	%50
30	MP15	Z	21	%50



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Member Point Loads (BLC 31: Horizontal Seismic, Eh (120))

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in,%]
1	MP1	Х	-130.3	%40
2	MP2	Χ	-10.5	%50
3	MP3	Х	0	%50
4	MP4	Χ	-44	%50
5	MP5	X	-10.5	%50
6	MP6	X	-121.3	%40
7	MP7	X	-44	%50
8	MP8	Χ	0	%50
9	MP9	Χ	-10.5	%50
10	MP10	Χ	-10.5	%50
11	MP11	X	-128.4	%40
12	MP12	Χ	-44	%50
13	MP13	Χ	0	%50
14	MP14	X	-10.5	%50
15	MP15	Χ	-10.5	%50
16	MP1	Z	225.7	%40
17	MP2	Ζ	18.2	%50
18	MP3	Z	0	%50
19	MP4	Z	76.2	%50
20	MP5	Z	18.2	%50
21	MP6	Z	210.2	%40
22	MP7	Z	76.2	%50
23	MP8	Z	0	%50
24	MP9	Z	18.2	%50
25	MP10	Z	18.2	%50
26	MP11	Z	222.4	%40
27	MP12	Ζ	76.2	%50
28	MP13	Z	0	%50
29	MP14	Z	18.2	%50
30	MP15	Z	18.2	%50

Member Point Loads (BLC 32 : Horizontal Seismic, Eh (150))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-225.7	%40
2	MP2	X	-18.2	%50
3	MP3	X	0	%50
4	MP4	X	-76.2	%50
5	MP5	X	-18.2	%50
6	MP6	X	-210.2	%40
7	MP7	X	-76.2	%50
8	MP8	X	0	%50
9	MP9	X	-18.2	%50
10	MP10	X	-18.2	%50
11	MP11	X	-222.4	%40
12	MP12	X	-76.2	%50
13	MP13	X	0	%50
.14	MP14	X	-18.2	%50
15	MP15	X	-18.2	%50
16	MP1	Z	130.3	%40
17	MP2	Z	10.5	%50
18	MP3	Z	. 0	%50
19	MP4	Z	44	%50
20	MP5	Z	10.5	%50
21	MP6	Z	121.4	%40
22	MP7	Z	44	%50
23	MP8	Z	0	%50



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Member Point Loads (BLC 32: Horizontal Seismic, Eh (150)) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
24	MP9	Z	10,5	%50
25	MP10	Z	10.5	<u>%50</u>
26	MP11	Z	128.4	%40
27	MP12	Z	44	%50
28	MP13	Z	0	%50
29	MP14	Z	10.5	%50
30	MP15	Z	10.5	%50

Member Point Loads (BLC 33 : Horizontal Seismic, Eh (180))

	ci i cint Loude (DLO co i i			
	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
	MP1	X	-260.6	%40
2	MP2	Χ	-21	%50
3	MP3	X	0	%50
4	MP4	Χ	-88	%50
5	MP5	X	-21	%50
-6	MP6	X	-242.7	%40
7	MP7	X	-88	%50
8	MP8	X	0	%50
9	MP9	X	-21	%50
10	MP10	X	-21	%50
11	MP11	Х	-256.8	%40
12	MP12	X	-88	%50
13	MP13	X	0	%50
14	MP14	X	-21	%50
15	MP15	X	-21	%50
16	MP1	Z	0	%40
17	MP2	Z	0	%50
18	MP3	Z	0	%50
19	MP4	Z	0	%50
20	MP5	Z	0	%50
21	MP6	Z	0	%40
22	MP7	Z	0	%50
23	MP8	Z	0	%50
24	MP9	Z	0	%50
25	MP10	Z	0	%50
26	MP11	Z	0	%40
27	MP12	Z	0	%50
28	MP13	Z	0	%50
29	MP14	Z	0	%50
30	MP15	Z	0	%50

Member Point Loads (BLC 34: Horizontal Seismic, Eh (210))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-225.7	%40 <u> </u>
2	MP2	Χ	-18.2	%50
3	MP3	X	0	%50
4	MP4	X	-76.2	%50
5	MP5	X	-18.2	<u>%50</u>
6	MP6	X	-210.2	<u>%40</u>
7	MP7	X	-76.2	%50
- 8	MP8	- X	0	%50
9	MP9	X	-18,2	%50
10	MP10	X	-18.2	<u>%50</u>
11	MP11	X	-222.4	%40
12	MP12	X	-76.2	%50
13	MP13	X	0	%50



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Member Point Loads (BLC 34: Horizontal Seismic, Eh (210)) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
14	MP14	X	-18.2	%50
15	MP15	X	-18.2	%50
16	MP1	Z	-130.3	%40
17	MP2	Z	<i>-</i> 10.5	%50
18	MP3	Z	0	%50
19	MP4	Z	-44	%50
20	MP5	Z	-10.5	%50
21	MP6	Z		%40
22	MP7	Z	-44	%50
23	MP8	Z	0	%50
24	MP9	Z	-10.5	<u>%50</u>
25	MP10	Z	-10.5	<u>%50</u>
26	MP11	Z	-128.4	<u>%40</u>
27	MP12	Z	-44	%50
28	MP13	Z	0	%50
29	MP14	Z	-10.5	%50
30	MP15	Z	-10.5	%50

Member Point Loads (BLC 35 : Horizontal Seismic, Eh (240))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-130.3	%40
2	MP2	X	-10.5	%50
3	MP3	X	0	%50
4	MP4	X	-44	%50
5	MP5	X	-10.5	%50
6	MP6	X	-121.4	%40
7	MP7	X	-44	%50
8	MP8	X	0	%50
9	MP9	X	-10.5	%50
10	MP10	X	-10.5	%50
11	MP11	X	-128.4	%40
12	MP12	X	-44	%50
13	MP13	X	0	%50
14	MP14	X	-10.5	%50
15	MP15	X	-10.5	%50
16	MP1	Z	-225.7	%40
17	MP2	Z	-18.2	%50
18	MP3	Z	0	%50
19	MP4	Z	-76.2	<u>%50</u>
20	MP5	Z	-18.2	%50
21	MP6	Z	-210.2	%40
22	MP7	Z	-76.2	%50
23	MP8	Z	0	%50
24	MP9	Z	-18.2	%50
25	MP10	Z	-18.2	%50
26	MP11	Z	-222.4	%40
27	MP12	Z	-76.2	%50
28	MP13	Z	0 .	%50
29	MP14	Z	-18.2	%50
30	MP15	Z	-18.2	%50

Member Point Loads (BLC 36 : Horizontal Seismic, Eh (270))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X		%40
2	MP2	Χ	0	<u>%50</u>
3	MP3	Χ	0	<u>%50</u>



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Member Point Loads (BLC 36 : Horizontal Seismic, Eh (270)) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
4	MP4	Χ	0	<u>%50</u>
5	MP5	X	0	%50
6	MP6	Χ	0	%40
7	MP7	Χ	0	%50
8	MP8	Χ	0	%50
9	MP9	Х	0	%50
10	MP10	X	0	%50
11	MP11	Х	0	%40
12	MP12	Χ	0	%50
13	MP13	Х	0	%50
14	MP14	Χ	0	%50
15	MP15	Х	0	%50
16	MP1	Z	-260.6	%40
17	MP2	Z	-21	%50
18	MP3	Z	0	%50
19	MP4	Z	-88	<u>%50</u>
20	MP5	Z	-21	%50
21	MP6	Z	-242.7	%40
22	MP7	Z	-88	%50
23	MP8	Z	0	%50
24	MP9	Z	-21	%50
25	MP10	Z	-21	%50
26	MP11	Z	-256.8	%40
27	MP12	Z	-88	%50
28	MP13	Z	0	%50
29	MP14	Z	-21	%50
30	MP15	Z	-21	%50

Member Point Loads (BLC 37: Horizontal Seismic, Eh (300))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	130.3	%40
2	MP2	X	10.5	%50
3	MP3	X	0	%50
4	MP4	X	44	%50
5	MP5	X	10.5	%50
6	MP6	X	121.4	%40
7	MP7	X	44	%50
8	MP8	X	0	%50
9	MP9	X	10.5	%50
10	MP10	X	10.5	%50
11	MP11	X	128.4	%40
12	MP12	X	44	%50
13	MP13	X	0	%50
14	MP14	X	10.5	%50
15	MP15	X	10.5	%50
16	MP1	Z	-225.7	%40
17	MP2	Z	-18.2	%50
18	MP3	Z	. 0	%50
19	MP4	Z	-76.2	%50
20	MP5	Z	-18.2	%50
21	MP6	Z	-210.2	%40
22	MP7	Z	-76.2	%50
23	MP8	Z	0	%50
24	MP9	Z	-18.2	%50
25	MP10	Z	-18.2	%50
26	MP11	Z	-222.4	%40



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Member Point Loads (BLC 37: Horizontal Seismic, Eh (300)) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
27	MP12	Z	-76.2	%50
28	MP13	Z	0	%50
29	MP14	Z	-18.2	%50
30	MP15	Z	-18.2	%50

Member Point Loads (BLC 38 : Horizontal Seismic, Eh (330))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Χ	225.7	%40
2	MP2	Х	18.2	%50
3	MP3	X	0	%50
4	MP4	X	76.2	%50
5	MP5	X	18.2	%50
6	MP6	Χ	210.2	%40
7	MP7	Х	76,2	%50
8	MP8	Χ	O	%50
9	MP9	Χ	18,2	%50
10	MP10	X	18.2	%50
11	MP11	X	222.4	%40
12	MP12	Χ	76.2	%50
13	MP13	Χ	0	%50
14	MP14	Χ	18.2	%50
15	MP15	Χ	18.2	%50
16	MP1	Z	-130.3	<u></u> 40
17	MP2	Z	-10.5	%50
18	MP3	Z	0	%50
19	MP4	Z	-44	%50
20	MP5	Z	-10.5	%50
21	MP6	Z	-121.4	%40
22	MP7	Z	-44	%50
23	MP8	Z	0	%50
24	MP9	Z	-10.5	%50
25	MP10	Z	-10.5	%50
26	MP11	Z	-128.4	%40
27	MP12	Z	-44	%50
28	MP13	Z	0	%50
29	MP14	Z	-10.5	%50
30	MP15	Z	-10.5	%50

Member Point Loads (BLC 39 : Maintenance Load, Lm (MP1))

		Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
ſ	1	MP1	Y	-500	%50

Member Point Loads (BLC 40 : Maintenance Load, Lm (MP2))

		Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
ſ	1	MP2	Y	-500	%50

Member Point Loads (BLC 41: Maintenance Load, Lm (MP3))

		Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
ſ	1	MP3	Υ	-500	%50

Member Point Loads (BLC 42: Maintenance Load, Lm (MP4))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP4	Υ	-500	<u></u> %50



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Member Point Loads (BLC 43: Maintenance Load, Lm (MP5)) Magnitude[lb,lb-ft] Location[in.%] Member Label Direction 1 MP5 -500 %50 Member Point Loads (BLC 44 : Maintenance Load. Lm (MP6)) Member Label Direction Magnitude[lb,lb-ft] Location[in,%] 1 MP6 -500 %50 Member Point Loads (BLC 45: Maintenance Load, Lm (MP7)) Magnitude[lb,lb-ft] Location[in,%] Direction Member Label MP7 -500 %50 Member Point Loads (BLC 46: Maintenance Load, Lm (MP8)) Direction Magnitude[lb.lb-ft] Location[in,%] Member Label 1 MP8 -500 %50 Member Point Loads (BLC 47: Maintenance Load, Lm (MP9)) Member Label Direction Magnitude[lb,lb-ft] Location[in,%] MP9 -500 %50 Member Point Loads (BLC 48: Maintenance Load, Lm (MP10)) Member Label Direction Magnitude[lb,lb-ft] Location[in,%] 1 MP10 -500 %50 Member Point Loads (BLC 49 : Maintenance Load, Lm (MP11)) Magnitude[lb,lb-ft] Location[in,%] Member Label Direction MP11 -500 %50 Member Point Loads (BLC 50 : Maintenance Load, Lm (MP12)) Direction Magnitude[lb,lb-ft] Location[in,%] Member Label 1 %50 MP12 -500 Member Point Loads (BLC 51: Maintenance Load, Lm (MP13)) Magnitude[lb,lb-ft] Location[in,%] Member Label Direction 1 MP13 -500 %50 Member Point Loads (BLC 52 : Maintenance Load, Lm (MP14)) Member Label Direction Magnitude[lb,lb-ft] Location[in.%] %50 MP14 -500 Member Point Loads (BLC 53: Maintenance Load, Lm (MP15)) Member Label Direction Magnitude[lb,lb-ft] Location[in,%] 1 MP15 -500 %50 Member Point Loads (BLC 75: Maintenance Load, Lv (Pos. 1)) Member Label Magnitude[lb,lb-ft] Location[in,%] Direction 1 %50 FM1 -250 Member Point Loads (BLC 76 : Maintenance Load, Lv (Pos. 2)) Member Label Direction Magnitude[lb,lb-ft] Location[in,%] 1 %50 FM2 -250



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	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in,%]
	FM3	Y	-250	%50
ombor	Point Loads (BLC 78	· Maintenance I car	1 Ly (Pos 4))	
<u>siiibei</u>	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
	GRATE1	Y	-250	%50
<u>ember</u>	Point Loads (BLC 79	: Maintenance Load	d, Lv (Pos. 5))	
	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	GRATE2	Y	-250	%50
<u>ember</u>	Point Loads (BLC 80	<u>: Maintenance Loac</u>	l, Lv (Pos. 6))	
. 1	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in,%]
1	GRATE3	Υ	-250	%50
<u>ember</u>	Point Loads (BLC 81	: Maintenance Load	l, Lv (Pos. 7))	
T"	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	GRATE4	Υ	-250	%50
ember	Point Loads (BLC 82	: Maintenance Load	l, Lv (Pos. 8))	
	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1.	GRATE5	ΥΥ	-250	%50
lember	Point Loads (BLC 83	: Maintenance Load	d, Lv (Pos. 9))	
	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	GRATE6	Υ	-250	%50
			J. L. (Dog. 40))	
lember	Point Loads (BLC 84	<u>: Maintenance Loag</u>	1, LV (POS. 10))	
	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in,%]
				Location[in,%]
1	Member Label	Direction Y	Magnitude[lb.lb-ft] -250	
1	Member Label GRATE7	Direction Y : Maintenance Load	Magnitude[lb.lb-ft] -250	
1 lember	Member Label GRATE7 Point Loads (BLC 85	Direction Y	Magnitude[<u>lb.lb-ft]</u> -250 d, Lv (Pos. 11))	%50
1 lember	Member Label GRATE7 Point Loads (BLC 85 Member Label	Direction Y : Maintenance Load Direction Y	Magnitude[lb.lb-ft] -250 1, Lv (Pos. 11)) Magnitude[lb.lb-ft] -250	%50 Location[in,%]
1 lember	Member Label GRATE7 Point Loads (BLC 85 Member Label GRATE8	Direction Y : Maintenance Load Direction Y	Magnitude[lb.lb-ft] -250 d, Lv (Pos. 11)) Magnitude[lb.lb-ft] -250 d, Lv (Pos. 12))	Location[in,%] %50
1 lember	Member Label GRATE7 Point Loads (BLC 85 Member Label GRATE8 Point Loads (BLC 86	Direction Y : Maintenance Load Direction Y : Maintenance Load	Magnitude[lb.lb-ft] -250 1, Lv (Pos. 11)) Magnitude[lb.lb-ft] -250	%50 Location[in,%] %50
1 1 1 1ember	Member Label GRATE7 Point Loads (BLC 85 Member Label GRATE8 Point Loads (BLC 86 Member Label GRATE9	Direction Y : Maintenance Load Direction Y : Maintenance Load Direction Y	Magnitude[lb,lb-ft] -250 d, Lv (Pos. 11)) Magnitude[lb,lb-ft] -250 d, Lv (Pos. 12)) Magnitude[lb,lb-ft] -250	Location[in,%] %50
1 flember 1 flember 1 flember	Member Label GRATE7 Point Loads (BLC 85 Member Label GRATE8 Point Loads (BLC 86 Member Label GRATE9 Point Loads (BLC 87 Member Label	Direction Y : Maintenance Load Direction Y : Maintenance Load Direction Y	Magnitude[lb.lb-ft] -250 d, Lv (Pos. 11)) Magnitude[lb.lb-ft] -250 d, Lv (Pos. 12)) Magnitude[lb.lb-ft] -250 d, Lv (Pos. 13)) Magnitude[lb.lb-ft]	Location[in,%]
1 lember 1 lember	Member Label GRATE7 Point Loads (BLC 85 Member Label GRATE8 Point Loads (BLC 86 Member Label GRATE9 Point Loads (BLC 87	Direction Y : Maintenance Load Direction Y : Maintenance Load Direction Y : Maintenance Load Direction Y : Maintenance Load	Magnitude[lb.lb-ft] -250 d, Lv (Pos. 11)) Magnitude[lb.lb-ft] -250 d, Lv (Pos. 12)) Magnitude[lb,lb-ft] -250 d, Lv (Pos. 13))	Location[in,%] %50 Location[in,%] %50
1 lember 1 lember	Member Label GRATE7 Point Loads (BLC 85 Member Label GRATE8 Point Loads (BLC 86 Member Label GRATE9 Point Loads (BLC 87 Member Label	Direction Y : Maintenance Load Direction Y : Maintenance Load Direction Y : Maintenance Load Direction Y	Magnitude[lb.lb-ft] -250 d, Lv (Pos. 11)) Magnitude[lb.lb-ft] -250 d, Lv (Pos. 12)) Magnitude[lb.lb-ft] -250 d, Lv (Pos. 13)) Magnitude[lb.lb-ft] -250	Location[in,%]
1 lember 1 lember	Member Label GRATE7 Point Loads (BLC 85 Member Label GRATE8 Point Loads (BLC 86 Member Label GRATE9 Point Loads (BLC 87 Member Label GRATE10	Direction Y : Maintenance Load Direction Y : Maintenance Load Direction Y : Maintenance Load Direction Y	Magnitude[lb.lb-ft] -250 d, Lv (Pos. 11)) Magnitude[lb.lb-ft] -250 d, Lv (Pos. 12)) Magnitude[lb.lb-ft] -250 d, Lv (Pos. 13)) Magnitude[lb.lb-ft] -250	Location[in,%] Location[in,%] %50 Location[in,%] %50 Location[in,%]
1 lember 1 lember	Member Label GRATE7 Point Loads (BLC 85 Member Label GRATE8 Point Loads (BLC 86 Member Label GRATE9 Point Loads (BLC 87 Member Label GRATE10 Point Loads (BLC 88	Direction Y : Maintenance Load Direction Y : Maintenance Load Direction Y : Maintenance Load Direction Y : Maintenance Load Direction P : Maintenance Load Direction Y : Maintenance Load	Magnitude[lb.lb-ft] -250 d, Lv (Pos. 11)) Magnitude[lb,lb-ft] -250 d, Lv (Pos. 12)) Magnitude[lb,lb-ft] -250 d, Lv (Pos. 13)) Magnitude[lb.lb-ft] -250 d, Lv (Pos. 14))	Location[in,%] %50 Location[in,%] %50 Location[in,%] %50
1 lember Member Label GRATE7 Point Loads (BLC 85 Member Label GRATE8 Point Loads (BLC 86 Member Label GRATE9 Point Loads (BLC 87 Member Label GRATE10 Point Loads (BLC 88 Member Label	Direction Y : Maintenance Load Direction Y : Maintenance Load Direction Y : Maintenance Load Direction Y : Maintenance Load Direction Y : Maintenance Load Direction Y	Magnitude[lb.lb-ft] -250 d, Lv (Pos. 11)) Magnitude[lb,lb-ft] -250 d, Lv (Pos. 12)) Magnitude[lb,lb-ft] -250 d, Lv (Pos. 13)) Magnitude[lb.lb-ft] -250 d, Lv (Pos. 14)) Magnitude[lb.lb-ft] -250	Location[in,%] Location[in,%] %50 Location[in,%] %50 Location[in,%]	
1 Member 1 Member 1 Member 1 Member 1	Member Label GRATE7 Point Loads (BLC 85 Member Label GRATE8 Point Loads (BLC 86 Member Label GRATE9 Point Loads (BLC 87 Member Label GRATE10 Point Loads (BLC 88 Member Label GRATE11	Direction Y : Maintenance Load Direction Y : Maintenance Load Direction Y : Maintenance Load Direction Y : Maintenance Load Direction Y : Maintenance Load Direction Y	Magnitude[lb.lb-ft] -250 d, Lv (Pos. 11)) Magnitude[lb,lb-ft] -250 d, Lv (Pos. 12)) Magnitude[lb,lb-ft] -250 d, Lv (Pos. 13)) Magnitude[lb.lb-ft] -250 d, Lv (Pos. 14)) Magnitude[lb.lb-ft] -250	Location[in,%] Location[in,%] %50 Location[in,%] %50 Location[in,%]



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	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	GRATE13	Y	-250	%50
1ambar		. Maintananaa l	1 Ly (Pop. 47))	
<u>iemper</u>	Point Loads (BLC 91 Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	GRATE14	V	-250	%50
fombor.	Point Loads (BLC 92	· Maintananaa / aas		
<u>rember</u>	Member Label	Direction	· · · · · · · · · · · · · · · · · · ·	Location[in,%]
1	GRATE15	Direction	Magnitude[lb.lb-ft] -250	%50
lambar		Maintananas I aas		7,000
<u>iember</u>	Point Loads (BLC 93 Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	GRATE16	Y	-250	%50
lombor	Point Loads (BLC 94	· Maintenance I car		
GIIIDEI	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	GRATE17	Y	-250	%50
lember	Point Loads (BLC 95	: Maintenance Load		
	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	GRATE18	Υ	-250	%50
lember	Point Loads (BLC 96	: Maintenance Load	d, Lv (Pos. 22))	
	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	SA-BOT-1	Υ	-250	%100
lember	Point Loads (BLC 97	: Maintenance Load	d, Lv (Pos. 23))	
	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	SA-BOT-2	Υ	-250	%100
lember	Point Loads (BLC 98	: Maintenance Load	i, Lv (Pos. 24))	
	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	SA-BOT-3	Υ	-250	%100
lember	Point Loads (BLC 99	: Maintenance Load	d. Lv (Pos. 25))	
	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	SA-TOP-1	Υ	-250	%100
lember	Point Loads (BLC 100	: Maintenance Loa	ad, Lv (Pos. 26))	
	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	SA-TOP-2	Υ	-250	%100
lember	Point Loads (BLC 101	: Maintenance Loa	nd. Lv (Pos. 27))	
	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	SA-TOP-3	Y	-250	%100
		·		
lemher	Distributed Loads (Bl	C 2 : Wind I oad (0	(dea))	
- VIIIVOI	Member Label Direct			ation[in,%] End Location[in
1	FM1 X	12.1		0 0
2	FM2 X	12.1	12.1	0 0



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Member Distributed Loads (BLC 2 : Wind Load (0 deg)) (Continued)

	Member Label	Direction		End Magnitude[lb/ft,	Start Location[in,%]	End Location[in,%]
3	FM3	X	12.1	12,1	0	0
4	GRATE1	X	8.6	8.6	0	0
5	GRATE2	X	8.6	8.6	0	0
6	GRATE3	X	8.6	8.6	0	0
7	GRATE4	X	8.6	8.6	0	0
8	GRATE5	X	8.6	8.6	0	0
9	GRATE6	X	8.6	8.6	0	0
10	GRATE7	X	8.6	8.6	0	0
11	GRATE8	Х	8,6	8.6	0	0
12	GRATE9	X	8.6	8.6	0	. 0
13	GRATE10	X	8.6	8,6	0	0
14	GRATE11	X	8.6	8.6	Ŏ	0
15	GRATE12	X	0	0	0	0
16	GRATE13	X	Ö	ŏ	.0	0
17	GRATE14	X	8.6	8.6	Ŏ	Ō
18	GRATE15	X	8.6	8.6	Ŏ	0
19	GRATE16	X	8.6	8.6	0	0
		x	8.6	8.6	0	. 0
20	GRATE17	X	8.6	8.6	0	0 _
21	GRATE18			34.6	0	0
22	PL-BOT-1	X	34.6		0	0
23	PL-BOT-2	├ X	34.6	34.6	0	0
24	PL-BOT-3	X	34.6	34.6		
25	SA-BOT-1	X	0	0	0	0
26	SA-BOT-2	X	17.3	17.3	0	0
27	SA-BOT-3	<u> </u>	17.3	17.3	0	0
28	SA-TOP-1	X	0	0	0	. 0
29	SA-TOP-2	X	17.3	17.3	0	0
30	SA-TOP-3	X	17.3	17.3	0	0
31_	FM1	Z	0	0	0	0
32	FM2	Z	0	0	0	0
33	FM3	Z	00	0	0	0
34	GRATE1	Z	0	0	0	0
35	GRATE2	Z	0	0	0	0
36	GRATE3	Z	0	0	0	0
37	GRATE4	Z	0	0	0	0
38	GRATE5	Z	0	0	0	0
39	GRATE6	Z	0	0	0 _	0
40	GRATE7	Z	0	0	0	0
41	GRATE8	Z	0	0	0	0
42	GRATE9	Z	Ö	0	Ō	0
43	GRATE10	Ž	0 _	0	0	0
44	GRATE11	Z	0	Ö	0	Ō
45	GRATE12	Z	0	Ŏ	0	Ö
46	GRATE13	Z	0	0 -	Ŏ	ō
47	GRATE14	Z	Ö	0	Ö	Ŏ
48	GRATE15	Z	0	0	0	Ŏ
49	GRATE16	Z	Ö	0	0	0
50	GRATE17	Z	0	0	0	0
	GRATE18	Z	0	0	0	0
51			0	0	0	0
52	PL-BOT-1	Z		0	0	0
53	PL-BOT-2	<u>Z</u>	0		0	0
54	PL-BOT-3	<u>Z</u>	0	0		0
55	SA-BOT-1	Z	0	0	0	
56	SA-BOT-2	Z	0	0	0	0
57	SA-BOT-3	Z	0	0	0	0
58	SA-TOP-1	Z	0	0	0	0
59	SA-TOP-2	Z	0	0	0	0



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Member Distributed Loads (BLC 2 : Wind Load (0 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft	End Magnitude[lb/ft	Start Location[in,%]	End Location[in.%]
60	SA-TOP-3	Ζ	0	0	0	0
61	MP1	Х	56.2	56.2	0	%100
62	MP2	X	48.6	48.6	0	%100
63	MP3	Х	0	0	0	0
64	MP4	Х	56.2	56.2	0	%100
65	MP5	Χ	48.6	48.6	0	%100
66	MP6	Х	49.3	49.3	0	<u>%100</u>
67	MP7	X	49.3	49.3	0	%100
68	MP8	X	0	0	0	0
69	MP9	Х	44.1	44.1	0	<u>%100</u>
70	MP10	X	44.1	44.1	0	%100
71	MP11	Х	49.3	49.3	0	%100
72	MP12	X	49.3	49.3	0	%10 <u>0</u>
73	MP13	Х	0	0	0	0
74	MP14	Х	52.7	52.7	0	%99.058
75	MP15	Х	52.7	52.7	0	%99.058
76	MP1	Z	0	0	0	0
77	MP2	Z	0	0	0	0
78	MP3	Z	0	0	0	0
79	MP4	Z	0	0	0	0
80	MP5	Z	0	0	0	0
81	MP6	Z	0	0	0	0
82	MP7	Z	0	0	0	0
83	MP8	Z	0	0	0	0
84	MP9	Z	0	0	0	0
85	MP10	Z	0	0	0	0
86	MP11	Z	0	0	0	0
87	MP12	Z	0	0	0	0
88	MP13	Z	0	0	0	0
89	MP14	Z	0	0	0	0
90	MP15	Z	0	0	0	. 0.

Member Distributed Loads (BLC 3: Wind Load (30 deg))

			7 77777 22 24 24 25 7 3 3			
	Membe <u>r Label</u>	Direction		End Magnitude[lb/ft,	Start Location[in,%]	End Location[in,%]
1	FM1	X	10.5	10.5	0	0
2	FM2	X	0	0	0	0
3	FM3	X	10.5	10.5	0	0
4	GRATE1	X	7.5	7.5	0	0
5	GRATE2	X	7,5	7.5	0	0
6	GRATE3	Х	7.5	7.5	0	0
7	GRATE4	Х	7.5	7.5	0	0
8	GRATE5	Х	7.5	7.5	0	. 0
9	GRATE6	X	7.5	7.5	0	0
10	GRATE7	X	7.5	7.5	0	0
11	GRATE8	X	7.5	7.5	0	0
12	GRATE9	X	7.5	7.5	0	0
13	GRATE10	X	7.5	7.5	0	0
14	GRATE11	Х	7.5	7.5	0	0
15	GRATE12	Х	7.5	7.5	0	0
16	GRATE13	Х	7.5	7.5	0	0
17	GRATE14	Х	7.5	7.5	0	0
18	GRATE15	Х	7.5	7.5	0	0
19	GRATE16	X	7.5	7.5	0	0
20	GRATE17	X	7.5	7.5	0	0
21	GRATE18	X	7.5	7.5	0	0
22	PL-BOT-1	X	29.9	29.9	0	0



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Member Distributed Loads (BLC 3: Wind Load (30 deg)) (Continued)

	Member Label	Direction		End Magnitude(lh/ft	Start Location[in,%]	End Location[in,%]
23	PL-BOT-2	X	O O	O	O O	0
24	PL-BOT-3	X	29.9	29.9	0	Ö
25	SA-BOT-1	X	15	15	0	0
26	SA-BOT-2	X	15	15	0	0
27	SA-BOT-2 SA-BOT-3	X	15	15	0	0
28			15			0
	SA-TOP-1	X		15	0	
29	SA-TOP-2	X	15	15	0	0
30	SA-TOP-3	X	15	15	0	0
31	FM1	Z	6	6	0	0
32	FM2	Z	0	0	0	0
33	FM3	Z	6	6	0	0
34	GRATE1	<u> </u>	4.3	4.3	0	0
35	GRATE2	<u>Z</u>	4.3	4.3	0	0
36	GRATE3	<u>Z</u>	4.3	4.3	0	0
37	GRATE4	Z	4.3	4.3	0	0
38	GRATE5	Z	4.3	4.3	0	0
39	GRATE6	Z	4.3	4.3	0	0
40	GRATE7	Z	4.3	4.3	0	. 0
41	GRATE8	Z	4.3	4.3	0	0
42	GRATE9	Z	4,3	4.3	0	0
43	GRATE10	Z	4.3	4.3	0	0
44	GRATE11	Z	4.3	4.3	0	. 0
45	GRATE12	Z	4.3	4.3	0	0
46	GRATE13	Z	4.3	4.3	0	.0
47	GRATE14	Z	4.3	4.3	0	0
48	GRATE15	Z	4.3	4.3	0	0
49	GRATE16	Z	4.3	4.3	0	0
50	GRATE17	Z	4.3	4.3	Ö	0
51	GRATE18	Z	4.3	4.3	0	0
52	PL-BOT-1	Z	17.3	17.3	Ö	Ō
53	PL-BOT-2	Z	0	0	0	0
54	PL-BOT-3	Z	17.3	17.3	Ō	0
55	SA-BOT-1	Z	8.6	8.6	0	Ö
56	SA-BOT-2	Z	8.6	8.6	Ö	0
57	SA-BOT-3	Ž	8.6	8.6	Ö	Ö
58	SA-TOP-1	Z	8.6	8.6	0	Ö
59	SA-TOP-2	Z	8.6	8.6	0	Ö
60	SA-TOP-3	Z	8.6	8.6	0	0
61	MP1	X	46.7	46.7	0	%100
62	MP2	X	40.8	40.8	0	%100 %100
63	MP3	- x	0	0	0	0
64	MP4	x	46.7	46.7	0	%100
65	MP5	X	40.8	40.8	0	%100 %100
66	MP6	X	40.8	40.7	0	%100 %100
67	MP7	X	40.7	40.7	0	%100 %100
68		X			0	
	MP8		0	0		0 0 0
69	MP9	X	36.9	36.9	0	%100 %100
70	MP10	X	36.9	36.9	0	%100 %400
71	MP11	X	46.7	46.7	0	%100 %400
72	MP12	X	46.7	46.7	0	%100
73	MP13	X	0	0	0	0
74	MP14	X	32.6	32.6	. 0	<u>%99.058</u>
75	MP15	<u>X</u>	32.6	32.6	0	<u>%99.058</u>
76	MP1	<u>Z</u>	27	27	0	%100
77	MP2	Z	23.6	23.6	0	<u>%100</u>
78	MP3	Z	0	0	0	0
79	MP4	Z	27	27	0	%100



Company : ETS, PLLC Designer : BRL Job Number : 194467.14 Model Name : 829046 - W

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Member Distributed Loads (BLC 3: Wind Load (30 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft	.End Magnitude[lb/ft	Start Location[in,%]	End Location[in,%]
80	MP5	Z	23.6	23.6	0	%100
81	MP6	Z	23.5	23.5	0	%100
82	MP7	Z	23.5	23.5	0	%100
83	MP8	Z	0	0	0	0
84	MP9	Z	21.3	21.3	0	%100
85	MP10	Z	21.3	21.3	0	%100
86	MP11	Z	27	27	0	%100
87	MP12	Z	27	27	0	%100
88	MP13	Z	0.	0	0	0
89	MP14	Z	18.8	18.8	0	%99.058
90	MP15	Z	18.8	18.8	0	%99.058

Member Distributed Loads (BLC 4: Wind Load (60 deg))

	Member Label	Direction	Start Magnitude[lb/ft,	End Magnitude[ib/ft,	Start Location[in,%]	End Location[in,%]
1	FM1	X	6	6	0 .	0
2	FM2	X	6 -	6	0	0
3	FM3	X	6	6	0	0
4	GRATE1	X	4.3	4.3	0	0
5	GRATE2	X	4.3	4.3	0	0
6	GRATE3	X	4.3	4.3	0	0
7	GRATE4	X	4.3	4.3	0	0
8	GRATE5	X	4,3	4.3	0	0
9	GRATE6	X	0	0	0	0
10	GRATE7	X	0	0	0	0
11	GRATE8	X	4.3	4.3	0	0
12	GRATE9	X	4.3	4.3	0	0
13	GRATE10	X	4.3	4.3	0	0
14	GRATE11	X	4.3	4.3	0	0
15	GRATE12	X	4.3	4.3	0	0
16	GRATE13	X	4.3	4.3	0	0
17	GRATE14	X	4.3	4.3	0	0
18	GRATE15	X	4.3	4.3	0	0
19	GRATE16	X	4.3	4.3	0	0
20	GRATE17	X	4.3	4.3	0	Ò
21	GRATE18	X	4.3	4.3	0	0
22	PL-BOT-1	Х	17.3	17.3	0	0
23	PL-BOT-2	Х	17.3	17.3	0	0
24	PL-BOT-3	X	17.3	17.3	0	0
25	SA-BOT-1	X	8.6	8.6	0	0
26	SA-BOT-2	Х	8.6	8.6	0	0
27	SA-BOT-3	X	0	0	0	0
28	SA-TOP-1	X	8.6	8.6	0	0
29	SA-TOP-2	X	8.6	8.6	0	0
30	SA-TOP-3	X	0	0	0	0
31	FM1	Z	10.5	10.5	0	0
32	FM2	Z	10.5	10.5	0	0
33	FM3	Z	10,5	10,5	0	0
34	GRATE1	Z	7.5	7.5	0	0
35	GRATE2	Z	7.5	7.5	0	0
36	GRATE3	Z	7.5	7.5	0	0
37	GRATE4	Z	7.5	7.5	0	0
38	GRATE5	Z	7.5	7.5	0	0
39	GRATE6	Z	0	0	0	0
40	GRATE7	Z	0	0	0	0
41	GRATE8	Z	7.5	7.5	0	0
42	GRATE9	Z	7.5	7,5	0	0



ETS, PLLC BRL

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Member Distributed Loads (BLC 4: Wind Load (60 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,	End Magnitude[lb/ft	Start Location[in,%]	End Location[in,%]
43	GRATE10	Z	7,5	7.5	0	0
44	GRATE11	Z	7.5	7.5	0	0.
45	GRATE12	Z	7.5	7.5	0	0
46	GRATE13	Z	7.5	7.5	0	0
47	GRATE14	Z	7.5	7,5	0	0
48	GRATE15	Z	7,5	7.5	0	0
49	GRATE16	Z	7.5	7.5	0	0
50	GRATE17	Z	7.5	7.5	0	0
51	GRATE18	Z	7.5	7.5	0	0
52	PL-BOT-1	Z	29.9	29.9	0	0
53	PL-BOT-2	Z	29,9	29.9	0	0
54	PL-BOT-3	Z	29.9	29.9	0	0
55	SA-BOT-1	Z	15	15	0	0
56	SA-BOT-2	Z	15	15	0	0
57	SA-BOT-3	Z	0	0	0	0
58	SA-TOP-1	Z	15	15	0	0
59	SA-TOP-2	Z	15	15	0	Ö
60	SA-TOP-3	Z	0	0	0	0
61	MP1	X	24.7	24.7	0	%100
62	MP2	X	22	22	Ö	%100
63	MP3	X	0	0	Ö	0
64	MP4	X	24.7	24.7	Ö	%100
65	MP5	X	22	22	Ö	%100
66	MP6	X	24.7	24.7	Ŏ	%100
67	MP7	X	24.7	24.7	Ŏ	%100
68	MP8	X	0	0	Ö	0
69	MP9	X	22	22	Ö	%100
70	MP10	X	22	22	ŏ	%100 %100
71	MP11	x	28.1	28.1	Ŏ	%100 %100
72	MP12	X	28.1	28.1	0	%100 %100
73	MP13	X	0	0	ő	0
74	MP14	X	15.1	15.1	Ö	%99.058
75	MP15	X	15.1	15.1	ő	%99.058
76	MP1	Ž	42.7	42.7	0	%100
77	MP2	Z	38.2	38.2	Ö	%100 %100
78	MP3	Z	0	0	0	78100
79	MP4	Z	42.7	42.7	0	%100
80	MP5	Z	38.2	38.2	0	%100 %100
81	MP6	Z	42.7	42.7	0	%100 %100
82	MP7	Z	42.7	42.7	0	%100 %100
83		Z	0	0	0	76100
84	MP8 MP9	Z	38.2	38.2	0	%100
	MP10	Z	38.2	38.2	0	%100 %100
85	MP10 MP11		38.2 48.7	48.7	0	%100 %100
86		Z			0	%100 %100
87	MP12	Z	48.7	48.7		
88	MP13	<u>Z</u>	0	0	0	0 00 058
89	MP14	Z	26.1	26.1	0	%99.058
90	MP15	Z	26.1	26.1	0	%99.058

Member Distributed Loads (BLC 5: Wind Load (90 deg))

	Member Label	Direction	Start Magnitude[lb/ft,	.End Magnitude[lb/ft,	Start Location[in,%]	End Location[in,%]
1	FM1	X	0	0	0	0
2	FM2	X	-0	0	0	0
3	FM3	X	0	0	0	0
4	GRATE1	Х	0	0	0	0
5	GRATE2	X	0	0	0	0



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Member Distributed Loads (BLC 5 : Wind Load (90 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,	End Magnitude[lb/ft,		End Location[in,%]
6	GRATE3	X	0	0	0	
7	GRATE4	X	0	0	0	0
8	GRATE5	X	0	0	0	0
9	GRATE6	X	0	0	0	0
10	GRATE7	Х	0	0	0	0
11	GRATE8	X	0	0	0	0
12	GRATE9	X	0	Ō	0	0
13	GRATE10	X	0	0	0	0
14	GRATE11	x	0	Ŏ O	ő	Ö
				0	0	0
15	GRATE12	X	0			
16	GRATE13	X	0	0	0	0
17	GRATE14	X	0	0	0	0
18	GRATE15	Χ	0	0	0	. 0
19	GRATE16	Χ	0	0	0	0
20	GRATE17	X	0	. 0	0	0
21	GRATE18	X	0	0	0	0
22	PL-BOT-1	X	Ö	0	0	0
23	PL-BOT-2	X	0	0	0	0
24	PL-BOT-3	X	0	Ŏ	0	0
25	SA-BOT-1	x	0	0	Ŏ	Ö
				0 -	0	0
26	SA-BOT-2	X	0			
27	SA-BOT-3	X	0	0	0	0
28	SA-TOP-1	X	0	0	0	0
29	SA-TOP-2	X	0	0	0	0
30	SA-TOP-3	X	0	0	0	0
31	FM1	Z	0	0	0	0
32	FM2	Z	12.1	12.1	0	0
33	FM3	Z	12.1	12,1	0	0
34	GRATE1	Z	8.6	8.6	0	0
35	GRATE2	Z	8.6	8.6	0	0
36	GRATE3	Z	8.6	8.6	0	0
37	GRATE4	Z	8.6	8.6	Ö	0
		Z	8.6	8.6	0	0
38	GRATE5				 	0
39	GRATE6	<u>Z</u>	8.6	8.6	0	
40	GRATE7	<u>Z</u>	8.6	8.6	0	0
41	GRATE8	Z	8.6	8.6	0	0
42	GRATE9	Z	8.6	8.6	. 0	0
43	GRATE10	Z	8.6	8.6	0	0
44	GRATE11	Z	8.6	8.6	0	0
45	GRATE12	Z	8.6	8.6	0	0
46	GRATE13	Z	8.6	8.6	0	0
47	GRATE14	Z	8.6	8.6	Ö	Ö
48	GRATE15	Ž	8.6	8.6	Ŏ	0
49	GRATE16	Z	8.6	8. <u>6</u>	0	Ö
		<u>Z</u> Z	8.6	8.6	0	0
50	GRATE17					0
51	GRATE18	<u>Z</u>	8.6	8.6	0	
52	PL-BOT-1	<u>Z</u>	0	0	0	0
53	PL-BOT-2	Z	34.6	34.6	0	0
54	PL-BOT-3	Z	34.6	34.6	0	0
55	SA-BOT-1	Z	17.3	17.3	0	0
56	SA-BOT-2	· Z	17.3	17.3	0	0
57	SA-BOT-3	Z	17.3	17.3	0	0
58	SA-TOP-1	Z	17.3	17.3	0	0
59	SA-TOP-2	Z	17.3	17.3	Ö	0
60	SA-TOP-3	Z	17.3	17.3	Ö	0
61	MP1	X	0	0	0	0
62	MP2	X	0	0	0	0
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Member Distributed Loads (BLC 5: Wind Load (90 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,	.End Magnitude[lb/ft,	Start Location[in,%]	End Location[in,%]
63	MP3	Χ	0	0	0	0
64	MP4	Χ	0	0	0	0
65	MP5	Х	0	0	0	0
66	MP6	Х	0	0	0	0 -
67	MP7	Х	0	0	0	0
68	MP8	X	0	0	0	0
69	MP9	X	0	0	0	0
70	MP10	Χ.	0	0	0	0
71	MP11	X	0	0	0	0
72	MP12	Χ	0	0	0	0
73	MP13	Х	0	0	0	0
74	MP14	Х	0	0	0	0
75	MP15	Х	0	0	0	0
76	MP1	Z	47	47	0	%100
77	MP2	Z	42.6	42.6	0	<u>%100</u>
78	MP3	Z	0	0	0	0
79	MP4	Z	47	47	0	%100
80	MP5	Z	42.6	42.6	0	%100
81	MP6	Z	53.9	53.9	0	%100
82	MP7	Z	53.9	53.9	0	%100
83	MP8	Z	0	0	0	0
84	MP9	Z	47.1	47.1	0	%100
85	MP10	Z	47.1	47,1	0	%100
86	MP11	Z	53,9	53.9	0	%100
87	MP12	Z	53,9	53.9	0	%100
88	MP13	Z	0	0	0	0
89	MP14	Z	37.7	37.7	0	%99.058
90	MP15	Z	37.7	37.7	0	%99,058

Member Distributed Loads (BLC 6 : Wind Load (120 deg))

	ber Distributed Ed					
	Member Label	Direction		End Magnitude[lb/ft,	Start Location[in,%]	End Location[in,%]
1	FM1	Χ	-6	-6	0	0
2	FM2	Χ	-6	- 6	0	. 0
3	FM3	X	-6	-6	0	0
4	GRATE1	X	0	0	0	0
5	GRATE2	X	-4.3	-4.3	0	0
6	GRATE3	Х	-4.3	-4.3	0	0
7	GRATE4	Х	-4.3	-4.3	0	0
8	GRATE5	X	-4.3	-4.3	0	0
9	GRATE6	Х	-4.3	-4.3	0	0
10	GRATE7	X	-4.3	-4,3	0	0
11	GRATE8	Х	-4.3	-4.3	0	0
12	GRATE9	X	-4.3	-4.3	0	0
13	GRATE10	X	-4.3	-4.3	0	0
14	GRATE11	Х	-4.3	-4.3	0	0
15	GRATE12	Х	-4.3	-4.3	0	0
16	GRATE13	Х	-4.3	-4.3	0	0.
17	GRATE14	Х	-4.3	-4.3	0	0
18	GRATE15	Х	-4.3	-4.3	0	0
19	GRATE16	X	-4.3	-4.3	0	0
20	GRATE17	X	-4.3	-4.3	0	0
21	GRATE18	X	0	0	0	0
22	PL-BOT-1	X	-17.3	-17.3	0	0
23	PL-BOT-2	X	-17.3	-17.3	0	0
24	PL-BOT-3	X	-17.3	-17.3	0	0
25	SA-BOT-1	X	-8.6	-8.6	0	0



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Member Distributed Loads (BLC 6: Wind Load (120 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,.	End Magnitude[lb/ft	Start Location[in,%]	End Location[in,%]
26	SA-BOT-2	X	0	0	0	0
27	SA-BOT-3	X	-8.6	-8.6	0	0
28	SA-TOP-1	X	-8.6	-8.6	0	0
29	SA-TOP-2	X	0	0	0	0
30	SA-TOP-3	X	-8.6	-8.6	0	0
31	FM1	Z	10.5	10.5	0	0
32	FM2	Z	10.5	10.5	0	0
33	FM3	Z	10.5	10.5	0	0
34	GRATE1	Z	0	0	0	0
35	GRATE2	Z	7.5	7.5	0	0
36	GRATE3	Z	7.5	7.5	0	0
37	GRATE4	Z	7.5	7.5	0	0
38	GRATE5	Z	7.5	7.5	0	0
39	GRATE6	Z	7.5	7.5	0	0
40	GRATE7	Z	7.5	7.5	0	0
41	GRATE8	Z	7.5	7.5	0	0
42	GRATE9	Z	7.5	7.5	0	0
43	GRATE10	Z	7.5	7.5	0	0
44	GRATE11	Z	7.5	7.5	0	0
45	GRATE12	Z	7.5	7,5	0	0
46	GRATE13	Z	7.5	7.5	Ō	0
47	GRATE14	Z	7.5	7.5	Ŏ	Ö
48	GRATE15	Z	7.5	7.5	. 0	0
49	GRATE16	Z	7.5	7.5	0	Ö
50	GRATE17	Z	7.5	7.5	0	0
51	GRATE18	Z	0	Ö	Ö	0
52	PL-BOT-1	Z	29.9	29.9	0	0
53	PL-BOT-2	Z	29.9	29,9	0	0
54	PL-BOT-3	Ž	29.9	29.9	0	0
55	SA-BOT-1	Ž	15	15	Ö	Ö
56	SA-BOT-2	Ž	0	0	Ō	0
57	SA-BOT-3	Ž	15	15	0	0
58	SA-TOP-1	Ž	15	15	Ö	0
59	SA-TOP-2	Ž	0	Ö	Ŏ	0
60	SA-TOP-3	Z	15	15	0	o o
61	MP1	X	-24.7	-24.7	0	%100
62	MP2	x	-22	-22	Ö	%100
63	MP3	x	0	0	Ö	0
64	MP4	x	-24.7	-24.7	Ö	%100
65	MP5	x	-22	-22	Ö	%100
66	MP6	x	-28.1	-28.1	Ŏ	%100
67	MP7	X	-28.1	-28.1	0	%100
68	MP8	X	0	0	Ö	0
69	MP9	X	-24.3	-24.3	Ŏ	%100
70	MP10	x	-24.3	-24.3	0	%100
71	MP11	X	-24.7	-24.7	ő	%100 %100
72	MP12	X	-24.7	-24.7	0	%100 %100
73	MP13	X	0	0	0	0
74	MP14	x	-26.3	-26.3	0	%99.058
75	MP15	X	-26.3	-26.3	0	%99.058
76	MP1	Ž	42.7	42,7	0	%100
77	MP2	Z	38.2	38.2	0	%100 %100
78	MP3	Z	0	38.2	0	0
79	MP4	Z	42.7	42.7	0	%100
80	MP5	Z	38.2	38.2	0	%100 %100
81	MP6	Z	48.7	48.7	0	%100 %100
82	MP7	Z	48.7	48.7	0	%100 %100
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Member Distributed Loads (BLC 6 : Wind Load (120 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft	End Magnitude[lb/ft,	Start Location[in.%]	End Location[in,%]
83	MP8	Z	0	0	0	0
84	MP9	Z	42.1	42.1	0	%100
85	MP10	Z	42.1	42.1	0	%100
86	MP11	Z	42.7	42.7	0	%100
87	MP12	Z	42.7	42.7	0	%100
88	MP13	Z	0	0	0	0
89	MP14	Z	45.6	45.6	0	%99,058
90	MP15	Z	45.6	45.6	0	%99.058

Member Distributed Loads (BLC 7: Wind Load (150 deg))

	Member Label	Direction	Start Magnitude[lb/ft,	End Magnitude[lb/ft	Start Location[in.%]	End Location[in.%]
1	FM1	<u> </u>	-10.5	<i>-</i> 10.5	0	0
2	FM2	X .	-10.5	-10.5	0	0
3	FM3	Х	0	0	0	0
4	GRATE1	Х	-7.5	-7.5	0	0
5	GRATE2	X	-7.5	-7.5	0	0
6	GRATE3	X	-7.5	-7.5	0	0
7	GRATE4	X	-7.5	-7.5	0	0
8	GRATE5	X	-7.5	-7.5	0	0
9	GRATE6	X	-7.5	-7.5	0	0
10	GRATE7	X	-7.5	-7.5	Ö	Ö
11	GRATE8	X	-7.5	-7.5	0	Ö
12	GRATE9	X	-7.5	-7.5	0	0
13	GRATE10	Ŷ	-7.5	-7.5	0	0
14		X	-7.5 -7.5	-7.5 -7.5	0	0.
	GRATE11					0
15	GRATE12	X	-7.5 -7.5	-7.5 7.5	0	0
16	GRATE13	X	-7.5	-7.5 7.5	0	
17	GRATE14	X	-7.5	-7.5	0	0
18	GRATE15	X	<u>-7.5</u>	<u>-7.5</u>	0	0
19	GRATE16	X	<u>-7.5</u>	<u>-7.5</u>	0	0
20	GRATE17	X	<u>-7.5</u>	<u>-7.5</u>	0	0
21	GRATE18	X	-7.5	-7.5	0	0
22	PL-BOT-1	X	-29.9	-29.9	0	0
23	PL-BOT-2	X	-29.9	-29.9	0	0
24	PL-BOT-3	X	0	0	0	0
25	SA-BOT-1	X	-15	-15	0	0
26	SA-BOT-2	X	-15	-15	0	0
27	SA-BOT-3	X	-15	-15	0	0
28	SA-TOP-1	X	-15	-15	. 0	0
29	SA-TOP-2	Х	-15	-15	0	0
30	SA-TOP-3	X	-15	-15	0	0
31	FM1	Z	6	6	0	0
32	FM2	Z	6	6	0	0
33	FM3	Z	0	0	0	0
34	GRATE1	Z	4.3	4.3	0	0
35	GRATE2	Z	4.3	4.3	0	0
36	GRATE3	Ž	4.3	4.3	0	0 -
37	GRATE4	Z	4.3	4.3	Ō	0
38	GRATE5	Z	4.3	4.3	Ö	0
39	GRATE6	Z	4.3	4.3	0	Ö
40	GRATE7	Z	4.3	4.3	Ö	Ö
41	GRATE8	Z	4,3	4.3	0	Ŏ
42	GRATE9	Z	4.3	4.3	0	0
43	GRATE10	Z	4.3	4.3	Ö	Ö
44	GRATE11	Z	4.3	4.3	0	0
45	GRATE11	Z Z	4.3	4.3	0	0
40	GRAIEIZ	<u> </u>	4.0	1 4.3	ı U	U



ETS, PLLC BRL

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Member Distributed Loads (BLC 7: Wind Load (150 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,	.End Magnitude[lb/ft,	Start Location[in,%]	End Location[in,%]
46	GRATE13	Z	4.3	4.3	0	0
47	GRATE14	Z	4.3	4.3	0	0
48	GRATE15	Z	4.3	4.3	0	0
49	GRATE16	Z	4.3	4.3	0	0
50	GRATE17	Ž	4.3	4.3	0	0
51	GRATE18	Z	4.3	4.3	0	0
52	PL-BOT-1	Z	17.3	17,3	0	Ö
53	PL-BOT-2	Z	17.3	17.3	0	0
54	PL-BOT-3	Z	17.3	0	0	0
						0
55	SA-BOT-1	Z	8.6	8.6	0	
<u>56</u>	SA-BOT-2	Z	8.6	8.6	0	0
57	SA-BOT-3	Z	8.6	8.6	0	0
_58	SA-TOP-1	Z	8.6	8.6	0	0
59	SA-TOP-2	Z	8.6	0.0	0	0
60	SA-TOP-3	Z	8.6	8.6	0	0
61	MP1	Х	-46.7	-46.7	0	%100
62	MP2	Х	-40.8	-40.8	0	%100
63	MP3	X	0	0	0	0
64	MP4	X	-46.7	-46.7	0	%100
65	MP5	X	-40.8	-40.8	0	%100
66	MP6	X	-46.7	-46.7	0	%100
67	MP7	X	-46.7	-46.7	0	%100
68	MP8	X	0	Ö	0	0
69	MP9	X	-40.8	-40.8	0	%100
70	MP10	X	-40.8	-40.8	Ö	%100
71	MP11	X	-40.7	-40.7	Ö	%100
72	MP12	X	-40.7	-40.7	Ö	%100
73	MP13	X	0	0	ő	0
74	MP14	X	-52.1	-52.1	Ö	%99.058
75	MP15	x	-52.1	-52.1	0	%99.058
76	MP1	Ž	27	27	0	%99.038 %100
77						%100 %100
	MP2	Z	23.6	23.6	0	
78	MP3	<u>Z</u>	0	0	0	0
79	MP4	Z	27	27	0	<u>%100</u>
80	MP5	Z	23.6	23.6	.0	<u>%100</u>
81	MP6	Z	27	27	0	<u>%100</u>
82	MP7	Z	27	27	0	%100
83	MP8	Z	0	0	0	0
84	MP9	Z	23.6	23.6	0	%100
85	MP10	Z	23.6	23.6	0	%100
86	MP11	Z	23.5	23.5	0	%100
87	MP12	Z	23.5	23.5	0	%100
88	MP13	Z	0	0	0	0
89	MP14	Z	30.1	30.1	0	%99.058
90	MP15	Z	30.1	30.1	0	%99.058

Member Distributed Loads (BLC 8 : Wind Load (180 deg))

	Member Label	Direction	Start Magnitude[lb/ft,	End Magnitude[lb/ft,	Start Location[in,%]	End Location[in,%]
1 1	FM1	X	-12.1	-12.1	0	00
2	FM2	X	-12.1	-12.1	0	0
3	FM3	Х	-12.1	-12.1	0	0
4	GRATE1	X	-8.6	-8.6	0	0
5	GRATE2	X	-8.6	-8.6	0	0
6	GRATE3	. X	-8.6	-8.6	0	0
7	GRATE4	X	-8.6	-8.6	0	0
8	GRATE5	X	-8.6	-8.6	0	0



Company : Designer : Job Number : Model Name :

: ETS, PLLC : BRL : 194467.14

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Member Distributed Loads (BLC 8: Wind Load (180 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft		Start Location[in,%]	End Location[in,%]
9	GRATE6	X	-8.6	-8.6	0	0
10	GRATE7	Х	-8.6	-8.6	0	0
11	GRATE8	X	-8.6	-8.6	0	0
12	GRATE9	X	-8.6	-8.6	0	0
13	GRATE10	Х	-8.6	-8.6	0	0
14	GRATE11	X	-8.6	-8.6	0	0
15	GRATE12	X	0	0	Ŏ	Ŏ
16	GRATE13	X	Ö	Ö	Ŏ	Ö
17	GRATE14	X	-8.6	-8.6	0	Ö
18		Î Â				0
	GRATE15		-8.6	-8.6	0	
19	GRATE16	X	-8.6	-8.6	0	0
20	GRATE17	X	-8.6	-8.6	0	0.
21	GRATE18	X	-8.6	-8.6	0	0
22	PL-BOT-1	X	-34.6	-34.6	0	0
23	PL-BOT-2	X	-34,6	-34.6	0	0
24	PL-BOT-3	X	-34.6	-34.6	0	0
25	SA-BOT-1	X	0	0	0	0
26	SA-BOT-2	X	-17.3	-17.3	0	0
27	SA-BOT-3	X	-17.3	-17.3	0	Ŏ
28	SA-TOP-1	x	0	0	Ŏ	Ŏ
29	SA-TOP-2	X	-17.3	-17.3	0	0
30		x		-17.3	0	0
	SA-TOP-3		-17.3			
31	<u>FM1</u>	<u>Z</u>	0	0	0	0
32	FM2	<u>Z</u>	0	0	0	0
33	FM3	Z	0	0	0	0
34	GRATE1	Z	0	0	0	. 0
35	GRATE2	Z	0	0	0	0
36	GRATE3	: Z	0	0	0	0
37	GRATE4	Z	0	0	0	0
38	GRATE5	Z	0	0	0	0
39	GRATE6	Z	0	0	0	Ō
40	GRATE7	Ž	0	Ö	Ö	Ŏ
41	GRATE8	Z	Ö	0	Ö	ŏ
42	GRATE9			0		ő
		Z	0	T	0	
43	GRATE10	Z	0	0	0	0
44	GRATE11	<u> </u>	0	0	0	0
45	GRATE12	Z	0	0	0	0
46	GRATE13	Z	0.	0	0	<u> </u>
47	GRATE14	Z	0	0	0	0
48	GRATE15	Z	0	0	0	0
49	GRATE16	Z	0	0	0	0
50	GRATE17	Z	Ö	0	0	0
51	GRATE18	Z	Ō	Ö	0	Ö
52	PL-BOT-1	Ž	Ö	0	0	0
53	PL-BOT-2	Z	Ö	Ö	0	0
54	PL-BOT-3		0	0	0	0
		<u>Z</u>				
55	SA-BOT-1	Z	0	0	0	0
<u>56</u>	SA-BOT-2	Z	0	0	0	<u> </u>
57	SA-BOT-3	Z	0	0	0	<u> </u>
58	SA-TOP-1	Z	0	0	0	0
59	SA-TOP-2	Z	0	0	0	0
60	SA-TOP-3	Z	0	. 0	0	0
61	MP1	Х	-56.2	-56.2	0	%100
62	MP2	X	-48.6	-48.6	0	%100
63	MP3	X	0	0.0	Ö	0
64	MP4	X	-56.2	-56.2	0	%100
65	MP5	X	-56. <u>2</u> -48.6	-38.2 -48.6	0	%100 %100
UU	IVIFO	^	-40.0	7,0,0	U	70 TUU



: ETS, PLLC : BRL : 194467.14 : 829046 - Weston/ Rt-57/ Norfield R Mount Analysis

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Member Distributed Loads (BLC 8: Wind Load (180 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,	.End Magnitude[lb/ft,	Start Location[in,%]	End Location[in,%]
66	MP6	X	-49.3	-49.3	0	%100
67	MP7	Х	-49.3	-49.3	0	%100
-68	MP8	Х	0	0	0	0
69	MP9	Х	-44.1	-44,1	0	%100
70	MP10	Х	-44.1	-44,1	0	%100
71	MP11	X	-49.3	-49.3	0	%100
72	MP12	Х	-49.3	-49.3	0	%100
73	MP13	X	0	0	0	0
74	MP14	Х	- 52.7	-52.7	0	%99.058
75	MP15	Х	-52.7	-52.7	0	%99.058
76	MP1	Z	0	0	0	0
77	MP2	Z	0	0	0	0
78	MP3	Z	0	0 '	0	0
79	MP4	Z	0	0	0	0
80	MP5	Z	0	0	0	0
81	MP6	Z	0	0	0	0
82	MP7	. Z	0	.0 .	0	0
83	MP8	Z	0	0	0	0
84	MP9	Z	0	0	0	0
85	MP10	Z	0	0	0	0
86	MP11	Z	0	0	0	0
87	MP12	Z	Ō	0	0	0
88	MP13	Z	0	0	0	0
89	MP14	Z	0	0	0	0
90	MP15	Z	0	0	0	0

Member Distributed Loads (BLC 9: Wind Load (210 deg))

	Member Label	Direction	Start Magnitude[lb/ft,	.End Magnitude[lb/ft,	Start Location[in.%]	End Location[in,%]
1	FM1	Х	-10.5	-10.5	0	0
2	FM2	X	0	0	0	0
3	FM3	X	-10.5	-10.5	0	0
4	GRATE1	X	-7.5	-7.5	0	0
5	GRATE2	Х	-7.5	-7,5	0	0
6	GRATE3	Х	-7.5	-7.5	0	0
7	GRATE4	X	-7.5	-7.5	0	0
8	GRATE5	X	-7.5	-7.5	0	0
9	GRATE6	X	-7.5	-7.5	0	0
10	GRATE7	X	-7.5	-7.5	0	0
11	GRATE8	X	- 7.5	-7.5	0	0
12	GRATE9	Х	-7.5	-7.5	0	0
13	GRATE10	Х	-7.5	-7.5	0	0
14	GRATE11	X	-7.5	-7.5	0	. 0
15	GRATE12	X	-7.5	-7.5	. 0	0
16	GRATE13	X	-7.5	-7.5	0	0
17	GRATE14	X	- 7.5	-7.5	0	0
_18	GRATE15	Х	-7.5	-7.5	0	0
19	GRATE16	Х	-7.5	- 7.5	0	0
20	GRATE17	Χ	-7.5	-7.5	0	0
21	GRATE18	Х	<i>-7.</i> 5	<u>-7.</u> 5	0	0
22	PL-BOT-1	Χ	-29.9	-29.9	0	0
23	PL-BOT-2	Χ _	0	0	0	0
24	PL-BOT-3	X	-29.9	-29,9	0	. 0
25	SA-BOT-1	X	-15	-15	0	0
26	SA-BOT-2	X	-15	-15	0	0
27	SA-BOT-3	Χ	-15	-15	0	0
28	SA-TOP-1	X	-15	-15	0	0



: ETS, PLLC : BRL : 194467.14

194467.14 829046 - Weston/ Rt-57/ Norfield R Mount Analysis

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Member Distributed Loads (BLC 9: Wind Load (210 deg)) (Continued)

	Member Label	Direction		End Magnitude[lb/ft,	Start Location[in,%]	End Location[in,%]_
29	SA-TOP-2	X	-15	-15	0	0
30	SA-TOP-3	X	-15	-15	0	0
31	FM1	Z	-6	-6	0	0
32	FM2	. Z	0	0	0	0
33	FM3	Z	-6	-6	0	0
34	GRATE1	Z	-4.3	-4.3	0	0
35	GRATE2	Z	-4.3	-4.3	0	0
36	GRATE3	Z	-4.3	-4.3	Ö	0
37	GRATE4	Z	-4.3	-4.3	0	0
38	GRATE5	Z	-4.3	-4.3	0	Ö
39	GRATE6	Z	-4.3	-4,3	Ö	0
40	GRATE7	Z	-4.3	4.3	0	0
41	GRATE8	Z	-4.3	4.3	0	0
42	GRATE9	Z	-4.3	-4.3	0	0
43	GRATE10	<u> </u>	-4.3	-4.3	0	0
44	GRATE11	Z	-4.3	-4.3	0	0 .
45	GRATE12	Z	-4.3	-4.3	0	0
46	GRATE13	Z	-4.3	-4.3	0	0
_47	GRATE14	Z	-4.3	-4.3	0	00
48	GRATE15	Z	-4.3	-4.3	0	0
49	GRATE16	Z	-4.3	-4.3	0	0
50	GRATE17	Z	-4.3	-4.3	0	0
51	GRATE18	Z	-4.3	-4.3	0	0
52	PL-BOT-1	Z	-17.3	-17.3	0	0.
53	PL-BOT-2	Z	0	0	Ö	0
54	PL-BOT-3	Ž	-17.3	-17.3	0	Ö -
55	SA-BOT-1	Z	-8.6	-8.6	Ö	Ö
56	SA-BOT-2	Z	-8.6	-8.6	0	Ö
	SA-BOT-3	Z		-8.6	0	0
57			-8.6			
58	SA-TOP-1	<u>Z</u>	-8.6	-8.6	0	0
59	SA-TOP-2	<u>Z</u>	-8.6	-8.6	0	0
60	SA-TOP-3	Z	-8.6	-8,6	0	0
61	MP1	X	-46.7	-46.7	0	%100
62	MP2	X	-40,8	-40.8	0	%100
63	MP3	X	0	0	0	0
64	MP4	X	-46.7	-46.7	0	%100
65	MP5	X	-40.8	-40.8	0	%100
66	MP6	- X	-40.7	-40.7	0	%100
67	MP7	X	-40.7	-40.7	0	%100
68	MP8	Х	0	0	0	0
69	MP9	X	-36.9	-36.9	Ō	%100
70	MP10	X	-36.9	-36.9	Ö	%100
71	MP11	X	-46.7	-46.7	0	%100
72	MP12	X	-46.7	-46.7	Ö	%100 %100
73	MP13	x	0	0	0	0
74	MP14	â	-32.6	-32.6	0	%99.058
75		X		-32.6	0	%99.058 %99.058
	MP15		-32.6			
76	MP1	Z	-27	-27	0	%100 %400
77	MP2	Z	-23.6	-23.6	0	%100
78	MP3	<u>Z</u>	0	0	0	0
79	MP4	<u>Z</u>	-27	-27	0	%100
80	MP5	Z	-23.6	-23.6	0	%100
81	MP6	Z	-23.5	-23.5	0	<u>%100</u>
82	MP7	Z	-23.5	-23.5	0	<u>%100</u>
83	MP8	Z	0	0	0	0
84	MP9	Z	-21,3	-21.3	0	%100
85	MP10	Z	-21.3	-21.3	0	%100
		·				



: ETS, PLLC : BRL

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Member Distributed Loads (BLC 9 : Wind Load (210 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft	.End Magnitude[lb/ft,	Start Location[in,%]	End Location[in,%]
86	MP11	Z	-27	-27	0	%100
87	MP12	Z	-27	-27	. 0	%100
88	MP13	Z	0	0	0	0
89	MP14	Z	-18.8	-18.8	0	%99.058
90	MP15	Z	-18.8	-18.8	0	%99.058

Member Distributed Loads (BLC 10 : Wind Load (240 deg))

	Member Label	Direction	Start Magnitude[lb/ft.	End Magnitude[lb/ft,	Start Location[in,%]	End Location[in,%]
1	FM1	X	-6	-6	0	0
_2	FM2	X	-6	-6	0	0
3	FM3	X	- 6	-6	0	0
4	GRATE1	X	-4.3	-4.3	0	0
5	GRATE2	X	-4,3	-4.3	0	0
6	GRATE3	X	-4.3	-4.3	0	0
7	GRATE4	Х	-4.3	-4.3	0	0
8	GRATE5	Х	-4.3	-4,3	0	0
9	GRATE6	Х	0	0	0	Ō
10	GRATE7	X	0	0	0	Ō
_11	GRATE8	X	-4.3	-4.3	0	0
12	GRATE9	X	-4.3	-4.3	0	- O
13	GRATE10	Х	-4.3	-4.3	Ō	0.
14	GRATE11	X	-4.3	-4.3	0	Ö
15	GRATE12	X	-4.3	-4.3	0	0
16	GRATE13	X	-4.3	-4.3	Ō	Ö
17	GRATE14	X	-4.3	-4.3	Ö	ő
18	GRATE15	X	-4.3	-4.3	Ŏ	Ö
19	GRATE16	X	-4.3	-4.3	0	Ö
20	GRATE17	X	-4,3	-4.3	Ö	ŏ
21	GRATE18	X	-4,3	-4.3	0	Ö
22	PL-BOT-1	X	-17.3	-17.3	0	Ö
23	PL-BOT-2	X	-17.3	-17.3	0	0
24	PL-BOT-3	X	-17.3	-17.3	0	0
25	SA-BOT-1	X	-8.6	-8.6	0	0
26	SA-BOT-2	x	-8.6	-8.6	0	0
27	SA-BOT-3	X	0	0	0	0
28	SA-TOP-1	x	-8.6	-8.6		
29	SA-TOP-2	x	-8.6	-8,6		0
30	SA-TOP-3	X	0	-0.6	0	0
31	SA-10F-3 FM1	Ż	-10.5	-10.5		0
32	FM2	Z	-10.5	-10.5 -10.5	0	
33	FM3	Z			0	0
34	GRATE1		-10.5	-10.5	0	0
		<u>Z</u>	-7.5	-7.5 7.5	0	0
35	GRATE2	Z	-7.5	<u>-7.5</u>	0	0
36	GRATE3	<u>Z</u>	<u>-7.5</u>	<u>-7.5</u>	0	0
37	GRATE4	Z	<u>-7.5</u>	-7.5	0	0
38	GRATES	Z	-7.5	-7.5	0	0
39	GRATE6	<u>Z</u>	0	0	0	0
40	GRATE?	Z	0	0	0	0
41	GRATE8	Z	-7.5	-7.5	0	0
42	GRATE9	Z	<u>-7.5</u>	-7.5	0	0
43	GRATE10	<u>Z</u>	<u>-7.5</u>	-7.5	0	0
44	GRATE11	<u>Z</u> .	-7.5	-7.5	0	0
45	GRATE12	Z	-7.5	-7.5	0_	0
46	GRATE13	Z	-7.5	-7.5	0	0
47	GRATE14	Z	-7.5	-7.5	0	0
48	GRATE15	<u>Z</u> .	-7.5	-7.5	0	0



: ETS, PLLC : BRL : 1944 : 8290

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Member Distributed Loads (BLC 10 : Wind Load (240 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft	End Magnitude[lb/ft,	Start Locationlin %I	End Location(in.%)
49	GRATE16	Z	-7.5	-7.5	0	0
50	GRATE17	Z	-7.5	-7.5	Ō	Ō
51	GRATE18	Z	<i>-</i> 7.5	-7.5	0	0
52	PL-BOT-1	Z	-29.9	-29.9	0	0
53	PL-BOT-2	Z	-29.9	-29.9	0	Ö
54	PL-BOT-3	Z	-29.9	-29.9	0	0
55	SA-BOT-1	Z	-15	-15	0	0
56	SA-BOT-2	Z	-15	-15	0	0
57	SA-BOT-3	Z	0	0	0	0
58	SA-TOP-1	Z	-15	-15	0	0
59	SA-TOP-2	Z	-15	-15	0	0
60	SA-TOP-3	Ζ	0	0	0	0
61	MP1	X	-24.7	-24.7	0	%100
62	MP2	X	-22	-22	0	%100
63	MP3	Χ	0	0	0	0
64	MP4	X	-24.7	-24.7	0	%100
65	MP5	X	-22	-22	00	%100
66	MP6	Χ	-24.7	-24.7	0	%100
67	MP7	X	-24.7	-24.7	0	%100
68	MP8	X	0	0	0	0
69	MP9	Х	-22	-22	0	%100
70	MP10	X	-22	-22	0	%100
71	MP11	X	-28.1	-28.1	0	%100
72	MP12	X	-28,1	-28.1	0	%100
73	MP13	X	0	0	0	0
74	MP14	Х	-15.1	-15.1	0	%99.058
75	MP15	Χ	-15.1	-15.1	0	%99.058
76	MP1	Z	-42.7	-42.7	0	%100
77	MP2	Z	-38.2	-38.2	0	%100
78	MP3	Z	- 0	. 0	0	0
79	MP4	Z	-42.7	-42.7	0	%100
80	MP5	Z	-38,2	-38.2	0	%100
81	MP6	Z	-42.7	-42.7	0	%100
82	MP7	Z	-42.7	-42.7	0	%100
83	MP8	Z	0	0	0	0
84	MP9	Z	-38.2	-38.2	0	%100
85	MP10	Z	-38.2	-38.2	0	%100
86	MP11	Z	-48.7	-48.7	0 .	%100
87	MP12	Z	-48.7	-48.7	0	%100
88	MP13	Z	0	0	0	0
89	MP14	Z	-26.1	-26.1	0	%99.058
90	MP15	Z	-26.1	-26.1	0	%99.058

Member Distributed Loads (BLC 11: Wind Load (270 deg))

	Member Label	Direction	Start Magnitude[lb/ft,	End Magnitude[lb/ft,	Start Location[in,%]	End Location[in,%]
1	FM1	X	0	0	0	0
2	FM2	X	0	0	0	.0
3	FM3	Х	0	0	0	0
4	GRATE1	Х	0	0	0	0
5	GRATE2	X	0	0	0	0
6	GRATE3	_ X	0	0	0	0
7	GRATE4	X	0	0	0	0
8	GRATE5	X	0	0	0	0
9	GRATE6	X	0	0	0	0
10	GRATE7	X	0	0	0	Ó
_11	GRATE8	X	0	0	0	0



Company : ETS, PLLC
Designer : BRL
Job Number : 194467.14
Model Name : 829046 - Weston/ Rt-57/ Norfield R Mount Analysis

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Member Distributed Loads (BLC 11 : Wind Load (270 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,	End Magnitudellh/ft		End Location[in,%]
12	GRATE9	X	0	0	0	0
13	GRATE10	X	Ö	ŏ	0	0
14	GRATE11	X	Ö	ŏ	Ō	0
15	GRATE12	X	0	Ö	Ō	0
16	GRATE13	X	0	Ō	0	0
17	GRATE14	X	0	Ō	0	0
18	GRATE15	X	0	Ŏ	0	0
19	GRATE16	X	Ö	ō	Ö	0
20	GRATE17	X	0	0	Ö	Ō
21	GRATE18	X	0	Ö	Ö	0
22	PL-BOT-1	X	0	Ō	0	0
23	PL-BOT-2	X	Ō	0	0	Ō
24	PL-BOT-3	X	Ö	0	0 .	0
25	SA-BOT-1	X	Ō	Ö	0	0
26	SA-BOT-2	X	0 .	Ö	0	Ö
27	SA-BOT-3	X	0	0	Ö	Ō
28	SA-TOP-1	X	0	0	0	0
29	SA-TOP-2	X	Ö	Ō	Ö	0
30.	SA-TOP-3	X	Ŏ	Ŏ	0	Ö
31	FM1	Z	Ö	Ō	Ö	Ō
32	FM2	Z	-12.1	-12.1	. 0	Ō
33	FM3	Z	-12.1	-12.1	Ö	Ö
34	GRATE1	Z	-8.6	-8.6	0	. 0
35	GRATE2	Z	-8.6	-8.6	Ö	0
36	GRATE3	Z	-8.6	-8.6	0	Ō
37	GRATE4	Z	-8.6	-8.6	Ö	Ō
38	GRATE5	Z	-8.6	-8.6	Ö	0
39	GRATE6	Z	-8.6	-8,6	Ö	0
40	GRATE7	Z	-8.6	-8.6	Ö	0
41	GRATE8	Z	-8.6	-8.6	. 0	0
42	GRATE9	Z	-8.6	-8.6	0 .	. 0
43	GRATE10	Z	-8.6	-8.6	Ō	0
44	GRATE11	Z	-8.6	-8.6	0	0
45	GRATE12	Z	-8.6	-8.6	0	Ō
46	GRATE13	Z	-8.6	-8.6	0	0
47	GRATE14	Z	-8.6	-8.6	0	0
48	GRATE15	- Z	-8.6	-8.6	0	0
49	GRATE16	Z	-8.6	-8.6	0	0
50	GRATE17	Z	-8.6	-8.6	0	0
51	GRATE18	Z	-8.6	-8.6	0	0
52	PL-BOT-1	Z	0	. 0	0	0
53	PL-BOT-2	Z	-34.6	-34.6	0	0
54	PL-BOT-3	Z	-34.6	-34.6	0	0
55	SA-BOT-1	Z	<i>-</i> 17.3	-17.3	0	0
56	SA-BOT-2	Z	-17.3	-17.3	0	0
57	SA-BOT-3	Z	-17.3	-17.3	0	0
58	SA-TOP-1	Z	-17.3	-17.3	0	0
59	SA-TOP-2	Z	-17.3	-17.3	0	0
60	SA-TOP-3	Z	-17.3	-17.3	0	0
61	MP1	Χ	0	0	0	0
62	MP2	X	0	0	0	0
63	MP3	X	0	0	0	0
64	MP4	X	0	0	0	0
65	MP5	X	0	0	0	0
66	MP6	X	0	0	0	Ō
67	MP7	X	Ö	Ö	0	0
68	MP8	Χ	0	Ō	. 0	0



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Member Distributed Loads (BLC 11: Wind Load (270 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,	.End Magnitude(lb/ft,	Start Location[in,%]	End Location[in,%]
69	MP9	X	0	0	0	0
70	MP10	Х	0	0	0	0
71	MP11	Х	0	0	0	0
72	MP12	Х	0	0	0	0
73	MP13	Х	0	O	0	0
74	MP14	Х	0	0	0	0
75	MP15	Х	0	0	0	0
76	MP1	Z	-47	-47	0	%100
77	MP2	Z	-42.6	-42.6	0	%100
78	MP3	Z	0	0	0	0
79	MP4	Z	-47	-47	0	%100
80	MP5	Z	-42.6	-42.6	. 0	%100
81	MP6	Z	-53.9	-53.9	0	%100
82	MP7	Z	-53.9	-53.9	0	%100
83	MP8	Z	0	0	0	0
84	MP9	Z	-47.1	-47.1	0	%100
85	MP10	Z	-47.1	-47.1	0	%100
86	MP11	Z	-53.9	-53.9	. 0	%100
87	MP12	Z	-53.9	-53.9	0	%1 <u>00</u>
88	MP13	Z	0	0	0	0
89	MP14	Z	-37.7	-37.7	0	%99.058
90	MP15	Z	-37.7	-37.7	0	%99.058

Member Distributed Loads (BLC 12: Wind Load (300 deg))

	Member Label	Direction	Start Magnitude[lb/ft,.	End Magnitude[lb/ft,	Start Location[in,%]	End Location[in,%]
1	FM1	X	6	6	0	0
2	FM2	Х	6	6	0	0
3	FM3	Х	6	6	0	0
4	GRATE1	. X	. 0	0	0	0
5	GRATE2	Х	4.3	4.3	0	0
6	GRATE3	X	4.3	4.3	0	0
7	GRATE4	Х	4,3	4.3	0	0
8	GRATE5	×	4.3	4.3	0	0
9	GRATE6	Х	4.3	4.3	0	0
10	GRATE7	Х	4.3	4.3	0	0
11	GRATE8	Х	4.3	4.3	0	0
12	GRATE9	X	4.3	4.3	0	0
13	GRATE10	Χ	4.3	4.3	0	0
14	GRATE11	X	4.3	4.3	0	0
15	GRATE12	X	4.3	4.3	0	0
16	GRATE13	Х	4.3	4.3	0	0
17	GRATE14	X	4.3	4.3	0	0
18	GRATE15	X	4.3	4.3	0	0
19	GRATE16	Χ	4.3	4.3	0	0
20	GRATE17	X	4.3	4.3	0	0
21	GRATE18	X	0	0	0	0
22	PL-BOT-1	X	17.3	17.3	0	0
23	PL-BOT-2	X	17.3	17.3	0	00
24	PL-BOT-3	Х	17.3	17.3	0	. 0
25	SA-BOT-1	X	8.6	8.6	0	0
26	SA-BOT-2	Х	0	0	0	0
27	SA-BOT-3	Χ	8.6	8.6	0	0
28	SA-TOP-1	Х	8.6	8.6	0	0
29	SA-TOP-2	X	0	0	0	0
30	SA-TOP-3	Х	8.6	8.6	0	0
31	FM1	Z	-10.5	-10.5	0	0



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Member Distributed Loads (BLC 12: Wind Load (300 deg)) (Continued)

777.0717	<u>bei Distributed Lo</u>					End Location[in.%]
22	Member Label	Direction Z	Start Magnitude lb/ft	-10.5	Start Location[in, %]	0
32	FM2		-10.5 -10.5	-10.5 -10.5	0	0
33	FM3	Z	-10.5	0	0	0
34	GRATE1			-7.5	0	0
35	GRATE2	<u>Z</u>	<u>-7.5</u>		0	0
36	GRATE3	Z	-7.5	<u>-7.5</u>		
37	GRATE4	Z	-7.5	<u>-7.5</u>	0	0
38	GRATE5	Z	-7.5	-7.5	0	0
39	GRATE6	<u>Z</u>	-7.5	-7. <u>5</u>	0	0
40	GRATE7	<u>Z</u>	-7.5	-7.5	0	0
41	GRATE8	<u>Z</u>	-7.5	-7.5	0	0
42	GRATE9	Z	<u>-7.5</u>	-7.5	0 :	0
43	GRATE10	Z	-7.5	-7.5	0	0
44	GRATE11	Z	<u>-7.5</u>	-7.5	0	0
45	GRATE12	<u>Z</u>	<u>-7.5</u>	-7.5	0	0
46	GRATE13	<u>Z</u>	<u>-7.5</u>	-7.5	0	0
47	GRATE14	<u>Z</u>	-7.5	-7.5	0	0
48	GRATE15	Z	-7.5	<u>-7.5</u>	0	0
49	GRATE16	<u>Z</u>	-7.5	<u>-7.5</u>	0	0
50	GRATE17	<u>Z</u>	-7.5	-7.5	0	0
51	GRATE18	<u>Z</u> .	0	0	0	0
52	PL-BOT-1	Z	-29.9	-29.9	0	0
53	PL-BOT-2	<u>Z</u>	-29.9	-29.9	0	0
54	PL-BOT-3	Z	-29.9	<u>-29.9</u>	0	0
55	SA-BOT-1	Z	-15	-15	0	0
56	SA-BOT-2	Z	0	0	0	. 0
57	SA-BOT-3	Z	-15	-15	<u>0</u>	0
58	SA-TOP-1	Z	-15	-15	0	0
59	SA-TOP-2	Z	0	0	0	0
60	SA-TOP-3	Z	-15	-15	0	0
61	MP1	Χ	24.7	24.7	0	%100
62	MP2	X	22	22	.0	<u>%100</u>
63	MP3	X	0	. 0	0	0
64	MP4	X	24.7	24.7	0	%100
65	MP5	X	22	22	0	%100
66	MP6	X	28.1	28.1	0	%100
67	MP7	X	28.1	28.1	0	<u>%1</u> 00
68	MP8	X	0	0	0	0
69	MP9	Χ	24.3	24.3	0	%100
70	MP10	- X	24.3	24.3	0	%100
71	MP11	X	24.7	24.7	0	%100
72	MP12	X	24.7	24.7	0	%100
73	MP13	X	0	0	0	0
74	MP14	X	26.3	26.3	0	%99.058
75	MP15	X	26.3	26.3	0	%99.058
76	MP1		-42.7	-42.7	0	%100
77	MP2	<u>Z</u> Z	-38.2	-38.2	0	%100
78	MP3		0	0	0	0
79	MP4	Z	-42.7	-42.7	0	%100
80	MP5	Z	-38.2	-38.2	0	%100
81	MP6	Z	-48.7	-48.7	0	%100
82	MP7	Z	-48.7	-48.7	0	%100
83	MP8	Z	0	0	0	0
84	MP9	Z	-42.1	-42.1	0	%100
85	MP10	Z	-42.1	-42.1	0	<u>%100</u>
86	MP11_	Z	-42.7	-42.7	. 0	%100
87	MP12	Z	-42,7	-42.7	0	%100
88	MP13	Z	0	0	0	0



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Member Distributed Loads (BLC 12: Wind Load (300 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft	.End Magnitude[lb/ft,	Start Location[in.%]	End Location[in,%]_
89	MP14	Z	-45.6	-45.6	0	%99.058
QΛ	MP15	7	-45.6	-45.6	0 .	%99.058

Member Distributed Loads (BLC 13: Wind Load (330 deg))

	Member Label	Direction	Start Magnitude[lb/ft	End Magnitude[lb/ft,	Start Location[in.%]	End Location[in.%]
1	FM1	X	10.5	10.5	0	0
2	FM2	X	10.5	10.5	0	0
3	FM3	X	0	0	0	0
4	GRATE1	X	7.5	7.5	0	0
5	GRATE2	X	7.5	7.5	0	0
6	GRATE3	X	7.5	7.5	0	0
7	GRATE4	X	7.5	7.5	0	0
8	GRATE5	X	7.5	7.5	0	0
9	GRATE6	X	7.5	7.5	0	0
10	GRATE7	X	7.5	7.5	0	0
11	GRATE8	X	7.5	7.5	0	0
12	GRATE9	X	7.5	7.5	Ö	Ō
13	GRATE10	X	7.5	7.5	Ö	Ŏ
14	GRATE11	x	7.5	7.5	Ö	ŏ
15	GRATE12	X	7.5	7.5	Ö	Ŏ
16	GRATE12	x	7.5	7.5	0	<u> </u>
17	GRATE13	X	7.5	7.5	0	0
		1 x	7.5	7.5	0	0
18	GRATE15 GRATE16	$\frac{1}{x}$	7.5	7.5	0	0
			7.5	7.5	0	0
20	GRATE17	, <u> </u>			0	0
21	GRATE18	, X —	7.5	7.5		0
22	PL-BOT-1	X	29.9	29.9	0	
23	PL-BOT-2	X	29.9	29.9	0	0
24	PL-BOT-3	X	0	0	0	0
25	SA-BOT-1	<u> </u>	15	15	0	0
26	SA-BOT-2	X	15	15	0	0
27	SA-BOT-3	X	15	15	0	0
28	SA-TOP-1	X	15	15	0	0
29	SA-TOP-2	X	15	15	0	0
30	SA-TOP-3	<u>X</u>	15	15	0	0
31	FM1	<u>Z</u>	-6	-6	0	0
32	FM2	Z	-6	<u>-6</u>	0	0
_33	FM3	<u>Z</u>	0	0	0	0
34	GRATE1_	Z	-4.3	-4.3	0	<u> </u>
. 35	GRATE2	Z	-4.3	-4.3	0	<u> </u>
36	GRATE3	Z	-4.3	-4.3	0	0
37	GRATE4	Z	-4.3	-4.3	0	0
38	GRATE5	Z	-4.3	-4.3	0	0
39	GRATE6	Z	-4.3	-4.3	0	0
40	GRATE7	Z	-4.3	-4.3	0	0
41	GRATE8	Z	-4.3	-4.3	0	0
42	GRATE9	Z	-4.3	-4.3	0	0
43	GRATE10	Z	-4.3	-4.3	0	0
44	GRATE11	Z.	-4.3	-4.3	0	0
45	GRATE12	Z	4.3	-4.3	0	0
46	GRATE13	Z	-4.3	-4.3	0	0
47	GRATE14	Z	-4.3	-4.3	0	0
48	GRATE15	Z	-4.3	-4.3	0	0
49	GRATE16	Z	-4.3	-4.3	0	0
50	GRATE17	Z	-4.3	-4.3	0	0
51	GRATE18	Z	-4.3	-4,3	0	0



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Member Distributed Loads (BLC 13 : Wind Load (330 deg)) (Continued)

*	Member Label	Direction	Start Magnitude[lb/ft,	.End Magnitude[lb/ft,	Start Location[in,%]	End Locationfin.%1
52	PL-BOT-1	Z	-17.3	-17,3	0	0
53	PL-BOT-2	Z	-17.3	-17.3	0	0
54	PL-BOT-3	Z	0	0	0	0_
55	SA-BOT-1	Z	-8.6	-8.6	0	0
56	SA-BOT-2	Z	-8.6	-8.6	0	0
57	SA-BOT-3	Z	-8.6	-8.6	0	0
58	SA-TOP-1	Z	-8.6	-8.6	0	0
59	SA-TOP-2	Z	-8.6	-8.6	0	0
60	SA-TOP-3	Z	-8.6	-8.6	0	0
61	MP1	Х	46.7	46.7	0	%100
62	MP2	X	40.8	40.8	0	%100
63	MP3	X	0	0	0	0
64	MP4	X	46.7	46.7	0	%100
65	MP5	X	40.8	40.8	0	%100
66	MP6	Х	46.7	46.7	0	%100
67	MP7	X	46.7	46.7	0	%100
68	MP8	Х	0	0	0	0
69	MP9	X	40.8	40,8	0	%100
70	MP10	X	40.8	40.8	0	%100
71	MP11	X	40.7	40.7	0	%100
72	MP12	X	40.7	40.7	0	%100
73	MP13	X	0	0	0	0
74	MP14	X	52.1	52.1	0	%99.058
75	MP15	X	52.1	52.1	0	%99.058
76	MP1	Z	-27	-27	0	%100
77	MP2	Z	-23.6	-23.6	0	%100
78	MP3	Z	0	0	0	0
79	MP4	Z	-27	-27	0	%100
80	MP5	Z	-23.6	-23.6	0	%100
81	MP6	Z	-27	-27	0	%100
82	MP7	Z	-27	-27	0	%100
83	MP8	Z	0	0	0	0
84	MP9	Z	-23.6	-23.6	0	%100
85	MP10	Z	-23.6	-23.6	0	%100
86	MP11	Z	-23.5	-23.5	0	%100
87	MP12	- Z	-23.5	-23.5	0	%100
88	MP13	Ž	0	0	. 0	0.
89	MP14		-30.1	-30.1	0	%99.058
90	MP15	Z	-30.1	-30,1	0	%99.058

Member Distributed Loads (BLC 14 : Ice Load)

	Member Label	Direction	Start Magnitude[lb/ft,	End Magnitude[lb/ft,	Start Location[in,%]	End Location[in.%]
1	FM1	Υ	-11.2	-11.2	0	0
2	FM2	Y	-11.2	-11.2	0	0.
3	FM3	Υ	-11.2	-11.2	0	0
4	GRATE1	Y	-9.9	-9.9	0	0
5	GRATE2	Y	-9.9	-9.9	0	0
6	GRATE3	Υ	-9.9	-9.9	0	0
7	GRATE4	Y	-9.9	-9.9	0	0
8	GRATE5	Υ	-9.9	-9.9	0	0
9	GRATE6	Y	-9.9	-9.9	0	0
10	GRATE7	Y	-9.9	-9.9	0	0
11	GRATE8	Υ	-9.9	-9.9	0	0
12	GRATE9	Υ	-9.9	-9.9	0	0
13	GRATE10	Y	-9.9	-9.9	0	0
14	GRATE11	Y	-9.9	-9.9	0	0



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Member Distributed Loads (BLC 14 : Ice Load) (Continued)

	Member Label	Direction	Start Magnitude[lh/ft	.End Magnitude[lb/ft,	Start Location[in,%]	End Location[in,%]
15	GRATE12	V	-9.9	-9.9	Otare zocation[iii, 74]	n
		 			0	Ö
16	GRATE13	Y	-9.9	-9.9	0	U
17	GRATE14	Υ	-9.9	-9.9	0	0
18	GRATE15	Υ	-9.9	-9.9	0	0
19	GRATE16	Y	-9.9	-9.9	0	0
20	GRATE17	Υ	-9.9	-9.9	. 0	.0
21	GRATE18	Υ	-9,9	-9.9	0	0
22	PL-BOT-1	Υ	-16.6	-16.6	0	0
23	PL-BOT-2	Υ	-16.6	-16.6	0	0
24	PL-BOT-3	Υ	-16.6	-16.6	0	0
25	SA-BOT-1	Υ	-12.8	-12.8	0	•
26	SA-BOT-2	Υ	-12.8	-12.8	0	0
27	SA-BOT-3	Υ	-12.8	-12.8	0	0
28	SA-TOP-1	Y	-12.8	-12.8	0	0
29	SA-TOP-2	Υ	-12.8	-12.8	0	0
30	SA-TOP-3	Υ	-12.8	-12.8	0	0

Member Distributed Loads (BLC 15: Wind on Ice (0 deg))

÷	Member Label	Direction	Start MagnitudeIIh/ft	.End Magnitude[lb/ft,	Start Location(in %)	End Location[in.%]
1	FM1	X	4.2	4.2	0	0
2	FM2	X	4.2	4.2	0	0
3	FM3	Ŷ	4.2	4.2	0	0
4	GRATE1	X	3.6	3.6	0	0
5	GRATE2	X	3.6	3.6	0	0
6	GRATE3	X	3.6	3.6	0 _	Ö
7	GRATE4	X	3.6	3.6	0	0
8	GRATE5	X	3.6	3.6	0	Ō
9	GRATE6	X	3,6	3.6	0	0
10	GRATE7	X	3.6	3.6	0	0
11	GRATE8	X	3.6	3.6	0	Ō
12	GRATE9	X	3.6	3.6	0	Ō
13	GRATE10	X	3.6	3.6	0	Ö
14	GRATE11	X	3.6	3.6	0	Ō
15	GRATE12	X	0	Ó	0	C
16	GRATE13	Х	0	0	0	0
17	GRATE14	X	3.6	3.6	0	0
18	GRATE15	X	3.6	3.6	0	0
19	GRATE16	X	3.6	3.6	0	0
20	GRATE17	X	3.6	3.6	0	0
21	GRATE18	X	3.6	3.6	0	0
22	PL-BOT-1	Х	8.1	8.1	0	0
23	PL-BOT-2	Х	8.1	8.1	0	0
24	PL-BOT-3	Х	8.1	8.1	0	0
25	SA-BOT-1	X	0	0	0	0
26	SA-BOT-2	X	5.1	5.1	0	0
27	SA-BOT-3	Х	5.1	5.1	0	0
28	SA-TOP-1	X	0	0	0	0
29	SA-TOP-2	X	5.1	5.1	0	0
30	SA-TOP-3	Х	5.1	5.1	0	. 0
31	FM1	Z	0	0	0	0
32	FM2	Z	0	0	0	0
33	FM3	Z	0	0	0	0
34	GRATE1	Z	0	0	0	0
35	GRATE2	Z	0	0	0	0
36	GRATE3	Z	0	0	0	0
37	GRATE4	Z	0	0	0	0



ETS, PLLC BRL 194467.14

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Member Distributed Loads (BLC 15 : Wind on Ice (0 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,	.End Magnitude[lb/ft,	Start Location[in,%]	End Location[in,%]
38	GRATE5	Z	0	0	0	0
39	GRATE6	Z	0	0	0	0
40	GRATE7	Z	0	0	0	0
41	GRATE8	Z	0	0	0	0
42	GRATE9	Z	0	0	0	0
43	GRATE10	Z	0	0	Ö	0
44	GRATE11	Z	0	Ō	Ō	. O
45	GRATE12	Z	0	0	Ö	Ō.
46	GRATE13	Z	Ŏ	Ŏ	Ö	0
47	GRATE14	Z	0	Ö	0	Ö
48	GRATE15	Ž	Ŏ	Ŏ	Ö	Ö
49	GRATE16	Z	ő	Ŏ	Ö	Ō
50	GRATE17	Z	Ö	ŏ	Ö	Ŏ
51	GRATE18	Z	ŏ	ŏ	0	0
52	PL-BOT-1	Z	Ŏ	Ö	0	Ö
53	PL-BOT-2	Z	0	Ö	0	Ö
54	PL-BOT-3	Z	0	Ö	0	0
55	SA-BOT-1	Z	0	0	0	0
56	SA-BOT-2	Z	0	0	0	. 0
57	SA-BOT-3					
58		<u>Z</u>	0	0	0	0
	SA-TOP-1	<u>Z</u>		0	0	0
59	SA-TOP-2	<u>Z</u>	0	0	0	0
60	SA-TOP-3	Z	0	0	0	0 0
61	MP1	X	11.1	11.1	. 0	%100
62	MP2	X	9.7	9.7	0	<u>%100</u>
63	MP3	X	0	0	0	0
64	MP4	X	11.1	11.1	0	<u>%100</u>
65	MP5	X	9.7	9.7	0	<u>%100</u>
_66	MP6	Х	10	10.	0	%100
67	MP7	X	10	10	0	%100
68	MP8	X	0	0	0	0
69	MP9	X	9.1	9.1	0	%100
70	MP10	X	9.1	9.1	0	%100
71	MP11	X	10	10	0	%100
72	MP12	X .	10	10	.0	%100
73	MP13	X	0	0	0	. 0
.74	MP14	Χ	10.7	10.7	0	%99.058
75	MP15	X	10.7	10.7	0	%99.058
76	MP1	Z	0	0	0	0
77	MP2	Z	0	0	0	0
78	MP3	Z	0	Ö	Ô	0
79	MP4	Z	Ö	Ö	0	0
80	MP5	Z	0	0	0	0
81	MP6	Z	0	0	0	0
82	MP7	Z	0	Ö	0	Ō
83	MP8	Z	Ö	0	0	Ō
84	MP9	Ž	, o	Ö	Ö	Ŏ
85	MP10	Z	Ö	Ö	Ö	ŏ
86	MP11	Z	Ŏ	ŏ	Ŏ	ŏ
87	MP12	Z	0	0	0	0
88	MP13	Z	0	0	0	.0
89	MP14	Z	0	0	0	0
90	MP15	Z	0	0	0	0
70	IVIT' 10		<u> </u>	L V		U .

Member Distributed Loads (BLC 16: Wind on Ice (30 deg))

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



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Member Distributed Loads (BLC 16 : Wind on Ice (30 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,	.End Magnitude[lb/ft	Start Location[in.%]	End Location[in,%]
1	FM1	Χ	3.6	3.6	0	0
2	FM2	X	0	0	0	0
3	FM3	X	3.6	3.6	0	0
4	GRATE1	Х	3.1	3.1	0	0
5	GRATE2	X	3.1	3.1	0	0
6	GRATE3	X	3.1	3.1	. 0	0
7	GRATE4	X	3.1	3.1	0	0
8	GRATE5	X	3.1	3.1	0	0
9	GRATE6	X	3.1	3.1	0	0
10	GRATE7	: X	3.1	3.1	Ō	0
11	GRATE8	X	3.1	3.1	Ō	0
12	GRATE9	x	3.1	3.1	Ŏ	Ö
13	GRATE10	x	3.1	3.1	Ŏ	Ö
14	GRATE10 GRATE11	x	3.1	3.1	0	Ö
15	GRATE11 GRATE12	â	3.1	3.1	0	0
						0
16	GRATE13	X	3.1	3.1	0	0
17	GRATE14	X	3.1	3.1	· · · · · · · · · · · · · · · · · · ·	
18	GRATE15	X	3.1	3.1	0	0
19	GRATE16	X	3.1	3.1	0	0
20	GRATE17	X	3.1	3.1	0	0
21	GRATE18	X	3.1	<u>3.1</u>	0	0
22	PL-BOT-1	X	7	7	0	0
23	PL-BOT-2	X	0	0	0	0
24	PL-BOT-3	X	7	7	0	0
25	SA-BOT-1	X	4.4	4.4	0	0
26	SA-BOT-2	X	4.4	4.4	0	0
27	SA-BOT-3	X	4.4	4.4	0	0
28	SA-TOP-1	X	4.4	4.4	0	0
29	SA-TOP-2	Х	4.4	4.4	0	0
30	SA-TOP-3	X	4.4	4.4	0	0
31	FM1	Z	2.1	2.1	0	0
32	FM2	Ž	0	0	0	0
33	FM3	Z	2.1	2.1	Ö	0
34	GRATE1	Z	1,8	1.8	ŏ	0
35	GRATE2	Z	1,8	1.8	Ŏ	0
36	GRATE3	Z	1.8	1.8	ŏ	o -
37	GRATE4	Z	1.8	1.8	ŏ	Ö
		Z	1.8	1.8	0	0
38	GRATE5			1.8	0	0
39	GRATE6	<u>Z</u>	1.8			
40	GRATE?	<u> </u>	1.8	1.8	0	0
41	GRATE8	<u>Z</u>	1.8	1.8	0 0	0
42	GRATE9	<u>Z</u>	1.8	1.8		
43	GRATE10	<u>Z</u>	1.8	1.8	0	0
44	GRATE11	<u>Z</u>	1.8	1.8	0	0
45	GRATE12	<u> </u>	1.8	1.8	0	0
46	GRATE13	Z	1.8	1.8	0	. 0
47	GRATE14	Z	1.8	1.8	0	0
48	GRATE15	Z	1.8	1.8	0	0
49	GRATE16	Z	1.8	1.8	0	0
50	GRATE17	Z	1.8	1.8	0	0
51	GRATE18	Z	1.8	1.8	0	0
52	PL-BOT-1	Z	4	4	0	0
53	PL-BOT-2	Z	0	0	0	0
54	PL-BOT-3	Z	4	4	0	0
55	SA-BOT-1	Z	2.5	2.5	Ö	0
.56	SA-BOT-2	Z	2.5	2.5	0	0
57	SA-BOT-3	Z	2.5	2.5	Ö	Ö
<u> </u>	GM-BU 1-3	<u> </u>			<u> </u>	<u> </u>



: ETS, PLLC : BRL : 194467.14

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Member Distributed Loads (BLC 16: Wind on Ice (30 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,	.End Magnitude[lb/ft,	Start Location[in,%]	End Location[in,%]
58	SA-TOP-1	Z	2.5	2.5	0	0
59	SA-TOP-2	Z	2.5	2.5	0	0
60	SA-TOP-3	Z	2.5	2.5	0	0
61	MP1	Χ	9.3	9.3	0	% <u>100</u>
62	MP2	Χ	8.2	8.2	0	<u>%100</u>
63	MP3	Х	0	0	0	0
64	MP4	Х	9.3	9.3	0	%100
65	MP5	X	8.2	8.2	0	%100
66	MP6	X	8.4	8.4	0	%100
67	MP7	Х	8.4	8.4	0	%100
68	MP8	Х	0	0	0	0
69	MP9	Х	7.7	7.7	0	%100
70	MP10	Х	7.7	7.7	0	%100
71	MP11	Х	9.3	9.3	0	%100
72	MP12	X	9.3	9,3	0	<u>%100</u>
73	MP13	Х	0	Ö	0	0
74	MP14	Х	6,9	6.9	0	%99.058
75	MP15	X	6,9	6.9	0	%99.058
76	MP1	Z	5.4	5.4	0	%10 <u>0</u>
77	MP2	Z	4.8	4,8	0	<u>%100</u>
78	MP3	Z	0	0	0	0
79	MP4	Z	5.4	5.4	0	%100
80	MP5	Z	4.8	4.8	. 0	<u>%100</u>
81	MP6	Z	4.8	4.8	0	%100
82	MP7	Z	4.8	4.8	0	%100
83	MP8	Z	0	0	0	0
84	MP9	Z	4.4	4.4	0	%100
85	MP10	Z	4.4	4.4	0	%100
86	MP11	Z	5.4	5.4	0	%100
87	MP12	Z	5.4	5.4	0	%100
88	MP13	Z	0	0	0	0
89	MP14	Z	4	4	0	%99.058
90	MP15	Z	4	4	0	%99.058

Member Distributed Loads (BLC 17: Wind on Ice (60 deg))

	Member Label	Direction	Start Magnitude[lb/ft	.End Magnitude[lb/ft	Start Location[in,%]	End Location[in,%]
1	FM1	X	2.1	2.1	0	0
2	FM2	Χ	2.1	2.1	0	0
3	FM3	Χ	2.1	2.1	0	0
4	GRATE1	X	1.8	1.8	0	0
5	GRATE2	X	1.8	1.8	0	0
6	GRATE3	Х	1.8	1.8	0	0
7	GRATE4	X	1.8	1.8	0	0
8	GRATE5	X	1.8	1.8	0	0
9	GRATE6	Χ	0	0	0	0
10	GRATE7	. X	0	0	0	0
11	GRATE8	X	1.8	1,8	0	0
12	GRATE9	X	1.8	1.8	. 0	0
13	GRATE10	X	1.8 _	1.8	0	0
14	GRATE11	X	1.8	1.8	0	0
15	GRATE12	X	1.8	1.8	0	0
16	GRATE13	X	1.8	1.8	0	0
17	GRATE14	Х	1.8	1.8	0	0
18	GRATE15	Х	1.8	1.8	. 0	0
19	GRATE16	X	1.8	1.8	0	0
20	GRATE17	Χ	1.8	1.8	0	0



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Member Distributed Loads (BLC 17: Wind on Ice (60 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft	End Magnitude[lb/ft,	Start Location[in.%]	End Location[in.%]
21	GRATE18	X	1.8	1.8	0	0
22	PL-BOT-1	X	4	4	0	0
23	PL-BOT-2	X	4	4	0	0
24	PL-BOT-3	X	4	4	0	.0
25	SA-BOT-1	X	2,5	2.5	Ö	Ō
26	SA-BOT-2	X	2,5	2.5	ő	0
27	SA-BOT-3	X	0	0	ŏ	Ö
28	SA-TOP-1	1 x	2.5	2.5	0	Ö
29	SA-TOP-2	X	2.5	2.5	0	0
30	SA-TOP-3	 	2.5	0	0	0
					¥	
31	FM1	Z	3.6	3.6	0	0
32	FM2	<u>Z</u>	3.6	3.6	0	0
33	FM3	<u>Z</u>	3.6	3.6	0	0
34	GRATE1	Z	3.1	3.1	0	0
35	GRATE2	Z	3.1	3.1	0	0
36	GRATE3	Z	3.1	3.1	0	0
37	GRATE4	Z	3.1	3.1	0	0
38	GRATE5	Z	3.1	3.1	0 .	: O
39	GRATE6	Z	0	0	0	0
40	GRATE7	Z	. 0	0	. 0	0
41	GRATE8	Z	3.1	3.1	0	Ö
42	GRATE9	Ž	3,1	3.1	Ŏ.	Ö
43	GRATE10	Z	3.1	3.1	0	Ö
44	GRATE11	Z	3.1	3.1	0	Ö
45	GRATE12	Z	3.1	3.1	0	0
46	GRATE13	Z	3.1	3.1	0	0
47	GRATE14	Z	3.1	3,1	0	0
48	GRATE15	<u>Z</u>	3.1	3.1	0	0
49	GRATE16	<u>Z</u>	3.1	3.1	0	0
50	GRATE17	Z	3.1	3.1	0	0
51	GRATE18	Z	3.1	3.1	0	0
52	PL-BOT-1	Z	7	7	0	0
53	PL-BOT-2	Z	7	7	0	0
54	PL-BOT-3	Z	7	7	0	0
55	SA-BOT-1	Z	4.4	4.4	0	0
56	SA-BOT-2	Z	4.4	4.4	0	0
57	SA-BOT-3	Z.	0	0	Ö	Ō
58	SA-TOP-1	Ž	4.4	4.4	Ö .	Ö
59	SA-TOP-2	Z	4.4	4,4	Ō	Ŏ
60	SA-TOP-3	Ž	0	0	0	Ö
61	MP1	X	5	5	0	%100
62	MP2	- x	4.6	4.6	0	%100 %100
63						0
	MP3	X	5	5	0	%100
64	MP4				0	
65	MP5	X	4.6	4,6	0	%100 %100
66	MP6	X	5	5	0	<u>%100</u>
67	MP7	X	5	5	0	%100
68	<u>MP8</u>	X	0	0	0	0 .
69	MP9	X	4.6	4.6	0	%100
70	MP10	X	4.6	4.6	0	%100
71	MP11	X	5.5	5.5	0	%100
72	MP12	X	5.5	5.5	0	%100
73	MP13	Х	0	0	0	0
74	MP14	X	3.3	3,3	0	%99.058
75	MP15	x	3.3	3.3	0	%99.058
76	MP1	Z	8.7	8.7	Ö	%100
77	MP2	Z	7.9	7.9	0	%100 %100
11	IVII Z		1.0	1.0	5	70 100



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Member Distributed Loads (BLC 17: Wind on Ice (60 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,	.End Magnitude[lb/ft	Start Locationlin.%]	End Location[in,%]_
78	MP3	Z	0.	0	0	0
79	MP4	Z	8.7	8.7	0	<u>%100</u>
80	MP5	Z	7.9	7.9	0	%100
81	MP6	Z	8.7	8.7	0	%100
82	MP7	Z	8.7	8.7	0	%100
83	MP8	Z	0	0	0	0
84	MP9	Z	7.9	7.9	0	%100
85	MP10	Z	7.9	7.9	0	%100
86	MP11	Z	9.6	9.6	0	%100
87	MP12	Z	9.6	9.6	0	%100
88	MP13	Z	0	0	0	0
89	MP14	Z	5.7	5.7	0	%99.058
90	MP15	Z	5.7	5.7	0	%99.058

Member Distributed Loads (BLC 18: Wind on Ice (90 deg))

			. Willa dir loc	oo acg//		
	Member Label	Direction		.End Magnitude[lb/ft		End Location[in,%]
1	FM1	X	0	0	0	<u> </u>
2	FM2	X	0	0	0	0
3	FM3	Χ	0	0	0	0
4	GRATE1	X	0	0	0	0
5	GRATE2	X	0	0	0	0
6	GRATE3	X	0	0	. 0	0
7	GRATE4	X	0	0	0	0
8	GRATE5	X	0	0	0	0
9	GRATE6	X	0	0	0	0
10	GRATE7	X	0	0 .	- 0	0
11	GRATE8	X	0	0	0 .	0
12	GRATE9	X	0	0	0	.0
13	GRATE10	Χ	0	0	00	0
14	GRATE11	X	0	. 0	0	0
15	GRATE12	Х	0	0	0	0
16	GRATE13	X	. 0	0	0	0
17	GRATE14	Х	0	0	0	0
18	GRATE15	Х	. 0	0	0	0
19	GRATE16	X	0	0	0	0
20	GRATE17	X	0	0	0	0
21	GRATE18	X	0	0	0	0
22	PL-BOT-1	X	0	0	0	0
23	PL-BOT-2	X	0	0	0	0
24	PL-BOT-3	X	0	0	0	0
25	SA-BOT-1	X	0	0	0	0
26	SA-BOT-2	X	0	0	0	0
27	SA-BOT-3	X	0	0	0	0
28	SA-TOP-1	X	0	0	0	0
29	SA-TOP-2	X	0	0	0	0
30	SA-TOP-3	Х	0	0	0	0
31	FM1	Z	0	0	0	0
32	FM2	Z	4.2	4.2	0	0
33	FM3	Z	4.2	4.2	0	0
34	GRATE1	Z	3.6	3.6	0	0
35	GRATE2	Z	3.6	3.6	. 0	0
36	GRATE3	Z	3.6	3.6	0	0
37	GRATE4	Z	3.6	3.6	0	0
38	GRATE5	Z	3.6	3.6	0	0
39	GRATE6	Z	3.6	3.6	0	0
40	GRATE7	Z	3.6	3.6	0	0



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Member Distributed Loads (BLC 18: Wind on Ice (90 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,	.End Magnitude[lb/ft,	Start Location[in,%]	End Location[in.%]
41	GRATE8	. Z	3.6	3.6	0	0
42	GRATE9	Z	3.6	3.6	0	0
43	GRATE10	Z	3.6	3.6	0	0
44	GRATE11	Z	3.6	3.6	0	0
45	GRATE12	Z	3.6	3.6	0	0
46	GRATE13	Z	3.6	3.6	0	0
47	GRATE14	Z	3.6	3.6	0	0
48	GRATE15	Z	3.6	3.6	0	0
49	GRATE16	Z	3,6	3.6	0	0
50	GRATE17	Z	3.6	3.6	0	0
51	GRATE18	Z	3.6	3.6	0	_ 0
52	PL-BOT-1	Z	0	0	0	0
53	PL-BOT-2	Z	8.1	8.1	0	0
54	PL-BOT-3	Z	8.1	8.1	0	0
55	SA-BOT-1	Z	5.1	5.1	0	0
56	SA-BOT-2	Ž	5.1	5.1	Ö	0
57	SA-BOT-3	Ž	5.1	5.1	0	0
58	SA-TOP-1	Z	5,1	5.1	Ö	0
59	SA-TOP-2	Z	5.1	5.1	0	0
60	SA-TOP-3	Ž	5.1	5.1	0	0
61	MP1	x	0	0	0	Ō
62	MP2	X	0	0	0	Ö
63	MP3	X	0	Ö	0	0
64	MP4	X	Ŏ	0	0	Ö
65	MP5	x	Ö	0	Ö	0
66	MP6	X	0	Ó	0	0
67	MP7	X	Ö	Ö	Ö	0
68	MP8	x	o –	ŏ	Ŏ	Ö
69	MP9	X	0	Ö	Ö	Ö
70	MP10	x	0	Ŏ	Ö	Ö
71	MP11	x	0	0	Ö	Ö
72	MP12	X	0	0	Ö	Ö
73	MP13	X	0	0	0	0
74	MP14	X	Ö	0	Ö	ő
75	MP15	x	0	0	0	0
76	MP1	ź	9.7	9.7	0	%100
77	MP2	Z	8.9	8.9	0	%100 %100
78	MP3	Z	0.9	0	0	70 100
79	MP4	Z	9.7	9.7	0	%100
80	MP5	Z	8.9	8.9	0	%100 %100
81		Z	10.7	10.7	0	%100 %100
82	MP6		10.7	10.7	0	%100 %100
	MP7	Z	0	0	0	0
83	MP8 MP9	Z	9.5	9.5	0	%100
84		Z	9.5	9.5	0	%100 %100
85	MP10				0	%100 %100
86	MP11	<u>Z</u>	10.7	10.7	0	%100 %100
87	MP12	Z	10.7	10,7	0	0
88	MP13	Z	0	7.0		%99.058
89	MP14	<u>Z</u>	7.9	7.9	0	
90	MP15	Z	7.9	7.9	0	%99.058

Member Distributed Loads (BLC 19: Wind on Ice (120 deg))

	Member Label	Direction	Start Magnitude[lb/ft	End Magnitude[lb/ft,	Start Location[in,%]	End Location[in.%]
1	FM1	X	-2.1	-2.1	0	0
2	FM2	X	-2.1	-2.1	0	0
3	FM3	Х	-2.1	-2.1	0	0



: ETS, PLLC BRL

194467.14 829046 - Weston/ Rt-57/ Norfield R Mount Analysis

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Member Distributed Loads (BLC 19: Wind on Ice (120 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,	.End Magnitude[lb/ft,	Start Location[in,%]	End Location[in,%]
4	GRATE1	Χ	0	0	0	0
5	GRATE2	X	-1.8	-1.8	0	0
6	GRATE3	X	-1.8	-1.8	0	0
7	GRATE4	X	-1.8	-1.8	0	0
8	GRATE5	X	-1.8	-1.8	0	5 di 0
9	GRATE6	X	-1.8	-1.8	0	0
10	GRATE7	Х	-1.8	-1.8	Ō	0
11	GRATE8	X	-1.8	-1.8	0	0
12	GRATE9	X	-1.8	-1.8	Ö	o i
13	GRATE10	X	-1.8	-1.8	Ō	Ō
14	GRATE11	X	-1.8	-1.8	Ö	Ö
15	GRATE12	X	-1.8	-1.8	0	Ö
16	GRATE13	X	-1,8	-1.8	Ö	Ö
17	GRATE14	X	-1.8	-1.8	0	0
18	GRATE15	X	-1.8	-1.8	. 0	0
19	GRATE16	X	-1.8	-1.8 -1.8	0	
20	GRATE 17	X	-1.8 -1.8			0
21		X		-1.8	0	0
	GRATE18		0	0	0	0
22	PL-BOT-1	X	-4	-4	0	<u> </u>
23	PL-BOT-2	Χ	-4	-4	0	0
24	PL-BOT-3	X	-4	-4	. 0	0
25	SA-BOT-1	X	-2.5	-2.5	0	0
26	SA-BOT-2	X	0	0	0	0
27	SA-BOT-3	X	-2.5	-2.5	0	0
28	SA-TOP-1	X	-2.5	-2.5	0	0
29	SA-TOP-2	X	0	0	0	0
30	SA-TOP-3	Χ	-2.5	-2.5	0	0
31	FM1	Z	3.6	3.6	0	0
32	FM2	Z	3.6	3.6	0	0
33	FM3	Z	3.6	3.6	0	0
34	GRATE1	Z	0.	0	0	0
35	GRATE2	Z	3.1	3.1	0	0
36	GRATE3	Z	3.1	3.1	0	0
37	GRATE4	Z	3.1	3.1	0	0
38	GRATE5	Z	3.1	3.1	0	0
39	GRATE6	Z	3.1	3.1	Ö	Ō
40	GRATE7	Z	3.1	3.1	0	0
41	GRATE8	Z	3.1	3.1	0	0
42	GRATE9	Ž	3.1	3.1	0	Ö
43	GRATE10	Z Z	3.1	3.1	Ö	0
44	GRATE11	Z	3.1	3.1	0 .	Ö
45	GRATE12	Ž	3.1	3.1	O .	- <u>n</u>
46	GRATE13	Z	3.1	3.1	Ó	0
47	GRATE14	Z	3.1	3.1	Ö	ŏ
48	GRATE15	Z	3.1	3.1	Ö	ŏ
49	GRATE16	Z	3.1	3.1	0	0
50	GRATE17	Z	3.1	3.1	0	0
51	GRATE18	Z	0	0	0	0
52	PL-BOT-1	Z	7	7	0	0
53	PL-BOT-2	Z	7	7		0
54	PL-BOT-3	<u>Z</u>	7	7	0	
55		<u>Z</u> 			0	0
	SA-BOT-1		4.4	4.4	0	0
56	SA-BOT-2	Z	0	0	0	0
57	SA-BOT-3	<u>Z</u>	4.4	4.4	0	0
58	SA-TOP-1	<u> </u>	4.4	4.4	0	0
59	SA-TOP-2	<u>Z</u>	0	0	0	0
60	SA-TOP-3	Z	4.4	4.4	0	0



ny : ETS, PLLC er : BRL

: 194467.14 : 829046 - Weston/ Rt-57/ Norfield R Mount Analysis July 15, 2019 5:02 PM Checked By: JAA

Member Distributed Loads (BLC 19: Wind on Ice (120 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,	.End Magnitude[lb/ft,	Start Location[in,%]	End Location[in,%]
61	MP1	X	-5	-5	0	%100
62	MP2	X	-4.6	-4.6	0	%100
63	MP3	Х	0	0	0	0
64	MP4	X	-5	-5	0	%100
65	MP5	X	-4.6	-4.6	0	%100
66	MP6	X	-5.5	-5.5	0	%100
67	MP7	Х	-5.5	-5.5	0	%100
68	MP8	Х	0	0	0	0
69	MP9	X	-4.9	-4.9	0	%100
70	MP10	X	-4.9	4.9	0	%100
71	MP11	X	-5	-5	0	%100
72	MP12	X	-5	-5	0	%100
73	MP13	X	0	0	0	0
74	MP14	Х	-5.3	-5.3	0	%99.058
75	MP15	Х	-5.3	-5,3	0	%99.058
76	MP1	Z	8,7	8.7	0	%100
77	MP2	Z	7.9	7.9	0	%100
78	MP3	Z	0	0	0	0
79	MP4	Z	8.7	8.7	0	%100
80	MP5	Z	7.9	7.9	0	%100
81	MP6	Z	9.6	9.6	0	%100
82	MP7	Z	9.6	9.6	0	%100
83	MP8	Z	0	0	0	0
84	MP9	Z	8.4	8.4	0	%100
85	MP10	Z	8.4	8,4	0	%100
86	MP11	Z	8.7	8.7	0	%100
87	MP12	Z	8.7	8.7	0	%100
88	MP13	Z	0	0	0	0
89	MP14	Z	9.2	9.2	0	%99.058
90	MP15	Z	9.2	9.2	0	<u>%99.058</u>

Member Distributed Loads (BLC 20: Wind on Ice (150 deg))

	Member Label	Direction	Start Magnitude[lb/ft,	End Magnitude[lb/ft,	Start Location[in.%]	End Location[in,%]
1	FM1	Χ	-3.6	-3.6	0	0
2	FM2	Χ .	-3.6	-3.6	0	0
3	FM3	Χ	0	0	0	0
4	GRATE1	X	-3.1	-3.1	0	0-
5	GRATE2	X	-3.1	-3.1	0	0
6	GRATE3	X	-3.1	-3.1	0	0
. 7	GRATE4	Х	-3.1	-3.1	0	0
8	GRATE5	Χ	-3.1	-3.1	0	0
9	GRATE6	X	-3.1	-3.1	0	0
10	GRATE7	. X	-3.1	-3.1	0	0.
11	GRATE8	X	-3.1	-3.1	0	0
12	GRATE9	X	-3.1	-3.1	0	0
13	GRATE10	X	-3.1	-3.1	0	0
14	GRATE11	Χ	-3.1	-3.1	0	0
15	GRATE12	X	-3.1	-3.1	0	0
16	GRATE13	Χ	-3.1	-3.1	0	0
17	GRATE14	Χ	-3.1	-3.1	0	0
18	GRATE15	Χ	-3.1	-3.1	0	0
19	GRATE16	X	-3.1	-3.1	0	0
20	GRATE17	X	-3.1	-3.1	0	0
21	GRATE18	X	-3.1	-3.1	0	0
-22	PL-BOT-1	X	-7	-7	0	0
23	PL-BOT-2	X	-7	-7	0	0



: ETS, PLLC : BRL : 194467.14 : 829046 - Weston/ Rt-57/ Norfield R Mount Analysis

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Member Distributed Loads (BLC 20 : Wind on Ice (150 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,.	End Magnitude[lb/ft		End Location[in,%]
24	PL-BOT-3	Х	0	0	0	0
25	SA-BOT-1	X	-4.4	-4.4	0	0
26	SA-BOT-2	X	_4.4	4.4	0	0
27	SA-BOT-3	X	-4,4	-4.4	0	0
28	SA-TOP-1	Χ	-4.4	-4.4	0	0
29	SA-TOP-2	X	-4.4	-4.4	0	0
30	SA-TOP-3	X	-4.4	-4.4	0	0
31	FM1	Ž	2.1	2.1	0	0
32	FM2	Ž	2.1	2.1	0	0
33	FM3	Z	0	0	0	0
34	GRATE1	Ž	1.8	1.8	Ŏ	0
35	GRATE2	Z	1.8	1.8	0	0
		Z	1.8	1.8	Ŏ	Ö
36	GRATE3		1.8	1.8	0	Ö
37	GRATE4	<u> </u>				
38	GRATE5	<u> </u>	1.8	1.8	0	0
39	GRATE6	<u>Z</u>	1.8	1.8	0	0
40	GRATE7	<u> </u>	1.8	1.8	0	0
41	GRATE8	<u>Z</u>	1.8	1.8	0	0
42	GRATE9	Z	1.8	1.8	0	0
43	GRATE10	Z	1.8	1.8	0	0
44	GRATE11	Z	1.8	1.8	0	0
45	GRATE12	Z	1.8	1,8	0	0
46	GRATE13	Z	1.8	1.8	0	0
47	GRATE14	Z	1.8	1.8	0	0
48	GRATE15	Z	1.8	1.8	0	0 -
49	GRATE16	Z	1.8	1,8	0	0
50	GRATE17	Z	1.8	1.8	0	0
51	GRATE18	Z	1,8	1.8	0	O_
52	PL-BOT-1	Z	4	4	Ö	Ö
53	PL-BOT-2	Z	4	4	Ŏ	0
54	PL-BOT-3	Z	0	0	Ö	Ö
			2.5	2.5	0	Ö
55	SA-BOT-1	Z		2.5	0	0
56	SA-BOT-2		2.5			0
57	SA-BOT-3	Z	2.5	2.5	0	
58	SA-TOP-1	<u>Z</u>	2.5	2.5	0	0
59	SA-TOP-2	<u>Z</u>	2.5	2.5	0	0
60	SA-TOP-3	Z	2.5	2.5	0	0
61	MP1	X	-9.3	-9.3	0	<u>%100</u>
62	MP2	X	-8.2	-8.2	0	%100
63	MP3	Χ	0	0	0	0
64	MP4	X	-9.3	-9.3	0	%100
65	MP5	X	-8.2	-8.2	0	<u>%100</u>
66	MP6	Χ	-9.3	-9.3	0	%100
67	MP7	Х	-9.3	-9.3	0	%100
68	MP8	X	0	. 0	0	0
69	MP9	X	-8.2	-8.2	0	%100
70	MP10	X	-8.2	-8.2	0	%100
71	MP1 <u>1</u>	X _	-8.4	-8.4	0	%100
72	MP12	X	-8.4	-8.4	0	%100
73	MP13	X	0	0	Ö	0
74	MP14	X	-10.4	-10.4	0	%99.058
75	MP15	X	-10.4	-10.4	0	%99.058
		Z			0	%99.030 %100
76	MP1		5.4	5.4	0	%100 %100
77	MP2	<u>Z</u>	4.8	4.8		
78	MP3	Z	0	0	0	0.
79	MP4	Z	5.4	5.4	0	%100 %400
80	MP5	Z	4.8	4.8	0	%100



ETS, PLLC BRL

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Member Distributed Loads (BLC 20: Wind on Ice (150 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,	End Magnitude[lb/ft,	Start Location[in,%]	End Location[in,%]
81	MP6	Z	5.4	5.4	0	%100
82	MP7	Z	5.4	5.4	0	%100
83	MP8	Z	0	0	0	0
84	MP9	Z	4.8	4.8	0	%100
_85	MP10	Z	4.8	4,8	0	%100
86	MP11	Z	4.8	4.8	0	%100
87	MP12	Z	4.8	4.8	0	%100
88	MP13	Z	0	0	0	0
89	MP14	Z	6	6	0	%99.058
90	MP15	<u> </u>	6	6	0	%99.058

Member Distributed Loads (BLC 21 : Wind on Ice (180 deg))

	Member Label	Direction	Start Magnitude[lb/ft,.	End Magnitude[lb/ft,	Start Location[in,%]	End Location[in,%]
1	<u>FM1</u>	X	-4.2	-4.2	0	0
2	FM2	X	-4.2	-4.2	0	0
3	FM3	X	-4.2	-4.2	0	0
4	GRATE1	X	-3.6	-3.6	0	0
5	GRATE2	X	-3.6	-3.6	0	0
6	GRATE3	X	-3.6	-3.6	0	0
7	GRATE4	X	-3.6	-3.6	0	0
8	GRATE5	X	-3.6	-3.6	0	0
_9	GRATE6	X	-3.6	-3.6	0	0
10	GRATE7	X	-3.6	-3.6	0	0
11	GRATE8	X	-3.6	-3.6	0	0
12	GRATE9	X	-3.6	-3.6	0	. 0
13	GRATE10	X	-3.6	-3.6	0	0
14	GRATE11	X	-3,6	-3.6	0	0
15	GRATE12	X	0	0	0	0
16	GRATE13	X	0	0	0	0
17	GRATE14	X	-3.6	-3.6	0	0
18	GRATE15	X	-3.6	-3.6	0	0
19	GRATE16	X	-3.6	-3.6	0	0
20	GRATE17	X	-3.6	-3.6	0	0
21	GRATE18	X	-3.6	-3.6	0	0
22	PL-BOT-1	X	-8.1	-8.1	0	0
23	PL-BOT-2	X	-8.1	-8.1	0	0
24	PL-BOT-3	X	-8.1	-8.1	0	0
25	SA-BOT-1	X	0	0	0	0
26	SA-BOT-2	X	-5.1	-5.1	0 .	0
27	SA-BOT-3	X	-5.1	-5.1	0	0
28	SA-TOP-1	X	0	0	0	0
29	SA-TOP-2	X	5.1	-5.1	0	0
30	SA-TOP-3	X	-5.1	-5.1	0	0.
31	FM1	Z	0	0	0	0
32	FM2	Z	0	0	0	Ö
33	FM3	Z	0	0	0	0
34	GRATE1	Z	0	0	0	0.
35	GRATE2	Z	0	0	0	Ō
36	GRATE3	Z	0	0	0	Ö.
37	GRATE4	Z	0	0	0	0
38	GRATE5	Z	0.	0	0	0
39	GRATE6	Z	0	0	0	0
40	GRATE7	Z	0	0	0	0
41	GRATE8	Z	0	0	0	0
42	GRATE9	Z	0	0	0	0 .
43	GRATE10	Z	0	0	0	Ō



: ETS, PLLC BRL

194467.14 829046 - Weston/ Rt-57/ Norfield R Mount Analysis

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Member Distributed Loads (BLC 21: Wind on Ice (180 deg)) (Continued)

	Member Label	Direction	Start Magnitude/lb/ft	End Magnitude[lb/ft,	Start Location[in.%]	End Location[in.%]
44	GRATE11	Z	0	0	0	O
45	GRATE12	Z	0	0	0	0
46	GRATE13	Z	Ö	0	Ō	Ō
47	GRATE14	Z	0	Ö	0	0
48	GRATE15	Ž	0	Ŏ	Ŏ	0
49	GRATE16	Z	Ö	Ö	Ŏ	0
50	GRATE17	Z	ŏ	ŏ	Ŏ	Ö
51	GRATE18	Z	Ö	Ö	Ö	Ö
52	PL-BOT-1	Ž	0 -	Ŏ	Ö	Ŏ
53	PL-BOT-2	Z	Ö	0	Ö	0
54	PL-BOT-3	Z	ŏ	0	Ŏ	0
55	SA-BOT-1	Z	0	0	Ö	Ö
56	SA-BOT-2	Z	Ö	0	0	0
57	SA-BOT-3	Z	0	0	0	0
58	SA-TOP-1	Z	0	0	0	0
59	SA-TOP-1 SA-TOP-2		0	0	0	0
		Z Z	0	0 -	0	0
60	SA-TOP-3		-11.1	-11.1	0	%100
61	MP1 MP2	X		-9.7	0	%100 %100
62		X	-9.7		0	70100
63	MP3	X	0 -11.1	0 -11.1	0	%100
64	MP4	X				%100 %100
65	MP5	X	-9.7	-9.7	0	
66	MP6	X	-10	-10	0	%100 %400
67	MP7	X	-10	-10	0	%100
68	MP8	X	0	0	0	0
69	MP9	X	-9.1	-9.1	0	%100 %400
70	MP10	X	-9.1	-9.1	0	%100
71	MP11	X	-10	-10	0	%100
72	MP12	X	-10	-10	0 -	%100
73	MP13	X	0	0	0	0
74	MP14	X	-10.7	-10.7	0	<u>%99.058</u>
75	MP15	X	-10.7	-10.7	0	<u>%99.058</u>
76	MP1	<u> </u>	0	0	0	0
77	MP2	<u>Z</u>	0	0	0	0
78	MP3	<u>Z</u>	0	0	0	0
79	MP4	Z	0	0	0	0
80	MP5	Z	0	0	0	0
81	MP6	Z	0	0	0	0
82	MP7	Z	0	0	0	0
83	MP8	Z	0	0	0	0
84	MP9	Z	0	0	0	0
85	MP10	Z	0	0	0	0
86	MP11	Z	0	0	0	0
87	MP12	Z	0	0	0	0
88	MP13	Z	0	0	0	0
89	MP14	Z	0	0	0	0
90	MP15	Z	0	0	0	0

Member Distributed Loads (BLC 22 : Wind on Ice (210 deg))

	Member Label	Direction	Start Magnitude[lb/ft	End Magnitude[lb/ft,	Start Location[in,%]	End Location[in,%]
1	FM1	X	-3.6	-3.6	0	00
2	FM2	X	0	0	0	0
3	FM3	X	-3.6	-3.6	0	0
4	GRATE1	Х	-3.1	-3.1	. 0	0
5	GRATE2	X	-3.1	-3.1	0	0
6	GRATE3	Х	-3.1	-3.1	0	0



: ETS, PLLC : BRL : 194467.14 : 829046 - Weston/ Rt-57/ Norfield R Mount Analysis

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Member Distributed Loads (BLC 22 : Wind on Ice (210 deg)) (Continued)

	Member Label	Direction		End Magnitude[lb/ft,	Start Location[in,%]	End Location[in,%]
7	GRATE4	X	-3.1	-3.1	0	0
8	GRATE5	Х	-3.1	-3.1	0	0
9	GRATE6	X	-3.1	-3.1	0	0
10	GRATE7	X	-3.1	-3.1	0	00
11	GRATE8	X	-3.1	-3.1	0	00
12	GRATE9	Х	-3.1	-3.1	0	0
13	GRATE10	X	-3.1	-3.1	0	0
14	GRATE11	X	-3.1	-3.1	0	0
15	GRATE12	: X	-3.1	-3.1	0	0
16	GRATE13	X	-3.1	-3.1	0	0
17	GRATE14	X	-3.1	-3.1	Ö	0
18	GRATE15	x	-3.1	-3.1	Ö	Ö
19		X	-3.1	-3.1	Ö	0
	GRATE16				0	0
20	GRATE17	X	-3.1	<u> </u>		
21	GRATE18	X	-3.1	-3.1	0 _	0
22	PL-BOT-1	X	-7	-7	0	0
23	PL-BOT-2	X	0	0	0	0
24	PL-BOT-3	X	-7	-7	0	0
25	SA-BOT-1	X	-4.4	-4.4	0	0
26	SA-BOT-2	. X	-4.4	-4.4	0	0
27	SA-BOT-3	- X	-4.4	-4.4	0	0
28	SA-TOP-1	Х	-4.4	-4.4	0	0
29	SA-TOP-2	Х	-4.4	-4.4	0	0
30	SA-TOP-3	X	-4.4	-4.4	0	0
31	FM1	Ž	-2,1	-2.1	0	0
32	FM2	Ž	0	0	Ö	Ō
33	FM3	Z	-2.1	-2.1	Ö	0
34	GRATE1	Z	-1.8	-1.8	Ö	ŏ
35		Z	-1.8	-1.8	Ö	Ö
	GRATE2				0	0
36	GRATE3	<u>Z</u>	-1.8	-1.8		0
37	GRATE4	<u>Z</u>	-1.8	-1.8	0	
38	GRATE5	Z	-1.8	-1.8	0	0
39	GRATE6	<u>Z</u>	-1.8	-1.8	0	0
40	GRATE7	Z	-1.8	-1.8	0	0
41	GRATE8	Z	-1.8	-1.8	0	0
42	GRATE9	Z	-1.8	-1.8	0	0
43	GRATE10	Z	<i>-</i> 1.8	-1.8	0	0
44	GRATE11	Z	<i>-</i> 1.8	-1.8	0	0
45	GRATE12	Z	<i>-</i> 1,8	-1.8	0	0
46	GRATE13	Z	-1.8	-1.8	0	0
47	GRATE14	Z	-1.8	-1.8	0	0
48	GRATE15	Z	-1.8	-1.8	0	.0
49	GRATE16	Z	-1.8	-1.8	0	0
50	GRATE17	Z	-1.8	-1.8	Ö	Ō
51	GRATE18	Z	-1.8	_1.8	Ŏ	0
52	PL-BOT-1	Z	-4	-4	ŏ	Ö
53	PL-BOT-2	Z	0	0	Ŏ	Ö
54		Z	-4	-4	0	0
	PL-BOT-3	- 4			0	0
55	SA-BOT-1	Z	-2.5	-2.5		
56	SA-BOT-2	Z	-2.5	-2.5	0	0
57	SA-BOT-3	Z	-2.5	-2.5	0	0
58	SA-TOP-1	<u>Z</u>	-2.5	-2.5	0	0
59	SA-TOP-2	Z	-2.5	-2.5	0	0
60	SA-TOP-3	Z	-2.5	-2.5	0	0
61	MP1	Χ	-9.3	-9.3	0	%100
62	MP2	X	-8.2	-8.2	0	<u>%10</u> 0
63	MP3	X	0	0	0	0



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829046 - Weston/ Rt-57/ Norfield R Mount Analysis

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Member Distributed Loads (BLC 22 : Wind on Ice (210 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft	End Magnitude[lb/ft	Start Location[in,%]	End Location[in.%]
64	MP4	X	-9.3	-9.3	0	%100
65	MP5	X	-8.2	-8.2	0	%100
66	MP6	X	-8.4	-8.4	0	%100
67	MP7	X	-8.4	-8.4	0	%100
68	MP8	X	0	0	0	0
69	MP9	X	- 7.7	-7.7	0	%100
70	MP10	X	-7.7	-7.7	0	%100
71	MP11	X	-9.3	-9.3	0	%100
72	MP12	· X	-9.3	-9.3	0	%100
73	MP13	Х	0	0	0	0
74	MP14	X	-6.9	-6.9	0	%99.058
75	MP15	Х	-6.9	-6.9	0	%99.058
76	MP1	Z	-5.4	-5.4	0	%100
77	MP2	Z	-4.8	-4.8	0	%100
78	MP3	Z	0	0	0	0
79	MP4	Z	-5.4	-5.4	0	%100
80	MP5	Z	-4.8	-4.8	0	%100
81	MP6	Z	-4.8	-4.8	0	%100
82	MP7	Z	-4.8	-4.8	0	%100
83	MP8	Z	0	0	0	0
84	MP9	Z	-4.4	-4.4	0	%100
85	MP10	Z	-4.4	-4.4	0	%100
86	MP11	Z	-5.4	-5.4	0	%100
87	MP12	Z	-5.4	-5.4	0	%100
88	MP13	Z	0	0	0	0
89	MP14	Z	-4	-4	0	%99.058
90	MP15	Z	-4	-4	0	%99.058

Member Distributed Loads (BLC 23 : Wind on Ice (240 deg))

	Member Label	Direction	Start Magnitude[lb/ft	End Magnitude[lb/ft,	Start Location[in,%]	End Location[in,%]
1	FM1	X	-2.1	-2.1	0	0
2	FM2	X	-2.1	-2.1	O	0.
3	FM3	X	-2.1	-2.1	0	0
4	GRATE1	- X	-1.8	-1.8	0	0
5	GRATE2	X	-1.8	-1.8	0	0
6	GRATE3	X	-1.8	-1.8	0	0
7_	GRATE4	X	-1.8	-1.8	0	0
8	GRATE5) X	-1.8	-1.8	0	0
9	GRATE6	. X	0	0	0	0
10	GRATE7	X	0	0	0	0
11	GRATE8	X	-1.8	-1.8	0	0
12	GRATE9	X	-1.8	-1.8	0	0
13	GRATE10	X	-1.8	-1.8	0	0
14	GRATE11	X	-1.8	-1.8	0	0
15	GRATE12	X	-1.8	-1.8	00	0
16	GRATE13	X	-1.8	-1.8	0	0
17	GRATE14	X	<i>-</i> 1.8	-1.8	0	0
18	GRATE15	X	-1.8	-1.8	0	0
19	GRATE16	X	-1 .8	-1.8	0	0
20	GRATE17	Х	-1.8	-1.8	0	0
21	GRATE18	Х	-1.8	-1.8	0	0
22	PL-BOT-1	X	-4	-4	0	0
23	PL-BOT-2	Х	-4	-4	0	0
24	PL-BOT-3	Χ	-4	-4	0	0
25	SA-BOT-1	X	-2.5	-2.5	0	0
26	SA-BOT-2	X	-2.5	-2.5	0	0



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Member Distributed Loads (BLC 23 : Wind on Ice (240 deg)) (Continued)

	Member Label	Direction	Start Magnitude(lh/ft	.End Magnitude[lb/ft,		End Location[in.%]
27	SA-BOT-3	X	0	0	0	0
_28	SA-TOP-1	X	-2.5	-2.5	. Ŏ	Ŏ
29	SA-TOP-2	X	-2.5	-2.5	0	0
30	SA-TOP-3	X	0	0	Ō	Ō
31	FM1	Z	-3.6	-3.6	Ō	Ō
32	FM2	Z	-3.6	-3.6	Ö	Ō
33	FM3	Z	-3.6	-3.6	Ŏ	Ō
34	GRATE1	Z	-3.1	-3.1	Ö	Ö
35	GRATE2	Z	-3,1	-3.1	Ō	0
_36	GRATE3	Z	-3,1	-3.1	Ö	Ö
37	GRATE4	Z	-3.1	-3,1	Ö	Ö
38	GRATE5	Z	-3.1	-3.1	Ŏ	0
39	GRATE6	Z	0	0	0	Ö
40	GRATE7	Z	0	Ö	0	. 0
41	GRATE8	Z	-3,1	-3.1	Ŏ	Ŏ
42	GRATE9	Z	-3.1	-3.1	Ō	ō
43	GRATE10	Z	-3.1	-3.1	Ö	Ö
44	GRATE11	Z	-3.1	-3.1	Ö	Ö
45	GRATE12	Z	-3.1	-3.1	Ö	ŏ
46	GRATE13	Z	-3.1	-3.1	Ŏ	Ö
47	GRATE14	Z	-3.1	-3.1	0	Ŏ
48	GRATE15	Ž	-3.1	-3.1	0	ŏ
49	GRATE16	Z	-3.1	-3.1	0	
50	GRATE17	Z	-3.1	-3.1	Ö	ŏ
51	GRATE18	Z	-3.1	-3.1	ő	Ö
52	PL-BOT-1	Z	-7	-7	Ö	ő
53	PL-BOT-2	Z	-7	-7	0	0
54	PL-BOT-3	Z	-7	-7	ŏ	0
55	SA-BOT-1	Z	-4,4	-4,4	Ö	ŏ
56	SA-BOT-2	Z	-4,4	-4,4	o o	ŏ
57	SA-BOT-3	Ž	0	0	0	ŏ
58	SA-TOP-1	Ž	-4,4	-4.4	. 0	Ö
59	SA-TOP-2	Z	-4.4	-4.4	Ö	0
60	SA-TOP-3	Z	0	0	Ö	0
61	MP1	X	-5	-5	Ö	%100
62	MP2	X	-4.6	-4.6	0	%100 %100
63	MP3	x	0	0	0	0
64	MP4	Ŷ	-5	-5	ő	%100
65	MP5	X	-4.6	-4.6	ŏ	%100 %100
66	MP6	X	-5	-5	0	%100 %100
67	MP7	X	-5	-5	Ö	%100 %100
68	MP8	X	0	0	Ö	0
69	MP9	X	-4.6	-4.6	0	%100
70	MP10	X	-4.6	-4.6	0	%100 %100
71	MP11	X	-5.5	-5.5	0	%100 %100
72	MP12	X	-5.5	-5.5	0	%100 %100
73	MP13	X	0	0	0	0
74	MP14	X	-3.3	-3.3	0	%99.058
75	MP15	X	-3.3	-3.3	0	%99.058 %99.058
76	MP1	Z	-8.7	-8.7	0	%100
77	MP2	Z	-7.9	-7.9	0	%100 %100
78	MP3	Z	0.	0	0	0
79	MP4	Z	-8.7	-8.7	0	%100
80	MP5	Z	-7.9	-7.9	0	%100 %100
81	MP6	Z	-8.7	-7.9 -8.7	0	%100 %100
82	MP7	Z	-8.7 -8.7	-8.7 -8.7	0	%100 %100
83	MP8	Z	-8.7	0	Ö	
	IVII U	<u>_</u>	<u> </u>	<u>U</u>	U	0



: ETS, PLLC : BRL : 194467.14 : 829046 - Weston/ Rt-57/ Norfield R Mount Analysis

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Member Distributed Loads (BLC 23 : Wind on Ice (240 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft	End Magnitude]lb/ft	Start Location[in.%]	End Location[in.%]
84	MP9	Z	-7.9	-7.9	0	<u>%100</u>
85	MP10	Z	<i>-</i> 7.9	-7.9	0	%100
86	MP11	Z	-9.6	-9.6	0	%100
87	MP12	Z	-9,6	-9.6	0	%100
88	MP13	Z	0	0	0	0
89	MP14	Z	-5.7	-5.7	0	%99.058
90	MP15	Z	-5.7	-5.7	0	%99.058

Member Distributed Loads (BLC 24 : Wind on Ice (270 deg))

		aus IDEC E			Charlesotion (in 0/1	End Location(in,%)
	Member Label	Direction		.End Magnitude[lb/ft,	Start Location[in, 76]	O End Location[III.78]
1	<u>FM1</u>	X	0	0	0	0
2	FM2	X	0	0		0
3	FM3	Х	0	0	0	0 -
4	GRATE1	X		0 _	0	
5	GRATE2	X	0	0	0	0
6	GRATE3	X	0	0	0	0
7	GRATE4	X	0	0	0	0
8	GRATE5	X	0	0	0	0
9	GRATE6	Х	0	0	0	0
10	GRATE7	X	0	0	0	0
11	GRATE8	X	0	0	0	0
12	GRATE9	X	0	0	0	0
13	GRATE10	X	0	0	0	0
14	GRATE11	Х	0	0	0	0
15	GRATE12	Х	0	0	0	0
16	GRATE13	X	0	0	0	0
17	GRATE14	X	0	0	0	0
18	GRATE15	X	0	Ö	0	0
19	GRATE16	X	0	0	Ö	0
20	GRATE17	X	Ö	0	0	0
21	GRATE18	X	Ŏ	0	Ö	0
22	PL-BOT-1	X	Ŏ O	0	Ō	0
23	PL-BOT-2	X	Ŏ	Ö	Ŏ	Ö
24	PL-BOT-3	X	0	0	Ŏ	Ŏ.
25	SA-BOT-1	T X	0	0	Ö	Ö
26	SA-BOT-2	$\hat{\mathbf{x}}$	0	0	0	Ŏ
		$\hat{\mathbf{x}}$	0	0	Ö	Ö
27	SA-BOT-3	$\frac{1}{x}$	0	0	0	Ö
28	SA-TOP-1	x	0	0	0	Ö
29	SA-TOP-2		0	0	0	0
30	SA-TOP-3	X		1		0
31	FM1	<u>Z</u>	0	0	0	
32	FM2	<u>Z</u>	-4.2	-4.2	0	0
33	FM3	<u>Z</u>	-4.2	-4.2	0	0
34	GRATE1	<u>z</u>	-3.6	-3.6	0	
35	GRATE2	<u>Z</u>	-3.6	-3.6	0	0
36	GRATE3	Z	-3.6	-3.6	0	0
37	GRATE4	Z	-3.6	-3.6	0	0
38	GRATE5	Z	-3.6	-3.6	0	0 :
39	GRATE6	Z	-3.6	-3.6	0	0
40	GRATE7	Z	-3.6	-3.6	00	0
41	GRATE8 _	Z	-3.6	-3.6	0	0
42	GRATE9	Z	-3.6	-3.6	0	0
43	GRATE10	Z	-3.6	-3.6	0	0
44	GRATE11	Z	-3.6	-3.6	0	0
45	GRATE12	Z	-3.6	-3.6	0	0
46	GRATE13	Z	-3,6	-3.6	0	0



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Member Distributed Loads (BLC 24: Wind on Ice (270 deg)) (Continued)

	Member Label	Direction		.End Magnitude[lb/ft,		End Location(in.%)
47	GRATE14	Z	-3.6	-3.6	O O	0
48	GRATE15	Z	-3.6	-3.6	0	0
49	GRATE16	Z	-3.6	-3.6	0	0
50	GRATE17	Z	-3.6	-3.6	0	0
51	GRATE18	Z	-3.6	-3.6	0	0
52	PL-BOT-1	Z	-3.0	0	0	0
53	PL-BOT-2	Z	-8.1	-8.1	0	0
54	PL-BOT-3	Z	-8.1	-8.1 -8.1	0	0
55	SA-BOT-1	Z	-5.1	-5.1	0	0
56	SA-BOT-2	Z	-5.1 -5.1	-5.1 -5.1	0	0
57	SA-BOT-3	Z	-5.1	-5.1 -5.1	0	0
58	SA-TOP-1	Z	-5.1	-5.1	0	0
59	SA-TOP-2	Z	-5.1	-5.1 -5.1	0	0
60	SA-TOP-3	Z	-5.1 -5.1	-5.1 -5.1	0	0
61	MP1	X		-5.1	0	0
	MP2	X	0	0		0
62		X	0	0	0	0
63	MP3		0			0
64	MP4	X	0	0	0	
65	MP5	X	0	0	0	0
66	MP6	X	0	0	0	0
67	MP7	X	0	0	0	0
68	MP8	X	0	0	. 0	0
69	MP9	X	0	0	0	0
70	MP10	X	. 0	0	0	0 '
71	MP11	X	0	0	0	0
72	MP12	X	0	0	0	0
73	MP13	X	0	<u> </u>	0	0
74	MP14	X	0	0 '	0	0
75	MP15	<u>X</u>	0	0	0	0
76	MP1	Z	-9.7	-9.7	0	%100
77	MP2	<u>Z</u>	-8.9	-8.9	0	%100
78	MP3	<u>Z</u>	0	0	0	. 0
79	MP4	Z	-9.7	-9.7	0	<u>%100</u>
80	MP5	- Z	-8.9	-8.9	0	%100
81	MP6	Z	-10.7	-10.7	0	%100
82	MP7	Z	-10.7	-10.7	0	%100
83	MP8	Z	0	0	0	0
84	MP9	Z	-9.5	-9,5	0	%100
85	MP10	Z	-9.5	-9.5	0	%100
86	MP11	Z	-10.7	-10.7	0	%100
87	MP12	Z	-10.7	-10.7	0	%100
88	MP13	Z	0	0	0	0
89	MP14	Z	-7.9	-7.9	0	_%99.058
90	MP15	Z	-7.9	-7.9	0	%99.058

Member Distributed Loads (BLC 25 : Wind on Ice (300 deg))

	Member Label	Direction	Start Magnitude[lb/ft,.	End Magnitude[lb/ft	Start Location[in,%]	End Location[in,%]
1	FM1	X	2.1	2.1	0	0
2	FM2	X	2.1	2.1	0	0
3	FM3	X	2.1	2.1	0	0
4	GRATE1	X	0	0	0	0
5	GRATE2	X	1.8	1.8	0	0
6	GRATE3	X	1.8	1.8	0	0
7	GRATE4	X	1.8	1.8	0	0
8	GRATE5	X	1.8	1.8	. 0	0
9	GRATE6	X	1.8	1.8	0	0



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Member Distributed Loads (BLC 25 : Wind on Ice (300 deg)) (Continued)

	Member Label	Direction	Start Magnitude[ib/ft	.End Magnitude[lb/ft,		End Location[in.%]
10	GRATE7	X	1.8	1.8	0	0
11	GRATE8	X	1.8	1.8	0	0
12	GRATE9	X	1.8	1.8	0	Ö
13	GRATE10	X	1.8	1.8	0	0
14	GRATE11	X	1.8	1.8	0	0
15	GRATE12	X	1.8	1.8	0	
16	GRATE13	x	1.8	1.8		0
17	GRATE14	X			0	0
18	GRATE14 GRATE15	X	1.8	1.8	0	0
19			1.8	1.8	0	0
	GRATE16	X	1.8	1.8	0	0
20	GRATE17	X	1.8	1.8	0	0
21	GRATE18	X	0	0	0	0
22	PL-BOT-1	X	4	4	0	0
23	PL-BOT-2	X	4	4	0	0
24	PL-BOT-3	Х	4	4	0	0
25	SA-BOT-1	X	2.5	2.5	0	0
26	SA-BOT-2	X	0	0	0	0
27	SA-BOT-3	X	2.5	2.5	0	0
28	SA-TOP-1	X	2.5	2.5	0	. 0
29	SA-TOP-2	X	0	0	0	0
30	SA-TOP-3	X	2.5	2.5	0	0
31	FM1	Z	-3.6	-3.6	0	0
32	FM2	Z	-3,6	-3.6	Ō	0
33	FM3	Z	-3.6	-3.6	Ö	0
34	GRATE1	Z	0	0	0	Ŏ
35	GRATE2	Z	-3.1	-3.1	Ö	Ö
36	GRATE3	Z	-3.1	-3.1	0	Ö
37	GRATE4	Z	-3.1	-3.1	0	0
38	GRATE5	Ž	-3.1	-3.1	0	0
39	GRATE6	Z	-3.1	-3.1	0	0
40	GRATE7	Z	-3.1	-3.1	0	0
41	GRATE8	Z	-3.1	-3.1	0	
42	GRATE9	Z	-3.1 -3.1			0
43	GRATE10	Z	-3.1 -3.1	-3.1	0	0
44				-3.1	0	0
	GRATE11	Z	-3.1	-3.1	0	0
45	GRATE12	<u> </u>	-3.1	-3.1	0	0
46	GRATE13	<u>Z</u>	-3.1	-3.1	0	<u> </u>
47	GRATE14	<u>Z</u>	-3.1	-3.1	0	0
48	GRATE15	<u> </u>	-3.1	-3.1	0	0
49	GRATE16	<u>Z</u>	-3.1	-3.1	0	0
50	GRATE17	Z	-3.1	-3.1	0	0 -
51	GRATE18	<u>Z</u>	0	0	0	0
52	PL-BOT-1	Z	-7	-7	0	0
53	PL-BOT-2	Z	-7	7	0	0
54	PL-BOT-3	Z		-7	0	0
55	SA-BOT-1	Z	-4.4	-4.4	0	0
56	SA-BOT-2	Z	0	0	0	0
57	SA-BOT-3	Z	-4.4	-4.4	0	0
58	SA-TOP-1	Z	-4.4	-4.4	0	Ö
59	SA-TOP-2	Z	Ö	Ö	0	Ö
60	SA-TOP-3	Z	-4.4	-4.4	0	Ŏ
61	MP1	X	5	5	Ö	%100
62	MP2	X	4.6	4.6	Ö	%100 %100
63	MP3	x	0	0	Ö	0
64	MP4	X	5	5	0	%100
65	MP5	X	4.6	4.6	0	%100 %100
66	MP6	X	5.5	5.5	0	
100	IVIEO		5.5	5,5	U	<u>%100</u>



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829046 - Weston/ Rt-57/ Norfield R Mount Analysis

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Member Distributed Loads (BLC 25 : Wind on Ice (300 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,	End Magnitude[lb/ft,	Start Location[in,%]	End Location[in,%]
67	MP7	X	5.5	5.5	0	%100
68	MP8	X	0	0	0	0
69	MP9	Х	4.9	4.9	0	%100
70	MP10	Х	4.9	4.9	0	%100
71	MP11	Х	5	5	0	%100
72	MP12	Х	5	5	0	%100
73	MP13	Х	0	0	0	0
74	MP14	X	5.3	5.3	0	%99.058
75	MP15	Х	5.3	5,3	0	%99.058
76	MP1	Z	-8.7	-8.7	0	%100
77	MP2	Z	-7.9	-7.9	0	%100
78	MP3	Z	0	0 4 4	0	. 0
79	MP4	Z	-8.7	-8.7	0	<u>%100</u>
80	MP5	Z	-7.9	-7.9	0	%100
81	MP6	Z	-9.6	-9.6	0	%100
82	MP7	Z	-9.6	-9.6	0	%100
83	MP8	Z	0	0	0	0
84	MP9	Z	-8.4	-8.4	0	%100
85	MP10	Z	-8.4	-8,4	0	%100
86	MP11	Z	-8.7	-8.7	0	<u>%100</u>
87	MP12	Z	-8.7	-8.7	0	%100
88	MP13	Z	0	0	0	0
89	MP14	Z	-9.2	-9.2	0	%99.058
90	MP15	Z	-9.2	-9.2	0	%99.058

Member Distributed Loads (BLC 26: Wind on Ice (330 deg))

	Member Label	Direction	Start Magnitude[lb/ft	.End Magnitude[lb/ft	Start Location[in,%]	End Location[in,%]
1	FM1	X	3.6	3.6	0	0
2	FM2	X	3.6	3.6	0	0
3	FM3	X	0	0	0	0
4	GRATE1	X	3.1	3.1	0 _	0
5	GRATE2	X	3.1	3.1	0	0
6	GRATE3	Х	3,1	3.1	0	0
7	GRATE4	Х	3.1	3.1	0	0
8	GRATE5	X	3.1	3.1	0	.0
9	GRATE6	X	3.1	3.1	0	0
10	GRATE7	Х	3.1	3,1	0	0
11	GRATE8	X	3,1	3.1	0	0
12	GRATE9	X	3,1	3.1	0	0
13	GRATE10	Х	3.1	3.1	0	0
14	GRATE11	Х	3.1	3.1	0	0
15	GRATE12	Х	3.1	3.1	0	0
16	GRATE13	X	3.1	3.1	0	0
17	GRATE14	Х	3.1	3.1	0	0
18	GRATE15	X	3.1	3.1	0	0
19	GRATE16	Х	3.1	3.1	0	0
20	GRATE17	Х	3.1	3.1	0	0.
21	GRATE18	Х	3.1	3.1	0	0
22	PL-BOT-1	Х	7	7	0	0 -
23	PL-BOT-2	Х	7	7	0	0
24	PL-BOT-3	Х	0	0	0	0
25	SA-BOT-1	Х	4.4	4.4	0	0
26	SA-BOT-2	X	4.4	4.4	0	0
27	SA-BOT-3	Х	4.4	4.4	0	0
28	SA-TOP-1	Х	4.4	4.4	0	0
29	SA-TOP-2	Х	4.4	4.4	0	0



Company : ETS, PLLC Designer : BRL Job Number : 194467.14

Job Number : 194467.14 Model Name : 829046 - Weston/ Rt-57/ Norfield R Mount Analysis July 15, 2019 5:02 PM Checked By: JAA

Member Distributed Loads (BLC 26: Wind on Ice (330 deg)) (Continued)

	Member Label	Direction		.End Magnitude]lb/ft,		End Location[in.%]
30	SA-TOP-3	X	4.4	4.4	0	0
31	FM1	Z	-2.1	-2.1	0	0
32	FM2	Z	-2.1	-2.1	Ö	0
33	FM3	Z	0	0	0	Ö
34	GRATE1	Ž	-1.8	-1.8	Ŏ	Ŏ
35	GRATE2	Z	-1.8	-1.8	0	0
36	GRATE3	Ž	-1.8	-1.8	0	0
37	GRATE4	Z	-1.8	-1.8	0	0
38	GRATE5	Ž	-1.8	-1.8	0	Ö
39	GRATE6	Z	-1.8	-1.8	0	0
40	GRATE7	Z	-1.8	-1.8	0	0
41	GRATE8	Z	-1.8	-1.8	0	0
42	GRATE9	Z	-1.8	#1.8 #1.8	0	0
43	GRATE10	Z	-1.8 -1.8	-1.8	0	0
44	GRATE11	Z	~1.8	-1.8	0	0
45						
	GRATE12	<u>Z</u>	-1.8	-1.8	0	0
46 47	GRATE13 GRATE14	<u>Z</u>	-1.8	-1.8	0	0
48		Z	-1.8	-1.8	0	0
	GRATE15 GRATE16	Z	-1.8	-1.8	0	0
49		<u>Z</u>	-1.8	-1.8	0	0
50 51	GRATE17	<u>Z</u>	-1.8	-1.8	0 .	0
52	GRATE18	Z	-1.8	-1.8	0	0
	PL-BOT-1	Z	-4	-4	0	0
53	PL-BOT-2	7	-4	-4	0	0
54	PL-BOT-3	7	0	0	0	0
55	SA-BOT-1		-2.5	-2.5	0	0
56	SA-BOT-2	Z	-2.5	-2.5	0	0
57	SA-BOT-3	<u>Z</u>	-2.5	-2.5	0	0
58	SA-TOP-1	Z	-2.5	-2.5	0	0
59	SA-TOP-2	Z	-2.5	-2.5	0	0
60	SA-TOP-3	Z	-2.5	-2.5	0	0 0/100
61	MP1	X	9.3	9.3	0	%100 %100
62	MP2	X	8.2	8.2	0	%100
63	MP3	X	0	0	0	0 0
64	MP4	X	9.3	9.3	0	%100
65	MP5	X	8.2	8.2	0	%100 %100
66	MP6	X	9.3	9.3	0	%100 %100
67	MP7	X	9.3	9.3	0	%100
68	MP8	X	0	0	0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
69 70	MP9	X	8.2	8.2	0	%100 %100
70	MP10 MP11		8.2	8.2	0	%100 %100
		X	8.4	8.4	0	%100 %100
72	MP12 MP13	X X	8.4	8.4	0	%100
74	MP14		0 10.4	0 10.4	0	0 00 050
	MP15	X	10.4	10.4	0	%99.058 %00.058
75 76	MP1	Z	-5.4			%99.058 %100
77	MP2	Z		-5.4	0	%100 %100
78	MP3	Z	-4.8 0	<u>-4.8</u> 0	0	<u>%100</u>
79	MP4	Z	-5.4	-5.4		<u>0</u> %100
80	MP5	Z	-5.4 -4.8		0	
81		Z		<u>-4,8</u>	0	%100 %100
82	MP6 MP7	Z	-5.4	-5,4	0	%100 %100
83		Z	-5.4	-5.4	0	%100
	MP8		0 -4.8	0	0	0 9/100
84	MP9	Z Z		<u>-4.8</u>	0	%100 %100
85	MP10		-4.8	-4.8	0	%100 %100
86	<u>MP11</u>	<u>Z</u>	-4.8	-4.8	01	%100



: ETS, PLLC : BRL

194467.14 829046 - Weston/ Rt-57/ Norfield R Mount Analysis

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Member Distributed Loads (BLC 26: Wind on Ice (330 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,	End Magnitude[lb/ft,	Start Location[in,%]	End Location[in,%]
87	MP12	Z	-4.8	-4.8	0	%100
88	MP13	Z	0	0	0	. 0
89	MP14	Z	-6	-6	0	%99.058
90	MP15	Z	-6	-6	0	%99.058

Load Combinations

	Description	Solve	P	SR	BLC	Fac	BLC	Fac	.BLC	Fac	BLC	Fac	.BLC	Fac.	BLC	Fac	BLC	Fac	BLC	Fac	.BLC	Fac	BLC	Fac.
1	1.4D	Yes			1	1.4																		
	1.2D + 1.0W (0	Yes	Ŷ		1	1.2	2	- 1		:														
3	1.2D + 1.0W (30	Yes	Ý		1	1.2		1																
	1.2D + 1.0W (60				1	1.2		1												Ì				
5	1.2D + 1.0W (90	Yes	Ý		1	1.2	5	1												i				
6	1.2D + 1.0W (12	Yes	Ý		1	1.2		1				_				1				<u> </u>				
7	1.2D + 1.0W (15	Yes	Ý		1	1.2	7	1																
8	1.2D + 1.0W (18	Yes	Ý		1	1.2		1					1											T
	1.2D + 1.0W (21				1	1.2	9	1																
10	1.2D + 1.0W (24	Vec	Ÿ		1	1.2		1	ļ .				1.0					<u> </u>	<u> </u>					
11	1.2D + 1.0W (27	Vac	Ÿ	 	1	1.2		1					 								 			
12	1.2D + 1.0W (30	Vac	Ÿ		1	1.2		1					1		 								_	
13	1.2D + 1.0W (33	Vas	Ÿ		1	1.2		1							1									
	1.2D + Di + Wi (1	1.2		1	15	1			ì										1	
	1.2D + Di + Wi (1	1.2		1	16						-	ļ			 	 	H			
	1.2D + Di + Wi (-	1	1.2		1	17	1			 										_	<u> </u>
	1.2D + Di + Wi (1	1.2		1	18	1	<u> </u>				1				+				+-	_
17	1.2D + Di + Wi (Vec	Ţ		1	1.2		1		1	\vdash		1		 -								 	
					1				19	1	<u> </u>		 		 	 			+	-	1		\vdash	
	1.2D + Di + Wi (1.2D + Di + Wi (-	1	1.2		1	20 21		-		-	-	+		 	ļ 		<u> </u>			 	—
20	1.2D + Di + Wi (Yes	Y		<u> </u>	1.2		1_		1			1		+						1		-	
					1	1.2		1	22	1	<u> </u>		 			<u> </u>						-		
	1.2D + Di + Wi (1	1.2		1	23	1_				-		<u> </u>			\vdash		-		-	
	1.2D + DI + WI (1	1.2		1	24	1	 -		 							├─	 	-	-	
	1.2D + Di + Wi (1	1.2	14	1	25	1									ļ	-			-	
	1.2D + Di + Wi (ļ	1	1.2		1	26	1					ļ				 				-	
	1.2D + 1.0 Ev +				1	1.2	1	.048		.121			<u> </u>	<u> </u>	<u> </u>									<u> </u>
27	1,2D + 1,0 Ev +	Yes	Y	ļ	1	1.2	1			.121													<u> </u>	—
	1.2D + 1.0 Ev +				1	1.2	1			.121				<u> </u>	1				_	ļ <u> </u>			<u> </u>	<u> </u>
29	1.2D + 1.0 Ev +	Yes	Y		1	1.2	1			.121					-					ļ	ļ		_	<u> </u>
	1,2D + 1.0 Ev +				1_	1.2	1			.121	L									<u> </u>	<u> </u>		Щ.	ļ
31	1.2D + 1.0 Ev +	Yes	Υ		1	1.2	1			.121														
32	1.2D + 1.0 Ev +	Yes	Υ		1	1.2	1			.121									ļ					<u> </u>
33	1.2D + 1.0 Ev +	Yes	Υ		1_	1.2	1			.121						<u> </u>		ļ						<u> </u>
34	1.2D + 1.0 Ev +	Yes	Y	<u> </u>	1	1.2	1			.121					<u> </u>				<u> </u>	ļ <u> </u>		<u> </u>	\perp	<u> </u>
35_	1.2D + 1.0 Ev +	Yes	Υ		1	1.2	1			.121				ļ									<u> </u>	<u> </u>
36	1.2D + 1.0 Ev +	Yes	Ÿ		1_	1.2	1			.121		<u> </u>	ļ				٠.		1	<u> </u>				<u> </u>
37	1.2D + 1.0 Ev +	Yes	Υ		1_	1.2	1			.121						<u> </u>			<u> </u>	ļ			\perp	<u> </u>
38	1.2D + 1.5Lm1 +.	-Yes	Υ	-	1	1.2		1,5		.063		<u> </u>			ļ					ļ				<u> </u>
39	1.2D + 1.5Lm1 +.	Yes	Υ		1	1.2	39	1.5	3	.063					J				ļ				<u>L</u> .	<u> </u>
40	1.2D + 1.5Lm1 +.	Yes	Υ		1	1.2	39	1.5	4	.063												ļ		
41	1.2D + 1.5Lm1 +.	Yes	Υ		1	1.2	39		5	.063														
42	1.2D + 1.5Lm1 +.	Yes	Y		1	1.2			6	.063														
43	1.2D + 1.5Lm1 +.	Yes	Ý	T	1	1.2		1.5	7	.063														
	1.2D + 1.5Lm1 +.				1			1.5	_	.063														
	1.2D + 1.5Lm1 +.				1	1.2		1.5		.063					1			ĺ	T-					
46	1.2D + 1.5Lm1 +.	Yes	Ý		1					.063			1	-						ļ <u> —</u>				
47	1.2D + 1.5Lm1 +.	Yes	Ý	<u> </u>	1	1.2		1.5	11	.063														
	1.2D + 1.5Lm1 +.				1					.063									T		1			
-#Q	produce a complete to	A 1 C2		L			JUS	1.0	14	.000	1	1	i	<u>. </u>	<u> </u>	L	L	<u> </u>						<u> </u>



: ETS, PLLC : BRL : 194467.14 : 829046 - Weston/ Rt-57/ Norfield R Mount Analysis

July 15, 2019 5:02 PM Checked By: JAA

	Description	Solve	Р	SR	BLC:	Fac	BLC	Fac	BLC	Fac	BLC	Fac	BLC	Fac.	BLC	Fac.	BLC	Fac	.BL.C	Fac	BLC	Fac	BLC	Fac
49	1.2D + 1.5Lm1 +				1					.063														
	1.2D + 1.5Lm2 +.				1			1.5		.063						1				٠.				
	1.2D + 1.5Lm2 +.				1	1.2		1,5		.063														
52	1.2D + 1.5Lm2 +.	Yes	Υ		1			1,5		.063														
53	1,2D + 1.5Lm2 +.	Yes	Y		1			1,5		.063														
54	1.2D + 1.5Lm2 +	Yes	Y	1.	1	1.2																	Ŀ	
55	1,2D + 1.5Lm2 +.	Yes	Υ			1.2				.063											<u> </u>			
56	1.2D + 1.5Lm2 +.	Yes	Y	T						.063					•			, <u></u>						
57	1.2D + 1.5Lm2 +.	Yes	Υ		1	1.2	40	1,5	9	.063														
58	1.2D + 1.5Lm2 +.	Yes	Y							.063									<u> </u>	٠				
59 ľ	1.2D + 1.5Lm2 +.	Yes	Y		1	1.2	40	1.5	11	.063														
	1.2D + 1.5Lm2 +.									.063					-						<u> </u>			
	1.2D + 1.5Lm2 +.				1	1.2	40	1,5	13	.063														
62	1.2D + 1.5Lm3 +.	Yes	Y		1	1.2	41	1.5	2	.063										<u></u> .				
	1.2D + 1.5Lm3 +.				1	1,2	41	1.5	3	.063														
64	1.2D + 1.5Lm3 +	Yes	Y		1	1.2	41	1.5	4	.063														
	1.2D + 1.5Lm3 +				1	1.2		1.5		.063													\sqcup	
	1,2D + 1.5Lm3 +			<u> </u>	1	1.2				,063									<u> </u>				\sqcup	
	1.2D + 1.5Lm3 +.					1.2				.063											<u> </u>		\sqcup	
	1.2D + 1.5Lm3 +				1			1.5							<u> </u>			<u> </u>			-			
	1.2D + 1.5Lm3 +				1	1,2		1.5		.063									ļ. <u> </u>		-			
	1.2D + 1.5Lm3 +									.063					-					-				
	1.2D + 1.5Lm3 +				1_					.063											<u> </u>		-	
	1.2D + 1.5Lm3 +				1					.063										_	<u> </u>			
	1.2D + 1.5Lm3 +			\perp	1	1.2				.063											<u> </u>		\sqcup	
	1.2D + 1.5Lm4 +			<u> </u>	1	1.2				.063									ļ		<u> </u>		\sqcup	
	1.2D + 1.5Lm4 +				1			1.5		.063										ļ	₩.			
	1.2D + 1.5Lm4 +				1	1.2		1.5		.063									<u> </u>		-		ļļ	
	1.2D + 1.5Lm4 +				1	1.2				.063											-			
	1.2D + 1.5Lm4 +			\perp	1			1.5													-	. :		
	1.2D + 1.5Lm4 +				1			1.5		.063								<u>.</u>			-		\vdash \dashv	
	1.2D + 1.5Lm4 +				1			1.5		.063											ļ	<u> </u>	\vdash	
	1.2D + 1.5Lm4 +				1			1.5		.063									-		ļ <u> </u>			
	1,2D + 1,5Lm4 +			_						.063							-			ļ <u> </u>				
	1.2D + 1.5Lm4 +									.063										ļ			\vdash	
	1.2D + 1.5Lm4 +				1			1.5		.063			ļ —		<u> </u>				ļ	<u> </u>			 	
	1.2D + 1.5Lm4 +				1					.063					<u> </u>				 	-				-
	1.2D + 1.5Lm5 +				1			1.5		.063					1				├	-	1	ļ	\vdash	
	1.2D + 1.5Lm5 +				1			1.5		.063			$\vdash \vdash \mid$						\vdash		1.		 	Ÿ
	1.2D + 1.5Lm5 +				1			1.5		.063		-	-			-		<u> </u>	-	-			\vdash	
	1.2D + 1.5Lm5 +				1			1.5		.063							<u> </u>		-	 - -	+		\vdash	
	1.2D + 1.5Lm5 +					1.2				.063									<u> </u>		1	_	\vdash	
	1.2D + 1.5Lm5 +				1					.063										 	+		+	
	1.2D + 1.5Lm5 +				1					.063				•	-				-		1		╀─┤	
	1.2D + 1.5Lm5 +									.063							_		-		+		┼┼┤	
	1.2D + 1.5Lm5 +									.063					·	l			 					
	1.2D + 1.5Lm5 +				1	1.2	43	1.5	111	.063								<u> </u>				<u> </u>	┼┈┤	
	1.2D + 1.5Lm5 +				1	1.2	43	1.5	172	.063	-			<u> </u>	-		<u> </u>				+	\vdash		
	1.2D + 1.5Lm5 +				1	1.2	43	1.5	13	.063	ļ				-	_				-	\vdash	 	1	
	1.2D + 1.5Lm6 +				1	1.2	44	1.5	12	.063	-				<u> </u>	 			_	-	+-	<u> </u>	+-	
	1.2D + 1.5Lm6 +				1	1.2	44	1.5	3	.063					 	 					+			
	1.2D + 1.5Lm6 +				1	1.2	44	1.5	4	.063		_			1	<u> </u>		<u> </u>	\vdash	-	+	-	 - -	
	1.2D + 1.5Lm6 +									.063			\vdash			-	<u> </u>		-	-	-	-	 	
	1.2D + 1.5Lm6 +									.063		·					<u> </u>		\vdash		+	<u> </u>	┼┷┤	
	1.2D + 1.5Lm6 +				1			1.5					-						 	-	+	-	 	
	1.2D + 1.5Lm6 +				1					.063						-			-	-	+		 	
105	1.2D + 1.5L <u>m6 +</u>	∵+Yes	ΙY		1_	1.2	<u> </u>	1.5	19	.063	<u> </u>				<u> </u>	<u> </u>	<u></u>	<u> </u>	<u> </u>		<u> </u>	<u> </u>	<u> </u>	



: ETS, PLLC : BRL : 194467.14 : 829046 - Weston/ Rt-57/ Norfield R Mount Analysis

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	Description Se	alve	P	SR	BLC	Fac	BLC	Fac	BLC	Fac.	BLC	Fac	BLC	Fac.	BLC	Fac	BLC	Fac	.BLC	Fac	BLC	Fac	BLC	Fac
106	1.2D + 1.5Lm6 +Y			<u> </u>	1					.063									<u> </u>					
	1.2D + 1.5Lm6 +Y				1					.063									ļ					
	1.2D + 1.5Lm6 +Y				1			1.5		.063			٠.											
	1.2D + 1.5Lm6 +Y				1					.063							-							
	1.2D + 1.5Lm7 +Y				1			1.5		.063							_		-					
	1.2D + 1.5Lm7 +Y				1			1.5		.063						<u> </u>		_						
	1,2D + 1.5Lm7 +Y				1			1.5		.063							_							
	1.2D + 1.5Lm7 + Y				1			1.5		.063						-			 					
	 				1			1.5		.063				-		. * .			— —	-	<u> </u>			
	1.2D + 1.5Lm7 +Y 1.2D + 1.5Lm7 +Y						45	1.5	2	.063					1		<u> </u>				-	_		
					1	1.2														-	 			
	1.2D + 1.5Lm7 +Y			 .	1			1.5		.063									 	<u> </u>				
	1.2D + 1.5Lm7 +Y				1			1.5		.063										 	 			
	1.2D + 1.5Lm7 + Y				1					.063							<u> </u>		 					
	1.2D + 1.5Lm7 +Y									.063							<u> </u>		 					
	1.2D + 1.5Lm7 +Y			ļ <u> </u>				1.5									<u> </u>			<u> </u>	├─			
	1.2D + 1.5Lm7 +Y				1					.063						_	 			-	 			
	1.2D + 1.5Lm8 +Y				1			1.5		.063					-	<u> </u>	-			-	 			
	1.2D + 1.5Lm8 +Y							1.5		.063							ļ		-	<u> </u>				
	1.2D + 1.5Lm8 +Y			_				1.5		.063								ļ. <u>. </u>	 		<u> </u>			
	1.2D + 1.5Lm8 +Y				1	1.2	46	1.5	5	.063								_	<u> </u>		-		-	
	1.2D + 1.5Lm8 +Y							1.5		.063								-	-	-				•
	1.2D + 1.5Lm8 +Y							1.5		.063							-	<u> </u>		-				
	1.2D + 1.5Lm8 +Y			_	1			1.5											-		<u> </u>			
	1.2D + 1.5Lm8 +Y			<u> </u>	1_	1.2		1.5		.063									ļ.—		-			
	1.2D + 1.5Lm8 +Y			ļ						.063								ļ	<u> </u>		-			
	1.2D + 1.5Lm8 +Y							1.5							ļ				ļ		<u> </u>			
	1.2D + 1.5Lm8 +. \									.063					<u> </u>						ļ <u>.</u>			
	1.2D + 1.5Lm8 +Y				1					.063					ļ			<u> </u>	ļ <u>. </u>		<u> </u>			
	1.2D + 1.5Lm9 +							1.5		.063						ļ <u>.</u>			<u> </u>		<u> </u>			
	1.2D + 1.5Lm9 +\							1.5		.063									<u>.</u>		<u> </u>			
	1.2D + 1.5Lm9 +Y				1			1.5		.063							<u> </u>		<u> </u>	<u> </u>				
137	1.2D + 1.5Lm9 +\	'es	Y		1			1.5		,063														
	1.2D + 1.5Lm9 +\				1			1.5		.063								ļ <u> </u>						
	1,2D + 1.5Lm9 +Y				1			1.5		.063								<u> </u>		<u> </u>	<u> </u>			
140	1.2D + 1.5Lm9 +. \	'es	Y		1			1.5	8	.063							ļ <u>.</u>			<u> </u>				
	1.2D + 1.5Lm9 +\				1		47			.063							ļ				_			
	1.2D + 1.5Lm9 +\				1	1.2	47	1.5	10	.063									ļ		ļ <u> </u>			
	1.2D + 1.5Lm9 +\				1_	1.2		1.5		.063								<u> </u>						
	1.2D + 1.5Lm9 +\				1	1.2		1.5											<u> </u>					
145	1.2D + 1.5Lm9 +\	'es	Υ	ļ. <u></u>	1	1.2	47	1.5	13	.063										ļ	<u> </u>			
	1.2D + 1.5Lm10\				1			1.5		.063			<u> </u>	ļ <u>.</u>	<u> </u>	ļ <u>.</u>	ļ		<u> </u>					
	1.2D + 1.5Lm10				1			1.5		.063					<u> </u>	<u> </u>			<u> _ </u>		<u> </u>			
148	1.2D + 1.5Lm10	es'	Υ		1	1.2	48	1.5	4	.063														
149	1.2D + 1.5Lm10	'es	Υ		1	1.2	48	1.5	5	.063									<u> </u>					
	1.2D + 1.5Lm10				1					.063														
	1.2D + 1.5Lm10				1			1.5																
	1.2D + 1.5Lm10				1					.063									L	· _				
	1.2D + 1.5Lm10				1	1.2	48	1.5	9	.063														
	1.2D + 1.5Lm10				1	1.2	48	1.5	10	.063									-					
	1.2D + 1.5Lm10				1	1.2	48	1.5	111	.063														
	1.2D + 1.5Lm10			_	1	1.2	48	1.5	12	.063														
	1.2D + 1.5Lm10				1					.063														
	1.2D + 1.5Lm11\				1			1.5										L						
	1.2D + 1.5Lm11				1			1.5																
	1.2D + 1.5Lm11				1					.063														
	1.2D + 1.5Lm11				1					.063														
	1.2D + 1.5Lm11\				1					.063					İ							l	-	
102	THE TOTAL THE	US	<u></u>		<u> </u>	1.4	170	1.0	و ي		1		1		1		_	<u> </u>	<u> </u>			-		



: ETS, PLLC

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Description Solve	Þ	SR	BLC	Fac	BLC	Fac	BLC	Fac	BI C	Fac	BI C	Fac	BI C	Fac	BI C	Eac	BI C	Eac	DI C	Eac	DI C	Eac
163 1.2D + 1.5Lm11 Yes	Ÿ	011	1	1.2	49	1 5	7	.063		1 aţ	BLÇ	га <u>с</u>	BLU	rac	.DLC	raç	.BLC	rau	.DEC	rac	.DLC	rac
164 1.2D + 1.5Lm11 Yes				1.2															-			
165 1.2D + 1.5Lm11 Yes	┰	<u> </u>	1		49						-					-	 		 			
166 1.2D + 1.5Lm11 Yes	V		1					.063									├─					
167 1.2D + 1.5Lm11 Yes	t		1	1.2	49	1.5	10	.063	· ·					<u></u>					-			·
168 1.2D + 1.5Lm11 Yes	V		1										-						 			
169 1.2D + 1.5Lm11 Yes	V			1.2	40	1.5	12	.063		***							 					
170 1.2D + 1.5Lm12 Yes	I V	<u> </u>	1					.063									-			-		
171 1.2D + 1.5Lm12 Yes	V		1	1.2								7 4 4		<u> </u>			-					
172 1.2D + 1.5Lm12 Yes	Y	1.0	1_	1.2									-									
173 1.2D + 1.5Lm12 Yes			1	1.2	50	1.5	4											<u> </u>	-			
174 1.2D + 1.5Lm12 Yes	Y			1.2													ļ					
175 1.2D + 1.5Lm12 Yes		i	1					.063					-		-		 					
176 1.2D + 1.5Lm12 Yes			1					.063											ļ			
176 1.2D + 1.5Lm12 Yes	Y		1		50			.063														
177 1.2D + 1.5Lm12 Yes				1.2													<u> </u>					
178 1.2D + 1.5Lm12 Yes			1					.063														
179 1.2D + 1.5Lm12 Yes	Ϋ́		1	1.2	50	1.5	117	.063										<u> </u>				
180 1.2D + 1.5Lm12 Yes			1	1.2				.063								<u> </u>						
181 1.2D + 1.5Lm12 Yes								.063										<u> </u>				
182 1.2D + 1.5Lm13 Yes	Y		1	1.2				.063														•
183 1.2D + 1.5Lm13Yes			1	1.2	51	1.5		.063														
184 1.2D + 1.5Lm13 Yes			1	1.2		1.5																
185 1.2D + 1.5Lm13 Yes			1	1.2		1.5		.063														
186 1.2D + 1.5Lm13 Yes	X		1	1.2		1.5	6			-												
187 1.2D + 1.5Lm13 Yes			1	1.2		1.5		.063														
188 1.2D + 1.5Lm13 Yes	Y							.063	.													
189 1.2D + 1.5Lm13 Yes			1	1.2																		
190 1.2D + 1.5Lm13 Yes 191 1.2D + 1.5Lm13 Yes								.063														
192 1.2D + 1.5Lm13 Yes			1	1.2	51	1.5	11	.063														
193 1.2D + 1.5Lm13 Yes			1	1,2	51	1.5	12	.063														
194 1.2D + 1.5Lm14 Yes	V							.063														
195 1.2D + 1.5Lm14 Yes	I V		1	1.2	52	1.5	2	.063										·				
196 1.2D + 1.5Lm14 Yes	T			1.2	52	1.5	3	.063														
197 1.2D + 1.5Lm14 Yes	Y			1.2		1.5		.063	.													
198 1.2D + 1.5Lm14 Yes	V			1.2		1.5		.063														
199 1.2D + 1.5Lm14 Yes	V			<u>1.2</u> 1.2		1.5		.063														
200 1.2D + 1.5Lm14 Yes	V			1.2		1.5	7	.063														
201 1.2D + 1.5Lm14 Yes								.063			-											
202 1.2D + 1.5Lm14 Yes	Y		+	1.2		1.5	10	.063 .063							-							
203 1.2D + 1.5Lm14 Yes					52	1.5	10	.063			_					-			-			
204 1.2D + 1.5Lm14 Yes	₩							.063														
205 1.2D + 1.5Lm14 Yes	V							.063														
206 1.2D + 1.5Lm15 Yes								.063	-												-	
207 1.2D + 1.5Lm15 Yes			1	1.4	22	1.0 1.5	2	.063	-													
208 1.2D + 1.5Lm15 Yes								.063									-					
209 1.2D + 1.5Lm15 Yes	 \		1	1.4	53	1.5	<u>4</u>	.063			+											
210 1.2D + 1.5Lm15 Yes	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		1	1.2	52	1,5 1 5	8	.063	\dashv		-									.		
211 1.2D + 1.5Lm15 Yes								.063	-		-		-									
212 1.2D + 1.5Lm15 Yes		-	1	12	23	15	Q	.063	\dashv		\dashv											
213 1.2D + 1.5Lm15 Yes		-						.063	-	-	_		\dashv									
214 1.2D + 1.5Lm15 Yes	V		1	1.2	53	1.5	10	.063	-+		+		\dashv								-	
215 1.2D + 1.5Lm15 Yes		+						.063	\dashv		$\overline{}$										-	
216 1.2D + 1.5Lm15 Yes								.063	\dashv		$\overline{}$	-		-							\dashv	
217 1.2D + 1.5Lm15 Yes								.063	\dashv					-+								
218 1.2D + 1.5Lm16	Y	- 1						.063	\dashv		+										$\overline{}$	
219 1.2D + 1.5Lm16	Ÿ	-						.063	_	<u></u>	\dashv					-				Ħ		
			J	1.4	VΤ	1.0	Ų	.000						- 1								



: ETS, PLLC : BRL : 194467.14 : 829046 - Weston/ Rt-57/ Norfield R Mount Analysis

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Load Combinations				51.6	_	51.0		51.0		DI 0	_	51.0	_	DI 0	_	51.0	F	DI O	F	DI A	
Description Solve	P	SRBLC							Fac	BLC	Fac	BLC	<u> </u>	BLC	Fac	BLC	:⊢ac	BLC	rac	BLC	Fac
220 1,2D + 1,5Lm16	_		1.2				.063		·						<u> </u>			 			
221 1.2D + 1.5Lm16	Y	1	1.2	54	1.5	5	.063										ļ	├			
222 1.2D + 1.5Lm16	Υ		1.2								- '					ļ		ļ			
223 1.2D + 1.5Lm16	Y	1	1.2	54	1.5	7	.063										<u> </u>				
224 1.2D + 1.5Lm16	Y		1.2				.063									<u></u>		<u> </u>			
225 1.2D + 1.5Lm16	Y	1	1.2	54	1.5	9	.063														
226 1.2D + 1.5Lm16	Y	1	1.2	54	1.5	10	.063														
227 1.2D + 1.5Lm16	Y	1			1.5																
228 1.2D + 1.5Lm16	Ý	1					.063						-					Ī			
229 1.2D + 1.5Lm16	Ý	1					.063														
230 1.2D + 1.5Lm17	Ϋ́	1			1.5		.063														
231 1.2D + 1.5Lm17	Ϋ́	1	1.2				.063									<u> </u>		i –			
232 1.2D + 1.5Lm17	Ϋ́		1.2												-						
233 1.2D + 1.5Lm17	Ϋ́	1			1.5		.063									 	ļ.:—				
234 1.2D + 1.5Lm17	Ÿ	1			1.5													<u> </u>			
235 1.2D + 1.5Lm17	Y		1.2	55	1.5	7												<u> </u>			
		1					.063											-			
236 1.2D + 1.5Lm17	Y	1			1.5		.063									-	ļ <u>.</u>	-			
237 1.2D + 1.5Lm17	Y	1	1.2	55	1.5	9	.063									ļ.,		-			
238 1.2D + 1.5Lm17	Y	1					.063									<u> </u>	ļ		- 1		
239 1.2D + 1.5Lm17	Y		1.2													ļ. <u>.</u>	<u> </u>	ļ			
240 1.2D + 1.5Lm17	Y	1					.063								·						
241 1.2D + 1.5Lm17	ļΥ	1_	1.2																		
242 1.2D + 1.5Lm18	Y	1	1.2	56	1.5	2	.063										ļ	ļ			
243 1.2D + 1.5Lm18	Y	1	1.2	56	1.5	3	.063														
244 1.2D + 1.5Lm18	Y	1	1.2				.063														
245 1.2D + 1.5Lm18	Υ	1	1.2																[· · ·		
246 1.2D + 1.5Lm18	Y	1			1.5																
247 1.2D + 1.5Lm18	Ý	1			1.5		.063											ĺ .			
248 1.2D + 1.5Lm18	Ý	1			1.5												1	Ì			
249 1.2D + 1.5Lm18	Ý	1	1.2				.063										1	İ			
250 1.2D + 1.5Lm18	Ý						.063									 		İ			
251 1.2D + 1.5Lm18	Ϋ́	1			1.5													 			
252 1.2D + 1.5Lm18	Ý	1 1					.063														
253 1.2D + 1.5Lm18	Ý	1 1	1.2				,063									l					
254 1.2D + 1.5Lm19	Y		1.2				.063										 				-
255 1.2D + 1.5Lm19		1																 			
	Y	1	1.2		1.5		.063									 	 	-		-	
256 1.2D + 1.5Lm19	Y	1	1.2	57	1.5		.063									<u> </u>	 	-			$\overline{}$
257 1.2D + 1.5Lm19	Υ	1 1	1.2	57	1.5		.063					ļ					1				
258 1.2D + 1.5Lm19	Y	1	1.2											ļ				ļ			
259 1.2D + 1.5Lm19	Y	1	1.2		1.5		.063					<u> </u>						ļ			
260 1.2D + 1.5Lm19	Υ	1	1.2	57	1.5		.063		•			<u> </u>				ļ		<u> </u>			
261 1.2D + 1.5Lm19	Y	1					.063					ļ				<u> </u>		1			
262 1.2D + 1.5Lm19	Y	1					.063								<u> </u>	<u> </u>					
263 1.2D + 1.5Lm19	Υ	1	1.2	57	1.5	11	.063	L													
264 1.2D + 1.5Lm19	Y	1	1.2	57	1.5	12	.063														
265 1.2D + 1.5Lm19	Y						.063								<u></u>						
266 1.2D + 1.5Lm20	Y	1					.063														
267 1.2D + 1.5Lm20	Ý	1			1.5																
268 1.2D + 1.5Lm20	Ý	1	1.2	58	1.5	4	.063						, i								
269 1.2D + 1.5Lm20	Ý	1					.063									ļ <u> </u>		1			
270 1.2D + 1.5Lm20	Ϋ́	1					.063				 						''				\Box
271 1.2D + 1.5Lm20	Ϋ́	1			1.5								<u> </u>								
271 1.2D + 1.5Lm20	Ϋ́	1					.063									<u>├</u>		 			\neg
273 1.2D + 1.5Lm20	Ϋ́	1					.063					 				 					$\overline{}$
274 1.2D + 1.5Lm20		1 - 1 -														├	<u> </u>	-			
	Y	1					.063							<u> </u>		<u> </u>		-			
275 1.2D + 1.5Lm20	Y	1	1.2	28	1.5	117	.063					-				ļ	-	-			
276 1.2D + 1.5Lm20	Υ	<u> 1</u>	1.2	∣၁୪	1.5	12	.063			<u> </u>		<u> </u>	Ļ	<u> </u>		<u> </u>	<u> </u>	l			



ETS, PLLC

BRL 194467.14 829046 - Weston/ Rt-57/ Norfield R Mount Analysis

July 15, 2019 5:02 PM Checked By: JAA

Load Combinations	<u> </u>	manac	u)																		
Description Solve	Р	SRBL	Fac	BLC	Fac	BLC.	Fac	BLC:	Fac	BI C	Fac	BI C	Fac	BLC.	Fac	BL C	Fac	RI C	Fac	BLC.	Fac
277 1.2D + 1.5Lm20									1 40		<u> 1 au.,</u>	<u>.DLO</u>	1 40	<u> </u>	1 40	<u> </u>	ao		1 40		1 40
	Y						.063														
278 1.2D + 1.5Lm21	Υ	1					.063												-		
279 1.2D + 1.5Lm21	Υ	1	1.2	59	1.5	3	.063									ļ					
280 1.2D + 1.5Lm21	Ŷ	1			1.5		.063			· · · ·					-						
												-						 		-	
281 1.2D + 1.5Lm21	Υ	1		59			<u>.063</u>														
282 1.2D + 1.5Lm21	Y	1.	1.2	59	1.5	6	.063									}					
283 1.2D + 1.5Lm21	Υ	1	12	59	1.5	7	.063														
284 1.2D + 1.5Lm21	Ÿ	1			1.5		.063														
		 			1.5	0															
285 1.2D + 1.5Lm21	Y	1		59	1.5		.063														
286 1.2D + 1.5Lm21	ΙY	1	11.2	59.	1.5	10	.063				1	-	·				14.				
287 1.2D + 1.5Lm21	Y	1			1.5		.063														
288 1.2D + 1.5Lm21																					
	Y	1		59			,063														
289 1.2D + 1.5Lm21	Υ	1	1.2	59	1.5	13	,063														
290 1.2D + 1.5Lm22	Υ	1	12		1.5		.063														
291 1.2D + 1.5Lm22	Ÿ	1			1.5		,063														
		 														_					
292 1.2D + 1.5Lm22	Y	1	1.2	60	1.5	4	.063														
293 1.2D + 1.5Lm22	Y	1	1.2	60	1.5	5	.063					1									
294 1.2D + 1.5Lm22	Ý	1			1.5		.063														
295 1.2D + 1.5Lm22	Ý											l -									
		1			1.5		.063														
296 1.2D + 1.5Lm22	Υ	1	1.2		1.5		.063			·	:										
297 1.2D + 1.5Lm22	Υ	1	1.2		1.5		.063														
298 1.2D + 1.5Lm22	Ÿ	1	1.2				.063			-											•
								-	•	- 1											\longrightarrow
299 1.2D + 1.5Lm22	Υ	1	1.2		1.5		.063			1											
300 1.2D + 1.5Lm22	Y	1	1.2	60	1.5	12	.063			· ·											
301 1.2D + 1.5Lm22	Y	1			15	13	.063														
302 1.2D + 1.5Lm23	Ÿ	1									•										-
					1.5		.063														
303 1.2D + 1.5Lm23	Y	1		61	1.5	3	.063														
304 1.2D + 1.5Lm23	ΙY	1	1,2	61	1.5	4	.063													1	
305 1.2D + 1.5Lm23	Ŷ	1			1.5		.063														
																					
306 1.2D + 1.5Lm23	Υ	1		61	1.5		<u>.063</u>														
307 1.2D + 1.5Lm23	Υ	1	1.2	61	1.5	7	.063			- 1	1										
308 1.2D + 1.5Lm23	Υ	1		61	1.5	R	.063														
309 1.2D + 1.5Lm23	Ÿ																				
		1			1.5		.063	-													
310 1.2D + 1.5Lm23	Υ	1					.063							1							
311 1.2D + 1.5Lm23	Υ	1	1.2	61	1.5	11	.063														
312 1.2D + 1.5Lm23	Υ	1			1.5		.063														
																				-	
313 1.2D + 1.5Lm23	Υ	1	1.2	61			.063														
314 1.2D + 1.5Lm24	Υ	1	1.2	62	1.5	2	.063												-		
315 1.2D + 1.5Lm24	Ý	1	1.2	62		3	.063												-		
316 1.2D + 1.5Lm24	Ÿ	1			1.5		.063		- 1									-			-
								- 1				\vdash									
317 1.2D + 1.5Lm24	Υ	1			1.5		.063														
318 1.2D + 1.5Lm24	Υ	∟	1.2	62	1.5	6	.063														
319 1.2D + 1.5Lm24	Ý	1			1,5		.063														
320 1.2D + 1.5Lm24	····														-						
	Υ	1.					.063						•								
321 1.2D + 1.5Lm24	Y	1					.063]]]		
322 1.2D + 1.5Lm24	Y	1					.063														
323 1.2D + 1.5Lm24	Ÿ	1	1 2	62	1 5	11	.063												- 1		
		H - 1 - 1	1.4	02	1,0		.003														
324 1.2D + 1.5Lm24	Υ	1					.063														
325 1.2D + 1.5Lm24	Y	1	1.2	62	1.5	13	.063	ł							- 1					1	
326 1.2D + 1.5Lm25	Υ	1			1.5		.063											1			
327 1.2D + 1.5Lm25														•							
	Υ	1			1.5		.063														
328 1.2D + 1.5Lm25	Y	1			1.5		<u>.063</u>														
329 1.2D + 1.5Lm25	Υ	1	1.2	63	1.5	5	.063														
330 1.2D + 1.5Lm25	Ÿ	1	10	62	1.5	6	.063														
												$\vdash \vdash \mid$									
331 1.2D + 1.5Lm25	Υ	1			1.5		.063														
332 1.2D + 1.5Lm25	Y	1	11.2	63	1.5	8	.063					.		١		j					
333 1.2D + 1.5Lm25	Ŷ	1					.063					Πİ								-	
	<u> </u>		1.6	, 00	1.0	. J									1						



: ETS, PLLC : BRL : 194467.14 : 829046 - Weston/ Rt-57/ Norfield R Mount Analysis

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Luad Cumbinations		munu	Çu	<u>'/</u>																		
Description Solve	P.	SRBL	C.F	ac	BLC	Fac	BLC	Fac	BLC	Fac	BLC	Fac.	BLC	Fac.	BLC	Fac	BLC	Fac	BLC	Fac	BLC	Fac
334 1.2D + 1.5Lm25	Υ							.063		I		<u> </u>			Ϊ		<u> </u>	1 4011		<u> </u>		
										····		- 1		_	 			_	-			
335 1.2D + 1.5Lm25	Y							.063							<u> </u>	ļ	<u> </u>		<u> </u>			
336 1.2D + 1.5Lm25	Υ							.063			1.											
337 1.2D + 1.5Lm25	Y	1		1.2	63	1.5	13	.063	,							1						
338 1.2D + 1.5Lm26	Ÿ	1		12	64	1.5	2	.063						Ì							1.	
														 	 				1.0			
339 1.2D + 1.5Lm26	Y	1				1.5		.063						ļ	<u> </u>			<u> </u>				
340 1.2D + 1.5Lm26	Y			<u>1.2</u>	64	1.5	4	.063														
341 1.2D + 1.5Lm26	l Y	1		1.2	64	1.5	5	.063								1						ł
342 1.2D + 1.5Lm26	Ÿ	1		12	84	1.5	6	.063														
															 	ļ						
343 1.2D + 1.5Lm26	Y	1				1.5		.063						ļ	ļ							
344 1.2D + 1.5Lm26	Υ	1		1.2	64	1.5	8	.063								ļ						
345 1.2D + 1.5Lm26	Υ	1				1.5		.063						I -								
346 1.2D + 1.5Lm26	Ÿ																					
		1						.063		-				ļ .			<u> </u>	 	_			
347 1.2D + 1.5Lm26	Y	1				1.5		.063														
348 1.2D + 1.5Lm26	Y	1 1		1.2	64	1.5	12	.063		ļ												
349 1.2D + 1.5Lm26	Y	1						.063						T								
350 1.2D + 1.5Lm27	Ÿ	11				1.5								·				 				
			+	1.4	00	1.5	 _						_	 		-						
351 1.2D + 1.5Lm27	Υ	1				1.5		.063							<u> </u>		<u> </u>					
352 1.2D + 1.5Lm27	Y	1		1.2	65	1.5	4	.063						-			L.					
353 1.2D + 1.5Lm27	Ŷ	1				1.5		.063														
354 1.2D + 1.5Lm27											-											
	Y	1				1.5		.063						<u> </u>	ļ.,,				<u> </u>			
355 1.2D + 1.5Lm27	Y	1				1.5		.063														
356 1.2D + 1.5Lm27	lΥ	1		1.2	65	1.5	8	.063														
357 1.2D + 1.5Lm27	Ŷ	1				1,5	a	.063														
358 1.2D + 1.5Lm27	Ϋ́													 								
								.063						ļ							_	
359 1.2D + 1.5Lm27	Υ	1				1.5		.063						ļ								
360 1.2D + 1.5Lm27 .	Y	1		1.2	65	1.5	12	.063									1					
361 1.2D + 1.5Lm27	Ý	1				1.5		.063						i –					Ì			
362 1.2D + 1.5Lm28																						
	Υ	1				1.5		.063						ļ								
363 1.2D + 1.5Lm28	Y	1		<u>1.2</u>	66	1.5	3	.063						l					lder			
364 1.2D + 1.5Lm28	Y	1				1.5		.063								i .						
365 1.2D + 1.5Lm28	Ŷ	1				1.5		.063						i		i	$\overline{}$					
														 								
366 1.2D + 1.5Lm28	Y	1		<u>1.2</u>		1.5		.063						<u> </u>								
367 1.2D + 1.5Lm28	Y	1		1.2	66	1.5	7	.063														
368 1.2D + 1.5Lm28	Υ	1			66	1.5		.063														
369 1.2D + 1.5Lm28	Ÿ	1				1.5		.063														$\overline{}$
														l .			<u></u>					
370 1.2D + 1.5Lm28	Y	1				1.5		.063						ļ <u> </u>								
371 1.2D + 1.5Lm28	Y	1	- 1 '	1,2	66	1.5	11	.063														
372 1.2D + 1.5Lm28	Υ	1	- [1.2	66	1.5	12	.063														
373 1.2D + 1.5Lm28	Ÿ	1						.063														\neg
														-			-					
374 1.2D + 1.5Lm29	Y	1		<u>1.2</u>	0/	1.5	12	.063								3.5	_					
375 1.2D + 1.5Lm29	Υ	1		1.2	67	1.5	3	.063														
376 1.2D + 1.5Lm29	Υ	1				1.5		.063													']	
377 1.2D + 1.5Lm29	Ŷ	1				1.5		.063						T .			l					
		1 -											-				<u> </u>					
378 1.2D + 1.5Lm29	Y	1		1.2	0/	1.5	D	.063							 		<u> </u>					
379 1.2D + 1.5Lm29	Υ	1	_ [<u>1.2</u>	67	1.5	7	.063									<u> </u>	<u> </u>	L			
380 1.2D + 1.5Lm29	Υ	1				1.5		.063	-									-]	
381 1.2D + 1.5Lm29	Ÿ	1				1.5											İ					
														 			<u> </u>					
382 1.2D + 1.5Lm29	Υ	1						.063									-	<u> </u>			ļ	
383 1.2D + 1.5Lm29	Υ	1		<u>1.2</u>	67	1.5	11	.063														
384 1.2D + 1.5Lm29	Y	1						.063							-							
385 1.2D + 1.5Lm29	Ý	1						.063									Г	l				$\neg \neg$
		· 1															l	 				
386 1.2D + 1.5Lm30	Υ	1				1.5		.063			-		<u> </u>	-	ļ <u>-</u>						-	
387 1.2D + 1.5Lm30	Υ			<u>1.2</u>	68	1.5	3	.063									<u>L</u> .					
388 1.2D + 1.5Lm30	Υ	1				1.5		.063									-					
389 1.2D + 1.5Lm30	Ÿ	1				1.5		.063						\vdash			l	İ				
													<u> </u>	-			 	<u> </u>				
390 1.2D + 1.5Lm30	Υ	1	- 1	1.2	108	1.5	6	.063	L	L			L	1	<u> </u>		L					



: ETS, PLLC : BRL : 194467.14 : 829046 - Weston/ Rt-57/ Norfield R Mount Analysis

July 15, 2019 5:02 PM Checked By: JAA

Description Cal		CD D		DI C		DIC		DI C		DI C	F	DI C	C	DI C	Гоо	DI C	Гоо	DI C	Enc	DI C	Eas
Description Sol									rac	BLC	<u>rac</u>	BLU	rac	BLC	rac.,	BLU	rac	DLU	<u>rac</u>	PLC	rac
	<u> </u>			2 68																 	
392 1.2D + 1.5Lm30	Y			2 68					1.11			<u> </u>								\vdash	
393 1.2D + 1.5Lm30	Y			2 68							ļ									-	
394 1.2D + 1.5Lm30	Y			2 68																\vdash	
395 1.2D + 1.5Lm30	Y	'		2 68												<u> </u>				$oxed{oxed}$	
396 1.2D + 1.5Lm30	Y	'	l 1.	2 68	1.5	12	.063									l					
397 1.2D + 1.5Lm30	Y	1	1 1.	2 68	1.5	13	.063														
398 1.2D + 1.5Lm31	Ý			2 69																	
399 1.2D + 1.5Lm31	Ý			2 69																	
400 1.2D + 1.5Lm31	Ý			2 69								1			٠.				-		
401 1.2D + 1.5Lm31	Ϋ́	·		2 69														<u> </u>			
402 1.2D + 1.5Lm31	Ϋ́			2 69							ļ -					<u> </u>	-				
													ļ <u> —</u>							\vdash	
403 1.2D + 1.5Lm31	Y			2 69								-		_		ļ				 	
404 1.2D + 1.5Lm31	Y			2 69			.063					-				1				\vdash	
405 1.2D + 1.5Lm31	Y			2 69														ļ			
406 1.2D + 1.5Lm31	_ Y			2 69								<u></u>								\vdash	
407 1.2D + 1.5Lm31	Y			2 69												ļ				\sqcup	
408 1.2D + 1.5Lm31	Y			2 69									<u> </u>				<u> </u>				
409 1.2D + 1.5Lm31	Y		<u> 1.</u>	2 69	1.5	13	.063				<u>_</u>					1					
410 1.2D + 1.5Lm32	Ý			2 70																Ŀ_Ī	
411 1.2D + 1.5Lm32	Ý	1		2 70								T									
412 1.2D + 1.5Lm32	Τ̈́Υ			2 70								1								7	
413 1.2D + 1.5Lm32	Τ̈́Υ			2 70																	
414 1.2D + 1.5Lm32	Ϋ́			2 70								-				<u> </u>					
415 1.2D + 1.5Lm32	Τ̈́Υ			2 70								-				 					
416 1.2D + 1.5Lm32			1 1.	2 70	1.5	0						-				├─					
	Y											-				ļ					
417 1.2D + 1.5Lm32	Y			2 70								-				<u> </u>				\vdash	
418 1.2D + 1.5Lm32	Y			2 70								ļ								\vdash	
419 1.2D + 1.5Lm32	Y			<u>2 70</u>												<u> </u>					
420 1.2D + 1.5Lm32	Y			2 70								1	<u> </u>				ļ			<u> </u>	
421 1.2D + 1.5Lm32	Y	1 1	<u> 1.</u>	2 70	1.5	13	.063						<u></u>								
422 1.2D + 1.5Lm33	Y	1	L 1 .	2 71	1.5	2	.063														
423 1.2D + 1.5Lm33	Y	'	l 1.	2 71	1.5	3	.063														
424 1.2D + 1.5Lm33	Y	1		2 71	1.5	4	,063														
425 1.2D + 1.5Lm33	Ý			2 71	1.5																
426 1.2D + 1.5Lm33	Y			2 71	1.5																
427 1.2D + 1.5Lm33	Ÿ				1.5	7	.063														
428 1.2D + 1.5Lm33	Ϋ́	1		2 71	1.5	+ <i>'</i>								_							
429 1.2D + 1.5Lm33	Y	·		2 71																	
					1.5																
430 1.2D + 1.5Lm33	Y				1.5		.063				1		 		ļ. <u></u>	 			-	$\vdash\vdash$	
431 1.2D + 1.5Lm33	Y			2 71	1.5	11										 				\vdash	
432 1.2D + 1.5Lm33	Y		<u> 1.</u>	2 71	1.5	12	.063				<u> </u>	-				<u> </u>				\vdash	
433 1.2D + 1.5Lm33	Y		<u> 1.</u>	2 71	1.5	13	.063				ļ	ļ								 	
434 1.2D + 1.5Lm34	Y	1 1	<u> 1.</u>	2 72	1.5	2	.063				<u> </u>		<u> </u>				· .				
435 1.2D + 1.5Lm34	Υ	'	<u> 1.</u>	2 72	1.5	3	.063				<u> </u>									Ш	
436 1.2D + 1.5Lm34	Υ		1 1.	2 72	1.5	4	.063							<u> </u>							
437 1.2D + 1.5Lm34	Ý	·		2 72																LT	
438 1.2D + 1.5Lm34	Τ̈́Υ			2 72																	
439 1.2D + 1.5Lm34	Ý		1 1.	2 72	15	7	063					T .									
440 1.2D + 1.5Lm34	Ϋ́		<u>. 1.</u>	2 72	15	Ŕ	063									†	-				
441 1.2D + 1.5Lm34	Y			2 72												Η-				\Box	
			1 L	2 70	1.0	10	063			-		 		 							-
442 1.2D + 1.5Lm34	_ Y		1 1.	2 72	1.5	10	.003	-	ļ			-		_			-	 		\vdash	
443 1.2D + 1.5Lm34	Y		<u>ı 1.</u>	2 72	1.5	117	.063		-	ļ	<u> </u>	-		 		-	-	-		$\vdash\vdash$	
444 1.2D + 1.5Lm34	Y			2 72					ļ	<u> </u>	<u> </u>	<u> </u>				1	ļ <u>-</u>	<u> </u>		$\vdash \vdash$	
445 1.2D + 1.5Lm34	Y		<u>1 1,</u>	2 72	1.5	13	.063		ļ	<u> </u>		ļ				<u> </u>		ļ <u> </u>		\vdash	
446 1.2D + 1.5Lm35	Y		<u>1 1,</u>	2 73	1.5	2	.063		<u> </u>	<u> </u>	L	ļ:				ļ				\square	
447 1.2D + 1.5Lm35	Υ	T·	1 1.	2 73	1.5	3	.063														
										_	_					_		_		_=	



Company : ETS, PLLC
Designer : BRL
Job Number : 194467.14
Model Name : 829046 - W

er : 194467.14 ne : 829046 - Weston/ Rt-57/ Norfield R Mount Analysis July 15, 2019 5:02 PM Checked By: JAA

LOAG COMBINATION	100	munucu																		
Description S	Solve P	SRBLCE	ac. BLC	Fac.	BLC	Facl	BLC	Fac	BLC	Fac	.BLC	Fac	BLC	Fac	.BLC	Fac	BLC	Fac	BLC	Fac
448 1.2D + 1.5Lm35	Υ		1.2 73											<u> </u>						
449 1.2D + 1.5Lm35	Ý		1.2 73																	
														····			_			
450 1.2D + 1.5Lm35	Y		1.2 73									1.		:			- -		<u></u>	
451 1.2D + 1.5Lm35	Y		<u> 1.2 73</u>	1.5	<u> 7</u>	.063													\longrightarrow	
452 1.2D + 1.5Lm35	' Y	1	<u>1.2 73</u>	1.5	8	.063													· ·	
453 1.2D + 1.5Lm35	Ý		1.2 73																ıl	
454 1.2D + 1.5Lm35	Ý		1.2 73				•													
455 1.2D + 1.5Lm35	Y		1.2 73	1.5	111	.003									-					
456 1.2D + 1.5Lm35	Y		<u>1.2 73</u>														<u> </u>			
457 1.2D + 1.5Lm35	Y	1 1 1	<u>1.2 73</u>	1.5	13	.063													<u> </u>	
458 1.2D + 1.5Lm36	Y	1	1.2 74	1.5	2	.063													ı]
459 1.2D + 1.5Lm36	Ý		1.2 74										-							
460 1.2D + 1.5Lm36																				
	Y		1.2 74																$\overline{}$	
461 1.2D + 1.5Lm36	Y		1.2 74																⊢	
462 1.2D + 1.5Lm36	Ý	1	<u>1.2 74</u>	1.5	6	.063													\perp	
463 1.2D + 1.5Lm36	Y	11	1.2 74	1.5	7	.063					1								, 1	
464 1.2D + 1.5Lm36	Ý		1.2 74								•				T .					
465 1.2D + 1.5Lm36	Ý		1.2 74	1.5	<u> </u>	.063					 				1					
															-				\vdash	
466 1.2D + 1.5Lm36			1.2 74								L					<u> </u>				
467 1.2D + 1.5Lm36	<u> Y</u>		1.2 74			.063					<u>.</u>				<u> </u>					
468 1.2D + 1.5Lm36	Y		1.2 74			.063			l			<u>L</u> .	L							
469 1.2D + 1.5Lm36	Y		1.2 74																	
470 1.2D + 1.5Lv (P)			1.2 75			.000														
																			\vdash	
471 1.2D + 1.5Lv (P \			1.2 76								ļ						-	-		
472 1.2D + 1.5Lv (P	Yes Y	1	<u> 1.2 77</u>	1.5															\vdash	
473 1.2D + 1.5Lv (P	Yes Y	1	1.2 78	1.5																
474 1.2D + 1.5Lv (P \			1.2 79																	
475 1.2D + 1.5Lv (P			1.2 80		1															
											 			-	┢				\vdash	
476 1.2D + 1.5Lv (P \			<u>1.2 81</u>								 			<u> </u>	 	<u> </u>			\vdash	
477 1.2D + 1.5Lv (P \			<u>1,2 82</u>								ļ				<u> </u>					
478 1.2D + 1.5Lv (P	Yes Y	1	1.2 83	1.5															\sqcup	
479 1.2D + 1.5Lv (P \	Yes Y		1.2 84																	
480 1.2D + 1.5Lv (P			1.2 85																	
						1												···		
481 1.2D + 1.5Lv (P)			1.2 86				-				-				-				\vdash	
482 1.2D + 1.5Lv (P \			1.2 87			<u> </u>					<u> </u>				-				\vdash	
483 1.2D + 1.5Lv (P	Yes Y		1.2 <u>88</u>								<u> </u>				<u> </u>					
484 1.2D + 1.5Lv (P	Yes Y	1 1	<u>1.2 89</u>	1.5		1 1														
485 1.2D + 1.5Lv (P)			1.2 90																	
486 1.2D + 1.5Lv (P			1.2 91																	
															-		 			
487 1.2D + 1.5Lv (P)			<u>1.2 92</u>										 		-	-	ļ <u> </u>	 	\vdash	
488 1.2D + 1.5Lv (P \			1.2 93			<u> </u>						<u> </u>				<u> </u>	-	<u> </u>	\vdash	ļ
489 1.2D + 1.5Lv (P	Yes Y		1.2 94														<u> </u>		\sqcup	
490 1.2D + 1.5Lv (P '			1.2 95											İ ¯			L	L		
491 1.2D + 1.5Lv (P '			1.2 96																	
									· ·							İ				
492 1.2D + 1.5Lv (P)			1.2 97						 				\vdash	 	1	<u> </u>		-	\vdash	
493 1.2D + 1.5Lv (P '			1.2 98			ļ			<u> </u>					<u> </u>	 	-	 	<u> </u>		
494 1.2D + 1.5Lv (P			1.2 99			$oxed{oxed}$			ļ					<u> </u>	<u> </u>	ļ			\sqcup	
495 1.2D + 1.5Lv (P '	Yes Y		1.2 100						L			<u> </u>	L		$oxed{oxed}$					
496 1.2D + 1.5Lv (P			1.2 101													-				
497 1.2D + 1.5Lv (P	Y	1	1.2 102	1 5	1		· ·				<u> </u>	ĺ		i –	1					
						1	-	1		 -	 	-	-		1		 		\vdash	
498 1.2D + 1.5Lv (P	Y		1.2 103						ļ	<u> </u>	 			<u> </u>		 	-	-		
499 1.2D + 1.5Lv (P	Y		1.2 104			<u> </u>					<u> </u>	ļ <u>.</u>			ļ			ļ	<u> </u>	
500 1.2D + 1.5Lv (P	Y	1 1	1.2 105	1.5		" 7	.				1					L_	L_			
501 1.2D + 1.5Lv (P	Ý		1.2 106																	
502 1.2D + 1.5Lv (P			1.2 107											-	 				\vdash	
	Y					+-					1	_			1		+		\vdash	
503 1.2D + 1.5Lv (P	Y		1.2 108			\vdash					.				ļ		-		-	
504 1.2D + 1.5Lv (P	Y	1 1	1.2 109	1.5						L	<u> </u>		<u>L</u>			L		<u></u>		
										-										



: ETS, PLLC : BRL : 194467.14 : 829046 - Weston/ Rt-57/ Norfield R Mount Analysis

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Load Combination	3 00	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	uc	<i></i>																		
Description So	lua D	QD.	BI C	Fac	BI C	Fac	BI C	Fac	BI C	Fac	BI C	Fac	BL C	Fac	BLC.	Fac	RLC.	Fac	BL C	Fac	BLC.	Fac
505 1.2D + 1.5Lv (P								1 ac	کیں۔	ı aç	i I	1 aç	DLO	l ac	<u> </u>	1 40	<u></u>	1 ac		1 40		1 2.0
	<u> </u>			1.2	110	1.0	-														\vdash	
506 1.2D + 1.5Lv (P	Y		1		111																	
507 1.2D + 1.5Lv (P	Y		1	1.2	112	1.5																
508 1.2D + 1.5Lv (P	Ý		1		113																	
509 1.2D + 1.5Lv (P		·			114												 ` ` 					
	Y	-	1																		$\vdash \vdash$	
510 1.2D + 1.5Lv (P	Y		1	1.2	115	1.5						1.1			<u> </u>							
511 1.2D + 1.5Lv (P	Y		1	1.2	116	1.5											1					
512 1.2D + 1.5Lv (P	Y		1		117																	
513 1.2D + 1.5Lv (P	Ý	1	1		118																	
		 															-				\vdash	
514 1.2D + 1.5Lv (P	Y		1	1.2	119	1.5	4								<u> </u>						$oxed{oxed}$	
515 1.2D + 1.5Lv (P	Y		1	1.2	120	1.5																
516 1.2D + 1.5Lv (P)	Y		1	1.2	121	1.5																
517 1.2D + 1.5Lv (P	Ý		1		122												[
518 1.2D + 1.5Lv (P	Ÿ	1	1		123																一	
		1	-												<u> </u>				-			
519 1.2D + 1.5Lv (P	Y		_1_		124												<u> </u>				\vdash	
520 1.2D + 1.5Lv (P	Y	\perp	1		125						<u> </u>								<u> </u>			
521 1.2D + 1.5Lv (P	Y] [1	1.2	126	1.5	1					L			L		L					
522 1.2D + 1.5Lv (P	Y		1		127																	
523 1.2D + 1.5Lv (P	Ý		1		128																	一
		1		4.5	129	4 ~	+					-					-		-		\vdash	
524 1.2D + 1.5Lv (P	Y		1						 								\vdash				\vdash	-
525 1.2D + 1.5Lv (P	Y		1		130										<u> </u>		<u> </u>				\square	
526 1.2D + 1.5Lv (P	· Y	<u> </u>	1		131				-		<u> </u>	L		<u> </u>	L				L.,			
527 1.2D + 1.5Lv (P	Ý		1		132																ıΠ	
528 1.2D + 1.5Lv (P)	Ý		1		133								i		$\overline{}$		İ					
529 1.2D + 1.5Lv (P		1											 									
	Y		1		134								 								├ ──┤	
530 1.2D + 1.5Lv (P	Y		1_		135								<u> </u>									
531 1.2D + 1.5Lv (P)	Y		1	1.2	136	1.5																
532 1.2D + 1.5Lv (P	Y		1	1.2	137	1.5																
533 1.2D + 1.5Lv (P	Ý		1		138														-			
														l								
534 1.2D + 1.5Lv (P	Y		_1_		139								ļ		_		 				\vdash	
535 1.2D + 1.5Lv (P	Y		1_		140																	
536 1.2D + 1.5Lv (P	Y		1	1.2	141	1.5																
537 1.2D + 1.5Lv (P	Y		1	1.2	142	1.5] :					
538 1.2D + 1.5Lv (P	Ý		1		143																	
539 1.2D + 1.5Lv (P	Ÿ	1			144												-				\Box	
		-	1											-							\vdash	
540 1.2D + 1.5Lv (P	Y		1		145								<u> </u>								\vdash	
541 1.2D + 1.5Lv (P	Y		1		146				<u> </u>													
542 1.2D + 1.5Lv (P	Y		1	1.2	147	1.5]
543 1.2D + 1.5Lv (P	Ÿ	1	1		148																	
544 1.2D + 1.5Lv (P	Ý	1	1		149																	
				1.4	150	1.0	+		<u> </u>	·	<u> </u>		-								\vdash	
545 1.2D + 1.5Lv (P	Y		1	1.2	150	1.5	-		\vdash				-						ļ		\vdash	
546 1.2D + 1.5Lv (P	Y		1	1.2																		
547 1.2D + 1.5Lv (P	Y	1	1		152							L		L	L	L						
548 1.2D + 1.5Lv (P	Ý		1		153																	
549 1.2D + 1.5Lv (P	Ϋ́		1		154									i								
	Y	+	1							<u>.</u>							H					
550 1.2D + 1.5Lv (P		1 -	1		155														-	<u> </u>	 	
551 1.2D + 1.5Lv (P	Y		1	1.2	156	1.5	<u> </u>						ļ									
552 1.2D + 1.5Lv (P	Y	<u> </u>	1	1.2													<u> </u>					
553 1.2D + 1.5Lv (P	Y		1		158																ı –Ţ	
554 1.2D + 1.5Lv (P	Ÿ		1		159																ı	
555 1.2D + 1.5Lv (P	Ý		1	1.2																	\Box	
															-		\vdash		\vdash		 	-
556 1.2D + 1.5Lv (P	<u> Y</u>		1		161							<u> </u>			ļ <u>.</u>					-		
557 1.2D + 1.5Lv (P	Y		1		162																$\sqcup \sqcup$	
558 1.2D + 1.5Lv (P	Υ		1	1.2	163	1.5		<u> </u>					:				<u> </u>		<u>L</u> .			
559 1.2D + 1.5Lv (P	Y		1		164																	
560 1.2D + 1.5Lv (P	Ý		1		165												1					
	1	+															 				\vdash	
561 1.2D + 1.5Lv (P	Y		1	1.2	166	1.5		<u> </u>			نــــــــــــــــــــــــــــــــــــــ	L	L		L	L	J				ш	



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: 829046 - Weston/ Rt-57/ Norfield R Mount Analysis

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Load Combinations (Continued)

	Description	Solve P	SR.	BLC	Fac.	.BLC	Fac	.BLC	Fac	BLC	Fac	.BLC	Fac	BLC	Fac	BLC	Fac	.BLC	Fac	BLC	Fac	<u>BLC</u>	<u>Fac</u>
562	1.2D + 1.5Lv (P	Y		1	1.2	167	1.5			L					1			<u> </u>				Ĺ	
563	1.2D + 1.5Lv (P	Y		1	1.2	168	1.5			L							<u></u>			<u> </u>		L	
	1.2D + 1.5Lv (P			1	1.2	169	1.5													<u> </u>			
565	1.2D + 1.5Lv (P	Y		1	1.2	170	1.5													1			
566	1.2D + 1.5Lv (P	Υ-		1	1.2	171	1.5			·							<u> </u>						<u> </u>
567	1.2D + 1.5Lv (P	Y		1	1.2	172	1.5											<u></u>				ļ	
568	1.2D + 1.5Lv (P	Y		1	1.2	173	1.5											<u> </u>		ļ			
569	1.2D + 1.5Lv (P	Ÿ		1	1.2	174	1.5											L.	<u></u>			<u>. </u>	

Envelope Joint Reactions

	Joint		X [lb]	LC.	Y (lb)	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
1	N258A	max	-3309.97	7	2810.085	18	26757,948	24	-375.644	12	883.855	8	<u>-190.857</u>	157
2		min	-15448.392	25	831.703	12	6231.218	6	-5818.07	18	-839. <u>546</u>	2	<u>-3376.235</u>	
3	N259A	max	-3594.648	9	2768.265	22	-6433.667	10	5555.1	22	770,54	13	-322.809	160
4			-15323.894	15	893,991	184	-26683.285	16	710.905	4	-725,975	7	-3236,573	22
5	N257A		30686.261	20	2717.692	14	843.647	11	198.053	107	739.297	5	6128.474	14
6		min	7212.255	2	861.879	8	-758.904	5	-176.865	5	-822.568	11	591.174	8
7	Totals:	max	5007.667	8	8216.908	14	4783.223	11						
8	•	min	-5007,663	2	2997.059	8	-4783.225	5		<u> </u>				

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

	Member	Shape	Code Check		LC	Shear Ch	.Lo	Dir J	C phi*Pn.	.phi*P	phi*M	phi*M	Cb Eqn
1	GRATE7	L1.5x2.5x4	.994	41.264	18	.087	13	Z	20 12929	30375	469.106	15281	1 <u>H2-1</u>
2	GRATE1	L1.5x2.5x4	.994	41.263	14	.088	13		16 12929				
3	GRATE18	L1.5x2.5x4	.991	0	22	.074	13		21 12929				
4	GRATE6	L1.5x2.5x4	.984	0	14	.073	13		25 12928				
5	GRATE13	L1.5x2.5x4	.97 <u>4</u>	41.264	22	.086	13		24 12928				
6	GRATE12	L1.5x2.5x4	.965	0	18	.073	13		17 12928				
7	SA-BOT-2	HSS3X3X6	.771	0	19	.397	24		19 12995				
8	SA-BOT-3	HSS3X3X6	748	0	21	388	24		<u>21</u> 12995				
9	SA-BOT-1	HSS3X3X6	.718	0	15	.379_	24		15 12995				
10	SA-TOP-2	HSS3X3X6	.707	20.417	19	.305	19		18 12391				
11	SA-TOP-3	HSS3X3X6	<u>.695</u>	20.416	24	.298	19	V	22 12391	140346	11212.5	1121	2H1-1a
12	SA-TOP-1	HSS3X3X6	.682	20.417	24	.291	19		14 12391				
13	FM3	PIPE 3.0	.451	167.9.	19	.122	16		18 22812				
14	FM1	PIPE 3.0	.442	0	17	.119	0		19 22812				
15	FM2	PIPE 3.0	.441	168.0	21	.112	16		2 3 22811				
16	GRATE8	L1.5x2.5x4	386	36.216	<u>18</u>	.418	0		21 29253				
17	GRATE17	L1.5x2.5x4	.384	0	23	541	12		20 29253				1H2-1
18	GRATE2	L1.5x2.5x4	380	36.216	14	.419	0		17 29253				
19	GRATE11	L1,5x2.5x4	.379	0	19	.520	12		16 29253				
20	PL-BOT-2	PL6"x5/8" Pl	.378	0	14	1.701	9.1		15 93935				
21	PL-BOT-3	PL6"x5/8" Pl	.374	12.613	18	1.701	3.4		20 93939				1H1- <u>1b</u>
22	PL-BOT-1	PL6"x5/8" Pl	.373	0	22	1.662	9.1		24 93937				1H1-1b
23	GRATE14	L1.5x2.5x4	.371	36.217	22	.412	0_		25 29253				
24	GRATE5	L1.5x2.5x4	.369	0	14	.525	12,		24 29253				
25	MP15	PIPE 2.0	.149	24.375	13	.023_	24		13 23808	32130) 1871	1871	2H1-1b
26	MP14	PIPE_2.0	.149	24.375	13	.023	24		13 23808				2H1-1b
27	MP7	PIPE 2.0	.136	24.375	12	.019	24		3 23808				1H1-1b
28	MP12	PIPE_2.0	.136	24.375	4	.019	24		7 23808				1H1-1b
29	MP4	PIPE 2.0	.136	24.375	8	.019	24		5 23808	32130	1871	1871	1H1-1b
30	MP6	PIPE 2.0	133	24.375	12	.017	24						1H1-1b
31	MP11	PIPE 2.0	.133	24.375	4	.017	24		4 23808				1H1-1b
32	MP1	PIPE_2.0	.133	24.375	8	.017	24		8 23808	32130) 1871	1871	1H1-1b



ETS, PLLC BRL

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

	Member	Shape	Code Check	Loc[in] LC	Shear Ch	Lo Dir	LC phi*Pn.	phi* <u>P</u>	. phi*Mı	ohi*M0	Cb Eqn
33	MP9	PIPE 2.0	.116	24.375 6	.017	24	9 23808.	32130	1871	18711	H1-1b
34	. MP10	PIPE 2.0	.116	24.375 6	.017	24	9 23808.	. 32130	1871	18711	H1-1b
35	MP2	PIPE 2.0	.116	24.375 8	.017	24	11 23808.	32130	1871	18711	H1-1b
36	MP5	PIPE 2.0	.116	24.375 2	.017	24	5 23808.	32130	1871	18711	H1-1b
37	MP8	PIPE 2.0	.032	24.375 133	.004	24	11 23808.	32130	1871	18711	H1
38	MP13	PIPE 2.0	.032	24.375 193	004	24	11 23808.	32130	1871	18711	H1
39	MP3	PIPE 2.0	.032	24.375 73	.004	24	8 23808.	32130	1871	18711	H1

Date: July 22, 2019 Rebecca Klein Crown Castle 3530 Toringdon Way Charlotte, NC 28277



Black & Veatch Corp. 6800 W. 115th St., Suite 2292 Overland Park, KS 66211 (913) 458-6909

Subject:

Structural Analysis Report

Carrier Designation:

Verizon Wireless Co-Locate

Carrier Site Number: Carrier Site Name:

20840 Weston CT

Crown Castle Designation:

Crown Castle BU Number: Crown Castle Site Name:

829046 Weston/ Rt-57/

Crown Castle JDE Job Number: Crown Castle Work Order Number: Norfield R 582614 1765202

Crown Castle Order Number:

499102 Rev. 0

Engineering Firm Designation:

Black & Veatch Corp. Project Number:

400087

Site Data:

56 Norfield Rd. (Town Hall), Weston, Fairfield County, CT

Latitude 41° 12' 8.4", Longitude -73° 22' 46.6"

190 Foot - Monopole Tower

Dear Rebecca Klein,

Black & Veatch Corp. is pleased to submit this "Structural Analysis Report" to determine the structural integrity of the above-mentioned tower.

The purpose of the analysis is to determine acceptability of the tower stress level. Based on our analysis we have determined the tower stress level for the structure and foundation, under the following load case, to be:

LC7: Proposed Equipment Configuration

Sufficient Capacity - 79.4%

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

Structural analysis prepared by: Aishwarya Mahapatra / Anup Chitale

Respectfully submitted by:

Joshua J. Riley, P.E.

Professional Engineer



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1) INTRODUCTION

This tower is a 190 ft Monopole tower designed by Pirod, Inc. and mapped by Tower Engineering Professionals,

The tower has been modified multiple times in the past to accommodate additional loading.

The tower has been modified per reinforcement drawings prepared by Tower Engineering Professionals and Sabre Tower & Poles, in January of 2012. Reinforcement consists of addition of reinforcement plates at elevation 0.83' – 51' and 57.5' – 112.5' and additional (8) anchor rods. Refer to Post Modification Inspection Report by Sabre Tower & Poles in November of 2012. This modification has been considered effective in this analysis.

The tower was later modified per reinforcement drawings prepared by Paul J. Ford and Company, in April of 2013. Reinforcement consisted of addition of jump plates at elevation 20', 40', 60' and 80', reinforcing plates at 80.25' to 87.25' and additional (4) transition stiffeners. Refer to Modification Inspection Report by Tower Engineering Professionals in November of 2014. This modification has been considered effective in this analysis.

2) ANALYSIS CRITERIA

TIA-222 Revision:

TIA-222-H

Risk Category:

11

Wind Speed:

120 mph

Exposure Category:

В

Topographic Factor:

1

Ice Thickness:

1.5 in

Wind Speed with Ice:

50 mph

Service Wind Speed:

60 mph

Table 1 - Proposed Equipment Configuration

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
		2	antel	LPA-80080/6CF w/ Mount Pipe	A STATE OF THE STA	
ļ		1	cci tower mounts	Platform Mount [LP 403-1]		
ļ		4	decibel	DB846F65ZAXY w/ Mount Pipe		
150.0	150.0	6	quintel technology	QS6656-5D w/ Mount Pipe	7	1 5/8
		1	rfs celwave	DB-C1-12C-24AB-0Z		
		3	samsung telecommunications	RFV01U-D1A	ļ	
		3	samsung telecommunications	RFV01U-D2A		

Table 2 - Other Considered Equipment

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
	193.0	1	rfs celwave	PD201-7		
[3	alcatel lucent	TD-RRH8x20-25		Ĵ
188.0	190.0	3	rfs celwave	APXVSPP18-C-A20 w/ Mount Pipe	4 1	1 1/4 5/16
	of the Section of the	3	rfs celwave	APXVTM14-ALU-I20 w/ Mount Pipe	1	5/8 7/8
	188.0	1	cci tower mounts	Platform Mount [LP 403-1]		
***************************************	187.0	1	radio waves	SP2-5.8	and the contract of the contra	The Control of the Co
	188.0	3	alcatel lucent	1900MHz RRH		
185.0		3	alcatel lucent	800MHZ RRH	_	_
den aberen 11 km et, 200 estemprope brege	185.0	1	cci tower mounts	Side Arm Mount [SO 102- 3]		
184.0	184.0	1	cci tower mounts	Side Arm Mount [SO 701- 1]	-	_
	185.0	2	rfs celwave	458-2D		
179.0		1	cci tower mounts	Platform Mount [LP 403-1]	2	7/8
77 U.U.U	179.0	2	cci tower mounts	Side Arm Mount [SO 301- 1]	2	110
		1	cci tower mounts	Platform Mount [LP 405-1]	Transport - statement and the	
		3	ericsson	AIR 32 B2A/B66AA w/ Mount Pipe		
170.0	170.0	3	ericsson	ERICSSON AIR 21 B2A B4P w/ Mount Pipe	10	1 5/8
		3	ericsson	KRY 112 144/1		
		3	ericsson	RADIO 4449 B12/B71		
1 · · · · · · · · · · · · · · · · · · ·	and the angular and a second angular	3	rfs celwave	APXVAARR24_43-U- NA20 w/ Mount Pipe		
		3	cci antennas	OPA-65R-LCUU-H6 w/ Mount Pipe		
I		3	ericsson	RRUS 11		
ļ		3	ericsson	RRUS 32		
		3	ericsson	RRUS 32 B2		
1	Ī	3	ericsson	RRUS 4478 B14		
Ī	163.0	3	kathrein	80010965 w/ Mount Pipe	12	1 5/8
162.0		6	powerwave technologies	7020.00	2 4 2	7/8 3/4 3/8
		3	powerwave technologies	7770.00 w/ Mount Pipe	1	5/8 2 Conduit
		1	raycap	DC6-48-60-18-8C	į	
		1	raycap	DC6-48-60-18-8F		
	162.0	1	site pro1	HRK-14 Handrail Kit [NA 510-1]		
	102.0	6	unknown	L1-1/2"x2-1/2"x1/4"x1'-2"		
		3	site pro1	PRK-SFS-L	1	

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
				Reinforcement Kit		
	Пот каторият по макетика домуну сущену с	2	cci tower mounts	Platform Mount [LP 403-1]	Ī	
Constitution of the second	160.0	6	powerwave technologies	LGP21401		
	130.0	1	rfs celwave	PD128-1	2, 1,2,1	X10/2011 (10)
125.0		1	rfs celwave	PD201-1	1	7/8 1/2
- Note that the state of the st	125.0	2	cci tower mounts	Side Arm Mount [SO 901-	1	
	115.0	2	rfs celwave	PD128-1	And the state of t	TW. Fath of the Angelogy, and they are
110.0	110.0	2	cci tower mounts	Side Arm Mount [SO 901-	2	1/2
"	101.0	1	gps	GPS_A		Professional Company of the Profession Community of the Pr
100.0	100.0	1	cci tower mounts	Side Arm Mount ICO 004		1/2
	100.0	2	rfs celwave	PD128-1	No. of Contract of	All the respect to the end of the
95.0	95.0	2	cci tower mounts	Side Arm Mount [SO 901- 1]	2	1/2
	85.0	1	decibel	DB222		- American supply of the state
80.0		1	rfs celwave	PD128-1	2	1/2
and the second	80.0	2	cci tower mounts	Side Arm Mount [SO 901- 1]	2	1/2

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Remarks	Reference	Source
4-GEOTECHNICAL REPORTS	Arcnet architects, Inc.	3529916	CCISITES
4-TOWER FOUNDATION DRAWINGS/DESIGN/SPECS	Pîrod, Inc.	3755295	CCISITES
4-TOWER MANUFACTURER DRAWINGS	Pirod, Inc. & Tower Engineering Professionals (mapped)	7340070	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	Sabre Tower & Poles	3667108	CCISITES
4-POST-MODIFICATION INSPECTION	Sabre Tower & Poles	3673725	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	Paul J. Ford and Company	3801440	CCISITES
4-POST-MODIFICATION INSPECTION	Tower Engineering Professionals	5392198	CCISITES

3.1) Analysis Method

tnxTower (version 8.0.5.0), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A.

tnxTower was used to determine the loads on the modified structure. Additional calculations were performed to determine the stresses in the pole and in the reinforcing elements. These calculations are presented in Appendix C

3.2) Assumptions

- Tower and structures were built and maintained in accordance with the manufacturer's specification.
- 2) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.
- 3) The existing base plate grout is not considered in this analysis.
- 4) The wind loading EPA of the panel antennas has been analyzed and determined by the tower owner. Verification of its accuracy is outside the scope of this structural analysis. Black & Veatch does not assume any responsibility for its accuracy.
- This analysis was performed under the assumption that all information provided to Black & Veatch is current and correct. This is to include site data, appurtenance loading, tower/foundation details, and geotechnical data. The loading on the structure is based on CAD level drawings and carrier orders provided by the owner. If any of this information is not current and correct, this report should be considered obsolete and further analysis will be required.

This analysis may be affected if any assumptions are not valid or have been made in error. Black & Veatch Corp. should be notified to determine the effect on the structural integrity of the tower.

4) ANALYSIS RESULTS

Table 4 - Section Capacity (Summary) (Monopole Tower)

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
190 - 185	Pole	TP30x30x0.375	Pole	1.3%	Pass
<u> 185 - 180</u>	Pole	TP30x30x0.375	Pole	3.5%	Pass
180 - 175	Pole	TP36x36x0.375	Pole	4.9%	Pass
175 - 170	Pole	TP36x36x0.375	Pole	7.2%	Pass
170 - 165	Pole	TP36x36x0.375	Pole	11.4%	Pass
165 - 160	Pole	TP36x36x0.375	Pole	16.6%	Pass
160 - 155	Pole	TP42x42x0.375	Pole	16.9%	Pass
155 - 150	Pole	TP42x42x0.375	Pole	21.4%	Pass
150 - 145	Pole	TP42x42x0.375	Pole	27.5%	Pass
145 - 140	Pole	TP42x42x0.375	Pole	33.5%	Pass
140 - 135	Pole	TP48x48x0.375	Pole	30.9%	Pass
135 - 130	Pole	TP48x48x0.375	Pole	35.8%	Pass
130 - 125	Pole	TP48x48x0.375	Pole	40.8%	Pass
125 - 120	Pole	TP48x48x0.375	Pole	46,0%	Pass
120 - 115	Pole	TP54x54x0.375	Pole	41.1%	Pass
115 - 112.67	Pole	TP54x54x0.375	Pole	43.1%	Pass
12.67 - 112.42	Pole + Reinf.	TP54x54x0.4875	Pole	33.1%	Pass
12.42 - 107.42	Pole + Reinf.	TP54x54x0.4875	Pole	36.5%	Pass

107.42 - 103.33	Pole + Reinf.	TP54x54x0.4875	D-1-	00.00/	_
103.33 - 103.08	Pole + Reinf.		Pole	39.3%	Pass
103.08 - 100	Pole + Reinf.	TP54x54x0.4875	Pole	39.5%	Pass
100 - 95	Pole + Reinf.	TP54x54x0,4875	Pole	41.6%	Pass
95 - 90	Pole + Reinf.	TP60x60x0.475	Pole	37.9%	Pass
90 - 89,5		TP60x60x0.475	Pole	41.0%	Pass
89.5 - 89.25	Pole + Reinf.	TP60x60x0.475	Pole	41.3%	Pass
	Pole + Reinf.	TP60x60x0.5563	Pole	35.8%	Pass
89.25 - 85.5	Pole + Reinf.	TP60x60x0.5563	Pole	37.8%	Pass
85.5 - 85.25	Pale + Reinf.	TP60x60x0.6375	Pole	33.3%	Pass
85.25 - 84	Pole + Reinf.	TP60x60x0.6375	Pole	34.0%	Pass
84 - 83.75	Pole + Reinf.	TP60x60x0.525	Pole	40.7%	Pass
83.75 - 82.5	Pole + Reinf.	TP60x60x0.525	Pole	41.4%	Pass
82.5 - 82.25	Pole + Reinf.	TP60x60x0.45	Pole	48.6%	Pass
82.25 - 80	Pole + Reinf.	TP60x60x0.45	Pole	50.2%	Pass
80 - 75	Pole + Reinf.	TP60x60x0.575	Reinf. 3 Compression	41.3%	Pass
75 - 70	Pole + Reinf.	TP60x60x0.575	Reinf. 3 Compression	44.1%	Pass
70 - 65	Pole + Reinf,	TP60x60x0.575	Reinf. 3 Compression	47.0%	Pass
65 - 60	Pole + Reinf.	TP60x60x0.575	Reinf. 3 Compression	49.9%	Pass
60 - 58.5	Pole + Reinf.	TP60x60x0.7	Reinf. 3 Compression	42.0%	Pass
58.5 - 58.25	Pole	TP60x60x0.625	Pole	45.9%	Pass
58,25 - 53.25	Pole	TP60x60x0.625	Pole	48.7%	Pass
53.25 - 48.25	Pole	TP60x60x0.625	Pole	51.5%	Pass
48.25 - 48	Pole + Reinf.	TP60x60x0.775	Pole	42.1%	Pass
48 - 43	Pole + Reinf.	TP60x60x0,775	Pole	44.4%	Pass
43 - 40	Pole + Reinf.	TP60x60x0.775	Pole	45.9%	Pass
40 - 35	Pole + Reinf.	TP60x60x0.775	Pole	48.3%	Pass
35 - 32.08	Pole + Reinf.	TP60x60x0.775	Pole	49.8%	Pass
32.08 - 31.83	Pole + Reinf.	TP60x60x0.9625	Pole	40.2%	Pass
31.83 - 28.75	Pole + Reinf.	TP60x60x0.9625	Pole	41.5%	Pass
28.75 - 28.5	Pole + Reinf,	TP60x60x0.8125	Pole	48.8%	Pass
28.5 - 23.5	Pole + Reinf.	TP60x60x0.8125	Pole	51.2%	Pass
23.5 - 18.5	Pole + Reinf.	TP60x60x0.95	Pole	45.6%	Pass
18.5 - 13.5	Pole + Reinf.	TP60x60x0.95	Pole	47.7%	Pass
13.5 - 8.5	Pole + Reinf.	TP60x60x0.95	Pole	49.9%	Pass
8.5 - 3.5	Pole + Reinf.	TP60x60x0,95	Pole	52.2%	
3.5 - 0	Pole + Reinf.	TP60x60x0.95	Pole	53.7%	Pass
		TO TO THE TOTAL	1 016	Summary	Pass
			Pole	53.7%	Pass
			Reinforcement	49.9%	Pass

	(
Overall	53.7%	Pass

Table 5 - Tower Component Stresses vs. Capacity (Monopole Tower) - LC7

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1.2	Flange Bolts		3.0	Pass
1,2	Flange Plate	180	3.0	Pass
1,2	Flange Bolts	and the state of t	15.4	Pass
I, Z Secretarios maios secretarios estados en consecuentes en la consecuencia de la consecuencia de la consecuencia	Flange Plate	160	15.4	Pass
1,2	Flange Bolts	440	33.5	Pass
1 1 4 4	Flange Plate	140	33.5	Pass
1,2	Flange Bolts	400	47.6	Pass
1,4 	Flange Plate	120	47.6	Pass
1,2	Flange Bolts	100	47.6	Pass
U y fee <u></u>	Flange Plate	100	47.6	Pass
	Flange Bolts		34.3	Pass
1,2	Flange Plate	80	34.3	Pass
and the second second second second second second second second second second second second second second second	Jump Plates	The second of second and the second are second as the second and second as the second	68.5	Pass
	Flange Bolts		38.2	Pass
1,2	Flange Plate	60	38.2	Pass
, de l'Angenya em mongrape : l'Angent Angent Angent (Angent Angen) e em le personne de l'Angenya e em l'Angeny	Jump Plates	er etter etter poor som en state op en som en som en som en som en som en som en som en som en som en som en s	61.7	Pass
	Flange Bolts		41.7	Pass
1,2	Flange Plate	40	41.7	Pass
entre april 17 ann an ann agus ag searn is gigin an an agus agus ag meiricean	Jump Plates	CMANAGE COMPANY OF TH	69.5	Pass
	Flange Bolts		44.9	Pass
1,2	Flange Plate	20	44.9	Pass
office of the control of the same of the control of	Jump Plates	graph a basis in the section in	72.6	Pass
	Anchor Rods (Original)		45.5	Pass
1,2	Anchor Rods (Existing Modification)	0	45.5	Pass
	Base Plate		45.5	Pass
1,3	Base Foundation (Compared w/ Design Loads)	0	79.4	Pass

Structure Rating (max from all components) =	

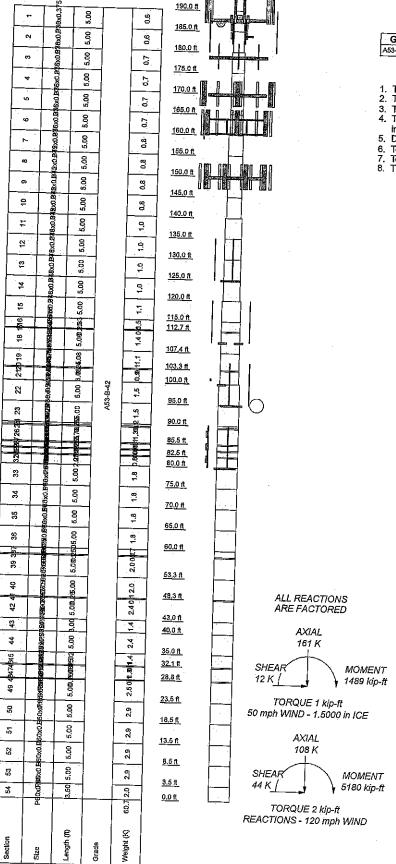
Notes:

- See additional documentation in "Appendix C Additional Calculations" for calculations supporting the % capacity consumed. TIA-22-H Section 15.5.
- Base/Flange plates have the same capacity as their respective splice bolts or shaft
- Foundation capacity determined by comparing analysis reactions to original design reactions.

4.1) Recommendations

The tower and its foundation have sufficient capacity to carry the proposed load configuration. No modifications are required at this time.

APPENDIX A TNXTOWER OUTPUT



MATERIAL STRENGTH GRADE GRADE A53-B-42 42 ksi **TOWER DESIGN NOTES** Tower is located in Fairfield County, Connecticut.
 Tower designed for Exposure B to the TIA-222-H Standard. Tower designed for a 120 mph basic wind in accordance with the TIA-222-H Standard. Tower is also designed for a 50 mph basic wind with 1,50 in ice. Ice is considered to increase in thickness with height. Deflections are based upon a 60 mph wind. 6. Tower Risk Category II. 7. Topographic Category 1 with Crest Height of 0.00 ft 8. TIA-222-H Annex S



Black & Veatch Corp. Overland Park, KS 66211 Phone: (913) 458-6909 FAX: (913) 458-8136

Weston/Rt-5	7/Norfield (BU# 829046)	*
^{~10]ect.} 400087 (8290	46.1765202)	
Client: Crown Castle	Drawn by: Aishwarya Mahapatra	App'd:
	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	Scale: NTS
Path:		150

Tower Input Data

The tower is a monopole.

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

The following design criteria apply:

- Tower is located in Fairfield County, Connecticut.
- 2. Tower base elevation above sea level: 322.00 ft.
- 3. Basic wind speed of 120 mph.
- 4. Risk Category II.
- Exposure Category B.
- 6. Simplified Topographic Factor Procedure for wind speed-up calculations is used.
- 7. Topographic Category: 1.
- 8. Crest Height: 0.00 ft.
- 9. Nominal ice thickness of 1.5000 in.
- 10. Ice thickness is considered to increase with height.
- 11. Ice density of 56 pcf.
- 12. A wind speed of 50 mph is used in combination with ice.
- 13. Temperature drop of 50 °F.
- 14. Deflections calculated using a wind speed of 60 mph.
- 15. A non-linear (P-delta) analysis was used.
- 16. Pressures are calculated at each section.
- 17. Stress ratio used in pole design is 1.05.
- 18. Tower analysis based on target reliabilities in accordance with Annex S.
- 19. Load Modification Factors used: $K_{es}(F_w) = 0.95$, $K_{es}(t_i) = 0.85$.
- 20. Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

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

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

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

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

Section	Elevation	Section	Pole	Pole	Socket Lengt
	ft	Length ft	Size	Grade	ft
L1	190.00-185.00	5.00	P30x0.375	A53-B-42	
L2	185.00-180.00	5.00	Danya aze	(42 ksi)	
		0.00	P30x0.375	A53-B-42 (42 ksi)	
L3	180.00-175.00	5.00	P36x0.375	A53-B-42	
L4	175.00-170.00	5.00	P36x0.375	(42 ksi) A53-B-42	
L5	170.00-165.00	F 86		(42 ksi)	
	170.00-105.00	5.00	P36x0.375	A53-B-42	
L6	165.00-160.00	5.00	P36x0.375	(42 ksi) A53-B-42	
L7	160.00-155.00	5.00	P42x0.375	(42 ksi)	
L8	155 00 450 00		7 42/0.070	A53-B-42 (42 ksi)	
LO	155.00-150.00	5.00	P42x0.375	A53-B-42	
L9	150.00-145.00	5.00	P42x0.375	(42 ksi) A53-B-42	
L10	145.00-140.00	5.00	D400.075	(42 ksi)	
		3.00	P42x0.375	A53-B-42 (42 ksi)	
L11	140.00-135.00	5.00	P48x0.375	A53-B-42	
L12	135.00-130.00	5.00	P48x0.375	(42 ksi) A53-B-42	
L13	130.00-125.00	E 00		(42 ksi)	
		5.00	P48x0.375	A53-B-42 (42 ksi)	
L14	125.00-120.00	5.00	P48x0.375	A53-B-42	
L15	120.00-115.00	5.00	P54x0.375	(42 ksi) A53-B-42	
L16	115.00-112.67	0.00		(42 ksi)	
	110.00-112,01	2.33	P54x0.375	A53-B-42 (42 ksi)	
L17	112.67-112.42	0.25	P54x0.4875	A53-B-42	
L18	112.42-107.42	5.00	P54x0.4875	(42 ksi) A53-B-42	
.19	107.42-103.33	4.00		(42 ksi)	
		4.08	P54x0.4875	A53-B-42 (42 ksi)	
_20	103.33-103.08	0.25	P54x0.4875	A53-B-42	
.21	103.08-100.00	3.08	P54x0.4875	(42 ksi) A53-B-42	
.22	100.00-95.00	F 00		(42 ksi)	
	100.00-95.00	5.00	P60x0.475	A53-B-42 (42 ksi)	
.23	95.00-90.00	5.00	P60x0.475	A53-B-42	
24	90.00-89.50	0.50	P60x0.475	(42 ksi) A53-B-42	
25	89.50-89.25	۸۹۳		(42 ksi)	
	03.00-09.23	0.25	P60x0.55625	A53-B-42 (42 ksi)	
26	89.25-85.50	3.75	P60x0.55625	A53-B-42	
27	85.50-85.25	0.25	P60x0.6375	(42 ksi) A53-B-42	
28	85.25-84,00	4.05		(42 ksi)	
	55,25-64,00	1.25	P60x0.6375	A53-B-42 (42 ksi)	
29	84.00-83.75	0.25	P60x0.525	A53-B-42	
30	83.75-82.50	1.25	P60x0.525	(42 ksi) A53-B-42	
31	82 50 92 25		_	(42 ksi)	
	82.50-82.25	0.25	P60x0.45	A53-B-42	
32	82.25-80.00	2.25	P60x0.45	(42 ksi) A53-B-42	
				(42 ksi)	

(42 ksi) A53-B-42

tnxTower Report - version 8.0.5.0

80.00-75.00

5.00

P60x0.575

L33

Section	Elevation	Section	Pole	Pole	Socket Length
	ft	Length ft	Size	Grade	ft
		n.		(42 ksi)	
L34	75.00-70.00	5.00	P60x0.575	A53-B-42	
				(42 ksi)	
L35	70.00-65.00	5.00	P60x0.575	A53-B-42	
				(42 ksi)	
L36	65.00-60.00	5.00	P60x0.575	A53-B-42	
L37	CO 00 50 50	4.50	F	(42 ksi)	
LO/	60.00-58.50	1.50	P60x0.7	A53-B-42	
L38	58.50-58.25	0.25	Deovo enc	(42 ksi)	
Loo	30.30-30.23	0.20	P60x0.625	A53-B-42	
L39	58,25-53,25	5.00	P60x0.625	(42 ksi)	
	00.20 00.20	0.00	1 0000.025	A53-B-42 (42 ksi)	
L40	53,25-48,25	5.00	P60x0.625	A53-B-42	
				(42 ksi)	
L41	48.25-48.00	0.25	P60x0.775	A53-B-42	
				(42 ksi)	
L42	48.00-43.00	5.00	P60x0.775	A53-B-42	
				(42 ksi)	
L43	43.00-40.00	3.00	P60x0.775	A53-B-42	
1.44	40.00.05.00	F 00		(42 ksi)	
L44	40.00-35.00	5.00	P60x0.775	A53-B-42	
L45	35,00-32.08	2.92	D000 775	(42 ksi)	
L+O	33.00-32.08	2.92	P60x0.775	A53-B-42	
L46	32.08-31.83	0.25	P60x0.9625	(42 ksi) A53-B-42	
-70	02.00 01.00	0.23	F00X0.80Z5	(42 ksi)	
L47	31.83-28.75	3.08	P60x0.9625	A53-B-42	
				(42 ksi)	
L48	28.75-28.50	0.25	P60x0.8125	A53-B-42	
				(42 ksi)	
L49	28.50-23.50	5.00	P60x0.8125	A53-B-42	
1.50			,	(42 ksi)	
L50	23.50-18.50	5.00	P60x0.95	A53-B-42	
L51	40 50 40 50	• ^^		(42 ksi)	
LOI	18.50-13.50	5.00	P60x0.95	A53-B-42	
L52	13.50-8.50	5.00	Decoro of	(42 ksi)	
LUZ	19.00-0,00	5.00	P60x0.95	A53-B-42	
L53	8.50-3,50	5.00	P60x0.95	(42 ksi)	
	0.00 0.00	5.00	I OUND.SO	A53-B-42 (42 ksi)	
L54	3.50-0.00	3.50	P60x0.95	A53-B-42	
				(42 ksi)	

Tower Elevation	Gusset Area (per face)	Gusset Thickness	Gusset Grade Adjust. Factor A _f	Adjust. Factor A _r	Weight Mult.	Stitch Bolt Spacing	Double Angle Stitch Bolt Spacing	Stitch Bolt Spacing
ft	ft²	in				Diagonals in	Horizontals in	Redundants in
L1 190.00-			1	1	1			
185.00								
L2 185.00-			1	1	1			
180.00								
L.3 180.00-			1	1	1			
175.00								
L4 175.00-			1	1	1			
170.00								
L5 170.00-			1	1	1			
165.00								
L6 165.00-			1	1	1			
160.00					·			
L7 160.00-			1	1	1			
155.00				•				
L8 155.00-			1	1	1			
150.00			·	•	•			
L9 150.00-			1	1	1			
145.00			·	•	'			

## ## Disgonals Horizontals Redundan 1	Tower Elevation	Gusset Area (per face)	Gusset Thickness	Gusset Grade Adjust. Factor A _f	Adjust. Factor A _r		Double Angle Stitch Bolt Spacing	Double Angle Stitch Bolt Spacing	Stitch Bolt
1.10 1.45 1.00 1	ft	ft²	in			•	Diagonals		Spacing Redundants
L1 1 1400. 12 135.00 13 1 1 1 135.00 13 130.00 13 130.00 13 130.00 14 1 1 152.500 15 12 135.00 1 1 1 16 125.00 1 1 1 17 125.00 1 1 1 1 1 18 120.00 1 1 1 1 18 120.00 1 1 1 1 18 120.00 1 1 1 1 18 122.42 1 1 0.990478 18 12 12-2 19 10 7.42 1 1 0.990478 19 10 7.42 10 0.990478 19 10 7.42 10 0.990478 19 10 0.990	L10 145.00-								
135.00				1	1	1			
12 135.00				1	1	1			
130.00 125.00 125.00 1					•	,			
125.00				1	1	1			
14 125.00- 15 120.00- 15 120.00- 16 15.00- 16 15.00- 16 15.00- 16 15.00- 17 11 267- 17 112.67- 18 112.42- 19 107.42- 19 107.42- 19 107.42- 19 107.33- 10 0.990478 10 0.990444 10 0.990474 10 0.991333 10 0.991333 10 0.991333 10 0.99174 10 0.990478 10 0.990478 1	L13 130.00-			1	4				
120,00 15,100 16,100 16,100 16,1100 112,67 17 1 1 1 17,112,67 11 1 1 18,112,42 11 1 0,990476 112,42 11 1 0,990476 112,42 11 1 0,990476 110,100 11 1 0,990476 110,100 11 1 0,990478 110,100 11 1 0,990478 110,100 11 1 0,990478 110,100 11 1 0,990478 110,100 11 1 0,990478 110,100 11 1 0,990478 110,100 11 1 0,990478 110,100 11 1 0,990478 110,100 11 1 0,990478 110,100 11 1 0,990442 110,100 11 1 0,979451 11 1 0,979451 11 1 0,99944 11 1 0,99944 11 1 0,99944 11 1 0,99944 11 1 0,99944 11 1 0,99474 11 1 0,99474 11 1 0,99474 11 1 0,99474 11 1 0,99474 11 1 0,99424 11 1 0,99444 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				'	ī	1			
16 12 16 15 16 15 16 15 16 15 16 15 16 15 16 15 16 15 16 15 16 15 16 15 16 15 16 15 16 15 16 15 16 15 16 15 16 15 16 16				1	1	1			
115.00 16.115.00 112.67 112.42 11.12.42 11.12.42 11.12.42 11.10.990478 118.12.42 107.42 10.990478 10.999442 10.990478 10.990478 10.990478 10.990478 10.990478 10.990478 10.990478 10.990478 10.990478 10.990478 10.990478 10.990478 10.990478 10.990478 10.990478 10.990478 10.990478 10.990478 10.990442 10.990478 10.99047									
112.67 17.12.67 17.12.67 17.12.62 19.090478 18.112.42 10.74.2 19.10.990478 19.10.990478 19.10.990478 19.10.990478 19.10.990478 10.990474 10.990478 10.990478 10.990474 10.990474 10.990474 10.990478 10.990478 10.990478 10.990478	115.00			1	1	1			
17 112.67: 17 112.67: 18 172.42: 18 172.42: 19 107.42: 19 107.42: 19 107.42: 19 107.42: 19 107.42: 10 1 0.990478 10 10.308: 1 1 0.990478 21 103.08: 21 103.08: 21 103.08: 21 103.08: 21 103.08: 21 103.08: 21 103.08: 22 100.00: 29 50.00: 1 1 0.993442 23 95.00: 90.00: 1 1 0.993442 24 90.00: 24 90.00: 25 99.50: 26 99.50: 26 99.50: 27 95.50: 28 99.25: 28 99.25: 28 99.25: 28 99.25: 28 99.25: 28 99.25: 28 99.25: 28 99.25: 29 99.40: 29 94.00: 20 1 1 0.999451 27 85.50: 28 99.25: 28 99.25: 29 99.40: 20 1 1 0.99944 20 10 0.999444 20 10 0.999				1	1	4			
112,42				•	•	ı			
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85.50 7	26 89.25-								
85.25 84.00 1 1 0.96934 984.00- 984.00- 98.3.75 80.83.75- 82.50 1 1 0.991333 1 1 0.99474 1 82.25- 82.25- 83.00 1 1 0.99474 2 82.25- 83.00 1 1 0.99474 3 80.00 3 80.00- 75.00 1 1 0.996424 475.00- 770.00- 1 1 0.996424 66.60- 66.00- 80.00 1 1 0.996424 66.80- 80.00 1 1 0.996424 66.80- 80.00 1 1 0.997508 65.85- 82.5 1 1 1 1 0.997534 48.00- 3.00 1 1 0.977534 48.00- 3.00 48.00- 3.00 1 1 0.977534	85.50			1	1	0.979451			
88.85.25-84.00				1	1	0.06034			
84.00 99 84.00- 99 84.00- 83.75- 1 1 0.991333 1 82.50- 82.50 1 1 0.99474 1 82.50- 82.25- 82.60 1 1 0.99474 1 0.99474 1 0.99474 1 0.996424 1 0.996424 1 0.996424 1 0.996424 1 0.996424 1 0.996424 1 0.996424 1 0.996424 1 0.996424 1 0.996424 1 0.996424 1 0.996424 1 0.996424 1 0.996424 1 0.996424 1 0.996424 1 0.997508 1 1 0.997508 1 1 1 0.997508 1 1 1 0.997508 1 1 1 0.997508 1 1 1 0.997508 1 1 1 0.997508 1 1 1 0.997508 1 1 1 0.997508 1 1 1 0.997508				•	•	0.90934			
98.4.00- 83.75 0.83.75 1				1	1	0.96934			
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4 75.00- 70.00 1 1 0.996424 5 70.00- 5 .00 8 .65.00- 8 .60.00- 8 .50 1 1 0.996424 7 60.00- 8 .50 8 .50 8 .50 8 .50 8 .50 8 .50 8 .50 8 .50 8 .50 8 .50 8 .50 8 .50 8 .50 8 .50 8 .50 8 .50 8 .50 8 .50 8 .50 9 .58.25 9 .58.25 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				1	1	0.996424			
70.00						1.000 1.2 1			
35.00	70.00			1	1	0.996424			
53.00 5.65.00- 50.00 1 1 0.996424 7 60.00- 58.50 1 1 0.997508 7 58.50- 58.25 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	5 70.00-			1	1	0.000404			
30.00 1 1 0.996424 7 60.00- 1 1 0.997508 158.50- 1 1 1 18.25- 1 1 1 158.25- 1 1 1 3.25- 1 1 1 8.25- 1 1 1 48.25- 1 1 0.977534 48.00- 3.00 1 1 0.977534 43.00- 43.00-				•	r	0.996424			
60.00- 58.50 1 1 0.997508 1 58.50- 18.25 1 1 1 1 58.25- 3.25 3.25 1 1 1 1 1 48.25- 8.20 1 1 0.977534 48.00- 3.00 1 1 0.977534				1	1	0.996424			
58.50	7 60.00-			_					
18.25 1 1 1 18.25-3.25-3.25-3.25-3.25-3.25-3.25-3.25-3	58.50			1	1	0.997508			
158.25- 3.25				1	1	1			
3.25						ı			
53.25- 8.25 8.25 8.00 1 1 0.977534 48.00- 3.00 1 1 0.977534 43.00-				1	1	1			
8.25	53.25-			4					
8.00 1 0.977534 48.00- 3.00 1 1 0.977534 43.00-	18.25			1	1	1			
48.00- 3.00 1 1 0.977534 43.00-	48.25-			1	1	0.077524			
3.00					•	0.011004		-	
43.00-	3.00			1	1	0.977534			
1 0.977534	43.00-			4	a a				•
				7	1	0.977534			

Tower Elevation	Gusset Area (per face)	Gusset Thickness	Gusset Grade Adjust. Factor Ar	Adjust. Factor A _r	Weight Mult.	Stitch Bolt Spacing	Double Angle Stitch Bolt Spacing	Double Angle Stitch Bolt Spacing
ft	ft²	in				Diagonals in	Horizontals	Redundants
40.00						- 111	in	in
L44 40.00-			1	1	0.977534			
35.00			•	•	0.311334			
L45 35.00-			1	1	0.977534			
32.08				•	0.011004			
L46 32.08-			1	1	0.96816			
31.83				•	0.00010			
L47 31.83-			1	1	0,96816			
28.75				•	0.50010			
L48 28.75-			1	1	0.98265			
28.50				•	0.00200			
L49 28.50-			1	1	0.98265			
23.50				•	0.80203			
L50 23.50-			1	1	0,973014			
18.50			•	•	0.07 00 14			
L51 18.50-			1	1	0.973014			
13.50			•	•	0.87 30 14			
L52 13.50-			1	1	0.973014			
8.50			•		0.873014			
L53 8.50-3.50			1	1	0.973014			
L54 3.50-0.00			i	1	0.973014			
	The state of the s	and the state of t	and the control of th		U.313U14			was the control of th

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Sector	Exclude From	Componen	Placement	Total	Number			Perimete	Weight
		Torque	Type	ft	Number	Per Row	d	Diamete	r	
		Calculation					Position	ŗ		plf
Safety Line 3/8	С	No	Surface Ar	190.00 -	1	1	0.400	in	in	
<u>-</u>			(CaAa)	10.00	'	1	0.490 0.500	0.3750		0.22
Climbing Rungs	Ç	No	Surface Ar	190.00 -	1	1	0.000	0.8000		7.00
			(CaAa)	10.00	•	•	0.000	0.0000		7.90
188							0.000			
(1) HB114-21U3M12-	В	No	Surface Ar	188.00 -	3	3	0.032	1.5400		1.22
XXXF(1-1/4) + (2)			(CaAa)	6.00		-	0.131	1.0100		1.22
TYPE I(1-1/4) ***170***										
(6) LDF7-50A(1-5/8) +	n	M.								
(3) HCS 6X12	В	No	Surface Ar	170.00 -	10	10	-0.380	1.9800		0.82
4AWG(1-5/8) + (1)			(CaAa)	8.00			0.032			
MLE Hybrid										
9Power/18Fiber RL										
2(1-5/8)										
160										
(4) WR-VG86ST-	Α	No	Surface Ar	162.00 -	6	3	0.443	0.7050		
BRD(3/4) + (2) FB-			(CaAa)	11.00	U	3	0.443 0.491	0.7950		0.58
L98B-034-XXX(3/8)			(/				0.491			
LDF7-50A(1-5/8)	Α	No	Surface Ar	162.00 -	12	6	0.200	1.9800		0.82
***			(CaAa)	11.00	-	•	0.443	1,5000		0.02
***MOD 2012 *** 8.5" x 1.25" Flat Plate										
0.5 x 1.25 Flat Plate	Α	No	Surface Af	35.83 -	1	1	0.000	8.5000	19.5000	0.00
8.5" x 1.25" Flat Plate	В	No	(CaAa)	0.83			0.000			
0.0 X 1.20 Tlat Flate	ь	NO	Surface Af	35.83 -	1	1	0.000	8.5000	19.5000	0.00
8.5" x 1.25" Flat Plate	С	No	(CaAa) Surface Af	0.83	a a		0.000			
111111111111111111111111111111111111111	•	IVO	(CaAa)	35.83 - 0.83	1	1	0.000	8.5000	19.5000	0.00
*			(Cana)	0.63			0.000			
6.5" x 1.25" Flat Plate	Α	No	Surface Af	51.00 -	1	1	0.000	C 5000	45 5000	
			(CaAa)	26.00	•	'	0.000	6.5000	15.5000	0.00
6.5" x 1.25" Flat Plate	В	No	Surface Af	51.00 -	1	1		6.5000	15.5000	0.00
0 FH 4 5 5 H 1 5 5 H			(CaAa)	26.00	•	•	0.000	0.0000	10.000	0.00
6.5" x 1.25" Flat Plate	С	No :	Surface Af	51.00 -	1	1		6.5000	15.5000	0.00
										0.00

Description	Sector	Exclude		Placement	Total	Number	Start/En		Perimete	Weight
		From	_ t		Number	Per Row	d	Diamete	r	
		Torque	Type	ft			Position	r		plf
		Calculation						in	in	•
*			(CaAa)	26.00			0.000			
4.5" x 1" Flat Plate	Α	No	Surface Af (CaAa)	87.00 - 57.00	1	1	0.000	4.5000	11.0000	0.00
4.5" x 1" Flat Plate	В	No	Surface Af	87.00 -	1	1	0.000 000.0	4.5000	11.0000	0.00
4.5" x 1" Flat Plate	С	No	(CaAa) Surface Af (CaAa)	57.00 87.00 - 57.00	1	1	0.000 0.000 0.000	4.5000	11.0000	0.00
* 6" x 1" Flat Plate	٨	11.	•		_					
	А	No	Surface Af (CaAa)	105.33 - 82.00	1	1	0.000	6.0000	14.0000	0.00
6" x 1" Flat Plate	В	No	Surface Af (CaAa)	105.33 - 82.00	1	1	0.000	6.0000	14.0000	0.00
6" x 1" Flat Plate	С	No	Surface Af (CaAa)	105.33 - 82.00	1	1	0.000	6,0000	14.0000	0.00
* 6" x 1" Flat Plate	Α	No	Surface Af	114.67 -	1	4	0.000	0.0000	44.0000	
			(CaAa)	101.33	•	1	0.000 0.000	6.0000	14.0000	0.00
6" x 1" Flat Plate	В	No	Surface Af (CaAa)	114.67 - 101.33	1	1	0.000	6.0000	14.0000	0.00
6" x 1" Flat Plate	С	No	Surface Af (CaAa)	114.67 - 101.33	1	1	0.000	6.0000	14.0000	0.00
MOD 2013							0.000			
4.5" x 1" Flat Plate	Α	No	Surface Af (CaAa)	91.00 - 81.00	1	1	0.000	4.5000	11.0000	0.00
4.5" x 1" Flat Plate	В	No	Surface Af	91.00 -	1	1	0.000	4.5000	11.0000	0.00
4.5" x 1" Flat Plate	С	No	(CaAa) Surface Af	81.00 91.00 -	1	1	000.0 000.0	4.5000	11.0000	0.00
*****			(CaAa)	81.00			0.000			

Feed Line			

Description	Face or	Allow Shield	Exclude From	Componen t	Placement	Total Number		C_AA_A	Weight
	Leg		Torque Calculation	Туре	ft			ft²/ft	plf
TYPE I(1-1/4)	С	No	No	Inside Pole	188.00 - 0.00	1	No Ice	0.00	0.63
							1/2" ice	0.00 `	0.63
							1" Ice	0.00	0.63
							2" Ice	0.00	0.63
ATCB-B01(5/16)	С	No	No	Inside Pole	188.00 - 0.00	1	No Ice	0.00	0.07
							1/2" Ice	0.00	0.07
							1" Ice	0.00	0.07
	_						2" Ice	0.00	0.07
LDF4.5-50(5/8)	С	No	No	Inside Pole	188.00 - 0.00	1	No Ice	0.00	0.15
							1/2" Ice	0.00	0.15
							1" Ice	0.00	0.15
							2" Ice	0.00	0.15
LDF5-50A(7/8)	С	No	No	Inside Pole	188.00 - 0.00	1	No Ice	0.00	0.33
							1/2" Ice	0.00	0.33
							1" lce	0.00	0.33
179							2" Ice	0.00	0.33
LDF5-50A(7/8)	С	No	No	Inside Pole	179.00 - 0.00	2	Ma Iaa	0.00	
	•	110	110	mone i ore	175.00 - 0.00	2	No Ice	0.00	0.33
							1/2" Ice	0.00	0.33
							1" Ice	0.00	0.33
2" innerduct	С	No	No	Inside Pole	162.00 - 0.00	4	2" Ice	0.00	0.33
conduit	J	140	INO	matue moje	102.00 - 0.00	1	No Ice	0.00	0.20
Conduit							1/2" Ice	0.00	0.20
							1" Ice	0.00	0.20
9776(5/8)	С	No	No	Inside Dela	400.00 0.00		2" Ice	0.00	0.20
2110(31a)	Ų	No	No	Inside Pole	162.00 - 0.00	1	No Ice	0.00	0.28
							1/2" Ice	0.00	0.28
							1" Ice	0.00	0.28

Description	Face or	Allow Shield	Exclude From	Componen t	Placement	Total Number		C_AA_A	Weight
	Leg	_	Torque Calculatio	Type n	ft			ft²/ft	plf
LDE# F04/7/0\	_		-				2" ice	0.00	0.28
LDF5-50A(7/8)	С	No	No	Inside Pole	162.00 - 0.00	2	No Ice	0.00	0.33
							1/2" Ice	0.00	0.33
							1" Ice	0.00	0.33
150							2" lce	0.00	0.33
HB158-1-13U6-	С	No	No	Inside Pole	150.00 - 0.00	1	Maiaa	0.00	4.00
S6F18(1-5/8)	•		110	monder de	150.00 - 0.00		No ice	0.00	1.90
							1/2" Ice	0.00	1.90
							1" Ice	0.00	1.90
LDF7-50A(1-5/8)	С	No	No	Innido Dolo	150.00 - 0.00	^	2" ice	0.00	1.90
	•	110	140	It is ide Fole	100.00 - 0.00	6	No ice	0.00	0.82
							1/2" Ice	0.00	0.82
							1" ice	0.00	0.82
125							2" Ice	0.00	0.82
LDF4-50A(1/2)	С	No	No	Inside Pole	125.00 - 0.00	1	No Ice	0.00	0.15
						-	1/2" Ice	0.00	0.15
							1" Ice	0.00	0.15
							2" lce	0.00	0.15
LDF5-50A(7/8)	С	No	No	Inside Pole	125.00 - 0.00	1	No ice	0.00	0.33
					•	-	1/2" Ice	0.00	0.33
							1" ice	0.00	0.33
**** 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0							2" Ice	0.00	0.33
110	_								
LDF4-50A(1/2)	С	No	No	Inside Pole	110.00 - 0.00	2	No Ice	0.00	0.15
							1/2" Ice	0.00	0.15
							1" ice	0.00	0.15
100							2" Ice	0.00	0.15
LDF4-50A(1/2)	C.	No	No	Incide Dala	100.00 - 0.00	4	Na tau	0.00	
	٠,	. 10	140	mande Loie	100.00 - 00.001	1	No Ice	0.00	0.15
							1/2" Ice	0.00	0.15
							1" Ice	0.00	0.15
95							2" lce	0.00	0.15
LDF4-50A(1/2)	С	No	No	Inside Pole	95.00 - 0.00	2	No Ice	0.00	0.15
, ,						-	1/2" Ice	0.00	0.15
							1" Ice	0.00	0.15
							2" Ice	0.00	0.15
80							- 10¢	0.00	0.15
LDF4-50A(1/2)	С	No	No	Inside Pole	80.00 - 0.00	2	No Ice	0.00	0.15
					· •		1/2" Ice	0.00	0.15
							1" Ice	0.00	0.15
							2" Ice	0.00	0.15
***********							_ 100	5.00	0.10

Feed Line/Linear Appurtenances Section Areas

Tower Sectio	Tower Elevation	Face	A_R	A_F	C _A A _A In Face	C _A A _A Out Face	Weight
n	ft		ft²	ft²	ft²	ft ²	к
L1	190.00-185.00	Ā	0.000	0.000	0.000	0.000	0.00
		В	0.000	0.000	1,386	0.000	0.01
		С	0.000	0.000	0.588	0.000	0.04
L2	185.00-180.00	Α	0.000	0.000	0.000	0.000	0.00
		В	0.000	0.000	2.310	0.000	0.02
		С	0.000	0.000	0.588	0.000	0.05
L3	180.00-175.00	Α	0.000	0.000	0.000	0.000	0.00
		В	0.000	0.000	2.310	0.000	0.02
		С	0.000	0.000	0.588	0.000	0.05
L4	175.00-170.00	Α	0.000	0.000	0.000	0.000	0.00
		В	0.000	0.000	2.310	0.000	0.02
		C	0.000	0.000	0.588	0.000	0.05
L5	170.00-165.00	Α	0.000	0.000	0.000	0.000	0.00
		В	0.000	0.000	12.210	0.000	0.06

Tower Sectio	Tower Elevation	Face	A_R	A_{F}	C _A A _A In Face	C _A A _A	Weight
n	ft		ft²	ft²	in race ft²	Out Face ft²	K
		С	0.000	0.000	0.588	0.000	0.05
L6	165.00-160.00	Α	0.000	0.000	2.853	0.000	0.03
		В	0.000	0.000	12,210	0.000	0.06
		С	0.000	0.000	0.588	0.000	0.05
L7	160.00-155.00	Α	0.000	0.000	7.132	0.000	0.07
		В	0.000	0.000	12.210	0.000	0.06
L8	455 00 450 00	Ç	0.000	0.000	0.588	0.000	0.06
LO	155.00-150.00	A	0.000	0.000	7.132	0.000	0.07
		B C	0.000 0.000	0.000	12.210	0.000	0.06
L9	150.00-145.00	Ä	0.000	0.000 0.000	0.588 7.132	0.000	0.06
	100.00	В	0.000	0.000	12.210	0.000 0.000	0.07 0.06
		ċ	0.000	0.000	0.588	0.000	0.09
L10	145.00-140.00	Ā	0.000	0.000	7.132	0.000	0.03
		В	0.000	0.000	12,210	0.000	0.06
		C	0.000	0.000	0.588	0.000	0.09
L11	140.00-135,00	Α	0.000	0.000	7.132	0.000	0.07
		В	0.000	0.000	12.210	0.000	0.06
1.40		C	0.000	0.000	0.588	0.000	0.09
L12	135.00-130.00	A	0.000	0.000	7.132	0.000	0.07
		В	0.000	0.000	12.210	0.000	0.06
1.49	420 00 405 00	C	0.000	0.000	0.588	0.000	0.09
L13	130.00-125.00	A	0.000	0.000	7.132	0.000	0.07
		B C	0.000	0.000	12.210	0.000	0.06
L14	125.00-120.00	Ā	0.000	0.000	0.588	0.000	0.09
1 T	120.00-120.00	B	0.000 0.000	0.000 0.000	7.132	0.000	0.07
		Č	0.000	0.000	12.210 0.588	0.000	0.06
L15	120.00-115.00	Ă	0.000	0.000	7.132	0.000 0.000	0.09 0.07
		В	0.000	0.000	12.210	0.000	0.07
		č	0.000	0.000	0.588	0.000	0.00
L16	115.00-112.67	Ā	0.000	0.000	5.329	0.000	0.03
1		В	0.000	0.000	7.700	0.000	0.03
		C	0.000	0.000	2.274	0.000	0.04
L17	112.67-112.42	Α	0.000	0.000	0.607	0.000	0.00
		₿	0.000	0.000	0.861	0.000	0.00
		Ç	0.000	0.000	0.279	0.000	0.00
L18	112.42-107.42	A	0.000	0.000	12.133	0.000	0.07
		В	0.000	0.000	17.210	0.000	0.06
L19	107,42-103,33	Ç	0.000	0.000	5.588	0.000	0.09
LIS	107,42-105.55	A B	0.000	0.000	11.907	0.000	0.05
		C	0.000 0.000	0.000 0.000	16.054 6.563	0.000	0.05
L20	103.33-103.08	Ä	0.000	0.000	0.857	0.000 0.000	0.08 0.00
		В	0.000	0.000	1.111	0.000	0.00
		Ċ	0.000	0.000	0.529	0.000	0.00
L21	103.08-100.00	Α	0.000	0.000	9.231	0.000	0.04
		В	0.000	0.000	12.362	0.000	0.04
		С	0.000	0.000	5.195	0.000	0.06
L22	100.00-95.00	Α	0.000	0.000	12.133	0.000	0.07
		В	0.000	0.000	17.210	0.000	0.06
Loo	05.00.00.00	Ç	0.000	0.000	5.588	0.000	0.09
L23	95.00-90.00	A	0.000	0.000	12.883	0.000	0.07
		B C	0.000	0.000	17.960	0.000	0.06
L24	90.00-89.50	Ã	0.000 0.000	0.000 0.000	6.338 1.588	0.000	0.10
	00.00-03.00	В	0.000	0.000	2.096	0.000	0.01
		Č	0.000	0.000	0.934	0.000 0.000	0.01
L.25	89.50-89.25	Ă	0.000	0.000	0.794	0.000	0.01 0.00
		B	0.000	0.000	1.048	0.000	0.00
		ć	0.000	0.000	0.467	0.000	0.00
L26	89.25-85.50	Ā	0.000	0.000	13.037	0.000	0.05
		В	0.000	0.000	16.845	0.000	0.04
		С	0.000	0.000	8.128	0.000	0.07
L27	85.50-85.25	Α	0.000	0.000	0.982	0.000	0.00
		В	0.000	0.000	1.236	0.000	0.00
1.00	AF AF 6 / 11	Ċ	0.000	0.000	0.654	0.000	0.00
L28	85.25-84.00	Ā	0.000	0.000	4.908	0.000	0.02
		В	0.000	0.000	6.178	0.000	0.01

Tower Sectio	Tower Elevation	Face	A_R	A_F	C_AA_A	C_AA_A	Weight
n	ft		ft²	ft²	In Face	Out Face	
		С	0.000	0.000	ft² 3.272	ft² 0.000	K
L29	84.00-83.75	Ă	0.000	0.000	0.982	0.000	0.02 0.00
		В	0.000	0.000	1.236	0.000	0.00
1.00		Ç	0.000	0.000	0.654	0.000	0.00
L30	83.75-82.50	A	0.000	0.000	4.908	0.000	0.02
	-	B C	0.000	0.000	6.178	0.000	0.01
L31	82.50-82,25	Δ	0.000 0.000	0.000	3.272	0.000	0.02
	02.00-02,20	A B	0.000	0.000 0.000	0.982 1.236	0.000	0.00
		č	0.000	0.000	0.654	0.000 0.000	0.00 0.00
L32	82.25-80.00	Α	0.000	0.000	6.085	0.000	0.03
		В	0.000	0.000	8.370	0.000	0.03
1.00	00.00.75.00	C	0.000	0.000	3.139	0.000	0.04
L33	80.00-75.00	A	0.000	0.000	10.883	0.000	0.07
		B C	0.000 0.000	0.000	15.960	0.000	0.06
L34	75.00-70.00	Ä	0.000	0.000 0.000	4.338 10.883	0.000	0.10
		В	0.000	0.000	15.960	0.000 0.000	0.07 0.06
		C	0.000	0.000	4.338	0.000	0.10
L35	70.00-65.00	Α	0.000	0.000	10.883	0.000	0.07
		В	0.000	0.000	15.960	0.000	0.06
L36	65.00.00.00	Ç	0.000	0.000	4.338	0.000	0.10
Lou	65.00-60.00	A	0.000	0.000	10.883	0.000	0.07
		B C	0.000 0.000	0.000 0.000	15.960	0.000	0.06
L37	60.00-58.50	Ä	0.000	0.000	4.338 3.265	0.000 0.000	0.10
		В	0.000	0.000	4.788	0.000	0.02 0.02
		С	0.000	0.000	1.301	0.000	0.02
L38	58.50-58.25	Α	0.000	0.000	0.544	0.000	0.00
		В	0.000	0.000	0.798	0.000	0.00
L39	E9 25 52 25	C	0.000	0.000	0.217	0.000	0.00
LOS	58.25-53.25	A B	0.000	0.000	8.070	0.000	0.07
		Ç	0.000 0.000	0.000 0.000	13.148	0.000	0.06
L40	53.25-48.25	Ä	0.000	0.000	1.525 10.112	0.000	0.10
		В	0.000	0.000	15,189	0.000 0.000	0.07 0.06
		C	0.000	0.000	3.567	0.000	0.10
L41	48.25-48.00	Α	0.000	0.000	0.627	0.000	0.00
		В	0.000	0.000	0.881	0.000	0.00
L42	48.00-43.00	C A	0.000	0.000	0.300	0.000	0.00
_ '-	40.00-45.00	В	0.000 0.000	0.000 0.000	12.549	0.000	0.07
		č	0.000	0.000	17.627 6.004	0.000 0.000	0.06 0.10
L43	43.00-40.00	Α	0.000	0.000	7.530	0.000	0.10
		В	0.000	0.000	10.576	0.000	0.04
1.44		C .	0.000	0.000	3.603	0.000	0.06
L44	40.00-35.00	A	0.000	0.000	13.729	0.000	0.07
		B C	0.000 0.000	0.000	18.807	0.000	0.06
L45	35.00-32.08	Ā	0.000	0.000 0.000	7.184 11.465	0.000	0.10
	*******	В	0.000	0.000	14.431	0.000 0.000	0.04 0.03
		Č	0.000	0.000	7.643	0.000	0.03
L46	32.08-31.83	Α	0.000	0.000	0.982	0.000	0.00
		В	0.000	0.000	1.236	0.000	0.00
L47	24 02 20 75	Ç	0.000	0.000	0.654	0.000	0.00
L 4 /	31.83-28.75	A B	0.000	0.000	12.094	0.000	0.04
		Ĉ	0.000	0.000	15.221	0.000	0.04
L.48	28.75-28.50	Ă	0.000	0.000	8.062 0.982	0.000 0.000	0.06
		В	0.000	0.000	1.236	0.000	0.00 0.00
		ċ	0.000	0.000	0.654	0.000	0.00
L49	28.50-23.50	Α	0.000	0.000	16.924	0.000	0.07
		В	0.000	0.000	22.002	0.000	0.06
LEO	22 50 42 52	Ç	0.000	0.000	10.379	0.000	0.10
L50	23.50-18.50	A	0.000	0.000	14.216	0.000	0.07
		B C	0.000 0.000	0.000	19.293	0.000	0.06
L51	18.50-13.50	Ă	0.000	0.000 0.000	7.671 14.216	0.000	0.10
		B	0.000	0.000	19.293	0.000 0.000	0.07 0.06
			= =		.5.200	5.000	0.00

Tower Sectio	Tower Elevation	Face	A _R	A_F	C _A A _A In Face	C _A A _A Out Face	Weight
n	ft		ft²	ft²	ft²	ft²	K
		C	0.000	0.000	7.671	0,000	0.10
L52	13.50-8.50	Α	0.000	0.000	10.650	0.000	0.03
		В	0.000	0.000	19.293	0.000	0.06
		С	0.000	0.000	7.495	0.000	0.09
L53	8.50-3.50	Α	0.000	0.000	7.083	0.000	0.00
		В	0.000	0.000	9.228	0.000	0.01
		С	0.000	0.000	7.083	0.000	0.06
L54	3.50-0.00	Α	0.000	0.000	3.778	0.000	0.00
		В	0.000	0.000	3.778	0.000	0.00
		С	0.000	0.000	3,778	0.000	0.04

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Sectio	Tower Elevation	Face or	lce Thickness	A_R	A_{F}	C _A A _A In Face	C _A A _A Out Face	Weight
n	ft	Leg	in	ft ²	ft²	fit ²	ft ²	к
L1	190.00-185.00	A	1.517	0.000	0.000	0.000	0.000	0.00
		В	11017	0.000	0.000	2.870	0.000	0.04
		č		0.000	0.000	3.621	0.000	0.04
L2	185.00-180.00	Ã	1.513	0.000	0.000	0.000	0.000	0.00
	100.00 100.00	В	1.010	0.000	0.000	4.779	0.000	0.07
		č		0.000	0.000	3.613	0.000	0.07
L3	180.00-175.00	Ä	1.509	0.000	0.000	0.000	0.000	0.09
LO	100.00-170.00	В	1.508	0.000		4.770	0.000	0.00
		Č		0.000	0.000	4.773	0.000	0.07
L4	175.00-170.00	Ā	1.504	0.000	0.000	3.605	0.000	0.09
L4	170.00-170.00	В	1.304	0.000	0.000	0.000	0.000	0.00
		В		0.000	0.000	4.768	0.000	0.07
	470.00 405.00	Ċ	4 800	0.000	0.000	3.596	0.000	0.09
L5	170.00-165.00	A B	1.500	0.000	0.000	0.000	0.000	0.00
		В		0.000	0.000	19.012	0.000	0.26
		Ċ		0.000	0.000	3.587	0.000	0.09
L6	165.00-160.00	Α	1.495	0.000	0.000	5.062	0.000	0.09
		В		0.000	0.000	19.001	0.000	0.26
		С		0.000	0.000	3.578	0.000	0.09
L7	160.00-155.00	Α	1.491	0.000	0.000	12.642	0.000	0.22
		В		0.000	0.000	18.989	0.000	0.26
		С		0.000	0.000	3.569	0.000	0.09
L8	155.00-150.00	Α	1.486	0.000	0.000	12.630	0.000	0.22
		В		0.000	0.000	18.977	0.000	0.26
		С		0.000	0.000	3.559	0.000	0.09
L9	150.00-145.00	Α	1.481	0.000	0.000	12.618	0.000	0.22
		В		0.000	0.000	18.965	0.000	0.26
		С		0.000	0.000	3.549	0.000	0.13
L10	145.00-140.00	Ā	1.476	0.000	0.000	12.605	0.000	0.22
		В		0.000	0.000	18.952	0.000	0.25
		Ċ		0.000	0.000	3.539	0.000	0.13
L11	140.00-135.00	Ă	1.471	0.000	0.000	12.592	0.000	0.13
	. 10.00 100.00	В	1.77	0.000	0.000	18.939	0.000	0.25
		č		0.000	0.000	3.529	0.000	0.23
L12	135.00-130.00	Ă	1.465	0.000	0.000	12.578	0.000	0.13
	100.00-100.00	B	1.400	0.000			0.000	0.22
		Č		0.000	0.000	18.925	0.000	0.25
L13	130.00-125.00		4.400		0.000	3.518	0.000	0.13
LIJ	130.00-125.00	A B	1.460	0.000	0.000	12.564	0.000	0.22
		D .		0.000	0.000	18.911	0.000	0.25
1 4 4	405.00.400.00	Ç	4.47.1	0.000	0.000	3.507	0.000	0.13
L14	125.00-120.00	A	1.454	0.000	0.000	12.550	0.000	0.22
		В		0.000	0.000	18.897	0.000	0,25
		Ç		0.000	0.000	3.495	0.000	0.13
L15	120.00-115.00	A	1.448	0.000	0.000	12.535	0.000	0.22
		В		0.000	0.000	18,882	0.000	0.25
		С		0.000	0.000	3.483	0.000	0.13
L16	115.00-112.67	Α	1.443	0.000	0.000	8.191	0.000	0.12
		В		0.000	0.000	11,153	0.000	0.14
		С		0.000	0.000	3.966	0.000	0.08
L17	112.67-112.42	Α	1.441	0.000	0.000	0.919	0.000	0.01
		В		0.000	0.000	1.236	0.000	0.02

Seeting Clearation Cor	Town			····					
n ft Leg in ft² g² lf² m² f² m² <th< th=""><th>Tower Sectio</th><th>Tower Elevation</th><th>Face</th><th>lce Thickness</th><th>A_R</th><th>A_F</th><th>$C_A A_A$</th><th></th><th>Weight</th></th<>	Tower Sectio	Tower Elevation	Face	lce Thickness	A_R	A_F	$C_A A_A$		Weight
List					#2	#2			14
List									
L19	L18	112.42-107.42		1.438					
Light 107.42-103.33			В						
Light 107.42-103.33			С		0.000				
L20	L19	107.42-103.33		1.432		0.000			
L20			В						
L21	1.20	103 33-103 08		1.400					
C		100.00-100.00	R	1.429					
L21			č		0.000				
L22	L21	103.08-100.00		1.427					
1.22			В						
L22	1.00								
C	L22	100.00-95.00		1.421			18.889		
L23			В						
L24	L23	95 00-90 00		1 412					
L24		00.00-00.00		1.413					
L24									
L25	L24	90.00-89.50		1.409					
L25									
L28									
L26	L25	89.50-89.25		1.409					
L26								0.000	0.02
B	1.26	80 25-85 50		4 405					0.01
L27 85.50-85.25		03.25-05.50		1.405					
L27									
L28	L27	85.50-85.25		1.402					
L28									
L28			C						
L29	L28	85.25-84.00		1.401	0.000	0.000			
L29							8.716		
B	1 20	94.00.02.75		4 400				0.000	
L30 83.75-82.50 A 1.398 0.000 0.000 7.126 0.000 0.09	LZS	04.00-03.75		1.400					
L30 83.75-82.50 A 1.398 0.000 0.000 7.126 0.000 0.09 B 0.000 0.000 8.712 0.000 0.10 C 0.000 0.000 8.712 0.000 0.07 L31 82.50-82.25 A 1.397 0.000 0.000 1.425 0.000 0.02 B 0.000 0.000 1.742 0.000 0.02 C 0.000 0.000 1.742 0.000 0.02 L32 82.25-80.00 A 1.395 0.000 0.000 0.9352 0.000 0.13 B 0.000 0.000 0.000 12.208 0.000 0.14 C 0.000 0.000 0.000 12.208 0.000 0.14 C 0.000 0.000 5.291 0.000 0.09 L33 80.00-75.00 A 1.389 0.000 0.000 5.291 0.000 0.25 B 0.000 0.000 0.000 17.526 0.000 0.25 B 0.000 0.000 0.000 23.873 0.000 0.25 L34 75.00-70.00 A 1.379 0.000 0.000 17.494 0.000 0.25 B 0.000 0.000 17.494 0.000 0.25 L35 70.00-65.00 A 1.370 0.000 0.000 17.494 0.000 0.25 L36 65.00-60.00 A 1.359 0.000 0.000 17.459 0.000 0.25 L36 65.00-60.00 A 1.359 0.000 0.000 17.459 0.000 0.25 L37 60.00-58.50 A 1.350 0.000 0.000 23.866 0.000 0.17 L39 58.50-58.25 A 1.350 0.000 0.000 1.187 0.000 0.05 L38 58.50-58.25 A 1.350 0.000 0.000 1.187 0.000 0.05 L39 58.25-53.25 A 1.344 0.000 0.000 1.187 0.000 0.01 L39 58.25-53.25 A 1.344 0.000 0.000 13.548 0.000 0.01 L30 53.25-48.25 A 1.331 0.000 0.000 13.548 0.000 0.22 B 0.000 0.000 0.000 13.548 0.000 0.01 L30 53.25-48.25 A 1.344 0.000 0.000 13.548 0.000 0.22 B 0.000 0.000 0.000 13.548 0.000 0.01 L30 53.25-48.25 A 1.344 0.000 0.000 13.548 0.000 0.22 B 0.000 0.000 0.000 13.548 0.000 0.01 L30 53.25-48.25 A 1.331 0.000 0.000 15.955 0.000 0.23			Č						
L31	L30	83.75-82.50	Ā	1 398					
L31 82.50-82.25			В						
S2-50-82.25			С						
B	L31	82.50-82.25	Α	1.397	0.000				
L32 82.25-80.00			В			0.000			
B	122	92.25.00.00	C	4.00#				0.000	
L33 80.00-75.00	LJZ	02.20-80.00	A	1.395					
L33									
L34	L33	80.00-75.00		1 380					
L34			В	1.000					
L34			C						
L35	L34	75.00-70.00	Α	1.379					
L35			В						
L36 65.00-60.00 A 1.359 0.000 0.000 23.806 0.000 0.28 L36 65.00-60.00 A 1.359 0.000 0.000 17.422 0.000 0.25 B 0.000 0.000 0.000 23.769 0.000 0.28 L37 60.00-58.50 A 1.352 0.000 0.000 5.219 0.000 0.07 B 0.000 0.000 0.000 7.123 0.000 0.08 C 0.000 0.000 0.000 2.518 0.000 0.05 L38 58.50-58.25 A 1.350 0.000 0.000 0.870 0.000 0.01 B 0.000 0.000 0.000 0.419 0.000 0.01 L39 58.25-53.25 A 1.344 0.000 0.000 13.548 0.000 0.02 L40 53.25-48.25 A 1.331 0.000 0.000 15.955 0.000 0.23	125	70.00 65.00	Ç	4.070					
L36 65.00-60.00 A 1.359 0.000 0.000 8.446 0.000 0.17 B 0.000 0.000 0.000 23.769 0.000 0.28 C 0.000 0.000 8.415 0.000 0.17 L37 60.00-58.50 A 1.352 0.000 0.000 5.219 0.000 0.07 B 0.000 0.000 7.123 0.000 0.08 C 0.000 0.000 7.123 0.000 0.08 C 0.000 0.000 7.123 0.000 0.08 L38 58.50-58.25 A 1.350 0.000 0.000 2.518 0.000 0.05 B 0.000 0.000 0.000 0.870 0.000 0.01 B 0.000 0.000 0.187 0.000 0.01 B 0.000 0.000 0.419 0.000 0.01 L39 58.25-53.25 A 1.344 0.000 0.000 13.548 0.000 0.22 B 0.000 0.000 13.548 0.000 0.22 B 0.000 0.000 19.895 0.000 0.22 L40 53.25-48.25 A 1.331 0.000 0.000 15.955 0.000 0.23	LJJ	70.00-00.00		1.370					
L36 65.00-60.00 A 1.359 0.000 0.000 17.422 0.000 0.25 B 0.000 0.000 23.769 0.000 0.28 C 0.000 0.000 8.415 0.000 0.17 L37 60.00-58.50 A 1.352 0.000 0.000 5.219 0.000 0.07 B 0.000 0.000 7.123 0.000 0.08 C 0.000 0.000 2.518 0.000 0.05 L38 58.50-58.25 A 1.350 0.000 0.000 0.870 0.000 0.01 B 0.000 0.000 0.870 0.000 0.01 C 0.000 0.000 1.187 0.000 0.01 C 0.000 0.000 0.419 0.000 0.01 L39 58.25-53.25 A 1.344 0.000 0.000 13.548 0.000 0.22 B 0.000 0.000 13.548 0.000 0.22 C 0.000 0.000 19.895 0.000 0.22 L40 53.25-48.25 A 1.331 0.000 0.000 15.955 0.000 0.23			C						
B 0.000 0.000 23.769 0.000 0.28 C 0.000 0.000 8.415 0.000 0.17 B 0.000 0.000 5.219 0.000 0.07 B 0.000 0.000 0.000 7.123 0.000 0.08 C 0.000 0.000 0.000 7.123 0.000 0.08 C 0.000 0.000 0.000 7.123 0.000 0.08 L38 58.50-58.25 A 1.350 0.000 0.000 0.870 0.000 0.01 B 0.000 0.000 0.870 0.000 0.01 C 0.000 0.000 0.419 0.000 0.01 L39 58.25-53.25 A 1.344 0.000 0.000 13.548 0.000 0.22 B 0.000 0.000 19.895 0.000 0.25 C 0.000 0.000 15.955 0.000 0.14 L40 53.25-48.25 A 1.331 0.000 0.000 15.955 0.000 0.23	L36	65,00-60,00		1 359					
L37 60.00-58.50 A 1.352 0.000 0.000 8.415 0.000 0.17 B 0.000 0.000 0.000 5.219 0.000 0.07 B 0.000 0.000 7.123 0.000 0.08 C 0.000 0.000 2.518 0.000 0.05 L38 58.50-58.25 A 1.350 0.000 0.000 0.870 0.000 0.01 B 0.000 0.000 0.870 0.000 0.01 C 0.000 0.000 0.419 0.000 0.01 L39 58.25-53.25 A 1.344 0.000 0.000 13.548 0.000 0.22 B 0.000 0.000 19.895 0.000 0.25 C 0.000 0.000 15.955 0.000 0.14 L40 53.25-48.25 A 1.331 0.000 0.000 15.955 0.000 0.23				1.000					
L37 60.00-58.50 A 1.352 0.000 0.000 5.219 0.000 0.07 B 0.000 0.000 7.123 0.000 0.08 C 0.000 0.000 2.518 0.000 0.05 L38 58.50-58.25 A 1.350 0.000 0.000 0.870 0.000 0.01 B 0.000 0.000 1.187 0.000 0.01 C 0.000 0.000 0.419 0.000 0.01 L39 58.25-53.25 A 1.344 0.000 0.000 13.548 0.000 0.22 B 0.000 0.000 19.895 0.000 0.25 C 0.000 0.000 19.895 0.000 0.25 L40 53.25-48.25 A 1.331 0.000 0.000 15.955 0.000 0.23			С						
L38 58.50-58.25 A 1.344 0.000 0.000 13.548 0.000 0.01 L39 58.25-53.25 A 1.344 0.000 0.000 13.548 0.000 0.22 B 0.000 0.000 0.000 13.548 0.000 0.22 C 0.000 0.000 19.895 0.000 0.25 L40 53.25-48.25 A 1.331 0.000 0.000 15.955 0.000 0.23	L37	60.00-58.50	Α	1.352					
L38 58.50-58.25 A 1.350 0.000 0.000 2.518 0.000 0.05 B 0.000 0.000 1.187 0.000 0.01 L39 58.25-53.25 A 1.344 0.000 0.000 13.548 0.000 0.22 B 0.000 0.000 19.895 0.000 0.25 C 0.000 0.000 4.548 0.000 0.14 L40 53.25-48.25 A 1.331 0.000 0.000 15.955 0.000 0.23			В		0.000	0.000			
L38	1 20	E0 E0 E0 OF	Ç	4.005			2.518	0.000	
L39 58.25-53.25	LOO	აგ. 50-58.25	A	1.350			0.870	0.000	0.01
L39 58.25-53.25 A 1.344 0.000 0.000 13.548 0.000 0.22 B 0.000 0.000 19.895 0.000 0.25 C 0.000 0.000 4.548 0.000 0.14 L40 53.25-48.25 A 1.331 0.000 0.000 15.955 0.000 0.23			C						
B 0.000 0.000 19.895 0.000 0.25 C 0.000 0.000 4.548 0.000 0.14 L40 53.25-48.25 A 1.331 0.000 0.000 15.955 0.000 0.23	L39	58.25-53.25		1 3//					
C 0.000 0.000 4.548 0.000 0.14 L40 53.25-48.25 A 1.331 0.000 0.000 15.955 0.000 0.23		-5.25 50.20		1.077					
L40 53.25-48.25 A 1.331 0.000 0.000 15.955 0.000 0.23									
0.20	L40	53.25-48.25	Α	1.331					
			В		0.000				0.26

Tower	Tower	Face	lce	A_R	A_{F}	$C_A A_A$	C_AA_A	Weight
Sectio	Elevation	or	Thickness			In Face	Out Face	
n	ft	Leg	in	ft²	ft²	ft²	ft ²	K
		C		0.000	0,000	6.961	0.000	0.16
L41	48.25-48.00	Α	1,324	0.000	0.000	0.948	0.000	0.01
		В		0.000	0.000	1.266	0.000	0.01
		С		0.000	0.000	0.499	0.000	0.01
L42	48,00-43,00	Α	1.317	0.000	0.000	18.940	0.000	0.26
		В		0.000	0.000	25.287	0.000	0.28
		С		0.000	0.000	9.954	0.000	0.18
L43	43.00-40.00	Α	1.305	0.000	0.000	11.339	0.000	0.15
		В		0.000	0.000	15.147	0.000	0.17
		С		0.000	0.000	5.951	0.000	0.11
L44	40.00-35.00	Α	1.291	0.000	0.000	20.247	0.000	0.26
		В		0.000	0.000	26.594	0.000	0.29
		С		0.000	0.000	11.274	0.000	0.19
L45	35.00-32.08	Ā	1.277	0.000	0.000	15.863	0.000	0.18
	******	В		0.000	0.000	19.569	0.000	0.20
		č		0.000	0.000	10.626	0.000	0.14
L46	32.08-31.83	Ã	1,271	0.000	0.000	1.357	0.000	0.02
		В		0.000	0.000	1.674	0.000	0.02
		č		0.000	0.000	0.909	0.000	0.01
L47	31.83-28.75	Ă	1.264	0.000	0.000	16.696	0.000	0.19
	01.00 20.10	В	1.201	0.000	0.000	20.606	0.000	0.10
		č		0.000	0.000	11.177	0.000	0.15
L48	28.75-28.50	Ä	1.257	0.000	0.000	1.354	0.000	0.02
	20.10 20,00	B	1.201	0.000	0.000	1.671	0.000	0.02
		č		0.000	0.000	0.906	0.000	0.01
L49	28.50-23,50	Ă	1.245	0.000	0.000	23.687	0.000	0.28
	20.00-20,00	B	1.270	0.000	0.000	30.034	0.000	0.31
		Č		0.000	0.000	14.737	0.000	0.31
L50	23.50-18.50	Ä	1.219	0.000	0.000	20,264	0.000	0.25
LUV	20.00-10.00	B	1.218	0.000	0.000	26.611	0.000	0.23
		Č		0.000	0.000	11.327	0.000	0.28
L51	18.50-13.50	Ā	1.186	0.000	0.000	20,150	0.000	0.18
LUI	10.00-13.00		1.100					
		B C		0.000 0.000	0.000	26.497	0.000	0.27
1.50	42 50 0 50		1.110	0.000	0.000	11.229	0.000	0.18
L52	13,50-8,50	A	1.142	0.000	0.000	14.111	0.000	0.15
		В		0.000	0.000	26.344	0.000	0.26
1.50	0.50.0.50	C	4.075	0.000	0.000	10.236	0.000	0.15
L53	8,50-3,50	A	1.075	0.000	0.000	8.158	0.000	0.05
		В		0.000	0.000	11,646	0.000	0.09
1.54		Ç		0.000	0.000	8.158	0.000	0.11
L54	3.50-0.00	Α	0.951	0.000	0.000	4.285	0.000	0.02
		В		0.000	0.000	4.285	0.000	0.02
		C		0.000	0.000	4.285	0.000	0.06

Feed Line Center of Pressure

Section	Elevation	CP _X	CPz	CP_X	CPz
				Ice	Ice
	ft .	in	ín	in	in
L1	190.00-185.00	1.9055	0.0038	0.8161	1.0926
L2	185.00-180.00	3.0508	-0.4822	1.7458	0.5941
L3	180.00-175.00	3.1719	-0.4983	1.8706	0.6434
L4	175.00-170.00	3.1719	-0.4983	1.8711	0.6412
L5	170.00-165.00	7.1696	-6.9662	4.7465	-3.9631
L6	165.00-160.00	5.6109	-8.3154	3.6023	-5.1529
L7	160.00-155.00	4.2504	-10.8051	2.6170	-7.1208
L8	155.00-150.00	4.2504	-10.8051	2.6186	-7.1236
L9	150.00-145.00	4.2504	-10.8051	2.6201	-7.1265
L10	145.00-140.00	4.2504	-10.8051	2.6217	-7.1295
L11	140.00-135.00	4.6140	-11.6794	2.8627	-7.7493
L12	135.00-130.00	4.6140	-11.6794	2.8645	-7.7524
L13	130.00-125.00	4.6140	-11.6794	2.8663	-7.7557
L14	125.00-120.00	4.6140	-11.6794	2.8682	- 7. 7 591
L15	120.00-115.00	4.9449	-12.4752	3.0904	-8.3295
L16	115.00-112.67	3.5716	-9.0107	2.5715	-6.9296

Section	Elevation	CP _X	CPz	CP _X	CPz
				lce	Ice
	ft	in	in	in	in
L17	112.67-112.42	3,4133	-8.6113	2.5015	-6.7407
L18	112.42-107.42	3.4133	-8.6113	2.5023	-6.7419
L19	107.42-103.33	2.9637	-7,4769	2.2701	-6.1149
L20	103.33-103.08	2.1436	-5.4079	2.0660	-5.5645
L21	103.08-100.00	2.9030	-7.3237	2.2220	-5.9840
L22	100.00-95.00	3.6710	-9.2363	2.6428	-7.0959
L23	95.00-90.00	3.5127	-8.8380	2.5718	-6.9032
L24	90.00-89.50	2.9959	<i>-7.</i> 5379	2.3172	-6.2189
L25	89.50-89.25	2.9959	-7.5379	2.3173	-6.2190
L26	89.25-85.50	2.2705	-5.7127	2.1935	-5.8859
L27	85.50-85,25	2.0853	- 5.2466	2.0246	-5.4320
L28	85.25-84.00	2.0853	-5.2466	2.0248	-5.4324
L29	84.00-83,75	2.0853	-5.2466	2,0251	-5.4328
L30	83.75-82.50	2.0853	-5.2466	2.0253	-5,4331
L31	82.50-82.25	2.0853	-5.2466	2.0255	<i>-</i> 5.4335
L32	82.25-80.00	3.3882	-8.5249	2.4948	-6.6919
L33	80.00-75.00	3.9691	-9.9863	2.7590	-7.3987
L34	75.00-70,00	3.9691	-9.9863	2,7617	-7.4032
L35	70.00-65.00	3.9691	-9.9863	2.7646	-7.4080
L36	65.00-60.00	3.9691	-9.9863	2.7677	-7.4132
L37	60.00-58.50	3.9691	-9.9863	2.7698	-7.4168
L38	58.50-58.25	3.9691	-9,9863	2.7704	-7.4178
L39	58.25-53.25	4.8564	-12.2188	3.1695	-8.4842
L40	53.25-48.25	4,1783	-10.5127	2.9069	-7.7774
L41	48.25-48.00	3.5813	-9.0107	2.6336	-7.0442
L42	48.00-43.00	3.5813	-9.0107	2.6355	-7.0472
L43	43.00-40.00	3.5813	-9.0107	2.6387	-7.0522
L44	40.00-35.00	3.3496	-8.4277	2.5313	-6.7617
L45	35.00-32.08	2,0853	-5.2466	2.0865	-5.5704
L46	32.08-31.83	2.0853	-5.2466	2.0877	-5.5720
L47	31,83-28,75	2.0853	-5.2466	2.0889	-5.5739
L48	28.75-28.50	2.0853	-5.2466	2.0902	-5.5758
L49	28.50-23.50	2.8503	-7.1716	2.2921	-6.1113
L50	23,50-18,50	3.2626	-8.2088	2.5276	-6.7319
L51	18.50-13.50	3,2626	-8.2088	2.5352	-6.7432
L52	13.50-8.50	4.2095	-6.8454	3.5348	-5.6902
L53	8.50-3.50	1.3721	-0.9409	1.4537	-0.9191
L54	3.50-0.00	0.0000	0.0000	0.0000	0.0000

Note: For pole sections, center of pressure calculations do not consider feed line shielding.

Shielding Factor Ka

Tower	Feed Line	Description	Feed Line	K _a	Ka
Section	Record No.		Segment	No Ice	Ice
			Elev.		
L1	1	Safety Line 3/8	185.00 -	1.0000	1.0000
	,		190.00		
L1	2	Climbing Rungs	185.00 -	1.0000	1.0000
			190.00		
L1	4	(1) HB114-21U3M12-	185.00 -	1.0000	1.0000
		XXXF(1-1/4) + (2) TYPE	188.00		
		I(1-1/4)			
L2	1	Safety Line 3/8	180.00 -	1.0000	1.0000
			185.00		
L2	2	Climbing Rungs	180.00 -	1.0000	1.0000
			185.00		
L2	4	(1) HB114-21U3M12-	180.00 -	1.0000	1.0000
		XXXF(1-1/4) + (2) TYPE	185.00		
		1(1-1/4)		-	
L3	1,	Safety Line 3/8	175.00 -	1.0000	1.0000
I .	İ	l	180.00	-	

ſ	Tower	Feed Line	Description	Feed Line	Ke	K,
1	Section	Record No.	Journal	Segment	No Ice	/ce
ŀ	L31	2	Climbias Dem	Elev.		
		*	Climbing Rungs	175.00 - 180.00		1.0000
1	L3	4		175.00 -	1.0000	1.0000
١	l		XXXF(1-1/4) + (2) TYPE I(1-1/4)	180.00	Ϊ	
	L4	1		170.00 -	1.0000	1.0000
I	L4	2	Climbing Rungs	175.00 170.00 -	1,0000	1.0000
				170.00 -		
	L4	4	(1) HB114-21U3M12- XXXF(1-1/4) + (2) TYPE	170.00 -	1.0000	1.0000
I			1(1-1/4)	175.00		[!
١	L5	1	Safety Line 3/8	165.00 -	1.0000	1.0000
	L5	2	Climbing Rungs	170.00 165.00 -	1.0000	1.0000
١				170.00		1
	L5	4	(1) HB114-21U3M12- XXXF(1-1/4) + (2) TYPE	165.00 - 170.00	1.0000	1.0000
1			I(1-1/4)			
l	L5	14	(6) LDF7-50A(1-5/8) + (3) HCS 6X12 4AWG(1-5/8) +	165.00 - 170.00	1.0000	1.0000
1			(1) MLÈ Hybrid	170.00		f
			9Power/18Fiber RL 2(1-			
	L6	1	5/8) Safety Line 3/8	160.00 -	1.0000	1.0000
	L6	2	Climbing Rungs	165.00		
		2	Cumping Rungs	160.00 - 165.00	1.0000	1.0000
1	L6	4	(1) HB114-21U3M12-	160.00 -	1.0000	1.0000
			XXXF(1-1/4) + (2) TYPE I(1-1/4)	165.00		
1	L6	14	(6) LDF7-50A(1-5/8) + (3)	160.00 -	1.0000	1.0000
1	,		HCS 6X12 4AWG(1-5/8) + (1) MLE Hybrid	165.00		1
l			9Power/18Fiber RL 2(1-	ĺ	1	
1	L6	19	5/8) (4) WR-VG86ST-BRD(3/4)	160.00 -	1.0000	1 0000
		19	+ (2) FB-L98B-034-	160.00 -	1.0000	1.0000
	L6	25	XXX(3/8)	İ	4 0000	4.0000
			LDF7-50A(1-5/8)	160.00 - 162.00	1.0000	1.0000
!	L7	1	Safety Line 3/8	155.00 -	1,0000	1.0000
l	L7	2	Climbing Rungs	160,00 155.00 -	1.0000	1.0000
l				160.00		-
	L.7	4	(1) HB114-21U3M12- XXXF(1-1/4) + (2) TYPE	155.00 - 160.00	1.0000	1,0000
	,_		I(1-1/4)			_ [
	L7	14	(6) LDF7-50A(1-5/8) + (3) HCS 6X12 4AWG(1-5/8) +	155.00 - 160.00	1.0000	1.0000
]	(1) MLE Hybrid	.55.00		
		-	9Power/18Fiber RL 2(1- 5/8)	ļ		
	L7	19	(4) WR-VG86ST-BRD(3/4)	155.00 -	1.0000	1.0000
			+ (2) FB-L98B-034- XXX(3/8)	160.00		1
	L7	25	LDF7-50A(1-5/8)	155.00 -	1.0000	1.0000
	L8	1	Safety Line 3/8	160.00	ľ	
				150.00 - 155.00	1.0000	1.0000
	L8	2	Climbing Rungs	150.00 -	1.0000	1.0000
	L8	4	(1) HB114-21U3M12-	155.00 150.00 -	1.0000	1.0000
	-	-	XXXF(1-1/4) + (2) TYPE	155.00		
	L8	14	l(1-1/4) (6) LDF7-50A(1-5/8) + (3)	150.00 -	1.0000	1.0000
	- 1		HCS 6X12 4AWG(1-5/8) +	155.00		
	1		(1) MLE Hybrid 9Power/18Fiber RL 2(1-	1	į	ļ
	1	ı	or officer of more the Z(1-	ı	I	l l

Tower	Feed Line	Description	Feed Line	K _e	Ka
Section	Record No.		Segment	∧ _a No lce	∧₃ Ice
		5/8)	Elev.		
L8	19		150.00 - 155.00	1.0000	1.0000
L8	25	LDF7-50A(1-5/8)	150.00 - 155.00	1.0000	1.0000
L9	1	Safety Line 3/8	145.00 - 150.00	1.0000	1.0000
L9	2	Climbing Rungs	145.00 - 150.00	1.0000	1.0000
L9	4	(1) HB114-21U3M12- XXXF(1-1/4) + (2) TYPE I(1-1/4)	145.00 - 150.00	1.0000	1.0000
L9	14	(6) LDF7-50A(1-5/8) + (3) HCS 6X12 4AWG(1-5/8) + (1) MLE Hybrid 9Power/18Fiber RL 2(1-	145.00 - 150.00	1.0000	1.0000
L9	19	5/8) (4) WR-VG86ST-BRD(3/4) + (2) FB-L98B-034- XXX(3/8)	145.00 - 150.00	1,0000	1.0000
L9	25	LDF7-50A(1-5/8)	145.00 - 150.00	1.0000	1.0000
L10	1	Safety Line 3/8	140.00 - 145.00	1.0000	1.0000
L10	2	Climbing Rungs	140.00 - 145.00	1.0000	1.0000
L10	4	(1) HB114-21U3M12- XXXF(1-1/4) + (2) TYPE I(1-1/4)	140.00 - 145.00	1.0000	1.0000
L10	14	(6) LDF7-50A(1-5/8) + (3) HCS 6X12 4AWG(1-5/8) + (1) MLE Hybrid 9Power/18Fiber RL 2(1-	140.00 - 145.00	1.0000	1.0000
L10	19	5/8) (4) WR-VG86ST-BRD(3/4) + (2) FB-L98B-034-	140.00 - 145.00	1.0000	1.0000
L10	25	XXX(3/8) LDF7-50A(1-5/8)	140.00 - 145.00	1.0000	1.0000
L11	1	Safety Line 3/8	135.00 - 140.00	1.0000	1.0000
L11	2	Climbing Rungs	135.00 - 140.00	1.0000	1.0000
L11	4	(1) HB114-21U3M12- XXXF(1-1/4) + (2) TYPE I(1-1/4)	135.00 - 140.00	1.0000	1.0000
L11	14	(6) LDF7-50A(1-5/8) + (3) HCS 6X12 4AWG(1-5/8) + (1) MLE Hybrid 9Power/18Fiber RL 2(1- 5/8)	135.00 - 140.00	1.0000	1.0000
L11	19	(4) WR-VG86ST-BRD(3/4) + (2) FB-L98B-034- XXX(3/8)	135.00 - 140.00	1.0000	1.0000
L11	25	LDF7-50A(1-5/8)	135.00 - 140.00	1.0000	1.0000
L12	1	Safety Line 3/8	130.00 - 135.00	1.0000	1.0000
L12	2	Climbing Rungs	130.00 - 135.00	1.0000	1.0000
L12	4	(1) HB114-21U3M12- XXXF(1-1/4) + (2) TYPE I(1-1/4)	130.00 - 135.00	1.0000	1.0000
L12	14	(6) LDF7-50A(1-5/8) + (3) HCS 6X12 4AWG(1-5/8) + (1) MLE Hybrid 9Power/18Fiber RL 2(1- 5/8)	130.00 - 135.00	1.0000	1.0000

Tower	Feed Line	Description	Feed Line	K _a	K _a
Section	Record No.	Description	Segment	No Ice	r∖a Ice
			Elev.		
L12	19	(4) WR-VG86ST-BRD(3/4) + (2) FB-L98B-034- XXX(3/8)	130.00 - 135.00	1.0000	1.0000
L12	25	LDF7-50A(1-5/8)	130.00 - 135.00	1.0000	1.0000
L13	1	Safety Line 3/8	125.00 - 130.00	1.0000	1.0000
L13	2	Climbing Rungs	125.00 - 130.00	1.0000	1.0000
L13	4	(1) HB114-21U3M12- XXXF(1-1/4) + (2) TYPE I(1-1/4)	125,00 - 130.00	1.0000	1.0000
L13	14	(6) LDF7-50A(1-5/8) + (3) HCS 6X12 4AWG(1-5/8) + (1) MLE Hybrid 9Power/18Fiber RL 2(1-	125.00 - 130.00	1.0000	1.0000
L13	19	5/8) (4) WR-VG86ST-BRD(3/4) + (2) FB-L98B-034- XXX(3/8)	125.00 - 130.00	1,0000	1.0000
L13	25	LDF7-50A(1-5/8)	125.00 - 130.00	1.0000	1.0000
L14	1	Safety Line 3/8	120.00 - 125.00	1.0000	1.0000
L14	2	Climbing Rungs	120.00 - 125.00	1.0000	1.0000
L14	4	(1) HB114-21U3M12- XXXF(1-1/4) + (2) TYPE I(1-1/4)	120.00 - 125.00	1.0000	1.0000
L14	14	(6) LDF7-50A(1-5/8) + (3) HCS 6X12 4AWG(1-5/8) + (1) MLE Hybrid 9Power/18Fiber RL 2(1-	120.00 - 125.00	1.0000	1.0000
L14	19	5/8) (4) WR-VG86ST-BRD(3/4) + (2) FB-L98B-034-	120.00 - 125.00	1.0000	1.0000
L14	25	XXX(3/8) LDF7-50A(1-5/8)	120.00 - 125.00	1,0000	1.0000
L15	1	Safety Line 3/8	115.00 - 120.00	1.0000	1.0000
L15	2	Climbing Rungs	115.00 - 120.00	1.0000	1.0000
L15	4	(1) HB114-21U3M12- XXXF(1-1/4) + (2) TYPE I(1-1/4)	115.00 - 120.00	1.0000	1.0000
L15	14	(6) LDF7-50A(1-5/8) + (3) HCS 6X12 4AWG(1-5/8) + (1) MLE Hybrid 9Power/18Fiber RL 2(1-	115.00 - 120.00	1.0000	1.0000
L15	19	5/8) (4) WR-VG86ST-BRD(3/4) + (2) FB-L98B-034-	115.00 - 120.00	1.0000	1.0000
L15	25	XXX(3/8) LDF7-50A(1-5/8)	115.00 -	1.0000	1.0000
L16	1	Safety Line 3/8	120.00 112.67 - 115.00	1.0000	1.0000
L16	2	Climbing Rungs	112.67 - 115.00	1.0000	1.0000
L16	4	(1) HB114-21U3M12- XXXF(1-1/4) + (2) TYPE	112.67 - 115.00	1.0000	1.0000
L16	14	I(1-1/4) (6) LDF7-50A(1-5/8) + (3) HCS 6X12 4AWG(1-5/8) + (1) MLE Hybrid 9Power/18Fiber RL 2(1-	112.67 - 115.00	1.0000	1.0000
L16	19	5/8) (4) WR-VG86ST-BRD(3/4)	112.67 -	1.0000	1.0000

Tower	Feed Line	Description	Feed Line	K _a	K _a
Section	Record No.	·	Segment Elev.	No Îce	Ice
		+ (2) FB-L98B-034- XXX(3/8)	115.00		
L16	25	LDF7-50A(1-5/8)	112.67 - 115.00	1.0000	1.0000
L16	59	6" x 1" Flat Plate	112.67 - 114.67	1.0000	1.0000
L16	60	6" x 1" Flat Plate	112.67 - 114.67	1.0000	1.0000
L16	61	6" x 1" Flat Plate	112.67 - 114.67	1,0000	1.0000
L17	1	Safety Line 3/8	112.42 - 112.67	1.0000	1.0000
L.17	2	Climbing Rungs	112.42 - 112.67	1.0000	1.0000
L17	4	(1) HB114-21U3M12- XXXF(1-1/4) + (2) TYPE I(1-1/4)	112.42 - 112.67	1.0000	1.0000
L17	14	(6) LDF7-50A(1-5/8) + (3) HCS 6X12 4AWG(1-5/8) + (1) MLE Hybrid 9Power/18Fiber RL 2(1-	112.42 - 112.67	1.0000	1.0000
L17	19	5/8) (4) WR-VG86ST-BRD(3/4) + (2) FB-L98B-034- XXX(3/8)	112.42 - 112.67	1.0000	1.0000
L17	25	LDF7-50A(1-5/8)	112.42 - 112.67	1.0000	1.0000
L17	59	6" x 1" Flat Plate	112.42 - 112.67	1.0000	1.0000
L17	60	6" x 1" Flat Plate	112.42 - 112.67	1.0000	1.0000
L17	61	6" x 1" Flat Plate	112.42 - 112.67	1.0000	1.0000
L18	1	Safety Line 3/8	107.42 - 112.42	1.0000	1.0000
L18	2	Climbing Rungs	107.42 - 112.42	1.0000	1.0000
L18	4	(1) HB114-21U3M12- XXXF(1-1/4) + (2) TYPE I(1-1/4)	107.42 - 112.42	1.0000	1.0000
L18	14	(6) LDF7-50A(1-5/8) + (3) HCS 6X12 4AWG(1-5/8) + (1) MLE Hybrid 9Power/18Fiber RL 2(1-	107.42 - 112.42	1.0000	1.0000
L18	19	5/8) (4) WR-VG86ST-BRD(3/4) + (2) FB-L98B-034-	107.42 - 112.42	1.0000	1.0000
L18	25	XXX(3/8) LDF7-50A(1-5/8)	107.42 - 112.42	1.0000	1.0000
L.18	59	6" x 1" Flat Plate	107.42 - 112.42	1.0000	1.0000
L.18	60	6" x 1" Flat Plate	107.42 - 112.42	1.0000	1.0000
L18	61	6" x 1" Flat Plate	107.42 - 112.42	1.0000	1.0000
L19	1	Safety Line 3/8	103.33 - 107.42	1.0000	1.0000
L19	2	Climbing Rungs	103.33 - 107.42	1.0000	1.0000
L19	4	(1) HB114-21U3M12- XXXF(1-1/4) + (2) TYPE I(1-1/4)	103.33 - 107.42	1.0000	1.0000
L19	14	(6) LDF7-50A(1-5/8) + (3) HCS 6X12 4AWG(1-5/8) + (1) MLE Hybrid 9Power/18Fiber RL 2(1-	103.33 - 107.42	1.0000	1.0000
L19	19	5/8) (4) WR-VG86ST-BRD(3/4)	103.33 -	1.0000	1.0000

Tower	Feed Line	Description	Feed Line	K _a	K _a
Section	Record No.		Segment Elev.	No Ice	lce
		+ (2) FB-L98B-034-	107.42		
L19	25	XXX(3/8) LDF7-50A(1-5/8)	103.33 - 107.42	1.0000	1.0000
L19	55	6" x 1" Flat Plate	103.33 - 105.33	1.0000	1.0000
L19	56	6" x 1" Flat Plate	103.33 - 105.33	1,0000	1.0000
L19	57	6" x 1" Flat Plate	103.33 - 105.33	1.0000	1.0000
L19	59	6" x 1" Flat Plate	103.33 - 107.42	1.0000	1.0000
L19	60	6" x 1" Flat Plate	103.33 - 107.42	1,0000	1.0000
L19	61	6" x 1" Flat Plate	103.33 - 107.42	1.0000	1.0000
L20	1	Safety Line 3/8	103.08 - 103.33	1.0000	1.0000
L20	2	Climbing Rungs	103.08 - 103.33	1.0000	1.0000
L20	4	(1) HB114-21U3M12- XXXF(1-1/4) + (2) TYPE (1-1/4)	103.08 - 103.33	1.0000	1.0000
L20	14	(6) LDF7-50A(1-5/8) + (3) HCS 6X12 4AWG(1-5/8) + (1) MLE Hybrid 9Power/18Fiber RL 2(1-	103.08 - 103.33	1.0000	1,0000
L20	19	5/8) (4) WR-VG86ST-BRD(3/4) + (2) FB-L98B-034- XXX(3/8)	103.08 - 103.33	1.0000	1.0000
L20	25	LDF7-50A(1-5/8)	103.08 - 103.33	1.0000	1.0000
L20	55	6" x 1" Flat Plate	103.08 - 103.33	1.0000	1.0000
L20	56	6" x 1" Flat Plate	103.08 - 103.33	1.0000	1.0000
L20	57	6" x 1" Flat Plate	103.08 - 103.33	1.0000	1.0000
L20	59	6" x 1" Flat Plate	103.08 - 103.33	1.0000	1.0000
L20	60	6" x 1" Flat Plate	103.08 - 103.33	1.0000	1,0000
L20	61	6" x 1" Flat Plate	103.08 - 103.33	1.0000	1.0000
L21	1	Safety Line 3/8	100.00 - 103.08	1.0000	1.0000
L21	2	Climbing Rungs	100.00 - 103.08	1.0000	1.0000
L21	4	(1) HB114-21U3M12- XXXF(1-1/4) + (2) TYPE I(1-1/4)	100.00 - 103.08	1.0000	1,0000
L21	14	(6) LDF7-50A(1-5/8) + (3) HCS 6X12 4AWG(1-5/8) + (1) MLE Hybrid 9Power/18Fiber RL 2(1-	100.00 - 103.08	1.0000	1.0000
L21	19	5/8) (4) WR-VG86ST-BRD(3/4) + (2) FB-L98B-034-	100.00 - 103.08	1.0000	1.0000
L21	25	XXX(3/8) LDF7-50A(1-5/8)	100.00 -	1.0000	1.0000
L21	55	6" x 1" Flat Plate	103.08 100.00 -	1.0000	1.0000
L21	56	6" x 1" Flat Plate	103.08 100.00 - 103.08	1.0000	1.0000
L21	57	6" x 1" Flat Plate	100.00 -	1.0000	1.0000
L21	59	6" x 1" Flat Plate	101.33 -	1.0000	1.0000

Tower	Feed Line	Dogovintie	Food 11:	1 2	· · · · ·
Section	Record No.	Description	Feed Line Segment	K₃ No Ice	K₃ Ice
	, . 100010 190.		Elev.	NO ICE	ice
			103.08	; 	
L21	60	6" x 1" Flat Plate	101,33	1.0000	1.0000
L21	64	CH v AH Elex bleve	103.08		4 0000
LZ1	61	6" x 1" Flat Plate	101.33 - 103.08		1.0000
L22	1	Safety Line 3/8	95.00 -	1	1.0000
	_		100.00		
L22	2	Climbing Rungs	95.00 -	1.0000	1.0000
L22	4	(1) HB114-21U3M12-	100.00 95.00 -	1.0000	1.0000
		XXXF(1-1/4) + (2) TYPE	100.00	4	1.0000
1.00	4.4	[(1-1/4)]			
L22	14	(6) LDF7-50A(1-5/8) + (3) HCS 6X12 4AWG(1-5/8) +	95.00 - 100.00	1.0000	1.0000
' I	i	(1) MLE Hybrid	100.00		
		9Power/18Fiber RL 2(1-			
L22	10	5/8)] : (4) WR-VG86ST-BRD(3/4)	95.00 -	1.0000	4.0000
	19	+ (2) FB-L98B-034-	100.00	1.0000	1.0000
		XXX(3/8)			
L22	25	LDF7-50A(1-5/8)	95.00 -	1.0000	1.0000
1.22	55	6" x 1" Flat Plate	100.00 95.00 -	1.0000	1.0000
			100.00	1,5550	,,,,,,,,
L22	56	6" x 1" Flat Plate	95.00 -	1.0000	1.0000
L22	57	6" x 1" Flat Plate	100.00 95.00 -	1.0000	1,0000
	٠.	V X I TIME I MAG	100.00	1.0000	1.0000
L.23	1	Safety Line 3/8	90.00 -	1.0000	1.0000
L23	2	Climbing Rungs	95,00 - 90.00	1.0000	1.0000
i	2	Omnoing Rungs	95.00	1.0000	1.0000
L23	4	(1) HB114-21U3M12-	90.00 -	1.0000	1.0000
	ļ	XXXF(1-1/4) + (2) TYPE	95.00		
L23	14	(6) LDF7-50A(1-5/8) + (3)	90.00 -	1.0000	1.0000
		HCS 6X12 4AWG(1-5/8) +	95.00	~	
		(1) MLE Hybrid 9Power/18Fiber RL 2(1-			
		5/8)			
L23	19	(4) WR-VG86ST-BRD(3/4)	90.00 -	1.0000	1.0000
	ļ	+ (2) FB-L98B-034-	95.00		
L23	25	XXX(3/8) LDF7-50A(1-5/8)	90.00 -	1.0000	1.0000
		` 1	95.00		5000
L23	55	6" x 1" Flat Plate	90.00 -	1.0000	1.0000
L23	56	6" x 1" Flat Plate	95.00 90.00 -	1.0000	1.0000
1			95.00		
L23	57	6" x 1" Flat Plate	90.00 -	1.0000	1.0000
L23	63	4.5" x 1" Flat Plate	95.00 - 90.00	1,0000	1.0000
			91.00		
L23	64	4.5" x 1" Flat Plate	90.00 -	1.0000	1.0000
L.23	65	4.5" x 1" Flat Plate	91.00 90.00 -	1.0000	1.0000
	İ		91.00		1.0000
L24	1	Safety Line 3/8	89.50 -	1.0000	1.0000
L24	2	Climbing Rungs	90.00 89.50 -	1.0000	1.0000
		194	90.00		1.0000
L24	4	(1) HB114-21U3M12-	89.50 -	1.0000	1.0000
l		XXXF(1-1/4) + (2) TYPE I(1-1/4)	90.00		- 1
L24	14	(6) LDF7-50A(1-5/8) + (3)	89.50 -	1.0000	1.0000
		HCS 6X12 4AWG(1-5/8) +	90.00		
		(1) MLE Hybrid 9Power/18Fiber RL 2(1-	İ		
	ļ	5/8)]	ĺ	
	•	/·	•	•	•

Tower	Foodling	Doggrinties	Foodline	<i>V</i>	· /
Section	Feed Line Record No.	Description	Feed Line Segment	K _a No Ice	K₃ Ice
			Ēlev.	140 100	
L24	19	(4) WR-VG86ST-BRD(3/4)	89.50 -	1.0000	1.0000
		+ (2) FB-L98B-034- XXX(3/8)	90.00		
L24	25	LDF7-50A(1-5/8)	89.50 -	1.0000	1.0000
L24	ee	69 v 47 Flat Diata	90.00	4 0000	4.0000
L24	55	6" x 1" Flat Plate	89.50 - 90.00	1.0000	1.0000
L24	56	6" x 1" Flat Plate	89.50 -	1.0000	1.0000
L24	57	6" x 1" Flat Plate	90.00 89.50 -	1.0000	1.0000
	51	O X I FIAL FIALE	90.00	1.0000	1,0000
L24	63	4.5" x 1" Flat Plate	89.50 -	1.0000	1.0000
L24	64	4.5" x 1" Flat Plate	90.00 89.50 -	1.0000	1.0000
		i	90.00		i
L24	65	4.5" x 1" Flat Plate	89.50 - 90.00	1.0000	1.0000
L25	1	Safety Line 3/8	89.25 -	1.0000	1.0000
1.05		-	89.50	4	
L25	2	Climbing Rungs	89.25 - 89.50	1.0000	1.0000
L25	4	(1) HB114-21U3M12-	89.25 -	1.0000	1.0000
		XXXF(1-1/4) + (2) TYPE	89.50		
L25	14	[(1-1/4)] (6) LDF7-50A(1-5/8) + (3)	89.25 -	1.0000	1.0000
[HCS 6X12 4AWG(1-5/8) +	89.50		
		(1) MLE Hybrid 9Power/18Fiber RL 2(1-			
ļ		5/8)			
L25	19	(4) WR-VG86ST-BRD(3/4)	89.25 -	1.0000	1.0000
		+ (2) FB-L98B-034- XXX(3/8)	89.50		
L25	25	LDF7-50A(1-5/8)	89.25 -	1.0000	1,0000
L25	55	6" x 1" Flat Plate	89.50 89.25 -	1,0000	1.0000
	33	O X I Hat Hate	89.50	1.0000	1.0000
L25	56	6" x 1" Flat Plate	89.25 -	1.0000	1.0000
L25	57	6" x 1" Flat Plate	89.50 89.25 -	1.0000	1,0000
		1	89.50		
L.25	63	4.5" x 1" Flat Plate	89.25 - 89.50	1.0000	1.0000
L25	64	4.5" x 1" Flat Plate	89.25 -	1.0000	1.0000
L25	65	4.5" x 1" Flat Plate	89.50	4 0000	4 0000
LZS	00	4.5 X T Flat Plate	89.25 - 89.50	1.0000	1.0000
L.26	1	Safety Line 3/8	85.50 -	1.0000	1.0000
L26	2	Climbing Rungs	89.25 85.50 -	1.0000	1.0000
	i	• • • • •	89.25		1.0000
L26	4	(1) HB114-21U3M12-	85.50 -	1.0000	1.0000
		XXXF(1-1/4) + (2) TYPE I(1-1/4)	89.25		
L26	14	(6) LDF7-50A(1-5/8) + (3)	85.50 -	1.0000	1.0000
		HCS 6X12 4AWG(1-5/8) + (1) MLE Hybrid	89.25		
	İ	9Power/18Fiber RL 2(1-			
L26	40	5/8)	05.50	4 0000	4 0000
L20	19	(4) WR-VG86ST-BRD(3/4) + (2) FB-L98B-034-	85.50 - 89.25	1.0000	1.0000
		XXX(3/8)			
L.26	25	LDF7-50A(1-5/8)	85.50 - 89.25	1.0000	1.0000
L26	51	4.5" x 1" Flat Plate	85.50 -	1.0000	1.0000
L.26	50	A EN V AN Class Diese	87.00	4 0000	4.0000
1,20	52	4.5" x 1" Flat Plate	85.50 - 87.00	1.0000	1.0000
L26	53	4.5" x 1" Flat Plate	85.50 -	1.0000	1.0000
I	1		87.00	i	J

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	Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K₃ No Ice	K₃ Ice
I	L26	55	6" x 1" Flat Plate	85.50 - 89.25	1.0000	1.0000
	L26	56	6" x 1" Flat Plate	85.50 - 89.25	1.0000	1.0000
	L26	57	6" x 1" Flat Plate	85.50 - 89.25	1.0000	1.0000
I	L26	63	4.5" x 1" Flat Plate	85.50 - 89.25	1.0000	1.0000
ı	L26	64	4.5" x 1" Flat Plate	85,50 - 89,25	1.0000	1.0000
l	L26	65	4.5" x 1" Flat Plate	85.50 - 89.25	1.0000	1.0000
l	L27	1	Safety Line 3/8	85.25 - 85.50	1.0000	1.0000
	L27	2	Climbing Rungs	85,25 - 85,50	1.0000	1.0000
	L27	4	(1) HB114-21U3M12- XXXF(1-1/4) + (2) TYPE	85.25 - 85.50	1.0000	1.0000
	L27	14	1(1-1/4) (6) LDF7-50A(1-5/8) + (3) HCS 6X12 4AWG(1-5/8) + (1) MLE Hybrid 9Power/18Fiber RL 2(1-	85.25 - 85.50	1.0000	1.0000
	L27	19	5/8) (4) WR-VG86ST-BRD(3/4) + (2) FB-L98B-034-	85.25 - 85.50	1,0000	1.0000
l	L27	25	XXX(3/8) LDF7-50A(1-5/8)	85.25 - 85.50	1.0000	1.0000
l	L27	51	4.5" x 1" Flat Plate	85.25 - 85.50	1.0000	1.0000
	L27	52	4.5" x 1" Flat Plate	85.25 - 85.50	1.0000	1.0000
l	L27	53	4.5" x 1" Flat Plate	85.25 - 85.50	1.0000	1.0000
	L27	55	6" x 1" Flat Plate	85.25 - 85,50	1.0000	1.0000
	L27	56	6" x 1" Flat Plate	85.25 - 85.50	1.0000	1.0000
	L27	57	6" x 1" Flat Plate	85.25 - 85,50	1.0000	1.0000
l	L27	63	4.5" x 1" Flat Plate	85.25 - 85,50	1.0000	1.0000
	L27	64	4.5" x 1" Flat Plate	85.25 - 85.50	1.0000	1.0000
	L27	65	4.5" x 1" Flat Plate	85.25 - 85.50	1.0000	1.0000
	L28	1	Safety Line 3/8	84.00 - 85.25	1.0000	1.0000
	L.28	2.	Climbing Rungs	84.00 - 85.25	1.0000	1.0000
	L28	4	(1) HB114-21U3M12- XXXF(1-1/4) + (2) TYPE	84.00 - 85.25	1.0000	1.0000
	L28	14	I(1-1/4) (6) LDF7-50A(1-5/8) + (3) HCS 6X12 4AWG(1-5/8) + (1) MLE Hybrid 9Power/18Fiber RL 2(1- 5/8)	84.00 - 85.25	1.0000	1.0000
	L28	19	(4) WR-VG86ST-BRD(3/4) + (2) FB-L98B-034- XXX(3/8)	84.00 - 85.25	1.0000	1.0000
	L28	25	LDF7-50A(1-5/8)	84.00 -	1.0000	1.0000
	L28	51	4.5" x 1" Flat Plate	85.25 84.00 - 85.25	1.0000	1.0000
	L28	52	4.5" x 1" Flat Plate	84.00 - 85.25	1.0000	1.0000
l	L28	53	4.5" x 1" Flat Plate	84.00 -	1.0000	1.0000

Tower	Feed Line	Description	Feed Line	ν	v
Section	Record No.	Description	Segment	K _e No Ice	K _a Ice
			Elev.		
L28	55	6" x 1" Flat Plate	85.25 84.00 -	1.0000	1.0000
L28	56	6" x 1" Flat Plate	85.25 84.00 - 85.25	1.0000	1.0000
L28	57	6" x 1" Flat Plate	84.00 - 85,25	1.0000	1.0000
L28	63	4.5" x 1" Flat Plate	84.00 - 85.25	1.0000	1.0000
L28	64	4.5" x 1" Flat Plate	84.00 - 85.25	1.0000	1.0000
L28	65	4.5" x 1" Flat Plate	84.00 - 85.25	1.0000	1.0000
L29	1	Safety Line 3/8	83.75 - 84.00	1.0000	1.0000
L29 L29	2	Climbing Rungs	83.75 - 84.00	1.0000	1.0000
L29	4	(1) HB114-21U3M12- XXXF(1-1/4) + (2) TYPE I(1-1/4)	83.75 - 84.00	1.0000	1.0000
L29	14	(6) LDF7-50A(1-5/8) + (3) HCS 6X12 4AWG(1-5/8) + (1) MLE Hybrid 9Power/18Fiber RL 2(1- 5/8)	83.75 - 84.00	1.0000	1.0000
L29	19	(4) WR-VG86ST-BRD(3/4) + (2) FB-L98B-034- XXX(3/8)	83.75 - 84.00	1.0000	1.0000
L29	25	LDF7-50A(1-5/8)	83.75 - 84.00	1.0000	1.0000
L29	51	4.5" x 1" Flat Plate	83.75 - 84.00	1.0000	1.0000
L29	52	4.5" x 1" Flat Plate	83.75 - 84.00	1.0000	1.0000
L29	53	4.5" x 1" Flat Plate	83.75 - 84.00	1.0000	1.0000
L29	55	6" x 1" Flat Plate	83.75 - 84.00	1.0000	1,0000
L29 L29	56 57	6" x 1" Flat Plate 6" x 1" Flat Plate	83.75 - 84.00	1.0000	1.0000
L29 L29	63	6" x 1" Flat Plate	83.75 - 84.00 83.75 -	1.0000	1.0000 1.0000
L29	64	4.5" x 1" Flat Plate	84.00 83.75 -	1.0000	1.0000
L29	65	4.5" x 1" Flat Plate	84.00 83.75 -	1.0000	1.0000
L30	1	Safety Line 3/8	84.00 82.50 -	1.0000	1.0000
L30	2	Climbing Rungs	83.75 82.50 -	1.0000	1.0000
L30	4	(1) HB114-21U3M12- XXXF(1-1/4) + (2) TYPE	83.75 82.50 - 83.75	1.0000	1.0000
L30	14	I(1-1/4) (6) LDF7-50A(1-5/8) + (3) HCS 6X12 4AWG(1-5/8) + (1) MLE Hybrid 9Power/18Fiber RL 2(1-	82.50 - 83.75	1.0000	1.0000
L30	19	5/8) (4) WR-VG86ST-BRD(3/4) + (2) FB-L98B-034- XXX(3/8)	82.50 - 83.75	1.0000	1.0000
L30	25	LDF7-50A(1-5/8)	82.50 - 83.75	1.0000	1.0000
L30	51	4.5" x 1" Flat Plate	82.50 - 83.75	1.0000	1.0000
L30	52	4.5" x 1" Flat Plate	82.50 - 83.75	1.0000	1.0000

Tower	Feed Line	Description	Feed Line	K _a	K₃
Section	Record No.		Segment Elev.	No Ice	lce
L30	53	4.5" x 1" Flat Plate	82.50 - 83.75	1.0000	1.0000
L30	55	6" x 1" Flat Plate	82.50 - 83.75	1.0000	1.0000
L30	56	6" x 1" Flat Plate	82.50 - 83.75	1.0000	1.0000
L30	57	6" x 1" Flat Plate	82.50 - 83.75	1.0000	1.0000
L30	63	4.5" x 1" Flat Plate	82.50 - 83.75	1.0000	1.0000
L30	64	4.5" x 1" Flat Plate	82.50 - 83.75	1.0000	1.0000
L30	65	4.5" x 1" Flat Plate	82.50 - 83.75	1.0000	1.0000
L31	1	Safety Line 3/8	82.25 - 82.50	1.0000	1.0000
L31	2	Climbing Rungs	82.25 - 82.50	1.0000	1.0000
L31	4	(1) HB114-21U3M12- XXXF(1-1/4) + (2) TYPE I(1-1/4)	82.25 - 82.50	1.0000	1.0000
L31	14	(6) LDF7-50A(1-5/8) + (3) HCS 6X12 4AWG(1-5/8) + (1) MLE Hybrid	82.25 - 82.50	1.0000	1.0000
		9Power/18Fiber RL 2(1- 5/8)			
L31	19	(4) WR-VG86ST-BRD(3/4) + (2) FB-L98B-034- XXX(3/8)	82.25 - 82.50	1.0000	1.0000
L31	25	LDF7-50A(1-5/8)	82,25 - 82,50	1.0000	1.0000
L31	51	4.5" x 1" Flat Plate	82.25 - 82.50	1.0000	1.0000
L31	52	4.5" x 1" Flat Plate	82.25 - 82.50	1.0000	1.0000
L31	53	4.5" x 1" Flat Plate	82.25 - 82.50	1.0000	1.0000
L31	55	6" x 1" Flat Plate	82.25 - 82.50	1.0000	1,0000
L31	56	6" x 1" Flat Plate	82.25 - 82.50	1.0000	1,0000
L31	57	6" x 1" Flat Plate	82.25 - 82.50	1.0000	1.0000
L31	63	4.5" x 1" Flat Plate	82.25 - 82.50	1.0000	1.0000
L31	64	4.5" x 1" Flat Plate	82.25 - 82.50	1.0000	1.0000
L31	65	4.5" x 1" Flat Plate	82.25 - 82.50	1.0000	1.0000
L32	1	Safety Line 3/8	80.00 - 82.25	1,0000	1.0000
L32	2	Climbing Rungs	80.00 - 82.25	1.0000	1.0000
L32	4	(1) HB114-21U3M12- XXXF(1-1/4) + (2) TYPE I(1-1/4)	80.00 - 82.25	1.0000	1.0000
L.32	14	(6) LDF7-50A(1-5/8) + (3) HCS 6X12 4AWG(1-5/8) + (1) MLE Hybrid 9Power/18Fiber RL 2(1-	80.00 - 82.25	1.0000	1.0000
L32	19	5/8) (4) WR-VG86ST-BRD(3/4) + (2) FB-L98B-034- XXX(3/8)	80.00 - 82.25	1.0000	1.0000
L32	25	LDF7-50A(1-5/8)	80.00 - 82.25	1.0000	1.0000
L32	51	4.5" x 1" Flat Plate	80.00 - 82.25	1.0000	1.0000
L32	52	4.5" x 1" Flat Plate	80.00 -	1.0000	1.0000

Tower	Feed Line	Description	Feed Line	Ka	Ka
Section	Record No.	Doddipaon	Segment	∧₃ No Ice	∧₃ Ice
	ļ -	-	Elev.	<u> </u>	
L32	53	4.5" x 1" Flat Plate	82.25 80.00 - 82.25	1.0000	1.0000
L32	55	6" x 1" Flat Plate	82.25 82.00 - 82.25	1.0000	1.0000
L32	56	6" x 1" Flat Plate	82.00 - 82.25	1.0000	1.0000
L32	57		82.00 - 82.25	1.0000	1.0000
L32	63		81.00 - 82.25	1.0000	1.0000
L32	64	4.5" x 1" Flat Plate	81.00 - 82.25	1.0000	1.0000
L32	65	4.5" x 1" Flat Plate	81.00 - 82.25	1.0000	1.0000
L33	1	Safety Line 3/8	75.00 - 80.00	1.0000	1.0000
L33	2	Climbing Rungs	75.00 - 80.00	1.0000	1.0000
L33	4	(1) HB114-21U3M12- XXXF(1-1/4) + (2) TYPE I(1-1/4)	75.00 - 80.00	1.0000	1.0000
L33	14	(6) LDF7-50A(1-5/8) + (3) HCS 6X12 4AWG(1-5/8) + (1) MLE Hybrid 9Power/18Fiber RL 2(1-	75.00 - 80.00	1.0000	1.0000
L 33	19	5/8) (4) WR-VG86ST-BRD(3/4) + (2) FB-L98B-034-	75.00 - 80.00	1.0000	1.0000
L33	25	XXX(3/8) LDF7-50A(1-5/8)	75.00 -	1.0000	1.0000
L33	51	4.5" x 1" Flat Plate	80.00 75.00 -	1.0000	1.0000
L33	52	4.5" x 1" Flat Plate	80.00 75.00 - 80.00	1.0000	1.0000
L33	53	4.5" x 1" Flat Plate	75.00 - 80.00	1.0000	1.0000
L34	1	Safety Line 3/8	70.00 - 75.00	1.0000	1.0000
L34	2	Climbing Rungs	70.00 - 75.00	1.0000	1.0000
L34	4	(1) HB114-21U3M12- XXXF(1-1/4) + (2) TYPE I(1-1/4)	70.00 - 75.00	1.0000	1.0000
L34	14	(6) LDF7-50A(1-5/8) + (3) HCS 6X12 4AWG(1-5/8) + (1) MLE Hybrid 9Power/18Fiber RL 2(1-	70.00 - 75.00	1.0000	1.0000
L34	19	5/8) (4) WR-VG86ST-BRD(3/4) + (2) FB-L98B-034-	70.00 - 75.00	1.0000	1.0000
L34	25	XXX(3/8) LDF7-50A(1-5/8)	70.00 - 75.00	1.0000	1.0000
L34	51	4.5" x 1" Flat Plate	75.00 70.00 - 75.00	1.0000	1.0000
1.34	52	4.5" x 1" Flat Plate	70.00 - 75.00	1.0000	1.0000
L34	53	4.5" x 1" Flat Plate	70.00 - 75.00	1.0000	1.0000
L35	1	Safety Line 3/8	65.00 - 70.00	1.0000	1.0000
L35	2	Climbing Rungs	65.00 - 70.00	1.0000	1.0000
L35	4	(1) HB114-21U3M12- XXXF(1-1/4) + (2) TYPE I(1-1/4)	65.00 - 70.00	1.0000	1.0000
L35	14	(6) LDF7-50A(1-5/8) + (3)	65.00 -	1.0000	1.0000

Tower	Feed Line	Description	Foodling		1 15
Section	Record No.		Feed Line Segment Elev.	K₂ No Ice	K₃ Ice
	f	HCS 6X12 4AWG(1-5/8) +	70.00		
		(1) MLE Hybrid 9Power/18Fiber RL 2(1- 5/8).			
L35	19	(4) WR-VG86ST-BRD(3/4) + (2) FB-L98B-034-	65.00 - 70.00	1.0000	1.0000
L35	25	XXX(3/8) LDF7-50A(1-5/8)	65.00 - 70.00	1.0000	1.0000
L35	51	4.5" x 1" Flat Plate	65.00 - 70.00	1,0000	1.0000
L35	52	4.5" x 1" Flat Plate	65.00 - 70.00	1.0000	1.0000
L35 L36	53	4.5" x 1" Flat Plate	65.00 - 70.00	1.0000	1.0000
L36	1	Safety Line 3/8	60.00 - 65.00	1.0000	1.0000
L36	4	Climbing Rungs (1) HB114-21U3M12-	60.00 - 65.00	1.0000	1,0000
200	7	XXXF(1-1/4) + (2) TYPE	60.00 - 65.00	1.0000	1.0000
L36	14	(6) LDF7-50A(1-5/8) + (3) HCS 6X12 4AWG(1-5/8) + (1) MLE Hybrid 9Power/18Fiber RL 2(1-	60.00 - 65.00	1.0000	1.0000
L36	19	5/8) (4) WR-VG86ST-BRD(3/4) + (2) FB-L98B-034- XXX(3/8)	60.00 - 65.00	1.0000	1.0000
L36	25	LDF7-50A(1-5/8)	60.00 - 65.00	1.0000	1.0000
L36	51	4.5" x 1" Flat Plate	60.00 - 65.00	1.0000	1.0000
L36	52	4.5" x 1" Flat Plate	60.00 - 65.00	1.0000	1.0000
L36	53	4.5" x 1" Flat Plate	60.00 - 65.00	1.0000	1.0000
L37	1	Safety Line 3/8	58.50 - 60.00	1.0000	1.0000
L37 L37	2	Climbing Rungs	58.50 - 60.00	1.0000	1.0000
L3/	4	(1) HB114-21U3M12- XXXF(1-1/4) + (2) TYPE I(1-1/4)	58.50 - 60.00	1.0000	1.0000
L37	14	(6) LDF7-50A(1-5/8) + (3) HCS 6X12 4AWG(1-5/8) + (1) MLE Hybrid 9Power/18Fiber RL 2(1- 5/8)	58.50 - 60.00	1.0000	1.0000
L37	19	(4) WR-VG86ST-BRD(3/4) + (2) FB-L98B-034- XXX(3/8)	58.50 - 60.00	1.0000	1.0000
L37	25	LDF7-50A(1-5/8)	58.50 - 60.00	1.0000	1.0000
L37	51	4.5" x 1" Flat Plate	58.50 - 60.00	1.0000	1.0000
L37	52	4.5" x 1" Flat Plate	58.50 - 60.00	1.0000	1.0000
L37	53	4.5" x 1" Flat Plate	58.50 - 60.00	1.0000	1.0000
L38	1	Safety Line 3/8	58.25 - 58.50	1.0000	1.0000
L38 L38	2	Climbing Rungs	58.25 - 58.50	1.0000	1.0000
L30	4	(1) HB114-21U3M12- XXXF(1-1/4) + (2) TYPE I(1-1/4)	58.25 - 58.50	1.0000	1.0000
L38	14	(6) LDF7-50A(1-5/8) + (3)	58.25 -	1.0000	1.0000

Tower	Feed Line	Description	Feed Line	K _a	Ka
Section	Record No.	-	Segment Elev.	No Ice	Ice
		HCS 6X12 4AWG(1-5/8) + (1) MLE Hybrid	58.50		
		9Power/18Fiber RL 2(1- 5/8)	:		
L38	19	+ (2) FB-L98B-034-	58.25 - 58.50	1.0000	1.0000
L38	25	XXX(3/8) LDF 7 -50A(1-5/8)	58.25 - 58.50	1.0000	1.0000
L38	51	4.5" x 1" Flat Plate	58.25 - 58.50	1.0000	1.0000
L38	52	4.5" x 1" Flat Plate	58.25 - 58.50	1.0000	1.0000
L38	53	4.5" x 1" Flat Plate	58.25 - 58.50	1.0000	1.0000
L39	1	Safety Line 3/8	53.25 - 58.25	1.0000	1.0000
L39	2	Climbing Rungs	53.25 - 58.25	1.0000	1.0000
L 39	4.	(1) HB114-21U3M12- XXXF(1-1/4) + (2) TYPE I(1-1/4)	53.25 - 58.25	1.0000	1.0000
L39	14	(6) LDF7-50A(1-5/8) + (3) HCS 6X12 4AWG(1-5/8) + (1) MLE Hybrid 9Power/18Fiber RL 2(1- 5/8)	53.25 - 58.25	1.0000	1.0000
L39	19	(4) WR-VG86ST-BRD(3/4) + (2) FB-L98B-034- XXX(3/8)	53.25 - 58.25	1.0000	1.0000
L39	25	LDF7-50A(1-5/8)	53.25 - 58.25	1.0000	1.0000
L39	51	4.5" x 1" Flat Plate	57.00 - 58.25	1.0000	1.0000
L39	52	4.5" x 1" Flat Plate	57.00 - 58.25	1.0000	1.0000
L39	53	4.5" x 1" Flat Plate	57.00 - 58.25	1,0000	1.0000
L40	1	Safety Line 3/8	48.25 - 53.25	1.0000	1.0000
L40	2	Climbing Rungs	48.25 - 53.25	1.0000	1.0000
L40]	4	(1) HB114-21U3M12- XXXF(1-1/4) + (2) TYPE I(1-1/4)	48.25 - 53.25	1.0000	1.0000
L40	14	(6) LDF7-50A(1-5/8) + (3) HCS 6X12 4AWG(1-5/8) + (1) MLE Hybrid 9Power/18Fiber RL 2(1- 5/8)	48.25 - 53.25	1.0000	1.0000
L40	19	(4) WR-VG86ST-BRD(3/4) + (2) FB-L98B-034- XXX(3/8)	48.25 - 53.25	1.0000	1.0000
L40	25	LDF7-50A(1-5/8)	48.25 - 53.25	1.0000	1.0000
L40	47	6.5" x 1.25" Flat Plate	48.25 - 51.00	1.0000	1.0000
L40	48	6.5" x 1.25" Flat Plate	48.25 - 51.00	1.0000	1.0000
L40	49	6.5" x 1.25" Flat Plate	48.25 - 51.00	1.0000	1.0000
L41	1	Safety Line 3/8	48.00 - 48.25	1.0000	1.0000
L41	2	Climbing Rungs	48.00 - 48.25	1.0000	1.0000
L41	4	(1) HB114-21U3M12- XXXF(1-1/4) + (2) TYPE 1(1-1/4)	48.00 - 48.25	1.0000	1.0000
L41	14	(6) LDF7-50A(1-5/8) + (3)	48.00 -	1.0000	1.0000

Tower	Feed Line	Description	Feed Line	K _e	K _a
Section	Record No.	<u>.</u>	Segment Elev.	No Ice	Ice
		HCS 6X12 4AWG(1-5/8) +	48.25		
		(1) MLE Hybrid 9Power/18Fiber RL 2(1- 5/8)			
L41	19	(4) WR-VG86ST-BRD(3/4) + (2) FB-L98B-034-	48.00 - 48.25	1.0000	1.0000
L41	25	XXX(3/8) LDF7-50A(1-5/8)	48.00 - 48.25	1.0000	1.0000
L41	47	6.5" x 1.25" Flat Plate	48.00 - 48.25	1.0000	1.0000
L41	48	6.5" x 1.25" Flat Plate	48.00 - 48.25	1.0000	
L41	49	6.5" x 1.25" Flat Plate	48.00 - 48.25	1.0000	l 1
L42	1	Safety Line 3/8	43.00 - 48.00	1.0000	
L42	2	Climbing Rungs	43.00 - 48.00	1.0000	
L42	4	(1) HB114-21U3M12- XXXF(1-1/4) + (2) TYPE I(1-1/4)	43.00 - 48.00	1.0000	1,0000
L42	14	(6) LDF7-50A(1-5/8) + (3) HCS 6X12 4AWG(1-5/8) + (1) MLE Hybrid 9Power/18Fiber RL 2(1-	43.00 - 48.00	1.0000	1.0000
L42	19	5/8) (4) WR-VG86ST-BRD(3/4) + (2) FB-L98B-034-	43.00 - 48.00	1.0000	1.0000
L42	25	XXX(3/8) LDF7-50A(1-5/8)	43.00 - 48.00	1.0000	1.0000
L42	47	6.5" x 1.25" Flat Plate	43.00 - 48.00	1.0000	1.0000
L42	48	6.5" x 1.25" Flat Plate	43.00 - 48.00	1.0000	1.0000
L42	49	6.5" x 1.25" Flat Plate	43.00 - 48.00	1.0000	1.0000
L43	1	Safety Line 3/8	40.00 - 43.00	1.0000	1.0000
L43	2	Climbing Rungs	40.00 - 4 3.00	1.0000	1.0000
L43	4	(1) HB114-21U3M12- XXXF(1-1/4) + (2) TYPE I(1-1/4)	40.00 - 43.00	1.0000	1.0000
L43	14.	(6) LDF7-50A(1-5/8) + (3) HCS 6X12 4AWG(1-5/8) + (1) MLE Hybrid 9Power/18Fiber RL 2(1-	40.00 - 43.00	1.0000	1.0000
L43	19	5/8) (4) WR-VG86ST-BRD(3/4) + (2) FB-L98B-034-	40.00 - 43.00	1.0000	1.0000
L43	25	XXX(3/8) LDF7-50A(1-5/8)	40.00 - 43.00	1.0000	1.0000
L43	47	6.5" x 1.25" Flat Plate	40.00 - 43.00	1.0000	1.0000
L43	48	6.5" x 1.25" Flat Plate	40.00 - 43.00	1.0000	1.0000
L43	49	6.5" x 1.25" Flat Plate	40.00 - 43.00	1.0000	1.0000
L44	1	Safety Line 3/8	35.00 - 40.00	1.0000	1.0000
L44	2	Climbing Rungs	35.00 - 40.00	1.0000	1.0000
L44	4	(1) HB114-21U3M12- XXXF(1-1/4) + (2) TYPE I(1-1/4)	35.00 - 40.00	1.0000	1.0000
L44	14	(6) LDF7-50A(1-5/8) + (3)	35.00 -	1.0000	1.0000

Tower	Feed Line	Description	Feed Line	K _e	Ka
Section	Record No.		Segment Elev.	No Ice	Ice
		HCS 6X12 4AWG(1-5/8) +	40.00		
		(1) MLE Hybrid 9Power/18Fiber RL 2(1- 5/8)			
L44	19	(4) WR-VG86ST-BRD(3/4) + (2) FB-L98B-034-	35.00 - 40.00	1.0000	1.0000
L44	25	XXX(3/8) LDF7-50A(1-5/8)	35.00 - 40.00	1.0000	1.0000
L44	43	8.5" x 1.25" Flat Plate	35.00 - 35.83	1.0000	1.0000
L44	44	8.5" x 1.25" Flat Plate	35.00 - 35.83	1.0000	1.0000
L44	45	8.5" x 1.25" Flat Plate	35.00 - 35.83	1.0000	1.0000
L44	47	6.5" x 1.25" Flat Plate	35.00 - 40.00	1.0000	1.0000
L44	48	6.5" x 1.25" Flat Plate	35.00 - 40.00	1.0000	1.0000
L44	49	6.5" x 1.25" Flat Plate	35.00 - 40.00	1.0000	1.0000
L45	1	Safety Line 3/8	32.08 - 35.00	1.0000	1.0000
L45	2	Climbing Rungs	32.08 - 35.00	1.0000	1.0000
L45	4	(1) HB114-21U3M12- XXXF(1-1/4) + (2) TYPE I(1-1/4)	32.08 - 35.00	1.0000	1.0000
L45	14	(6) LDF7-50A(1-5/8) + (3) HCS 6X12 4AWG(1-5/8) + (1) MLE Hybrid 9Power/18Fiber RL 2(1-	32.08 - 35.00	1.0000	1.0000
L45	19	5/8) (4) WR-VG86ST-BRD(3/4) + (2) FB-L98B-034-	32.08 - 35.00	1.0000	1,0000
L45	25	XXX(3/8) LDF7-50A(1-5/8)	32.08 -	1.0000	1.0000
L.45	43	8.5" x 1.25" Flat Plate	35.00 32.08 -	1.0000	1.0000
L45	44	8.5" x 1,25" Flat Plate	35.00 32.08 -	1.0000	1.0000
L45	45	8.5" x 1.25" Flat Plate	35.00 32.08 - 35.00	1.0000	1,0000
L45	47	6.5" x 1.25" Flat Plate	32.08 - 35.00	1.0000	1.0000
L45	48	6.5" x 1.25" Flat Plate	32.08 - 35.00	1.0000	1.0000
L45	49	6.5" x 1.25" Flat Plate	32.08 - 35.00	1.0000	1.0000
L46	1	Safety Line 3/8	31.83 - 32.08	1.0000	1.0000
L46	2	Climbing Rungs	31.83 - 32.08	1.0000	1.0000
L46	4	(1) HB114-21U3M12- XXXF(1-1/4) + (2) TYPE	31.83 - 32.08	1.0000	1.0000
L46	14	I(1-1/4) (6) LDF7-50A(1-5/8) + (3) HCS 6X12 4AWG(1-5/8) + (1) MLE Hybrid 9Power/18Fiber RL 2(1-	31.83 - 32.08	1.0000	1.0000
L46	19	5/8) (4) WR-VG86ST-BRD(3/4) + (2) FB-L98B-034- XXX(3/8)	31.83 - 32.08	1.0000	1.0000
L46	25	LDF7-50A(1-5/8)	31.83 - 32.08	1.0000	1.0000
L46	43	8.5" x 1.25" Flat Plate	31.83 - 32.08	1.0000	1.0000

Tower	Feed Line	Description	Feed Line	V	v
Section	Record No.	ΣσαστιριίΟ!!	reea Line Segment Elev.	K _a No Ice	K₃ Ice
L46	44	8.5" x 1.25" Flat Plate	31.83 -	1.0000	1.0000
L46	45	8.5" x 1.25" Flat Plate	32.08 31.83 -	1.0000	1.0000
L46	47	6.5" x 1.25" Flat Plate	32.08 31.83 -	1.0000	1.0000
L46	48	6.5" x 1.25" Flat Plate	32.08 31.83 - 32.08	1.0000	1.0000
L46	49	6.5" x 1.25" Flat Plate	31.83 - 32.08	1.0000	1.0000
L47	1	Safety Line 3/8	28.75 - 31.83	1.0000	1.0000
L47	2	Climbing Rungs	28.75 - 31.83	1.0000	1.0000
L47	4	(1) HB114-21U3M12- XXXF(1-1/4) + (2) TYPE I(1-1/4)	28.75 - 31.83	1.0000	1.0000
L47	14	(6) LDF7-50A(1-5/8) + (3) HCS 6X12 4AWG(1-5/8) + (1) MLE Hybrid	28.75 - 31.83	1.0000	1.0000
L47	19	9Power/18Fiber RL 2(1- 5/8) (4) WR-VG86ST-BRD(3/4) + (2) FB-L98B-034-	28.75 - 31.83	1.0000	1.0000
L47	25	XXX(3/8) LDF7-50A(1-5/8)	28.75 - 31.83	1,0000	1.0000
L47	43	8.5" x 1.25" Flat Plate	28.75 - 31.83	1.0000	1.0000
L47	44	8.5" x 1.25" Flat Plate	28.75 - 31.83	1.0000	1.0000
L47	45	8.5" x 1.25" Flat Plate	28.75 - 31.83	1.0000	1.0000
L47	47	6.5" x 1.25" Flat Plate	28.75 - 31.83	1.0000	1.0000
L47	48	6.5" x 1.25" Flat Plate	28.75 - 31.83	1.0000	1.0000
L47 L48	49	6.5" x 1.25" Flat Plate	28.75 - 31.83	1.0000	1.0000
L48	1 2	Safety Line 3/8	28.50 - 28.75	1.0000	1.0000
L48	4	Climbing Rungs (1) HB114-21U3M12-	28.50 - 28.75 28.50 -	1.0000	1.0000
		XXXF(1-1/4) + (2) TYPE	28.75	1.0000	1.0000
L48	14	(6) LDF7-50A(1-5/8) + (3) HCS 6X12 4AWG(1-5/8) + (1) MLE Hybrid	28.50 - 28.75	1.0000	1.0000
L48	19	9Power/18Fiber RL 2(1- 5/8) (4) WR-VG86ST-BRD(3/4) + (2) FB-L98B-034-	28.50 - 28.75	1.0000	1.0000
L48	25	XXX(3/8) LDF7-50A(1-5/8)	28.50 -	1.0000	1.0000
L48	43	8.5" x 1.25" Flat Plate	28.75 28.50 -	1.0000	1.0000
L48	44	8.5" x 1.25" Flat Plate	28.75 28.50 - 28.75	1.0000	1.0000
L48	45	8.5" x 1.25" Flat Plate	28.50 - 28.75	1.0000	1.0000
L48	47	6.5" x 1.25" Flat Plate	28.50 - 28.75	1.0000	1.0000
L.48	48	6.5" x 1.25" Flat Plate	28.50 - 28.75	1.0000	1.0000
L48	49	6.5" x 1.25" Flat Plate	28.50 - 28.75	1.0000	1.0000
L49	1	Safety Line 3/8	23.50 -	1.0000	1.0000

Tower	Feed Line	Danesi-ii	Facility		·
Section	Record No.	Description	Feed Line Segment Elev.	K₂ No Ice	K₂ Ice
L49	2	Climbing Rungs	28.50 23.50 - 28.50	1.0000	1.0000
L49	4	XXXF(1-1/4) + (2) TYPE	23.50 - 28.50	1.0000	1.0000
L49	14	HCS 6X12 4AWG(1-5/8) + (1) MLE Hybrid	23.50 - 28.50	1.0000	1.0000
L49	19	9Power/18Fiber RL 2(1- 5/8) (4) WR-VG86ST-BRD(3/4) + (2) FB-L98B-034- XXX(3/8)	23.50 - 28.50	1.0000	1.0000
L49	25	LDF7-50A(1-5/8)	23.50 -	1.0000	1.0000
L49	43	8.5" x 1.25" Flat Plate	28.50 23.50 -	1.0000	1.0000
L49	44	8.5" x 1.25" Flat Plate	28.50 23.50 -	1.0000	1.0000
L49	45	8.5" x 1.25" Flat Plate	28,50 23,50 - 28,50	1.0000	1.0000
L49	47	6.5" x 1.25" Flat Plate	26.00 - 28.50	1.0000	1.0000
L49	48	6.5" x 1.25" Flat Plate	26.00 - 28.50	1.0000	1.0000
L49	49	6.5" x 1.25" Flat Plate	26.00 - 28.50	1.0000	1.0000
L50	1	Safety Line 3/8	18.50 - 23.50	1.0000	1.0000
L50	2	Climbing Rungs	18.50 - 23.50	1.0000	1.0000
L50	4	(1) HB114-21U3M12- XXXF(1-1/4) + (2) TYPE	18.50 - 23.50	1.0000	1.0000
L50	14	I(1-1/4) (6) LDF7-50A(1-5/8) + (3) HCS 6X12 4AWG(1-5/8) + (1) MLE Hybrid 9Power/18Fiber RL 2(1-	18.50 - 23.50	1.0000	1.0000
L.50	19	5/8) (4) WR-VG86ST-BRD(3/4) + (2) FB-L98B-034-	18.50 - 23.50	1.0000	1.0000
L50	25	XXX(3/8) LDF7-50A(1-5/8)	18.50 - 23.50	1.0000	1.0000
L50	43	8.5" x 1.25" Flat Plate	18.50 - 23.50	1.0000	1.0000
L50	44	8.5" x 1.25" Flat Plate	18.50 - 23.50	1.0000	1.0000
L50	45	8.5" x 1.25" Flat Plate	18.50 - 23.50	1.0000	1.0000
L51	1	Safety Line 3/8	13.50 - 18.50	1.0000	1.0000
L51	2	Climbing Rungs	13.50 - 18.50	1.0000	1.0000
L51	4	(1) HB114-21U3M12- XXXF(1-1/4) + (2) TYPE I(1-1/4)	13.50 - 18.50	1.0000	1.0000
L51	14	(6) LDF7-50A(1-5/8) + (3) HCS 6X12 4AWG(1-5/8) + (1) MLE Hybrid 9Power/18Fiber RL 2(1-	13.50 - 18.50	1.0000	1.0000
L.51	19 (5/8) (4) WR-VG86ST-BRD(3/4) + (2) FB-L98B-034- XXX(3/8)	13.50 - 18.50	1.0000	1.0000
L51	25	LDF7-50A(1-5/8)	13.50 - 18.50	1.0000	1.0000
L.51	43	8.5" x 1.25" Flat Plate	13.50 -	1.0000	1.0000

Tower	Feed Line	Description	Feed Line	1/	V
Section	Record No.	Description		K, No Ice	Ka
36011011	Necola No.		Segment Elev.	No ice	lce
			18.50		
L51	44	8.5" x 1.25" Flat Plate	13.50 -	1.0000	1.0000
	-3.4	0.0 X 1.20 1 lat 1 late	18.50	1.0000	1.0000
L51	45	8.5" x 1.25" Flat Plate	13.50 -	1.0000	1.0000
			18.50		
L52	1	Safety Line 3/8	10.00 -	1.0000	1.0000
		-	13.50		
L52	2	Climbing Rungs	10.00 -	1.0000	1.0000
			13.50		
L52	4	(1) HB114-21U3M12-	8.50 - 13.50	1.0000	1.0000
	İ	XXXF(1-1/4) + (2) TYPE			
1.50		I(1-1/4)		4 0000	
L52	14	(6) LDF7-50A(1-5/8) + (3)	8.50 - 13,50	1.0000	1.0000
		HCS 6X12 4AWG(1-5/8) + (1) MLE Hybrid	·		
		9Power/18Fiber RL 2(1-			
ļ		5/8)			
L52	19	(4) WR-VG86ST-BRD(3/4)	11,00 -	1.0000	1.0000
		+ (2) FB-L98B-034-	13.50	1.0000	1.0000
		XXX(3/8)	,0.00		
L52	25	LDF7-50A(1-5/8)	11.00 -	1.0000	1.0000
İ		` '	13.50		
L52	43	8.5" x 1.25" Flat Plate	8.50 - 13,50	1.0000	1.0000
L52	44	8.5" x 1.25" Flat Plate	8.50 - 13.50	1.0000	1.0000
L52	45	8.5" x 1.25" Flat Plate	8.50 - 13,50	1.0000	1.0000
L53	4	(1) HB114-21U3M12-	6.00 - 8.50	1.0000	1.0000
		XXXF(1-1/4) + (2) TYPE]	j	
		I(1-1/4)			
L53	14	(6) LDF7-50A(1-5/8) + (3)	8.00 - 8.50	1.0000	1.0000
		HCS 6X12 4AWG(1-5/8) +			
1		(1) MLE Hybrid 9Power/18Fiber RL 2(1-			1
		5/8)			
L53	43	8.5" x 1.25" Flat Plate	3.50 - 8.50	1.0000	1,0000
L53	44	8.5" x 1.25" Flat Plate	3.50 - 8.50	1.0000	1.0000
L53	45	8.5" x 1.25" Flat Plate	3.50 - 8.50	1.0000	1.0000
L54	43	8.5" x 1.25" Flat Plate	0.83 - 3.50	1.0000	1.0000
L54	44	8.5" x 1.25" Flat Plate	0.83 - 3.50	1.0000	1.0000
L54	45	8.5" x 1.25" Flat Plate	0.83 - 3.50	1,0000	1.0000

	1 64. 1 4.4		Disc	rete Tov	ver Loa	ds			
Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert	Azimuth Adjustmen t	Placement		C _A A _A Front	C₄A₄ Side	Weight
			ft ft ft	o	ft		ft²	ft²	К
188									
Platform Mount [LP 403-1]	С	None		0.0000	188,00	No Ice	18.85	18.85	1.50
-						1/2"	24.30	24.30	1,80
						Ice	29.75	29.75	2.09
						1" Ice	40.65	40.65	2.69
						2" Ice			
6'x2" Mount Pipe	Α	From Leg	4.00	0.0000	188.00	No Ice	1,43	1,43	0.02
			0.00			1/2"	1.92	1.92	0.03
			0.00			Ice	2.29	2.29	0.05
						1" Ice 2" Ice	3.06	3.06	0.09
6'x2" Mount Pipe	В	From Leg	4.00	0.0000	188.00	No Ice	1.43	1.43	0.02
·		ŭ	0.00			1/2"	1.92	1.92	0.03

	Face or Leg	Type	Offsets: Horz Lateral	Azimuth Adjustmen t	Placement		C_AA_A Front	C _A A _A Side	Weighi
			Vert ft ft ft	9	ft		ft²	ft²	К
· · · · · · · · · · · · · · · · · · ·			0.00			Ice	2.29	2.29	0.05
		-				1" Ice	3.06	3.06	0.09
6'x2" Mount Pipe	С	From Leg	4.00	0.0000	400.00	2" Ice			
ONE MOUNT IPE	C	From Leg	4.00 0.00	0.0000	188.00	No Ice	1.43	1.43	0.02
			0.00			1/2" Ice	1.92	1.92	0.03
			0.00			1" Ice	2.29 3.06	2.29	0.05
						2" Ice	3.00	3.06	0.09
APXVTM14-ALU-I20 w/	Α	From Leg	4.00	0.0000	188.00	No Ice	4.09	2.86	0.08
Mount Pipe		-	-7.00			1/2"	4.48	3.23	0.13
			2.00			Ice	4.88	3.61	0.19
						1" Ice	5.71	4.40	0.33
ADVICTION ALLEGO	_	- .				2" Ice			
APXVTM14-ALU-I20 w/	В	From Leg	4.00	0.0000	188.00	No Ice	4.09	2.86	80.0
Mount Pipe			-7.00			1/2"	4.48	3,23	0.13
			2.00			Ice	4.88	3.61	0.19
						1" Ice	5.71	4.40	0.33
APXVTM14-ALU-I20 w/	С	From Leg	4.00	0.0000	188,00	2" ice No ice	4.00	0.00	0.00
Mount Pipe	•		-7.00	0.0000	100,00	1/2"	4.09 4.48	2.86 3.23	0.08
•			2.00			Ice	4.88	3.23 3.61	0.13 0.19
						1" Ice	5.71	4.40	0.19
ADM (077)						2" Ice		0	0.00
APXVSPP18-C-A20 w/	Α	From Leg	4.00	0.0000	188.00	No Ice	4.60	4.01	0.10
Mount Pipe			7.00			1/2"	5.05	4.45	0.16
			2.00			Ice	5.50	4.89	0.23
						1" Ice	6. 4 4	5.82	0.42
APXVSPP18-C-A20 w/	В	From Leg	4.00	0.0000	400.00	2" ice			
Mount Pipe		r rom Leg	7.00	0.0000	188.00	No ice	4.60	4.01	0.10
meant ipo			2.00			1/2"	5.05	4.45	0.16
			2.00			ice 1" ice	5.50	4.89	0.23
						2" Ice	6.44	5.82	0.42
APXVSPP18-C-A20 w/	С	From Leg	4.00	0.0000	188.00	No ice	4.60	4.01	0.10
Mount Pipe			7.00			1/2"	5.05	4.45	0.16
			2.00			Ice	5.50	4.89	0.23
						1" Ice	6.44	5.82	0.42
PD201-7	۸	F***** 1 * *	4.00			2" Ice			
1 0201-1	Α	From Leg	4.00	0.0000	188.00	No ice	1.02	1.02	0.00
			0.00 5.00			1/2"	1.81	1.81	0.01
			5.00			ice 1" ice	2.62	2.62	0.03
						2" Ice	3.76	3.76	0.07
TD-RRH8x20-25	Α	From Leg	4.00	0.0000	188.00	No Ice	4.05	1.53	0.07
		_	0.00	-		1/2"	4.30	1.71	0.10
			2.00			lce	4.56	1.90	0.13
						1" Ice	5.10	2.30	0.20
TD DDHeven of	D	F 1	4.00			2" Ice			
TD-RRH8x20-25	В	From Leg	4.00	0.0000	188.00	No Ice	4.05	1.53	0.07
			0.00			1/2"	4.30	1.71	0.10
			2.00			Ice	4.56	1.90	0.13
						1" ice	5.10	2.30	0.20
TD-RRH8x20-25	С	From Leg	4.00	0.0000	188.00	2" Ice No Ice	4.05	1.53	0.07
		- ···*-	0.00		.00.00	1/2"	4.05	1.53	0.07 0.10
			2.00			Ice	4.56	1.71	0.10
						1" Ice	5.10	2.30	0.10
****						2" Ice	,		V.=0
185	_								
de Arm Mount [SO 102- 3]	С	None		0.0000	185.00	No Ice	3.00	3.00	0.08
<mark>၂</mark>						1/2"	3.48	3.48	0.11
						Ice	3.96	3.96	0.14
						411.1			_
						1" lce 2" lce	4.92	4.92	0.20

Description	Face or Leg	Type	Offsets: Horz Lateral	Azimuth Adjustmen t	Placement		C _A A _A Front	C _A A _A Side	Weight
			Vert ft ft	a	ft		ft²	ft²	К
			ft						
			0.00			1/2"	1.11	1.11	0.02
			0.00			Ice	1.36	1.36	0.03
						1" Ice	1.90	1.90	0.06
4'x2" Mount Pipe	В	From Leg	0.50	0.0000	405.00	2" Ice			
- AZ Wibdit(ipc	0	i ioni Leg	0.00	0.0000	185.00	No Ice	0.87	0.87	0.01
			0.00			1/2"	1.11	1.11	0.02
			0.00			Ice 1" Ice	1.36 1.90	1.36	0.03
						2" Ice	1.90	1.90	0.06
4'x2" Mount Pipe	С	From Leg	0.50	0.0000	185.00	No Ice	0.87	0.87	0.01
·	_		0.00	0.0000	100.00	1/2"	1.11	1.11	0.01
			0.00			lce	1.36	1.36	0.03
						1" Ice	1.90	1.90	0.06
						2" Ice	1.00	1.00	0.00
800MHZ RRH	Α	From Leg	1.00	0.0000	185.00	No Ice	2.13	1.77	0.05
		_	0.00			1/2"	2.32	1.95	0.07
			3.00			lce	2.51	2.13	0.10
						1" Ice	2.92	2.51	0.16
						2" lce			
800MHZ RRH	В	From Leg	1.00	0.0000	185.00	No ice	2.13	1,77	0.05
			0.00			1/2"	2.32	1.95	0.07
			3.00			Ice	2.51	2.13	0.10
						1" Ice	2.92	2.51	0.16
40014117 DD14	_					2" Ice			
800MHZ RRH	С	From Leg	1.00	0.0000	185.00	No Ice	2.13	1.77	0.05
			0.00			1/2"	2.32	1.95	0.07
			3.00			Ice	2.51	2.13	0.10
						1" Ice	2.92	2,51	0.16
1900MHz RRH	Α	From Log	4.00	0.0000	405.00	2" Ice	2.40		
130010112 [X](1)	Α.	From Leg	1.00 0.00	0.0000	185,00	No Ice	2.49	3.26	0.04
			3.00			1/2"	2.70	3.48	0.08
			3.00			lce	2.91	3.72	0.11
						1" lce 2" lce	3.35	4.21	0.19
1900MHz RRH	В	From Leg	1.00	0.0000	185.00	No Ice	2.49	3.26	0.04
	_	, rom Log	0.00	0.0000	100.00	1/2"	2.49	3,48	0.04 0.08
			3.00			ice	2.70	3.72	0.00
			0.00			1" Ice	3.35	4.21	0.19
						2" ice	0.00	4.21	0.15
1900MHz RRH	С	From Leg	1.00	0.0000	185.00	No Ice	2.49	3.26	0.04
		Ť	0.00			1/2"	2.70	3.48	0.08
			3.00			Ice	2.91	3.72	0.11
						1" Ice	3.35	4.21	0.19
						2" Ice			
184									
Side Arm Mount [SO 701-	В	From Leg	1.50	0.0000	184.00	No Ice	0.85	1.67	0.07
1]			0.00			1/2"	1.14	2.34	0.08
			0.00			lce	1.43	3.01	0.09
						1" Ice	2.01	4.35	0.12
dhaDii Marrint Dina	_	E				2" Ice			
4'x2" Mount Pipe	В	From Leg	3.00	0.0000	184.00	No Ice	0.87	0.87	0.01
			0.00			1/2"	1.11	1.11	0.02
			0.00			Ice	1.36	1.36	0.03
						1" Ice	1.90	1.90	0.06
179						2" Ice			
Platform Mount [LP 403-1]	С	None		0.0000	179.00	No los	10 05	10.05	4.50
	J	140176		0.0000	178.00	No Ice 1/2"	18.85 24.30	18.85 24.30	1.50
									1.80
						ice 1" ice	29.75 40.65	29.75 40.65	2.09
						2" lce	40.00	40.65	2.69
Side Arm Mount [SO 301-	В	From Face	4.00	0.0000	179.00	No Ice	1.00	0.90	0.02
1]	_		7.00			1/2"	1.39	1.42	0.02
•			0.00			Ice	1.78	1.94	0.03
						1" Ice	2.56	2.98	0.04
								2.00	0.00

Description	Face or Leg	Type	Offsets: Horz Lateral	Azimuth Adjustmen t	Placement		C _A A _A Front	C _A A _A Side	Weight
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Vert ft ft ft	•	ft		ft²	ft²	К
Side Arm Mount [SO 301-	С	From Face	4.00	0.0000	179.00	2" Ice No Ice	1,00	0.90	0.02
1]			7.00	0.0000	175.00	1/2"	1.39	1.42	0.02
			0.00			lce	1.78	1.94	0.04
						1" Ice	2.56	2.98	0.06
(4) 01 04 15						2" (ce			
(4) 6' x 2" Mount Pipe	Α	From Face	4.00	0.0000	179.00	No ice	1.43	1.43	0.02
			0.00			1/2"	1.92	1.92	0.03
			0.00			Ice	2.29	2.29	0.05
						1" Ice	3.06	3.06	0.09
(4) 6' x 2" Mount Pipe	В	From Face	4.00	0.0000	179,00	2" Ice No Ice	4.40	4.40	
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	_	1101111 400	0.00	0.0000	173.00	1/2"	1.43 1.92	1. 4 3 1.92	0.02
			0.00			Ice	2.29	2.29	0.03 0.05
			5.55			1" Ice	3.06	3.06	0.09
						2" Ice	0.00	0.00	0.00
(4) 6' x 2" Mount Pipe	С	From Face	4.00	0.0000	179.00	No Ice	1.43	1.43	0.02
			0.00			1/2"	1.92	1.92	0.03
			0.00			Ice	2.29	2.29	0.05
						1" Ice	3.06	3.06	0.09
458-2D	В	From Face	5.00	0.0000	470.00	2" Ice	0.07		
.00 20	В	Tomrace	7.00	0.0000	179.00	No Ice 1/2"	3.67	3.67	0.02
			6.00			ice	5.03 6.41	5.03	0.05
			0.00			1" Ice	9.10	6.41 9.10	0.08 0.18
						2" Ice	3,10	3.10	0.10
458-2D	С	From Face	5.00	0.0000	179.00	No Ice	3.67	3.67	0.02
			7.00			1/2"	5.03	5.03	0.05
			6.00			Ice	6.41	6.41	0.08
						1" ice	9.10	9.10	0.18
170						2" Ice			
Platform Mount [LP 405-1]	С	None		0.0000	170.00	No Ice	20.80	20.80	1.80
•					., 0.00	1/2"	28.10	28,10	2.07
						ice	35.40	35.40	2.33
						1" Ice	50.00	50.00	2.86
EDICECON AID OF DOA						2" Ice			
ERICSSON AIR 21 B2A B4P w/ Mount Pipe	Α	From Face	4.00	0.0000	170.00	No Ice	6.33	5.64	0.11
D-1 W Would 1 Ipe			-8.00 0.00			1/2"	6.78	6.43	0.17
			0.00			Ice	7.21	7.13	0.23
						1" Ice 2" Ice	8.12	8.59	0.38
ERICSSON AIR 21 B2A	В	From Face	4.00	0.0000	170.00	No ice	6.33	5.64	0.11
B4P w/ Mount Pipe			-8.00			1/2"	6.78	6.43	0.17
			0.00			lce	7,21	7.13	0.23
						1" Ice	8.12	8.59	0.38
ERICSSON AIR 21 B2A	_	.				2" Ice			
ENICOSON AIR ZI BZA	С	From Face	4.00	0.0000	170.00	No Ice	6,33	5.64	0.11
B4P w/ Mount Dino			-8.00			1/2"	6.78	6.43	0.17
B4P w/ Mount Pipe	,					lce	7.21	7.13	0.23
B4P w/ Mount Pipe	,		0.00			411 1			11.40
B4P w/ Mount Pipe	,		0.00			1" Ice	8.12	8.59	0.38
B4P w/ Mount Pipe PXVAARR24_43-U-NA20	, A	From Face		0.0000	170:00	2" Ice			
·	A	From Face	4.00 0.00	0.0000	170.00		14.69	6.87	0.19
PXVAARR24_43-U-NA20	, A	From Face	4.00	0.0000	170:00	2" Ice No Ice	14.69 15.46		0.19 0.31
PXVAARR24_43-U-NA20	A	From Face	4.00 0.00	0.0000	170.00	2" Ice No Ice 1/2" Ice 1" Ice	14.69	6.87 7.55	0.19
PXVAARR24_43-U-NA20 w/ Mount Pipe			4.00 0.00 0.00			2" Ice No Ice 1/2" Ice 1" Ice 2" Ice	14.69 15.46 16.23 17.82	6.87 7.55 8.25 9.67	0.19 0.31 0.46 0.79
PXVAARR24_43-U-NA20 w/ Mount Pipe PXVAARR24_43-U-NA20		From Face From Face	4.00 0.00 0.00 4.00	0.0000	170.00 170.00	2" Ice No Ice 1/2" Ice 1" Ice 2" Ice No Ice	14.69 15.46 16.23 17.82	6.87 7.55 8.25 9.67 6.87	0.19 0.31 0.46 0.79
PXVAARR24_43-U-NA20 w/ Mount Pipe			4.00 0.00 0.00 4.00 0.00			2" Ice No Ice 1/2" Ice 1" Ice 2" Ice No Ice 1/2"	14.69 15.46 16.23 17.82 14.69 15.46	6.87 7.55 8.25 9.67 6.87 7.55	0.19 0.31 0.46 0.79 0.19 0.31
PXVAARR24_43-U-NA20 w/ Mount Pipe PXVAARR24_43-U-NA20			4.00 0.00 0.00 4.00			2" Ice No Ice 1/2" Ice 1" Ice 2" Ice No Ice 1/2" Ice	14.69 15.46 16.23 17.82 14.69 15.46 16.23	6.87 7.55 8.25 9.67 6.87 7.55 8.25	0.19 0.31 0.46 0.79 0.19 0.31 0.46
PXVAARR24_43-U-NA20 w/ Mount Pipe PXVAARR24_43-U-NA20			4.00 0.00 0.00 4.00 0.00			2" Ice No Ice 1/2" Ice 1" Ice 2" Ice No Ice 1/2" Ice 1" Ice	14.69 15.46 16.23 17.82 14.69 15.46	6.87 7.55 8.25 9.67 6.87 7.55	0.19 0.31 0.46 0.79 0.19 0.31
PXVAARR24_43-U-NA20 w/ Mount Pipe PXVAARR24_43-U-NA20 w/ Mount Pipe	В	From Face	4.00 0.00 0.00 4.00 0.00 0.00	0.0000	170.00	2" Ice No Ice 1/2" Ice 1" Ice 2" Ice No Ice 1/2" Ice 1" Ice 2" Ice	14.69 15.46 16.23 17.82 14.69 15.46 16.23 17.82	6.87 7.55 8.25 9.67 6.87 7.55 8.25 9.67	0.19 0.31 0.46 0.79 0.19 0.31 0.46 0.79
PXVAARR24_43-U-NA20 w/ Mount Pipe PXVAARR24_43-U-NA20	В		4.00 0.00 0.00 4.00 0.00			2" Ice No Ice 1/2" Ice 1" Ice 2" Ice No Ice 1/2" Ice 1" Ice	14.69 15.46 16.23 17.82 14.69 15.46 16.23	6.87 7.55 8.25 9.67 6.87 7.55 8.25	0.19 0.31 0.46 0.79 0.19 0.31 0.46

Description	Face or Leg	Offset Type	Offsets: Horz Lateral	Azimuth Adjustmen t	Placement	· · · · · · · · · · · · · · · · · · ·	C _A A _A Front	C _A A _A Side	Weight
			Vert ft ft	o	ft		ft²	ft²	К
			ft			1" lce	17.82	9.67	0.79
						2" Ice	17.02	3.07	0.10
AIR 32 B2A/B66AA w/	Α	From Face	4.00	0.0000	170,00	No Ice	6.75	6.07	0.15
Mount Pipe			8.00 0.00			1/2" Ice	7.20 7.65	6.87 7.58	0.21 0.28
·			0.00			1" Ice 2" Ice	8.57	9.06	0.44
AIR 32 B2A/B66AA w/	В	From Face	4.00	0.0000	170.00	No Ice	6.75	6.07	0.15
Mount Pipe			8.00			1/2"	7.20	6.87	0.21
			0.00			Ice 1" Ice	7.65 8.57	7.58 9.06	0,28 0,44
				•		2" Ice	0.07	5.00	0.77
AIR 32 B2A/B66AA w/	С	From Face	4.00	0.0000	170.00	No Ice	6.75	6.07	0.15
Mount Pipe			8.00			1/2"	7.20	6.87	0.21
			0.00			Ice 1" Ice	7.65 8.57	7.58 9.06	0.28 0.44
						2" Ice	0.07	9.00	U. 44
KRY 112 144/1	Α	From Face	4.00	0.0000	170.00	No Ice	0.35	0.17	0.01
			0.00			1/2"	0.43	0.23	0.01
			0.00			ice 1" ice	0.51 0.70	0.30 0.46	0.02 0.03
						2" Ice	0.70	0.40	0.03
KRY 112 144/1	В	From Face	4.00	0.0000	170.00	No Ice	0.35	0.17	0.01
			0.00			1/2"	0.43	0.23	0.01
			0.00			Ice	0.51	0.30	0.02
						1" Ice 2" Ice	0.70	0.46	0.03
KRY 112 144/1	С	From Face	4,00	0.0000	170.00	No Ice	0.35	0.17	0.01
			0.00			1/2"	0.43	0.23	0.01
			0.00			Ice	0.51	0.30	0.02
						1" Ice 2" Ice	0.70	0.46	0.03
RADIO 4449 B12/B71	Α	From Face	4.00	0.0000	170.00	No Ice	1.65	1.30	80.0
			0.00			1/2"	1.81	1.44	0.09
			0.00			lce	1.98	1.60	0.11
						1" ice 2" ice	2.34	1.92	0.16
RADIO 4449 B12/B71	В	From Face	4.00	0.0000	170.00	No ice	1.65	1.30	0.08
			0.00			1/2"	1.8 1	1.44	0.09
			0.00			lce	1.98	1.60	0.11
						1" ice 2" ice	2.34	1.92	0.16
RADIO 4449 B12/B71	С	From Face	4,00	0.0000	170.00	No Ice	1.65	1.30	80.0
			0.00			1/2"	1.81	1.44	0.09
			0.00			Ice	1.98	1.60	0.11
****						1" Ice 2" Ice	2.34	1.92	0.16
160 Platform Mount [LP 403-1]	С	None		0.0000	162.00	No Ice	18.85	18.85	1.50
רומנוטוווו אוטטוון נגר אטטיון	C	NONE		0.0000	102.00	1/2"	24.30	24.30	1.80
						Ice	29.75	29.75	2.09
						1" Ice	40.65	40.65	2.69
HRK-14 Handrail Kit [NA	С	None		0.0000	162.00	2" lce No lce	6.00	6.00	0.30
510-1]	U	MOLIG		0.0000	102.00	1/2"	8.50	8.50	0.40
,						Ice	11.00	11.00	0.50
						1" Ice	16.00	16.00	0.70
DDV QEQ Dainformanical	۸	Erom Food	0.00	0.0000	162.00	2" Ice No Ice	1.97	0.06	0.08
PRK-SFS-L Reinforcement Kit	Α	From Face	0.00 0.00	0.0000	102.00	1/2"	2.54	0.00	0.08
TAL			0.00			lce	3.13	0.14	0.13
						1" Ice	4.35	0.26	0.22
DDIZ OCO 1 D-1-f 1	Б.	Erom Fass	0.00	0.0000	460.00	2" Ice	1.07	n ne	<u> </u>
PRK-SFS-L Reinforcement Kit	В	From Face	0.00 0.00	0.0000	162.00	No Ice 1/2"	1.97 2.54	0.06 0.10	0.08 0.96
M			0.00			.,_	2.57	5.10	2.20

Description	Face or Leg	Offset Type	Offsets: Horz Lateral	Azimuth Adjustmen t	Placement		C _A A _A Front	C₄A₄ Side	Weight
			Vert ft ft ft	0	ft		ft²	fť²	κ
			0.00			Ice	3.13	0.44	0.40
			0.00			1" Ice 2" Ice	4.35	0.14 0.26	0.13 0.22
PRK-SFS-L Reinforcement	С	From Face	0.00	0.0000	162.00	No Ice	1,97	0.06	0.08
Kit			0.00			1/2"	2.54	0.10	0.96
			0.00			Ice	3.13	0.14	0.13
(0) 1.4.4(0)(-0.4(0)) 4449 41		_				1" Ice 2" Ice	4.35	0.26	0,22
(2) L1-1/2"x2-1/2"x1/4"x1'- 2"	Α	From Face	0.00	0.0000	162.00	No Ice	0.00	0.00	0.00
2			0.00			1/2"	0.00	0.00	0.00
			0.00			Ice	0.00	0.00	0.00
/2) 1.4.47915-0.47915-47415-41	_					1" Ice 2" Ice	0.00	0.00	0.00
(2) L1-1/2"x2-1/2"x1/4"x1'-	В	From Face	0.00	0.0000	162.00	No Ice	0.00	0.00	0.00
2"			0.00			1/2"	0.00	0.00	0.00
			0.00			Ice	0.00	0.00	0.00
(9) [4 4/9]b/9 4/9]b/4/4]b/4/	_	E E				1" Ice 2" Ice	0.00	0.00	0.00
(2) L1-1/2"x2-1/2"x1/4"x1'- 2"	С	From Face	0.00	0.0000	162.00	No Ice	0.00	0.00	0.00
2			0.00			1/2"	0.00	0.00	0.00
			0.00			Ice	0.00	0.00	0.00
						1" Ice	0.00	0.00	0.00
6'x2" Mount Pipe	Α	From Food	4.00	0.0000	400.00	2" Ice			
0 X2 Wount Fipe	А	From Face	4.00	0.0000	162.00	No Ice	1.43	1.43	0.02
			-6.00			1/2"	1.92	1.92	0.03
			0.00			Ice	2.29	2.29	0.05
7770 00 my Marint Dina		.				1" fce 2" fce	3.06	3.06	0.09
7770.00 w/ Mount Pipe	Α	From Face	4.00	0.0000	162.00	No Ice	5.75	4.25	0.06
			-7.00			1/2"	6.18	5.01	0.10
			1.00			Ice	6.61	5.71	0.16
•						1" lce 2" lce	7.49	7.16	0.29
7770.00 w/ Mount Pipe	В	From Face	4.00	0.0000	162.00	No Ice	5.75	4,25	0.00
•	-		-7.00	0.0000	102.00	1/2"	6.18	5.01	0.06 0.10
			1.00			Ice	6.61	5.71	0.16
						1" Ice	7.49	7.16	0.10
						2" lce	7.40	7.10	0.25
7770.00 w/ Mount Pipe	С	From Face	4.00	0.0000	162.00	No Ice	5.75	4.25	0.06
			-7.00			1/2"	6,18	5.01	0.10
			1.00			Ice	6.61	5.71	0.16
						1" Ice	7.49	7.16	0.29
80010965 w/ Mount Pipe	۸	Francisco	4.00			2" Ice			
ood roods w/ Modifit Filpe	Α	From Face	4.00	0.0000	162.00	No Ice	12.26	5.79	0.14
			0.00			1/2"	13.03	6.47	0.23
			1.00			lce	13.80	7.17	0.33
						1" Ice 2" Ice	15.41	8.60	0.57
30010965 w/ Mount Pipe	В	From Face	4.00	0.0000	162.00	No Ice	12.26	5.79	0.14
. 1-	_		0.00	0.0000	102.00	1/2"	13.03	5.79 6.47	0.14 0.23
			1.00			Ice	13.80	7.17	0.23
						1" Ice	15.41	8.60	0.57
						2" Ice	10.11	0.00	0.07
30010965 w/ Mount Pipe	Ç	From Face	4.00	0.0000	162.00	No Ice	12.26	5.79	0.14
			0.00			1/2"	13.03	6.47	0.23
			1.00			Ice	13.80	7.17	0.33
						1" lce 2" lce	15.41	8.60	0.57
	Α	From Face	4.00	0.0000	162.00	No Ice	9.90	7.18	0.10
Mount Pipe			7.00	-		1/2"	10.47	8.36	0.18
			1.00			lce	11.01	9.26	0.26
						1" Ice	12.11	11.09	0.46
								· · · - -	
ODA opp. Louis	_	_				2" lce			
OPA-65R-LCUU-H6 w/ Mount Pipe	В	From Face	4.00 7.00	0.0000	162.00	2" Ice No Ice 1/2"	9.90 10. 4 7	7.18	0.10

Description	Fac or Leg	Type	Offsets: Horz Lateral	Azimuth Adjustmen t	Placemer	nt	C _A A _A Front	C _A A _A Side	Weigh
			Vert ft ft	٠	ft		fť²	ft²	κ
		· · · · · · · · · · · · · · · · · · ·	ft						
			1.00			Ice	11.01	9.26	0.26
						1" Ice	12.11	11.09	0.46
OPA-65R-LCUU-H6 w/	С	From Face	4.00	0.0000	162.00	2" Ice No Ice	0.00	740	
Mount Pipe			7.00	4.5500	102.00	1/2"	9.90 10.47	7.18	0.10
			1.00			lce	11.01	8.36 9.26	0.18
						1" Ice	12.11	11.09	0.26 0.46
DDITE 44		-				2" Ice	122.11	11.05	0.40
RRUS 11	Α	From Face	4.00	0.0000	162.00	No Ice	2.78	1.19	0.05
			0.00			1/2"	2.99	1.33	0.07
			1.00			Ice	3.21	1.49	0.10
						1" Ice	3.66	1.83	0.15
RRUS 11	В	From Face	4.00	0.0000		2" Ice			
		TOILL	4.00 0.00	0.0000	162.00	No Ice	2.78	1.19	0.05
			1.00			1/2"	2.99	1.33	0.07
			1.00			Ice	3.21	1. 4 9	0.10
						1" Ice	3.66	1.83	0.15
RRUS 11	С	From Face	4.00	0.0000	162,00	2" Ice No Ice	2.78	4.40	
			0.00		102,00	1/2"	2.78	1.19	0.05
			1.00			Ice	3.21	1.33 1.49	0.07 0.10
						1" Ice	3.66	1.83	0.10
DDUO 66		_				2" ice	0.00	1.00	0.15
RRUS 32	Α	From Face	4.00	0.0000	162.00	No Ice	2.86	1.78	0.06
			0.00			1/2"	3.08	1.97	0.08
			1.00			Ice	3,32	2,17	0.10
						1" Ice	3.81	2.58	0.16
RRUS 32	В	From Face	4.00	0.000		2" ice			
***********	D	TOMFace	4.00 0.00	0.0000	162.00	No Ice	2.86	1.78	0.06
			1.00			1/2"	3.08	1.97	0.08
			1.00			ice	3.32	2.17	0.10
						1" Ice	3.81	2.58	0.16
RRUS 32	С	From Face	4.00	0.0000	162.00	2" Ice No Ice	2.00	4.70	
			0.00		.02.00	1/2"	2.86 3.08	1.78	0.06
			1.00			lce	3.32	1.97 2.17	0.08 0.10
						1" Ice	3.81	2.58	0.16
DDIIC 22 D2						2" Ice	0.01	2.00	0.10
RRUS 32 B2	Α	From Face	4.00	0.0000	162.00	No ice	2.73	1.67	0.05
			0.00			1/2"	2.95	1.86	0.07
			1.00			Ice	3.18	2.05	0.10
						1" Ice	3.66	2.46	0.16
RRUS 32 B2	В	From Face	4.00	0.0000	400.00	2" lce			
			0.00	0.0000	162.00	No Ice 1/2"	2.73	1.67	0.05
			1.00			lce	2.95 3.18	1.86	0.07
						1" Ice	3.66	2.05 2.46	0.10
DOUG GO DO	_	_				2" ice	0.00	2.40	0.16
RRUS 32 B2	С	From Face	4.00	0.0000	162.00	No Ice	2.73	1.67	0.05
			0.00			1/2"	2.95	1.86	0.03
			1.00			Ice	3.18	2.05	0.10
						1" Ice	3.66	2.46	0.16
RRUS 4478 B14	Α Ι	From Face	4.00	0.0000	400.00	2" Ice			
·•	- • • •		0.00	0.0000	162.00	No Ice	1.84	1.06	0.06
			1.00			1/2"	2.01	1.20	0.08
						Ice 1" Ice	2.19	1.34	0.09
						2" Ice	2.57	1.66	0.14
RRUS 4478 B14	В	From Face	4.00	0.0000	162.00	No Ice	1.84	1.06	0.00
			0.00	-		1/2"	2.01	1.06	0.06 0.08
			1.00			Ice	2.19	1.34	0.08
						1" Ice	2.57	1.66	0.14
RRUS 4478 B14	۰ -					2" Ice			U. 1-P
1100 4410 DI4	C F	From Face	4.00	0.0000	162.00	No Ice	1.84	1.06	0.06
			0.00			1/2"	1.07	1.00	0.00

Description	Fac or Leg	Туре	Offsets: Horz Laterai Vert	Azimuth Adjustmen t	Placemen	t	C _A A _A Front	C _A A _A Side	Weig
			ft ft ft	0	ft		ft²	ft²	κ
			1.00			Ice 1" Ice	2.19 2.57	1.34 1.66	0.09 0.14
(2) 7020.00	Α	From Face	4.00	0.0000	162.00	2" Ice No Ice	0.40	0.47	0.00
			0.00	0.0000	102.00	1/2"	0.10 0.15	0.17 0.24	0.00 0.01
			1.00			lce	0.20	0.31	0.01
						1" Ice	0.33	0.48	0.02
(2) 7020.00	ь	F F				2" Ice			0.02
(2) 7020.00	В	From Face	4.00	0.0000	162.00	No Ice	0.10	0.17	0.00
			0.00 1.00			1/2"	0.15	0.24	0.01
			1.00			Ice	0.20	0.31	0.01
						1" Ice	0.33	0.48	0.02
(2) 7020.00	C	From Face	4.00	0.0000	162.00	2" Ice	0.40		
			0.00	0.0000	102.00	No Ice 1/2"	0.10 0.15	0.17	0.00
			1.00			Ice	0.15	0.24	0.01
						1" Ice	0.20	0.31 0.48	0.01
(0) (0000000						2" Ice	0.00	0.40	0.02
(2) LGP21401	Α	From Face	4.00	0.0000	162.00	No Ice	1.10	0.35	0.01
*			0.00			1/2"	1.24	0.44	0.02
			-2.00			Ice	1.38	0.54	0.03
						1" Ice	1.69	0.77	0.05
(2) LGP21401	В	E	4.00			2" Ice			
(2) 201 21401	ь	From Face	4.00	0.0000	162.00	No Ice	1.10	0.35	0.01
			0.00			1/2"	1.24	0.44	0.02
			-2.00			Ice	1.38	0.54	0.03
						1" Ice	1.69	0.77	0.05
(2) LGP21401	С	From Face	4.00	0.0000	162.00	2" Ice	4.40		
	-		0.00	0.0000	102.00	No Ice 1/2"	1.10	0.35	0.01
			-2.00			Ice	1.24	0.44	0.02
						1" Ice	1.38 1.69	0.54 0.77	0.03
						2" Ice	1.00	0.77	0.05
DC6-48-60-18-8C	Α	From Face	1.00	0.0000	162.00	No Ice	1.14	1.14	0.03
			0.00			1/2"	1.79	1.79	0.05
			1.00			ice	2.00	2.00	0.07
						1" ice	2.45	2.45	0.13
DC6-48-60-18-8F	С	From For-	4.00			2" Ice			
200 40-00-10-01	U	From Face	1.00	0.0000	162.00	No Ice	0.92	0.92	0.02
			0.00 1.00			1/2"	1.46	1.46	0.04
			1.00			lce	1.64	1.64	0.06
						1" Ice	2.04	2.04	0.11
150						2" Ice			
latform Mount [LP 403-1]	C	None		0.0000	150.00	No Ice	18.85	18.85	1.50
						1/2"	24.30	24.30	1.50 1.80
						Ice	29.75	29.75	2.09
						1" Ice	40.65	40.65	2.69
Seese ED and Married Direct						2" Ice		10.00	2.00
S6656-5D w/ Mount Pipe	Α	From Face	4.00	0.0000	150.00	No Ice	8.37	8.46	0.11
			-7.00			1/2"	8.93	9.66	0.19
			0.00			lce	9.46	10.55	0.27
						1" Ice	10.53	12.35	0.47
S6656-5D w/ Mount Pipe	Α	From Face	4.00	0.0000	450.00	2" Ice			
- in the Line of the	,,	1 TOTAL TACE	2.50	0.0000	150.00	No Ice	8.37	8.46	0.11
			0.00			1/2"	8.93	9.66	0.19
			2.30			Ice 1" Ice	9.46	10.55	0.27
						2" Ice	10.53	12.35	0.47
S6656-5D w/ Mount Pipe	В	From Face	4.00	0.0000	150.00	No Ice	8.37	8.46	Ω 44
•			-7.00		. 55.00	1/2"	8.93	8.46 9.66	0.11
			0.00			Ice	9.46	9.00 10.55	0.19 0.27
						1" Ice	10.53	12.35	0.27
CREE ED	_					2" Ice		12.00	0.77
66656-5D w/ Mount Pipe	В	From Face	4.00	0.0000	150.00	No Ice	8.37	8.46	0.11
									· · · ·

Description	Face or Leg	Type	Offsets: Horz Lateral	Azimuth Adjustmen t	Placement		C_AA_A Front	C _A A _A Side	Weight
			Vert ft ft	0	ft		fť²	ft²	κ
· <u> </u>			ft						
			-2.50			1/2"	8.93	9.66	0.19
			0.00			Ice	9.46	10.55	0.27
						1" Ice 2" Ice	10.53	12.35	0.47
QS6656-5D w/ Mount Pipe	С	From Face	4.00	0.0000	150.00	No Ice	8.37	8.46	0.11
			-7.00			1/2"	8.93	9.66	0.19
			0.00			ice	9.46	10.55	0.27
						1" Ice 2" Ice	10.53	12.35	0.47
QS6656-5D w/ Mount Pipe	С	From Face	4.00	0.0000	150.00	No ice	8.37	8,46	0.11
			-2.50			1/2"	8.93	9.66	0.19
			0.00			Ice	9.46	10.55	0.27
						1" Ice	10.53	12.35	0.47
DB846F65ZAXY w/ Mount	Α	From Face	4.00	0.0000	150.00	2" Ice	7.07	= 00	
Pipe			-2.50	0.0000	150.00	No Ice 1/2"	7.27 7.83	7.82 9.01	0.05
			0.00			lce	8.35	9.91	0.11 0.19
						1" Ice	9,40	11.73	0.37
DB846F65ZAXY w/ Mount	۸	Franc #	4.00			2" Ice			
Pipe	Α	From Face	4.00 7.00	0.0000	150.00	No Ice	7.27	7.82	0.05
F0			0.00			1/2" Ice	7.83 8.35	9.01	0.11
			0.00			1" Ice	9.40	9.91 11.73	0.19 0.37
DD0.40505344444444444444444444444444444444						2" Ice	0.40	11.70	0.37
DB846F65ZAXY w/ Mount	В	From Face	4.00	0.0000	150.00	No Ice	7.27	7.82	0.05
Pipe			2.50			1/2"	7.83	9.01	0.11
			0.00			Ice	8.35	9.91	0.19
						1" Ice 2" Ice	9.40	11.73	0.37
DB846F65ZAXY w/ Mount	В	From Face	4.00	0.0000	150.00	No Ice	7,27	7.82	0.05
Pipe			7.00			1/2"	7.83	9.01	0.11
			0.00			Ice	8.35	9.91	0.19
						1" Ice	9.40	11.73	0.37
_PA-80080/6CF w/ Mount	С	From Face	4.00	0.0000	150,00	2" Ice No Ice	4.56	40.00	0.05
Pipe			2.50	0.0000	150,00	1/2"	4.3 0 5.11	10.26 11.43	0.05 0.11
			0.00			ice	5.61	12,31	0.11
						1" lce	6.65	14.13	0.36
.PA-80080/6CF w/ Mount	С	From Face	4.00	0.0000		2" Ice			
Pipe	Ç	rionirace	4.00 7.00	0.0000	150,00	No Ice 1/2"	4.56	10.26	0.05
- 4			0.00			lce	5.11 5.61	11.43 12.31	0.11
						1" Ice	6.65	14.13	0.19 0.36
DD 04 400 044D 07						2" lce			0.00
DB-C1-12C-24AB-0Z	Α	From Face	4.00	0.0000	150.00	No Ice	4.06	3.10	0.03
			0.00 0.00			1/2"	4.32	3,34	0.07
			0.00			lce 1" Ice	4.58 5.14	3.58	0.11
						2" lce	5.14	4.09	0.20
RFV01U-D2A	Α	From Face	4.00	0.0000	150.00	No Ice	1.88	1.01	0.07
			0.00			1/2"	2.05	1.14	0.09
			0.00			Ice	2.22	1.28	0.11
						1" ice	2.60	1.59	0.15
RFV01U-D2A	В	From Face	4.00	0.0000	150.00	2" Ice No Ice	1.88	1.01	0.07
			0.00			1/2"	2.05	1.01	0.07
			0.00			lce	2.22	1.28	0.11
						1" Ice	2.60	1.59	0.15
RFV01U-D2A	С	From Face	4.00	0.0000	150.00	2" Ice	4.00	4.04	
	~		0.00	0.0000	150.00	No Ice 1/2"	1.88 2.05	1.01 1.14	0.07
			0.00			lce	2.05	1.14	0.09 0.11
						1" Ice	2.60	1.59	0.15
RFV01U-D1A	٨	Fram F-	4.00	0.0000		2" lce			
MI AN IO-DIN	Α	From Face	4.00	0.0000	150.00	No Ice	1.88	1.25	0.08

1]	Description	Face or Leg	Type	Offsets: Horz Lateral	Azimuth Adjustmen t	Placement		C _A A _A Front	C _A A _A Side	Weight
RFV01U-D1A B From Face 4.00 0.0000 150.00 No 10c 1.88 1.25 0.08 1.00				ft ft ft	o	ft		ft²	ft²	К
RFV01U-D1A B From Face 4.00 0.0000 150.00 No ice 1.88 1.25 0.06 1.60										
RFV01U-D1A C From Face 0.00 0.0000 150.00 No Ice 2.22 1.54 0.12 0.18	5-044						1" Ice			
RFV01U-D1A C From Face 4.00 0.0000 150.00 150.00 1.000 1.86 0.18 0.18 0.18 0.18 0.18 0.18 0.18 0.18 0.18 0.18 0.18 0.18 0.18 0.19 0.18 0.19 0.18 0.19 0.18 0.19 0.18 0.19 0.19 0.18 0.19 0.19 0.18 0.19 0.19 0.19 0.19 0.18 0.19 0.19 0.19 0.18 0.19 0.19 0.18 0.19 0.19 0.18 0.19 0.19 0.19 0.18 0.19 0.19 0.18 0.19 0.19 0.18 0.19 0.19 0.18 0.19 0.18 0.19 0.19 0.18 0.19 0.19 0.18 0.19 0.19 0.18 0.19 0.19 0.18 0.19 0.19 0.18 0.19 0.19 0.18 0.19 0.19 0.18 0.19 0.19 0.18 0.19 0.19 0.18 0.19 0.19 0.19 0.18 0.19 0.19 0.19 0.18 0.19 0.19 0.19 0.18 0.19 0.19 0.19 0.18 0.19	RFV01U-D1A	В	From Face		0.0000	150.00				
RFV01U-D1A RFV01U										
RFV01U-D1A RFV01U				0.00						
RF-V0TU-D1A C From Face 4.00 0.0000 150.00 No Ice 1.88 1.25 0.08 0.00 0.000 0.000 1.72 0.05 1.39 0.10 0.18 0.18 0.18 0.18 0.18 0.18 0.18 0.18 0.18 0.18 0.18 0.19 0.10 0.00 0.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 0.0000 1.0000 0.00000 0.0000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.0								2.00	1.00	0.10
Side Arm Mount [SO 901- A From Face 0.00 0.0000 125.00 No Ice 0.50 0.88 0.11 1 1 1 1 1 1 1 1 1	RFV01U-D1A	С	From Face		0.0000	150.00	No Ice		1.25	0.08
Tibe 2.60 1.86 0.18 0.18 0.19 0.00 0.000 125.00 No loe 0.50 0.88 0.11 0.00 0.000 125.00 No loe 0.50 0.88 0.11 0.12 0.68 1.13 0.11 0.12 0.68 0.13 0.11 0.12 0.00 0.00 0.000										
Side Arm Mount [SO 901- A From Face 0.00 0.0000 125.00 No loce 0.50 0.88 0.11 10c 0.86 1.33 0.11 11c 0.86 1.33 0.12 11c 0.86 1.33 0.12 11c 0.86 1.33 0.12 11c 0.86 1.33 0.12 11c 0.86 1.33 0.13 11c 0.86 1.33 0.12 0.86 1.33 0.13 0.86 1.33 0.13 0.86 1.33 0.13 0.86 0.11 0.86 0.12 0.86 0.13 0.86 0.11 0.86 0.12 0.86 0.13 0.12 0.86 0.13 0.13 0.86 0.11 0.86 0.86 0.13 0.12 0.86 0.13 0.13 0.86 0.13 0.13 0.86 0.13 0.13 0.86 0.13 0.13 0.13 0.86 0.13				0.00						
Side Arm Mount [SO 901- A From Face 0.00 0.0000 125.00 No loc 0.50 0.88 0.11 11 11 12 1.28 0.12 1.88 0.12 1.22 1.24 0.04 1.24 0.04 1.24 0.04								2.60	1.86	0.18
1] 0.00 0.00 125.00 125.00 125.00 125.00 1272" 0.88 1.38 0.11 12 10 12 12 12 12 12 12 12 12 12 12 12 12 12							2 100			
Side Arm Mount [SO 901- C From Face 10.00		Α	From Face		0.0000	125.00		0.50	0.88	0.11
Side Arm Mount [SO 901- C From Face 0.00 0.0000 125.00 No Ice 0.50 0.88 0.11 1.13 0.11 1.18 0.00 1.12 2" Ice 1.22 1.88 0.12 2" Ice 1.22 1.88 0.12 2" Ice 1.22 1.88 0.12 2" Ice 1.22 1.88 0.12 2" Ice 1.22 1.88 0.12 2" Ice 1.22 1.88 0.12 2" Ice 1.22 1.88 0.12 2" Ice 1.22 1.88 0.12 2" Ice 1.22 1.88 0.12 2" Ice 1.22 1.88 0.12 2" Ice 1.22 1.88 0.00 0.000 125.00 No Ice 1.28 1.28 0.00 0.000 125.00 No Ice 1.28 1.28 0.00 0.000 125.00 No Ice 1.28 1.28 0.01 1.2" 1.20 0.00 0.000 125.00 No Ice 1.28 1.28 0.01 1.2" 1.20 0.00 0.000 125.00 No Ice 1.28 1.28 0.01 1.2" 1.20 0.00 0.000 125.00 No Ice 1.28 1.28 0.01 1.2" 1.20 0.00 0.000 125.00 No Ice 1.28 1.28 0.01 1.2" 1.20 0.00 0.000 125.00 No Ice 1.28 1.28 0.01 1.2" 1.20 0.00 0.000 125.00 No Ice 1.28 1.28 0.01 1.2" 1.20 0.00 0.000 125.00 No Ice 1.28 1.28 0.01 1.2" 1.20 0.00 0.000 125.00 No Ice 0.50 0.88 0.11 1.30 0.11 1.20 0.00 122" Ice 0.86 1.33 0.11 1.20 0.00 122" Ice 0.86 0.86 1.33 0.11 1.20 0.00 122" Ice 0.86 0.86 0.12 1.20 0.00 0.000 120.00 No Ice 0.50 0.88 0.12 2" Ice 0.000 0.000 120.00 No Ice 0.50 0.88 0.12 2" Ice 0.000 0.000 120.00 120.00 No Ice 0.50 0.88 0.12 2" Ice 0.000 0.000 120.00 No Ice 0.50 0.88 0.13 0.11 11 12 12 12 12 12 12 12 12 12 12 12 1	1]								1.13	
Side Arm Mount SO 901- C From Face 0.00 0.0000 125.00 No 122 0.68 0.11 1.12 0.68 0.11 1.12 0.68 0.11 1.12 0.68 0.11 1.12 0.68 0.11 1.12 0.68 0.11 1.12 0.68 0.11 1.12 0.68 0.11 1.12 0.68 0.11 1.12 0.68 0.11 1.12 0.00 0.00 0.000				0.00			Ice			
Side Arm Mount [SO 901- C From Face 0.00 0.000 125.00 No Ice 0.50 0.88 0.11 0.11 1.12 0.68 1.13 0.11 1.12 0.68 1.13 0.11 1.12 0.68 0.12 1.12 0.12 1.18 0.12 1.18 0.12 1.18 0.12 1.18 0.12 1.18 0.11 1.18 0.00 0.000								1,22	1.88	0.12
1]	Side Arm Mount [SO 901-	С	From Face	0.00	0.0000	125.00		0.50	0.88	0.11
PD201-1 C From Face 3.00 0.0000 125.00 No lce 1.22 1.88 0.12 PD201-1 C From Face 3.00 0.0000 125.00 No lce 1.22 1.88 0.12 PD128-1 A From Face 3.00 0.0000 125.00 No lce 4.58 4.58 0.09 PD128-1 A From Face 3.00 0.0000 125.00 No lce 4.58 4.58 0.09 FO 1.28-1 A From Face 3.00 0.0000 125.00 No lce 1.28 1.28 0.01 1/2" 2.09 2.09 0.01 1/2" 2.00 2.00 1/2" 0.68 1.38 0.11 1/2" 0.68 0.18 0.11 1/2" 0.68 0.18 0.1	1]					0.00				
PD201-1 C From Face 3.00 0.0000 125.00 No loc 1.18 1.18 0.00 0.000 1/2" 2.09 2.09 0.011 1/2" 2.09 2.09 0.011 1/2" 2.09 2.09 0.011 1/2" 2.09 2.09 0.011 1/2" 2.09 2.09 0.011 1/2" 2.09 2.09 0.011 1/2" 2.09 2.09 0.011 1/2" 2.09 2.09 0.011 1/2" 2.09 2.09 0.011 1/2" 2.09 2.09 0.011 1/2" 2.09 2.09 0.011 1/2" 2.09 2.09 0.011 1/2" 2.09 2.09 0.011 1/2" 2.09 2.09 0.000 1/2" 2.09 2.09 0.000 1/2" 2.09 2.09 0.000 1/2" 2.09 2.09 0.000 1/2" 2.09 2.09 0.000 1/2" 2.27 2.27 0.02 1/2" 2.27 2.27 0.02 1/2" 2.27 2.27 0.02 1/2" 2.27 0.02 1/2" 2.27 2.27 0.02 1/2" 2.27 2.27 0.02 1/2" 2.29 2.29 0.000 1/2" 2.09 2.09 1/2" 2.09 2.09 0.000 1/2" 2.09 2.09 2.09 1/2" 2.09 2.09 2.09 2.09 1/2" 2.09 2.09 2.09 2.09 2.09 2.09 2.09 2.09				0.00			lce			
PD201-1 C From Face 0.00										
PD128-1 A From Face 0.00 0.000 110.00 No Ice 0.50 0.88 0.11 1]	PD201_1	_	From Foss	2.00	0.0000	400.00				
PD128-1 A From Face 0.00 0.0000 125.00 No Ice 4.68 4.58 0.08 2" Ice 2" Ice 2" Ice 2" Ice 3.02 3.02 0.09 1/1" Ice 4.68 4.58 0.08 2" Ice 2" Ice 2" Ice 3.00 0.000 1/1/2" 2.27 2.27 0.02 1ce 3.28 3.28 0.04 1" Ice 5.13 5.13 0.09 2" Ice 2" Ice 2" Ice 2" Ice 3.28 3.28 0.04 1" Ice 5.13 5.13 0.09 2" Ice 3.28 3.28 0.04 1" Ice 5.13 5.13 0.09 2" Ice 3.28 3.28 0.04 1" Ice 5.13 5.13 0.09 2" Ice 3.28 3.28 0.04 1" Ice 1.22 1.88 0.11 1] 1 Ice 1.22 1.88 0.12 2" Ice 1.22 1.88 0.12 1" Ice 1.22 1.88 0.14 1" Ice 1.22 1.88 0	1 0201-1	C	FIUITAGE		0.0000	125.00				
PD128-1 A From Face 3.00 0.0000 125.00 No loce 1.28 1.28 0.01 0.000 1/2" 2.27 2.27 0.02 1/2" 2.27 2.27 0.02 1/2" 1/2" 2.27 2.27 0.02 1/2" 1/2" 2.27 2.27 0.02 1/2" 1/2" 1/2" 1/2" 1/2" 1/2" 1/2" 1/2										
PD128-1 A From Face 3.00 0.0000 125.00 No lee 1.28 1.28 0.01 1/2" 2.27 2.27 0.02				0.00						
Side Arm Mount [SO 901- A From Face 0.00 0.0000 110.00 No Ice 0.50 0.88 0.11 1 1 1 1 1 1 1 1 1									4.00	0.00
Side Arm Mount [SO 901- A From Face 0.00 0.0000 110.00 No Ice 0.50 0.88 0.11 11 12 0.68 1.38 0.12 2" Ice 1.22 1.88 0.12 2" Ice 1.22 1.88 0.12 12 1.22 1.88 0.12 12 12 1.22 1.88 0.12 12 1.22 1.88 0.14 1 12 1.22 1.88 0.15 1 12 1.22 1.88 0.15 1 12 1.22 1.88 0.15 1 12 1.22 1.88 0.15 1 12 1.22 1.88 0.15 1 12 1.22 1.88 0.15 1 12 1.22 1.88 0.15 1 12 1.22 1.88 0.15 1 12 1.22 1.88 0.15 1 12 1.22 1.88 0.15 1 12 1.22 1.88 0.15 1 12 1.22 1.88 0.15 1 12 1.22 1.88 0.15 1 12 1.23 1.24 0.15 1 12 1.24	PD128-1	Α	From Face		0.0000	125.00		1.28		0.01
1"										
Side Arm Mount [SO 901- A From Face 0.00 0.0000 110.00 No Ice 0.50 0.88 0.11 1/2" 0.68 1.13 0.11 1/2" 0.68 1.13 0.11 1/2" 0.68 1.13 0.11 1/2" 0.68 1.13 0.11 1/2" 0.68 1.13 0.11 1/2" 0.68 1.13 0.11 1/2" 0.68 1.13 0.11 1/2" 0.68 1.13 0.11 1/2" 0.68 0.12 1/2" 0.68 0.12 1/2" 0.68 0.11 1/2" 0.68 0.11 1/2" 0.68 1.13 0.11 1/2" 0.68 1.38 0.11 1/2" 0.68 1				5.00						
Side Arm Mount [SO 901- A From Face 0.00 0.0000 110.00 No Ice 0.50 0.88 0.11								5,13	5.13	0.09
1]							2 ,00			
Side Arm Mount [SO 901- B From Face 0.00 0.0000 110.00 No Ice 0.50 0.88 0.11 1 Ice 0.22 1.88 0.12 2" Ice 0.00 0.000 110.00 No Ice 0.50 0.88 0.11 1 Ice 0.86 1.38 0.11 1 Ice 0.86 0.26 0.26 0.26 0.00		Α	From Face		0.0000	110.00		0.50	0.88	0.11
PD128-1 B From Face 0.00 0.0000 110.00 No Ice 0.50 0.88 0.11 1 1 1 1 1 1 1 1 1	1]									
PD128-1 B From Face 0.00 0.0000 110.00 No Ice 0.50 0.88 0.11 1/2" 0.68 1.13 0.11 1/2" 0.68 1.38 0.11 1/2" 0.68 1.38 0.11 1/2" 0.68 1.38 0.11 1/2" 1.22 1.88 0.12 1/2" 1.22 1.88 0.12 1/2" 1/2				0.00						
PD128-1 B From Face 0.00 0.0000 110.00 No Ice 0.50 0.88 0.11 0.00 110.00 No Ice 0.50 0.88 0.11 0.11 0.00 110.00 No Ice 0.50 0.88 0.11 0.11 0.00 110.00 No Ice 0.86 1.33 0.11 0.12 0.12 0.12 0.18 0.12								1.22	1.88	0.12
1] 0.00 1/2" 0.68 1.13 0.11 0.00 1/2" 0.68 1.38 0.11 1/2" 0.68 1.38 0.11 1/2" 0.68 1.22 1.88 0.12 1/2" 0.00 0.00 1/2" 0.00 1/2" 0.68 1.13 0.11 0.00 1/2" 0.68 1.13 0.11 0.00 1/2" 0.68 1.38 0.11 1/2" 0.68 1.38 0.11 1/2" 0.68 1.38 0.11 1/2" 0.68 1.38 0.11 1/2" 0.00 1/2" 0.00 1/2" 0.00 0.00 1/2" 0.00 0.00 1/2" 0.00 0.00 1/2" 0.00 0.00 0.00 1/2" 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	Side Arm Mount [SO 901-	В	From Face	0.00	0.0000	110.00		0.50	0.88	0.11
PD128-1 A From Face 3.00 0.0000 110.00 No Ice 1.28 1.28 0.01 1/2" 2.27 2.27 0.02 5.00 Ice 3.28 3.28 0.04 1" Ice 5.13 5.13 0.09 2" Ice PD128-1 B From Face 3.00 0.0000 110.00 No Ice 1.28 1.28 0.01 1/2" 2.27 2.27 0.02 1ce 3.28 3.28 0.04 1" Ice 5.13 5.13 0.09 2" Ice PD128-1 B From Face 3.00 0.0000 110.00 No Ice 1.28 1.28 0.01 1/2" 2.27 2.27 0.02 1ce 3.28 3.28 0.04 1" Ice 5.13 5.13 0.09 2" Ice 3.28 3.28 0.04 1" Ice 5.13 5.13 0.09 1/2" 2.27 2.27 0.02 1ce 3.28 3.28 0.04 1" Ice 5.13 5.13 0.09 1/2" 0.00 1/2" 0.00 1/2" 0.00 1/2" 0.00 1/2" 0.00 0.000 1/2" 0.000 1/2" 0.000 1/2" 0.000 1/2" 0.000 0.000 1/2" 0.000 0.000 1/2" 0.000 0.000 1/2" 0.000 0.000 1/2" 0.000 0.000 1/2" 0.000 0.000 1/2" 0.000 0.000 1/2" 0.000 0.000 0.000 1/2" 0.000 0.000 0.000 1/2" 0.000 0.000 0.000 1/2" 0.000 0.000 0.000 1/2" 0.0000 0.0000 0.0000 0.0000 0.000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.	1]									
PD128-1 A From Face 3.00 0.0000 110.00 No Ice 1.28 1.28 0.01 0.00 1/2" 2.27 2.27 0.02 Ice 3.28 3.28 0.04 1" Ice 5.13 5.13 0.09 2" Ice PD128-1 B From Face 3.00 0.000 110.00 No Ice 1.28 1.28 0.01 0.00 1 I'' Ice 5.13 5.13 0.09 2" Ice PD128-1 B From Face 3.00 0.0000 110.00 No Ice 1.28 1.28 0.01 1/2" 2.27 2.27 0.02 Ice 3.28 3.28 0.04 1" Ice 5.13 5.13 0.09 2" Ice Ice 3.28 3.28 0.04 1" Ice 5.13 5.13 0.09 Ice 3.28 3.28 0.04 1" Ice 5.13 5.13 0.09 Ice 3.28 3.28 0.04 1" Ice 5.13 5.13 0.09 Ice 3.28 3.28 0.04 1" Ice 5.13 5.13 0.09 Ice 3.28 3.28 0.04 1" Ice 5.13 5.13 0.09 Ice 0.86 1.38 0.11 1 Ice 0.86 1.38 0.11 Ice 0.86 1.38 0.11 Ice 0.86 1.38 0.11 Ice 0.86 1.38 0.11 Ilice 1.22 1.88 0.12 Ice Ice 0.86 1.38 0.12 Ice 0.86 0.26 0.26 0.00 0.00 0.000 1/2" 0.32 0.32 0.00							lce	0.86		
PD128-1 A From Face 3.00 0.0000 110.00 No Ice 1.28 1.28 0.01 0.00 1/2" 2.27 2.27 0.02 Ice 3.28 3.28 0.04 1" Ice 5.13 5.13 0.09 2" Ice 2" Ice 1" Ice 5.13 5.13 0.09 1" Ice 3.28 1.28 0.01 0.00 1" Ice 3.28 1.28 0.01 0.00 1/2" 2.27 0.02 Ice 3.28 3.28 0.04 1" Ice 5.13 5.13 0.09 Ice 3.28 3.28 0.04 1" Ice 5.13 5.13 0.09 1ce 3.28 3.28 0.04 1" Ice 5.13 5.13 0.09 1ce 3.28 3.28 0.04 1" Ice 5.13 5.13 0.09 1ce 0.26 0.26 0.26 0.26 0.26 0.00 0.00 1/2" 0.32 0.32 0.00 0.000 1/2" 0.32 0.32 0.00								1.22	1.88	
PD128-1 B From Face 3.00 0.0000 110.00 No Ice 3.28 3.28 0.04 PD128-1 B From Face 3.00 0.0000 110.00 No Ice 3.28 3.28 0.04 1" Ice 5.13 5.13 0.09 2" Ice 1.28 1.28 0.01 0.00 1/2" 2.27 2.27 0.02 5.00 Ice 3.28 3.28 0.04 1" Ice 5.13 5.13 0.09 2" Ice 2.27 0.02 5.00 Ice 3.28 3.28 0.04 1" Ice 5.13 5.13 0.09 2" Ice 3.28 3.28 0.04 1" Ice 5.13 5.13 0.09 1" Ice 0.50 0.88 0.11 1 0.00 1/2" 0.68 1.13 0.11 1 Ice 0.86 1.38 0.11 1" Ice 1.22 1.88 0.12 2" Ice GPS_A C From Leg 3.00 0.0000 100.00 No Ice 0.26 0.26 0.00 0.00 1/2" 0.32 0.32 0.00	PD128-1	Α	From Face	3.00	0.000	110.00		4.00	4.00	0.04
PD128-1 B From Face 3.00 0.0000 110.00 No Ice 5.13 5.13 0.09 2" Ice 5.13 5.13 0.09 2" Ice 5.13 5.13 0.09 2" Ice 7.227 0.02 5.00 Ice 3.28 1.28 0.01 1/2" 2.27 2.27 0.02 Ice 3.28 3.28 0.04 1" Ice 5.13 5.13 0.09 2" Ice 7.227 1.22 0.00 1" Ice 5.13 5.13 0.09 2" Ice 7.227 1.22 0.00 1" Ice 5.13 5.13 0.09 1" Ice 5.13 5.13 0.09 1" Ice 0.50 0.88 0.11 1 0.00 1/2" 0.68 1.13 0.11 Ice 0.86 1.38 0.11 1" Ice 1.22 1.88 0.12 2" Ice GPS_A C From Leg 3.00 0.0000 100.00 No Ice 0.26 0.26 0.00 0.00 1/2" 0.32 0.32 0.00	. 2.20 .	<i>F</i> (i iomi ace		0.0000	110.00				
PD128-1 B From Face 3.00 0.0000 110.00 No Ice 1.28 1.28 0.01 0.00 1/2" 2.27 2.27 0.02								3.28		
PD128-1 B From Face 3.00 0.0000 110.00 No Ice 1.28 1.28 0.01 0.00 1/2" 2.27 2.27 0.02 Ice 3.28 3.28 0.04 1" Ice 5.13 5.13 0.09 1" Ice 5.13 5.13 0.09 1" Ice 5.13 5.13 0.09 1" Ice 5.13 5.13 0.09 1" Ice 5.13 5.13 0.09 1" Ice 5.13 5.13 0.09 1" Ice 5.13 5.13 0.09 1" Ice 6.86 1.38 0.11 1 0.00 1/2" 0.68 1.13 0.11 0.00 Ice 0.86 1.38 0.11 1" Ice 1.22 1.88 0.12 2" Ice GPS_A C From Leg 3.00 0.0000 100.00 No Ice 0.26 0.26 0.00 0.00 1/2" 0.32 0.32 0.00								5.13		
0.00	DD400 4	_					2" Ice			
5.00 loe 3.28 3.28 0.04 1" loe 5.13 5.13 0.09	PD128-1	В	From Face		0.0000	110.00				
****100**** side Arm Mount [SO 901- C From Leg 0.00 0.0000 100.00 No Ice 0.50 0.88 0.11 1] 0.00 1/2" 0.68 1.13 0.11 0.00 1/2" 0.68 1.38 0.11 1" Ice 1.22 1.88 0.12 2" Ice GPS_A C From Leg 3.00 0.0000 100.00 No Ice 0.26 0.26 0.00 0.00 1/2" 0.32 0.32 0.00									2.27	
100 side Arm Mount [SO 901- C From Leg 0.00 0.0000 100.00 No Ice 0.50 0.88 0.11 1] 0.00 11/2" 0.68 1.13 0.11 1 0.00 Ice 0.86 1.38 0.11 1 Ice 1.22 1.88 0.12 2" Ice GPS_A C From Leg 3.00 0.0000 100.00 No Ice 0.26 0.26 0.00 0.00 1/2" 0.32 0.32 0.00				5.00						
GPS_A C From Leg 3.00 0.0000 100.00 No Ice 0.26 0.26 0.00 0.000 1/2" 0.32 0.32 0.00								0.13	0.10	บ.บฮ
1] 0.00 1/2" 0.68 1.13 0.11 0.00 lce 0.86 1.38 0.11 1" lce 1.22 1.88 0.12 2" lce GPS_A C From Leg 3.00 0.0000 100.00 No Ice 0.26 0.26 0.00 0.00 1/2" 0.32 0.32 0.00		^	F							
O.00 Ice 0.86 1.38 0.11 1" Ice 1.22 1.88 0.12 2" Ice GPS_A C From Leg 3.00 0.0000 100.00 No Ice 0.26 0.26 0.00 0.00 1/2" 0.32 0.32 0.00		C	From Leg		0.0000	100.00				
1" lce 1.22 1.88 0.12 2" lce GPS_A C From Leg 3.00 0.0000 100.00 No lce 0.26 0.26 0.00 0.00 1/2" 0.32 0.32 0.00	ų.									
2" Ice GPS_A C From Leg 3.00 0.0000 100.00 No Ice 0.26 0.26 0.00 0.00 1/2" 0.32 0.32 0.00				0.00					1.38	
GPS_A C From Leg 3.00 0.0000 100.00 No Ice 0.26 0.26 0.00 0.00 1/2" 0.32 0.32 0.00								1.44	1.08	0.12
0.00 1/2" 0.32 0.32 0.00	GPS_A	С	From Leg	3.00	0.0000	100.00		0.26	0.26	0.00
			-			•				
.05 0.05 0.01				1.00			Ice	0.39	0.39	0.01

Description	Fa o Le	r Type	Offsets Horz Laterai	Adjustmen	Placeme	ent	C _A A _A Front	C₄A₄ Side	Weigh
			Vert ft ft	٥	ft		ft²	ft²	К
			ft			1" Ice	0.50		
95	_					2" lce		0.56	0.02
Side Arm Mount [SO 901	- B	From Face		0.0000	95.00	No Ice	0.50	0.88	0.11
•			0.00 0.00			1/2"	0.68	1.13	0.11
			0.00			Ice	0.86	1.38	0.11
						1" Ice		1.88	0.12
Side Arm Mount [SO 901-	- с	From Face	0.00	0.0000	95.00	2" Ice No Ice		0.00	
1]			0.00		40.00	1/2"	0.68	0.88 1.13	0.11
			0.00			Ice	0.86	1.13	0.11
						1" Ice	1.22	1.88	0.11 0.12
PD128-1	В	From Face	0.00			2" Ice		1.00	0.12
. – . – .	ь	From Face	3.00 0.00	0.0000	95.00	No Ice	1.28	1.28	0.01
			5.00			1/2"	2.27	2.27	0.02
			9.00			ice	3.28	3.28	0.04
						1" ice	5.13	5.13	0.09
PD128-1	С	From Face	3.00	0.0000	95.00	2" Ice No Ice	4.00	4.00	
			0.00		00.00	1/2"	1.28 2.27	1.28	0.01
			5.00			Ice	3.28	2.27 3.28	0.02
•						1" Ice	5.13	5.26 5.13	0.04 0.09
80						2" Ice	3.10	0.10	0.09
Bide Arm Mount [SO 901-	Α	From Face	0.00	0.0000					
1]	11	TIOHITACE	0.00 0.00	0.0000	80.00	No Ice	0.50	88.0	0.11
_			0.00			1/2"	0.68	1.13	0.11
			5.00			Ice	0.86	1.38	0.11
National and the second						1" Ice 2" Ice	1.22	1.88	0.12
Gide Arm Mount [SO 901-	С	From Face	0.00	0.0000	80.00	No Ice	0.50	0.88	0.44
1]			0.00			1/2"	0.68	1.13	0.11 0.11
			0.00			Ice	0.86	1.38	0.11
						1" Ice	1.22	1.88	0.12
PD128-1	С	From Face	3.00	0.0000		2" Ice			0,12
-	Ū	1 TOTAL T ACE	0.00	0.0000	80.00	No Ice	1.28	1.28	0.01
			5.00			1/2"	2.27	2.27	0.02
			0.00	*		lce	3.28	3.28	0.04
B.B						1" Ice 2" Ice	5.13	5.13	0.09
DB222	Α	From Face	3.00	0.0000	80.00	No ice	1.60	1.60	0.00
			0.00		,••	1/2"	2.88	1.60 2.88	0.02 0.02
			5.00			lce	4.16	4.16	0.02
						1" Ice	6.72	6.72	0.04
MOD 2013						2" Ice			
ump Plate 120" x 4.5" x	Α	From Face	0.00	0.0000	80.00	No Ice	7 50	0.04	
1"			0.00		00.00	1/2"	7.50 9.24	2.21	0.21
			0.00			lce	11.01	3.09 3.99	0.25
						1" Ice	14.64	5.81	0.28 0.36
mp Plate 120" x 4.5" x	В	From Face	0.00	0.0000		2" Ice			0.00
1"		i iom race	0.00 0.00	0.0000	80.00	No Ice	7.50	2.21	0.21
			0.00			1/2"	9.24	3.09	0.25
			2.00			lce 1" lce	11.01	3.99	0.28
mn Blota 4008 - 1	_	_				2" Ice	14.64	5.81	0.36
mp Plate 120" x 4.5" x 1"	C I	From Face	0.00	0.0000	80.00	No ice	7.50	2.21	0.24
1			0.00		•	1/2"	9.24	3.09	0.21 0.25
			0.00			Ice	11.01	3.99	0.28
						1" Ice	14.64	5.81	0.36
***						2" ice			
mp Plate 120" x 6.5" x	A F	From Face	0.00	0.0000	60.00	Mo Is -	0.05		
1.25"			0.00	0.0000	00.00	No Ice 1/2"	9.65	3.08	0.41
			0.00				11.23 12.83	3.97 4.87	0.47 0.51

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert	Azimuth Adjustmen t	Placement		C _A A _A Front	C₄A₄ Side	Weight
			ft ft ft	a	ft		ft²	ft²	К
Jump Plate 120" x 6.5" x 1.25"	В	From Face	0.00 0.00 0.00	0.0000	60.00	2" Ice No Ice 1/2" Ice 1" Ice 2" Ice	9.65 11.23 12.83 16.11	3.08 3.97 4.87 6.71	0.41 0.47 0.51 0.59
Jump Plate 120" x 6.5" x 1.25"	С	From Face	0.00 0.00 0.00	0.0000	60,00	No Ice 1/2" Ice 1" Ice 2" Ice	9.65 11.23 12.83 16.11	3.08 3.97 4.87 6.71	0.41 0.47 0.51 0.59
(2) Jump Plate 120" x 6" x 1"	Α	From Face	0.00 00.0 00.0	0.0000	40.00	No fce 1/2" Ice 1" Ice 2" Ice	9.17 10.78 12.43 15.79	2.42 3.30 4.19 6.03	0.30 0.35 0.38 0.47
(2) Jump Plate 120" x 6" x 1"	B	From Face	0.00 0.00 0.00	0.0000	40.00	No Ice 1/2" Ice 1" Ice 2" Ice	9.17 10.78 12.43 15.79	2.42 3.30 4.19 6.03	0.30 0.35 0.38 0.47
(2) Jump Plate 120" x 6" x 1"	С	From Face	0.00 0.00 0.00	0.0000	40.00	No Ice 1/2" Ice 1" Ice 2" Ice	9.17 10.78 12.43 15.79	2.42 3.30 4.19 6.03	0.30 0.35 0.38 0.47
(2) Jump Plate 120" x 6.5" x 1.25"	Α	From Face	0.00 0.00 0.00	0.0000	20.00	No Ice 1/2" Ice 1" Ice 2" Ice	9.65 11.23 12.83 16.11	3.08 3.97 4.87 6.71	0.41 0.47 0.51 0.59
(2) Jump Plate 120" x 6.5" x 1.25"	В	From Face	0.00 0.00 0.00	0.0000	20.00	No Ice 1/2" Ice 1" Ice 2" Ice	9.65 11.23 12.83 16.11	3.08 3.97 4.87 6.71	0.41 0.47 0.51 0.59
(2) Jump Plate 120" x 6.5" x 1.25"	C.	From Face	0.00 0.00 0.00	0.0000	20.00	No Ice 1/2" Ice 1" Ice 2" Ice	9.65 11.23 12.83 16.11	3.08 3.97 4.87 6.71	0.41 0.47 0.51 0.59

					Dish	es		of Mark Age Carolina			
Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert	Azimuth Adjustment	3 dB Beam Width	Elevation	Outside Diameter		Aperture Area	Weigh
		· · · · · · · · · · · · · · · · · · ·		ft	•	۰	ft	ft		ft²	K
SP2-5.8	Α	Paraboloid	From	4.00	15.0000		188.00	2.00	No Ice	3.14	0.02
		w/Radome	Face	0.00					1/2" Ice	3.41	0.04
				-1.00					1" Ice	3.68	0.06
									2" Ice	4.21	0.09

Tower Pressures - No Ice

 $G_H = 1.100$

Castian		1	F.	<u>-</u> -							
Section Elevation	Z	Kz	q_z	A _G	F	A _F	A_R	A _{lag}	Leg	C _A A _A	C_AA_A
Elevation	J			1	a			1	%	In	Out
ft	l ft				C		_			Face	Face
L1 190.00		0 4 400	psf	ft ²	e	ft ²	ft²	ft ²		ft²	ft²
185.0		0 1.183	39	12.500		0.000		12.500	100.00	0.000	0.000
1 100.0	°I	1	1		B	0.000			100.00	1.386	0.000
L2 185.00	182.5	0 1.174	39	40.500	C	0.000		i	100.00	0.588	0.000
180.00		0 1.174	38	12.500		0.000	12.500	12,500		0.000	0.000
100.0	٦			1	B	0.000	12.500	i	100.00	2.310	0.000
L3 180.00	- 177.5	1.164	38	15,000	ΪČ	0.000	12.500		100.00	0.588	0.000
175.00		1.104	30	15.000		0.000	15.000	15.000		0.000	0.000
1			i		B	0.000	15.000	l	100.00	2.310	0.000
L4 175.00	- 172.50	1.155	38	15.000		0.000	15.000	4	100.00	0.588	0.000
170,00			1 "	13.000	B	0.000	15.000	15.000		0.000	0.000
	i	1	[1	ľč	0.000	15.000		100.00	2.310	0.000
L5 170,00	- 167.50	1.145	38	15.000		0.000	15.000 15.000	45.55	100.00	0.588	0.000
165.00			"	10.000	Ιŝ	0.000	15.000	15.000	1	0.000	0.000
1	1	1	l	i	Ιč	0.000	15.000		100.00	12.210	0.000
L6 165.00-	- 162,50	1.135	37	15.000	ΙĂ	0.000	15.000	45.000	100.00	0.588	0.000
160.00	1]		-	10,000	B	0.000	15.000	15.000	100.00	2.853	0.000
					Ιč	0.000	15.000		100.00	12.210	0.000
L7 160.00-	157.50	1.125	37	17.500	Ă	0.000	17.500	47 500	100.00	0.588	0.000
155.00	1			11,500	lβ	0.000	17.500	17.500	100.00	7.132	0.000
1		1		İ	ĺč	0.000	17.500		100.00	12.210	0.000
L8 155.00-	152.50	1.115	37	17.500	ΙÃ	0.000	17.500	17.500	100.00 100.00	0.588	0.000
150.00	1	1 1			В	0.000	17.500	17.500	100.00	7.132	0.000
1		1 1			C	0.000	17.500		100.00	12.210 0.588	0.000
L9 150.00-	147.50	1.104	36	17.500	ĺΑ.	0.000	17.500	17.500	100.00	7.132	0.000
145.00		1 1			В	0.000	17.500	11.000	100.00	12.210	0.000
1	ŀ	1 1			С	0.000	17.500		100.00	0.588	0.000 0.000
L10 145.00-	142.50	1.093	36	17.500	Α	0.000	17.500	17.500	100.00	7.132	0.000
140.00		1			В	0.000	17.500		100.00	12.210	0.000
					C	0.000	17.500		100.00	0.588	0.000
L11 140.00-	137.50	1.082	36	20.000	Α	0.000	20.000	20.000	100.00	7.132	0.000
135.00					В	0.000	20.000	-	100.00	12.210	0.000
142 425 00	400 50				C	0.000	20.000		100.00	0.588	0.000
L12 135.00-	132.50	1.071	35	20.000	A	0.000	20.000	20.000	100.00	7.132	0.000
130.00	1	1 1			В	0.000	20.000		100.00	12,210	0.000
L13 130.00-	107.50	4.050			C	0.000	20.000		100.00	0.588	0.000
125.00	127.50	1.059	35	20.000	A	0.000	20.000	20.000	100.00	7.132	0.000
120.00		!!			В	0.000	20.000		100.00	12.210	0.000
L14 125.00-	122.50	1.047	24		C	0.000	20.000		100.00	0.588	0.000
120.00	122.50	1.047	34	20.000	A	0.000	20.000	20.000	100.00	7.132	0.000
120.00			j	ĺ	B	0.000	20.000		100.00	12.210	0.000
L15 120.00-	117.50	1.035	34	22,500	Č	0.000	20.000		100.00	0.588	0.000
115.00	117.50	1.000	34	24.000	A B	0.000	22.500	22.500	100.00	7.132	0.000
			- 1		c l	0.000	22.500	ļ	100.00	12.210	0.000
L16 115.00-	113.83	1.025	34	10.503	Ă	0.000	22.500	40.500	100.00	0.588	0.000
112.67			~~	10.000	B	0.000	10.503	10.503	100.00	5.329	0.000
			ŀ	- 1	c	0.000	10.503	1	100.00	7.700	0.000
L17 112.67-	112.54	1.022	34	1.125	Ă	0.000	10.503	4.405	100.00	2.274	0.000
112.42			- 1	"120	B	0.000	1.125	1.125	100.00	0.607	0.000
i		1	ł	ļ	č	0.000	1.125 1.125		100.00	0.861	0.000
L18 112.42-	109.92	1.015	33	22.500	Ă	0.000	22.500	22.500	100.00	0.279	0.000
107.42	- [B	0.000	22.500	22.000	100.00	12.133	0.000
]	ŀ	ĺ			č	0.000	22.500	, I	100.00	17.210	0.000
L19 107.42-	105.37	1.003	33	18.374	Ă	0.000	18.374	18.374	100.00	5.588	0.000
103.33					B	0.000	18.374	10.374	100.00	11.907	0.000
1	i		- 1	- 1	c l	0.000	18.374]	100.00	16.054	0.000
L20 103.33-	103.21	0.997	33	1.125	Ă	0.000	1.125	1.125	100.00	6.563	0.000
103.08	İ	. 1			в	0.000	1.125	1.120	100.00	0.857	0.000
		}		İ	č l	0.000	1.125		100.00	1.111 0.529	0.000
L21 103.08-	101.54	0.993	33	13.874	Ã	0.000	13.874	13.874	100.00	9.231	0.000
•	•	•	•			2.000	. 5.01 4	10.074	100.00	9.∠31	0.000

R	ſ	Section Elevation	Z	Kz	qz	A_G	F	AF	AR	A _{leg}	Leg	CAAA	C _A A _A
The color The	- 1											In	Out
12.21 (10.00.0 97.50 0.981 32 25.000 A 0.000 25.000 25.000 10.000 12.382 0.0000 0.0000 0.0	ŀ		ft		psf	ft²	e						
Section Sect			ĺ										0.000
Section Sect	- 1		97.5	0.981	32	25.00							
L23 95.00	- [95.00		Í .				0.000	25.000				
90.00 1.2883 0.000 1.286 0.000 1.286 0.000 1.2883 0.000 0.000 1.286 0.000 0.000 1.286 0.000 0.	- 1	L23 95.00-	92.56	0 0 966	32	25.00				1		5.588	0.000
L24 90.00	- 1	90.00		- 5.555	\ \frac{\sigma_{2}}{2}	20,00				25.000			
Section Sect	- [124 00 00	00.7			ĺ	C	0.000		İ			
L25 89.50 89.38 0.957 31 1.250 C 0.000 1.250 10.000 0.794 0.000			89.7	0.958	32	2.50				2.500	100.00	1.588	0.000
Bay Bay]		1		1							
L26 86.25			89.38	0.957	31	1.250				1.250			
L26 89.25		89.25		1					1.250				
85.50 L27 85.50 85.26 85.27 84.00 L28 85.25 84.00 R5.26 R5.26 R5.26 R5.26 R5.26 R5.27 R5.26 R5.27 R5.27 R5.28 R5.28 R5.28 R5.28 R5.28 R5.28 R5.28 R5.28 R5.28 R5.28 R5.29 R5.29 R5.29 R5.29 R5.29 R5.29 R5.29 R5.29 R5.29 R5.29 R5.29 R5.29 R5.29 R5.29 R5.29 R5.20 R	- 1	L26 89.25-	87.38	0.951	31	18,750				40.750	1 1		0.000
L27 85.60		85.50				1000				18./50			
85.25 L28 85.25 84.63 0.942 31 6.250 6 0.000 1.250 0.000 1.250 0.000 0.		127.85.50.	05.20	اممدا					18.750				
L28 85.25			05.50	0.945	31	1.250				1.250		0.982	0.000
Section Sect	1			1		ł			1.250 1.250				
L29 84.00			84.63	0.942	31	6.250	A			6,250			
L29 84 00- 83.88 0.94 31 1.250 A 0.000 1.250 1.250 100.00 0.982 0.000 0.000 0.250 1.250 100.00 0.982 0.000 0.000 0.250 1.250 100.00 0.982 0.000 0.000 0.250 1.250 100.00 0.250 100.00 0.250 100.00 0.250 100.00 0.250 100.00 0.250 100.00 0.250 100.00 0.250 100.00 0.250 100.00 0.250 100.00 0.250 100.00 0.250 100.00 1.236 0.000 1.250 100.00 1.236 0.000 1.250 100.00 1.236 0.000 1.250 100.00 1.236 0.000 1.250 100.00 1.25		84.00							6.250		100.00		
83.75 L30 83.75- 82.50 82.38 0.935 31 1.250 A 0.000 0.250 C 0.000 1.250 B 0.000 0.250 C 0.000 1.250 100.00 0.654 0.000 0.822 0.000 0.823 0.000 0.6256 100.00 0.6178 0.000 0.6178 0.000 0.822 0.000 0.825 100.00 0.6178 0.000 0.822 0.000 0.825 100.00 0.6178 0.000 0.822 0.000 0.822 0.000 0.823 0.000 0.825 0.000 0.825 0.000 0.1250 100.00 0.6178 0.000 0.822 0.000 0.822 0.000 0.822 0.000 0.822 0.000 0.822 0.000 0.823 0.000 0.823 0.000 0.824 0.000 0.824 0.000 0.824 0.000 0.825 0.000 0.825 0.000 0.825 0.000 0.825 0.000 0.825 0.000 0.825 0.000 0.825 0.000 0.822 0.000 0.822 0.000 0.822 0.000 0.822 0.000 0.822 0.000 0.822 0.000 0.823 0.000 0.822 0.000 0.823 0.000 0.824 0.000 0.823 0.000 0.000 0.823 0.000 0.000 0.823 0.000 0.000 0.823 0.000 0.824 0.000 0.825 0.000 0.000 0.826 0.000 0.000 0.826 0.000 0.000 0.826 0.000 0.000 0.832 0.000 0.832 0.000 0.832 0.000 0.832 0.000 0.832 0.000 0.832 0.000 0.832 0.000 0.832 0.000 0.832 0.000 0.832 0.000 0.832 0.000 0.832 0.000 0.832 0.000 0.832 0.000 0.833 0.000 0.000 0.8330 0.000 0.000 0.3330 0.000 0.000 0.3380 0.000 0.000 0.3380 0.000 0.000 0.3380 0.000 0.000 0.3380 0.000 0.000 0.3380 0.000 0.000 0.3380 0.000 0.000 0.3380 0.000 0.000 0.3380 0.000 0.000 0.3380 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1	L29 84.00-	83.88	0.94	31	1 250				4.050			0.000
L30 83.75- 82.50		83.75			٠.	1.200				1.250			
82.50	ŀ	130 92 75	02.40	0.007				0.000			1		
L31 82.50	ı	1	83.13	0.937	31	6.250				6.250	100.00	4.908	
Section Sect		1											
L32 82.25			82.38	0.935	31	1.250				1.250			
L32 82.25		82.25			l		1 1		1.250	1.202			
B 0.000 11.250 100.00 8.085 0.000 11.250 100.00 8.377 0.000 11.250 100.00 8.377 0.000 11.250 100.00 3.139 0.000 12.500 100.00 3.139 0.000 12.500 100.00 10.883 0.000 10.000 10.883 0.000 10.000 10.883 0.000 10.000 10.883 0.000 10.000 10.883 0.000 10.000 10.883 0.000 10.000 10.883 0.000 10.000 10.883 0.000 10.000 10.883 0.000 10.000 10.000 10.883 0.000 10.000 10.000 10.883 0.000 10.000 10.000 10.883 0.000 10	1	L32 82.25-	81.13	0.931	31	11 250				44.000			0.000
L33 80.00- 75.00 7				""	١,٠	11.230				11.250			0.000
75.00 75.00		133 90 00	77 50										0.000
L34 75.00			77.50	0.919	30	25.000		1		25.000		10.883	
L34 75,000	1									i			
Color Colo			72.50	0.901	30	25.000	À			25,000			
L35 70.00- 65.00 67.50 0.883 29 25.000 A 0.000 25.000 25.000 100.00 10.883 0.000 10.000 15.960 0.000 10.000 10.883 0.000 10.000 10.000 10.883 0.000 10.000 10.000 10.883 0.000 10.000 10.000 10.883 0.000 10.000 10.000 10.883 0.000 10.000 10.000 10.883 0.000 10.000 10.000 10.883 0.000 10.000 10.000 10.883 0.000 10.000 10.000 10.883 0.000 10.000 10.000 10.883 0.000 10.000 10.000 10.883 0.000 10.000 10.000 10.883 0.000 10.000 10.000 10.883 0.000 10.000 10.000 10.883 0.000 10.000 10.000 10.883 0.000 10.000 10.000 10.883 0.000 10.000 10.000 10.883 0.000 10	1	70.00			i				25.000				
C		L35 70.00-	67.50	0.883	29	25,000				05.000			0.000
L36 65.00- 60.00		65.00				20.000				25.000			
C C C C C C C C C C		136.65.00	60.50	0.004									
L37 60.00- 58.50 L38 58.50- 58.38 L38 6.25- 53.25 L44 53.25- 48.25 L44 48.25- 48.13 L55	1		02.50	0.864	28	25.000	_ 1			25.000		10.883	
L37 60.00- 58.50 59.25 0.851 28 7.500 A 0.000 7.500 7.500 100.00 3.265 0.000 L38 58.50- 58.25 58.38 0.847 28 1.250 A 0.000 7.500 100.00 4.788 0.000 L39 58.25- 53.25 55.75 0.836 28 25.000 A 0.000 25.000 100.00 0.544 0.000 L40 53.25- 48.25 50.75 0.814 27 25.000 A 0.000 25.000 100.00 10.12 0.000 L41 48.25- 48.00 48.13 0.802 26 1.250 A 0.000 25.000 100.00 10.12 0.000 L42 48.00- 43.00 45.50 0.789 26 25.000 A 0.000 25.000 100.00 15.189 0.000 L43 43.00- 40.000 41.50 0.769 25 15.000 A 0.000 25.000 100.00 12.549 0.000 L43 43.00- 40.000 41.50	1			,									0.000
L38 58.50			59.25	0.851	28	7.500	A	0.000		7,500			
L38 58.50		56.50	ŀ	!	}				7.500		100.00	4.788	
58.25 B 0.000 1.250 1.250 100.00 0.544 0.000 L39 58.25-53.25 55.75 0.836 28 25.000 A 0.000 1.250 100.00 0.798 0.000 L40 53.25-48.25 50.75 0.814 27 25.000 A 0.000 25.000 100.00 8.070 0.000 L40 53.25-48.25 50.75 0.814 27 25.000 A 0.000 25.000 100.00 13.148 0.000 L41 48.25-48.00 48.13 0.802 26 1.250 A 0.000 25.000 100.00 15.189 0.000 L42 48.00-43.00 45.50 0.789 26 25.000 A 0.000 1.250 1.00.00 12.549 0.000 L43 43.00-40.00 41.50 0.769 25 15.000 A 0.000 15.000 15.000 100.00 7.530 0.000 L43 43.00-40.00 41.50 0.769 25 15.000 A		L38 58.50-	58.38	0.847	28	1,250				4 050			0.000
L39 58.25- 53.25	1		ĺ	j						1.250			
53.25 35.75 0.838 28 25.000 A 0.000 25.000 25.000 100.00 8.070 0.000 L40 53.25-48.25 50.75 0.814 27 25.000 A 0.000 25.000 100.00 13.148 0.000 L41 48.25-48.00 48.13 0.802 26 1.250 A 0.000 25.000 100.00 15.189 0.000 L42 48.00-43.00 45.50 0.789 26 25.000 A 0.000 25.000 1.250 100.00 13.148 0.000 L43 43.00-40.00 41.50 0.769 25 1.250 A 0.000 25.000 100.00 10.112 0.000 L43 43.00-40.00 41.50 0.769 25 15.000 A 0.000 25.000 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 <		139 58 25-	EE 70	000	200	05.655		0.000	1.250	J			
L40 53.25- 48.25	1		55.75	u.835	28	25.000				25.000	100.00	8.070	0.000
L41 48.25	1			ſ	Ī								
L41 48.25			50.75	0.814	27	25.000	Α	0.000		25.000			
L41 48.25- 48.00		48.25	- 1			- 1			25.000		100.00		
48.00 48.00 B 0.000 1.250 1.250 100.00 0.627 0.000 L42 48.00- 43.00 45.50 0.789 26 25.000 A 0.000 25.000 25.000 100.00 0.881 0.000 L43 43.00- 40.00 41.50 0.769 25 15.000 A 0.000 25.000 25.000 100.00 17.627 0.000 B 0.000 25.000 100.00 17.627 0.000 0.000 C 0.000 25.000 100.00 17.627 0.000 B 0.000 15.000 15.000 100.00 7.530 0.000 B 0.000 15.000 15.000 100.00 7.530 0.000 B 0.000 15.000 100.00 10.576 0.000	I	L41 48.25-	48.13	0.802	26	1,250				4 252		3.567	0.000
L42 48.00- 43.00		48.00								1.250			
43.00		42 48 nn	4E E0	0.700			c	0.000	1.250	-	I		
L43 43.00- 40.00 41.50 0.769 25 15.000 B 0.000 15.000 15.000 100.00 10.576 0.000 15.000 15.000 15.000 100.00 100.00 10.576 0.000 15.000 15.000 15.000 100.00 10.576 0.000 100.00 10.576 0.000 15.000 15.000 100.00 10.576 0.000 100.00 10.576 100.00 10.576 100.00 10.576 100.000 100.00 10.576 100.000 100.00 10.576 100.0000 100.000 100.000 100.0000 100.0000 100.0000 100.000 100.000 100.000 100.000 100.0000 100		i i	40.00	0.789	26	25.000				25.000	100.00	12.549	0.000
L43 43.00- 40.00 41.50 0.769 25 15.000 A 0.000 15.000 15.000 100.00 7.530 0.000 B 0.000 15.000 100.00 10.576 0.000						1							
40.00 B 0.000 15.000 100.00 10.576 0.000		I	41.50	0.769	25	15.000	,			15,000			
		40.00	}						15.000		100.00		
. , , , , , , , , , , , , , , , , , , ,	1	ı	ı	1	ı	í	G	U.000	15.000	i	100.00		0.000

Section	z	Kz	q_z	A_G	F	A_F	A_R	A _{leg}	Leg	C_AA_A	CAAA
Elevation	1				a			1	%	În	Out
				ļ	C				,	Face	Face
ft	ft		psf	ft ²	е	ft²	ft²	ft²		ft²	ft²
L44 40.00-	37.50	0.747	25	25.000	Α	0.000	25,000	25.000	100.00	13.729	0.000
35.00		ļ	ļ		В	0.000	25.000		100.00	18.807	0.000
1					C	0.000	25.000		100.00	7.184	0.000
L45 35.00-	33.54	0.723	24	14.600	Α	0.000	14.600	14.600	100.00	11.465	0.000
32.08					В	0.000	14.600		100.00	14,431	0.000
1					C	0.000	14.600		100.00	7.643	0.000
L46 32,08-	31.96	0.713	23	1.250	Α	0.000	1.250	1.250	100.00	0.982	0.000
31.83					В	0.000	1.250		100,00	1.236	0.000
1					C	0.000	1.250		100.00	0.654	0.000
L47 31.83-	30,29	0,703	23	15.400	A	0.000	15.400	15.400	100.00	12.094	0.000
28.75					В	0.000	15.400		100.00	15.221	0.000
1 40 00		[C	0.000	15.400		100.00	8.062	0.000
L48 28.75-	28.63	0.7	23	1.250	Α	0.000	1.250	1.250	100.00	0.982	0.000
28.50	l	- 1			В	0.000	1.250		100,00	1.236	0.000
1 40 00 50					C	0.000	1.250		100.00	0.654	0.000
L49 28.50-	26.00	0.7	23	25.000	A	0.000	25.000	25.000	100,00	16.924	0.000
23.50	ļ	ł		•	В	0.000	25.000		100.00	22.002	0.000
150.00 50	1				C	0.000	25.000		100,00	10.379	0.000
L50 23.50-	21,00	0.7	23	25.000	Α	0.000	25.000	25.000	100.00	14.216	0.000
18.50	ľ	- 1			В	0.000	25.000	-	100.00	19.293	0.000
154 40 50	1				C	0.000	25.000	1	100.00	7.671	0.000
L51 18.50-	16,00	0.7	23	25.000	Α	0.000	25.000	25.000	100.00	14.216	0.000
13.50	[В	0.000	25,000	i	100.00	19.293	0.000
150 40 50	44.60				Ç	0.000	25.000	i	100.00	7.671	0.000
L52 13.50-	11.00	0.7	23	25.000	Α	0.000	25.000	25.000	100.00	10.650	0.000
8.50	ĺ		- 1		В	0.000	25.000	į	100.00	19.293	0.000
	1	[i		С	0.000	25.000		100.00	7.495	0.000
L53 8.50-3.50	6.00	0.7	23	25.000	Α	0.000	25.000	25.000	100.00	7.083	0.000
1 1	į	-	- !		В	0.000	25.000	j	100.00	9.228	0.000
15405000	,1		1	[С	0.000	25.000	i	100.00	7.083	0.000
L54 3.50-0.00	1.75	0.7	23	17.500	Α	0.000	17.500	17.500	100.00	3.778	0.000
]	İ		ļ	}	В	0.000	17.500	j	100.00	3.778	0.000
					С	0.000	17.500	1	100.00	3.778	0.000

Tower Pressure - With Ice

 $G_H=1.100$

Section	Z	Kz	q ₂	tz	A_G	F	A _E	A_R	A _{lea}	Leg	$C_A A_A$	C_AA_A
Elevation			-	_		а	'"	איי /	2 4/eg	%	In	Out
						С	j.	ļ		,-	Face	Face
ft	ft		psf	in	ft²	е	ft²	ft²	ft²		ft ²	ft²
L1 190.00-	187.50	1.183	7	1.5169	13.764	Α	0.000	13.764	13.764	100.00	0.000	0.000
185.00						В	0.000	13.764		100.00	2.870	0.000
	ĺ					С	0.000	13.764		100.00	3.621	0.000
L2 185.00-	182.50	1.174	7	1.5128	13.761	Α	0.000	13.761	13.761	100.00	0.000	0.000
180.00		Į	i			В	0.000	13.761	į	100.00	4.779	0.000
	i					С	0.000	13.761		100.00	3.613	0.000
L3 180.00-	177.50	1.164	7	1.5086	16.257	Α	0.000	16.257	16.257	100.00	0.000	0.000
175.00	İ		- 1			В	0.000	16.257	1	100.00	4.773	0.000
14475 00						С	0.000	16.257		100.00	3.605	0.000
L4 175.00-	172.50	1.155	7	1.5043	16.254	Α	0.000	16.254	16.254	100.00	0.000	0.000
170.00	ŀ					В	0.000	16.254	ŀ	100.00	4.768	0.000
LE 470 00	407.50					Ç	0.000	16.254		100.00	3.596	0.000
L5 170.00-	167.50	1.145	7	1.4999	16.250	Α	0.000	16.250	16.250	100.00	0.000	0.000
165.00	l					В	0.000	16.250		100.00	19.012	0.000
L6 165.00-	400.50	4 405	اہ	4 10-1		Ç	0.000	16.250		100.00	3.587	0.000
160.00	162.50	1.135	6	1.4954	16.246	<u> </u>	0.000	16.246	16.246	100.00	5.062	0.000
100.00	Į.		1			В	0.000	16.246	ľ	100.00	19.001	0.000
L7 160.00-	457 EN	4 495	اء	4.4007	40 740	Ç	0.000	16.246		100.00	3.578	0.000
155.00	157.50	1.125	6	1.4907	18.742	ΑĮ	0.000	18.742	18.742	100.00	12.642	0.000
155.00	i	l	[ļ	В	0.000	18.742		100.00	18.989	0.000
L8 155.00-	152.50	4 445	6	4 4050	40.700	Č	0.000	18.742		100.00	3.569	0.000
150.00	102.50	1.115	이	1.4859	18.738	Αl	0.000	18.738	18.738	100.00	12.630	0.000
150.00	1	ł	ŀ	l	ı	В	0.000	18.738	i	100.00	18.977	0.000

Section Elevation	Z	Kz	q_z	t _Z	AG	F	A _F	A_R	A _{leg}	Leg	C_AA_A	$C_A A_A$
Lievation	1					a	}			%	ln	Out
ft	ft	ļ	psf	in	ft ²	lе	ft²	ft²	ft²		Face ft²	Face ft²
L9 150.00-	147.50	1.104	6	1.4809	18.734	C	0.000		40.70	100.00	3.559	0.000
145.00)		_	17.550	10.70	B	0.000		18.73	4 100.00 100.00		0.000 0.000
L10 145.00-	142.50	1.093	6	1 4750	40.700	ļç	0.000	18.734		100.00		0.000
140.00		1.033	U	1.4758	18.730	A B	0.000	18.730 18.730	18.73			0.000
144 440 00	10- "				}	C	0.000	18.730		100.00		0.000 0.000
L11 140.00- 135.00		1.082	6	1.4706	21.225	1	0.000	21.225	21.225			0.000
100.00	İ	ĺĺ		l		ВС	0.000 0.000	21.225 21.225		100.00		0.000
L12 135.00-	132.50	1.071	6	1.4651	21.221	Ă	0.000	21,225	21,221	100.00	3.529 12.578	0.000 0.000
130.00						В	0.000	21.221	,	100.00	18.925	0.000
L13 130.00-	127.50	1.059	6	1.4595	21.216	C	0.000	21.221 21.216	04.040	100.00	3.518	0.000
125.00						₿	0.000	21.216	21.216	100.00 100.00	12.564 18.911	0.000 0.000
L14 125.00-	122.50	1.047	6	1 4507	04.044	Ç	0.000	21.216		100.00	3.507	0.000
120.00	122.00	1.047	ា	1.4537	21.211	A B	0.000	21.211 21.211	21.211		12.550	0.000
		. 1	i	į		Č	0.000	21.211		100.00 100.00	18.897 3.495	0.000
L15 120.00- 115.00	117.50	1.035	6	1.4476	23.706		0.000	23.706	23.706		12.535	0.000
1.10.00				[B C	0.000	23.706		100.00	18.882	0.000
L16 115.00-	113.83	1.025	6	1.4431	11.064	Ă	0.000	23.706 11.064	11,064	100.00 100.00	3.483 8.191	0.000
112.67	ĺ	i				В	0.000	11.064	11,004	100.00	11.153	0.000 0.000
L17 112.67-	112.54	1.022	6	1.4414	1.185	CA	0.000	11.064		100.00	3.966	0.000
112.42			٦	1.4414	1.103	B	0.000	1.185 1.185	1.185	100.00	0.919 1.236	0.000
L18 112.42-	109,92	4 045	اء	4		С	0.000	1.185		100.00	0.467	0.000 0.000
107.42	109,92	1.015	6	1.4380	23.698	A B	0.000	23,698	23.698	100.00	18.370	0.000
	}			ŀ	- [Ĉ	0.000 0.000	23.698 23.698		100.00 100.00	24.717	0.000
L19 107,42- 103,33	105.37	1.003	6	1.4320	19.348	Α	0.000	19.348	19.348	100.00	9.323 17.559	0.000 0.000
100.00	ĺ	ł	1			ВС	0.000	19.348		100.00	22.742	0.000
L20 103.33-	103.21	0.997	6	1.4290	1.185	Ă	0.000	19.348 1.185	1.185	100.00 100.00	10.174	0.000
103.08						В	0.000	1.185	1.103	100.00	1.239 1.556	0.000
L21 103.08-	101.54	0.993	6	1.4267	14.607	CA	0.000	1.185		100.00	0.786	0.000
100.00			٦	1.4207	14.007	ŝГ	0.000	14.607 14.607	14,607	100.00 100.00	13.708 17.622	0.000
L22 100.00-	97.50	0.004				C	0.000	14.607		100.00	8.133	0.000
95.00	97.50	0.981	6	1.4209	26,184	A B	0.000 0.000	26.184	26.184	100.00	18.889	0.000
				!		čΙ	0.000	26.184 26.184	1	100.00 100.00	25.236 9.850	0.000
L23 95.00- 90.00	92.50	0.966	6	1.4134	26.178	A	0.000	26.178	26.178	100.00	19.773	0.000
30.00					1	В	0.000	26.178	ĺ	100.00	26.120	0.000
L24 90.00-	89.75	0.958	5	1.4092		CA	0.000	26.178 2.617	2.617	100.00	10.738 2.340	0.000
89.50					}	В	0.000	2.617	2.011	100.00	2.974	0.000 0.000
L25 89.50-	89.38	0.957	5	1.4086		C A	0.000	2.617		100.00	1.436	0.000
89.25]	1.7000		B	0.000	1.309 1.309	1.309	100.00 100.00	1.170 1.487	0.000
L26 89.25-	87.38	0.054	اء	4 4554		c	0.000	1.309		100.00	0.718	0.000 0.000
85.50	01.36	0.951	5	1.4054		A B	0.000	19.628	19.628	100.00	19.083	0.000
	ŀ			ŀ		č l	0.000	19.628 19.628	1	100.00 100.00	23.843 12.310	0.000
L27 85.50- 85.25	85.38	0.945	5	1.4021		A	0.000	1.308	1.308	100.00	1.426	0.000 0.000
65.25						B	0.000	1.308	ľ	100.00	1.743	0.000
L28 85.25-	84.63	0.942	5	1.4009		ă	0.000	1.308 6.542	6.542	100.00	0.975	0.000
84.00				İ		В	0.000	6.542	0.042	100.00 100.00	7.129 8.716	0.000 0.000
L29 84.00-	83.88	0.94	5	1.3997		2	0.000	6.542		100.00	4.872	0.000
83.75			Ĭ	1.0001		3	0.000	1.308 1.308	1.308	100.00 100.00	1.425	0.000
L30 83.75-	92 45	, 007			(0.000	1.308		100.00	1.743 0.974	0.000. 0.000
82,50	83.13	0.937	5	1.3984	6.541		0.000	6.541	6.541	100.00	7.126	0.000
			1		E		0.000	6.541 6.541		100.00 100.00	8.712	0.000
L31 82.50-	82.38 C	0.935	5]	1.3971		1	0.000	1.308	1.308	100.00	4.869 1.425	0.000 0.000
XTower Report	. varaion 9							-	•	•	1	

Section	z	Kz	T ~	1 4		-, =						
Elevation		1 1/2	qz	tz	A _G	F	A_F	A _R	A _{leg}	Leg %	C _A A _A In	C _A A _A Out
ft	ft		psf	in	ft ²	C	ft ²	ft²	ff ²	, ~	Face	Face
82.	25					В	0.000			100.00	ft ²	ft² 0.000
L32 82.2	5- 81.1	3 0.931	5	1 205		္ပါင္	0.000	1.308		100.00		0.000
80.0		0.331		1.3950	11.77	3 A B	0.000			1		0.000
122.00.0	<u>, </u>			1		C	0.000			100.00		0.000 0.000
L33 80.0 75.0		0.919	5	1.3886	26.15		0.000	26.157	26.15	7 100.00	17.526	0.000
	ľ	i			1	B	0.000			100.00		0.000
L34 75.00 70.0		0.901	5	1.3794	26.15		0.000		26.15	100.00		0.000 0.000
1 70.0	,0					B	0.000			100.00	23.840	0.000
L35 70.00		0.883	5	1.3696	26.14		0.000	26.150 26.141	26,141	100.00		0.000
65.0	10	1				В	0.000	26.141	20.14	100.00		0.000 0.000
L36 65.00	D- 62.50	0.864	5	1.3591	26.133	Ç	0.000	26.141		100.00	8.446	0.000
60.0			Ĭ	1.0031	20.13	B B	0.000	26.133 26.133	26.133	100.00	17.422	0.000
L37 60.00)- 59.25	0.054	_			C	0.000	26.133		100.00	23.769 8.415	0.000 0.000
58.5		0.851	5	1.3518	7.838	B B	0.000	7.838	7.838	100.00	5.219	0.000
	1	i i				C	0.000	7.838 7.838		100.00	7.123	0.000
L38 58.50 58.2		0.847	5	1.3498	1.306	A	0.000	1.306	1.306		2.518 0.870	0.000 0.000
30.2	1]				В	0.000	1.306		100.00	1.187	0.000
L39 58.25		0.836	5	1.3436	26.120	CA	0.000	1.306 26,120	26.120	100.00	0.419	0.000
53.25	5					В	0.000	26.120	20.120	100.00 100.00	13.548 19.895	0.000 0.000
L40 53.25	- 50.75	0.814	5	1.3311	26.109	Č	0.000	26.120		100.00	4.548	0.000
48.25		0.017	"	1.0011	20.109	A B	0.000	26.109 26.109	26.109	100.00	15.955	0.000
L41 48.25	40.40		ا۔			Č	0.000	26.109		100.00 100.00	22.301 6.961	0.000 0.000
48.00		0.802	5	1.3240	1.305	A	0.000	1.305	1.305	100.00	0.948	0.000
						B	0.000	1.305 1.305		100.00	1.266	0.000
L42 48.00- 43.00		0.789	5	1.3166	26.097	Ă	0.000	26.097	26,097	100.00 100.00	0.499 18.940	0.000 0.000
45.00	'l			ļ		В	0.000	26.097		100.00	25.287	0.000
L43 43.00-		0.769	4	1.3046	15.652	CA	0.000	26.097 15.652	15,652	100.00	9.954	0.000
40.00						В	0.000	15.652	10,002	100.00 100.00	11.339 15.147	0.000
L44 40.00-	37.50	0.747	4	1.2914	26.076	Č	0.000	15.652		100.00	5.951	0.000
35.00		··· ··	7	1.2314	20.076	A B	0.000	26.076 26.076	26.076	100.00 100.00	20.247	0.000
L45 35.00-	22.54	0.700				c	0.000	26.076	l	100.00	26.594 11.274	0.000
32.08	33.54	0.723	4	1.2771	15.222	A	0.000	15.222	15.222	100.00	15.863	0.000
i		i				B	0.000	15.222 15.222		100.00	19.569	0.000
L46 32.08- 31.83		0.713	4	1.2709	1.303	Α	0.000	1.303	1.303	100.00 100.00	10.626 1.357	0.000 0.000
31.83					ļ	BC	0.000	1.303	1	100.00	1.674	0.000
L47 31.83-	30.29	0.703	4	1.2641	16.049	Ă	0.000 0.000	1.303 16.049	16.049	100.00 100.00	0.909	0.000
28.75		ĺ		ĺ		В	0.000	16.049	10.040	100.00	16.696 20.606	0.000 0.000
L48 28.75-	28.63	0.7	4	1.2570	1.302	CA	0.000	16.049		100.00	11.177	0.000
28.50			Ï		1.302	B	0.000	1.302 1.302	1.302	100.00 100.00	1.354 1.671	0.000
L49 28.50-	26.00	اج				c	0.000	1.302		100.00	0.906	0.000 0.000
23.50	20.00	0.7	4	1.2450	26.037	A B	0.000	26.037	26.037	100.00	23.687	0.000
		ł		1		č l	0.000	26.037 26.037	- 1	100.00 100.00	30.034	0.000
L50 23.50- 18.50	21.00	0.7	4	1.2187	26.016	Α	0.000	26.016	26.016	100.00	14.737 20.264	0.000 0.000
I	1			ŀ		В	0.000	26.016	ĺ	100.00	26.611	0.000
L51 18.50-	16.00	0.7	4	1.1860	25.988	C A	0.000	26.016 25.988	25.988	100.00 100.00	11.327	0.000
13.50					1	в	0.000	25.988	20.300	100.00	20.150 26.497	0.000
.52 13.50-8.50	11.00	0.7	4	1.1423		Č	0.000	25.988		100.00	11.229	0.000
• •		١	7			A B	0.000	25.952 25.952	25.952	100.00	14.111	0.000
L53 8.50-3.50	6.00	0-			. 1	C	0.000	25.952		100.00	26.344 10.236	0.000 0.000
-00.00-0.00	6.00	0.7	4	1.0752		A	0.000	25.896	25.896	100.00	8.158	0.000
				1		B C	0.000	25.896 25.896		100.00 100.00	11.646	0.000
yTowar Bana			•	•	•	,		20.000	ı	100.00]	8.158	0.000

Section Elevation	Z	Kz	qz	tz	A_G	F a	A _F	A_R	A _{leg}	Leg %	C _A A _A In	$C_A A_A$ Out
ft 154 2 50 0 00	ft		psf	in	ft²_	c e	ft²	ft²	ft²		Face ft²	Face ft²
L54 3.50-0.00	1.75	0.7	4	0.9505	18.054		0.000	18.054	18.054	100.00	4.285	0.000
j						В	0.000	18.054		100.00	4.285	0.000
<u> </u>						C	0.000	18.054		100.00	4.285	0.000

Tower Pressure - Service

 $G_H = 1.100$

Elevation	Section	7 7	I V		1	1 5						
The color The		²	/ _Z	q_z	A _G		A_F	A_R	A_{leg}	Leg	$C_A A_A$	$C_A A_A$
Fr	Lievation		i		1	1		}	i	%	ln	Out
11 190.00	#						1	l <u>.</u>				
185.00			1 400								ft ²	ft ²
L2 185.00			1.183	9	12.500				12.500	100.00	0.000	0.000
12 185.00	100.00	'1	}	l	i						1.386	0.000
180.00	12 40 5 00	400 50			. <u>.</u>					100,00	0.588	0.000
L3 180.00- 177.50			1.174	9	12.500				12.500	100.00	0.000	0.000
L3 180.00	180.00		i						ł	100.00	2.310	0.000
Color	1040000			_		_		12.500		100.00	0.588	0.000
175.00			1.164	9	15.000			15.000	15.000	100.00	0.000	
L4 175.00	175.00	1			l			15.000		100.00	2.310	0.000
177.00	1447500	i	1		}		0.000	15.000		100.00	0.588	
170,000		172.50	1.155	9	15.000			15,000	15.000	100.00	0.000	
L5 170.00	170.00	ŀ					0.000	15.000		100.00	2.310	
Let 170.00	15450		[]				0.000	15.000		100.00		
165.00		167.50	1.145	9	15.000		0.000	15,000	15.000	100.00	0.000	
L6 165.00	165.00	ĺ	[0.000	15.000		100.00		
169.00	10.40		ĺĺ			C	0.000	15.000		100.00		
Teb.00		162.50	1.135	9	15.000		0.000	15,000	15.000	100.00	2.853	
L7 160.00-	160.00] [0.000	15.000		100.00		
155.00	1		l i			C	0.000	15.000		100.00	0.588	
195.00		157.50	1.125	9	17.500		0.000	17.500	17.500	100.00		
L8 155.00- 150.00 L8 155.00- 150.00 L9 150.00 L9 150.00- 147.50 L1115 B	155.00			i			0.000	17.500				
L8 155.00		!	li			C	0.000	17.500				
150.00		152.50	1.115	9	17.500	Α	0.000	17.500	17.500			
L9 150.00- 145.00 145.00 145.00 145.00 145.00 145.00 140.00 145.00 140.0	150.00						0.000	17.500				
L9 150.00				ļ		C	0.000	17.500		100.00		
145.00		147.50	1.104	9	17.500		0.000	17.500	17.500			
L10 145.00- 140.00 L11 140.00- 137.50 L11 140.00- 135.00 L12 135.00- 130.00 L13 130.00- 125.00 L13 130.00- 125.00 L14 125.00- 125.00 L15 120.00- 125.00 L16 115.00- 115.00 L17 1267- 112.67-	145.00						0.000	17.500				
L10 145,00					1	C	0.000	17.500		100.00		
Table Tabl		142.50	1.093	8	17.500		0.000	17.500	17.500	100.00		
L11 140.00-	140.00				j		0.000	17.500		100.00	12.210	
Color Colo			· [- 1		C	0.000	17.500		100.00		
L12 135.00		137.50	1.082	8	20.000		0.000	20.000	20.000	100,00	7.132	
L12 135.00- 130.00	135.00		ļ	ŀ	i		0.000	20.000				
132.50	1404000			ļ		C	0.000	20.000		100.00	0.588	
L13 130.00		132.50	1.071	8	20.000		0.000	20.000	20,000	100.00		
L13 130.00- 125.00 L14 125.00- 120.00 L14 125.00- 120.00 L15 120.00- 115.00 L16 115.00- 112.67- 112.67- 112.42 L13 130.00- 127.50 L1059 R	130.00		ŀ	ľ				20.000		100.00	12.210	
125.00	140 400 00			1				20.000	I	100.00	0.588	0.000
L14 125.00- 120.00		127.50	1.059	8	20.000				20.000		7.132	
L14 125.00- 120.00	125.00	ŀ		F			0.000	20.000		100.00	12,210	
L14 125.00- 120.00 1.047 8 20.000 A 0.000 20.000 20.000 100.00 7.132 0.000								20.000			0.588	
L15 120.00		122.50	1.047	8	20.000		0.000	20.000	20.000	100.00	7.132	
L15 120.00- 115.00	120.00	ľ	ľ				0.000	20.000	ļ	100.00		
Color Colo			l		1	C	0.000	20.000	i	100.00		
T15.00 L16 115.00 L16 115.00 L16 115.00 L17 112.67 L17 112.67 L124 L1022 8 L10.503 A D.000 L10.503		117.50	1.035	8	22.500		0.000	22.500	22.500	100.00	7.132	
L16 115.00- 112.67	115.00	İ		ľ			0.000	22.500	İ	100,00		
L16 115.00- 112.67		1		1	ſ		0.000	22.500	İ			
112.67 L17 112.67-		113.83	1.025	8	10.503			10.503	10.503			
L17 112.67- 112.42	112.67			j			0.000	10.503	1			
L17 112.67- 112.42		1		- 1			0.000	10.503				
112.42 B 0.000 1.125 100.00 0.861 0.000		112.54	1.022	8	1.125	Α	0.000		1.125			
	112.42	1		j	ļ		0.000	1.125				
				j]	C	0.000	1.125	l	100.00	0.279	0.000

ı	Section	Z	Kz		1 4	1 ~	7 2		,	- I		
ı	Elevation	1	\^z	q_z	A _G	Fa	A_F	A_R	A _{leg}	Leg %	C _A A _A In	C _A A _A Out
ļ	ft	ft			E42	С	""			/*	Face	Face
	L18 112.42-	109.92	1.015	psf 8	# ²	e A	# ²	ft ² 22.500	ft² 22.500	100.00	ft ²	ft ²
Ì	107.42					В	0.000	22.500	22.500	100.00	12.133 17.210	0.000
1	L19 107.42-	105.37	1.003	1 .	40.074	C	0.000	22,500		100.00	5.588	0.000
ı	103.33	100.37	1.003	8	18.374	A B	0.000	18.374	18.374		11.907	0.000
-1		}		1		C	0.000	18.374 18.374		100.00	16.054 6.563	0.000
1	L20 103.33-	103.21	0.997	8	1.125		0.000	1.125	1.125		0.857	0.000
1	103.08	i	1			B	0.000	1.125	1	100.00	1.111	0.000
1	L21 103.08-	101.54	0.993	8	13.874	C	0.000 0.000	1,125	40.07	100.00	0.529	0.000
1	100.00		""		10.07	ΙĜ	0.000	13.874 13.874	13.874	100.00	9.231 12.362	0.000
ı	1 00 400 00		1			C	0.000	13.874		100.00	5.195	0.000
1	L22 100.00- 95.00	97.50	0.981	8	25.000	A	0.000	25.000	25.000	100.00	12.133	0.000
1	00.00		i	ŀ	1	BC	0.000 0.000	25.000 25.000		100.00	17.210	0.000
ı	L23 95.00-	92.50	0.966	7	25.000	Ā	0.000	25.000	25.000	100.00	5.588 12.883	0.000 0.000
1	90.00			ŀ		В	0.000	25.000	_5,000	100.00	17.960	0.000
ı	L24 90.00-	89.75	0.958	7	2.500	C	0.000	25.000		100.00	6.338	0.000
1	89.50	00,10	0.550	·	2.500	AB	0.000	2.500 2.500	2.500	100.00	1.588	0.000
1					İ	č	0.000	2.500		100.00	2.096 0.934	0.000 0.000
ı	L25 89.50- 89.25	89.38	0.957	7	1.250	Α	0.000	1.250	1,250	100.00	0.794	0.000
ı	09.20		1 1	l		BC	0.000	1.250		100.00	1.048	0.000
Ţ	L26 89.25-	87.38	0.951	7	18.750	Ă	0.00.0	1.250 18.750	18.750	100.00	0.467	0.000
1	85.50					В	0.000	18.750	10.730	100.00	13.037 16.845	0,000 000.0
I	L27 85.50-	05.00	0045	_	4.550	Ç	0.000	18.750		100.00	8.128	0.000
ı	85.25	85.38	0.945	7	1.250	A B	0.000	1.250	1.250	100.00	0.982	0.000
ı						Č	0.000	1.250 1.250		100.00 100.00	1.236 0.654	0.000 0.000
ı	L28 85.25-	84.63	0.942	7	6.250	Α	0.000	6.250	6.250	100.00	4.908	0.000
	84.00					В	0.000	6.250		100.00	6.178	0.000
ı	L29 84.00-	83.88	0.94	7	1.250	C A	0.000	6.250 1.250	4.050	100.00	3.272	0.000
	83.75			'	1,200	B	0.000	1.250	1.250	100.00 100.00	0.982 1.236	0.000
	120.00 25	00.40		_ [c	0.000	1.250		100.00	0.654	0.000
	L30 83.75- 82.50	83.13	0.937	. 7	6.250	A	0.000	6.250	6.250	100.00	4.908	0.000
	02.00			1		B	0.000 0.000	6.250 6.250		100.00	6.178	0.000
	L31 82.50-	82.38	0.935	7	1.250	Ă	0.000	1.250	1.250	100.00	3.272 0.982	0.000
ĺ	82.25		- 1		1	В	0.000	1.250		100.00	1.236	0.000
•	L32 82,25-	81.13	0.931	7	11.250	CA	0.000	1.250	44.050	100.00	0.654	0.000
ı	80.00		0.001		11.230	B	0.000	11.250 11.250	11.250	100.00 100.00	6.085 8.370	0.000
	100 00 00			ĺ		c	0.000	11.250		100.00	3.139	0.000 0.000
	L33 80.00- 75.00	77.50	0.919	7	25.000	A	0.000	25.000	25.000	100.00	10.883	0.000
	70.00					B	0.000	25.000 25.000	Ì	100.00	15.960	0.000
	L34 75.00-	72.50	0.901	7	25.000	Ă	0.000	25.000	25.000	100.00 100.00	4.338 10.883	0.000
	70.00	ŀ	İ	ĺ	- 1	в	0.000	25.000	20,000	100.00	15.960	0.000
	L35 70.00-	67.50	0.883	7	25.000	Č	0.000	25.000		100.00	4.338	0.000
	65.00	07.00	0.003	' ·	25.000	В	0.000	25.000 25.000	25.000	100.00	10.883	0.000
			!	j	[c	0.000	25.000		100.00	15.960 4.338	0.000 0.000
	L36 65,00- 60,00	62.50	0.864	7	25.000	A	0.000	25.000	25.000	100.00	10.883	0.000
	80.00			į.		BC	0.000	25.000		100.00	15.960	0.000
	L37 60.00-	59.25	0.851	7	7.500	Ă	0.000	25.000 7.500	7.500	100.00	4.338	0.000
	58.50	1				в	0.000	7.500	7.500	100.00	3.265 4.788	0.000
	L38 58.50-	50.20	0047	٦.		Ç	0.000	7.500		100.00	1.301	0.000
	58.25	58.38	0.847	7	1.250	A B	0.000	1.250	1.250	100.00	0.544	0.000
		-	- 1			č	0.000	1.250 1.250		100.00	0.798 0.217	0.000
	L39 58.25-	55.75	0.836	6	25.000	Αİ	0.000	25.000	25.000	100.00	8.070	0.000
	53.25					В	0.000	25.000	1	100.00	13.148	0.000
	L40 53.25-	50.75	0.814	6		C A	0.000	25.000 25.000	25 000	100.00	1.525	0.000
	48.25		1	٦		B	0.000	25.000	25.000	100.00	10.112 15.189	0.000 0.000
		,	•	•		•	1		1	.00.00	10.100	0.000

Section	Z	Kz	q_z	A _G	F	A_F	A_R	A _{leg}	Leg	C_AA_A	I C 4
Elevation	1			1	a		1 7.77	, neg		In	C _A A _A Out
_		1	1	1	C		f		/*	Face	Face
ft	ft		psf	ft²	e	ft ²	ft²	ft ²]	ft ²	ft2
L41 48.25-		1	ŀ		С	0.000	25.000		100.00	3.567	0.000
	48.13	0.802	6	1.250		0.000	1.250	1,250	100.00	0.627	0.000
48.00	1		ľ	1	B	0.000	1.250	1	100.00	0.881	0.000
142 40 00	45.50				C	0.000	1.250	!	100.00	0.300	0.000
L42 48.00-	45.50	0.789	6	25.000		0.000	25.000	25.000	100.00	12,549	0.000
43.00]	İ			B	0.000	25.000	ļ	100.00	17.627	0.000
L43 43.00-	1 44 50		_		C	0.000	25.000	1	100.00	6.004	0.000
1	41.50	0.769	6	15.000		0.000	15.000	15.000	100.00	7.530	0.000
40.00	1	i I		ļ	B	0.000	15.000		100.00	10.576	0.000
L44 40.00-		l l	_	İ	C	0.000	15.000	ł	100,00	3.603	0.000
35.00	37.50	0.747	6	25.000	A	0.000	25.000	25.000	100.00	13,729	0.000
33.00					В	0.000	25.000	İ	100.00	18.807	0.000
L45 35.00-	33.54	0.700	_		C	0.000	25.000	ļ	100.00	7,184	0.000
32,08	33.54	0.723	6	14.600	Α	0.000	14.600	14.600	100.00	11.465	0.000
32,06					В	0.000	14.600		100.00	14,431	0.000
L46 32.08-	31.96	0.740	_		C	0.000	14.600		100.00	7.643	0.000
31.83	31.90	0.713	6	1.250	A	0.000	1.250	1.250	100.00	0.982	0.000
31.03	ĺ				B	0.000	1.250		100.00	1.236	0.000
L47 31.83-	30.29	0.700	_		C	0.000	1.250		100.00	0.654	0.000
28.75	30.29	0.703	5	15.400	<u>A</u>	0.000	15.400	15,400	100.00	12.094	0.000
20.75	i	İ			В	0.000	15.400	ł	100.00	15.221	0.000
L48 28,75-	28.63	0-1	_ [Ç	0.000	15.400		100.00	8.062	0.000
28.50	20.03	0.7	5	1.250	A	0.000	1.250	1.250	100.00	0.982	0.000
20.50					В	0.000	1.250	ŀ	100.00	1.236	0.000
L49 28.50-	26.00	0.7	ا ہ		Ç	0.000	1.250	1	100.00	0.654	0.000
23.50	20.00	0.7	5	25.000	A	0.000	25.000	25.000	100.00	16.924	0.000
20.00		ĺ	- 1		В	0.000	25,000	1	100.00	22.002	0.000
L50 23.50-	21.00	0.7	5	25.000	c	0.000	25.000	ŀ	100.00	10.379	0.000
18.50	21.00	0.7	9	25.000	A	0.000	25.000	25.000	100.00	14.216	0.000
.0.00	1	- 1	- 1		В	0.000	25,000	-	100.00	19.293	0.000
L51 18.50-	16.00	0.7	5	25,000	Ç	0.000	25.000		100.00	7.671	0.000
13.50	10.00	0.7	ာ	25.000	Α.	0.000	25.000	25.000	100.00	14.216	0.000
.0.00		i	i		В	0.000	25.000	i	100.00	19.293	0.000
L52 13.50-	11.00	0.7	5	25.000	Ç	0.000	25.000	ľ	100.00	7.671	0.000
8.50	71.00	0.7	ီ	25.000	Ā	0.000	25.000	25.000	100.00	10.650	0.000
5.55	{	ľ		i	ВС	0.000	25.000	1	100.00	19.293	0.000
L53 8.50-3.50	6.00	0.7	5	25,000	Ä	0.000	25.000		100.00	7.495	0.000
	0.00	0.7	9	25.000	A	0.000	25.000	25.000	100.00	7.083	0.000
	ļ	- 1		ŀ		0.000	25.000		100.00	9.228	0.000
L54 3.50-0.00	1.75	0.7	5	17.500	Ç	0.000	25.000	477.000	100.00	7.083	0.000
		٠ ا	٦	17.500	A B	0.000	17.500	17.500	100.00	3.778	0.000
İ	İ		1	ļ	c l	0.000	17.500	ſ	100.00	3.778	0.000
					V	0.000	17.500	<u> </u>	100.00	3.778	0.000

Load Combinations

Comb.		Description
No.	<u> </u>	Description
1	Dead Only	
2	1.2 Dead+1.0 Wind 0 deg - No Ice	
3	0.9 Dead+1.0 Wind 0 deg - No Ice	
4	1.2 Dead+1.0 Wind 30 deg - No Ice	
5	0.9 Dead+1.0 Wind 30 deg - No Ice	
6	1.2 Dead+1.0 Wind 60 deg - No Ice	
7	0.9 Dead+1.0 Wind 60 deg - No Ice	
8	1.2 Dead+1.0 Wind 90 deg - No Ice	
9	0.9 Dead+1.0 Wind 90 deg - No Ice	
10	1.2 Dead+1.0 Wind 120 deg - No Ice	
11	0.9 Dead+1.0 Wind 120 deg - No Ice	
12	1.2 Dead+1.0 Wind 150 deg - No Ice	
13	0.9 Dead+1.0 Wind 150 deg - No Ice	
14	1.2 Dead+1.0 Wind 180 deg - No Ice	
15	0.9 Dead+1.0 Wind 180 deg - No Ice	
16	1.2 Dead+1.0 Wind 210 deg - No Ice	
17	0.9 Dead+1.0 Wind 210 deg - No Ice	
	•	

Comb.	Description
No	
18	1.2 Dead+1.0 Wind 240 deg - No Ice
19	0.9 Dead+1.0 Wind 240 deg - No Ice
20	1.2 Dead+1.0 Wind 270 deg - No Ice
21	0.9 Dead+1.0 Wind 270 deg - No Ice
22	1.2 Dead+1.0 Wind 300 deg - No Ice
23	0.9 Dead+1.0 Wind 300 deg - No Ice
24	1.2 Dead+1.0 Wind 330 deg - No Ice
25	0.9 Dead+1.0 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42 43	Dead+Wind 90 deg - Service
43 44	Dead+Wind 120 deg - Service
	Dead+Wind 150 deg - Service
45 46	Dead+Wind 180 deg - Service
46 47	Dead+Wind 210 deg - Service
47 48	Dead+Wind 240 deg - Service
48 49	Dead+Wind 270 deg - Service
49 50	Dead+Wind 300 deg - Service
DU	Dead+Wind 330 deg - Service

Maximum Member Forces

Sectio	Elevation	Component	Condition	Gov.	Axial	Major Axis	Minor Axis
n	ft	Type		Load		Moment	Moment
No		<u> </u>		Comb.	K	kip-ft	kip-ft
L1	190 - 185	Pole	Max Tension	48	0.00	-0.00	0.00
			Max. Compression	26	-6.60	0.32	0.39
			Max. Mx	20	-3,44	10.85	0.03
			Max. My	14	-3.44	0.07	-10.79
			Max. Vy	8	2.82	-10,73	0.00
			Max. Vx	14	2.82	0.07	-10.79
	40= 400		Max. Torque	18			-0.51
L2	185 - 180	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-9.18	-0.23	0.05
			Max. Mx	8	-4.73	-31.43	-0.16
			Max. My	14	-4.73	-0.16	-31.49
	•		Max. Vy	8	3.98	-31.43	-0.16
			Max, Vx	14	4.00	-0.16	-31.49
10	400 475		Max. Torque	18			-0.51
L3	180 - 175	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-14.51	-0.69	-1.81
			Max. Mx	8	-7.77	-61.13	-0.59
			Мах. Му	14	-7.77	-0,23	-61 <i>.</i> 67
			Max. Vy	8	6.18	-61,13	-0.59
			Max. Vx	14	6.20	-0.23	-61.67
1.4	472 470		Max. Torque	6			-1.25
L4	175 - 170	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-15.88	-0.79	-1.89
			Max. Mx	8	-8.69	-93.08	-0.61
			Max. My	14	-8.69	-0.22	-93,74
			Max. Vy	8	6.59	-93.08	-0.61
			Max. Vx	14	6.61	-0.22	-93.74
			Max. Torque	6			-1.25

Sectio n No.	Elevation ft	Component Туре	Condition	Gov. Load Comb.	Axial K	Major Axis Moment	Moment
L5	170 - 165	Pole	Max Tension	1	K	kip-ft	kip-ft
		. 0.0	Max. Compression	26	0.00	0.00	0.00
			Max, Mx	8	-25.10	-1.16	-1.81
	-		Max. My	14	-13.59 -13.59	-147.10	-0.59
			Max. Vy	8	10.99	-0.28	-147.76
			Max. Vx	14	11.00	-147.10	-0.59
			Max. Torque	6	11.00	-0.28	-147.76
l.6	165 - 160	Pole	Max Tension	1	0.00	0.00	-1.25
			Max. Compression	26	0.00	0.00	0.00
			Max. Mx		-36.20	-0.60	-1.92
				8	-18.89	-214.85	-0.62
			Max. My	14	-18.89	-0.04	-215.85
			Max. Vy	8	15.99	-214.85	-0.62
			Max, Vx Max, Torque	14	16.00	-0.04	-215.85
L7	160 - 155	Pole		20			1.38
	100 100	1 010	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-38,20	-0.64	-1.60
			Max. Mx	8	-20.10	-296.17	-0.53
			Max, My	14	-20.10	0.01	-296.93
			Max. Vy	8	16.54	-296.17	-0.53
			Max. Vx	14	16.46	0.01	-296,93
10	455 450		Max. Torque	20			1.38
L8	155 - 150	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-40.20	-0,68	-1.29
			Max. Mx	8	-21,31	-380.22	-0.45
			Max, My	14	-21.32	0.07	-380.32
			Max. Vý	8	17.09	-380.22	
			Max. Vx	14	16.92		-0.45
			Max. Torque	20	10.52	0.07	-380.32
L9	150 - 145	Pole	Max Tension	1	0.00	0.00	1.38
		. 0.0	Max. Compression	26	0.00	0.00	0.00
			Max, Mx		-50.05	-0.22	-0.03
			_	8	-25.92	-489.64	0.01
			Max. My	14	-25.95	0.08	-486.49
			Max. Vy	8	22.15	-489.64	0.01
			Max. Vx	14	21.55	80.0	-486.49
L10	145 - 140	Data	Max. Torque	20			1.83
LIU	145 - 140	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-52.08	-0.26	0.28
			Max. Mx	8	-27.19	-601.66	0.03
			Max. My	14	-27,22	0.07	-595.25
			Max. Vy	8	22.67	-601.66	0.03
			Max. Vx	14	21,98	0.07	-595.25
			Max. Torque	20		5.57	1.83
_11	140 - 135	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-54,32	-0.30	0.63
			Max. Mx	8	-28.60	-716.36	0.03
			Max. My	14	-28.63	0.06	-706.30
			Max. Vy	8	23.23		
			Max. Vx	14		-716.36	0.06
			Max. Torque	20	22.47	0.06	-706.30
.12	135 - 130	Pole	Max Tension	1	0.00	0.00	1.83
		. 4.0	Max. Compression		0.00	0.00	0.00
				26	-56.54	-0.35	0.98
			Max. Mx	8	-30.01	-833.82	0.09
			Max. My	14	-30.04	0.05	-819.78
			Max. Vy	8	23.77	-833.82	0.09
			Max. Vx	14	22.95	0.05	-819.78
13	130 - 125	D-1-	Max. Torque	20			1.83
10	130 - 123	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	- 58. 7 7	-0.40	1.33
			Max. Mx	8	-31.43	-953.97	0.11
			Max. My	14	-31.46	0.04	-935.63
			Max. Vý	8	24.30	- 953.97	0.11
			Max. Vx	14	23.42	0.04	-935.63
			Max. Torque	20	~~.74	0.04	
14	125 - 120	Pole	Max Tension	1	0.00	0.00	1.83
		•	Max. Compression	26		0.00	0.00
			Max. Mx		-61.40	0.09	1.44
			Max. My	8	-33.12	-1077.73	0.06
				14	-33.15	0.33	-1055.12
			Max. Vy Max. Vx	8 14	24.98 24.02	-1077.73	0.06
						0.33	-1055.12

Sectio n	Elevation ft	Component Type	Condition	Gov.	Axial	Major Axis	Minor Axis
No.	••	rypc		Load Comb.	κ	Moment	Moment
			Max. Torque	20		kip-ft	kip-ft
L15	120 - 115	Pole	Max Tension	1	0.00	0.00	1.97
		1 010	Max. Compression	26		0.00	0.00
			Max, Mx	8	-63.82	0.04	1.82
			Max, My	14	-34.69	-1203.96	0.13
			Max. Vy		-34.72	0.35	-1176.41
			Max. Vx	8	25.53	-1203.96	0.13
				14	24.53	0.35	-1176.41
L16	115 -	Pole	Max. Torque	20			1.97
	112.666	1-016	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-65.01	0.02	2.00
			Max. Mx	8	-35,42	-1263,85	0.16
			Max. My	14	-35.45	0.37	-1233.89
			Max. Vy	8	25.80	-1263.85	0.16
			Max. Vx	14	24.77	0.37	-1233,89
			Max. Torque	20			1.97
L17	112.666 - 112.416	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-65.16	0.01	2.02
			Max. Mx	8	-35.52	-1270.30	0.16
			Max. My	14	-35.55	0.37	-1240.09
			Max. Vy	8	25.83	-1270.30	0.16
			Max. Vx	14	24.81	0,37	-1240.09
			Max. Torque	20		0,0,	1.97
L18	112.416 - 107.416	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-68.51	0.04	0.00
			Max. Mx	8		-0.04	3.08
					-37.72	-1401.73	0.57
			Max. My	14	-37.74	0.39	-1367.16
			Max. Vy	8	26.56	-1401.73	0.57
			Max. Vx	14	25.99	0.39	-1367.16
L19	107.446	D-I-	Max. Torque	20			1.97
LIS	107.416 - 103.333	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-70.98	-0.08	3.39
			Max. Mx	8	-39.30	-1511,12	0.62
			Max, My	14	-39,31	0.41	-1474.93
			Max. Vy	8	27.04	-1511.12	0.62
			Max. Vx	14	26.83	0.41	
			Max. Torque	20	20.03	0.41	-1474.93
_20	103,333 -	Pole	Max Tension	1	0.00	0.00	1.65
	103.083	. 010			0.00	0.00	0.00
			Max. Compression	26	-71.13	-0.08	3.41
			Max. Mx	8	-39.40	-1517.88	0.63
			Max. My	14	-39.41	0.42	-1481.64
			Max. Vy	8	27.08	-1517.88	0.63
			Max. Vx	14	26.88	0.42	-1481.64
			Max. Torque	20			1.65
21	103.083 - 100	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-73.00	-0.12	3.64
			Max. Mx	8	-40.59	-1601,91	0.67
			Max. My	14	-40.59	0.43	-1565.43
			Max. Vy	8	27.44	-1601.91	0.67
			Max. Vx	14	27.51	0.43	-1565.43
			Max. Torque	20			1.65
22	100 - 95	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-76.29	0.00	3.87
			Max. Mx	8	-42.80	-1740.48	
			Max. My	14	-42.80 -42.80		0.57
			Max. Vy	8		0.68	-1704.60
			Max. Vx	o 14	28.07	-1740.48	0.57
					28.09	0.68	-1704.60
23	95 - 90	Pole	Max. Torque	20	0.00		1.71
	50 00	· OIE	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-79.85	-0.50	3.93
			Max. Mx	8	-45.16	-1883.80	0.40
			Max. My	14	-45.14	0.32	-1848.99
			_				1040.00
			Max. Vy Max. Vx	8 14	28.81 29.30	-1883.80	0.40

Sectio n No.	Elevation ft	Component Type	Condition	Gov. Load	Axial	Major Axis Moment	Minor Axi Moment
			Mar. T.	Comb.	K	kip-ft	kip-ft
L24	90 - 89.5	Pole	Max. Torque	20		-	1.88
	01.0	1 016	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-80.17	-0.51	3,97
			Max. Mx	8	-4 5.37	-1898.21	0.40
			Max. My	14	-45.35	0.32	-1863,66
			Max. Vy	8	28.87	-1898.21	0.40
			Max. Vx	14	29.41	0.32	-1863.66
L25	90 E 00 0E		Max. Torque	20		2.02	1.88
LZJ	89.5 - 89.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-80.35	-0.51	
			Max. Mx	8	-45.48	-1905,43	3.99
			Max. My	14	-45.4 7		0.40
			Max. Vy	8		0.32	-1871.01
			Max. Vx	14	28.90	-1905.43	0.40
			Max. Torque		29.46	0.32	-1871.01
L26	89.25 - 85.5	Pole		20			1.88
		1 010	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-83.04	-0.55	4.31
			Max. Mx	8	-47,24	-2015.23	0.41
			Max. My	14	-47.23	0.30	-1982.98
			Max. Vy	8	29.68	-2015.23	0.41
			Max. Vx	14	30.29	0.30	
			Max. Torque	20	00.23	0.50	-1982.98
L27	85.5 - 85.25	Pole	Max Tension	1	0.00		1.88
			Max. Compression	26	0.00	0.00	0.00
			Max. Mx		-83.23	-0.56	4.33
			Max Mr.	8	-47.38	-2022.65	0.42
			Max. My	14	-47.36	0.29	-1990.55
			Max. Vy	8	29.73	-2022.65	0.42
			Max. Vx	14	30.35	0.29	-1990.55
L28	05.05.04		Max. Torque	20			1.88
LZO	85.25 - 84	Pole	Max Tension	1	0.00	0.00	
			Max. Compression	26	-84.22		0.00
			Max. Mx	8	-48.03	-0.57	4.43
			Max. My	14		-2059.97	0.42
			Max. Vy		-48.01	0.29	-2028.64
				8	30.00	-2059.97	0.42
			Max. Vx	14	30.63	0.29	-2028.64
_29	84 - 83.75	Pole	Max. Torque	20			1.88
	00.10	FOIC	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-84.39	-0.57	4.45
			Max. Mx	8	-48.15	-2067.47	0.42
			Max. My	14	-4 8.13	0.29	-2036.30
			Max. Vv	8	30.04	-2067.47	
			Max, Vx	14	30.69		0.42
			Max. Torque	20	30.03	0.29	-2036.30
.30	83.75 - 82.5	Pole	Max Tension	1	0.00		1.88
			Max. Compression		0.00	0.00	0.00
				26	-85.28	-0.59	4.56
			Max. Mx	8	-48.71	-2105.18	0.42
			Max. My	14	-48.69	0.28	-2074.81
			Max. Vy	8	30.31	-2105,18	0.42
			Max. Vx	14	30.97	0,28	-2074.81
31	P3 C 00 pc	 .	Max. Torque	20			1.88
31	82.5 - 82.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-85.45	-0.59	
			Max. Mx	8	-48.81		4.58
			Max. My	14		-2112.76	0.43
			Max. Vy		-48.79	0.28	-2082.56
				8	30.35	-2112.76	0.43
			Max. Vx	14	31.02	0.28	-2082.56
32	82.25 - 80	Pole	Max. Torque	20			1.88
_		L OIG	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-86.84	-0.61	4.76
			Max. Mx	8	-49.71	-2181.31	0.43
			Max. My	14	-49.69	0.26	
			Max. Vy	8	30.60		-2152.82
			Max. Vx			-2181.31	0.43
			Max. Torque	14	31.48	0.26	-2152.82
	80 - 75	Pole		20			1.88
3		i OlG	Max Tension	1	0.00	0.00	0.00
3	0						
3			Max. Compression	26	-91.73	-0.21	
3	30 .0		Max. Compression Max. Mx	26 8	-91.73 -53.20	-0.21 -2338.56	4.74
33			Max. Compression			-2338.56	

Sectio	Elevation	Component	Condition	Gov.	Aut=1	M=1= - A!	file - 4 1
n	ft	Туре	Condition	Load	Axial	Major Axis Moment	Minor Axis Moment
No.				Comb.	K	kíp-ft	kip-ft
			Max. Vx	14	32.52	0.62	-2314.75
104	75 70	- .	Max. Torque	20			2.01
L34	75 - 70	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-95.19	-0.27	5.15
			Max. Mx	8	-55.68	-2498.34	0.35
			Max. My Max. Vy	14 8	-55.67	0.61	-2478.43
			Max. Vx	14	32.23 32.99	-2498.34 0.61	0.35 -2478.43
			Max. Torque	20	32.33	0.01	2,01
L35	70 - 65	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-98.64	-0.32	5.56
			Max. Mx	8	-58.17	-2660,67	0.40
			Max. My	14	-58.15	0.61	-2644.41
			Max. Vy	8	32,73	-2660.67	0.40
			Max. Vx	14	33.44	0.61	-2644.41
L36	65 - 60	Pole	Max. Torque	20			2.01
LOQ	03 - 00	Loie	Max Tension	1	0.00	0.00	0.00
			Max. Compression Max. Mx	26 8	-102.08 -60.66	-0.38	5.97
			Max. My	14	-60.64	-2825.45 0.61	0.44 -2812.59
			Max. Vy	8	33,21	-2825,45	0.44
			Max. Vx	14	33.87	0.61	-2812,59
			Max. Torque	20		0.0.	2.01
L37	60 - 58.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-105.10	-0.39	6.09
			Max, Mx	8	-63.01	-2876,09	0.46
			Max. My	14	-62,99	0.61	-2864.21
			Max, Vy	8	33.85	-2876.09	0.46
			Max. Vx	14	34.50	0.61	-2864.21
L38	58.5 - 58.25	Pole	Max. Torque Max Tension	20 1	0.00	0.00	2.01
200	00.0 00.20	1 OIC	Max. Compression	26	0.00 -105.29	0.00 -0.40	0.00
			Max. Mx	8	-63.15	-2884.55	6.11 0.46
			Max. My	14	-63.13	0.61	-2872.83
			Max. Vý	8	33.87	-2884.55	0.46
			Max. Vx	14	34,52	0.61	-2872.83
			Max. Torque	20			2.01
L39	58.25 -	Pole	Max Tension	1	0.00	0.00	0.00
	53.25		May Commencedies		400.00		
			Max. Compression Max. Mx	26	-108.82	-0.45	6.52
			Max. My	8 14	-65.83	-3054,92	0.51
			Max. Vy	8	-65,82 34,31	0.60 -3054.92	-3046.33
			Max. Vx	14	34.93	0.60	0.51 -3046.33
			Max. Torque	20	04.55	0.00	2.01
L40	53.25 -	Pole	Max Tension	1	0.00	0.00	0.00
	48.25						
			Max. Compression	26	-112.39	-0.50	6.92
			Max. Mx	8	-68.52	-3227.42	0.55
			Max. My	14	-68.51	0.60	-3221.79
			Max. Vy	8	34.72	-3227.42	0.55
			Max, Vx Max. Torque	14	35.31	0.60	-3221.79
L41	48.25 - 48	Pole	Max. Torque Max Tension	20 1	0.00	0.00	2.01
4	10.20	1 016	Max. Compression	26	0.00 -112.60	0.00 -0.51	0.00
			Max. Mx	8	-68.69	-3236.10	6.94 0.55
			Max. My	14	-68.68	0.60	-3230.62
			Max. Vy	8	34.74	-3236.10	0.55
			Max. Vx	14	35.34	0.60	-3230.62
			Max. Torque	20			2.01
L42	48 - 43	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-116.74	-0.56	7.34
			Max. Mx	8	-71.87	-3410.83	0.60
			Max. My	14	-71.85	0.59	-3409.26
			Max. Vy	8	35.17	-3410.83	0.60
			Max. Vx Max. Torque	14 20	36.16	0.59	-3409.26
L43	43 - 40	Pole	Max Tension	1	0.00	0.00	2.01 0.00
			Max. Compression	26	-119.21	-0.59	7.58
						0.00	7.00

Sectio n No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment	Moment
			Max. Mx	8	K	kip-ft	kip-ft
			Max. My	14	-73.78 -73.76	-3516.67	0.63
			Max. Vy	8	35.42	0.59	-3518.37
			Max. Vx	14	36.62	-3516.67	0.63
			Max. Torque	20	30.02	0.59	-3518.37
L44	40 - 35	Pole	Max Tension	1	0.00	0.00	2.01
			Max. Compression	26	-126.16	-0.64	0.00
			Max. Mx	8	-79.10	-3698.57	7.97
			Max. My	14	-79.08	0.59	0.67
			Max. Vy	8	36.59	-3698.57	-3707.20
			Max. Vx	14	38.17	0.59	0.67
			Max. Torque	20	30.17	0.59	-3707.20
L45	35 ~ 32.08	Pole	Max Tension	1	0.00	0.00	2.01
			Max. Compression	26	-128.67		0.00
			Max. Mx	8	-80.96	-0.67	8.20
			Max. My	14	-80.94	-3805.97	0.70
			Max. Vy	8	37.01	0.59	-3819.23
			Max. Vx	14		-3805.97	0.70
			Max. Torque	20	38.62	0.59	-3819.23
L46	32.08 -	Pole	Max Tension	1	0.00		2.01
	31.83				0.00	0.00	0.00
			Max. Compression	26	-128.91	-0.67	8.22
			Max. Mx	8	-81.16	-3815.22	0.70
			Max. My	14	-81.14	0.59	-3828.88
			Max. Vy	8	37.03	-3815.22	0.70
			Max. Vx	14	38.65	0.59	-3828.88
L47	31.83 -	Data	Max. Torque	20			2.01
_ ,,	28.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-131,94	-0.70	8.46
			Max. Mx	8	-83.52	-3929.92	0.73
			Мах. Му	14	-83.50	0.58	-3948.59
			Max. Vy	8	37.47	-3929.92	0.73
			Max. Vx	14	39.13	0.58	-3948.59
			Max. Torque	20		0.00	2.01
L48	28.75 - 28.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-132.17	-0.70	8.48
			Max. Mx	8	-83.69	-3939.29	0.48
			Max. My	14	-83.67	0.58	-3958.37
			Max. Vý	8	37.50	-3939.29	0.73
			Max. Vx	14	39.16	0.58	
			Max. Torque	20	05.10	0.56	-3958.37
.49	28.5 - 23.5	Pole	Max Tension	1	0.00	0.00	2.01
			Max. Compression	26	-136.50	0.00	0.00
			Max, Mx	8	-87.03	-0.75	8.86
			Max. My	14	-87.03 -87.02	-4127.58	0.78
			Max. Vy	8		0.58	-4155.83
			Max. Vx	14	37.84	-4127.58	0.78
			Max. Torque	20	39.87	0.58	-4155.83
.50	23.5 - 18.5	Pole	Max Tension	1	0.00	0.00	2.01
			Max. Compression	26		0.00	0.00
			Max. Mx	. 20	-144.84	-0.79	9.24
			Max. My	14	-93.79	-4318.70	0.82
			Max. Vy		-93.78	0.57	-4357.92
			Max. Vx	8	38.96	-4318.70	0.82
			Max. Torque	14	41.34	0.57	-4357.92
51	18.5 - 13.5	Pole		20			2.01
	.0.0 ,0.0	i oic	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-149.52	-0.84	9.61
			Max. Mx	8	-97.62	-4514 .17	0.87
			Max. My	14	-9 7.60	0.57	-4566.14
			Max. Vy	8	39.26	-4514.17	0.87
			Max. Vx	14	42.00	0.57	-4566.14
52	125 05	Delle	Max. Torque	20			2.01
J.L	13.5 - 8.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-154.05	-1.10	9.90
			Max. Mx	8	-101.39	-4711.10	0.90
			Max. My	14	-101.38	0.47	-4777.63
			• • • • •				
			Max. Vy	8	39.51	-4711.10	0.90

Sectio n No.	Elevation ft	Component Type	Condition	Gov. Load	Axial	Major Axis Moment	Minor Axis Moment
				Comb.	K	kíp-ft	kip-ft
L53	8.5 - 3.5	D.J.	Max. Torque	20			2.01
	0.0 - 3.0	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-158.21	-1.20	9.96
			Max. Mx	8	-105.03	-4909.18	0.89
			Max. My	14	-105.03	0.41	-4992.32
			Max. Vy	8	39,74	-4909.18	0.89
			Max, Vx	14	43.27	0.41	-4992.32
L54	3.5 - 0		Max. Torque	20			2.01
LUT	3.5 - 0	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-161.02	-1.20	9.96
			Max. Mx	8	-107.58	-5048.47	0.87
			Мах. Му	14	-107.57	0.39	-5144.43
			Max. Vy	8	39.89	-5048.47	0.87
			Max. Vx	14	43.69	0.39	-5144.43
	•		Max. Torque	20		5.55	2.01

		ЦM		

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, I K
Pole	Max. Vert	26	161.02	0.00	0.00
	Max. H _x	20	107.58	39.83	0.00
	Max. H _z	2	107.58	0.00	37,88
	Max. M _x	2	4828.45	0.00	37.88
	Max. M₂	8	5048.47	-39.87	-0.01
	Max. Torsion	20	2.01	39.83	0.00
	Min. Vert	5	80.69	-19.11	32.79
	Min. H _x	8	107.58	-39.87	-0.01
	Min. H _z	14	107.58	-0.01	-0.01 -43.67
	Min. M _x	14	-5144,43	-0.01	-43.67
	Min. M _z	20	-5042.10	39.83	0.00
	Min. Torsion	8	-1.97	-39.87	-0.01

Tower Mast Reaction Summary

Load Combination	Vertical	Shear _x	Shearz	Overturning	Overturning	Torque
	К	K	K	Moment, M _x kip-ft	Moment, M _z kip-ft	kip-ft
Dead Only	89.65	0.00	0.00	-1.18	0.78	0.00
1.2 Dead+1.0 Wind 0 deg - No Ice	107.58	-0.00	-37.88	-4828.45	0.51	-0.17
0.9 Dead+1.0 Wind 0 deg - No Ice	80.69	-0.00	-37.88	-4788.96	0.27	-0.16
1.2 Dead+1.0 Wind 30 deg - No Ice	107.58	19.11	-32.79	-4179.08	-2439.01	0.91
0.9 Dead+1.0 Wind 30 deg - No Ice	80.69	19.11	-32.79	-4144.86	-2419.48	0.91
1.2 Dead+1.0 Wind 60 deg - No Ice	107.58	38.08	-21.80	-2568.44	-4494.61	1.69
0.9 Dead+1.0 Wind 60 deg - No Ice	80.69	38.08	-21.80	-2547.75	-4459.26	1.69
1.2 Dead+1.0 Wind 90 deg - No Ice	107.58	39.87	0.01	-0.87	-5048.47	1.97
0.9 Dead+1.0 Wind 90 deg - No Ice	80.69	39.87	0.01	-0.51	-5008.01	1.97
1.2 Dead+1.0 Wind 120 deg - No Ice	107.58	33.13	18.96	2416.27	-4230.81	1.86
0.9 Dead+1.0 Wind 120 deg - No Ice	80.69	33.13	18.96	2397.04	-4196.75	1.85
1.2 Dead+1.0 Wind 150 deg	107.58	19.13	32.86	4189.31	-2442.84	1.25

Load Combination	Vertical	Shear _x	Shearz	Overturning	Overturning	Torque
- No Ice	Κ	K	<u> </u>	Moment, M _x kip-ft	Moment, M _z kip-ft	kip-ft
0.9 Dead+1.0 Wind 150 deg - No Ice	80.69	19.13	32.86	4155.70	-2423.27	1.25
1.2 Dead+1.0 Wind 180 deg - No Ice	107.58	0.01	43.67	5144.43	0.39	0.30
0.9 Dead+1.0 Wind 180 deg - No Ice	80.69	0.01	43.67	5104.06	0.14	0.30
1.2 Dead+1.0 Wind 210 deg - No Ice	107.58	-19.09	32.82	4182.09	2437.57	-0.84
0.9 Dead+1.0 Wind 210 deg - No Ice	80.69	-19.09	32.82	4148.55	2417.57	-0.84
1.2 Dead+1.0 Wind 240 deg - No Ice	107.58	-33.07	18.94	2413.64	4221.70	-1.67
0.9 Dead+1.0 Wind 240 deg - No Ice	80.69	-33.07	18.94	2394.43	4187.24	-1.66
1.2 Dead+1.0 Wind 270 deg - No Ice	107.58	-39.83	-0.00	-0.99	5042.10	-2.01
0.9 Dead+1.0 Wind 270 deg - No Ice	80.69	-39.83	-0.00	-0.63	5001.22	-2.01
1.2 Dead+1.0 Wind 300 deg - No Ice	107.58	-38.08	-21.82	-2571.21	4497.17	-1.81
0.9 Dead+1.0 Wind 300 deg No Ice	80.69	-38.08	-21.82	-2550.51	4461.31	-1.80
1.2 Dead+1.0 Wind 330 deg No Ice	107.58	-19.12	-32.84	-4187.67	2441.53	-1.22
0.9 Dead+1.0 Wind 330 deg No ice	80.69	-19.12	-32.84	-4153.37	2421.51	-1,21
.2 Dead+1.0 Ice+1.0 Temp .2 Dead+1.0 Wind 0	161.02 161.02	0.00 0.00	0.00 -11.48	-9.96	-1.20	0.00
leg+1.0 Ice+1.0 Temp .2 Dead+1.0 Wind 30	161.02	5.77	-9.94	-1481.67 -1284.21	-1.83	-0.14
eg+1.0 Ice+1.0 Temp .2 Dead+1.0 Wind 60	161.02	10.06	-5.78		-741.71	0.21
eg+1.0 Ice+1.0 Temp .2 Dead+1.0 Wind 90	161,02	11.54	-0.00	-748.36	-1287.30	0.50
eg+1.0 Ice+1.0 Temp .2 Dead+1.0 Wind 120	161.02	9.99	5,74	-10.88	-1482.51	0.64
eg+1.0 Ice+1.0 Temp .2 Dead+1.0 Wind 150	161.02	5.77	9.95	725.57	-1284.09	0.63
eg+1.0 Ice+1.0 Temp 2 Dead+1.0 Wind 180	161.02	-0.00	11.56	1265.15	-741.50	0.46
eg+1.0 Ice+1.0 Temp 2 Dead+1.0 Wind 210	161.02	-5.76	9.94	1466.97	-0.92	0.17
eg+1.0 lce+1.0 Temp 2 Dead+1.0 Wind 240	161.02	-9.98		1264.46	738.44	-0.20
eg+1.0 Ice+1.0 Temp 2 Dead+1.0 Wind 270	161.02	-9.96 -1 1 .53	5.74	725.79	1279.56	-0.49
eg+1.0 Ice+1.0 Temp 2 Dead+1.0 Wind 300	161.02	-10.06	0.00	-9.97	1478.12	-0.64
eg+1.0 Ice+1.0 Temp 2 Dead+1.0 Wind 330	161.02		-5.78	-748.18	1284.46	-0.62
g+1.0 Ice+1.0 Temp ead+Wind 0 deg - Service		-5.76	-9.94	-1285.21	738.25	-0.46
ead+Wind 30 deg - Service	89.65	-0.00	-8.92	-1131.87	0.70	-0.04
ead+Wind 60 deg - Service	89.65 89.65	4.50	-7.72	-979.76	-570.73	0.21
ead+Wind 90 deg - Service	89.65	8.97	-5.13	-602.57	-1052.37	0.40
ad+Wind 120 deg -		9.39	0.00	-1.07	-1182.01	0.46
rvice	89.65	7.80	4.46	565.12	-990.44	0.44
ad+Wind 150 deg - rvice	89.65	4.50	7.74	980.43	-571.63	0.29
ad+Wind 180 deg - rvice	89.65	0.00	10.28	1204.32	0.67	0.07
ad+Wind 210 deg -	89.65	-4.49	7.73	978.74	571.55	-0.20
ad+Wind 240 deg - ∾ice	89.65	-7.79	4.46	564.50	989.46	-0.39
ad+Wind 270 deg - vice	89.65	-9.38	-0.00	-1.09	1181.68	-0.47
ad+Wind 300 deg -						

Combination	Vertical K	Shear _x K	Shear _z K	Overturning Moment, M _x kip-ft	Overturning Moment, Mz	Torque
Service Dead+Wind 330 deg - Service	89.65	-4.50	-7.73	-981.77	kip-ft 572.48	<i>kip-ft</i> -0.29

			· · · · · · · · · · · · · · · · · · ·	tion Sun			tik, kest
	S	um of Applied Fore	ces		Sum of Reacti	one	
Load	PX	PY	PZ	PX	PY	PZ PZ	% Erroi
Comb.	K	K	K	K	K	ĸ	70 E1101
1 2	0.00	-89.65	0.00	0.00	89.65	0.00	0.000%
3	-0.00	-107.58	-37.88	0.00	107,58	37 .8 8	0.000%
4	-0.00	-80.69	-37.88	0.00	80.69	37.88	0.000%
5	19.11	-107.58	-32.79	-19.11	107.58	32.79	0.000%
6	19.11	-80.69	-32.79	-19.11	80.69	32.79	0.000%
7	38.08 38.08	-107.58	-21.80	-38.08	107.58	21.80	0.000%
8	39.87	-80.69	-21.80	-38.08	80.69	21.80	0.000%
9	39.87 39.87	-107.58	0.01	-39.87	107.58	-0.01	0.000%
10	33.13	-80.69	0.01	- 39.87	80.69	-0.01	0.000%
11	33.13	-107.58	18.96	-33.13	107.58	-18.96	0.000%
12	19.13	-80.69	18.96	-33.13	80.69	-18.96	0.000%
13	19.13	-107.58	32.86	-19.13	107.58	- 32.86	0.000%
14	0.01	-80.69	32.86	-19.13	80.69	-32.86	0.000%
15	0.01	-107.58	43.67	-0.01	107.58	-43.67	0.000%
16	-19.09	-80.69	43.67	-0.01	80.69	-43.67	0.000%
17	-19.09	-107.58	32.82	19.09	107.58	-32.82	0.000%
18	-33.07	-80.69 -107.58	32.82	19.09	80.69	-32.82	0.000%
19	-33.07		18.94	33.07	107.58	-18.94	0.000%
20	-39.83	-80.69	18.94	33.07	80.69	-18.94	0.000%
21	-39.83	-107.58 -80.69	-0.00	39.83	107.58	0.00	0.000%
22	-38.08		-0.00	39.83	80.69	0.00	0.000%
23	-38.08	-107.58 -80.69	-21.82	38.08	107.58	21.82	0.000%
24	-19.12	-107.58	-21.82	38.08	80.69	21.82	0.000%
25	-19.12		-32.84	19.12	107.58	32.84	0.000%
26	0.00	-80.69	-32.84	19.12	80.69	32.84	0.000%
27	0.00	-161,02 -161,02	0.00	0.00	161.02	0.00	0.000%
28	5.77	-161.02	-11. 4 8	-0.00	161.02	11.48	0.000%
29	10.06	-161.02 -161.02	-9.94 5.70	-5.77	161.02	9.94	0.000%
30	11,54	-161.02 -161.02	-5.78	-10.06	161.02	5.78	0.000%
31	9.99	-161.02	-0.00	-11.54	161.02	0.00	0.000%
32	5.77	-161.02 -161.02	5.74	-9.99	161.02	-5.74	0.000%
33	-0.00	-161.02	9.95	-5.77	161.02	-9.95	0.000%
34	-5.76	-161.02	11.56	0.00	161.02	-11.56	0.000%
35	-9.98	-161.02	9.94 5.74	5.76	161.02	-9.94	0.000%
36	-11.53	-161.02	0.00	9.98	161.02	-5.74	0.000%
37	-10.06	-161.02	-5.78	11.53	161.02	-0.00	0.000%
38	-5.76	-161.02	-9.94	10.06	161.02	5.78	0.000%
39	-0.00	-89.65	-9.9 4 -8.92	5.76	161.02	9.94	0.000%
40	4.50	-89.65	-7.72	0.00	89.65	8.92	0.000%
41	8.97	-89.65	-7.72 -5.13	-4.50	89.65	7.72	0.000%
42	9.39	-89.65	0.00	-8.97	89.65	5.13	0.000%
13	7.80	-89.65	4.46	-9.39 7.00	89.65	-0.00	0.000%
14	4.50	-89.65	4.46 7.74	-7.80	89.65	-4.46	0.000%
1 5	0.00	-89.65	10.28	-4.50	89.65	- 7.74	0.000%
16	-4.49	-89.65	7. 7 3	-0.00	89.65	-10.28	0.000%
17	- 7 .79	-89.65	7.73 4.46	4.49 7.70	89.65	-7.73	0.000%
18	-9.38	-89.65	-0.00	7.79	89.65	-4.46	0.000%
19	-8.97	-89.65	-5.14	9.38	89.65	0.00	0.000%
0	-4.50	-89.65	-5.14 -7.73	8.97 4.50	89.65	5.14	0.000%
			7.10	4,00	89.65	7.73	0.000%

Non-Linear Convergence Results

Tolerance	Load	Converged?	Number	Displacement	
1 Yes 5 0.00000001 0.00006436 4 Yes 6 0.00000001 0.00006436 5 Yes 5 0.00000001 0.00006436 6 Yes 6 0.00000001 0.0006849 7 Yes 6 0.00000001 0.0006849 7 Yes 6 0.00000001 0.0006849 8 Yes 5 0.00000001 0.0006849 9 Yes 5 0.00000001 0.0006845 10 Yes 6 0.00000001 0.00083362 9 Yes 5 0.00000001 0.0003362 11 Yes 6 0.0000001 0.0003828 12 Yes 6 0.0000001 0.0003828 13 Yes 6 0.0000001 0.0008829 13 Yes 5 0.0000001 0.0008829 14 Yes 5 0.0000001 0.0008829 15 Yes 6 0.0000001 0.0008829 16 0.0000001 0.0008382 17 Yes 6 0.0000001 0.00083310 18 Yes 5 0.0000001 0.00083310 19 Yes 6 0.0000001 0.0006431 18 Yes 6 0.0000001 0.0006431 18 Yes 6 0.0000001 0.0006431 18 Yes 6 0.0000001 0.0006431 19 Yes 6 0.0000001 0.00083331 19 Yes 6 0.0000001 0.0006838 22 Yes 6 0.0000001 0.0008383 23 Yes 6 0.0000001 0.0008383 24 Yes 6 0.0000001 0.0008383 25 Yes 6 0.00000001 0.0008383 26 Yes 6 0.0000001 0.0008383 27 Yes 6 0.0000001 0.0008383 28 Yes 6 0.00000001 0.0008383 29 Yes 6 0.00000001 0.0000828 20 Yes 6 0.0000001 0.0008383 21 Yes 6 0.00000001 0.0008383 22 Yes 6 0.00000001 0.0008383 23 Yes 6 0.00000001 0.0008383 24 Yes 6 0.00000001 0.0008383 25 Yes 6 0.00000001 0.0008383 26 Yes 6 0.00000001 0.0008383 27 Yes 6 0.00000001 0.0008383 28 Yes 6 0.00000001 0.0008383 29 Yes 6 0.00000001 0.0008383 20 Yes 6 0.00000001 0.0008383 21 Yes 6 0.00000001 0.0008383 22 Yes 6 0.00000001 0.0008383 23 Yes 6 0.00000001 0.0008383 24 Yes 6 0.00000001 0.0008383 25 Yes 6 0.00000001 0.0008383 26 Yes 6 0.00000001 0.0008383 27 Yes 6 0.00000001 0.0008333 28 Yes 6 0.00000001 0.0003336 29 Yes 6 0.00000001 0.0003336 29 Yes 6 0.00000001 0.0003336 29 Yes 6 0.00000001 0.0003336 29 Yes 6 0.00000001 0.0003336 29 Yes 6 0.00000001 0.0003336 29 Yes 6 0.00000001 0.0003336 29 Yes 6 0.00000001 0.0003336 29 Yes 6 0.00000001 0.0003336 29 Yes 6 0.00000001 0.0003336 29 Yes 6 0.00000001 0.0003336 29 Yes 6 0.00000001 0.0003336 29 Yes 6 0.00000001 0.0003366 20 Yes 6 0.00000001 0.0003366 20 Yes 6 0.00000001 0.0003366 20 Yes 6 0.00000001 0.0003368	Combination				Force
2 Yes 5 0.00000001 0.00011169 4 Yes 6 0.00000001 0.0000643 6 Yes 6 0.00000001 0.0006843 6 Yes 6 0.00000001 0.0006843 7 Yes 5 0.00000001 0.0006845 8 Yes 5 0.00000001 0.0006824 7 Yes 5 0.00000001 0.00068284 8 Yes 5 0.00000001 0.00068382 9 Yes 5 0.00000001 0.00068284 10 Yes 6 0.00000001 0.00068284 11 Yes 6 0.00000001 0.00068284 11 Yes 5 0.00000001 0.00068284 12 Yes 6 0.00000001 0.00068284 13 Yes 5 0.00000001 0.00068284 14 Yes 5 0.00000001 0.00068284 15 Yes 5 0.00000001 0.00068284 16 Yes 6 0.00000001 0.00068284 17 Yes 5 0.00000001 0.00068284 18 Yes 6 0.00000001 0.0006428 18 Yes 6 0.00000001 0.0006431 18 Yes 6 0.00000001 0.0006431 18 Yes 6 0.00000001 0.0006431 19 Yes 5 0.00000001 0.0006431 19 Yes 5 0.00000001 0.0006431 22 Yes 6 0.00000001 0.0006775 20 Yes 5 0.00000001 0.00067755 21 Yes 6 0.00000001 0.0006795 22 Yes 6 0.00000001 0.0006795 23 Yes 5 0.00000001 0.0006795 24 Yes 6 0.00000001 0.0006795 25 Yes 6 0.00000001 0.0006795 26 Yes 5 0.00000001 0.0006795 27 Yes 6 0.00000001 0.0006795 28 Yes 6 0.00000001 0.0006799 29 Yes 6 0.00000001 0.0006799 30 Yes 6 0.00000001 0.000679387 31 Yes 6 0.00000001 0.0006799 32 Yes 6 0.00000001 0.0006799 33 Yes 6 0.00000001 0.000679387 34 Yes 6 0.00000001 0.000679387 35 Yes 6 0.00000001 0.00020383 39 Yes 6 0.00000001 0.00020383 30 Yes 6 0.00000001 0.00020383 31 Yes 6 0.00000001 0.00020383 31 Yes 6 0.00000001 0.00020383 33 Yes 6 0.00000001 0.00020383 34 Yes 6 0.00000001 0.00020383 35 Yes 6 0.00000001 0.00020383 36 Yes 6 0.00000001 0.00020383 37 Yes 6 0.00000001 0.00020383 39 Yes 6 0.00000001 0.00020383 30 Yes 6 0.00000001 0.00020383 31 Yes 6 0.00000001 0.00020383 31 Yes 6 0.00000001 0.00020383 32 Yes 6 0.00000001 0.00020383 33 Yes 6 0.00000001 0.0003384 34 Yes 6 0.00000001 0.0003384		Yes			
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4 Yes 6 0.0000001 0.0006649 6 Yes 5 0.00000001 0.0006649 6 Yes 6 0.00000001 0.0006649 7 Yes 6 0.00000001 0.0006645 8 Yes 5 0.00000001 0.0006845 8 Yes 5 0.00000001 0.0006845 10 Yes 5 0.00000001 0.00017389 10 Yes 6 0.00000001 0.00068529 11 Yes 6 0.00000001 0.00068529 12 Yes 6 0.00000001 0.00068529 13 Yes 5 0.00000001 0.00068529 14 Yes 5 0.00000001 0.00088529 15 Yes 5 0.00000001 0.0006828 16 Yes 6 0.00000001 0.00088529 17 Yes 5 0.00000001 0.00083310 18 Yes 6 0.00000001 0.0006428 19 Yes 5 0.00000001 0.0001472 10 Yes 6 0.00000001 0.0000432 11 Yes 5 0.00000001 0.0006428 12 Yes 6 0.00000001 0.0006428 13 Yes 6 0.00000001 0.0006428 14 Yes 5 0.00000001 0.0000432 15 Yes 5 0.00000001 0.0000432 16 Yes 6 0.00000001 0.00006431 18 Yes 6 0.00000001 0.000063331 19 Yes 5 0.00000001 0.0006776 20 Yes 5 0.00000001 0.0006776 21 Yes 6 0.00000001 0.0006776 22 Yes 6 0.00000001 0.0006776 23 Yes 5 0.00000001 0.0006776 24 Yes 6 0.00000001 0.0006776 25 Yes 6 0.00000001 0.0006776 26 Yes 4 0.00000001 0.0006737 27 Yes 6 0.00000001 0.0006737 28 Yes 6 0.00000001 0.0006737 29 Yes 6 0.00000001 0.0006737 30 Yes 6 0.00000001 0.0006737 31 Yes 6 0.00000001 0.0006737 32 Yes 6 0.00000001 0.0006737 33 Yes 6 0.00000001 0.00020382 34 Yes 6 0.00000001 0.00020382 35 Yes 6 0.00000001 0.00020382 36 Yes 6 0.00000001 0.00020382 37 Yes 6 0.00000001 0.00020382 38 Yes 6 0.00000001 0.00020382 39 Yes 6 0.00000001 0.00020382 30 Yes 6 0.00000001 0.00020382 31 Yes 6 0.00000001 0.00020382 32 Yes 6 0.00000001 0.00020382 33 Yes 6 0.00000001 0.00020382 34 Yes 6 0.00000001 0.00020383 35 Yes 6 0.00000001 0.00020383 36 Yes 6 0.00000001 0.00020383 37 Yes 6 0.00000001 0.00020383 39 Yes 6 0.00000001 0.00020383 30 Yes 6 0.00000001 0.00020383 31 Yes 6 0.00000001 0.00020383 32 Yes 6 0.00000001 0.00020383 33 Yes 6 0.00000001 0.00020383 34 Yes 6 0.00000001 0.00020383 35 Yes 6 0.00000001 0.00020383	3	Yes			
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Maximum Tower Deflections - Service Wind

Section No.	Elevation	Horz. Deflection	Gov. Load	Tilt	Twist
14	ft	<u>in</u>	Comb.	c	٥
L2 L3 L4 L5	190 - 185 185 - 180 180 - 175 175 - 170 170 - 165	13.410 12.814 12.218 11.625 11.035	49 49 49 49 49	0.5702 0.5699 0.5680 0.5656 0.5618	0.0011 0.0011 0.0012 0.0011 0.0010

Section No.	Elevation	Horz.	Gov.	Tilt	Twist
NO.	e	Deflection	Load		
L6	ft	in	Comb.	······································	•
L7	165 - 160	10.450	49	0.5558	0.0010
L.8	160 - 155	9.872	49	0.5471	0.0009
L9	155 - 150	9.303	49	0.5392	0.0008
	150 - 145	8.744	49	0.5287	0.0008
L10	145 - 140	8.197	49	0.5152	0.0007
L11	140 - 135	7.666	49	0.4983	0.0006
L12	135 - 130	7.151	49	0.4847	0.0006
L13	130 - 125	6.651	49	0.4688	0.0005
L14	125 - 120	6.170	49	0.4504	0.0005
L15	120 - 115	5.709	49	0.4294	0.0004
L16	115 - 112.666	5.268	49	0.4130	0.0004
L17	112.666 - 112.416	5.068	4 9	0.4047	0.0004
L18	112.416 - 107.416	5.047	49	0.4040	0.0004
L19	107.416 -	4.631	49	0.3892	0.0003
L20	103,333				
	103.333 - 103.083	4.304	49	0.3759	0.0003
L21	103.083 - 100	4.284	49	0.3751	0.0003
L22	100 - 95	4.046	4 9	0.3643	0.0003
L23	95 - 90	3.671	49	0.3504	0.0003
L24	90 - 89.5	3.312	49	0.3353	0.0003
L25	89.5 - 89.25	3.277	49	0.3337	0.0003
L26	89.25 - 85.5	3.260	49	0.3330	0.0003
L27	85.5 - 85.25	3.002	49	0.3225	0.0003
L28	85.25 - 84	2.986	49	0.3218	0.0002
L29	84 - 83.75	2.902	49	0.3186	0.0002
L30	83.75 - 82.5	2.885	49	0.3178	
L31	82.5 - 82.25	2.802	49	0.3138	0.0002
L32	82,25 - 80	2.786	4 9	0.3129	0.0002
L33	80 - 75	2.640	49	0.3044	0.0002
L34	75 - 70	2.330	49		0.0002
L35	70 - 65	2.037	49	0.2886	0.0002
L36	65 - 60	1.762	49	0.2716	0.0002
L37	60 - 58.5	1.506	49	0.2535	0.0002
L38	58.5 - 58.25	1.433	49 49	0.2342	0.0002
L39	58.25 - 53,25	1.421	49 49	0.2292	0.0002
L40	53.25 - 48.25	1.192		0.2282	0.0002
L41	48.25 - 48		49	0.2089	0.0001
L42	48 - 43	0.984	49	0.1884	0.0001
L43	43 - 40	0.974	49	0.1876	0.0001
L44	40 - 35	0.787	49	0.1700	0.0001
L45	35 - 32.08	0.684	49	0.1589	0.0001
L46	32.08 - 31.83	0.527	49	0.1398	0.0001
1.47		0.445	49	0.1281	0.0001
L48	31.83 - 28.75	0.439	49	0.1273	0.0001
L49	28.75 - 28.5	0.360	49	0.1169	0.0001
	28.5 - 23.5	0.354	49	0.1159	0.0001
L50	23.5 - 18.5	0.243	49	0.0954	0.0001
L51	18.5 - 13.5	0.153	49	0.0768	0.0000
L52	13.5 - 8.5	0.083	49	0.0573	0.0000
L53	8.5 - 3.5	0.033	49	0.0369	0.0000
L54	3.5 - 0	0.006	49	0.0155	0.0000

Critical Deflections and Radius of Curvature - Service Wind

Elevation	Appurtenance	Gov. Load	Deflection	Tilt	Twist	Radius of
ft		Comb.	in	•	o	Curvature ff
188.00	Platform Mount [LP 403-1]	49	13.172	0.5702	0.0011	200070
187.00	SP2-5.8	49	13.052	0.5702		266276
185.00	Side Arm Mount [SO 102-3]	49			0.0011	2662 7 6
184.00			12.814	0.5699	0.0012	266276
	Side Arm Mount [SO 701-1]	49	12.695	0.5696	0.0012	220602
179.00	Platform Mount [LP 403-1]	49	12,100	0.5675	0.0012	121577
170.00	Platform Mount [LP 405-1]	49	11.035	0.5618	0.0012	57910

Elevation	Appurtenance	Gov.	Deflection	Tilt	Twist	Radius of
ft		Load Comb.	in	٠	۰	Curvature ft
162.00	Platform Mount [LP 403-1]	49	10,102	0.5506	0.0009	34327
150.00	Platform Mount [LP 403-1]	49	8.744	0.5287	0.0008	23783
125.00	Side Arm Mount [SO 901-1]	49	6.170	0.4504	0.0005	14370
110.00	Side Arm Mount [SO 901-1]	49	4.844	0.3971	0.0003	18433
100.00	Side Arm Mount [SO 901-1]	49	4.046	0.3643	0.0003	18166
95.00	Side Arm Mount [SO 901-1]	49	3.671	0.3504	0.0003	19481
80.00	Side Arm Mount [SO 901-1]	49	2.640	0.3044	0.0003	16910
60.00	Jump Plate 120" x 6.5" x 1.25"	49	1.506	0.2342	0.0002	15378
40.00	(2) Jump Plate 120" x 6" x 1"	49	0.684	0.1589	0.0002	
20.00	(2) Jump Plate 120" x 6.5" x	49	0.178	0.0823	0.0001	15336 15057
	1.25"				300	.0007

Maximum Tower Deflections - Design Wind

Section	Elovotion	11			
No.	Elevation	Horz.	Gov.	Tilt	Twist
700.	ft	Deflection	Load	a	
L1	190 - 185	in	Comb.		•
L2	185 - 180	57.275	22	2.4387	0.0047
L3	180 - 175	54.726	22	2.4372	0.0048
L4	175 - 179	52.181	22	2,4292	0.0049
L5	170 - 165	49.645	22	2.4194	0.0047
L6	165 - 160	47.122	22	2.4029	0.0044
L7	160 - 155	44.621	22	2.3773	0.0040
Ľ8	155 - 150	42.153	22	2.3393	0.0037
Ĺ9	150 - 145	39.722	22	2.3051	0.0035
L10	145 - 140	37.332	22	2.2599	0.0032
L11	140 - 135	34.996	22	2.2017	0.0029
L12	135 - 130	32.728	22	2.1293	0.0026
L13		30.529	22	2.0710	0.0024
L13	130 - 125	28.396	22	2.0026	0.0022
L15	125 - 120	26.340	22	1.9238	0.0020
L16	120 - 115	24.372	22	1.8343	0.0018
L17	115 - 112.666	22.488	22	1.7641	0.0016
LIT	112.666 -	21.634	22	1.7286	0.0016
L18	112.416				
LIO	112.416 -	21.544	22	1.7256	0.0015
L19	107.416	40			
LIS	107.416 -	19.770	22	1.6620	0.0014
L20	103.333	40.000			
LZU	103.333 - 103.083	18.373	22	1.6054	0.0014
L21	103.083 - 100	40.000			
L22		18.289	22	1.6018	0.0014
L23	100 - 95 95 - 90	17.270	22	1.5559	0.0013
L24		15.671	22	1.4964	0.0012
L25	90 - 89,5	14.138	22	1.4317	0.0011
L26	89.5 - 89.25	13.989	22	1.4249	0.0011
L27	89.25 - 85.5	13.914	22	1.4220	0.0011
L28	85.5 - 85.25	12.815	22	1.3769	0.0011
L29	85.25 - 84 84 - 83.75	12.743	22	1.3742	0.0011
L30	83.75 - 82.5	12.385	22	1.3604	0.0010
L31	82.5 - 82.25	12.314	22	1.3571	0.0010
L32	82.25 - 80	11.961	22	1.3401	0.0010
L33	80 - 75	11.891	22	1.3361	0.0010
L34	75 - 70	11.270	22	1.2995	0.0010
L35	70 - 65	9.944	22	1.2320	0.0009
L36	65 - 60	8.692	22	1.1595	0.0008
L37	60 - 58.5	7.518	22	1.0821	0.0007
L38	58.5 - 58.25	6.428	22	0.9996	0.0007
L39	58,25 - 53,25	6.117	22	0.9783	0.0006
L40	53.25 - 48.25	6.066	22	0.9743	0.0006
L40 L41	48.25 - 48	5.088	22	0.8917	0.0006
L42	48 - 43	4.200	22	0.8043	0.0005
L43	43 - 40	4.158	22	0.8007	0.0005
L44	40 - 35	3.359	22	0.7254	0.0004
	70 - 30	2.918	22	0.6783	0.0004

Section No.	Elevation	Horz. Deflection	Gov. Load	Tilt	Twist
L45	ft 35 - 32.08	in	Comb.	0	•
L46 L47 L48 L49 L50 L51	32.08 - 31,83 31.83 - 28.75 28.75 - 28.5 28.5 - 23.5 23.5 - 18.5 18.5 - 13.5	2.250 1.900 1.872 1.535 1.509 1.037 0.652	22 22 22 22 22 22 22 22	0.5965 0.5467 0.5432 0.4990 0.4948 0.4069 0.3275	0.0003 0.0003 0.0003 0.0003 0.0003 0.0002
L52 L53 L54	13.5 - 8.5 8.5 - 3.5 3.5 - 0	0.352 0.142 0.024	22 22 22 22	0.3275 0.2443 0.1572 0.0661	0.0002 0.0001 0.0001 0.0000

Critical Deflections and Radius of Curvature - Design Wind

Elevation	Appurtenance	Gov.	Deflection	Tilt	Twist	Radius of
ft		Load Comb.	in	٥	0	Curvature
188.00 187.00 185.00 184.00 179.00 170.00 162.00 150.00 125.00 110.00 95.00	Platform Mount [LP 403-1] SP2-5.8 Side Arm Mount [SO 102-3] Side Arm Mount [SO 701-1] Platform Mount [LP 403-1] Platform Mount [LP 403-1] Platform Mount [LP 403-1] Platform Mount [LP 403-1] Side Arm Mount [SO 901-1] Side Arm Mount [SO 901-1] Side Arm Mount [SO 901-1] Side Arm Mount [SO 901-1]	22 22 22 22 22 22 22 22 22 22 22 22	56.255 55.745 54.726 54.216 51.673 47.122 43.136 37.332 26.340 20.678 17.270	2.4387 2.4385 2.4372 2.4360 2.4274 2.4029 2.3547 2.2599 1.9238 1.6958 1.5559	0.0048 0.0049 0.0049 0.0050 0.0050 0.0045 0.0039 0.0033 0.0020 0.0015	62721 62721 62721 52175 29302 13834 8130 5584 3364 4313 4249
80.00 60.00 40.00 20.00	Side Arm Mount [SO 901-1] Side Arm Mount [SO 901-1] Jump Plate 120" x 6.5" x 1.25" (2) Jump Plate 120" x 6" x 1" (2) Jump Plate 120" x 6.5" x 1.25"	22 22 22 22 22 22	15.671 11.270 6.428 2.918 0.759	1.4964 1.2995 0.9996 0.6783 0.3511	0.0012 0.0010 0.0007 0.0004 0.0002	4557 3955 3602 3592 3528

Compression Checks

D - I -		• ' '		10000
Pole	DAG		n J	Data
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Section No.	Elevation	Size	L	L _u	KI/r	A	P_u	10	
	ft		ft	ft		in²	. и К	ф <i>Р</i> п	Ratio Pu
L1	190 - 185 (1)	P30x0.375	5.00	0.00	0.0	34.901	-3.44	K 4044.05	ϕP_n
L2	185 - 180 (2)	P30x0.375	5.00	0.00	0.0	34.901	-3.44 -4.73	1311.06 1311.06	0.003
L3	180 - 175 (3)	P36x0.375	5.00	0.00	0.0	1 41.969	-7.77	1490.10	0.004
L4	175 - 170 (4)	P36x0.375	5.00	0.00	0.0	7 41.969	-8.69	1490.10	0.006
L5	170 - 165 (5)	P36x0.375	5.00	0.00	0.0	7 41. 969	-13.59	1490.10	0.009
L6	165 - 160 (6)	P36x0.375	5.00	0.00	0.0	7 41.969	-18.89	1490.10	0.013
L7	160 - 155 (7)	P42x0.375	5.00	0.00	0.0	7 49.038	-20.10	1668.87	0.012
	155 - 150 (8)	P42x0.375	5.00	0.00	0.0	3 49.038	-21.31	1668.87	0.013
L9	150 - 145 (9)	P42x0.375	5.00	0.00	0.0	3 49.038	-25.92	1668.87	0.016

No.	Elevation	Size	L	L_{u}	KV	r A	P_u	ϕP_n	Ratio
	ft		ft	ft		in²	K	К	$\frac{P_u}{\phi P_n}$
L10	145 - 140 (10)	P42x0.375	5.00	0.00	0.0	3 49.038	-27.19	1668,87	
L11	140 - 135 (11)	P48x0.375	5.00	0.00	0.0	3 56.106	-28.60	1847.49	
L12	135 - 130 (12)	P48x0.375	5.00	0.00	0.0	9 56.106	-30.01	1847.49	0.016
L13	130 - 125 (13)	P48x0.375	5.00	0.00	0.0	9 56.106	-31.43	1847.49	0.017
L14	125 - 120 (14)	P48x0.375	5.00	0.00	0.0	9 56.106	-33.12	1847.49	0.018
L15	120 - 115 (15)	P54x0.375	5.00	0.00	0.0	9 63.175	-34.69	2026.00	0.017
L16	115 - 112.666 (16)	P54x0.375	2.33	0.00	0.0	5 63.175	-35.42	2026.00	0.017
L17	112.666 - 112.416 (17)	P54x0.4875	0.25	0.00	0.0	5 81.955	-35.52	2797,17	0.013
L18	112.416 - 107.416 (18)	P54x0.4875	5.00	0.00	0.0	8 81.955	-37.72	2797,17	0.013
L19	107.416 - 103.333 (19)	P54x0.4875	4.08	0.00	0.0	8 81.955	-39.30	2797.17	0.014
L20	103.333 - 103.083 (20)	P54x0.4875	0.25	0.00	0.0	8 81.955	-39.40	2797.17	0.014
	103.083 - 100 (21)	P54x0.4875	3.08	0.00	0.0	8 81.955	-40.59	2797.17	0.014
L22	100 - 95 (22)	P60x0.475	5.00	0.00	0.0	8 88.826	-42.80	2934.04	0.015
L23	95 - 90 (23)	P60x0.475	5.00	0.00	0.0	6 88.826	-45.16	2934.04	0.015
L24 9	0 - 89.5 (24)	P60x0.475	0.50	0.00	0.0	6 88.826	-45,37	2934.04	0.015
L25	89.5 - 89,25 (25)	P60x0.55625	0.25	0.00	0.0	6 103,87	-45.48	3570.37	0.013
L26 ;	89.25 - 85.5 (26)	P60x0.55625	3.75	0.00	0.0	90 103.87	-47,24	3570.37	
L27 (35.5 - 85.25 (27)	P60x0.6375	0.25	0.00	0.0	90 118.88	-47.38	4245.55	0.013
L28	85.25 - 84 (28)	P60x0.6375	1.25	0.00	0.0	90 118,88	-48.03	4245.55	
L29	84 - 83.75 (29)	P60x0.525	0.25	0.00	0.0	90 98,094	-48.15	3321.02	0.011
L30 8	3.75 - 82.5	P60x0.525	1.25	0.00	0.0	3 98.094	-48.71	3321.02	0.014
_31 8	(30) 2.5 - 82.25	P60x0,45	0.25	0.00	0.0	3 84.186	-48.81	2746.08	0.015
.32	(31) 82.25 - 80	P60x0.45	2.25	0.00	0.0	8 84.186	-49.71		0.018
.33 8	(32) 0 - 75 (33)	P60x0.575	5.00	0.00	0.0	8 107.34	-53.20	2746.08	0.018
.34 7	5 - 70 (34)	P60x0.575	5.00	0.00	0.0	60 107.34	-55.68	3722.74	0.014
35 7	0 - 65 (35)	P60x0.575	5.00	0.00	0.0	60 107.34	-58.14	3722.74	0.015
36 6	5 - 60 (36)	P60x0.575	5.00	0.00	0.0	60 107.34	-60.63	3722.74	0.016
37 60	- 58.5 (37)	P60x0.7	1.50	0.00	0.0	60 130.40	-62,99	3722.74	0.016
38 58	3.5 - 58.25	P60x0.625	0.25	0.00	0.0	80 116.58	-63.12	4791.24	0.013
39 58.	(38) 25 - 53.25	P60x0.625	5.00	0.00	0.0	30 116.58	-65.81	4139.15	0.015
10 5 3.	(39) 25 - 48.25	P60x0.625	5.00	0.00	0.0	30 116,58	-68.51	4139.15	0.016
11 4	(40) 3.25 - 48	P60x0.775	0.25	0.00	0.0	30 144.19		4139.15	0.017
2 48	(41) - 43 (42)	P60x0.775	5.00	0.00		70 144. 1 9	-68.67 -71.95	5450.65	0.013
3 43	- 40 (43)	P60x0.775	-	2.00	3.0	70	-71.85	5450.65	0.013

Section No.	Elevation	Size	L	Lu	KI/r	А	P_{u}	φPn	Ratio
	ft		ft	ft		in²	К	К	P_u
L44	40 - 35 (44)	P60x0.775	5.00	0.00	0.0	144.19	- 7 9.07	5450.65	φ <i>P_n</i> 0.015
L45	35 - 32.08 (45)	P60x0.775	2.92	0.00	0.0	70 144.19	-80.93	5450.65	0.015
L.46	32.08 - 31.83 (46)	P60x0.9625	0.25	0.00	0.0	70 178.51	-81.13	6747.93	0.012
L47	31.83 - 28.75 (47)	P60x0.9625	3.08	0.00	0.0	70 178.51 70	-83.49	6747.93	0.012
L48	28.75 - 28.5 (48)	P60x0.8125	0.25	0.00	0.0	151.07 90	-83.66	5710.78	0.015
L49	28.5 - 23.5 (49)	P60x0.8125	5.00	0.00	0.0	151.07 90	-87.01	5710.78	0.015
L50	23.5 - 18.5 (50)	P60x0.95	5.00	0.00	0.0	176.23 50	-93.77	6661.70	0.014
L51	18.5 - 13.5 (51)	P60x0.95	5.00	0.00	0.0	176.23 50	-97.60	6661.70	0.015
L52	13.5 - 8.5 (52)	P60x0.95	5.00	0.00	0.0	176.23 50	-101.38	6661.70	0.015
L53	8.5 - 3.5 (53)	P60x0.95	5.00	0.00	0.0	176.23 50	-105.03	6661.70	0.016
L54	3.5 - 0 (54)	P60x0.95	3.50	0.00	0.0	176.23 50	-107.58	6661.70	0.016

Pole Bending Design Data

Section	Elevation	Size	M _{ux}	ϕM_{nx}	Ratio	A //		
No.			ux	ψινιηχ	M _{ux}	M_{uy}	ϕM_{ny}	Ratio
	ft		kip-ft	kip-ft		kip-ft	ld- a	M_{uy}
L1	190 - 185 (1)	P30x0.375	10.91		φ <i>M</i> _{nx}		kip-ft	ϕM_{ny}
L2	185 - 180 (2)	P30x0.375	31.52	947.86	0.012	0.00	947.86	0.000
L3	180 - 175 (3)	P36x0.375		947.86	0.033	0.00	947.86	0.000
L4	175 - 170 (4)	P36x0.375	61.67 93.75	1338.81	0.046	0.00	1338.81	0.000
L5	170 - 165 (5)	P36x0.375		1338.81	0.070	0.00	1338.81	0.000
L6	165 - 160 (6)	P36x0.375	147.76	1338.81	0.110	0.00	1338.81	0.000
L.7	160 - 155 (7)	P42x0.375	215.85	1338.81	0.161	0.00	1338.81	0.000
L8	155 - 150 (8)	P42x0.375	296.93	1796.56	0.165	0.00	1796.56	0.000
L9	150 - 145 (9)	P42x0.375	380.22	1796.56	0.212	0.00	1796.56	0.000
	145 - 140 (10)	P42x0.375	489.64	1796.56	0.273	0.00	1796.56	0.000
	140 - 135 (11)		601.66	1796.56	0.335	0.00	1796.56	0.000
	135 - 130 (12)	P48x0.375	716.36	2321.11	0.309	0.00	2321.11	0.000
	130 - 125 (13)	P48x0.375	833.83	2321.11	0.359	0.00	2321,11	0.000
	125 - 120 (14)	P48x0.375	953.97	2321.11	0.411	0.00	2321.11	0.000
	120 - 115 (15)	P48x0.375	1077.73	2321.11	0.464	0.00	2321.11	0.000
	115 - 112,666	P54x0.375	1203.97	2912.46	0.413	0.00	2912,46	0.000
_10	(16)	P54x0.375	1263.85	2912.46	0.434	0.00	2912.46	0.000
L17	112.666 -	Mg (* 1000						
L17		P54x0.4875	1270.31	3864.47	0.329	0.00	3864.47	0.000
L18	112,416 (17)							0.000
LIO	112.416 -	P54x0.4875	1401.73	3864.47	0.363	0.00	3864.47	0.000
L19	107.416 (18)							0.000
	107.416 -	P54x0.4875	1511.12	3864.47	0.391	0.00	3864.47	0.000
L20	103.333 (19)							0.000
	103.333 -	P54x0.4875	1517.88	3864.47	0.393	0.00	3864,47	0.000
	103.083 (20)						000 1117	0.000
LZI	103.083 - 100	P54x0.4875	1601.91	3864.47	0.415	0.00	3864.47	0.000
L22	(21)						0001.17	0.000
-	100 - 95 (22)	P60x0.475	1740.48	4598.57	0.378	0.00	4598.57	0.000
L23	95 - 90 (23)	P60x0.475	1883.80	4598.57	0.410	0.00	4598,57	0.000
L24 9	90 - 89.5 (24)	P60x0.475	1898.22	4598.57	0.413	0.00	4598.57	0.000
L25	89.5 - 89.25	P60x0.55625	1905.43	5456.53	0.349	0.00	5456.53	0.000
1.00	(25)					5.00	0,00.00	0.000
L26	89.25 - 85.5	P60x0.55625	2015.22	5456,53	0.369	0.00	5456.53	0.000
1.07	(26)					0.00	0-00.00	0.000
L27	85.5 - 85.25	P60x0.6375	2022.65	6334.56	0.319	0.00	6334.56	0.000
1.00	(27)					3.00	0004.00	0.000
L28	85.25 - 84	P60x0.6375	2059.97	6334.56	0.325	0.00	6334.56	0.000
1xTower	Report - version	n R O E O		ŕ		3.00	5007.00	0.000

Section No.	n Elevation	Size	M _{ux}	ф <i>М_{пх}</i>	Ratio	M_{vy}	ф <i>М_{пу}</i>	Ratio
	ft		kip-ft	kip-ft	Mux	kip-ft		M_{uy}
	(28)			пр-п	ф <i>М_{пх}</i>	кір-п	kip-ft	ф <i>М_{пу}</i>
L29	84 - 83.75	P60x0.525	2067.47	5124.16	0,403	0.00	5124.16	0.000
L30	(29)			- 12 •	0.100	0.00	3124.10	0.000
LOU	83.75 - 82.5 (30)	P60x0.525	2105.18	5124.16	0.411	0.00	5124.16	0.000
L31	82.5 - 82.25	P60x0.45	2112,76	4000.07				
	(31)	. 50,101.10	2112,76	4338.67	0.487	0.00	4338.67	0.000
L32	82.25 - 80	P60x0.45	2181.31	4338.67	0.500			
	(32)		2101.01	4336.07	0.503	0.00	4338,67	0.000
L33	80 - 75 (33)	P60x0.575	2338.56	5657.38	0.413	0.00		
L34	75 - 70 (34)	P60x0.575	2498.34	5657.38		0.00	5657.38	0.000
L35	70 - 65 (35)	P60x0.575	2664.01		0.442	0.00	5657.38	0.000
L36	65 - 60 (36)	P60x0.575	2833,47	5657.38	0.471	0.00	5657.38	0.000
L37	60 - 58.5 (37)	P60x0.7	2885.48	5657.38	0.501	0.00	5657,38	0.000
L38	58.5 - 58,25	P60x0.625		7023.43	0.411	0.00	7023.43	0.000
	(38)	. 00,0,020	2894.17	6198.18	0.467	0.00	6198,18	0.000
L39	58.25 - 53.25	P60x0.625	2000 07					
	(39)	1 0000,020	3068.97	6198.18	0.495	0.00	6198.18	0.000
L40	53.25 - 48.25	P60x0.625	2045 70			•		
	(40)	1 00/0.020	3245.72	6198.18	0.524	0.00	6198.18	0.000
L41	48.25 - 48	P60x0.775	2251.20					
	(41)	1 0000.775	3254.60	7865.35	0.414	0.00	7865.35	0.000
L42	48 - 43 (42)	P60x0.775	0404 50					
L43	43 - 40 (43)	P60x0.775	3434.53	7865.35	0.437	0.00	7865,35	0.000
L44	40 - 35 (44)		3544.41	7865.35	0.451	0.00	7865.35	0.000
L45	35 - 32.08	P60x0,775	3734.53	7865.35	0.475	0.00	7865,35	0.000
	(45)	P60x0.775	3847.30	7865.35	0.489	0.00	7865.35	0.000
L46	32.08 - 31.83	D00-0 000F						0.000
0	(46)	P60x0.9625	3857.02	10041.58	0.384	0.00	10041.58	0.000
L47	31.83 - 28.75	D00: 0 000=					.0017.00	0.000
777	(47)	P60x0.9625	3977.52	10041.58	0.396	0.00	10041.58	0.000
L48	28.75 - 28.5	F100 0 0 4					10011.00	0.000
L+0		P60x0.8125	3987.36	8292.48	0.481	0.00	8292,48	0.000
L49	(48)					0.00	0202.70	0.000
L 4 8	28.5 - 23.5	P60x0.8125	4186.09	8292.48	0.505	0.00	8292,48	0.000
L50	(49)					0.00	0232,40	0.000
LOU	23.5 - 18.5	P60x0.95	4389.46	9893.33	0.444	0.00	9893.33	0.000
1 54	(50)				0	0.00	9093.33	0.000
L51	18.5 - 13.5	P60x0.95	4598.95	9893.33	0.465	0.00	0000 00	0.000
1.50	(51)				÷. 100	0.00	9893.33	0.000
L52	13.5 - 8.5 (52)	P60x0.95	4811.60	9893.33	0.486	0.00	0000.00	0.000
L53	8.5 - 3.5 (53)	P60x0.95	5027.42	9893.33	0.508	0.00	9893,33	0.000
L54	3.5 - 0 (54)	P60x0.95	5180.32	9893.33	0.524		9893.33	0.000
-				0000.00	U.0Z4	0.00	9893.33	0.000

· / .			Pole Shea	ar Desig	n Data			- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1
Section No.	Elevation	Size	Actual Vu	φVn	Ratio	Actual	φ <i>Τ</i> ,,	Ratio
	ft		K	К		Tu kin #	t.: «	T _u
L.1	190 - 185 (1)	P30x0.375	2.80		φ <i>V_p</i>	kip-ft	kip-ft	\ \ \ \ \ T_n
L2	185 - 180 (2)	P30x0.375	3.99	395.78	0.007	0.22	994.73	0.000
L3	180 - 175 (3)	P36x0.375	6.20	395.78	0.010	0.01	994.73	0.00
L4	175 - 170 (4)	P36x0.375		454.19	0.014	0.17	1094.28	0.00
L5	170 - 165 (5)	P36x0.375	6,61	454.19	0.015	0.17	1094.28	0.00
1.6	165 - 160 (6)	P36x0.375	11.00	454.19	0.024	0.17	1094.28	0.00
L7	160 - 155 (7)	P42x0.375	16.00	454.19	0.035	0.29	1094.28	0.00
L8	155 - 150 (8)	P42x0.375	16.46	421.13	0.039	0.29	1185.51	0.000
L9	150 - 145 (9)		17.09	421.13	0.041	1.34	1185.51	0.00
	145 - 140 (10)	P42x0.375	22.15	421.13	0.053	1.79	1185,51	0.002
	140 - 135 (11)	P42x0.375	22.67	421.13	0.054	1.79	1185.51	0.002
	135 - 130 (11)	P48x0.375	23.23	394.81	0.059	1.79	1270.83	0.002
	130 - 125 (13)	P48x0.375	23.77	394.81	0.060	1.79	1270.83	0.001
	125 - 120 (14)	P48x0.375	24.30	394.81	0.062	1.79	1270.83	0.001
	120 - 115 (15)	P48x0.375	24.98	394.81	0.063	1,93	1270.83	0.002
	115 - 112.666	P54x0.375	25.53	406.96	0.063	1.93	1474,98	0.002
- 10	(16)	P54x0.375	25.80	406.96	0.063	1.93	1474.98	0.001

Section No.	n Elevation	Size	Actual	φV"	Ratio	Actual	φ <i>Τ</i> _n	Ratio
740.	ft		$egin{array}{c} V_u \ \mathcal{K} \end{array}$	V		T_{u}	•	T_a
L17	112.666 -	P54x0.4875		K 700.05	ϕV_n	kip-ft	kip-ft	ϕT_n
	112.416 (17)	1 3470.4073	25.83	732.85	0.035	1.93	2650.55	0.001
L18	112.416 - ´ 107.416 (18)	P54x0.4875	26.56	732.85	0.036	1.61	2650.55	0.001
L19	107.416 - ´ 103.333 (19)	P54x0.4875	27.04	732.85	0.037	1.61	2650.55	0.001
L20	103.333 - ´ 103.083 (20)	P54x0.4875	27.08	732.85	0.037	1.61	2650.55	0.001
L21	103.083 - 100 (21)	P54x0.4875	27.44	732.85	0.037	1.61	2650.55	0.001
L.22	100 - 95 (22)	P60x0,475	28.07	710.49	0.040	1.67	2858.41	0.004
L23	95 - 90 (23)	P60x0.475	28.81	710.49	0.041	1.84	2858.41	0.001
L24	90 - 89.5 (24)	P60x0.475	28.87	710.49	0.041	1.84		0.001
L25	89.5 - 89.25	P60x0.55625	28.90	1012.19	0.029	1.84	2858.41	0.001
L26	(25) 89.25 - 85.5	P60x0.55625	29.68	1012.19			4066.63	0.000
L27	(26) 85.5 - 85.25	P60x0.6375			0.029	1.84	4066.63	0.000
L28	(27) 85.25 - 84		29.73	1348.20	0.022	1.84	5511.49	0.000
L29	(28)	P60x0.6375	30.00	1348,20	0.022	1.84	5511.49	0.000
L30	84 - 83.75 (29)	P60x0.525	30.04	889.19	0.034	1.84	3574.31	0.001
	83.75 - 82.5 (30)	P60x0.525	30.31	889.19	0.034	1.84	3574.31	0.001
L31	82.5 - 82.25 (31)	P60x0.45	30.35	629.38	0.048	1.84	2533,13	0.001
L32	82.25 - 80 (32)	P60x0.45	30.60	629.38	0.049	1.84	2533.13	0.001
L33	80 - 75 (33)	P60x0,575	31.71	1090.24	0.029	1.97	4378.80	0.000
L34	75 - 70 (34)	P60x0.575	32.23	1090.24	0.030	1.97	4378.80	0.000
L35	70 - 65 (35)	P60x0.575	33.68	1090.24	0.031	1.81	4378.80	0.000
L36	65 - 60 (36)	P60x0.575	34.10	1090,24	0.031	1.81	4378.80	
L37	60 - 58.5 (37)	P60x0,7	34.74	1478.82	0.023	1.81		0.000
L38	58.5 - 58.25	P60x0.625	34.75	1314.11	0.026	1.81	6788.03	0.000
	(38)				0.020	1.01	5273,53	0.000
L39	58.25 - 53.25 (39)	P60x0.625	35.16	1314.11	0.027	1.81	5273.53	0.000
L40	53.25 - 48.25 (40)	P60x0.625	35.54	1314.11	0.027	1.81	5273.53	0.000
L41	48.25 - 48 (41)	P60x0.775	35.57	1635.20	0.022	1.81	8514.42	0.000
L42	48 - 43 (42)	P60x0.775	36.39	1635.20	0.022	1.81	0514.40	0.000
L43	43 - 40 (43)	P60x0.775	36.86	1635.20	0.023	1.81	8514.42	0.000
L44	40 - 35 (44)	P60x0,775	38.40	1635.20	0.023	1.81	8514.42	0.000
L45	35 - 32.08	P60x0.775	38.85	1635.20	0.023	1.81	8514.42	0.000
L46	(45) 32.08 - 31.83	P60x0.9625	38.88	2024.38	0.019	1.81	8514,42 10507.50	0.000
L47	(46) 31.83 - 28.75	P60x0.9625	39.36	2024.38	0.019	1,81	10507.50	
L48	(47) 28.75 - 28.5	P60x0.8125	39.39	1713,23	0.023			0.000
L49	(48) 28.5 - 23.5	P60x0.8125	40.10			1.81	8915.08	0.000
L50	(49) 23.5 - 18.5	P60x0.95		1713.23	0.023	1.81	8915,08	0.000
L.51	(50) 18.5 - 13.5		41.57	1998.51	0.021	1.81	10375.42	0.000
	(51) 13.5 - 8.5 (52)	P60x0.95	42.23	1998.51	0.021	1.81	10375.42	0.000
L52 L53	8.5 - 8.5 (52) 8.5 - 3.5 (53)	P60x0.95	42.87	1998.51	0.021	1.81	10375,42	0.000
L54	3.5 - 3.5 (53) 3.5 - 0 (54)	P60x0.95	43.49	1998.51	0.022	1.81	10375.42	0.000
L07	0.0 - 0 (04)	P60x0.95	43.91	1998.51	0.022	1.81	10375.42	0.000
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Pole Interaction Design Data

No.	n Elevation	Ratio P _u	Ratio M _{ux}	Ratio M _{uy}	Ratio	Ratio	Comb.	Allow.	Criteria
	ft	φPa	φM _{nx}		$-\frac{V_y}{V_y}$	$-\frac{T_u}{T_u}$	_ Stress	Stress	
L1	190 - 185 (1)	0.003	Ψινι _{πχ} 0.012	$\phi M_{ny} = 0.000$	φ <i>V_n</i>	<u> </u>	Ratio	Ratio	
L2	185 - 180 (2)	0.004	0.012		0.007	0.000	0.014	1.050	4.8.2
L3	180 - 175 (3)	0.005		0.000	0.010	0.000	0.037	1.050	4.8.2
L4	175 - 170 (4)	0.005	0.046	0.000	0.014	0.000	0.051	1.050	4.8.2
L5	170 - 165 (5)	0.000	0.070	0.000	0.015	0.000	0.076	1.050	4.8.2
L6	170 - 100 (0)	0.009	0.110	0.000	0.024	0.000	0.120	1.050	
L7	165 - 160 (6)		0.161	0.000	0.035	0.000	0.175	1.050	4.8.2
	160 - 155 (7)	0.012	0.165	0.000	0.039	0.000	0.179		4.8.2
L8	155 - 150 (8)		0.212	0.000	0.041	0.001		1.050	4.8.2
L9	150 - 1 45 (9)	0.016	0.273	0.000	0.053	0.001	0.226	1.050	4.8.2
L10	145 - 140 (ÌÓ)	0.016	0.335	0.000	0.054		0.291	1.050	4.8.2
L11	140 - 135 (11)	0.015	0.309	0.000	0.059	0.002	0.354	1.050	4.8.2
L12	135 - 130 (12)	0.016	0.359	0.000		0.001	0.328	1.050	4.8.2
L13	130 - 125 (13)		0.411	0.000	0.060	0.001	0.379	1.050	4.8.2
L14	125 - 120 (14)	0.018	0.464		0.062	0.001	0.432	1.050	4.8.2
L15	120 - 115 (15)	0.017		0.000	0.063	0.002	0.486	1.050	4.8.2
L16	115 - 112.666		0.413	0.000	0.063	0.001	0.435	1.050	4.8.2
_,,		0.017	0.434	0.000	0.063	0.001	0.456	1.050	
L17	(16)							1.000	4.8.2
	112.666 - 112.416 (17)	0.013	0.329	0.000	0.035	0.001	0.343	1.050	4.8.2
L18	112.416 - · 107.416 (18)	0.013	0.363	0.000	0.036	0.001	0.378	1.050	4.8.2
L19	107.416 -	0.014	0.391	0.000	0.037	0.001	0.406	1.050	4.8.2
L20	103.333 (19) 103.333 -	0.014	0.393	0.000	0.037	0.001			
L21	103.083 (20) 103.083 - 100	0.015	0.415				0.408	1.050	4.8.2
L22	(21) 100 - 95 (22)			0.000	0.037	0.001	0.430	1.050	4.8.2
	00 - 95 (22)	0.015	0.378	0.000	0.040	0.001	0.395	1.050	400
L23	95 - 90 (23)	0.015	0.410	0.000	0.041	0.001	0.427		4.8.2
L24	90 - 89.5 (24)	0.015	0.413	0.000	0.041	0.001		1.050	4.8.2
L25	89.5 - 89.25	0.013	0.349	0.000	0.029		0.430	1.050	4.8.2
	(25)		10	0.000	0.029	0.000	0.363	1.050	4.8.2
_26	89.25 - 85.5 (26)	0.013	0.369	0.000	0.029	0.000	0.383	1.050	4.8.2
_27	85.5 - 85.25	0.011	0.319	0.000	0.022	0.000	0.331	1.050	
_28	(27) 85.25 - 84	0.011	0.325	0.000	0.022				4.8.2
29	(28) 84 - 83.75	0.014	0.403			0.000	0.337	1.050	4.8.2
.30	(29)			0.000	0.034	0.001	0.419	1.050	4.8.2
	83.75 - 82.5 (30)	0.015	0.411	0.000	0.034	0.001	0.427	1.050	4.8.2
.31	82.5 - 82.25 (31)	0.018	0.487	0.000	0.048	0.001	0.507	1.050	4.8.2
32	82.25 - 80 (32)	0.018	0.503	0.000	0.049	0.001	0.523	1.050	4.8.2
33		0.04.4							7.0.∠
	80 - 75 (33)	0.014	0.413	0.000	0.029	0.000	0.429	1.050	400
	75 - 70 (34)	0.015	0.442	0.000	0.030	0.000	0.457		4.8.2
35	70 - 65 (35)	0.016	0.471	0.000	0.031	0.000		1.050	4.8.2
36	65 - 60 (36)	0.016	0.501	0.000	0.031		0.487	1.050	4.8.2
37 (30 - 58.5 (37)	0.013	0.411	0.000	0.023	0.000	0.518	1.050	4.8.2
	58.5 - 58.25	0.015	0.467			0.000	0.425	1.050	4.8.2
	(38)	2.0.0	0.701	0.000	0.026	0.000	0.483	1.050	4.8.2
39 £	8.25 - 53.25	0.016	0.495	0.000	0.027	0.000	0.512	1.050	4.8.2
10 5	(39) 3.25 - 48,25	0.017	0.524	0.000	0.027	0.000			
11	(40) 48.25 - 48	0.013	0.414				0.541	1.050	4.8.2
	(41) 48 - 43 (42)			0.000	0.022	0.000	0.427	1.050	4.8.2
	10 - 40 (42)	0.013	0.437	0.000	0.022	0.000	0.450	1.050	400
	43 - 40 (43)	0.014	0.451	0.000	0.023	0.000	0.465		4.8.2
4 4	⁴⁰ - 35 (44)	0.015	0.475	0.000	0.023	0.000		1.050	4.8.2
5	35 - 32.08 (45)	0.015	0.489	0.000	0.023	0.000	0.490 0.505	1.050 1.050	4.8.2 4.8.2
6 3:	2.08 - 31.83	0.012	0.384	0.000	0.010	0.000	0.00=		
	(46)		3.004	v.vvv	0.019	0.000	0.397	1.050	4.8,2

Section No.	Elevation	Ratio P _u	Ratio M _{ux}	Ratio M _{uv}	Ratio Vu	Ratio Tu	Comb. Stress	Allow. Stress	Criteria
	ft	ϕP_n	φM _{ox}	$\phi M_{\alpha \nu}$	φV ₀	$\frac{r_{ij}}{\phi T_{ij}}$	Ratio	Ratio	
L47	31.83 - 28.75 (47)	0.012	0.396	0.000	0.019	0.000	0.409	1.050	4.8.2
L48	28.75 - 28.5 (48)	0.015	0.481	0.000	0.023	0.000	0.496	1.050	4.8.2
L49	28.5 - 23.5 (49)	0.015	0.505	0.000	0.023	0.000	0.521	1.050	4.8.2
L50	23.5 - 18.5 (50)	0.014	0.444	0.000	0.021	0.000	0.458	1.050	4.8.2
L51	18.5 - 13.5 (51)	0.015	0.465	0.000	0.021	0.000	0.480	1.050	4.8.2
L52 L53 L54	13.5 - 8.5 (52) 8.5 - 3.5 (53) 3.5 - 0 (54)	0.015 0.016 0.016	0.486 0.508 0.524	0.000 0.000 0.000	0.021 0.022 0.022	0.000 0.000 0.000	0.502 0.524 0.540	1.050 1.050 1.050	4.8.2 4.8.2 4.8.2

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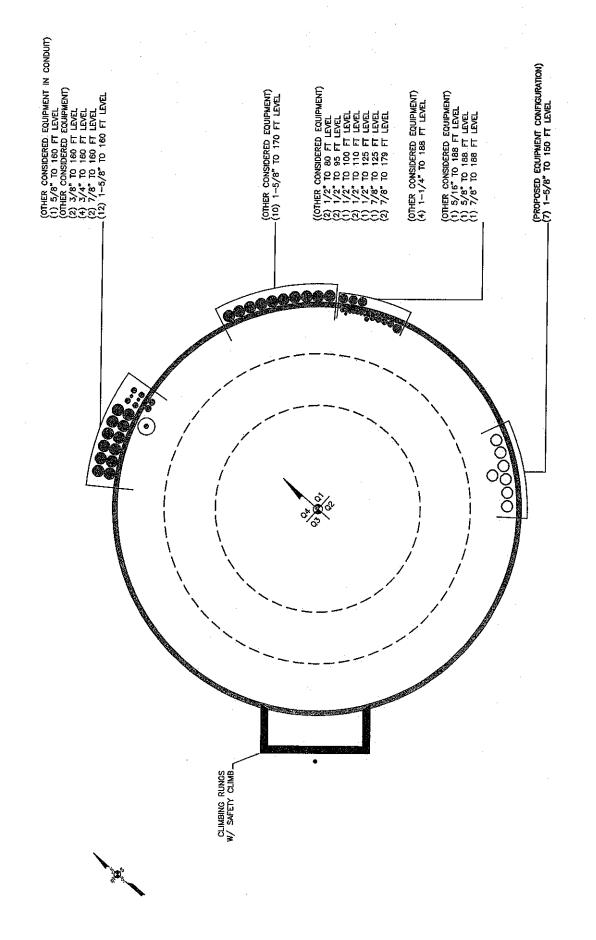
Section No.	n Elevation ft	Component	Size	Critical	P	øP _{allow}	%	Pass
L1		Туре		Element	K	K	Capacity	Fail
1.2	190 - 185	Pole	P30x0.375	1	-3.44	1376.61	1.4	Pass
L3	185 - 180	Pole	P30x0.375	2	-4.73	1376.61	3.5	Pass
	180 - 175	Pole	P36x0.375	3	7.77	1564.60	4.9	Pass
L4	175 - 170	Pole	P36x0.375	4	-8.69	1564.60	7.2	Pass
L5	170 - 165	Pole	P36x0.375	5	-13.59	1564.60	11.4	Pass
L6	165 - 160	Pole	P36x0.375	6	-18.89	1564.60	16.7	
L7	160 - 155	Pole	P42x0.375	7	-20.10	1752.31	17.0	Pass
L8	155 - 150	Pole	P42x0.375	8	-21.31	1752.31	21.5	Pass
L9	150 - 145	Pole	P42x0,375	9	-25.92	1752.31	27.7	Pass
L10	145 - 140	Pole	P42x0.375	10	-27.19	1752.31		Pass
L11	140 - 135	Pole	P48x0.375	11	-27.19		33.7	Pass
L12	135 - 130	Pole	P48x0.375	12	-30.01	1939.86	31.2	Pass
L13	130 - 125	Pole	P48x0.375	13	-30.01	1939.86	36.1	Pass
L14	125 - 120	Pole	P48x0.375	13 14	-31.43 -33.12	1939.86	41.1	Pass
L15	120 - 115	Pole	P54x0.375	15		1939.86	46.3	Pass
L16	115 - 112.666	Pole	P54x0.375	16	-34.69	2127.30	41.4	Pass
L17	112.666 -	Pole	P54x0.4875	17	-35.42	2127.30	43.4	Pass
	112. 4 16		1 5-20.4015	17	-35.52	2937.03	32.6	Pass
L18	112.416 -	Pole	P54x0.4875	40				
	107.416	. 0.0	1 3480.4675	18	-37.72	2937.03	36.0	Pass
L19	107.416 -	Pole	P54x0.4875	46				
	103,333	1 0.0	F 04X0.4675	19	-39.30	2937.03	38.7	Pass
L20	103.333 -	Pole	DE4v0 4075					
	103.083	7 010	P54x0.4875	20	-39.40	2937.03	38.9	Pass
L21	103.083 - 100	Pole	DE4v0 4075					
L22	100 - 95	Pole	P54x0.4875	21	-40.59	2937.03	41.0	Pass
L23	95 - 90	Pole	P60x0.475	22	-42.80	3080.74	37.6	Pass
L24	90 - 89.5	Pole	P60x0.475	23	-45.16	3080.74	40.6	Pass
L25	89.5 - 89.25	Pole	P60x0.475	24	-45.37	3080.74	40.9	Pass
L26	89.25 - 85.5	Pole	P60x0.55625	25	-45.48	3748.89	34.6	Pass
L27	85.5 - 85.25	Pole	P60x0.55625	26	-47.24	3748.89	36.5	Pass
L28	85.25 - 84	Pole	P60x0.6375	27	-47.38	4457.83	31.5	Pass
L29	84 - 83.75	Pole	P60x0.6375	28	-48.03	4457.83	32.1	Pass
L30	83.75 - 82.5	Pole	P60x0.525	29	-48.15	3487.07	39.9	Pass
L31	82.5 - 82.25		P60x0.525	30	-48.71	3487.07	40.6	Pass
L32	82.25 - 80	Pole	P60x0.45	31	-48.81	2883.38	48.3	Pass
L33	80 - 75	Pole	P60x0.45	32	-49.71	2883.38	49.8	Pass
L34	75 - 70	Pole	P60x0.575	33	-53.20	3908.88	40.8	Pass
L34 L35		Pole	P60x0.575	34	-55.68	3908.88	43.6	Pass
L36	70 - 65	Pole	P60x0.575	35	-58.14	3908.88	46.4	Pass
_30 _37	65 - 60	Pole	P60x0.575	36	-60.63	3908.88	49.3	Pass
	60 - 58.5	Pole	P60x0.7	37	-62.99	5030.80	40.4	
_38	58.5 - 58.25	Pole	P60x0.625	38	-63.12	4346.11	46.0	Pass
L39 L40	58.25 - 53.25	Pole	P60x0.625	39	-65.81	4346.11	48.7	Pass
411	53.25 - 48.25	Pole	P60x0.625	40	-68.51	1070. I I	70.7	Pass

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Section No.	Elevation ft	Component Type	Size	Critical Element	P K	øР _{allow} К	% Capacity	Pass Fail
L41	48.25 - 48	Pole	P60x0.775	41	-68.67	5723.18	40.7	Pass
L42	48 - 43	Pole	P60x0.775	42	-71.85	5723.18	40.7	
L43	43 - 40	Pole	P60x0.775	43	-71.05 -73.76	5723.18		Pass
L44	40 - 35	Pole	P60x0.775	44	-79.07	5723.18	44.3	Pass
L45	35 - 32.08	Pole	P60x0.775	45	-80.93		46.7	Pass
L46	32.08 - 31.83	Pole	P60x0.9625	46	-81.13	5723.18	48.1	Pass
L47	31.83 - 28.75	Pole	P60x0.9625	47		7085.33	37.8	Pass
L48	28.75 - 28.5	Pole	P60x0.8125	48	-83.49	7085.33	38.9	Pass
L49	28.5 - 23.5	Pole	P60x0.8125		-83.66	5996.32	47.2	Pass
L50	23.5 - 18.5	Pole	P60x0.95	49	-87.01	5996.32	49.6	Pass
L51	18.5 - 13.5	Pole		50	-93.77	6994.78	43.6	Pass
L52	13.5 - 8.5	Pole	P60x0.95	51	-97.60	6994.78	45.7	Pass
L53	8.5 - 3.5		P60x0.95	52	-101.38	6994.78	47.8	Pass
L54	3,5 - 0	Pole	P60x0.95	53	-105.03	6994.78	49.9	Pass
LUT	3.5 - U	Pole	P60x0.95	54	-107.58	6994.78	51.5	Pass
							Summary	
						Pole (L40)	51.5	Pass
to. Aba		and the second s				RATING =	51.5	Pass

Note: Above stress ratio for reinforced sections are approximate. More exact calculation are presented in Appendix C.

APPENDIX B BASE LEVEL DRAWING



BUSINESS UNIT: 829046 TOWER ID: C_BASELEYEL

APPENDIX C ADDITIONAL CALCULATIONS

CCIpole per TIA-222- H

Work Order: 1765202 Site BU: 829046

CASTLE

CASTLE	Copyright © 2019 Crown Castle		Bend Radius (in) Pole Material	L	A53-B-42	A53_B.43	74-0-0-0	A53-B-42	C 0 C 2 V	75-0-CCV	A53_B_17	74-9-550	A53-B-42		A53-B-42	4 4 4 4	A53-B-42	
			Wall Thickness (in) Be	11.00	0.375	0.375	1250	0.3/5	0.375		0.375		0.375	30	7	5625		
1		eter	(III)	5	05	36	CV	7.5	48		54	8	90	09		9	, i	
65202		i i	lop Diameter (In)	30	00.5	36.00	42.00	40.00	46.00	00 70	00.40	80.00	0000	60.00		60.00	00.03	
Work Order: 1765202		Number of Chas	regimes of sines (10) plameter (10)	0		2	0	c	,	c	2	_		0		0	C	,
	*** **********************************	Lap Spilce Length								•								
		Section Length (ft)		7.0	20	00	20	20		50		70	ů.	77	20		20	
Pole Geometry	Pole Height Above	_	197	000	180	160	200	140	320	170	400	TOD	08	3	09		40	
Pole			-		7	~		4	Ē	'n	ч			Ť		•	6	

Reinforcement Configuration

		6 7 8 9 10 11 12 13 14 15 16 17 18					2,40	330% (210% 330%			
		3 60 40 5	MS-650 (1.1875") 3 (2.1875) (2.1875)	1 C	MS-600 (1.1875") 3 (645) (6.25)	2 SECUMENTAL SECUMENTS	MACASO (1 1075)				
	Top Effective Elevation (ft) Type	32.08 plate	48.25 plate	plate	103.333 plate	112.666 plate	╁	\dagger			_
2	Bottom Effective Elevation (ft)	1 0	2 28.75	3 58.5	4 84	5 103,333	6 82.5	7	8	ō	27

Reinforcement Details

	Delinform	2	in) Material .	AE77 CE	A372-03	32-02-4	2/61	A572-65		A572-65	17 01.14	A5/2-65	A572-65
		1	Bolt Hole Size (in)	11875)	1.1875		1.1875		1.1875	1 1075	T'10/3	1,1875
		~	١	9.063		6.563		3.250	4 370	4.750	4.750	2	3,250
		(E)	1	17.250		19.250	20.00	40.b25	16 375	C/C'07	16,375		20.625
Тор	Termination	[enoth (in)	+	45.000	6000	33,000	40.000	TO:000	24 000	200	24.000	000	18,000
Bottom	Termination	Length (in)		45,000	22 000	33.000	18,000	000.01	24.000		24.000	40.00	10,000
	Pole Face to	Centroid (in)	2030	0,023	0.625	7700	5.5		0.5	L	C.U	n c	
		Gross Area (in-)	10.625	Commission	8.125		4.5		٥	y		4.5	
		(ui) H	1.25	100	1.25		1	-	*	-		-	
		III) a	8,5	u	0,0	7.12	?	٠		9		4.5	
			(- 1		4	'n	1	4		Ϋ́	Ú	0	

TNX Geometry Input

	Section Height (ft)	Section Length (ft)	Lap Splice Length (ft)	Number of Sides	Top Diameter (in)	Bottom Diameter (in)	 Wall Thickness (in)	Tapered Pole	Weight
. 1	190 185	5	(14)	0	30.000			Grade	Multiplier
2	185 - 180	5	0	0	30.000	30,000	0.375	A53-B-42	1.000
3	180 - 175	5		0	36.000	30.000	0.375	A53-B-42	1.000
4	175 - 170	5		0	36.000	36.000 36.000	0.375	A53-B-42	1.000
5	170 - 165	5		0	36.000	36,000	0,375	A53-8-42	1.000
6	165 - 160	5	0	0	36.000	36,000	0.375	A53-B-42	1.000
7	160 - 155	5		0	42,000	42.000	0.375	A53-B-42	1.000
8	155 - 150	5		0	42,000	42.000	0.375 0.375	A53-B-42	1.000
9	150 - 145	5		0	42,000	42.000		A53-B-42	1.000
10	145 - 140	5	0	0	42.000		0.375	A53-B-42	1.000
11	140 - 135	5		0	48.000	42.000	0.375	A53-B-42	1.000
12	135 - 130	5		0	48.000	48,000	0.375	A53-B-42	1.000
13	130 - 125	5 .		0	48.000	48.000	0.375	A53-B-42	1.000
14	125 - 120	5	0	0	48,000 48,000	48.000	0.375	A53-B-42	1.000
15	120 - 115	5		0	48.000 54.000	48.000	0.375	A53-B-42	1.000
16	115 - 112,566	2.334		0		54.000	0.375	A53-B-42	1.000
17	112.665 - 112.415	0.25		0	54.000	54.000	0.375	A53-B-42	1.000
18	112.416 - 107.416	5		0	54.000	54.000	0.4875	A53-B-42	0.990
19	107.416 - 103.333	4.083		0	54.000	54.000	0.4875	A53-B-42	0.990
20	103.333 - 103.083	0.25			54.000	54.000	0.4875	A53-B-42	0.990
21	103.083 - 100	3.083	0	0	54.000	54.000	0.4875	A53-B-42	0.990
22	100 - 95	5		0	54.000	54.000	0.4875	A53-8-42	0.990
23	95 - 90	5		0	60.000	60,000	0.475	A53-B-42	0.993
24	90 - 89.5	0.5		0	60.000	60.000	0.475	A53-B-42	0.993
25	89.5 - 89.25	0.25		0	60.000	60.000	0.475	A53-8-42	0.993
26	89.25 - 85.5			0	60.000	60.000	0.55625	A53-B-42	0.979
27	85.5 - 85.25	3.75		0	60,000	60.000	0.55625	A53-B-42	0.979
28	85.25 - 84	0.25	<u> </u>	0	60.000	60.000	0.6375	A53-B-42	0.969
20 29	84 - 83.75	1.25		0 .	60.000	60.000	0.6375	A53-B-42	0.959
23 30		0.25		0	60.000	60.000	0.525	A53-B-42	0.991
31		1.25		0	60.000	60.000	0.525	A53-B-42	0.991
32		0.25		0	60.000	60.000	0.45	A53-B-42	0.995
- 4	82,25 - 80	2.25	0	0	60.000	60.000	0.45	A53-B-42	0.995
33	. 80 - 75	5		D	60.000	60,000	0.575	A53-B-42	0.996
34	75 - 70	5		0	60.000	60.000	0.575	A53-B-42	0.996
35	70 - 65	. 5	<u> </u>	0	60.000	60.000	0.575	A53-B-42	0.996
36	65 - 60	5	0	0	60.000	60,000	0.575	A53-B-42	0.996
37	60 - 58,5	1.5		0	60.000	60.000	0.7	A53-8-42	0.998
18	58.5 - 58.25	0.25		0	60.000	60.000	0.625	A53-B-42	1.000
19	58,25 - 53,25	5		0 '	60.000	60,000	0,625	A53-B-42	1.000
0	53.25 - 48.25	5 .		0	60.000	60,000	0,625	A53-B-42	1.000
1	48.25 - 48	0.25		0	60.000	50.000	0.775	A53-B-42	0.978
2	48 - 43	5		. 0	60.000	60.000	0.775	A53-B-42	0.978
3	43 - 40	3	0	0	60.000	60,000	0.775	A53-8-42	0.978
4	40 - 35	5		0	60.000	60.000	0.775	A53-B-42	0.978
5	35 - 32.08	2.92		0	60.000	60.000	0.775	A53-B-42	0.978
6	32.08 - 31.83	0.25		0	60.000	60.000	0.9625	A53-B-42	0.968
17	31.83 - 28.75	3.08		0	50,000	50,000		100 0 40	

31.83 - 28.75

28.75 - 28.5

28.5 - 23.5 23.5 - 18.5

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TNX Section Forces

[ncrement (ft): 5		Ţ		TNX O	ıtpı	ut	
		÷		:	M _{ux} (÷
	Section Height (ft)		Pu	(K)	ft)		j .	(K)
1.7	1 190 - 185			44	10	.91	2.	_
	2 185 - 180			.73		.52	3.9	
	3 180 - 175			.77		-		
	175 - 170		- 2.			.67	6.2	
-		_		.69	93.		6.6	
-		\dashv		.59	147		11.(20
		-4		.89	215.	85	16.0	00
		_	20	.10	296.	93	16.4	16
		_	21	.32	380.	32	16.9	2
9	 		25	.92	489.	64	22.1	5
10	145 - 140		27.	19	601.	66	22.6	7
11	140 - 135	Ī	28	60	716.	36	23.2	3
12	135 - 130	T	30.	01	833.	82	23.7	7
13	130 - 125	7	31,	43	953.	-	24.3	-
14	125 - 120	寸	33.		1077.			-1
15	120 - 115	+	34.		1203.9	-	24.9	-
16	115 - 112.666	+	35.	-		-	25.5	-
17	140.000	+			1263.8	-	25.80	4
18	1414	+	35.	-	1270.3	_	25.83	
20.00	7 3 11 1	4	37.		1401.7		26.5	-1
19	107.416 - 103.333	\downarrow	39.	+	1511.1	2	27.04	4
20	103.333 - 103.083	\perp	39.4	10	1517.8	8	27.08	3
21	103.083 - 100	\perp	40.5	59	1601.9	1	27.44	1
22	100 - 95	╧	42.8	30	1740.4	8	28.07	7
23	95 - 90	Т	45.1	.6	1883.8	0	28.81	
24	90 - 89.5	1	45.3	7	1898.2	1	28.87	4
25	89.5 - 89.25	1	45.4		1905.4		28.90	4
26	89.25 - 85.5	╁	47.2		2015.2	+		4
27	85.5 - 85.25	╁	47.3		2022.6		29.68	-{
28	85.25 - 84	╫		+	·	+	29.73	ł
29	84 - 83.75	╫	48.0		2059.97	+	30.00	1
30		4-	48.1	.	2067.47	٠	30.04	
20.00	83.75 - 82.5		48.7		2105.18	3	30.31	
31	82.5 - 82.25	丰	48.8	1 3	2112.76	j	30.35	
32	82.25 - 80	1_	49.7	1 2	181.31	L	30.60	
33	80 - 75	_	53.20	0 2	338.56		31.71	
34	75 70		55.68	3 2	498.34	Π	32.23	
35	70 - 65		58.14	1 2	664.01		33.68	
36	65 - 60	Π	60.63	3 2	833.48		34.10	
37	60 - 58.5	T	62.99	2	885.48	Т	34.74	
38	58.5 - 58.25		63.12		894.17		34.75	
39	58.25 - 53.25		65.81	+	068.96		35.16	
40	53.25 - 48.25		68.51		245.71	├-		
41	48.25 - 48	-		-		_	35.54	
42	48 - 43	<u> </u>	68.67	-	254.60		35.57	
43		_	71.85	 	434.54		36.39	
	43 - 40		73.76	-	544.41		36.86	
44	40 - 35	ļ .	79.07	-	734.52		38.40	
45	35 - 32.08		80.93	38	347.30		38.85	
46	32.08 - 31.83		81.13	38	357.02	_	38.88	
47	31.83 - 28.75		83.49	39	77.52		39.36	
48	28.75 - 28.5		83.66	39	87.36		39.39	
49	28.5 - 23.5		87.01		86.09	_	40.10	
50	23.5 - 18.5		93.77		89.46		41.57	
51	18.5 - 13.5		97.60		98.95			
52	13.5 - 8.5		01.38				42.23	
53	8.5 - 3.5		-		11.60		42.87	
54	3.5 - 0		05.03		27.42		43.49	
	3.3 - 11	113	07.57	-41	80.31		43.91	

Analysis Results

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fai
190 - 185	Pole	TP30x30x0.375	Pole	1.3%	Pass
185 - 180	Pole	TP30x30x0.375	Pole	3.5%	Pass
180 - 175	Pole	TP36x36x0.375	Pole	4.9%	Pass
175 - 1 70	Pole	TP36x36x0.375	Pole	7.2%	Pass
170 - 165	Pole	TP36x36x0.375	Pole	11.4%	Pass
165 - 160	Pole	TP36x36x0.375	Pole	16.6%	Pass
160 - 155	Pole	TP42x42x0.375	Pole	16.9%	Pass
155 - 150	Pole	TP42x42x0,375	Pole	21.4%	Pass
150 - 145	Pole	TP42x42x0.375	Pole	27.5%	Pass
145 - 140	Pole	TP42x42x0.375	Pole	33.5%	Pass
140 - 135	Pole	TP48x48x0.375	Pole	30.9%	Pass
135 - 130	Pole	TP48x48x0.375	Pole	35.8%	Pass
130 - 125	Pole	TP48x48x0.375	Pole	40.8%	Pass
125 - 120	Pole	TP48x48x0.375	Pole	46.0%	Pass
120 - 115	Pole	TP54x54x0.375	Pole	41.1%	Pass
115 - 112.67	Pole	TP54x54x0.375	Pole	43.1%	Pass
112.67 - 112.42	Pole + Reinf.	TP54x54x0.4875	Pole	33.1%	Pass
112.42 - 107.42	Pole + Reinf.	TP54x54x0.4875	Pole	36.5%	Pass
107.42 - 103.33	Pole + Reinf.	TP54x54x0.4875	Pole	39.3%	Pass
103.33 - 103.08	Pole + Reinf.	TP54x54x0.4875	Pole	39.5%	Pass
103.08 - 100	Pole + Reinf.	TP54x54x0.4875	Pole	41.6%	Pass
100 - 95	Pole + Reinf.	TP60x60x0.475	Pole	37.9%	Pass
95 - 90	Pole + Reinf.	TP60x60x0.475	Pole	41.0%	Pass
90 - 89.5	Pole + Reinf.	TP60x60x0.475	Pole	41.3%	Pass
89.5 - 89.25	Pole + Reinf.	TP60x60x0.5563	Pale	35.8%	Pass
89.25 - 85.5	Pole + Reinf.	TP60x60x0.5563	Pole	37.8%	Pass
85.5 - 85.25	Pole + Reinf.	TP60x60x0.6375	Pole	33.3%	Pass
85.25 - 84	Pole + Reinf.	TP60x60x0.6375	Pole	34.0%	Pass
84 - 83.75	Pole + Reinf.	TP60x60x0.525	Pole	40.7%	Pass
83.75 - 82.5	Pole + Reinf.	TP60x60x0.525	Pole	41.4%	Pass
82.5 - 82.25	Pole + Reinf.	TP60x60x0.45	Pole	48.6%	Pass
82.25 - 80	Pole + Reinf.	TP60x60x0.45	Pole	50.2%	Pass
80 - 75	Pole + Reinf.	TP60x60x0.575	Reinf. 3 Compression	41.3%	Pass
75 - 70	Pole + Reinf.	TP60x60x0.575	Reinf. 3 Compression	44.1%	Pass
70 - 65	Pole + Reinf.	TP60x60x0.575	Reinf. 3 Compression	47.0%	Pass
65 - 60	Pole + Reinf.	TP60x60x0.575	Reinf. 3 Compression	49.9%	Pass
60 - 58.5	Pole + Reinf.	TP60x60x0.7	Reinf. 3 Compression	42.0%	Pass
58.5 - 58.25	Pole	TP60x60x0.625	Pole	45.9%	Pass
58.25 - 53.25	Pole	TP60x60x0.625	Pole	48.7%	Pass
53.25 - 48.25	Pole	TP60x60x0.625	Pole	51.5%	Pass
48.25 - 48	Pole + Reinf.	TP60x60x0.775	Pole	\ 42.1%	Pass
48 - 43	Pole + Reinf.	TP60x60x0.775	Pole	44.4%	Pass
43 - 40	Pole + Reinf.	TP60x60x0.775	Pale	45.9%	Pass
40 - 35	Pole + Reinf.	TP60x60x0.775	Pole	48.3%	Pass
35 - 32.08	Pole + Reinf.	TP60x60x0.775	Pole	49.8%	Pass
32.08 - 31.83	Pole + Reinf.	TP60x60x0.9625	Pole	40.2%	Pass
31.83 - 28.75	Pole + Reinf.	TP60x60x0.9625	Pole	41.5%	Pass
28.75 - 28.5	Pole + Reinf.	TP60x60x0.8125	Pale	48.8%	Pass
28.5 - 23.5	Pole + Reinf.	TP60x60x0.8125	Pole	51.2%	Pass
23.5 - 18.5	Pole + Reinf.	TP60x60x0.95	Pole	45.6%	Pass
18.5 - 13.5	Pole + Reinf.	TP60x60x0.95	Pole	47.7%	Pass
13.5 - 8.5	Pole + Reinf.	TP60x60x0.95	Pole	49.9%	Pass
8.5 - 3.5	Pole + Reinf.	TP60x60x0.95	Pole	52.2%	Pass
3.5 - 0	Pole + Reinf.	TP60x60x0.95	Pole	53.7%	Pass
				Summary	
1		The state of the s	Pole	53.7%	Pass
	<u> </u>		Reinforcement	49.9%	Pass
	1		Overall	53.7%	Pass

Additional Calculations

Section	Moment of Inertia (in ⁴)				Area (in ²)		% Capacity*					
Elevation (ft)	Pole	Reinf.	Total	Pole	Reinf.	Total	Pole	R1	R2	R3	R4	R5	R6
190 - 185	3829	n/a	3829	34.90	n/a	34.90	1.3		 "	- 10	114	l un	no
185 - 180	3829	n/a	3829	34.90	n/a	34.90	3.5	.3 -		4		 	+
180 - 175	6659	n/a	6659	41,97	n/a	41.97	4.9		 	1. 7.4.	- 1 (A 11)	+	- 57
175 - 170	6659	n/a	6659	41.97	n/a	41.97	7.2	-			_	1	1 2 -
170 - 165	6659	n/a	6659	41.97	n/a	41.97	11.4		10 10 1	- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	: William 1.	1	
165 - 160	6659	n/a	6659	41.97	n/a	41,97	16.6	-			1		
160 - 155	10622	n/a	10622	49.04	n/a	49.04	16.9		1 197 5		1	1 12 1	\$ 16 s.m.
155 - 150	10622	n/a	10622	49.04	n/a	49.04	21.4		**************************************		+	-	1
150 - 145	10622	n/a	10622	49.04	n/a	49.04	27.5			20 70 000	1 1 1 1	1	+ + +
145 - 140	10622	n/a	10622	49.04	n/a	49.04	33.5		+	1 - 114	ļ	1	+
140 - 135	15908	n/a	15908	56.11	n/a	56.11	30.9		1 477		. A. O 154	100	1 132
135 - 130	15908	n/a	15908	56.11	n/a	56,11	35.89		-	1 12 13	 	-	+
130 - 125	15908	n/a	15908	56.11	n/a	56.11	40.89		12.0	7 274 27	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		+
125 - 120	15908	п/а	15908	56.11	n/a	56.11	46.09		-		 		-
120 - 115	22710	n/a	22710	63.18	n/a	63.18	41.19						1 1 2 2 1
115 - 112.67	22710	n/a	22710	63.18	n/a	63.18	43.19					1111111111	
112.67 - 112.42	22710	6834	29544	63.18	18.00	81.18	33.19		7 2 2 2 2	1 1 1 1 1 1 1	The grade of the	00.00	1
112.42 - 107.42	22710	6834	29544	63,18	18.00	81.18	36.5%		-		1 1 1 1 1	29.6%	
107.42 - 103.33	22710	6834	29544	63.18	18.00	81.18	39.39		 	1 10 10	F H 1 2 2	32.7%	
103.33 - 103.08	22710	6834	29544	63.18	18.00	81.18	39.5%		- 1		07.00	35.2%	1
103.08 - 100	22710	6834	29544	63.18	18.00	81.18	1	-		1 2 2	35.3%		
100 - 95	31217	8400	39617	70.24	18.00	88.24	41.69		-	1	37.2%		
95 - 90	31217	8400	39617	70.24	18.00	88.24	37.9%		 	*	33.6%		ļ.,
90 - 89,5	31217	8400	39617	70.24	18.00	88.24	41.0%	-	1 4 444	100 64	36.3%		1200
89.5 - 89.25	31217	14691	45908	70.24	31.50	101.74	41.3%		1		36.6%		<u> </u>
89.25 - 85.5	31217	14691	45908	70.24	31.50		35.8%			2.76	31.7%		34.9%
85.5 - 85.25	31217	20982	52199	70.24	45.00	101.74	37.8%	+			33.5%		36.9%
85.25 - 84	31217	20982	52199	70.24	45.00	115.24	33.3%			32.6%	29.5%		32.6%
84 - 83,75	31217	12582	43799	70.24		115.24	34.0%		ļ <u>.</u>	33.2%	30.1%		33.2%
83.75 - 82.5	31217	12582	43799	70.24	27,00	97.24	40.7%	1		39.8%	1 1 1 1 1	1.54	39.8%
82.5 - 82.25	31217	6291	37508		27,00	97.24	41.4%			40.5%			40.5%
82.25 - 80	31217	6291	37508	70.24	13.50	83,74	48.6%			47.5%		100	
80 - 75	41363	6291		70.24	13.50	83.74	50.2%	 		49.0%			
75 - 70	41363	6291	47654	93.46	13.50	106.96	41.2%	N 2 1 1	11.0	41.3%			
70 - 65	41363		47654	93.46	13.50	106,96	43.9%			44.1%			
65 - 60	41363	6291	47654	93.46	13.50	106.96	46.8%			47.0%		- 4	
60 - 58.5		6291	47654	93.46	13.50	106.96	49.8%			49.9%			
58.5 - 58.25	51381	6291	57672	116.58	13.50	130.08	40.8%		1.11	42.0%			
58.25 - 53.25	51381	n/a	51381	116.58	n/a	116.58	45.9%		1.	L			-
53.25 - 48.25	51381	n/a	51381	116.58	n/a	116.58	48.7%		477		7 3		
48,25 - 48	51381	n/a	51381	116.58	n/a	116.58	51.5%						
	51381	11475	62856	116.58	24.38	140.96	42.1%		38.6%		7 7		Y-10
48 - 43	51381	11475	62856	116.58	24.38	140.96	44.4%		40.8%				
43 - 40	51381	11475	62856	116.58	24.38	140.96	45.9%	11.77	42.1%	. 31.0		20.4	4
40 - 35	51381	11475	62856	116.58	24.38	140.96	48.3%		44.3%				-
35 - 32.08	51381	11475	62856	116.58	24.38	140.96	49.8%	34 Jan 20 Jan	45.7%	1.55		1.3	12.1
32.08 - 31.83	51381	26521	77901	116.58	56.25	172.83	40.2%	36.4%	36.9%				
31.83 - 28.75	51381	26521	77901	116.58	56.25	172.83	41.5%	36.3%	38.0%	100			7.7 35
28.75 - 28.5	51381	15046	66426	116.58	31.88	148.46	48.8%	42.7%		- 			
28.5 - 23.5	51381	15046	66426	116.58	31.88	148.46	51.2%	44.8%	1.75	13,39		(5 F)	-15244.5
23.5 - 18.5	61271	15046	76317	139.60	31.88	171.48	45.6%	40.9%		-	 		
18.5 - 13.5	61271	15046	76317	139.60	31.88	171.48	47.7%	42.8%	1. 1. 1	10 (1)	10 Face		-
13.5 - 8.5	61271	15046	76317	139.60	31.88	171.48	49.9%	44.8%				-+	
8.5 - 3.5	61271	15046	76317	139.60	31.88	171.48	52.2%	46.8%					
3.5 - 0	61271	15046	76317	139.60	31.88	171.48	53.7%	49.9%				- :	

Note: Section capacity checked in 5 degree increments. Rating per TIA-222-H Section 15.5.

BU#	829046
 Site Name	eston/Rt-57/Norfield
Order#	499102 Rev.0

TIA-222 Revision	THE STATE OF THE S

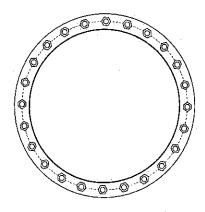
Elevation = 180 ft.

Appli	ed Loads
Moment (kip-ft)	31.52
Axial Force (kips)	4.73
Shear Force (kips)	3.99
demand and a second	

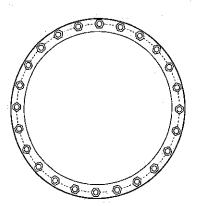
*TIA-222-H Section 15.5 Applied



Top Plate - External



Bottom Plate - Internal



Bolt Data

(24) 1" ø bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 33" BC

Top Plate Data

36" OD x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Top Stiffener Data

N/A

Top Pole Data

30" x 0.375" round pole (AS3-B-42; Fy=42 ksi, Fu=63 ksi)

30" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Stiffener Data

N/A

Bottom Pole Data

36" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bolt Capacity 1.71

Max Load (kips)

Allowable (kips)

54.54

Stress Rating: 3.0% Pass

Top Plate Capacity

Max Stress (ksi):

Allowable Stress (ksi):

Stress Rating:

Tension Side Stress Rating:

Pirod OK

Pirod OK

Bottom Plate Capacity

Max Stress (ksi):

Allowable Stress (ksi):

Stress Rating:

Pirod OK

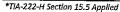
Tension Side Stress Rating: Pirod OK

BU#	829046
Site Name	eston/Rt-57/Norfield
Order#	499102 Rev.0

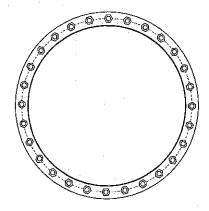
···	
TIA-222 Revision	H "

Elevation = 160 ft.

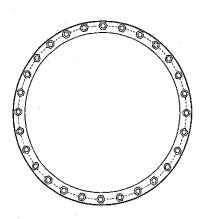
App	red Loads
Moment (kip-ft)	215.85
Axial Force (kips)	18.89
Shear Force (kips)	16.00







Top Plate - External



Bolt Data

(28) 1" ø bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 39" BC

Тор	Ы	ate	Data
-----	---	-----	------

42" OD x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Top Stiffener Data

N/A

Top Pole Data

36" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bottom Plate Data

36" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Stiffener Data

N/A

Bottom Pole Data

42" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bolt Capacity

Max Load (kips)

Allowable (kips)

8.81 54.53

Stress Rating:

15.4% Pass

Top Plate Capacity

Max Stress (ksi):

Allowable Stress (ksi):

Stress Rating:

Tension Side Stress Rating:

Pirod OK Pirod OK

Bottom Plate Capacity

Max Stress (ksi):

Allowable Stress (ksi):

Stress Rating:

Pirod OK

Tension Side Stress Rating:

Pirod OK

	-
BU#	829046
Site Name	eston/Rt-57/Norfield
Order#	499102 Rev.0

TIA-222 Revision	H

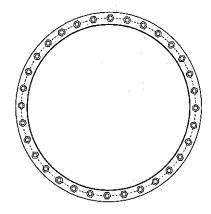
Elevation = 140 ft.

Appli	ed Loads
Moment (kip-ft)	601.66
Axial Force (kips)	27.19
Shear Force (kips)	22.67
	22.67

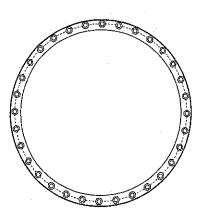
*TIA-222-H Section 15.5 Applied



Bottom Plate - Internal



Top Plate - External



eogo	M TO	
	Data	

(32) 1" ø bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 45" BC

48" OD x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Top Stiffener Data

N/A

Top Pole Data

42" x 0.375" round pole (A53-8-42; Fy=42 ksi, Fu=63 ksi)

Bottom Plate Data

42" ID x 1.25" Piate (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Stiffener Data

Bottom Pole Data

48" x 0.375" round pole (A53-8-42; Fy=42 ksi, Fu=63 ksi)

Analy	is Results			
Bolt	Capacity			
Max Load (kips)	19.20		***	
Allowable (kips)	54,53		•	
Stress Rating:	33 5%	Pace		

Top Plate Capacity

Max Stress (ksi):

Allowable Stress (ksi):

Tension Side Stress Rating:

Stress Rating:

Pirod OK Pirod OK

Bottom Plate Capacity

Max Stress (ksi):

Allowable Stress (ksi):

Stress Rating: Tension Side Stress Rating:

Pirod OK Pirod OK

BU#	829046
Site Name	eston/ Rt-57/ Norfield
Order#	499102 Rev.0

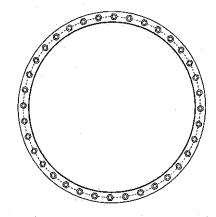
TIA-222 Revision	H *

Elevation = 120 ft.

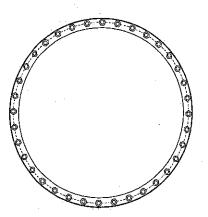
ed Loads
1077.73
33.12
24.98

*TIA-222-H Section 15.5 Applied

Bottom Plate - Internal



Top Plate - External



Connection Properties	
Bolt Data	
DOK Data	

(36) 1" ø bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 51" BC

Top P.	late	Data
--------	------	------

54" OD x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Top Stiffener Data

N/A

Top Pole Data

48" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bottom Plate Data

48" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Stiffener Data

Bottom Pole Data

54" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Analy Bolt	sis Results Capacity		e lega		
Max Load (kips)	27.25	-			
Allowable (kips)	54.53				
Stress Rating:	47.6%	Pass			

Top Plate Capacity

Max Stress (ksi): Allowable Stress (ksi):

Stress Rating:

Tension Side Stress Rating:

Pirod OK Pirod OK

Bottom Plate Capacity

Max Stress (ksi): Allowable Stress (ksi):

Stress Rating:

Tension Side Stress Rating:

Pirod OK Pirod OK

BU#	829046
Site Name	eston/Rt-57/Norfield
Order#	499102 Rev.0

TIA-222 Revision	H

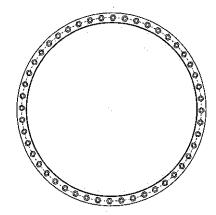
Elevation = 100 ft.

Appli	ed Loads
Moment (kip-ft)	1601.91
Axial Force (kips)	40.59
Shear Force (kips)	27.44

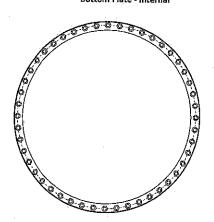
*TIA-222-H Section 15.5 Applied



Bottom Plate - Internal



Top Plate - External



Connection Properties	
Bolt Data	

(48) 1" ø bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 57" BC

Top Plate Data

60" OD x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Top Stiffener Data

N/A

Top Pole Data

54" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bottom Plate Data

54" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Stiffener Data

N/A

Bottom Pole Data

60" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

	Analysis Results		
	Bolt Capacity		
Max Lo	oad (kips) 27.25		
Allowa	ble (kips) 54.53	•	
Stress	Rating: 47.6%	Pass	

Top Plate Capacity

Max Stress (ksi):

Allowable Stress (ksi):

Stress Rating:

Pirod OK

Tension Side Stress Rating:

Pirod OK

Bottom Plate Capacity

Max Stress (ksi):

Alfowable Stress (ksi):

Stress Rating: Tension Side Stress Rating: Pirod OK Pirod OK



1. PARAMETERS

Flange Elevation: 80'- 0"

1.1 tnxTower Reactions

Apply 11A-222-M = 2181.31kip-ft

Apply TIA-222-H Section 15.5? No

Moment:

#STANSACTION TO A STANSACTION OF THE STANSACTION OF

Axial Load: P := 49.71kip

Shear Load: V = 30.60 kip

1.2 Shaft Properties at the Flange

Upper Shaft Diameter:

 $D_{shaft1} := 60in$

Upper Shaft Thickness:

 $t_1 := 0.375$ in

Lower Shaft Diameter:

 $D_{shaft2} := 60$ in

Lower Shaft Thickness:

 $t_2 := 0.5in$

Shaft Grade:

Fy_{shaft} := 42

Fu_{shaft} := 63ksi

1.3 Existing Bridge Stiffener Properties

(Verify existing bolted connection for reduced moment.)

Number of Existing Bridge

Stiffeners:

 $N_{exist} = 3$

Existing Bridge Stiffener Grade:

 $Fy_{Ex} := 65ksi$

 $Fu_{Fx} := 80$ ksi

Diameter to the centroid of

Existing Bridge Stiffeners:

BC_{exist} ≔ 61in

Thickness of Existing Bridge

Stiffeners:

t_{exist} := 1in

Width of Existing Bridge

Stiffeners:

Wexist := 4.5in

Gross Area of One Existing

Bridge Stiffener:

 $A_{g_exist} := w_{exist} \cdot t_{exist} = 4.5 \cdot in^2$

Moment of Inertia of Existing

Bridge Stiffeners:

 $I_{exist} := \frac{N_{exist} \cdot BC_{exist}^2 \cdot A_{g_{exist}}}{8} = 6279.19 \cdot in^4$

Radius of Gyration about x-axis:

 $r_{x2} := \frac{t_{exist}}{\sqrt{12}} = 0.29 \cdot in$

BU# 829046 WO# 1765202 Elevation: 80' flange

Done By: AM Checked By: AC Date: 07/22/2019



1.4 Flange Bolt Properties

Number of Flange Bolts:

 $N_{bolts} = 64$

Diameter of Flange Bolts:

1-1/4" 🗸

Bolt Circle of Flange Bolts:

BCbolts := 50in

Gross Area of One Flange Bolt:

 $A_{g_bolts} := \frac{\pi}{4} \cdot D_{bolts}^2 = 1.23 \cdot in^2$

Moment of Inertia of Flange Bolts:

 $I_{bolts} := \frac{N_{bolts} \cdot BC_{bolts}^2 \cdot A_{g_bolts}}{8} = 24543.69 \cdot in^4$

1.5 Division of Forces

Total Gross Area:

 $A_{g_total} := N_{exist} \cdot A_{g_exist} + N_{bolts} \cdot A_{g_bolts} = 92.04 \cdot in^2$

Total Moment of Inertia:

 $I_{total} := I_{exist} + I_{bolts} = 30822.88 \cdot in^4$

1.6 Reactions to Existing Bridge Stiffeners

Moment Reaction to

Existing Bridge Stiffeners:

 $M_{\text{exist}} := M \cdot \left(\frac{I_{\text{exist}}}{I_{\text{total}}} \right) = 444.37 \cdot \text{kip} \cdot \text{ft}$

Axial Reaction to Existing

Bridge Stiffeners:

 $P_{exist} := 0 \text{kip}$

Shear Reaction to Existing

Bridge Stiffeners:

 $V_{exist} := 0 kip$

1.7 Reactions to Flange Bolts

(It is assumed that all shear and axial loads are taken by the flange bolts)

Moment Reaction to Flange Bolts:

 $M_{\text{bolts}} = M_{\text{s}} \left(\frac{1_{\text{bolts}}}{1_{\text{total}}} \right) = 1736594 \text{ kipsh}$

Axial Reaction to Flange Bolts:

P_{bolts} = P = 49.71 kip

Shear Reaction to Flange Bolts:

 $V_{bolts} = V = 30.6 \text{ kip}$

Check Flange Connection in CClplate with these Reactions



2. Existing Bridge Stiffener Checks

2.1 Maximum Axial Forces in Single Existing Bridge Stiffener

Outer Radius of Bolt Circle:

$$C := \frac{BC_{exist}}{2} = 30.5 - in$$

Critical Compression Bending

Stress:

$$P_{comp} := \frac{M_{exist} \cdot C}{I_{exist}} \cdot A_{g_{exist}} + \frac{P_{exist}}{N_{exist}} = 116.56 \cdot kip$$

Critical Tension Bending Stress:

$$P_{tens} := \frac{M_{exist} \cdot C}{I_{exist}} \cdot A_{g_{exist}} - \frac{P_{exist}}{N_{exist}} = 116.56 \cdot kip$$

2.2 Available Compression Strength

[AISC 15th Edition E3-1]

Resistance Factor:

$$\phi_c := 0.9$$

Unbraced Length:

$$L_u = 20.625$$
in

Effective Length Factor:

$$K := 1.0$$

Effective Length of Member:

$$\mathbf{L_c} \coloneqq \mathbf{K} \cdot \mathbf{L_u} = 20.63 \cdot \mathbf{in}$$

[AISC 15th Edition E3-2]

Strength of Bridge Stiffener:

$$Fy_{Ex} = 65 \cdot ksi$$
 $Fu_{Ex} = 80 \cdot ksi$

$$Fu_{Ex} = 80 \text{ ksi}$$

Elastic Buckling Stress: [AISC 15th Ed., Eq. E3-4]

$$F_{e} := \frac{\pi^{2} \cdot 29000 \text{ksi}}{\left(\frac{L_{c}}{r_{x2}}\right)^{2}} = 56.07 \cdot \text{ksi}$$

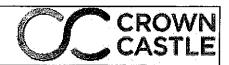
Determination of Crticial Stress: [AISC 15th Ed., Eqs. E3-2 and E3-3]

$$F_{cr} := \begin{cases} \left(\frac{Fy_{Ex}}{F_e}\right) & \text{if } 4.71 \cdot \sqrt{\frac{E}{Fy_{Ex}}} \ge \frac{L_c}{r_{x2}} \\ \left(0.877 \cdot F_e\right) & \text{otherwise} \end{cases}$$

$$F_{cr} = 40.01 \cdot ksi$$

Allowable Compressive Strength: [AISC 15th Ed., Eqs. J4-6 and E3-1]

$$\phi P_n := \begin{cases} \left(\phi_c \cdot Fy_{Ex} \cdot A_{g_exist} \right) & \text{if } \frac{L_c}{r_{x2}} \le 25 \\ \left(\phi_c \cdot F_{cr} \cdot A_{g_exist} \right) & \text{otherwise} \end{cases}$$



 $\phi P_n = 162.05 \text{ kip}$

Check Compressive Strength:

$$\label{eq:comp} \begin{aligned} \text{Check}_{comp} \coloneqq & \text{"OK"} & \text{if } \text{Capacity}_{comp} \leq 100\% \\ & \text{"N/G"} & \text{otherwise} \end{aligned}$$

Check comp = "OK"

Capacity = 68.5 %

2.3 Available Tension Strength

Available Tension Yield Strength:

Gross Section Yield

 $\label{eq:phity} \text{[AISC 15th Edition Ch. D2]} \\ \phi P_{ty} := 0.9 \cdot Fy_{EX} \cdot A_{g~exist} = 263.25 \cdot kip$

Net Section Fracture

Bolt Hole Diameter:

BH := 1.1875in

Thickness:

$$T := t_{exist} = 1 \cdot in$$

Net Area:

$$\mathbf{A}_{\text{net}} \coloneqq \mathbf{A}_{\text{g_exist}} - \left(\mathbf{BH} + \frac{1}{16} \mathrm{in}\right) \cdot \mathbf{T} = 3.25 \cdot \mathrm{in}^2$$

Net Area Limitation:

$$A_e := A_{net} = 3.25 \cdot in^2$$

Available Fractile Strength:

$$\phi P_{tr} := 0.75 \cdot Fu_{Ex} \cdot A_e = 195 \cdot kip$$

Tension Check

Controlling Mode of Failure:

$$\text{Check}_{mode} := \left| \text{"Fracture Controls"} \quad \text{if } \frac{P_{tens}}{\phi P_{tr}} > \frac{P_{tens}}{\phi P_{ty}} \right|$$

$$\text{"Yield Controls"} \quad \text{otherwise}$$

 ${\rm Check}_{\rm mode} = "Fracture\ {\rm Controls"}$

$$\begin{array}{ll} \varphi P_{nt} \coloneqq & \varphi P_{tr} & \mathrm{if} \; \; \mathrm{Check}_{mode} = \text{"Fracture Controls"} \\ & \varphi P_{ty} & \mathrm{otherwise} \end{array}$$

Controlling Tension Mode Check:

$$\label{eq:Check_tension} \begin{split} \text{Check}_{\text{tension}} \coloneqq & \begin{array}{ccc} \text{"OK"} & \text{if Capacity}_{\text{tension}} \leq 100\% \\ \text{"N/G"} & \text{otherwise} \\ \end{split}$$

 $Check_{tension} = "OK"$

Capacity tension = 56.93 %

BU# 829046 WO# 1765202 Elevation: 80' flange

Done By: AM Checked By: AC Date: 07/22/2019



SUMMARY

tnxTower Reactions:

 $M = 2181.31 \cdot \text{kip} \cdot \text{ft}$

 $P = 49.71 \cdot \text{kip}$

V = 30.6 kip

Flange Bolts:

Diameter of Flange Bolts:

 $D_{bolts} = 1 \frac{1}{4} \cdot in$

Bolt Circle of Flange Bolts:

 $BC_{bolts} = 50 in$

Loads to Flange Bolts:

M_{Bolts} = 1736 94 ft kip

P = 49.71 kip

 $\overline{V} = 30.6$ kip

See CCIPlate for Flange Bolt and Plate Capacities

Existing Jump Plates:

Moment to Proposed Bridge

Stiffeners:

 $M_{exist} = 444.37 \, \text{ft-kip}$

Number of Existing Bridge

Stiffeners:

 $N_{exist} = 3$

Thickness:

 $t_{exist} = 1 \cdot in$

Width:

 $w_{exist} = 4.5 \cdot in$

Controlling Capacity of Existing

Bridge Stiffeners:

Capacity exist = 68.5.%

 BU#	829046
 Site Name	eston/ Rt-57/ Norfield
Order#	499102 Rev.0

TIA-222 Revision	H

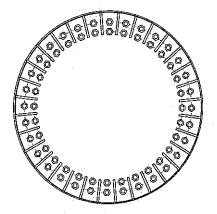
Top Plate - Internal

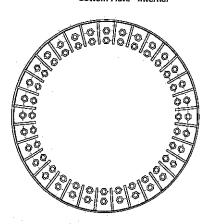


Appl	ed Loads
Moment (kip-ft)	1736,94
Axial Force (kips)	49.71
Shear Force (kips)	30.60

*TIA-222-H Section 15.5 Applied

Bottom Plate - Internal





Bolt Data

GROUP 1: (32) 1-1/4" ø bolts (A325 N; Fy=81 ksi, Fu=105 ksi) on 47" BC GROUP 2: (32) 1-1/4" ø bolts (A325 N; Fy=81 ksi, Fu=105 ksi) on 53" BC

Top Plate Data

60" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Top Stiffener Data

(32) 10"H x 7"W x 0.625"T, Notch: 0.5" plate: Fy= 36 ksi ; weld: Fy= 70 ksi horiz. weld: 0.375" fillet vert. weld: 0.375" fillet

Top Pole Data

60" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bottom Plate Data

60" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Stiffener Data

(32) 10"H x 7"W x 0.625"T, Notch: 0.5" plate: Fy= 36 ksi; weld: Fy= 70 ksi horiz, weld: 0.375" fillet vert. weld: 0.375" fillet

Bottom Pole Data

60" x 0.5" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

· · · · · · · · · · · · · · · · · · ·			Capacity		<u> </u>
		Max Load (kips)	27.51		
		Allowable (kips)	76.31		
•		Stress Rating:	34.3%	Pass	
Top Plate Capacity				Bottom Plate Capacity	
Max Stress (ksi):	- '			Max Stress (ksi):	
Allowable Stress (ksi):	•			Allowable Stress (ksi):	-
Stress Rating:	Pirod OK			Stress Rating:	Pirod OK
Tension Side Stress Rating:	Pirod OK			Tension Side Stress Rating:	Pirod OK
Fop Stiffener Capacity				Bottom Stiffener Capacity	
forizontal Weld:	Pirod OK			Horizontal Weld:	Pirod OK
/ertical Weld:	Pirod OK			Vertical Weld:	Pirod OK
late Flexure+Shear:	Pirod OK			Plate Flexure+Shear:	Pirod OK
late Tension+Shear:	Pirod OK			Plate Tension+Shear:	Pîrod OK
Plate Compression:	Pirod OK			Plate Compression:	Pirod OK
op Pole Capacity				Bottom Pole Capacity	
ounching Shear:	Pirod OK			Punching Shear:	Pirod OK



1. PARAMETERS

Flange Elevation: 60'- 0"

1.1 tnxTower Reactions

Apply TIA-222-H Section 15.5?

No Year w

Moment:

M := 2833.48 kip.ft

Axial Load:

P := 60.63 kip

Shear Load:

V = 34.10 kip

1.2 Shaft Properties at the Flange

Upper Shaft Diameter:

Dshaft1 := 60in

Upper Shaft Thickness:

t₁ i= 0.5in

Lower Shaft Diameter:

 $D_{shaft2} := 60in$

Lower Shaft Thickness:

 $t_2 := 0.625$ in

Shaft Grade:

Fu_{shaft} = 63ksi

1.3 Existing Bridge Stiffener Properties

(Verify existing bolted connection for reduced moment.)

Number of Existing Bridge Stiffeners:

Existing Bridge Stiffener Grade:

Fy_{Ex}:= 65ksi

Fu_{Éx} := 80ksi

Diameter to the centroid of Existing Bridge Stiffeners:

 $BC_{exist} = 61.25in$

Thickness of Existing Bridge Stiffeners:

 $t_{exist} := 1.25$ in

Width of Existing Bridge

Stiffeners:

 $w_{exist} := 6.5in$

Gross Area of One Existing

Bridge Stiffener:

 $A_{g_exist} := w_{exist} \cdot t_{exist} = 8.13 \cdot in^2$

Moment of Inertia of Existing

Bridge Stiffeners:

 $I_{exist} := \frac{N_{exist} \cdot BC_{exist}^2 \cdot A_{g_{exist}}}{8} = 11430.54 \cdot in^4$

Radius of Gyration about x-axis:

 $r_{x2} := \frac{t_{exist}}{\sqrt{12}} = 0.36 \cdot in$

BU# 829046 WO# 1765202 Elevation: 60' flange

Done By: AM Checked By: AC Date: 07/22/2019



1.4 Flange Bolt Properties

Number of Flange Bolts:

 $N_{bolts} := 64$

Diameter of Flange Bolts:

1-1/4"

Bolt Circle of Flange Bolts:

BC_{bolts} ≔ 50in

Gross Area of One Flange Bolt:

 $A_{g_bolts} := \frac{\pi}{4} \cdot D_{bolts}^2 = 1.23 \cdot in^2$

Moment of Inertia of Flange Bolts:

 $I_{bolts} := \frac{N_{bolts} \cdot BC_{bolts}^2 \cdot A_{g_bolts}}{2} = 24543.69 \cdot in^4$

1.5 Division of Forces

Total Gross Area:

 $A_{g_total} := N_{exist} \cdot A_{g_exist} + N_{bolts} \cdot A_{g_bolts} = 102.91 \cdot in^2$

Total Moment of Inertia:

 $I_{total} := I_{exist} + I_{bolts} = 35974.23 \cdot in^4$

1.6 Reactions to Existing Bridge Stiffeners

Moment Reaction to

Existing Bridge Stiffeners:

 $M_{\text{exist}} := M \cdot \left(\frac{I_{\text{exist}}}{I_{\text{total}}} \right) = 900.32 \cdot \text{kip} \cdot \text{ft}$

Axial Reaction to Existing

Bridge Stiffeners:

 $P_{exist} := 0 kip$

Shear Reaction to Existing

Bridge Stiffeners:

 $V_{exist} = 0 kip$

1.7 Reactions to Flange Bolts

(It is assumed that all shear and axial loads are taken by the flange bolts)

Moment Reaction to Flange Bolts:

Axial Reaction to Flange Bolts:

Shear Reaction to Flange Bolts:

Check Flange Connection in CCIplate with these Reactions



2. Existing Bridge Stiffener Checks

2.1 Maximum Axial Forces in Single Existing Bridge Stiffener

Outer Radius of Bolt Circle:

$$C := \frac{BC_{exist}}{2} = 30.63 \cdot in$$

Critical Compression Bending

$$P_{comp} := \frac{M_{exist} \cdot C}{I_{exist}} \cdot A_{g_{exist}} + \frac{P_{exist}}{N_{exist}} = 235.18 \cdot kip$$

Critical Tension Bending Stress:

$$P_{tens} := \frac{M_{exist} \cdot C}{I_{exist}} \cdot A_{g_{exist}} - \frac{P_{exist}}{N_{exist}} = 235.18 \cdot kip$$

2.2 Available Compression Strength

[AISC 15th Edition E3-1]

Resistance Factor:

$$\phi_{\mathbf{c}} \coloneqq 0.9$$

Unbraced Length:

$$L_{u} = 19.2$$
in

Effective Length Factor:

$$K := 1.0$$

Effective Length of Member:

$$L_c := K \cdot L_u = 19.2 \cdot in$$

[AISC 15th Edition E3-2]

Strength of Bridge Stiffener:

$$Fy_{Ex} = 65 \cdot ksi$$
 $Fu_{Ex} = 80 \cdot ksi$

Elastic Buckling Stress: [AISC 15th Ed., Eq. E3-4]

$$F_e := \frac{\pi^2 \cdot 29000 \text{ksi}}{\left(\frac{L_c}{r_{x2}}\right)^2} = 101.1 \cdot \text{ksi}$$

Determination of Crticial Stress: [AISC 15th Ed., Eqs. E3-2 and E3-3]

$$F_{cr} := \begin{cases} \left(\frac{Fy_{Ex}}{F_e} \\ 0.658 & Fy_{Ex} \end{cases}\right) & \text{if } 4.71 \cdot \sqrt{\frac{E}{Fy_{Ex}}} \ge \frac{L_c}{r_{x2}} \\ \left(0.877 \cdot F_e\right) & \text{otherwise} \end{cases}$$

$$F_{cr} = 49.66 \cdot ksi$$

Allowable Compressive Strength: [AISC 15th Ed., Eqs. J4-6 and E3-1]

$$\begin{split} \varphi P_n := & \left[\left(\varphi_c \cdot Fy_{Ex} \cdot A_{g_exist} \right) \ \, \mathrm{if} \ \, \frac{L_c}{r_{x2}} \leq 25 \\ \left(\varphi_c \cdot F_{cr} \cdot A_{g_exist} \right) \ \, \mathrm{otherwise} \\ \end{split} \right. \end{split}$$



$$\phi P_n = 363.17 \cdot \text{kip}$$

Check Compressive Strength:

$$\label{eq:comp} \begin{aligned} \text{Check}_{comp} &:= \left| \begin{array}{ll} \text{"OK"} & \text{if } \text{Capacity}_{comp} \leq 100\% \\ \text{"N/G"} & \text{otherwise} \\ \end{aligned} \right.$$

Check comp = "OK"

Capacity = 61.68%

2.3 Available Tension Strength

Available Tension Yield Strength:

Gross Section Yield

Net Section Fracture

Bolt Hole Diameter:

BH := 1.1875in

Thickness:

 $T := t_{exist} = 1.25 \cdot in$

Net Area:

$$A_{\text{net}} := A_{\text{g_exist}} - \left(BH + \frac{1}{16}in\right) \cdot T = 6.56 \cdot in^2$$

Net Area Limitation:

$$A_e := A_{net} = 6.56 \cdot in^2$$

Available Fractile Strength:

$$\Phi P_{tr} \coloneqq 0.75 \cdot Fu_{Ex} \cdot A_e = 393.75 \cdot kip$$

Tension Check

Controlling Mode of Failure:

Check_{mode} = "Fracture Controls"

$$\begin{split} \Phi P_{nt} \coloneqq & \left| \begin{array}{l} \Phi P_{tr} & \mathrm{if} \; \; \mathrm{Check}_{mode} = \text{"Fracture Controls"} \\ \Phi P_{ty} & \mathrm{otherwise} \\ \end{array} \right. \end{split}$$

Controlling Tension Mode Check:

Checktension = "OK"

Capacity $_{\text{tension}} = 56.89.\%$

BU# 829046 WO# 1765202 Elevation: 60' flange

Done By: AM Checked By: AC Date: 07/22/2019



SUMMARY

tnxTower Reactions:

 $M = 2833.48 \cdot \text{kip} \cdot \text{ft}$

 $P = 60.63 \cdot kip$

 $V = 34.1 \cdot kip$

Flange Bolts:

Diameter of Flange Bolts:

 $D_{bolts} = 1 \frac{1}{4} in$

Bolt Circle of Flange Bolts:

 $BC_{bolts} = 50 \cdot in$

Loads to Flange Bolts:

 $M_{
m boltk} = 1938$ Moff-kip

P = 60.63 kip

V = 34.1 kip

See CCIPlate for Flange Bolt and Plate Capacities

Existing Jump Plates:

Moment to Proposed Bridge

Stiffeners:

 $M_{exist} = 900.32 \, \text{ft-kip}$

Number of Existing Bridge

Stiffeners:

 $N_{exist} = 3$

Thickness:

 $t_{exist} = 1.25 \cdot in$

Width:

 $w_{exist} = 6.5 \cdot in$

Controlling Capacity of Existing

Bridge Stiffeners:

Capacity = 61.7 %

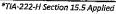
BU#	829046
Site Name	eston/Rt-57/Norfield
Order#	499102 Rev.0

_				 	
	TL	<u>4-222</u>	Revision	H. 123	

Top Plate - Internal

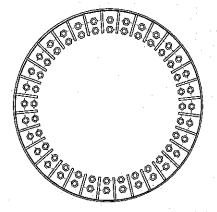


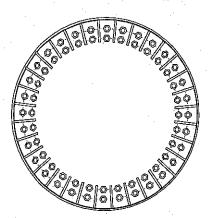
Appli	ed Loads
Moment (kip-ft)	1933.16
Axial Force (kips)	60.63
Shear Force (kips)	34.10





Bottom Plate - Internal





Bolt Data

GROUP 1: (32) 1-1/4" ø bolts (A325 N; Fy=81 ksi, Fu=105 ksi) on 47" BC GROUP 2: (32) 1-1/4" ø bolts (A325 N; Fy=81 ksi, Fu=105 ksi) on 53" BC

Bolt Capacity

30.62

Top Plate Data

60" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Top Stiffener Data

(32) 10"H x 7"W x 0.625"T, Notch: 0.5" plate: Fy= 36 ksi ; weld: Fy= 70 ksi horiz. weld: 0.375" fillet vert. weld: 0.375" fillet

Top Pole Data

60" x 0.5" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bottom Plate Data

60" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Stiffener Data

(32) 10"H x 7"W x 0.625"T, Notch: 0.5" plate: Fy= 36 ksi ; weld: Fy= 70 ksi horiz. weld: 0.375" fillet vert. weld: 0.375" fillet

Bottom Pole Data

60" x 0.625" round pole (A53-8-42; Fy=42 ksi, Fu=63 ksi)

		E
		Max Load (kips)
		Allowable (kips)
		Stress Rating:
Top Plate Capacity		
Max Stress (ksi):	÷ .	
Allowable Stress (ksi):	-	
Stress Rating:	Pirod OK	
Tension Side Stress Rating:	Pirod OK	
Top Stiffener Capacity		
Horizontal Weld:	Pirod OK	
Vertical Weld:	Pîrod OK	
Plate Flexure+Shear:	Pirod OK	
Plate Tension+Shear:	Pirod OK	
Plate Compression:	Pirod OK	
Top Pole Capacity		
Punching Shear:	Pirod OK	

ottom Plate Capacity	
lax Stress (ksi):	-
llowable Stress (ksi):	. •
tress Rating:	Pirod OK
ension Side Stress Rating:	Pirod OK
orizontal Weld:	Pirod OK
orizontal Weld:	Pirod OK
ertical Weld:	Pirod OK
ate Flexure+Shear:	
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ate Flexure+Shear:	Pirod OK Pirod OK
ate Flexure+Shear: ate Tension+Shear:	Pirod OK Pirod OK Pirod OK



1. PARAMETERS

Flange Elevation: 40'- 0"

1.1 tnxTower Reactions

M:= 3544.41kip∙ft

Apply TIA-222-H Section 15.5?

No

Moment: Axial Load:

P:= 73.76kip

Shear Load:

V:= 36.86kip

1.2 Shaft Properties at the Flange

Upper Shaft Diameter:

D_{shaft1} := 60in

Upper Shaft Thickness:

 $t_1 := 0.625in$

Lower Shaft Diameter:

 $D_{\text{shaft2}} := 60 \text{in}$

Lower Shaft Thickness:

 $t_2 := 0.625$ in

Shaft Grade:

Fy_{shaft}:= 42

Fu_{shaft} := 63ks

1.3 Existing Bridge Stiffener Properties

(Verify existing bolted connection for reduced moment.)

Number of Existing Bridge Stiffeners:

 $N_{exist} := 6$

Fy_D. := 65ksi

Fu_{Fy}:= 80ksi

Diameter to the centroid of

Existing Bridge Stiffener Grade:

Existing Bridge Stiffeners:

 $BC_{exist} := 61in$

Thickness of Existing Bridge

Stiffeners:

t_{exist}:= 1in

Width of Existing Bridge

Stiffeners:

w_{exist} ≔ 6in

Gross Area of One Existing

Bridge Stiffener:

 $A_{g_exist} := w_{exist} \cdot t_{exist} = 6 \cdot in^2$

Moment of Inertia of Existing

Bridge Stiffeners:

 $I_{\text{exist}} := \frac{N_{\text{exist}} \cdot BC_{\text{exist}}^2 \cdot A_{\text{g}_{\text{exist}}}}{g} = 16744.5 \cdot \text{in}^4$

Radius of Gyration about x-axis:

 $r_{x2} := \frac{t_{exist}}{\sqrt{12}} = 0.29 \cdot in$

BU# 829046 WO# 1765202 Elevation: 40' flange

Done By: AM Checked By: AC Date: 07/22/2019



1.4 Flange Bolt Properties

Number of Flange Bolts:

N_{bolts} := 64

Diameter of Flange Bolts:

Bolt Circle of Flange Bolts:

 $\mathrm{BC}_{\mathrm{bolts}} := 50 \mathrm{in}$

Gross Area of One Flange Bolt:

 $A_{\text{g_bolts}} := \frac{\pi}{4} \cdot D_{\text{bolts}}^2 = 1.23 \cdot \text{in}^2$

Moment of Inertia of Flange Bolts:

 $I_{bolts} := \frac{N_{bolts} \cdot BC_{bolts}^{2} \cdot A_{g_bolts}}{8} = 24543.69 \cdot in^{4}$

1.5 Division of Forces

Total Gross Area:

 $A_{g_total} := N_{exist} \cdot A_{g_exist} + N_{bolts} \cdot A_{g_bolts} = 114.54 \cdot in^2$

Total Moment of Inertia:

 $I_{total} := I_{exist} + I_{bolts} = 41288.19 \cdot in^4$

1.6 Reactions to Existing Bridge Stiffeners

Moment Reaction to

Existing Bridge Stiffeners:

 $M_{\text{exist}} := M \cdot \left(\frac{I_{\text{exist}}}{I_{\text{total}}} \right) = 1437.44 \cdot \text{kip} \cdot \text{ft}$

Axial Reaction to Existing

Bridge Stiffeners:

Pexist := 0kip

Shear Reaction to Existing

Bridge Stiffeners:

 $V_{exist} := 0 \text{kip}$

1.7 Reactions to Flange Bolts

(It is assumed that all shear and axial loads are taken by the flange bolts)

Moment Reaction to Flange Bolts:

 $M_{\text{Bolts}} = M_{\text{bolts}} \left(\frac{I_{\text{bolts}}}{I_{\text{total}}} \right) = 2106.97 \text{ kip/f}$

Axial Reaction to Flange Bolts:

P_{bolts} = P = 73 76 kip

Shear Reaction to Flange Bolts:

V_{bolts} := V = 36.86 kir

Check Flange Connection in CCIplate with these Reactions



2. Existing Bridge Stiffener Checks

2.1 Maximum Axial Forces in Single Existing Bridge Stiffener

Outer Radius of Bolt Circle:

$$C := \frac{BC_{exist}}{2} = 30.5 \cdot in$$

Critical Compression Bending

$$P_{comp} := \frac{M_{exist} \cdot C}{I_{exist}} \cdot A_{g_{exist}} + \frac{P_{exist}}{N_{exist}} = 188.52 \cdot kip$$

Critical Tension Bending Stress:

$$P_{tens} := \frac{M_{exist} \cdot C}{I_{exist}} \cdot A_{g_{exist}} - \frac{P_{exist}}{N_{exist}} = 188.52 \cdot kip$$

2.2 Available Compression Strength

[AISC 15th Edition E3-1]

Resistance Factor:

$$\phi_{c} := 0.9$$

Unbraced Length:

$$L_{\dot{u}} = 16.375 in$$

Effective Length Factor:

$$K := 1.0$$

Effective Length of Member:

$$L_c := K \cdot L_u = 16.38 \cdot in$$

[AISC 15th Edition E3-2]

Strength of Bridge Stiffener:

$$Fy_{Ex} = 65 \cdot ksi$$
 $Fu_{Ex} = 80 \cdot ksi$

$$Fu_{Ex} = 80 \cdot ksi$$

Elastic Buckling Stress: [AISC 15th Ed., Eq. E3-4]

$$F_{e} := \frac{\pi^{2} \cdot 29000 \text{ksi}}{\left(\frac{L_{c}}{r_{x2}}\right)^{2}} = 88.95 \cdot \text{ksi}$$

Determination of Crticial Stress: [AISC 15th Ed., Eqs. E3-2 and E3-3]

$$F_{cr} := \begin{pmatrix} \frac{Fy_{Ex}}{F_e} \\ 0.658 & Fy_{Ex} \end{pmatrix} \text{ if } 4.71 \cdot \sqrt{\frac{E}{Fy_{Ex}}} \ge \frac{L_c}{r_{x2}} \\ \begin{pmatrix} 0.877 \cdot F_e \end{pmatrix} \text{ otherwise}$$

$$F_{cr} = 47.87 \cdot ksi$$

Allowable Compressive Strength: [AISC 15th Ed., Eqs. J4-6 and E3-1]

$$\begin{split} \varphi P_n \coloneqq & \left[\left(\varphi_c \cdot F y_{Ex} \cdot A_{g_exist} \right) \ \, \text{if} \, \, \frac{L_c}{r_{x2}} \leq 25 \\ \left(\varphi_c \cdot F_{cr} \cdot A_{g_exist} \right) \ \, \text{otherwise} \\ \end{split} \right. \end{split}$$



[AISC 15th Edition Ch. D2]

$$\Phi P_n = 258.51 \cdot \text{kip}$$

Check Compressive Strength:

Check comp = "OK"

Capacity comp = 69.45 %

2.3 Available Tension Strength

Gross Section Yield

Available Tension Yield Strength:

$$\Phi P_{ty} := 0.9 \cdot Fy_{Ex} \cdot A_{g_exist} = 351 \cdot kip$$

Net Section Fracture

Bolt Hole Diameter:

Thickness:

$$T := t_{exist} = 1 \cdot in$$

Net Area:

$$A_{\text{net}} := A_{\text{g_exist}} - \left(BH + \frac{1}{16}in\right) \cdot T = 4.75 \cdot in^2$$

Net Area Limitation:

$$A_e := A_{net} = 4.75 \cdot in^2$$

Available Fractile Strength:

$$\Phi P_{tr} := 0.75 \cdot Fu_{Ex} \cdot A_e = 285 \cdot kip$$

Tension Check

Controlling Mode of Failure:

Checkmode = "Fracture Controls"

$$\begin{split} \varphi P_{nt} \coloneqq \begin{bmatrix} \varphi P_{tr} & \text{if Check}_{mode} = \text{"Fracture Controls"} \\ \varphi P_{ty} & \text{otherwise} \end{bmatrix} \end{split}$$

Controlling Tension Mode Check:

Check_{tension} :=
$$|"OK"|$$
 if Capacity_{tension} $\leq 100\%$
 $|"N/G"|$ otherwise

BU# 829046 WO# 1765202 Elevation: 40' flange

Done By: AM Checked By: AC Date: 07/22/2019



SUMMARY

tnxTower Reactions:

 $M = 3544.41 \cdot \text{kip} \cdot \text{ft}$

 $P = 73.76 \cdot kip$

V = 36.86 kip

Flange Bolts:

Diameter of Flange Bolts:

 $D_{bolts} = 1 \frac{1}{4} - in$

Bolt Circle of Flange Bolts:

 $BC_{bolts} = 50 \cdot in$

Loads to Flange Bolts:

 $M_{
m bolis} = 2106.97$ ft kip

P = 73.76 k p

V = 36.86 kip

See CCIPlate for Flange Bolt and Plate Capacities

Existing Jump Plates:

Moment to Proposed Bridge

Stiffeners:

 $M_{exist} = 1437.44 \text{ ft-kip}$

Number of Existing Bridge

Stiffeners:

 $N_{exist} \approx 6$

Thickness:

 $t_{exist} = 1 \cdot in$

Width:

 $w_{exist} = 6 \cdot in$

Controlling Capacity of Existing

Bridge Stiffeners:

Capacity = 69.5 %

 BU#	829046
 Site Name	eston/ Rt-57/ Norfield
Order#	499102 Rev.0

TIA-222 Revision	н

Top Plate - Internal

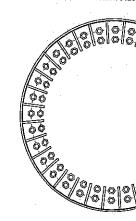


Appli	ed Loads
Moment (kip-ft)	2106.97
Axial Force (kips)	73.76
Shear Force (kips)	36.86
*	

^{*}TIA-222-H Section 15.5 Applied

Bottom Plate - Internal

CROWN CASTLE



Bolt Data

GROUP 1: (32) 1-1/4" ø bolts (A325 N; Fy=81 ksi, Fu=105 ksi) on 47" BC GROUP 2: (32) 1-1/4" ø bolts (A325 N; Fy=81 ksi, Fu=105 ksi) on 53" BC

Top Plate Data

60" ID x 1.25" Plate (A36; Fy≈36 ksi, Fu=58 ksi)

Top Stiffener Data

(32) 10"H x 7"W x 0.625"T, Notch: 0.5" plate: Fy= 36 ksi ; weld: Fy= 70 ksi horiz. weld: 0.375" fillet vert. weld: 0.375" fillet

Top Pole Data

60" x 0.625" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bottom Plate Data

60" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Stiffener Data

(32) 10"H x 7"W x 0.625"T, Notch: 0.5" plate: Fy= 36 ksi ; weld: Fy= 70 ksi horiz. weld: 0.375" fillet vert. weld: 0.375" fillet

Bottom Pole Data

60" x 0.625" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

		Analy	sis Results			
		Bolt	Capacity		a none contract services and contract to the contract of the c	
		Max Load (kips)	33,37			
		Allowable (kips)	76.31			
	•	Stress Rating:	41.7%	Pass		
Top Plate Capacity				D		
Max Stress (ksi):				Bottom P		
Allowable Stress (ksi):				Max Stress (ksi): Allowable Stress (ksi):		-
Stress Rating:	Pirod OK					-
Tension Side Stress Rating: Pirod OK	•		Stress Rating:		Pirod OK	
	riioù OK			Tension Side Stress Rating:		Pirod OK
Top Stiffener Capacity				D est C1	366	
Horizontal Weld:	Pirod OK	Bottom Stiffener Capacity				
Vertical Weld:	Pirod OK			Horizontal Weld: Vertical Weld:		Pirod OK
Plate Flexure+Shear:	Pirod OK		Pirod OK			
Plate Tension+Shear:	Pirod OK			Plate Flexu		Pirod OK
Plate Compression: Pirod OK				Plate Tension+Shear:		Pirod OK
Filled OK	Filled OK			Plate Com	pression:	Pirod OK
Top Pole Capacity				D D	1- 0	
	Pirod OK		Bottom Pole Capacity			
				Punching S	hear:	Pirod OK



Apply TIA-222-H Section 15.5?

1. PARAMETERS

Flange Elevation: 20'- 0"

1.1 tnxTower Reactions

Moment:

M:= 4389.46kip-ft

Axial Load:

P := 93.77kip

Shear Load:

V = 41.57 kip

1.2 Shaft Properties at the Flange

Upper Shaft Diameter:

D_{shaft1} := 60in

Upper Shaft Thickness:

 $t_1 := 0.625$ in

Lower Shaft Diameter:

 $D_{shaft2} := 60$ in

Lower Shaft Thickness:

:= 0.75in

Shaft Grade:

 $^{1}y_{\text{shaft}} := 42$

Fu_{shāft}:= 63ksi

1.3 Existing Bridge Stiffener Properties

(Verify existing bolted connection for reduced moment.)

Number of Existing Bridge

Stiffeners:

 $N_{exist} = 6$

Existing Bridge Stiffener Grade:

Diameter to the centroid of Existing Bridge Stiffeners:

BC_{exist} := 61.25in

Thickness of Existing Bridge

Stiffeners:

t_{exist} := 1.25in

Width of Existing Bridge

Stiffeners:

 $W_{exist} := 6.5 in$

Gross Area of One Existing

Bridge Stiffener:

 $A_{g_{exist}} := w_{exist} \cdot t_{exist} = 8.13 \cdot in^2$

Moment of Inertia of Existing

Bridge Stiffeners:

 $I_{\text{exist}} = \frac{N_{\text{exist}} \cdot BC_{\text{exist}}^2 \cdot A_{\text{g_exist}}}{8} = 22861.08 \cdot \text{in}^4$

Radius of Gyration about x-axis:

 $r_{x2} := \frac{t_{exist}}{\sqrt{12}} = 0.36 \cdot in$

BU# 829046 WO# 1765202 Elevation:20' flange

Done By: AM Checked By:AC Date: 07/22/2019



1.4 Flange Bolt Properties

Number of Flange Bolts:

N_{bolts} := 64

Diameter of Flange Bolts:

Bolt Circle of Flange Bolts:

BC_{bolts} := 50in

Gross Area of One Flange Bolt:

 $A_{\underline{g_bolts}} := \frac{\pi}{4} \cdot D_{\underline{bolts}}^2 = 1.23 \cdot in^2$

Moment of Inertia of Flange Bolts:

 $I_{bolts} := \frac{N_{bolts} \cdot BC_{bolts}^2 \cdot A_{g_bolts}}{8} = 24543.69 \cdot in^4$

1.5 Division of Forces

Total Gross Area:

 $A_{g_total} := N_{exist} \cdot A_{g_exist} + N_{bolts} \cdot A_{g_bolts} = 127.29 \cdot in^2$

Total Moment of Inertia:

 $I_{total} = I_{exist} + I_{bolts} = 47404.78 \cdot in^4$

1.6 Reactions to Existing Bridge Stiffeners

Moment Reaction to

Existing Bridge Stiffeners:

 $M_{\text{exist}} := M \cdot \left(\frac{I_{\text{exist}}}{I_{\text{total}}}\right) = 2116.83 \cdot \text{kip} \cdot \text{ft}$

Axial Reaction to Existing

Bridge Stiffeners:

 $P_{exist} = 0 kip$

Shear Reaction to Existing

Bridge Stiffeners:

 $V_{exist} = 0 kip$

1.7 Reactions to Flange Bolts

(It is assumed that all shear and axial loads are taken by the flange bolts)

Moment Reaction to Flange Bolts:

 $M_{\text{bolts}} = M_{\text{total}} = 2272.63 \text{ kip fi}$

Axial Reaction to Flange Bolts:

 $P_{bolts} = P = 93.77 \text{ kip}$

Shear Reaction to Flange Bolts:

 $V_{bolts} = V = 41.57 \text{ kip}$

Check Flange Connection in CClplate with these Reactions



2. Existing Bridge Stiffener Checks

2.1 Maximum Axial Forces in Single Existing Bridge Stiffener

Outer Radius of Bolt Circle:

$$C := \frac{BC_{exist}}{2} = 30.63 \cdot in$$

Critical Compression Bending

Stress:

$$P_{comp} := \frac{M_{exist} \cdot C}{I_{exist}} \cdot A_{g_{exist}} + \frac{P_{exist}}{N_{exist}} = 276.48 \cdot kip$$

Critical Tension Bending Stress:

$$P_{tens} := \frac{M_{exist} \cdot C}{I_{exist}} \cdot A_{g_{exist}} - \frac{P_{exist}}{N_{exist}} = 276.48 \cdot \text{kip}$$

2.2 Available Compression Strength

 $\phi_c := 0.9$

Unbraced Length:

Resistance Factor:

 $L_u := 19.25in$

Effective Length Factor:

K := 1.0

Effective Length of Member:

$$L_c := K \cdot L_u = 19.25 \cdot in$$

[AISC 15th Edition E3-2]

[AISC 15th Edition E3-1]

Strength of Bridge Stiffener:

$$Fy_{Ex} = 65 \cdot ksi$$
 $Fu_{Ex} = 80 \cdot ksi$

$$Fu_{Ex} = 80 \cdot ksi$$

Elastic Buckling Stress: [AISC 15th Ed., Eq. E3-4]

$$F_{e} := \frac{\pi^{2} \cdot 29000 \text{ksi}}{\left(\frac{L_{c}}{r_{x2}}\right)^{2}} = 100.57 \cdot \text{ksi}$$

Determination of Crticial Stress: [AISC 15th Ed., Eqs. E3-2 and E3-3]

$$F_{cr} := \begin{pmatrix} \frac{Fy_{Ex}}{F_e} \\ 0.658 & Fy_{Ex} \end{pmatrix} \text{ if } 4.71 \cdot \sqrt{\frac{E}{Fy_{Ex}}} \ge \frac{L_c}{r_{x2}} \\ \begin{pmatrix} 0.877 \cdot F_e \end{pmatrix} \text{ otherwise}$$

$$F_{cr} = 49.59 \cdot ksi$$

Allowable Compressive Strength: [AISC 15th Ed., Eqs. J4-6 and E3-1]

$$\phi P_{n} := \begin{cases} \left(\phi_{c} \cdot Fy_{Ex} \cdot A_{g_exist} \right) & \text{if } \frac{L_{c}}{r_{x2}} \leq 25 \\ \left(\phi_{c} \cdot F_{cr} \cdot A_{g_exist} \right) & \text{otherwise} \end{cases}$$



[AISC 15th Edition Ch. D2]

$$\phi P_n = 362.66 \cdot \text{kip}$$

Check Compressive Strength:

Check_{comp} :=
$$| "OK"$$
 if Capacity_{comp} $\leq 100\%$ $| "N/G"$ otherwise

Check = "OK"

Capacity comp = 72.611%

2.3 Available Tension Strength

Available Tension Yield Strength:

Gross Section Yield

 $\Phi P_{ty} := 0.9 \cdot Fy_{Ex} \cdot A_{g_exist} = 475.31 \cdot kip$

Net Section Fracture

Bolt Hole Diameter:

BH:= 1.1875in

Thickness:

 $T := t_{\text{exist}} = 1.25 \cdot \text{in}$

Net Area:

 $A_{\text{net}} := A_{\text{g_exist}} - \left(BH + \frac{1}{16}\text{in}\right) \cdot T = 6.56 \cdot \text{in}^2$

Net Area Limitation:

 $A_e := A_{net} = 6.56 \cdot in^2$

Available Fractile Strength:

 $\Phi P_{tr} := 0.75 \cdot Fu_{EX} \cdot A_e = 393.75 \cdot kip$

Tension Check

Controlling Mode of Failure:

 $\text{Check}_{\text{mode}} \coloneqq \left| \text{"Fracture Controls"} \quad \text{if } \frac{P_{tens}}{\phi P_{tr}} > \frac{P_{tens}}{\phi P_{ty}} \right|$ "Yield Controls" otherwise

Check_{mode} = "Fracture Controls"

$$\begin{split} \varphi P_{nt} \coloneqq & \left| \begin{array}{l} \varphi P_{tr} & \mathrm{if} \; \; \mathrm{Check}_{mode} = \text{"Fracture Controls"} \\ \varphi P_{ty} & \mathrm{otherwise} \\ \end{array} \right. \end{split}$$

Controlling Tension Mode Check:

 $\label{eq:Check_tension} \begin{aligned} \text{Check}_{\text{tension}} \coloneqq & \text{"OK"} & \text{if Capacity}_{\text{tension}} \leq 100\% \\ & \text{"N/G"} & \text{otherwise} \end{aligned}$

 $Check_{tension} = "OK"$

Gapacity tension = 66 87 %

BU# 829046 WO# 1765202 Elevation:20' flange

Done By: AM Checked By: AC Date: 07/22/2019



SUMMARY

tnxTower Reactions:

 $M = 4389.46 \cdot \text{kip} \cdot \text{ft}$

 $P = 93.77 \cdot kip$

V = 41.57·kip

Flange Bolts:

Diameter of Flange Bolts:

 $D_{\text{bolts}} = 1 \frac{1}{4} \cdot \text{in}$

Bolt Circle of Flange Bolts:

 $BC_{bolts} = 50 in$

Loads to Flange Bolts:

 $M_{
m bolts}=2272.63~{
m ft-kip}$

P=193/77/kip

V = 41.57 kip

See CCIPlate for Flange Bolt and Plate Capacities

Existing Jump Plates:

Moment to Proposed Bridge

Stiffeners:

 $M_{\text{exist}} = 2116.83 \text{ ft-kip}$

Number of Existing Bridge

Stiffeners:

 $N_{exist} = 6$

Thickness:

 $t_{\text{exist}} = 1.25 \cdot \text{in}$

Width:

 $w_{exist} = 6.5 \cdot in$

Controlling Capacity of Existing

Bridge Stiffeners:

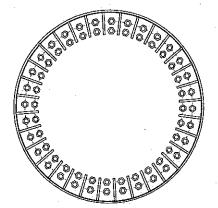
Capacity exist = 72.6.%

Monopole Flange Plate Connection

1	BU#	829046
ļ	Site Name	eston/ Rt-57/ Norfield
J	Order#	499102 Rev.0

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Top Plate - Internal



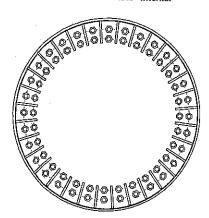
Elevation = 20 ft.

Appl	ied Loads
Moment (kip-ft)	2272.63
Axial Force (kips)	93.77
Shear Force (kips)	41.57

*TIA-222-H Section 15.5 Applied

Bottom Plate - Internal

CROWN CASTLE



onnection Propert

Bolt Data

GROUP 1: (32) 1-1/4" \emptyset bolts (A325 N; Fy=81 ksi, Fu=105 ksi) on 47" BC GROUP 2: (32) 1-1/4" \emptyset bolts (A325 N; Fy=81 ksi, Fu=105 ksi) on 53" BC

Top Plate Data

60" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Top Stiffener Data

(32) 10"H x 7"W x 0.625"T, Notch: 0.5" plate: Fy= 36 ksi ; weld: Fy= 70 ksi horiz. weld: 0.375" fillet vert. weld: 0.375" fillet

Top Pole Data

60" x 0.625" round pole (A53-8-42; Fy=42 ksi, Fu≈63 ksi)

Bottom Plate Data

60" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Stiffener Data

(32) 10"H x 7"W x 0.625"T, Notch: 0.5"
plate: Fy= 36 ksi; weld: Fy≈ 70 ksi
horiz, weld: 0.375" fillet
vert. weld: 0.375" fillet

Bottom Pole Data

60" x 0.75" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

			sis Results		
	_ 	Bolt	Capacity		
• •	·	Max Load (kips) Alfowable (kips) Stress Rating:	36.00 76.31 44.9 %	Pass	
Top Plate Capacity Max Stress (ksi): Allowable Stress (ksi): Stress Rating: Tension Side Stress Rating:	Pirod OK Pirod OK	<u> </u>		Bottom Plate Capacity Max Stress (ksi): Allowable Stress (ksi): Stress Rating: Tension Side Stress Rating:	Pirod OK Pirod OK
Top Stiffener Capacity Horizontal Weld: Vertical Weld: Plate Flexure+Shear: Plate Tension+Shear:	Pirod OK Pirod OK Pirod OK			Bottom Stiffener Capacity Horizontal Weld: Vertical Weld: Plate Flexure+Shear:	Pirod OK Pirod OK Pirod OK
Plate Compression:	Pirod OK Pirod OK			Plate Tension+Shear: Plate Compression:	Pirod OK Pirod OK
Punching Shear:	Pirod OK			Bottom Pole Capacity Punching Shear:	Pirod OK

Monopole Base Plate Connection

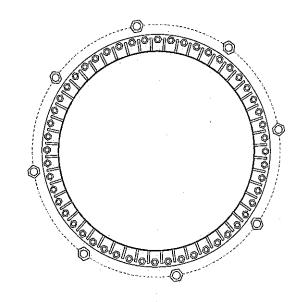


Site Info	
BU#	829046
Site Name	eston/Rt-57/Norfield
Order#	499102 Rév.0

Analysis Considerations	
TIA-222 Revision	THE PROPERTY OF
Grout Considered:	No
l _{ar} (in)	1.375

Applied Loads				
Moment (kip-ft)	5180.31			
Axial Force (kips)	107.57			
Shear Force (kips)	43.91			

^{*}TIA-222-H Section 15.5 Applied



Anchor	Rod	Data
--------	-----	------

GROUP 1: (52) 1-1/4" ø bolts (A687 N; Fy=105 ksi, Fu=125 ksi) on 67" BC GROUP 2: (8) 2-1/4" ø bolts (F1554-105 N; Fy=105 ksi, Fu=125 ksi) on 76" BC

Base Plate Data

70" OD x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Stiffener Data

(52) 8"H x 4"W x 0.625"T, Notch: 0.5" plate: Fy= 36 ksi; weld: Fy= 70 ksi horiz. weld: 0.375" fillet vert. weld: 0.375" fillet

Pole Data

60" x 0.75" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Anchor Rod Summary	(ui	nits of kips, kip-in)
GROUP 1:		
Pu_c = 44.95	φPn_c = 101.75	Stress Rating
Vu = 0.84	$\phi Vn = 30.52$	45.5%
Mu = 0.75	φMn = 21.58	Pass
GROUP 2:		
Pu_c = 1.63.15	φPn_c = 341.25	Stress Rating
Vu = 0	φVn = 102.38	45.5%
M !u = n/a	фMn = n/a	Pass
Base Plate Summary		
Max Stress (ksi):	-	
Allowable Stress (ksi):	-	
Stress Rating:	Pirod OK	
Stiffener Summary		
Horizontal Weld:	Pirod OK	
Vertical Weld:	Pirod OK	
Plate Flexure+Shear:	Pirod OK	
Plate Tension+Shear:	Pirod OK	
Plate Compression:	Pirod OK	
Pole Summary		
Punching Shear:	Pirod OK	

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Additional Anchor Rod Calculations:

Base Reactions from tnxTower:

Moment:= \$180.31 kip fl

Axial := 107.57/kip Apply TIA-222-H Section 15.5?

No 1005

Original Anchor Rod Group:

Nexisting = 52

BC existing = 67 in

Dexisting = 1,25 in

Aexisting = 0.969in

Shear := 43.91 kip

Fu_{existing} = 125ksi Fy_{existing} = 105ksi

Other Anchor Rod Group:

 $N_{gen1} := 0$ $BC_{gen1} := 0 \text{ in}$ $D_{gen1} := 0 \text{ in}$ $A_{gen1} := 0 \text{ in}^2$

Fugenl := 0ksi Fygenl := 0ksi

Existing Anchor Rod Group:

 $N_{new} = 4$ $BC_{new} = 76 \text{ in}$ $D_{new} = 2.25 \text{ in}$ $A_{new} = 3.25 \text{ in}$

 $Fu_{rod} = 125 \text{ks}$ $Fy_{rod} = 105 \text{ks}$

--See attached CCIplate output for additional anchor rod group capacity and structural rating values--



 $A_{e_HSS} := 0.75 \cdot A_{HSS} = 4.51 \cdot in^2$

 $F_{u \text{ HSS}} = 62 \cdot \text{ks}$

Anchor Rod Bracket Calculations

Analyze the anchor rod bracket and all components to resist the full demand loading of the additional anchors.

Bracket Demand Load: From CCI Plate

Pu := 163,15-kip

Tube Design (Square HSS)

Member Size:

HSS 4" x 4" x 1/2"

Member Properties

(AISC 15th Ed., Table 1-12):

Outside Diameter: ODHSS = 4.ir

Area: $A_{HSS} := 6.02 \cdot in$ $t_{
m HSS} = 0.465$ in Thickness:

Yield Strength:

Fv HSS ≔ 46 ksi $\mathsf{L}_{ ext{HSS}} \coloneqq 24$ in

Length:

 $I_{
m HSS} \coloneqq 11.9$ in

Moment of Inertia: Radius of Gyration:

 $r_{HSS} := 1.41 \cdot ir$

Inside Dimension:

 $ID_{HSS} := OD_{HSS} - 2 \cdot t_{HSS} = 3.07 \cdot in$

Bearing Check (AISC 15th Ed., Equation J7-1):

 $\phi_b := 0.75$

 $Pu_c = \phi_b \cdot R_n = \phi_b \cdot 1.8 \cdot F_{y_HSS} \cdot A_{pb}$

 ${\rm A}_{pb} := \frac{{\rm Pu}}{\varphi_b \cdot 1.8 \cdot {\rm F}_{y_HSS}} = 2.63 \cdot {\rm in}^2$

 $\mathsf{Check}_{bear} := \ \big| \ \mathsf{"OK"} \quad \mathsf{if} \ \ \mathsf{A}_{HSS} \geq \mathsf{A}_{pb}$ "N/G" otherwise

Check bear = 10



Compression Check (AISC 15th Ed., Eqs. E3-1 to E3-4):

$$\phi_c := 0.9$$

$$K := 1$$

$$\Phi P_{u_comp} = \Phi_c \cdot F_{cr} \cdot A_g$$

$$L_c = K L_{HSS} = 24 in$$

$$F_e := \frac{\pi^2 \cdot 29000 \text{ksi}}{\left(\frac{L_c}{r_{HSS}}\right)^2} = 987.9 \text{ ksi}$$

$$\frac{L_c}{r_{HSS}} = 17.02 \le 4.71 \cdot \sqrt{\frac{29000 \cdot ksi}{F_{y_HSS}}} = 118.26$$

$$F_{cr} := 0.658 \qquad F_{e}$$

$$F_{cy} := 0.658 \qquad F_{y} = 45.11 \cdot ksi$$

(AISC 15th Ed., Equation J4-6):

$$\phi_{\text{u_comp}} := \begin{cases} \phi_{\text{c}} \cdot F_{\text{y_HSS}} \cdot A_{\text{HSS}} & \text{if } \frac{L_{\text{c}}}{r_{\text{HSS}}} \le 25 \\ \phi_{\text{c}} \cdot F_{\text{cr}} \cdot A_{\text{HSS}} & \text{otherwise} \end{cases}$$

$$\phi P_{u_comp} = 249.23 \cdot kip$$

 $\underline{\mathbf{Check}}_{\underline{\mathbf{comp}}} = \underline{\mathbf{comp}}_{\underline{\mathbf{comp}}} = \underline{\mathbf{comp}}_{\underline{\mathbf{comp}}}$

Gusset Plate Design

Gusset Plate width:

 $w_{\text{plate}} = 6.25 \text{ in}$ $t_{\text{plate}} = 1.25 \text{ in}$

Gusset Plate thickness:

^Lplate1 ≔ 30in L_{plate2} ≔ 24in

Gusset Plate Strength:

Fy_{plate} = 50ks Fu_{plate} = 65ks

Pole thickness:

pole := 0.75in



Shear Check

(AISC 15th Ed., Eqs. J4-3 and J4-4):

$$A_g := t_{plate} \cdot L_{plate2} = 30 \cdot in^2$$

$$A_{nv} := A_g = 30 \cdot in^2$$

Shear Yielding

$$\phi_{\mathbf{v}} = 1$$

$$\Phi V_{plate} := \Phi_v \cdot 0.6 \cdot A_g \cdot Fy_{plate} = 900 \cdot kip$$



Shear Rupture

$$\phi_{\mathbf{v}} \approx 0.75$$

$$\Phi V_{plate} := \Phi_{v} \cdot 0.6 \cdot A_{nv} \cdot Fu_{plate} = 877.5 \cdot kip$$

$$\label{eq:Check_shear} \mbox{Check}_{shear} := \left[\begin{tabular}{ll} "OK" & \mbox{if } Rating_{shear} < 100\% \\ "N/G" & \mbox{otherwise} \end{tabular} \right]$$



Gusset Plate to Pole and Base Plate Weld Design (Horizontal and Vertical Weld):

(AISC 15th Ed., Part 8)

Gusset plate thickness:

 $t_{plate} = 1.25 \cdot in$

Pole Grade:

Fy_{pole} := 42ks

Base Plate Grade:

Fy_{base} = 36ks

Gussett Plate Grade:

Fy_{plate} = 50 ksi Fu_{plate} = 65 ksi

Height of vertical weld from base plate:

 $H := L_{plate1} = 30 \cdot in$

Notch horiz = 0.75 in

Gap between Base Plate and HSS:

Notch vert = 0.75 in

Vertical fillet weld size to pole:

Gap := 0 in $D_{vpole} := 5$

(in sixteenths of an inch)

 $weldsize_{pole} := \frac{D_{vpole}}{16} = \frac{5}{16}$

Weld Material Grade:

 $F_{EXX} = 80$ ksi

BU: 829046	Τ
BU: 829046 WO: 1765202	
Existing AR Bracket	\$

Done By: AM Checked By: AC Date: 07/22/2019



			CASTL
D			
		if Rating < 100% JFFICIENT", otherwise	
Gusset Plate to HSS Weld De (AISC 15th Ed., Table 8-4)	sign Electrode Strength:	$F_{EXX} = 80ksi$	
	•	Entered accessing to a second stage of the second s	
·		÷	



Weld Size (in sixteenths of an inch):

$$D_1 := 10$$

weldsize₁ :=
$$\frac{D_1}{16} = \frac{5}{8}$$

Assume the worst-case installation scenario where the rod is positioned directly against the far side of the HSS.

$$ecc_2 := OD_{HSS} - t_{HSS} - \frac{D_{new}}{2} = 2.41 \cdot in$$

Load not in plane with weld group:

$$a := \frac{ecc_2}{L_{plate2}} = 0.1$$

$$C_1 = 1.03$$

$$Coeff_1 := 3.67$$

 $\phi_w = 0.75$

$$D_{min1} := ceil \left(\frac{Pu \cdot in}{\Phi_{w} \cdot Coeff_{1} \cdot C_{1} \cdot L_{plate2} \cdot kip} \right) = 3$$

$$minweldsize := \frac{D_{min1}}{16} = \frac{3}{16}$$

$$\begin{aligned} \text{Check}_{weld} \coloneqq & & \text{"OK"} & \text{if } \mathbf{D}_1 \geq \mathbf{D}_{min1} \wedge \mathbf{D}_1 \geq \mathbf{Min}_{weldsize} \\ & & \text{"N/G"} & \text{otherwise} \end{aligned}$$

Check weld = 40K4

$$\phi Rn_{weldI} := \phi_w \cdot Coeff_1 \cdot ksi \cdot in \cdot C_1 \cdot D_1 \cdot L_{plate2} = 680.42 \cdot kip$$





Gusset Plate to Pole Punching Shear Check (max per unit length):

(AISC 15th Ed., Section J4.2)

Assume the worst-case installation scenario where the rod is positioned directly against the far side of the HSS.

$$\varphi_{\text{Sy}} \coloneqq 1.0$$

$$\Phi_{sr} := 0.75$$

$$ecc_1 := w_{plate} + OD_{HSS} - t_{HSS} - \frac{D_{new}}{2} = 8.66 \cdot in$$

$$M_1 := Pu \cdot ecc_1 = 1412.88 \cdot kip \cdot in$$

$$S_1 := \frac{t_{plate} \cdot L_{plate1}^2}{6} = 187.5 \cdot in^3$$

$$f_{v} := \frac{M_{1}}{s_{1}} \cdot t_{plate} \cdot 1 \text{ in} = 9.42 \cdot \text{kip}$$

AISC 15th Ed., Equation J4-3:

$$\varphi F_{sy} \coloneqq \varphi_{sy} \cdot 0.6 \cdot Fy_{pole} \cdot 2 \cdot t_{pole} \cdot 1 \\ in = 37.8 \cdot kip$$

AISC 15th Ed., Equation J4-4:

$$\varphi F_{sr} \coloneqq \varphi_{sr} \cdot 0.6 \cdot Fu_{pole} \cdot 2 \cdot t_{pole} \cdot 1 in = 42.52 \cdot kip$$

$$\Phi F_{V} := \min(\Phi F_{SY}, \Phi F_{ST}) = 37.8 \cdot \text{kip}$$

$Check p_{S[} = "OK"$

Gusset Plate to HSS Punching Shear Check

(max per unit length):

(AISC 15th Ed., Section J4.2)

Assume the worst-case installation scenario where the rod is positioned directly against the far side of the HSS.

$$ecc_2 := OD_{HSS} - t_{HSS} - \frac{D_{new}}{2} = 2.41 \cdot in$$

$$\mathbf{M}_2 := \mathbf{Pu} \cdot \mathbf{ecc}_2 = \mathbf{393.19 \cdot kip \cdot in}$$

$$S_2 := \frac{^{t}plate \cdot L_{plate2}}{6} = 120 \cdot in^3$$

$$f_v := \frac{M_2}{S_2} \cdot t_{plate} \cdot 1 \text{ in} = 4.1 \cdot \text{kip}$$

AISC 15th Ed., Equation J4-3:

$$\varphi F_{sy} \coloneqq \varphi_{sy} \cdot 0.6 \cdot F_{y_HSS} \cdot 2 \cdot t_{HSS} \cdot 1 \text{in} = 25.67 \cdot \text{kip}$$

AISC 15th Ed., Equation J4-4:

$$\varphi F_{SF} := \varphi_{SF} \cdot 0.6 \cdot F_{u_HSS} \cdot 2 \cdot t_{HSS} \cdot 1 \text{in} = 25.95 \cdot \text{kip}$$

$$\Phi F_{v} := \min(\Phi F_{sy}, \Phi F_{sr}) = 25.67 \cdot \text{kip}$$

$$\label{eq:Checkps2} \begin{array}{ll} \text{Check}_{PS2} \coloneqq & \text{"OK"} & \text{if } \operatorname{Rating}_{PS2} < 100\% \\ \\ \text{"N/G"} & \text{otherwise} \end{array}$$





Embedment Depth Calculations

Projected Embedment Depth:

 $L_{\mathrm{em}} := 6 \cdot \mathrm{fr}$

Yield Strength of Rebar:

:= 60ks

Concrete Strength:

Transverse Reinforcement Index:

:= 5000ps

Can be taken as 0 for design per ACI 318-14

Epoxy Factor:

Rebar Size Factor:

Casting Position Factor:



Concrete Weight Factor:



Pier Diameter:

Cover:



Rebar Size:

Tie Size:



n := 47

 $d_b := vlookup(d_s, Rebar, 2) \cdot in = 1.13 \cdot in$

Number of Vertical Rebar:

The embedment depth shall be analyzed based on the design tension capacity of the anchor rods.

Design Load:

$$\Phi P_{\text{nt}} := 0.75 \cdot Fu_{\text{rod}} \cdot A_{\text{new}} = 304.69 \cdot \text{kip}$$

Development Length (ACI 318-14 Chapter 25):

$$BC_{rebar} := D_{pier} - 2 \cdot c_c - \frac{Tie \cdot in}{4} - d_b = 81.87 \cdot in$$

$$S_{rebar} := \frac{\pi \cdot BC_{rebar}}{n} = 5.473 \cdot in$$

$$c_b := min \left(c_c + \frac{Tie}{8} in + \frac{d_b}{2}, S_{rebar} \cdot 0.5 \right) = 2.74 \cdot in$$

ACI 318-14, Equation 25.4.2.3a:

$$l_d := \left[\frac{3}{40} \cdot \frac{f_y}{\lambda \cdot \sqrt{f_c}} \cdot \frac{\psi_t \cdot \psi_e \cdot \psi_s}{\min \left[\left(\frac{c_b + k_{tr}}{d_b} \right), 2.5 \right]} \right] \cdot d_b = 29.59 \cdot in$$

Calculate Max Distance Between Rebar and New Anchor Rods:



$$A := \frac{1}{2} \cdot S_{rebar} = 2.736 \cdot in$$

$$B := \frac{BC_{rebar}}{2} - \frac{BC_{new}}{2} = 2.936 \text{ in}$$

$$G := \sqrt{A^2 + B^2} = 4.013 \cdot in$$

$$l'_d := l_d + \frac{G}{1.5} + 3 \text{ in} = 2.94 \text{ ft}$$

Epoxy Development Length:

Bond Strength:



$$\Phi_{bond} := 0.65$$

$$S_b := \begin{bmatrix} S_{bh} & \text{if Epoxy} = 0 \\ \\ S_{bA} & \text{otherwise} \end{bmatrix}$$

$$S_b = 1073 \, psi$$

$$L_{be} := \frac{\phi P_{nt}}{\pi \cdot D_{new} \cdot S_b \cdot \phi_{bond}} = 61.8 \cdot in$$

Required Embedment Length:

Length of Breaker Tape:

$$L_{
m BT} \coloneqq 0$$
 in

$$L_{min} := max(L_{be} + L_{BT}, l'_{d} + 0.25 \cdot L_{be}) = 5.15 \text{ ft}$$

$$\label{eq:Check} \begin{array}{ll} \text{Check} := & \text{"OK"} & \text{if $L_{\min} \leq L_{em}$} \\ \text{"N/G"} & \text{otherwise} \end{array}$$

Check = "OK"

Anchor Rod Pullout Test:

$$\varphi_p \coloneqq 0.75$$

Is this a CA DSA site?



BU: 829046 WO: 1765202 Existing AR Brackets

Done By: AM Checked By: AC Date: 07/22/2019



Done By: AM Checked By: AC Date: 07/22/2019



Additional Anchor Rod Calculations:

Base Reactions from tnxTower:

Moment = 5180.31 kip ft

Axial := 107.57 kip

Shear := 43.91/kip

Apply TIA-222-H Section 15.5?

No Yes

Original Anchor Rod Group:

 $N_{\text{existing}} = 52$ $\overline{BC}_{\text{existing}} = 67 \cdot \text{in}$ $\overline{D}_{\text{existing}} = 1.25 \cdot \text{in}$ $\overline{A}_{\text{existing}} = 0.969 \text{in}^2$

Fu_{exisiting} = 125ks Fy_{existing} = 105ks

Other Anchor Rod Group:

 $\begin{aligned} & \underset{\text{BC}_{gen1} := 0}{\text{BC}_{gen1} := 0 \cdot \text{in}} \\ & \underset{\text{D}_{gen1} := 0 \cdot \text{in}}{\text{D}_{gen1} := 0 \cdot \text{in}} \end{aligned}$

 $Fu_{gen1} := 0$ ksi $Fy_{gen1} := 0$ ksi

Existing Anchor Rod Group:

 $N_{\text{new}} = 4$ $BC_{\text{new}} = 76 \text{ in}$ $D_{\text{new}} = 2.25 \text{ in}$ $A_{\text{new}} = 3.25 \text{ in}$

Fu_{rod} = 125ksi Fy_{rod} = 105ksi

⁻⁻See attached CCIplate output for additional anchor rod group capacity and structural rating values--



Anchor Rod Bracket Calculations

Analyze the anchor rod bracket and all components to resist the full demand loading of the additional anchors.

Bracket Demand Load: From CCI Plate

Pu := 163.15 kip

Tube Design (Square HSS)

Member Size:

HSS 4" x 4" x 1/2"

Member Properties

(AISC 15th Ed., Table 1-12):

Outside Diameter: ODHSS = 4 in

 $A_{HSS} = 6.02 \text{ in}$

 $A_{e \text{ HSS}} := 0.75 \cdot A_{HSS} = 4.51 \cdot in^2$

Thickness:

Area:

Yield Strength:

 $F_{y | HSS} = 46 \text{ ks}$ L_{HSS} ≔ 24 in

 $t_{HSS} := 0.465 \cdot ir$

F_{u HSS} ≔ 62-ksi

Length:

Moment of Inertia:

Radius of Gyration:

 $I_{HSS} := 11.9 \text{ in}$ $r_{HSS} = 1.41$ in

Inside Dimension:

 $ID_{HSS} := OD_{HSS} - 2 \cdot t_{HSS} = 3.07 \cdot in$

Bearing Check (AISC 15th Ed., Equation J7-1):

 $\phi_b := 0.75$

 $Pu_c = \phi_b \cdot R_n = \phi_b \cdot 1.8 \cdot F_{y_HSS} \cdot A_{pb}$

 $\mathrm{A}_{pb} \coloneqq \frac{\mathrm{Pu}}{\varphi_b \cdot 1.8 \cdot \mathrm{F}_{y_HSS}} = 2.63 \cdot \mathrm{in}^2$

 $Check_{bear} := \int "OK" \text{ if } A_{HSS} \ge A_{pb}$ "N/G" otherwise

Check bear = "OF



Compression Check (AISC 15th Ed., Eqs. E3-1 to E3-4):

$$\phi_c \approx 0.9$$

$$K := 1$$

$$\Phi P_{u_comp} = \Phi_c \cdot F_{cr} \cdot A_g$$

$$L_c := K \cdot L_{HSS} = 24 \cdot in$$

$$F_{e} := \frac{\pi^{2} \cdot 29000 \text{ksi}}{\left(\frac{L_{c}}{r_{HSS}}\right)^{2}} = 987.9 \cdot \text{ksi}$$

$$\frac{L_c}{r_{HSS}} = 17.02 \le 4.71 \cdot \sqrt{\frac{29000 \cdot ksi}{F_{\dot{y}}_{HSS}}} = 118.26$$

$$F_{cr} := 0.658 \qquad F_{e}$$

$$F_{cy_HSS} = 45.11 \cdot ksi$$

(AISC 15th Ed., Equation J4-6):

$$\phi P_{u_comp} := \begin{cases} \phi_{c} \cdot F_{y_HSS} \cdot A_{HSS} & \text{if } \frac{L_{c}}{r_{HSS}} \leq 25 \\ \phi_{c} \cdot F_{cr} \cdot A_{HSS} & \text{otherwise} \end{cases}$$

$$\Phi P_{u comp} = 249.23 \cdot kip$$

$$\label{eq:Check_comp} \begin{split} \text{Check}_{comp} \coloneqq & \text{ "OK" } & \text{if } \text{Rating}_{comp} < 100\% \\ & \text{ "N/G" } & \text{otherwise} \end{split}$$

Check WOK!

Gusset Plate Design

Gusset Plate width:

 $W_{\text{plate}} := 6.25 \text{ in}$ $t_{\text{plate}} := 1.25 \text{ in}$

Gusset Plate thickness:

 $rac{ ext{L}_{ ext{plate}1}}{ ext{L}_{ ext{plate}2}} = 75$ ir

a

Fy_{plate} := 50ks

Gusset Plate Strength:

Fu_{plate} ≔ 65ks

Pole thickness:

 $t_{pole} = 0.75in$



Shear Check

(AISC 15th Ed., Eqs. J4-3 and J4-4):

$$A_g = t_{plate} L_{plate2} = 30 in^2$$

$$A_{nv} := A_g = 30 \cdot in^2$$

Shear Yielding

$$\phi_{\mathbf{v}} := 1$$

$$\varphi V_{plate} \coloneqq \varphi_{V} \cdot 0.6 \cdot A_{g} \cdot Fy_{plate} = 900 \cdot kip$$



Shear Rupture

$$\phi_{\rm V} := 0.75$$

$$\phi V_{plate} \coloneqq \phi_{V} \cdot 0.6 \cdot A_{nV} \cdot Fu_{plate} = 877.5 \cdot kip$$



Gusset Plate to Pole and Base Plate Weld Design (Horizontal and Vertical Weld):

Gusset plate thickness:

 $t_{plate} = 1.25 \cdot in$

(AISC 15th Ed., Part 8)

Pole Grade:

Fybase = 36ksi Fubase = 58ks

 $Fy_{pole} = 42ksi Fu_{pole} = 63ks$

Gussett Plate Grade:

Base Plate Grade:

 $Fy_{plate} = 50 \cdot ksi$ $Fu_{plate} = 65 \cdot ksi$

Height of vertical weld from base plate:

 $H := L_{plate1} = 75 \cdot in$

Notchhoriz = 0.75 i $Notch_{vert} = 0.75 in$

Gap between Base Plate and HSS:

Gap := 0in $D_{\text{voole}} = 5$

Vertical fillet weld size to pole: (in sixteenths of an inch)

 $weldsize_{pole} := \frac{D_{vpole}}{16} = \frac{5}{16}$

Weld Material Grade:

 $F_{EXX} = 80$ ksi

BU: 829046	
BU: 829046 WO: 1765202	
Existing AR Brac	kets

Done By: AM Checked By: AC Date: 07/22/2019



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	UNIQUET	TCIENT" otherwise		
	Check Power	ICIENI" otherwise		

Gusset Plate to HSS Weld Design (AISC 15th Ed., Table 8-4)

Electrode Strength:





Weld Size (in sixteenths of an inch):

$$D_1 := 10$$

weldsize₁ :=
$$\frac{D_1}{16} = \frac{5}{8}$$

Assume the worst-case installation scenario where the rod is positioned directly against the far side of the HSS.

$$ecc_2 := OD_{HSS} - t_{HSS} - \frac{D_{new}}{2} = 2.41 \cdot in$$

Load not in plane with weld group:

$$k := 0$$

$$a := \frac{ecc_2}{L_{plate2}} = 0.1$$

$$C_1 = 1.03$$

$$Coeff_1 := 3.67$$

 $\phi_W \approx 0.75$

$$D_{min1} := ceil \left(\frac{Pu \cdot in}{\phi_w \cdot Coeff_1 \cdot C_1 \cdot L_{plate2} \cdot kip} \right) = 3$$

minweldsize :=
$$\frac{D_{min1}}{16} = \frac{3}{16}$$

Checkweld = "OK"

$$\phi \text{Rn}_{weld1} \coloneqq \phi_w \cdot \text{Coeff}_1 \text{ ksi-in } \text{C}_1 \cdot \text{D}_1 \cdot \text{L}_{plate2} = 680.42 \cdot \text{kip}$$





Gusset Plate to Pole Punching Shear Check

(max per unit length): (AISC 15th Ed., Section J4.2) Assume the worst-case installation scenario where the rod is positioned directly against the far side of the HSS.

$$\dot{\Phi}_{\text{sy}} := 1.0$$

$$\phi_{sr} := 0.75$$

$$ecc_1 := w_{plate} + OD_{HSS} - t_{HSS} - \frac{D_{new}}{2} = 8.66 \cdot in$$

$$M_1 := Pu \cdot ecc_1 = 1412.88 \cdot kip \cdot in$$

$$S_1 := \frac{t_{plate} \cdot L_{plate1}^2}{6} = 1171.88 \cdot in^3$$

$$f_v := \frac{M_1}{S_1} \cdot t_{plate} \cdot 1 \text{ in} = 1.51 \cdot \text{kip}$$

AISC 15th Ed., Equation J4-3:

$$\varphi F_{sy} \coloneqq \varphi_{sy} \cdot 0.6 \cdot Fy_{pole} \cdot 2 \cdot t_{pole} \cdot 1 in = 37.8 \cdot kip$$

AISC 15th Ed., Equation J4-4:

$$\varphi F_{Sr} := \varphi_{Sr} \cdot 0.6 \cdot Fu_{pole} \cdot 2 \cdot t_{pole} \cdot 1 \\ in = 42.52 \cdot kip$$

$$\Phi F_{V} := \min(\Phi F_{SV}, \Phi F_{SV}) = 37.8 \cdot \text{kip}$$

Check_{PS1} :=
$$| \text{"OK"} \text{ if } \text{Rating}_{PS1} < 100\%$$
 $| \text{"N/G"} \text{ otherwise} | \text{"N/G"} | | \text{Check}_{PS1} = | \text{N/G"} | | \text{Check}_{PS1} = | \text{N/G"} | | \text{Check}_{PS1} = | \text{N/G"} | | \text{Check}_{PS1} = | \text{N/G"} | | \text{Check}_{PS1} = | \text{N/G"} | | \text{Check}_{PS1} = | \text{N/G"} | | \text{Check}_{PS1} = | \text{N/G"} | | \text{Check}_{PS1} = | \text{N/G"} | | \text{Check}_{PS1} = | \text{N/G"} | | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1} = | \text{Check}_{PS1}$

Check_{PS1} = "OK".

Gusset Plate to HSS Punching Shear Check

(max per unit length):

(AISC 15th Ed., Section J4.2)

Assume the worst-case installation scenario where the rod is positioned directly against the far side of the HSS.

$$ecc_2 := OD_{HSS} - t_{HSS} - \frac{D_{new}}{2} = 2.41 \cdot in$$

$$M_2 := Pu \cdot ecc_2 = 393.19 \cdot kip \cdot in$$

$$S_2 := \frac{{}^{t}plate \cdot L_{plate2}}{6} = 120 \cdot in^3$$

$$f_{v} := \frac{M_{2}}{S_{2}} \cdot t_{plate} \cdot 1 \text{ in} = 4.1 \cdot \text{kip}$$

AISC 15th Ed., Equation J4-3:

$$\phi F_{SY} \coloneqq \phi_{SY} \cdot 0.6 \cdot F_{y_HSS} \cdot 2 \cdot t_{HSS} \cdot 1 in = 25.67 \cdot kip$$

AISC 15th Ed., Equation J4-4:

$$\varphi F_{ST} \coloneqq \varphi_{ST} \cdot 0.6 \cdot F_{u_HSS} \cdot 2 \cdot t_{HSS} \cdot 1 \text{in} = 25.95 \cdot \text{kip}$$

$$\Phi F_V := \min(\Phi F_{SV}, \Phi F_{SY}) = 25.67 \text{ kip}$$



Embedment Depth Calculations

Projected Embedment Depth:

 $L_{em} = 6.1$

Yield Strength of Rebar:

Concrete Strength:

 $f_y = 60 \text{ks}$ $f_c^{\text{tot}} = 5000 \text{ps}$

Transverse Reinforcement Index:

Epoxy Factor:

υ ψ_e := 1 Can be taken as 0 for design per ACI 318-14

Rebar Size Factor:

repair Oize ractor.

Casting Position Factor:

Concrete Weight Factor:

and a dotor.

Pier Diameter:

Cover:

Rebar Size:

Tie Size:

Number of Vertical Rebar:



 $d_b := vlookup(d_s, Rebar, 2) \cdot in = 1.13 \cdot in$

The embedment depth shall be analyzed based on the design tension capacity of the anchor rods.

n := 47

Design Load:

$$\Phi P_{nt} := 0.75 \cdot Fu_{rod} \cdot A_{new} = 304.69 \cdot kip$$

Development Length (ACI 318-14 Chapter 25):

$$BC_{rebar} := D_{pier} - 2 \cdot c_c - \frac{Tie \cdot in}{4} - d_b = 81.87 \cdot in$$

$$S_{rebar} := \frac{\pi \cdot BC_{rebar}}{n} = 5.473 \cdot in$$

$$c_b := \min \left(c_c + \frac{\text{Tie}}{8} \text{in} + \frac{d_b}{2}, S_{\text{rebar}} \cdot 0.5 \right) = 2.74 \cdot \text{in}$$

ACI 318-14, Equation 25.4.2.3a:

$$I_d := \left[\frac{3}{40} \cdot \frac{f_y}{\lambda \sqrt{f_c}} \cdot \frac{\psi_t \cdot \psi_e \cdot \psi_s}{\min \left[\left(\frac{c_b + k_{tr}}{d_b} \right), 2.5 \right]} \right] \cdot d_b = 29.59 \cdot in$$

Calculate Max Distance Between Rebar and New Anchor Rods:



$$A := \frac{1}{2} \cdot S_{\text{rebar}} = 2.736 \cdot \text{in}$$

$$B := \frac{BC_{rebar}}{2} - \frac{BC_{new}}{2} = 2.936 \cdot in$$

$$G := \sqrt{A^2 + B^2} = 4.013 \cdot in$$

$$l'_d := l_d + \frac{G}{1.5} + 3in = 2.94 \text{ ft}$$

Epoxy Development Length:

Bond Strength:



$$\phi_{bond} := 0.65$$

$$S_b := \begin{bmatrix} S_{bh} & \text{if Epoxy} = 0 \\ S_{bA} & \text{otherwise} \end{bmatrix}$$

$$S_b = 1073 \, psi$$

$$L_{be} := \frac{\Phi P_{nt}}{\pi \cdot D_{new} \cdot S_b \cdot \Phi_{bond}} = 61.8 \cdot in$$

Required Embedment Length:

Length of Breaker Tape:

$$\mathsf{L}_{\mathbf{BT}}\coloneqq \mathsf{0}.\mathsf{ir}$$

$$L_{min} := \max \! \left(L_{be} + L_{BT}, l'_d + 0.25 \cdot L_{be} \right) = 5.15 \, \mathrm{ft}$$

Check :=
$$|"OK"|$$
 if $L_{min} \le L_{em}$
 $|"N/G"|$ otherwise

$\mathsf{Check} \triangleq \mathsf{"QK"}$

Anchor Rod Pullout Test:

$$\phi_p \coloneqq 0.75$$

Is this a CA DSA site?



BU: 829046 WO: 1765202 Existing AR Brackets

Done By: AM Checked By: AC Date: 07/22/2019



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Client:					
CHEIR.	Crown Castle	Design:	AM		
Project:	400087 (829046.1765202)	Date:	7/22/2019		
Site:	Weston/ Rt-57/ Norfield R	Verify:	AUC		
Title:	Foundation Design Reaction Comparison	Date:	7/22/2019		
	Griffe Company	Code:	TiA-222-H		

Template Version

FOUNDATION ANALYSIS:

Original Tower Design Reactions:

Pad & Pier:

Shear:

Overturning Moment:

52.8 Kip 7052.7 Kip-ft Note: Design reactions are multiplied by 1.35 for comparison as allowed by TIA-222-H Section

15.6.2.

TnxTower Reactions:

Drilled Caisson:

Shear:

Overturning Moment:

44.0 5180.0 Kip-ft

Stress Ratio:

Drilled Caisson:

Shear:

Overturning Moment:

79.4% 69.9%

Note: Ratings per TIA-222-H Section 15.5.

Conclusion:

When the calculated reactions are compared to the original design reactions, the existing foundation is considered to have been designed and constructed with adequate capacity to support the existing and proposed loads.

Controlling Foundation Stress Ratio:

79.4%



Address:

No Address at This Location

ASCE 7 Hazards Report

Standard:

ASCE/SEI 7-10

Risk Category: II

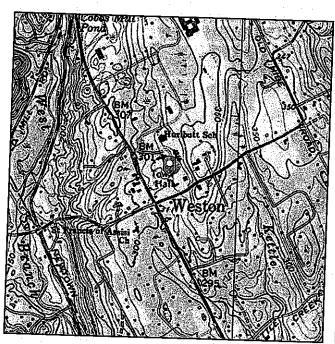
Soil Class:

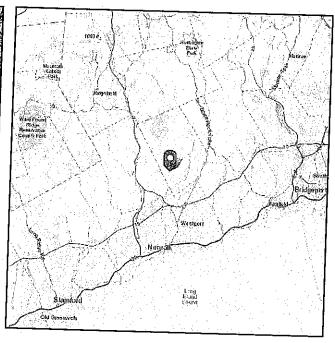
D - Stiff Soil

Elevation: 321.79 ft (NAVD 88)

Latitude: 41.202333

Longitude: -73.379611





Wind

Results:

Wind Speed:

119 Vmph

10-year MRI

76 Vmph

25-year MRI

86 Vmph

50-year MRI

91 Vmph

100-year MRI

98 Vmph

Data Source:

ASCE/SEI 7-10, Fig. 26.5-1A and Figs. CC-1-CC-4, incorporating errata of

March 12, 2014

Date Accessed:

Thu Jul 18 2019

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-10 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

Site is in a hurricane-prone region as defined in ASCE/SEI 7-10 Section 26.2. Glazed openings need not be protected against wind-borne debris.

Mountainous terrain, gorges, ocean promontories, and special wind regions should be examined for unusual wind



Site Soil Class: Results:	D - Stiff Soil			
S _S : S ₁ : F ₂ : F ₃ : S _{MS} : S _{M1} :	0.226 0.067 1.6 2.4 0.361 0.16	S _{DS} : S _{D1} : T _L : PGA: PGA _M : F _{PGA} :	0.241 0.107 6 0.126 0.195 1.548	
Seismic Design Cat	egory B	l _e :	1	
1	R Response Spectrum	0.25	Design Response	Spectrum
0.35		0.20		
0.25		0.15		
0.15		0.10		
0.05		0.05		
0 1 2 Sa(g)	vs T(s) 4 5 6 7	0 1	S _a (g) vs T(s)	5 6 7

Data Accessed:

Thu Jul 18 2019

Date Source:

USGS Seismic Design Maps based on ASCE/SEI 7-10, incorporating Supplement 1 and errata of March 31, 2013, and ASCE/SEI 7-10 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-10 Ch. 21 are available from USGS.



lce

Results:

Ice Thickness:

0.75 in.

Concurrent Temperature:

15 F

Gust Speed:

50 mph

Data Source:

Standard ASCE/SEI 7-10, Figs. 10-2 through 10-8

Date Accessed:

Thu Jul 18 2019

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

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 50-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

The ASCE 7 Hazard Tool is provided for your convenience, for informational purposes only, and is provided "as is" and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

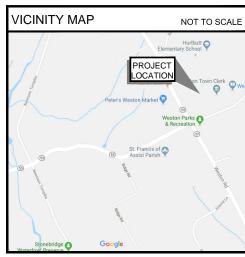
ASCE does not intend, nor should anyone interpret, the results provided by this Tool to replace the sound judgment of a competent professional, having knowledge and experience in the appropriate field(s) of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the contents of this Tool or the ASCE 7 standard.

In using this Tool, you expressly assume all risks associated with your use. Under no circumstances shall ASCE or its officers, directors, employees, members, affiliates, or agents be liable to you or any other person for any direct, indirect, special, incidental, or consequential law, you agree to release and hold harmless ASCE from any and all liability of any nature arising out of or resulting from any use of data





CROWN CASTLE BU #:829046 56 NORFIELD RD. (TOWN HALL) WESTON, CT 06883



DO NOT SCALE DRAWINGS

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE LESSEE/LICENSEE REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME

APPLICANT: VERIZON WIRELESS 20 ALEXANDER DRIVE WALLINGFORD, CT 06492 CONTACT: JAMES O'DONNELL

(413) 575-2626

JACOBS ENGINEERING GROUP, INC. ARCHITECT: 120 SAINT JAMES AVENUE

BOSTON, MA 02116

STRUCTURAL ENGINEER:

BOSTON, MA 02116

ELECTRICAL ENGINEER:

5TH FLOOR BOSTON, MA 02116

PROJECT SUMMARY

VERIZON SITE NAME: WESTON CT

CROWN CASTLE SITE NAME: WESTON/RT-57/NORFIELD R

TOWER OWNER:

CROWN CASTLE LLC 67 SHARP STREET HINGHAM, MA 02043

COORDINATES:

N 41° 12' 8.40" W -73° 22' 46.60"

VERIZON WIRELESS 20 ALEXANDER DRIVE WALLINGFORD, CT 06492

PROJECT DIRECTORY

SITE ADDRESS:

56 NORFIELD RD. (TOWN HALL) WESTON, CT 06883

PROJECT DESCRIPTION

INSTALL (6) ANTENNAS, INSTALL (6) RADIOS, INSTALL (1) OVP BOX, INSTALL (1) HYBRID CABLE, INSTALL (3) MOUNTS. REMOVE (6) ANTENNAS, REMOVE (6) RADIOS, REMOVE (1) OVE

THIS DOCUMENT WAS DEVELOPED TO REFLECT A SPECIFIC SITE AND ITS SITE CONDITIONS AND IS NOT TO BE USED FOR ANOTHER SITE OR WHEN CONDITIONS PERTAIN REUSE OF THIS DOCUMENT IS AT THE SOLE RISK OF THE USER

FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION

SHEET INDEX

A-1

TITLE SHEET T-1

SITE PLAN

A-2 **ELEVATION PLAN**

EQUIPMENT DETAILS A-3

PLUMBING DIA



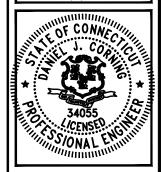
UNDERGROUND SERVICE ALERT

THE LAW REQUIRES TWO WORKING DAYS NOTICE PRIOR TO ANY EARTH MOVING ACTIVITIES DIAL 811

Verizoi

CCROWN 3 CORPORATE PARK DRIVE, SUITE 101 CLIFTON PARK, NEW YORK, 12065

ACOE



APPROVALS CONSTRUCTION

ERCC0004

EBG

CAT CHECKED BY: SUBMITTALS

0 08/28/19 FOR PERMITTING

TRICTLY PROHIBITED. DUPLICATION AND US Y GOVERNMENT AGENCIES FOR THE RPOSES OF CONDUCTING THEIR LAWFULL THORIZED REGULATORY AND MINISTRATIVE FUNCTIONS IS SPECIFICALL

> SITE NAME: WESTON CT **CROWN CASTLE BU#:**

6 NORFIELD RD. (TOWN HALL) WESTON, CT 06883

TITLE SHEET

T-1

CONSTRUCTION

CONSULTANT TEAM

APPLICANT'S CONTACT: JAMES O'DONNELL

5TH FLOOR

JACOBS ENGINEERING GROUP, INC.

120 SAINT JAMES AVENUE 5TH FLOOR

JACOBS ENGINEERING GROUP, INC. 120 SAINT JAMES AVENUE

APPLICANT:



25'-1" EXISTING FENCED IN - EXISTING BUILDING COMPOUND - EXISTING CABLE TRAY EXISTING VERION EXISTING EQUIPMENT EXISTING EQUIPMENT 12'-0" x 20'-0" ROOM (BY OTHERS) ROOM (BY OTHERS) EXISTING EQUIPMENT EXISTING EQUIPMENT EXISTING EQUIPMENT EXISTING EQUIPMENT ROOM (BY OTHERS) EXISTING 190 MONOPOLE ROOM (BY OTHERS) ROOM (BY OTHERS) ROOM (BY OTHERS)



GENERAL NOTES:

- 1. SOME EXISTING AND PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
- 2. NORTH SHOWN AS APPROXIMATE.
- EXISTING ANTENNAS SHOWN AS APPROXIMATE. ELEVATION BASED ON EXISTING INFORMATION AND VISUAL INSPECTION AND HAVE NOT BEEN VERIFIED THROUGH AN ANTENNA MAPPING.
- 4. PLANS BASED ON DRAWINGS FROM CROWN CASTLE AS-BUILT.
- 5. ANTENNAS TO BE INSTALLED PER TOWER MANUFACTURER RECOMMENDATIONS AND TOWER STRUCTURAL ANALYSIS SPECIFICATIONS.
- 6. REUSED EXISTING ANTENNA MOUNTS AND COAX. INSPECT FOR DAMAGE OR DECAY AND REPLACE AS NEEDED PER STRUCTURAL ANALYSIS.
- 7. CONTRACTOR TO VERIFY FINAL ANTENNA DESIGN AND NOTIFY CARRIER AND ENGINEER WITH ANY DISCREPANCIES PRIOR TO THE INSTALLATION.
- 8. INSTALL ALL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS.
- 9. ALL EQUIPMENT SHALL BE GROUNDED PER VERIZON WIRELESS STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.
- 10. EQUIPMENT MOUNTING DETAIL IS PROVIDED AS SCHEMATIC IN NATURE WITH SUGGESTED PART NUMBERS, ACTUAL PARTS, MOUNTING METHOD, LOCATION AND ORIENTATION MUST BE IN ACCORDANCE WITH THE STRUCTURAL ANALYSIS OR CONFIRMED WITH THE STRUCTURAL ENGINEER THAT COMPLETED THE REPORT IF NOT PROVIDED.
- 11. ALL PROPOSED EQUIPMENT INCLUDING ANTENNAS, COAX, SURGE ARRESTORS, RRU'S, ETC. SHALL BE MOUNTED IN ACCORDANCE WITH THE STRUCTURAL ANALYSIS (BY OTHERS)
- 12. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR PRIOR TO ALL FABRICATION. ANY DISCREPANCIES SHALL BE REPORTED IMMEDIATELY TO ENGINEER.
- 13. CONSTRUCTION SAFETY SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THESE DRAWINGS DO NOT INCLUDE NECESSARY SAFETY
- 14. BRACE STRUCTURES SUCH AS LATERAL BRACING, ANCHOR BOLTS, ETC. SHALL BE INSTALLED UNTIL ALL STRUCTURAL ELEMENTS REACH TO REQUIRED STABILITY.
- 15. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OF NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE OWNER PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE OWNER'S REPRESENTATIVE PRIOR TO PROCEEDING.
- 16. EACH CONTRACTOR SHALL COOPERATE WITH THE OWNER'S REPRESENTATIVE AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
- 17. REPAIR ANY DAMAGE DURING CONSTRUCTION TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE CONSTRUCTION MANAGER.
- 18. CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
- 19. REUSE EXISTING ANTENNA MOUNTS AND COAX. INSPECT FOR DAMAGE OR DECAY AND REPLACE AS NEEDED PER STRUCTURAL ANALYSIS.
- 20. CONTRACTOR TO VERIFY FINAL ANTENNA DESIGN AND NOTIFY CARRIER AND ENGINEER WITH ANY DISCREPANCIES PRIOR TO THE INSTALLATION.



CROWN 3 CORPORATE PARK DRIVE, SUITE 1 CLIFTON PARK, NEW YORK, 12065

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	LANDLORD_
	LEASING
П	R.F
П	ZONING
П	CONSTRUCTION
П	A & E
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PROJECT NO: ERCC0004

DRAWN BY EBG

CAT CHECKED BY:

	SUBMITTALS			
0	08/28/19	FOR PERMITTING		

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> SITE NAME: WESTON CT CROWN CASTLE BU#:

56 NORFIELD RD. (TOWN HALL) WESTON, CT 06883

SITE PLAN

A-1

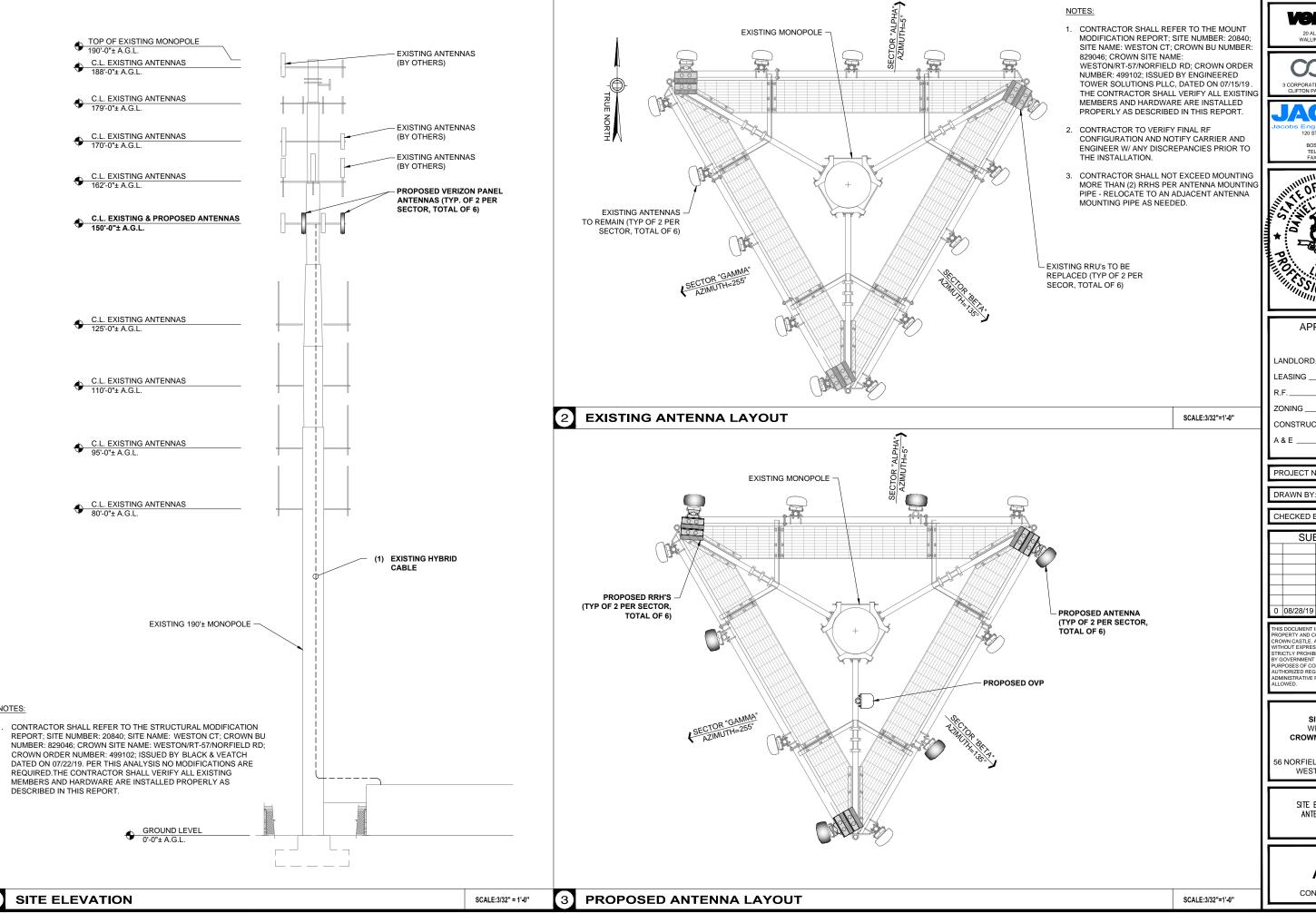
CONSTRUCTION

SITE PLAN

EXISTING 10' WIDE DOUBLE -

SWING GATE

SCALE: 3/16" = 1'-0"



VerZonV

20 ALEXANDER DRIVE
WALLINGFORD, CT 06492

CCROWN

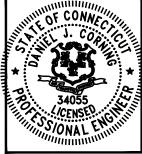
3 CORPORATE PARK DRIVE, SUITE CLIFTON PARK, NEW YORK, 12068

JACOBS

Jacobs Engineering Group, In

120 ST JAMES AVENUE





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LANDLORD

LEASING

R.F.

ZONING

CONSTRUCTION

A & E

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SITE NAME: WESTON CT CROWN CASTLE BU#: 829046

56 NORFIELD RD. (TOWN HALL) WESTON, CT 06883

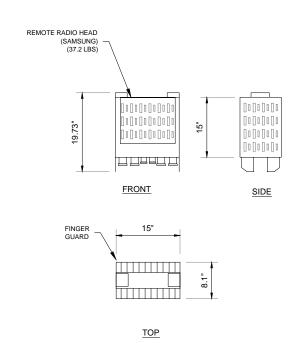
SITE ELEVATION AND ANTENNA LAYOUT

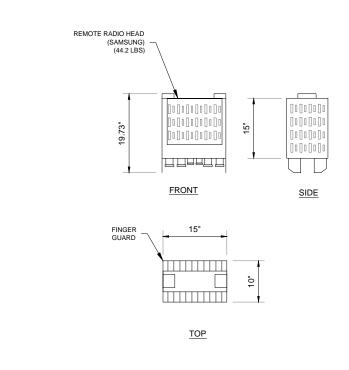
A-2 CONSTRUCTION

GENERAL NOTES:

GENERAL NOTES

- 1. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR PRIOR TO ALL FABRICATION. ANY DISCREPANCIES SHALL BE REPORTED IMMEDIATELY TO ENGINEER.
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3 SAMSUNG 1900/2100 RRH - RFV01U-D1A

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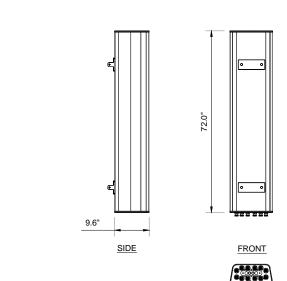
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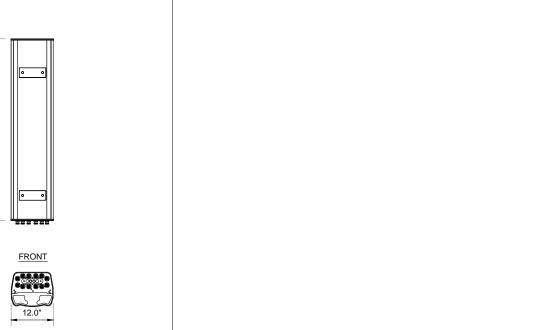
> SITE NAME: WESTON CT **CROWN CASTLE BU#:**

56 NORFIELD RD. (TOWN HALL) WESTON, CT 06883

EQUIPMENT DETAILS

A-3 SCALE: NTS





QUINTEL QS665-5D ANTENNA **BOTTOM** DIMENSIONS: 72.0"x12.0"x9.6" WEIGHT: 88.0 LBS.

SCALE: NTS

QUNTEL QS6656-5D ANTENNA

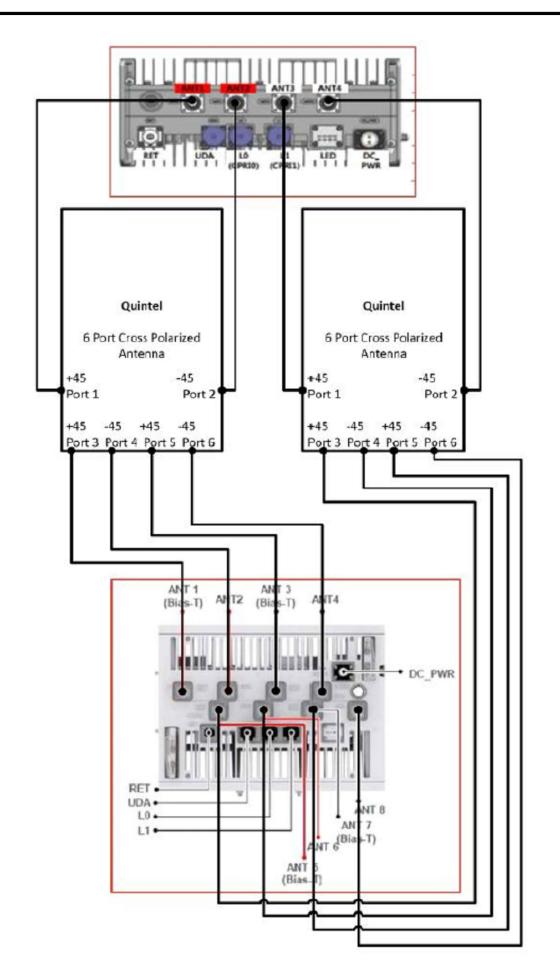
DETAIL NOT USED

DETAIL NOT USED SCALE: NTS

SAMSUNG 700/850 RRH - RFV01U-D2A

SCALE: NTS

CONSTRUCTION



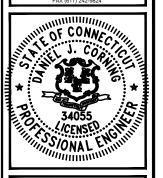


CROWN CASTLE

3 CORPORATE PARK DRIVE, SUITE 11
CLIFTON PARK, NEW YORK, 12065

JACOBS

Dbs Engineering Group, Ir 120 ST JAMES AVENUE 5TH FLOOR BOSTON, MA 02116 TEL (617) 242-9222



APPROVALS

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LEASING

R.F.

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CONSTRUCTION

A & E

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SITE NAME: WESTON CT CROWN CASTLE BU#: 829046

56 NORFIELD RD. (TOWN HALL) WESTON, CT 06883

PLUMBING DIA

A-4

CONSTRUCTION

1

SCHEMATIC PLUMBING DIAGRAM

SCALE: NTS