Crown Castle
3 Corporate Park Drive, Suite 101
Clifton Park, NY 12065

May 25, 2023

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

RE: **Notice of Exempt Modification -T-Mobile: CTFF013A**
Crown Site ID#857525
24 Dinglebrook Lane, Newtown, CT 06470
Latitude: 41° 28′ 1.01″ / Longitude: -73° 20′ 2.05″

Dear Ms. Bachman:

Please accept this letter by Crown Castle USA Inc. on behalf of T-Mobile Northeast LLC ("T-Mobile") for notification of construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2) and §16-50aa. The property is owned by Genesis TT LLC. The tower is operated by CCATT LLC ("Crown Castle"). A copy of this letter is being sent to Daniel C. Rosenthal, First Selectman, Town of Newtown and Rob Sibley, Director of Land Use, Town of Newtown as well as Genesis TT LLC, property owner. The facility was approved by the Connecticut Siting Council, Docket No. 376 on August 27, 2009.

T-Mobile proposes to install one (1) microwave dish at the 128' mount level on the existing 150-foot monopole tower located at 24 Dinglebrook Lane, Newtown, CT. T-Mobile to also install, two (2) coaxial cables, (3/8") and ancillary equipment. This modification/proposal includes hardware that is both 4G (LTE) and 5G capable through remote software configuration and either or both services may be turned on or off at various times.

Panned Modification:

Tower:

Installed New:

(1) Ericsson ANT3 0.9 HPX Microwave Dish
(2) Ericsson ODU's mini link 6365
(2.) Coaxial Cables 3/8"
(1) Power Cable
(1) Fiber Cable

The planned modification to the facility fall within the activities explicitly provided for in R.C.S.A §16-50j 72(b)(2), specifically:

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.
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, T-Mobile 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.

Sincerely,

Jeffrey Barbadora
Site Acquisition Specialist
1800 W. Park Drive, Suite 250
Westborough, MA 01581
(781) 970-0053
Jeff.Barbadora@crowncastle.com

Attachments
cc:

Daniel C. Rosenthal, First Selectman
Town of Newtown
3 Primrose Street
Newtown, CT 06470
(203) 270-4201

Rob Sibley, Director of Land Use
Town of Newtown
3 Primrose Street
Newtown, CT 06470
(203) 270-4351

Genesis TT LLC Property Owner
C/O Lease Administration
1001 3rd Ave West, Suite 420
Bradenton, FL 34205
(941) 757-5010

DOCKET NO. 376 - New Cingular Wireless PCS, LLC (AT&T) application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a telecommunications facility located at 24 Dinglebrook Lane, Newtown, Connecticut.	}	Connecticut
	}	Siting
	}	Council
		August 27, 2009

Decision and Order

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, operation, and maintenance of a telecommunications facility, including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate, either alone or cumulatively with other effects, when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application, and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by General Statutes § 16-50k, be issued to New Cingular Wireless PCS, LLC (AT&T), hereinafter referred to as the Certificate Holder, for a telecommunications facility located at 24 Dinglebrook Lane, Newtown, Connecticut.

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

1. The tower shall be constructed as a monopole, no taller than necessary to provide the proposed telecommunications services, sufficient to accommodate the antennas of the Certificate Holder and other entities, both public and private, but such tower shall not exceed a height of 150 feet above ground level. The height at the top of the Certificate Holder's antennas shall not exceed 152-foot 6-inches feet above ground level.

2. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be served on the Town of Newtown for comment, and all parties and intervenors as listed in the service list, and submitted to and approved by the Council prior to the commencement of facility construction and shall include:
    a) a final site plan(s) of site development to include specifications for the tower, tower foundation, antennas, equipment compound, radio equipment, access road including its possible relocation, utility line, and landscaping; and
    b) construction plans for site clearing, grading, landscaping, water drainage, and erosion and sedimentation controls consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.

3. The Certificate Holder shall, prior to the commencement of operation, provide the Council worst-case modeling of the electromagnetic radio frequency power density of all proposed entities' antennas at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin No. 65, August 1997. The Certificate Holder shall ensure a recalculated report of the electromagnetic radio frequency power density be submitted to the Council if and when circumstances in operation cause a change in power density above the levels calculated and provided pursuant to this Decision and Order.

The parties and intervenors to this proceeding are:

Applicant	**Its Representative**
New Cingular Wireless PCS, LLC (AT&T)	Christopher B. Fisher, Esq. Cuddy & Feder LLP 445 Hamilton Avenue, 14th Floor White Plains, NY 10601 AT&T 500 Enterprise Drive Rocky Hill, CT 06067 Attention: Michele Briggs
Intervenor	**Its Representative**
Cellco Partnership d/b/a Verizon Wireless	Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103-3597

24 DINGLEBROOK LANE

Location	24 DINGLEBROOK LANE	**M/B/L**	22/ 3/ 4/C /
Acct#	00174600C	**Owner**	GENESIS TT LLC
Assessment	$378,390	**Appraisal**	$540,550
PID	15217	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2022	$156,550	$384,000	$540,550
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2022	$109,590	$268,800	$378,390

Owner of Record

Owner	GENESIS TT LLC
Co-Owner	C/O TARPON TOWERS II, LLC
Address	8916 77TH TERRACE EAST #103 LAKEWOOD RANCH, FL 34202

Sale Price	$620,000
Book & Page	1120/0239
Sale Date	12/05/2018
Instrument	38

Ownership History

Ownership History				
Owner	**Sale Price**	**Book & Page**	**Instrument**	**Sale Date**
GENESIS TT LLC	$620,000	1120/0239	38	12/05/2018
LINDA LUNDGREN LIFE USE	$0	1112/0725	34	06/04/2018
LUNDGREN PAUL R EST	$0	0857/0723		12/25/2009

Building Information

Building 1 : Section 1

Year Built:
Living Area: 0

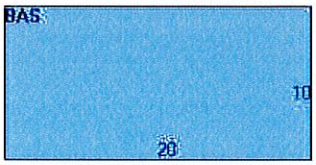
Building Attributes	
Field	**Description**

Style	Outbuildings
Model	
Grade:	
Stories	
Occupancy	
Exterior Wall 1	
Exterior Wall 2	
Roof Structure	
Roof Cover	
Interior Wall 1	
Interior Wall 2	
Interior Flr 1	
Interior Flr 2	
Heat Fuel	
Heat Type:	
AC Type:	
Total Bedrooms:	
Full Bthrms:	
Half Baths:	
Extra Fixtures	
Total Rooms:	
Bath Style:	
Kitchen Style:	
Extra Kitchens	
Fireplace(s)	
Extra Opening(s)	
Gas Fireplace(s)	
Blocked FPL(s)	
Woodstove(s)	
SF Fin Bsmt	
Fin Bsmt Qual	
Bsmt Garage	
Int Millwork	
Ext. Millwork	
Foundation	
MH Park	
Fndtn Cndtn	
Basement	

Building Photo

(https://images.vgsi.com/photos/NewtownCTPhotos/\00\02\10\13.jpg)

Building Layout



(https://images.vgsi.com/photos/NewtownCTPhotos//Sketches/15217_205

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

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code	4310
Description	CELL SITE
Zone	R-2
Neighborhood	
Alt Land Appr	No
Category	

Land Line Valuation

Size (Acres)	0.00
Frontage	
Depth	
Assessed Value	$268,800
Appraised Value	$384,000

Outbuildings

Outbuildings						Legend
Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
CELL	Cell Tower			1.00 Units	$140,000	1
SHD4	Cellular Shed			400.00 S.F.	$8,160	1
SHD4	Cellular Shed			360.00 S.F.	$7,340	1
FN1	Fence			250.00 L.F.	$1,050	1

Valuation History

Appraisal			
Valuation Year	Improvements	Land	Total
2022	$156,550	$384,000	$540,550
2021	$110,580	$360,000	$470,580
2020	$110,580	$360,000	$470,580

Assessment			
Valuation Year	Improvements	Land	Total
2022	$109,590	$268,800	$378,390
2021	$77,410	$252,000	$329,410
2020	$77,410	$252,000	$329,410

Barbadora, Jeff

From: TrackingUpdates@fedex.com
Sent: Friday, May 26, 2023 10:38 AM
To: Barbadora, Jeff
Subject: FedEx Shipment 772257499227: Your package has been delivered

FedEx®

Hi. Your package was delivered Fri, 05/26/2023 at 10:30am.

Delivered to 3 PRIMROSE ST, NEWTOWN, CT 06470
Received by S CHRINER

OBTAIN PROOF OF DELIVERY

How was your delivery ?

TRACKING NUMBER	772257499227
FROM	Jeff Bancadora 1800 W. Park Drive WESTBOROUGH, MA, US, 01581
TO	Town of Newtown Daniel C. Rosenthal, First Selectma 3 Primrose Street NEWTOWN, CT, US, 06470
REFERENCE	799001 7680
SHIPPER REFERENCE	799001 7680
SHIP DATE	Thu 6/29/2023 05:36 PM
DELIVERED TO	Receptionist/Front Desk
PACKAGING TYPE	FedEx Envelope
ORIGIN	WESTBOROUGH, MA, US, 01581
DESTINATION	NEWTOWN, CT, US, 06470
NUMBER OF PIECES	1
TOTAL SHIPMENT WEIGHT	1.00 LB
SERVICE TYPE	FedEx Priority Overnight

Barbadora, Jeff

From: TrackingUpdates@fedex.com
Sent: Friday, May 26, 2023 10:39 AM
To: Barbadora, Jeff
Subject: FedEx Shipment 772257545469: Your package has been delivered

Hi. Your package was delivered Fri, 05/26/2023 at 10:32am.

Delivered to 3 PRIMROSE ST, NEWTOWN, CT 06470
Received by NANCY

OBTAIN PROOF OF DELIVERY

How was your delivery ?

TRACKING NUMBER	772257545469
FROM	Jeff Barbadora 1800 W Park Drive WESTBOROUGH MA US 01581
TO	Town of Newtown Rob Sibley, Director Land Use 3 Primrose Street NEWTOWN CT US 06470
REFERENCE	799001 7630
SHIPPER REFERENCE	799001 7630
SHIP DATE	Thu, 6/25/2023 05:36 PM
DELIVERED TO	Receptionist/Front Desk
PACKAGING TYPE	FedEx Envelope
ORIGIN	WESTBOROUGH MA US 01581
DESTINATION	NEWTOWN CT US 06470
NUMBER OF PIECES	1
TOTAL SHIPMENT WEIGHT	0.50 LB
SERVICE TYPE	FedEx Priority Overnight

Date: **April 25, 2023**

Telamon Tower Engineering, PLLC
319 Chapanoke Road, Suite 118
Raleigh, NC 27603
(405) 348-5460
Engineering@ttepllc.com

Subject:	**Mount Analysis Report**	
Carrier Designation:	**T-Mobile Equipment Change-Out**	
	Carrier Site Number:	CTFF013A
	Carrier Site Name:	CTFF013A
Crown Castle Designation:	**BU Number:**	857525
	Site Name:	NEWTOWN DINGLEBROOK
	JDE Job Number:	744581
	Order Number:	648398 Rev. 0
Engineering Firm Designation:	**Telamon Tower Engineering, PLLC Project #:** 42284-CTFF013A-01-MA	
Site Data:	**24 DINGLEBROOK LANE, NEWTOWN, CT 06470, Fairfield County** **Latitude: 41° 28' 1.01" Longitude: -73° 20' 2.05"**	
Structure Information:	**Tower Height & Type:**	149 ft Monopole
	Mount Elevation:	131 ft
	Mount Width & Type:	12.5 ft Platform w/ Support Rails

Telamon Tower Engineering, PLLC is pleased to submit this **"Mount Analysis Report"** to determine the structural integrity of T-Mobile'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:

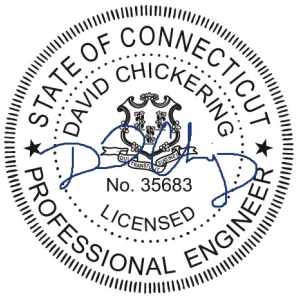
Platform w/ Support Rails **Sufficient**

This analysis utilizes an ultimate 3-second gust wind speed of 115 mph as required by the 2022 Connecticut State Building Code. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Mount analysis prepared by: Vignesh Hari

Respectfully Submitted by:

Digitally signed by David W Chickering
Date: 2023.04.25 17:25:00 -04'00'



David Chickering
Telamon Tower Engineering PLLC
PE # 35683 Exp. 01/31/2024

TABLE OF CONTENTS

1) INTRODUCTION

The proposed equipment is to be mounted to the existing 4-sector 12.5 ft Platform w/ Support Rails.

2) ANALYSIS CRITERIA

Building Code:	2021 IBC
TIA-222 Revision:	TIA-222-H
Risk Category:	II
Ultimate Wind Speed:	115 mph
Exposure Category:	C
Topographic Factor, K_{zt}:	1.00
Ice Thickness:	1 in
Wind Speed with Ice:	50 mph
Seismic S_s:	0.21
Seismic S_1:	0.06
Live Loading Wind Speed:	30 mph
Man Live Load at Mount Pipes:	500 lb
Man Live Load at Mid/End-Points:	250 lb

Table 1 – Proposed Equipment Configuration

Mount Centerline (ft)	Antenna Centerline (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Mount / Modification Details
131.0	131.0	4	Ericsson	RADIO 4449 B12/B71	12.5 ft Platform w/ Support Rails
	129.0	4	RFS Celwave	APXVAARR24_43-U-NA20	
		4	Ericsson	AIR -32 B2A/B66AA	
	128.0	1	Ericsson	ANT3 A 0.9 HPX	
		2	Ericsson	MINI-LINK 6365	

3) ANALYSIS PROCEDURE

Table 2 - Documents Provided

Document	Remarks	Reference	Source
SITE PHOTOS	DATED OCTOBER 06, 2022	-	CCISITES
MOUNT MANUFACTURE DRAWINGS	SITE PRO 1 DWG# F4P-HRK12	-	SITE PRO 1
LOADING APPLICATION	ORDER #648398 Rev. 0, DATED APRIL 21, 2023	-	CCISITES
STRUCTURAL ANALYSIS	CROWN CASTLE PROJECT# 2150233, DATED AUGUST 18, 2022	10533751	CCISITES

3.1) Analysis Method

RISA-3D (Version 20.0.4), a commercially available analysis software package, was used to create a three-dimensional model of the antenna mounting system and calculate member stresses for various loading cases.

A tool internally developed, using Microsoft Excel, by Telamon Tower Engineering, 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 (Rev. E).

3.2) Assumptions

1) The analysis of the existing tower or the effect of the mount attachment to the tower is not within the current scope of work.
2) The antenna mounting system was properly fabricated, installed, and maintained in good condition in accordance with its original design and manufacturer's specifications.
3) The configuration of antennas, mounts, and other appurtenances are as specified in Table 1.
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. All U-Bolt connections have been properly tightened. This analysis will be required to be revised if the existing conditions in the field allowance was made for any damaged, missing, or rusted members.
5) Steel grades have been assumed as follows, unless noted otherwise:

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

This analysis may be affected if any assumptions are not valid or have been made in error. Telamon Tower Engineering, PLLC should be notified to determine the effect on the structural integrity of the antenna mounting system.

4) ANALYSIS RESULTS

Table 3 - Mount Component Stresses vs. Capacity

Notes	Component	Critical Member	Centerline (ft)	% Capacity	Pass / Fail
1, 3	Stand-Off Horizontals	G_SA1	131	32%	Pass
1, 3	Support Rail	A_SR1	131	19%	Pass
1, 3	Bracing Members	M668	131	23%	Pass
1, 3	Mount Pipes	A_MP3_S	131	31%	Pass
1, 3	Grating Pipe	M519_1	131	10%	Pass
1, 3	Corner Plates	M293	131	46%	Pass
2-3	Tower to Mount Connection Bolts	-	131	18%	Pass

Structure Rating (max from all components) =	46%

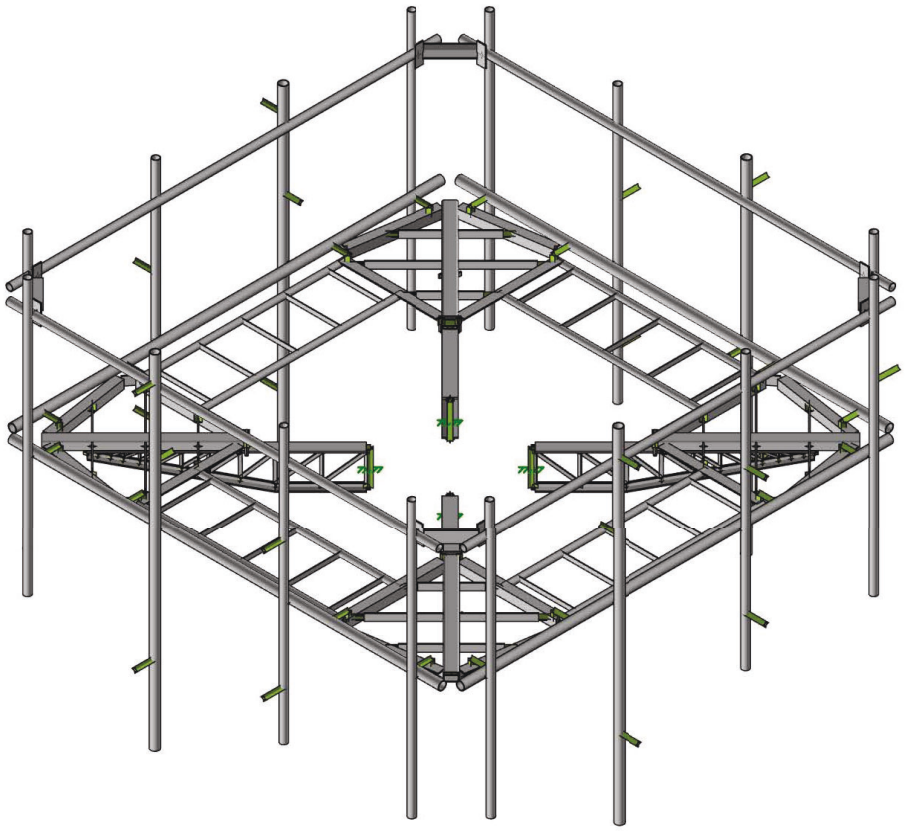
Notes:
1) See additional documentation in "Appendix C - Software Analysis Output" for calculations supporting the % capacity consumed.
2) See additional documentation in “Appendix D – Additional Calculations” for detailed mount connection calculations.
3) All sectors are typical.

4.1) Recommendations

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

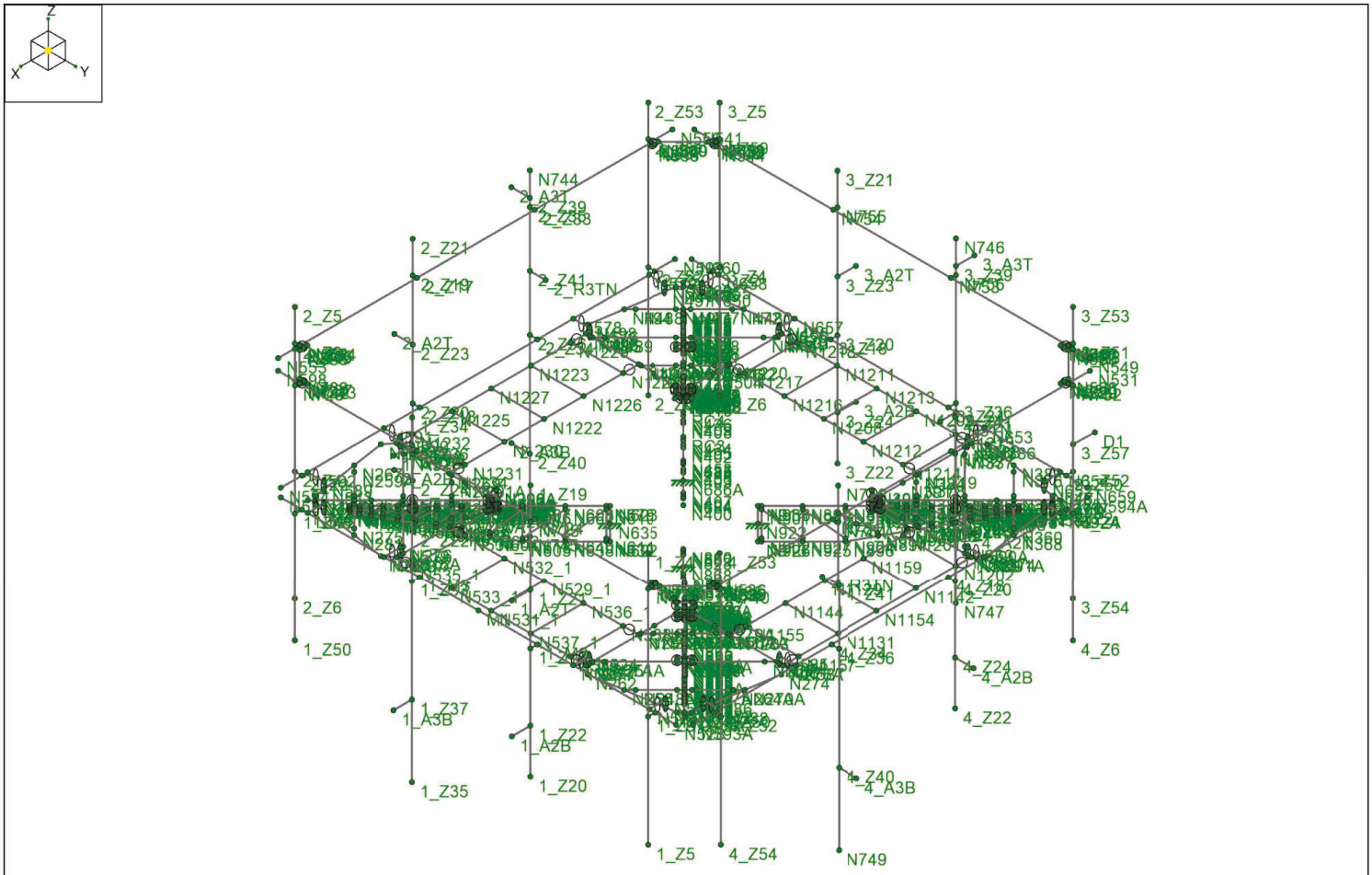
APPENDIX A

WIRE FRAME AND RENDERED MODELS



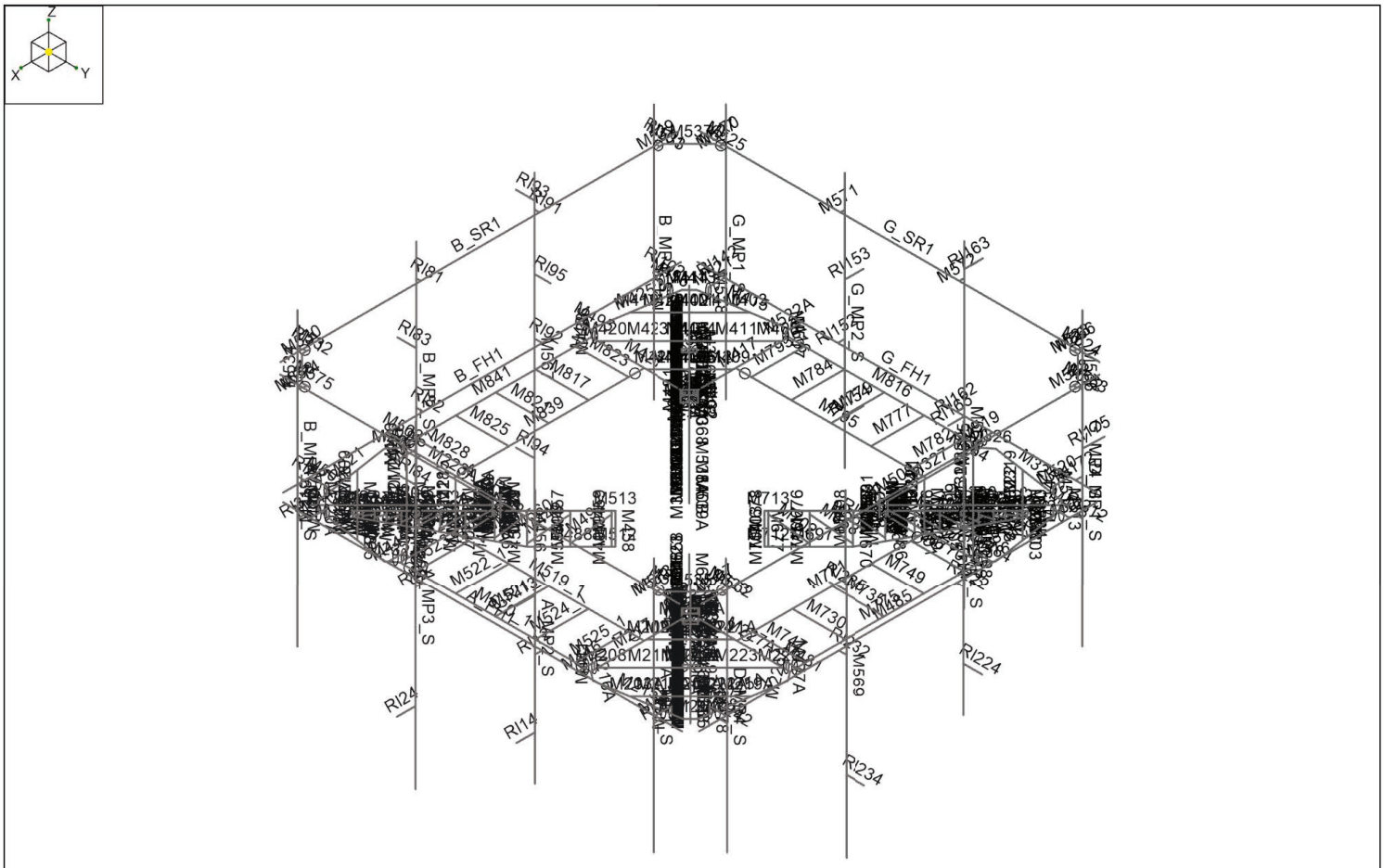
Envelope Only Solution

Telamon CLS	42284-CTFF013A-NEWTOWN DINGLEBROOK	SK-1
VH		Apr 24, 2023
42284-CTFF013A-01-MA	Rendered	42284-CTFF013A-01-MA.r3d



Envelope Only Solution

Telamon CLS	42284-CTFF013A-NEWTOWN DINGLEBROOK	SK-2
VH		Apr 24, 2023
42284-CTFF013A-01-MA	Joint Labels	42284-CTFF013A-01-MA.r3d



Envelope Only Solution

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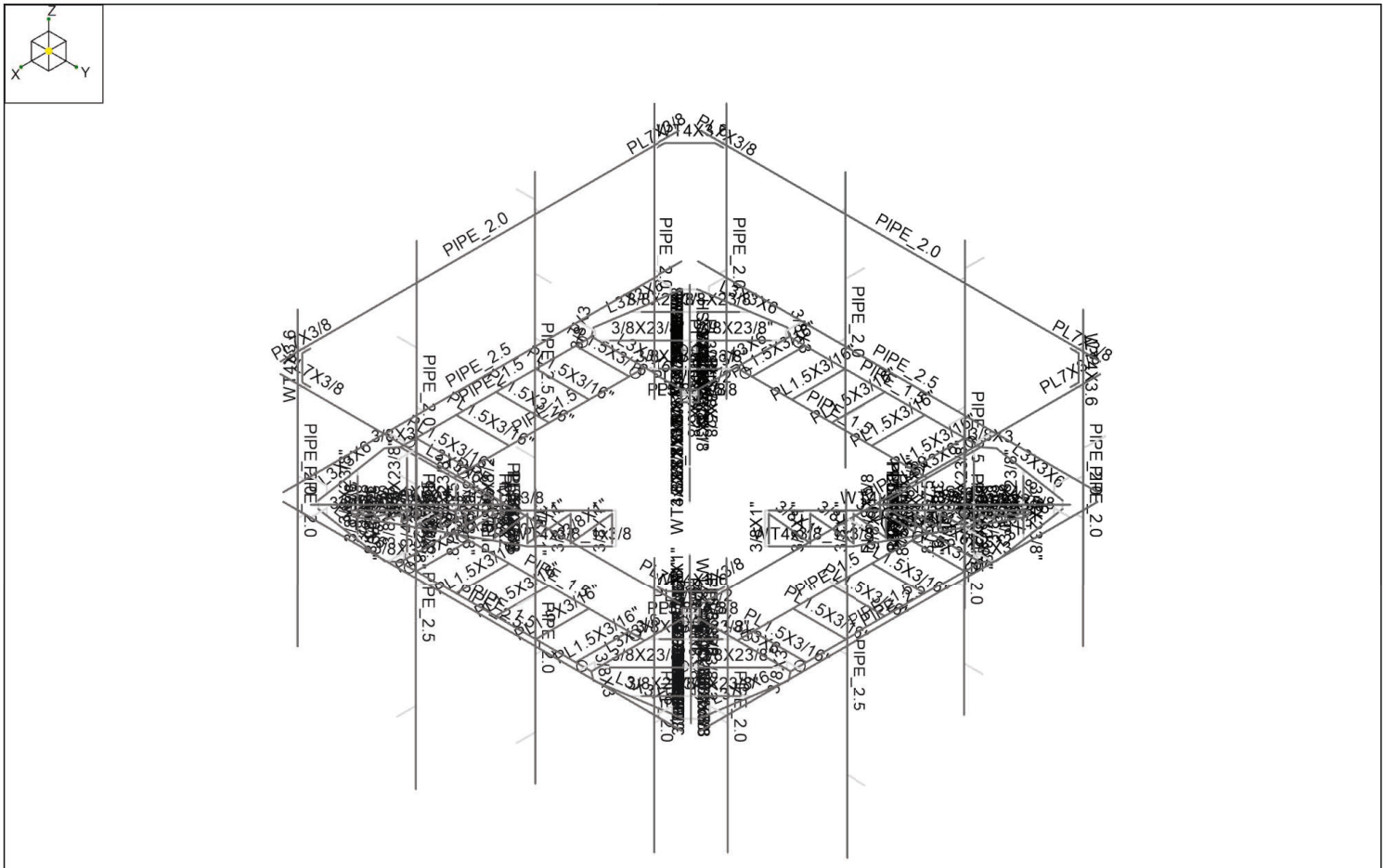
VH		Apr 24, 2023
42284-CTFF013A-01-MA	Member Labels	42284-CTFF013A-01-MA.r3d



Envelope Only Solution

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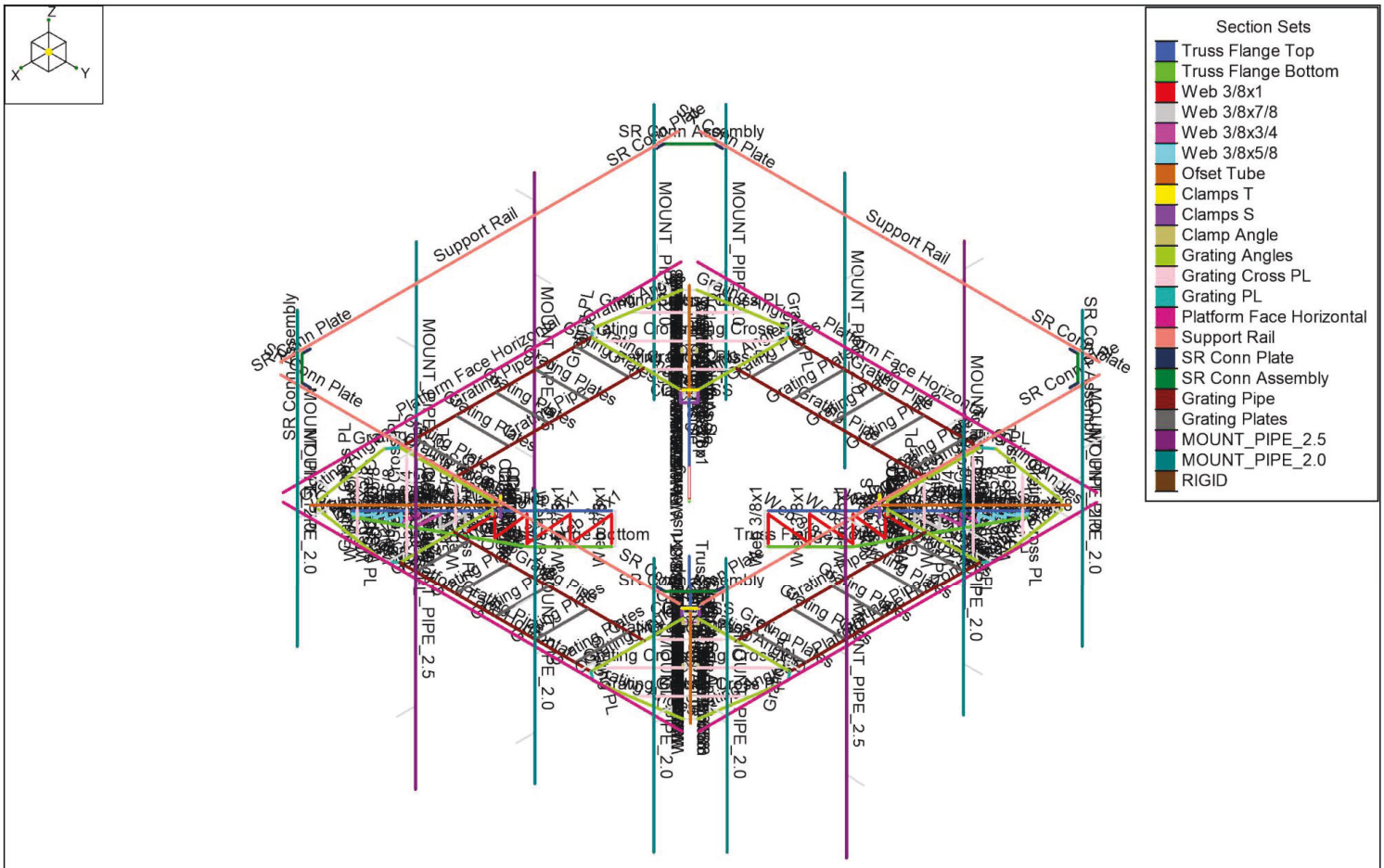
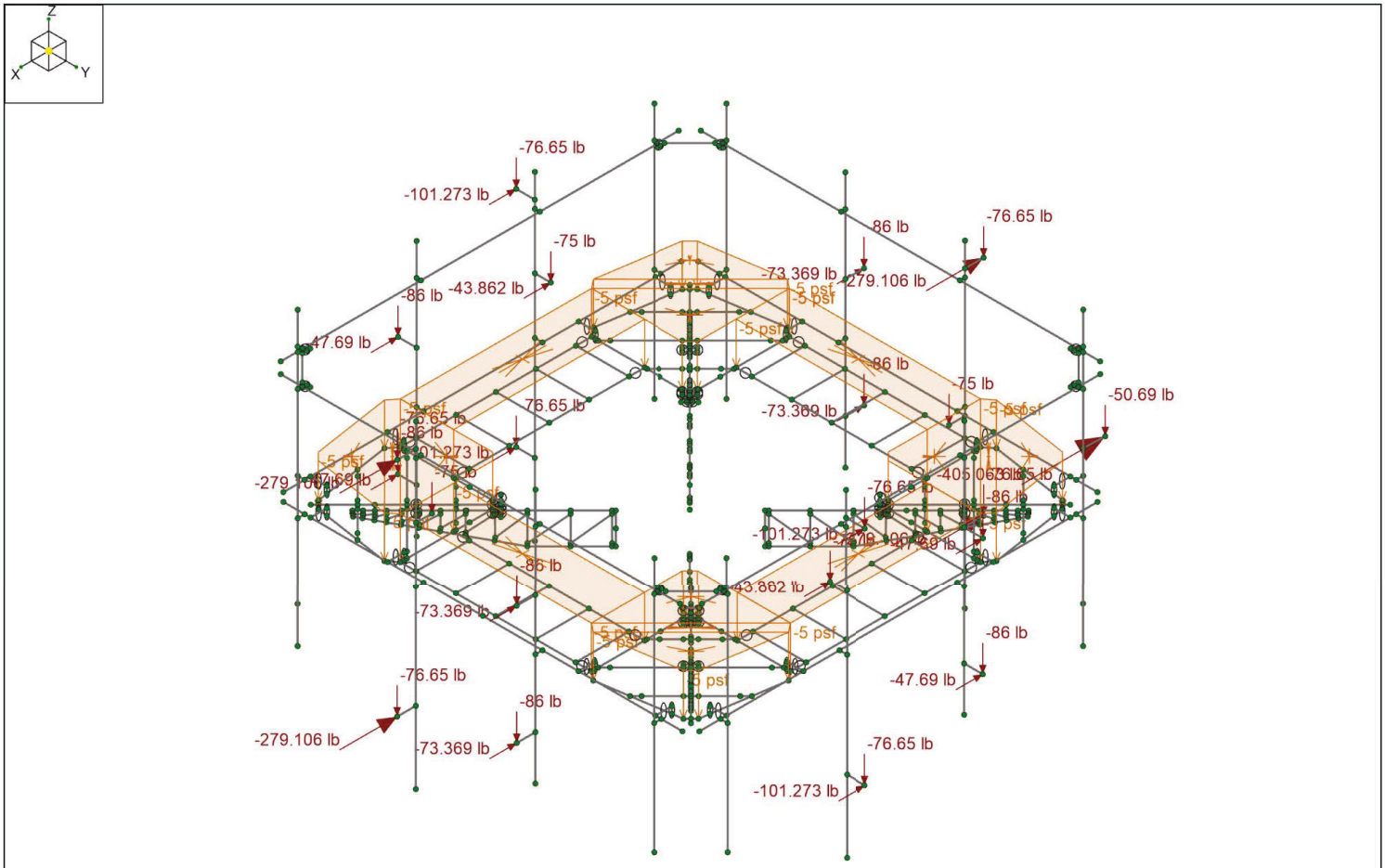
42284-CTFF013A-01-MA	Member Shapes	42284-CTFF013A-01-MA.r3d



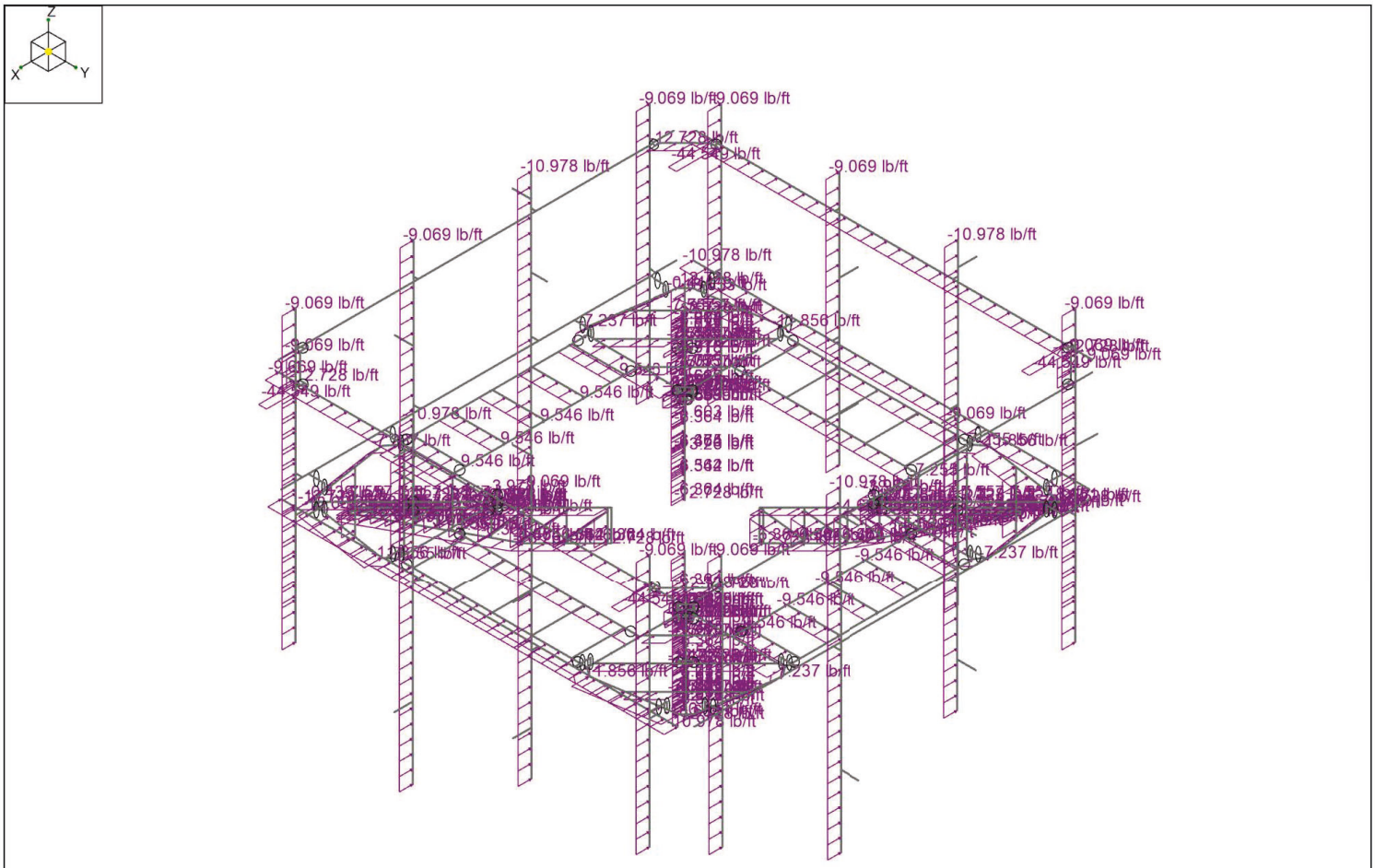
Envelope Only Solution

Telamon CLS	42284-CTFF013A-NEWTOWN DINGLEBROOK	SK-5
VH		Apr 24, 2023
42284-CTFF013A-01-MA	Section Sets	42284-CTFF013A-01-MA.r3d



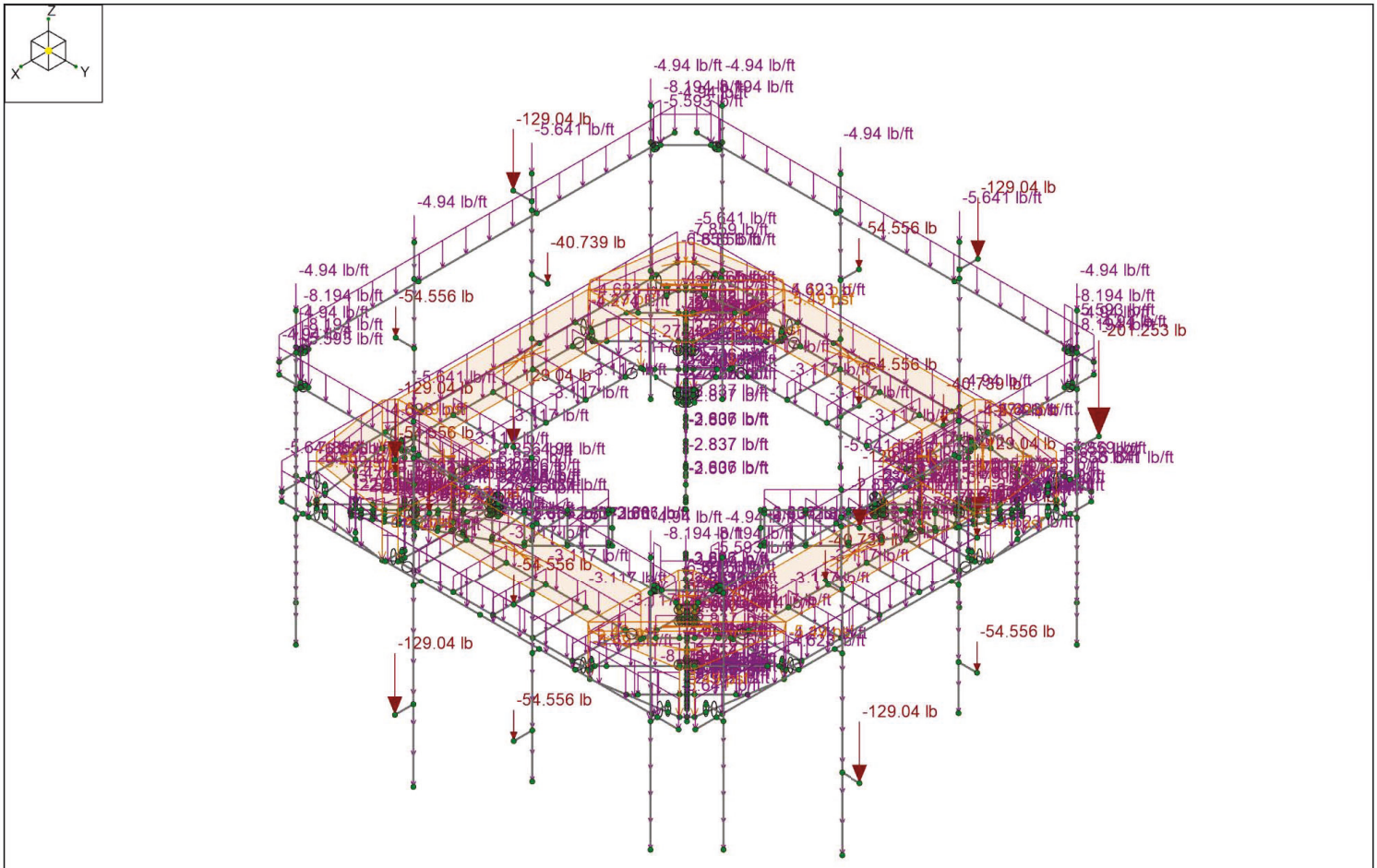
Loads: LC 1, DISPLAY (1.0D + 1.0W_0)
Envelope Only Solution

Telamon CLS	42284-CTFF013A-NEWTOWN DINGLEBROOK	SK-6
VH		Apr 24, 2023
42284-CTFF013A-01-MA	Joint Loads – Dead and Normal Wind	42284-CTFF013A-01-MA.r3d



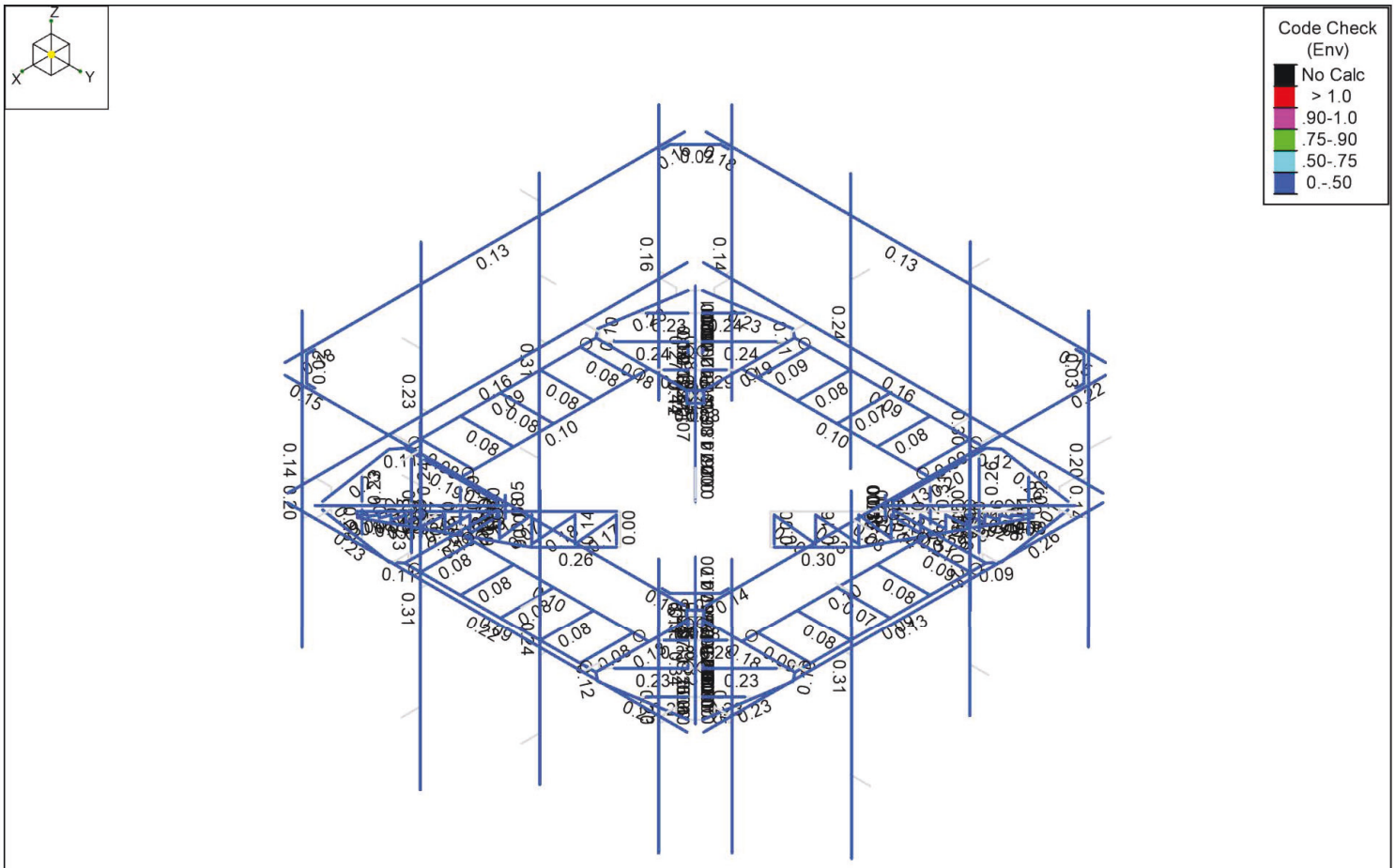
Loads: BLC 5, Structure Wind 0
Envelope Only Solution

Telamon CLS	42284-CTFF013A-NEWTOWN DINGLEBROOK	SK-7
VH		Apr 24, 2023
42284-CTFF013A-01-MA	Distributed Load – Normal Wind	42284-CTFF013A-01-MA.r3d



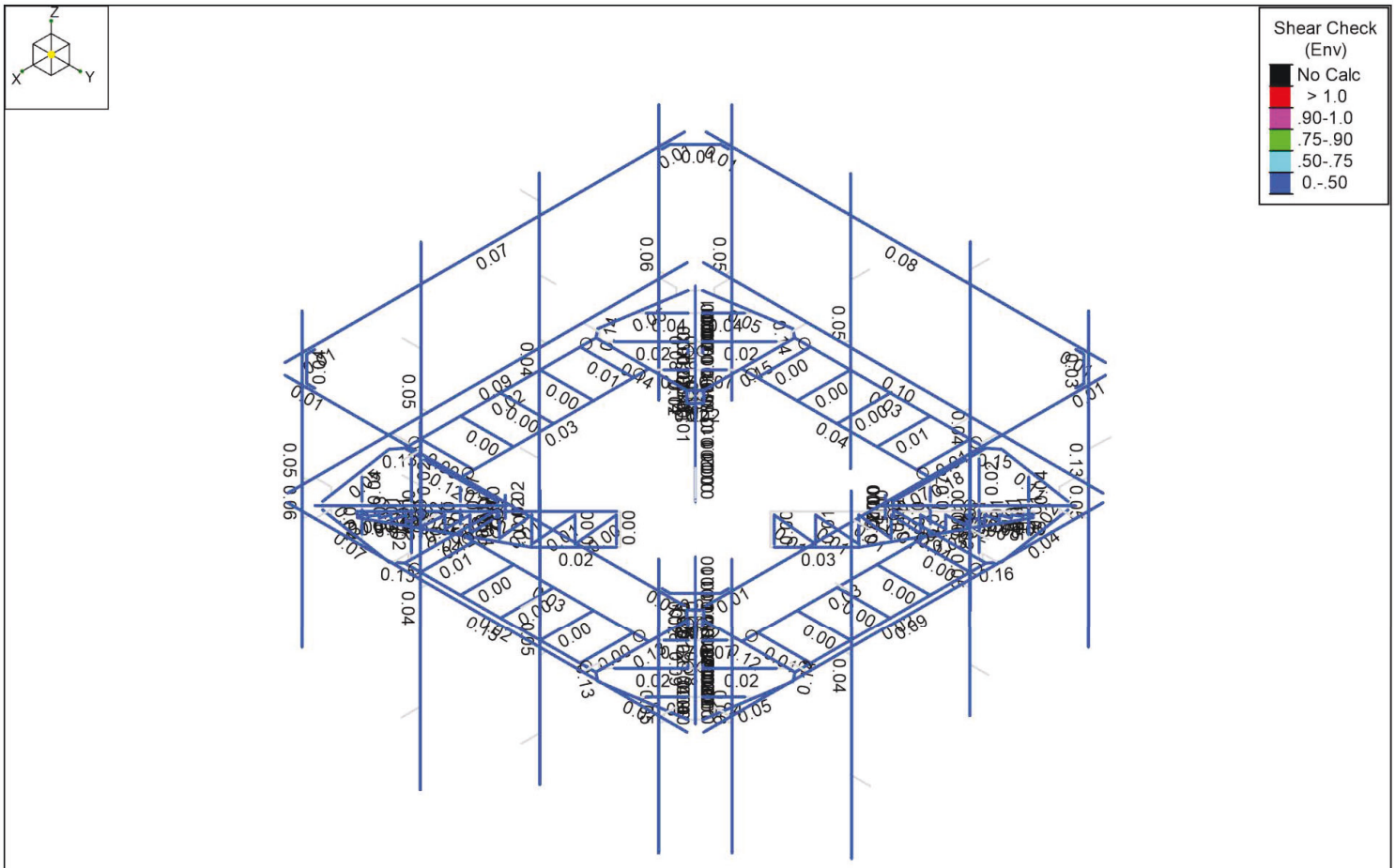
Loads: BLC 2, Ice Dead
Envelope Only Solution

Telamon CLS	42284-CTFF013A-NEWTOWN DINGLEBROOK	SK-8
VH		Apr 24, 2023
42284-CTFF013A-01-MA	Ice Dead Loads	42284-CTFF013A-01-MA.r3d



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

Telamon CLS	42284-CTFF013A-NEWTOWN DINGLEBROOK	SK-1
VH		Apr 25, 2023
42284-CTFF013A-01-MA	Envelope Member Unity Check Results – Bending	42284-CTFF013A-01-MA.r3d



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

Telamon CLS	42284-CTFF013A-NEWTOWN DINGLEBROOK	SK-2
VH		Apr 25, 2023
42284-CTFF013A-01-MA	Envelope Member Check Results – Shear	42284-CTFF013A-01-MA.r3d

APPENDIX B

SOFTWARE INPUT CALCULATIONS

Wind & Ice Loading

Nominal Mount Elevation (AGL), z_{mount}	131.0 ft	K_a	0.90
Nominal Rad Elevation (AGL), z_{rad}	129.0 ft	K_d	0.95
Elevation AMSL (ft)	426.2 ft	K_e	0.98
TIA Standard	H	K_z	1.34
Basic Wind Speed, V_{ult} (bare)	115 mph	K_{zt}	1.00
Basic Wind Speed, V (ice)	50 mph	K_s	1.00
Design Ice Thickness, t_i	1 in	t_z	1.15 in
Exposure Category	C	G_h	1.00
Risk Category	II	q_z (bare)	42.4 psf
Seismic Response Coeff., C_s	0.11	q_z (ice)	8.0 psf

Live Loading

At Mount Pipes, L_M	500 lb
Joint Labels Considered	1_M1
	1_M2
	1_M3
	1_M4
On Horizontals, L_V	250 lb
Member Labels Considered	N528
	N527
	M1

Member Distributed Loading

Section Set Label	Shape Label	F_A (lb/ft) Bare	F_A (lb/ft) Ice	Ice Wt. (lb/ft)
Platform Face Horizontal	PIPE_2.5	10.98	3.73	5.64
Clamps S	PL5/8X5/8	3.98	2.30	2.73
Clamp Angle	PL3/8X2	12.73	3.13	3.73
Ofset Tube	HSS4X3X4	25.46	2.02	7.86
Grating Cross PL	3/8X23/8"	15.11	3.39	4.06
Grating Angles	L3X3X6	19.09	1.93	6.86
Grating PL	3/8X3	19.09	3.84	4.62
Clamps T	PL5/8X1/2	3.98	2.23	2.61
Truss Flange Bottom	WT4x3/8_1x3/8	25.46	2.02	3.61
Web 3/8x1	3/8X1"	6.36	2.43	2.84
Web 3/8x7/8	.875X.375	5.57	2.34	2.73
Web 3/8x3/4	3/4X3/8	4.77	2.26	2.61
Web 3/8x5/8	3/8X5/8	3.98	2.18	2.50
Truss Flange Top	WT4x1/2_1x3/8	25.46	2.02	3.72
SR Conn Plate	PL7X3/8	44.55	6.72	8.19
Support Rail	PIPE_2.0	9.07	3.37	4.94
SR Conn Assembly	WT4X3.6	25.46	2.02	5.59
Grating Pipe	PIPE_1.5	7.26	3.03	4.27
Grating Plates	PL1.5X3/16"	9.55	2.75	3.12
MOUNT_PIPE_2.0	PIPE_2.0	9.07	3.37	4.94
MOUNT_PIPE_2.5	PIPE_2.5	10.98	3.73	5.64

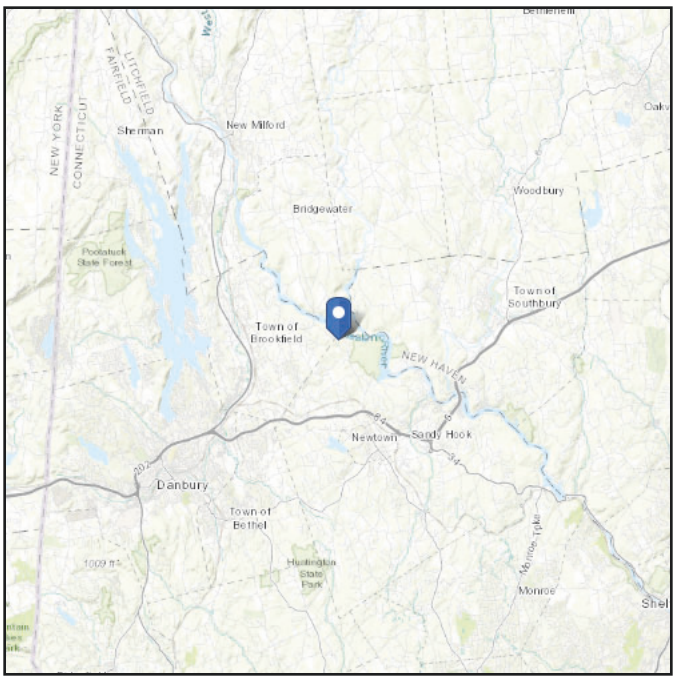
Appurtenances

Appurtenance Model	Status	Azimuth Offset (°, CW)	Rad Elev. Override (ft)	Swap Width & Depth	Area Factor Front	Area Factor Side	Qty. per Azimuth 0°	90°	180°	270°	Total Qty. Override	0° Joints 1	0° Joints 2	90° Joints 1	90° Joints 2	180° Joints 1	180° Joints 2	270° Joints 1	270° Joints 2	Height (in)	Width (in)	Depth (in)	Weight (Bare) (lb)	Shape	EPA_A (Bare) (ft^2) N	EPA_A (Bare) (ft^2) T	EPA_A (Ice) (ft^2) N	EPA_A (Ice) (ft^2) T	F_A (Bare) (lb) N	F_A (Bare) (lb) T	F_A (Ice) (lb) N	F_A (Ice) (lb) T
APXVAARR24_43-U-NA20				☐			1	1	1	1		1_A3T	1_A3B	2_A3T	2_A3B	3_A3T	3_A3B	4_A3T	4_A3B	95.9	24	8.7	153.3	Generic	14.67	5.32	16.43	6.86	558.21	202.55	118.19	49.35
AIR -32 B2A/B66AA				☐			1	1	1	1		1_A2T	1_A2B	2_A2T	2_A2B	3_A2T	3_A2B	4_A2T	4_A2B	56.6	12.9	8.7	172	Generic	3.86	2.51	4.71	3.31	146.74	95.38	33.89	23.81
ANT3 A 0.9 HPX		2	128	☐					1							D1				39.37	39.37	16	45.19	Dish (HP)	10.67	5.28	11.94	5.92	405.31	200.78	85.79	42.50
MINI-LINK 6365			128	☐	0				2							D1				7	7.8	6.1	5.5	Flat	0.00	0.36	0.00	0.65	0.00	13.52	0.00	4.67
RADIO 4449 B12/B71			131	☐	0		1	1	1	1		1_R3TN		2_R3TN		3_R3TN		4_R3TN		14.95	13.19	9.25	75	Flat	0.00	1.15	0.00	1.66	0.00	44.00	0.00	11.98

ASCE 7 Hazards Report

Address:
24 Dinglebrook Ln
Newtown, Connecticut
06470

Standard:	ASCE/SEI 7-16	**Latitude:**	41.466896
Risk Category:	II	**Longitude:**	-73.333712
Soil Class:	D - Default (see Section 11.4.3)	**Elevation:**	426.14845578241943 ft (NAVD 88)



Wind

Results:

Wind Speed	115 Vmph
10-year MRI	75 Vmph
25-year MRI	84 Vmph
50-year MRI	90 Vmph
100-year MRI	96 Vmph

Data Source: ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4, and Section 26.5.2

Date Accessed: Mon Apr 24 2023

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-16 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

Site is in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2. Glazed openings need not be protected against wind-borne debris.

Seismic

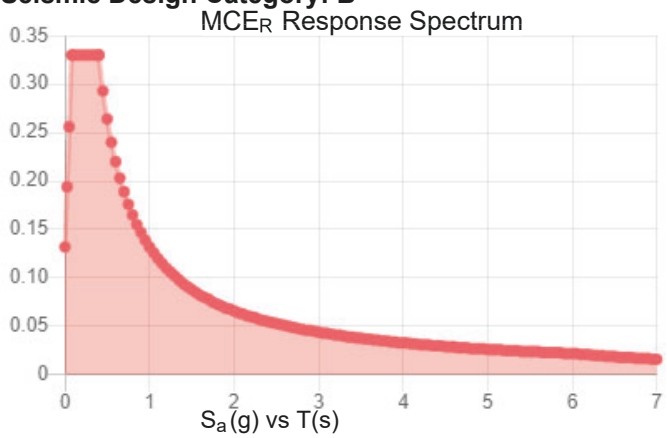
D - Default (see Section 11.4.3)

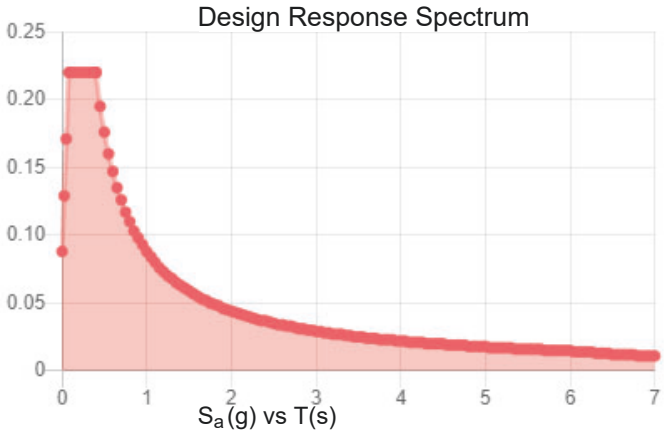
Site Soil Class:

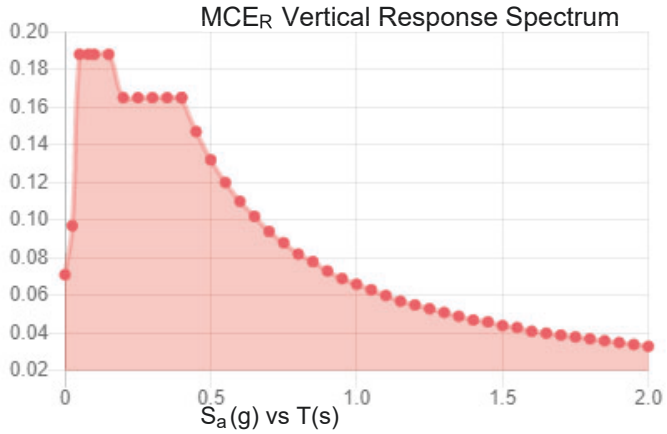
Results:

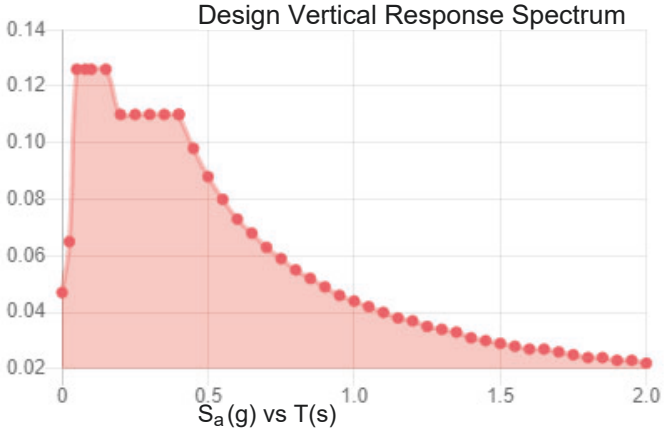
S_S :	0.206	S_{D1} :	0.088
S_1 :	0.055	T_L :	6
F_a :	1.6	PGA :	0.116
F_v :	2.4	PGA_M :	0.182
S_{MS} :	0.33	F_{PGA} :	1.567
S_{M1} :	0.132	I_e :	1
S_{DS} :	0.22	C_v :	0.713

Seismic Design Category: B









Data Accessed: **Mon Apr 24 2023**

Date Source:

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

Ice

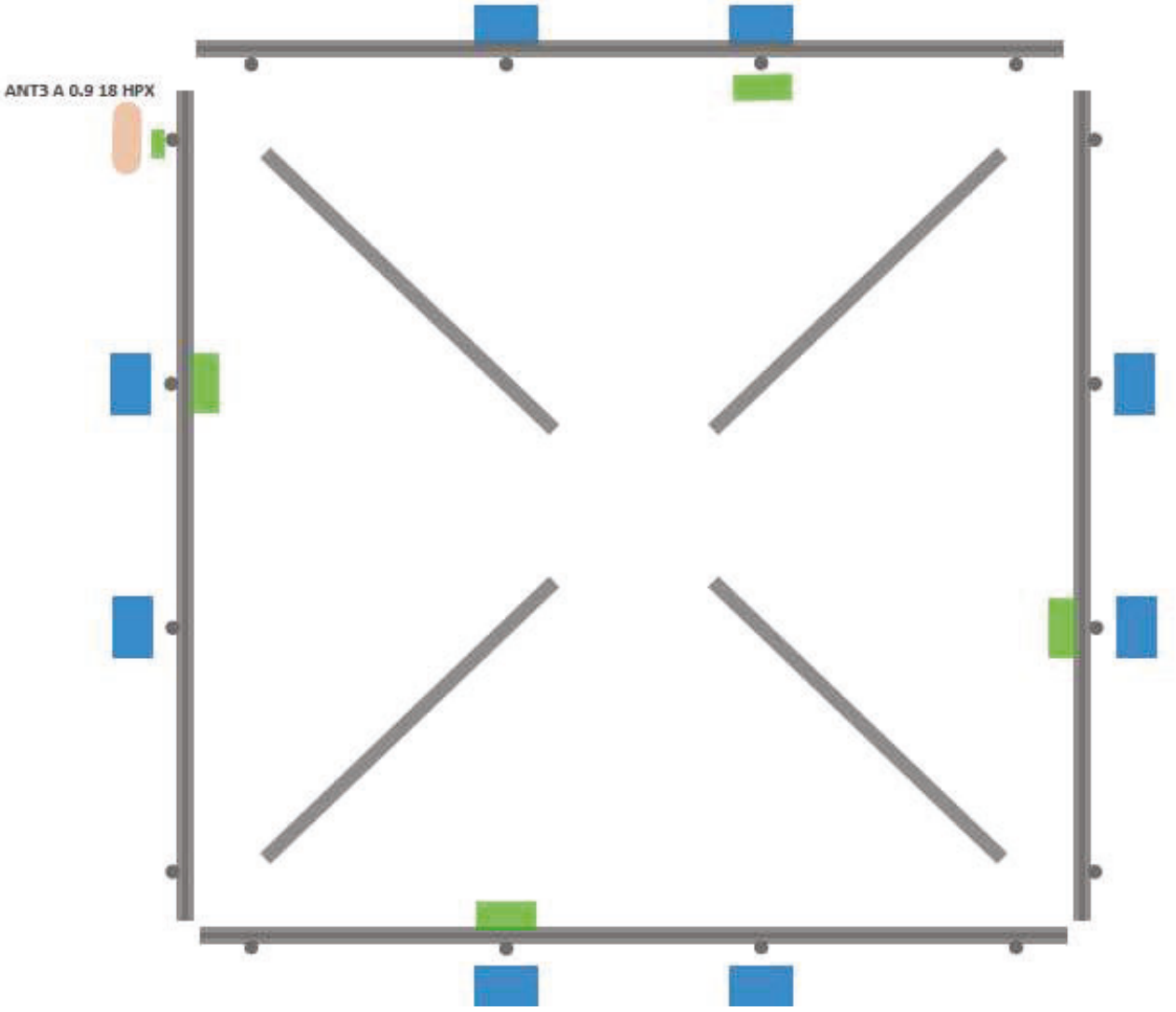
Results:

Ice Thickness:	1.00 in.
Concurrent Temperature:	15 F
Gust Speed	50 mph
Data Source:	Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8
Date Accessed:	Mon Apr 24 2023

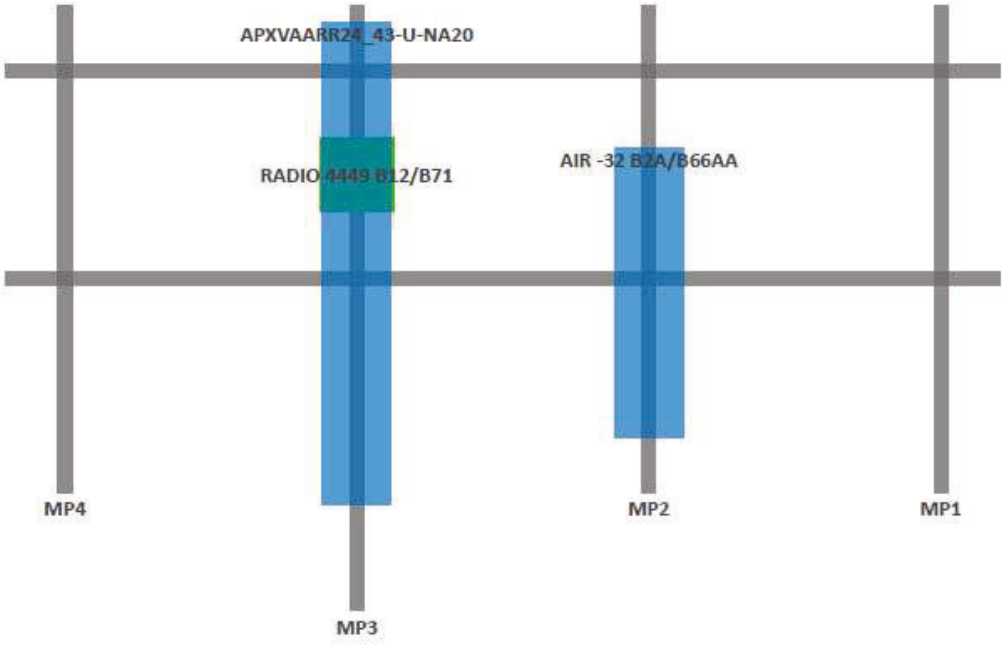
Ice thicknesses on structures in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

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

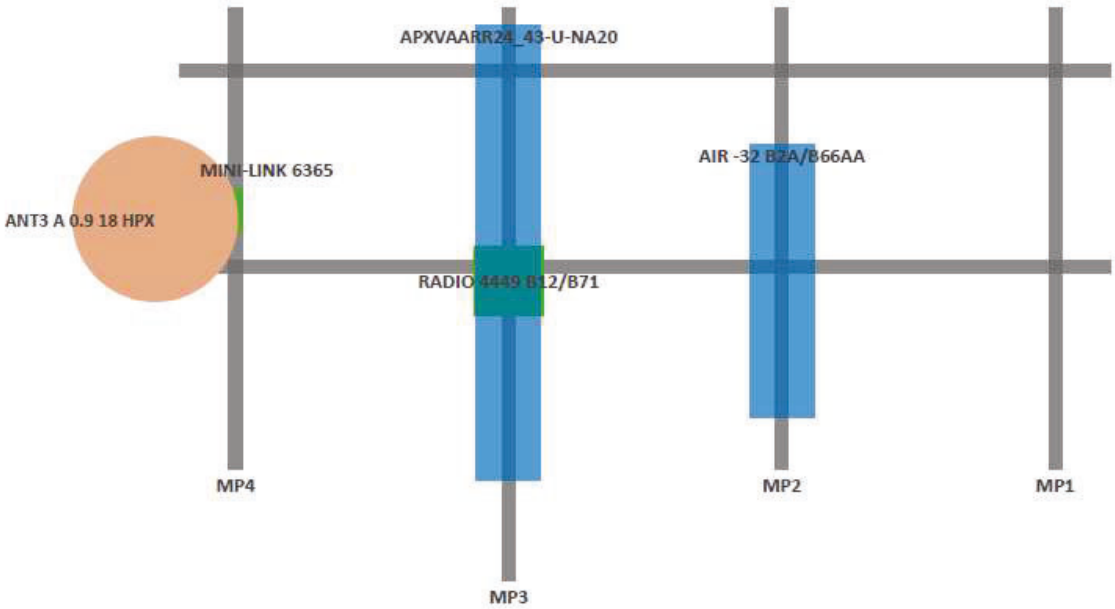
Equipment Layout Plan View



Equipment Layout Front Elevation View Alpha, Beta & Delta



Equipment Layout Front Elevation View Gamma



APPENDIX C

SOFTWARE ANALYSIS OUTPUT

Basic Load Cases

	BLC Description	Category	Z Gravity	Nodal	Distributed	Area(Member)
1	Dead	DL	-1	22		16
2	Ice Dead	RL		22	256	16
3	BLC 1 Transient Area Loads	None			516	
4	BLC 2 Transient Area Loads	None			516	
5	Structure Wind 0°	None			234	
6	Structure Wind 30°	None			512	
7	Structure Wind 45°	None			460	
8	Structure Wind 60°	None			512	
9	Structure Wind 90°	None			234	
10	Structure Wind 120°	None			512	
11	Structure Wind 135°	None			460	
12	Structure Wind 150°	None			512	
13	Structure Wind 180°	None			234	
14	Structure Wind 210°	None			512	
15	Structure Wind 225°	None			460	
16	Structure Wind 240°	None			512	
17	Structure Wind 270°	None			234	
18	Structure Wind 300°	None			512	
19	Structure Wind 315°	None			460	
20	Structure Wind 330°	None			512	
21	Structure Wind w/ Ice 0°	None			234	
22	Structure Wind w/ Ice 30°	None			512	
23	Structure Wind w/ Ice 45°	None			460	
24	Structure Wind w/ Ice 60°	None			512	
25	Structure Wind w/ Ice 90°	None			234	
26	Structure Wind w/ Ice 120°	None			512	
27	Structure Wind w/ Ice 135°	None			460	
28	Structure Wind w/ Ice 150°	None			512	
29	Structure Wind w/ Ice 180°	None			234	
30	Structure Wind w/ Ice 210°	None			512	
31	Structure Wind w/ Ice 225°	None			460	
32	Structure Wind w/ Ice 240°	None			512	
33	Structure Wind w/ Ice 270°	None			234	
34	Structure Wind w/ Ice 300°	None			512	
35	Structure Wind w/ Ice 315°	None			460	
36	Structure Wind w/ Ice 330°	None			512	
37	Antenna Wind 0°	None		19		
38	Antenna Wind 30°	None		44		
39	Antenna Wind 45°	None		44		
40	Antenna Wind 60°	None		44		
41	Antenna Wind 90°	None		20		
42	Antenna Wind 120°	None		44		
43	Antenna Wind 135°	None		44		
44	Antenna Wind 150°	None		44		
45	Antenna Wind 180°	None		19		
46	Antenna Wind 210°	None		44		
47	Antenna Wind 225°	None		44		
48	Antenna Wind 240°	None		44		
49	Antenna Wind 270°	None		20		
50	Antenna Wind 300°	None		44		
51	Antenna Wind 315°	None		44		
52	Antenna Wind 330°	None		44		
53	Antenna Wind w/ Ice 0°	None		19		
54	Antenna Wind w/ Ice 30°	None		44		
55	Antenna Wind w/ Ice 45°	None		44		

Basic Load Cases (Continued)

	BLC Description	Category	Z Gravity	Nodal	Distributed	Area(Member)
56	Antenna Wind w/ Ice 60°	None		44		
57	Antenna Wind w/ Ice 90°	None		20		
58	Antenna Wind w/ Ice 120°	None		44		
59	Antenna Wind w/ Ice 135°	None		44		
60	Antenna Wind w/ Ice 150°	None		44		
61	Antenna Wind w/ Ice 180°	None		19		
62	Antenna Wind w/ Ice 210°	None		44		
63	Antenna Wind w/ Ice 225°	None		44		
64	Antenna Wind w/ Ice 240°	None		44		
65	Antenna Wind w/ Ice 270°	None		20		
66	Antenna Wind w/ Ice 300°	None		44		
67	Antenna Wind w/ Ice 315°	None		44		
68	Antenna Wind w/ Ice 330°	None		44		
69	Seismic X	ELX		22	256	
70	Seismic Y	ELY		22	256	
71	Seismic Z	ELZ		22	256	
72	Maintenance Live 500 (1)	OL1		1		
73	Maintenance Live 500 (2)	OL2		1		
74	Maintenance Live 500 (3)	OL3		1		
75	Maintenance Live 500 (4)	OL4		1		
77	Maintenance Live 250 (1)	OL6		1		
78	Maintenance Live 250 (2)	OL7		1		
79	Maintenance Live 250 (3)	OL8		1		

Load Combinations

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
1	DISPLAY (1.0D + 1.0W_0°)	Yes	Y	DL	1	37	1				
2	1.4D	Yes	Y	DL	1.4						
3	1.2D + 1.0W_0°	Yes	Y	DL	1.2	5	1	37	1		
4	1.2D + 1.0W_30°	Yes	Y	DL	1.2	6	1	38	1		
5	1.2D + 1.0W_45°	Yes	Y	DL	1.2	7	1	39	1		
6	1.2D + 1.0W_60°	Yes	Y	DL	1.2	8	1	40	1		
7	1.2D + 1.0W_90°	Yes	Y	DL	1.2	9	1	41	1		
8	1.2D + 1.0W_120°	Yes	Y	DL	1.2	10	1	42	1		
9	1.2D + 1.0W_135°	Yes	Y	DL	1.2	11	1	43	1		
10	1.2D + 1.0W_150°	Yes	Y	DL	1.2	12	1	44	1		
11	1.2D + 1.0W_180°	Yes	Y	DL	1.2	13	-1	45	-1		
12	1.2D + 1.0W_210°	Yes	Y	DL	1.2	14	-1	46	-1		
13	1.2D + 1.0W_225°	Yes	Y	DL	1.2	15	-1	47	-1		
14	1.2D + 1.0W_240°	Yes	Y	DL	1.2	16	-1	48	-1		
15	1.2D + 1.0W_270°	Yes	Y	DL	1.2	17	-1	49	-1		
16	1.2D + 1.0W_300°	Yes	Y	DL	1.2	18	-1	50	-1		
17	1.2D + 1.0W_315°	Yes	Y	DL	1.2	19	-1	51	-1		
18	1.2D + 1.0W_330°	Yes	Y	DL	1.2	20	-1	52	-1		
19	1.2D + 1.0Di + 1.0Wi_0°	Yes	Y	DL	1.2	21	1	53	1	RL	1
20	1.2D + 1.0Di + 1.0Wi_30°	Yes	Y	DL	1.2	22	1	54	1	RL	1
21	1.2D + 1.0Di + 1.0Wi_45°	Yes	Y	DL	1.2	23	1	55	1	RL	1
22	1.2D + 1.0Di + 1.0Wi_60°	Yes	Y	DL	1.2	24	1	56	1	RL	1
23	1.2D + 1.0Di + 1.0Wi_90°	Yes	Y	DL	1.2	25	1	57	1	RL	1
24	1.2D + 1.0Di + 1.0Wi_120°	Yes	Y	DL	1.2	26	1	58	1	RL	1
25	1.2D + 1.0Di + 1.0Wi_135°	Yes	Y	DL	1.2	27	1	59	1	RL	1
26	1.2D + 1.0Di + 1.0Wi_150°	Yes	Y	DL	1.2	28	1	60	1	RL	1
27	1.2D + 1.0Di + 1.0Wi_180°	Yes	Y	DL	1.2	29	-1	61	-1	RL	1
28	1.2D + 1.0Di + 1.0Wi_210°	Yes	Y	DL	1.2	30	-1	62	-1	RL	1
29	1.2D + 1.0Di + 1.0Wi_225°	Yes	Y	DL	1.2	31	-1	63	-1	RL	1

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
30	1.2D + 1.0Di + 1.0Wi_240°	Yes	Y	DL	1.2	32	-1	64	-1	RL	1
31	1.2D + 1.0Di + 1.0Wi_270°	Yes	Y	DL	1.2	33	-1	65	-1	RL	1
32	1.2D + 1.0Di + 1.0Wi_300°	Yes	Y	DL	1.2	34	-1	66	-1	RL	1
33	1.2D + 1.0Di + 1.0Wi_315°	Yes	Y	DL	1.2	35	-1	67	-1	RL	1
34	1.2D + 1.0Di + 1.0Wi_330°	Yes	Y	DL	1.2	36	-1	68	-1	RL	1
35	1.2D + 1.0Ev + 1.0Eh_0°	Yes	Y	DL	1.244	ELX	-1	ELY			
36	1.2D + 1.0Ev + 1.0Eh_30°	Yes	Y	DL	1.244	ELX	-0.866	ELY	0.5		
37	1.2D + 1.0Ev + 1.0Eh_45°	Yes	Y	DL	1.244	ELX	-0.707	ELY	0.707		
38	1.2D + 1.0Ev + 1.0Eh_60°	Yes	Y	DL	1.244	ELX	-0.5	ELY	0.866		
39	1.2D + 1.0Ev + 1.0Eh_90°	Yes	Y	DL	1.244	ELX		ELY	1		
40	1.2D + 1.0Ev + 1.0Eh_120°	Yes	Y	DL	1.244	ELX	0.5	ELY	0.866		
41	1.2D + 1.0Ev + 1.0Eh_135°	Yes	Y	DL	1.244	ELX	0.707	ELY	0.707		
42	1.2D + 1.0Ev + 1.0Eh_150°	Yes	Y	DL	1.244	ELX	0.866	ELY	0.5		
43	1.2D + 1.0Ev + 1.0Eh_180°	Yes	Y	DL	1.244	ELX	1	ELY			
44	1.2D + 1.0Ev + 1.0Eh_210°	Yes	Y	DL	1.244	ELX	0.866	ELY	-0.5		
45	1.2D + 1.0Ev + 1.0Eh_225°	Yes	Y	DL	1.244	ELX	0.707	ELY	-0.707		
46	1.2D + 1.0Ev + 1.0Eh_240°	Yes	Y	DL	1.244	ELX	0.5	ELY	-0.866		
47	1.2D + 1.0Ev + 1.0Eh_270°	Yes	Y	DL	1.244	ELX		ELY	-1		
48	1.2D + 1.0Ev + 1.0Eh_300°	Yes	Y	DL	1.244	ELX	-0.5	ELY	-0.866		
49	1.2D + 1.0Ev + 1.0Eh_315°	Yes	Y	DL	1.244	ELX	-0.707	ELY	-0.707		
50	1.2D + 1.0Ev + 1.0Eh_330°	Yes	Y	DL	1.244	ELX	-0.866	ELY	-0.5		
51	0.9D - 1.0Ev + 1.0Eh_0°	Yes	Y	DL	0.856	ELX	-1	ELY			
52	0.9D - 1.0Ev + 1.0Eh_30°	Yes	Y	DL	0.856	ELX	-0.866	ELY	0.5		
53	0.9D - 1.0Ev + 1.0Eh_45°	Yes	Y	DL	0.856	ELX	-0.707	ELY	0.707		
54	0.9D - 1.0Ev + 1.0Eh_60°	Yes	Y	DL	0.856	ELX	-0.5	ELY	0.866		
55	0.9D - 1.0Ev + 1.0Eh_90°	Yes	Y	DL	0.856	ELX		ELY	1		
56	0.9D - 1.0Ev + 1.0Eh_120°	Yes	Y	DL	0.856	ELX	0.5	ELY	0.866		
57	0.9D - 1.0Ev + 1.0Eh_135°	Yes	Y	DL	0.856	ELX	0.707	ELY	0.707		
58	0.9D - 1.0Ev + 1.0Eh_150°	Yes	Y	DL	0.856	ELX	0.866	ELY	0.5		
59	0.9D - 1.0Ev + 1.0Eh_180°	Yes	Y	DL	0.856	ELX	1	ELY			
60	0.9D - 1.0Ev + 1.0Eh_210°	Yes	Y	DL	0.856	ELX	0.866	ELY	-0.5		
61	0.9D - 1.0Ev + 1.0Eh_225°	Yes	Y	DL	0.856	ELX	0.707	ELY	-0.707		
62	0.9D - 1.0Ev + 1.0Eh_240°	Yes	Y	DL	0.856	ELX	0.5	ELY	-0.866		
63	0.9D - 1.0Ev + 1.0Eh_270°	Yes	Y	DL	0.856	ELX		ELY	-1		
64	0.9D - 1.0Ev + 1.0Eh_300°	Yes	Y	DL	0.856	ELX	-0.5	ELY	-0.866		
65	0.9D - 1.0Ev + 1.0Eh_315°	Yes	Y	DL	0.856	ELX	-0.707	ELY	-0.707		
66	0.9D - 1.0Ev + 1.0Eh_330°	Yes	Y	DL	0.856	ELX	-0.866	ELY	-0.5		
67	1.2D + 1.5Lm_1 + 1.0Wm_0°	Yes	Y	DL	1.2	5	0.072	37	0.072	OL1	1.5
68	1.2D + 1.5Lm_1 + 1.0Wm_30°	Yes	Y	DL	1.2	6	0.072	38	0.072	OL1	1.5
69	1.2D + 1.5Lm_1 + 1.0Wm_45°	Yes	Y	DL	1.2	7	0.072	39	0.072	OL1	1.5
70	1.2D + 1.5Lm_1 + 1.0Wm_60°	Yes	Y	DL	1.2	8	0.072	40	0.072	OL1	1.5
71	1.2D + 1.5Lm_1 + 1.0Wm_90°	Yes	Y	DL	1.2	9	0.072	41	0.072	OL1	1.5
72	1.2D + 1.5Lm_1 + 1.0Wm_120°	Yes	Y	DL	1.2	10	0.072	42	0.072	OL1	1.5
73	1.2D + 1.5Lm_1 + 1.0Wm_135°	Yes	Y	DL	1.2	11	0.072	43	0.072	OL1	1.5
74	1.2D + 1.5Lm_1 + 1.0Wm_150°	Yes	Y	DL	1.2	12	0.072	44	0.072	OL1	1.5
75	1.2D + 1.5Lm_1 + 1.0Wm_180°	Yes	Y	DL	1.2	13	-0.072	45	-0.072	OL1	1.5
76	1.2D + 1.5Lm_1 + 1.0Wm_210°	Yes	Y	DL	1.2	14	-0.072	46	-0.072	OL1	1.5
77	1.2D + 1.5Lm_1 + 1.0Wm_225°	Yes	Y	DL	1.2	15	-0.072	47	-0.072	OL1	1.5
78	1.2D + 1.5Lm_1 + 1.0Wm_240°	Yes	Y	DL	1.2	16	-0.072	48	-0.072	OL1	1.5
79	1.2D + 1.5Lm_1 + 1.0Wm_270°	Yes	Y	DL	1.2	17	-0.072	49	-0.072	OL1	1.5
80	1.2D + 1.5Lm_1 + 1.0Wm_300°	Yes	Y	DL	1.2	18	-0.072	50	-0.072	OL1	1.5
81	1.2D + 1.5Lm_1 + 1.0Wm_315°	Yes	Y	DL	1.2	19	-0.072	51	-0.072	OL1	1.5
82	1.2D + 1.5Lm_1 + 1.0Wm_330°	Yes	Y	DL	1.2	20	-0.072	52	-0.072	OL1	1.5
83	1.2D + 1.5Lm_2 + 1.0Wm_0°	Yes	Y	DL	1.2	5	0.072	37	0.072	OL2	1.5
84	1.2D + 1.5Lm_2 + 1.0Wm_30°	Yes	Y	DL	1.2	6	0.072	38	0.072	OL2	1.5

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
85	1.2D + 1.5Lm_2 + 1.0Wm_45°	Yes	Y	DL	1.2	7	0.072	39	0.072	OL2	1.5
86	1.2D + 1.5Lm_2 + 1.0Wm_60°	Yes	Y	DL	1.2	8	0.072	40	0.072	OL2	1.5
87	1.2D + 1.5Lm_2 + 1.0Wm_90°	Yes	Y	DL	1.2	9	0.072	41	0.072	OL2	1.5
88	1.2D + 1.5Lm_2 + 1.0Wm_120°	Yes	Y	DL	1.2	10	0.072	42	0.072	OL2	1.5
89	1.2D + 1.5Lm_2 + 1.0Wm_135°	Yes	Y	DL	1.2	11	0.072	43	0.072	OL2	1.5
90	1.2D + 1.5Lm_2 + 1.0Wm_150°	Yes	Y	DL	1.2	12	0.072	44	0.072	OL2	1.5
91	1.2D + 1.5Lm_2 + 1.0Wm_180°	Yes	Y	DL	1.2	13	-0.072	45	-0.072	OL2	1.5
92	1.2D + 1.5Lm_2 + 1.0Wm_210°	Yes	Y	DL	1.2	14	-0.072	46	-0.072	OL2	1.5
93	1.2D + 1.5Lm_2 + 1.0Wm_225°	Yes	Y	DL	1.2	15	-0.072	47	-0.072	OL2	1.5
94	1.2D + 1.5Lm_2 + 1.0Wm_240°	Yes	Y	DL	1.2	16	-0.072	48	-0.072	OL2	1.5
95	1.2D + 1.5Lm_2 + 1.0Wm_270°	Yes	Y	DL	1.2	17	-0.072	49	-0.072	OL2	1.5
96	1.2D + 1.5Lm_2 + 1.0Wm_300°	Yes	Y	DL	1.2	18	-0.072	50	-0.072	OL2	1.5
97	1.2D + 1.5Lm_2 + 1.0Wm_315°	Yes	Y	DL	1.2	19	-0.072	51	-0.072	OL2	1.5
98	1.2D + 1.5Lm_2 + 1.0Wm_330°	Yes	Y	DL	1.2	20	-0.072	52	-0.072	OL2	1.5
99	1.2D + 1.5Lm_3 + 1.0Wm_0°	Yes	Y	DL	1.2	5	0.072	37	0.072	OL3	1.5
100	1.2D + 1.5Lm_3 + 1.0Wm_30°	Yes	Y	DL	1.2	6	0.072	38	0.072	OL3	1.5
101	1.2D + 1.5Lm_3 + 1.0Wm_45°	Yes	Y	DL	1.2	7	0.072	39	0.072	OL3	1.5
102	1.2D + 1.5Lm_3 + 1.0Wm_60°	Yes	Y	DL	1.2	8	0.072	40	0.072	OL3	1.5
103	1.2D + 1.5Lm_3 + 1.0Wm_90°	Yes	Y	DL	1.2	9	0.072	41	0.072	OL3	1.5
104	1.2D + 1.5Lm_3 + 1.0Wm_120°	Yes	Y	DL	1.2	10	0.072	42	0.072	OL3	1.5
105	1.2D + 1.5Lm_3 + 1.0Wm_135°	Yes	Y	DL	1.2	11	0.072	43	0.072	OL3	1.5
106	1.2D + 1.5Lm_3 + 1.0Wm_150°	Yes	Y	DL	1.2	12	0.072	44	0.072	OL3	1.5
107	1.2D + 1.5Lm_3 + 1.0Wm_180°	Yes	Y	DL	1.2	13	-0.072	45	-0.072	OL3	1.5
108	1.2D + 1.5Lm_3 + 1.0Wm_210°	Yes	Y	DL	1.2	14	-0.072	46	-0.072	OL3	1.5
109	1.2D + 1.5Lm_3 + 1.0Wm_225°	Yes	Y	DL	1.2	15	-0.072	47	-0.072	OL3	1.5
110	1.2D + 1.5Lm_3 + 1.0Wm_240°	Yes	Y	DL	1.2	16	-0.072	48	-0.072	OL3	1.5
111	1.2D + 1.5Lm_3 + 1.0Wm_270°	Yes	Y	DL	1.2	17	-0.072	49	-0.072	OL3	1.5
112	1.2D + 1.5Lm_3 + 1.0Wm_300°	Yes	Y	DL	1.2	18	-0.072	50	-0.072	OL3	1.5
113	1.2D + 1.5Lm_3 + 1.0Wm_315°	Yes	Y	DL	1.2	19	-0.072	51	-0.072	OL3	1.5
114	1.2D + 1.5Lm_3 + 1.0Wm_330°	Yes	Y	DL	1.2	20	-0.072	52	-0.072	OL3	1.5
115	1.2D + 1.5Lm_4 + 1.0Wm_0°	Yes	Y	DL	1.2	5	0.072	37	0.072	OL4	1.5
116	1.2D + 1.5Lm_4 + 1.0Wm_30°	Yes	Y	DL	1.2	6	0.072	38	0.072	OL4	1.5
117	1.2D + 1.5Lm_4 + 1.0Wm_45°	Yes	Y	DL	1.2	7	0.072	39	0.072	OL4	1.5
118	1.2D + 1.5Lm_4 + 1.0Wm_60°	Yes	Y	DL	1.2	8	0.072	40	0.072	OL4	1.5
119	1.2D + 1.5Lm_4 + 1.0Wm_90°	Yes	Y	DL	1.2	9	0.072	41	0.072	OL4	1.5
120	1.2D + 1.5Lm_4 + 1.0Wm_120°	Yes	Y	DL	1.2	10	0.072	42	0.072	OL4	1.5
121	1.2D + 1.5Lm_4 + 1.0Wm_135°	Yes	Y	DL	1.2	11	0.072	43	0.072	OL4	1.5
122	1.2D + 1.5Lm_4 + 1.0Wm_150°	Yes	Y	DL	1.2	12	0.072	44	0.072	OL4	1.5
123	1.2D + 1.5Lm_4 + 1.0Wm_180°	Yes	Y	DL	1.2	13	-0.072	45	-0.072	OL4	1.5
124	1.2D + 1.5Lm_4 + 1.0Wm_210°	Yes	Y	DL	1.2	14	-0.072	46	-0.072	OL4	1.5
125	1.2D + 1.5Lm_4 + 1.0Wm_225°	Yes	Y	DL	1.2	15	-0.072	47	-0.072	OL4	1.5
126	1.2D + 1.5Lm_4 + 1.0Wm_240°	Yes	Y	DL	1.2	16	-0.072	48	-0.072	OL4	1.5
127	1.2D + 1.5Lm_4 + 1.0Wm_270°	Yes	Y	DL	1.2	17	-0.072	49	-0.072	OL4	1.5
128	1.2D + 1.5Lm_4 + 1.0Wm_300°	Yes	Y	DL	1.2	18	-0.072	50	-0.072	OL4	1.5
129	1.2D + 1.5Lm_4 + 1.0Wm_315°	Yes	Y	DL	1.2	19	-0.072	51	-0.072	OL4	1.5
130	1.2D + 1.5Lm_4 + 1.0Wm_330°	Yes	Y	DL	1.2	20	-0.072	52	-0.072	OL4	1.5
131	1.2D + 1.5Lv_1	Yes	Y	DL	1.2	OL6	1.5				
132	1.2D + 1.5Lv_2	Yes	Y	DL	1.2	OL7	1.5				
133	1.2D + 1.5Lv_3	Yes	Y	DL	1.2	OL8	1.5				

Member Primary Data

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
1	M438	N496	N576	255	RIGID	None	None	RIGID	Typical
2	M439	N497	N577	255	RIGID	None	None	RIGID	Typical
3	M476	N542	N590	15	RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
4	M477	N543	N589	15	RIGID	None	None	RIGID	Typical
5	M495	N576	N578		RIGID	None	None	RIGID	Typical
6	M496	N577	N579		RIGID	None	None	RIGID	Typical
7	M502	N589	N592		RIGID	None	None	RIGID	Typical
8	M503	N590	N591		RIGID	None	None	RIGID	Typical
9	B_FH1	N594	N593		Platform Face Horizontal	None	None	Q235	Typical
10	M190	N225	N227		Clamps S	None	None	Q235	Typical
11	M191	N226A	N228		Clamps S	None	None	Q235	Typical
12	M192	N227	N244A	270	RIGID	None	None	RIGID	Typical
13	M193A	N228	N245	270	RIGID	None	None	RIGID	Typical
14	M195	N245	N244A		RIGID	None	None	RIGID	Typical
15	M196	N247A	N246		RIGID	None	None	RIGID	Typical
16	M197	N249	N248		RIGID	None	None	RIGID	Typical
17	M198	N250A	N246	180	Clamp Angle	None	None	Q235	Typical
18	M199A	N251	N247A	195.095	Clamp Angle	None	None	Q235	Typical
19	M200A	N251	N250A		RIGID	None	None	RIGID	Typical
20	M201A	N252	N271A		RIGID	None	None	RIGID	Typical
21	M202	N253A	N248	180	Clamp Angle	None	None	Q235	Typical
22	M203	N254	N249	180	Clamp Angle	None	None	Q235	Typical
23	M204	N254	N253A		RIGID	None	None	RIGID	Typical
24	M205	N255	N289A		RIGID	None	None	RIGID	Typical
25	M206	N256A	N257	90	Ofset Tube	None	None	Q235	Typical
26	M207	N258	N264		RIGID	None	None	RIGID	Typical
27	M208A	N258	N278		RIGID	None	None	RIGID	Typical
28	M209	N259A	N267		RIGID	None	None	RIGID	Typical
29	M210	N260	N265A		RIGID	None	None	RIGID	Typical
30	M211A	N260	N279		RIGID	None	None	RIGID	Typical
31	M212	N261	N266		RIGID	None	None	RIGID	Typical
32	M213	N261	N280A		RIGID	None	None	RIGID	Typical
33	M214A	N262A	N268A		RIGID	None	None	RIGID	Typical
34	M215	N263	N269		RIGID	None	None	RIGID	Typical
35	M216	N264	N259A		Grating Cross PL	None	None	Q235	Typical
36	M217A	N265A	N262A		Grating Cross PL	None	None	Q235	Typical
37	M218	N266	N263		Grating Cross PL	None	None	Q235	Typical
38	M219	N270	N272		RIGID	None	None	RIGID	Typical
39	M220A	N270	N284		RIGID	None	None	RIGID	Typical
40	M221	N272	N273	180	Grating Angles	None	None	Q235	Typical
41	M222	N273	N288		Grating PL	None	None	Q235	Typical
42	M223A	N274A	N288	90	Grating Angles	None	None	Q235	Typical
43	M224A	N274A	N250A	90	RIGID	None	None	RIGID	Typical
44	M225	N275	N281		RIGID	None	None	RIGID	Typical
45	M226	N276	N282		RIGID	None	None	RIGID	Typical
46	M227	N277A	N283A		RIGID	None	None	RIGID	Typical
47	M228	N278	N275		Grating Cross PL	None	None	Q235	Typical
48	M229A	N279	N276		Grating Cross PL	None	None	Q235	Typical
49	M230	N280A	N277A		Grating Cross PL	None	None	Q235	Typical
50	M231	N284	N285	90	Grating Angles	None	None	Q235	Typical
51	M232A	N285	N287		Grating PL	None	None	Q235	Typical
52	M233	N286A	N287	180	Grating Angles	None	None	Q235	Typical
53	M234	N286A	N251	105.095	RIGID	None	None	RIGID	Typical
54	M235A	N294A	N298A	270	RIGID	None	None	RIGID	Typical
55	M236A	N295A	N294A		RIGID	None	None	RIGID	Typical
56	M237	N295A	N299	270	RIGID	None	None	RIGID	Typical
57	M238	N296A	N225	90	Clamps S	None	None	Q235	Typical
58	M239	N297A	N296A	90	Clamps T	None	None	Q235	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
59	M240	N297A	N226A	90	Clamps S	None	None	Q235	Typical
60	M184A	N214A	N216A		Clamps S	None	None	Q235	Typical
61	M185A	N215A	N217		Clamps S	None	None	Q235	Typical
62	M186A	N216A	N233A		RIGID	None	None	RIGID	Typical
63	M187A	N217	N234A		RIGID	None	None	RIGID	Typical
64	M189A	N234A	N233A		RIGID	None	None	RIGID	Typical
65	M190A	N236A	N235		RIGID	None	None	RIGID	Typical
66	M191A	N238	N237A		RIGID	None	None	RIGID	Typical
67	M192A	N239A	N235	90	Clamp Angle	None	None	Q235	Typical
68	M193	N240A	N236A	105.095	Clamp Angle	None	None	Q235	Typical
69	M194	N240A	N239A		RIGID	None	None	RIGID	Typical
70	M195A	N241	N260A	90	RIGID	None	None	RIGID	Typical
71	M196A	N242A	N237A	90	Clamp Angle	None	None	Q235	Typical
72	M197A	N243A	N238	90	Clamp Angle	None	None	Q235	Typical
73	M198A	N243A	N242A		RIGID	None	None	RIGID	Typical
74	M199	N244	N278A	90	RIGID	None	None	RIGID	Typical
75	M200	N245A	N246A	90	Ofset Tube	None	None	Q235	Typical
76	M201	N247	N253		RIGID	None	None	RIGID	Typical
77	M202A	N247	N267A		RIGID	None	None	RIGID	Typical
78	M203A	N248A	N256		RIGID	None	None	RIGID	Typical
79	M204A	N249A	N254A		RIGID	None	None	RIGID	Typical
80	M205A	N249A	N268		RIGID	None	None	RIGID	Typical
81	M206A	N250	N255A		RIGID	None	None	RIGID	Typical
82	M207A	N250	N269A		RIGID	None	None	RIGID	Typical
83	M208	N251A	N257A		RIGID	None	None	RIGID	Typical
84	M209A	N252A	N258A		RIGID	None	None	RIGID	Typical
85	M210A	N253	N248A		Grating Cross PL	None	None	Q235	Typical
86	M211	N254A	N251A		Grating Cross PL	None	None	Q235	Typical
87	M212A	N255A	N252A		Grating Cross PL	None	None	Q235	Typical
88	M213A	N259	N261A		RIGID	None	None	RIGID	Typical
89	M214	N259	N273A		RIGID	None	None	RIGID	Typical
90	M215A	N261A	N262	180	Grating Angles	None	None	Q235	Typical
91	M216A	N262	N277		Grating PL	None	None	Q235	Typical
92	M217	N263A	N277	90	Grating Angles	None	None	Q235	Typical
93	M218A	N263A	N239A		RIGID	None	None	RIGID	Typical
94	M219A	N264A	N270A		RIGID	None	None	RIGID	Typical
95	M220	N265	N271		RIGID	None	None	RIGID	Typical
96	M221A	N266A	N272A		RIGID	None	None	RIGID	Typical
97	M222A	N267A	N264A		Grating Cross PL	None	None	Q235	Typical
98	M223	N268	N265		Grating Cross PL	None	None	Q235	Typical
99	M224	N269A	N266A		Grating Cross PL	None	None	Q235	Typical
100	M225A	N273A	N274	90	Grating Angles	None	None	Q235	Typical
101	M226A	N274	N276A		Grating PL	None	None	Q235	Typical
102	M227A	N275A	N276A	180	Grating Angles	None	None	Q235	Typical
103	M228A	N275A	N240A	15.095	RIGID	None	None	RIGID	Typical
104	M229	N283	N287A		RIGID	None	None	RIGID	Typical
105	M230A	N284A	N283		RIGID	None	None	RIGID	Typical
106	M231A	N284A	N288A		RIGID	None	None	RIGID	Typical
107	M232	N285A	N214A		Clamps S	None	None	Q235	Typical
108	M233A	N286	N285A	90	Clamps T	None	None	Q235	Typical
109	M234A	N286	N215A		Clamps S	None	None	Q235	Typical
110	M284	N326	N328		Clamps S	None	None	Q235	Typical
111	M285	N327	N329		Clamps S	None	None	Q235	Typical
112	M286	N328	N345	90	RIGID	None	None	RIGID	Typical
113	M287	N329	N346	90	RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
114	M289	N346	N345		RIGID	None	None	RIGID	Typical
115	M290	N348	N347		RIGID	None	None	RIGID	Typical
116	M291	N350	N349		RIGID	None	None	RIGID	Typical
117	M292	N351	N347		Clamp Angle	None	None	Q235	Typical
118	M293	N352	N348	15.095	Clamp Angle	None	None	Q235	Typical
119	M294	N352	N351		RIGID	None	None	RIGID	Typical
120	M295	N353	N372	180	RIGID	None	None	RIGID	Typical
121	M296	N354	N349		Clamp Angle	None	None	Q235	Typical
122	M297	N355	N350		Clamp Angle	None	None	Q235	Typical
123	M298	N355	N354		RIGID	None	None	RIGID	Typical
124	M299	N356	N390	180	RIGID	None	None	RIGID	Typical
125	M300	N357	N358	90	Ofset Tube	None	None	Q235	Typical
126	M301	N359	N365		RIGID	None	None	RIGID	Typical
127	M302	N359	N379		RIGID	None	None	RIGID	Typical
128	M303	N360	N368		RIGID	None	None	RIGID	Typical
129	M304	N361	N366		RIGID	None	None	RIGID	Typical
130	M305	N361	N380		RIGID	None	None	RIGID	Typical
131	M306	N362	N367		RIGID	None	None	RIGID	Typical
132	M307	N362	N381		RIGID	None	None	RIGID	Typical
133	M308	N363	N369		RIGID	None	None	RIGID	Typical
134	M309	N364	N370		RIGID	None	None	RIGID	Typical
135	M310	N365	N360		Grating Cross PL	None	None	Q235	Typical
136	M311	N366	N363		Grating Cross PL	None	None	Q235	Typical
137	M312	N367	N364		Grating Cross PL	None	None	Q235	Typical
138	M313	N371	N373		RIGID	None	None	RIGID	Typical
139	M314	N371	N385		RIGID	None	None	RIGID	Typical
140	M315	N373	N374	180	Grating Angles	None	None	Q235	Typical
141	M316	N374	N389		Grating PL	None	None	Q235	Typical
142	M317	N375	N389	90	Grating Angles	None	None	Q235	Typical
143	M318	N375	N351	270	RIGID	None	None	RIGID	Typical
144	M319	N376	N382		RIGID	None	None	RIGID	Typical
145	M320	N377	N383		RIGID	None	None	RIGID	Typical
146	M321	N378	N384		RIGID	None	None	RIGID	Typical
147	M322	N379	N376		Grating Cross PL	None	None	Q235	Typical
148	M323	N380	N377		Grating Cross PL	None	None	Q235	Typical
149	M324	N381	N378		Grating Cross PL	None	None	Q235	Typical
150	M325	N385	N386	90	Grating Angles	None	None	Q235	Typical
151	M326	N386	N388		Grating PL	None	None	Q235	Typical
152	M327	N387	N388	180	Grating Angles	None	None	Q235	Typical
153	M328	N387	N352	285.095	RIGID	None	None	RIGID	Typical
154	M329	N395	N399	90	RIGID	None	None	RIGID	Typical
155	M330	N396	N395		RIGID	None	None	RIGID	Typical
156	M331	N396	N400A	90	RIGID	None	None	RIGID	Typical
157	M332	N397	N326	270	Clamps S	None	None	Q235	Typical
158	M333	N398	N397	90	Clamps T	None	None	Q235	Typical
159	M334	N398	N327	270	Clamps S	None	None	Q235	Typical
160	M335	N402	N405		RIGID	None	None	RIGID	Typical
161	M336	N402	N423	180	Truss Flange Bottom	None	None	A992	Typical
162	M337	N403	N406		RIGID	None	None	RIGID	Typical
163	M338	N404	N407		RIGID	None	None	RIGID	Typical
164	M339	N404	N402	180	Truss Flange Bottom	None	None	A992	Typical
165	M340	N405	N426		Web 3/8x1	None	None	A992	Typical
166	M341	N405	N434		Web 3/8x1	None	None	A992	Typical
167	M342	N406	N434	90	Web 3/8x1	None	None	A992	Typical
168	M343	N406	N435		Web 3/8x1	None	None	A992	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
169	M344	N407	N435	90	Web 3/8x1	None	None	A992	Typical
170	M345	N408	N409		RIGID	None	None	RIGID	Typical
171	M346	N409	N427		Web 3/8x1	None	None	A992	Typical
172	M347	N410	N411		RIGID	None	None	RIGID	Typical
173	M348	N411	N428	90	Web 3/8x7/8	None	None	A992	Typical
174	M349	N412	N413		RIGID	None	None	RIGID	Typical
175	M350	N413	N428		Web 3/8x7/8	None	None	A992	Typical
176	M351	N413	N429	90	Web 3/8x7/8	None	None	A992	Typical
177	M352	N414	N416		RIGID	None	None	RIGID	Typical
178	M353	N415	N418		RIGID	None	None	RIGID	Typical
179	M354	N416	N429		Web 3/8x3/4	None	None	A992	Typical
180	M355	N416	N430	90	Web 3/8x3/4	None	None	A992	Typical
181	M356	N417	N420		RIGID	None	None	RIGID	Typical
182	M357	N418	N430		Web 3/8x3/4	None	None	A992	Typical
183	M358	N418	N431	90	Web 3/8x5/8	None	None	A992	Typical
184	M359	N419	N422		RIGID	None	None	RIGID	Typical
185	M360	N420	N431		Web 3/8x5/8	None	None	A992	Typical
186	M361	N420	N432	270	Web 3/8x5/8	None	None	A992	Typical
187	M362	N421	N424		RIGID	None	None	RIGID	Typical
188	M363	N422	N433	270	Web 3/8x5/8	None	None	A992	Typical
189	M364	N423	N425		RIGID	None	None	RIGID	Typical
190	M365	N424	N436	270	Web 3/8x5/8	None	None	A992	Typical
191	M366	N425	N437		Web 3/8x5/8	None	None	A992	Typical
192	M367	N426	RC4	270	RIGID	None	None	RIGID	Typical
193	M368	N426	N409		Web 3/8x1	None	None	A992	Typical
194	M369	N427	N446	270	RIGID	None	None	RIGID	Typical
195	M370	N427	N411		Web 3/8x1	None	None	A992	Typical
196	M371	N428	N447	270	RIGID	None	None	RIGID	Typical
197	M372	N429	N448	270	RIGID	None	None	RIGID	Typical
198	M373	N430	N449	270	RIGID	None	None	RIGID	Typical
199	M374	N431	N444	270	RIGID	None	None	RIGID	Typical
200	M375	N432	N450	270	RIGID	None	None	RIGID	Typical
201	M376	N432	N422		Web 3/8x5/8	None	None	A992	Typical
202	M377	N433	N451	270	RIGID	None	None	RIGID	Typical
203	M378	N433	N424		Web 3/8x5/8	None	None	A992	Typical
204	M379	N434	RC3		RIGID	None	None	RIGID	Typical
205	M380	N435	N453		RIGID	None	None	RIGID	Typical
206	M381	N436	N425		Web 3/8x5/8	None	None	A992	Typical
207	M382	N436	N455	270	RIGID	None	None	RIGID	Typical
208	M383	N437	N445	270	RIGID	None	None	RIGID	Typical
209	M384	N438	N440		Clamps S	None	None	Q235	Typical
210	M385	N439	N441		Clamps S	None	None	Q235	Typical
211	M386	N440	N457	180	RIGID	None	None	RIGID	Typical
212	M387	N441	N458	180	RIGID	None	None	RIGID	Typical
213	B_SA1	N445	N453		Truss Flange Top	None	None	A992	Typical
214	M389	N458	N457		RIGID	None	None	RIGID	Typical
215	M390	N460	N459		RIGID	None	None	RIGID	Typical
216	M391	N462	N461		RIGID	None	None	RIGID	Typical
217	M392	N463	N459	270	Clamp Angle	None	None	Q235	Typical
218	M393	N464	N460	285.095	Clamp Angle	None	None	Q235	Typical
219	M394	N464	N463		RIGID	None	None	RIGID	Typical
220	M395	N465	N484	270	RIGID	None	None	RIGID	Typical
221	M396	N466	N461	270	Clamp Angle	None	None	Q235	Typical
222	M397	N467	N462	270	Clamp Angle	None	None	Q235	Typical
223	M398	N467	N466		RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
224	M399	N468	N502	270	RIGID	None	None	RIGID	Typical
225	M400	N469	N470	90	Ofset Tube	None	None	Q235	Typical
226	M401	N471	N477		RIGID	None	None	RIGID	Typical
227	M402	N471	N491		RIGID	None	None	RIGID	Typical
228	M403	N472	N480		RIGID	None	None	RIGID	Typical
229	M404	N473	N478		RIGID	None	None	RIGID	Typical
230	M405	N473	N492		RIGID	None	None	RIGID	Typical
231	M406	N474	N479		RIGID	None	None	RIGID	Typical
232	M407	N474	N493		RIGID	None	None	RIGID	Typical
233	M408	N475	N481		RIGID	None	None	RIGID	Typical
234	M409	N476	N482		RIGID	None	None	RIGID	Typical
235	M410	N477	N472		Grating Cross PL	None	None	Q235	Typical
236	M411	N478	N475		Grating Cross PL	None	None	Q235	Typical
237	M412	N479	N476		Grating Cross PL	None	None	Q235	Typical
238	M413	N483	N485		RIGID	None	None	RIGID	Typical
239	M414	N483	N497A		RIGID	None	None	RIGID	Typical
240	M415	N485	N486	180	Grating Angles	None	None	Q235	Typical
241	M416	N486	N501		Grating PL	None	None	Q235	Typical
242	M417	N487	N501	90	Grating Angles	None	None	Q235	Typical
243	M418	N487	N463	180	RIGID	None	None	RIGID	Typical
244	M419	N488	N494		RIGID	None	None	RIGID	Typical
245	M420	N489	N495		RIGID	None	None	RIGID	Typical
246	M421	N490	N496A		RIGID	None	None	RIGID	Typical
247	M422	N491	N488		Grating Cross PL	None	None	Q235	Typical
248	M423	N492	N489		Grating Cross PL	None	None	Q235	Typical
249	M424	N493	N490		Grating Cross PL	None	None	Q235	Typical
250	M425	N497A	N498	90	Grating Angles	None	None	Q235	Typical
251	M426	N498	N500		Grating PL	None	None	Q235	Typical
252	M427	N499	N500	180	Grating Angles	None	None	Q235	Typical
253	M428	N499	N464	195.095	RIGID	None	None	RIGID	Typical
254	M429	N507	N511	180	RIGID	None	None	RIGID	Typical
255	M430	N508	N507		RIGID	None	None	RIGID	Typical
256	M431	N508	N512	180	RIGID	None	None	RIGID	Typical
257	M432	N509	N438	180	Clamps S	None	None	Q235	Typical
258	M433	N510	N509	90	Clamps T	None	None	Q235	Typical
259	M434	N510	N439	180	Clamps S	None	None	Q235	Typical
260	M439B	N515A	N519	300	RIGID	None	None	RIGID	Typical
261	M440	N516	N520	298.942	RIGID	None	None	RIGID	Typical
262	M441	N517	N524	60	RIGID	None	None	RIGID	Typical
263	M442	N518	N523	48.642	RIGID	None	None	RIGID	Typical
264	M443	N519	N521		RIGID	None	None	RIGID	Typical
265	M444	N520	N522		RIGID	None	None	RIGID	Typical
266	M445	N523	N526		RIGID	None	None	RIGID	Typical
267	M446	N524	N525		RIGID	None	None	RIGID	Typical
268	A_FH1	N528	N527		Platform Face Horizontal	None	None	Q235	Typical
269	M477A	N581	N585	30	RIGID	None	None	RIGID	Typical
270	M478	N582	N586	30	RIGID	None	None	RIGID	Typical
271	M479	N583	N590A	150	RIGID	None	None	RIGID	Typical
272	M480	N584	N589B	195	RIGID	None	None	RIGID	Typical
273	M481	N585	N587		RIGID	None	None	RIGID	Typical
274	M482	N586	N588		RIGID	None	None	RIGID	Typical
275	M483	N589B	N592A		RIGID	None	None	RIGID	Typical
276	M484	N590A	N591A		RIGID	None	None	RIGID	Typical
277	M485	N594A	N593A		Platform Face Horizontal	None	None	Q235	Typical
278	M515	N647	N651	120	RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
279	M516	N648	N652	118.942	RIGID	None	None	RIGID	Typical
280	M517	N649	N656	240	RIGID	None	None	RIGID	Typical
281	M518	N650	N655	228.642	RIGID	None	None	RIGID	Typical
282	M519	N651	N653		RIGID	None	None	RIGID	Typical
283	M520	N652	N654		RIGID	None	None	RIGID	Typical
284	M521	N655	N658		RIGID	None	None	RIGID	Typical
285	M522A	N656	N657		RIGID	None	None	RIGID	Typical
286	G_FH1	N660	N659		Platform Face Horizontal	None	None	Q235	Typical
287	M538A	N453	N685		RIGID	None	None	RIGID	Typical
288	M539A	N404	N684		RIGID	None	None	RIGID	Typical
289	M540B	N685	N684	180	RIGID	None	None	RIGID	Typical
290	M573	N741	N736		RIGID	None	None	RIGID	Typical
291	M574	N737	N742		RIGID	None	None	RIGID	Typical
292	M575	N739	N743		SR Conn Plate	Beam	None	A36 Gr.36	Typical
293	M578	N751	N738		SR Conn Plate	Beam	None	A36 Gr.36	Typical
294	M437	N642	N661		Web 3/8x3/4	None	None	A992	Typical
295	M448	N615	N661	180	Web 3/8x7/8	None	None	A992	Typical
296	M449	N613	N662		Web 3/8x1	None	None	A992	Typical
297	M450	N641	N643		RIGID	None	None	RIGID	Typical
298	M451	N605	N613		RIGID	None	None	RIGID	Typical
299	M452	N644	N619		Web 3/8x5/8	None	None	A992	Typical
300	M453	N621	N597		Web 3/8x5/8	None	None	A992	Typical
301	M454	N642	N609	180	Web 3/8x3/4	None	None	A992	Typical
302	M455	N618	N807		RIGID	None	None	RIGID	Typical
303	M456	N613	N646		Web 3/8x1	None	None	A992	Typical
304	M457	N662	N608	90	RIGID	None	None	RIGID	Typical
305	M458	N623	N622	90	RIGID	None	None	RIGID	Typical
306	M459	N610	N679	90	RIGID	None	None	RIGID	Typical
307	M460	N618	N636		Web 3/8x1	None	None	A992	Typical
308	M461	N606	N808		RIGID	None	None	RIGID	Typical
309	M462	N609	N626		RIGID	None	None	RIGID	Typical
310	M463	N603	N809		RIGID	None	None	RIGID	Typical
311	M464	N597	N606		Web 3/8x5/8	None	None	A992	Typical
312	M465	N634	N597		RIGID	None	None	RIGID	Typical
313	M466	N632	N618		Web 3/8x1	None	None	A992	Typical
314	M467	N601	N632		RIGID	None	None	RIGID	Typical
315	M468	N646	N632		Web 3/8x1	None	None	A992	Typical
316	M469	N633	N645		Web 3/8x5/8	None	None	A992	Typical
317	M470	N633	N810		RIGID	None	None	RIGID	Typical
318	M471	N644	N633		Web 3/8x5/8	None	None	A992	Typical
319	M472	N605	N634	180	Truss Flange Bottom	None	None	A992	Typical
320	M473	N599	N621		Web 3/8x5/8	None	None	A992	Typical
321	M474	N620	N599		Web 3/8x5/8	None	None	A992	Typical
322	M475	N624	N599		RIGID	None	None	RIGID	Typical
323	M486	N636	N603	180	Web 3/8x7/8	None	None	A992	Typical
324	M487	N615	N603		Web 3/8x7/8	None	None	A992	Typical
325	M488	N639	N605	180	Truss Flange Bottom	None	None	A992	Typical
326	M489	N646	N607		RIGID	None	None	RIGID	Typical
327	M490	N643	N609		Web 3/8x3/4	None	None	A992	Typical
328	M491	N619	N811		RIGID	None	None	RIGID	Typical
329	M492	N612	N636		RIGID	None	None	RIGID	Typical
330	M493	N640	N610		Web 3/8x1	None	None	A992	Typical
331	M494	N611	N610	180	Web 3/8x1	None	None	A992	Typical
332	M497	N639	N611	90	RIGID	None	None	RIGID	Typical
333	M498	N614	N615		RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
334	M499	N661	N616		RIGID	None	None	RIGID	Typical
335	M500	N617	N645		RIGID	None	None	RIGID	Typical
336	M501	N643	N619	180	Web 3/8x5/8	None	None	A992	Typical
337	M505	N620	N812		RIGID	None	None	RIGID	Typical
338	M510	N645	N620		Web 3/8x5/8	None	None	A992	Typical
339	M511	N621	N813		RIGID	None	None	RIGID	Typical
340	M512	N639	N622		RIGID	None	None	RIGID	Typical
341	M513	N679	N623		RIGID	None	None	RIGID	Typical
342	M514	N637	N642		RIGID	None	None	RIGID	Typical
343	A_SA1	N808	N679		Truss Flange Top	None	None	A992	Typical
344	M594	N638	N640	90	RIGID	None	None	RIGID	Typical
345	M595	N640	N662	180	Web 3/8x1	None	None	A992	Typical
346	M596	N625	N644		RIGID	None	None	RIGID	Typical
347	M599	N875	N880		Web 3/8x3/4	None	None	A992	Typical
348	M600	N852	N880	270	Web 3/8x7/8	None	None	A992	Typical
349	M601	N850	N881		Web 3/8x1	None	None	A992	Typical
350	M602	N874	N876		RIGID	None	None	RIGID	Typical
351	M603	N818	N850		RIGID	None	None	RIGID	Typical
352	M604	N877	N856		Web 3/8x5/8	None	None	A992	Typical
353	M605	N858	N814		Web 3/8x5/8	None	None	A992	Typical
354	M606	N875	N822	270	Web 3/8x3/4	None	None	A992	Typical
355	M607	N855	N885	90	RIGID	None	None	RIGID	Typical
356	M608	N850	N879		Web 3/8x1	None	None	A992	Typical
357	M621	N881	N821	180	RIGID	None	None	RIGID	Typical
358	M622	N860	N859		RIGID	None	None	RIGID	Typical
359	M623	N823	N882	180	RIGID	None	None	RIGID	Typical
360	M624	N855	N869		Web 3/8x1	None	None	A992	Typical
361	M625	N819	N886	90	RIGID	None	None	RIGID	Typical
362	M626	N822	N863	90	RIGID	None	None	RIGID	Typical
363	M627	N817	N887	90	RIGID	None	None	RIGID	Typical
364	M628	N814	N819		Web 3/8x5/8	None	None	A992	Typical
365	M629	N867	N814		RIGID	None	None	RIGID	Typical
366	M630	N865	N855		Web 3/8x1	None	None	A992	Typical
367	M631	N816	N865		RIGID	None	None	RIGID	Typical
368	M632	N879	N865		Web 3/8x1	None	None	A992	Typical
369	M633	N866	N878		Web 3/8x5/8	None	None	A992	Typical
370	M634	N866	N888	90	RIGID	None	None	RIGID	Typical
371	M635	N877	N866	90	Web 3/8x5/8	None	None	A992	Typical
372	M636	N818	N867	180	Truss Flange Bottom	None	None	A992	Typical
373	M637	N815	N858	90	Web 3/8x5/8	None	None	A992	Typical
374	M638	N857	N815		Web 3/8x5/8	None	None	A992	Typical
375	M639	N861	N815		RIGID	None	None	RIGID	Typical
376	M640	N869	N817	270	Web 3/8x7/8	None	None	A992	Typical
377	M641	N852	N817		Web 3/8x7/8	None	None	A992	Typical
378	M642	N872	N818	180	Truss Flange Bottom	None	None	A992	Typical
379	M643	N879	N820	90	RIGID	None	None	RIGID	Typical
380	M644	N876	N822		Web 3/8x3/4	None	None	A992	Typical
381	M645	N856	N889	90	RIGID	None	None	RIGID	Typical
382	M646	N825	N869		RIGID	None	None	RIGID	Typical
383	M647	N873	N823		Web 3/8x1	None	None	A992	Typical
384	M648	N824	N823	270	Web 3/8x1	None	None	A992	Typical
385	M649	N872	N824	180	RIGID	None	None	RIGID	Typical
386	M650	N851	N852		RIGID	None	None	RIGID	Typical
387	M651	N880	N853	90	RIGID	None	None	RIGID	Typical
388	M652	N854	N878		RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
389	M653	N876	N856	270	Web 3/8x5/8	None	None	A992	Typical
390	M654	N857	N890	90	RIGID	None	None	RIGID	Typical
391	M655	N878	N857	90	Web 3/8x5/8	None	None	A992	Typical
392	M656	N858	N891	90	RIGID	None	None	RIGID	Typical
393	M657	N872	N859		RIGID	None	None	RIGID	Typical
394	M658	N882	N860		RIGID	None	None	RIGID	Typical
395	M659	N870	N875		RIGID	None	None	RIGID	Typical
396	D SA1	N886	N882		Truss Flange Top	None	None	A992	Typical
397	M661	N871	N873	180	RIGID	None	None	RIGID	Typical
398	M662	N873	N881	270	Web 3/8x1	None	None	A992	Typical
399	M663	N862	N877		RIGID	None	None	RIGID	Typical
400	M666	N929	N934		Web 3/8x3/4	None	None	A992	Typical
401	M667	N906	N934		Web 3/8x7/8	None	None	A992	Typical
402	M668	N904	N935		Web 3/8x1	None	None	A992	Typical
403	M669	N928	N930		RIGID	None	None	RIGID	Typical
404	M670	N896	N904		RIGID	None	None	RIGID	Typical
405	M671	N931	N910		Web 3/8x5/8	None	None	A992	Typical
406	M672	N912	N892		Web 3/8x5/8	None	None	A992	Typical
407	M673	N929	N900		Web 3/8x3/4	None	None	A992	Typical
408	M674	N909	N939	180	RIGID	None	None	RIGID	Typical
409	M675	N904	N933		Web 3/8x1	None	None	A992	Typical
410	M676	N935	N899	270	RIGID	None	None	RIGID	Typical
411	M677	N914	N913	270	RIGID	None	None	RIGID	Typical
412	M678	N901	N936	270	RIGID	None	None	RIGID	Typical
413	M679	N909	N923		Web 3/8x1	None	None	A992	Typical
414	M680	N897	N940	180	RIGID	None	None	RIGID	Typical
415	M681	N900	N917	180	RIGID	None	None	RIGID	Typical
416	M682	N895	N941	180	RIGID	None	None	RIGID	Typical
417	M683	N892	N897		Web 3/8x5/8	None	None	A992	Typical
418	M684	N921	N892		RIGID	None	None	RIGID	Typical
419	M685	N919	N909		Web 3/8x1	None	None	A992	Typical
420	M686	N894	N919		RIGID	None	None	RIGID	Typical
421	M687	N933	N919		Web 3/8x1	None	None	A992	Typical
422	M688	N920	N932		Web 3/8x5/8	None	None	A992	Typical
423	M689	N920	N942	180	RIGID	None	None	RIGID	Typical
424	M690	N931	N920	180	Web 3/8x5/8	None	None	A992	Typical
425	M691	N896	N921	180	Truss Flange Bottom	None	None	A992	Typical
426	M692	N893	N912	180	Web 3/8x5/8	None	None	A992	Typical
427	M693	N911	N893		Web 3/8x5/8	None	None	A992	Typical
428	M694	N915	N893		RIGID	None	None	RIGID	Typical
429	M695	N923	N895		Web 3/8x7/8	None	None	A992	Typical
430	M696	N906	N895		Web 3/8x7/8	None	None	A992	Typical
431	M697	N926	N896	180	Truss Flange Bottom	None	None	A992	Typical
432	M698	N933	N898	180	RIGID	None	None	RIGID	Typical
433	M699	N930	N900		Web 3/8x3/4	None	None	A992	Typical
434	M700	N910	N943	180	RIGID	None	None	RIGID	Typical
435	M701	N903	N923		RIGID	None	None	RIGID	Typical
436	M702	N927	N901		Web 3/8x1	None	None	A992	Typical
437	M703	N902	N901		Web 3/8x1	None	None	A992	Typical
438	M704	N926	N902	270	RIGID	None	None	RIGID	Typical
439	M705	N905	N906		RIGID	None	None	RIGID	Typical
440	M706	N934	N907	180	RIGID	None	None	RIGID	Typical
441	M707	N908	N932		RIGID	None	None	RIGID	Typical
442	M708	N930	N910		Web 3/8x5/8	None	None	A992	Typical
443	M709	N911	N944	180	RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
444	M710	N932	N911	180	Web 3/8x5/8	None	None	A992	Typical
445	M711	N912	N945	180	RIGID	None	None	RIGID	Typical
446	M712	N926	N913		RIGID	None	None	RIGID	Typical
447	M713	N936	N914		RIGID	None	None	RIGID	Typical
448	M714	N924	N929		RIGID	None	None	RIGID	Typical
449	G_SA1	N940	N936		Truss Flange Top	None	None	A992	Typical
450	M716	N925	N927	270	RIGID	None	None	RIGID	Typical
451	M717	N927	N935		Web 3/8x1	None	None	A992	Typical
452	M718	N916	N931		RIGID	None	None	RIGID	Typical
453	A_SR1	N598	N600		Support Rail	Beam	None	A53 Gr.B	Typical
454	M507	N538	N536		SR Conn Plate	Beam	None	A36 Gr.36	Typical
455	M508	N533	N532		SR Conn Plate	Beam	None	A36 Gr.36	Typical
456	M509	N537	N531		Support Rail	Beam	None	A53 Gr.B	Typical
457	M522	N534	N529		RIGID	None	None	RIGID	Typical
458	M523	N535	N530		RIGID	None	None	RIGID	Typical
459	M524	N550	N548		SR Conn Plate	Beam	None	A36 Gr.36	Typical
460	M525	N545	N544		SR Conn Plate	Beam	None	A36 Gr.36	Typical
461	G_SR1	N549	N541		Support Rail	Beam	None	A53 Gr.B	Typical
462	M527	N546	N539		RIGID	None	None	RIGID	Typical
463	M528	N547	N540		RIGID	None	None	RIGID	Typical
464	M529	N560	N558		SR Conn Plate	Beam	None	A36 Gr.36	Typical
465	M530	N555	N554		SR Conn Plate	Beam	None	A36 Gr.36	Typical
466	B_SR1	N559	N553		Support Rail	Beam	None	A53 Gr.B	Typical
467	M532	N556	N551		RIGID	None	None	RIGID	Typical
468	M533	N557	N552		RIGID	None	None	RIGID	Typical
469	M534	N739	N555	270	SR Conn Assembly	Beam	None	A36 Gr.36	Typical
470	M535	N538	N751	270	SR Conn Assembly	Beam	None	A36 Gr.36	Typical
471	M536	N550	N533	270	SR Conn Assembly	Beam	None	A36 Gr.36	Typical
472	M537	N560	N545	270	SR Conn Assembly	Beam	None	A36 Gr.36	Typical
473	M519_1	N1117	N1118		Grating Pipe	Beam	None	Q235	Typical
474	M520_1	N287	N277		Grating Pipe	Beam	None	Q235	Typical
475	M521_1	N529_1	N531_1		Grating Plates	Beam	None	Q235	Typical
476	M522_1	N532_1	N533_1		Grating Plates	Beam	None	Q235	Typical
477	M523_1	N534_1	N535_1		Grating Plates	Beam	None	Q235	Typical
478	M524_1	N536_1	N537_1		Grating Plates	Beam	None	Q235	Typical
479	M525_1	N538_1	N539_1		Grating Plates	Beam	None	Q235	Typical
480	M730	N1144	N1131		Grating Plates	Beam	None	Q235	Typical
481	M735	N1129	N1154		Grating Plates	Beam	None	Q235	Typical
482	M747	N1155	N1157		Grating Plates	Beam	None	Q235	Typical
483	M749	N1159	N1142		Grating Plates	Beam	None	Q235	Typical
484	M770	N1201	N1202		Grating Plates	Beam	None	Q235	Typical
485	M771	N1203	N1206		Grating Pipe	Beam	None	Q235	Typical
486	M775	N276A	N389		Grating Pipe	Beam	None	Q235	Typical
487	M777	N1212	N1209		Grating Plates	Beam	None	Q235	Typical
488	M779	N1208	N1213		Grating Plates	Beam	None	Q235	Typical
489	M782	N1214	N1215		Grating Plates	Beam	None	Q235	Typical
490	M784	N1216	N1211		Grating Plates	Beam	None	Q235	Typical
491	M793	N1217	N1218		Grating Plates	Beam	None	Q235	Typical
492	M795	N1219	N1220		Grating Pipe	Beam	None	Q235	Typical
493	M816	N388	N501		Grating Pipe	Beam	None	Q235	Typical
494	M817	N1226	N1223		Grating Plates	Beam	None	Q235	Typical
495	M821	N1222	N1227		Grating Plates	Beam	None	Q235	Typical
496	M823	N1228	N1229		Grating Plates	Beam	None	Q235	Typical
497	M825	N1230	N1225		Grating Plates	Beam	None	Q235	Typical
498	M828	N1231	N1232		Grating Plates	Beam	None	Q235	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
499	M839	N1233	N1234		Grating Pipe	Beam	None	Q235	Typical
500	M841	N500	N288		Grating Pipe	Beam	None	Q235	Typical
501	RI2	1_M1	1_Z3		RIGID	None	None	RIGID	Typical
502	A_MP1_S	1_Z4	1_Z5		MOUNT_PIPE_2.0	None	None	A53 Gr.B	Typical
503	RI12	1_M2	1_Z18		RIGID	None	None	RIGID	Typical
504	A_MP2_S	1_Z19	1_Z20		MOUNT_PIPE_2.0	None	None	A53 Gr.B	Typical
505	RI13	1_Z21	1_A2T		RIGID	None	None	RIGID	Typical
506	RI14	1_Z22	1_A2B		RIGID	None	None	RIGID	Typical
507	RI22	1_M3	1_Z33		RIGID	None	None	RIGID	Typical
508	A_MP3_S	1_Z34	1_Z35		MOUNT_PIPE_2.5	None	None	A53 Gr.B	Typical
509	RI23	1_Z36	1_A3T		RIGID	None	None	RIGID	Typical
510	RI24	1_Z37	1_A3B		RIGID	None	None	RIGID	Typical
511	RI25	1_Z38	1_R3TN		RIGID	None	None	RIGID	Typical
512	RI32	1_M4	1_Z48		RIGID	None	None	RIGID	Typical
513	A_MP4_S	1_Z49	1_Z50		MOUNT_PIPE_2.0	None	None	A53 Gr.B	Typical
514	RI72	2_Z2	2_Z4		RIGID	None	None	RIGID	Typical
515	RI71	2_Z1	2_Z3		RIGID	None	None	RIGID	Typical
516	B_MP1_S	2_Z5	2_Z6		MOUNT_PIPE_2.0	None	None	A53 Gr.B	Typical
517	RI82	2_Z18	2_Z20		RIGID	None	None	RIGID	Typical
518	RI81	2_Z17	2_Z19		RIGID	None	None	RIGID	Typical
519	B_MP2_S	2_Z21	2_Z22		MOUNT_PIPE_2.0	None	None	A53 Gr.B	Typical
520	RI83	2_Z23	2_A2T		RIGID	None	None	RIGID	Typical
521	RI84	2_Z24	2_A2B		RIGID	None	None	RIGID	Typical
522	RI92	2_Z34	2_Z36		RIGID	None	None	RIGID	Typical
523	RI91	2_Z33	2_Z35		RIGID	None	None	RIGID	Typical
524	RI93	2_Z39	2_A3T		RIGID	None	None	RIGID	Typical
525	RI94	2_Z40	2_A3B		RIGID	None	None	RIGID	Typical
526	RI95	2_Z41	2_R3TN		RIGID	None	None	RIGID	Typical
527	RI102	2_Z50	2_Z52		RIGID	None	None	RIGID	Typical
528	RI101	2_Z49	2_Z51		RIGID	None	None	RIGID	Typical
529	B_MP4_S	2_Z53	2_Z54		MOUNT_PIPE_2.0	None	None	A53 Gr.B	Typical
530	RI142	3_Z2	3_Z4		RIGID	None	None	RIGID	Typical
531	G_MP1_S	3_Z5	3_Z6		MOUNT_PIPE_2.0	None	None	A53 Gr.B	Typical
532	RI152	3_Z18	3_Z20		RIGID	None	None	RIGID	Typical
533	G_MP2_S	3_Z21	3_Z22		MOUNT_PIPE_2.0	None	None	A53 Gr.B	Typical
534	RI153	3_Z23	3_A2T		RIGID	None	None	RIGID	Typical
535	RI154	3_Z24	3_A2B		RIGID	None	None	RIGID	Typical
536	RI162	3_Z34	3_Z36		RIGID	None	None	RIGID	Typical
537	RI163	3_Z39	3_A3T		RIGID	None	None	RIGID	Typical
538	RI164	3_Z40	3_A3B		RIGID	None	None	RIGID	Typical
539	RI165	3_Z41	3_R3TN		RIGID	None	None	RIGID	Typical
540	RI172	3_Z50	3_Z52		RIGID	None	None	RIGID	Typical
541	G_MP4_S	3_Z53	3_Z54		MOUNT_PIPE_2.0	None	None	A53 Gr.B	Typical
542	RI175	3_Z57	D1		RIGID	None	None	RIGID	Typical
543	RI212	4_Z2	4_Z4		RIGID	None	None	RIGID	Typical
544	D_MP1_S	4_Z5	4_Z6		MOUNT_PIPE_2.0	None	None	A53 Gr.B	Typical
545	RI222	4_Z18	4_Z20		RIGID	None	None	RIGID	Typical
546	D_MP2_S	4_Z21	4_Z22		MOUNT_PIPE_2.0	None	None	A53 Gr.B	Typical
547	RI223	4_Z23	4_A2T		RIGID	None	None	RIGID	Typical
548	RI224	4_Z24	4_A2B		RIGID	None	None	RIGID	Typical
549	RI232	4_Z34	4_Z36		RIGID	None	None	RIGID	Typical
550	RI233	4_Z39	4_A3T		RIGID	None	None	RIGID	Typical
551	RI234	4_Z40	4_A3B		RIGID	None	None	RIGID	Typical
552	RI235	4_Z41	4_R3TN		RIGID	None	None	RIGID	Typical
553	RI242	4_Z50	4_Z52		RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
554	D_MP4_S	4_Z53	4_Z54		MOUNT_PIPE_2.0	None	None	A53 Gr.B	Typical
555	M567	N744	N745		MOUNT_PIPE_2.5	None	None	A53 Gr.B	Typical
556	M568	N746	N747		MOUNT_PIPE_2.5	None	None	A53 Gr.B	Typical
557	M569	N748	N749		MOUNT_PIPE_2.5	None	None	A53 Gr.B	Typical
558	M558	N727	N728		RIGID	None	None	RIGID	Typical
559	M559	N729	N730		RIGID	None	None	RIGID	Typical
560	M560	N724	N725		RIGID	None	None	RIGID	Typical
561	M561	N723	N726		RIGID	None	None	RIGID	Typical
562	M562	N735	N740		RIGID	None	None	RIGID	Typical
563	M563	N750	N752		RIGID	None	None	RIGID	Typical
564	M564	N732	N733		RIGID	None	None	RIGID	Typical
565	M565	N731	N734		RIGID	None	None	RIGID	Typical
566	M566	N757	3_Z51		RIGID	None	None	RIGID	Typical
567	M570	N758	N759		RIGID	None	None	RIGID	Typical
568	M571	N754	N755		RIGID	None	None	RIGID	Typical
569	M572	N753	N756		RIGID	None	None	RIGID	Typical

Hot Rolled Steel Design Parameters

	Label	Shape	Length [in]	Lb y-y [in]	Lb z-z [in]	Lcomp top [in]	K y-y	K z-z	Channel Conn.	a [in]	Function
1	B_FH1	Platform Face Horizontal	150	71.815	71.815		0.65	0.65	N/A	N/A	Lateral
2	M190	Clamps S	1.563						N/A	N/A	Lateral
3	M191	Clamps S	1.562						N/A	N/A	Lateral
4	M198	Clamp Angle	1.118						N/A	N/A	Lateral
5	M199A	Clamp Angle	1.118						N/A	N/A	Lateral
6	M202	Clamp Angle	1.118						N/A	N/A	Lateral
7	M203	Clamp Angle	1.118						N/A	N/A	Lateral
8	M206	Ofset Tube	50.932				1	1	N/A	N/A	Lateral
9	M216	Grating Cross PL	11.106				0.65	0.65	N/A	N/A	Lateral
10	M217A	Grating Cross PL	19.512				0.65	0.65	N/A	N/A	Lateral
11	M218	Grating Cross PL	6.316				0.65	0.65	N/A	N/A	Lateral
12	M221	Grating Angles	29.689	Segment	Segment		0.65	0.65	N/A	N/A	Lateral
13	M222	Grating PL	4.245				0.65	0.65	N/A	N/A	Lateral
14	M223A	Grating Angles	34.63	Segment	Segment		0.65	0.65	N/A	N/A	Lateral
15	M228	Grating Cross PL	11.106				0.65	0.65	N/A	N/A	Lateral
16	M229A	Grating Cross PL	19.512				0.65	0.65	N/A	N/A	Lateral
17	M230	Grating Cross PL	6.389				0.65	0.65	N/A	N/A	Lateral
18	M231	Grating Angles	29.679	Segment	Segment		0.65	0.65	N/A	N/A	Lateral
19	M232A	Grating PL	4.26				0.65	0.65	N/A	N/A	Lateral
20	M233	Grating Angles	34.63	Segment	Segment		0.65	0.65	N/A	N/A	Lateral
21	M238	Clamps S	4.181						N/A	N/A	Lateral
22	M239	Clamps T	4.625						N/A	N/A	Lateral
23	M240	Clamps S	4.181						N/A	N/A	Lateral
24	M184A	Clamps S	1.563						N/A	N/A	Lateral
25	M185A	Clamps S	1.562						N/A	N/A	Lateral
26	M192A	Clamp Angle	1.118						N/A	N/A	Lateral
27	M193	Clamp Angle	1.118						N/A	N/A	Lateral
28	M196A	Clamp Angle	1.118						N/A	N/A	Lateral
29	M197A	Clamp Angle	1.118						N/A	N/A	Lateral
30	M200	Ofset Tube	50.932				1	1	N/A	N/A	Lateral
31	M210A	Grating Cross PL	11.106				0.65	0.65	N/A	N/A	Lateral
32	M211	Grating Cross PL	19.512				0.65	0.65	N/A	N/A	Lateral
33	M212A	Grating Cross PL	6.316				0.65	0.65	N/A	N/A	Lateral
34	M215A	Grating Angles	29.689	Segment	Segment		0.65	0.65	N/A	N/A	Lateral
35	M216A	Grating PL	4.245				0.65	0.65	N/A	N/A	Lateral
36	M217	Grating Angles	34.63	Segment	Segment		0.65	0.65	N/A	N/A	Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length [in]	Lb y-y [in]	Lb z-z [in]	Lcomp top [in]	K y-y	K z-z	Channel Conn.	a [in]	Function
37	M222A	Grating Cross PL	11.106				0.65	0.65	N/A	N/A	Lateral
38	M223	Grating Cross PL	19.512				0.65	0.65	N/A	N/A	Lateral
39	M224	Grating Cross PL	6.389				0.65	0.65	N/A	N/A	Lateral
40	M225A	Grating Angles	29.679	Segment	Segment		0.65	0.65	N/A	N/A	Lateral
41	M226A	Grating PL	4.26				0.65	0.65	N/A	N/A	Lateral
42	M227A	Grating Angles	34.63	Segment	Segment		0.65	0.65	N/A	N/A	Lateral
43	M232	Clamps S	4.181						N/A	N/A	Lateral
44	M233A	Clamps T	4.625						N/A	N/A	Lateral
45	M234A	Clamps S	4.181						N/A	N/A	Lateral
46	M284	Clamps S	1.563						N/A	N/A	Lateral
47	M285	Clamps S	1.562						N/A	N/A	Lateral
48	M292	Clamp Angle	1.118						N/A	N/A	Lateral
49	M293	Clamp Angle	1.118						N/A	N/A	Lateral
50	M296	Clamp Angle	1.118						N/A	N/A	Lateral
51	M297	Clamp Angle	1.118						N/A	N/A	Lateral
52	M300	Ofset Tube	50.932				1	1	N/A	N/A	Lateral
53	M310	Grating Cross PL	11.106				0.65	0.65	N/A	N/A	Lateral
54	M311	Grating Cross PL	19.512				0.65	0.65	N/A	N/A	Lateral
55	M312	Grating Cross PL	6.316				0.65	0.65	N/A	N/A	Lateral
56	M315	Grating Angles	29.689	Segment	Segment		0.65	0.65	N/A	N/A	Lateral
57	M316	Grating PL	4.245				0.65	0.65	N/A	N/A	Lateral
58	M317	Grating Angles	34.63	Segment	Segment		0.65	0.65	N/A	N/A	Lateral
59	M322	Grating Cross PL	11.106				0.65	0.65	N/A	N/A	Lateral
60	M323	Grating Cross PL	19.512				0.65	0.65	N/A	N/A	Lateral
61	M324	Grating Cross PL	6.389				0.65	0.65	N/A	N/A	Lateral
62	M325	Grating Angles	29.679	Segment	Segment		0.65	0.65	N/A	N/A	Lateral
63	M326	Grating PL	4.26				0.65	0.65	N/A	N/A	Lateral
64	M327	Grating Angles	34.63	Segment	Segment		0.65	0.65	N/A	N/A	Lateral
65	M332	Clamps S	4.181						N/A	N/A	Lateral
66	M333	Clamps T	4.625						N/A	N/A	Lateral
67	M334	Clamps S	4.181						N/A	N/A	Lateral
68	M336	Truss Flange Bottom	47.307		11.25				N/A	N/A	Lateral
69	M339	Truss Flange Bottom	22.5		11.25				N/A	N/A	Lateral
70	M340	Web 3/8x1	9.5				0.65	0.65	N/A	N/A	Lateral
71	M341	Web 3/8x1	14.903				0.65	0.65	N/A	N/A	Lateral
72	M342	Web 3/8x1	9.5				0.65	0.65	N/A	N/A	Lateral
73	M343	Web 3/8x1	14.534				0.65	0.65	N/A	N/A	Lateral
74	M344	Web 3/8x1	9.5				0.65	0.65	N/A	N/A	Lateral
75	M346	Web 3/8x1	7.692				0.65	0.65	N/A	N/A	Lateral
76	M348	Web 3/8x7/8	6.057				0.65	0.65	N/A	N/A	Lateral
77	M350	Web 3/8x7/8	8.145				0.65	0.65	N/A	N/A	Lateral
78	M351	Web 3/8x7/8	4.663				0.65	0.65	N/A	N/A	Lateral
79	M354	Web 3/8x3/4	6.601				0.65	0.65	N/A	N/A	Lateral
80	M355	Web 3/8x3/4	3.494				0.65	0.65	N/A	N/A	Lateral
81	M357	Web 3/8x3/4	5.344				0.65	0.65	N/A	N/A	Lateral
82	M358	Web 3/8x5/8	2.509				0.65	0.65	N/A	N/A	Lateral
83	M360	Web 3/8x5/8	4.321				0.65	0.65	N/A	N/A	Lateral
84	M361	Web 3/8x5/8	1.679				0.65	0.65	N/A	N/A	Lateral
85	M363	Web 3/8x5/8	1.029				0.65	0.65	N/A	N/A	Lateral
86	M365	Web 3/8x5/8	0.563				0.65	0.65	N/A	N/A	Lateral
87	M366	Web 3/8x5/8	0.486				0.65	0.65	N/A	N/A	Lateral
88	M368	Web 3/8x1	11.512				0.65	0.65	N/A	N/A	Lateral
89	M370	Web 3/8x1	9.857				0.65	0.65	N/A	N/A	Lateral
90	M376	Web 3/8x5/8	3.279				0.65	0.65	N/A	N/A	Lateral
91	M378	Web 3/8x5/8	3.189				0.65	0.65	N/A	N/A	Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length [in]	Lb y-y [in]	Lb z-z [in]	Lcomp top [in]	K y-y	K z-z	Channel Conn.	a [in]	Function
92	M381	Web 3/8x5/8	2.652				0.65	0.65	N/A	N/A	Lateral
93	M384	Clamps S	1.563						N/A	N/A	Lateral
94	M385	Clamps S	1.562						N/A	N/A	Lateral
95	B SA1	Truss Flange Top	69		11.25		0.65	0.65	N/A	N/A	Lateral
96	M392	Clamp Angle	1.118						N/A	N/A	Lateral
97	M393	Clamp Angle	1.118						N/A	N/A	Lateral
98	M396	Clamp Angle	1.118						N/A	N/A	Lateral
99	M397	Clamp Angle	1.118						N/A	N/A	Lateral
100	M400	Ofset Tube	50.932				1	1	N/A	N/A	Lateral
101	M410	Grating Cross PL	11.106				0.65	0.65	N/A	N/A	Lateral
102	M411	Grating Cross PL	19.512				0.65	0.65	N/A	N/A	Lateral
103	M412	Grating Cross PL	6.316				0.65	0.65	N/A	N/A	Lateral
104	M415	Grating Angles	29.689	Segment	Segment		0.65	0.65	N/A	N/A	Lateral
105	M416	Grating PL	4.245				0.65	0.65	N/A	N/A	Lateral
106	M417	Grating Angles	34.63	Segment	Segment		0.65	0.65	N/A	N/A	Lateral
107	M422	Grating Cross PL	11.106				0.65	0.65	N/A	N/A	Lateral
108	M423	Grating Cross PL	19.512				0.65	0.65	N/A	N/A	Lateral
109	M424	Grating Cross PL	6.389				0.65	0.65	N/A	N/A	Lateral
110	M425	Grating Angles	29.679	Segment	Segment		0.65	0.65	N/A	N/A	Lateral
111	M426	Grating PL	4.26				0.65	0.65	N/A	N/A	Lateral
112	M427	Grating Angles	34.63	Segment	Segment		0.65	0.65	N/A	N/A	Lateral
113	M432	Clamps S	4.181						N/A	N/A	Lateral
114	M433	Clamps T	4.625						N/A	N/A	Lateral
115	M434	Clamps S	4.181						N/A	N/A	Lateral
116	A FH1	Platform Face Horizontal	150	71.815	71.815		0.65	0.65	N/A	N/A	Lateral
117	M485	Platform Face Horizontal	150	71.815	71.815		0.65	0.65	N/A	N/A	Lateral
118	G FH1	Platform Face Horizontal	150	71.815	71.815		0.65	0.65	N/A	N/A	Lateral
119	M575	SR Conn Plate	3						N/A	N/A	Lateral
120	M578	SR Conn Plate	3						N/A	N/A	Lateral
121	M437	Web 3/8x3/4	6.601				0.65	0.65	N/A	N/A	Lateral
122	M448	Web 3/8x7/8	4.663				0.65	0.65	N/A	N/A	Lateral
123	M449	Web 3/8x1	14.903				0.65	0.65	N/A	N/A	Lateral
124	M452	Web 3/8x5/8	4.321				0.65	0.65	N/A	N/A	Lateral
125	M453	Web 3/8x5/8	2.652				0.65	0.65	N/A	N/A	Lateral
126	M454	Web 3/8x3/4	3.494				0.65	0.65	N/A	N/A	Lateral
127	M456	Web 3/8x1	9.5				0.65	0.65	N/A	N/A	Lateral
128	M460	Web 3/8x1	9.857				0.65	0.65	N/A	N/A	Lateral
129	M464	Web 3/8x5/8	0.486				0.65	0.65	N/A	N/A	Lateral
130	M466	Web 3/8x1	7.692				0.65	0.65	N/A	N/A	Lateral
131	M468	Web 3/8x1	11.512				0.65	0.65	N/A	N/A	Lateral
132	M469	Web 3/8x5/8	3.279				0.65	0.65	N/A	N/A	Lateral
133	M471	Web 3/8x5/8	1.679				0.65	0.65	N/A	N/A	Lateral
134	M472	Truss Flange Bottom	47.307		11.25				N/A	N/A	Lateral
135	M473	Web 3/8x5/8	0.563				0.65	0.65	N/A	N/A	Lateral
136	M474	Web 3/8x5/8	3.189				0.65	0.65	N/A	N/A	Lateral
137	M486	Web 3/8x7/8	6.057				0.65	0.65	N/A	N/A	Lateral
138	M487	Web 3/8x7/8	8.145				0.65	0.65	N/A	N/A	Lateral
139	M488	Truss Flange Bottom	22.5		11.25				N/A	N/A	Lateral
140	M490	Web 3/8x3/4	5.344				0.65	0.65	N/A	N/A	Lateral
141	M493	Web 3/8x1	14.534				0.65	0.65	N/A	N/A	Lateral
142	M494	Web 3/8x1	9.5				0.65	0.65	N/A	N/A	Lateral
143	M501	Web 3/8x5/8	2.509				0.65	0.65	N/A	N/A	Lateral
144	M510	Web 3/8x5/8	1.029				0.65	0.65	N/A	N/A	Lateral
145	A SA1	Truss Flange Top	69		11.25		0.65	0.65	N/A	N/A	Lateral
146	M595	Web 3/8x1	9.5				0.65	0.65	N/A	N/A	Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length [in]	Lb y-y [in]	Lb z-z [in]	Lcomp top [in]	K y-y	K z-z	Channel Conn.	a [in]	Function
147	M599	Web 3/8x3/4	6.601				0.65	0.65	N/A	N/A	Lateral
148	M600	Web 3/8x7/8	4.663				0.65	0.65	N/A	N/A	Lateral
149	M601	Web 3/8x1	14.903				0.65	0.65	N/A	N/A	Lateral
150	M604	Web 3/8x5/8	4.321				0.65	0.65	N/A	N/A	Lateral
151	M605	Web 3/8x5/8	2.652				0.65	0.65	N/A	N/A	Lateral
152	M606	Web 3/8x3/4	3.494				0.65	0.65	N/A	N/A	Lateral
153	M608	Web 3/8x1	9.5				0.65	0.65	N/A	N/A	Lateral
154	M624	Web 3/8x1	9.857				0.65	0.65	N/A	N/A	Lateral
155	M628	Web 3/8x5/8	0.486				0.65	0.65	N/A	N/A	Lateral
156	M630	Web 3/8x1	7.692				0.65	0.65	N/A	N/A	Lateral
157	M632	Web 3/8x1	11.512				0.65	0.65	N/A	N/A	Lateral
158	M633	Web 3/8x5/8	3.279				0.65	0.65	N/A	N/A	Lateral
159	M635	Web 3/8x5/8	1.679				0.65	0.65	N/A	N/A	Lateral
160	M636	Truss Flange Bottom	47.307		11.25				N/A	N/A	Lateral
161	M637	Web 3/8x5/8	0.563				0.65	0.65	N/A	N/A	Lateral
162	M638	Web 3/8x5/8	3.189				0.65	0.65	N/A	N/A	Lateral
163	M640	Web 3/8x7/8	6.057				0.65	0.65	N/A	N/A	Lateral
164	M641	Web 3/8x7/8	8.145				0.65	0.65	N/A	N/A	Lateral
165	M642	Truss Flange Bottom	22.5		11.25				N/A	N/A	Lateral
166	M644	Web 3/8x3/4	5.344				0.65	0.65	N/A	N/A	Lateral
167	M647	Web 3/8x1	14.534				0.65	0.65	N/A	N/A	Lateral
168	M648	Web 3/8x1	9.5				0.65	0.65	N/A	N/A	Lateral
169	M653	Web 3/8x5/8	2.509				0.65	0.65	N/A	N/A	Lateral
170	M655	Web 3/8x5/8	1.029				0.65	0.65	N/A	N/A	Lateral
171	D_SA1	Truss Flange Top	69		11.25		0.65	0.65	N/A	N/A	Lateral
172	M662	Web 3/8x1	9.5				0.65	0.65	N/A	N/A	Lateral
173	M666	Web 3/8x3/4	6.601				0.65	0.65	N/A	N/A	Lateral
174	M667	Web 3/8x7/8	4.663				0.65	0.65	N/A	N/A	Lateral
175	M668	Web 3/8x1	14.903				0.65	0.65	N/A	N/A	Lateral
176	M671	Web 3/8x5/8	4.321				0.65	0.65	N/A	N/A	Lateral
177	M672	Web 3/8x5/8	2.652				0.65	0.65	N/A	N/A	Lateral
178	M673	Web 3/8x3/4	3.494				0.65	0.65	N/A	N/A	Lateral
179	M675	Web 3/8x1	9.5				0.65	0.65	N/A	N/A	Lateral
180	M679	Web 3/8x1	9.857				0.65	0.65	N/A	N/A	Lateral
181	M683	Web 3/8x5/8	0.486				0.65	0.65	N/A	N/A	Lateral
182	M685	Web 3/8x1	7.692				0.65	0.65	N/A	N/A	Lateral
183	M687	Web 3/8x1	11.512				0.65	0.65	N/A	N/A	Lateral
184	M688	Web 3/8x5/8	3.279				0.65	0.65	N/A	N/A	Lateral
185	M690	Web 3/8x5/8	1.679				0.65	0.65	N/A	N/A	Lateral
186	M691	Truss Flange Bottom	47.307		11.25				N/A	N/A	Lateral
187	M692	Web 3/8x5/8	0.563				0.65	0.65	N/A	N/A	Lateral
188	M693	Web 3/8x5/8	3.189				0.65	0.65	N/A	N/A	Lateral
189	M695	Web 3/8x7/8	6.057				0.65	0.65	N/A	N/A	Lateral
190	M696	Web 3/8x7/8	8.145				0.65	0.65	N/A	N/A	Lateral
191	M697	Truss Flange Bottom	22.5		11.25				N/A	N/A	Lateral
192	M699	Web 3/8x3/4	5.344				0.65	0.65	N/A	N/A	Lateral
193	M702	Web 3/8x1	14.534				0.65	0.65	N/A	N/A	Lateral
194	M703	Web 3/8x1	9.5				0.65	0.65	N/A	N/A	Lateral
195	M708	Web 3/8x5/8	2.509				0.65	0.65	N/A	N/A	Lateral
196	M710	Web 3/8x5/8	1.029				0.65	0.65	N/A	N/A	Lateral
197	G_SA1	Truss Flange Top	69		11.25		0.65	0.65	N/A	N/A	Lateral
198	M717	Web 3/8x1	9.5				0.65	0.65	N/A	N/A	Lateral
199	A_SR1	Support Rail	150		48				N/A	N/A	Lateral
200	M507	SR Conn Plate	3						N/A	N/A	Lateral
201	M508	SR Conn Plate	3						N/A	N/A	Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length [in]	Lb y-y [in]	Lb z-z [in]	Lcomp top [in]	K y-y	K z-z	Channel Conn.	a [in]	Function
202	M509	Support Rail	150		48				N/A	N/A	Lateral
203	M524	SR Conn Plate	3						N/A	N/A	Lateral
204	M525	SR Conn Plate	3						N/A	N/A	Lateral
205	G_SR1	Support Rail	150		48				N/A	N/A	Lateral
206	M529	SR Conn Plate	3						N/A	N/A	Lateral
207	M530	SR Conn Plate	3						N/A	N/A	Lateral
208	B_SR1	Support Rail	150		48				N/A	N/A	Lateral
209	M534	SR Conn Assembly	13.444						N/A	N/A	Lateral
210	M535	SR Conn Assembly	13.444						N/A	N/A	Lateral
211	M536	SR Conn Assembly	13.444						N/A	N/A	Lateral
212	M537	SR Conn Assembly	13.444						N/A	N/A	Lateral
213	M519_1	Grating Pipe	71.758						N/A	N/A	Lateral
214	M520_1	Grating Pipe	71.816						N/A	N/A	Lateral
215	M521_1	Grating Plates	20				0.65	0.65	N/A	N/A	Lateral
216	M522_1	Grating Plates	20				0.65	0.65	N/A	N/A	Lateral
217	M523_1	Grating Plates	20				0.65	0.65	N/A	N/A	Lateral
218	M524_1	Grating Plates	20				0.65	0.65	N/A	N/A	Lateral
219	M525_1	Grating Plates	20				0.65	0.65	N/A	N/A	Lateral
220	M730	Grating Plates	19.999				0.65	0.65	N/A	N/A	Lateral
221	M735	Grating Plates	19.999				0.65	0.65	N/A	N/A	Lateral
222	M747	Grating Plates	19.999				0.65	0.65	N/A	N/A	Lateral
223	M749	Grating Plates	19.999				0.65	0.65	N/A	N/A	Lateral
224	M770	Grating Plates	19.999				0.65	0.65	N/A	N/A	Lateral
225	M771	Grating Pipe	71.757						N/A	N/A	Lateral
226	M775	Grating Pipe	71.815						N/A	N/A	Lateral
227	M777	Grating Plates	19.999				0.65	0.65	N/A	N/A	Lateral
228	M779	Grating Plates	19.999				0.65	0.65	N/A	N/A	Lateral
229	M782	Grating Plates	19.999				0.65	0.65	N/A	N/A	Lateral
230	M784	Grating Plates	19.999				0.65	0.65	N/A	N/A	Lateral
231	M793	Grating Plates	19.999				0.65	0.65	N/A	N/A	Lateral
232	M795	Grating Pipe	71.757						N/A	N/A	Lateral
233	M816	Grating Pipe	71.815						N/A	N/A	Lateral
234	M817	Grating Plates	19.999				0.65	0.65	N/A	N/A	Lateral
235	M821	Grating Plates	19.999				0.65	0.65	N/A	N/A	Lateral
236	M823	Grating Plates	19.999				0.65	0.65	N/A	N/A	Lateral
237	M825	Grating Plates	19.999				0.65	0.65	N/A	N/A	Lateral
238	M828	Grating Plates	19.999				0.65	0.65	N/A	N/A	Lateral
239	M839	Grating Pipe	71.757						N/A	N/A	Lateral
240	M841	Grating Pipe	71.815						N/A	N/A	Lateral
241	A_MP1_S	MOUNT_PIPE_2.0	96			Lbyy			N/A	N/A	Lateral
242	A_MP2_S	MOUNT_PIPE_2.0	96			Lbyy			N/A	N/A	Lateral
243	A_MP3_S	MOUNT_PIPE_2.5	120			Lbyy			N/A	N/A	Lateral
244	A_MP4_S	MOUNT_PIPE_2.0	96			Lbyy			N/A	N/A	Lateral
245	B_MP1_S	MOUNT_PIPE_2.0	96			Lbyy			N/A	N/A	Lateral
246	B_MP2_S	MOUNT_PIPE_2.0	96			Lbyy			N/A	N/A	Lateral
247	B_MP4_S	MOUNT_PIPE_2.0	96			Lbyy			N/A	N/A	Lateral
248	G_MP1_S	MOUNT_PIPE_2.0	96			Lbyy			N/A	N/A	Lateral
249	G_MP2_S	MOUNT_PIPE_2.0	96			Lbyy			N/A	N/A	Lateral
250	G_MP4_S	MOUNT_PIPE_2.0	96			Lbyy			N/A	N/A	Lateral
251	D_MP1_S	MOUNT_PIPE_2.0	96			Lbyy			N/A	N/A	Lateral
252	D_MP2_S	MOUNT_PIPE_2.0	96			Lbyy			N/A	N/A	Lateral
253	D_MP4_S	MOUNT_PIPE_2.0	96			Lbyy			N/A	N/A	Lateral
254	M567	MOUNT_PIPE_2.5	120			Lbyy			N/A	N/A	Lateral
255	M568	MOUNT_PIPE_2.5	120			Lbyy			N/A	N/A	Lateral
256	M569	MOUNT_PIPE_2.5	120			Lbyy			N/A	N/A	Lateral

Node Boundary Conditions

	Node Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot [k-ft/rad]	Y Rot [k-ft/rad]	Z Rot [k-ft/rad]
1	N402						
2	N403						
3	N404						
4	RC4						
5	RC3						
6	N453						
7	N684						
8	N685						
9	N686A	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
10	N605						
11	N607						
12	N608						
13	N622						
14	N623						
15	N635	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
16	N638						
17	N639						
18	N679						
19	N818						
20	N820						
21	N821						
22	N859						
23	N860						
24	N868	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
25	N871						
26	N872						
27	N882						
28	N896						
29	N898						
30	N899						
31	N913						
32	N914						
33	N922	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
34	N925						
35	N926						
36	N936						

Member Advanced Data

	Label	I Release	J Release	Physical	Deflection Ratio Options	Seismic DR
1	M438		OOOXOO	Yes	** NA **	None
2	M439		OOOXOO	Yes	** NA **	None
3	M476		OOOXOO	Yes	** NA **	None
4	M477		OOOXOO	Yes	** NA **	None
5	M495		OOOXOO	Yes	** NA **	None
6	M496		OOOXOO	Yes	** NA **	None
7	M502		OOOXOO	Yes	** NA **	None
8	M503		OOOXOO	Yes	** NA **	None
9	B_FH1			Yes	** NA **	None
10	M190			Yes	** NA **	None
11	M191			Yes	** NA **	None
12	M192	BenPIN		Yes	** NA **	None
13	M193A	BenPIN		Yes	** NA **	None
14	M195			Yes	** NA **	None
15	M196			Yes	** NA **	None

Member Advanced Data (Continued)

	Label	I Release	J Release	Physical	Deflection Ratio Options	Seismic DR
16	M197			Yes	** NA **	None
17	M198	OOOOOX		Yes	** NA **	None
18	M199A	OOOOOX		Yes	** NA **	None
19	M200A			Yes	** NA **	None
20	M201A			Yes	** NA **	None
21	M202	OOOOOX		Yes	** NA **	None
22	M203	OOOOOX		Yes	** NA **	None
23	M204			Yes	** NA **	None
24	M205			Yes	** NA **	None
25	M206			Yes	** NA **	None
26	M207			Yes	** NA **	None
27	M208A			Yes	** NA **	None
28	M209			Yes	** NA **	None
29	M210			Yes	** NA **	None
30	M211A			Yes	** NA **	None
31	M212			Yes	** NA **	None
32	M213			Yes	** NA **	None
33	M214A			Yes	** NA **	None
34	M215			Yes	** NA **	None
35	M216			Yes	** NA **	None
36	M217A			Yes	** NA **	None
37	M218			Yes	** NA **	None
38	M219			Yes	** NA **	None
39	M220A			Yes	** NA **	None
40	M221			Yes	** NA **	None
41	M222			Yes	** NA **	None
42	M223A			Yes	** NA **	None
43	M224A			Yes	** NA **	None
44	M225			Yes	** NA **	None
45	M226			Yes	** NA **	None
46	M227			Yes	** NA **	None
47	M228			Yes	** NA **	None
48	M229A			Yes	** NA **	None
49	M230			Yes	** NA **	None
50	M231			Yes	** NA **	None
51	M232A			Yes	** NA **	None
52	M233			Yes	** NA **	None
53	M234			Yes	** NA **	None
54	M235A		BenPIN	Yes	** NA **	None
55	M236A			Yes	** NA **	None
56	M237		BenPIN	Yes	** NA **	None
57	M238			Yes	** NA **	None
58	M239			Yes	** NA **	None
59	M240			Yes	** NA **	None
60	M184A			Yes	** NA **	None
61	M185A			Yes	** NA **	None
62	M186A	BenPIN		Yes	** NA **	None
63	M187A	BenPIN		Yes	** NA **	None
64	M189A			Yes	** NA **	None
65	M190A			Yes	** NA **	None
66	M191A			Yes	** NA **	None
67	M192A	OOOOOX		Yes	** NA **	None
68	M193	OOOOOX		Yes	** NA **	None
69	M194			Yes	** NA **	None
70	M195A			Yes	** NA **	None

Member Advanced Data (Continued)

	Label	I Release	J Release	Physical	Deflection Ratio Options	Seismic DR
71	M196A	OOOOOX		Yes	** NA **	None
72	M197A	OOOOOX		Yes	** NA **	None
73	M198A			Yes	** NA **	None
74	M199			Yes	** NA **	None
75	M200			Yes	** NA **	None
76	M201			Yes	** NA **	None
77	M202A			Yes	** NA **	None
78	M203A			Yes	** NA **	None
79	M204A			Yes	** NA **	None
80	M205A			Yes	** NA **	None
81	M206A			Yes	** NA **	None
82	M207A			Yes	** NA **	None
83	M208			Yes	** NA **	None
84	M209A			Yes	** NA **	None
85	M210A			Yes	** NA **	None
86	M211			Yes	** NA **	None
87	M212A			Yes	** NA **	None
88	M213A			Yes	** NA **	None
89	M214			Yes	** NA **	None
90	M215A			Yes	** NA **	None
91	M216A			Yes	** NA **	None
92	M217			Yes	** NA **	None
93	M218A			Yes	** NA **	None
94	M219A			Yes	** NA **	None
95	M220			Yes	** NA **	None
96	M221A			Yes	** NA **	None
97	M222A			Yes	** NA **	None
98	M223			Yes	** NA **	None
99	M224			Yes	** NA **	None
100	M225A			Yes	** NA **	None
101	M226A			Yes	** NA **	None
102	M227A			Yes	** NA **	None
103	M228A			Yes	** NA **	None
104	M229		BenPIN	Yes	** NA **	None
105	M230A			Yes	** NA **	None
106	M231A		BenPIN	Yes	** NA **	None
107	M232			Yes	** NA **	None
108	M233A			Yes	** NA **	None
109	M234A			Yes	** NA **	None
110	M284			Yes	** NA **	None
111	M285			Yes	** NA **	None
112	M286	BenPIN		Yes	** NA **	None
113	M287	BenPIN		Yes	** NA **	None
114	M289			Yes	** NA **	None
115	M290			Yes	** NA **	None
116	M291			Yes	** NA **	None
117	M292	OOOOOX		Yes	** NA **	None
118	M293	OOOOOX		Yes	** NA **	None
119	M294			Yes	** NA **	None
120	M295			Yes	** NA **	None
121	M296	OOOOOX		Yes	** NA **	None
122	M297	OOOOOX		Yes	** NA **	None
123	M298			Yes	** NA **	None
124	M299			Yes	** NA **	None
125	M300			Yes	** NA **	None

Member Advanced Data (Continued)

	Label	I Release	J Release	Physical	Deflection Ratio Options	Seismic DR
126	M301			Yes	** NA **	None
127	M302			Yes	** NA **	None
128	M303			Yes	** NA **	None
129	M304			Yes	** NA **	None
130	M305			Yes	** NA **	None
131	M306			Yes	** NA **	None
132	M307			Yes	** NA **	None
133	M308			Yes	** NA **	None
134	M309			Yes	** NA **	None
135	M310			Yes	** NA **	None
136	M311			Yes	** NA **	None
137	M312			Yes	** NA **	None
138	M313			Yes	** NA **	None
139	M314			Yes	** NA **	None
140	M315			Yes	** NA **	None
141	M316			Yes	** NA **	None
142	M317			Yes	** NA **	None
143	M318			Yes	** NA **	None
144	M319			Yes	** NA **	None
145	M320			Yes	** NA **	None
146	M321			Yes	** NA **	None
147	M322			Yes	** NA **	None
148	M323			Yes	** NA **	None
149	M324			Yes	** NA **	None
150	M325			Yes	** NA **	None
151	M326			Yes	** NA **	None
152	M327			Yes	** NA **	None
153	M328			Yes	** NA **	None
154	M329		BenPIN	Yes	** NA **	None
155	M330			Yes	** NA **	None
156	M331		BenPIN	Yes	** NA **	None
157	M332			Yes	** NA **	None
158	M333			Yes	** NA **	None
159	M334			Yes	** NA **	None
160	M335			Yes	** NA **	None
161	M336			Yes	** NA **	None
162	M337			Yes	** NA **	None
163	M338			Yes	** NA **	None
164	M339			Yes	** NA **	None
165	M340			Yes	** NA **	None
166	M341			Yes	** NA **	None
167	M342			Yes	** NA **	None
168	M343			Yes	** NA **	None
169	M344			Yes	** NA **	None
170	M345			Yes	** NA **	None
171	M346			Yes	** NA **	None
172	M347			Yes	** NA **	None
173	M348			Yes	** NA **	None
174	M349			Yes	** NA **	None
175	M350			Yes	** NA **	None
176	M351			Yes	** NA **	None
177	M352			Yes	** NA **	None
178	M353			Yes	** NA **	None
179	M354			Yes	** NA **	None
180	M355			Yes	** NA **	None

Member Advanced Data (Continued)

	Label	I Release	J Release	Physical	Deflection Ratio Options	Seismic DR
181	M356			Yes	** NA **	None
182	M357			Yes	** NA **	None
183	M358			Yes	** NA **	None
184	M359			Yes	** NA **	None
185	M360			Yes	** NA **	None
186	M361			Yes	** NA **	None
187	M362			Yes	** NA **	None
188	M363			Yes	** NA **	None
189	M364			Yes	** NA **	None
190	M365			Yes	** NA **	None
191	M366			Yes	** NA **	None
192	M367			Yes	** NA **	None
193	M368			Yes	** NA **	None
194	M369			Yes	** NA **	None
195	M370			Yes	** NA **	None
196	M371			Yes	** NA **	None
197	M372			Yes	** NA **	None
198	M373			Yes	** NA **	None
199	M374			Yes	** NA **	None
200	M375			Yes	** NA **	None
201	M376			Yes	** NA **	None
202	M377			Yes	** NA **	None
203	M378			Yes	** NA **	None
204	M379			Yes	** NA **	None
205	M380			Yes	** NA **	None
206	M381			Yes	** NA **	None
207	M382			Yes	** NA **	None
208	M383			Yes	** NA **	None
209	M384			Yes	** NA **	None
210	M385			Yes	** NA **	None
211	M386	BenPIN		Yes	** NA **	None
212	M387	BenPIN		Yes	** NA **	None
213	B_SA1			Yes	** NA **	None
214	M389			Yes	** NA **	None
215	M390			Yes	** NA **	None
216	M391			Yes	** NA **	None
217	M392	OOOOOX		Yes	** NA **	None
218	M393	OOOOOX		Yes	** NA **	None
219	M394			Yes	** NA **	None
220	M395			Yes	** NA **	None
221	M396	OOOOOX		Yes	** NA **	None
222	M397	OOOOOX		Yes	** NA **	None
223	M398			Yes	** NA **	None
224	M399			Yes	** NA **	None
225	M400			Yes	** NA **	None
226	M401			Yes	** NA **	None
227	M402			Yes	** NA **	None
228	M403			Yes	** NA **	None
229	M404			Yes	** NA **	None
230	M405			Yes	** NA **	None
231	M406			Yes	** NA **	None
232	M407			Yes	** NA **	None
233	M408			Yes	** NA **	None
234	M409			Yes	** NA **	None
235	M410			Yes	** NA **	None

Member Advanced Data (Continued)

	Label	I Release	J Release	Physical	Deflection Ratio Options	Seismic DR
236	M411			Yes	** NA **	None
237	M412			Yes	** NA **	None
238	M413			Yes	** NA **	None
239	M414			Yes	** NA **	None
240	M415			Yes	** NA **	None
241	M416			Yes	** NA **	None
242	M417			Yes	** NA **	None
243	M418			Yes	** NA **	None
244	M419			Yes	** NA **	None
245	M420			Yes	** NA **	None
246	M421			Yes	** NA **	None
247	M422			Yes	** NA **	None
248	M423			Yes	** NA **	None
249	M424			Yes	** NA **	None
250	M425			Yes	** NA **	None
251	M426			Yes	** NA **	None
252	M427			Yes	** NA **	None
253	M428			Yes	** NA **	None
254	M429		BenPIN	Yes	** NA **	None
255	M430			Yes	** NA **	None
256	M431		BenPIN	Yes	** NA **	None
257	M432			Yes	** NA **	None
258	M433			Yes	** NA **	None
259	M434			Yes	** NA **	None
260	M439B		OOOXOO	Yes	** NA **	None
261	M440		OOOXOO	Yes	** NA **	None
262	M441		OOOXOO	Yes	** NA **	None
263	M442		OOOXOO	Yes	** NA **	None
264	M443		OOOXOO	Yes	** NA **	None
265	M444		OOOXOO	Yes	** NA **	None
266	M445		OOOXOO	Yes	** NA **	None
267	M446		OOOXOO	Yes	** NA **	None
268	A FH1			Yes	** NA **	None
269	M477A		OOOXOO	Yes	** NA **	None
270	M478		OOOXOO	Yes	** NA **	None
271	M479		OOOXOO	Yes	** NA **	None
272	M480		OOOXOO	Yes	** NA **	None
273	M481		OOOXOO	Yes	** NA **	None
274	M482		OOOXOO	Yes	** NA **	None
275	M483		OOOXOO	Yes	** NA **	None
276	M484		OOOXOO	Yes	** NA **	None
277	M485			Yes	** NA **	None
278	M515		OOOXOO	Yes	** NA **	None
279	M516		OOOXOO	Yes	** NA **	None
280	M517		OOOXOO	Yes	** NA **	None
281	M518		OOOXOO	Yes	** NA **	None
282	M519		OOOXOO	Yes	** NA **	None
283	M520		OOOXOO	Yes	** NA **	None
284	M521		OOOXOO	Yes	** NA **	None
285	M522A		OOOXOO	Yes	** NA **	None
286	G FH1			Yes	** NA **	None
287	M538A			Yes	** NA **	None
288	M539A			Yes	** NA **	None
289	M540B			Yes	** NA **	None
290	M573		OOOOOX	Yes	** NA **	None

Member Advanced Data (Continued)

	Label	I Release	J Release	Physical	Deflection Ratio Options	Seismic DR
291	M574		OOOOOX	Yes	** NA **	None
292	M575			Yes	N/A	None
293	M578			Yes	N/A	None
294	M437			Yes	** NA **	None
295	M448			Yes	** NA **	None
296	M449			Yes	** NA **	None
297	M450			Yes	** NA **	None
298	M451			Yes	** NA **	None
299	M452			Yes	** NA **	None
300	M453			Yes	** NA **	None
301	M454			Yes	** NA **	None
302	M455			Yes	** NA **	None
303	M456			Yes	** NA **	None
304	M457			Yes	** NA **	None
305	M458			Yes	** NA **	None
306	M459			Yes	** NA **	None
307	M460			Yes	** NA **	None
308	M461			Yes	** NA **	None
309	M462			Yes	** NA **	None
310	M463			Yes	** NA **	None
311	M464			Yes	** NA **	None
312	M465			Yes	** NA **	None
313	M466			Yes	** NA **	None
314	M467			Yes	** NA **	None
315	M468			Yes	** NA **	None
316	M469			Yes	** NA **	None
317	M470			Yes	** NA **	None
318	M471			Yes	** NA **	None
319	M472			Yes	** NA **	None
320	M473			Yes	** NA **	None
321	M474			Yes	** NA **	None
322	M475			Yes	** NA **	None
323	M486			Yes	** NA **	None
324	M487			Yes	** NA **	None
325	M488			Yes	** NA **	None
326	M489			Yes	** NA **	None
327	M490			Yes	** NA **	None
328	M491			Yes	** NA **	None
329	M492			Yes	** NA **	None
330	M493			Yes	** NA **	None
331	M494			Yes	** NA **	None
332	M497			Yes	** NA **	None
333	M498			Yes	** NA **	None
334	M499			Yes	** NA **	None
335	M500			Yes	** NA **	None
336	M501			Yes	** NA **	None
337	M505			Yes	** NA **	None
338	M510			Yes	** NA **	None
339	M511			Yes	** NA **	None
340	M512			Yes	** NA **	None
341	M513			Yes	** NA **	None
342	M514			Yes	** NA **	None
343	A_SA1			Yes	** NA **	None
344	M594			Yes	** NA **	None
345	M595			Yes	** NA **	None

Member Advanced Data (Continued)

	Label	I Release	J Release	Physical	Deflection Ratio Options	Seismic DR
346	M596			Yes	** NA **	None
347	M599			Yes	** NA **	None
348	M600			Yes	** NA **	None
349	M601			Yes	** NA **	None
350	M602			Yes	** NA **	None
351	M603			Yes	** NA **	None
352	M604			Yes	** NA **	None
353	M605			Yes	** NA **	None
354	M606			Yes	** NA **	None
355	M607			Yes	** NA **	None
356	M608			Yes	** NA **	None
357	M621			Yes	** NA **	None
358	M622			Yes	** NA **	None
359	M623			Yes	** NA **	None
360	M624			Yes	** NA **	None
361	M625			Yes	** NA **	None
362	M626			Yes	** NA **	None
363	M627			Yes	** NA **	None
364	M628			Yes	** NA **	None
365	M629			Yes	** NA **	None
366	M630			Yes	** NA **	None
367	M631			Yes	** NA **	None
368	M632			Yes	** NA **	None
369	M633			Yes	** NA **	None
370	M634			Yes	** NA **	None
371	M635			Yes	** NA **	None
372	M636			Yes	** NA **	None
373	M637			Yes	** NA **	None
374	M638			Yes	** NA **	None
375	M639			Yes	** NA **	None
376	M640			Yes	** NA **	None
377	M641			Yes	** NA **	None
378	M642			Yes	** NA **	None
379	M643			Yes	** NA **	None
380	M644			Yes	** NA **	None
381	M645			Yes	** NA **	None
382	M646			Yes	** NA **	None
383	M647			Yes	** NA **	None
384	M648			Yes	** NA **	None
385	M649			Yes	** NA **	None
386	M650			Yes	** NA **	None
387	M651			Yes	** NA **	None
388	M652			Yes	** NA **	None
389	M653			Yes	** NA **	None
390	M654			Yes	** NA **	None
391	M655			Yes	** NA **	None
392	M656			Yes	** NA **	None
393	M657			Yes	** NA **	None
394	M658			Yes	** NA **	None
395	M659			Yes	** NA **	None
396	D_SA1			Yes	** NA **	None
397	M661			Yes	** NA **	None
398	M662			Yes	** NA **	None
399	M663			Yes	** NA **	None
400	M666			Yes	** NA **	None

Member Advanced Data (Continued)

	Label	I Release	J Release	Physical	Deflection Ratio Options	Seismic DR
401	M667			Yes	** NA **	None
402	M668			Yes	** NA **	None
403	M669			Yes	** NA **	None
404	M670			Yes	** NA **	None
405	M671			Yes	** NA **	None
406	M672			Yes	** NA **	None
407	M673			Yes	** NA **	None
408	M674			Yes	** NA **	None
409	M675			Yes	** NA **	None
410	M676			Yes	** NA **	None
411	M677			Yes	** NA **	None
412	M678			Yes	** NA **	None
413	M679			Yes	** NA **	None
414	M680			Yes	** NA **	None
415	M681			Yes	** NA **	None
416	M682			Yes	** NA **	None
417	M683			Yes	** NA **	None
418	M684			Yes	** NA **	None
419	M685			Yes	** NA **	None
420	M686			Yes	** NA **	None
421	M687			Yes	** NA **	None
422	M688			Yes	** NA **	None
423	M689			Yes	** NA **	None
424	M690			Yes	** NA **	None
425	M691			Yes	** NA **	None
426	M692			Yes	** NA **	None
427	M693			Yes	** NA **	None
428	M694			Yes	** NA **	None
429	M695			Yes	** NA **	None
430	M696			Yes	** NA **	None
431	M697			Yes	** NA **	None
432	M698			Yes	** NA **	None
433	M699			Yes	** NA **	None
434	M700			Yes	** NA **	None
435	M701			Yes	** NA **	None
436	M702			Yes	** NA **	None
437	M703			Yes	** NA **	None
438	M704			Yes	** NA **	None
439	M705			Yes	** NA **	None
440	M706			Yes	** NA **	None
441	M707			Yes	** NA **	None
442	M708			Yes	** NA **	None
443	M709			Yes	** NA **	None
444	M710			Yes	** NA **	None
445	M711			Yes	** NA **	None
446	M712			Yes	** NA **	None
447	M713			Yes	** NA **	None
448	M714			Yes	** NA **	None
449	G_SA1			Yes	** NA **	None
450	M716			Yes	** NA **	None
451	M717			Yes	** NA **	None
452	M718			Yes	** NA **	None
453	A_SR1			Yes	Default	None
454	M507			Yes	N/A	None
455	M508			Yes	N/A	None

Member Advanced Data (Continued)

	Label	I Release	J Release	Physical	Deflection Ratio Options	Seismic DR
456	M509			Yes	Default	None
457	M522		OOOOOX	Yes	** NA **	None
458	M523		OOOOOX	Yes	** NA **	None
459	M524			Yes	N/A	None
460	M525			Yes	N/A	None
461	G_SR1			Yes	Default	None
462	M527		OOOOOX	Yes	** NA **	None
463	M528		OOOOOX	Yes	** NA **	None
464	M529			Yes	N/A	None
465	M530			Yes	N/A	None
466	B_SR1			Yes	Default	None
467	M532		OOOOOX	Yes	** NA **	None
468	M533		OOOOOX	Yes	** NA **	None
469	M534			Yes	Default	None
470	M535			Yes	Default	None
471	M536			Yes	Default	None
472	M537			Yes	Default	None
473	M519_1	BenPIN	BenPIN	Yes	Default	None
474	M520_1	BenPIN	BenPIN	Yes	Default	None
475	M521_1			Yes	N/A	None
476	M522_1			Yes	N/A	None
477	M523_1			Yes	N/A	None
478	M524_1			Yes	N/A	None
479	M525_1			Yes	N/A	None
480	M730			Yes	N/A	None
481	M735			Yes	N/A	None
482	M747			Yes	N/A	None
483	M749			Yes	N/A	None
484	M770			Yes	N/A	None
485	M771	BenPIN	BenPIN	Yes	Default	None
486	M775	BenPIN	BenPIN	Yes	Default	None
487	M777			Yes	N/A	None
488	M779			Yes	N/A	None
489	M782			Yes	N/A	None
490	M784			Yes	N/A	None
491	M793			Yes	N/A	None
492	M795	BenPIN	BenPIN	Yes	Default	None
493	M816	BenPIN	BenPIN	Yes	Default	None
494	M817			Yes	N/A	None
495	M821			Yes	N/A	None
496	M823			Yes	N/A	None
497	M825			Yes	N/A	None
498	M828			Yes	N/A	None
499	M839	BenPIN	BenPIN	Yes	Default	None
500	M841	BenPIN	BenPIN	Yes	Default	None
501	RI2			Yes	** NA **	None
502	A_MP1_S			Yes	** NA **	None
503	RI12			Yes	** NA **	None
504	A_MP2_S			Yes	** NA **	None
505	RI13			Yes	** NA **	None
506	RI14			Yes	** NA **	None
507	RI22			Yes	** NA **	None
508	A_MP3_S			Yes	** NA **	None
509	RI23			Yes	** NA **	None
510	RI24			Yes	** NA **	None

Member Advanced Data (Continued)

	Label	I Release	J Release	Physical	Deflection Ratio Options	Seismic DR
511	RI25			Yes	** NA **	None
512	RI32			Yes	** NA **	None
513	A_MP4_S			Yes	** NA **	None
514	RI72			Yes	** NA **	None
515	RI71			Yes	** NA **	None
516	B_MP1_S			Yes	** NA **	None
517	RI82			Yes	** NA **	None
518	RI81			Yes	** NA **	None
519	B_MP2_S			Yes	** NA **	None
520	RI83			Yes	** NA **	None
521	RI84			Yes	** NA **	None
522	RI92			Yes	** NA **	None
523	RI91			Yes	** NA **	None
524	RI93			Yes	** NA **	None
525	RI94			Yes	** NA **	None
526	RI95			Yes	** NA **	None
527	RI102			Yes	** NA **	None
528	RI101			Yes	** NA **	None
529	B_MP4_S			Yes	** NA **	None
530	RI142			Yes	** NA **	None
531	G_MP1_S			Yes	** NA **	None
532	RI152			Yes	** NA **	None
533	G_MP2_S			Yes	** NA **	None
534	RI153			Yes	** NA **	None
535	RI154			Yes	** NA **	None
536	RI162			Yes	** NA **	None
537	RI163			Yes	** NA **	None
538	RI164			Yes	** NA **	None
539	RI165			Yes	** NA **	None
540	RI172			Yes	** NA **	None
541	G_MP4_S			Yes	** NA **	None
542	RI175			Yes	** NA **	None
543	RI212			Yes	** NA **	None
544	D_MP1_S			Yes	** NA **	None
545	RI222			Yes	** NA **	None
546	D_MP2_S			Yes	** NA **	None
547	RI223			Yes	** NA **	None
548	RI224			Yes	** NA **	None
549	RI232			Yes	** NA **	None
550	RI233			Yes	** NA **	None
551	RI234			Yes	** NA **	None
552	RI235			Yes	** NA **	None
553	RI242			Yes	** NA **	None
554	D_MP4_S			Yes	** NA **	None
555	M567			Yes	** NA **	None
556	M568			Yes	** NA **	None
557	M569			Yes	** NA **	None
558	M558			Yes	** NA **	None
559	M559			Yes	** NA **	None
560	M560			Yes	** NA **	None
561	M561			Yes	** NA **	None
562	M562			Yes	** NA **	None
563	M563			Yes	** NA **	None
564	M564			Yes	** NA **	None
565	M565			Yes	** NA **	None

Member Advanced Data (Continued)

	Label	I Release	J Release	Physical	Deflection Ratio Options	Seismic DR
566	M566			Yes	** NA **	None
567	M570			Yes	** NA **	None
568	M571			Yes	** NA **	None
569	M572			Yes	** NA **	None

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [1e^{5}°F^{-1}]	Density [k/ft^{3}]	Yield [ksi]	Ry	Fu [ksi]	Rt
1	A992	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	0.3	0.65	0.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	0.3	0.65	0.527	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	0.3	0.65	0.527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	0.3	0.65	0.49	35	1.6	60	1.2
7	A1085	29000	11154	0.3	0.65	0.49	50	1.4	65	1.3
8	Q235	29000	11154	0.3	0.65	0.49	35	1.5	58	1.2

Envelope Node Reactions

	Node Label		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
1	N686A	max	636.755	17	912.136	16	2432.769	33	-1342.31	9	7066.53	33	780.102	6
2		min	-2980.743	9	-3256.521	8	881.122	57	-7090.319	33	1435.671	9	-783.881	14
3	N635	max	3084.492	5	629.822	13	2421.735	29	-1513.236	5	-1475.225	5	167.879	4
4		min	-736.954	13	-2975.175	5	878.982	53	-7034.888	29	-7054.734	29	-171.877	12
5	N868	max	3146.838	18	3010.239	16	2386.067	25	6883.374	25	-1337.201	18	706.949	11
6		min	-804.416	10	-663.058	8	872.019	65	1386.522	17	-6879.938	25	-716.561	3
7	N922	max	932.116	4	3101.701	13	2772.253	21	8506.073	21	8535.489	21	1112.674	10
8		min	-3282.446	12	-756.129	5	939.092	61	1638.571	13	1576.876	12	-1110.844	18
9	Totals:	max	6433.578	3	6256.552	15	9791.062	24						
10		min	-6433.541	11	-6256.566	7	3617.592	66						

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

	Member	Shape	Code Check	Loc[in]	LC	Shear Check	Loc[in]	Dir	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [lb-ft]	phi*Mn z-z [lb-ft]	Cb	Eqn
1	M293	PL3/8X2	0.459	1.118	11	0.145	0	y	11	23496.379	23625	184.572	984.375	1.67	H1-1b
2	M193	PL3/8X2	0.446	1.118	15	0.151	0	y	15	23496.379	23625	184.572	984.375	1.67	H1-1b
3	M199A	PL3/8X2	0.444	1.118	3	0.152	0	y	3	23496.379	23625	184.572	984.375	1.67	H1-1b
4	M393	PL3/8X2	0.44	1.118	7	0.138	0	y	7	23496.379	23625	184.572	984.375	1.67	H1-1b
5	M296	PL3/8X2	0.355	0	27	0.099	1.118	y	27	23496.379	23625	184.572	984.375	1.67	H1-1b
6	M297	PL3/8X2	0.35	0	31	0.103	1.118	y	31	23496.379	23625	184.572	984.375	1.67	H1-1b
7	M392	PL3/8X2	0.347	1.118	10	0.175	1.118	y	11	23496.379	23625	184.572	984.375	1.67	H1-1b
8	M196A	PL3/8X2	0.339	0	80	0.094	1.118	y	79	23496.379	23625	184.572	984.375	1.67	H1-1b
9	M203	PL3/8X2	0.335	0	120	0.094	1.118	y	118	23496.379	23625	184.572	984.375	1.67	H1-1b
10	M198	PL3/8X2	0.332	1.118	7	0.183	1.118	y	8	23496.379	23625	184.572	984.375	1.67	H1-1b
11	M202	PL3/8X2	0.331	0	116	0.089	1.118	y	3	23496.379	23625	184.572	984.375	1.67	H1-1b
12	M192A	PL3/8X2	0.329	1.118	3	0.182	1.118	y	4	23496.379	23625	184.572	984.375	1.67	H1-1b
13	G_SA1	WT4x1/2_1x3/8	0.323	17.068	24	0.192	17.795	y	22	93731.189	106875	7631.85	830.304	1	H1-1b
14	M312	3/8X23/8"	0.323	0	19	0.074	0	y	20	26063.707	28054.688	219.177	1388.124	1.345	H1-1b
15	M197A	PL3/8X2	0.318	0	69	0.081	1.118	y	82	23496.379	23625	184.572	984.375	1.67	H1-1b
16	M567	PIPE_2.5	0.312	54.316	7	0.043	12		5	22373.407	50715	3596.25	3596.25	1	H1-1b
17	M569	PIPE_2.5	0.312	54.316	15	0.043	12		13	22373.407	50715	3596.25	3596.25	1	H1-1b
18	A_MP3_S	PIPE_2.5	0.312	54.316	3	0.043	12		17	22373.407	50715	3596.25	3596.25	1	H1-1b
19	M324	3/8X23/8"	0.308	0	24	0.072	0	y	20	26019.139	28054.688	219.177	1388.124	1.353	H1-1b
20	M292	PL3/8X2	0.302	1.118	14	0.168	1.118	y	16	23496.379	23625	184.572	984.375	1.67	H1-1b
21	M568	PIPE_2.5	0.3	54.316	11	0.045	12		9	22373.407	50715	3596.25	3596.25	1	H1-1b

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

	Member	Shape	Code Check	Loc[in]	LC	Shear Check	Loc[in]	Dir	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [lb-ft]	phi*Mn z-z [lb-ft]	Cb	Eqn
22	M697	WT4x3/8_1x3/8	0.297	22.5	20	0.026	11.013	y	26	77034.174	84375	5756.85	680.804	1	H1-1b
23	M691	WT4x3/8_1x3/8	0.293	29.38	21	0.048	23.902	y	20	72320.981	84375	5756.85	680.804	1	H1-1b
24	M412	3/8X23/8"	0.29	0	30	0.069	0	y	33	26063.707	28054.688	219.177	1388.124	1.343	H1-1b
25	M424	3/8X23/8"	0.289	0	20	0.067	0	y	33	26019.139	28054.688	219.177	1388.124	1.349	H1-1b
26	M673	3/4X3/8	0.287	3.494	20	0.012	3.494	y	8	12255.445	12656.25	98.876	197.753	2.223	H1-1a
27	M218	3/8X23/8"	0.286	0	27	0.067	0	y	28	26063.707	28054.688	219.177	1388.124	1.344	H1-1b
28	M224	3/8X23/8"	0.285	0	28	0.066	0	y	25	26019.139	28054.688	219.177	1388.124	1.349	H1-1b
29	M230	3/8X23/8"	0.284	0	32	0.066	0	y	28	26019.139	28054.688	219.177	1388.124	1.35	H1-1b
30	M212A	3/8X23/8"	0.283	0	23	0.067	0	y	24	26063.707	28054.688	219.177	1388.124	1.343	H1-1b
31	A_SA1	WT4x1/2_1x3/8	0.281	17.068	129	0.165	17.795	y	122	93731.189	106875	7631.85	830.304	1	H1-1b
32	D_SA1	WT4x1/2_1x3/8	0.278	17.068	76	0.17	17.795	y	76	93731.189	106875	7631.85	830.304	1	H1-1b
33	M396	PL3/8X2	0.278	0	23	0.086	0	y	22	23496.379	23625	184.572	984.375	1.67	H1-1b
34	M397	PL3/8X2	0.271	0	27	0.081	1.118	y	27	23496.379	23625	184.572	984.375	1.67	H1-1b
35	M666	3/4X3/8	0.271	0	21	0.01	6.601	y	26	11283.078	12656.25	98.876	197.753	2.157	H1-1a
36	B_SA1	WT4x1/2_1x3/8	0.265	69	31	0.159	17.795	y	33	93731.189	106875	7631.85	830.304	1	H1-1b
37	M311	3/8X23/8"	0.262	0	20	0.022	0	y	34	13896.284	28054.688	219.177	1388.124	1.562	H1-1b
38	M339	WT4x3/8_1x3/8	0.259	22.5	33	0.022	11.013	y	17	77034.174	84375	5756.85	680.804	1	H1-1b
39	M310	3/8X23/8"	0.259	0	20	0.046	0	y	21	22343.871	28054.688	219.177	1388.124	1.495	H1-1b
40	M325	L3X3X6	0.258	0	19	0.109	0	z	19	66402.893	66465	2243.303	5174.486	1.5	H2-1
41	M315	L3X3X6	0.257	0	34	0.038	3.75	z	7	66402.606	66465	2243.303	5174.486	1.5	H2-1
42	M323	3/8X23/8"	0.256	0	21	0.02	0	y	26	13896.284	28054.688	219.177	1388.124	1.584	H1-1b
43	M488	WT4x3/8_1x3/8	0.256	22.5	30	0.022	11.013	y	26	77034.174	84375	5756.85	680.804	1	H1-1b
44	D_MP2_S	PIPE_2.0	0.256	53.558	17	0.053	53.558		3	14916.096	32130	1871.625	1871.625	1	H1-1b
45	M642	WT4x3/8_1x3/8	0.251	22.5	25	0.024	11.013	y	10	77034.174	84375	5756.85	680.804	1	H1-1b
46	M322	3/8X23/8"	0.249	0	20	0.037	0	y	20	22343.871	28054.688	219.177	1388.124	1.479	H1-1b
47	M472	WT4x3/8_1x3/8	0.247	29.38	125	0.04	23.902	y	124	72320.981	84375	5756.85	680.804	1	H1-1b
48	M636	WT4x3/8_1x3/8	0.246	29.38	73	0.042	23.902	y	72	72320.981	84375	5756.85	680.804	1	H1-1b
49	M411	3/8X23/8"	0.244	0	33	0.017	0	y	29	13896.284	28054.688	219.177	1388.124	1.537	H1-1b
50	A_MP2_S	PIPE_2.0	0.24	53.558	4	0.048	53.558		7	14916.096	32130	1871.625	1871.625	1	H1-1b
51	G_MP2_S	PIPE_2.0	0.24	53.558	12	0.051	53.558		15	14916.096	32130	1871.625	1871.625	1	H1-1b
52	M410	3/8X23/8"	0.239	0	34	0.041	0	y	34	22343.871	28054.688	219.177	1388.124	1.479	H1-1b
53	M423	3/8X23/8"	0.237	0	33	0.019	0	y	20	13896.284	28054.688	219.177	1388.124	1.529	H1-1b
54	M217A	3/8X23/8"	0.236	0	29	0.019	0	y	120	13896.284	28054.688	219.177	1388.124	1.532	H1-1b
55	M336	WT4x3/8_1x3/8	0.235	29.38	33	0.04	23.902	y	32	72320.981	84375	5756.85	680.804	1	H1-1b
56	M211	3/8X23/8"	0.234	0	25	0.017	0	y	20	13896.284	28054.688	219.177	1388.124	1.525	H1-1b
57	M229A	3/8X23/8"	0.234	0	29	0.019	0	y	32	13896.284	28054.688	219.177	1388.124	1.539	H1-1b
58	M425	L3X3X6	0.234	0	24	0.046	0	z	30	66402.606	66465	2243.303	5174.486	1.5	H2-1
59	M415	L3X3X6	0.233	0	24	0.046	0	y	20	66402.528	66465	2243.303	5174.486	1.5	H2-1
60	M223	3/8X23/8"	0.232	0	25	0.02	0	y	75	13896.284	28054.688	219.177	1388.124	1.524	H1-1b
61	M422	3/8X23/8"	0.232	0	33	0.039	0	y	32	22343.871	28054.688	219.177	1388.124	1.491	H1-1b
62	M216	3/8X23/8"	0.232	0	30	0.039	0	y	29	22343.871	28054.688	219.177	1388.124	1.483	H1-1b
63	M210A	3/8X23/8"	0.231	0	26	0.039	0	y	26	22343.871	28054.688	219.177	1388.124	1.485	H1-1b
64	B_MP2_S	PIPE_2.0	0.231	53.558	8	0.047	53.558		11	14916.096	32130	1871.625	1871.625	1	H1-1b
65	M668	3/8X1"	0.23	0	20	0.012	14.903	y	10	8869.124	16875	128	352.5	2.173	H1-1a
66	M231	L3X3X6	0.23	0	20	0.073	0	z	123	66402.893	66465	2243.303	5174.486	1.5	H2-1
67	M221	L3X3X6	0.229	0	20	0.048	0	y	32	66402.604	66465	2243.303	5174.486	1.5	H2-1
68	M228	3/8X23/8"	0.227	0	29	0.038	0	y	28	22343.871	28054.688	219.177	1388.124	1.49	H1-1b
69	M215A	L3X3X6	0.227	0	32	0.073	0	y	76	66402.528	66465	2243.303	5174.486	1.5	H2-1
70	M225A	L3X3X6	0.226	0	32	0.05	3.749	y	87	66402.599	66465	2243.303	5174.486	1.5	H2-1
71	M222A	3/8X23/8"	0.226	0	25	0.038	0	y	24	22343.871	28054.688	219.177	1388.124	1.49	H1-1b
72	A_FH1	PIPE_2.5	0.22	97.895	106	0.15	9.474		70	44808.135	50715	3596.25	3596.25	1	H1-1b
73	M508	PL7X3/8	0.216	0	3	0.011	1.705	y	19	81679.966	85050	664.454	12403.125	1.375	H1-1b
74	M300	HSS4X3X4	0.209	27.879	21	0.091	27.879	z	21	83040.402	91665	8190	10001.25	1.564	H1-1b
75	M317	L3X3X6	0.209	13.67	19	0.142	32.26	z	8	66352.241	66465	2243.303	5174.486	1.303	H2-1
76	M206	HSS4X3X4	0.209	27.879	126	0.079	27.879	z	125	83040.402	91665	8190	10001.25	2.874	H1-1b

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

	Member	Shape	Code Check	Loc[in]	LC	Shear Check	Loc[in]	Dir	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [lb-ft]	phi*Mn z-z [lb-ft]	Cb	Eqn
77	M200	HSS4X3X4	0.207	27.879	74	0.08	27.879	z	72	83040.402	91665	8190	10001.25	2.659	H1-1b
78	G_MP4_S	PIPE_2.0	0.205	44.968	19	0.131	53.558		5	14916.096	32130	1871.625	1871.625	1	H1-1b
79	A_MP1_S	PIPE_2.0	0.204	53.558	86	0.052	12.126		27	14916.096	32130	1871.625	1871.625	1	H1-1b
80	M327	L3X3X6	0.204	13.67	34	0.18	32.26	z	18	66352.241	66465	2243.303	5174.486	1.28	H2-1
81	A_MP4_S	PIPE_2.0	0.201	53.558	112	0.056	12.126		11	14916.096	32130	1871.625	1871.625	1	H1-1b
82	M702	3/8X1"	0.195	14.534	21	0.009	14.534	y	18	9152.489	16875	128	352.5	2.203	H1-1b*
83	M696	.875X.375	0.192	8.145	21	0.006	8.145	y	11	12396.495	14765.625	115.358	269.164	2.335	H1-1b*
84	M437	3/4X3/8	0.192	6.601	125	0.016	6.601	y	105	11283.078	12656.25	98.876	197.753	2.165	H1-1b*
85	M417	L3X3X6	0.192	13.67	32	0.147	32.26	y	5	66352.241	66465	2243.303	5174.486	1.298	H2-1
86	M599	3/4X3/8	0.19	6.601	74	0.012	6.601	y	94	11283.078	12656.25	98.876	197.753	2.166	H1-1b*
87	A_SR1	PIPE_2.0	0.187	52.105	109	0.069	8.684		11	6295.422	32130	1871.625	1871.625	1	H1-1b
88	M223A	L3X3X6	0.186	13.67	28	0.122	34.63	y	25	66352.241	66465	2243.303	5174.486	1.3	H2-1
89	M354	3/4X3/8	0.185	6.601	33	0.009	6.601	y	11	11283.078	12656.25	98.876	197.753	2.154	H1-1b*
90	M217	L3X3X6	0.184	13.67	23	0.129	32.261	z	12	66352.248	66465	2243.303	5174.486	1.315	H2-1
91	M427	L3X3X6	0.183	13.67	23	0.136	32.26	y	15	66352.241	66465	2243.303	5174.486	1.343	H2-1
92	M233	L3X3X6	0.18	13.67	19	0.119	34.63	z	99	66352.248	66465	2243.303	5174.486	1.339	H2-1
93	M227A	L3X3X6	0.18	13.67	26	0.121	32.26	y	6	66352.241	66465	2243.303	5174.486	1.309	H2-1
94	M341	3/8X1"	0.178	14.903	33	0.012	14.903	y	10	8869.124	16875	128	352.5	2.16	H1-1b*
95	M530	PL7X3/8	0.178	0	11	0.012	1.705	y	129	81679.966	85050	664.454	12403.125	1.346	H1-1b
96	M449	3/8X1"	0.177	14.903	29	0.012	14.903	y	10	8869.124	16875	128	352.5	2.159	H1-1b*
97	M578	PL7X3/8	0.177	0	7	0.007	0	y	69	81679.966	85050	664.454	12403.125	1.335	H1-1b
98	M525	PL7X3/8	0.176	0	15	0.007	0	z	20	81679.966	85050	664.454	12403.125	1.361	H1-1b
99	M601	3/8X1"	0.175	14.903	25	0.012	0	y	10	8869.124	16875	128	352.5	2.157	H1-1b*
100	M454	3/4X3/8	0.172	0	125	0.02	3.494	y	17	12255.445	12656.25	98.876	197.753	2.27	H1-1b*
101	M343	3/8X1"	0.171	14.534	33	0.007	0	y	15	9152.489	16875	128	352.5	2.213	H1-1b*
102	M606	3/4X3/8	0.171	0	74	0.017	0	y	83	12255.445	12656.25	98.876	197.753	2.152	H1-1b*
103	M493	3/8X1"	0.17	14.534	29	0.004	14.534	y	1	9152.489	16875	128	352.5	2.213	H1-1b*
104	M647	3/8X1"	0.168	14.534	25	0.007	14.534	y	18	9152.489	16875	128	352.5	2.216	H1-1b*
105	M355	3/4X3/8	0.165	0	33	0.015	3.494	y	4	12255.445	12656.25	98.876	197.753	2.172	H1-1b*
106	B_MP4_S	PIPE_2.0	0.163	53.558	21	0.059	12.126		15	14916.096	32130	1871.625	1871.625	1	H1-1b
107	G_FH1	PIPE_2.5	0.162	110.526	11	0.102	140.526		27	44808.135	50715	3596.25	3596.25	1	H1-1b
108	M487	.875X.375	0.161	8.145	125	0.013	8.145	y	105	12396.495	14765.625	115.358	269.164	2.25	H1-1b*
109	M641	.875X.375	0.16	8.145	74	0.012	8.145	y	98	12396.495	14765.625	115.358	269.164	2.232	H1-1b*
110	M717	3/8X1"	0.159	0	21	0.01	9.5	y	10	12993.608	16875	128	352.5	2.23	H1-1b*
111	M350	.875X.375	0.156	8.145	33	0.007	8.145	y	9	12396.495	14765.625	115.358	269.164	2.367	H1-1b*
112	M529	PL7X3/8	0.156	0	3	0.006	0	z	15	81679.966	85050	664.454	12403.125	1.35	H1-1b
113	B_FH1	PIPE_2.5	0.155	110.526	7	0.086	110.526		15	44808.135	50715	3596.25	3596.25	1	H1-1b
114	M400	HSS4X3X4	0.152	27.879	33	0.073	27.879	z	33	83040.402	91665	8190	10001.25	1.678	H1-1b
115	M524	PL7X3/8	0.151	0	7	0.008	0	z	19	81679.966	85050	664.454	12403.125	1.319	H1-1b
116	M667	.875X.375	0.149	0	21	0.011	4.663	y	24	13943.033	14765.625	115.358	269.164	2.217	H1-1b
117	D_MP4_S	PIPE_2.0	0.147	53.558	29	0.056	12.126		7	14916.096	32130	1871.625	1871.625	1	H1-1b
118	M575	PL7X3/8	0.147	0	15	0.007	0	y	129	81679.966	85050	664.454	12403.125	1.356	H1-1b
119	M507	PL7X3/8	0.143	0	11	0.012	1.705	y	69	81679.966	85050	664.454	12403.125	1.33	H1-1b
120	G_MP1_S	PIPE_2.0	0.14	53.558	29	0.053	12.126		19	14916.096	32130	1871.625	1871.625	1	H1-1b
121	M342	3/8X1"	0.14	0	33	0.008	9.5	y	7	12993.608	16875	128	352.5	2.246	H1-1b*
122	M595	3/8X1"	0.139	0	29	0.004	9.5	y	107	12993.608	16875	128	352.5	2.287	H1-1b*
123	D_MP1_S	PIPE_2.0	0.138	53.558	33	0.049	12.126		7	14916.096	32130	1871.625	1871.625	1	H1-1b
124	M662	3/8X1"	0.137	0	25	0.007	9.5	y	11	12993.608	16875	128	352.5	2.221	H1-1b*
125	B_MP1_S	PIPE_2.0	0.136	53.558	26	0.048	12.126		15	14916.096	32130	1871.625	1871.625	1	H1-1b
126	M679	3/8X1"	0.136	0	21	0.009	0	y	11	12736.404	16875	128	352.5	2.21	H1-1b*
127	B_SR1	PIPE_2.0	0.135	52.105	32	0.071	8.684		15	6295.422	32130	1871.625	1871.625	1	H1-1b
128	M334	PL5/8X5/8	0.133	4.181	20	0.02	4.181	y	3	11971.104	12304.688	160.217	160.217	1.698	H1-1b
129	M509	PIPE_2.0	0.13	52.895	3	0.069	8.684		7	6295.422	32130	1871.625	1871.625	1	H1-1b
130	M600	.875X.375	0.13	4.663	73	0.013	0	y	86	13943.033	14765.625	115.358	269.164	2.214	H1-1b
131	M485	PIPE_2.5	0.129	39.474	15	0.086	110.526		7	44808.135	50715	3596.25	3596.25	1	H1-1b

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

	Member	Shape	Code Check	Loc[in]	LC	Shear Check	Loc[in]	Dir	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [lb-ft]	phi*Mn z-z [lb-ft]	Cb	Eqn
132	M332	PL5/8X5/8	0.127	4.181	22	0.017	4.181	y	11	11971.104	12304.688	160.217	160.217	1.611	H1-1b
133	M448	.875X.375	0.126	0	125	0.013	4.663	y	17	13943.033	14765.625	115.358	269.164	2.206	H1-1b
134	G SR1	PIPE 2.0	0.126	52.105	20	0.084	8.684		3	6295.422	32130	1871.625	1871.625	1	H1-1b
135	M351	.875X.375	0.122	4.663	33	0.011	4.663	y	4	13943.033	14765.625	115.358	269.164	2.253	H1-1b
136	M695	.875X.375	0.122	0	21	0.005	6.057	y	9	13404.419	14765.625	115.358	269.164	2.03	H1-1b*
137	M216A	3/8X3	0.118	4.245	100	0.13	0	y	28	34278.662	35437.5	276.856	2214.844	1.761	H1-1b
138	M434	PL5/8X5/8	0.118	4.181	31	0.019	4.181	y	14	11971.104	12304.688	160.217	160.217	1.703	H1-1b
139	M326	3/8X3	0.115	4.26	29	0.146	0	y	18	34270.325	35437.5	276.856	2214.844	2.167	H1-1b
140	M240	PL5/8X5/8	0.115	4.181	27	0.02	4.181	y	10	11971.104	12304.688	160.217	160.217	1.707	H1-1b
141	M460	3/8X1"	0.114	0	125	0.021	0	y	105	12736.404	16875	128	352.5	2.198	H1-1b*
142	M416	3/8X3	0.114	4.245	26	0.137	0	y	20	34278.419	35437.5	276.856	2214.844	2.12	H1-1b
143	M232A	3/8X3	0.114	4.26	98	0.13	0	y	27	34270.569	35437.5	276.856	2214.844	1.831	H1-1b
144	M624	3/8X1"	0.114	0	74	0.018	0	y	98	12736.404	16875	128	352.5	2.198	H1-1b*
145	M234A	PL5/8X5/8	0.114	4.181	24	0.02	4.181	y	6	11971.104	12304.688	160.217	160.217	1.689	H1-1b
146	M432	PL5/8X5/8	0.112	4.181	34	0.017	4.181	y	6	11971.104	12304.688	160.217	160.217	1.615	H1-1b
147	M238	PL5/8X5/8	0.111	4.181	31	0.019	4.181	y	18	11971.104	12304.688	160.217	160.217	1.633	H1-1b
148	M222	3/8X3	0.111	4.245	22	0.131	0	y	32	34278.419	35437.5	276.856	2214.844	2.132	H1-1b
149	M232	PL5/8X5/8	0.111	4.181	27	0.018	4.181	y	14	11971.104	12304.688	160.217	160.217	1.635	H1-1b
150	M370	3/8X1"	0.11	0	33	0.009	0	y	9	12736.404	16875	128	352.5	2.21	H1-1b*
151	M486	.875X.375	0.105	6.057	106	0.008	0	y	114	13404.419	14765.625	115.358	269.164	1.245	H1-1b
152	M426	3/8X3	0.103	4.26	22	0.136	0	y	31	34270.325	35437.5	276.856	2214.844	2.058	H1-1b
153	M226A	3/8X3	0.102	4.26	15	0.136	0	y	22	34270.325	35437.5	276.856	2214.844	1.619	H1-1b
154	M771	PIPE 1.5	0.102	35.879	31	0.033	71.757		22	12028.467	23593.5	1105.125	1105.125	1	H1-1b
155	M640	.875X.375	0.102	0	74	0.01	0	y	86	13404.419	14765.625	115.358	269.164	2.179	H1-1b*
156	M839	PIPE 1.5	0.102	35.879	23	0.033	71.757		30	12028.467	23593.5	1105.125	1105.125	1	H1-1b
157	M795	PIPE_1.5	0.102	35.879	27	0.038	71.757		19	12028.467	23593.5	1105.125	1105.125	1	H1-1b
158	M519 1	PIPE 1.5	0.102	35.879	19	0.033	71.758		27	12028.399	23593.5	1105.125	1105.125	1	H1-1b
159	M348	.875X.375	0.099	0	33	0.006	6.057	y	5	13404.419	14765.625	115.358	269.164	2.278	H1-1b*
160	M285	PL5/8X5/8	0.094	0	19	0.023	0	y	20	12257.576	12304.688	160.217	160.217	1.664	H1-1b
161	M520_1	PIPE_1.5	0.091	35.908	34	0.022	0		29	12015.2	23593.5	1105.125	1105.125	1	H1-1b
162	M841	PIPE 1.5	0.091	35.908	22	0.021	0		33	12015.362	23593.5	1105.125	1105.125	1	H1-1b
163	M782	PL1.5X3/16"	0.091	0	7	0.007	0	y	19	1110.927	8883	34.792	277.594	1.789	H1-1b
164	M816	PIPE 1.5	0.091	35.908	28	0.03	0		20	12015.362	23593.5	1105.125	1105.125	1	H1-1b
165	M770	PL1.5X3/16"	0.091	0	3	0.005	0	y	20	1110.927	8883	34.792	277.594	1.877	H1-1b
166	M747	PL1.5X3/16"	0.09	0	11	0.005	0	y	26	1110.927	8883	34.792	277.594	1.981	H1-1b
167	M699	3/4X3/8	0.09	5.344	21	0.016	0	y	22	11738.571	12656.25	98.876	197.753	2.18	H1-1b
168	M316	3/8X3	0.09	4.245	30	0.158	0	y	24	34278.419	35437.5	276.856	2214.844	2.147	H1-1b
169	M775	PIPE_1.5	0.089	35.908	32	0.02	71.815		22	12015.362	23593.5	1105.125	1105.125	1	H1-1b
170	M284	PL5/8X5/8	0.089	0	23	0.022	0	y	22	12257.516	12304.688	160.217	160.217	1.664	H1-1b
171	M793	PL1.5X3/16"	0.089	0	15	0.005	0	y	20	1110.927	8883	34.792	277.594	1.817	H1-1b
172	M466	3/8X1"	0.086	7.692	110	0.007	7.692	y	17	14217.447	16875	128	352.5	2.211	H1-1b
173	M501	3/8X5/8	0.084	2.509	9	0.013	2.509	y	106	10373.324	10546.875	82.399	137.329	1.667	H1-1b
174	M385	PL5/8X5/8	0.083	0	31	0.02	0	y	31	12257.576	12304.688	160.217	160.217	1.665	H1-1b
175	M825	PL1.5X3/16"	0.083	19.999	11	0.004	0	y	34	1110.927	8883	34.792	277.594	2.35	H1-1b
176	M828	PL1.5X3/16"	0.082	19.999	11	0.004	0	y	31	1110.927	8883	34.792	277.594	1.865	H1-1b
177	M817	PL1.5X3/16"	0.082	19.999	3	0.004	0	y	34	1110.927	8883	34.792	277.594	2.516	H1-1b
178	M524 1	PL1.5X3/16"	0.082	20	7	0.004	0	y	19	1110.896	8883	34.792	277.594	2.381	H1-1b
179	M191	PL5/8X5/8	0.082	0	27	0.02	0	y	27	12257.576	12304.688	160.217	160.217	1.665	H1-1b
180	M522 1	PL1.5X3/16"	0.081	20	15	0.004	0	y	32	1110.896	8883	34.792	277.594	2.449	H1-1b
181	M525 1	PL1.5X3/16"	0.081	20	7	0.004	0	y	91	1110.896	8883	34.792	277.594	1.881	H1-1b
182	M185A	PL5/8X5/8	0.081	0	23	0.019	0	y	24	12257.576	12304.688	160.217	160.217	1.665	H1-1b
183	M821	PL1.5X3/16"	0.081	19.999	3	0.003	19.999	y	34	1110.927	8883	34.792	277.594	2.331	H1-1b
184	M777	PL1.5X3/16"	0.08	0	7	0.005	0	y	19	1110.927	8883	34.792	277.594	2.055	H1-1b
185	M521 1	PL1.5X3/16"	0.079	20	15	0.003	20	y	32	1110.896	8883	34.792	277.594	2.312	H1-1b
186	M384	PL5/8X5/8	0.079	0	19	0.019	0	y	34	12257.516	12304.688	160.217	160.217	1.665	H1-1b

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

	Member	Shape	Code Check	Loc[in]	LC	Shear Check	Loc[in]	Dir	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [lb-ft]	phi*Mn z-z [lb-ft]	Cb	Eqn
187	M823	PL1.5X3/16"	0.079	19.999	3	0.006	0	y	31	1110.927	8883	34.792	277.594	2.079	H1-1b
188	M749	PL1.5X3/16"	0.079	0	3	0.003	0	y	20	1110.927	8883	34.792	277.594	2.303	H1-1b
189	M730	PL1.5X3/16"	0.079	0	11	0.004	0	y	28	1110.927	8883	34.792	277.594	2.304	H1-1b
190	M190	PL5/8X5/8	0.079	0	31	0.019	0	y	31	12257.516	12304.688	160.217	160.217	1.665	H1-1b
191	M523_1	PL1.5X3/16"	0.079	20	15	0.006	0	y	30	1110.896	8883	34.792	277.594	2.032	H1-1b
192	M784	PL1.5X3/16"	0.078	0	15	0.004	0	y	20	1110.927	8883	34.792	277.594	2.262	H1-1b
193	M184A	PL5/8X5/8	0.078	0	27	0.019	0	y	27	12257.516	12304.688	160.217	160.217	1.665	H1-1b
194	M490	3/4X3/8	0.076	5.344	122	0.025	0	y	9	11738.571	12656.25	98.876	197.753	2.186	H1-1b
195	M687	3/8X1"	0.075	0	29	0.008	11.512	y	10	11496.246	16875	128	352.5	2.124	H1-1b*
196	M779	PL1.5X3/16"	0.074	0	7	0.004	19.999	y	19	1110.927	8883	34.792	277.594	2.019	H1-1b
197	M735	PL1.5X3/16"	0.074	0	11	0.002	19.999	y	28	1110.927	8883	34.792	277.594	2.169	H1-1b
198	M630	3/8X1"	0.072	7.692	88	0.006	7.692	y	10	14217.447	16875	128	352.5	2.215	H1-1b
199	M644	3/4X3/8	0.071	5.344	25	0.018	0	y	6	11738.571	12656.25	98.876	197.753	2.177	H1-1b
200	M368	3/8X1"	0.07	0	25	0.009	11.512	y	10	11496.246	16875	128	352.5	2.087	H1-1b*
201	M685	3/8X1"	0.069	0	29	0.005	7.692	y	20	14217.447	16875	128	352.5	2.178	H1-1b*
202	M468	3/8X1"	0.069	0	21	0.014	11.512	y	106	11496.246	16875	128	352.5	2.089	H1-1b*
203	M357	3/4X3/8	0.069	5.344	32	0.015	0	y	12	11738.571	12656.25	98.876	197.753	2.178	H1-1b
204	M632	3/8X1"	0.069	0	33	0.012	11.512	y	98	11496.246	16875	128	352.5	2.082	H1-1b*
205	M675	3/8X1"	0.067	9.5	29	0.009	9.5	y	18	12993.597	16875	128	352.5	2.116	H1-1b
206	M346	3/8X1"	0.066	0	25	0.007	7.692	y	18	14217.447	16875	128	352.5	1.807	H1-1b*
207	M708	3/8X5/8	0.065	2.509	21	0.009	0	y	23	10373.324	10546.875	82.399	137.329	2.077	H1-1b
208	M653	3/8X5/8	0.063	2.509	6	0.01	2.509	y	6	10373.324	10546.875	82.399	137.329	1.78	H1-1b
209	M456	3/8X1"	0.063	9.5	99	0.006	9.5	y	108	12993.597	16875	128	352.5	2.096	H1-1b
210	M608	3/8X1"	0.063	9.5	32	0.008	0	y	3	12993.597	16875	128	352.5	2.126	H1-1b
211	M340	3/8X1"	0.059	9.5	24	0.008	0	y	7	12993.597	16875	128	352.5	2.126	H1-1b
212	M358	3/8X5/8	0.053	2.509	12	0.01	2.509	y	13	10373.324	10546.875	82.399	137.329	1.753	H1-1b
213	M333	PL5/8X1/2	0.049	0.292	3	0.023	0.292	z	3	9339.775	9843.75	102.54	128.174	3	H1-1b
214	M239	PL5/8X1/2	0.045	0.292	11	0.022	0.292	z	11	9339.775	9843.75	102.54	128.174	3	H1-1b
215	M233A	PL5/8X1/2	0.045	0.292	7	0.022	0.292	z	7	9339.775	9843.75	102.54	128.174	3	H1-1b
216	M433	PL5/8X1/2	0.044	0.292	15	0.021	0.292	z	15	9339.775	9843.75	102.54	128.174	3	H1-1b
217	M471	3/8X5/8	0.035	1.679	9	0.01	1.679	y	113	10468.8	10546.875	82.399	137.329	1.098	H1-1b
218	M536	WT4X3.6	0.03	13.444	3	0.034	13.444	y	19	81237.352	87783.75	4350.612	5356.633	1	H1-1b
219	M464	3/8X5/8	0.025	0	101	0.029	0	y	113	10540.32	10546.875	82.399	137.329	1.333	H1-1b
220	M534	WT4X3.6	0.024	13.444	11	0.043	13.444	y	129	81237.352	87783.75	4350.612	5356.633	1	H1-1b
221	M535	WT4X3.6	0.024	13.444	7	0.042	0	z	69	81237.352	87783.75	4350.612	5356.633	1	H1-1b
222	M537	WT4X3.6	0.024	13.444	15	0.013	13.444	y	5	81237.352	87783.75	4350.612	5356.633	1	H1-1b
223	M635	3/8X5/8	0.024	1.679	6	0.01	0	y	84	10468.8	10546.875	82.399	137.329	1.049	H1-1b
224	M510	3/8X5/8	0.021	1.029	9	0.013	1.029	y	113	10517.482	10546.875	82.399	137.329	1.039	H1-1b
225	M452	3/8X5/8	0.021	4.321	17	0.014	4.321	y	9	10040.506	10546.875	82.399	137.329	1.892	H1-1b
226	M690	3/8X5/8	0.021	0	22	0.008	1.679	y	9	10468.8	10546.875	82.399	137.329	1.505	H1-1b
227	M361	3/8X5/8	0.021	1.679	12	0.007	1.679	y	5	10468.8	10546.875	82.399	137.329	1.052	H1-1b
228	M628	3/8X5/8	0.02	0	83	0.025	0.486	y	84	10540.32	10546.875	82.399	137.329	1	H1-1b
229	M671	3/8X5/8	0.017	4.321	22	0.004	4.321	y	27	10040.506	10546.875	82.399	137.329	1.73	H1-1b
230	M604	3/8X5/8	0.017	4.321	13	0.01	4.321	y	6	10040.506	10546.875	82.399	137.329	1.882	H1-1b
231	M360	3/8X5/8	0.016	4.321	4	0.008	4.321	y	12	10040.506	10546.875	82.399	137.329	1.792	H1-1b
232	M655	3/8X5/8	0.015	1.029	94	0.012	0	y	84	10517.482	10546.875	82.399	137.329	1.153	H1-1b
233	M473	3/8X5/8	0.014	0.563	105	0.025	0.563	y	100	10538.067	10546.875	82.399	137.329	1.115	H1-1b
234	M683	3/8X5/8	0.013	0	10	0.018	0.486	y	10	10540.32	10546.875	82.399	137.329	1.113	H1-1b
235	M363	3/8X5/8	0.012	1.029	11	0.007	1.029	y	6	10517.482	10546.875	82.399	137.329	1.03	H1-1b
236	M637	3/8X5/8	0.011	0.563	94	0.022	0	y	83	10538.067	10546.875	82.399	137.329	1.158	H1-1b
237	M366	3/8X5/8	0.01	0	7	0.014	0	y	6	10540.32	10546.875	82.399	137.329	1.184	H1-1b
238	M469	3/8X5/8	0.01	0	9	0.008	0	y	9	10252.244	10546.875	82.399	137.329	2.282	H1-1b
239	M710	3/8X5/8	0.009	1.029	26	0.009	1.029	y	10	10517.482	10546.875	82.399	137.329	1.19	H1-1b
240	M633	3/8X5/8	0.008	0	6	0.006	0	y	6	10252.244	10546.875	82.399	137.329	2.291	H1-1b
241	M365	3/8X5/8	0.008	0.563	9	0.011	0	y	6	10538.067	10546.875	82.399	137.329	1.068	H1-1b

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

	Member	Shape	Code Check	Loc[in]	LC	Shear Check	Loc[in]	Dir	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [lb-ft]	phi*Mn z-z [lb-ft]	Cb	Eqn
242	M376	3/8X5/8	0.007	0	4	0.005	0	y	12	10252.244	10546.875	82.399	137.329	2.253	H1-1b
243	M474	3/8X5/8	0.006	3.189	105	0.004	0	y	17	10267.962	10546.875	82.399	137.329	1.704	H1-1b
244	M453	3/8X5/8	0.006	2.652	100	0.004	2.652	y	113	10353.116	10546.875	82.399	137.329	1.09	H1-1b
245	M688	3/8X5/8	0.006	3.279	26	0.002	0	y	27	10252.244	10546.875	82.399	137.329	2.349	H1-1b
246	M692	3/8X5/8	0.006	0.563	26	0.015	0	y	10	10538.067	10546.875	82.399	137.329	1.058	H1-1b
247	M638	3/8X5/8	0.005	3.189	98	0.003	0	y	13	10267.962	10546.875	82.399	137.329	2.168	H1-1b
248	M605	3/8X5/8	0.005	2.652	83	0.004	0	y	85	10353.116	10546.875	82.399	137.329	2.18	H1-1b
249	M672	3/8X5/8	0.003	2.652	10	0.003	0	y	9	10353.116	10546.875	82.399	137.329	1.175	H1-1b
250	M693	3/8X5/8	0.003	3.189	26	0.002	0	y	9	10267.962	10546.875	82.399	137.329	1.627	H1-1b
251	M378	3/8X5/8	0.003	0	4	0.003	0	y	5	10267.962	10546.875	82.399	137.329	2.102	H1-1b
252	M703	3/8X1"	0.003	0	18	0	9.5	y	7	12993.608	16875	128	352.5	2.381	H1-1b
253	M344	3/8X1"	0.003	0	14	0	9.5	y	3	12993.608	16875	128	352.5	2.381	H1-1b
254	M648	3/8X1"	0.003	0	6	0	9.5	y	11	12993.608	16875	128	352.5	2.381	H1-1b
255	M494	3/8X1"	0.003	0	10	0	9.5	y	15	12993.608	16875	128	352.5	2.381	H1-1b
256	M381	3/8X5/8	0.003	2.652	7	0.003	0	y	6	10353.116	10546.875	82.399	137.329	1.132	H1-1b

APPENDIX D

ADDITIONAL CALCULATIONS

telamon CLS

Bolted Connection Checks
AISC 15th Edition (360-16)

Description	LC	Tensile Load, T_u (kips)	Shear Load, V_u (kips)	Bolt Diameter (in)	Number of Bolts	Shear Planes per Bolt	U-Bolt?	Bolt Grade	Connected Member Thickness (in)	Connected Member Edge Clear Distance (in)	Connected Member Ultimate Strength, F_u (ksi)	Bolt Tensile Usage	Bolt Shear Usage	Combined Tensile & Shear Usage	Member Bearing Usage
Standoff to Tower	Env.	3.760	2.070	0.625	1	1	No	A325-X (1/2" to 1.5" Dia.)	0.625	1	65	**18%**	**13%**	-	**6%**

Date: **May 04, 2023**

Crown Castle
2000 Corporate Drive
Canonsburg, PA 15317
(724) 416-2000

Subject:	**Structural Analysis Report**	
Carrier Designation:	***T-Mobile* Co-Locate**	
	Site Number:	CTFF013A
	Site Name:	CTFF013A
Crown Castle Designation:	**BU Number:**	857525
	Site Name:	NEWTOWN DINGLEBROOK
	JDE Job Number:	744581
	Work Order Number:	2225019
	Order Number:	648398 Rev. 0
Engineering Firm Designation:	**Crown Castle Project Number:**	2225019
Site Data:	**24 DINGLEBROOK LANE, NEWTOWN, FAIRFIELD County, CT** **Latitude *41° 28' 1.01"*, Longitude *-73° 20' 2.05"*** **149 Foot - Monopole Tower**	

Crown Castle 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 - 93.9%**

This analysis has been performed in accordance with the 2022 Connecticut State Building Code based upon an ultimate 3-second gust wind speed of 115 mph. Applicable Standard references and design criteria are listed in Section 2 - "Analysis Criteria".

Structural analysis prepared by: Tyler Ho

Respectfully submitted by:

Digitally signed by Maham Barimani
Date: 2023.05.04 15:24:50 -04'00'

STATE OF CONNECTICUT
MAHAM BARIMANI
30501
LICENSED
PROFESSIONAL ENGINEER

Maham Barimani, P.E.
Senior Project Engineer

TABLE OF CONTENTS

1) INTRODUCTION

This tower is a 149 ft Monopole tower designed by Sabre Communications. The tower has been modified multiple times to accommodate additional loading.

2) ANALYSIS CRITERIA

TIA-222 Revision:	TIA-222-H
Risk Category:	II
Wind Speed:	115 mph
Exposure Category:	C
Topographic Factor:	1
Ice Thickness:	1 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)
131.0	131.0	4	ericsson	RADIO 4449 B12/B71	2 4	3/8 1-3/8
		1	mounts	Site Pro1_F4P-12[W]_Platform		
		1	mounts	Site Pro1_F4P-HRK12_Handrail Kit		
	129.0	4	ericsson	AIR 32 B2A/B66AA w/ Mount Pipe		
		4	rfs celwave	APXVAARR24_43-U-NA20 w/ Mount Pipe		
	128.0	1	ericsson	ANT3 A 0.9 HPX		
		2	ericsson	MINI-LINK 6365		

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)
153.0	164.0	1	dbspectra	DS1F06F36U-D	1	7/8
	153.0	1	tower mounts	8' x 2" Mount Pipe		
148.0	150.0	3	ericsson	RRUS-11	12 2 1	1-5/8 3/4 3/8
		3	kmw communications	AM-X-CD-16-65-00T-RET w/ Mount Pipe		
		6	powerwave technologies	P90-14-XLH-RR w/ Mount Pipe		
		6	powerwave technologies	TT19-08BP111-001		
		1	raycap	DC6-48-60-18-8F		
	148.0	1	tower mounts	Miscellaneous [NA 507-1]		
		1	tower mounts	Platform Mount [LP 602-1]		
140.0	142.0	3	alcatel lucent	B13 RRH 4X30	8	1-5/8
		3	alcatel lucent	B66A RRH4X45		
		3	nokia	AHCA		

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
	140.0	6	andrew	DB846F65ZAXY w/ Mount Pipe		
		6	commscope	JAHH-65B-R3B w/ Mount Pipe		
		1	rfs celwave	DB-C1-12C-24AB-0Z		
		1	tower mounts	T-Arm Mount [TA 602-3]		
119.0	119.0	3	fujitsu	TA08025-B604	1	1-1/2
		3	fujitsu	TA08025-B605		
		3	jma wireless	MX08FRO665-21 w/ Mount Pipe		
		1	raycap	RDIDC-9181-PF-48		
		1	tower mounts	Commscope MC-PK8-DSH		
90.0	90.0	1	dbspectra	DS1F03P36D-D	1	7/8
		1	tower mounts	Side Arm Mount [SO 102-3]		

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Reference	Source
4-GEOTECHNICAL REPORTS	4308150	CCISITES
4-TOWER FOUNDATION DRAWINGS/DESIGN/SPECS	4895572	CCISITES
4-TOWER MANUFACTURER DRAWINGS	4570932	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	4860017	CCISITES
4-POST-MODIFICATION INSPECTION	4871327	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	5461906	CCISITES
4-POST-MODIFICATION INSPECTION	5652840	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	7839699	CCISITES
4-POST-MODIFICATION INSPECTION	8504433	CCISITES

3.1) Analysis Method

tnxTower (version 8.1.4.0), 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. When applicable, Crown Castle has calculated and provided the effective area for panel antennas using approved methods following the intent of the TIA-222 standard.

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

3.2) Assumptions

1) Tower and structures were maintained in accordance with the TIA-222 Standard.
2) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.

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

4) ANALYSIS RESULTS

Table 4 - Section Capacity (Summary)

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
149 - 144	Pole	TP16.865x16x0.1875	Pole	10.5%	Pass
144 - 139	Pole	TP17.73x16.865x0.1875	Pole	19.4%	Pass
139 - 134	Pole	TP18.595x17.73x0.1875	Pole	31.5%	Pass
134 - 129	Pole	TP19.459x18.595x0.1875	Pole	46.0%	Pass
129 - 125	Pole	TP20.151x19.459x0.1875	Pole	59.6%	Pass
125 - 124.75	Pole + Reinf.	TP20.195x20.151x0.35	Reinf. 15 Tension Rupture	58.1%	Pass
124.75 - 119.75	Pole + Reinf.	TP21.059x20.195x0.3438	Reinf. 15 Tension Rupture	73.3%	Pass
119.75 - 118.5	Pole + Reinf.	TP21.276x21.059x0.3438	Reinf. 15 Tension Rupture	77.5%	Pass
118.5 - 118.25	Pole + Reinf.	TP21.319x21.276x0.625	Reinf. 9 Tension Rupture	45.4%	Pass
118.25 - 117	Pole + Reinf.	TP21.535x21.319x0.625	Reinf. 9 Tension Rupture	48.1%	Pass
117 - 116.75	Pole + Reinf.	TP21.578x21.535x0.625	Reinf. 9 Tension Rupture	48.6%	Pass
116.75 - 111.75	Pole + Reinf.	TP22.443x21.578x0.6	Reinf. 9 Tension Rupture	58.7%	Pass
111.75 - 106.75	Pole + Reinf.	TP23.308x22.443x0.575	Reinf. 9 Tension Rupture	67.9%	Pass
106.75 - 102	Pole + Reinf.	TP24.735x23.308x0.5625	Reinf. 9 Tension Rupture	75.9%	Pass
102 - 97	Pole + Reinf.	TP24.62x23.755x0.625	Reinf. 9 Tension Rupture	76.7%	Pass
97 - 96.75	Pole + Reinf.	TP24.663x24.62x0.7625	Reinf. 9 Tension Rupture	63.6%	Pass
96.75 - 93.98	Pole + Reinf.	TP25.142x24.663x0.75	Reinf. 9 Tension Rupture	66.7%	Pass
93.98 - 93.73	Pole + Reinf.	TP25.186x25.142x0.75	Reinf. 9 Tension Rupture	66.9%	Pass
93.73 - 91.5	Pole + Reinf.	TP25.572x25.186x0.75	Reinf. 9 Tension Rupture	69.3%	Pass
91.5 - 91.38	Pole + Reinf.	TP25.592x25.572x0.6375	Reinf. 26 Tension Rupture	78.0%	Pass
91.38 - 91.25	Pole + Reinf.	TP25.615x25.592x0.9	Reinf. 26 Tension Rupture	58.7%	Pass
91.25 - 91.13	Pole + Reinf.	TP25.636x25.615x0.9	Reinf. 26 Tension Rupture	58.8%	Pass
91.13 - 89	Pole + Reinf.	TP26.004x25.636x0.8875	Reinf. 26 Tension Rupture	60.7%	Pass
89 - 88.75	Pole + Reinf.	TP26.047x26.004x0.75	Reinf. 26 Tension Rupture	71.4%	Pass
88.75 - 83.75	Pole + Reinf.	TP26.913x26.047x0.725	Reinf. 26 Tension Rupture	76.5%	Pass
83.75 - 80.08	Pole + Reinf.	TP27.548x26.913x0.7125	Reinf. 26 Tension Rupture	79.9%	Pass
80.08 - 79.83	Pole + Reinf.	TP27.591x27.548x0.9	Reinf. 25 Tension Rupture	63.8%	Pass
79.83 - 74.83	Pole + Reinf.	TP28.456x27.591x0.875	Reinf. 25 Tension Rupture	67.5%	Pass
74.83 - 73.5	Pole + Reinf.	TP28.686x28.456x0.875	Reinf. 25 Tension Rupture	68.4%	Pass
73.5 - 73.25	Pole + Reinf.	TP28.73x28.686x1.075	Reinf. 25 Tension Rupture	57.0%	Pass
73.25 - 71	Pole + Reinf.	TP29.119x28.73x1.05	Reinf. 25 Tension Rupture	58.4%	Pass
71 - 70.75	Pole + Reinf.	TP29.162x29.119x0.925	Reinf. 25 Tension Rupture	65.8%	Pass
70.75 - 65.75	Pole + Reinf.	TP30.027x29.162x0.9	Reinf. 25 Tension Rupture	68.9%	Pass
65.75 - 64.13	Pole + Reinf.	TP30.308x30.027x0.9	Reinf. 25 Tension Rupture	69.9%	Pass
64.13 - 63.88	Pole + Reinf.	TP30.351x30.308x0.675	Reinf. 25 Tension Rupture	90.4%	Pass

63.88 - 63	Pole + Reinf.	TP30.503x30.351x0.675	Reinf. 25 Tension Rupture	91.1%	Pass
63 - 62.75	Pole + Reinf.	TP30.547x30.503x0.825	Reinf. 25 Tension Rupture	74.9%	Pass
62.75 - 62.08	Pole + Reinf.	TP30.663x30.547x0.825	Reinf. 25 Tension Rupture	75.3%	Pass
62.08 - 61.83	Pole + Reinf.	TP30.706x30.663x0.775	Reinf. 24 Tension Rupture	79.3%	Pass
61.83 - 60.67	Pole + Reinf.	TP30.907x30.706x0.7625	Reinf. 24 Tension Rupture	80.0%	Pass
60.67 - 60.42	Pole + Reinf.	TP30.95x30.907x0.85	Reinf. 24 Tension Rupture	77.3%	Pass
60.42 - 59	Pole + Reinf.	TP31.196x30.95x0.85	Reinf. 24 Tension Rupture	78.1%	Pass
59 - 58.75	Pole + Reinf.	TP31.239x31.196x0.8375	Reinf. 12 Tension Rupture	72.7%	Pass
58.75 - 53.75	Pole + Reinf.	TP32.104x31.239x0.825	Reinf. 12 Tension Rupture	75.4%	Pass
53.75 - 53.25	Pole + Reinf.	TP33.013x32.104x0.825	Reinf. 12 Tension Rupture	75.6%	Pass
53.25 - 47.5	Pole + Reinf.	TP32.682x31.691x0.8625	Reinf. 6 Tension Rupture	72.1%	Pass
47.5 - 46.88	Pole + Reinf.	TP32.789x32.682x0.8625	Reinf. 6 Tension Rupture	72.4%	Pass
46.88 - 46.63	Pole + Reinf.	TP32.832x32.789x0.875	Reinf. 4 Tension Rupture	70.8%	Pass
46.63 - 43.5	Pole + Reinf.	TP33.372x32.832x0.8625	Reinf. 4 Tension Rupture	72.1%	Pass
43.5 - 43.25	Pole + Reinf.	TP33.415x33.372x1.0125	Reinf. 11 Tension Rupture	66.6%	Pass
43.25 - 38.25	Pole + Reinf.	TP34.278x33.415x1	Reinf. 11 Tension Rupture	68.5%	Pass
38.25 - 33.25	Pole + Reinf.	TP35.14x34.278x0.9875	Reinf. 11 Tension Rupture	70.3%	Pass
33.25 - 32.58	Pole + Reinf.	TP35.256x35.14x0.975	Reinf. 11 Tension Rupture	70.5%	Pass
32.58 - 32.33	Pole + Reinf.	TP35.299x35.256x0.9875	Reinf. 11 Tension Rupture	70.3%	Pass
32.33 - 29.67	Pole + Reinf.	TP35.758x35.299x0.9625	Reinf. 11 Tension Rupture	71.2%	Pass
29.67 - 29.42	Pole + Reinf.	TP35.801x35.758x0.8125	Reinf. 11 Tension Rupture	89.7%	Pass
29.42 - 29.13	Pole + Reinf.	TP35.851x35.801x0.8125	Reinf. 11 Tension Rupture	89.8%	Pass
29.13 - 28.88	Pole + Reinf.	TP35.894x35.851x0.95	Reinf. 10 Tension Rupture	73.4%	Pass
28.88 - 28	Pole + Reinf.	TP36.046x35.894x0.9375	Reinf. 10 Tension Rupture	73.7%	Pass
28 - 27.75	Pole + Reinf.	TP36.089x36.046x0.9125	Reinf. 10 Tension Rupture	76.8%	Pass
27.75 - 26.92	Pole + Reinf.	TP36.232x36.089x0.9125	Reinf. 10 Tension Rupture	77.0%	Pass
26.92 - 26.67	Pole + Reinf.	TP36.275x36.232x0.875	Reinf. 10 Tension Rupture	78.0%	Pass
26.67 - 26.5	Pole + Reinf.	TP36.304x36.275x0.875	Reinf. 10 Tension Rupture	78.0%	Pass
26.5 - 26.25	Pole + Reinf.	TP36.347x36.304x0.8375	Reinf. 10 Tension Rupture	78.7%	Pass
26.25 - 24.92	Pole + Reinf.	TP36.577x36.347x0.8375	Reinf. 10 Tension Rupture	79.1%	Pass
24.92 - 24.67	Pole + Reinf.	TP36.62x36.577x0.8	Reinf. 1 Tension Rupture	78.2%	Pass
24.67 - 22.17	Pole + Reinf.	TP37.051x36.62x0.7875	Reinf. 1 Tension Rupture	78.9%	Pass
22.17 - 21.92	Pole + Reinf.	TP37.094x37.051x0.8625	Reinf. 1 Tension Rupture	71.2%	Pass
21.92 - 16.92	Pole + Reinf.	TP37.957x37.094x0.8375	Reinf. 1 Tension Rupture	72.6%	Pass
16.92 - 11.92	Pole + Reinf.	TP38.819x37.957x0.825	Reinf. 1 Tension Rupture	73.8%	Pass
11.92 - 6.92	Pole + Reinf.	TP39.681x38.819x0.8125	Reinf. 1 Tension Rupture	75.0%	Pass
6.92 - 1.92	Pole + Reinf.	TP40.544x39.681x0.8	Reinf. 1 Tension Rupture	76.1%	Pass
1.92 - 1.5	Pole + Reinf.	TP40.616x40.544x0.8	Reinf. 1 Tension Rupture	76.2%	Pass
1.5 - 1.25	Pole + Reinf.	TP40.659x40.616x0.6375	Reinf. 3 Tension Rupture	93.5%	Pass

1.25 - 1	Pole + Reinf.	TP40.703x40.659x0.4938	Pole	83.4%	Pass
1 - 0	Pole + Reinf.	TP40.875x40.703x0.4875	Pole	83.7%	Pass
				Summary	
			Pole	83.0%	Pass
			Reinforcement	93.5%	Pass
			Overall	93.5%	Pass

Table 5 - Tower Component Stresses vs. Capacity - LC7

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Anchor Rods	0	64.5	Pass
1	Base Plate	0	84.8	Pass
1	Base Foundation (Structure)	0	93.9	Pass
1	Base Foundation (Soil Interaction)	0	50.7	Pass

Structure Rating (max from all components) =	93.9%

Notes:
1) See additional documentation in “Appendix C – Additional Calculations” for calculations supporting the % capacity consumed.

4.1) Recommendations

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

The results of the tilt and twist values for a 60 mph 3-second gust service wind speed per the TIA-222-H Standard are given below:

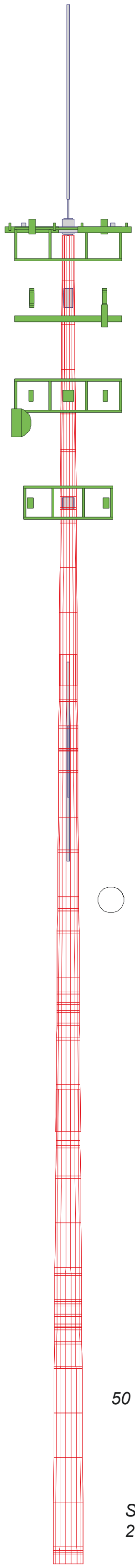
Critical Deflections and Radius of Curvature - Service Wind

Elevation *ft*	*Appurtenance*	*Gov. Load Comb.*	*Deflection* *in*	*Tilt* *°*	*Twist* *°*	*Radius of Curvature* *ft*
128.0000	ANT3 A 0.9 HPX	14	19.36	1.55	0.01	2664

APPENDIX A

TNXTOWER OUTPUT

Section	Length (ft)	Number of Sides	Thickness (in)	Socket Length (ft)	Top Dia (in)	Bot Dia (in)	Grade	Weight (K)
1	5.0000	18	0.1875		16.0000	16.8649	A572-65	0.2
2	5.0000	18	0.1875		16.8649	17.7297	A572-65	0.2
3	5.0000	18	0.1875		17.7297	18.5946	A572-65	0.2
4	5.0000	18	0.1875		18.5946	19.4594	A572-65	0.2
5–12	[illegible]	18	[illegible]		[illegible]	[illegible]	A572-65	[illegible]
13	5.0000	18	0.5750		22.4431	23.3080	A572-65	0.6
14	[illegible]	18	0.5625	3.5000	23.3080	24.7350	A572-65	1.1
15–68	[illegible]	18	[illegible]	4.7500	[illegible]	[illegible]	A572-65	[illegible]
69	5.0000	18	[illegible]		[illegible]	[illegible]	A572-65	1.6
70	5.0000	18	0.8250		37.9567	38.8191	A572-65	1.7
71	5.0000	18	0.8125		38.8191	39.6814	A572-65	1.7
72–75	[illegible]	18	[illegible]		[illegible]	[illegible]	A572-65	1.7
								32.9



MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-65	65 ksi	80 ksi			

TOWER DESIGN NOTES

1. Tower designed for Exposure C to the TIA-222-H Standard.
2. Tower designed for a 115 mph basic wind in accordance with the TIA-222-H Standard.
3. Tower is also designed for a 50 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 60 mph wind.
5. Tower Risk Category II.
6. Topographic Category 1 with Crest Height of 0.0000 ft
7. TOWER RATING: 93.5%

ALL REACTIONS ARE FACTORED

AXIAL 82 K
SHEAR 8 K
MOMENT 910 kip-ft
TORQUE 0 kip-ft
50 mph WIND - 1.0000 in ICE

AXIAL 59 K
SHEAR 26 K
MOMENT 3027 kip-ft
TORQUE 2 kip-ft
REACTIONS - 115 mph WIND

Crown Castle, 2000 Corporate Drive, Canonsburg, PA 15317, Phone: (724) 416-2000, FAX: — The Pathway to Possible	Job: 857525		
	Project:		
	Client: Crown Castle	Drawn by: THo	App'd:
	Code: TIA-222-H	Date: 05/04/23	Scale: NTS
	Path: C:\WORK SPACE\857525\WO 2225019 - SA\Prod\857525.eri		Dwg No. E-1

Tower Input Data

The tower is a monopole.
This tower is designed using the TIA-222-H standard.
The following design criteria apply:

- Tower base elevation above sea level: 438.0000 ft.
- Basic wind speed of 115 mph.
- Risk Category II.
- Exposure Category C.
- Simplified Topographic Factor Procedure for wind speed-up calculations is used.
- Topographic Category: 1.
- Crest Height: 0.0000 ft.
- Nominal ice thickness of 1.0000 in.
- Ice thickness is considered to increase with height.
- Ice density of 56 pcf.
- A wind speed of 50 mph is used in combination with ice.
- Temperature drop of 50 °F.
- Deflections calculated using a wind speed of 60 mph.
- TOWER RATING: 91.9%.
- A non-linear (P-delta) analysis was used.
- Pressures are calculated at each section.
- Stress ratio used in pole design is 1.
- Tower analysis based on target reliabilities in accordance with Annex S.
- Load Modification Factors used: $K_{es}(F_w) = 0.95$, $K_{es}(t_i) = 0.85$.
- Maximum demand-capacity ratio is: 1.05.
- Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

	Consider Moments - Legs		Distribute Leg Loads As Uniform		Use ASCE 10 X-Brace Ly Rules
	Consider Moments - Horizontals		Assume Legs Pinned		Calculate Forces in Supporting Bracing Members
	Consider Moments - Diagonals	√	Assume Rigid Index Plate		Ignore Redundant Members in FEA
	Use Moment Magnification	√	Use Clear Spans For Wind Area		SR Leg Bolts Resist Compression
√	Use Code Stress Ratios		Use Clear Spans For KL/r		All Leg Panels Have Same Allowable
√	Use Code Safety Factors - Guys		Retension Guys To Initial Tension		Offset Girt At Foundation
	Escalate Ice	√	Bypass Mast Stability Checks	√	Consider Feed Line Torque
	Always Use Max Kz	√	Use Azimuth Dish Coefficients		Include Angle Block Shear Check
	Use Special Wind Profile	√	Project Wind Area of Appurt.		Use TIA-222-H Bracing Resist. Exemption
	Include Bolts In Member Capacity		Autocalc Torque Arm Areas		Use TIA-222-H Tension Splice Exemption
	Leg Bolts Are At Top Of Section		Add IBC .6D+W Combination		Poles
	Secondary Horizontal Braces Leg	√	Sort Capacity Reports By Component	√	Include Shear-Torsion Interaction
	Use Diamond Inner Bracing (4 Sided)		Triangulate Diamond Inner Bracing		Always Use Sub-Critical Flow
	SR Members Have Cut Ends		Treat Feed Line Bundles As Cylinder		Use Top Mounted Sockets
	SR Members Are Concentric		Ignore KL/ry For 60 Deg. Angle Legs		Pole Without Linear Attachments
					Pole With Shroud Or No Appurtenances
					Outside and Inside Corner Radii Are Known

Tapered Pole Section Geometry

Section	*Elevation*	*Section Length*	*Splice Length*	*Number of Sides*	*Top Diameter*	*Bottom Diameter*	*Wall Thickness*	*Bend Radius*	*Pole Grade*
	ft	*ft*	*ft*		*in*	*in*	*in*	*in*	
L1	149.0000-144.0000	5.0000	0.00	18	16.0000	16.8649	0.1875	0.7500	A572-65 (65 ksi)

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L2	144.0000-139.0000	5.0000	0.00	18	16.8649	17.7297	0.1875	0.7500	A572-65 (65 ksi)
L3	139.0000-134.0000	5.0000	0.00	18	17.7297	18.5946	0.1875	0.7500	A572-65 (65 ksi)
L4	134.0000-129.0000	5.0000	0.00	18	18.5946	19.4594	0.1875	0.7500	A572-65 (65 ksi)
L5	129.0000-125.0000	4.0000	0.00	18	19.4594	20.1513	0.1875	0.7500	A572-65 (65 ksi)
L6	125.0000-124.7500	0.2500	0.00	18	20.1513	20.1945	0.3500	1.4000	A572-65 (65 ksi)
L7	124.7500-119.7500	5.0000	0.00	18	20.1945	21.0594	0.3438	1.3750	A572-65 (65 ksi)
L8	119.7500-118.5000	1.2500	0.00	18	21.0594	21.2756	0.3438	1.3750	A572-65 (65 ksi)
L9	118.5000-118.2500	0.2500	0.00	18	21.2756	21.3188	0.6250	2.5000	A572-65 (65 ksi)
L10	118.2500-117.0000	1.2500	0.00	18	21.3188	21.5350	0.6250	2.5000	A572-65 (65 ksi)
L11	117.0000-116.7500	0.2500	0.00	18	21.5350	21.5783	0.6250	2.5000	A572-65 (65 ksi)
L12	116.7500-111.7500	5.0000	0.00	18	21.5783	22.4431	0.6000	2.4000	A572-65 (65 ksi)
L13	111.7500-106.7500	5.0000	0.00	18	22.4431	23.3080	0.5750	2.3000	A572-65 (65 ksi)
L14	106.7500-98.5000	8.2500	3.50	18	23.3080	24.7350	0.5625	2.2500	A572-65 (65 ksi)
L15	98.5000-97.0000	5.0000	0.00	18	23.7546	24.6198	0.6250	2.5000	A572-65 (65 ksi)
L16	97.0000-96.7500	0.2500	0.00	18	24.6198	24.6631	0.7625	3.0500	A572-65 (65 ksi)
L17	96.7500-93.9800	2.7700	0.00	18	24.6631	25.1424	0.7500	3.0000	A572-65 (65 ksi)
L18	93.9800-93.7300	0.2500	0.00	18	25.1424	25.1857	0.7500	3.0000	A572-65 (65 ksi)
L19	93.7300-91.5000	2.2300	0.00	18	25.1857	25.5716	0.7500	3.0000	A572-65 (65 ksi)
L20	91.5000-91.3800	0.1200	0.00	18	25.5716	25.5923	0.6375	2.5500	A572-65 (65 ksi)
L21	91.3800-91.2500	0.1300	0.00	18	25.5923	25.6148	0.9000	3.6000	A572-65 (65 ksi)
L22	91.2500-91.1300	0.1200	0.00	18	25.6148	25.6356	0.9000	3.6000	A572-65 (65 ksi)
L23	91.1300-89.0000	2.1300	0.00	18	25.6356	26.0042	0.8875	3.5500	A572-65 (65 ksi)
L24	89.0000-88.7500	0.2500	0.00	18	26.0042	26.0474	0.7500	3.0000	A572-65 (65 ksi)
L25	88.7500-83.7500	5.0000	0.00	18	26.0474	26.9127	0.7250	2.9000	A572-65 (65 ksi)
L26	83.7500-80.0800	3.6700	0.00	18	26.9127	27.5477	0.7125	2.8500	A572-65 (65 ksi)
L27	80.0800-79.8300	0.2500	0.00	18	27.5477	27.5910	0.9000	3.6000	A572-65 (65 ksi)
L28	79.8300-74.8300	5.0000	0.00	18	27.5910	28.4562	0.8750	3.5000	A572-65 (65 ksi)
L29	74.8300-73.5000	1.3300	0.00	18	28.4562	28.6864	0.8750	3.5000	A572-65 (65 ksi)
L30	73.5000-73.2500	0.2500	0.00	18	28.6864	28.7296	1.0750	4.3000	A572-65 (65 ksi)
L31	73.2500-71.0000	2.2500	0.00	18	28.7296	29.1190	1.0500	4.2000	A572-65 (65 ksi)
L32	71.0000-70.7500	0.2500	0.00	18	29.1190	29.1623	0.9250	3.7000	A572-65 (65 ksi)
L33	70.7500-65.7500	5.0000	0.00	18	29.1623	30.0275	0.9000	3.6000	A572-65 (65 ksi)
L34	65.7500-64.1300	1.6200	0.00	18	30.0275	30.3078	0.9000	3.6000	A572-65 (65 ksi)
L35	64.1300-63.8800	0.2500	0.00	18	30.3078	30.3511	0.6750	2.7000	A572-65 (65 ksi)
L36	63.8800-	0.8800	0.00	18	30.3511	30.5034	0.6750	2.7000	A572-65

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
	63.0000								(65 ksi)
L37	63.0000-62.7500	0.2500	0.00	18	30.5034	30.5466	0.8250	3.3000	A572-65 (65 ksi)
L38	62.7500-62.0800	0.6700	0.00	18	30.5466	30.6626	0.8250	3.3000	A572-65 (65 ksi)
L39	62.0800-61.8300	0.2500	0.00	18	30.6626	30.7058	0.7750	3.1000	A572-65 (65 ksi)
L40	61.8300-60.6700	1.1600	0.00	18	30.7058	30.9065	0.7625	3.0500	A572-65 (65 ksi)
L41	60.6700-60.4200	0.2500	0.00	18	30.9065	30.9498	0.8500	3.4000	A572-65 (65 ksi)
L42	60.4200-59.0000	1.4200	0.00	18	30.9498	31.1955	0.8500	3.4000	A572-65 (65 ksi)
L43	59.0000-58.7500	0.2500	0.00	18	31.1955	31.2388	0.8375	3.3500	A572-65 (65 ksi)
L44	58.7500-53.7500	5.0000	0.00	18	31.2388	32.1040	0.8250	3.3000	A572-65 (65 ksi)
L45	53.7500-48.5000	5.2500	4.75	18	32.1040	33.0125	0.8250	3.3000	A572-65 (65 ksi)
L46	48.5000-47.5000	5.7500	0.00	18	31.6905	32.6823	0.8625	3.4500	A572-65 (65 ksi)
L47	47.5000-46.8800	0.6200	0.00	18	32.6823	32.7892	0.8625	3.4500	A572-65 (65 ksi)
L48	46.8800-46.6300	0.2500	0.00	18	32.7892	32.8323	0.8750	3.5000	A572-65 (65 ksi)
L49	46.6300-43.5000	3.1300	0.00	18	32.8323	33.3722	0.8625	3.4500	A572-65 (65 ksi)
L50	43.5000-43.2500	0.2500	0.00	18	33.3722	33.4153	1.0125	4.0500	A572-65 (65 ksi)
L51	43.2500-38.2500	5.0000	0.00	18	33.4153	34.2777	1.0000	4.0000	A572-65 (65 ksi)
L52	38.2500-33.2500	5.0000	0.00	18	34.2777	35.1401	0.9875	3.9500	A572-65 (65 ksi)
L53	33.2500-32.5800	0.6700	0.00	18	35.1401	35.2556	0.9750	3.9000	A572-65 (65 ksi)
L54	32.5800-32.3300	0.2500	0.00	18	35.2556	35.2988	0.9875	3.9500	A572-65 (65 ksi)
L55	32.3300-29.6700	2.6600	0.00	18	35.2988	35.7576	0.9625	3.8500	A572-65 (65 ksi)
L56	29.6700-29.4200	0.2500	0.00	18	35.7576	35.8007	0.8125	3.2500	A572-65 (65 ksi)
L57	29.4200-29.1300	0.2900	0.00	18	35.8007	35.8507	0.8125	3.2500	A572-65 (65 ksi)
L58	29.1300-28.8800	0.2500	0.00	18	35.8507	35.8938	0.9500	3.8000	A572-65 (65 ksi)
L59	28.8800-28.0000	0.8800	0.00	18	35.8938	36.0456	0.9375	3.7500	A572-65 (65 ksi)
L60	28.0000-27.7500	0.2500	0.00	18	36.0456	36.0887	0.9125	3.6500	A572-65 (65 ksi)
L61	27.7500-26.9200	0.8300	0.00	18	36.0887	36.2319	0.9125	3.6500	A572-65 (65 ksi)
L62	26.9200-26.6700	0.2500	0.00	18	36.2319	36.2750	0.8750	3.5000	A572-65 (65 ksi)
L63	26.6700-26.5000	0.1700	0.00	18	36.2750	36.3043	0.8750	3.5000	A572-65 (65 ksi)
L64	26.5000-26.2500	0.2500	0.00	18	36.3043	36.3474	0.8375	3.3500	A572-65 (65 ksi)
L65	26.2500-24.9200	1.3300	0.00	18	36.3474	36.5768	0.8375	3.3500	A572-65 (65 ksi)
L66	24.9200-24.6700	0.2500	0.00	18	36.5768	36.6199	0.8000	3.2000	A572-65 (65 ksi)
L67	24.6700-22.1700	2.5000	0.00	18	36.6199	37.0511	0.7875	3.1500	A572-65 (65 ksi)
L68	22.1700-21.9200	0.2500	0.00	18	37.0511	37.0943	0.8625	3.4500	A572-65 (65 ksi)
L69	21.9200-16.9200	5.0000	0.00	18	37.0943	37.9567	0.8375	3.3500	A572-65 (65 ksi)
L70	16.9200-11.9200	5.0000	0.00	18	37.9567	38.8191	0.8250	3.3000	A572-65 (65 ksi)

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L71	11.9200-6.9200	5.0000	0.00	18	38.8191	39.6814	0.8125	3.2500	A572-65 (65 ksi)
L72	6.9200-1.9200	5.0000	0.00	18	39.6814	40.5438	0.8000	3.2000	A572-65 (65 ksi)
L73	1.9200-1.5000	0.4200	0.00	18	40.5438	40.6163	0.8000	3.2000	A572-65 (65 ksi)
L74	1.5000-1.2500	0.2500	0.00	18	40.6163	40.6594	0.6375	2.5500	A572-65 (65 ksi)
L75	1.2500-1.0000	0.2500	0.00	18	40.6594	40.7025	0.4938	1.9750	A572-65 (65 ksi)
L76	1.0000-0.0000	1.0000		18	40.7025	40.8750	0.4875	1.9500	A572-65 (65 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
L1	16.2179	9.4104	297.2674	5.6134	8.1280	36.5733	594.9259	4.7061	2.4860	13.259
	17.0961	9.9251	348.7601	5.9205	8.5673	40.7081	697.9792	4.9635	2.6382	14.07
L2	17.0961	9.9251	348.7601	5.9205	8.5673	40.7081	697.9792	4.9635	2.6382	14.07
	17.9743	10.4398	405.8804	6.2275	9.0067	45.0643	812.2948	5.2209	2.7904	14.882
L3	17.9743	10.4398	405.8804	6.2275	9.0067	45.0643	812.2948	5.2209	2.7904	14.882
	18.8525	10.9545	468.9197	6.5345	9.4460	49.6420	938.4565	5.4783	2.9426	15.694
L4	18.8525	10.9545	468.9197	6.5345	9.4460	49.6420	938.4565	5.4783	2.9426	15.694
	19.7307	11.4692	538.1702	6.8415	9.8854	54.4410	1077.0486	5.7357	3.0949	16.506
L5	19.7307	11.4692	538.1702	6.8415	9.8854	54.4410	1077.0486	5.7357	3.0949	16.506
	20.4332	11.8809	598.2386	7.0871	10.2369	58.4397	1197.2644	5.9416	3.2166	17.155
L6	20.4082	21.9972	1089.6642	7.0295	10.2369	106.4452	2180.7622	11.0007	2.9306	8.373
	20.4521	22.0453	1096.8188	7.0448	10.2588	106.9147	2195.0807	11.0247	2.9382	8.395
L7	20.4530	21.6584	1078.2508	7.0470	10.2588	105.1048	2157.9205	10.8313	2.9492	8.58
	21.3312	22.6020	1225.4104	7.3540	10.6982	114.5440	2452.4333	11.3032	3.1015	9.022
L8	21.3312	22.6020	1225.4104	7.3540	10.6982	114.5440	2452.4333	11.3032	3.1015	9.022
	21.5508	22.8380	1264.1818	7.4308	10.8080	116.9672	2530.0271	11.4211	3.1395	9.133
L9	21.5074	40.9656	2207.1001	7.3310	10.8080	204.2098	4417.1044	20.4867	2.6445	4.231
	21.5513	41.0514	2220.9944	7.3463	10.8300	205.0786	4444.9112	20.5296	2.6521	4.243
L10	21.5513	41.0514	2220.9944	7.3463	10.8300	205.0786	4444.9112	20.5296	2.6521	4.243
	21.7708	41.4803	2291.3404	7.4231	10.9398	209.4498	4585.6957	20.7441	2.6902	4.304
L11	21.7708	41.4803	2291.3404	7.4231	10.9398	209.4498	4585.6957	20.7441	2.6902	4.304
	21.8148	41.5661	2305.5853	7.4384	10.9618	210.3296	4614.2043	20.7870	2.6978	4.316
L12	21.8186	39.9511	2221.2938	7.4473	10.9618	202.6400	4445.5104	19.9793	2.7418	4.57
	22.6968	41.5981	2507.5007	7.7543	11.4011	219.9347	5018.3009	20.8030	2.8940	4.823
L13	22.7007	39.9105	2411.2819	7.7632	11.4011	211.4952	4825.7367	19.9590	2.9380	5.11
	23.5789	41.4889	2708.8327	8.0702	11.8405	228.7776	5421.2298	20.7484	3.0902	5.374
L14	23.5808	40.6092	2654.3188	8.0747	11.8405	224.1736	5312.1301	20.3085	3.1122	5.533
	25.0298	43.1570	3185.8961	8.5812	12.5654	253.5455	6375.9843	21.5826	3.3634	5.979
L15	24.6396	45.8834	3101.1943	8.2110	12.0673	256.9907	6206.4693	22.9460	3.0808	4.929
	24.9032	47.5997	3462.4006	8.5182	12.5069	276.8398	6929.3571	23.8044	3.2331	5.173
L16	24.8820	57.7389	4151.9262	8.4694	12.5069	331.9716	8309.3156	28.8749	2.9911	3.923
	24.9259	57.8436	4174.5535	8.4847	12.5288	333.1953	8354.6000	28.9273	2.9987	3.933
L17	24.9279	56.9251	4112.5641	8.4891	12.5288	328.2476	8230.5396	28.4680	3.0207	4.028
	25.4146	58.0662	4364.8615	8.6593	12.7724	341.7430	8735.4663	29.0386	3.1051	4.14
L18	25.4146	58.0662	4364.8615	8.6593	12.7724	341.7430	8735.4663	29.0386	3.1051	4.14
	25.4585	58.1691	4388.1265	8.6747	12.7943	342.9744	8782.0270	29.0901	3.1127	4.15
L19	25.4585	58.1691	4388.1265	8.6747	12.7943	342.9744	8782.0270	29.0901	3.1127	4.15
	25.8504	59.0878	4599.3196	8.8117	12.9904	354.0564	9204.6911	29.5495	3.1806	4.241
L20	25.8677	50.4522	3962.8195	8.8516	12.9904	305.0585	7930.8534	25.2309	3.3786	5.3
	25.8888	50.4942	3972.7289	8.8590	13.0009	305.5732	7950.6852	25.2519	3.3823	5.305
L21	25.8483	70.5361	5433.4244	8.7658	13.0009	417.9265	10873.9982	35.2748	2.9203	3.245
	25.8711	70.6004	5448.2876	8.7738	13.0123	418.7017	10903.7443	35.3069	2.9242	3.249
L22	25.8711	70.6004	5448.2876	8.7738	13.0123	418.7017	10903.7443	35.3069	2.9242	3.249
	25.8922	70.6597	5462.0325	8.7811	13.0229	419.4180	10931.2522	35.3366	2.9279	3.253

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
L23	25.8942	69.7135	5394.3407	8.7856	13.0229	414.2201	10795.7794	34.8634	2.9499	3.324
	26.2684	70.7518	5638.9695	8.9164	13.2101	426.8672	11285.3588	35.3826	3.0147	3.397
L24	26.2896	60.1176	4844.0181	8.9652	13.2101	366.6898	9694.4102	30.0645	3.2567	4.342
	26.3336	60.2206	4868.9545	8.9806	13.2321	367.9653	9744.3158	30.1160	3.2644	4.352
L25	26.3374	58.2707	4720.6238	8.9895	13.2321	356.7554	9447.4591	29.1409	3.3084	4.563
	27.2160	60.2618	5221.2322	9.2966	13.6716	381.9025	10449.3346	30.1366	3.4606	4.773
L26	27.2179	59.2510	5138.5622	9.3011	13.6716	375.8557	10283.8859	29.6311	3.4826	4.888
	27.8628	60.6872	5521.3590	9.5265	13.9943	394.5447	11049.9831	30.3494	3.5944	5.045
L27	27.8339	76.1220	6829.1763	9.4599	13.9943	487.9986	13667.3385	38.0682	3.2644	3.627
	27.8778	76.2455	6862.4906	9.4753	14.0162	489.6102	13734.0109	38.1300	3.2720	3.636
L28	27.8817	74.1970	6690.6309	9.4842	14.0162	477.3488	13390.0655	37.1056	3.3160	3.79
	28.7602	76.6000	7361.9585	9.7913	14.4558	509.2749	14733.6040	38.3073	3.4683	3.964
L29	28.7602	76.6000	7361.9585	9.7913	14.4558	509.2749	14733.6040	38.3073	3.4683	3.964
	28.9939	77.2392	7547.7941	9.8730	14.5727	517.9413	15105.5197	38.6269	3.5088	4.01
L30	28.9631	94.2114	9074.3845	9.8020	14.5727	622.6984	18160.7092	47.1147	3.1568	2.937
	29.0070	94.3590	9117.1051	9.8174	14.5947	624.6878	18246.2066	47.1885	3.1644	2.944
L31	29.0109	92.2479	8929.2520	9.8263	14.5947	611.8165	17870.2533	46.1327	3.2084	3.056
	29.4062	93.5455	9311.3815	9.9645	14.7924	629.4686	18635.0152	46.7817	3.2769	3.121
L32	29.4255	82.7762	8312.9625	10.0089	14.7924	561.9734	16636.8634	41.3959	3.4969	3.78
	29.4694	82.9032	8351.2885	10.0242	14.8144	563.7268	16713.5658	41.4595	3.5046	3.789
L33	29.4733	80.7340	8147.1792	10.0331	14.8144	549.9491	16305.0786	40.3746	3.5486	3.943
	30.3519	83.2056	8918.5754	10.3403	15.2540	584.6729	17848.8860	41.6107	3.7008	4.112
L34	30.3519	83.2056	8918.5754	10.3403	15.2540	584.6729	17848.8860	41.6107	3.7008	4.112
	30.6365	84.0064	9178.5681	10.4398	15.3964	596.1515	18369.2136	42.0112	3.7502	4.167
L35	30.6712	63.4868	7043.1454	10.5196	15.3964	457.4550	14095.5584	31.7494	4.1462	6.142
	30.7152	63.5795	7074.0374	10.5350	15.4183	458.8066	14157.3829	31.7958	4.1538	6.154
L36	30.7152	63.5795	7074.0374	10.5350	15.4183	458.8066	14157.3829	31.7958	4.1538	6.154
	30.8698	63.9058	7183.4964	10.5891	15.4957	463.5799	14376.4451	31.9589	4.1806	6.193
L37	30.8466	77.7142	8648.0386	10.5358	15.4957	558.0927	17307.4566	38.8645	3.9166	4.747
	30.8906	77.8275	8685.9115	10.5512	15.5177	559.7430	17383.2522	38.9212	3.9242	4.757
L38	30.8906	77.8275	8685.9115	10.5512	15.5177	559.7430	17383.2522	38.9212	3.9242	4.757
	31.0083	78.1311	8787.9563	10.5923	15.5766	564.1777	17587.4760	39.0730	3.9446	4.781
L39	31.0160	73.5189	8296.9239	10.6101	15.5766	532.6539	16604.7652	36.7664	4.0326	5.203
	31.0599	73.6253	8333.0045	10.6254	15.5986	534.2165	16676.9738	36.8197	4.0402	5.213
L40	31.0619	72.4681	8208.8774	10.6299	15.5986	526.2589	16428.5563	36.2409	4.0622	5.328
	31.2657	72.9539	8375.0770	10.7011	15.7005	533.4266	16761.1742	36.4839	4.0976	5.374
L41	31.2522	81.0896	9255.0862	10.6701	15.7005	589.4762	18522.350	40.5525	3.9436	4.639

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
	31.2961	81.2063	9295.1069	10.6854	15.7225	591.1977	18602.4445	40.6108	3.9512	4.648
L42	31.2961	81.2063	9295.1069	10.6854	15.7225	591.1977	18602.4445	40.6108	3.9512	4.648
	31.5456	81.8692	9524.6161	10.7727	15.8473	601.0234	19061.7649	40.9424	3.9944	4.699
L43	31.5476	80.6985	9396.1501	10.7771	15.8473	592.9169	18804.6639	40.3569	4.0164	4.796
	31.5915	80.8135	9436.3767	10.7925	15.8693	594.6307	18885.1699	40.4144	4.0240	4.805
L44	31.5934	79.6400	9307.0060	10.7969	15.8693	586.4785	18626.2583	39.8276	4.0460	4.904
	32.4720	81.9057	10124.1256	11.1041	16.3088	620.7754	20261.5729	40.9606	4.1983	5.089
L45	32.4720	81.9057	10124.1256	11.1041	16.3088	620.7754	20261.5729	40.9606	4.1983	5.089
	33.3945	84.2846	11032.1475	11.4266	16.7704	657.8365	22078.8114	42.1503	4.3582	5.283
L46	32.8782	84.3940	10133.0346	10.9439	16.0988	629.4290	20279.4026	42.2050	4.0595	4.707
	33.0534	87.1090	11142.7896	11.2960	16.6026	671.1479	22300.2411	43.5628	4.2341	4.909
L47	33.0534	87.1090	11142.7896	11.2960	16.6026	671.1479	22300.2411	43.5628	4.2341	4.909
	33.1620	87.4017	11255.5096	11.3340	16.6569	675.7262	22525.8295	43.7092	4.2529	4.931
L48	33.1600	88.6337	11405.2262	11.3295	16.6569	684.7145	22825.4598	44.3253	4.2309	4.835
	33.2038	88.7534	11451.5183	11.3448	16.6788	686.5907	22918.1048	44.3852	4.2385	4.844
L49	33.2057	87.5198	11301.1761	11.3493	16.6788	677.5767	22617.2226	43.7682	4.2605	4.94
	33.7539	88.9977	11883.4110	11.5409	16.9531	700.9596	23782.4586	44.5073	4.3555	5.05
L50	33.7308	103.9935	13757.8831	11.4877	16.9531	811.5279	27533.8693	52.0066	4.0915	4.041
	33.7746	104.1320	13812.9546	11.5030	16.9750	813.7250	27644.0845	52.0759	4.0991	4.048
L51	33.7765	102.8861	13658.2188	11.5074	16.9750	804.6095	27334.4095	51.4528	4.1211	4.121
	34.6522	105.6234	14777.5900	11.8136	17.4131	848.6497	29574.6248	52.8217	4.2729	4.273
L52	34.6541	104.3423	14609.3208	11.8180	17.4131	838.9863	29237.8648	52.1810	4.2949	4.349
	35.5298	107.0453	15774.3660	12.1242	17.8512	883.6606	31569.4884	53.5328	4.4467	4.503
L53	35.5318	105.7290	15591.7980	12.1286	17.8512	873.4334	31204.1121	52.8745	4.4687	4.583
	35.6491	106.0866	15750.5483	12.1696	17.9099	879.4343	31521.8215	53.0534	4.4890	4.604
L54	35.6472	107.4075	15935.0341	12.1652	17.9099	889.7351	31891.0360	53.7139	4.4670	4.524
	35.6910	107.5426	15995.2636	12.1805	17.9318	892.0070	32011.5742	53.7815	4.4746	4.531
L55	35.6948	104.8964	15624.4235	12.1894	17.9318	871.3264	31269.4060	52.4582	4.5186	4.695
	36.1607	106.2980	16259.1404	12.3522	18.1648	895.0887	32539.6749	53.1591	4.5993	4.779
L56	36.1838	90.1189	13903.5216	12.4055	18.1648	765.4086	27825.3378	45.0680	4.8633	5.986
	36.2276	90.2301	13955.0533	12.4208	18.1867	767.3202	27928.4691	45.1236	4.8709	5.995
L57	36.2276	90.2301	13955.0533	12.4208	18.1867	767.3202	27928.4691	45.1236	4.8709	5.995
	36.2784	90.3591	14014.9881	12.4386	18.2122	769.5405	28048.4174	45.1881	4.8797	6.006
L58	36.2572	105.2361	16194.5922	12.3897	18.2122	889.2191	32410.4937	52.6280	4.6377	4.882
	36.3010	105.3661	16254.692	12.4051	18.2341	891.4469	32530.772	52.6930	4.6453	4.89

Section	Tip Dia. in	Area in²	I in⁴	r in	C in	I/C in³	J in⁴	It/Q in²	w in	w/t
			0				3			
L59	36.3029	104.0169	16058.034	12.4095	18.2341	880.6617	32137.199	52.0183	4.6673	4.978
			8				2			
	36.4570	104.4685	16268.118	12.4634	18.3112	888.4264	32557.643	52.2442	4.6940	5.007
			7				4			
L60	36.4609	101.7551	15868.152	12.4722	18.3112	866.5836	31757.184	50.8872	4.7380	5.192
			5				7			
	36.5047	101.8800	15926.649	12.4876	18.3331	868.7390	31874.255	50.9497	4.7456	5.201
			4				4			
L61	36.5047	101.8800	15926.649	12.4876	18.3331	868.7390	31874.255	50.9497	4.7456	5.201
			4				4			
	36.6500	102.2946	16121.893	12.5384	18.4058	875.9143	32265.001	51.1570	4.7708	5.228
			7				1			
L62	36.6558	98.1949	15508.643	12.5517	18.4058	842.5960	31037.694	49.1068	4.8368	5.528
			9				5			
	36.6996	98.3146	15565.453	12.5670	18.4277	844.6772	31151.387	49.1666	4.8444	5.536
			2				8			
L63	36.6996	98.3146	15565.453	12.5670	18.4277	844.6772	31151.387	49.1666	4.8444	5.536
			2				8			
	36.7294	98.3961	15604.164	12.5774	18.4426	846.0940	31228.860	49.2074	4.8496	5.542
			1				5			
L64	36.7352	94.2788	14982.889	12.5907	18.4426	812.4070	29985.493	47.1483	4.9156	5.869
			4				7			
	36.7789	94.3934	15037.603	12.6060	18.4645	814.4065	30094.994	47.2057	4.9231	5.878
			8				4			
L65	36.7789	94.3934	15037.603	12.6060	18.4645	814.4065	30094.994	47.2057	4.9231	5.878
			8				4			
	37.0119	95.0032	15330.921	12.6875	18.5810	825.0847	30682.016	47.5106	4.9635	5.927
			6				0			
L66	37.0177	90.8445	14690.608	12.7008	18.5810	790.6241	29400.547	45.4309	5.0295	6.287
			5				3			
	37.0615	90.9540	14743.790	12.7161	18.6029	792.5519	29506.980	45.4856	5.0371	6.296
			1				5			
L67	37.0634	89.5641	14528.617	12.7205	18.6029	780.9854	29076.352	44.7906	5.0591	6.424
			8				8			
	37.5012	90.6419	15059.454	12.8736	18.8220	800.0993	30138.723	45.3296	5.1350	6.521
			0				7			
L68	37.4897	99.0691	16391.563	12.8470	18.8220	870.8734	32804.694	49.5440	5.0030	5.801
			1				7			
	37.5334	99.1872	16450.226	12.8623	18.8439	872.9742	32922.098	49.6030	5.0106	5.809
			3				2			
L69	37.5373	96.3786	16006.496	12.8712	18.8439	849.4265	32034.053	48.1985	5.0546	6.035
			0				8			
	38.4130	98.6711	17176.058	13.1773	19.2820	890.7828	34374.717	49.3449	5.2064	6.217
			2				0			
L70	38.4149	97.2311	16936.798	13.1817	19.2820	878.3743	33895.882	48.6248	5.2284	6.337
			1				1			
	39.2906	99.4893	18144.506	13.4879	19.7201	920.1032	36312.887	49.7541	5.3802	6.521
			5				9			
L71	39.2926	98.0141	17887.232	13.4923	19.7201	907.0569	35798.001	49.0164	5.4022	6.649
			7				9			
	40.1683	100.2382	19132.690	13.7985	20.1582	949.1281	38290.555	50.1286	5.5539	6.836
			0				3			
L72	40.1702	98.7278	18856.521	13.8029	20.1582	935.4280	37737.855	49.3733	5.5759	6.97
			6				1			
	41.0459	100.9176	20139.276	14.1091	20.5963	977.8118	40305.053	50.4684	5.7277	7.16
			7				3			
L73	41.0459	100.9176	20139.276	14.1091	20.5963	977.8118	40305.053	50.4684	5.7277	7.16
			7				3			
	41.1194	101.1015	20249.601	14.1348	20.6331	981.4148	40525.847	50.5604	5.7405	7.176
			0				0			
L74	41.1445	80.8941	16334.778	14.1925	20.6331	791.6794	32691.049	40.4547	6.0265	9.453
			0				8			
	41.1883	80.9813	16387.688	14.2078	20.6550	793.4015	32796.940	40.4984	6.0341	9.465
			6				5			
L75	41.2105	62.9461	12829.682	14.2588	20.6550	621.1425	25676.246	31.4790	6.2871	12.733
			6				8			
	41.2543	63.0137	12871.047	14.2741	20.6769	622.4850	25759.030	31.5128	6.2946	12.749
			1				2			
L76	41.2552	62.2257	12714.049	14.2763	20.6769	614.8920	25444.828	31.1188	6.3056	12.935

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
	41.4304	62.4926	3 12878.340 6	14.3376	20.7645	620.2095	1 25773.626 8	31.2522	6.3360	12.997

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
L1 149.0000-144.0000				1	1	1			
L2 144.0000-139.0000				1	1	1			
L3 139.0000-134.0000				1	1	1			
L4 134.0000-129.0000				1	1	1			
L5 129.0000-125.0000				1	1	1			
L6 125.0000-124.7500				1	1	0.948366			
L7 124.7500-119.7500				1	1	0.947777			
L8 119.7500-118.5000				1	1	0.943621			
L9 118.5000-118.2500				1	1	0.890996			
L10 118.2500-117.0000				1	1	0.884885			
L11 117.0000-116.7500				1	1	0.883678			
L12 116.7500-111.7500				1	1	0.895372			
L13 111.7500-106.7500				1	1	0.910135			
L14 106.7500-98.5000				1	1	0.909053			
L15 98.5000-97.0000				1	1	0.910474			
L16 97.0000-96.7500				1	1	0.905424			
L17 96.7500-93.9800				1	1	0.908504			
L18 93.9800-93.7300				1	1	0.907485			
L19 93.7300-91.5000				1	1	0.898559			
L20 91.5000-91.3800				1	1	0.93298			
L21 91.3800-91.2500				1	1	0.959679			
L22 91.2500-91.1300				1	1	0.959106			
L23 91.1300-89.0000				1	1	0.961992			
L24 89.0000-88.7500				1	1	0.981337			
L25 88.7500-83.7500				1	1	0.992059			
L26 83.7500-80.0800				1	1	0.993407			
L27 80.0800-79.8300				1	1	0.94854			
L28 79.8300-				1	1	0.953113			

Tower Elevation	Gusset Area (per face)	Gusset Thickness	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals	Double Angle Stitch Bolt Spacing Horizontals	Double Angle Stitch Bolt Spacing Redundants
ft	ft^2	in					in	in	in
74.8300									
L29 74.8300-73.5000				1	1	0.947591			
L30 73.5000-73.2500				1	1	0.919106			
L31 73.2500-71.0000				1	1	0.930401			
L32 71.0000-70.7500				1	1	0.941687			
L33 70.7500-65.7500				1	1	0.946516			
L34 65.7500-64.1300				1	1	0.940142			
L35 64.1300-63.8800				1	1	1.02646			
L36 63.8800-63.0000				1	1	1.02311			
L37 63.0000-62.7500				1	1	0.98991			
L38 62.7500-62.0800				1	1	0.987241			
L39 62.0800-61.8300				1	1	0.925881			
L40 61.8300-60.6700				1	1	0.936586			
L41 60.6700-60.4200				1	1	0.904943			
L42 60.4200-59.0000				1	1	0.899997			
L43 59.0000-58.7500				1	1	0.949303			
L44 58.7500-53.7500				1	1	0.945027			
L45 53.7500-48.5000				1	1	0.943256			
L46 48.5000-47.5000				1	1	0.949771			
L47 47.5000-46.8800				1	1	0.947803			
L48 46.8800-46.6300				1	1	0.93385			
L49 46.6300-43.5000				1	1	0.937304			
L50 43.5000-43.2500				1	1	0.931137			
L51 43.2500-38.2500				1	1	0.926088			
L52 38.2500-33.2500				1	1	0.921777			
L53 33.2500-32.5800				1	1	0.931188			
L54 32.5800-32.3300				1	1	0.927115			
L55 32.3300-29.6700				1	1	0.942251			
L56 29.6700-29.4200				1	1	0.97752			
L57 29.4200-29.1300				1	1	0.976674			
L58 29.1300-28.8800				1	1	0.968477			
L59 28.8800-28.0000				1	1	0.978239			
L60 28.0000-27.7500				1	1	0.944619			
L61 27.7500-26.9200				1	1	0.942178			

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
L62 26.9200-26.6700				1	1	0.919724			
L63 26.6700-26.5000				1	1	0.919258			
L64 26.5000-26.2500				1	1	0.911017			
L65 26.2500-24.9200				1	1	0.907564			
L66 24.9200-24.6700				1	1	0.975926			
L67 24.6700-22.1700				1	1	0.984005			
L68 22.1700-21.9200				1	1	0.972758			
L69 21.9200-16.9200				1	1	0.986515			
L70 16.9200-11.9200				1	1	0.986999			
L71 11.9200-6.9200				1	1	0.988159			
L72 6.9200-1.9200				1	1	0.989983			
L73 1.9200-1.5000				1	1	0.988892			
L74 1.5000-1.2500				1	1	1.01983			
L75 1.2500-1.0000				1	1	0.987883			
L76 1.0000-0.0000				1	1	0.998858			

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
AVA5-50(7/8) ***	A	No	Surface Ar (CaAa)	148.0000 - 0.0000	1	1	-0.375 -0.375	1.1020		0.30
CU12PSM9P6XXX(1-1/2) ***	A	No	Surface Ar (CaAa)	119.0000 - 0.0000	1	1	0.150 0.150	1.6000		2.35
AVA5-50(7/8) ***	A	No	Surface Ar (CaAa)	90.0000 - 0.0000	1	1	-0.350 -0.350	1.1020		0.30
FP 5.50 x 1.25 Reinforcement	A	No	Surface Af (CaAa)	30.5000 - 0.5000	1	1	-0.458 -0.458	5.5000	13.5000	0.00
FP 5.50 x 1.25 Reinforcement	C	No	Surface Af (CaAa)	30.5000 - 0.5000	1	1	-0.292 -0.292	5.5000	13.5000	0.00
FP 5.50 x 1.25 Reinforcement	B	No	Surface Af (CaAa)	30.5000 - 0.5000	1	1	0.042 0.042	5.5000	13.5000	0.00
FP 5.50 x 1.25 Reinforcement	A	No	Surface Af (CaAa)	30.5000 - 0.5000	1	1	0.208 0.208	5.5000	13.5000	0.00
FP 5.50 x 1.25 Reinforcement	C	No	Surface Af (CaAa)	38.0220 - 27.7500	1	1	0.375 0.375	5.5000	13.5000	0.00
FP 5.50 x 1.25 Reinforcement	C	No	Surface Af (CaAa)	48.2500 - 38.0220	1	1	0.375 0.375	5.5000	13.5000	0.00
FP 5.50 x 1.25 Reinforcement	B	No	Surface Af (CaAa)	38.0220 - 27.7500	1	1	0.375 0.375	5.5000	13.5000	0.00
FP 5.50 x 1.25 Reinforcement	B	No	Surface Af (CaAa)	48.2500 - 38.0220	1	1	0.375 0.375	5.5000	13.5000	0.00
FP 5.50 x 1.25	A	No	Surface Af	38.0220 -	1	1	0.375	5.5000	13.5000	0.00

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
Reinforcement			(CaAa)	27.7500			0.375			
FP 5.50 x 1.25	A	No	Surface Af	48.2500 -	1	1	0.375	5.5000	13.5000	0.00
Reinforcement			(CaAa)	38.0220			0.375			
FP 5.50 x 1.25	A	No	Surface Af	65.5000 -	1	1	-0.458	5.5000	13.5000	0.00
Reinforcement			(CaAa)	45.5000			-0.458			
FP 5.50 x 1.25	C	No	Surface Af	65.5000 -	1	1	-0.458	5.5000	13.5000	0.00
Reinforcement			(CaAa)	45.5000			-0.458			
FP 5.50 x 1.25	B	No	Surface Af	65.5000 -	1	1	-0.458	5.5000	13.5000	0.00
Reinforcement			(CaAa)	45.5000			-0.458			
FP 5.50 x 1.25	C	No	Surface Af	92.7500 -	1	1	0.208	5.5000	13.5000	0.00
Reinforcement			(CaAa)	62.7500			0.208			
FP 5.50 x 1.25	B	No	Surface Af	92.7500 -	1	1	0.042	5.5000	13.5000	0.00
Reinforcement			(CaAa)	62.7500			0.042			
FP 5.50 x 1.25	A	No	Surface Af	92.7500 -	1	1	0.208	5.5000	13.5000	0.00
Reinforcement			(CaAa)	62.7500			0.208			
FP 4.00 x 1.25	A	No	Surface Af	99.5110 -	1	1	-0.458	4.0000	10.5000	0.00
Reinforcement			(CaAa)	90.0000			-0.458			
FP 4.00 x 1.25	A	No	Surface Af	120.0000 -	1	1	-0.458	4.0000	10.5000	0.00
Reinforcement			(CaAa)	99.5110			-0.458			
FP 4.00 x 1.25	C	No	Surface Af	99.5110 -	1	1	-0.458	4.0000	10.5000	0.00
Reinforcement			(CaAa)	90.0000			-0.458			
FP 4.00 x 1.25	C	No	Surface Af	120.0000 -	1	1	-0.458	4.0000	10.5000	0.00
Reinforcement			(CaAa)	99.5110			-0.458			
FP 4.00 x 1.25	B	No	Surface Af	99.5110 -	1	1	-0.458	4.0000	10.5000	0.00
Reinforcement			(CaAa)	90.0000			-0.458			
FP 4.00 x 1.25	B	No	Surface Af	120.0000 -	1	1	-0.458	4.0000	10.5000	0.00
Reinforcement			(CaAa)	99.5110			-0.458			
**********										
CCI-045100	C	No	Surface Af	45.0000 -	1	1	-0.125	4.5000	11.0000	0.00
Reinforcement			(CaAa)	25.0000			-0.125			
CCI-045100	B	No	Surface Af	45.0000 -	1	1	-0.125	4.5000	11.0000	0.00
Reinforcement			(CaAa)	25.0000			-0.125			
CCI-045100	A	No	Surface Af	45.0000 -	1	1	-0.125	4.5000	11.0000	0.00
Reinforcement			(CaAa)	25.0000			-0.125			
CCI-045100	A	No	Surface Af	75.0000 -	1	1	-0.292	4.5000	11.0000	0.00
Reinforcement			(CaAa)	50.0000			-0.292			
CCI-045100	C	No	Surface Af	75.0000 -	1	1	-0.292	4.5000	11.0000	0.00
Reinforcement			(CaAa)	50.0000			-0.292			
CCI-045100	B	No	Surface Af	75.0000 -	1	1	-0.292	4.5000	11.0000	0.00
Reinforcement			(CaAa)	50.0000			-0.292			
CCI-040075	A	No	Surface Af	98.0000 -	1	1	-0.292	4.0000	9.5000	0.00
Reinforcement			(CaAa)	88.0000			-0.292			
CCI-040075	C	No	Surface Af	98.0000 -	1	1	-0.292	4.0000	9.5000	0.00
Reinforcement			(CaAa)	88.0000			-0.292			
CCI-040075	B	No	Surface Af	98.0000 -	1	1	-0.292	4.0000	9.5000	0.00
Reinforcement			(CaAa)	88.0000			-0.292			
CCI-040075	C	No	Surface Af	126.0000 -	1	1	-0.125	4.0000	9.5000	0.00
Reinforcement			(CaAa)	116.0000			-0.125			
CCI-040075	B	No	Surface Af	126.0000 -	1	1	-0.125	4.0000	9.5000	0.00
Reinforcement			(CaAa)	116.0000			-0.125			
CCI-040075	A	No	Surface Af	126.0000 -	1	1	-0.125	4.0000	9.5000	0.00
Reinforcement			(CaAa)	116.0000			-0.125			
**********										
CCI-065125	C	No	Surface Af	5.1410 -	1	1	-0.125	6.5000	15.5000	0.00
Reinforcement			(CaAa)	0.5000			-0.125			
CCI-065125	C	No	Surface Af	24.9167 -	1	1	-0.125	6.5000	15.5000	0.00
Reinforcement			(CaAa)	5.1410			-0.125			
CCI-065125	B	No	Surface Af	5.1410 -	1	1	-0.125	6.5000	15.5000	0.00
Reinforcement			(CaAa)	0.5000			-0.125			
CCI-065125	B	No	Surface Af	24.9167 -	1	1	-0.125	6.5000	15.5000	0.00
Reinforcement			(CaAa)	5.1410			-0.125			
CCI-065125	C	No	Surface Af	5.1410 -	1	1	0.375	6.5000	15.5000	0.00
Reinforcement			(CaAa)	0.5000			0.375			
CCI-065125	C	No	Surface Af	27.6670 -	1	1	0.375	6.5000	15.5000	0.00
Reinforcement			(CaAa)	5.1410			0.375			
CCI-065125	A	No	Surface Af	5.1410 -	1	1	0.375	6.5000	15.5000	0.00

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
Reinforcement			(CaAa)	0.5000			0.375			
CCI-065125	A	No	Surface Af	27.6670 -	1	1	0.375	6.5000	15.5000	0.00
Reinforcement			(CaAa)	5.1410			0.375			
CCI-060100	B	No	Surface Af	49.9167 -	1	1	-0.292	6.0000	14.0000	0.00
Reinforcement			(CaAa)	24.9167			-0.292			
CCI-060100	C	No	Surface Af	62.6700 -	1	1	0.208	6.0000	14.0000	0.00
Reinforcement			(CaAa)	27.6700			0.208			
CCI-060100	B	No	Surface Af	61.0000 -	1	1	0.208	6.0000	14.0000	0.00
Reinforcement			(CaAa)	26.0000			0.208			
CCI-060100	A	No	Surface Af	62.6670 -	1	1	0.042	6.0000	14.0000	0.00
Reinforcement			(CaAa)	27.6670			0.042			
CCI-060100	C	No	Surface Af	49.9167 -	1	1	-0.292	6.0000	14.0000	0.00
Reinforcement			(CaAa)	30.5830			-0.292			
CCI-040075	B	No	Surface Af	81.0830 -	1	1	0.208	4.0000	9.5000	0.00
Reinforcement			(CaAa)	61.0830			0.208			
CCI-040075	C	No	Surface Af	81.0830 -	1	1	-0.125	4.0000	9.5000	0.00
Reinforcement			(CaAa)	61.0830			-0.125			
CCI-040075	B	No	Surface Af	81.0830 -	1	1	-0.125	4.0000	9.5000	0.00
Reinforcement			(CaAa)	61.0830			-0.125			
CCI-040075	A	No	Surface Af	81.0830 -	1	1	-0.125	4.0000	9.5000	0.00
Reinforcement			(CaAa)	61.0830			-0.125			
CCI-040075	A	No	Surface Af	89.9167 -	1	1	-0.458	4.0000	9.5000	0.00
Reinforcement			(CaAa)	65.5830			-0.458			
CCI-040075	C	No	Surface Af	89.9167 -	1	1	-0.458	4.0000	9.5000	0.00
Reinforcement			(CaAa)	65.5830			-0.458			
CCI-040075	B	No	Surface Af	89.9167 -	1	1	-0.458	4.0000	9.5000	0.00
Reinforcement			(CaAa)	65.5830			-0.458			
CCI-040075	C	No	Surface Af	95.0000 -	1	1	0.375	4.0000	9.5000	0.00
Reinforcement			(CaAa)	70.0000			0.375			
CCI-040075	B	No	Surface Af	95.0000 -	1	1	0.375	4.0000	9.5000	0.00
Reinforcement			(CaAa)	70.0000			0.375			
CCI-040075	A	No	Surface Af	95.0000 -	1	1	0.375	4.0000	9.5000	0.00
Reinforcement			(CaAa)	70.0000			0.375			
CCI-040075	C	No	Surface Af	99.5110 -	1	1	-0.125	4.0000	9.5000	0.00
Reinforcement			(CaAa)	93.0830			-0.125			
CCI-040075	C	No	Surface Af	115.9167 -	1	1	-0.125	4.0000	9.5000	0.00
Reinforcement			(CaAa)	99.5110			-0.125			
CCI-040075	B	No	Surface Af	99.5110 -	1	1	-0.125	4.0000	9.5000	0.00
Reinforcement			(CaAa)	93.0830			-0.125			
CCI-040075	B	No	Surface Af	115.9167 -	1	1	-0.125	4.0000	9.5000	0.00
Reinforcement			(CaAa)	99.5110			-0.125			
CCI-040075	A	No	Surface Af	99.5110 -	1	1	-0.125	4.0000	9.5000	0.00
Reinforcement			(CaAa)	93.0830			-0.125			
CCI-040075	A	No	Surface Af	115.9167 -	1	1	-0.125	4.0000	9.5000	0.00
Reinforcement			(CaAa)	99.5110			-0.125			
**										
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Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
***									
LDF7-50A(1-5/8)	C	No	No	Inside Pole	148.0000 - 0.0000	12	No Ice	0.0000	0.82
							1/2" Ice	0.0000	0.82
							1" Ice	0.0000	0.82
FB-L98-002-XXX(3/8)	C	No	No	Inside Pole	148.0000 - 0.0000	1	No Ice	0.0000	0.06
							1/2" Ice	0.0000	0.06
							1" Ice	0.0000	0.06
WR-VG86ST-BRD(3/4)	C	No	No	Inside Pole	148.0000 - 0.0000	2	No Ice	0.0000	0.58
							1/2" Ice	0.0000	0.58
							1" Ice	0.0000	0.58

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
***									
LDF7-50A(1-5/8)	C	No	No	Inside Pole	140.0000 - 0.0000	8	No Ice	0.0000	0.82
							1/2" Ice	0.0000	0.82
							1" Ice	0.0000	0.82
7810A-RG-8 TYPE(3/8)	C	No	No	Inside Pole	131.0000 - 0.0000	2	No Ice	0.0000	0.07
							1/2" Ice	0.0000	0.07
							1" Ice	0.0000	0.07
HCS 6X12 6AWG(1-3/8)	C	No	No	Inside Pole	131.0000 - 0.0000	4	No Ice	0.0000	1.70
							1/2" Ice	0.0000	1.70
							1" Ice	0.0000	1.70
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**									
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Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L1	149.0000-	A	0.000	0.000	0.441	0.000	0.00
	144.0000	B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.04
L2	144.0000-	A	0.000	0.000	0.551	0.000	0.00
	139.0000	B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.06
L3	139.0000-	A	0.000	0.000	0.551	0.000	0.00
	134.0000	B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.09
L4	134.0000-	A	0.000	0.000	0.551	0.000	0.00
	129.0000	B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.10
L5	129.0000-	A	0.000	0.000	1.107	0.000	0.00
	125.0000	B	0.000	0.000	0.667	0.000	0.00
		C	0.000	0.000	0.667	0.000	0.10
L6	125.0000-	A	0.000	0.000	0.194	0.000	0.00
	124.7500	B	0.000	0.000	0.167	0.000	0.00
		C	0.000	0.000	0.167	0.000	0.01
L7	124.7500-	A	0.000	0.000	4.051	0.000	0.00
	119.7500	B	0.000	0.000	3.500	0.000	0.00
		C	0.000	0.000	3.500	0.000	0.12
L8	119.7500-	A	0.000	0.000	1.884	0.000	0.00
	118.5000	B	0.000	0.000	1.667	0.000	0.00
		C	0.000	0.000	1.667	0.000	0.03
L9	118.5000-	A	0.000	0.000	0.401	0.000	0.00
	118.2500	B	0.000	0.000	0.333	0.000	0.00
		C	0.000	0.000	0.333	0.000	0.01
L10	118.2500-	A	0.000	0.000	2.004	0.000	0.00
	117.0000	B	0.000	0.000	1.667	0.000	0.00
		C	0.000	0.000	1.667	0.000	0.03
L11	117.0000-	A	0.000	0.000	0.401	0.000	0.00
	116.7500	B	0.000	0.000	0.333	0.000	0.00
		C	0.000	0.000	0.333	0.000	0.01
L12	116.7500-	A	0.000	0.000	7.962	0.000	0.01
	111.7500	B	0.000	0.000	6.611	0.000	0.00
		C	0.000	0.000	6.611	0.000	0.12
L13	111.7500-	A	0.000	0.000	8.018	0.000	0.01
	106.7500	B	0.000	0.000	6.667	0.000	0.00
		C	0.000	0.000	6.667	0.000	0.12
L14	106.7500-	A	0.000	0.000	13.161	0.000	0.02
	98.5000	B	0.000	0.000	10.932	0.000	0.00
		C	0.000	0.000	10.932	0.000	0.20
L15	98.5000-97.0000	A	0.000	0.000	2.971	0.000	0.00

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		B	0.000	0.000	2.566	0.000	0.00
		C	0.000	0.000	2.566	0.000	0.04
L16	97.0000-96.7500	A	0.000	0.000	0.551	0.000	0.00
		B	0.000	0.000	0.483	0.000	0.00
		C	0.000	0.000	0.483	0.000	0.01
L17	96.7500-93.9800	A	0.000	0.000	6.782	0.000	0.01
		B	0.000	0.000	6.034	0.000	0.00
		C	0.000	0.000	6.034	0.000	0.07
L18	93.9800-93.7300	A	0.000	0.000	0.717	0.000	0.00
		B	0.000	0.000	0.650	0.000	0.00
		C	0.000	0.000	0.650	0.000	0.01
L19	93.7300-91.5000	A	0.000	0.000	6.596	0.000	0.01
		B	0.000	0.000	5.994	0.000	0.00
		C	0.000	0.000	5.994	0.000	0.05
L20	91.5000-91.3800	A	0.000	0.000	0.382	0.000	0.00
		B	0.000	0.000	0.350	0.000	0.00
		C	0.000	0.000	0.350	0.000	0.00
L21	91.3800-91.2500	A	0.000	0.000	0.414	0.000	0.00
		B	0.000	0.000	0.379	0.000	0.00
		C	0.000	0.000	0.379	0.000	0.00
L22	91.2500-91.1300	A	0.000	0.000	0.382	0.000	0.00
		B	0.000	0.000	0.350	0.000	0.00
		C	0.000	0.000	0.350	0.000	0.00
L23	91.1300-89.0000	A	0.000	0.000	6.843	0.000	0.01
		B	0.000	0.000	6.157	0.000	0.00
		C	0.000	0.000	6.157	0.000	0.05
L24	89.0000-88.7500	A	0.000	0.000	0.824	0.000	0.00
		B	0.000	0.000	0.729	0.000	0.00
		C	0.000	0.000	0.729	0.000	0.01
L25	88.7500-83.7500	A	0.000	0.000	13.652	0.000	0.01
		B	0.000	0.000	11.750	0.000	0.00
		C	0.000	0.000	11.750	0.000	0.12
L26	83.7500-80.0800	A	0.000	0.000	10.322	0.000	0.01
		B	0.000	0.000	9.595	0.000	0.00
		C	0.000	0.000	8.926	0.000	0.09
L27	80.0800-79.8300	A	0.000	0.000	0.824	0.000	0.00
		B	0.000	0.000	0.896	0.000	0.00
		C	0.000	0.000	0.729	0.000	0.01
L28	79.8300-74.8300	A	0.000	0.000	16.613	0.000	0.01
		B	0.000	0.000	18.044	0.000	0.00
		C	0.000	0.000	14.711	0.000	0.12
L29	74.8300-73.5000	A	0.000	0.000	5.383	0.000	0.00
		B	0.000	0.000	5.763	0.000	0.00
		C	0.000	0.000	4.877	0.000	0.03
L30	73.5000-73.2500	A	0.000	0.000	1.012	0.000	0.00
		B	0.000	0.000	1.083	0.000	0.00
		C	0.000	0.000	0.917	0.000	0.01
L31	73.2500-71.0000	A	0.000	0.000	9.106	0.000	0.01
		B	0.000	0.000	9.750	0.000	0.00
		C	0.000	0.000	8.250	0.000	0.06
L32	71.0000-70.7500	A	0.000	0.000	1.012	0.000	0.00
		B	0.000	0.000	1.083	0.000	0.00
		C	0.000	0.000	0.917	0.000	0.01
L33	70.7500-65.7500	A	0.000	0.000	17.402	0.000	0.01
		B	0.000	0.000	18.833	0.000	0.00
		C	0.000	0.000	15.500	0.000	0.12
L34	65.7500-64.1300	A	0.000	0.000	5.763	0.000	0.00
		B	0.000	0.000	6.227	0.000	0.00
		C	0.000	0.000	5.147	0.000	0.04
L35	64.1300-63.8800	A	0.000	0.000	0.908	0.000	0.00
		B	0.000	0.000	0.979	0.000	0.00
		C	0.000	0.000	0.813	0.000	0.01
L36	63.8800-63.0000	A	0.000	0.000	3.195	0.000	0.00
		B	0.000	0.000	3.447	0.000	0.00
		C	0.000	0.000	2.860	0.000	0.02
L37	63.0000-62.7500	A	0.000	0.000	0.908	0.000	0.00
		B	0.000	0.000	0.979	0.000	0.00
		C	0.000	0.000	0.813	0.000	0.01
L38	62.7500-62.0800	A	0.000	0.000	2.405	0.000	0.00

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		B	0.000	0.000	2.010	0.000	0.00
		C	0.000	0.000	2.153	0.000	0.02
L39	62.0800-61.8300	A	0.000	0.000	0.928	0.000	0.00
		B	0.000	0.000	0.750	0.000	0.00
		C	0.000	0.000	0.833	0.000	0.01
L40	61.8300-60.6700	A	0.000	0.000	4.033	0.000	0.00
		B	0.000	0.000	3.259	0.000	0.00
		C	0.000	0.000	3.591	0.000	0.03
L41	60.6700-60.4200	A	0.000	0.000	0.762	0.000	0.00
		B	0.000	0.000	0.667	0.000	0.00
		C	0.000	0.000	0.667	0.000	0.01
L42	60.4200-59.0000	A	0.000	0.000	4.327	0.000	0.00
		B	0.000	0.000	3.787	0.000	0.00
		C	0.000	0.000	3.787	0.000	0.03
L43	59.0000-58.7500	A	0.000	0.000	0.762	0.000	0.00
		B	0.000	0.000	0.667	0.000	0.00
		C	0.000	0.000	0.667	0.000	0.01
L44	58.7500-53.7500	A	0.000	0.000	15.235	0.000	0.01
		B	0.000	0.000	13.333	0.000	0.00
		C	0.000	0.000	13.333	0.000	0.12
L45	53.7500-48.5000	A	0.000	0.000	14.872	0.000	0.02
		B	0.000	0.000	14.292	0.000	0.00
		C	0.000	0.000	14.292	0.000	0.13
L46	48.5000-47.5000	A	0.000	0.000	2.947	0.000	0.00
		B	0.000	0.000	3.567	0.000	0.00
		C	0.000	0.000	3.567	0.000	0.02
L47	47.5000-46.8800	A	0.000	0.000	1.962	0.000	0.00
		B	0.000	0.000	2.346	0.000	0.00
		C	0.000	0.000	2.346	0.000	0.02
L48	46.8800-46.6300	A	0.000	0.000	0.791	0.000	0.00
		B	0.000	0.000	0.946	0.000	0.00
		C	0.000	0.000	0.946	0.000	0.01
L49	46.6300-43.5000	A	0.000	0.000	9.196	0.000	0.01
		B	0.000	0.000	11.135	0.000	0.00
		C	0.000	0.000	11.135	0.000	0.08
L50	43.5000-43.2500	A	0.000	0.000	0.749	0.000	0.00
		B	0.000	0.000	0.904	0.000	0.00
		C	0.000	0.000	0.904	0.000	0.01
L51	43.2500-38.2500	A	0.000	0.000	14.988	0.000	0.01
		B	0.000	0.000	18.086	0.000	0.00
		C	0.000	0.000	18.086	0.000	0.12
L52	38.2500-33.2500	A	0.000	0.000	14.995	0.000	0.01
		B	0.000	0.000	18.093	0.000	0.00
		C	0.000	0.000	18.093	0.000	0.12
L53	33.2500-32.5800	A	0.000	0.000	2.009	0.000	0.00
		B	0.000	0.000	2.424	0.000	0.00
		C	0.000	0.000	2.424	0.000	0.02
L54	32.5800-32.3300	A	0.000	0.000	0.750	0.000	0.00
		B	0.000	0.000	0.905	0.000	0.00
		C	0.000	0.000	0.905	0.000	0.01
L55	32.3300-29.6700	A	0.000	0.000	9.499	0.000	0.01
		B	0.000	0.000	10.386	0.000	0.00
		C	0.000	0.000	9.473	0.000	0.07
L56	29.6700-29.4200	A	0.000	0.000	1.208	0.000	0.00
		B	0.000	0.000	1.134	0.000	0.00
		C	0.000	0.000	0.884	0.000	0.01
L57	29.4200-29.1300	A	0.000	0.000	1.401	0.000	0.00
		B	0.000	0.000	1.315	0.000	0.00
		C	0.000	0.000	1.025	0.000	0.01
L58	29.1300-28.8800	A	0.000	0.000	1.208	0.000	0.00
		B	0.000	0.000	1.134	0.000	0.00
		C	0.000	0.000	0.884	0.000	0.01
L59	28.8800-28.0000	A	0.000	0.000	4.252	0.000	0.00
		B	0.000	0.000	3.991	0.000	0.00
		C	0.000	0.000	3.111	0.000	0.02
L60	28.0000-27.7500	A	0.000	0.000	1.208	0.000	0.00
		B	0.000	0.000	1.134	0.000	0.00
		C	0.000	0.000	0.884	0.000	0.01
L61	27.7500-26.9200	A	0.000	0.000	3.352	0.000	0.00

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		B	0.000	0.000	3.043	0.000	0.00
		C	0.000	0.000	2.273	0.000	0.02
L62	26.9200-26.6700	A	0.000	0.000	1.012	0.000	0.00
		B	0.000	0.000	0.917	0.000	0.00
		C	0.000	0.000	0.688	0.000	0.01
L63	26.6700-26.5000	A	0.000	0.000	0.688	0.000	0.00
		B	0.000	0.000	0.623	0.000	0.00
		C	0.000	0.000	0.468	0.000	0.00
L64	26.5000-26.2500	A	0.000	0.000	1.012	0.000	0.00
		B	0.000	0.000	0.917	0.000	0.00
		C	0.000	0.000	0.688	0.000	0.01
L65	26.2500-24.9200	A	0.000	0.000	5.323	0.000	0.00
		B	0.000	0.000	3.737	0.000	0.00
		C	0.000	0.000	3.598	0.000	0.03
L66	24.9200-24.6700	A	0.000	0.000	0.824	0.000	0.00
		B	0.000	0.000	0.500	0.000	0.00
		C	0.000	0.000	0.767	0.000	0.01
L67	24.6700-22.1700	A	0.000	0.000	8.243	0.000	0.01
		B	0.000	0.000	5.000	0.000	0.00
		C	0.000	0.000	7.708	0.000	0.06
L68	22.1700-21.9200	A	0.000	0.000	0.824	0.000	0.00
		B	0.000	0.000	0.500	0.000	0.00
		C	0.000	0.000	0.771	0.000	0.01
L69	21.9200-16.9200	A	0.000	0.000	16.485	0.000	0.01
		B	0.000	0.000	10.000	0.000	0.00
		C	0.000	0.000	15.417	0.000	0.12
L70	16.9200-11.9200	A	0.000	0.000	16.485	0.000	0.01
		B	0.000	0.000	10.000	0.000	0.00
		C	0.000	0.000	15.417	0.000	0.12
L71	11.9200-6.9200	A	0.000	0.000	16.485	0.000	0.01
		B	0.000	0.000	10.000	0.000	0.00
		C	0.000	0.000	15.417	0.000	0.12
L72	6.9200-1.9200	A	0.000	0.000	15.521	0.000	0.01
		B	0.000	0.000	9.035	0.000	0.00
		C	0.000	0.000	13.487	0.000	0.12
L73	1.9200-1.5000	A	0.000	0.000	1.259	0.000	0.00
		B	0.000	0.000	0.714	0.000	0.00
		C	0.000	0.000	1.043	0.000	0.01
L74	1.5000-1.2500	A	0.000	0.000	0.749	0.000	0.00
		B	0.000	0.000	0.425	0.000	0.00
		C	0.000	0.000	0.621	0.000	0.01
L75	1.2500-1.0000	A	0.000	0.000	0.749	0.000	0.00
		B	0.000	0.000	0.425	0.000	0.00
		C	0.000	0.000	0.621	0.000	0.01
L76	1.0000-0.0000	A	0.000	0.000	1.689	0.000	0.00
		B	0.000	0.000	0.850	0.000	0.00
		C	0.000	0.000	1.242	0.000	0.02

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L1	149.0000-	A	0.987	0.000	0.000	1.230	0.000	0.01
	144.0000	B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.04
L2	144.0000-	A	0.983	0.000	0.000	1.534	0.000	0.01
	139.0000	B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.06
L3	139.0000-	A	0.980	0.000	0.000	1.531	0.000	0.01
	134.0000	B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.09
L4	134.0000-	A	0.976	0.000	0.000	1.527	0.000	0.01
	129.0000	B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.10
L5	129.0000-	A	0.973	0.000	0.000	2.036	0.000	0.02

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
	125.0000	B		0.000	0.000	0.818	0.000	0.00
		C		0.000	0.000	0.818	0.000	0.10
L6	125.0000-124.7500	A	0.971	0.000	0.000	0.280	0.000	0.00
		B		0.000	0.000	0.204	0.000	0.00
		C		0.000	0.000	0.204	0.000	0.01
L7	124.7500-119.7500	A	0.969	0.000	0.000	5.821	0.000	0.04
		B		0.000	0.000	4.301	0.000	0.03
		C		0.000	0.000	4.301	0.000	0.15
L8	119.7500-118.5000	A	0.966	0.000	0.000	2.652	0.000	0.02
		B		0.000	0.000	2.096	0.000	0.01
		C		0.000	0.000	2.096	0.000	0.04
L9	118.5000-118.2500	A	0.966	0.000	0.000	0.583	0.000	0.00
		B		0.000	0.000	0.419	0.000	0.00
		C		0.000	0.000	0.419	0.000	0.01
L10	118.2500-117.0000	A	0.965	0.000	0.000	2.916	0.000	0.02
		B		0.000	0.000	2.096	0.000	0.01
		C		0.000	0.000	2.096	0.000	0.04
L11	117.0000-116.7500	A	0.965	0.000	0.000	0.583	0.000	0.00
		B		0.000	0.000	0.419	0.000	0.00
		C		0.000	0.000	0.419	0.000	0.01
L12	116.7500-111.7500	A	0.962	0.000	0.000	11.764	0.000	0.09
		B		0.000	0.000	8.488	0.000	0.05
		C		0.000	0.000	8.488	0.000	0.17
L13	111.7500-106.7500	A	0.958	0.000	0.000	11.850	0.000	0.09
		B		0.000	0.000	8.583	0.000	0.05
		C		0.000	0.000	8.583	0.000	0.17
L14	106.7500-98.5000	A	0.952	0.000	0.000	19.290	0.000	0.15
		B		0.000	0.000	13.919	0.000	0.08
		C		0.000	0.000	13.919	0.000	0.29
L15	98.5000-97.0000	A	0.947	0.000	0.000	4.034	0.000	0.03
		B		0.000	0.000	3.058	0.000	0.02
		C		0.000	0.000	3.058	0.000	0.06
L16	97.0000-96.7500	A	0.947	0.000	0.000	0.739	0.000	0.01
		B		0.000	0.000	0.577	0.000	0.00
		C		0.000	0.000	0.577	0.000	0.01
L17	96.7500-93.9800	A	0.945	0.000	0.000	9.060	0.000	0.07
		B		0.000	0.000	7.264	0.000	0.05
		C		0.000	0.000	7.264	0.000	0.11
L18	93.9800-93.7300	A	0.944	0.000	0.000	0.953	0.000	0.01
		B		0.000	0.000	0.791	0.000	0.00
		C		0.000	0.000	0.791	0.000	0.01
L19	93.7300-91.5000	A	0.942	0.000	0.000	8.767	0.000	0.06
		B		0.000	0.000	7.324	0.000	0.04
		C		0.000	0.000	7.324	0.000	0.10
L20	91.5000-91.3800	A	0.941	0.000	0.000	0.506	0.000	0.00
		B		0.000	0.000	0.428	0.000	0.00
		C		0.000	0.000	0.428	0.000	0.01
L21	91.3800-91.2500	A	0.941	0.000	0.000	0.548	0.000	0.00
		B		0.000	0.000	0.464	0.000	0.00
		C		0.000	0.000	0.464	0.000	0.01
L22	91.2500-91.1300	A	0.941	0.000	0.000	0.506	0.000	0.00
		B		0.000	0.000	0.428	0.000	0.00
		C		0.000	0.000	0.428	0.000	0.01
L23	91.1300-89.0000	A	0.940	0.000	0.000	9.260	0.000	0.06
		B		0.000	0.000	7.586	0.000	0.04
		C		0.000	0.000	7.586	0.000	0.10
L24	89.0000-88.7500	A	0.939	0.000	0.000	1.143	0.000	0.01
		B		0.000	0.000	0.907	0.000	0.01
		C		0.000	0.000	0.907	0.000	0.01
L25	88.7500-83.7500	A	0.936	0.000	0.000	19.377	0.000	0.13
		B		0.000	0.000	14.667	0.000	0.08
		C		0.000	0.000	14.667	0.000	0.20
L26	83.7500-80.0800	A	0.931	0.000	0.000	14.609	0.000	0.10
		B		0.000	0.000	12.018	0.000	0.07
		C		0.000	0.000	11.163	0.000	0.15
L27	80.0800-79.8300	A	0.929	0.000	0.000	1.149	0.000	0.01
		B		0.000	0.000	1.128	0.000	0.01
		C		0.000	0.000	0.915	0.000	0.01
L28	79.8300-74.8300	A	0.926	0.000	0.000	23.123	0.000	0.15

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		B		0.000	0.000	22.703	0.000	0.13
		C		0.000	0.000	18.444	0.000	0.22
L29	74.8300-73.5000	A	0.922	0.000	0.000	7.344	0.000	0.05
		B		0.000	0.000	7.234	0.000	0.04
		C		0.000	0.000	6.103	0.000	0.07
L30	73.5000-73.2500	A	0.921	0.000	0.000	1.380	0.000	0.01
		B		0.000	0.000	1.360	0.000	0.01
		C		0.000	0.000	1.147	0.000	0.01
L31	73.2500-71.0000	A	0.919	0.000	0.000	12.415	0.000	0.08
		B		0.000	0.000	12.232	0.000	0.07
		C		0.000	0.000	10.318	0.000	0.11
L32	71.0000-70.7500	A	0.918	0.000	0.000	1.379	0.000	0.01
		B		0.000	0.000	1.359	0.000	0.01
		C		0.000	0.000	1.146	0.000	0.01
L33	70.7500-65.7500	A	0.914	0.000	0.000	23.937	0.000	0.16
		B		0.000	0.000	23.541	0.000	0.13
		C		0.000	0.000	19.293	0.000	0.23
L34	65.7500-64.1300	A	0.910	0.000	0.000	7.811	0.000	0.05
		B		0.000	0.000	7.686	0.000	0.04
		C		0.000	0.000	6.311	0.000	0.07
L35	64.1300-63.8800	A	0.908	0.000	0.000	1.225	0.000	0.01
		B		0.000	0.000	1.206	0.000	0.01
		C		0.000	0.000	0.994	0.000	0.01
L36	63.8800-63.0000	A	0.907	0.000	0.000	4.313	0.000	0.03
		B		0.000	0.000	4.245	0.000	0.02
		C		0.000	0.000	3.499	0.000	0.04
L37	63.0000-62.7500	A	0.907	0.000	0.000	1.225	0.000	0.01
		B		0.000	0.000	1.206	0.000	0.01
		C		0.000	0.000	0.994	0.000	0.01
L38	62.7500-62.0800	A	0.906	0.000	0.000	3.240	0.000	0.02
		B		0.000	0.000	2.496	0.000	0.01
		C		0.000	0.000	2.624	0.000	0.03
L39	62.0800-61.8300	A	0.905	0.000	0.000	1.245	0.000	0.01
		B		0.000	0.000	0.931	0.000	0.01
		C		0.000	0.000	1.014	0.000	0.01
L40	61.8300-60.6700	A	0.904	0.000	0.000	5.426	0.000	0.04
		B		0.000	0.000	4.009	0.000	0.02
		C		0.000	0.000	4.356	0.000	0.05
L41	60.6700-60.4200	A	0.903	0.000	0.000	1.033	0.000	0.01
		B		0.000	0.000	0.802	0.000	0.00
		C		0.000	0.000	0.802	0.000	0.01
L42	60.4200-59.0000	A	0.902	0.000	0.000	5.864	0.000	0.04
		B		0.000	0.000	4.555	0.000	0.02
		C		0.000	0.000	4.555	0.000	0.06
L43	59.0000-58.7500	A	0.901	0.000	0.000	1.032	0.000	0.01
		B		0.000	0.000	0.802	0.000	0.00
		C		0.000	0.000	0.802	0.000	0.01
L44	58.7500-53.7500	A	0.897	0.000	0.000	20.615	0.000	0.14
		B		0.000	0.000	16.023	0.000	0.08
		C		0.000	0.000	16.023	0.000	0.21
L45	53.7500-48.5000	A	0.888	0.000	0.000	20.200	0.000	0.13
		B		0.000	0.000	17.074	0.000	0.09
		C		0.000	0.000	17.074	0.000	0.22
L46	48.5000-47.5000	A	0.882	0.000	0.000	3.907	0.000	0.03
		B		0.000	0.000	4.172	0.000	0.02
		C		0.000	0.000	4.172	0.000	0.05
L47	47.5000-46.8800	A	0.881	0.000	0.000	2.567	0.000	0.02
		B		0.000	0.000	2.732	0.000	0.01
		C		0.000	0.000	2.732	0.000	0.03
L48	46.8800-46.6300	A	0.880	0.000	0.000	1.035	0.000	0.01
		B		0.000	0.000	1.102	0.000	0.01
		C		0.000	0.000	1.102	0.000	0.01
L49	46.6300-43.5000	A	0.877	0.000	0.000	12.148	0.000	0.08
		B		0.000	0.000	12.990	0.000	0.07
		C		0.000	0.000	12.990	0.000	0.15
L50	43.5000-43.2500	A	0.874	0.000	0.000	0.991	0.000	0.01
		B		0.000	0.000	1.059	0.000	0.01
		C		0.000	0.000	1.059	0.000	0.01
L51	43.2500-38.2500	A	0.868	0.000	0.000	19.796	0.000	0.13

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		B		0.000	0.000	21.158	0.000	0.11
		C		0.000	0.000	21.158	0.000	0.23
L52	38.2500-33.2500	A	0.857	0.000	0.000	19.740	0.000	0.13
		B		0.000	0.000	21.125	0.000	0.11
		C		0.000	0.000	21.125	0.000	0.23
L53	33.2500-32.5800	A	0.850	0.000	0.000	2.640	0.000	0.02
		B		0.000	0.000	2.827	0.000	0.01
		C		0.000	0.000	2.827	0.000	0.03
L54	32.5800-32.3300	A	0.849	0.000	0.000	0.985	0.000	0.01
		B		0.000	0.000	1.055	0.000	0.01
		C		0.000	0.000	1.055	0.000	0.01
L55	32.3300-29.6700	A	0.845	0.000	0.000	12.268	0.000	0.08
		B		0.000	0.000	12.117	0.000	0.06
		C		0.000	0.000	11.050	0.000	0.12
L56	29.6700-29.4200	A	0.841	0.000	0.000	1.525	0.000	0.01
		B		0.000	0.000	1.325	0.000	0.01
		C		0.000	0.000	1.033	0.000	0.01
L57	29.4200-29.1300	A	0.840	0.000	0.000	1.769	0.000	0.01
		B		0.000	0.000	1.536	0.000	0.01
		C		0.000	0.000	1.198	0.000	0.01
L58	29.1300-28.8800	A	0.839	0.000	0.000	1.524	0.000	0.01
		B		0.000	0.000	1.324	0.000	0.01
		C		0.000	0.000	1.032	0.000	0.01
L59	28.8800-28.0000	A	0.837	0.000	0.000	5.364	0.000	0.03
		B		0.000	0.000	4.660	0.000	0.02
		C		0.000	0.000	3.633	0.000	0.04
L60	28.0000-27.7500	A	0.836	0.000	0.000	1.523	0.000	0.01
		B		0.000	0.000	1.323	0.000	0.01
		C		0.000	0.000	1.032	0.000	0.01
L61	27.7500-26.9200	A	0.834	0.000	0.000	4.321	0.000	0.03
		B		0.000	0.000	3.597	0.000	0.02
		C		0.000	0.000	2.687	0.000	0.03
L62	26.9200-26.6700	A	0.832	0.000	0.000	1.303	0.000	0.01
		B		0.000	0.000	1.083	0.000	0.01
		C		0.000	0.000	0.812	0.000	0.01
L63	26.6700-26.5000	A	0.832	0.000	0.000	0.886	0.000	0.01
		B		0.000	0.000	0.736	0.000	0.00
		C		0.000	0.000	0.552	0.000	0.01
L64	26.5000-26.2500	A	0.831	0.000	0.000	1.303	0.000	0.01
		B		0.000	0.000	1.083	0.000	0.01
		C		0.000	0.000	0.812	0.000	0.01
L65	26.2500-24.9200	A	0.829	0.000	0.000	6.852	0.000	0.04
		B		0.000	0.000	4.426	0.000	0.02
		C		0.000	0.000	4.245	0.000	0.05
L66	24.9200-24.6700	A	0.826	0.000	0.000	1.072	0.000	0.01
		B		0.000	0.000	0.582	0.000	0.00
		C		0.000	0.000	0.891	0.000	0.01
L67	24.6700-22.1700	A	0.821	0.000	0.000	10.707	0.000	0.06
		B		0.000	0.000	5.821	0.000	0.03
		C		0.000	0.000	8.940	0.000	0.10
L68	22.1700-21.9200	A	0.816	0.000	0.000	1.069	0.000	0.01
		B		0.000	0.000	0.582	0.000	0.00
		C		0.000	0.000	0.893	0.000	0.01
L69	21.9200-16.9200	A	0.806	0.000	0.000	21.322	0.000	0.13
		B		0.000	0.000	11.612	0.000	0.06
		C		0.000	0.000	17.835	0.000	0.21
L70	16.9200-11.9200	A	0.782	0.000	0.000	21.180	0.000	0.12
		B		0.000	0.000	11.565	0.000	0.05
		C		0.000	0.000	17.764	0.000	0.20
L71	11.9200-6.9200	A	0.750	0.000	0.000	20.984	0.000	0.12
		B		0.000	0.000	11.500	0.000	0.05
		C		0.000	0.000	17.666	0.000	0.20
L72	6.9200-1.9200	A	0.695	0.000	0.000	19.490	0.000	0.11
		B		0.000	0.000	10.224	0.000	0.05
		C		0.000	0.000	15.170	0.000	0.19
L73	1.9200-1.5000	A	0.632	0.000	0.000	1.554	0.000	0.01
		B		0.000	0.000	0.797	0.000	0.00
		C		0.000	0.000	1.155	0.000	0.02
L74	1.5000-1.2500	A	0.619	0.000	0.000	0.921	0.000	0.00

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft²	A_F ft²	C_AA_A In Face ft²	C_AA_A Out Face ft²	Weight K
		B		0.000	0.000	0.473	0.000	0.00
		C		0.000	0.000	0.686	0.000	0.01
L75	1.2500-1.0000	A	0.606	0.000	0.000	0.918	0.000	0.00
		B		0.000	0.000	0.472	0.000	0.00
		C		0.000	0.000	0.685	0.000	0.01
L76	1.0000-0.0000	A	0.559	0.000	0.000	2.167	0.000	0.01
		B		0.000	0.000	0.937	0.000	0.00
		C		0.000	0.000	1.360	0.000	0.03

Feed Line Center of Pressure

Section	Elevation ft	CP_X in	CP_Z in	CP_X Ice in	CP_Z Ice in
L1	149.0000-144.0000	-0.6812	0.1825	-0.9927	0.2660
L2	144.0000-139.0000	-0.8320	0.2229	-1.2081	0.3237
L3	139.0000-134.0000	-0.8333	0.2233	-1.2154	0.3257
L4	134.0000-129.0000	-0.8345	0.2236	-1.2219	0.3274
L5	129.0000-125.0000	-0.6074	0.1628	-0.9860	0.2642
L6	125.0000-124.7500	-0.3377	0.0905	-0.6263	0.1678
L7	124.7500-119.7500	-0.3322	0.0890	-0.6173	0.1654
L8	119.7500-118.5000	-0.3056	-0.0411	-0.5560	-0.0415
L9	118.5000-118.2500	-0.4333	-0.1867	-0.7454	-0.2646
L10	118.2500-117.0000	-0.4352	-0.1875	-0.7482	-0.2656
L11	117.0000-116.7500	-0.4370	-0.1883	-0.7510	-0.2666
L12	116.7500-111.7500	-0.4461	-0.1921	-0.7547	-0.2678
L13	111.7500-106.7500	-0.4555	-0.1961	-0.7672	-0.2722
L14	106.7500-98.5000	-0.4732	-0.2035	-0.7981	-0.2830
L15	98.5000-97.0000	-0.3993	-0.1717	-0.7181	-0.2546
L16	97.0000-96.7500	-0.3659	-0.1573	-0.6624	-0.2349
L17	96.7500-93.9800	-0.3362	-0.1445	-0.6107	-0.2166
L18	93.9800-93.7300	-0.2944	-0.1265	-0.5374	-0.1906
L19	93.7300-91.5000	-0.3515	-0.5811	-0.5823	-0.5978
L20	91.5000-91.3800	-0.3769	-0.8818	-0.5921	-0.8681
L21	91.3800-91.2500	-0.3428	-0.8018	-0.5902	-0.8653
L22	91.2500-91.1300	-0.3430	-0.8024	-0.5906	-0.8659
L23	91.1300-89.0000	-0.4048	-0.7973	-0.7183	-0.8367
L24	89.0000-88.7500	-0.5145	-0.8563	-0.8494	-0.7932
L25	88.7500-83.7500	-0.6196	-1.0315	-1.0014	-0.9363
L26	83.7500-80.0800	-0.3266	-0.9217	-0.7206	-0.8366
L27	80.0800-79.8300	0.3397	-0.5854	-0.0391	-0.5356
L28	79.8300-74.8300	0.3422	-0.5892	-0.0382	-0.5392
L29	74.8300-73.5000	0.2911	-0.5008	-0.0319	-0.4677
L30	73.5000-73.2500	0.2713	-0.4667	-0.0316	-0.4685
L31	73.2500-71.0000	0.2732	-0.4699	-0.0313	-0.4718
L32	71.0000-70.7500	0.2964	-0.5095	-0.0311	-0.4752
L33	70.7500-65.7500	0.3434	-0.5900	-0.0343	-0.5441
L34	65.7500-64.1300	0.3431	-0.5890	-0.0329	-0.5482
L35	64.1300-63.8800	0.3388	-0.5814	-0.0321	-0.5423
L36	63.8800-63.0000	0.3397	-0.5830	-0.0319	-0.5437
L37	63.0000-62.7500	0.3407	-0.5847	-0.0317	-0.5451
L38	62.7500-62.0800	-1.3690	0.3084	-1.5581	0.2497

Section	Elevation	CP_X	CP_Z	CP_X Ice	CP_Z Ice
	ft	in	in	in	in
L39	62.0800-61.8300	-1.5954	0.3142	-1.7540	0.2558
L40	61.8300-60.6700	-1.6248	0.3548	-1.8204	0.2824
L41	60.6700-60.4200	-1.3248	0.5297	-1.6418	0.4188
L42	60.4200-59.0000	-1.3300	0.5318	-1.6470	0.4203
L43	59.0000-58.7500	-1.3352	0.5339	-1.6522	0.4219
L44	58.7500-53.7500	-1.3507	0.5402	-1.6682	0.4268
L45	53.7500-48.5000	-0.9730	0.2682	-1.3496	0.1877
L46	48.5000-47.5000	0.1288	-0.4297	-0.3212	-0.4305
L47	47.5000-46.8800	0.1112	-0.3713	-0.3052	-0.4126
L48	46.8800-46.6300	0.1114	-0.3720	-0.3054	-0.4133
L49	46.6300-43.5000	0.1305	-0.4363	-0.3212	-0.4364
L50	43.5000-43.2500	0.1294	-0.4331	-0.3167	-0.4321
L51	43.2500-38.2500	0.1307	-0.4380	-0.3177	-0.4365
L52	38.2500-33.2500	0.1331	-0.4471	-0.3189	-0.4445
L53	33.2500-32.5800	0.1344	-0.4523	-0.3193	-0.4490
L54	32.5800-32.3300	0.1346	-0.4532	-0.3193	-0.4498
L55	32.3300-29.6700	0.1121	-0.5348	-0.3094	-0.5217
L56	29.6700-29.4200	0.1959	-0.6173	-0.1740	-0.5944
L57	29.4200-29.1300	0.1961	-0.6179	-0.1739	-0.5950
L58	29.1300-28.8800	0.1964	-0.6186	-0.1738	-0.5956
L59	28.8800-28.0000	0.1968	-0.6200	-0.1735	-0.5968
L60	28.0000-27.7500	0.1973	-0.6213	-0.1733	-0.5980
L61	27.7500-26.9200	1.1828	-2.2537	0.6524	-2.0286
L62	26.9200-26.6700	1.2838	-2.4179	0.7442	-2.1738
L63	26.6700-26.5000	1.2849	-2.4198	0.7451	-2.1754
L64	26.5000-26.2500	1.2859	-2.4217	0.7460	-2.1770
L65	26.2500-24.9200	0.0590	-3.0346	-0.3757	-2.7015
L66	24.9200-24.6700	1.8437	-1.4277	1.1318	-1.2822
L67	24.6700-22.1700	1.8789	-1.4053	1.1632	-1.2622
L68	22.1700-21.9200	1.8887	-1.4125	1.1715	-1.2681
L69	21.9200-16.9200	1.9069	-1.4259	1.1877	-1.2790
L70	16.9200-11.9200	1.9415	-1.4513	1.2208	-1.2993
L71	11.9200-6.9200	1.9757	-1.4764	1.2589	-1.3191
L72	6.9200-1.9200	2.0637	-1.2440	1.3103	-1.0882
L73	1.9200-1.5000	2.1163	-1.0959	1.3619	-0.9438
L74	1.5000-1.2500	2.1182	-1.0968	1.3717	-0.9444
L75	1.2500-1.0000	2.1196	-1.0975	1.3805	-0.9449
L76	1.0000-0.0000	1.0967	-0.9606	0.2691	-0.7973

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

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L1	1	AVA5-50(7/8)	144.00 - 148.00	1.0000	1.0000
L2	1	AVA5-50(7/8)	139.00 - 144.00	1.0000	1.0000
L3	1	AVA5-50(7/8)	134.00 - 139.00	1.0000	1.0000
L4	1	AVA5-50(7/8)	129.00 - 134.00	1.0000	1.0000
L5	1	AVA5-50(7/8)	125.00 - 129.00	1.0000	1.0000
L5	49	CCI-040075 Reinforcement	125.00 - 126.00	1.0000	1.0000
L5	50	CCI-040075 Reinforcement	125.00 - 126.00	1.0000	1.0000
L5	51	CCI-040075 Reinforcement	125.00 - 126.00	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L6	1	AVA5-50(7/8)	124.75 - 125.00	1.0000	1.0000
L6	49	CCI-040075 Reinforcement	124.75 - 125.00	1.0000	1.0000
L6	50	CCI-040075 Reinforcement	124.75 - 125.00	1.0000	1.0000
L6	51	CCI-040075 Reinforcement	124.75 - 125.00	1.0000	1.0000
L7	1	AVA5-50(7/8)	119.75 - 124.75	1.0000	1.0000
L7	34	FP 4.00 x 1.25 Reinforcement	119.75 - 120.00	1.0000	1.0000
L7	36	FP 4.00 x 1.25 Reinforcement	119.75 - 120.00	1.0000	1.0000
L7	38	FP 4.00 x 1.25 Reinforcement	119.75 - 120.00	1.0000	1.0000
L7	49	CCI-040075 Reinforcement	119.75 - 124.75	1.0000	1.0000
L7	50	CCI-040075 Reinforcement	119.75 - 124.75	1.0000	1.0000
L7	51	CCI-040075 Reinforcement	119.75 - 124.75	1.0000	1.0000
L8	1	AVA5-50(7/8)	118.50 - 119.75	1.0000	1.0000
L8	13	CU12PSM9P6XXX(1-1/2)	118.50 - 119.00	1.0000	1.0000
L8	34	FP 4.00 x 1.25 Reinforcement	118.50 - 119.75	1.0000	1.0000
L8	36	FP 4.00 x 1.25 Reinforcement	118.50 - 119.75	1.0000	1.0000
L8	38	FP 4.00 x 1.25 Reinforcement	118.50 - 119.75	1.0000	1.0000
L8	49	CCI-040075 Reinforcement	118.50 - 119.75	1.0000	1.0000
L8	50	CCI-040075 Reinforcement	118.50 - 119.75	1.0000	1.0000
L8	51	CCI-040075 Reinforcement	118.50 - 119.75	1.0000	1.0000
L9	1	AVA5-50(7/8)	118.25 - 118.50	1.0000	1.0000
L9	13	CU12PSM9P6XXX(1-1/2)	118.25 - 118.50	1.0000	1.0000
L9	34	FP 4.00 x 1.25 Reinforcement	118.25 - 118.50	1.0000	1.0000
L9	36	FP 4.00 x 1.25 Reinforcement	118.25 - 118.50	1.0000	1.0000
L9	38	FP 4.00 x 1.25 Reinforcement	118.25 - 118.50	1.0000	1.0000
L9	49	CCI-040075 Reinforcement	118.25 - 118.50	1.0000	1.0000
L9	50	CCI-040075 Reinforcement	118.25 - 118.50	1.0000	1.0000
L9	51	CCI-040075 Reinforcement	118.25 - 118.50	1.0000	1.0000
L10	1	AVA5-50(7/8)	117.00 - 118.25	1.0000	1.0000
L10	13	CU12PSM9P6XXX(1-1/2)	117.00 - 118.25	1.0000	1.0000
L10	34	FP 4.00 x 1.25 Reinforcement	117.00 - 118.25	1.0000	1.0000
L10	36	FP 4.00 x 1.25 Reinforcement	117.00 - 118.25	1.0000	1.0000
L10	38	FP 4.00 x 1.25 Reinforcement	117.00 - 118.25	1.0000	1.0000
L10	49	CCI-040075 Reinforcement	117.00 - 118.25	1.0000	1.0000
L10	50	CCI-040075 Reinforcement	117.00 - 118.25	1.0000	1.0000
L10	51	CCI-040075	117.00 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
		Reinforcement	118.25		
L11	1	AVA5-50(7/8)	116.75 - 117.00	1.0000	1.0000
L11	13	CU12PSM9P6XXX(1-1/2)	116.75 - 117.00	1.0000	1.0000
L11	34	FP 4.00 x 1.25 Reinforcement	116.75 - 117.00	1.0000	1.0000
L11	36	FP 4.00 x 1.25 Reinforcement	116.75 - 117.00	1.0000	1.0000
L11	38	FP 4.00 x 1.25 Reinforcement	116.75 - 117.00	1.0000	1.0000
L11	49	CCI-040075 Reinforcement	116.75 - 117.00	1.0000	1.0000
L11	50	CCI-040075 Reinforcement	116.75 - 117.00	1.0000	1.0000
L11	51	CCI-040075 Reinforcement	116.75 - 117.00	1.0000	1.0000
L12	1	AVA5-50(7/8)	111.75 - 116.75	1.0000	1.0000
L12	13	CU12PSM9P6XXX(1-1/2)	111.75 - 116.75	1.0000	1.0000
L12	34	FP 4.00 x 1.25 Reinforcement	111.75 - 116.75	1.0000	1.0000
L12	36	FP 4.00 x 1.25 Reinforcement	111.75 - 116.75	1.0000	1.0000
L12	38	FP 4.00 x 1.25 Reinforcement	111.75 - 116.75	1.0000	1.0000
L12	49	CCI-040075 Reinforcement	116.00 - 116.75	1.0000	1.0000
L12	50	CCI-040075 Reinforcement	116.00 - 116.75	1.0000	1.0000
L12	51	CCI-040075 Reinforcement	116.00 - 116.75	1.0000	1.0000
L12	77	CCI-040075 Reinforcement	111.75 - 115.92	1.0000	1.0000
L12	79	CCI-040075 Reinforcement	111.75 - 115.92	1.0000	1.0000
L12	81	CCI-040075 Reinforcement	111.75 - 115.92	1.0000	1.0000
L13	1	AVA5-50(7/8)	106.75 - 111.75	1.0000	1.0000
L13	13	CU12PSM9P6XXX(1-1/2)	106.75 - 111.75	1.0000	1.0000
L13	34	FP 4.00 x 1.25 Reinforcement	106.75 - 111.75	1.0000	1.0000
L13	36	FP 4.00 x 1.25 Reinforcement	106.75 - 111.75	1.0000	1.0000
L13	38	FP 4.00 x 1.25 Reinforcement	106.75 - 111.75	1.0000	1.0000
L13	77	CCI-040075 Reinforcement	106.75 - 111.75	1.0000	1.0000
L13	79	CCI-040075 Reinforcement	106.75 - 111.75	1.0000	1.0000
L13	81	CCI-040075 Reinforcement	106.75 - 111.75	1.0000	1.0000
L14	1	AVA5-50(7/8)	98.50 - 106.75	1.0000	1.0000
L14	13	CU12PSM9P6XXX(1-1/2)	98.50 - 106.75	1.0000	1.0000
L14	33	FP 4.00 x 1.25 Reinforcement	98.50 - 99.51	1.0000	1.0000
L14	34	FP 4.00 x 1.25 Reinforcement	99.51 - 106.75	1.0000	1.0000
L14	35	FP 4.00 x 1.25 Reinforcement	98.50 - 99.51	1.0000	1.0000
L14	36	FP 4.00 x 1.25 Reinforcement	99.51 - 106.75	1.0000	1.0000
L14	37	FP 4.00 x 1.25 Reinforcement	98.50 - 99.51	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L14	38	FP 4.00 x 1.25 Reinforcement	99.51 - 106.75	1.0000	1.0000
L14	76	CCI-040075 Reinforcement	98.50 - 99.51	1.0000	1.0000
L14	77	CCI-040075 Reinforcement	99.51 - 106.75	1.0000	1.0000
L14	78	CCI-040075 Reinforcement	98.50 - 99.51	1.0000	1.0000
L14	79	CCI-040075 Reinforcement	99.51 - 106.75	1.0000	1.0000
L14	80	CCI-040075 Reinforcement	98.50 - 99.51	1.0000	1.0000
L14	81	CCI-040075 Reinforcement	99.51 - 106.75	1.0000	1.0000
L15	1	AVA5-50(7/8)	97.00 - 98.50	1.0000	1.0000
L15	13	CU12PSM9P6XXX(1-1/2)	97.00 - 98.50	1.0000	1.0000
L15	33	FP 4.00 x 1.25 Reinforcement	97.00 - 98.50	1.0000	1.0000
L15	35	FP 4.00 x 1.25 Reinforcement	97.00 - 98.50	1.0000	1.0000
L15	37	FP 4.00 x 1.25 Reinforcement	97.00 - 98.50	1.0000	1.0000
L15	46	CCI-040075 Reinforcement	97.00 - 98.00	1.0000	1.0000
L15	47	CCI-040075 Reinforcement	97.00 - 98.00	1.0000	1.0000
L15	48	CCI-040075 Reinforcement	97.00 - 98.00	1.0000	1.0000
L15	76	CCI-040075 Reinforcement	97.00 - 98.50	1.0000	1.0000
L15	78	CCI-040075 Reinforcement	97.00 - 98.50	1.0000	1.0000
L15	80	CCI-040075 Reinforcement	97.00 - 98.50	1.0000	1.0000
L16	1	AVA5-50(7/8)	96.75 - 97.00	1.0000	1.0000
L16	13	CU12PSM9P6XXX(1-1/2)	96.75 - 97.00	1.0000	1.0000
L16	33	FP 4.00 x 1.25 Reinforcement	96.75 - 97.00	1.0000	1.0000
L16	35	FP 4.00 x 1.25 Reinforcement	96.75 - 97.00	1.0000	1.0000
L16	37	FP 4.00 x 1.25 Reinforcement	96.75 - 97.00	1.0000	1.0000
L16	46	CCI-040075 Reinforcement	96.75 - 97.00	1.0000	1.0000
L16	47	CCI-040075 Reinforcement	96.75 - 97.00	1.0000	1.0000
L16	48	CCI-040075 Reinforcement	96.75 - 97.00	1.0000	1.0000
L16	76	CCI-040075 Reinforcement	96.75 - 97.00	1.0000	1.0000
L16	78	CCI-040075 Reinforcement	96.75 - 97.00	1.0000	1.0000
L16	80	CCI-040075 Reinforcement	96.75 - 97.00	1.0000	1.0000
L17	1	AVA5-50(7/8)	93.98 - 96.75	1.0000	1.0000
L17	13	CU12PSM9P6XXX(1-1/2)	93.98 - 96.75	1.0000	1.0000
L17	33	FP 4.00 x 1.25 Reinforcement	93.98 - 96.75	1.0000	1.0000
L17	35	FP 4.00 x 1.25 Reinforcement	93.98 - 96.75	1.0000	1.0000
L17	37	FP 4.00 x 1.25 Reinforcement	93.98 - 96.75	1.0000	1.0000
L17	46	CCI-040075	93.98 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
		Reinforcement	96.75		
L17	47	CCI-040075	93.98 -	1.0000	1.0000
		Reinforcement	96.75		
L17	48	CCI-040075	93.98 -	1.0000	1.0000
		Reinforcement	96.75		
L17	73	CCI-040075	93.98 -	1.0000	1.0000
		Reinforcement	95.00		
L17	74	CCI-040075	93.98 -	1.0000	1.0000
		Reinforcement	95.00		
L17	75	CCI-040075	93.98 -	1.0000	1.0000
		Reinforcement	95.00		
L17	76	CCI-040075	93.98 -	1.0000	1.0000
		Reinforcement	96.75		
L17	78	CCI-040075	93.98 -	1.0000	1.0000
		Reinforcement	96.75		
L17	80	CCI-040075	93.98 -	1.0000	1.0000
		Reinforcement	96.75		
L18	1	AVA5-50(7/8)	93.73 -	1.0000	1.0000
			93.98		
L18	13	CU12PSM9P6XXX(1-1/2)	93.73 -	1.0000	1.0000
			93.98		
L18	33	FP 4.00 x 1.25	93.73 -	1.0000	1.0000
		Reinforcement	93.98		
L18	35	FP 4.00 x 1.25	93.73 -	1.0000	1.0000
		Reinforcement	93.98		
L18	37	FP 4.00 x 1.25	93.73 -	1.0000	1.0000
		Reinforcement	93.98		
L18	46	CCI-040075	93.73 -	1.0000	1.0000
		Reinforcement	93.98		
L18	47	CCI-040075	93.73 -	1.0000	1.0000
		Reinforcement	93.98		
L18	48	CCI-040075	93.73 -	1.0000	1.0000
		Reinforcement	93.98		
L18	73	CCI-040075	93.73 -	1.0000	1.0000
		Reinforcement	93.98		
L18	74	CCI-040075	93.73 -	1.0000	1.0000
		Reinforcement	93.98		
L18	75	CCI-040075	93.73 -	1.0000	1.0000
		Reinforcement	93.98		
L18	76	CCI-040075	93.73 -	1.0000	1.0000
		Reinforcement	93.98		
L18	78	CCI-040075	93.73 -	1.0000	1.0000
		Reinforcement	93.98		
L18	80	CCI-040075	93.73 -	1.0000	1.0000
		Reinforcement	93.98		
L19	1	AVA5-50(7/8)	91.50 -	1.0000	1.0000
			93.73		
L19	13	CU12PSM9P6XXX(1-1/2)	91.50 -	1.0000	1.0000
			93.73		
L19	30	FP 5.50 x 1.25	91.50 -	1.0000	1.0000
		Reinforcement	92.75		
L19	31	FP 5.50 x 1.25	91.50 -	1.0000	1.0000
		Reinforcement	92.75		
L19	32	FP 5.50 x 1.25	91.50 -	1.0000	1.0000
		Reinforcement	92.75		
L19	33	FP 4.00 x 1.25	91.50 -	1.0000	1.0000
		Reinforcement	93.73		
L19	35	FP 4.00 x 1.25	91.50 -	1.0000	1.0000
		Reinforcement	93.73		
L19	37	FP 4.00 x 1.25	91.50 -	1.0000	1.0000
		Reinforcement	93.73		
L19	46	CCI-040075	91.50 -	1.0000	1.0000
		Reinforcement	93.73		
L19	47	CCI-040075	91.50 -	1.0000	1.0000
		Reinforcement	93.73		
L19	48	CCI-040075	91.50 -	1.0000	1.0000
		Reinforcement	93.73		
L19	73	CCI-040075	91.50 -	1.0000	1.0000
		Reinforcement	93.73		

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L19	74	CCI-040075 Reinforcement	91.50 - 93.73	1.0000	1.0000
L19	75	CCI-040075 Reinforcement	91.50 - 93.73	1.0000	1.0000
L19	76	CCI-040075 Reinforcement	93.08 - 93.73	1.0000	1.0000
L19	78	CCI-040075 Reinforcement	93.08 - 93.73	1.0000	1.0000
L19	80	CCI-040075 Reinforcement	93.08 - 93.73	1.0000	1.0000
L20	1	AVA5-50(7/8)	91.38 - 91.50	1.0000	1.0000
L20	13	CU12PSM9P6XXX(1-1/2)	91.38 - 91.50	1.0000	1.0000
L20	30	FP 5.50 x 1.25 Reinforcement	91.38 - 91.50	1.0000	1.0000
L20	31	FP 5.50 x 1.25 Reinforcement	91.38 - 91.50	1.0000	1.0000
L20	32	FP 5.50 x 1.25 Reinforcement	91.38 - 91.50	1.0000	1.0000
L20	33	FP 4.00 x 1.25 Reinforcement	91.38 - 91.50	1.0000	1.0000
L20	35	FP 4.00 x 1.25 Reinforcement	91.38 - 91.50	1.0000	1.0000
L20	37	FP 4.00 x 1.25 Reinforcement	91.38 - 91.50	1.0000	1.0000
L20	46	CCI-040075 Reinforcement	91.38 - 91.50	1.0000	1.0000
L20	47	CCI-040075 Reinforcement	91.38 - 91.50	1.0000	1.0000
L20	48	CCI-040075 Reinforcement	91.38 - 91.50	1.0000	1.0000
L20	73	CCI-040075 Reinforcement	91.38 - 91.50	1.0000	1.0000
L20	74	CCI-040075 Reinforcement	91.38 - 91.50	1.0000	1.0000
L20	75	CCI-040075 Reinforcement	91.38 - 91.50	1.0000	1.0000
L21	1	AVA5-50(7/8)	91.25 - 91.38	1.0000	1.0000
L21	13	CU12PSM9P6XXX(1-1/2)	91.25 - 91.38	1.0000	1.0000
L21	30	FP 5.50 x 1.25 Reinforcement	91.25 - 91.38	1.0000	1.0000
L21	31	FP 5.50 x 1.25 Reinforcement	91.25 - 91.38	1.0000	1.0000
L21	32	FP 5.50 x 1.25 Reinforcement	91.25 - 91.38	1.0000	1.0000
L21	33	FP 4.00 x 1.25 Reinforcement	91.25 - 91.38	1.0000	1.0000
L21	35	FP 4.00 x 1.25 Reinforcement	91.25 - 91.38	1.0000	1.0000
L21	37	FP 4.00 x 1.25 Reinforcement	91.25 - 91.38	1.0000	1.0000
L21	46	CCI-040075 Reinforcement	91.25 - 91.38	1.0000	1.0000
L21	47	CCI-040075 Reinforcement	91.25 - 91.38	1.0000	1.0000
L21	48	CCI-040075 Reinforcement	91.25 - 91.38	1.0000	1.0000
L21	73	CCI-040075 Reinforcement	91.25 - 91.38	1.0000	1.0000
L21	74	CCI-040075 Reinforcement	91.25 - 91.38	1.0000	1.0000
L21	75	CCI-040075 Reinforcement	91.25 - 91.38	1.0000	1.0000
L22	1	AVA5-50(7/8)	91.13 - 91.25	1.0000	1.0000
L22	13	CU12PSM9P6XXX(1-1/2)	91.13 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
			91.25		
L22	30	FP 5.50 x 1.25 Reinforcement	91.13 - 91.25	1.0000	1.0000
L22	31	FP 5.50 x 1.25 Reinforcement	91.13 - 91.25	1.0000	1.0000
L22	32	FP 5.50 x 1.25 Reinforcement	91.13 - 91.25	1.0000	1.0000
L22	33	FP 4.00 x 1.25 Reinforcement	91.13 - 91.25	1.0000	1.0000
L22	35	FP 4.00 x 1.25 Reinforcement	91.13 - 91.25	1.0000	1.0000
L22	37	FP 4.00 x 1.25 Reinforcement	91.13 - 91.25	1.0000	1.0000
L22	46	CCI-040075 Reinforcement	91.13 - 91.25	1.0000	1.0000
L22	47	CCI-040075 Reinforcement	91.13 - 91.25	1.0000	1.0000
L22	48	CCI-040075 Reinforcement	91.13 - 91.25	1.0000	1.0000
L22	73	CCI-040075 Reinforcement	91.13 - 91.25	1.0000	1.0000
L22	74	CCI-040075 Reinforcement	91.13 - 91.25	1.0000	1.0000
L22	75	CCI-040075 Reinforcement	91.13 - 91.25	1.0000	1.0000
L23	1	AVA5-50(7/8)	89.00 - 91.13	1.0000	1.0000
L23	13	CU12PSM9P6XXX(1-1/2)	89.00 - 91.13	1.0000	1.0000
L23	15	AVA5-50(7/8)	89.00 - 90.00	1.0000	1.0000
L23	30	FP 5.50 x 1.25 Reinforcement	89.00 - 91.13	1.0000	1.0000
L23	31	FP 5.50 x 1.25 Reinforcement	89.00 - 91.13	1.0000	1.0000
L23	32	FP 5.50 x 1.25 Reinforcement	89.00 - 91.13	1.0000	1.0000
L23	33	FP 4.00 x 1.25 Reinforcement	90.00 - 91.13	1.0000	1.0000
L23	35	FP 4.00 x 1.25 Reinforcement	90.00 - 91.13	1.0000	1.0000
L23	37	FP 4.00 x 1.25 Reinforcement	90.00 - 91.13	1.0000	1.0000
L23	46	CCI-040075 Reinforcement	89.00 - 91.13	1.0000	1.0000
L23	47	CCI-040075 Reinforcement	89.00 - 91.13	1.0000	1.0000
L23	48	CCI-040075 Reinforcement	89.00 - 91.13	1.0000	1.0000
L23	70	CCI-040075 Reinforcement	89.00 - 89.92	1.0000	1.0000
L23	71	CCI-040075 Reinforcement	89.00 - 89.92	1.0000	1.0000
L23	72	CCI-040075 Reinforcement	89.00 - 89.92	1.0000	1.0000
L23	73	CCI-040075 Reinforcement	89.00 - 91.13	1.0000	1.0000
L23	74	CCI-040075 Reinforcement	89.00 - 91.13	1.0000	1.0000
L23	75	CCI-040075 Reinforcement	89.00 - 91.13	1.0000	1.0000
L24	1	AVA5-50(7/8)	88.75 - 89.00	1.0000	1.0000
L24	13	CU12PSM9P6XXX(1-1/2)	88.75 - 89.00	1.0000	1.0000
L24	15	AVA5-50(7/8)	88.75 - 89.00	1.0000	1.0000
L24	30	FP 5.50 x 1.25 Reinforcement	88.75 - 89.00	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L24	31	FP 5.50 x 1.25 Reinforcement	88.75 - 89.00	1.0000	1.0000
L24	32	FP 5.50 x 1.25 Reinforcement	88.75 - 89.00	1.0000	1.0000
L24	46	CCI-040075 Reinforcement	88.75 - 89.00	1.0000	1.0000
L24	47	CCI-040075 Reinforcement	88.75 - 89.00	1.0000	1.0000
L24	48	CCI-040075 Reinforcement	88.75 - 89.00	1.0000	1.0000
L24	70	CCI-040075 Reinforcement	88.75 - 89.00	1.0000	1.0000
L24	71	CCI-040075 Reinforcement	88.75 - 89.00	1.0000	1.0000
L24	72	CCI-040075 Reinforcement	88.75 - 89.00	1.0000	1.0000
L24	73	CCI-040075 Reinforcement	88.75 - 89.00	1.0000	1.0000
L24	74	CCI-040075 Reinforcement	88.75 - 89.00	1.0000	1.0000
L24	75	CCI-040075 Reinforcement	88.75 - 89.00	1.0000	1.0000
L25	1	AVA5-50(7/8)	83.75 - 88.75	1.0000	1.0000
L25	13	CU12PSM9P6XXX(1-1/2)	83.75 - 88.75	1.0000	1.0000
L25	15	AVA5-50(7/8)	83.75 - 88.75	1.0000	1.0000
L25	30	FP 5.50 x 1.25 Reinforcement	83.75 - 88.75	1.0000	1.0000
L25	31	FP 5.50 x 1.25 Reinforcement	83.75 - 88.75	1.0000	1.0000
L25	32	FP 5.50 x 1.25 Reinforcement	83.75 - 88.75	1.0000	1.0000
L25	46	CCI-040075 Reinforcement	88.00 - 88.75	1.0000	1.0000
L25	47	CCI-040075 Reinforcement	88.00 - 88.75	1.0000	1.0000
L25	48	CCI-040075 Reinforcement	88.00 - 88.75	1.0000	1.0000
L25	70	CCI-040075 Reinforcement	83.75 - 88.75	1.0000	1.0000
L25	71	CCI-040075 Reinforcement	83.75 - 88.75	1.0000	1.0000
L25	72	CCI-040075 Reinforcement	83.75 - 88.75	1.0000	1.0000
L25	73	CCI-040075 Reinforcement	83.75 - 88.75	1.0000	1.0000
L25	74	CCI-040075 Reinforcement	83.75 - 88.75	1.0000	1.0000
L25	75	CCI-040075 Reinforcement	83.75 - 88.75	1.0000	1.0000
L26	1	AVA5-50(7/8)	80.08 - 83.75	1.0000	1.0000
L26	13	CU12PSM9P6XXX(1-1/2)	80.08 - 83.75	1.0000	1.0000
L26	15	AVA5-50(7/8)	80.08 - 83.75	1.0000	1.0000
L26	30	FP 5.50 x 1.25 Reinforcement	80.08 - 83.75	1.0000	1.0000
L26	31	FP 5.50 x 1.25 Reinforcement	80.08 - 83.75	1.0000	1.0000
L26	32	FP 5.50 x 1.25 Reinforcement	80.08 - 83.75	1.0000	1.0000
L26	66	CCI-040075 Reinforcement	80.08 - 81.08	1.0000	1.0000
L26	67	CCI-040075 Reinforcement	80.08 - 81.08	1.0000	1.0000
L26	68	CCI-040075	80.08 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
		Reinforcement	81.08		
L26	69	CCI-040075	80.08 -	1.0000	1.0000
		Reinforcement	81.08		
L26	70	CCI-040075	80.08 -	1.0000	1.0000
		Reinforcement	83.75		
L26	71	CCI-040075	80.08 -	1.0000	1.0000
		Reinforcement	83.75		
L26	72	CCI-040075	80.08 -	1.0000	1.0000
		Reinforcement	83.75		
L26	73	CCI-040075	80.08 -	1.0000	1.0000
		Reinforcement	83.75		
L26	74	CCI-040075	80.08 -	1.0000	1.0000
		Reinforcement	83.75		
L26	75	CCI-040075	80.08 -	1.0000	1.0000
		Reinforcement	83.75		
L27	1	AVA5-50(7/8)	79.83 -	1.0000	1.0000
			80.08		
L27	13	CU12PSM9P6XXX(1-1/2)	79.83 -	1.0000	1.0000
			80.08		
L27	15	AVA5-50(7/8)	79.83 -	1.0000	1.0000
			80.08		
L27	30	FP 5.50 x 1.25	79.83 -	1.0000	1.0000
		Reinforcement	80.08		
L27	31	FP 5.50 x 1.25	79.83 -	1.0000	1.0000
		Reinforcement	80.08		
L27	32	FP 5.50 x 1.25	79.83 -	1.0000	1.0000
		Reinforcement	80.08		
L27	66	CCI-040075	79.83 -	1.0000	1.0000
		Reinforcement	80.08		
L27	67	CCI-040075	79.83 -	1.0000	1.0000
		Reinforcement	80.08		
L27	68	CCI-040075	79.83 -	1.0000	1.0000
		Reinforcement	80.08		
L27	69	CCI-040075	79.83 -	1.0000	1.0000
		Reinforcement	80.08		
L27	70	CCI-040075	79.83 -	1.0000	1.0000
		Reinforcement	80.08		
L27	71	CCI-040075	79.83 -	1.0000	1.0000
		Reinforcement	80.08		
L27	72	CCI-040075	79.83 -	1.0000	1.0000
		Reinforcement	80.08		
L27	73	CCI-040075	79.83 -	1.0000	1.0000
		Reinforcement	80.08		
L27	74	CCI-040075	79.83 -	1.0000	1.0000
		Reinforcement	80.08		
L27	75	CCI-040075	79.83 -	1.0000	1.0000
		Reinforcement	80.08		
L28	1	AVA5-50(7/8)	74.83 -	1.0000	1.0000
			79.83		
L28	13	CU12PSM9P6XXX(1-1/2)	74.83 -	1.0000	1.0000
			79.83		
L28	15	AVA5-50(7/8)	74.83 -	1.0000	1.0000
			79.83		
L28	30	FP 5.50 x 1.25	74.83 -	1.0000	1.0000
		Reinforcement	79.83		
L28	31	FP 5.50 x 1.25	74.83 -	1.0000	1.0000
		Reinforcement	79.83		
L28	32	FP 5.50 x 1.25	74.83 -	1.0000	1.0000
		Reinforcement	79.83		
L28	43	CCI-045100	74.83 -	1.0000	1.0000
		Reinforcement	75.00		
L28	44	CCI-045100	74.83 -	1.0000	1.0000
		Reinforcement	75.00		
L28	45	CCI-045100	74.83 -	1.0000	1.0000
		Reinforcement	75.00		
L28	66	CCI-040075	74.83 -	1.0000	1.0000
		Reinforcement	79.83		
L28	67	CCI-040075	74.83 -	1.0000	1.0000
		Reinforcement	79.83		

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L28	68	CCI-040075 Reinforcement	74.83 - 79.83	1.0000	1.0000
L28	69	CCI-040075 Reinforcement	74.83 - 79.83	1.0000	1.0000
L28	70	CCI-040075 Reinforcement	74.83 - 79.83	1.0000	1.0000
L28	71	CCI-040075 Reinforcement	74.83 - 79.83	1.0000	1.0000
L28	72	CCI-040075 Reinforcement	74.83 - 79.83	1.0000	1.0000
L28	73	CCI-040075 Reinforcement	74.83 - 79.83	1.0000	1.0000
L28	74	CCI-040075 Reinforcement	74.83 - 79.83	1.0000	1.0000
L28	75	CCI-040075 Reinforcement	74.83 - 79.83	1.0000	1.0000
L29	1	AVA5-50(7/8)	73.50 - 74.83	1.0000	1.0000
L29	13	CU12PSM9P6XXX(1-1/2)	73.50 - 74.83	1.0000	1.0000
L29	15	AVA5-50(7/8)	73.50 - 74.83	1.0000	1.0000
L29	30	FP 5.50 x 1.25 Reinforcement	73.50 - 74.83	1.0000	1.0000
L29	31	FP 5.50 x 1.25 Reinforcement	73.50 - 74.83	1.0000	1.0000
L29	32	FP 5.50 x 1.25 Reinforcement	73.50 - 74.83	1.0000	1.0000
L29	43	CCI-045100 Reinforcement	73.50 - 74.83	1.0000	1.0000
L29	44	CCI-045100 Reinforcement	73.50 - 74.83	1.0000	1.0000
L29	45	CCI-045100 Reinforcement	73.50 - 74.83	1.0000	1.0000
L29	66	CCI-040075 Reinforcement	73.50 - 74.83	1.0000	1.0000
L29	67	CCI-040075 Reinforcement	73.50 - 74.83	1.0000	1.0000
L29	68	CCI-040075 Reinforcement	73.50 - 74.83	1.0000	1.0000
L29	69	CCI-040075 Reinforcement	73.50 - 74.83	1.0000	1.0000
L29	70	CCI-040075 Reinforcement	73.50 - 74.83	1.0000	1.0000
L29	71	CCI-040075 Reinforcement	73.50 - 74.83	1.0000	1.0000
L29	72	CCI-040075 Reinforcement	73.50 - 74.83	1.0000	1.0000
L29	73	CCI-040075 Reinforcement	73.50 - 74.83	1.0000	1.0000
L29	74	CCI-040075 Reinforcement	73.50 - 74.83	1.0000	1.0000
L29	75	CCI-040075 Reinforcement	73.50 - 74.83	1.0000	1.0000
L30	1	AVA5-50(7/8)	73.25 - 73.50	1.0000	1.0000
L30	13	CU12PSM9P6XXX(1-1/2)	73.25 - 73.50	1.0000	1.0000
L30	15	AVA5-50(7/8)	73.25 - 73.50	1.0000	1.0000
L30	30	FP 5.50 x 1.25 Reinforcement	73.25 - 73.50	1.0000	1.0000
L30	31	FP 5.50 x 1.25 Reinforcement	73.25 - 73.50	1.0000	1.0000
L30	32	FP 5.50 x 1.25 Reinforcement	73.25 - 73.50	1.0000	1.0000
L30	43	CCI-045100 Reinforcement	73.25 - 73.50	1.0000	1.0000
L30	44	CCI-045100	73.25 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
		Reinforcement	73.50		
L30	45	CCI-045100	73.25 - 73.50	1.0000	1.0000
		Reinforcement			
L30	66	CCI-040075	73.25 - 73.50	1.0000	1.0000
		Reinforcement			
L30	67	CCI-040075	73.25 - 73.50	1.0000	1.0000
		Reinforcement			
L30	68	CCI-040075	73.25 - 73.50	1.0000	1.0000
		Reinforcement			
L30	69	CCI-040075	73.25 - 73.50	1.0000	1.0000
		Reinforcement			
L30	70	CCI-040075	73.25 - 73.50	1.0000	1.0000
		Reinforcement			
L30	71	CCI-040075	73.25 - 73.50	1.0000	1.0000
		Reinforcement			
L30	72	CCI-040075	73.25 - 73.50	1.0000	1.0000
		Reinforcement			
L30	73	CCI-040075	73.25 - 73.50	1.0000	1.0000
		Reinforcement			
L30	74	CCI-040075	73.25 - 73.50	1.0000	1.0000
		Reinforcement			
L30	75	CCI-040075	73.25 - 73.50	1.0000	1.0000
		Reinforcement			
L31	1	AVA5-50(7/8)	71.00 - 73.25	1.0000	1.0000
L31	13	CU12PSM9P6XXX(1-1/2)	71.00 - 73.25	1.0000	1.0000
L31	15	AVA5-50(7/8)	71.00 - 73.25	1.0000	1.0000
L31	30	FP 5.50 x 1.25	71.00 -	1.0000	1.0000
		Reinforcement	73.25		
L31	31	FP 5.50 x 1.25	71.00 -	1.0000	1.0000
		Reinforcement	73.25		
L31	32	FP 5.50 x 1.25	71.00 -	1.0000	1.0000
		Reinforcement	73.25		
L31	43	CCI-045100	71.00 -	1.0000	1.0000
		Reinforcement	73.25		
L31	44	CCI-045100	71.00 -	1.0000	1.0000
		Reinforcement	73.25		
L31	45	CCI-045100	71.00 -	1.0000	1.0000
		Reinforcement	73.25		
L31	66	CCI-040075	71.00 -	1.0000	1.0000
		Reinforcement	73.25		
L31	67	CCI-040075	71.00 -	1.0000	1.0000
		Reinforcement	73.25		
L31	68	CCI-040075	71.00 -	1.0000	1.0000
		Reinforcement	73.25		
L31	69	CCI-040075	71.00 -	1.0000	1.0000
		Reinforcement	73.25		
L31	70	CCI-040075	71.00 -	1.0000	1.0000
		Reinforcement	73.25		
L31	71	CCI-040075	71.00 -	1.0000	1.0000
		Reinforcement	73.25		
L31	72	CCI-040075	71.00 -	1.0000	1.0000
		Reinforcement	73.25		
L31	73	CCI-040075	71.00 -	1.0000	1.0000
		Reinforcement	73.25		
L31	74	CCI-040075	71.00 -	1.0000	1.0000
		Reinforcement	73.25		
L31	75	CCI-040075	71.00 -	1.0000	1.0000
		Reinforcement	73.25		
L32	1	AVA5-50(7/8)	70.75 - 71.00	1.0000	1.0000
L32	13	CU12PSM9P6XXX(1-1/2)	70.75 - 71.00	1.0000	1.0000
L32	15	AVA5-50(7/8)	70.75 - 71.00	1.0000	1.0000
L32	30	FP 5.50 x 1.25	70.75 -	1.0000	1.0000
		Reinforcement	71.00		

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L32	31	FP 5.50 x 1.25 Reinforcement	70.75 - 71.00	1.0000	1.0000
L32	32	FP 5.50 x 1.25 Reinforcement	70.75 - 71.00	1.0000	1.0000
L32	43	CCI-045100 Reinforcement	70.75 - 71.00	1.0000	1.0000
L32	44	CCI-045100 Reinforcement	70.75 - 71.00	1.0000	1.0000
L32	45	CCI-045100 Reinforcement	70.75 - 71.00	1.0000	1.0000
L32	66	CCI-040075 Reinforcement	70.75 - 71.00	1.0000	1.0000
L32	67	CCI-040075 Reinforcement	70.75 - 71.00	1.0000	1.0000
L32	68	CCI-040075 Reinforcement	70.75 - 71.00	1.0000	1.0000
L32	69	CCI-040075 Reinforcement	70.75 - 71.00	1.0000	1.0000
L32	70	CCI-040075 Reinforcement	70.75 - 71.00	1.0000	1.0000
L32	71	CCI-040075 Reinforcement	70.75 - 71.00	1.0000	1.0000
L32	72	CCI-040075 Reinforcement	70.75 - 71.00	1.0000	1.0000
L32	73	CCI-040075 Reinforcement	70.75 - 71.00	1.0000	1.0000
L32	74	CCI-040075 Reinforcement	70.75 - 71.00	1.0000	1.0000
L32	75	CCI-040075 Reinforcement	70.75 - 71.00	1.0000	1.0000
L33	1	AVA5-50(7/8)	65.75 - 70.75	1.0000	1.0000
L33	13	CU12PSM9P6XXX(1-1/2)	65.75 - 70.75	1.0000	1.0000
L33	15	AVA5-50(7/8)	65.75 - 70.75	1.0000	1.0000
L33	30	FP 5.50 x 1.25 Reinforcement	65.75 - 70.75	1.0000	1.0000
L33	31	FP 5.50 x 1.25 Reinforcement	65.75 - 70.75	1.0000	1.0000
L33	32	FP 5.50 x 1.25 Reinforcement	65.75 - 70.75	1.0000	1.0000
L33	43	CCI-045100 Reinforcement	65.75 - 70.75	1.0000	1.0000
L33	44	CCI-045100 Reinforcement	65.75 - 70.75	1.0000	1.0000
L33	45	CCI-045100 Reinforcement	65.75 - 70.75	1.0000	1.0000
L33	66	CCI-040075 Reinforcement	65.75 - 70.75	1.0000	1.0000
L33	67	CCI-040075 Reinforcement	65.75 - 70.75	1.0000	1.0000
L33	68	CCI-040075 Reinforcement	65.75 - 70.75	1.0000	1.0000
L33	69	CCI-040075 Reinforcement	65.75 - 70.75	1.0000	1.0000
L33	70	CCI-040075 Reinforcement	65.75 - 70.75	1.0000	1.0000
L33	71	CCI-040075 Reinforcement	65.75 - 70.75	1.0000	1.0000
L33	72	CCI-040075 Reinforcement	65.75 - 70.75	1.0000	1.0000
L33	73	CCI-040075 Reinforcement	70.00 - 70.75	1.0000	1.0000
L33	74	CCI-040075 Reinforcement	70.00 - 70.75	1.0000	1.0000
L33	75	CCI-040075 Reinforcement	70.00 - 70.75	1.0000	1.0000
L34	1	AVA5-50(7/8)	64.13 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
			65.75		
L34	13	CU12PSM9P6XXX(1-1/2)	64.13 - 65.75	1.0000	1.0000
L34	15	AVA5-50(7/8)	64.13 - 65.75	1.0000	1.0000
L34	27	FP 5.50 x 1.25 Reinforcement	64.13 - 65.50	1.0000	1.0000
L34	28	FP 5.50 x 1.25 Reinforcement	64.13 - 65.50	1.0000	1.0000
L34	29	FP 5.50 x 1.25 Reinforcement	64.13 - 65.50	1.0000	1.0000
L34	30	FP 5.50 x 1.25 Reinforcement	64.13 - 65.75	1.0000	1.0000
L34	31	FP 5.50 x 1.25 Reinforcement	64.13 - 65.75	1.0000	1.0000
L34	32	FP 5.50 x 1.25 Reinforcement	64.13 - 65.75	1.0000	1.0000
L34	43	CCI-045100 Reinforcement	64.13 - 65.75	1.0000	1.0000
L34	44	CCI-045100 Reinforcement	64.13 - 65.75	1.0000	1.0000
L34	45	CCI-045100 Reinforcement	64.13 - 65.75	1.0000	1.0000
L34	66	CCI-040075 Reinforcement	64.13 - 65.75	1.0000	1.0000
L34	67	CCI-040075 Reinforcement	64.13 - 65.75	1.0000	1.0000
L34	68	CCI-040075 Reinforcement	64.13 - 65.75	1.0000	1.0000
L34	69	CCI-040075 Reinforcement	64.13 - 65.75	1.0000	1.0000
L34	70	CCI-040075 Reinforcement	65.58 - 65.75	1.0000	1.0000
L34	71	CCI-040075 Reinforcement	65.58 - 65.75	1.0000	1.0000
L34	72	CCI-040075 Reinforcement	65.58 - 65.75	1.0000	1.0000
L35	1	AVA5-50(7/8)	63.88 - 64.13	1.0000	1.0000
L35	13	CU12PSM9P6XXX(1-1/2)	63.88 - 64.13	1.0000	1.0000
L35	15	AVA5-50(7/8)	63.88 - 64.13	1.0000	1.0000
L35	27	FP 5.50 x 1.25 Reinforcement	63.88 - 64.13	1.0000	1.0000
L35	28	FP 5.50 x 1.25 Reinforcement	63.88 - 64.13	1.0000	1.0000
L35	29	FP 5.50 x 1.25 Reinforcement	63.88 - 64.13	1.0000	1.0000
L35	30	FP 5.50 x 1.25 Reinforcement	63.88 - 64.13	1.0000	1.0000
L35	31	FP 5.50 x 1.25 Reinforcement	63.88 - 64.13	1.0000	1.0000
L35	32	FP 5.50 x 1.25 Reinforcement	63.88 - 64.13	1.0000	1.0000
L35	43	CCI-045100 Reinforcement	63.88 - 64.13	1.0000	1.0000
L35	44	CCI-045100 Reinforcement	63.88 - 64.13	1.0000	1.0000
L35	45	CCI-045100 Reinforcement	63.88 - 64.13	1.0000	1.0000
L35	66	CCI-040075 Reinforcement	63.88 - 64.13	1.0000	1.0000
L35	67	CCI-040075 Reinforcement	63.88 - 64.13	1.0000	1.0000
L35	68	CCI-040075 Reinforcement	63.88 - 64.13	1.0000	1.0000
L35	69	CCI-040075 Reinforcement	63.88 - 64.13	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L36	1	AVA5-50(7/8)	63.00 - 63.88	1.0000	1.0000
L36	13	CU12PSM9P6XXX(1-1/2)	63.00 - 63.88	1.0000	1.0000
L36	15	AVA5-50(7/8)	63.00 - 63.88	1.0000	1.0000
L36	27	FP 5.50 x 1.25 Reinforcement	63.00 - 63.88	1.0000	1.0000
L36	28	FP 5.50 x 1.25 Reinforcement	63.00 - 63.88	1.0000	1.0000
L36	29	FP 5.50 x 1.25 Reinforcement	63.00 - 63.88	1.0000	1.0000
L36	30	FP 5.50 x 1.25 Reinforcement	63.00 - 63.88	1.0000	1.0000
L36	31	FP 5.50 x 1.25 Reinforcement	63.00 - 63.88	1.0000	1.0000
L36	32	FP 5.50 x 1.25 Reinforcement	63.00 - 63.88	1.0000	1.0000
L36	43	CCI-045100 Reinforcement	63.00 - 63.88	1.0000	1.0000
L36	44	CCI-045100 Reinforcement	63.00 - 63.88	1.0000	1.0000
L36	45	CCI-045100 Reinforcement	63.00 - 63.88	1.0000	1.0000
L36	66	CCI-040075 Reinforcement	63.00 - 63.88	1.0000	1.0000
L36	67	CCI-040075 Reinforcement	63.00 - 63.88	1.0000	1.0000
L36	68	CCI-040075 Reinforcement	63.00 - 63.88	1.0000	1.0000
L36	69	CCI-040075 Reinforcement	63.00 - 63.88	1.0000	1.0000
L37	1	AVA5-50(7/8)	62.75 - 63.00	1.0000	1.0000
L37	13	CU12PSM9P6XXX(1-1/2)	62.75 - 63.00	1.0000	1.0000
L37	15	AVA5-50(7/8)	62.75 - 63.00	1.0000	1.0000
L37	27	FP 5.50 x 1.25 Reinforcement	62.75 - 63.00	1.0000	1.0000
L37	28	FP 5.50 x 1.25 Reinforcement	62.75 - 63.00	1.0000	1.0000
L37	29	FP 5.50 x 1.25 Reinforcement	62.75 - 63.00	1.0000	1.0000
L37	30	FP 5.50 x 1.25 Reinforcement	62.75 - 63.00	1.0000	1.0000
L37	31	FP 5.50 x 1.25 Reinforcement	62.75 - 63.00	1.0000	1.0000
L37	32	FP 5.50 x 1.25 Reinforcement	62.75 - 63.00	1.0000	1.0000
L37	43	CCI-045100 Reinforcement	62.75 - 63.00	1.0000	1.0000
L37	44	CCI-045100 Reinforcement	62.75 - 63.00	1.0000	1.0000
L37	45	CCI-045100 Reinforcement	62.75 - 63.00	1.0000	1.0000
L37	66	CCI-040075 Reinforcement	62.75 - 63.00	1.0000	1.0000
L37	67	CCI-040075 Reinforcement	62.75 - 63.00	1.0000	1.0000
L37	68	CCI-040075 Reinforcement	62.75 - 63.00	1.0000	1.0000
L37	69	CCI-040075 Reinforcement	62.75 - 63.00	1.0000	1.0000
L38	1	AVA5-50(7/8)	62.08 - 62.75	1.0000	1.0000
L38	13	CU12PSM9P6XXX(1-1/2)	62.08 - 62.75	1.0000	1.0000
L38	15	AVA5-50(7/8)	62.08 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
			62.75		
L38	27	FP 5.50 x 1.25 Reinforcement	62.08 - 62.75	1.0000	1.0000
L38	28	FP 5.50 x 1.25 Reinforcement	62.08 - 62.75	1.0000	1.0000
L38	29	FP 5.50 x 1.25 Reinforcement	62.08 - 62.75	1.0000	1.0000
L38	43	CCI-045100 Reinforcement	62.08 - 62.75	1.0000	1.0000
L38	44	CCI-045100 Reinforcement	62.08 - 62.75	1.0000	1.0000
L38	45	CCI-045100 Reinforcement	62.08 - 62.75	1.0000	1.0000
L38	62	CCI-060100 Reinforcement	62.08 - 62.67	1.0000	1.0000
L38	64	CCI-060100 Reinforcement	62.08 - 62.67	1.0000	1.0000
L38	66	CCI-040075 Reinforcement	62.08 - 62.75	1.0000	1.0000
L38	67	CCI-040075 Reinforcement	62.08 - 62.75	1.0000	1.0000
L38	68	CCI-040075 Reinforcement	62.08 - 62.75	1.0000	1.0000
L38	69	CCI-040075 Reinforcement	62.08 - 62.75	1.0000	1.0000
L39	1	AVA5-50(7/8)	61.83 - 62.08	1.0000	1.0000
L39	13	CU12PSM9P6XXX(1-1/2)	61.83 - 62.08	1.0000	1.0000
L39	15	AVA5-50(7/8)	61.83 - 62.08	1.0000	1.0000
L39	27	FP 5.50 x 1.25 Reinforcement	61.83 - 62.08	1.0000	1.0000
L39	28	FP 5.50 x 1.25 Reinforcement	61.83 - 62.08	1.0000	1.0000
L39	29	FP 5.50 x 1.25 Reinforcement	61.83 - 62.08	1.0000	1.0000
L39	43	CCI-045100 Reinforcement	61.83 - 62.08	1.0000	1.0000
L39	44	CCI-045100 Reinforcement	61.83 - 62.08	1.0000	1.0000
L39	45	CCI-045100 Reinforcement	61.83 - 62.08	1.0000	1.0000
L39	62	CCI-060100 Reinforcement	61.83 - 62.08	1.0000	1.0000
L39	64	CCI-060100 Reinforcement	61.83 - 62.08	1.0000	1.0000
L39	66	CCI-040075 Reinforcement	61.83 - 62.08	1.0000	1.0000
L39	67	CCI-040075 Reinforcement	61.83 - 62.08	1.0000	1.0000
L39	68	CCI-040075 Reinforcement	61.83 - 62.08	1.0000	1.0000
L39	69	CCI-040075 Reinforcement	61.83 - 62.08	1.0000	1.0000
L40	1	AVA5-50(7/8)	60.67 - 61.83	1.0000	1.0000
L40	13	CU12PSM9P6XXX(1-1/2)	60.67 - 61.83	1.0000	1.0000
L40	15	AVA5-50(7/8)	60.67 - 61.83	1.0000	1.0000
L40	27	FP 5.50 x 1.25 Reinforcement	60.67 - 61.83	1.0000	1.0000
L40	28	FP 5.50 x 1.25 Reinforcement	60.67 - 61.83	1.0000	1.0000
L40	29	FP 5.50 x 1.25 Reinforcement	60.67 - 61.83	1.0000	1.0000
L40	43	CCI-045100 Reinforcement	60.67 - 61.83	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L40	44	CCI-045100 Reinforcement	60.67 - 61.83	1.0000	1.0000
L40	45	CCI-045100 Reinforcement	60.67 - 61.83	1.0000	1.0000
L40	62	CCI-060100 Reinforcement	60.67 - 61.83	1.0000	1.0000
L40	63	CCI-060100 Reinforcement	60.67 - 61.00	1.0000	1.0000
L40	64	CCI-060100 Reinforcement	60.67 - 61.83	1.0000	1.0000
L40	66	CCI-040075 Reinforcement	61.08 - 61.83	1.0000	1.0000
L40	67	CCI-040075 Reinforcement	61.08 - 61.83	1.0000	1.0000
L40	68	CCI-040075 Reinforcement	61.08 - 61.83	1.0000	1.0000
L40	69	CCI-040075 Reinforcement	61.08 - 61.83	1.0000	1.0000
L41	1	AVA5-50(7/8)	60.42 - 60.67	1.0000	1.0000
L41	13	CU12PSM9P6XXX(1-1/2)	60.42 - 60.67	1.0000	1.0000
L41	15	AVA5-50(7/8)	60.42 - 60.67	1.0000	1.0000
L41	27	FP 5.50 x 1.25 Reinforcement	60.42 - 60.67	1.0000	1.0000
L41	28	FP 5.50 x 1.25 Reinforcement	60.42 - 60.67	1.0000	1.0000
L41	29	FP 5.50 x 1.25 Reinforcement	60.42 - 60.67	1.0000	1.0000
L41	43	CCI-045100 Reinforcement	60.42 - 60.67	1.0000	1.0000
L41	44	CCI-045100 Reinforcement	60.42 - 60.67	1.0000	1.0000
L41	45	CCI-045100 Reinforcement	60.42 - 60.67	1.0000	1.0000
L41	62	CCI-060100 Reinforcement	60.42 - 60.67	1.0000	1.0000
L41	63	CCI-060100 Reinforcement	60.42 - 60.67	1.0000	1.0000
L41	64	CCI-060100 Reinforcement	60.42 - 60.67	1.0000	1.0000
L42	1	AVA5-50(7/8)	59.00 - 60.42	1.0000	1.0000
L42	13	CU12PSM9P6XXX(1-1/2)	59.00 - 60.42	1.0000	1.0000
L42	15	AVA5-50(7/8)	59.00 - 60.42	1.0000	1.0000
L42	27	FP 5.50 x 1.25 Reinforcement	59.00 - 60.42	1.0000	1.0000
L42	28	FP 5.50 x 1.25 Reinforcement	59.00 - 60.42	1.0000	1.0000
L42	29	FP 5.50 x 1.25 Reinforcement	59.00 - 60.42	1.0000	1.0000
L42	43	CCI-045100 Reinforcement	59.00 - 60.42	1.0000	1.0000
L42	44	CCI-045100 Reinforcement	59.00 - 60.42	1.0000	1.0000
L42	45	CCI-045100 Reinforcement	59.00 - 60.42	1.0000	1.0000
L42	62	CCI-060100 Reinforcement	59.00 - 60.42	1.0000	1.0000
L42	63	CCI-060100 Reinforcement	59.00 - 60.42	1.0000	1.0000
L42	64	CCI-060100 Reinforcement	59.00 - 60.42	1.0000	1.0000
L43	1	AVA5-50(7/8)	58.75 - 59.00	1.0000	1.0000
L43	13	CU12PSM9P6XXX(1-1/2)	58.75 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
			59.00		
L43	15	AVA5-50(7/8)	58.75 - 59.00	1.0000	1.0000
L43	27	FP 5.50 x 1.25 Reinforcement	58.75 - 59.00	1.0000	1.0000
L43	28	FP 5.50 x 1.25 Reinforcement	58.75 - 59.00	1.0000	1.0000
L43	29	FP 5.50 x 1.25 Reinforcement	58.75 - 59.00	1.0000	1.0000
L43	43	CCI-045100 Reinforcement	58.75 - 59.00	1.0000	1.0000
L43	44	CCI-045100 Reinforcement	58.75 - 59.00	1.0000	1.0000
L43	45	CCI-045100 Reinforcement	58.75 - 59.00	1.0000	1.0000
L43	62	CCI-060100 Reinforcement	58.75 - 59.00	1.0000	1.0000
L43	63	CCI-060100 Reinforcement	58.75 - 59.00	1.0000	1.0000
L43	64	CCI-060100 Reinforcement	58.75 - 59.00	1.0000	1.0000
L44	1	AVA5-50(7/8)	53.75 - 58.75	1.0000	1.0000
L44	13	CU12PSM9P6XXX(1-1/2)	53.75 - 58.75	1.0000	1.0000
L44	15	AVA5-50(7/8)	53.75 - 58.75	1.0000	1.0000
L44	27	FP 5.50 x 1.25 Reinforcement	53.75 - 58.75	1.0000	1.0000
L44	28	FP 5.50 x 1.25 Reinforcement	53.75 - 58.75	1.0000	1.0000
L44	29	FP 5.50 x 1.25 Reinforcement	53.75 - 58.75	1.0000	1.0000
L44	43	CCI-045100 Reinforcement	53.75 - 58.75	1.0000	1.0000
L44	44	CCI-045100 Reinforcement	53.75 - 58.75	1.0000	1.0000
L44	45	CCI-045100 Reinforcement	53.75 - 58.75	1.0000	1.0000
L44	62	CCI-060100 Reinforcement	53.75 - 58.75	1.0000	1.0000
L44	63	CCI-060100 Reinforcement	53.75 - 58.75	1.0000	1.0000
L44	64	CCI-060100 Reinforcement	53.75 - 58.75	1.0000	1.0000
L45	1	AVA5-50(7/8)	48.50 - 53.75	1.0000	1.0000
L45	13	CU12PSM9P6XXX(1-1/2)	48.50 - 53.75	1.0000	1.0000
L45	15	AVA5-50(7/8)	48.50 - 53.75	1.0000	1.0000
L45	27	FP 5.50 x 1.25 Reinforcement	48.50 - 53.75	1.0000	1.0000
L45	28	FP 5.50 x 1.25 Reinforcement	48.50 - 53.75	1.0000	1.0000
L45	29	FP 5.50 x 1.25 Reinforcement	48.50 - 53.75	1.0000	1.0000
L45	43	CCI-045100 Reinforcement	50.00 - 53.75	1.0000	1.0000
L45	44	CCI-045100 Reinforcement	50.00 - 53.75	1.0000	1.0000
L45	45	CCI-045100 Reinforcement	50.00 - 53.75	1.0000	1.0000
L45	61	CCI-060100 Reinforcement	48.50 - 49.92	1.0000	1.0000
L45	62	CCI-060100 Reinforcement	48.50 - 53.75	1.0000	1.0000
L45	63	CCI-060100 Reinforcement	48.50 - 53.75	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L45	64	CCI-060100 Reinforcement	48.50 - 53.75	1.0000	1.0000
L45	65	CCI-060100 Reinforcement	48.50 - 49.92	1.0000	1.0000
L46	1	AVA5-50(7/8)	47.50 - 48.50	1.0000	1.0000
L46	13	CU12PSM9P6XXX(1-1/2)	47.50 - 48.50	1.0000	1.0000
L46	15	AVA5-50(7/8)	47.50 - 48.50	1.0000	1.0000
L46	22	FP 5.50 x 1.25 Reinforcement	47.50 - 48.25	1.0000	1.0000
L46	24	FP 5.50 x 1.25 Reinforcement	47.50 - 48.25	1.0000	1.0000
L46	26	FP 5.50 x 1.25 Reinforcement	47.50 - 48.25	1.0000	1.0000
L46	27	FP 5.50 x 1.25 Reinforcement	47.50 - 48.50	1.0000	1.0000
L46	28	FP 5.50 x 1.25 Reinforcement	47.50 - 48.50	1.0000	1.0000
L46	29	FP 5.50 x 1.25 Reinforcement	47.50 - 48.50	1.0000	1.0000
L46	61	CCI-060100 Reinforcement	47.50 - 48.50	1.0000	1.0000
L46	62	CCI-060100 Reinforcement	47.50 - 48.50	1.0000	1.0000
L46	63	CCI-060100 Reinforcement	47.50 - 48.50	1.0000	1.0000
L46	64	CCI-060100 Reinforcement	47.50 - 48.50	1.0000	1.0000
L46	65	CCI-060100 Reinforcement	47.50 - 48.50	1.0000	1.0000
L47	1	AVA5-50(7/8)	46.88 - 47.50	1.0000	1.0000
L47	13	CU12PSM9P6XXX(1-1/2)	46.88 - 47.50	1.0000	1.0000
L47	15	AVA5-50(7/8)	46.88 - 47.50	1.0000	1.0000
L47	22	FP 5.50 x 1.25 Reinforcement	46.88 - 47.50	1.0000	1.0000
L47	24	FP 5.50 x 1.25 Reinforcement	46.88 - 47.50	1.0000	1.0000
L47	26	FP 5.50 x 1.25 Reinforcement	46.88 - 47.50	1.0000	1.0000
L47	27	FP 5.50 x 1.25 Reinforcement	46.88 - 47.50	1.0000	1.0000
L47	28	FP 5.50 x 1.25 Reinforcement	46.88 - 47.50	1.0000	1.0000
L47	29	FP 5.50 x 1.25 Reinforcement	46.88 - 47.50	1.0000	1.0000
L47	61	CCI-060100 Reinforcement	46.88 - 47.50	1.0000	1.0000
L47	62	CCI-060100 Reinforcement	46.88 - 47.50	1.0000	1.0000
L47	63	CCI-060100 Reinforcement	46.88 - 47.50	1.0000	1.0000
L47	64	CCI-060100 Reinforcement	46.88 - 47.50	1.0000	1.0000
L47	65	CCI-060100 Reinforcement	46.88 - 47.50	1.0000	1.0000
L48	1	AVA5-50(7/8)	46.63 - 46.88	1.0000	1.0000
L48	13	CU12PSM9P6XXX(1-1/2)	46.63 - 46.88	1.0000	1.0000
L48	15	AVA5-50(7/8)	46.63 - 46.88	1.0000	1.0000
L48	22	FP 5.50 x 1.25 Reinforcement	46.63 - 46.88	1.0000	1.0000
L48	24	FP 5.50 x 1.25	46.63 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
		Reinforcement	46.88		
L48	26	FP 5.50 x 1.25 Reinforcement	46.63 - 46.88	1.0000	1.0000
L48	27	FP 5.50 x 1.25 Reinforcement	46.63 - 46.88	1.0000	1.0000
L48	28	FP 5.50 x 1.25 Reinforcement	46.63 - 46.88	1.0000	1.0000
L48	29	FP 5.50 x 1.25 Reinforcement	46.63 - 46.88	1.0000	1.0000
L48	61	CCI-060100 Reinforcement	46.63 - 46.88	1.0000	1.0000
L48	62	CCI-060100 Reinforcement	46.63 - 46.88	1.0000	1.0000
L48	63	CCI-060100 Reinforcement	46.63 - 46.88	1.0000	1.0000
L48	64	CCI-060100 Reinforcement	46.63 - 46.88	1.0000	1.0000
L48	65	CCI-060100 Reinforcement	46.63 - 46.88	1.0000	1.0000
L49	1	AVA5-50(7/8)	43.50 - 46.63	1.0000	1.0000
L49	13	CU12PSM9P6XXX(1-1/2)	43.50 - 46.63	1.0000	1.0000
L49	15	AVA5-50(7/8)	43.50 - 46.63	1.0000	1.0000
L49	22	FP 5.50 x 1.25 Reinforcement	43.50 - 46.63	1.0000	1.0000
L49	24	FP 5.50 x 1.25 Reinforcement	43.50 - 46.63	1.0000	1.0000
L49	26	FP 5.50 x 1.25 Reinforcement	43.50 - 46.63	1.0000	1.0000
L49	27	FP 5.50 x 1.25 Reinforcement	45.50 - 46.63	1.0000	1.0000
L49	28	FP 5.50 x 1.25 Reinforcement	45.50 - 46.63	1.0000	1.0000
L49	29	FP 5.50 x 1.25 Reinforcement	45.50 - 46.63	1.0000	1.0000
L49	40	CCI-045100 Reinforcement	43.50 - 45.00	1.0000	1.0000
L49	41	CCI-045100 Reinforcement	43.50 - 45.00	1.0000	1.0000
L49	42	CCI-045100 Reinforcement	43.50 - 45.00	1.0000	1.0000
L49	61	CCI-060100 Reinforcement	43.50 - 46.63	1.0000	1.0000
L49	62	CCI-060100 Reinforcement	43.50 - 46.63	1.0000	1.0000
L49	63	CCI-060100 Reinforcement	43.50 - 46.63	1.0000	1.0000
L49	64	CCI-060100 Reinforcement	43.50 - 46.63	1.0000	1.0000
L49	65	CCI-060100 Reinforcement	43.50 - 46.63	1.0000	1.0000
L50	1	AVA5-50(7/8)	43.25 - 43.50	1.0000	1.0000
L50	13	CU12PSM9P6XXX(1-1/2)	43.25 - 43.50	1.0000	1.0000
L50	15	AVA5-50(7/8)	43.25 - 43.50	1.0000	1.0000
L50	22	FP 5.50 x 1.25 Reinforcement	43.25 - 43.50	1.0000	1.0000
L50	24	FP 5.50 x 1.25 Reinforcement	43.25 - 43.50	1.0000	1.0000
L50	26	FP 5.50 x 1.25 Reinforcement	43.25 - 43.50	1.0000	1.0000
L50	40	CCI-045100 Reinforcement	43.25 - 43.50	1.0000	1.0000
L50	41	CCI-045100 Reinforcement	43.25 - 43.50	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L50	42	CCI-045100 Reinforcement	43.25 - 43.50	1.0000	1.0000
L50	61	CCI-060100 Reinforcement	43.25 - 43.50	1.0000	1.0000
L50	62	CCI-060100 Reinforcement	43.25 - 43.50	1.0000	1.0000
L50	63	CCI-060100 Reinforcement	43.25 - 43.50	1.0000	1.0000
L50	64	CCI-060100 Reinforcement	43.25 - 43.50	1.0000	1.0000
L50	65	CCI-060100 Reinforcement	43.25 - 43.50	1.0000	1.0000
L51	1	AVA5-50(7/8)	38.25 - 43.25	1.0000	1.0000
L51	13	CU12PSM9P6XXX(1-1/2)	38.25 - 43.25	1.0000	1.0000
L51	15	AVA5-50(7/8)	38.25 - 43.25	1.0000	1.0000
L51	22	FP 5.50 x 1.25 Reinforcement	38.25 - 43.25	1.0000	1.0000
L51	24	FP 5.50 x 1.25 Reinforcement	38.25 - 43.25	1.0000	1.0000
L51	26	FP 5.50 x 1.25 Reinforcement	38.25 - 43.25	1.0000	1.0000
L51	40	CCI-045100 Reinforcement	38.25 - 43.25	1.0000	1.0000
L51	41	CCI-045100 Reinforcement	38.25 - 43.25	1.0000	1.0000
L51	42	CCI-045100 Reinforcement	38.25 - 43.25	1.0000	1.0000
L51	61	CCI-060100 Reinforcement	38.25 - 43.25	1.0000	1.0000
L51	62	CCI-060100 Reinforcement	38.25 - 43.25	1.0000	1.0000
L51	63	CCI-060100 Reinforcement	38.25 - 43.25	1.0000	1.0000
L51	64	CCI-060100 Reinforcement	38.25 - 43.25	1.0000	1.0000
L51	65	CCI-060100 Reinforcement	38.25 - 43.25	1.0000	1.0000
L52	1	AVA5-50(7/8)	33.25 - 38.25	1.0000	1.0000
L52	13	CU12PSM9P6XXX(1-1/2)	33.25 - 38.25	1.0000	1.0000
L52	15	AVA5-50(7/8)	33.25 - 38.25	1.0000	1.0000
L52	21	FP 5.50 x 1.25 Reinforcement	33.25 - 38.02	1.0000	1.0000
L52	22	FP 5.50 x 1.25 Reinforcement	38.02 - 38.25	1.0000	1.0000
L52	23	FP 5.50 x 1.25 Reinforcement	33.25 - 38.02	1.0000	1.0000
L52	24	FP 5.50 x 1.25 Reinforcement	38.02 - 38.25	1.0000	1.0000
L52	25	FP 5.50 x 1.25 Reinforcement	33.25 - 38.02	1.0000	1.0000
L52	26	FP 5.50 x 1.25 Reinforcement	38.02 - 38.25	1.0000	1.0000
L52	40	CCI-045100 Reinforcement	33.25 - 38.25	1.0000	1.0000
L52	41	CCI-045100 Reinforcement	33.25 - 38.25	1.0000	1.0000
L52	42	CCI-045100 Reinforcement	33.25 - 38.25	1.0000	1.0000
L52	61	CCI-060100 Reinforcement	33.25 - 38.25	1.0000	1.0000
L52	62	CCI-060100 Reinforcement	33.25 - 38.25	1.0000	1.0000
L52	63	CCI-060100	33.25 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
		Reinforcement	38.25		
L52	64	CCI-060100	33.25 -	1.0000	1.0000
		Reinforcement	38.25		
L52	65	CCI-060100	33.25 -	1.0000	1.0000
		Reinforcement	38.25		
L53	1	AVA5-50(7/8)	32.58 -	1.0000	1.0000
			33.25		
L53	13	CU12PSM9P6XXX(1-1/2)	32.58 -	1.0000	1.0000
			33.25		
L53	15	AVA5-50(7/8)	32.58 -	1.0000	1.0000
			33.25		
L53	21	FP 5.50 x 1.25	32.58 -	1.0000	1.0000
		Reinforcement	33.25		
L53	23	FP 5.50 x 1.25	32.58 -	1.0000	1.0000
		Reinforcement	33.25		
L53	25	FP 5.50 x 1.25	32.58 -	1.0000	1.0000
		Reinforcement	33.25		
L53	40	CCI-045100	32.58 -	1.0000	1.0000
		Reinforcement	33.25		
L53	41	CCI-045100	32.58 -	1.0000	1.0000
		Reinforcement	33.25		
L53	42	CCI-045100	32.58 -	1.0000	1.0000
		Reinforcement	33.25		
L53	61	CCI-060100	32.58 -	1.0000	1.0000
		Reinforcement	33.25		
L53	62	CCI-060100	32.58 -	1.0000	1.0000
		Reinforcement	33.25		
L53	63	CCI-060100	32.58 -	1.0000	1.0000
		Reinforcement	33.25		
L53	64	CCI-060100	32.58 -	1.0000	1.0000
		Reinforcement	33.25		
L53	65	CCI-060100	32.58 -	1.0000	1.0000
		Reinforcement	33.25		
L54	1	AVA5-50(7/8)	32.33 -	1.0000	1.0000
			32.58		
L54	13	CU12PSM9P6XXX(1-1/2)	32.33 -	1.0000	1.0000
			32.58		
L54	15	AVA5-50(7/8)	32.33 -	1.0000	1.0000
			32.58		
L54	21	FP 5.50 x 1.25	32.33 -	1.0000	1.0000
		Reinforcement	32.58		
L54	23	FP 5.50 x 1.25	32.33 -	1.0000	1.0000
		Reinforcement	32.58		
L54	25	FP 5.50 x 1.25	32.33 -	1.0000	1.0000
		Reinforcement	32.58		
L54	40	CCI-045100	32.33 -	1.0000	1.0000
		Reinforcement	32.58		
L54	41	CCI-045100	32.33 -	1.0000	1.0000
		Reinforcement	32.58		
L54	42	CCI-045100	32.33 -	1.0000	1.0000
		Reinforcement	32.58		
L54	61	CCI-060100	32.33 -	1.0000	1.0000
		Reinforcement	32.58		
L54	62	CCI-060100	32.33 -	1.0000	1.0000
		Reinforcement	32.58		
L54	63	CCI-060100	32.33 -	1.0000	1.0000
		Reinforcement	32.58		
L54	64	CCI-060100	32.33 -	1.0000	1.0000
		Reinforcement	32.58		
L54	65	CCI-060100	32.33 -	1.0000	1.0000
		Reinforcement	32.58		
L55	1	AVA5-50(7/8)	29.67 -	1.0000	1.0000
			32.33		
L55	13	CU12PSM9P6XXX(1-1/2)	29.67 -	1.0000	1.0000
			32.33		
L55	15	AVA5-50(7/8)	29.67 -	1.0000	1.0000
			32.33		
L55	17	FP 5.50 x 1.25	29.67 -	1.0000	1.0000
		Reinforcement	30.50		

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L55	18	FP 5.50 x 1.25 Reinforcement	29.67 - 30.50	1.0000	1.0000
L55	19	FP 5.50 x 1.25 Reinforcement	29.67 - 30.50	1.0000	1.0000
L55	20	FP 5.50 x 1.25 Reinforcement	29.67 - 30.50	1.0000	1.0000
L55	21	FP 5.50 x 1.25 Reinforcement	29.67 - 32.33	1.0000	1.0000
L55	23	FP 5.50 x 1.25 Reinforcement	29.67 - 32.33	1.0000	1.0000
L55	25	FP 5.50 x 1.25 Reinforcement	29.67 - 32.33	1.0000	1.0000
L55	40	CCI-045100 Reinforcement	29.67 - 32.33	1.0000	1.0000
L55	41	CCI-045100 Reinforcement	29.67 - 32.33	1.0000	1.0000
L55	42	CCI-045100 Reinforcement	29.67 - 32.33	1.0000	1.0000
L55	61	CCI-060100 Reinforcement	29.67 - 32.33	1.0000	1.0000
L55	62	CCI-060100 Reinforcement	29.67 - 32.33	1.0000	1.0000
L55	63	CCI-060100 Reinforcement	29.67 - 32.33	1.0000	1.0000
L55	64	CCI-060100 Reinforcement	29.67 - 32.33	1.0000	1.0000
L55	65	CCI-060100 Reinforcement	30.58 - 32.33	1.0000	1.0000
L56	1	AVA5-50(7/8)	29.42 - 29.67	1.0000	1.0000
L56	13	CU12PSM9P6XXX(1-1/2)	29.42 - 29.67	1.0000	1.0000
L56	15	AVA5-50(7/8)	29.42 - 29.67	1.0000	1.0000
L56	17	FP 5.50 x 1.25 Reinforcement	29.42 - 29.67	1.0000	1.0000
L56	18	FP 5.50 x 1.25 Reinforcement	29.42 - 29.67	1.0000	1.0000
L56	19	FP 5.50 x 1.25 Reinforcement	29.42 - 29.67	1.0000	1.0000
L56	20	FP 5.50 x 1.25 Reinforcement	29.42 - 29.67	1.0000	1.0000
L56	21	FP 5.50 x 1.25 Reinforcement	29.42 - 29.67	1.0000	1.0000
L56	23	FP 5.50 x 1.25 Reinforcement	29.42 - 29.67	1.0000	1.0000
L56	25	FP 5.50 x 1.25 Reinforcement	29.42 - 29.67	1.0000	1.0000
L56	40	CCI-045100 Reinforcement	29.42 - 29.67	1.0000	1.0000
L56	41	CCI-045100 Reinforcement	29.42 - 29.67	1.0000	1.0000
L56	42	CCI-045100 Reinforcement	29.42 - 29.67	1.0000	1.0000
L56	61	CCI-060100 Reinforcement	29.42 - 29.67	1.0000	1.0000
L56	62	CCI-060100 Reinforcement	29.42 - 29.67	1.0000	1.0000
L56	63	CCI-060100 Reinforcement	29.42 - 29.67	1.0000	1.0000
L56	64	CCI-060100 Reinforcement	29.42 - 29.67	1.0000	1.0000
L57	1	AVA5-50(7/8)	29.13 - 29.42	1.0000	1.0000
L57	13	CU12PSM9P6XXX(1-1/2)	29.13 - 29.42	1.0000	1.0000
L57	15	AVA5-50(7/8)	29.13 - 29.42	1.0000	1.0000
L57	17	FP 5.50 x 1.25	29.13 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
		Reinforcement	29.42		
L57	18	FP 5.50 x 1.25 Reinforcement	29.13 - 29.42	1.0000	1.0000
L57	19	FP 5.50 x 1.25 Reinforcement	29.13 - 29.42	1.0000	1.0000
L57	20	FP 5.50 x 1.25 Reinforcement	29.13 - 29.42	1.0000	1.0000
L57	21	FP 5.50 x 1.25 Reinforcement	29.13 - 29.42	1.0000	1.0000
L57	23	FP 5.50 x 1.25 Reinforcement	29.13 - 29.42	1.0000	1.0000
L57	25	FP 5.50 x 1.25 Reinforcement	29.13 - 29.42	1.0000	1.0000
L57	40	CCI-045100 Reinforcement	29.13 - 29.42	1.0000	1.0000
L57	41	CCI-045100 Reinforcement	29.13 - 29.42	1.0000	1.0000
L57	42	CCI-045100 Reinforcement	29.13 - 29.42	1.0000	1.0000
L57	61	CCI-060100 Reinforcement	29.13 - 29.42	1.0000	1.0000
L57	62	CCI-060100 Reinforcement	29.13 - 29.42	1.0000	1.0000
L57	63	CCI-060100 Reinforcement	29.13 - 29.42	1.0000	1.0000
L57	64	CCI-060100 Reinforcement	29.13 - 29.42	1.0000	1.0000
L58	1	AVA5-50(7/8)	28.88 - 29.13	1.0000	1.0000
L58	13	CU12PSM9P6XXX(1-1/2)	28.88 - 29.13	1.0000	1.0000
L58	15	AVA5-50(7/8)	28.88 - 29.13	1.0000	1.0000
L58	17	FP 5.50 x 1.25 Reinforcement	28.88 - 29.13	1.0000	1.0000
L58	18	FP 5.50 x 1.25 Reinforcement	28.88 - 29.13	1.0000	1.0000
L58	19	FP 5.50 x 1.25 Reinforcement	28.88 - 29.13	1.0000	1.0000
L58	20	FP 5.50 x 1.25 Reinforcement	28.88 - 29.13	1.0000	1.0000
L58	21	FP 5.50 x 1.25 Reinforcement	28.88 - 29.13	1.0000	1.0000
L58	23	FP 5.50 x 1.25 Reinforcement	28.88 - 29.13	1.0000	1.0000
L58	25	FP 5.50 x 1.25 Reinforcement	28.88 - 29.13	1.0000	1.0000
L58	40	CCI-045100 Reinforcement	28.88 - 29.13	1.0000	1.0000
L58	41	CCI-045100 Reinforcement	28.88 - 29.13	1.0000	1.0000
L58	42	CCI-045100 Reinforcement	28.88 - 29.13	1.0000	1.0000
L58	61	CCI-060100 Reinforcement	28.88 - 29.13	1.0000	1.0000
L58	62	CCI-060100 Reinforcement	28.88 - 29.13	1.0000	1.0000
L58	63	CCI-060100 Reinforcement	28.88 - 29.13	1.0000	1.0000
L58	64	CCI-060100 Reinforcement	28.88 - 29.13	1.0000	1.0000
L59	1	AVA5-50(7/8)	28.00 - 28.88	1.0000	1.0000
L59	13	CU12PSM9P6XXX(1-1/2)	28.00 - 28.88	1.0000	1.0000
L59	15	AVA5-50(7/8)	28.00 - 28.88	1.0000	1.0000
L59	17	FP 5.50 x 1.25 Reinforcement	28.00 - 28.88	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L59	18	FP 5.50 x 1.25 Reinforcement	28.00 - 28.88	1.0000	1.0000
L59	19	FP 5.50 x 1.25 Reinforcement	28.00 - 28.88	1.0000	1.0000
L59	20	FP 5.50 x 1.25 Reinforcement	28.00 - 28.88	1.0000	1.0000
L59	21	FP 5.50 x 1.25 Reinforcement	28.00 - 28.88	1.0000	1.0000
L59	23	FP 5.50 x 1.25 Reinforcement	28.00 - 28.88	1.0000	1.0000
L59	25	FP 5.50 x 1.25 Reinforcement	28.00 - 28.88	1.0000	1.0000
L59	40	CCI-045100 Reinforcement	28.00 - 28.88	1.0000	1.0000
L59	41	CCI-045100 Reinforcement	28.00 - 28.88	1.0000	1.0000
L59	42	CCI-045100 Reinforcement	28.00 - 28.88	1.0000	1.0000
L59	61	CCI-060100 Reinforcement	28.00 - 28.88	1.0000	1.0000
L59	62	CCI-060100 Reinforcement	28.00 - 28.88	1.0000	1.0000
L59	63	CCI-060100 Reinforcement	28.00 - 28.88	1.0000	1.0000
L59	64	CCI-060100 Reinforcement	28.00 - 28.88	1.0000	1.0000
L60	1	AVA5-50(7/8)	27.75 - 28.00	1.0000	1.0000
L60	13	CU12PSM9P6XXX(1-1/2)	27.75 - 28.00	1.0000	1.0000
L60	15	AVA5-50(7/8)	27.75 - 28.00	1.0000	1.0000
L60	17	FP 5.50 x 1.25 Reinforcement	27.75 - 28.00	1.0000	1.0000
L60	18	FP 5.50 x 1.25 Reinforcement	27.75 - 28.00	1.0000	1.0000
L60	19	FP 5.50 x 1.25 Reinforcement	27.75 - 28.00	1.0000	1.0000
L60	20	FP 5.50 x 1.25 Reinforcement	27.75 - 28.00	1.0000	1.0000
L60	21	FP 5.50 x 1.25 Reinforcement	27.75 - 28.00	1.0000	1.0000
L60	23	FP 5.50 x 1.25 Reinforcement	27.75 - 28.00	1.0000	1.0000
L60	25	FP 5.50 x 1.25 Reinforcement	27.75 - 28.00	1.0000	1.0000
L60	40	CCI-045100 Reinforcement	27.75 - 28.00	1.0000	1.0000
L60	41	CCI-045100 Reinforcement	27.75 - 28.00	1.0000	1.0000
L60	42	CCI-045100 Reinforcement	27.75 - 28.00	1.0000	1.0000
L60	61	CCI-060100 Reinforcement	27.75 - 28.00	1.0000	1.0000
L60	62	CCI-060100 Reinforcement	27.75 - 28.00	1.0000	1.0000
L60	63	CCI-060100 Reinforcement	27.75 - 28.00	1.0000	1.0000
L60	64	CCI-060100 Reinforcement	27.75 - 28.00	1.0000	1.0000
L61	1	AVA5-50(7/8)	26.92 - 27.75	1.0000	1.0000
L61	13	CU12PSM9P6XXX(1-1/2)	26.92 - 27.75	1.0000	1.0000
L61	15	AVA5-50(7/8)	26.92 - 27.75	1.0000	1.0000
L61	17	FP 5.50 x 1.25 Reinforcement	26.92 - 27.75	1.0000	1.0000
L61	18	FP 5.50 x 1.25	26.92 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
		Reinforcement	27.75		
L61	19	FP 5.50 x 1.25	26.92 -	1.0000	1.0000
		Reinforcement	27.75		
L61	20	FP 5.50 x 1.25	26.92 -	1.0000	1.0000
		Reinforcement	27.75		
L61	40	CCI-045100	26.92 -	1.0000	1.0000
		Reinforcement	27.75		
L61	41	CCI-045100	26.92 -	1.0000	1.0000
		Reinforcement	27.75		
L61	42	CCI-045100	26.92 -	1.0000	1.0000
		Reinforcement	27.75		
L61	58	CCI-065125	26.92 -	1.0000	1.0000
		Reinforcement	27.67		
L61	60	CCI-065125	26.92 -	1.0000	1.0000
		Reinforcement	27.67		
L61	61	CCI-060100	26.92 -	1.0000	1.0000
		Reinforcement	27.75		
L61	62	CCI-060100	27.67 -	1.0000	1.0000
		Reinforcement	27.75		
L61	63	CCI-060100	26.92 -	1.0000	1.0000
		Reinforcement	27.75		
L61	64	CCI-060100	27.67 -	1.0000	1.0000
		Reinforcement	27.75		
L62	1	AVA5-50(7/8)	26.67 -	1.0000	1.0000
			26.92		
L62	13	CU12PSM9P6XXX(1-1/2)	26.67 -	1.0000	1.0000
			26.92		
L62	15	AVA5-50(7/8)	26.67 -	1.0000	1.0000
			26.92		
L62	17	FP 5.50 x 1.25	26.67 -	1.0000	1.0000
		Reinforcement	26.92		
L62	18	FP 5.50 x 1.25	26.67 -	1.0000	1.0000
		Reinforcement	26.92		
L62	19	FP 5.50 x 1.25	26.67 -	1.0000	1.0000
		Reinforcement	26.92		
L62	20	FP 5.50 x 1.25	26.67 -	1.0000	1.0000
		Reinforcement	26.92		
L62	40	CCI-045100	26.67 -	1.0000	1.0000
		Reinforcement	26.92		
L62	41	CCI-045100	26.67 -	1.0000	1.0000
		Reinforcement	26.92		
L62	42	CCI-045100	26.67 -	1.0000	1.0000
		Reinforcement	26.92		
L62	58	CCI-065125	26.67 -	1.0000	1.0000
		Reinforcement	26.92		
L62	60	CCI-065125	26.67 -	1.0000	1.0000
		Reinforcement	26.92		
L62	61	CCI-060100	26.67 -	1.0000	1.0000
		Reinforcement	26.92		
L62	63	CCI-060100	26.67 -	1.0000	1.0000
		Reinforcement	26.92		
L63	1	AVA5-50(7/8)	26.50 -	1.0000	1.0000
			26.67		
L63	13	CU12PSM9P6XXX(1-1/2)	26.50 -	1.0000	1.0000
			26.67		
L63	15	AVA5-50(7/8)	26.50 -	1.0000	1.0000
			26.67		
L63	17	FP 5.50 x 1.25	26.50 -	1.0000	1.0000
		Reinforcement	26.67		
L63	18	FP 5.50 x 1.25	26.50 -	1.0000	1.0000
		Reinforcement	26.67		
L63	19	FP 5.50 x 1.25	26.50 -	1.0000	1.0000
		Reinforcement	26.67		
L63	20	FP 5.50 x 1.25	26.50 -	1.0000	1.0000
		Reinforcement	26.67		
L63	40	CCI-045100	26.50 -	1.0000	1.0000
		Reinforcement	26.67		
L63	41	CCI-045100	26.50 -	1.0000	1.0000
		Reinforcement	26.67		

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L63	42	CCI-045100 Reinforcement	26.50 - 26.67	1.0000	1.0000
L63	58	CCI-065125 Reinforcement	26.50 - 26.67	1.0000	1.0000
L63	60	CCI-065125 Reinforcement	26.50 - 26.67	1.0000	1.0000
L63	61	CCI-060100 Reinforcement	26.50 - 26.67	1.0000	1.0000
L63	63	CCI-060100 Reinforcement	26.50 - 26.67	1.0000	1.0000
L64	1	AVA5-50(7/8)	26.25 - 26.50	1.0000	1.0000
L64	13	CU12PSM9P6XXX(1-1/2)	26.25 - 26.50	1.0000	1.0000
L64	15	AVA5-50(7/8)	26.25 - 26.50	1.0000	1.0000
L64	17	FP 5.50 x 1.25 Reinforcement	26.25 - 26.50	1.0000	1.0000
L64	18	FP 5.50 x 1.25 Reinforcement	26.25 - 26.50	1.0000	1.0000
L64	19	FP 5.50 x 1.25 Reinforcement	26.25 - 26.50	1.0000	1.0000
L64	20	FP 5.50 x 1.25 Reinforcement	26.25 - 26.50	1.0000	1.0000
L64	40	CCI-045100 Reinforcement	26.25 - 26.50	1.0000	1.0000
L64	41	CCI-045100 Reinforcement	26.25 - 26.50	1.0000	1.0000
L64	42	CCI-045100 Reinforcement	26.25 - 26.50	1.0000	1.0000
L64	58	CCI-065125 Reinforcement	26.25 - 26.50	1.0000	1.0000
L64	60	CCI-065125 Reinforcement	26.25 - 26.50	1.0000	1.0000
L64	61	CCI-060100 Reinforcement	26.25 - 26.50	1.0000	1.0000
L64	63	CCI-060100 Reinforcement	26.25 - 26.50	1.0000	1.0000
L65	1	AVA5-50(7/8)	24.92 - 26.25	1.0000	1.0000
L65	13	CU12PSM9P6XXX(1-1/2)	24.92 - 26.25	1.0000	1.0000
L65	15	AVA5-50(7/8)	24.92 - 26.25	1.0000	1.0000
L65	17	FP 5.50 x 1.25 Reinforcement	24.92 - 26.25	1.0000	1.0000
L65	18	FP 5.50 x 1.25 Reinforcement	24.92 - 26.25	1.0000	1.0000
L65	19	FP 5.50 x 1.25 Reinforcement	24.92 - 26.25	1.0000	1.0000
L65	20	FP 5.50 x 1.25 Reinforcement	24.92 - 26.25	1.0000	1.0000
L65	40	CCI-045100 Reinforcement	25.00 - 26.25	1.0000	1.0000
L65	41	CCI-045100 Reinforcement	25.00 - 26.25	1.0000	1.0000
L65	42	CCI-045100 Reinforcement	25.00 - 26.25	1.0000	1.0000
L65	58	CCI-065125 Reinforcement	24.92 - 26.25	1.0000	1.0000
L65	60	CCI-065125 Reinforcement	24.92 - 26.25	1.0000	1.0000
L65	61	CCI-060100 Reinforcement	24.92 - 26.25	1.0000	1.0000
L65	63	CCI-060100 Reinforcement	26.00 - 26.25	1.0000	1.0000
L66	1	AVA5-50(7/8)	24.67 - 24.92	1.0000	1.0000
L66	13	CU12PSM9P6XXX(1-1/2)	24.67 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
			24.92		
L66	15	AVA5-50(7/8)	24.67 - 24.92	1.0000	1.0000
L66	17	FP 5.50 x 1.25 Reinforcement	24.67 - 24.92	1.0000	1.0000
L66	18	FP 5.50 x 1.25 Reinforcement	24.67 - 24.92	1.0000	1.0000
L66	19	FP 5.50 x 1.25 Reinforcement	24.67 - 24.92	1.0000	1.0000
L66	20	FP 5.50 x 1.25 Reinforcement	24.67 - 24.92	1.0000	1.0000
L66	54	CCI-065125 Reinforcement	24.67 - 24.92	1.0000	1.0000
L66	56	CCI-065125 Reinforcement	24.67 - 24.92	1.0000	1.0000
L66	58	CCI-065125 Reinforcement	24.67 - 24.92	1.0000	1.0000
L66	60	CCI-065125 Reinforcement	24.67 - 24.92	1.0000	1.0000
L66	61	CCI-060100 Reinforcement	24.92 - 24.92	1.0000	1.0000
L67	1	AVA5-50(7/8)	22.17 - 24.67	1.0000	1.0000
L67	13	CU12PSM9P6XXX(1-1/2)	22.17 - 24.67	1.0000	1.0000
L67	15	AVA5-50(7/8)	22.17 - 24.67	1.0000	1.0000
L67	17	FP 5.50 x 1.25 Reinforcement	22.17 - 24.67	1.0000	1.0000
L67	18	FP 5.50 x 1.25 Reinforcement	22.17 - 24.67	1.0000	1.0000
L67	19	FP 5.50 x 1.25 Reinforcement	22.17 - 24.67	1.0000	1.0000
L67	20	FP 5.50 x 1.25 Reinforcement	22.17 - 24.67	1.0000	1.0000
L67	54	CCI-065125 Reinforcement	22.17 - 24.67	1.0000	1.0000
L67	56	CCI-065125 Reinforcement	22.17 - 24.67	1.0000	1.0000
L67	58	CCI-065125 Reinforcement	22.17 - 24.67	1.0000	1.0000
L67	60	CCI-065125 Reinforcement	22.17 - 24.67	1.0000	1.0000
L68	1	AVA5-50(7/8)	21.92 - 22.17	1.0000	1.0000
L68	13	CU12PSM9P6XXX(1-1/2)	21.92 - 22.17	1.0000	1.0000
L68	15	AVA5-50(7/8)	21.92 - 22.17	1.0000	1.0000
L68	17	FP 5.50 x 1.25 Reinforcement	21.92 - 22.17	1.0000	1.0000
L68	18	FP 5.50 x 1.25 Reinforcement	21.92 - 22.17	1.0000	1.0000
L68	19	FP 5.50 x 1.25 Reinforcement	21.92 - 22.17	1.0000	1.0000
L68	20	FP 5.50 x 1.25 Reinforcement	21.92 - 22.17	1.0000	1.0000
L68	54	CCI-065125 Reinforcement	21.92 - 22.17	1.0000	1.0000
L68	56	CCI-065125 Reinforcement	21.92 - 22.17	1.0000	1.0000
L68	58	CCI-065125 Reinforcement	21.92 - 22.17	1.0000	1.0000
L68	60	CCI-065125 Reinforcement	21.92 - 22.17	1.0000	1.0000
L69	1	AVA5-50(7/8)	16.92 - 21.92	1.0000	1.0000
L69	13	CU12PSM9P6XXX(1-1/2)	16.92 - 21.92	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L69	15	AVA5-50(7/8)	16.92 - 21.92	1.0000	1.0000
L69	17	FP 5.50 x 1.25 Reinforcement	16.92 - 21.92	1.0000	1.0000
L69	18	FP 5.50 x 1.25 Reinforcement	16.92 - 21.92	1.0000	1.0000
L69	19	FP 5.50 x 1.25 Reinforcement	16.92 - 21.92	1.0000	1.0000
L69	20	FP 5.50 x 1.25 Reinforcement	16.92 - 21.92	1.0000	1.0000
L69	54	CCI-065125 Reinforcement	16.92 - 21.92	1.0000	1.0000
L69	56	CCI-065125 Reinforcement	16.92 - 21.92	1.0000	1.0000
L69	58	CCI-065125 Reinforcement	16.92 - 21.92	1.0000	1.0000
L69	60	CCI-065125 Reinforcement	16.92 - 21.92	1.0000	1.0000
L70	1	AVA5-50(7/8)	11.92 - 16.92	1.0000	1.0000
L70	13	CU12PSM9P6XXX(1-1/2)	11.92 - 16.92	1.0000	1.0000
L70	15	AVA5-50(7/8)	11.92 - 16.92	1.0000	1.0000
L70	17	FP 5.50 x 1.25 Reinforcement	11.92 - 16.92	1.0000	1.0000
L70	18	FP 5.50 x 1.25 Reinforcement	11.92 - 16.92	1.0000	1.0000
L70	19	FP 5.50 x 1.25 Reinforcement	11.92 - 16.92	1.0000	1.0000
L70	20	FP 5.50 x 1.25 Reinforcement	11.92 - 16.92	1.0000	1.0000
L70	54	CCI-065125 Reinforcement	11.92 - 16.92	1.0000	1.0000
L70	56	CCI-065125 Reinforcement	11.92 - 16.92	1.0000	1.0000
L70	58	CCI-065125 Reinforcement	11.92 - 16.92	1.0000	1.0000
L70	60	CCI-065125 Reinforcement	11.92 - 16.92	1.0000	1.0000
L71	1	AVA5-50(7/8)	6.92 - 11.92	1.0000	1.0000
L71	13	CU12PSM9P6XXX(1-1/2)	6.92 - 11.92	1.0000	1.0000
L71	15	AVA5-50(7/8)	6.92 - 11.92	1.0000	1.0000
L71	17	FP 5.50 x 1.25 Reinforcement	6.92 - 11.92	1.0000	1.0000
L71	18	FP 5.50 x 1.25 Reinforcement	6.92 - 11.92	1.0000	1.0000
L71	19	FP 5.50 x 1.25 Reinforcement	6.92 - 11.92	1.0000	1.0000
L71	20	FP 5.50 x 1.25 Reinforcement	6.92 - 11.92	1.0000	1.0000
L71	54	CCI-065125 Reinforcement	6.92 - 11.92	1.0000	1.0000
L71	56	CCI-065125 Reinforcement	6.92 - 11.92	1.0000	1.0000
L71	58	CCI-065125 Reinforcement	6.92 - 11.92	1.0000	1.0000
L71	60	CCI-065125 Reinforcement	6.92 - 11.92	1.0000	1.0000
L72	1	AVA5-50(7/8)	1.92 - 6.92	1.0000	1.0000
L72	13	CU12PSM9P6XXX(1-1/2)	1.92 - 6.92	1.0000	1.0000
L72	15	AVA5-50(7/8)	1.92 - 6.92	1.0000	1.0000
L72	17	FP 5.50 x 1.25 Reinforcement	1.92 - 6.92	1.0000	1.0000
L72	18	FP 5.50 x 1.25 Reinforcement	1.92 - 6.92	1.0000	1.0000
L72	19	FP 5.50 x 1.25 Reinforcement	1.92 - 6.92	1.0000	1.0000
L72	20	FP 5.50 x 1.25	1.92 - 6.92	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
		Reinforcement			
L72	53	CCI-065125	1.92 - 5.14	1.0000	1.0000
		Reinforcement			
L72	54	CCI-065125	5.14 - 6.92	1.0000	1.0000
		Reinforcement			
L72	55	CCI-065125	1.92 - 5.14	1.0000	1.0000
		Reinforcement			
L72	56	CCI-065125	5.14 - 6.92	1.0000	1.0000
		Reinforcement			
L72	57	CCI-065125	1.92 - 5.14	1.0000	1.0000
		Reinforcement			
L72	58	CCI-065125	5.14 - 6.92	1.0000	1.0000
		Reinforcement			
L72	59	CCI-065125	1.92 - 5.14	1.0000	1.0000
		Reinforcement			
L72	60	CCI-065125	5.14 - 6.92	1.0000	1.0000
		Reinforcement			
L73	1	AVA5-50(7/8)	1.50 - 1.92	1.0000	1.0000
L73	13	CU12PSM9P6XXX(1-1/2)	1.50 - 1.92	1.0000	1.0000
L73	15	AVA5-50(7/8)	1.50 - 1.92	1.0000	1.0000
L73	17	FP 5.50 x 1.25	1.50 - 1.92	1.0000	1.0000
		Reinforcement			
L73	18	FP 5.50 x 1.25	1.50 - 1.92	1.0000	1.0000
		Reinforcement			
L73	19	FP 5.50 x 1.25	1.50 - 1.92	1.0000	1.0000
		Reinforcement			
L73	20	FP 5.50 x 1.25	1.50 - 1.92	1.0000	1.0000
		Reinforcement			
L73	53	CCI-065125	1.50 - 1.92	1.0000	1.0000
		Reinforcement			
L73	55	CCI-065125	1.50 - 1.92	1.0000	1.0000
		Reinforcement			
L73	57	CCI-065125	1.50 - 1.92	1.0000	1.0000
		Reinforcement			
L73	59	CCI-065125	1.50 - 1.92	1.0000	1.0000
		Reinforcement			
L74	1	AVA5-50(7/8)	1.25 - 1.50	1.0000	1.0000
L74	13	CU12PSM9P6XXX(1-1/2)	1.25 - 1.50	1.0000	1.0000
L74	15	AVA5-50(7/8)	1.25 - 1.50	1.0000	1.0000
L74	17	FP 5.50 x 1.25	1.25 - 1.50	1.0000	1.0000
		Reinforcement			
L74	18	FP 5.50 x 1.25	1.25 - 1.50	1.0000	1.0000
		Reinforcement			
L74	19	FP 5.50 x 1.25	1.25 - 1.50	1.0000	1.0000
		Reinforcement			
L74	20	FP 5.50 x 1.25	1.25 - 1.50	1.0000	1.0000
		Reinforcement			
L74	53	CCI-065125	1.25 - 1.50	1.0000	1.0000
		Reinforcement			
L74	55	CCI-065125	1.25 - 1.50	1.0000	1.0000
		Reinforcement			
L74	57	CCI-065125	1.25 - 1.50	1.0000	1.0000
		Reinforcement			
L74	59	CCI-065125	1.25 - 1.50	1.0000	1.0000
		Reinforcement			
L75	1	AVA5-50(7/8)	1.00 - 1.25	1.0000	1.0000
L75	13	CU12PSM9P6XXX(1-1/2)	1.00 - 1.25	1.0000	1.0000
L75	15	AVA5-50(7/8)	1.00 - 1.25	1.0000	1.0000
L75	17	FP 5.50 x 1.25	1.00 - 1.25	1.0000	1.0000
		Reinforcement			
L75	18	FP 5.50 x 1.25	1.00 - 1.25	1.0000	1.0000
		Reinforcement			
L75	19	FP 5.50 x 1.25	1.00 - 1.25	1.0000	1.0000
		Reinforcement			
L75	20	FP 5.50 x 1.25	1.00 - 1.25	1.0000	1.0000
		Reinforcement			
L75	53	CCI-065125	1.00 - 1.25	1.0000	1.0000
		Reinforcement			
L75	55	CCI-065125	1.00 - 1.25	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
		Reinforcement			
L75	57	CCI-065125	1.00 - 1.25	1.0000	1.0000
		Reinforcement			
L75	59	CCI-065125	1.00 - 1.25	1.0000	1.0000
		Reinforcement			
L76	1	AVA5-50(7/8)	0.00 - 1.00	1.0000	1.0000
L76	13	CU12PSM9P6XXX(1-1/2)	0.00 - 1.00	1.0000	1.0000
L76	15	AVA5-50(7/8)	0.00 - 1.00	1.0000	1.0000
L76	17	FP 5.50 x 1.25	0.50 - 1.00	1.0000	1.0000
		Reinforcement			
L76	18	FP 5.50 x 1.25	0.50 - 1.00	1.0000	1.0000
		Reinforcement			
L76	19	FP 5.50 x 1.25	0.50 - 1.00	1.0000	1.0000
		Reinforcement			
L76	20	FP 5.50 x 1.25	0.50 - 1.00	1.0000	1.0000
		Reinforcement			
L76	53	CCI-065125	0.50 - 1.00	1.0000	1.0000
		Reinforcement			
L76	55	CCI-065125	0.50 - 1.00	1.0000	1.0000
		Reinforcement			
L76	57	CCI-065125	0.50 - 1.00	1.0000	1.0000
		Reinforcement			
L76	59	CCI-065125	0.50 - 1.00	1.0000	1.0000
		Reinforcement			

Effective Width of Flat Linear Attachments / Feed Lines

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L5	49	CCI-040075	125.00 -	Auto	0.1996
		Reinforcement	126.00		
L5	50	CCI-040075	125.00 -	Auto	0.1996
		Reinforcement	126.00		
L5	51	CCI-040075	125.00 -	Auto	0.1996
		Reinforcement	126.00		
L6	49	CCI-040075	124.75 -	Auto	0.2664
		Reinforcement	125.00		
L6	50	CCI-040075	124.75 -	Auto	0.2664
		Reinforcement	125.00		
L6	51	CCI-040075	124.75 -	Auto	0.2664
		Reinforcement	125.00		
L7	34	FP 4.00 x 1.25	119.75 -	Auto	0.2256
		Reinforcement	120.00		
L7	36	FP 4.00 x 1.25	119.75 -	Auto	0.2256
		Reinforcement	120.00		
L7	38	FP 4.00 x 1.25	119.75 -	Auto	0.2256
		Reinforcement	120.00		
L7	49	CCI-040075	119.75 -	Auto	0.2437
		Reinforcement	124.75		
L7	50	CCI-040075	119.75 -	Auto	0.2437
		Reinforcement	124.75		
L7	51	CCI-040075	119.75 -	Auto	0.2437
		Reinforcement	124.75		
L8	34	FP 4.00 x 1.25	118.50 -	Auto	0.2199
		Reinforcement	119.75		
L8	36	FP 4.00 x 1.25	118.50 -	Auto	0.2199
		Reinforcement	119.75		
L8	38	FP 4.00 x 1.25	118.50 -	Auto	0.2199
		Reinforcement	119.75		

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L8	49	CCI-040075 Reinforcement	118.50 - 119.75	Auto	0.2199
L8	50	CCI-040075 Reinforcement	118.50 - 119.75	Auto	0.2199
L8	51	CCI-040075 Reinforcement	118.50 - 119.75	Auto	0.2199
L9	34	FP 4.00 x 1.25 Reinforcement	118.25 - 118.50	Auto	0.3379
L9	36	FP 4.00 x 1.25 Reinforcement	118.25 - 118.50	Auto	0.3379
L9	38	FP 4.00 x 1.25 Reinforcement	118.25 - 118.50	Auto	0.3379
L9	49	CCI-040075 Reinforcement	118.25 - 118.50	Auto	0.3379
L9	50	CCI-040075 Reinforcement	118.25 - 118.50	Auto	0.3379
L9	51	CCI-040075 Reinforcement	118.25 - 118.50	Auto	0.3379
L10	34	FP 4.00 x 1.25 Reinforcement	117.00 - 118.25	Auto	0.3322
L10	36	FP 4.00 x 1.25 Reinforcement	117.00 - 118.25	Auto	0.3322
L10	38	FP 4.00 x 1.25 Reinforcement	117.00 - 118.25	Auto	0.3322
L10	49	CCI-040075 Reinforcement	117.00 - 118.25	Auto	0.3322
L10	50	CCI-040075 Reinforcement	117.00 - 118.25	Auto	0.3322
L10	51	CCI-040075 Reinforcement	117.00 - 118.25	Auto	0.3322
L11	34	FP 4.00 x 1.25 Reinforcement	116.75 - 117.00	Auto	0.3265
L11	36	FP 4.00 x 1.25 Reinforcement	116.75 - 117.00	Auto	0.3265
L11	38	FP 4.00 x 1.25 Reinforcement	116.75 - 117.00	Auto	0.3265
L11	49	CCI-040075 Reinforcement	116.75 - 117.00	Auto	0.3265
L11	50	CCI-040075 Reinforcement	116.75 - 117.00	Auto	0.3265
L11	51	CCI-040075 Reinforcement	116.75 - 117.00	Auto	0.3265
L12	34	FP 4.00 x 1.25 Reinforcement	111.75 - 116.75	Auto	0.2955
L12	36	FP 4.00 x 1.25 Reinforcement	111.75 - 116.75	Auto	0.2955
L12	38	FP 4.00 x 1.25 Reinforcement	111.75 - 116.75	Auto	0.2955
L12	49	CCI-040075 Reinforcement	116.00 - 116.75	Auto	0.3117
L12	50	CCI-040075 Reinforcement	116.00 - 116.75	Auto	0.3117
L12	51	CCI-040075 Reinforcement	116.00 - 116.75	Auto	0.3117
L12	77	CCI-040075 Reinforcement	111.75 - 115.92	Auto	0.2924
L12	79	CCI-040075 Reinforcement	111.75 - 115.92	Auto	0.2924
L12	81	CCI-040075 Reinforcement	111.75 - 115.92	Auto	0.2924
L13	34	FP 4.00 x 1.25 Reinforcement	106.75 - 111.75	Auto	0.2465
L13	36	FP 4.00 x 1.25 Reinforcement	106.75 - 111.75	Auto	0.2465
L13	38	FP 4.00 x 1.25 Reinforcement	106.75 - 111.75	Auto	0.2465
L13	77	CCI-040075 Reinforcement	106.75 - 111.75	Auto	0.2465

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L13	79	CCI-040075 Reinforcement	106.75 - 111.75	Auto	0.2465
L13	81	CCI-040075 Reinforcement	106.75 - 111.75	Auto	0.2465
L14	33	FP 4.00 x 1.25 Reinforcement	98.50 - 99.51	Auto	0.1630
L14	34	FP 4.00 x 1.25 Reinforcement	99.51 - 106.75	Auto	0.1944
L14	35	FP 4.00 x 1.25 Reinforcement	98.50 - 99.51	Auto	0.1630
L14	36	FP 4.00 x 1.25 Reinforcement	99.51 - 106.75	Auto	0.1944
L14	37	FP 4.00 x 1.25 Reinforcement	98.50 - 99.51	Auto	0.1630
L14	38	FP 4.00 x 1.25 Reinforcement	99.51 - 106.75	Auto	0.1944
L14	76	CCI-040075 Reinforcement	98.50 - 99.51	Auto	0.1630
L14	77	CCI-040075 Reinforcement	99.51 - 106.75	Auto	0.1944
L14	78	CCI-040075 Reinforcement	98.50 - 99.51	Auto	0.1630
L14	79	CCI-040075 Reinforcement	99.51 - 106.75	Auto	0.1944
L14	80	CCI-040075 Reinforcement	98.50 - 99.51	Auto	0.1630
L14	81	CCI-040075 Reinforcement	99.51 - 106.75	Auto	0.1944
L15	33	FP 4.00 x 1.25 Reinforcement	97.00 - 98.50	Auto	0.1974
L15	35	FP 4.00 x 1.25 Reinforcement	97.00 - 98.50	Auto	0.1974
L15	37	FP 4.00 x 1.25 Reinforcement	97.00 - 98.50	Auto	0.1974
L15	46	CCI-040075 Reinforcement	97.00 - 98.00	Auto	0.1955
L15	47	CCI-040075 Reinforcement	97.00 - 98.00	Auto	0.1955
L15	48	CCI-040075 Reinforcement	97.00 - 98.00	Auto	0.1955
L15	76	CCI-040075 Reinforcement	97.00 - 98.50	Auto	0.1974
L15	78	CCI-040075 Reinforcement	97.00 - 98.50	Auto	0.1974
L15	80	CCI-040075 Reinforcement	97.00 - 98.50	Auto	0.1974
L16	33	FP 4.00 x 1.25 Reinforcement	96.75 - 97.00	Auto	0.2513
L16	35	FP 4.00 x 1.25 Reinforcement	96.75 - 97.00	Auto	0.2513
L16	37	FP 4.00 x 1.25 Reinforcement	96.75 - 97.00	Auto	0.2513
L16	46	CCI-040075 Reinforcement	96.75 - 97.00	Auto	0.2513
L16	47	CCI-040075 Reinforcement	96.75 - 97.00	Auto	0.2513
L16	48	CCI-040075 Reinforcement	96.75 - 97.00	Auto	0.2513
L16	76	CCI-040075 Reinforcement	96.75 - 97.00	Auto	0.2513
L16	78	CCI-040075 Reinforcement	96.75 - 97.00	Auto	0.2513
L16	80	CCI-040075 Reinforcement	96.75 - 97.00	Auto	0.2513
L17	33	FP 4.00 x 1.25 Reinforcement	93.98 - 96.75	Auto	0.2343
L17	35	FP 4.00 x 1.25 Reinforcement	93.98 - 96.75	Auto	0.2343

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L17	37	FP 4.00 x 1.25 Reinforcement	93.98 - 96.75	Auto	0.2343
L17	46	CCI-040075 Reinforcement	93.98 - 96.75	Auto	0.2343
L17	47	CCI-040075 Reinforcement	93.98 - 96.75	Auto	0.2343
L17	48	CCI-040075 Reinforcement	93.98 - 96.75	Auto	0.2343
L17	73	CCI-040075 Reinforcement	93.98 - 95.00	Auto	0.2276
L17	74	CCI-040075 Reinforcement	93.98 - 95.00	Auto	0.2276
L17	75	CCI-040075 Reinforcement	93.98 - 95.00	Auto	0.2276
L17	76	CCI-040075 Reinforcement	93.98 - 96.75	Auto	0.2343
L17	78	CCI-040075 Reinforcement	93.98 - 96.75	Auto	0.2343
L17	80	CCI-040075 Reinforcement	93.98 - 96.75	Auto	0.2343
L18	33	FP 4.00 x 1.25 Reinforcement	93.73 - 93.98	Auto	0.2228
L18	35	FP 4.00 x 1.25 Reinforcement	93.73 - 93.98	Auto	0.2228
L18	37	FP 4.00 x 1.25 Reinforcement	93.73 - 93.98	Auto	0.2228
L18	46	CCI-040075 Reinforcement	93.73 - 93.98	Auto	0.2228
L18	47	CCI-040075 Reinforcement	93.73 - 93.98	Auto	0.2228
L18	48	CCI-040075 Reinforcement	93.73 - 93.98	Auto	0.2228
L18	73	CCI-040075 Reinforcement	93.73 - 93.98	Auto	0.2228
L18	74	CCI-040075 Reinforcement	93.73 - 93.98	Auto	0.2228
L18	75	CCI-040075 Reinforcement	93.73 - 93.98	Auto	0.2228
L18	76	CCI-040075 Reinforcement	93.73 - 93.98	Auto	0.2228
L18	78	CCI-040075 Reinforcement	93.73 - 93.98	Auto	0.2228
L18	80	CCI-040075 Reinforcement	93.73 - 93.98	Auto	0.2228
L19	30	FP 5.50 x 1.25 Reinforcement	91.50 - 92.75	Auto	0.4252
L19	31	FP 5.50 x 1.25 Reinforcement	91.50 - 92.75	Auto	0.4252
L19	32	FP 5.50 x 1.25 Reinforcement	91.50 - 92.75	Auto	0.4252
L19	33	FP 4.00 x 1.25 Reinforcement	91.50 - 93.73	Auto	0.2133
L19	35	FP 4.00 x 1.25 Reinforcement	91.50 - 93.73	Auto	0.2133
L19	37	FP 4.00 x 1.25 Reinforcement	91.50 - 93.73	Auto	0.2133
L19	46	CCI-040075 Reinforcement	91.50 - 93.73	Auto	0.2133
L19	47	CCI-040075 Reinforcement	91.50 - 93.73	Auto	0.2133
L19	48	CCI-040075 Reinforcement	91.50 - 93.73	Auto	0.2133
L19	73	CCI-040075 Reinforcement	91.50 - 93.73	Auto	0.2133
L19	74	CCI-040075 Reinforcement	91.50 - 93.73	Auto	0.2133
L19	75	CCI-040075 Reinforcement	91.50 - 93.73	Auto	0.2133

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L19	76	CCI-040075 Reinforcement	93.08 - 93.73	Auto	0.2194
L19	78	CCI-040075 Reinforcement	93.08 - 93.73	Auto	0.2194
L19	80	CCI-040075 Reinforcement	93.08 - 93.73	Auto	0.2194
L20	30	FP 5.50 x 1.25 Reinforcement	91.38 - 91.50	Auto	0.3854
L20	31	FP 5.50 x 1.25 Reinforcement	91.38 - 91.50	Auto	0.3854
L20	32	FP 5.50 x 1.25 Reinforcement	91.38 - 91.50	Auto	0.3854
L20	33	FP 4.00 x 1.25 Reinforcement	91.38 - 91.50	Auto	0.1549
L20	35	FP 4.00 x 1.25 Reinforcement	91.38 - 91.50	Auto	0.1549
L20	37	FP 4.00 x 1.25 Reinforcement	91.38 - 91.50	Auto	0.1549
L20	46	CCI-040075 Reinforcement	91.38 - 91.50	Auto	0.1549
L20	47	CCI-040075 Reinforcement	91.38 - 91.50	Auto	0.1549
L20	48	CCI-040075 Reinforcement	91.38 - 91.50	Auto	0.1549
L20	73	CCI-040075 Reinforcement	91.38 - 91.50	Auto	0.1549
L20	74	CCI-040075 Reinforcement	91.38 - 91.50	Auto	0.1549
L20	75	CCI-040075 Reinforcement	91.38 - 91.50	Auto	0.1549
L21	30	FP 5.50 x 1.25 Reinforcement	91.25 - 91.38	Auto	0.4687
L21	31	FP 5.50 x 1.25 Reinforcement	91.25 - 91.38	Auto	0.4687
L21	32	FP 5.50 x 1.25 Reinforcement	91.25 - 91.38	Auto	0.4687
L21	33	FP 4.00 x 1.25 Reinforcement	91.25 - 91.38	Auto	0.2694
L21	35	FP 4.00 x 1.25 Reinforcement	91.25 - 91.38	Auto	0.2694
L21	37	FP 4.00 x 1.25 Reinforcement	91.25 - 91.38	Auto	0.2694
L21	46	CCI-040075 Reinforcement	91.25 - 91.38	Auto	0.2694
L21	47	CCI-040075 Reinforcement	91.25 - 91.38	Auto	0.2694
L21	48	CCI-040075 Reinforcement	91.25 - 91.38	Auto	0.2694
L21	73	CCI-040075 Reinforcement	91.25 - 91.38	Auto	0.2694
L21	74	CCI-040075 Reinforcement	91.25 - 91.38	Auto	0.2694
L21	75	CCI-040075 Reinforcement	91.25 - 91.38	Auto	0.2694
L22	30	FP 5.50 x 1.25 Reinforcement	91.13 - 91.25	Auto	0.4680
L22	31	FP 5.50 x 1.25 Reinforcement	91.13 - 91.25	Auto	0.4680
L22	32	FP 5.50 x 1.25 Reinforcement	91.13 - 91.25	Auto	0.4680
L22	33	FP 4.00 x 1.25 Reinforcement	91.13 - 91.25	Auto	0.2685
L22	35	FP 4.00 x 1.25 Reinforcement	91.13 - 91.25	Auto	0.2685
L22	37	FP 4.00 x 1.25 Reinforcement	91.13 - 91.25	Auto	0.2685
L22	46	CCI-040075 Reinforcement	91.13 - 91.25	Auto	0.2685

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L22	47	CCI-040075 Reinforcement	91.13 - 91.25	Auto	0.2685
L22	48	CCI-040075 Reinforcement	91.13 - 91.25	Auto	0.2685
L22	73	CCI-040075 Reinforcement	91.13 - 91.25	Auto	0.2685
L22	74	CCI-040075 Reinforcement	91.13 - 91.25	Auto	0.2685
L22	75	CCI-040075 Reinforcement	91.13 - 91.25	Auto	0.2685
L23	30	FP 5.50 x 1.25 Reinforcement	89.00 - 91.13	Auto	0.4578
L23	31	FP 5.50 x 1.25 Reinforcement	89.00 - 91.13	Auto	0.4578
L23	32	FP 5.50 x 1.25 Reinforcement	89.00 - 91.13	Auto	0.4578
L23	33	FP 4.00 x 1.25 Reinforcement	90.00 - 91.13	Auto	0.2582
L23	35	FP 4.00 x 1.25 Reinforcement	90.00 - 91.13	Auto	0.2582
L23	37	FP 4.00 x 1.25 Reinforcement	90.00 - 91.13	Auto	0.2582
L23	46	CCI-040075 Reinforcement	89.00 - 91.13	Auto	0.2544
L23	47	CCI-040075 Reinforcement	89.00 - 91.13	Auto	0.2544
L23	48	CCI-040075 Reinforcement	89.00 - 91.13	Auto	0.2544
L23	70	CCI-040075 Reinforcement	89.00 - 89.92	Auto	0.2498
L23	71	CCI-040075 Reinforcement	89.00 - 89.92	Auto	0.2498
L23	72	CCI-040075 Reinforcement	89.00 - 89.92	Auto	0.2498
L23	73	CCI-040075 Reinforcement	89.00 - 91.13	Auto	0.2544
L23	74	CCI-040075 Reinforcement	89.00 - 91.13	Auto	0.2544
L23	75	CCI-040075 Reinforcement	89.00 - 91.13	Auto	0.2544
L24	30	FP 5.50 x 1.25 Reinforcement	88.75 - 89.00	Auto	0.4072
L24	31	FP 5.50 x 1.25 Reinforcement	88.75 - 89.00	Auto	0.4072
L24	32	FP 5.50 x 1.25 Reinforcement	88.75 - 89.00	Auto	0.4072
L24	46	CCI-040075 Reinforcement	88.75 - 89.00	Auto	0.1849
L24	47	CCI-040075 Reinforcement	88.75 - 89.00	Auto	0.1849
L24	48	CCI-040075 Reinforcement	88.75 - 89.00	Auto	0.1849
L24	70	CCI-040075 Reinforcement	88.75 - 89.00	Auto	0.1849
L24	71	CCI-040075 Reinforcement	88.75 - 89.00	Auto	0.1849
L24	72	CCI-040075 Reinforcement	88.75 - 89.00	Auto	0.1849
L24	73	CCI-040075 Reinforcement	88.75 - 89.00	Auto	0.1849
L24	74	CCI-040075 Reinforcement	88.75 - 89.00	Auto	0.1849
L24	75	CCI-040075 Reinforcement	88.75 - 89.00	Auto	0.1849
L25	30	FP 5.50 x 1.25 Reinforcement	83.75 - 88.75	Auto	0.3846
L25	31	FP 5.50 x 1.25 Reinforcement	83.75 - 88.75	Auto	0.3846

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L25	32	FP 5.50 x 1.25 Reinforcement	83.75 - 88.75	Auto	0.3846
L25	46	CCI-040075 Reinforcement	88.00 - 88.75	Auto	0.1701
L25	47	CCI-040075 Reinforcement	88.00 - 88.75	Auto	0.1701
L25	48	CCI-040075 Reinforcement	88.00 - 88.75	Auto	0.1701
L25	70	CCI-040075 Reinforcement	83.75 - 88.75	Auto	0.1539
L25	71	CCI-040075 Reinforcement	83.75 - 88.75	Auto	0.1539
L25	72	CCI-040075 Reinforcement	83.75 - 88.75	Auto	0.1539
L25	73	CCI-040075 Reinforcement	83.75 - 88.75	Auto	0.1539
L25	74	CCI-040075 Reinforcement	83.75 - 88.75	Auto	0.1539
L25	75	CCI-040075 Reinforcement	83.75 - 88.75	Auto	0.1539
L26	30	FP 5.50 x 1.25 Reinforcement	80.08 - 83.75	Auto	0.3566
L26	31	FP 5.50 x 1.25 Reinforcement	80.08 - 83.75	Auto	0.3566
L26	32	FP 5.50 x 1.25 Reinforcement	80.08 - 83.75	Auto	0.3566
L26	66	CCI-040075 Reinforcement	80.08 - 81.08	Auto	0.1052
L26	67	CCI-040075 Reinforcement	80.08 - 81.08	Auto	0.1052
L26	68	CCI-040075 Reinforcement	80.08 - 81.08	Auto	0.1052
L26	69	CCI-040075 Reinforcement	80.08 - 81.08	Auto	0.1052
L26	70	CCI-040075 Reinforcement	80.08 - 83.75	Auto	0.1154
L26	71	CCI-040075 Reinforcement	80.08 - 83.75	Auto	0.1154
L26	72	CCI-040075 Reinforcement	80.08 - 83.75	Auto	0.1154
L26	73	CCI-040075 Reinforcement	80.08 - 83.75	Auto	0.1154
L26	74	CCI-040075 Reinforcement	80.08 - 83.75	Auto	0.1154
L26	75	CCI-040075 Reinforcement	80.08 - 83.75	Auto	0.1154
L27	30	FP 5.50 x 1.25 Reinforcement	79.83 - 80.08	Auto	0.4058
L27	31	FP 5.50 x 1.25 Reinforcement	79.83 - 80.08	Auto	0.4058
L27	32	FP 5.50 x 1.25 Reinforcement	79.83 - 80.08	Auto	0.4058
L27	66	CCI-040075 Reinforcement	79.83 - 80.08	Auto	0.1829
L27	67	CCI-040075 Reinforcement	79.83 - 80.08	Auto	0.1829
L27	68	CCI-040075 Reinforcement	79.83 - 80.08	Auto	0.1829
L27	69	CCI-040075 Reinforcement	79.83 - 80.08	Auto	0.1829
L27	70	CCI-040075 Reinforcement	79.83 - 80.08	Auto	0.1829
L27	71	CCI-040075 Reinforcement	79.83 - 80.08	Auto	0.1829
L27	72	CCI-040075 Reinforcement	79.83 - 80.08	Auto	0.1829
L27	73	CCI-040075 Reinforcement	79.83 - 80.08	Auto	0.1829

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L27	74	CCI-040075 Reinforcement	79.83 - 80.08	Auto	0.1829
L27	75	CCI-040075 Reinforcement	79.83 - 80.08	Auto	0.1829
L28	30	FP 5.50 x 1.25 Reinforcement	74.83 - 79.83	Auto	0.3832
L28	31	FP 5.50 x 1.25 Reinforcement	74.83 - 79.83	Auto	0.3832
L28	32	FP 5.50 x 1.25 Reinforcement	74.83 - 79.83	Auto	0.3832
L28	43	CCI-045100 Reinforcement	74.83 - 75.00	Auto	0.2298
L28	44	CCI-045100 Reinforcement	74.83 - 75.00	Auto	0.2298
L28	45	CCI-045100 Reinforcement	74.83 - 75.00	Auto	0.2298
L28	66	CCI-040075 Reinforcement	74.83 - 79.83	Auto	0.1520
L28	67	CCI-040075 Reinforcement	74.83 - 79.83	Auto	0.1520
L28	68	CCI-040075 Reinforcement	74.83 - 79.83	Auto	0.1520
L28	69	CCI-040075 Reinforcement	74.83 - 79.83	Auto	0.1520
L28	70	CCI-040075 Reinforcement	74.83 - 79.83	Auto	0.1520
L28	71	CCI-040075 Reinforcement	74.83 - 79.83	Auto	0.1520
L28	72	CCI-040075 Reinforcement	74.83 - 79.83	Auto	0.1520
L28	73	CCI-040075 Reinforcement	74.83 - 79.83	Auto	0.1520
L28	74	CCI-040075 Reinforcement	74.83 - 79.83	Auto	0.1520
L28	75	CCI-040075 Reinforcement	74.83 - 79.83	Auto	0.1520
L29	30	FP 5.50 x 1.25 Reinforcement	73.50 - 74.83	Auto	0.3657
L29	31	FP 5.50 x 1.25 Reinforcement	73.50 - 74.83	Auto	0.3657
L29	32	FP 5.50 x 1.25 Reinforcement	73.50 - 74.83	Auto	0.3657
L29	43	CCI-045100 Reinforcement	73.50 - 74.83	Auto	0.2248
L29	44	CCI-045100 Reinforcement	73.50 - 74.83	Auto	0.2248
L29	45	CCI-045100 Reinforcement	73.50 - 74.83	Auto	0.2248
L29	66	CCI-040075 Reinforcement	73.50 - 74.83	Auto	0.1279
L29	67	CCI-040075 Reinforcement	73.50 - 74.83	Auto	0.1279
L29	68	CCI-040075 Reinforcement	73.50 - 74.83	Auto	0.1279
L29	69	CCI-040075 Reinforcement	73.50 - 74.83	Auto	0.1279
L29	70	CCI-040075 Reinforcement	73.50 - 74.83	Auto	0.1279
L29	71	CCI-040075 Reinforcement	73.50 - 74.83	Auto	0.1279
L29	72	CCI-040075 Reinforcement	73.50 - 74.83	Auto	0.1279
L29	73	CCI-040075 Reinforcement	73.50 - 74.83	Auto	0.1279
L29	74	CCI-040075 Reinforcement	73.50 - 74.83	Auto	0.1279
L29	75	CCI-040075 Reinforcement	73.50 - 74.83	Auto	0.1279

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L30	30	FP 5.50 x 1.25 Reinforcement	73.25 - 73.50	Auto	0.4253
L30	31	FP 5.50 x 1.25 Reinforcement	73.25 - 73.50	Auto	0.4253
L30	32	FP 5.50 x 1.25 Reinforcement	73.25 - 73.50	Auto	0.4253
L30	43	CCI-045100 Reinforcement	73.25 - 73.50	Auto	0.2976
L30	44	CCI-045100 Reinforcement	73.25 - 73.50	Auto	0.2976
L30	45	CCI-045100 Reinforcement	73.25 - 73.50	Auto	0.2976
L30	66	CCI-040075 Reinforcement	73.25 - 73.50	Auto	0.2098
L30	67	CCI-040075 Reinforcement	73.25 - 73.50	Auto	0.2098
L30	68	CCI-040075 Reinforcement	73.25 - 73.50	Auto	0.2098
L30	69	CCI-040075 Reinforcement	73.25 - 73.50	Auto	0.2098
L30	70	CCI-040075 Reinforcement	73.25 - 73.50	Auto	0.2098
L30	71	CCI-040075 Reinforcement	73.25 - 73.50	Auto	0.2098
L30	72	CCI-040075 Reinforcement	73.25 - 73.50	Auto	0.2098
L30	73	CCI-040075 Reinforcement	73.25 - 73.50	Auto	0.2098
L30	74	CCI-040075 Reinforcement	73.25 - 73.50	Auto	0.2098
L30	75	CCI-040075 Reinforcement	73.25 - 73.50	Auto	0.2098
L31	30	FP 5.50 x 1.25 Reinforcement	71.00 - 73.25	Auto	0.4104
L31	31	FP 5.50 x 1.25 Reinforcement	71.00 - 73.25	Auto	0.4104
L31	32	FP 5.50 x 1.25 Reinforcement	71.00 - 73.25	Auto	0.4104
L31	43	CCI-045100 Reinforcement	71.00 - 73.25	Auto	0.2794
L31	44	CCI-045100 Reinforcement	71.00 - 73.25	Auto	0.2794
L31	45	CCI-045100 Reinforcement	71.00 - 73.25	Auto	0.2794
L31	66	CCI-040075 Reinforcement	71.00 - 73.25	Auto	0.1893
L31	67	CCI-040075 Reinforcement	71.00 - 73.25	Auto	0.1893
L31	68	CCI-040075 Reinforcement	71.00 - 73.25	Auto	0.1893
L31	69	CCI-040075 Reinforcement	71.00 - 73.25	Auto	0.1893
L31	70	CCI-040075 Reinforcement	71.00 - 73.25	Auto	0.1893
L31	71	CCI-040075 Reinforcement	71.00 - 73.25	Auto	0.1893
L31	72	CCI-040075 Reinforcement	71.00 - 73.25	Auto	0.1893
L31	73	CCI-040075 Reinforcement	71.00 - 73.25	Auto	0.1893
L31	74	CCI-040075 Reinforcement	71.00 - 73.25	Auto	0.1893
L31	75	CCI-040075 Reinforcement	71.00 - 73.25	Auto	0.1893
L32	30	FP 5.50 x 1.25 Reinforcement	70.75 - 71.00	Auto	0.3635
L32	31	FP 5.50 x 1.25 Reinforcement	70.75 - 71.00	Auto	0.3635

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L32	32	FP 5.50 x 1.25 Reinforcement	70.75 - 71.00	Auto	0.3635
L32	43	CCI-045100 Reinforcement	70.75 - 71.00	Auto	0.2221
L32	44	CCI-045100 Reinforcement	70.75 - 71.00	Auto	0.2221
L32	45	CCI-045100 Reinforcement	70.75 - 71.00	Auto	0.2221
L32	66	CCI-040075 Reinforcement	70.75 - 71.00	Auto	0.1248
L32	67	CCI-040075 Reinforcement	70.75 - 71.00	Auto	0.1248
L32	68	CCI-040075 Reinforcement	70.75 - 71.00	Auto	0.1248
L32	69	CCI-040075 Reinforcement	70.75 - 71.00	Auto	0.1248
L32	70	CCI-040075 Reinforcement	70.75 - 71.00	Auto	0.1248
L32	71	CCI-040075 Reinforcement	70.75 - 71.00	Auto	0.1248
L32	72	CCI-040075 Reinforcement	70.75 - 71.00	Auto	0.1248
L32	73	CCI-040075 Reinforcement	70.75 - 71.00	Auto	0.1248
L32	74	CCI-040075 Reinforcement	70.75 - 71.00	Auto	0.1248
L32	75	CCI-040075 Reinforcement	70.75 - 71.00	Auto	0.1248
L33	30	FP 5.50 x 1.25 Reinforcement	65.75 - 70.75	Auto	0.3410
L33	31	FP 5.50 x 1.25 Reinforcement	65.75 - 70.75	Auto	0.3410
L33	32	FP 5.50 x 1.25 Reinforcement	65.75 - 70.75	Auto	0.3410
L33	43	CCI-045100 Reinforcement	65.75 - 70.75	Auto	0.1945
L33	44	CCI-045100 Reinforcement	65.75 - 70.75	Auto	0.1945
L33	45	CCI-045100 Reinforcement	65.75 - 70.75	Auto	0.1945
L33	66	CCI-040075 Reinforcement	65.75 - 70.75	Auto	0.0938
L33	67	CCI-040075 Reinforcement	65.75 - 70.75	Auto	0.0938
L33	68	CCI-040075 Reinforcement	65.75 - 70.75	Auto	0.0938
L33	69	CCI-040075 Reinforcement	65.75 - 70.75	Auto	0.0938
L33	70	CCI-040075 Reinforcement	65.75 - 70.75	Auto	0.0938
L33	71	CCI-040075 Reinforcement	65.75 - 70.75	Auto	0.0938
L33	72	CCI-040075 Reinforcement	65.75 - 70.75	Auto	0.0938
L33	73	CCI-040075 Reinforcement	70.00 - 70.75	Auto	0.1100
L33	74	CCI-040075 Reinforcement	70.00 - 70.75	Auto	0.1100
L33	75	CCI-040075 Reinforcement	70.00 - 70.75	Auto	0.1100
L34	27	FP 5.50 x 1.25 Reinforcement	64.13 - 65.50	Auto	0.3219
L34	28	FP 5.50 x 1.25 Reinforcement	64.13 - 65.50	Auto	0.3219
L34	29	FP 5.50 x 1.25 Reinforcement	64.13 - 65.50	Auto	0.3219
L34	30	FP 5.50 x 1.25 Reinforcement	64.13 - 65.75	Auto	0.3226

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L34	31	FP 5.50 x 1.25 Reinforcement	64.13 - 65.75	Auto	0.3226
L34	32	FP 5.50 x 1.25 Reinforcement	64.13 - 65.75	Auto	0.3226
L34	43	CCI-045100 Reinforcement	64.13 - 65.75	Auto	0.1721
L34	44	CCI-045100 Reinforcement	64.13 - 65.75	Auto	0.1721
L34	45	CCI-045100 Reinforcement	64.13 - 65.75	Auto	0.1721
L34	66	CCI-040075 Reinforcement	64.13 - 65.75	Auto	0.0686
L34	67	CCI-040075 Reinforcement	64.13 - 65.75	Auto	0.0686
L34	68	CCI-040075 Reinforcement	64.13 - 65.75	Auto	0.0686
L34	69	CCI-040075 Reinforcement	64.13 - 65.75	Auto	0.0686
L34	70	CCI-040075 Reinforcement	65.58 - 65.75	Auto	0.0742
L34	71	CCI-040075 Reinforcement	65.58 - 65.75	Auto	0.0742
L34	72	CCI-040075 Reinforcement	65.58 - 65.75	Auto	0.0742
L35	27	FP 5.50 x 1.25 Reinforcement	63.88 - 64.13	Auto	0.2455
L35	28	FP 5.50 x 1.25 Reinforcement	63.88 - 64.13	Auto	0.2455
L35	29	FP 5.50 x 1.25 Reinforcement	63.88 - 64.13	Auto	0.2455
L35	30	FP 5.50 x 1.25 Reinforcement	63.88 - 64.13	Auto	0.2455
L35	31	FP 5.50 x 1.25 Reinforcement	63.88 - 64.13	Auto	0.2455
L35	32	FP 5.50 x 1.25 Reinforcement	63.88 - 64.13	Auto	0.2455
L35	43	CCI-045100 Reinforcement	63.88 - 64.13	Auto	0.0778
L35	44	CCI-045100 Reinforcement	63.88 - 64.13	Auto	0.0778
L35	45	CCI-045100 Reinforcement	63.88 - 64.13	Auto	0.0778
L35	66	CCI-040075 Reinforcement	63.88 - 64.13	Auto	0.0000
L35	67	CCI-040075 Reinforcement	63.88 - 64.13	Auto	0.0000
L35	68	CCI-040075 Reinforcement	63.88 - 64.13	Auto	0.0000
L35	69	CCI-040075 Reinforcement	63.88 - 64.13	Auto	0.0000
L36	27	FP 5.50 x 1.25 Reinforcement	63.00 - 63.88	Auto	0.2423
L36	28	FP 5.50 x 1.25 Reinforcement	63.00 - 63.88	Auto	0.2423
L36	29	FP 5.50 x 1.25 Reinforcement	63.00 - 63.88	Auto	0.2423
L36	30	FP 5.50 x 1.25 Reinforcement	63.00 - 63.88	Auto	0.2423
L36	31	FP 5.50 x 1.25 Reinforcement	63.00 - 63.88	Auto	0.2423
L36	32	FP 5.50 x 1.25 Reinforcement	63.00 - 63.88	Auto	0.2423
L36	43	CCI-045100 Reinforcement	63.00 - 63.88	Auto	0.0740
L36	44	CCI-045100 Reinforcement	63.00 - 63.88	Auto	0.0740
L36	45	CCI-045100 Reinforcement	63.00 - 63.88	Auto	0.0740

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L36	66	CCI-040075 Reinforcement	63.00 - 63.88	Auto	0.0000
L36	67	CCI-040075 Reinforcement	63.00 - 63.88	Auto	0.0000
L36	68	CCI-040075 Reinforcement	63.00 - 63.88	Auto	0.0000
L36	69	CCI-040075 Reinforcement	63.00 - 63.88	Auto	0.0000
L37	27	FP 5.50 x 1.25 Reinforcement	62.75 - 63.00	Auto	0.2872
L37	28	FP 5.50 x 1.25 Reinforcement	62.75 - 63.00	Auto	0.2872
L37	29	FP 5.50 x 1.25 Reinforcement	62.75 - 63.00	Auto	0.2872
L37	30	FP 5.50 x 1.25 Reinforcement	62.75 - 63.00	Auto	0.2872
L37	31	FP 5.50 x 1.25 Reinforcement	62.75 - 63.00	Auto	0.2872
L37	32	FP 5.50 x 1.25 Reinforcement	62.75 - 63.00	Auto	0.2872
L37	43	CCI-045100 Reinforcement	62.75 - 63.00	Auto	0.1288
L37	44	CCI-045100 Reinforcement	62.75 - 63.00	Auto	0.1288
L37	45	CCI-045100 Reinforcement	62.75 - 63.00	Auto	0.1288
L37	66	CCI-040075 Reinforcement	62.75 - 63.00	Auto	0.0199
L37	67	CCI-040075 Reinforcement	62.75 - 63.00	Auto	0.0199
L37	68	CCI-040075 Reinforcement	62.75 - 63.00	Auto	0.0199
L37	69	CCI-040075 Reinforcement	62.75 - 63.00	Auto	0.0199
L38	27	FP 5.50 x 1.25 Reinforcement	62.08 - 62.75	Auto	0.2847
L38	28	FP 5.50 x 1.25 Reinforcement	62.08 - 62.75	Auto	0.2847
L38	29	FP 5.50 x 1.25 Reinforcement	62.08 - 62.75	Auto	0.2847
L38	43	CCI-045100 Reinforcement	62.08 - 62.75	Auto	0.1257
L38	44	CCI-045100 Reinforcement	62.08 - 62.75	Auto	0.1257
L38	45	CCI-045100 Reinforcement	62.08 - 62.75	Auto	0.1257
L38	62	CCI-060100 Reinforcement	62.08 - 62.67	Auto	0.3441
L38	64	CCI-060100 Reinforcement	62.08 - 62.67	Auto	0.3441
L38	66	CCI-040075 Reinforcement	62.08 - 62.75	Auto	0.0164
L38	67	CCI-040075 Reinforcement	62.08 - 62.75	Auto	0.0164
L38	68	CCI-040075 Reinforcement	62.08 - 62.75	Auto	0.0164
L38	69	CCI-040075 Reinforcement	62.08 - 62.75	Auto	0.0164
L39	27	FP 5.50 x 1.25 Reinforcement	61.83 - 62.08	Auto	0.2661
L39	28	FP 5.50 x 1.25 Reinforcement	61.83 - 62.08	Auto	0.2661
L39	29	FP 5.50 x 1.25 Reinforcement	61.83 - 62.08	Auto	0.2661
L39	43	CCI-045100 Reinforcement	61.83 - 62.08	Auto	0.1030
L39	44	CCI-045100 Reinforcement	61.83 - 62.08	Auto	0.1030

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L39	45	CCI-045100 Reinforcement	61.83 - 62.08	Auto	0.1030
L39	62	CCI-060100 Reinforcement	61.83 - 62.08	Auto	0.3273
L39	64	CCI-060100 Reinforcement	61.83 - 62.08	Auto	0.3273
L39	66	CCI-040075 Reinforcement	61.83 - 62.08	Auto	0.0000
L39	67	CCI-040075 Reinforcement	61.83 - 62.08	Auto	0.0000
L39	68	CCI-040075 Reinforcement	61.83 - 62.08	Auto	0.0000
L39	69	CCI-040075 Reinforcement	61.83 - 62.08	Auto	0.0000
L40	27	FP 5.50 x 1.25 Reinforcement	60.67 - 61.83	Auto	0.2582
L40	28	FP 5.50 x 1.25 Reinforcement	60.67 - 61.83	Auto	0.2582
L40	29	FP 5.50 x 1.25 Reinforcement	60.67 - 61.83	Auto	0.2582
L40	43	CCI-045100 Reinforcement	60.67 - 61.83	Auto	0.0934
L40	44	CCI-045100 Reinforcement	60.67 - 61.83	Auto	0.0934
L40	45	CCI-045100 Reinforcement	60.67 - 61.83	Auto	0.0934
L40	62	CCI-060100 Reinforcement	60.67 - 61.83	Auto	0.3200
L40	63	CCI-060100 Reinforcement	60.67 - 61.00	Auto	0.3179
L40	64	CCI-060100 Reinforcement	60.67 - 61.83	Auto	0.3200
L40	66	CCI-040075 Reinforcement	61.08 - 61.83	Auto	0.0000
L40	67	CCI-040075 Reinforcement	61.08 - 61.83	Auto	0.0000
L40	68	CCI-040075 Reinforcement	61.08 - 61.83	Auto	0.0000
L40	69	CCI-040075 Reinforcement	61.08 - 61.83	Auto	0.0000
L41	27	FP 5.50 x 1.25 Reinforcement	60.42 - 60.67	Auto	0.2823
L41	28	FP 5.50 x 1.25 Reinforcement	60.42 - 60.67	Auto	0.2823
L41	29	FP 5.50 x 1.25 Reinforcement	60.42 - 60.67	Auto	0.2823
L41	43	CCI-045100 Reinforcement	60.42 - 60.67	Auto	0.1228
L41	44	CCI-045100 Reinforcement	60.42 - 60.67	Auto	0.1228
L41	45	CCI-045100 Reinforcement	60.42 - 60.67	Auto	0.1228
L41	62	CCI-060100 Reinforcement	60.42 - 60.67	Auto	0.3421
L41	63	CCI-060100 Reinforcement	60.42 - 60.67	Auto	0.3421
L41	64	CCI-060100 Reinforcement	60.42 - 60.67	Auto	0.3421
L42	27	FP 5.50 x 1.25 Reinforcement	59.00 - 60.42	Auto	0.2777
L42	28	FP 5.50 x 1.25 Reinforcement	59.00 - 60.42	Auto	0.2777
L42	29	FP 5.50 x 1.25 Reinforcement	59.00 - 60.42	Auto	0.2777
L42	43	CCI-045100 Reinforcement	59.00 - 60.42	Auto	0.1172
L42	44	CCI-045100 Reinforcement	59.00 - 60.42	Auto	0.1172

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L42	45	CCI-045100 Reinforcement	59.00 - 60.42	Auto	0.1172
L42	62	CCI-060100 Reinforcement	59.00 - 60.42	Auto	0.3379
L42	63	CCI-060100 Reinforcement	59.00 - 60.42	Auto	0.3379
L42	64	CCI-060100 Reinforcement	59.00 - 60.42	Auto	0.3379
L43	27	FP 5.50 x 1.25 Reinforcement	58.75 - 59.00	Auto	0.2691
L43	28	FP 5.50 x 1.25 Reinforcement	58.75 - 59.00	Auto	0.2691
L43	29	FP 5.50 x 1.25 Reinforcement	58.75 - 59.00	Auto	0.2691
L43	43	CCI-045100 Reinforcement	58.75 - 59.00	Auto	0.1066
L43	44	CCI-045100 Reinforcement	58.75 - 59.00	Auto	0.1066
L43	45	CCI-045100 Reinforcement	58.75 - 59.00	Auto	0.1066
L43	62	CCI-060100 Reinforcement	58.75 - 59.00	Auto	0.3300
L43	63	CCI-060100 Reinforcement	58.75 - 59.00	Auto	0.3300
L43	64	CCI-060100 Reinforcement	58.75 - 59.00	Auto	0.3300
L44	27	FP 5.50 x 1.25 Reinforcement	53.75 - 58.75	Auto	0.2505
L44	28	FP 5.50 x 1.25 Reinforcement	53.75 - 58.75	Auto	0.2505
L44	29	FP 5.50 x 1.25 Reinforcement	53.75 - 58.75	Auto	0.2505
L44	43	CCI-045100 Reinforcement	53.75 - 58.75	Auto	0.0840
L44	44	CCI-045100 Reinforcement	53.75 - 58.75	Auto	0.0840
L44	45	CCI-045100 Reinforcement	53.75 - 58.75	Auto	0.0840
L44	62	CCI-060100 Reinforcement	53.75 - 58.75	Auto	0.3130
L44	63	CCI-060100 Reinforcement	53.75 - 58.75	Auto	0.3130
L44	64	CCI-060100 Reinforcement	53.75 - 58.75	Auto	0.3130
L45	27	FP 5.50 x 1.25 Reinforcement	48.50 - 53.75	Auto	0.2221
L45	28	FP 5.50 x 1.25 Reinforcement	48.50 - 53.75	Auto	0.2221
L45	29	FP 5.50 x 1.25 Reinforcement	48.50 - 53.75	Auto	0.2221
L45	43	CCI-045100 Reinforcement	50.00 - 53.75	Auto	0.0544
L45	44	CCI-045100 Reinforcement	50.00 - 53.75	Auto	0.0544
L45	45	CCI-045100 Reinforcement	50.00 - 53.75	Auto	0.0544
L45	61	CCI-060100 Reinforcement	48.50 - 49.92	Auto	0.2772
L45	62	CCI-060100 Reinforcement	48.50 - 53.75	Auto	0.2870
L45	63	CCI-060100 Reinforcement	48.50 - 53.75	Auto	0.2870
L45	64	CCI-060100 Reinforcement	48.50 - 53.75	Auto	0.2870
L45	65	CCI-060100 Reinforcement	48.50 - 49.92	Auto	0.2772
L46	22	FP 5.50 x 1.25 Reinforcement	47.50 - 48.25	Auto	0.2322

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L46	24	FP 5.50 x 1.25 Reinforcement	47.50 - 48.25	Auto	0.2322
L46	26	FP 5.50 x 1.25 Reinforcement	47.50 - 48.25	Auto	0.2322
L46	27	FP 5.50 x 1.25 Reinforcement	47.50 - 48.50	Auto	0.2329
L46	28	FP 5.50 x 1.25 Reinforcement	47.50 - 48.50	Auto	0.2329
L46	29	FP 5.50 x 1.25 Reinforcement	47.50 - 48.50	Auto	0.2329
L46	61	CCI-060100 Reinforcement	47.50 - 48.50	Auto	0.2969
L46	62	CCI-060100 Reinforcement	47.50 - 48.50	Auto	0.2969
L46	63	CCI-060100 Reinforcement	47.50 - 48.50	Auto	0.2969
L46	64	CCI-060100 Reinforcement	47.50 - 48.50	Auto	0.2969
L46	65	CCI-060100 Reinforcement	47.50 - 48.50	Auto	0.2969
L47	22	FP 5.50 x 1.25 Reinforcement	46.88 - 47.50	Auto	0.2285
L47	24	FP 5.50 x 1.25 Reinforcement	46.88 - 47.50	Auto	0.2285
L47	26	FP 5.50 x 1.25 Reinforcement	46.88 - 47.50	Auto	0.2285
L47	27	FP 5.50 x 1.25 Reinforcement	46.88 - 47.50	Auto	0.2285
L47	28	FP 5.50 x 1.25 Reinforcement	46.88 - 47.50	Auto	0.2285
L47	29	FP 5.50 x 1.25 Reinforcement	46.88 - 47.50	Auto	0.2285
L47	61	CCI-060100 Reinforcement	46.88 - 47.50	Auto	0.2928
L47	62	CCI-060100 Reinforcement	46.88 - 47.50	Auto	0.2928
L47	63	CCI-060100 Reinforcement	46.88 - 47.50	Auto	0.2928
L47	64	CCI-060100 Reinforcement	46.88 - 47.50	Auto	0.2928
L47	65	CCI-060100 Reinforcement	46.88 - 47.50	Auto	0.2928
L48	22	FP 5.50 x 1.25 Reinforcement	46.63 - 46.88	Auto	0.2301
L48	24	FP 5.50 x 1.25 Reinforcement	46.63 - 46.88	Auto	0.2301
L48	26	FP 5.50 x 1.25 Reinforcement	46.63 - 46.88	Auto	0.2301
L48	27	FP 5.50 x 1.25 Reinforcement	46.63 - 46.88	Auto	0.2301
L48	28	FP 5.50 x 1.25 Reinforcement	46.63 - 46.88	Auto	0.2301
L48	29	FP 5.50 x 1.25 Reinforcement	46.63 - 46.88	Auto	0.2301
L48	61	CCI-060100 Reinforcement	46.63 - 46.88	Auto	0.2942
L48	62	CCI-060100 Reinforcement	46.63 - 46.88	Auto	0.2942
L48	63	CCI-060100 Reinforcement	46.63 - 46.88	Auto	0.2942
L48	64	CCI-060100 Reinforcement	46.63 - 46.88	Auto	0.2942
L48	65	CCI-060100 Reinforcement	46.63 - 46.88	Auto	0.2942
L49	22	FP 5.50 x 1.25 Reinforcement	43.50 - 46.63	Auto	0.2167
L49	24	FP 5.50 x 1.25 Reinforcement	43.50 - 46.63	Auto	0.2167

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L49	26	FP 5.50 x 1.25 Reinforcement	43.50 - 46.63	Auto	0.2167
L49	27	FP 5.50 x 1.25 Reinforcement	45.50 - 46.63	Auto	0.2222
L49	28	FP 5.50 x 1.25 Reinforcement	45.50 - 46.63	Auto	0.2222
L49	29	FP 5.50 x 1.25 Reinforcement	45.50 - 46.63	Auto	0.2222
L49	40	CCI-045100 Reinforcement	43.50 - 45.00	Auto	0.0372
L49	41	CCI-045100 Reinforcement	43.50 - 45.00	Auto	0.0372
L49	42	CCI-045100 Reinforcement	43.50 - 45.00	Auto	0.0372
L49	61	CCI-060100 Reinforcement	43.50 - 46.63	Auto	0.2820
L49	62	CCI-060100 Reinforcement	43.50 - 46.63	Auto	0.2820
L49	63	CCI-060100 Reinforcement	43.50 - 46.63	Auto	0.2820
L49	64	CCI-060100 Reinforcement	43.50 - 46.63	Auto	0.2820
L49	65	CCI-060100 Reinforcement	43.50 - 46.63	Auto	0.2820
L50	22	FP 5.50 x 1.25 Reinforcement	43.25 - 43.50	Auto	0.2554
L50	24	FP 5.50 x 1.25 Reinforcement	43.25 - 43.50	Auto	0.2554
L50	26	FP 5.50 x 1.25 Reinforcement	43.25 - 43.50	Auto	0.2554
L50	40	CCI-045100 Reinforcement	43.25 - 43.50	Auto	0.0899
L50	41	CCI-045100 Reinforcement	43.25 - 43.50	Auto	0.0899
L50	42	CCI-045100 Reinforcement	43.25 - 43.50	Auto	0.0899
L50	61	CCI-060100 Reinforcement	43.25 - 43.50	Auto	0.3175
L50	62	CCI-060100 Reinforcement	43.25 - 43.50	Auto	0.3175
L50	63	CCI-060100 Reinforcement	43.25 - 43.50	Auto	0.3175
L50	64	CCI-060100 Reinforcement	43.25 - 43.50	Auto	0.3175
L50	65	CCI-060100 Reinforcement	43.25 - 43.50	Auto	0.3175
L51	22	FP 5.50 x 1.25 Reinforcement	38.25 - 43.25	Auto	0.2369
L51	24	FP 5.50 x 1.25 Reinforcement	38.25 - 43.25	Auto	0.2369
L51	26	FP 5.50 x 1.25 Reinforcement	38.25 - 43.25	Auto	0.2369
L51	40	CCI-045100 Reinforcement	38.25 - 43.25	Auto	0.0673
L51	41	CCI-045100 Reinforcement	38.25 - 43.25	Auto	0.0673
L51	42	CCI-045100 Reinforcement	38.25 - 43.25	Auto	0.0673
L51	61	CCI-060100 Reinforcement	38.25 - 43.25	Auto	0.3005
L51	62	CCI-060100 Reinforcement	38.25 - 43.25	Auto	0.3005
L51	63	CCI-060100 Reinforcement	38.25 - 43.25	Auto	0.3005
L51	64	CCI-060100 Reinforcement	38.25 - 43.25	Auto	0.3005
L51	65	CCI-060100 Reinforcement	38.25 - 43.25	Auto	0.3005

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L52	21	FP 5.50 x 1.25 Reinforcement	33.25 - 38.02	Auto	0.2047
L52	22	FP 5.50 x 1.25 Reinforcement	38.02 - 38.25	Auto	0.2185
L52	23	FP 5.50 x 1.25 Reinforcement	33.25 - 38.02	Auto	0.2047
L52	24	FP 5.50 x 1.25 Reinforcement	38.02 - 38.25	Auto	0.2185
L52	25	FP 5.50 x 1.25 Reinforcement	33.25 - 38.02	Auto	0.2047
L52	26	FP 5.50 x 1.25 Reinforcement	38.02 - 38.25	Auto	0.2185
L52	40	CCI-045100 Reinforcement	33.25 - 38.25	Auto	0.0287
L52	41	CCI-045100 Reinforcement	33.25 - 38.25	Auto	0.0287
L52	42	CCI-045100 Reinforcement	33.25 - 38.25	Auto	0.0287
L52	61	CCI-060100 Reinforcement	33.25 - 38.25	Auto	0.2715
L52	62	CCI-060100 Reinforcement	33.25 - 38.25	Auto	0.2715
L52	63	CCI-060100 Reinforcement	33.25 - 38.25	Auto	0.2715
L52	64	CCI-060100 Reinforcement	33.25 - 38.25	Auto	0.2715
L52	65	CCI-060100 Reinforcement	33.25 - 38.25	Auto	0.2715
L53	21	FP 5.50 x 1.25 Reinforcement	32.58 - 33.25	Auto	0.1857
L53	23	FP 5.50 x 1.25 Reinforcement	32.58 - 33.25	Auto	0.1857
L53	25	FP 5.50 x 1.25 Reinforcement	32.58 - 33.25	Auto	0.1857
L53	40	CCI-045100 Reinforcement	32.58 - 33.25	Auto	0.0047
L53	41	CCI-045100 Reinforcement	32.58 - 33.25	Auto	0.0047
L53	42	CCI-045100 Reinforcement	32.58 - 33.25	Auto	0.0047
L53	61	CCI-060100 Reinforcement	32.58 - 33.25	Auto	0.2535
L53	62	CCI-060100 Reinforcement	32.58 - 33.25	Auto	0.2535
L53	63	CCI-060100 Reinforcement	32.58 - 33.25	Auto	0.2535
L53	64	CCI-060100 Reinforcement	32.58 - 33.25	Auto	0.2535
L53	65	CCI-060100 Reinforcement	32.58 - 33.25	Auto	0.2535
L54	21	FP 5.50 x 1.25 Reinforcement	32.33 - 32.58	Auto	0.1871
L54	23	FP 5.50 x 1.25 Reinforcement	32.33 - 32.58	Auto	0.1871
L54	25	FP 5.50 x 1.25 Reinforcement	32.33 - 32.58	Auto	0.1871
L54	40	CCI-045100 Reinforcement	32.33 - 32.58	Auto	0.0065
L54	41	CCI-045100 Reinforcement	32.33 - 32.58	Auto	0.0065
L54	42	CCI-045100 Reinforcement	32.33 - 32.58	Auto	0.0065
L54	61	CCI-060100 Reinforcement	32.33 - 32.58	Auto	0.2549
L54	62	CCI-060100 Reinforcement	32.33 - 32.58	Auto	0.2549
L54	63	CCI-060100 Reinforcement	32.33 - 32.58	Auto	0.2549

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L54	64	CCI-060100 Reinforcement	32.33 - 32.58	Auto	0.2549
L54	65	CCI-060100 Reinforcement	32.33 - 32.58	Auto	0.2549
L55	17	FP 5.50 x 1.25 Reinforcement	29.67 - 30.50	Auto	0.1660
L55	18	FP 5.50 x 1.25 Reinforcement	29.67 - 30.50	Auto	0.1660
L55	19	FP 5.50 x 1.25 Reinforcement	29.67 - 30.50	Auto	0.1660
L55	20	FP 5.50 x 1.25 Reinforcement	29.67 - 30.50	Auto	0.1660
L55	21	FP 5.50 x 1.25 Reinforcement	29.67 - 32.33	Auto	0.1711
L55	23	FP 5.50 x 1.25 Reinforcement	29.67 - 32.33	Auto	0.1711
L55	25	FP 5.50 x 1.25 Reinforcement	29.67 - 32.33	Auto	0.1711
L55	40	CCI-045100 Reinforcement	29.67 - 32.33	Auto	0.0000
L55	41	CCI-045100 Reinforcement	29.67 - 32.33	Auto	0.0000
L55	42	CCI-045100 Reinforcement	29.67 - 32.33	Auto	0.0000
L55	61	CCI-060100 Reinforcement	29.67 - 32.33	Auto	0.2402
L55	62	CCI-060100 Reinforcement	29.67 - 32.33	Auto	0.2402
L55	63	CCI-060100 Reinforcement	29.67 - 32.33	Auto	0.2402
L55	64	CCI-060100 Reinforcement	29.67 - 32.33	Auto	0.2402
L55	65	CCI-060100 Reinforcement	30.58 - 32.33	Auto	0.2425
L56	17	FP 5.50 x 1.25 Reinforcement	29.42 - 29.67	Auto	0.1151
L56	18	FP 5.50 x 1.25 Reinforcement	29.42 - 29.67	Auto	0.1151
L56	19	FP 5.50 x 1.25 Reinforcement	29.42 - 29.67	Auto	0.1151
L56	20	FP 5.50 x 1.25 Reinforcement	29.42 - 29.67	Auto	0.1151
L56	21	FP 5.50 x 1.25 Reinforcement	29.42 - 29.67	Auto	0.1151
L56	23	FP 5.50 x 1.25 Reinforcement	29.42 - 29.67	Auto	0.1151
L56	25	FP 5.50 x 1.25 Reinforcement	29.42 - 29.67	Auto	0.1151
L56	40	CCI-045100 Reinforcement	29.42 - 29.67	Auto	0.0000
L56	41	CCI-045100 Reinforcement	29.42 - 29.67	Auto	0.0000
L56	42	CCI-045100 Reinforcement	29.42 - 29.67	Auto	0.0000
L56	61	CCI-060100 Reinforcement	29.42 - 29.67	Auto	0.1888
L56	62	CCI-060100 Reinforcement	29.42 - 29.67	Auto	0.1888
L56	63	CCI-060100 Reinforcement	29.42 - 29.67	Auto	0.1888
L56	64	CCI-060100 Reinforcement	29.42 - 29.67	Auto	0.1888
L57	17	FP 5.50 x 1.25 Reinforcement	29.13 - 29.42	Auto	0.1136
L57	18	FP 5.50 x 1.25 Reinforcement	29.13 - 29.42	Auto	0.1136
L57	19	FP 5.50 x 1.25 Reinforcement	29.13 - 29.42	Auto	0.1136

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L57	20	FP 5.50 x 1.25 Reinforcement	29.13 - 29.42	Auto	0.1136
L57	21	FP 5.50 x 1.25 Reinforcement	29.13 - 29.42	Auto	0.1136
L57	23	FP 5.50 x 1.25 Reinforcement	29.13 - 29.42	Auto	0.1136
L57	25	FP 5.50 x 1.25 Reinforcement	29.13 - 29.42	Auto	0.1136
L57	40	CCI-045100 Reinforcement	29.13 - 29.42	Auto	0.0000
L57	41	CCI-045100 Reinforcement	29.13 - 29.42	Auto	0.0000
L57	42	CCI-045100 Reinforcement	29.13 - 29.42	Auto	0.0000
L57	61	CCI-060100 Reinforcement	29.13 - 29.42	Auto	0.1874
L57	62	CCI-060100 Reinforcement	29.13 - 29.42	Auto	0.1874
L57	63	CCI-060100 Reinforcement	29.13 - 29.42	Auto	0.1874
L57	64	CCI-060100 Reinforcement	29.13 - 29.42	Auto	0.1874
L58	17	FP 5.50 x 1.25 Reinforcement	28.88 - 29.13	Auto	0.1561
L58	18	FP 5.50 x 1.25 Reinforcement	28.88 - 29.13	Auto	0.1561
L58	19	FP 5.50 x 1.25 Reinforcement	28.88 - 29.13	Auto	0.1561
L58	20	FP 5.50 x 1.25 Reinforcement	28.88 - 29.13	Auto	0.1561
L58	21	FP 5.50 x 1.25 Reinforcement	28.88 - 29.13	Auto	0.1561
L58	23	FP 5.50 x 1.25 Reinforcement	28.88 - 29.13	Auto	0.1561
L58	25	FP 5.50 x 1.25 Reinforcement	28.88 - 29.13	Auto	0.1561
L58	40	CCI-045100 Reinforcement	28.88 - 29.13	Auto	0.0000
L58	41	CCI-045100 Reinforcement	28.88 - 29.13	Auto	0.0000
L58	42	CCI-045100 Reinforcement	28.88 - 29.13	Auto	0.0000
L58	61	CCI-060100 Reinforcement	28.88 - 29.13	Auto	0.2264
L58	62	CCI-060100 Reinforcement	28.88 - 29.13	Auto	0.2264
L58	63	CCI-060100 Reinforcement	28.88 - 29.13	Auto	0.2264
L58	64	CCI-060100 Reinforcement	28.88 - 29.13	Auto	0.2264
L59	17	FP 5.50 x 1.25 Reinforcement	28.00 - 28.88	Auto	0.1490
L59	18	FP 5.50 x 1.25 Reinforcement	28.00 - 28.88	Auto	0.1490
L59	19	FP 5.50 x 1.25 Reinforcement	28.00 - 28.88	Auto	0.1490
L59	20	FP 5.50 x 1.25 Reinforcement	28.00 - 28.88	Auto	0.1490
L59	21	FP 5.50 x 1.25 Reinforcement	28.00 - 28.88	Auto	0.1490
L59	23	FP 5.50 x 1.25 Reinforcement	28.00 - 28.88	Auto	0.1490
L59	25	FP 5.50 x 1.25 Reinforcement	28.00 - 28.88	Auto	0.1490
L59	40	CCI-045100 Reinforcement	28.00 - 28.88	Auto	0.0000
L59	41	CCI-045100 Reinforcement	28.00 - 28.88	Auto	0.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L59	42	CCI-045100 Reinforcement	28.00 - 28.88	Auto	0.0000
L59	61	CCI-060100 Reinforcement	28.00 - 28.88	Auto	0.2199
L59	62	CCI-060100 Reinforcement	28.00 - 28.88	Auto	0.2199
L59	63	CCI-060100 Reinforcement	28.00 - 28.88	Auto	0.2199
L59	64	CCI-060100 Reinforcement	28.00 - 28.88	Auto	0.2199
L60	17	FP 5.50 x 1.25 Reinforcement	27.75 - 28.00	Auto	0.1379
L60	18	FP 5.50 x 1.25 Reinforcement	27.75 - 28.00	Auto	0.1379
L60	19	FP 5.50 x 1.25 Reinforcement	27.75 - 28.00	Auto	0.1379
L60	20	FP 5.50 x 1.25 Reinforcement	27.75 - 28.00	Auto	0.1379
L60	21	FP 5.50 x 1.25 Reinforcement	27.75 - 28.00	Auto	0.1379
L60	23	FP 5.50 x 1.25 Reinforcement	27.75 - 28.00	Auto	0.1379
L60	25	FP 5.50 x 1.25 Reinforcement	27.75 - 28.00	Auto	0.1379
L60	40	CCI-045100 Reinforcement	27.75 - 28.00	Auto	0.0000
L60	41	CCI-045100 Reinforcement	27.75 - 28.00	Auto	0.0000
L60	42	CCI-045100 Reinforcement	27.75 - 28.00	Auto	0.0000
L60	61	CCI-060100 Reinforcement	27.75 - 28.00	Auto	0.2097
L60	62	CCI-060100 Reinforcement	27.75 - 28.00	Auto	0.2097
L60	63	CCI-060100 Reinforcement	27.75 - 28.00	Auto	0.2097
L60	64	CCI-060100 Reinforcement	27.75 - 28.00	Auto	0.2097
L61	17	FP 5.50 x 1.25 Reinforcement	26.92 - 27.75	Auto	0.1349
L61	18	FP 5.50 x 1.25 Reinforcement	26.92 - 27.75	Auto	0.1349
L61	19	FP 5.50 x 1.25 Reinforcement	26.92 - 27.75	Auto	0.1349
L61	20	FP 5.50 x 1.25 Reinforcement	26.92 - 27.75	Auto	0.1349
L61	40	CCI-045100 Reinforcement	26.92 - 27.75	Auto	0.0000
L61	41	CCI-045100 Reinforcement	26.92 - 27.75	Auto	0.0000
L61	42	CCI-045100 Reinforcement	26.92 - 27.75	Auto	0.0000
L61	58	CCI-065125 Reinforcement	26.92 - 27.67	Auto	0.2678
L61	60	CCI-065125 Reinforcement	26.92 - 27.67	Auto	0.2678
L61	61	CCI-060100 Reinforcement	26.92 - 27.75	Auto	0.2070
L61	62	CCI-060100 Reinforcement	27.67 - 27.75	Auto	0.2089
L61	63	CCI-060100 Reinforcement	26.92 - 27.75	Auto	0.2070
L61	64	CCI-060100 Reinforcement	27.67 - 27.75	Auto	0.2089
L62	17	FP 5.50 x 1.25 Reinforcement	26.67 - 26.92	Auto	0.1199
L62	18	FP 5.50 x 1.25 Reinforcement	26.67 - 26.92	Auto	0.1199

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L62	19	FP 5.50 x 1.25 Reinforcement	26.67 - 26.92	Auto	0.1199
L62	20	FP 5.50 x 1.25 Reinforcement	26.67 - 26.92	Auto	0.1199
L62	40	CCI-045100 Reinforcement	26.67 - 26.92	Auto	0.0000
L62	41	CCI-045100 Reinforcement	26.67 - 26.92	Auto	0.0000
L62	42	CCI-045100 Reinforcement	26.67 - 26.92	Auto	0.0000
L62	58	CCI-065125 Reinforcement	26.67 - 26.92	Auto	0.2553
L62	60	CCI-065125 Reinforcement	26.67 - 26.92	Auto	0.2553
L62	61	CCI-060100 Reinforcement	26.67 - 26.92	Auto	0.1932
L62	63	CCI-060100 Reinforcement	26.67 - 26.92	Auto	0.1932
L63	17	FP 5.50 x 1.25 Reinforcement	26.50 - 26.67	Auto	0.1187
L63	18	FP 5.50 x 1.25 Reinforcement	26.50 - 26.67	Auto	0.1187
L63	19	FP 5.50 x 1.25 Reinforcement	26.50 - 26.67	Auto	0.1187
L63	20	FP 5.50 x 1.25 Reinforcement	26.50 - 26.67	Auto	0.1187
L63	40	CCI-045100 Reinforcement	26.50 - 26.67	Auto	0.0000
L63	41	CCI-045100 Reinforcement	26.50 - 26.67	Auto	0.0000
L63	42	CCI-045100 Reinforcement	26.50 - 26.67	Auto	0.0000
L63	58	CCI-065125 Reinforcement	26.50 - 26.67	Auto	0.2543
L63	60	CCI-065125 Reinforcement	26.50 - 26.67	Auto	0.2543
L63	61	CCI-060100 Reinforcement	26.50 - 26.67	Auto	0.1922
L63	63	CCI-060100 Reinforcement	26.50 - 26.67	Auto	0.1922
L64	17	FP 5.50 x 1.25 Reinforcement	26.25 - 26.50	Auto	0.1056
L64	18	FP 5.50 x 1.25 Reinforcement	26.25 - 26.50	Auto	0.1056
L64	19	FP 5.50 x 1.25 Reinforcement	26.25 - 26.50	Auto	0.1056
L64	20	FP 5.50 x 1.25 Reinforcement	26.25 - 26.50	Auto	0.1056
L64	40	CCI-045100 Reinforcement	26.25 - 26.50	Auto	0.0000
L64	41	CCI-045100 Reinforcement	26.25 - 26.50	Auto	0.0000
L64	42	CCI-045100 Reinforcement	26.25 - 26.50	Auto	0.0000
L64	58	CCI-065125 Reinforcement	26.25 - 26.50	Auto	0.2432
L64	60	CCI-065125 Reinforcement	26.25 - 26.50	Auto	0.2432
L64	61	CCI-060100 Reinforcement	26.25 - 26.50	Auto	0.1801
L64	63	CCI-060100 Reinforcement	26.25 - 26.50	Auto	0.1801
L65	17	FP 5.50 x 1.25 Reinforcement	24.92 - 26.25	Auto	0.1012
L65	18	FP 5.50 x 1.25 Reinforcement	24.92 - 26.25	Auto	0.1012
L65	19	FP 5.50 x 1.25 Reinforcement	24.92 - 26.25	Auto	0.1012

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L65	20	FP 5.50 x 1.25 Reinforcement	24.92 - 26.25	Auto	0.1012
L65	40	CCI-045100 Reinforcement	25.00 - 26.25	Auto	0.0000
L65	41	CCI-045100 Reinforcement	25.00 - 26.25	Auto	0.0000
L65	42	CCI-045100 Reinforcement	25.00 - 26.25	Auto	0.0000
L65	58	CCI-065125 Reinforcement	24.92 - 26.25	Auto	0.2395
L65	60	CCI-065125 Reinforcement	24.92 - 26.25	Auto	0.2395
L65	61	CCI-060100 Reinforcement	24.92 - 26.25	Auto	0.1761
L65	63	CCI-060100 Reinforcement	26.00 - 26.25	Auto	0.1788
L66	17	FP 5.50 x 1.25 Reinforcement	24.67 - 24.92	Auto	0.0849
L66	18	FP 5.50 x 1.25 Reinforcement	24.67 - 24.92	Auto	0.0849
L66	19	FP 5.50 x 1.25 Reinforcement	24.67 - 24.92	Auto	0.0849
L66	20	FP 5.50 x 1.25 Reinforcement	24.67 - 24.92	Auto	0.0849
L66	54	CCI-065125 Reinforcement	24.67 - 24.92	Auto	0.2256
L66	56	CCI-065125 Reinforcement	24.67 - 24.92	Auto	0.2256
L66	58	CCI-065125 Reinforcement	24.67 - 24.92	Auto	0.2256
L66	60	CCI-065125 Reinforcement	24.67 - 24.92	Auto	0.2256
L66	61	CCI-060100 Reinforcement	24.92 - 24.92	Auto	0.1617
L67	17	FP 5.50 x 1.25 Reinforcement	22.17 - 24.67	Auto	0.0733
L67	18	FP 5.50 x 1.25 Reinforcement	22.17 - 24.67	Auto	0.0733
L67	19	FP 5.50 x 1.25 Reinforcement	22.17 - 24.67	Auto	0.0733
L67	20	FP 5.50 x 1.25 Reinforcement	22.17 - 24.67	Auto	0.0733
L67	54	CCI-065125 Reinforcement	22.17 - 24.67	Auto	0.2158
L67	56	CCI-065125 Reinforcement	22.17 - 24.67	Auto	0.2158
L67	58	CCI-065125 Reinforcement	22.17 - 24.67	Auto	0.2158
L67	60	CCI-065125 Reinforcement	22.17 - 24.67	Auto	0.2158
L68	17	FP 5.50 x 1.25 Reinforcement	21.92 - 22.17	Auto	0.0897
L68	18	FP 5.50 x 1.25 Reinforcement	21.92 - 22.17	Auto	0.0897
L68	19	FP 5.50 x 1.25 Reinforcement	21.92 - 22.17	Auto	0.0897
L68	20	FP 5.50 x 1.25 Reinforcement	21.92 - 22.17	Auto	0.0897
L68	54	CCI-065125 Reinforcement	21.92 - 22.17	Auto	0.2297
L68	56	CCI-065125 Reinforcement	21.92 - 22.17	Auto	0.2297
L68	58	CCI-065125 Reinforcement	21.92 - 22.17	Auto	0.2297
L68	60	CCI-065125 Reinforcement	21.92 - 22.17	Auto	0.2297
L69	17	FP 5.50 x 1.25 Reinforcement	16.92 - 21.92	Auto	0.0672

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L69	18	FP 5.50 x 1.25 Reinforcement	16.92 - 21.92	Auto	0.0672
L69	19	FP 5.50 x 1.25 Reinforcement	16.92 - 21.92	Auto	0.0672
L69	20	FP 5.50 x 1.25 Reinforcement	16.92 - 21.92	Auto	0.0672
L69	54	CCI-065125 Reinforcement	16.92 - 21.92	Auto	0.2107
L69	56	CCI-065125 Reinforcement	16.92 - 21.92	Auto	0.2107
L69	58	CCI-065125 Reinforcement	16.92 - 21.92	Auto	0.2107
L69	60	CCI-065125 Reinforcement	16.92 - 21.92	Auto	0.2107
L70	17	FP 5.50 x 1.25 Reinforcement	11.92 - 16.92	Auto	0.0356
L70	18	FP 5.50 x 1.25 Reinforcement	11.92 - 16.92	Auto	0.0356
L70	19	FP 5.50 x 1.25 Reinforcement	11.92 - 16.92	Auto	0.0356
L70	20	FP 5.50 x 1.25 Reinforcement	11.92 - 16.92	Auto	0.0356
L70	54	CCI-065125 Reinforcement	11.92 - 16.92	Auto	0.1840
L70	56	CCI-065125 Reinforcement	11.92 - 16.92	Auto	0.1840
L70	58	CCI-065125 Reinforcement	11.92 - 16.92	Auto	0.1840
L70	60	CCI-065125 Reinforcement	11.92 - 16.92	Auto	0.1840
L71	17	FP 5.50 x 1.25 Reinforcement	6.92 - 11.92	Auto	0.0057
L71	18	FP 5.50 x 1.25 Reinforcement	6.92 - 11.92	Auto	0.0057
L71	19	FP 5.50 x 1.25 Reinforcement	6.92 - 11.92	Auto	0.0057
L71	20	FP 5.50 x 1.25 Reinforcement	6.92 - 11.92	Auto	0.0057
L71	54	CCI-065125 Reinforcement	6.92 - 11.92	Auto	0.1572
L71	56	CCI-065125 Reinforcement	6.92 - 11.92	Auto	0.1572
L71	58	CCI-065125 Reinforcement	6.92 - 11.92	Auto	0.1572
L71	60	CCI-065125 Reinforcement	6.92 - 11.92	Auto	0.1572
L72	17	FP 5.50 x 1.25 Reinforcement	1.92 - 6.92	Auto	0.0000
L72	18	FP 5.50 x 1.25 Reinforcement	1.92 - 6.92	Auto	0.0000
L72	19	FP 5.50 x 1.25 Reinforcement	1.92 - 6.92	Auto	0.0000
L72	20	FP 5.50 x 1.25 Reinforcement	1.92 - 6.92	Auto	0.0000
L72	53	CCI-065125 Reinforcement	1.92 - 5.14	Auto	0.1263
L72	54	CCI-065125 Reinforcement	5.14 - 6.92	Auto	0.1380
L72	55	CCI-065125 Reinforcement	1.92 - 5.14	Auto	0.1263
L72	56	CCI-065125 Reinforcement	5.14 - 6.92	Auto	0.1380
L72	57	CCI-065125 Reinforcement	1.92 - 5.14	Auto	0.1263
L72	58	CCI-065125 Reinforcement	5.14 - 6.92	Auto	0.1380
L72	59	CCI-065125 Reinforcement	1.92 - 5.14	Auto	0.1263

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L72	60	CCI-065125 Reinforcement	5.14 - 6.92	Auto	0.1380
L73	17	FP 5.50 x 1.25 Reinforcement	1.50 - 1.92	Auto	0.0000
L73	18	FP 5.50 x 1.25 Reinforcement	1.50 - 1.92	Auto	0.0000
L73	19	FP 5.50 x 1.25 Reinforcement	1.50 - 1.92	Auto	0.0000
L73	20	FP 5.50 x 1.25 Reinforcement	1.50 - 1.92	Auto	0.0000
L73	53	CCI-065125 Reinforcement	1.50 - 1.92	Auto	0.1178
L73	55	CCI-065125 Reinforcement	1.50 - 1.92	Auto	0.1178
L73	57	CCI-065125 Reinforcement	1.50 - 1.92	Auto	0.1178
L73	59	CCI-065125 Reinforcement	1.50 - 1.92	Auto	0.1178
L74	17	FP 5.50 x 1.25 Reinforcement	1.25 - 1.50	Auto	0.0000
L74	18	FP 5.50 x 1.25 Reinforcement	1.25 - 1.50	Auto	0.0000
L74	19	FP 5.50 x 1.25 Reinforcement	1.25 - 1.50	Auto	0.0000
L74	20	FP 5.50 x 1.25 Reinforcement	1.25 - 1.50	Auto	0.0000
L74	53	CCI-065125 Reinforcement	1.25 - 1.50	Auto	0.0723
L74	55	CCI-065125 Reinforcement	1.25 - 1.50	Auto	0.0723
L74	57	CCI-065125 Reinforcement	1.25 - 1.50	Auto	0.0723
L74	59	CCI-065125 Reinforcement	1.25 - 1.50	Auto	0.0723
L75	17	FP 5.50 x 1.25 Reinforcement	1.00 - 1.25	Auto	0.0000
L75	18	FP 5.50 x 1.25 Reinforcement	1.00 - 1.25	Auto	0.0000
L75	19	FP 5.50 x 1.25 Reinforcement	1.00 - 1.25	Auto	0.0000
L75	20	FP 5.50 x 1.25 Reinforcement	1.00 - 1.25	Auto	0.0000
L75	53	CCI-065125 Reinforcement	1.00 - 1.25	Auto	0.0322
L75	55	CCI-065125 Reinforcement	1.00 - 1.25	Auto	0.0322
L75	57	CCI-065125 Reinforcement	1.00 - 1.25	Auto	0.0322
L75	59	CCI-065125 Reinforcement	1.00 - 1.25	Auto	0.0322
L76	17	FP 5.50 x 1.25 Reinforcement	0.50 - 1.00	Auto	0.0000
L76	18	FP 5.50 x 1.25 Reinforcement	0.50 - 1.00	Auto	0.0000
L76	19	FP 5.50 x 1.25 Reinforcement	0.50 - 1.00	Auto	0.0000
L76	20	FP 5.50 x 1.25 Reinforcement	0.50 - 1.00	Auto	0.0000
L76	53	CCI-065125 Reinforcement	0.50 - 1.00	Auto	0.0287
L76	55	CCI-065125 Reinforcement	0.50 - 1.00	Auto	0.0287
L76	57	CCI-065125 Reinforcement	0.50 - 1.00	Auto	0.0287
L76	59	CCI-065125 Reinforcement	0.50 - 1.00	Auto	0.0287

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft
DS1F06F36U-D	A	From Leg	0.5000 0.00 11.00	0.00	153.0000
8' x 2" Mount Pipe	A	From Leg	0.5000 0.00 0.00	0.00	153.0000
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(2) P90-14-XLH-RR w/ Mount Pipe	A	From Leg	4.0000 0.00 2.00	0.00	148.0000
(2) P90-14-XLH-RR w/ Mount Pipe	B	From Leg	4.0000 0.00 2.00	0.00	148.0000
(2) P90-14-XLH-RR w/ Mount Pipe	C	From Leg	4.0000 0.00 2.00	0.00	148.0000
AM-X-CD-16-65-00T-RET w/ Mount Pipe	A	From Leg	4.0000 0.00 2.00	0.00	148.0000
AM-X-CD-16-65-00T-RET w/ Mount Pipe	B	From Leg	4.0000 0.00 2.00	0.00	148.0000
AM-X-CD-16-65-00T-RET w/ Mount Pipe	C	From Leg	4.0000 0.00 2.00	0.00	148.0000
(2) TT19-08BP111-001	A	From Leg	4.0000 0.00 2.00	0.00	148.0000
(2) TT19-08BP111-001	B	From Leg	4.0000 0.00 2.00	0.00	148.0000
(2) TT19-08BP111-001	C	From Leg	4.0000 0.00 2.00	0.00	148.0000
DC6-48-60-18-8F	A	From Leg	4.0000 0.00 2.00	0.00	148.0000
RRUS-11	A	From Leg	4.0000 0.00 2.00	0.00	148.0000
RRUS-11	B	From Leg	4.0000 0.00 2.00	0.00	148.0000
RRUS-11	C	From Leg	4.0000 0.00 2.00	0.00	148.0000
Platform Mount [LP 602-1]	C	None		0.00	148.0000
6' x 2" Mount Pipe	A	From Leg	4.0000 0.00 0.00	0.00	148.0000
6' x 2" Mount Pipe	B	From Leg	4.0000 0.00 0.00	0.00	148.0000
6' x 2" Mount Pipe	C	From Leg	4.0000 0.00 0.00	0.00	148.0000
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Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft
(2) DB846F65ZAXY w/ Mount Pipe	A	From Leg	4.0000 0.00 0.00	0.00	140.0000
(2) DB846F65ZAXY w/ Mount Pipe	B	From Leg	4.0000 0.00 0.00	0.00	140.0000
(2) DB846F65ZAXY w/ Mount Pipe	C	From Leg	4.0000 0.00 0.00	0.00	140.0000
(2) JAHH-65B-R3B w/ Mount Pipe	A	From Leg	4.0000 0.00 0.00	0.00	140.0000
(2) JAHH-65B-R3B w/ Mount Pipe	B	From Leg	4.0000 0.00 0.00	0.00	140.0000
(2) JAHH-65B-R3B w/ Mount Pipe	C	From Leg	4.0000 0.00 0.00	0.00	140.0000
B66A RRH4X45	A	From Leg	4.0000 0.00 2.00	0.00	140.0000
B66A RRH4X45	B	From Leg	4.0000 0.00 2.00	0.00	140.0000
B66A RRH4X45	C	From Leg	4.0000 0.00 2.00	0.00	140.0000
B13 RRH 4X30	A	From Leg	4.0000 0.00 2.00	0.00	140.0000
B13 RRH 4X30	B	From Leg	4.0000 0.00 2.00	0.00	140.0000
B13 RRH 4X30	C	From Leg	4.0000 0.00 2.00	0.00	140.0000
AHCA	A	From Leg	4.0000 0.00 2.00	0.00	140.0000
AHCA	B	From Leg	4.0000 0.00 2.00	0.00	140.0000
AHCA	C	From Leg	4.0000 0.00 2.00	0.00	140.0000
DB-C1-12C-24AB-0Z	B	From Leg	4.0000 0.00 0.00	0.00	140.0000
T-Arm Mount [TA 602-3] ***	C	None		0.00	140.0000
(2) MINI-LINK 6365	C	From Leg	4.0000 0.00 -3.00	0.00	131.0000
AIR 32 B2A/B66AA w/ Mount Pipe	A	From Leg	4.0000 0.00 -2.00	0.00	131.0000
AIR 32 B2A/B66AA w/ Mount Pipe	B	From Leg	4.0000 0.00 -2.00	0.00	131.0000
AIR 32 B2A/B66AA w/ Mount Pipe	C	From Leg	4.0000 0.00 -2.00	0.00	131.0000
AIR 32 B2A/B66AA w/ Mount Pipe	C	From Face	4.0000 0.00 -2.00	0.00	131.0000

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft
APXVAARR24_43-U-NA20 w/ Mount Pipe	A	From Leg	4.0000 0.00 -2.00	0.00	131.0000
APXVAARR24_43-U-NA20 w/ Mount Pipe	B	From Leg	4.0000 0.00 -2.00	0.00	131.0000
APXVAARR24_43-U-NA20 w/ Mount Pipe	C	From Leg	4.0000 0.00 -2.00	0.00	131.0000
APXVAARR24_43-U-NA20 w/ Mount Pipe	C	From Face	4.0000 0.00 -2.00	0.00	131.0000
RADIO 4449 B12/B71	A	From Leg	4.0000 0.00 0.00	0.00	131.0000
RADIO 4449 B12/B71	B	From Leg	4.0000 0.00 0.00	0.00	131.0000
RADIO 4449 B12/B71	C	From Leg	4.0000 0.00 0.00	0.00	131.0000
RADIO 4449 B12/B71	C	From Face	4.0000 0.00 0.00	0.00	131.0000
Site Pro1_F4P-12[W]_Platform	C	None		0.00	131.0000
Site Pro1_F4P-HRK12_Handrail Kit	C	None		0.00	131.0000
(2) 8' x 2" Mount Pipe	A	From Leg	4.0000 0.00 0.00	0.00	131.0000
(2) 8' x 2" Mount Pipe	B	From Leg	4.0000 0.00 0.00	0.00	131.0000
(2) 8' x 2" Mount Pipe	C	From Leg	4.0000 0.00 0.00	0.00	131.0000
(2) 8' x 2" Mount Pipe	C	From Face	4.0000 0.00 0.00	0.00	131.0000
***					
MX08FRO665-21 w/ Mount Pipe	A	From Leg	4.0000 0.00 0.00	0.00	119.0000
MX08FRO665-21 w/ Mount Pipe	B	From Leg	4.0000 0.00 0.00	0.00	119.0000
MX08FRO665-21 w/ Mount Pipe	C	From Leg	4.0000 0.00 0.00	0.00	119.0000
TA08025-B605	A	From Leg	4.0000 0.00 0.00	0.00	119.0000
TA08025-B605	B	From Leg	4.0000 0.00 0.00	0.00	119.0000
TA08025-B605	C	From Leg	4.0000 0.00 0.00	0.00	119.0000
TA08025-B604	A	From Leg	4.0000 0.00 0.00	0.00	119.0000
TA08025-B604	B	From Leg	4.0000 0.00 0.00	0.00	119.0000
TA08025-B604	C	From Leg	4.0000 0.00	0.00	119.0000

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft
			0.00		
RDIDC-9181-PF-48	A	From Leg	4.0000	0.00	119.0000
			0.00		
			0.00		
Commscope MC-PK8-DSH	C	None		0.00	119.0000
(2) 8' x 2" Mount Pipe	A	From Leg	4.0000	0.00	119.0000
			0.00		
			0.00		
(2) 8' x 2" Mount Pipe	B	From Leg	4.0000	0.00	119.0000
			0.00		
			0.00		
(2) 8' x 2" Mount Pipe	C	From Leg	4.0000	0.00	119.0000
			0.00		
			0.00		
***					
DS1F03P36D-D	A	From Leg	1.0000	0.00	90.0000
			0.00		
			0.00		
8' x 2" Mount Pipe	A	From Leg	0.5000	0.00	90.0000
			0.00		
			0.00		
Side Arm Mount [SO 102-3]	C	None		0.00	90.0000
**					
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**					
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Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft
ANT3 A 0.9 HPX	C	Paraboloid w/Shroud (HP)	From Leg	4.0000 0.00 -3.00	0.00		131.0000	3.2083
**								
**								

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice
3	0.9 Dead+1.0 Wind 0 deg - No Ice
4	1.2 Dead+1.0 Wind 90 deg - No Ice
5	0.9 Dead+1.0 Wind 90 deg - No Ice
6	1.2 Dead+1.0 Wind 180 deg - No Ice
7	0.9 Dead+1.0 Wind 180 deg - No Ice
8	1.2 Dead+1.0 Ice+1.0 Temp
9	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
10	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
11	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp

Comb. No.	Description
12	Dead+Wind 0 deg - Service
13	Dead+Wind 90 deg - Service
14	Dead+Wind 180 deg - Service

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	149 - 144	Pole	Max Tension	12	0.00	0.00	-0.00
			Max. Compression	8	-5.92	0.01	0.56
			Max. Mx	4	-2.59	-26.26	0.15
			Max. My	2	-2.59	-0.01	26.50
			Max. Vy	4	4.36	-26.26	0.15
			Max. Vx	6	4.37	0.01	-26.04
			Max. Torque	4			0.68
L2	144 - 139	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-11.59	-0.45	0.27
			Max. Mx	4	-5.10	-53.92	0.07
			Max. My	2	-5.10	-0.11	53.92
			Max. Vy	4	8.63	-53.92	0.07
			Max. Vx	6	8.62	-0.09	-53.64
			Max. Torque	4			0.68
L3	139 - 134	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-12.05	-0.43	0.22
			Max. Mx	4	-5.43	-97.74	-0.02
			Max. My	2	-5.43	-0.06	97.66
			Max. Vy	4	8.90	-97.74	-0.02
			Max. Vx	6	8.89	-0.14	-97.40
			Max. Torque	6			0.48
L4	134 - 129	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-22.60	-0.26	-5.22
			Max. Mx	4	-11.51	-149.48	-2.78
			Max. My	6	-11.46	-0.14	-152.17
			Max. Vy	4	14.40	-149.48	-2.78
			Max. Vx	6	14.71	-0.14	-152.17
			Max. Torque	4			-2.50
L5	129 - 125	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-23.18	0.33	-5.61
			Max. Mx	4	-11.90	-208.40	-2.51
			Max. My	6	-11.87	0.42	-212.26
			Max. Vy	4	14.99	-208.40	-2.51
			Max. Vx	2	-15.16	-0.46	206.29
			Max. Torque	4			-2.85
L6	125 - 124.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-23.22	0.33	-5.61
			Max. Mx	4	-11.94	-212.14	-2.48
			Max. My	6	-11.91	0.46	-216.04
			Max. Vy	4	15.00	-212.14	-2.48
			Max. Vx	2	-15.17	-0.52	210.07
			Max. Torque	4			-2.85
L7	124.75 - 119.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-24.01	0.35	-5.67
			Max. Mx	4	-12.57	-287.79	-1.82
			Max. My	6	-12.53	1.15	-292.47
			Max. Vy	4	15.27	-287.79	-1.82
			Max. Vx	2	-15.44	-1.64	286.56
			Max. Torque	4			-2.85
L8	119.75 - 118.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-29.12	0.36	-5.37
			Max. Mx	4	-15.67	-308.50	-1.55
			Max. My	6	-15.64	1.33	-313.26
			Max. Vy	4	18.50	-308.50	-1.55
			Max. Vx	2	-18.70	-1.93	307.61
			Max. Torque	4			-2.85

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L9	118.5 - 118.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-29.18	0.36	-5.38
			Max. Mx	4	-15.73	-313.12	-1.52
			Max. My	6	-15.70	1.36	-317.93
			Max. Vy	4	18.51	-313.12	-1.52
			Max. Vx	2	-18.71	-1.98	312.28
			Max. Torque	4			-2.66
L10	118.25 - 117	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-29.49	0.37	-5.39
			Max. Mx	4	-15.96	-336.30	-1.35
			Max. My	6	-15.93	1.54	-341.35
			Max. Vy	4	18.59	-336.30	-1.35
			Max. Vx	2	-18.79	-2.26	335.72
			Max. Torque	4			-2.66
L11	117 - 116.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-29.55	0.37	-5.39
			Max. Mx	4	-16.02	-340.95	-1.32
			Max. My	6	-15.98	1.58	-346.04
			Max. Vy	4	18.60	-340.95	-1.32
			Max. Vx	2	-18.80	-2.32	340.42
			Max. Torque	4			-2.66
L12	116.75 - 111.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-30.78	0.42	-5.43
			Max. Mx	4	-16.97	-434.71	-0.64
			Max. My	6	-16.93	2.29	-440.74
			Max. Vy	4	18.91	-434.71	-0.64
			Max. Vx	2	-19.11	-3.45	435.19
			Max. Torque	4			-2.66
L13	111.75 - 106.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-32.02	0.46	-5.46
			Max. Mx	4	-17.94	-529.97	0.04
			Max. My	6	-17.91	3.00	-536.94
			Max. Vy	4	19.21	-529.97	0.04
			Max. Vx	2	-19.41	-4.58	531.47
			Max. Torque	4			-2.65
L14	106.75 - 98.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-33.21	0.51	-5.48
			Max. Mx	4	-18.89	-621.82	0.70
			Max. My	6	-18.86	3.68	-629.68
			Max. Vy	4	19.49	-621.82	0.70
			Max. Vx	2	-19.69	-5.66	624.29
			Max. Torque	4			-2.65
L15	98.5 - 97	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-35.24	0.56	-5.50
			Max. Mx	4	-20.51	-720.17	1.39
			Max. My	6	-20.48	4.39	-728.97
			Max. Vy	4	19.86	-720.17	1.39
			Max. Vx	2	-20.06	-6.79	723.67
			Max. Torque	4			-2.65
L16	97 - 96.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-35.32	0.56	-5.51
			Max. Mx	4	-20.59	-725.13	1.42
			Max. My	6	-20.56	4.43	-733.98
			Max. Vy	4	19.86	-725.13	1.42
			Max. Vx	2	-20.07	-6.85	728.68
			Max. Torque	4			-2.65
L17	96.75 - 93.98	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-36.24	0.58	-5.52
			Max. Mx	4	-21.30	-780.38	1.80
			Max. My	6	-21.27	4.82	-789.75
			Max. Vy	4	20.05	-780.38	1.80
			Max. Vx	2	-20.25	-7.47	784.50
			Max. Torque	4			-2.65
L18	93.98 -	Pole	Max Tension	1	0.00	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
	93.73						
			Max. Compression	8	-36.32	0.59	-5.52
			Max. Mx	4	-21.37	-785.39	1.84
			Max. My	6	-21.34	4.86	-794.81
			Max. Vy	4	20.05	-785.39	1.84
			Max. Vx	2	-20.26	-7.53	789.56
			Max. Torque	4			-2.65
L19	93.73 - 91.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-37.09	0.61	-5.52
			Max. Mx	4	-21.94	-830.25	2.15
			Max. My	6	-21.92	5.18	-840.09
			Max. Vy	4	20.20	-830.25	2.15
			Max. Vx	2	-20.40	-8.04	834.88
			Max. Torque	4			-2.65
L20	91.5 - 91.38	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-37.12	0.61	-5.52
			Max. Mx	4	-21.98	-832.67	2.16
			Max. My	6	-21.95	5.20	-842.53
			Max. Vy	4	20.20	-832.67	2.16
			Max. Vx	2	-20.41	-8.07	837.33
			Max. Torque	4			-2.65
L21	91.38 - 91.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-37.18	0.61	-5.52
			Max. Mx	4	-22.02	-835.30	2.18
			Max. My	6	-22.00	5.22	-845.19
			Max. Vy	4	20.22	-835.30	2.18
			Max. Vx	2	-20.43	-8.10	839.98
			Max. Torque	4			-2.65
L22	91.25 - 91.13	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-37.23	0.61	-5.52
			Max. Mx	4	-22.06	-837.72	2.20
			Max. My	6	-22.03	5.23	-847.63
			Max. Vy	4	20.23	-837.72	2.20
			Max. Vx	2	-20.44	-8.12	842.44
			Max. Torque	4			-2.65
L23	91.13 - 89	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-38.52	0.64	-4.97
			Max. Mx	4	-22.93	-881.57	2.73
			Max. My	6	-22.90	5.54	-891.61
			Max. Vy	4	20.99	-881.57	2.73
			Max. Vx	2	-21.19	-8.60	887.00
			Max. Torque	4			-2.65
L24	89 - 88.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-38.62	0.64	-4.97
			Max. Mx	4	-23.00	-886.81	2.76
			Max. My	6	-22.98	5.57	-896.90
			Max. Vy	4	21.01	-886.81	2.76
			Max. Vx	6	21.20	5.57	-896.90
			Max. Torque	4			-1.95
L25	88.75 - 83.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-40.42	0.71	-4.97
			Max. Mx	4	-24.44	-992.59	3.46
			Max. My	6	-24.41	6.29	-1003.65
			Max. Vy	4	21.32	-992.59	3.46
			Max. Vx	6	21.52	6.29	-1003.65
			Max. Torque	4			-1.95
L26	83.75 - 80.08	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-41.77	0.76	-4.96
			Max. Mx	4	-25.51	-1071.20	3.98
			Max. My	6	-25.48	6.82	-1082.97
			Max. Vy	4	21.55	-1071.20	3.98
			Max. Vx	6	21.74	6.82	-1082.97
			Max. Torque	4			-1.95
L27	80.08 - 79.83	Pole	Max Tension	1	0.00	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Compression	8	-41.88	0.76	-4.96
			Max. Mx	4	-25.60	-1076.58	4.01
			Max. My	6	-25.58	6.85	-1088.41
			Max. Vy	4	21.55	-1076.58	4.01
			Max. Vx	6	21.76	6.85	-1088.41
			Max. Torque	4			-1.95
L28	79.83 - 74.83	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-44.05	0.80	-4.94
			Max. Mx	4	-27.29	-1185.13	4.71
			Max. My	6	-27.27	7.57	-1197.99
			Max. Vy	4	21.89	-1185.13	4.71
			Max. Vx	6	22.09	7.57	-1197.99
			Max. Torque	4			-1.95
L29	74.83 - 73.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-44.65	0.81	-4.94
			Max. Mx	4	-27.75	-1214.29	4.90
			Max. My	6	-27.72	7.76	-1227.45
			Max. Vy	4	21.98	-1214.29	4.90
			Max. Vx	6	22.24	7.76	-1227.45
			Max. Torque	4			-1.94
L30	73.5 - 73.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-44.77	0.82	-4.94
			Max. Mx	4	-27.86	-1219.78	4.93
			Max. My	6	-27.83	7.80	-1233.01
			Max. Vy	4	22.00	-1219.78	4.93
			Max. Vx	6	22.26	7.80	-1233.01
			Max. Torque	4			-1.94
L31	73.25 - 71	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-45.92	0.83	-4.93
			Max. Mx	4	-28.74	-1269.55	5.25
			Max. My	6	-28.71	8.12	-1283.38
			Max. Vy	4	22.27	-1269.55	5.25
			Max. Vx	6	22.53	8.12	-1283.38
			Max. Torque	4			-1.94
L32	71 - 70.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-46.03	0.84	-4.93
			Max. Mx	4	-28.83	-1275.12	5.28
			Max. My	6	-28.81	8.15	-1289.02
			Max. Vy	4	22.28	-1275.12	5.28
			Max. Vx	6	22.56	8.15	-1289.02
			Max. Torque	4			-1.94
L33	70.75 - 65.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-48.33	0.88	-4.90
			Max. Mx	4	-30.64	-1387.28	5.98
			Max. My	6	-30.62	8.87	-1402.58
			Max. Vy	4	22.61	-1387.28	5.98
			Max. Vx	6	22.89	8.87	-1402.58
			Max. Torque	4			-1.94
L34	65.75 - 64.13	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-49.08	0.89	-4.89
			Max. Mx	4	-31.23	-1423.97	6.21
			Max. My	6	-31.21	9.10	-1439.73
			Max. Vy	4	22.72	-1423.97	6.21
			Max. Vx	6	23.01	9.10	-1439.73
			Max. Torque	4			-1.94
L35	64.13 - 63.88	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-49.19	0.90	-4.89
			Max. Mx	4	-31.32	-1429.64	6.25
			Max. My	6	-31.30	9.14	-1445.48
			Max. Vy	4	22.72	-1429.64	6.25
			Max. Vx	6	23.01	9.14	-1445.48
			Max. Torque	4			-1.94
L36	63.88 - 63	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-49.55	0.90	-4.89
			Max. Mx	4	-31.60	-1449.65	6.37

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. My	6	-31.57	9.26	-1465.74
			Max. Vy	4	22.78	-1449.65	6.37
			Max. Vx	6	23.06	9.26	-1465.74
			Max. Torque	4			-1.94
L37	63 - 62.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-49.66	0.90	-4.89
			Max. Mx	4	-31.70	-1455.34	6.40
			Max. My	6	-31.67	9.30	-1471.50
			Max. Vy	4	22.78	-1455.34	6.40
			Max. Vx	6	23.07	9.30	-1471.50
			Max. Torque	4			-1.94
L38	62.75 - 62.08	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-49.97	0.92	-4.89
			Max. Mx	4	-31.93	-1470.61	6.50
			Max. My	6	-31.91	9.40	-1486.97
			Max. Vy	4	22.83	-1470.61	6.50
			Max. Vx	6	23.11	9.40	-1486.97
			Max. Torque	4			-1.94
L39	62.08 - 61.83	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-50.07	0.92	-4.89
			Max. Mx	4	-32.02	-1476.32	6.53
			Max. My	6	-32.00	9.43	-1492.74
			Max. Vy	4	22.84	-1476.32	6.53
			Max. Vx	6	23.12	9.43	-1492.74
			Max. Torque	4			-1.94
L40	61.83 - 60.67	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-50.55	0.94	-4.89
			Max. Mx	4	-32.39	-1502.84	6.70
			Max. My	6	-32.37	9.60	-1519.60
			Max. Vy	4	22.92	-1502.84	6.70
			Max. Vx	6	23.20	9.60	-1519.60
			Max. Torque	4			-1.94
L41	60.67 - 60.42	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-50.65	0.94	-4.89
			Max. Mx	4	-32.49	-1508.57	6.73
			Max. My	6	-32.46	9.63	-1525.39
			Max. Vy	4	22.92	-1508.57	6.73
			Max. Vx	6	23.21	9.63	-1525.39
			Max. Torque	4			-1.94
L42	60.42 - 59	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-51.26	0.96	-4.88
			Max. Mx	4	-32.97	-1541.16	6.93
			Max. My	6	-32.95	9.84	-1558.39
			Max. Vy	4	23.02	-1541.16	6.93
			Max. Vx	6	23.30	9.84	-1558.39
			Max. Torque	4			-1.94
L43	59 - 58.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-51.37	0.97	-4.88
			Max. Mx	4	-33.07	-1546.91	6.97
			Max. My	6	-33.05	9.87	-1564.22
			Max. Vy	4	23.02	-1546.91	6.97
			Max. Vx	6	23.31	9.87	-1564.22
			Max. Torque	4			-1.94
L44	58.75 - 53.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-53.56	1.04	-4.85
			Max. Mx	4	-34.87	-1662.69	7.67
			Max. My	6	-34.85	10.58	-1681.43
			Max. Vy	4	23.32	-1662.69	7.67
			Max. Vx	6	23.61	10.58	-1681.43
			Max. Torque	4			-1.94
L45	53.75 - 48.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-53.79	1.04	-4.85
			Max. Mx	4	-35.05	-1674.35	7.74
			Max. My	6	-35.03	10.66	-1693.23

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vy	4	23.34	-1674.35	7.74
			Max. Vx	6	23.63	10.66	-1693.23
			Max. Torque	4			-1.94
L46	48.5 - 47.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-58.13	1.10	-4.82
			Max. Mx	4	-38.72	-1809.87	8.54
			Max. My	6	-38.70	11.48	-1830.40
			Max. Vy	4	23.80	-1809.87	8.54
			Max. Vx	6	24.09	11.48	-1830.40
			Max. Torque	4			-1.94
L47	47.5 - 46.88	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-58.43	1.11	-4.82
			Max. Mx	4	-38.96	-1824.62	8.63
			Max. My	6	-38.94	11.56	-1845.33
			Max. Vy	4	23.83	-1824.62	8.63
			Max. Vx	6	24.11	11.56	-1845.33
			Max. Torque	4			-1.94
L48	46.88 - 46.63	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-58.55	1.11	-4.82
			Max. Mx	4	-39.06	-1830.58	8.67
			Max. My	6	-39.04	11.60	-1851.35
			Max. Vy	4	23.84	-1830.58	8.67
			Max. Vx	6	24.12	11.60	-1851.35
			Max. Torque	4			-1.94
L49	46.63 - 43.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-60.03	1.12	-4.80
			Max. Mx	4	-40.27	-1905.42	9.11
			Max. My	6	-40.25	12.05	-1927.09
			Max. Vy	4	24.01	-1905.42	9.11
			Max. Vx	6	24.30	12.05	-1927.09
			Max. Torque	4			-1.94
L50	43.5 - 43.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-60.16	1.12	-4.80
			Max. Mx	4	-40.39	-1911.42	9.14
			Max. My	6	-40.37	12.08	-1933.16
			Max. Vy	4	24.02	-1911.42	9.14
			Max. Vx	6	24.30	12.08	-1933.16
			Max. Torque	4			-1.94
L51	43.25 - 38.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-62.82	1.15	-4.77
			Max. Mx	4	-42.59	-2032.16	9.84
			Max. My	6	-42.57	12.79	-2055.32
			Max. Vy	4	24.31	-2032.16	9.84
			Max. Vx	6	24.59	12.79	-2055.32
			Max. Torque	4			-1.94
L52	38.25 - 33.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-65.50	1.17	-4.75
			Max. Mx	4	-44.82	-2154.27	10.54
			Max. My	6	-44.80	13.50	-2178.86
			Max. Vy	4	24.58	-2154.27	10.54
			Max. Vx	6	24.86	13.50	-2178.86
			Max. Torque	4			-1.94
L53	33.25 - 32.58	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-65.86	1.17	-4.74
			Max. Mx	4	-45.12	-2170.74	10.64
			Max. My	6	-45.11	13.59	-2195.52
			Max. Vy	4	24.61	-2170.74	10.64
			Max. Vx	6	24.89	13.59	-2195.52
			Max. Torque	4			-1.94
L54	32.58 - 32.33	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-66.00	1.17	-4.74
			Max. Mx	4	-45.24	-2176.89	10.67
			Max. My	6	-45.22	13.63	-2201.74
			Max. Vy	4	24.61	-2176.89	10.67

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vx	6	24.90	13.63	-2201.74
			Max. Torque	4			-1.94
L55	32.33 - 29.67	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-67.45	1.20	-4.72
			Max. Mx	4	-46.44	-2242.51	11.04
			Max. My	6	-46.42	14.00	-2268.12
			Max. Vy	4	24.76	-2242.51	11.04
			Max. Vx	6	25.05	14.00	-2268.12
			Max. Torque	4			-1.94
L56	29.67 - 29.42	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-67.58	1.20	-4.72
			Max. Mx	4	-46.55	-2248.70	11.08
			Max. My	6	-46.54	14.04	-2274.37
			Max. Vy	4	24.76	-2248.70	11.08
			Max. Vx	6	25.04	14.04	-2274.37
			Max. Torque	4			-1.94
L57	29.42 - 29.13	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-67.73	1.20	-4.71
			Max. Mx	4	-46.67	-2255.88	11.12
			Max. My	6	-46.66	14.08	-2281.63
			Max. Vy	4	24.77	-2255.88	11.12
			Max. Vx	6	25.05	14.08	-2281.63
			Max. Torque	4			-1.94
L58	29.13 - 28.88	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-67.87	1.21	-4.71
			Max. Mx	4	-46.78	-2262.07	11.15
			Max. My	6	-46.77	14.11	-2287.90
			Max. Vy	4	24.78	-2262.07	11.15
			Max. Vx	6	25.07	14.11	-2287.90
			Max. Torque	4			-1.94
L59	28.88 - 28	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-68.37	1.22	-4.70
			Max. Mx	4	-47.19	-2283.89	11.27
			Max. My	6	-47.18	14.24	-2309.97
			Max. Vy	4	24.84	-2283.89	11.27
			Max. Vx	6	25.12	14.24	-2309.97
			Max. Torque	4			-1.94
L60	28 - 27.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-68.51	1.22	-4.69
			Max. Mx	4	-47.30	-2290.09	11.31
			Max. My	6	-47.29	14.27	-2316.24
			Max. Vy	4	24.84	-2290.09	11.31
			Max. Vx	6	25.12	14.27	-2316.24
			Max. Torque	4			-1.94
L61	27.75 - 26.92	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-68.94	1.24	-4.68
			Max. Mx	4	-47.67	-2310.72	11.42
			Max. My	6	-47.65	14.39	-2337.10
			Max. Vy	4	24.88	-2310.72	11.42
			Max. Vx	6	25.17	14.39	-2337.10
			Max. Torque	4			-1.94
L62	26.92 - 26.67	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-69.07	1.24	-4.67
			Max. Mx	4	-47.78	-2316.94	11.46
			Max. My	6	-47.76	14.43	-2343.39
			Max. Vy	4	24.89	-2316.94	11.46
			Max. Vx	6	25.17	14.43	-2343.39
			Max. Torque	4			-1.94
L63	26.67 - 26.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-69.16	1.24	-4.67
			Max. Mx	4	-47.85	-2321.17	11.48
			Max. My	6	-47.84	14.45	-2347.66
			Max. Vy	4	24.89	-2321.17	11.48

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vx	6	25.18	14.45	-2347.66
			Max. Torque	4			-1.94
L64	26.5 - 26.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-69.28	1.25	-4.67
			Max. Mx	4	-47.95	-2327.39	11.52
			Max. My	6	-47.94	14.48	-2353.96
			Max. Vy	4	24.91	-2327.39	11.52
			Max. Vx	6	25.19	14.48	-2353.96
			Max. Torque	4			-1.94
L65	26.25 - 24.92	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-69.92	1.28	-4.64
			Max. Mx	4	-48.47	-2360.53	11.70
			Max. My	6	-48.46	14.67	-2387.48
			Max. Vy	4	24.98	-2360.53	11.70
			Max. Vx	6	25.26	14.67	-2387.48
			Max. Torque	4			-1.94
L66	24.92 - 24.67	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-70.04	1.28	-4.64
			Max. Mx	4	-48.58	-2366.77	11.74
			Max. My	6	-48.57	14.71	-2393.79
			Max. Vy	4	24.97	-2366.77	11.74
			Max. Vx	6	25.25	14.71	-2393.79
			Max. Torque	4			-1.94
L67	24.67 - 22.17	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-71.25	1.33	-4.62
			Max. Mx	4	-49.61	-2429.29	12.08
			Max. My	6	-49.60	15.06	-2457.01
			Max. Vy	4	25.08	-2429.29	12.08
			Max. Vx	6	25.36	15.06	-2457.01
			Max. Torque	4			-1.94
L68	22.17 - 21.92	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-71.38	1.34	-4.62
			Max. Mx	4	-49.73	-2435.55	12.12
			Max. My	6	-49.72	15.09	-2463.34
			Max. Vy	4	25.07	-2435.55	12.12
			Max. Vx	6	25.35	15.09	-2463.34
			Max. Torque	4			-1.94
L69	21.92 - 16.92	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-73.95	1.44	-4.59
			Max. Mx	4	-51.94	-2561.33	12.81
			Max. My	6	-51.93	15.79	-2590.52
			Max. Vy	4	25.27	-2561.33	12.81
			Max. Vx	6	25.55	15.79	-2590.52
			Max. Torque	4			-1.94
L70	16.92 - 11.92	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-76.53	1.54	-4.56
			Max. Mx	4	-54.18	-2687.97	13.50
			Max. My	6	-54.17	16.48	-2718.55
			Max. Vy	4	25.43	-2687.97	13.50
			Max. Vx	6	25.71	16.48	-2718.55
			Max. Torque	4			-1.94
L71	11.92 - 6.92	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-79.11	1.63	-4.53
			Max. Mx	4	-56.44	-2815.38	14.18
			Max. My	6	-56.43	17.16	-2847.34
			Max. Vy	4	25.58	-2815.38	14.18
			Max. Vx	6	25.86	17.16	-2847.34
			Max. Torque	4			-1.94
L72	6.92 - 1.92	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-81.68	1.73	-4.49
			Max. Mx	4	-58.71	-2943.54	14.86
			Max. My	6	-58.71	17.84	-2976.86
			Max. Vy	4	25.73	-2943.54	14.86

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vx	6	26.00	17.84	-2976.86
			Max. Torque	4			-1.94
L73	1.92 - 1.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-81.89	1.73	-4.49
			Max. Mx	4	-58.91	-2954.33	14.92
			Max. My	6	-58.91	17.90	-2987.77
			Max. Vy	4	25.73	-2954.33	14.92
			Max. Vx	6	26.00	17.90	-2987.77
			Max. Torque	4			-1.94
L74	1.5 - 1.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-82.00	1.74	-4.49
			Max. Mx	4	-59.01	-2960.76	14.96
			Max. My	6	-59.01	17.93	-2994.27
			Max. Vy	4	25.73	-2960.76	14.96
			Max. Vx	6	26.00	17.93	-2994.27
			Max. Torque	4			-1.94
L75	1.25 - 1	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-82.09	1.74	-4.49
			Max. Mx	4	-59.09	-2967.19	14.99
			Max. My	6	-59.09	17.97	-3000.77
			Max. Vy	4	25.73	-2967.19	14.99
			Max. Vx	6	26.00	17.97	-3000.77
			Max. Torque	4			-1.94
L76	1 - 0	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-82.42	1.76	-4.48
			Max. Mx	4	-59.39	-2992.91	15.12
			Max. My	6	-59.39	18.10	-3026.76
			Max. Vy	4	25.76	-2992.91	15.12
			Max. Vx	6	26.03	18.10	-3026.76
			Max. Torque	4			-1.94

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	8	82.42	-0.00	0.00
	Max. H_x	7	44.56	0.13	-26.00
	Max. H_z	3	44.56	-0.21	25.96
	Max. M_x	2	3018.54	-0.21	25.96
	Max. M_z	4	2992.91	-25.73	0.13
	Max. Torsion	2	0.28	-0.21	25.96
	Min. Vert	3	44.56	-0.21	25.96
	Min. H_x	4	59.41	-25.73	0.13
	Min. H_z	7	44.56	0.13	-26.00
	Min. M_x	6	-3026.76	0.13	-26.00
	Min. M_z	6	-18.10	0.13	-26.00
	Min. Torsion	4	-1.94	-25.73	0.13

Tower Mast Reaction Summary

Load Combination	Vertical K	$Shear_x$ K	$Shear_z$ K	Overturning Moment, M_x kip-ft	Overturning Moment, M_z kip-ft	Torque kip-ft
Dead Only	49.51	0.00	-0.00	1.85	0.54	-0.00
1.2 Dead+1.0 Wind 0 deg - No Ice	59.41	0.21	-25.96	-3018.54	-28.27	-0.28
0.9 Dead+1.0 Wind 0 deg - No Ice	44.56	0.21	-25.96	-2972.26	-27.99	-0.28
1.2 Dead+1.0 Wind 90 deg - No Ice	59.41	25.73	-0.13	-15.12	-2992.91	1.94

Load Combination	Vertical	$Shear_x$	$Shear_z$	Overturning Moment, M_x	Overturning Moment, M_z	Torque
	K	K	K	kip-ft	kip-ft	kip-ft
0.9 Dead+1.0 Wind 90 deg - No Ice	44.56	25.73	-0.13	-15.55	-2946.49	1.86
1.2 Dead+1.0 Wind 180 deg - No Ice	59.41	-0.13	26.00	3026.76	18.10	0.52
0.9 Dead+1.0 Wind 180 deg - No Ice	44.56	-0.13	26.00	2979.03	17.65	0.52
1.2 Dead+1.0 Ice+1.0 Temp	82.42	0.00	-0.00	4.48	1.76	-0.00
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	82.42	0.04	-7.68	-901.20	-4.51	-0.06
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	82.42	7.65	-0.03	0.78	-899.17	0.48
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	82.42	-0.03	7.68	910.01	5.62	0.12
Dead+Wind 0 deg - Service	49.51	0.05	-6.66	-765.57	-6.78	-0.07
Dead+Wind 90 deg - Service	49.51	6.60	-0.03	-2.38	-760.21	0.49
Dead+Wind 180 deg - Service	49.51	-0.03	6.67	770.66	5.00	0.14

Solution Summary

	Sum of Applied Forces			Sum of Reactions			
Load Comb.	PX	PY	PZ	PX	PY	PZ	% Error
	K	K	K	K	K	K	
1	0.00	-49.51	0.00	-0.00	49.51	0.00	0.003%
2	0.21	-59.41	-25.96	-0.21	59.41	25.96	0.001%
3	0.21	-44.56	-25.96	-0.21	44.56	25.96	0.001%
4	25.73	-59.41	-0.13	-25.73	59.41	0.13	0.000%
5	25.73	-44.56	-0.13	-25.73	44.56	0.13	0.000%
6	-0.13	-59.41	26.00	0.13	59.41	-26.00	0.000%
7	-0.13	-44.56	26.00	0.13	44.56	-26.00	0.000%
8	0.00	-82.42	0.00	-0.00	82.42	0.00	0.000%
9	0.04	-82.42	-7.68	-0.04	82.42	7.68	0.000%
10	7.65	-82.42	-0.03	-7.65	82.42	0.03	0.000%
11	-0.03	-82.42	7.68	0.03	82.42	-7.68	0.000%
12	0.05	-49.51	-6.66	-0.05	49.51	6.66	0.003%
13	6.60	-49.51	-0.03	-6.60	49.51	0.03	0.001%
14	-0.03	-49.51	6.67	0.03	49.51	-6.67	0.002%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	6	0.00000001	0.00002192
2	Yes	21	0.00000001	0.00012933
3	Yes	21	0.00000001	0.00009325
4	Yes	23	0.00000001	0.00009706
5	Yes	22	0.00000001	0.00013030
6	Yes	22	0.00000001	0.00012456
7	Yes	22	0.00000001	0.00009192
8	Yes	17	0.00000001	0.00009692
9	Yes	24	0.00000001	0.00014510
10	Yes	24	0.00000001	0.00014638
11	Yes	24	0.00000001	0.00014899
12	Yes	17	0.00010785	0.00013402
13	Yes	19	0.00000001	0.00010417
14	Yes	18	0.00000001	0.00009868

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	149 - 144	26.86	14	1.78	0.01
L2	144 - 139	25.00	14	1.77	0.01
L3	139 - 134	23.17	14	1.73	0.01
L4	134 - 129	21.39	14	1.67	0.01
L5	129 - 125	19.69	14	1.58	0.01
L6	125 - 124.75	18.40	14	1.48	0.01
L7	124.75 - 119.75	18.33	14	1.48	0.00
L8	119.75 - 118.5	16.82	14	1.40	0.00
L9	118.5 - 118.25	16.46	14	1.38	0.00
L10	118.25 - 117	16.38	14	1.37	0.00
L11	117 - 116.75	16.03	14	1.36	0.00
L12	116.75 - 111.75	15.96	14	1.36	0.00
L13	111.75 - 106.75	14.57	14	1.30	0.00
L14	106.75 - 98.5	13.25	14	1.23	0.00
L15	102 - 97	12.06	14	1.15	0.00
L16	97 - 96.75	10.88	14	1.10	0.00
L17	96.75 - 93.98	10.82	14	1.10	0.00
L18	93.98 - 93.73	10.19	14	1.06	0.00
L19	93.73 - 91.5	10.14	14	1.06	0.00
L20	91.5 - 91.38	9.65	14	1.03	0.00
L21	91.38 - 91.25	9.62	14	1.03	0.00
L22	91.25 - 91.13	9.59	14	1.03	0.00
L23	91.13 - 89	9.57	14	1.03	0.00
L24	89 - 88.75	9.11	14	1.00	0.00
L25	88.75 - 83.75	9.06	14	1.00	0.00
L26	83.75 - 80.08	8.05	14	0.93	0.00
L27	80.08 - 79.83	7.36	14	0.88	0.00
L28	79.83 - 74.83	7.31	14	0.87	0.00
L29	74.83 - 73.5	6.43	14	0.82	0.00
L30	73.5 - 73.25	6.20	14	0.80	0.00
L31	73.25 - 71	6.16	14	0.80	0.00
L32	71 - 70.75	5.79	14	0.78	0.00
L33	70.75 - 65.75	5.75	14	0.77	0.00
L34	65.75 - 64.13	4.97	14	0.72	0.00
L35	64.13 - 63.88	4.73	14	0.70	0.00
L36	63.88 - 63	4.69	14	0.69	0.00
L37	63 - 62.75	4.57	14	0.68	0.00
L38	62.75 - 62.08	4.53	14	0.68	0.00
L39	62.08 - 61.83	4.44	14	0.67	0.00
L40	61.83 - 60.67	4.40	14	0.67	0.00
L41	60.67 - 60.42	4.24	14	0.65	0.00
L42	60.42 - 59	4.21	14	0.65	0.00
L43	59 - 58.75	4.02	14	0.63	0.00
L44	58.75 - 53.75	3.98	14	0.63	0.00
L45	53.75 - 48.5	3.36	14	0.57	0.00
L46	53.25 - 47.5	3.30	14	0.56	0.00
L47	47.5 - 46.88	2.64	14	0.52	0.00
L48	46.88 - 46.63	2.58	14	0.51	0.00
L49	46.63 - 43.5	2.55	14	0.51	0.00
L50	43.5 - 43.25	2.23	14	0.47	0.00
L51	43.25 - 38.25	2.20	14	0.47	0.00
L52	38.25 - 33.25	1.74	14	0.42	0.00
L53	33.25 - 32.58	1.32	14	0.37	0.00
L54	32.58 - 32.33	1.27	14	0.36	0.00
L55	32.33 - 29.67	1.25	14	0.36	0.00
L56	29.67 - 29.42	1.06	14	0.33	0.00
L57	29.42 - 29.13	1.04	14	0.33	0.00
L58	29.13 - 28.88	1.02	14	0.33	0.00
L59	28.88 - 28	1.00	14	0.33	0.00
L60	28 - 27.75	0.94	14	0.32	0.00
L61	27.75 - 26.92	0.93	14	0.31	0.00
L62	26.92 - 26.67	0.87	14	0.31	0.00
L63	26.67 - 26.5	0.86	14	0.30	0.00
L64	26.5 - 26.25	0.85	14	0.30	0.00
L65	26.25 - 24.92	0.83	14	0.30	0.00
L66	24.92 - 24.67	0.75	14	0.28	0.00
L67	24.67 - 22.17	0.73	14	0.28	0.00
L68	22.17 - 21.92	0.60	14	0.25	0.00

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L69	21.92 - 16.92	0.58	14	0.25	0.00
L70	16.92 - 11.92	0.35	14	0.19	0.00
L71	11.92 - 6.92	0.18	14	0.14	0.00
L72	6.92 - 1.92	0.06	14	0.08	0.00
L73	1.92 - 1.5	0.01	14	0.03	0.00
L74	1.5 - 1.25	0.00	14	0.02	0.00
L75	1.25 - 1	0.00	14	0.02	0.00
L76	1 - 0	0.00	14	0.02	0.00

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
153.0000	DS1F06F36U-D	14	26.86	1.78	0.01	10354
148.0000	(2) P90-14-XLH-RR w/ Mount Pipe	14	26.49	1.78	0.01	10354
140.0000	(2) DB846F65ZAXY w/ Mount Pipe	14	23.53	1.74	0.01	6425
131.0000	(2) MINI-LINK 6365	14	20.36	1.62	0.01	3074
128.0000	ANT3 A 0.9 HPX	14	19.36	1.55	0.01	2664
119.0000	MX08FRO665-21 w/ Mount Pipe	14	16.60	1.38	0.00	3892
90.0000	DS1F03P36D-D	14	9.33	1.01	0.00	4516

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	149 - 144	105.15	6	6.96	0.02
L2	144 - 139	97.90	6	6.89	0.02
L3	139 - 134	90.77	6	6.75	0.03
L4	134 - 129	83.83	6	6.51	0.03
L5	129 - 125	77.20	6	6.17	0.03
L6	125 - 124.75	72.19	6	5.80	0.02
L7	124.75 - 119.75	71.89	6	5.79	0.02
L8	119.75 - 118.5	66.00	6	5.47	0.02
L9	118.5 - 118.25	64.58	6	5.39	0.01
L10	118.25 - 117	64.30	6	5.38	0.01
L11	117 - 116.75	62.90	6	5.33	0.01
L12	116.75 - 111.75	62.62	6	5.32	0.01
L13	111.75 - 106.75	57.18	6	5.08	0.01
L14	106.75 - 98.5	52.01	6	4.81	0.01
L15	102 - 97	47.37	6	4.53	0.01
L16	97 - 96.75	42.71	6	4.33	0.01
L17	96.75 - 93.98	42.49	6	4.32	0.01
L18	93.98 - 93.73	40.02	6	4.18	0.01
L19	93.73 - 91.5	39.81	6	4.17	0.01
L20	91.5 - 91.38	37.89	6	4.05	0.01
L21	91.38 - 91.25	37.79	6	4.04	0.01
L22	91.25 - 91.13	37.68	6	4.04	0.01
L23	91.13 - 89	37.58	6	4.03	0.01
L24	89 - 88.75	35.80	6	3.94	0.01
L25	88.75 - 83.75	35.59	6	3.92	0.01
L26	83.75 - 80.08	31.63	6	3.65	0.01
L27	80.08 - 79.83	28.90	6	3.45	0.00
L28	79.83 - 74.83	28.72	6	3.44	0.00
L29	74.83 - 73.5	25.25	6	3.20	0.00
L30	73.5 - 73.25	24.36	6	3.14	0.00
L31	73.25 - 71	24.20	6	3.13	0.00
L32	71 - 70.75	22.74	6	3.05	0.00

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L33	70.75 - 65.75	22.58	6	3.03	0.00
L34	65.75 - 64.13	19.53	6	2.81	0.00
L35	64.13 - 63.88	18.58	6	2.74	0.00
L36	63.88 - 63	18.44	6	2.72	0.00
L37	63 - 62.75	17.94	6	2.67	0.00
L38	62.75 - 62.08	17.80	6	2.66	0.00
L39	62.08 - 61.83	17.43	6	2.63	0.00
L40	61.83 - 60.67	17.30	6	2.62	0.00
L41	60.67 - 60.42	16.67	6	2.56	0.00
L42	60.42 - 59	16.53	6	2.55	0.00
L43	59 - 58.75	15.79	6	2.48	0.00
L44	58.75 - 53.75	15.66	6	2.47	0.00
L45	53.75 - 48.5	13.20	6	2.23	0.00
L46	53.25 - 47.5	12.96	6	2.21	0.00
L47	47.5 - 46.88	10.39	6	2.05	0.00
L48	46.88 - 46.63	10.13	6	2.02	0.00
L49	46.63 - 43.5	10.02	6	2.01	0.00
L50	43.5 - 43.25	8.75	6	1.86	0.00
L51	43.25 - 38.25	8.65	6	1.85	0.00
L52	38.25 - 33.25	6.82	6	1.65	0.00
L53	33.25 - 32.58	5.19	6	1.46	0.00
L54	32.58 - 32.33	4.99	6	1.43	0.00
L55	32.33 - 29.67	4.91	6	1.42	0.00
L56	29.67 - 29.42	4.15	6	1.31	0.00
L57	29.42 - 29.13	4.08	6	1.30	0.00
L58	29.13 - 28.88	4.00	6	1.29	0.00
L59	28.88 - 28	3.94	6	1.28	0.00
L60	28 - 27.75	3.70	6	1.24	0.00
L61	27.75 - 26.92	3.64	6	1.23	0.00
L62	26.92 - 26.67	3.43	6	1.20	0.00
L63	26.67 - 26.5	3.37	6	1.19	0.00
L64	26.5 - 26.25	3.32	6	1.18	0.00
L65	26.25 - 24.92	3.26	6	1.17	0.00
L66	24.92 - 24.67	2.94	6	1.11	0.00
L67	24.67 - 22.17	2.89	6	1.10	0.00
L68	22.17 - 21.92	2.34	6	0.98	0.00
L69	21.92 - 16.92	2.29	6	0.97	0.00
L70	16.92 - 11.92	1.39	6	0.76	0.00
L71	11.92 - 6.92	0.71	6	0.54	0.00
L72	6.92 - 1.92	0.25	6	0.33	0.00
L73	1.92 - 1.5	0.02	6	0.11	0.00
L74	1.5 - 1.25	0.02	6	0.10	0.00
L75	1.25 - 1	0.01	6	0.08	0.00
L76	1 - 0	0.01	6	0.07	0.00

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
153.0000	DS1F06F36U-D	6	105.15	6.96	0.02	2767
148.0000	(2) P90-14-XLH-RR w/ Mount Pipe	6	103.69	6.95	0.02	2767
140.0000	(2) DB846F65ZAXY w/ Mount Pipe	6	92.18	6.79	0.03	1694
131.0000	(2) MINI-LINK 6365	6	79.81	6.33	0.03	819
128.0000	ANT3 A 0.9 HPX	6	75.92	6.07	0.02	717
119.0000	MX08FRO665-21 w/ Mount Pipe	6	65.14	5.42	0.01	1028
90.0000	DS1F03P36D-D	6	36.63	3.98	0.01	1164

Compression Checks

Pole Design Data

Section No.	Elevation	Size	L	L_u	Kl/r	A	P_u	ϕP_n	Ratio $\frac{P_u}{\phi P_n}$
	ft		ft	ft		in^2	K	K	
L1	149 - 144 (1)	TP16.8649x16x0.1875	5.0000	0.0000	0.0	9.9251	-2.59	580.62	0.004
L2	144 - 139 (2)	TP17.7297x16.8649x0.1875	5.0000	0.0000	0.0	10.4398	-5.10	610.73	0.008
L3	139 - 134 (3)	TP18.5946x17.7297x0.1875	5.0000	0.0000	0.0	10.9545	-5.43	640.84	0.008
L4	134 - 129 (4)	TP19.4594x18.5946x0.1875	5.0000	0.0000	0.0	11.4692	-11.46	670.95	0.017
L5	129 - 125 (5)	TP20.1513x19.4594x0.1875	4.0000	0.0000	0.0	11.8809	-11.87	695.04	0.017
L6	125 - 124.75 (6)	TP20.1945x20.1513x0.35	0.2500	0.0000	0.0	22.0453	-11.91	1289.65	0.009
L7	124.75 - 119.75 (7)	TP21.0594x20.1945x0.3438	5.0000	0.0000	0.0	22.6020	-12.53	1322.22	0.009
L8	119.75 - 118.5 (8)	TP21.2756x21.0594x0.3438	1.2500	0.0000	0.0	22.8379	-15.64	1336.02	0.012
L9	118.5 - 118.25 (9)	TP21.3188x21.2756x0.625	0.2500	0.0000	0.0	41.0514	-15.70	2401.51	0.007
L10	118.25 - 117 (10)	TP21.5351x21.3188x0.625	1.2500	0.0000	0.0	41.4803	-15.93	2426.60	0.007
L11	117 - 116.75 (11)	TP21.5783x21.5351x0.625	0.2500	0.0000	0.0	41.5661	-15.98	2431.62	0.007
L12	116.75 - 111.75 (12)	TP22.4431x21.5783x0.6	5.0000	0.0000	0.0	41.5981	-16.93	2433.49	0.007
L13	111.75 - 106.75 (13)	TP23.308x22.4431x0.575	5.0000	0.0000	0.0	41.4889	-17.91	2427.10	0.007
L14	106.75 - 98.5 (14)	TP24.735x23.308x0.5625	8.2500	0.0000	0.0	42.0761	-18.86	2461.45	0.008
L15	98.5 - 97 (15)	TP24.6198x23.7546x0.625	5.0000	0.0000	0.0	47.5997	-20.48	2784.58	0.007
L16	97 - 96.75 (16)	TP24.6631x24.6198x0.7625	0.2500	0.0000	0.0	57.8436	-20.56	3383.85	0.006
L17	96.75 - 93.98 (17)	TP25.1424x24.6631x0.75	2.7700	0.0000	0.0	58.0662	-21.27	3396.87	0.006
L18	93.98 - 93.73 (18)	TP25.1857x25.1424x0.75	0.2500	0.0000	0.0	58.1691	-21.34	3402.90	0.006
L19	93.73 - 91.5 (19)	TP25.5716x25.1857x0.75	2.2300	0.0000	0.0	59.0878	-21.92	3456.63	0.006
L20	91.5 - 91.38 (20)	TP25.5923x25.5716x0.6375	0.1200	0.0000	0.0	50.4942	-21.95	2953.91	0.007
L21	91.38 - 91.25 (21)	TP25.6148x25.5923x0.9	0.1300	0.0000	0.0	70.6004	-22.00	4130.12	0.005
L22	91.25 - 91.13 (22)	TP25.6356x25.6148x0.9	0.1200	0.0000	0.0	70.6597	-22.03	4133.59	0.005
L23	91.13 - 89 (23)	TP26.0042x25.6356x0.8875	2.1300	0.0000	0.0	70.7518	-22.90	4138.98	0.006
L24	89 - 88.75 (24)	TP26.0474x26.0042x0.75	0.2500	0.0000	0.0	60.2206	-22.98	3522.90	0.007
L25	88.75 - 83.75 (25)	TP26.9127x26.0474x0.725	5.0000	0.0000	0.0	60.2618	-24.41	3525.31	0.007
L26	83.75 - 80.08 (26)	TP27.5477x26.9127x0.7125	3.6700	0.0000	0.0	60.6872	-25.48	3550.20	0.007
L27	80.08 - 79.83 (27)	TP27.591x27.5477x0.9	0.2500	0.0000	0.0	76.2455	-25.58	4460.36	0.006
L28	79.83 - 74.83 (28)	TP28.4562x27.591x0.875	5.0000	0.0000	0.0	76.6000	-27.27	4481.10	0.006
L29	74.83 - 73.5 (29)	TP28.6864x28.4562x0.875	1.3300	0.0000	0.0	77.2392	-27.72	4518.49	0.006
L30	73.5 - 73.25 (30)	TP28.7296x28.6864x1.075	0.2500	0.0000	0.0	94.3590	-27.83	5520.00	0.005
L31	73.25 - 71 (31)	TP29.119x28.7296x1.05	2.2500	0.0000	0.0	93.5455	-28.71	5472.41	0.005
L32	71 - 70.75 (32)	TP29.1623x29.119x0.925	0.2500	0.0000	0.0	82.9032	-28.81	4849.84	0.006
L33	70.75 - 65.75	TP30.0275x29.1623x0.9	5.0000	0.0000	0.0	83.205	-30.62	4867.52	0.006

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
	(33)					6			
L34	65.75 - 64.13	TP30.3078x30.0275x0.9	1.6200	0.0000	0.0	84.006	-31.21	4914.37	0.006
	(34)					3			
L35	64.13 - 63.88	TP30.3511x30.3078x0.67	0.2500	0.0000	0.0	63.579	-31.30	3719.40	0.008
	(35)	5				5			
L36	63.88 - 63	TP30.5034x30.3511x0.67	0.8800	0.0000	0.0	63.905	-31.57	3738.49	0.008
	(36)	5				8			
L37	63 - 62.75	TP30.5466x30.5034x0.82	0.2500	0.0000	0.0	77.827	-31.67	4552.91	0.007
	(37)	5				5			
L38	62.75 - 62.08	TP30.6626x30.5466x0.82	0.6700	0.0000	0.0	78.131	-31.91	4570.67	0.007
	(38)	5				1			
L39	62.08 - 61.83	TP30.7058x30.6626x0.77	0.2500	0.0000	0.0	73.625	-32.00	4307.08	0.007
	(39)	5				3			
L40	61.83 - 60.67	TP30.9065x30.7058x0.76	1.1600	0.0000	0.0	72.953	-32.37	4267.80	0.008
	(40)	25				9			
L41	60.67 - 60.42	TP30.9498x30.9065x0.85	0.2500	0.0000	0.0	81.206	-32.46	4750.57	0.007
	(41)					3			
L42	60.42 - 59	TP31.1955x30.9498x0.85	1.4200	0.0000	0.0	81.869	-32.95	4789.35	0.007
	(42)					2			
L43	59 - 58.75	TP31.2388x31.1955x0.83	0.2500	0.0000	0.0	80.813	-33.05	4727.59	0.007
	(43)	75				5			
L44	58.75 - 53.75	TP32.104x31.2388x0.825	5.0000	0.0000	0.0	81.905	-34.85	4791.48	0.007
	(44)					7			
L45	53.75 - 48.5	TP33.0125x32.104x0.825	5.2500	0.0000	0.0	82.132	-35.03	4804.74	0.007
	(45)					2			
L46	48.5 - 47.5	TP32.6823x31.6905x0.86	5.7500	0.0000	0.0	87.109	-38.70	5095.87	0.008
	(46)	25				0			
L47	47.5 - 46.88	TP32.7892x32.6823x0.86	0.6200	0.0000	0.0	87.401	-38.94	5113.00	0.008
	(47)	25				7			
L48	46.88 - 46.63	TP32.8323x32.7892x0.87	0.2500	0.0000	0.0	88.753	-39.05	5192.08	0.008
	(48)	5				4			
L49	46.63 - 43.5	TP33.3722x32.8323x0.86	3.1300	0.0000	0.0	88.997	-40.25	5206.36	0.008
	(49)	25				7			
L50	43.5 - 43.25	TP33.4153x33.3722x1.01	0.2500	0.0000	0.0	104.13	-40.37	6091.72	0.007
	(50)	25				20			
L51	43.25 - 38.25	TP34.2777x33.4153x1	5.0000	0.0000	0.0	105.62	-42.57	6178.97	0.007
	(51)					30			
L52	38.25 - 33.25	TP35.1401x34.2777x0.98	5.0000	0.0000	0.0	107.04	-44.80	6262.15	0.007
	(52)	75				50			
L53	33.25 - 32.58	TP35.2556x35.1401x0.97	0.6700	0.0000	0.0	106.08	-45.11	6206.06	0.007
	(53)	5				70			
L54	32.58 - 32.33	TP35.2988x35.2556x0.98	0.2500	0.0000	0.0	107.54	-45.22	6291.24	0.007
	(54)	75				30			
L55	32.33 - 29.67	TP35.7576x35.2988x0.96	2.6600	0.0000	0.0	106.29	-46.42	6218.43	0.007
	(55)	25				80			
L56	29.67 - 29.42	TP35.8007x35.7576x0.81	0.2500	0.0000	0.0	90.230	-46.54	5278.46	0.009
	(56)	25				1			
L57	29.42 - 29.13	TP35.8507x35.8007x0.81	0.2900	0.0000	0.0	90.359	-46.66	5286.01	0.009
	(57)	25				1			
L58	29.13 - 28.88	TP35.8938x35.8507x0.95	0.2500	0.0000	0.0	105.36	-46.77	6163.92	0.008
	(58)					60			
L59	28.88 - 28	TP36.0456x35.8938x0.93	0.8800	0.0000	0.0	104.46	-47.18	6111.41	0.008
	(59)	75				90			
L60	28 - 27.75	TP36.0887x36.0456x0.91	0.2500	0.0000	0.0	101.88	-47.29	5959.98	0.008
	(60)	25				00			
L61	27.75 - 26.92	TP36.2319x36.0887x0.91	0.8300	0.0000	0.0	102.29	-47.65	5984.23	0.008
	(61)	25				50			
L62	26.92 - 26.67	TP36.275x36.2319x0.875	0.2500	0.0000	0.0	98.314	-47.76	5751.41	0.008
	(62)					6			
L63	26.67 - 26.5	TP36.3043x36.275x0.875	0.1700	0.0000	0.0	98.396	-47.84	5756.17	0.008
	(63)					0			
L64	26.5 - 26.25	TP36.3474x36.3043x0.83	0.2500	0.0000	0.0	94.393	-47.94	5522.01	0.009
	(64)	75				4			
L65	26.25 - 24.92	TP36.5768x36.3474x0.83	1.3300	0.0000	0.0	95.003	-48.46	5557.69	0.009
	(65)	75				2			
L66	24.92 - 24.67	TP36.6199x36.5768x0.8	0.2500	0.0000	0.0	90.954	-48.57	5320.81	0.009
	(66)					0			
L67	24.67 - 22.17	TP37.0511x36.6199x0.78	2.5000	0.0000	0.0	90.641	-49.60	5302.55	0.009
	(67)	75				9			

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
L68	22.17 - 21.92 (68)	TP37.0943x37.0511x0.8625	0.2500	0.0000	0.0	99.1872	-49.72	5802.45	0.009
L69	21.92 - 16.92 (69)	TP37.9567x37.0943x0.8375	5.0000	0.0000	0.0	98.6711	-51.93	5772.26	0.009
L70	16.92 - 11.92 (70)	TP38.8191x37.9567x0.825	5.0000	0.0000	0.0	99.4893	-54.17	5820.13	0.009
L71	11.92 - 6.92 (71)	TP39.6814x38.8191x0.8125	5.0000	0.0000	0.0	100.2380	-56.43	5863.93	0.010
L72	6.92 - 1.92 (72)	TP40.5438x39.6814x0.8	5.0000	0.0000	0.0	100.9180	-58.71	5903.68	0.010
L73	1.92 - 1.5 (73)	TP40.6163x40.5438x0.8	0.4200	0.0000	0.0	101.1020	-58.91	5914.44	0.010
L74	1.5 - 1.25 (74)	TP40.6594x40.6163x0.6375	0.2500	0.0000	0.0	80.9813	-59.01	4737.41	0.012
L75	1.25 - 1 (75)	TP40.7025x40.6594x0.4938	0.2500	0.0000	0.0	63.0137	-59.09	3686.30	0.016
L76	1 - 0 (76)	TP40.875x40.7025x0.4875	1.0000	0.0000	0.0	62.4926	-59.39	3655.82	0.016

Pole Bending Design Data

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L1	149 - 144 (1)	TP16.8649x16x0.1875	26.50	252.03	0.105	0.00	252.03	0.000
L2	144 - 139 (2)	TP17.7297x16.8649x0.1875	53.92	279.00	0.193	0.00	279.00	0.000
L3	139 - 134 (3)	TP18.5946x17.7297x0.1875	97.74	304.95	0.320	0.00	304.95	0.000
L4	134 - 129 (4)	TP19.4594x18.5946x0.1875	152.17	330.53	0.460	0.00	330.53	0.000
L5	129 - 125 (5)	TP20.1513x19.4594x0.1875	212.26	351.46	0.604	0.00	351.46	0.000
L6	125 - 124.75 (6)	TP20.1945x20.1513x0.35	216.04	661.94	0.326	0.00	661.94	0.000
L7	124.75 - 119.75 (7)	TP21.0594x20.1945x0.3438	292.47	709.17	0.412	0.00	709.17	0.000
L8	119.75 - 118.5 (8)	TP21.2756x21.0594x0.3438	313.27	724.17	0.433	0.00	724.17	0.000
L9	118.5 - 118.25 (9)	TP21.3188x21.2756x0.625	317.94	1269.69	0.250	0.00	1269.69	0.000
L10	118.25 - 117 (10)	TP21.5351x21.3188x0.625	341.35	1296.76	0.263	0.00	1296.76	0.000
L11	117 - 116.75 (11)	TP21.5783x21.5351x0.625	346.05	1302.20	0.266	0.00	1302.20	0.000
L12	116.75 - 111.75 (12)	TP22.4431x21.5783x0.6	440.75	1361.67	0.324	0.00	1361.67	0.000
L13	111.75 - 106.75 (13)	TP23.308x22.4431x0.575	536.95	1416.42	0.379	0.00	1416.42	0.000
L14	106.75 - 98.5 (14)	TP24.735x23.308x0.5625	629.69	1491.25	0.422	0.00	1491.25	0.000
L15	98.5 - 97 (15)	TP24.6198x23.7546x0.625	728.98	1713.98	0.425	0.00	1713.98	0.000
L16	97 - 96.75 (16)	TP24.6631x24.6198x0.7625	733.99	2062.89	0.356	0.00	2062.89	0.000
L17	96.75 - 93.98 (17)	TP25.1424x24.6631x0.75	789.76	2115.82	0.373	0.00	2115.82	0.000
L18	93.98 - 93.73 (18)	TP25.1857x25.1424x0.75	794.82	2123.44	0.374	0.00	2123.44	0.000
L19	93.73 - 91.5 (19)	TP25.5716x25.1857x0.75	840.11	2192.05	0.383	0.00	2192.05	0.000
L20	91.5 - 91.38 (20)	TP25.5923x25.5716x0.6375	842.55	1891.88	0.445	0.00	1891.88	0.000
L21	91.38 - 91.25 (21)	TP25.6148x25.5923x0.9	845.20	2592.28	0.326	0.00	2592.28	0.000

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L22 (22)	91.25 - 91.13	TP25.6356x25.6148x0.9	847.65	2596.72	0.326	0.00	2596.72	0.000
L23 (23)	91.13 - 89	TP26.0042x25.6356x0.8875	891.63	2642.84	0.337	0.00	2642.84	0.000
L24 (24)	89 - 88.75	TP26.0474x26.0042x0.75	896.92	2278.17	0.394	0.00	2278.17	0.000
L25 (25)	88.75 - 83.75	TP26.9127x26.0474x0.725	1003.68	2364.45	0.424	0.00	2364.45	0.000
L26 (26)	83.75 - 80.08	TP27.5477x26.9127x0.7125	1082.99	2442.72	0.443	0.00	2442.72	0.000
L27 (27)	80.08 - 79.83	TP27.591x27.5477x0.9	1088.43	3031.30	0.359	0.00	3031.30	0.000
L28 (28)	79.83 - 74.83	TP28.4562x27.591x0.875	1198.01	3153.05	0.380	0.00	3153.05	0.000
L29 (29)	74.83 - 73.5	TP28.6864x28.4562x0.875	1227.47	3206.71	0.383	0.00	3206.71	0.000
L30 (30)	73.5 - 73.25	TP28.7296x28.6864x1.075	1233.03	3867.60	0.319	0.00	3867.60	0.000
L31 (31)	73.25 - 71	TP29.119x28.7296x1.05	1283.41	3897.20	0.329	0.00	3897.20	0.000
L32 (32)	71 - 70.75	TP29.1623x29.119x0.925	1289.04	3490.18	0.369	0.00	3490.18	0.000
L33 (33)	70.75 - 65.75	TP30.0275x29.1623x0.9	1402.61	3619.86	0.387	0.00	3619.86	0.000
L34 (34)	65.75 - 64.13	TP30.3078x30.0275x0.9	1439.76	3690.93	0.390	0.00	3690.93	0.000
L35 (35)	64.13 - 63.88	TP30.3511x30.3078x0.675	1445.51	2840.58	0.509	0.00	2840.58	0.000
L36 (36)	63.88 - 63	TP30.5034x30.3511x0.675	1465.77	2870.14	0.511	0.00	2870.14	0.000
L37 (37)	63 - 62.75	TP30.5466x30.5034x0.825	1471.53	3465.51	0.425	0.00	3465.51	0.000
L38 (38)	62.75 - 62.08	TP30.6626x30.5466x0.825	1487.00	3492.97	0.426	0.00	3492.97	0.000
L39 (39)	62.08 - 61.83	TP30.7058x30.6626x0.775	1492.78	3307.47	0.451	0.00	3307.47	0.000
L40 (40)	61.83 - 60.67	TP30.9065x30.7058x0.7625	1519.63	3302.57	0.460	0.00	3302.57	0.000
L41 (41)	60.67 - 60.42	TP30.9498x30.9065x0.85	1525.43	3660.25	0.417	0.00	3660.25	0.000
L42 (42)	60.42 - 59	TP31.1955x30.9498x0.85	1558.43	3721.08	0.419	0.00	3721.08	0.000
L43 (43)	59 - 58.75	TP31.2388x31.1955x0.8375	1564.25	3681.51	0.425	0.00	3681.51	0.000
L44 (44)	58.75 - 53.75	TP32.104x31.2388x0.825	1681.47	3843.38	0.437	0.00	3843.38	0.000
L45 (45)	53.75 - 48.5	TP33.0125x32.104x0.825	1693.27	3864.94	0.438	0.00	3864.94	0.000
L46 (46)	48.5 - 47.5	TP32.6823x31.6905x0.8625	1830.43	4155.24	0.441	0.00	4155.24	0.000
L47 (47)	47.5 - 46.88	TP32.7892x32.6823x0.8625	1845.37	4183.59	0.441	0.00	4183.59	0.000
L48 (48)	46.88 - 46.63	TP32.8323x32.7892x0.875	1851.39	4250.86	0.436	0.00	4250.86	0.000
L49 (49)	46.63 - 43.5	TP33.3722x32.8323x0.8625	1927.13	4339.82	0.444	0.00	4339.82	0.000
L50 (50)	43.5 - 43.25	TP33.4153x33.3722x1.0125	1933.20	5037.98	0.384	0.00	5037.98	0.000
L51 (51)	43.25 - 38.25	TP34.2777x33.4153x1	2055.37	5254.20	0.391	0.00	5254.20	0.000
L52 (52)	38.25 - 33.25	TP35.1401x34.2777x0.9875	2178.90	5470.97	0.398	0.00	5470.97	0.000
L53 (53)	33.25 - 32.58	TP35.2556x35.1401x0.975	2195.56	5444.80	0.403	0.00	5444.80	0.000
L54 (54)	32.58 - 32.33	TP35.2988x35.2556x0.9875	2201.78	5522.64	0.399	0.00	5522.64	0.000
L55 (55)	32.33 - 29.67	TP35.7576x35.2988x0.9625	2268.16	5541.72	0.409	0.00	5541.72	0.000
L56	29.67 - 29.42	TP35.8007x35.7576x0.81	2274.42	4750.68	0.479	0.00	4750.68	0.000

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
	(56)	25						
L57	29.42 - 29.13 (57)	TP35.8507x35.8007x0.81 25	2281.68	4764.42	0.479	0.00	4764.42	0.000
L58	29.13 - 28.88 (58)	TP35.8938x35.8507x0.95	2287.94	5519.17	0.415	0.00	5519.17	0.000
L59	28.88 - 28 (59)	TP36.0456x35.8938x0.93 75	2310.01	5500.47	0.420	0.00	5500.47	0.000
L60	28 - 27.75 (60)	TP36.0887x36.0456x0.91 25	2316.28	5378.58	0.431	0.00	5378.58	0.000
L61	27.75 - 26.92 (61)	TP36.2319x36.0887x0.91 25	2337.14	5423.01	0.431	0.00	5423.01	0.000
L62	26.92 - 26.67 (62)	TP36.275x36.2319x0.875	2343.43	5229.61	0.448	0.00	5229.61	0.000
L63	26.67 - 26.5 (63)	TP36.3043x36.275x0.875	2347.71	5238.38	0.448	0.00	5238.38	0.000
L64	26.5 - 26.25 (64)	TP36.3474x36.3043x0.83 75	2354.00	5042.19	0.467	0.00	5042.19	0.000
L65	26.25 - 24.92 (65)	TP36.5768x36.3474x0.83 75	2387.53	5108.31	0.467	0.00	5108.31	0.000
L66	24.92 - 24.67 (66)	TP36.6199x36.5768x0.8	2393.83	4906.88	0.488	0.00	4906.88	0.000
L67	24.67 - 22.17 (67)	TP37.0511x36.6199x0.78 75	2457.06	4953.62	0.496	0.00	4953.62	0.000
L68	22.17 - 21.92 (68)	TP37.0943x37.0511x0.86 25	2463.39	5404.80	0.456	0.00	5404.80	0.000
L69	21.92 - 16.92 (69)	TP37.9567x37.0943x0.83 75	2590.57	5515.06	0.470	0.00	5515.06	0.000
L70	16.92 - 11.92 (70)	TP38.8191x37.9567x0.82 5	2718.60	5696.59	0.477	0.00	5696.59	0.000
L71	11.92 - 6.92 (71)	TP39.6814x38.8191x0.81 25	2847.39	5876.29	0.485	0.00	5876.29	0.000
L72	6.92 - 1.92 (72)	TP40.5438x39.6814x0.8	2976.92	6053.87	0.492	0.00	6053.87	0.000
L73	1.92 - 1.5 (73)	TP40.6163x40.5438x0.8	2987.82	6076.18	0.492	0.00	6076.18	0.000
L74	1.5 - 1.25 (74)	TP40.6594x40.6163x0.63 75	2994.32	4912.15	0.610	0.00	4912.15	0.000
L75	1.25 - 1 (75)	TP40.7025x40.6594x0.49 38	3000.82	3853.96	0.779	0.00	3853.96	0.000
L76	1 - 0 (76)	TP40.875x40.7025x0.487 5	3026.82	3839.88	0.788	0.00	3839.88	0.000

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
L1	149 - 144 (1)	TP16.8649x16x0.1875	4.36	174.19	0.025	0.01	254.40	0.000
L2	144 - 139 (2)	TP17.7297x16.8649x0.18 75	8.62	181.41	0.048	0.46	281.47	0.002
L3	139 - 134 (3)	TP18.5946x17.7297x0.18 75	8.90	192.25	0.046	0.41	309.91	0.001
L4	134 - 129 (4)	TP19.4594x18.5946x0.18 75	14.71	199.48	0.074	0.37	339.71	0.001
L5	129 - 125 (5)	TP20.1513x19.4594x0.18 75	15.15	208.51	0.073	0.52	364.55	0.001
L6	125 - 124.75 (6)	TP20.1945x20.1513x0.35	15.15	386.89	0.039	0.52	672.38	0.001
L7	124.75 - 119.75 (7)	TP21.0594x20.1945x0.34 38	15.43	396.67	0.039	0.52	719.62	0.001
L8	119.75 - 118.5 (8)	TP21.2756x21.0594x0.34 38	18.69	400.81	0.047	0.52	734.72	0.001
L9	118.5 - 118.25 (9)	TP21.3188x21.2756x0.62 5	18.70	720.45	0.026	0.52	1305.65	0.000
L10	118.25 - 117 (10)	TP21.5351x21.3188x0.62 5	18.78	727.98	0.026	0.52	1333.08	0.000

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
L11	117 - 116.75 (11)	TP21.5783x21.5351x0.625	18.79	729.49	0.026	0.52	1338.59	0.000
L12	116.75 - 111.75 (12)	TP22.4431x21.5783x0.6	19.10	730.05	0.026	0.52	1396.52	0.000
L13	111.75 - 106.75 (13)	TP23.308x22.4431x0.575	19.40	728.13	0.027	0.52	1449.59	0.000
L14	106.75 - 98.5 (14)	TP24.735x23.308x0.5625	19.67	738.44	0.027	0.52	1524.05	0.000
L15	98.5 - 97 (15)	TP24.6198x23.7546x0.625	20.05	835.38	0.024	0.52	1755.42	0.000
L16	97 - 96.75 (16)	TP24.6631x24.6198x0.7625	20.05	1015.16	0.020	0.52	2124.82	0.000
L17	96.75 - 93.98 (17)	TP25.1424x24.6631x0.75	20.24	1019.06	0.020	0.52	2176.88	0.000
L18	93.98 - 93.73 (18)	TP25.1857x25.1424x0.75	20.24	1020.87	0.020	0.52	2184.61	0.000
L19	93.73 - 91.5 (19)	TP25.5716x25.1857x0.75	20.39	1036.99	0.020	0.52	2254.16	0.000
L20	91.5 - 91.38 (20)	TP25.5923x25.5716x0.6375	20.40	886.17	0.023	0.52	1936.66	0.000
L21	91.38 - 91.25 (21)	TP25.6148x25.5923x0.9	20.41	1239.04	0.016	0.52	2681.78	0.000
L22	91.25 - 91.13 (22)	TP25.6356x25.6148x0.9	20.43	1240.08	0.016	0.52	2686.28	0.000
L23	91.13 - 89 (23)	TP26.0042x25.6356x0.8875	21.18	1241.69	0.017	0.52	2731.22	0.000
L24	89 - 88.75 (24)	TP26.0474x26.0042x0.75	21.20	1056.87	0.020	0.52	2341.42	0.000
L25	88.75 - 83.75 (25)	TP26.9127x26.0474x0.725	21.52	1057.59	0.020	0.52	2425.47	0.000
L26	83.75 - 80.08 (26)	TP27.5477x26.9127x0.7125	21.74	1065.06	0.020	0.52	2502.99	0.000
L27	80.08 - 79.83 (27)	TP27.591x27.5477x0.9	21.76	1338.11	0.016	0.52	3127.78	0.000
L28	79.83 - 74.83 (28)	TP28.4562x27.591x0.875	22.09	1344.33	0.016	0.52	3247.13	0.000
L29	74.83 - 73.5 (29)	TP28.6864x28.4562x0.875	22.24	1355.55	0.016	0.52	3301.54	0.000
L30	73.5 - 73.25 (30)	TP28.7296x28.6864x1.075	22.26	1656.00	0.013	0.52	4010.59	0.000
L31	73.25 - 71 (31)	TP29.119x28.7296x1.05	22.53	1641.72	0.014	0.52	4035.59	0.000
L32	71 - 70.75 (32)	TP29.1623x29.119x0.925	22.56	1454.95	0.016	0.52	3597.92	0.000
L33	70.75 - 65.75 (33)	TP30.0275x29.1623x0.9	22.89	1460.26	0.016	0.52	3724.88	0.000
L34	65.75 - 64.13 (34)	TP30.3078x30.0275x0.9	23.01	1474.31	0.016	0.52	3796.93	0.000
L35	64.13 - 63.88 (35)	TP30.3511x30.3078x0.675	23.01	1115.82	0.021	0.52	2899.88	0.000
L36	63.88 - 63 (36)	TP30.5034x30.3511x0.675	23.06	1121.55	0.021	0.52	2929.72	0.000
L37	63 - 62.75 (37)	TP30.5466x30.5034x0.825	23.07	1365.87	0.017	0.52	3555.19	0.000
L38	62.75 - 62.08 (38)	TP30.6626x30.5466x0.825	23.11	1371.20	0.017	0.52	3582.98	0.000
L39	62.08 - 61.83 (39)	TP30.7058x30.6626x0.775	23.12	1292.12	0.018	0.52	3386.90	0.000
L40	61.83 - 60.67 (40)	TP30.9065x30.7058x0.7625	23.20	1280.34	0.018	0.52	3379.93	0.000
L41	60.67 - 60.42 (41)	TP30.9498x30.9065x0.85	23.21	1425.17	0.016	0.52	3756.73	0.000
L42	60.42 - 59 (42)	TP31.1955x30.9498x0.85	23.30	1436.80	0.016	0.52	3818.32	0.000
L43	59 - 58.75 (43)	TP31.2388x31.1955x0.8375	23.31	1418.28	0.016	0.52	3776.01	0.000
L44	58.75 - 53.75 (44)	TP32.104x31.2388x0.825	23.61	1437.44	0.016	0.52	3937.53	0.000
L45	53.75 - 48.5	TP33.0125x32.104x0.825	23.63	1441.42	0.016	0.52	3959.35	0.000

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
L46	48.5 - 47.5 (45)	TP32.6823x31.6905x0.8625	24.09	1528.76	0.016	0.52	4260.07	0.000
L47	47.5 - 46.88 (46)	TP32.7892x32.6823x0.8625	24.11	1533.90	0.016	0.52	4288.75	0.000
L48	46.88 - 46.63 (47)	TP32.8323x32.7892x0.875	24.12	1557.62	0.015	0.52	4359.26	0.000
L49	46.63 - 43.5 (48)	TP33.3722x32.8323x0.8625	24.30	1561.91	0.016	0.52	4446.81	0.000
L50	43.5 - 43.25 (49)	TP33.4153x33.3722x1.0125	24.30	1827.52	0.013	0.52	5185.90	0.000
L51	43.25 - 38.25 (50)	TP34.2777x33.4153x1	24.59	1853.69	0.013	0.52	5402.19	0.000
L52	38.25 - 33.25 (51)	TP35.1401x34.2777x0.9875	24.86	1878.64	0.013	0.52	5618.86	0.000
L53	33.25 - 32.58 (52)	TP35.2556x35.1401x0.975	24.89	1861.82	0.013	0.52	5589.42	0.000
L54	32.58 - 32.33 (53)	TP35.2988x35.2556x0.9875	24.90	1887.37	0.013	0.52	5671.19	0.000
L55	32.33 - 29.67 (54)	TP35.7576x35.2988x0.9625	25.05	1865.53	0.013	0.52	5684.60	0.000
L56	29.67 - 29.42 (55)	TP35.8007x35.7576x0.8125	25.04	1583.54	0.016	0.52	4852.10	0.000
L57	29.42 - 29.13 (56)	TP35.8507x35.8007x0.8125	25.05	1585.80	0.016	0.52	4865.98	0.000
L58	29.13 - 28.88 (57)	TP35.8938x35.8507x0.95	25.07	1849.17	0.014	0.52	5658.85	0.000
L59	28.88 - 28 (58)	TP36.0456x35.8938x0.9375	25.12	1833.42	0.014	0.52	5637.02	0.000
L60	28 - 27.75 (59)	TP36.0887x36.0456x0.9125	25.12	1787.99	0.014	0.52	5508.02	0.000
L61	27.75 - 26.92 (60)	TP36.2319x36.0887x0.9125	25.17	1795.27	0.014	0.52	5552.94	0.000
L62	26.92 - 26.67 (61)	TP36.275x36.2319x0.875	25.17	1725.42	0.015	0.52	5349.07	0.000
L63	26.67 - 26.5 (62)	TP36.3043x36.275x0.875	25.18	1726.85	0.015	0.52	5357.93	0.000
L64	26.5 - 26.25 (63)	TP36.3474x36.3043x0.8375	25.19	1656.60	0.015	0.52	5151.68	0.000
L65	26.25 - 24.92 (64)	TP36.5768x36.3474x0.8375	25.26	1667.31	0.015	0.52	5218.45	0.000
L66	24.92 - 24.67 (65)	TP36.6199x36.5768x0.8	25.25	1596.24	0.016	0.52	5007.30	0.000
L67	24.67 - 22.17 (66)	TP37.0511x36.6199x0.7875	25.36	1590.77	0.016	0.52	5051.93	0.000
L68	22.17 - 21.92 (67)	TP37.0943x37.0511x0.8625	25.35	1740.73	0.015	0.52	5523.34	0.000
L69	21.92 - 16.92 (68)	TP37.9567x37.0943x0.8375	25.55	1731.68	0.015	0.52	5629.18	0.000
L70	16.92 - 11.92 (69)	TP38.8191x37.9567x0.825	25.71	1746.04	0.015	0.52	5809.64	0.000
L71	11.92 - 6.92 (70)	TP39.6814x38.8191x0.8125	25.86	1759.18	0.015	0.52	5988.15	0.000
L72	6.92 - 1.92 (71)	TP40.5438x39.6814x0.8	26.00	1771.10	0.015	0.52	6164.44	0.000
L73	1.92 - 1.5 (72)	TP40.6163x40.5438x0.8	26.00	1774.33	0.015	0.52	6186.93	0.000
L74	1.5 - 1.25 (73)	TP40.6594x40.6163x0.6375	26.00	1421.22	0.018	0.52	4981.27	0.000
L75	1.25 - 1 (74)	TP40.7025x40.6594x0.4938	26.00	1105.89	0.024	0.52	3894.15	0.000
L76	1 - 0 (75)	TP40.875x40.7025x0.4875	26.03	1096.74	0.024	0.52	3879.12	0.000

Pole Interaction Design Data

Section No.	Elevation ft	Ratio P_u / ϕP_n	Ratio M_{ux} / ϕM_{nx}	Ratio M_{uy} / ϕM_{ny}	Ratio V_u / ϕV_n	Ratio T_u / ϕT_n	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	149 - 144 (1)	0.004	0.105	0.000	0.025	0.000	0.110	1.050	4.8.2
L2	144 - 139 (2)	0.008	0.193	0.000	0.048	0.002	0.204	1.050	4.8.2
L3	139 - 134 (3)	0.008	0.320	0.000	0.046	0.001	0.331	1.050	4.8.2
L4	134 - 129 (4)	0.017	0.460	0.000	0.074	0.001	0.483	1.050	4.8.2
L5	129 - 125 (5)	0.017	0.604	0.000	0.073	0.001	0.626	1.050	4.8.2
L6	125 - 124.75 (6)	0.009	0.326	0.000	0.039	0.001	0.337	1.050	4.8.2
L7	124.75 - 119.75 (7)	0.009	0.412	0.000	0.039	0.001	0.423	1.050	4.8.2
L8	119.75 - 118.5 (8)	0.012	0.433	0.000	0.047	0.001	0.447	1.050	4.8.2
L9	118.5 - 118.25 (9)	0.007	0.250	0.000	0.026	0.000	0.258	1.050	4.8.2
L10	118.25 - 117 (10)	0.007	0.263	0.000	0.026	0.000	0.270	1.050	4.8.2
L11	117 - 116.75 (11)	0.007	0.266	0.000	0.026	0.000	0.273	1.050	4.8.2
L12	116.75 - 111.75 (12)	0.007	0.324	0.000	0.026	0.000	0.331	1.050	4.8.2
L13	111.75 - 106.75 (13)	0.007	0.379	0.000	0.027	0.000	0.387	1.050	4.8.2
L14	106.75 - 98.5 (14)	0.008	0.422	0.000	0.027	0.000	0.431	1.050	4.8.2
L15	98.5 - 97 (15)	0.007	0.425	0.000	0.024	0.000	0.433	1.050	4.8.2
L16	97 - 96.75 (16)	0.006	0.356	0.000	0.020	0.000	0.362	1.050	4.8.2
L17	96.75 - 93.98 (17)	0.006	0.373	0.000	0.020	0.000	0.380	1.050	4.8.2
L18	93.98 - 93.73 (18)	0.006	0.374	0.000	0.020	0.000	0.381	1.050	4.8.2
L19	93.73 - 91.5 (19)	0.006	0.383	0.000	0.020	0.000	0.390	1.050	4.8.2
L20	91.5 - 91.38 (20)	0.007	0.445	0.000	0.023	0.000	0.453	1.050	4.8.2
L21	91.38 - 91.25 (21)	0.005	0.326	0.000	0.016	0.000	0.332	1.050	4.8.2
L22	91.25 - 91.13 (22)	0.005	0.326	0.000	0.016	0.000	0.332	1.050	4.8.2
L23	91.13 - 89 (23)	0.006	0.337	0.000	0.017	0.000	0.343	1.050	4.8.2
L24	89 - 88.75 (24)	0.007	0.394	0.000	0.020	0.000	0.401	1.050	4.8.2
L25	88.75 - 83.75 (25)	0.007	0.424	0.000	0.020	0.000	0.432	1.050	4.8.2
L26	83.75 - 80.08 (26)	0.007	0.443	0.000	0.020	0.000	0.451	1.050	4.8.2
L27	80.08 - 79.83 (27)	0.006	0.359	0.000	0.016	0.000	0.365	1.050	4.8.2
L28	79.83 - 74.83 (28)	0.006	0.380	0.000	0.016	0.000	0.386	1.050	4.8.2
L29	74.83 - 73.5 (29)	0.006	0.383	0.000	0.016	0.000	0.389	1.050	4.8.2
L30	73.5 - 73.25 (30)	0.005	0.319	0.000	0.013	0.000	0.324	1.050	4.8.2
L31	73.25 - 71 (31)	0.005	0.329	0.000	0.014	0.000	0.335	1.050	4.8.2
L32	71 - 70.75 (32)	0.006	0.369	0.000	0.016	0.000	0.376	1.050	4.8.2
L33	70.75 - 65.75 (33)	0.006	0.387	0.000	0.016	0.000	0.394	1.050	4.8.2
L34	65.75 - 64.13 (34)	0.006	0.390	0.000	0.016	0.000	0.397	1.050	4.8.2
L35	64.13 - 63.88 (35)	0.008	0.509	0.000	0.021	0.000	0.518	1.050	4.8.2
L36	63.88 - 63 (36)	0.008	0.511	0.000	0.021	0.000	0.520	1.050	4.8.2
L37	63 - 62.75 (37)	0.007	0.425	0.000	0.017	0.000	0.432	1.050	4.8.2

Section No.	Elevation ft	Ratio P_u / ϕP_n	Ratio M_{ux} / ϕM_{nx}	Ratio M_{uy} / ϕM_{ny}	Ratio V_u / ϕV_n	Ratio T_u / ϕT_n	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L38	62.75 - 62.08 (38)	0.007	0.426	0.000	0.017	0.000	0.433	1.050	4.8.2
L39	62.08 - 61.83 (39)	0.007	0.451	0.000	0.018	0.000	0.459	1.050	4.8.2
L40	61.83 - 60.67 (40)	0.008	0.460	0.000	0.018	0.000	0.468	1.050	4.8.2
L41	60.67 - 60.42 (41)	0.007	0.417	0.000	0.016	0.000	0.424	1.050	4.8.2
L42	60.42 - 59 (42)	0.007	0.419	0.000	0.016	0.000	0.426	1.050	4.8.2
L43	59 - 58.75 (43)	0.007	0.425	0.000	0.016	0.000	0.432	1.050	4.8.2
L44	58.75 - 53.75 (44)	0.007	0.437	0.000	0.016	0.000	0.445	1.050	4.8.2
L45	53.75 - 48.5 (45)	0.007	0.438	0.000	0.016	0.000	0.446	1.050	4.8.2
L46	48.5 - 47.5 (46)	0.008	0.441	0.000	0.016	0.000	0.448	1.050	4.8.2
L47	47.5 - 46.88 (47)	0.008	0.441	0.000	0.016	0.000	0.449	1.050	4.8.2
L48	46.88 - 46.63 (48)	0.008	0.436	0.000	0.015	0.000	0.443	1.050	4.8.2
L49	46.63 - 43.5 (49)	0.008	0.444	0.000	0.016	0.000	0.452	1.050	4.8.2
L50	43.5 - 43.25 (50)	0.007	0.384	0.000	0.013	0.000	0.391	1.050	4.8.2
L51	43.25 - 38.25 (51)	0.007	0.391	0.000	0.013	0.000	0.398	1.050	4.8.2
L52	38.25 - 33.25 (52)	0.007	0.398	0.000	0.013	0.000	0.406	1.050	4.8.2
L53	33.25 - 32.58 (53)	0.007	0.403	0.000	0.013	0.000	0.411	1.050	4.8.2
L54	32.58 - 32.33 (54)	0.007	0.399	0.000	0.013	0.000	0.406	1.050	4.8.2
L55	32.33 - 29.67 (55)	0.007	0.409	0.000	0.013	0.000	0.417	1.050	4.8.2
L56	29.67 - 29.42 (56)	0.009	0.479	0.000	0.016	0.000	0.488	1.050	4.8.2
L57	29.42 - 29.13 (57)	0.009	0.479	0.000	0.016	0.000	0.488	1.050	4.8.2
L58	29.13 - 28.88 (58)	0.008	0.415	0.000	0.014	0.000	0.422	1.050	4.8.2
L59	28.88 - 28 (59)	0.008	0.420	0.000	0.014	0.000	0.428	1.050	4.8.2
L60	28 - 27.75 (60)	0.008	0.431	0.000	0.014	0.000	0.439	1.050	4.8.2
L61	27.75 - 26.92 (61)	0.008	0.431	0.000	0.014	0.000	0.439	1.050	4.8.2
L62	26.92 - 26.67 (62)	0.008	0.448	0.000	0.015	0.000	0.457	1.050	4.8.2
L63	26.67 - 26.5 (63)	0.008	0.448	0.000	0.015	0.000	0.457	1.050	4.8.2
L64	26.5 - 26.25 (64)	0.009	0.467	0.000	0.015	0.000	0.476	1.050	4.8.2
L65	26.25 - 24.92 (65)	0.009	0.467	0.000	0.015	0.000	0.476	1.050	4.8.2
L66	24.92 - 24.67 (66)	0.009	0.488	0.000	0.016	0.000	0.497	1.050	4.8.2
L67	24.67 - 22.17 (67)	0.009	0.496	0.000	0.016	0.000	0.506	1.050	4.8.2
L68	22.17 - 21.92 (68)	0.009	0.456	0.000	0.015	0.000	0.465	1.050	4.8.2
L69	21.92 - 16.92 (69)	0.009	0.470	0.000	0.015	0.000	0.479	1.050	4.8.2
L70	16.92 - 11.92 (70)	0.009	0.477	0.000	0.015	0.000	0.487	1.050	4.8.2
L71	11.92 - 6.92 (71)	0.010	0.485	0.000	0.015	0.000	0.494	1.050	4.8.2
L72	6.92 - 1.92	0.010	0.492	0.000	0.015	0.000	0.502	1.050	4.8.2

Section No.	Elevation ft	Ratio $P_u / \phi P_n$	Ratio $M_{ux} / \phi M_{nx}$	Ratio $M_{uy} / \phi M_{ny}$	Ratio $V_u / \phi V_n$	Ratio $T_u / \phi T_n$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
	(72)								
L73	1.92 - 1.5 (73)	0.010	0.492	0.000	0.015	0.000	0.502	1.050	4.8.2
L74	1.5 - 1.25 (74)	0.012	0.610	0.000	0.018	0.000	0.622	1.050	4.8.2
L75	1.25 - 1 (75)	0.016	0.779	0.000	0.024	0.000	0.795	1.050	4.8.2
L76	1 - 0 (76)	0.016	0.788	0.000	0.024	0.000	0.805	1.050	4.8.2

Section Capacity Table

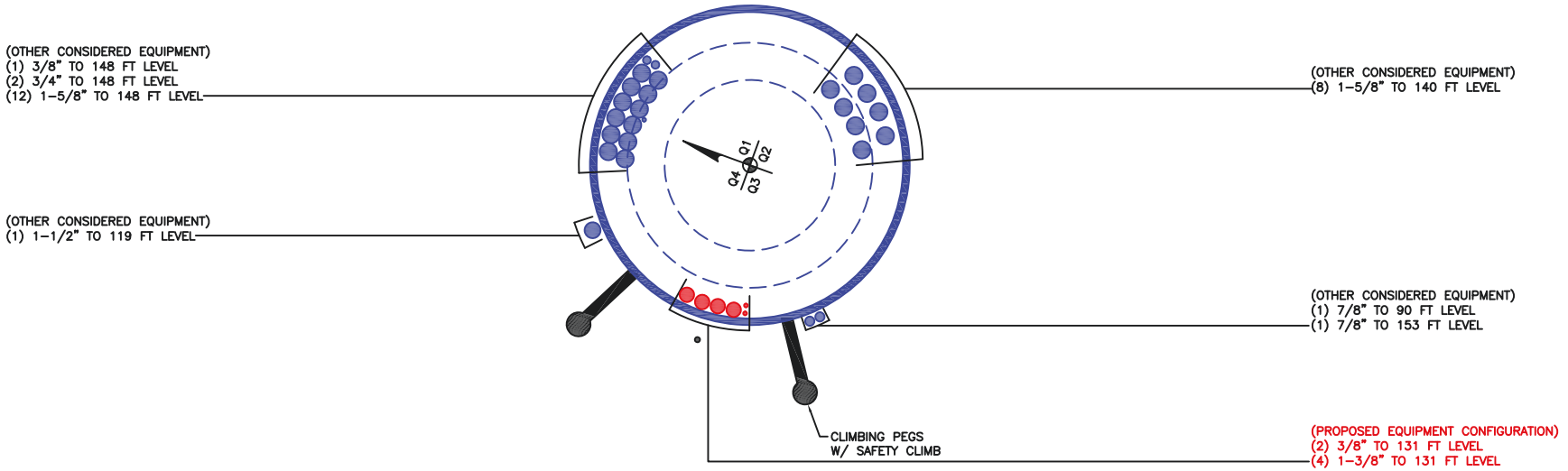
Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L1	149 - 144	Pole	TP16.8649x16x0.1875	1	-2.59	609.65	10.5	Pass
L2	144 - 139	Pole	TP17.7297x16.8649x0.1875	2	-5.10	641.27	19.4	Pass
L3	139 - 134	Pole	TP18.5946x17.7297x0.1875	3	-5.43	672.88	31.5	Pass
L4	134 - 129	Pole	TP19.4594x18.5946x0.1875	4	-11.46	704.50	46.0	Pass
L5	129 - 125	Pole	TP20.1513x19.4594x0.1875	5	-11.87	729.79	59.7	Pass
L6	125 - 124.75	Pole	TP20.1945x20.1513x0.35	6	-11.91	1354.13	32.1	Pass
L7	124.75 - 119.75	Pole	TP21.0594x20.1945x0.3438	7	-12.53	1388.33	40.3	Pass
L8	119.75 - 118.5	Pole	TP21.2756x21.0594x0.3438	8	-15.64	1402.82	42.5	Pass
L9	118.5 - 118.25	Pole	TP21.3188x21.2756x0.625	9	-15.70	2521.59	24.5	Pass
L10	118.25 - 117	Pole	TP21.5351x21.3188x0.625	10	-15.93	2547.93	25.8	Pass
L11	117 - 116.75	Pole	TP21.5783x21.5351x0.625	11	-15.98	2553.20	26.0	Pass
L12	116.75 - 111.75	Pole	TP22.4431x21.5783x0.6	12	-16.93	2555.16	31.6	Pass
L13	111.75 - 106.75	Pole	TP23.308x22.4431x0.575	13	-17.91	2548.45	36.9	Pass
L14	106.75 - 98.5	Pole	TP24.735x23.308x0.5625	14	-18.86	2584.52	41.0	Pass
L15	98.5 - 97	Pole	TP24.6198x23.7546x0.625	15	-20.48	2923.81	41.3	Pass
L16	97 - 96.75	Pole	TP24.6631x24.6198x0.7625	16	-20.56	3553.04	34.5	Pass
L17	96.75 - 93.98	Pole	TP25.1424x24.6631x0.75	17	-21.27	3566.71	36.2	Pass
L18	93.98 - 93.73	Pole	TP25.1857x25.1424x0.75	18	-21.34	3573.04	36.3	Pass
L19	93.73 - 91.5	Pole	TP25.5716x25.1857x0.75	19	-21.92	3629.46	37.1	Pass
L20	91.5 - 91.38	Pole	TP25.5923x25.5716x0.6375	20	-21.95	3101.61	43.2	Pass
L21	91.38 - 91.25	Pole	TP25.6148x25.5923x0.9	21	-22.00	4336.63	31.6	Pass
L22	91.25 - 91.13	Pole	TP25.6356x25.6148x0.9	22	-22.03	4340.27	31.6	Pass
L23	91.13 - 89	Pole	TP26.0042x25.6356x0.8875	23	-22.90	4345.93	32.7	Pass
L24	89 - 88.75	Pole	TP26.0474x26.0042x0.75	24	-22.98	3699.04	38.2	Pass
L25	88.75 - 83.75	Pole	TP26.9127x26.0474x0.725	25	-24.41	3701.58	41.1	Pass
L26	83.75 - 80.08	Pole	TP27.5477x26.9127x0.7125	26	-25.48	3727.71	42.9	Pass
L27	80.08 - 79.83	Pole	TP27.591x27.5477x0.9	27	-25.58	4683.38	34.8	Pass
L28	79.83 - 74.83	Pole	TP28.4562x27.591x0.875	28	-27.27	4705.15	36.8	Pass
L29	74.83 - 73.5	Pole	TP28.6864x28.4562x0.875	29	-27.72	4744.41	37.1	Pass
L30	73.5 - 73.25	Pole	TP28.7296x28.6864x1.075	30	-27.83	5796.00	30.9	Pass
L31	73.25 - 71	Pole	TP29.119x28.7296x1.05	31	-28.71	5746.03	31.9	Pass
L32	71 - 70.75	Pole	TP29.1623x29.119x0.925	32	-28.81	5092.33	35.8	Pass
L33	70.75 - 65.75	Pole	TP30.0275x29.1623x0.9	33	-30.62	5110.90	37.5	Pass
L34	65.75 - 64.13	Pole	TP30.3078x30.0275x0.9	34	-31.21	5160.09	37.8	Pass
L35	64.13 - 63.88	Pole	TP30.3511x30.3078x0.675	35	-31.30	3905.37	49.3	Pass
L36	63.88 - 63	Pole	TP30.5034x30.3511x0.675	36	-31.57	3925.41	49.5	Pass
L37	63 - 62.75	Pole	TP30.5466x30.5034x0.825	37	-31.67	4780.56	41.1	Pass
L38	62.75 - 62.08	Pole	TP30.6626x30.5466x0.825	38	-31.91	4799.20	41.2	Pass
L39	62.08 - 61.83	Pole	TP30.7058x30.6626x0.775	39	-32.00	4522.43	43.7	Pass
L40	61.83 - 60.67	Pole	TP30.9065x30.7058x0.7625	40	-32.37	4481.19	44.6	Pass
L41	60.67 - 60.42	Pole	TP30.9498x30.9065x0.85	41	-32.46	4988.10	40.4	Pass
L42	60.42 - 59	Pole	TP31.1955x30.9498x0.85	42	-32.95	5028.82	40.6	Pass
L43	59 - 58.75	Pole	TP31.2388x31.1955x0.8375	43	-33.05	4963.97	41.2	Pass
L44	58.75 - 53.75	Pole	TP32.104x31.2388x0.825	44	-34.85	5031.05	42.4	Pass
L45	53.75 - 48.5	Pole	TP33.0125x32.104x0.825	45	-35.03	5044.98	42.4	Pass
L46	48.5 - 47.5	Pole	TP32.6823x31.6905x0.8625	46	-38.70	5350.66	42.7	Pass
L47	47.5 - 46.88	Pole	TP32.7892x32.6823x0.8625	47	-38.94	5368.65	42.8	Pass
L48	46.88 - 46.63	Pole	TP32.8323x32.7892x0.875	48	-39.05	5451.68	42.2	Pass
L49	46.63 - 43.5	Pole	TP33.3722x32.8323x0.8625	49	-40.25	5466.68	43.1	Pass
L50	43.5 - 43.25	Pole	TP33.4153x33.3722x1.0125	50	-40.37	6396.31	37.2	Pass
L51	43.25 - 38.25	Pole	TP34.2777x33.4153x1	51	-42.57	6487.92	37.9	Pass
L52	38.25 - 33.25	Pole	TP35.1401x34.2777x0.9875	52	-44.80	6575.26	38.6	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L53	33.25 - 32.58	Pole	TP35.2556x35.1401x0.975	53	-45.11	6516.36	39.1	Pass
L54	32.58 - 32.33	Pole	TP35.2988x35.2556x0.9875	54	-45.22	6605.80	38.7	Pass
L55	32.33 - 29.67	Pole	TP35.7576x35.2988x0.9625	55	-46.42	6529.35	39.7	Pass
L56	29.67 - 29.42	Pole	TP35.8007x35.7576x0.8125	56	-46.54	5542.38	46.5	Pass
L57	29.42 - 29.13	Pole	TP35.8507x35.8007x0.8125	57	-46.66	5550.31	46.5	Pass
L58	29.13 - 28.88	Pole	TP35.8938x35.8507x0.95	58	-46.77	6472.12	40.2	Pass
L59	28.88 - 28	Pole	TP36.0456x35.8938x0.9375	59	-47.18	6416.98	40.8	Pass
L60	28 - 27.75	Pole	TP36.0887x36.0456x0.9125	60	-47.29	6257.98	41.8	Pass
L61	27.75 - 26.92	Pole	TP36.2319x36.0887x0.9125	61	-47.65	6283.44	41.8	Pass
L62	26.92 - 26.67	Pole	TP36.275x36.2319x0.875	62	-47.76	6038.98	43.5	Pass
L63	26.67 - 26.5	Pole	TP36.3043x36.275x0.875	63	-47.84	6043.98	43.5	Pass
L64	26.5 - 26.25	Pole	TP36.3474x36.3043x0.8375	64	-47.94	5798.11	45.3	Pass
L65	26.25 - 24.92	Pole	TP36.5768x36.3474x0.8375	65	-48.46	5835.57	45.4	Pass
L66	24.92 - 24.67	Pole	TP36.6199x36.5768x0.8	66	-48.57	5586.85	47.4	Pass
L67	24.67 - 22.17	Pole	TP37.0511x36.6199x0.7875	67	-49.60	5567.68	48.2	Pass
L68	22.17 - 21.92	Pole	TP37.0943x37.0511x0.8625	68	-49.72	6092.57	44.2	Pass
L69	21.92 - 16.92	Pole	TP37.9567x37.0943x0.8375	69	-51.93	6060.87	45.6	Pass
L70	16.92 - 11.92	Pole	TP38.8191x37.9567x0.825	70	-54.17	6111.14	46.4	Pass
L71	11.92 - 6.92	Pole	TP39.6814x38.8191x0.8125	71	-56.43	6157.13	47.1	Pass
L72	6.92 - 1.92	Pole	TP40.5438x39.6814x0.8	72	-58.71	6198.86	47.8	Pass
L73	1.92 - 1.5	Pole	TP40.6163x40.5438x0.8	73	-58.91	6210.16	47.8	Pass
L74	1.5 - 1.25	Pole	TP40.6594x40.6163x0.6375	74	-59.01	4974.28	59.3	Pass
L75	1.25 - 1	Pole	TP40.7025x40.6594x0.4938	75	-59.09	3870.61	75.7	Pass
L76	1 - 0	Pole	TP40.875x40.7025x0.4875	76	-59.39	3838.61	76.7	Pass
							Summary	
						Pole (L76)	76.7	Pass
						RATING =	**76.7**	**Pass**

***NOTE: Above stress ratios for reinforced sections are approximate. More exact calculations are presented in Appendix C.**

APPENDIX B

BASE LEVEL DRAWING


(OTHER CONSIDERED EQUIPMENT)
(1) 3/8" TO 148 FT LEVEL
(2) 3/4" TO 148 FT LEVEL
(12) 1-5/8" TO 148 FT LEVEL
(OTHER CONSIDERED EQUIPMENT)
(1) 1-1/2" TO 119 FT LEVEL
Q1
Q2
Q3
Q4
(OTHER CONSIDERED EQUIPMENT)
(8) 1-5/8" TO 140 FT LEVEL
(OTHER CONSIDERED EQUIPMENT)
(1) 7/8" TO 90 FT LEVEL
(1) 7/8" TO 153 FT LEVEL
CLIMBING PEGS
W/ SAFETY CLIMB
(PROPOSED EQUIPMENT CONFIGURATION)
(2) 3/8" TO 131 FT LEVEL
(4) 1-3/8" TO 131 FT LEVEL

APPENDIX C

ADDITIONAL CALCULATIONS

CCIpole

per TIA-222- H

Site BU: 857525

Work Order: 2225019

CROWN CASTLE

Pole Geometry

	Pole Height Above Base (ft)	Section Length (ft)	Lap Splice Length (ft)	Number of Sides	Top Diameter (in)	Bottom Diameter (in)	Wall Thickness (in)	Bend Radius (in)	Pole Material
1	149	50.5	3.5	18	16	24.735	0.1875	Auto	A572-65
2	102	53.5	4.75	18	23.75	33.0125	0.25	Auto	A572-65
3	53.25	53.25	0	18	31.69	40.875	0.3125	Auto	A572-65

Reinforcement Configuration

	Bottom Effective Elevation (ft)	Top Effective Elevation (ft)	Type	Model	Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	1.5	29.13	plate	5.5 x 1.25; (1) (1.1875	2		o									o							
2	1.25	32.58	plate	5.5 x 1.25; (1) (1.1875	1							o											
3	1.25	29.13	plate	5.5 x 1.25; (1) (1.1875	1																o		
4	24.92	46.88	plate	5.5 x 1.25; (1) (1.1875	2			o												o			
5	29.13	46.88	plate	5.5 x 1.25; (1) (1.1875	1									o									
6	46.88	63	plate	5.5 x 1.25; (1) (1.1875	3		o						o						o				
7	60.67	91.38	plate	5.5 x 1.25; (1) (1.1875	1				o														
8	64.13	91.38	plate	5.5 x 1.25; (1) (1.1875	2											o					o		
9	91.5	118.5	plate	P 4 x 1.25; (1) (1.1875)	3		o						o						o				
10	22.17	43.5	plate	CCI-SFP-045100	2						o						o						
11	26.5	43.5	plate	CCI-SFP-045100	1																		o
12	51.5	73.5	plate	CCI-SFP-045100	2	o												o					
13	47.92	73.5	plate	CCI-SFP-045100	1							o											
14	89	97	plate	CCI-SFP-040075	3	o						o						o					
15	117	125	plate	CCI-SFP-040075	3						o						o						o
16	1.5	22.17	plate	CCI-SFP-065125	1						o												
17	1.25	22.17	plate	CCI-SFP-065125	1												o						
18	1.25	24.92	plate	CCI-SFP-065125	1			o															
19	1.5	24.92	plate	CCI-SFP-065125	1															o			
20	26.92	47.92	plate	CCI-SFP-060100	1													o					
21	29.67	60.67	plate	CCI-SFP-060100	2				o													o	
22	28	59	plate	CCI-SFP-060100	1										o								
23	32.58	47.92	plate	CCI-SFP-060100	1							o											
24	59	80.08	plate	CCI-SFP-040075	1										o								
25	62.08	80.08	plate	CCI-SFP-040075	3						o						o						o
26	63	91.5	plate	CCI-SFP-040075	3		o						o						o				
27	71	94	plate	CCI-SFP-040075	3			o						o						o			
28	94.08	117	plate	CCI-SFP-040075	3						o						o						o
29	0	1.25	solid round	Round; (1.75 Max); (1	4				o				o					o				o	
30	0	1.5	solid round	d Round; (2 Max); (2 M	4	o				o					o				o				

Reinforcement Details

	B (in)	H (in)	Gross Area (in^2)	Pole Face to Centroid (in)	Bottom Termination Type	Bottom Termination Length (in)	Top Termination Type	Top Termination Length (in)	Lu (in)	Net Area (in2)	Bolt Hole Size (in)	Reinforcement Material
1	5.5	1.25	6.875	0.625	PC 8.8 - M20 (100)	30	PC 8.8 - M20 (100)	30.000	18.000	5.313	1.1875	A572-65
2	5.5	1.25	6.875	0.625	PC 8.8 - M20 (100)	30	PC 8.8 - M20 (100)	30.000	18.000	5.313	1.1875	A572-65
3	5.5	1.25	6.875	0.625	PC 8.8 - M20 (100)	30	PC 8.8 - M20 (100)	30.000	18.000	5.313	1.1875	A572-65
4	5.5	1.25	6.875	0.625	PC 8.8 - M20 (100)	30	PC 8.8 - M20 (100)	30.000	18.000	5.313	1.1875	A572-65
5	5.5	1.25	6.875	0.625	PC 8.8 - M20 (100)	30	PC 8.8 - M20 (100)	30.000	18.000	5.313	1.1875	A572-65
6	5.5	1.25	6.875	0.625	PC 8.8 - M20 (100)	30	PC 8.8 - M20 (100)	30.000	18.000	5.313	1.1875	A572-65
7	5.5	1.25	6.875	0.625	PC 8.8 - M20 (100)	30	PC 8.8 - M20 (100)	30.000	18.000	5.313	1.1875	A572-65
8	5.5	1.25	6.875	0.625	PC 8.8 - M20 (100)	30	PC 8.8 - M20 (100)	30.000	18.000	5.313	1.1875	A572-65
9	4	1.25	5	0.625	PC 8.8 - M20 (100)	18	PC 8.8 - M20 (100)	18.000	18.000	3.438	1.1875	A572-65
10	4.5	1	4.5	0.5	PC 8.8 - M20 (100)	18	PC 8.8 - M20 (100)	18.000	20.000	3.250	1.1875	A572-65
11	4.5	1	4.5	0.5	PC 8.8 - M20 (100)	18	PC 8.8 - M20 (100)	18.000	20.000	3.250	1.1875	A572-65
12	4.5	1	4.5	0.5	PC 8.8 - M20 (100)	18	PC 8.8 - M20 (100)	18.000	20.000	3.250	1.1875	A572-65
13	4.5	1	4.5	0.5	PC 8.8 - M20 (100)	18	PC 8.8 - M20 (100)	18.000	20.000	3.250	1.1875	A572-65
14	4	0.75	3	0.375	PC 8.8 - M20 (100)	12	PC 8.8 - M20 (100)	12.000	16.000	2.063	1.1875	A572-65
15	4	0.75	3	0.375	PC 8.8 - M20 (100)	12	PC 8.8 - M20 (100)	12.000	16.000	2.063	1.1875	A572-65
16	6.5	1.25	8.125	0.625	PC 8.8 - M20 (100)	33	PC 8.8 - M20 (100)	33.000	19.000	6.563	1.1875	A572-65
17	6.5	1.25	8.125	0.625	PC 8.8 - M20 (100)	33	PC 8.8 - M20 (100)	33.000	19.000	6.563	1.1875	A572-65
18	6.5	1.25	8.125	0.625	PC 8.8 - M20 (100)	33	PC 8.8 - M20 (100)	33.000	19.000	6.563	1.1875	A572-65
19	6.5	1.25	8.125	0.625	PC 8.8 - M20 (100)	33	PC 8.8 - M20 (100)	33.000	19.000	6.563	1.1875	A572-65
20	6	1	6	0.5	PC 8.8 - M20 (100)	24	PC 8.8 - M20 (100)	24.000	16.000	4.750	1.1875	A572-65
21	6	1	6	0.5	PC 8.8 - M20 (100)	24	PC 8.8 - M20 (100)	24.000	16.000	4.750	1.1875	A572-65
22	6	1	6	0.5	PC 8.8 - M20 (100)	24	PC 8.8 - M20 (100)	24.000	16.000	4.750	1.1875	A572-65
23	6	1	6	0.5	PC 8.8 - M20 (100)	24	PC 8.8 - M20 (100)	24.000	16.000	4.750	1.1875	A572-65
24	4	0.75	3	0.375	PC 8.8 - M20 (100)	12	PC 8.8 - M20 (100)	12.000	16.000	2.063	1.1875	A572-65
25	4	0.75	3	0.375	PC 8.8 - M20 (100)	12	PC 8.8 - M20 (100)	12.000	16.000	2.063	1.1875	A572-65
26	4	0.75	3	0.375	PC 8.8 - M20 (100)	12	PC 8.8 - M20 (100)	12.000	16.000	2.063	1.1875	A572-65
27	4	0.75	3	0.375	PC 8.8 - M20 (100)	12	PC 8.8 - M20 (100)	12.000	16.000	2.063	1.1875	A572-65
28	4	0.75	3	0.375	PC 8.8 - M20 (100)	12	PC 8.8 - M20 (100)	12.000	16.000	2.063	1.1875	A572-65
29	0	0	2.40528	0.875	Capacity Input	n/a	Capacity Input	n/a	0.000	2.405	0.0000	A572-65
30	-	-	3.14159	1	Capacity Input	n/a	Capacity Input	n/a	0.000	3.142	0.0000	A572-65

Connection Details for Custom Reinforcements

Reinforcement	End	# Bolts	N or X	Bolt Spacing (in)	Edge Dist (in)	Weld Grade (ksi)	Transverse (Horiz.) Weld Type	Horiz. Weld Length (in)	Horiz. Groove Depth (in)	Horiz. Groove Angle (deg)	Horiz. Fillet Size (in)	Vertical Weld Length (in)	Vertical Fillet Size (in)	Rev H Connection Capacity (kip)
FP 5.5 x 1.25; (1) (1.1875)_1	Top	10	N	3	3	-	-	-	-	-	-	-	-	-
	Bottom	10	N	3	3	-	-	-	-	-	-	-	-	-
FP 4 x 1.25; (1) (1.1875)_1	Top	6	N	3	3	-	-	-	-	-	-	-	-	-
	Bottom	6	N	3	3	-	-	-	-	-	-	-	-	-
1.75 Solid Round; (1.75 Max); (1.75	Top					-	-	-	-	-	-	-	-	178.13
	Bottom	-	-	-	-				-	-		-	-	178.13
2 Solid Round; (2 Max); (2 Min)_1	Top					-	-	-	-	-	-	-	-	234.38
	Bottom	-	-	-	-				-	-		-	-	234.38

TNX Geometry Input

Increment (ft): 5 Export to TNX

	Section Height (ft)	Section Length (ft)	Lap Splice Length (ft)	Number of Sides	Top Diameter (in)	Bottom Diameter (in)	Wall Thickness (in)	Tapered Pole Grade	Weight Multiplier
1	149 - 144	5		18	16.000	16.865	0.1875	A572-65	1.000
2	144 - 139	5		18	16.865	17.730	0.1875	A572-65	1.000
3	139 - 134	5		18	17.730	18.595	0.1875	A572-65	1.000
4	134 - 129	5		18	18.595	19.459	0.1875	A572-65	1.000
5	129 - 125	4		18	19.459	20.151	0.1875	A572-65	1.000
6	125 - 124.75	0.25		18	20.151	20.195	0.35	A572-65	0.948
7	124.75 - 119.75	5		18	20.195	21.059	0.34375	A572-65	0.948
8	119.75 - 118.5	1.25		18	21.059	21.276	0.34375	A572-65	0.944
9	118.5 - 118.25	0.25		18	21.276	21.319	0.625	A572-65	0.891
10	118.25 - 117	1.25		18	21.319	21.535	0.625	A572-65	0.885
11	117 - 116.75	0.25		18	21.535	21.578	0.625	A572-65	0.884
12	116.75 - 111.75	5		18	21.578	22.443	0.6	A572-65	0.895
13	111.75 - 106.75	5		18	22.443	23.308	0.575	A572-65	0.910
14	106.75 - 102	8.25	3.5	18	23.308	24.735	0.5625	A572-65	0.909
15	102 - 97	5		18	23.755	24.620	0.625	A572-65	0.910
16	97 - 96.75	0.25		18	24.620	24.663	0.7625	A572-65	0.905
17	96.75 - 93.98	2.77		18	24.663	25.142	0.75	A572-65	0.909
18	93.98 - 93.73	0.25		18	25.142	25.186	0.75	A572-65	0.907
19	93.73 - 91.5	2.23		18	25.186	25.572	0.75	A572-65	0.899
20	91.5 - 91.38	0.12		18	25.572	25.592	0.6375	A572-65	0.933
21	91.38 - 91.25	0.13		18	25.592	25.615	0.9	A572-65	0.960
22	91.25 - 91.13	0.12		18	25.615	25.636	0.9	A572-65	0.959
23	91.13 - 89	2.13		18	25.636	26.004	0.8875	A572-65	0.962
24	89 - 88.75	0.25		18	26.004	26.047	0.75	A572-65	0.981
25	88.75 - 83.75	5		18	26.047	26.913	0.725	A572-65	0.992
26	83.75 - 80.08	3.67		18	26.913	27.548	0.7125	A572-65	0.993
27	80.08 - 79.83	0.25		18	27.548	27.591	0.9	A572-65	0.949
28	79.83 - 74.83	5		18	27.591	28.456	0.875	A572-65	0.953
29	74.83 - 73.5	1.33		18	28.456	28.686	0.875	A572-65	0.948
30	73.5 - 73.25	0.25		18	28.686	28.730	1.075	A572-65	0.919
31	73.25 - 71	2.25		18	28.730	29.119	1.05	A572-65	0.930
32	71 - 70.75	0.25		18	29.119	29.162	0.925	A572-65	0.942
33	70.75 - 65.75	5		18	29.162	30.027	0.9	A572-65	0.947
34	65.75 - 64.13	1.62		18	30.027	30.308	0.9	A572-65	0.940
35	64.13 - 63.88	0.25		18	30.308	30.351	0.675	A572-65	1.026
36	63.88 - 63	0.88		18	30.351	30.503	0.675	A572-65	1.023
37	63 - 62.75	0.25		18	30.503	30.547	0.825	A572-65	0.990
38	62.75 - 62.08	0.67		18	30.547	30.663	0.825	A572-65	0.987
39	62.08 - 61.83	0.25		18	30.663	30.706	0.775	A572-65	0.926
40	61.83 - 60.67	1.16		18	30.706	30.907	0.7625	A572-65	0.937
41	60.67 - 60.42	0.25		18	30.907	30.950	0.85	A572-65	0.905
42	60.42 - 59	1.42		18	30.950	31.196	0.85	A572-65	0.900
43	59 - 58.75	0.25		18	31.196	31.239	0.8375	A572-65	0.949
44	58.75 - 53.75	5		18	31.239	32.104	0.825	A572-65	0.945
45	53.75 - 53.25	5.25	4.75	18	32.104	33.013	0.825	A572-65	0.943
46	53.25 - 47.5	5.75		18	31.691	32.682	0.8625	A572-65	0.950
47	47.5 - 46.88	0.62		18	32.682	32.789	0.8625	A572-65	0.948
48	46.88 - 46.63	0.25		18	32.789	32.832	0.875	A572-65	0.934
49	46.63 - 43.5	3.13		18	32.832	33.372	0.8625	A572-65	0.937
50	43.5 - 43.25	0.25		18	33.372	33.415	1.0125	A572-65	0.931
51	43.25 - 38.25	5		18	33.415	34.278	1	A572-65	0.926
52	38.25 - 33.25	5		18	34.278	35.140	0.9875	A572-65	0.922
53	33.25 - 32.58	0.67		18	35.140	35.256	0.975	A572-65	0.931
54	32.58 - 32.33	0.25		18	35.256	35.299	0.9875	A572-65	0.927
55	32.33 - 29.67	2.66		18	35.299	35.758	0.9625	A572-65	0.942
56	29.67 - 29.42	0.25		18	35.758	35.801	0.8125	A572-65	0.978
57	29.42 - 29.13	0.29		18	35.801	35.851	0.8125	A572-65	0.977
58	29.13 - 28.88	0.25		18	35.851	35.894	0.95	A572-65	0.968
59	28.88 - 28	0.88		18	35.894	36.046	0.9375	A572-65	0.978
60	28 - 27.75	0.25		18	36.046	36.089	0.9125	A572-65	0.945
61	27.75 - 26.92	0.83		18	36.089	36.232	0.9125	A572-65	0.942
62	26.92 - 26.67	0.25		18	36.232	36.275	0.875	A572-65	0.920
63	26.67 - 26.5	0.17		18	36.275	36.304	0.875	A572-65	0.919
64	26.5 - 26.25	0.25		18	36.304	36.347	0.8375	A572-65	0.911
65	26.25 - 24.92	1.33		18	36.347	36.577	0.8375	A572-65	0.908
66	24.92 - 24.67	0.25		18	36.577	36.620	0.8	A572-65	0.976
67	24.67 - 22.17	2.5		18	36.620	37.051	0.7875	A572-65	0.984
68	22.17 - 21.92	0.25		18	37.051	37.094	0.8625	A572-65	0.973
69	21.92 - 16.92	5		18	37.094	37.957	0.8375	A572-65	0.987
70	16.92 - 11.92	5		18	37.957	38.819	0.825	A572-65	0.987
71	11.92 - 6.92	5		18	38.819	39.681	0.8125	A572-65	0.988
72	6.92 - 1.92	5		18	39.681	40.544	0.8	A572-65	0.990
73	1.92 - 1.5	0.42		18	40.544	40.616	0.8	A572-65	0.989
74	1.5 - 1.25	0.25		18	40.616	40.659	0.6375	A572-65	1.020
75	1.25 - 1	0.25		18	40.659	40.703	0.49375	A572-65	0.988
76	1 - 0	1		18	40.703	40.875	0.4875	A572-65	0.999

TNX Section Forces

Increment (ft): 5

	Section Height (ft)	TNX Output P_u (K)	M_{ux} (kip-ft)	V_u (K)
1	149 - 144	2.59	26.50	4.36
2	144 - 139	5.10	53.92	8.62
3	139 - 134	5.43	97.74	8.90
4	134 - 129	11.46	152.17	14.71
5	129 - 125	11.87	212.26	15.15
6	125 - 124.75	11.91	216.05	15.15
7	124.75 - 119.75	12.53	292.47	15.43
8	119.75 - 118.5	15.64	313.27	18.69
9	118.5 - 118.25	15.70	317.94	18.70
10	118.25 - 117	15.93	341.35	18.78
11	117 - 116.75	15.98	346.05	18.79
12	116.75 - 111.75	16.93	440.75	19.10
13	111.75 - 106.75	17.91	536.95	19.40
14	106.75 - 102	18.86	629.69	19.67
15	102 - 97	20.48	728.98	20.05
16	97 - 96.75	20.56	733.99	20.05
17	96.75 - 93.98	21.27	789.76	20.24
18	93.98 - 93.73	21.34	794.82	20.24
19	93.73 - 91.5	21.92	840.10	20.39
20	91.5 - 91.38	21.95	842.55	20.40
21	91.38 - 91.25	22.00	845.20	20.41
22	91.25 - 91.13	22.03	847.65	20.43
23	91.13 - 89	22.90	891.63	21.18
24	89 - 88.75	22.98	896.92	21.20
25	88.75 - 83.75	24.41	1003.67	21.52
26	83.75 - 80.08	25.48	1082.99	21.74
27	80.08 - 79.83	25.58	1088.43	21.76
28	79.83 - 74.83	27.27	1198.01	22.09
29	74.83 - 73.5	27.72	1227.47	22.24
30	73.5 - 73.25	27.83	1233.03	22.26
31	73.25 - 71	28.71	1283.41	22.53
32	71 - 70.75	28.81	1289.04	22.56
33	70.75 - 65.75	30.62	1402.61	22.89
34	65.75 - 64.13	31.21	1439.76	23.01
35	64.13 - 63.88	31.30	1445.51	23.01
36	63.88 - 63	31.57	1465.77	23.06
37	63 - 62.75	31.67	1471.53	23.07
38	62.75 - 62.08	31.91	1487.00	23.11
39	62.08 - 61.83	32.00	1492.77	23.12
40	61.83 - 60.67	32.37	1519.63	23.20
41	60.67 - 60.42	32.46	1525.42	23.21
42	60.42 - 59	32.95	1558.43	23.30
43	59 - 58.75	33.05	1564.25	23.31
44	58.75 - 53.75	34.85	1681.46	23.61
45	53.75 - 53.25	35.03	1693.27	23.63
46	53.25 - 47.5	38.70	1830.43	24.09
47	47.5 - 46.88	38.94	1845.36	24.11
48	46.88 - 46.63	39.04	1851.39	24.12
49	46.63 - 43.5	40.25	1927.13	24.30
50	43.5 - 43.25	40.37	1933.20	24.30
51	43.25 - 38.25	42.57	2055.36	24.59
52	38.25 - 33.25	44.80	2178.90	24.86
53	33.25 - 32.58	45.11	2195.56	24.89
54	32.58 - 32.33	45.22	2201.78	24.90
55	32.33 - 29.67	46.42	2268.16	25.05
56	29.67 - 29.42	46.54	2274.42	25.04
57	29.42 - 29.13	46.66	2281.68	25.05
58	29.13 - 28.88	46.77	2287.94	25.07
59	28.88 - 28	47.18	2310.01	25.12
60	28 - 27.75	47.29	2316.29	25.12
61	27.75 - 26.92	47.65	2337.14	25.17
62	26.92 - 26.67	47.76	2343.43	25.17
63	26.67 - 26.5	47.84	2347.71	25.18
64	26.5 - 26.25	47.94	2354.00	25.19
65	26.25 - 24.92	48.46	2387.52	25.26
66	24.92 - 24.67	48.57	2393.83	25.25
67	24.67 - 22.17	49.60	2457.05	25.36
68	22.17 - 21.92	49.72	2463.39	25.35
69	21.92 - 16.92	51.93	2590.57	25.55
70	16.92 - 11.92	54.17	2718.60	25.71
71	11.92 - 6.92	56.43	2847.39	25.86
72	6.92 - 1.92	58.71	2976.91	26.00
73	1.92 - 1.5	58.91	2987.83	26.00
74	1.5 - 1.25	59.01	2994.32	26.00
75	1.25 - 1	59.09	3000.82	26.00
76	1 - 0	59.39	3026.82	26.03

Analysis Results

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
149 - 144	Pole	TP16.865x16x0.1875	Pole	10.5%	Pass
144 - 139	Pole	TP17.73x16.865x0.1875	Pole	19.4%	Pass
139 - 134	Pole	TP18.595x17.73x0.1875	Pole	31.5%	Pass
134 - 129	Pole	TP19.459x18.595x0.1875	Pole	46.0%	Pass
129 - 125	Pole	TP20.151x19.459x0.1875	Pole	59.6%	Pass
125 - 124.75	Pole + Reinf.	TP20.195x20.151x0.35	Reinf. 15 Tension Rupture	58.1%	Pass
124.75 - 119.75	Pole + Reinf.	TP21.059x20.195x0.3438	Reinf. 15 Tension Rupture	73.3%	Pass
119.75 - 118.5	Pole + Reinf.	TP21.276x21.059x0.3438	Reinf. 15 Tension Rupture	77.5%	Pass
118.5 - 118.25	Pole + Reinf.	TP21.319x21.276x0.625	Reinf. 9 Tension Rupture	45.4%	Pass
118.25 - 117	Pole + Reinf.	TP21.535x21.319x0.625	Reinf. 9 Tension Rupture	48.1%	Pass
117 - 116.75	Pole + Reinf.	TP21.578x21.535x0.625	Reinf. 9 Tension Rupture	48.6%	Pass
116.75 - 111.75	Pole + Reinf.	TP22.443x21.578x0.6	Reinf. 9 Tension Rupture	58.7%	Pass
111.75 - 106.75	Pole + Reinf.	TP23.308x22.443x0.575	Reinf. 9 Tension Rupture	67.9%	Pass
106.75 - 102	Pole + Reinf.	TP24.735x23.308x0.5625	Reinf. 9 Tension Rupture	75.9%	Pass
102 - 97	Pole + Reinf.	TP24.62x23.755x0.625	Reinf. 9 Tension Rupture	76.7%	Pass
97 - 96.75	Pole + Reinf.	TP24.663x24.62x0.7625	Reinf. 9 Tension Rupture	63.6%	Pass
96.75 - 93.98	Pole + Reinf.	TP25.142x24.663x0.75	Reinf. 9 Tension Rupture	66.7%	Pass
93.98 - 93.73	Pole + Reinf.	TP25.186x25.142x0.75	Reinf. 9 Tension Rupture	66.9%	Pass
93.73 - 91.5	Pole + Reinf.	TP25.572x25.186x0.75	Reinf. 9 Tension Rupture	69.3%	Pass
91.5 - 91.38	Pole + Reinf.	TP25.592x25.572x0.6375	Reinf. 26 Tension Rupture	78.0%	Pass
91.38 - 91.25	Pole + Reinf.	TP25.615x25.592x0.9	Reinf. 26 Tension Rupture	58.7%	Pass
91.25 - 91.13	Pole + Reinf.	TP25.636x25.615x0.9	Reinf. 26 Tension Rupture	58.8%	Pass
91.13 - 89	Pole + Reinf.	TP26.004x25.636x0.8875	Reinf. 26 Tension Rupture	60.7%	Pass
89 - 88.75	Pole + Reinf.	TP26.047x26.004x0.75	Reinf. 26 Tension Rupture	71.4%	Pass
88.75 - 83.75	Pole + Reinf.	TP26.913x26.047x0.725	Reinf. 26 Tension Rupture	76.5%	Pass
83.75 - 80.08	Pole + Reinf.	TP27.548x26.913x0.7125	Reinf. 26 Tension Rupture	79.9%	Pass
80.08 - 79.83	Pole + Reinf.	TP27.591x27.548x0.9	Reinf. 25 Tension Rupture	63.8%	Pass
79.83 - 74.83	Pole + Reinf.	TP28.456x27.591x0.875	Reinf. 25 Tension Rupture	67.5%	Pass
74.83 - 73.5	Pole + Reinf.	TP28.686x28.456x0.875	Reinf. 25 Tension Rupture	68.4%	Pass
73.5 - 73.25	Pole + Reinf.	TP28.73x28.686x1.075	Reinf. 25 Tension Rupture	57.0%	Pass
73.25 - 71	Pole + Reinf.	TP29.119x28.73x1.05	Reinf. 25 Tension Rupture	58.4%	Pass
71 - 70.75	Pole + Reinf.	TP29.162x29.119x0.925	Reinf. 25 Tension Rupture	65.8%	Pass
70.75 - 65.75	Pole + Reinf.	TP30.027x29.162x0.9	Reinf. 25 Tension Rupture	68.9%	Pass
65.75 - 64.13	Pole + Reinf.	TP30.308x30.027x0.9	Reinf. 25 Tension Rupture	69.9%	Pass
64.13 - 63.88	Pole + Reinf.	TP30.351x30.308x0.675	Reinf. 25 Tension Rupture	90.4%	Pass
63.88 - 63	Pole + Reinf.	TP30.503x30.351x0.675	Reinf. 25 Tension Rupture	91.1%	Pass
63 - 62.75	Pole + Reinf.	TP30.547x30.503x0.825	Reinf. 25 Tension Rupture	74.9%	Pass
62.75 - 62.08	Pole + Reinf.	TP30.663x30.547x0.825	Reinf. 25 Tension Rupture	75.3%	Pass
62.08 - 61.83	Pole + Reinf.	TP30.706x30.663x0.775	Reinf. 24 Tension Rupture	79.3%	Pass
61.83 - 60.67	Pole + Reinf.	TP30.907x30.706x0.7625	Reinf. 24 Tension Rupture	80.0%	Pass
60.67 - 60.42	Pole + Reinf.	TP30.95x30.907x0.85	Reinf. 24 Tension Rupture	77.3%	Pass
60.42 - 59	Pole + Reinf.	TP31.196x30.95x0.85	Reinf. 24 Tension Rupture	78.1%	Pass
59 - 58.75	Pole + Reinf.	TP31.239x31.196x0.8375	Reinf. 12 Tension Rupture	72.7%	Pass
58.75 - 53.75	Pole + Reinf.	TP32.104x31.239x0.825	Reinf. 12 Tension Rupture	75.4%	Pass
53.75 - 53.25	Pole + Reinf.	TP33.013x32.104x0.825	Reinf. 12 Tension Rupture	75.6%	Pass
53.25 - 47.5	Pole + Reinf.	TP32.682x31.691x0.8625	Reinf. 6 Tension Rupture	72.1%	Pass
47.5 - 46.88	Pole + Reinf.	TP32.789x32.682x0.8625	Reinf. 6 Tension Rupture	72.4%	Pass
46.88 - 46.63	Pole + Reinf.	TP32.832x32.789x0.875	Reinf. 4 Tension Rupture	70.8%	Pass
46.63 - 43.5	Pole + Reinf.	TP33.372x32.832x0.8625	Reinf. 4 Tension Rupture	72.1%	Pass
43.5 - 43.25	Pole + Reinf.	TP33.415x33.372x1.0125	Reinf. 11 Tension Rupture	66.6%	Pass
43.25 - 38.25	Pole + Reinf.	TP34.278x33.415x1	Reinf. 11 Tension Rupture	68.5%	Pass
38.25 - 33.25	Pole + Reinf.	TP35.14x34.278x0.9875	Reinf. 11 Tension Rupture	70.3%	Pass
33.25 - 32.58	Pole + Reinf.	TP35.256x35.14x0.975	Reinf. 11 Tension Rupture	70.5%	Pass
32.58 - 32.33	Pole + Reinf.	TP35.299x35.256x0.9875	Reinf. 11 Tension Rupture	70.3%	Pass
32.33 - 29.67	Pole + Reinf.	TP35.758x35.299x0.9625	Reinf. 11 Tension Rupture	71.2%	Pass
29.67 - 29.42	Pole + Reinf.	TP35.801x35.758x0.8125	Reinf. 11 Tension Rupture	89.7%	Pass
29.42 - 29.13	Pole + Reinf.	TP35.851x35.801x0.8125	Reinf. 11 Tension Rupture	89.8%	Pass
29.13 - 28.88	Pole + Reinf.	TP35.894x35.851x0.95	Reinf. 10 Tension Rupture	73.4%	Pass
28.88 - 28	Pole + Reinf.	TP36.046x35.894x0.9375	Reinf. 10 Tension Rupture	73.7%	Pass
28 - 27.75	Pole + Reinf.	TP36.089x36.046x0.9125	Reinf. 10 Tension Rupture	76.8%	Pass
27.75 - 26.92	Pole + Reinf.	TP36.232x36.089x0.9125	Reinf. 10 Tension Rupture	77.0%	Pass
26.92 - 26.67	Pole + Reinf.	TP36.275x36.232x0.875	Reinf. 10 Tension Rupture	78.0%	Pass
26.67 - 26.5	Pole + Reinf.	TP36.304x36.275x0.875	Reinf. 10 Tension Rupture	78.0%	Pass
26.5 - 26.25	Pole + Reinf.	TP36.347x36.304x0.8375	Reinf. 10 Tension Rupture	78.7%	Pass
26.25 - 24.92	Pole + Reinf.	TP36.577x36.347x0.8375	Reinf. 10 Tension Rupture	79.1%	Pass
24.92 - 24.67	Pole + Reinf.	TP36.62x36.577x0.8	Reinf. 1 Tension Rupture	78.2%	Pass
24.67 - 22.17	Pole + Reinf.	TP37.051x36.62x0.7875	Reinf. 1 Tension Rupture	78.9%	Pass
22.17 - 21.92	Pole + Reinf.	TP37.094x37.051x0.8625	Reinf. 1 Tension Rupture	71.2%	Pass
21.92 - 16.92	Pole + Reinf.	TP37.957x37.094x0.8375	Reinf. 1 Tension Rupture	72.6%	Pass
16.92 - 11.92	Pole + Reinf.	TP38.819x37.957x0.825	Reinf. 1 Tension Rupture	73.8%	Pass
11.92 - 6.92	Pole + Reinf.	TP39.681x38.819x0.8125	Reinf. 1 Tension Rupture	75.0%	Pass
6.92 - 1.92	Pole + Reinf.	TP40.544x39.681x0.8	Reinf. 1 Tension Rupture	76.1%	Pass
1.92 - 1.5	Pole + Reinf.	TP40.616x40.544x0.8	Reinf. 1 Tension Rupture	76.2%	Pass
1.5 - 1.25	Pole + Reinf.	TP40.659x40.616x0.6375	Reinf. 3 Tension Rupture	93.5%	Pass
1.25 - 1	Pole + Reinf.	TP40.703x40.659x0.4938	Pole	83.4%	Pass
1 - 0	Pole + Reinf.	TP40.875x40.703x0.4875	Pole	83.7%	Pass
				Summary	
			Pole	83.0%	Pass
			Reinforcement	93.5%	Pass
			Overall	93.5%	Pass

Additional Calculations

Section Elevation (ft)	Moment of Inertia (in^4)			Area (in^2)			% Capacity* (100% Max. Allowable)																											
	Pole	Reinf.	Total	Pole	Reinf.	Total	Pole	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15	R16	R17	R18	R19	R20	R21	R22	R23	R24	R25	R26	R27	R28	R29	R30
149 - 144	349	n/a	349	9.92	n/a	9.92	10.5%															58.1%														
144 - 139	406	n/a	406	10.44	n/a	10.44	19.4%															73.3%														
139 - 134	469	n/a	469	10.95	n/a	10.95	31.8%															77.5%														
134 - 129	538	n/a	538	11.47	n/a	11.47	46.0%															44.4%														
129 - 125	598	n/a	598	11.88	n/a	11.88	59.6%															47.1%														
125 - 124.75	602	500	1102	11.91	9.00	20.91	32.5%																													
124.75 - 119.75	683	541	1225	12.42	9.00	21.42	41.8%																													
119.75 - 118.5	705	552	1257	12.55	9.00	21.55	44.2%																													
118.5 - 118.25	709	1520	2229	12.58	24.00	36.58	25.3%									45.4%																				
118.25 - 117	731	1549	2281	12.70	24.00	36.70	26.9%									48.1%																				
117 - 116.75	736	1555	2291	12.73	24.00	36.73	27.2%									48.6%																			47.6%	
116.75 - 111.75	829	1675	2503	13.24	24.00	37.24	33.2%									58.7%																			57.6%	
111.75 - 106.75	929	1799	2728	13.76	24.00	37.76	38.9%									67.9%																			66.6%	
106.75 - 102	1032	1921	2953	14.25	24.00	38.25	44.1%									75.9%																			74.6%	
102 - 97	1450	1996	3447	19.34	24.00	43.34	41.2%									76.7%																			75.2%	
97 - 96.75	1458	2736	4194	19.37	33.00	52.37	34.2%									63.6%				62.4%															62.4%	
96.75 - 93.98	1546	2838	4384	19.75	33.00	52.75	36.0%									66.7%				65.4%														65.4%		
93.98 - 93.73	1554	2847	4401	19.79	33.00	52.79	36.2%									66.9%				65.7%														65.7%		
93.73 - 91.5	1627	2931	4558	20.09	33.00	53.09	37.6%									69.3%				68.0%														68.0%		
91.5 - 91.38	1631	2361	3992	20.11	27.00	47.11	43.2%													78.0%													78.0%	78.0%		
91.38 - 91.25	1638	3829	5467	20.13	47.63	67.75	32.5%						46.4%	49.2%						57.8%													58.7%	57.8%		
91.25 - 91.13	1642	3835	5477	20.14	47.63	67.77	32.6%						46.6%	49.3%						57.9%													58.8%	57.9%		
91.13 - 89	1715	3940	5655	20.44	47.63	68.06	33.8%						48.0%	50.9%						59.8%													60.7%	59.8%		
89 - 88.75	1724	3137	4861	20.47	38.63	59.09	39.7%						55.3%	59.2%																			71.4%	70.3%		
88.75 - 83.75	1903	3338	5241	21.16	38.63	59.78	42.9%						59.3%	63.4%																			76.5%	75.2%		
83.75 - 80.08	2043	3489	5532	21.66	38.63	60.28	45.2%						62.0%	66.3%																			79.9%	78.7%		
80.08 - 79.83	2050	4852	6902	21.69	50.63	72.32	36.6%						54.6%	57.2%																57.3%	63.8%	63.2%	61.0%			
79.83 - 74.83	2251	5147	7398	22.38	50.63	73.01	39.1%						57.6%	60.5%																60.7%	67.5%	66.9%	64.5%			
74.83 - 73.5	2307	5227	7534	22.56	50.63	73.19	39.8%						58.4%	61.3%																61.6%	68.4%	67.8%	65.4%			
73.5 - 73.25	2317	6748	9064	22.60	64.13	86.72	33.2%						49.2%	51.2%					52.8%	55.2%										52.1%	57.0%	56.6%	54.9%			
73.25 - 71	2413	6924	9337	22.91	64.13	87.03	34.1%						50.3%	52.4%					54.0%	56.5%										53.3%	58.4%	57.9%	56.2%			
71 - 70.75	2424	5930	8354	22.94	55.13	78.07	38.4%						56.4%	58.9%					60.6%	63.6%										59.5%	65.8%	65.2%				
70.75 - 65.75	2648	6272	8920	23.63	55.13	78.75	40.7%						59.1%	61.8%					63.5%	66.7%										62.4%	68.9%	68.4%				
65.75 - 64.13	2724	6384	9108	23.85	55.13	78.98	41.4%						60.0%	62.7%					64.4%	67.7%										63.4%	69.9%	69.3%				
64.13 - 63.88	2742	4388	7130	23.88	41.38	65.26	54.3%						62.6%						80.3%	79.1%										82.2%	90.4%	87.5%				
63.88 - 63	2784	4430	7214	24.01	41.38	65.38	54.8%						63.1%						80.9%	79.7%										82.8%	91.1%	88.1%				
63 - 62.75	2794	5975	8768	24.04	53.00	77.04	45.1%						65.8%	64.2%					67.2%	66.5%										69.3%	74.9%					
62.75 - 62.08	2826	6018	8844	24.13	53.00	77.13	45.4%						66.2%	64.5%					67.6%	66.9%										69.7%	75.3%					
62.08 - 61.83	2831	5433	8264	24.17	44.00	68.17	47.2%						76.9%	60.9%					77.3%	76.2%										79.3%						
61.83 - 60.67	2887	5501	8388	24.33	44.00	68.33	47.7%						76.7%	61.4%					78.0%	76.9%										80.0%						
60.67 - 60.42	2924	6393	9317	24.36	49.13	73.48	45.8%						69.8%						75.0%	71.2%								62.4%		77.3%						
60.42 - 59	2995	6490	9485	24.55	49.13	73.68	46.1%						70.2%						75.8%	72.0%								63.1%		78.2%						
59 - 58.75	2986	6461	9447	24.59	52.13	76.71	45.3%						69.3%						72.7%	69.3%								63.2%	60.5%							
58.75 - 53.75	3243	6807	10051	25.28	52.13	77.40	47.5%						71.9%						75.4%	72.0%								65.6%	62.8%							
53.75 - 53.25	3270	6842	10112	25.34	52.13	77.47	47.7%						72.1%						75.6%	72.2%								65.8%	63.0%							
53.25 - 47.5	4269	6936	11205	32.11	50.63	82.73	45.4%						72.1%														64.0%	68.6%	63.5%	61.5%						
47.5 - 46.88	4311	6979	11291	32.21	50.63	82.84	45.6%						72.4%														64.3%	68.9%	63.8%	61.7%						
46.88 - 46.63	4319	7132	11451	32.25	50.63	82.88	44.6%				70.8%	65.1%															64.4%	69.0%	63.9%	61.8%						
46.63 - 43.5	4537	7359	11896	32.79	50.63	83.41	45.6%				72.1%	66.2%															65.5%	70.2%	65.0%	63.0%						
43.5 - 43.25	4566	9385	13951	32.83	64.13	96.96	39.2%				61.8%	57.2%					61.8%	66.6%									56.5%	59.8%	56.1%	54.6%						
43.25 - 38.25	4932	9856	14787	33.69	64.13	97.81	40.6%				63.2%	58.8%					63.6%	68.5%									58.1%	61.5%	57.7%	56.1%						
38.25 - 33.25	5316	10339	15655	34.54	64.13	98.67	42.0%				64.8%	60.4%					65.3%	70.3%									59.6%	63.1%	59.2%	57.6%						
33.25 - 32.58	5369	10404	15774	34.66	64.13	98.78	42.2%				65.0%	60.6%					65.5%	70.5%									59.8%	63.3%	59.4%	57.8%						
32.58 - 32.33	5396	10512	15908	34.70	65.00	99.70	42.7%		58.1%		65.0%	59.7%					65.6%	70.3%									59.9%	62.9%	59.0%							
32.33 - 29.67	5611	10777	16388	35.16	65.00	100.16	43.4%		58.9%		65.9%	60.6%					66.6%	71.2%									60.6%	63.7%	59.7%							
29.67 - 29.42	5828	8298	14126	35.20	53.00	88.20	54.7%		66.5%		82.0%	64.3%					73.8%	89.7%									66.3%		62.6%							
29.42 - 29.13	5853	8320	14173	35.25	53.00	88.25	54.7%		66.6%		82.1%	64.4%					73.9%	89.8%									66.4%		62.7%							
29.13 - 28.88	5694	10585	16279	35.29	66.75	102.04	44.8%	61.9%	69.6%	63.1%	62.4%						73.4%	67.6%									53.6%		59.0%							
28.88 - 28	5767	10671	16438	35.44	66.75	102.19	45.0%	62.1%	69.9%	63.3%	62.7%						73.7%	67.8%									53.9%		59.2%							
28 - 27.75	5827	10166	15993	35.48	60.75	96.23	47.6%	68.3%	76.1%	64.3%	63.9%						76.8%	72.3%									56.8%									
27.75 - 26.92	5897	10244	16141	35.63	60.75	96.38	47.8%	68.5%	76.3%	64.6%	64.1%						77.0%	72.6%									57.0%									
26.92 - 26.67	5850	9713	15563	35.67	54.75	90.42	47.7%	76.2%	76.2%	67.6%	67.7%						78.0%	72.1%																		
26.67 - 26.5	5864	9728	15593	35.70	54.75	90.45	47.8%	76.3%	76.3%	67.6%	67.7%						78.0%	72.2%																		
26.5 - 26.25	5866	9106	14972	35.74	50.25	85.99	48.9%	78.6%	78.6%	74.9%	71.5%						78.7%																			
26.25 - 24.92	5978	9217	15195	35.97	50.25	86.22	49.3%	79.0%	79.0%	75.3%	71.9%						79.1%																			
24.92 - 24.67	6012	8760	14772	36.01	52.75	88.76	51.7%	78.2%	78.2%	72.8%							77.4%							66.2%	66.2%										
24.67 - 22.17	6229	8959	15187	36.44	52.75	89.19	52.4%	78.9%	78.9%	73.6%							78.2%							66.8%	66.8%										
22.17 - 21.92	6234	10079	16313	36.48	60.00	96.48	47.3%	71.2%	71.2%	71.2%												62.9%	62.9%	62.9%	62.9%										
21.92 - 16.92	6682	10533	17215	37.34	60.00	97.34	48.6%	72.6%	72.6%	72.6%												64.2%	64.2%	64.2%	64.2%										
16.92 - 11.92	7152	10997	18149	38.19	60.00	98.19	49.9%	73.8%	73.8%	73.8%												65.3%	65.3%	65.3%	65.3%										
11.92 - 6.92	7644	11471	19114	39.05	60.00	99.05	51.1%	75.0%	75.0%	75.0%												66.4%	66.4%	66.4%	66.4%										
6.92 - 1.92	8157	11954	20111	39.90	60.00	99.90	52.3%	76.1%	76.1%	76.1%												67.4%	67.4%	67.4%	67.4%										
1.92 - 1.5	8201	11996	20197	39.97	60.00	99.97	52.4%	76.2%	76.2%	76.2%												67.5%	67.5%	67.5%	67.5%										
1.5 - 1.25	8228	8281	16509	40.02	42.57	82.58	64.2%		93.6%	93.6%													79.9%	79.9%											59.6%
1.25 - 1	8254	4591	12845	40.06	22.19	62.25	82.7%																												77.7%	76.9%
1 - 0	8360	4628	12988	40.23	22.19	62.42	83.0%																												77.8%	77.0%

Note: Section capacity checked assuming all reinforcements are effective and using 5 degree increments.
**Rating per TIA-222-H Section 15.5.*

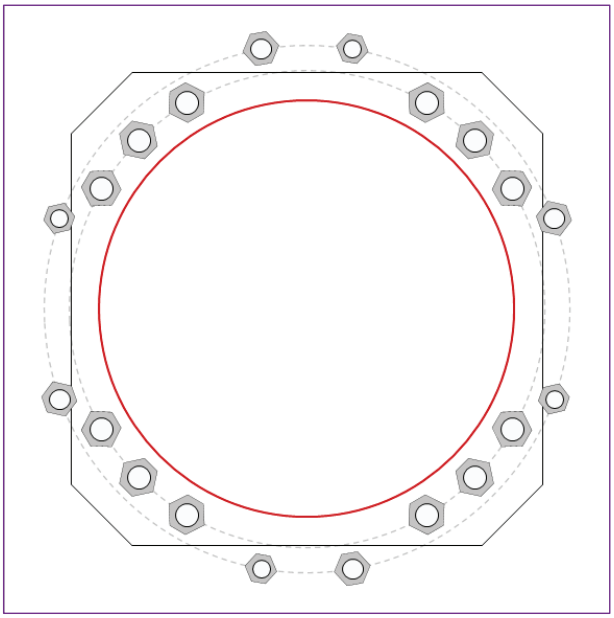
Monopole Base Plate Connection

Site Info	
BU #	857525
Site Name	EWTOWN DINGLEBRO(
Order #	648398 Rev. 0

Analysis Considerations	
TIA-222 Revision	H
Grout Considered:	See Custom Sheet
l_{ar} (in)	See Custom Sheet

Applied Loads	
Moment (kip-ft)	3026.82
Axial Force (kips)	59.39
Shear Force (kips)	26.03

**TIA-222-H Section 15.5 Applied*



Connection Properties

Anchor Rod Data

GROUP 1: (12) 2-1/4" ø bolts (A615-75 N; Fy=75 ksi, Fu=100 ksi) on 46.875" BC
Anchor Spacing: 6 in

GROUP 2: (4) 2" ø bolts (A193 Gr. B7 N; Fy=105 ksi, Fu=125 ksi) on 51.875" BC
pos. (deg): 20, 100, 200, 280

GROUP 3: (4) 1-3/4" ø bolts (A193 Gr. B7 N; Fy=105 ksi, Fu=125 ksi) on 51.875" BC
pos. (deg): 80, 160, 260, 340

Base Plate Data

46.5" W x 2.25" Plate (A572-50; Fy=50 ksi, Fu=65 ksi); Clip: 6 in

Stiffener Data

N/A

Pole Data

40.875" x 0.3125" 18-sided pole (A572-65; Fy=65 ksi, Fu=80 ksi)

Analysis Results

Anchor Rod Summary *(units of kips, kip-in)*

GROUP 1:		
Pu_t = 164.96	ϕPn_t = 243.75	**Stress Rating**
Vu = 2.17	ϕVn = 149.1	**64.5%**
Mu = n/a	ϕMn = n/a	**Pass**
GROUP 2:		
Pu_t = 144.29	ϕPn_t = 234.38	**Stress Rating**
Vu = 0	ϕVn = 147.26	**58.6%**
Mu = n/a	ϕMn = n/a	**Pass**
GROUP 3:		
Pu_t = 110.67	ϕPn_t = 178.13	**Stress Rating**
Vu = 0	ϕVn = 112.75	**59.2%**
Mu = n/a	ϕMn = n/a	**Pass**

Base Plate Summary

Max Stress (ksi):	40.07	(Flexural)
Allowable Stress (ksi):	45	
Stress Rating:	**84.8%**	**Pass**

CCIplate

Elevation (ft)	0	*(Base)*

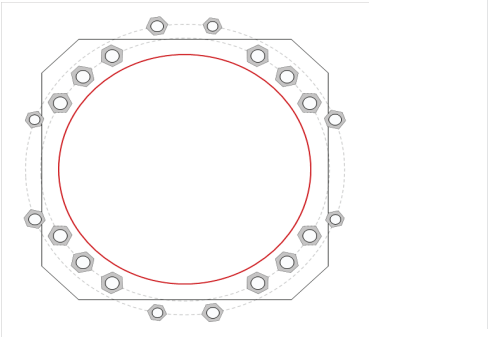
note: Bending interaction not considered when Grout Considered = "Yes"

Bolt Group	Resist Axial	Resist Shear	Induce Plate Bending	Grout Considered	Apply at BARB Elevation	BARB CL Elevation (ft)
1	Yes	Yes	Yes	No	No	
2	No	No	No	No	No	
3	No	No	No	No	No	

Custom Bolt Connection

Bolt	Bolt Group ID	Location (deg.)	Diameter (in)	Material	Bolt Circle (in)	Eta Factor, η:	l_{ar} (in):	Thread Type	Area Override, in^2	Tension Only
1	1	30.29193	2.25	A615-75	46.875	0.5	1.125	N-Included		No
2	1	45	2.25	A615-75	46.875	0.5	1.125	N-Included		No
3	1	59.70807	2.25	A615-75	46.875	0.5	1.125	N-Included		No
4	1	120.29193	2.25	A615-75	46.875	0.5	1.125	N-Included		No
5	1	135	2.25	A615-75	46.875	0.5	1.125	N-Included		No
6	1	149.70807	2.25	A615-75	46.875	0.5	1.125	N-Included		No
7	1	210.29193	2.25	A615-75	46.875	0.5	1.125	N-Included		No
8	1	225	2.25	A615-75	46.875	0.5	1.125	N-Included		No
9	1	239.70807	2.25	A615-75	46.875	0.5	1.125	N-Included		No
10	1	300.29193	2.25	A615-75	46.875	0.5	1.125	N-Included		No
11	1	315	2.25	A615-75	46.875	0.5	1.125	N-Included		No
12	1	329.70807	2.25	A615-75	46.875	0.5	1.125	N-Included		No
13	2	20	2	A193 Gr. B7	51.875	0.5	0	N-Included		No
14	2	100	2	A193 Gr. B7	51.875	0.5	0	N-Included		No
15	2	200	2	A193 Gr. B7	51.875	0.5	0	N-Included		No
16	2	280	2	A193 Gr. B7	51.875	0.5	0	N-Included		No
17	3	80	1.75	A193 Gr. B7	51.875	0.5	0	N-Included		No
18	3	160	1.75	A193 Gr. B7	51.875	0.5	0	N-Included		No
19	3	260	1.75	A193 Gr. B7	51.875	0.5	0	N-Included		No
20	3	340	1.75	A193 Gr. B7	51.875	0.5	0	N-Included		No

Plot Graphic



BU: 857525
WO: 2225019

Done By: TQH
Checked By:
Date: 5/4/2023

Additional Anchor Rod Calculations

Tower Reactions From tnx:

$Moment := 3027 \cdot kip \cdot ft$

$Axial := 59 \cdot kip$

$Shear := 26 \cdot kip$

Existing Anchor Rod Group Moment of Inertia:

$N_{existing} := 12$ $D_{existing} := 2.25 \cdot in$

$BC_{existing} := 46.875 \cdot in$ $A_{existing} := 3.25 in^2$

$$I_{existing} := \left(\frac{N_{existing}}{8}\right) \cdot \left(BC_{existing}^{2}\right) \cdot \left(A_{existing}\right) = 1.071 \times 10^{4} \cdot in^{4}$$

Additonal (New) Anchor Rod Group Moment of Inertia:

$N_{new} := 3$ $D_{new} := 2 \cdot in$ $Fu_{rod} := 125 ksi$

$BC_{new} := 51.875 \cdot i$ $A_{new} := 2.5 \cdot in^2$ $Fy_{rod} := 105 ksi$

$$I_{new} := \left(\frac{N_{new}}{8}\right) \cdot \left(BC_{new}^{2}\right) \cdot \left(A_{new}\right) = 2.523 \times 10^{3} \cdot in^{4}$$

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

Anchor Rod Bracket Calculations

Design the anchor rod bracket and all components to resist the max demanding load of the additional anchors.

Bracket Demanding Load

$\phi P_{nc} := 1.0 \cdot Fy_{rod} \cdot A_{new} = 262.5 \cdot kip$

$\phi P_{nt} := 0.75 \cdot Fu_{rod} \cdot A_{new} = 234.375 \cdot kip$

$\phi P_n := 166.26kip$

Tube Design (Pipe)

Member Size: P3.5 XX-strong

Member Properties
(AISC 15th Ed., Table 1-13):

Outside Diameter: $D_{pipe} := 4 \cdot in$

Thickness: $t_{pipe} := 0.636 \cdot in$

Yield Strength: $F_{ypipe} := 42 \cdot ksi$ $F_{upipe} := 58 \cdot ksi$

Length: $L_{pipe} := 14 \cdot in$

Inside Diameter: $ID_{pipe} := D_{pipe} - 2 \cdot t_{pipe} = 2.728 \cdot in$

Area: $A_{pipe} := \frac{\pi \cdot \left(D_{pipe}^{2} - ID_{pipe}^{2} \right)}{4} = 6.721 \cdot in^2$

Moment of Inertia: $I_{pipe} := \frac{\pi \cdot \left(D_{pipe}^{4} - ID_{pipe}^{4} \right)}{64} = 9.848 \cdot in^4$

Radius of Gyration: $r_{pipe} := \sqrt{\frac{I_{pipe}}{A_{pipe}}} = 1.21 \cdot in$

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

$\phi_b := 0.75$

$\phi P_n = \phi_b \cdot R_n = \phi_b \cdot 1.8 \cdot F_{ypipe} \cdot A_{pipe}$

$A_{pb} := \frac{\phi P_n}{\phi_b \cdot 1.8 \cdot F_{ypipe}} = 2.932 \cdot in^2$

$Check_{bear} := \begin{cases} \text{"OK"} & \text{if } A_{pipe} \geq A_{pb} \\ \text{"N/G"} & \text{otherwise} \end{cases}$

$Check_{bear} = \text{"OK"}$

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

$\phi_c := 0.9$

$K := 1$

$\phi P_{n\_comp} = \phi_c \cdot F_{cr} \cdot A_g$

$L_c := K \cdot L_{pipe} = 14 \cdot in$

$F_e := \frac{\pi^2 \cdot 29000ksi}{\left(\frac{L_c}{r_{pipe}}\right)^2} = 2.14 \times 10^3 \cdot ksi$

$\frac{L_c}{r_{pipe}} = 11.566 < 4.71 \cdot \sqrt{\frac{29000 \cdot ksi}{F_{ypipe}}} = 123.764$

$\therefore \quad F_{cr} := 0.658^{\frac{F_{ypipe}}{F_e}} \cdot F_{ypipe} = 41.656 \cdot ksi$

(AISC 15th Ed., Equation J4-6):

$$\phi P_{n\_comp} := \begin{cases} \phi_c \cdot F_{ypipe} \cdot A_{pipe} & \text{if } \frac{L_c}{r_{pipe}} \le 25 \\ \phi_c \cdot F_{cr} \cdot A_{pipe} & \text{otherwise} \end{cases}$$

$\phi P_{n\_comp} = 254.071 \cdot kip$

$$Check_{comp} := \begin{cases} \text{"OK"} & \text{if } \phi P_{n\_comp} \ge \phi P_n \\ \text{"N/G"} & \text{otherwise} \end{cases}$$

$Check_{comp} = \text{"OK"}$

$\frac{\phi P_n}{\phi P_{n\_comp}} = 65.438 \cdot \%$

Gusset Plate Design

Gusset Plate width: $w_{plate} := 3.5 \cdot in$

Gusset Plate thickness: $t_{plate} := 1.25in$

$L_{plate1} := 36in$

$L_{plate2} := 14in$

Gusset Plate Strength: $Fy_{plate} := 65ksi$

$Fu_{plate} := 80ksi$

Pole thickness: $t_{pole} := 0.3125in$

Shear Check
(AISC 15th Ed., Eqs. J4-3 and J4-4):

$A_g := t_{plate} \cdot L_{plate2} = 17.5 \cdot in^2$

$A_{nv} := A_g = 17.5 \cdot in^2$

Shear Yielding

$\phi_v := 1$

$\phi V_{plate} := \phi_v \cdot 0.6 \cdot A_g \cdot Fy_{plate} = 682.5 \cdot kip$

$$Check_{shear} := \begin{cases} \text{"OK"} & \text{if } \phi V_{plate} \geq \phi P_n \\ \text{"N/G"} & \text{otherwise} \end{cases}$$

$Check_{shear} = \text{"OK"}$

$\frac{\phi P_n}{\phi V_{plate}} = 24.36 \cdot \%$

Shear Rupture

$\phi_v := 0.75$

$\phi V_{plate} := \phi_v \cdot 0.6 \cdot A_{nv} \cdot Fu_{plate} = 630 \cdot kip$

$$Check_{shear} := \begin{cases} \text{"OK"} & \text{if } \phi V_{plate} \geq \phi P_n \\ \text{"N/G"} & \text{otherwise} \end{cases}$$

$Check_{shear} = \text{"OK"}$

$\frac{\phi P_n}{\phi V_{plate}} = 26.39 \cdot \%$

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: $Fy_{pole} := 65ksi$ $Fu_{pole} := 80ksi$

Gussett Plate Grade: $Fy_{plate} = 65 \cdot ksi$ $Fu_{plate} = 80 \cdot ksi$

Height of vertical weld from base plate: $H := L_{plate1} = 36 \cdot in$

Electrode Strength: $F_{EXX} := 70ksi$

Weld Size (in sixteenths of an inch): $D_1 := 5$ $\quad weldsize_1 := \frac{D_1}{16} = \frac{5}{16}$

Assume the worst-case installation scenario where the rod is positioned directly against the far side of the HSS.

$$ecc_1 := w_{plate} + D_{pipe} - t_{pipe} - \frac{D_{new}}{2} = 5.864 \cdot in$$

Load not in plane with weld group: $k := 0$

$$a := \frac{ecc_1}{L_{plate1}} = 0.163$$

$C_1 = 1$

$Coeff_1 := 3.51$

$\phi_w := 0.75$

$$D_{min1} := ceil\left(\frac{\phi P_n \cdot in}{\phi_w \cdot Coeff_1\, C_1 \cdot L_{plate1} \cdot kip}\right) = 2$$

$$minweldsize := \frac{D_{min1}}{16} = \frac{1}{8}$$

$$Check_{weld} := \begin{cases} \text{"OK"} & \text{if } D_1 \geq D_{min1} \wedge D_1 \geq Min_{weldsize} \wedge D_1 \leq Max_{weldsize} \\ \text{"N/G"} & \text{otherwise} \end{cases}$$

$Check_{weld} = \text{"OK"}$

$\phi Rn_{weld1} := \phi_w \cdot Coeff_1\, ksi \cdot in \cdot C_1 \cdot D_1 \cdot L_{plate1} = 473.85 \cdot kip$

$$Check_{weld1} := \begin{cases} \text{"OK"} & \text{if } \phi Rn_{weld1} \geq \phi P_n \\ \text{"N/G"} & \text{otherwise} \end{cases}$$

$Check_{weld1} = \text{"OK"}$

$$\frac{\phi P_n}{\phi Rn_{weld1}} = 35.09 \cdot \%$$

Gusset Plate to HSS Weld Design (AISC 15th Ed., Table 8-4)

Electrode Strength: $F_{EXX} := 70ksi$

Weld Size (in sixteenths of an inch): $D_1 := 14$ $\quad weldsize_1 := \frac{D_1}{16} = \frac{7}{8}$

Assume the worst-case installation scenario where the rod is positioned directly against the far side of the HSS.

$$ecc_2 := D_{pipe} - t_{pipe} - \frac{D_{new}}{2} = 2.364 \cdot in$$

Load not in plane with weld group: $k := 0$

$$a := \frac{ecc_2}{L_{plate2}} = 0.169$$

$C_1 = 1$

$Coeff_1 := 3.51$

$\phi_w := 0.75$

$$D_{min1} := ceil\left(\frac{\phi P_n \cdot in}{\phi_w \cdot Coeff_1\, C_1 \cdot L_{plate2} \cdot kip}\right) = 5$$

$$minweldsize := \frac{D_{min1}}{16} = \frac{5}{16}$$

$$Check_{weld} := \begin{cases} "OK" & \text{if } D_1 \geq D_{min1} \wedge D_1 \geq Min_{weldsize} \\ "N/G" & \text{otherwise} \end{cases}$$

$Check_{weld} = "OK"$

$$\phi Rn_{weld1} := \phi_w \cdot Coeff_1\, ksi \cdot in \cdot C_1 \cdot D_1 \cdot L_{plate2} = 515.97 \cdot kip$$

$$Check_{weld1} := \begin{cases} "OK" & \text{if } \phi Rn_{weld1} \geq \phi P_n \\ "N/G" & \text{otherwise} \end{cases}$$

$Check_{weld1} = "OK"$

$$\frac{\phi P_n}{\phi Rn_{weld1}} = 32.22 \cdot \%$$

Gusset Plate to Pole Punching Shear Check (max per unit length): (AISC 15th Ed., Section J4.2)

$\phi_{sy} := 1.0$

$\phi_{sr} := 0.75$

$ecc_1 := w_{plate} + D_{pipe} - t_{pipe} - \frac{D_{new}}{2} = 5.864 \cdot in$

$M_1 := \phi P_n \cdot ecc_1 = 974.949 \cdot kip \cdot in$

$S_1 := \frac{t_{plate} \cdot L_{plate1}^2}{6} = 270 \cdot in^3$

$f_v := \frac{M_1}{S_1} \cdot t_{plate} \cdot 1in = 4.514 \cdot kip$

AISC 15th Ed., Equation J4-3:

$\phi F_{sy} := \phi_{sy} \cdot 0.6 \cdot Fy_{pole} \cdot 2 \cdot t_{pole} \cdot 1in = 24.375 \cdot kip$

AISC 15th Ed., Equation J4-4:

$\phi F_{sr} := \phi_{sr} \cdot 0.6 \cdot Fu_{pole} \cdot 2 \cdot t_{pole} \cdot 1in = 22.5 \cdot kip$

$\phi F_v := \min(\phi F_{sy}, \phi F_{sr}) = 22.5 \cdot kip$

$$Check_{PS1} := \begin{cases} \text{"OK"} & \text{if } \phi F_v \geq f_v \\ \text{"N/G"} & \text{otherwise} \end{cases}$$

$Check_{PS1} = \text{"OK"}$

$\frac{f_v}{\phi F_v} = 20.06 \cdot \%$

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.

$ecc_2 := D_{pipe} - t_{pipe} - \frac{D_{new}}{2} = 2.364 \cdot in$

$M_2 := \phi P_n \cdot ecc_2 = 393.039 \cdot kip \cdot in$

$S_2 := \frac{t_{plate} \cdot L_{plate2}^2}{6} = 40.833 \cdot in^3$

$f_v := \frac{M_2}{S_2} \cdot t_{plate} \cdot 1in = 12.032 \cdot kip$

AISC 15th Ed., Equation J4-3:

$\phi F_{sy} := \phi_{sy} \cdot 0.6 \cdot F_{ypipe} \cdot 2 \cdot t_{pipe} \cdot 1in = 32.054 \cdot kip$

AISC 15th Ed., Equation J4-4:

$\phi F_{sr} := \phi_{sr} \cdot 0.6 \cdot F_{upipe} \cdot 2 \cdot t_{pipe} \cdot 1in = 33.199 \cdot kip$

$\phi F_v := \min(\phi F_{sy}, \phi F_{sr}) = 32.054 \cdot kip$

$$Check_{PS2} := \begin{cases} \text{"OK"} & \text{if } \phi F_v \geq f_v \\ \text{"N/G"} & \text{otherwise} \end{cases}$$

$Check_{PS2} = \text{"OK"}$

$$\frac{f_v}{\phi F_v} = 37.536 \cdot \%$$

Remember to fill out project information in header

Go to "View" --> "Header and Footer..."

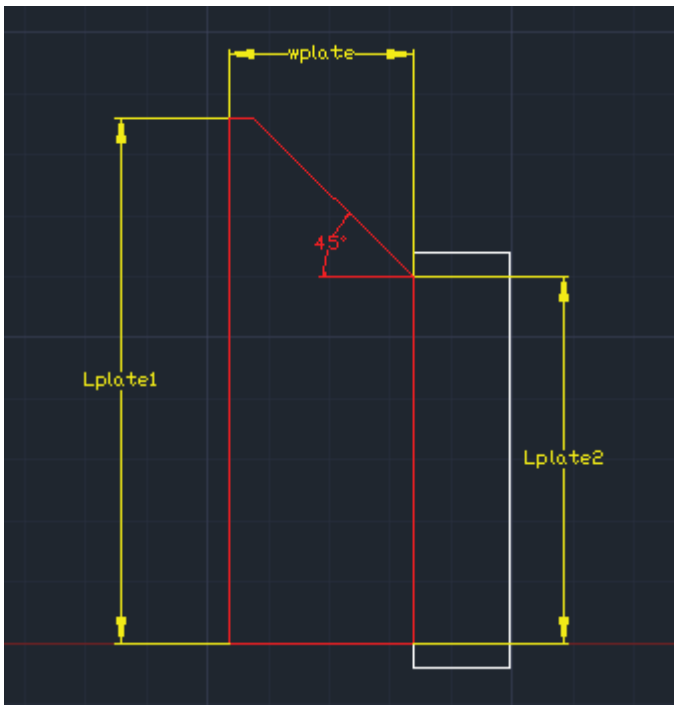
REVISION LOG:

07/31/15 - Modified by D. Tordella (Changed ϕ_{bond} to 0.55 instead of 0.5. Also added 6" to L_{be} in the L_{min} equation)
06/14/17 - Modified by M. Clark (Added AF35LVE selection to bond strength calculation)
07/12/17 - Modified by M. Paradise (Added Fy.rod and Logic for CA pullout requirements)
12/06/17 - Modified by D.Skupien (Updated All Fastener AF35LVE epoxy bond strength)
06/01/18 - Modified by M. Imgrund (Created sheet for Rev. H)
09/11/18 - Modified by M. Paradise (Changed Bond Strength and min embedment to match CED Requirements)
10/19/2018 - Modified by C. Hall (Updated material referenced for HSS Punching Shear Check. Added Header&Footer)
03/05/19 - Modified by D. Tordella (Updated embedment to be limited only by tension capacity; Separated vert & horiz notc

<---------- INPUTs

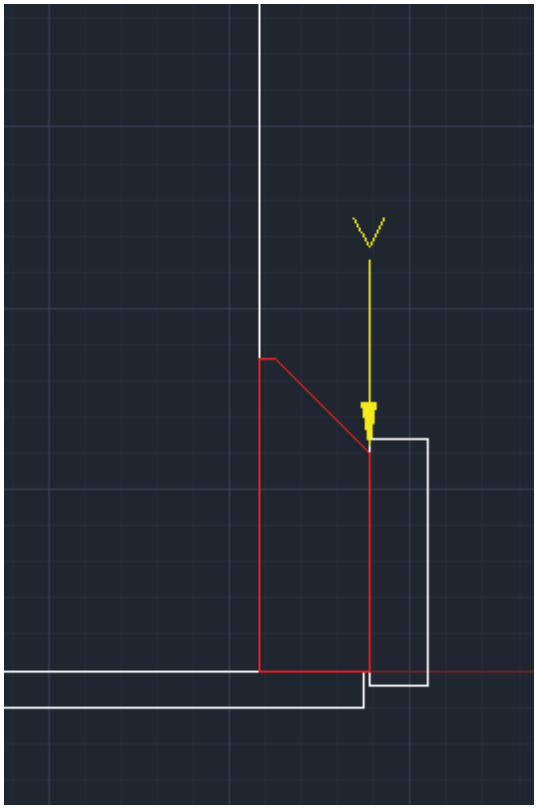
<---------- check AR Area calcs, Rev. F uses gross area and Rev. H uses net area.

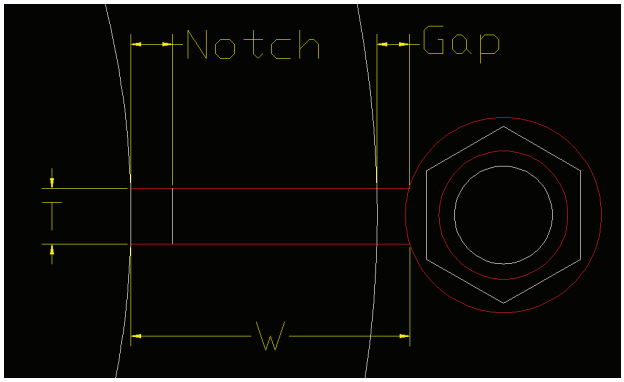
continue



<----------
INPUTs

<---------- Lplate2 shorter than tube length to allow for washers to be installed on top





<----------
INPUTS

Max fillet weld size = min. thickness of materials

**80ksi welds can be specified if all bracket materials have and fy > 60ksi

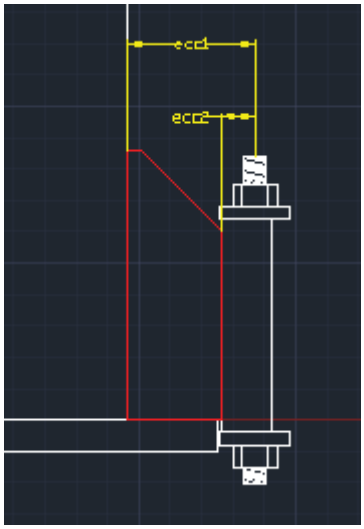
**Weld size shall not be greater than the thickness of the thinest base material

<---------- INPUTs

**C1 = 1.00 for 70ksi and 1.03 for 80ksi welds

$$C_1 := \begin{cases} 1.00 & \text{if } F_{EXX} = 70 \cdot ksi \\ 1.03 & \text{if } F_{EXX} = 80 \cdot ksi \end{cases}$$

<-------Coeff1 can be linearly interpolated, values from AISCM Table 8-4



<--------Check Minimum Weld Sizes is greater than size Per AISC Table J2.4

**80ksi welds can be specified if all bracket materials have and fy > 60ksi

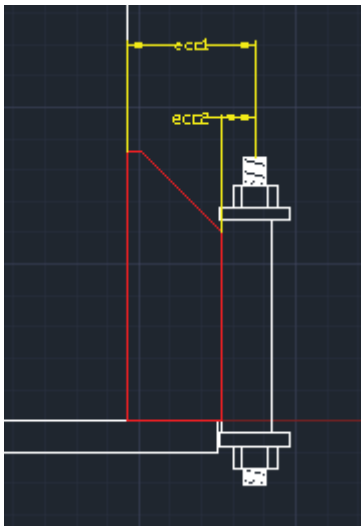
**Weld size shall not be greater than the thickness of the thinest base material

<---------- INPUTs

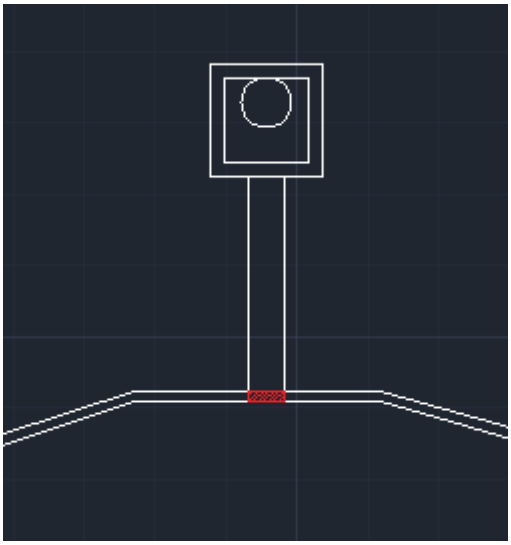
**C1 = 1.00 for 70ksi and 1.03 for 80ksi welds

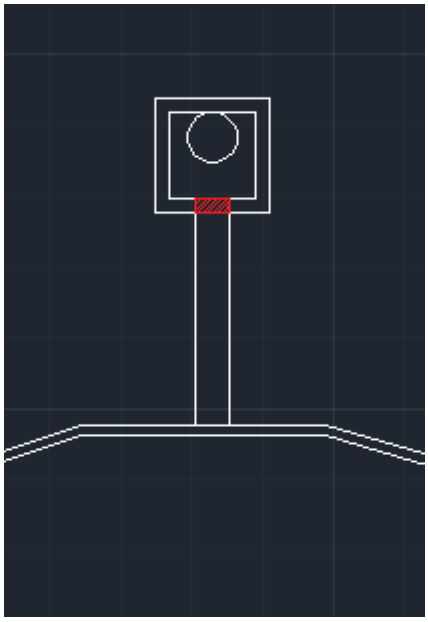
$$C_1 := \begin{cases} 1.00 & \text{if } F_{EXX} = 70 \cdot ksi \\ 1.03 & \text{if } F_{EXX} = 80 \cdot ksi \end{cases}$$

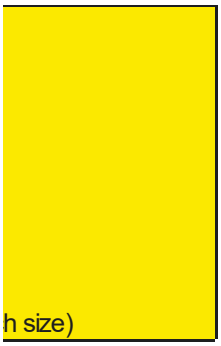
<-------Coeff1 can be linearly interpolated, values from AISCM Table 8-4



<--------Check Minimum Weld Sizes is greater than size Per AISC Table J2.4







h size)

Gusset Plate vs Pipe:

$$thin_{part1} := \min\left(\frac{t_{plate}}{in}, \frac{t_{pipe}}{in}\right) = 0.636$$

Gusset Plate vs Pole

$$thin_{part2} := \min\left(\frac{t_{plate}}{in}, \frac{t_{pole}}{in}\right) = 0.313$$

$$Min_{weldsize} := \begin{cases} \frac{1}{8}\cdot 16 & \text{if } thin_{part2} \le \frac{1}{4} \\ \frac{3}{16}\cdot 16 & \text{if } thin_{part2} > \frac{1}{4} \le \frac{1}{2} \\ \frac{1}{4}\cdot 16 & \text{if } thin_{part2} > \frac{1}{2} \le \frac{3}{4} \\ \frac{5}{16}\cdot 16 & \text{if } thin_{part2} > \frac{3}{4} \end{cases}$$

$$Max_{weldsize} := thin_{part2}\cdot 16$$

$$Min_{weldsize} = 3$$

$$Max_{weldsize} = 5$$

(in sixteenths of an inch)

Gusset Plate vs Pipe:

$$thin_{part1} := \min\left(\frac{t_{plate}}{in}, \frac{t_{pipe}}{in}\right) = 0.636$$

Gusset Plate vs Pole

$$thin_{part2} := \min\left(\frac{t_{plate}}{in}, \frac{t_{pole}}{in}\right) = 0.313$$

$$Min_{weldsize} := \begin{cases} \frac{1}{8}\cdot 16 & \text{if } thin_{part1} \le \frac{1}{4} \\ \frac{3}{16}\cdot 16 & \text{if } thin_{part1} > \frac{1}{4} \le \frac{1}{2} \\ \frac{1}{4}\cdot 16 & \text{if } thin_{part1} > \frac{1}{2} \le \frac{3}{4} \\ \frac{5}{16}\cdot 16 & \text{if } thin_{part1} > \frac{3}{4} \end{cases}$$

$$Max_{weldsize} := thin_{part1}\cdot 16$$

$$Min_{weldsize} = 4$$

$$Max_{weldsize} = 10.176$$

(in sixteenths of an inch)

$$Rebar := \begin{pmatrix} 3 & 0.375 & 0.110 \\ 4 & 0.500 & 0.200 \\ 5 & 0.625 & 0.310 \\ 6 & 0.750 & 0.440 \\ 7 & 0.875 & 0.600 \\ 8 & 1.000 & 0.790 \\ 9 & 1.128 & 1.000 \\ 10 & 1.270 & 1.270 \\ 11 & 1.410 & 1.560 \\ 14 & 1.693 & 2.250 \\ 18 & 2.257 & 4.000 \end{pmatrix}$$

Column 1 = Bar Size
Column 2 = Bar Diameter (in)
Column 3 = Bar Area (in^2)

```
vlookup(x, z, j) := | k ← 1
                    | while x ≠ z_{k,1}
                    |   k ← k + 1
                    | z_{k,j}
```

Lookup Function Definition

Pier and Pad Foundation

BU # :	857525
Site Name:	NEWTOWN DINGL
App. Number:	581650 Rev. 9

TIA-222 Revision:	H
Tower Type:	Monopole

Top & Bot. Pad Rein. Different?:	☐
Block Foundation?:	☐
Rectangular Pad?:	☐

Superstructure Analysis Reactions

Compression, P_{comp}:	59	kips
Base Shear, Vu_comp:	26	kips
Moment, M_u:	2292.74	ft-kips
Tower Height, **H**:	149	ft
BP Dist. Above Fdn, bp_{dist}:	3.25	in

Pier Properties

Pier Shape:	Square	
Pier Diameter, **dpier**:	10.5	ft
Ext. Above Grade, **E**:	1	ft
Pier Rebar Size, **Sc**:	7	
Pier Rebar Quantity, **mc**:	30	
Pier Tie/Spiral Size, **St**:	4	
Pier Tie/Spiral Quantity, **mt**:	7	
Pier Reinforcement Type:	Tie	
Pier Clear Cover, cc_{pier}:	3	in

Pad Properties

Depth, **D**:	5.5	ft
Pad Width, W_1:	22	ft
Pad Thickness, **T**:	1.5	ft
Pad Rebar Size (Bottom dir. 2), Sp_2:	8	
Pad Rebar Quantity (Bottom dir. 2), mp_2:	24	
Pad Clear Cover, cc_{pad}:	3	in

Material Properties

Rebar Grade, **Fy**:	60	ksi
Concrete Compressive Strength, **F'c**:	4	ksi
Dry Concrete Density, δ**c**:	150	pcf

Soil Properties

Total Soil Unit Weight, γ:	107	pcf
Ultimate Net Bearing, Qnet:	30.000	ksf
Cohesion, **Cu**:	15.000	ksf
Friction Angle, φ:	0	degrees
SPT Blow Count, N_{blows}:		
Base Friction, μ:		
Neglected Depth, **N**:	3.30	ft
Foundation Bearing on Rock?	Yes	
Groundwater Depth, **gw**:	N/A	ft

Foundation Analysis Checks

	Capacity	Demand	Rating*	Check
Lateral (Sliding) (kips)	6367.61	26.00	**0.4%**	**Pass**
Bearing Pressure (ksf)	22.94	3.00	**12.4%**	**Pass**
*Overturning (kip*ft)*	4867.44	2468.78	**50.7%**	**Pass**
*Pier Flexure (Comp.) (kip*ft)*	4995.64	2422.74	**46.2%**	**Pass**
Pier Compression (kip)	55135.08	158.23	**0.3%**	**Pass**
*Pad Flexure (kip*ft)*	1097.75	785.84	**68.2%**	**Pass**
Pad Shear - 1-way (kips)	338.11	179.34	**50.5%**	**Pass**
Pad Shear - 2-way (Comp) (ksi)	0.190	0.052	**26.0%**	**Pass**
*Flexural 2-way (Comp) (kip*ft)*	1474.77	1453.64	**93.9%**	**Pass**

**Rating per TIA-222-H Section 15.5*

Structural Rating*:	**93.9%**
Soil Rating*:	**50.7%**

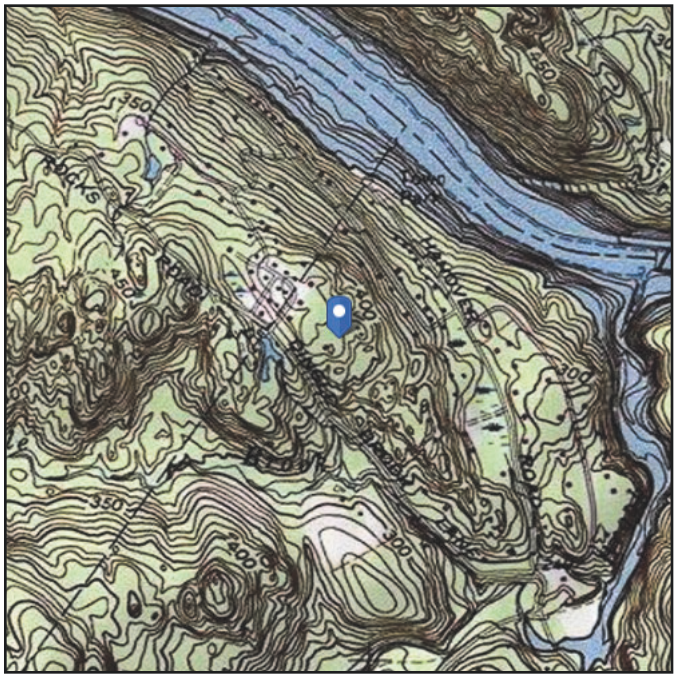
Moment, Mu:	3027	ft-kips
Additional Moment from Eccentricity:, Me: (59.18kips + 49.69kips)x1.42ft	129.5598	ft-kips
Rock Anchor Controlling Design Capacity, Cn:	108	kips
Additional Moment Resistance (Orthogonal), Rn_1: (Cn x 8ft)	864	ft-kips
Additional Moment Resistance (Diagonal), Rn_2: (2 x Cn x 5.66ft)	1222.56	ft-kips
Additional Moment Resistance, Rn	864	ft-kips
Moment for Pier and Pad Foundation, Mu	2292.5598	ft-kips

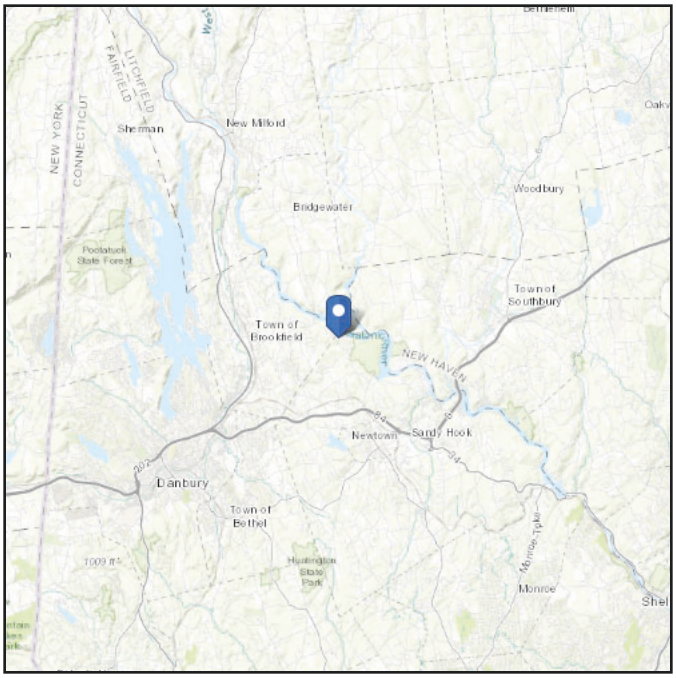
<--Toggle between Gross and Net

ASCE 7 Hazards Report

Address:
No Address at This Location

Standard:	ASCE/SEI 7-16	**Latitude:**	41.466947
Risk Category:	II	**Longitude:**	-73.333903
Soil Class:	D - Default (see Section 11.4.3)	**Elevation:**	437.8681373024624 ft (NAVD 88)





Wind

Results:

Wind Speed	115 Vmph
10-year MRI	75 Vmph
25-year MRI	84 Vmph
50-year MRI	90 Vmph
100-year MRI	96 Vmph

Data Source: ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4, and Section 26.5.2

Date Accessed: Thu May 04 2023

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-16 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

Site is in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2. Glazed openings need not be protected against wind-borne debris.

ASCE
AMERICAN SOCIETY OF CIVIL ENGINEERS

Seismic

D - Default (see Section 11.4.3)

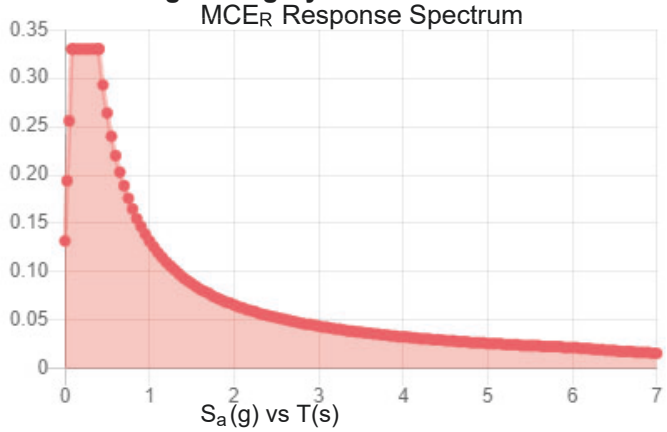
Site Soil Class:

Results:

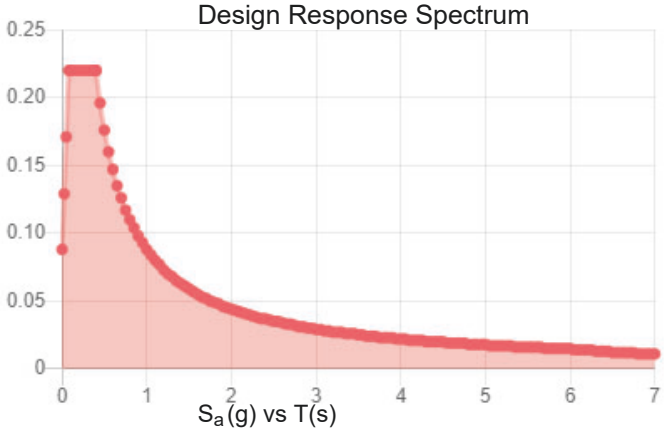
S_S :	0.206	S_{D1} :	0.088
S_1 :	0.055	T_L :	6
F_a :	1.6	PGA :	0.116
F_v :	2.4	PGA_M :	0.182
S_{MS} :	0.33	F_{PGA} :	1.567
S_{M1} :	0.132	I_e :	1
S_{DS} :	0.22	C_v :	0.713

Seismic Design Category: B

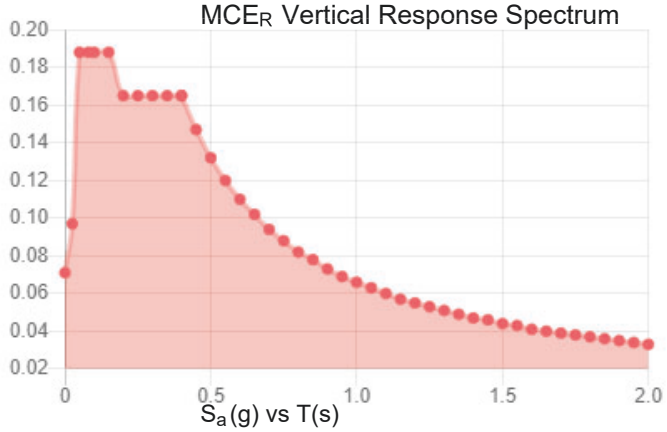
MCE_R Response Spectrum



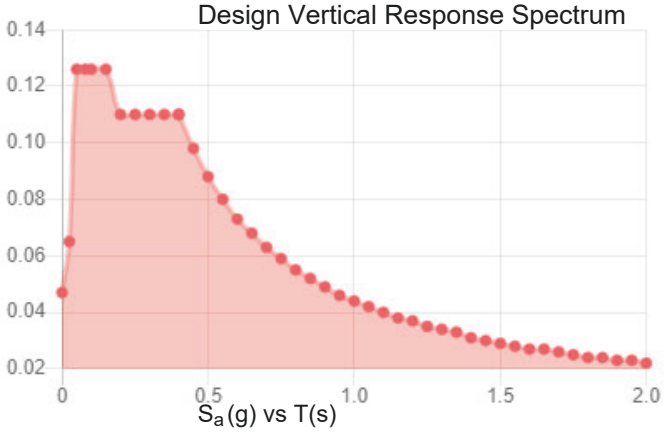
Design Response Spectrum



MCE_R Vertical Response Spectrum



Design Vertical Response Spectrum



Data Accessed: **Thu May 04 2023**

Date Source:

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

Ice

Results:

Ice Thickness:	1.00 in.
Concurrent Temperature:	15 F
Gust Speed	50 mph
Data Source:	Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8
Date Accessed:	Thu May 04 2023

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

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

Radio Frequency Exposure Analysis Report

May 16, 2023

T-Mobile

Site Name: NEWTOWN DINGLEBROOK
Site Number: CTFF013A
Site Address: 24 Dinglebrook Lane, Newtown, CT 06470

Michael Fischer, P.E.
Registered Professional Engineer (Electrical)
Connecticut License Number 33928
Expires January 31, 2024

Signed 16 May 2023

Site Compliance Summary

T-Mobile Compliance Status:	Compliant
Cumulative Calculated Power Density (Ground Level):	0.69532 µW/cm^2
Cumulative General Population % MPE (Ground Level):	0.11919%

May 16, 2023

Centerline
Attn: Jessica Meyer, Project Manager
750 W Center St, Suite 301
West Bridgewater, MA 02379

RF Exposure Analysis for Site: **NEWTOWN DINGLEBROOK**

Centerline Communications, LLC ("Centerline") was contracted to analyze the proposed T-Mobile facility at **24 Dinglebrook Lane, Newtown, CT 06470** for the purpose of determining whether the predictive exposure from the proposed facility is within specified federal limits.

All information used in this report was analyzed as a percentage of the Maximum Permissible Exposure (% MPE) limits as detailed in 47 CFR § 1.1310 as well as Federal Communications Commission (FCC) OET Bulletin 65 Edition 97-01. The FCC MPE limits are typically expressed in units of milliwatts per square centimeter (mW/cm^2) or microwatts per square centimeter ($\mu W/cm^2$). The exposure limits vary depending upon the frequencies being utilized. The General Population/Uncontrolled MPE limit (in mW/cm^2) for frequencies between 300 and 1500 is defined as frequency (in MHz) divided by 1500 ($f_{MHz}/1500$). Frequencies between 1500 and 100,000 MHz have a General Population/Uncontrolled MPE limit of 1 mW/cm^2 (1000 $\mu W/cm^2$). The calculated power density at each sample point divided by the limit at each calculated frequency provides a result in % MPE. Summing the calculated % MPE from all contributors provides a cumulative % MPE at a particular sample point. Wireless carriers use different frequency bands with varying MPE limits; therefore, it is useful to report results in terms of % MPE as opposed to power density.

All results were compared to the FCC radio frequency exposure rules as detailed in 47 CFR § 1.1307(b) to determine compliance with the MPE limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general population may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general population would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/ controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits, as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means. Additional details can be found in FCC OET 65.

Calculation Methodology

Centerline Communications, LLC has performed theoretical modeling of the site using a software tool, RoofMaster®, which incorporates calculation methodologies detailed in FCC OET 65. RoofMaster® uses a cylindrical model for conservative power density predictions within the near field of the antenna where the antenna pattern has not truly formed yet. Within this area power density values tend to decrease based upon an inverse distance function. At the point where it is appropriate for modeling to change from near-field calculations to far-field calculations, the power decreases inversely with the square of the distance. The modeling is based on worst-case assumptions in terms of transmitter power and duty cycle. No losses were included in the power calculations unless they were specifically provided for the project.

In OET 65, a far field model is presented to calculate the spatial peak power density. The RoofMaster® implementation of this model incorporates antenna manufacturer's horizontal and vertical pattern data to determine the power density in all directions. This model yields the power density at a single point in space. In order to determine the spatial power density for comparison to the FCC limits, the average of several points calculated within the human profile (0-6') must be conducted. RoofMaster® calculates seven power density values between 0-6' above the specified study plane and performs a linear spatial average.

Data & Results

The following table details the antennas and operating parameters for the T-Mobile antenna system as well as any other antenna systems at the site. This is based on antenna information provided by the client and data compiled from other sources where necessary. The data below was input into Roofmaster® to perform the theoretical exposure calculations at ground level.

The theoretical calculations performed in Roofmaster® determine the cumulative exposure at all sample points at ground level (0-6' spatial average). The results from highest cumulative sample point at ground level surrounding the site are displayed in the table below. The contribution from directional antennas to the maximum cumulative totals varies greatly depending on location; therefore, the contribution from one antenna sector at the highest calculated exposure point may be greater or less than other sectors since sectorized directional antennas are pointed in different directions and there is not much overlapping exposure.

The contribution to the cumulative power density and % MPE for each antenna/frequency band is listed in the table(s) below. The cumulative power density and cumulative % MPE are displayed at the bottom of the table(s) below.

CENTERLINE

Maximum Calculated Cumulative Power Density @ Ground Level (Location: approximately 8' North of site)

Antenna ID	Make / Model	Frequency Band (MHz)	Antenna Gain (dBd)	Antenna Centerline (ft)	Channel Count	TX Power/ Channel (watts)	ERP (watts)	Calculated Power Density (µW/cm²)	General Population MPE Limit (µW/cm²)	General Population % MPE
T-Mobile A 1	RFS APXVAARR24 43-U-NA20	600	13.09	129.00	4.00	40.00	3259.27	0.07956	400.00	0.01989
T-Mobile A 1	RFS APXVAARR24 43-U-NA20	700	13.17	129.00	4.00	40.00	3319.86	0.09002	466.67	0.01929
T-Mobile A 2	ERICSSON AIR 32	1900	15.55	129.00	4.00	30.00	4307.06	0.11290	1000.00	0.01129
T-Mobile A 2	ERICSSON AIR 32	2100	15.75	129.00	4.00	30.00	4510.05	0.11380	1000.00	0.01138
T-Mobile B 3	RFS APXVAARR24 43-U-NA20	600	13.09	129.00	4.00	40.00	3259.27	0.00228	400.00	0.00057
T-Mobile B 3	RFS APXVAARR24 43-U-NA20	700	13.17	129.00	4.00	40.00	3319.86	0.00042	466.67	0.00009
T-Mobile B 4	ERICSSON AIR 32	1900	15.55	129.00	4.00	30.00	4307.06	0.00110	1000.00	0.00011
T-Mobile B 4	ERICSSON AIR 32	2100	15.75	129.00	4.00	30.00	4510.05	0.00110	1000.00	0.00011
T-Mobile C 5	RFS APXVAARR24 43-U-NA20	600	13.09	129.00	4.00	40.00	3259.27	0.00000	400.00	0.00000
T-Mobile C 5	RFS APXVAARR24 43-U-NA20	700	13.17	129.00	4.00	40.00	3319.86	0.00019	466.67	0.00004
T-Mobile C 6	ERICSSON AIR 32	1900	15.55	129.00	4.00	30.00	4307.06	0.00000	1000.00	0.00000
T-Mobile C 6	ERICSSON AIR 32	2100	15.75	129.00	4.00	30.00	4510.05	0.00000	1000.00	0.00000
T-Mobile D 7	RFS APXVAARR24 43-U-NA20	600	13.09	129.00	4.00	40.00	3259.27	0.00064	400.00	0.00016
T-Mobile D 7	RFS APXVAARR24 43-U-NA20	700	13.17	129.00	4.00	40.00	3319.86	0.00112	466.67	0.00024
T-Mobile D 8	ERICSSON AIR 32	1900	15.55	129.00	4.00	30.00	4307.06	0.00120	1000.00	0.00012
T-Mobile D 8	ERICSSON AIR 32	2100	15.75	129.00	4.00	30.00	4510.05	0.00190	1000.00	0.00019
T-Mobile E 9	ERICSSON ANT3 A 0.9 HPX	11000	35.25	128.00	1.00	0.10	334.97	0.00000	1000.00	0.00000
							T-Mobile Totals:	**0.40623**		**0.06348**
Verizon A 10	POWERWAVE P90-14-XLH-RR	700	9.55	150.00	4.00	40.00	1442.51	0.08391	466.67	0.01798
Verizon A 10	POWERWAVE P90-14-XLH-RR	850	10.65	150.00	4.00	40.00	1858.32	0.09084	566.67	0.01603
Verizon A 11	KMW AM-X-CD-16-65-00T-RET-	2100	15.35	150.00	4.00	40.00	5484.28	0.08430	1000.00	0.00843
Verizon B 12	POWERWAVE P90-14-XLH-RR	700	9.55	150.00	4.00	40.00	1442.51	0.00187	466.67	0.00040
Verizon B 12	POWERWAVE P90-14-XLH-RR	850	10.65	150.00	4.00	160.00	1858.32	0.00051	566.67	0.00009
Verizon B 13	KMW AM-X-CD-16-65-00T-RET-	2100	15.35	150.00	4.00	160.00	5484.28	0.00010	1000.00	0.00001
Verizon C 14	POWERWAVE P90-14-XLH-RR	700	9.55	150.00	4.00	160.00	1442.51	0.00210	466.67	0.00045
Verizon C 14	POWERWAVE P90-14-XLH-RR	850	10.65	150.00	4.00	160.00	1858.32	0.00102	566.67	0.00018
Verizon C 15	KMW AM-X-CD-16-65-00T-RET-	2100	15.35	150.00	4.00	160.00	5484.28	0.00020	1000.00	0.00002
							Verizon Totals:	**0.26485**		**0.04359**
Town Of Newtown A 16	DBSPECTRA DS1F06F36U-D	150	6.00	164.00	1.00	100.00	398.11	0.02424	200.00	0.01212
							Town of Newtown Totals:	**0.02424**		**0.01212**
							Cumulative Power Density:	**0.69532 µW/cm²**	**Cumulative % MPE:**	**0.11919%**

Summary

The theoretical calculations performed for this analysis yielded cumulative power density totals in all areas at ground level that are within the allowable federal limits for public exposure to RF energy. Therefore, the site is **compliant** with FCC rules and regulations.

Samuel Cosgrove
RF EME Technical Writer
Centerline Communications, LLC

T-Mobile

T-MOBILE SITE NUMBER: CTFF013A
T-MOBILE SITE NAME: CTFF013A
SITE TYPE: MONOPOLE
TOWER HEIGHT: 150'-0"

BUSINESS UNIT #: 857525
SITE ADDRESS: 24 DINGLEBROOK LANE NEWTOWN, CT 06470
COUNTY: FAIRFIELD
JURISDICTION: FAIRFIELD COUNTY

CTFF013A : **MW ADD**

SITE INFORMATION

CROWN CASTLE USA INC. SITE NAME:	NEWTOWN DINGLEBROOK
SITE ADDRESS:	24 DINGLEBROOK LANE NEWTOWN, CT 06470
COUNTY:	FAIRFIELD
MAP/PARCEL #:	VERIFY
AREA OF CONSTRUCTION:	EXISTING
LATITUDE:	41° 28' 01.01" (41.466947°) N
LONGITUDE:	-73° 20' 02.05" (73.333903°) W
LAT/LONG TYPE:	NAD83
GROUND ELEVATION:	±413 FT
CURRENT ZONING:	TBD
JURISDICTION:	FAIRFIELD COUNTY
OCCUPANCY CLASSIFICATION:	U
TYPE OF CONSTRUCTION:	IIB
A.D.A. COMPLIANCE:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION
PROPERTY OWNER:	TBD
TOWER OWNER:	CROWN CASTLE 2000 CORPORATE DRIVE CANONSBURG, PA 15317
CARRIER/APPLICANT:	T-MOBILE 1 RAVINIA DRIVE, SUITE 1000 ATLANTA, GA 30346
ELECTRIC PROVIDER:	TBD
TELCO PROVIDER:	TBD

PROJECT TEAM

A&E FIRM:	INFINIGY 500 WEST OFFICE CENTER DR. SUITE 150, FORT WASHINGTON, PA 19034
CROWN CASTLE USA INC. DISTRICT CONTACTS:	1500 CORPORATE DRIVE CANONSBURG, PA 15317
	TRICIA PELON - PROJECT MANAGER TRICIA.PELON@CROWNCASTLE.COM
	JENNIFER MERSING - CONSTRUCTION MANAGER JENNIFER.MERSING@CROWNCASTLE.COM

DRAWING INDEX

SHEET #	SHEET DESCRIPTION
T-1	TITLE SHEET
T-2	GENERAL NOTES
C-1	SITE PLAN & ENLARGED SITE PLAN
C-2	FINAL ELEVATION & ANTENNA PLANS
C-3	ANTENNA & CABLE SCHEDULE
C-4	PLUMBING DIAGRAM
C-5	EQUIPMENT SPECS
G-1	ANTENNA GROUNDING DIAGRAM
G-2	GROUNDING DETAILS

ALL DRAWINGS CONTAINED HEREIN ARE FORMATTED FOR 11X17. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

PROJECT DESCRIPTION

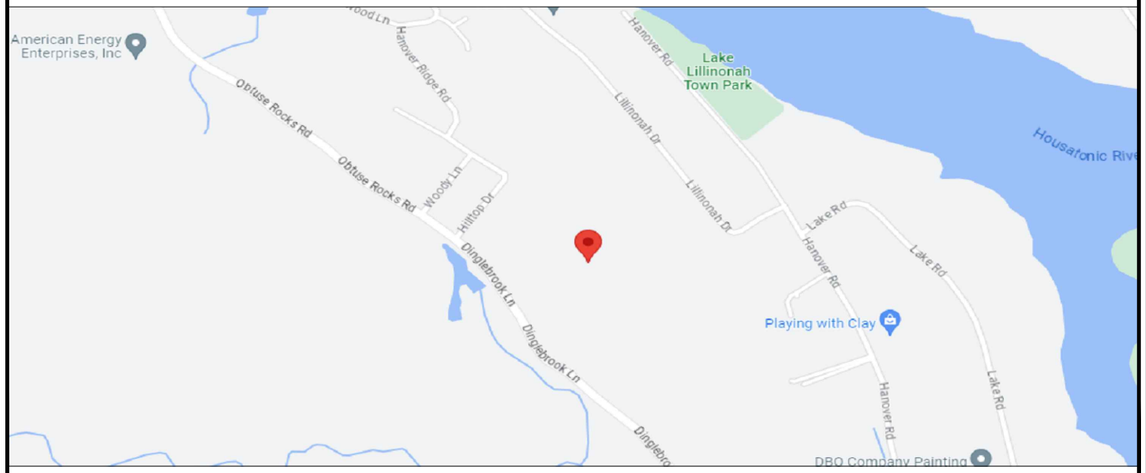
THE PURPOSE OF THIS PROJECT IS TO ENHANCE BROADBAND CONNECTIVITY AND CAPACITY TO THE EXISTING ELIGIBLE WIRELESS FACILITY.

TOWER SCOPE OF WORK:
- INSALL (1) MICROWAVE DISH
- INSTALL (2) ODU'S
- INSTALL (2) COAX CABLES (3/8")
- INSTALL (1) POWER CABLE
- INSTALL (1) FIBER CABLE

GROUND SCOPE OF WORK:
- N/A

NOTE:
PRIOR TO ACCESSING/ENTERING THE SITE YOU MUST CONTACT THE CROWN NOC AT (800) 788-7011 & CROWN CONSTRUCTION MANAGER.

LOCATION MAP



NO SCALE

APPLICABLE CODES/REFERENCE DOCUMENTS

ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES:

CODE TYPE	CODE
BUILDING	2022 CONNECTICUT BUILDING CODE/2021 IBC
MECHANICAL	2022 CONNECTICUT BUILDING CODE/2021 IMC
ELECTRICAL	2022 CONNECTICUT BUILDING CODE/2020 NEC

REFERENCE DOCUMENTS:

STRUCTURAL ANALYSIS:	CROWN CASTLE
DATED:	05/04/23
MOUNT ANALYSIS:	TELAMON TOWER ENGINEERING, PLLC
DATED:	04/25/23
RFDS REVISION:	TBD
DATED:	TBD
ORDER ID:	648398
REVISION:	0

CALL CONNECTICUT ONE CALL (800) 922-4455 CBYD.COM CALL 2 WORKING DAYS BEFORE YOU DIG! 811

APPROVALS

APPROVAL	SIGNATURE	DATE
PROPERTY OWNER OR REP.		
LAND USE PLANNER		
T-MOBILE		
OPERATIONS		
RF		
NETWORK		
BACKHAUL		
CONSTRUCTION MANAGER		

THE PARTIES ABOVE HEREBY APPROVE AND ACCEPT THESE DOCUMENTS AND AUTHORIZE THE CONTRACTOR TO PROCEED WITH THE CONSTRUCTION DESCRIBED HEREIN. ALL CONSTRUCTION DOCUMENTS ARE SUBJECT TO REVIEW BY THE LOCAL BUILDING DEPARTMENT AND ANY CHANGES AND MODIFICATIONS THEY MAY IMPOSE.

T-Mobile
1 RAVINIA DRIVE, SUITE 1000
ATLANTA, GA 30346

CROWN CASTLE
2000 CORPORATE DRIVE
CANONSBURG, PA 15317

INFINIGY
FROM ZERO TO INFINIGY
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500 West Office Center Dr.
Suite 150 | Fort Washington, PA 19034
www.infinigy.com

T-MOBILE SITE NUMBER:
CTFF013A

BU #: **857525**
NEWTOWN DINGLEBROOK

24 DINGLEBROOK LANE
NEWTOWN, CT 06470

EXISTING 150'-0"
MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	05/10/23	RCD	PRELIMINARY	CB
0	05/15/23	RCD	100% FINALS	CB

STATE OF CONNECTICUT
CHRISTOPHER J. WARREN
No. 23544
5/15/23
LICENSED PROFESSIONAL ENGINEER

SHEET NUMBER: T-1
REVISION: 0

CROWN CASTLE USA INC. SITE ACTIVITY REQUIREMENTS:

1. NOTICE TO PROCEED– NO WORK SHALL COMMENCE PRIOR TO CROWN CASTLE USA INC. WRITTEN NOTICE TO PROCEED (NTP) AND THE ISSUANCE OF A PURCHASE ORDER. PRIOR TO ACCESSING/ENTERING THE SITE YOU MUST CONTACT THE CROWN CASTLE USA INC. NOC AT 800–788–7011 & THE CROWN CASTLE USA INC. CONSTRUCTION MANAGER.
2. "LOOK UP" – CROWN CASTLE USA INC. SAFETY CLIMB REQUIREMENT:
   THE INTEGRITY OF THE SAFETY CLIMB AND ALL COMPONENTS OF THE CLIMBING FACILITY SHALL BE CONSIDERED DURING ALL STAGES OF DESIGN, INSTALLATION, AND INSPECTION. TOWER MODIFICATION, MOUNT REINFORCEMENTS, AND/OR EQUIPMENT INSTALLATIONS SHALL NOT COMPROMISE THE INTEGRITY OR FUNCTIONAL USE OF THE SAFETY CLIMB OR ANY COMPONENTS OF THE CLIMBING FACILITY ON THE STRUCTURE. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO: PINCHING OF THE WIRE ROPE, BENDING OF THE WIRE ROPE FROM ITS SUPPORTS, DIRECT CONTACT OR CLOSE PROXIMITY TO THE WIRE ROPE WHICH MAY CAUSE FRICTIONAL WEAR, IMPACT TO THE ANCHORAGE POINTS IN ANY WAY, OR TO IMPEDE/BLOCK ITS INTENDED USE. ANY COMPROMISED SAFETY CLIMB, INCLUDING EXISTING CONDITIONS MUST BE TAGGED OUT AND REPORTED TO YOUR CROWN CASTLE USA INC. POC OR CALL THE NOC TO GENERATE A SAFETY CLIMB MAINTENANCE AND CONTRACTOR NOTICE TICKET.
3. PRIOR TO THE START OF CONSTRUCTION, ALL REQUIRED JURISDICTIONAL PERMITS SHALL BE OBTAINED. THIS INCLUDES, BUT IS NOT LIMITED TO, BUILDING, ELECTRICAL, MECHANICAL, FIRE, FLOOD ZONE, ENVIRONMENTAL, AND ZONING. AFTER ONSITE ACTIVITIES AND CONSTRUCTION ARE COMPLETED, ALL REQUIRED PERMITS SHALL BE SATISFIED AND CLOSED OUT ACCORDING TO LOCAL JURISDICTIONAL REQUIREMENTS.
4. ALL CONSTRUCTION MEANS AND METHODS; INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS, AND RESCUE PLANS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN, AND SHALL MEET ANSI/ASSE A10.48 (LATEST EDITION); FEDERAL, STATE, AND LOCAL REGULATIONS; AND ANY APPLICABLE INDUSTRY CONSENSUS STANDARDS RELATED TO THE CONSTRUCTION ACTIVITIES BEING PERFORMED. ALL RIGGING PLANS SHALL ADHERE TO ANSI/ASSE A10.48 (LATEST EDITION) AND CROWN CASTLE USA INC. STANDARD CED–STD–10253, INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION, TO CERTIFY THE SUPPORTING STRUCTURE(S) IN ACCORDANCE WITH ANSI/TIA–322 (LATEST EDITION).
5. ALL SITE WORK TO COMPLY WITH QAS–STD–10068 "INSTALLATION STANDARDS FOR CONSTRUCTION ACTIVITIES ON CROWN CASTLE USA INC. TOWER SITE," CED–STD–10294 "STANDARD FOR INSTALLATION OF MOUNTS AND APPURTENANCES," AND LATEST VERSION OF ANSI/TIA–1019–A–2012 "STANDARD FOR INSTALLATION, ALTERATION, AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS."
6. IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY CROWN CASTLE USA INC. PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
7. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
8. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
9. THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
10. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY CONTRACTOR. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING AND EXCAVATION E) CONSTRUCTION SAFETY PROCEDURES.
11. ALL SITE WORK SHALL BE AS INDICATED ON THE STAMPED CONSTRUCTION DRAWINGS AND PROJECT SPECIFICATIONS, LATEST APPROVED REVISION.
12. CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH AT THE COMPLETION OF THE WORK. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
13. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF CONTRACTOR, TOWER OWNER, CROWN CASTLE USA INC., AND/OR LOCAL UTILITIES.
14. THE CONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION FOR SITE SIGNAGE REQUIRED BY LOCAL JURISDICTION AND SIGNAGE REQUIRED ON INDIVIDUAL PIECES OF EQUIPMENT, ROOMS, AND SHELTERS.
15. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE CARRIER'S EQUIPMENT AND TOWER AREAS.
16. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
17. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION AS SPECIFIED ON THE CONSTRUCTION DRAWINGS AND/OR PROJECT SPECIFICATIONS.
18. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
19. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
20. CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
21. CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.
22. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.

GENERAL NOTES:

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
   CONTRACTOR: GENERAL CONTRACTOR RESPONSIBLE FOR CONSTRUCTION
   CARRIER: T–MOBILE
   TOWER OWNER: CROWN CASTLE USA INC.
2. THESE DRAWINGS HAVE BEEN PREPARED USING STANDARDS OF PROFESSIONAL CARE AND COMPLETENESS NORMALLY EXERCISED UNDER SIMILAR CIRCUMSTANCES BY REPUTABLE ENGINEERS IN THIS OR SIMILAR LOCALITIES. IT IS ASSUMED THAT THE WORK DEPICTED WILL BE PERFORMED BY AN EXPERIENCED CONTRACTOR AND/OR WORKPEOPLE WHO HAVE A WORKING KNOWLEDGE OF THE APPLICABLE CODE STANDARDS AND REQUIREMENTS AND OF INDUSTRY ACCEPTED STANDARD GOOD PRACTICE. AS NOT EVERY CONDITION OR ELEMENT IS (OR CAN BE) EXPLICITLY SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL USE INDUSTRY ACCEPTED STANDARD GOOD PRACTICE FOR MISCELLANEOUS WORK NOT EXPLICITLY SHOWN.
3. THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE MEANS OR METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY FOR PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, FORMWORK, SHORING, ETC. SITE VISITS BY THE ENGINEER OR HIS REPRESENTATIVE WILL NOT INCLUDE INSPECTION OF THESE ITEMS AND IS FOR STRUCTURAL OBSERVATION OF THE FINISHED STRUCTURE ONLY.
4. NOTES AND DETAILS IN THE CONSTRUCTION DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT, AND/OR AS PROVIDED FOR IN THE CONTRACT DOCUMENTS. WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL NOTES, AND SPECIFICATIONS, THE GREATER, MORE STRICT REQUIREMENTS, SHALL GOVERN. IF FURTHER CLARIFICATION IS REQUIRED CONTACT THE ENGINEER OF RECORD.
5. SUBSTANTIAL EFFORT HAS BEEN MADE TO PROVIDE ACCURATE DIMENSIONS AND MEASUREMENTS ON THE DRAWINGS TO ASSIST IN THE FABRICATION AND/OR PLACEMENT OF CONSTRUCTION ELEMENTS BUT IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE DIMENSIONS, MEASUREMENTS, AND/OR CLEARANCES SHOWN IN THE CONSTRUCTION DRAWINGS PRIOR TO FABRICATION OR CUTTING OF ANY NEW OR EXISTING CONSTRUCTION ELEMENTS. IF IT IS DETERMINED THAT THERE ARE DISCREPANCIES AND/OR CONFLICTS WITH THE CONSTRUCTION DRAWINGS THE ENGINEER OF RECORD IS TO BE NOTIFIED AS SOON AS POSSIBLE.
6. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING CONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CROWN CASTLE.
7. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
8. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
9. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
10. IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CARRIER AND CROWN CASTLE PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
11. CONTRACTOR IS TO PERFORM A SITE INVESTIGATION AND IS TO DETERMINE THE BEST ROUTING OF ALL CONDUITS FOR POWER, AND TELCO AND FOR GROUNDING CABLES AS SHOWN IN THE POWER, TELCO, AND GROUNDING PLAN DRAWINGS.
12. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF CROWN CASTLE USA INC.
13. CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
14. CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.

CONCRETE, FOUNDATIONS, AND REINFORCING STEEL:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST–IN–PLACE CONCRETE.
2. UNLESS NOTED OTHERWISE, SOIL BEARING PRESSURE USED FOR DESIGN OF SLABS AND FOUNDATIONS IS ASSUMED TO BE 1000 psf.
3. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (f'c) OF 3000 psi AT 28 DAYS, UNLESS NOTED OTHERWISE. NO MORE THAN 90 MINUTES SHALL ELAPSE FROM BATCH TIME TO TIME OF PLACEMENT UNLESS APPROVED BY THE ENGINEER OF RECORD. TEMPERATURE OF CONCRETE SHALL NOT EXCEED 90°f AT TIME OF PLACEMENT.
4. CONCRETE EXPOSED TO FREEZE–THAW CYCLES SHALL CONTAIN AIR ENTRAINING ADMIXTURES. AMOUNT OF AIR ENTRAINMENT TO BE BASED ON SIZE OF AGGREGATE AND F3 CLASS EXPOSURE (VERY SEVERE). CEMENT USED TO BE TYPE II PORTLAND CEMENT WITH A MAXIMUM WATER–TO–CEMENT RATIO (W/C) OF 0.45.
5. ALL STEEL REINFORCING SHALL CONFORM TO ASTM A615. ALL WELDED WIRE FABRIC (WWF) SHALL CONFORM TO ASTM A185. ALL SPLICES SHALL BE CLASS "B" TENSION SPLICES, UNLESS NOTED OTHERWISE. ALL HOOKS SHALL BE STANDARD 90 DEGREE HOOKS, UNLESS NOTED OTHERWISE. YIELD STRENGTH (Fy) OF STANDARD DEFORMED BARS ARE AS FOLLOWS:
   #4 BARS AND SMALLER..40 ksi
   #5 BARS AND LARGER..60 ksi
6. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
   CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH......................3"
   CONCRETE EXPOSED TO EARTH OR WEATHER:
   - #6 BARS AND LARGER..2"
   - #5 BARS AND SMALLER..1–1/2"

   CONCRETE NOT EXPOSED TO EARTH OR WEATHER:
   - SLAB AND WALLS..3/4"
   - BEAMS AND COLUMNS..1–1/2"
7. A TOOLED EDGE OR A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNLESS NOTED OTHERWISE, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.

GREENFIELD GROUNDING NOTES:

1. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION AND AC POWER GES'S) SHALL BE BONDED TOGETHER AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
2. THE CONTRACTOR SHALL PERFORM IEEE FALL–OF–POTENTAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR GROUND ELECTRODE SYSTEMS, THE CONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
3. THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING GROUNDING AND UNDERGROUND CONDUIT INSTALLATION AS TO PREVENT ANY LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT AND PROVIDE TESTING RESULTS.
4. METAL CONDUIT AND TRAY SHALL BE GROUNDED AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
5. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.
6. EACH CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, #6 STRANDED COPPER OR LARGER FOR INDOOR BTS; #2 BARE SOLID TINNED COPPER FOR OUTDOOR BTS.
7. CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED BACK TO BACK CONNECTIONS ON OPPOSITE SIDE OF THE GROUND BUS ARE PERMITTED.
8. ALL EXTERIOR GROUND CONDUCTORS BETWEEN EQUIPMENT/GROUND BARS AND THE GROUND RING SHALL BE #2 SOLID TINNED COPPER UNLESS OTHERWISE INDICATED.
9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
10. USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.
11. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
12. ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR AND EXTERIOR) SHALL BE FORMED USING HIGH PRESS CRIMPS.
13. COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC WELD CONNECTIONS.
14. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.
15. APPROVED ANTIOXIDANT COATINGS (i.e. CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
16. ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
17. MISCELLANEOUS ELECTRICAL AND NON–ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
18. BOND ALL METALLIC OBJECTS WITHIN 6 ft OF MAIN GROUND RING WITH (1) #2 BARE SOLID TINNED COPPER GROUND CONDUCTOR.
19. GROUND CONDUCTORS USED FOR THE FACILITY GROUNDING AND LIGHTNING PROTECTION SYSTEMS SHALL NOT BE ROUTED THROUGH METALLIC OBJECTS THAT FORM A RING AROUND THE CONDUCTOR, SUCH AS METALLIC CONDUITS, METAL SUPPORT CLIPS OR SLEEVES THROUGH WALLS OR FLOORS. WHEN IT IS REQUIRED TO BE HOUSED IN CONDUIT TO MEET CODE REQUIREMENTS OR LOCAL CONDITIONS, NON–METALLIC MATERIAL SUCH AS PVC CONDUIT SHALL BE USED. WHERE USE OF METAL CONDUIT IS UNAVOIDABLE (i.e., NONMETALLIC CONDUIT PROHIBITED BY LOCAL CODE) THE GROUND CONDUCTOR SHALL BE BONDED TO EACH END OF THE METAL CONDUIT.
20. ALL GROUNDS THAT TRANSITION FROM BELOW GRADE TO ABOVE GRADE MUST BE #2 BARE SOLID TINNED COPPER IN 3/4" NON–METALLIC, FLEXIBLE CONDUIT FROM 24" BELOW GRADE TO WITHIN 3" TO 6" OF CAD–WELD TERMINATION POINT. THE EXPOSED END OF THE CONDUIT MUST BE SEALED WITH SILICONE CAULK. (ADD TRANSITIONING GROUND STANDARD DETAIL AS WELL).
21. BUILDINGS WHERE THE MAIN GROUNDING CONDUCTORS ARE REQUIRED TO BE ROUTED TO GRADE, THE CONTRACTOR SHALL ROUTE TWO GROUNDING CONDUCTORS FROM THE ROOFTOP, TOWERS, AND WATER TOWERS GROUNDING RING, TO THE EXISTING GROUNDING SYSTEM, THE GROUNDING CONDUCTORS SHALL NOT BE SMALLER THAN 2/0 COPPER. ROOFTOP GROUNDING RING SHALL BE BONDED TO THE EXISTING GROUNDING SYSTEM, THE BUILDING STEEL COLUMNS, LIGHTNING PROTECTION SYSTEM, AND BUILDING MAIN WATER LINE (FERROUS OR NONFERROUS METAL PIPING ONLY).

ELECTRICAL INSTALLATION NOTES:

1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES/ORDINANCES.
2. CONDUIT ROUTINGS ARE SCHEMATIC. CONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED AND TRIP HAZARDS ARE ELIMINATED.
3. WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC.
4. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC.
   - 4.1. ALL EQUIPMENT SHALL BEAR THE UNDERWRITERS LABORATORIES LABEL OF APPROVAL, AND SHALL CONFORM TO REQUIREMENT OF THE NATIONAL ELECTRICAL CODE.
   - 4.2. ALL OVERCURRENT DEVICES SHALL HAVE AN INTERRUPTING CURRENT RATING THAT SHALL BE GREATER THAN THE SHORT CIRCUIT CURRENT TO WHICH THEY ARE SUBJECTED, 22,000 AIC MINIMUM. VERYIFY AVAILABLE SHORT CIRCUIT CURRENT DOES NOT EXCEED THE RATING OF ELECTRICAL EQUIPMENT IN ACCORDANCE WITH ARTICLE 110.24 NEC OR THE MOST CURRENT ADOPTED CODE PRE THE GOVERNING JURISDICTION.
5. EACH END OF EVERY POWER PHASE CONDUCTOR, GROUNDING CONDUCTOR, AND TELCO CONDUCTOR OR CABLE SHALL BE LABELED WITH COLOR–CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2" PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC AND OSHA.
6. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH LAMICOID TAGS SHOWING THEIR RATED VOLTAGE, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING AND BRANCH CIRCUIT ID NUMBERS (i.e. PANEL BOARD AND CIRCUIT ID'S).
7. PANEL BOARDS (ID NUMBERS) SHALL BE CLEARLY LABELED WITH PLASTIC LABELS.
8. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
9. ALL POWER AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE COPPER CONDUCTOR (#14 OR LARGER) WITH TYPE THHW, THWN, THWN–2, XHHW, XHHW–2, THW, THW–2, RHW, OR RHW–2 INSULATION UNLESS OTHERWISE SPECIFIED.
10. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE COPPER CONDUCTOR (#6 OR LARGER) WITH TYPE THHW, THWN, THWN–2, XHHW, XHHW–2, THW, THW–2, RHW, OR RHW–2 INSULATION UNLESS OTHERWISE SPECIFIED.
11. POWER AND CONTROL WIRING IN FLEXIBLE CORD SHALL BE MULTI–CONDUCTOR, TYPE SOOW CORD (#14 OR LARGER) UNLESS OTHERWISE SPECIFIED.
12. POWER AND CONTROL WIRING FOR USE IN CABLE TRAY SHALL BE MULTI–CONDUCTOR, TYPE TC CABLE (#14 OR LARGER), WITH TYPE THHW, THWN, THWN–2, XHHW, XHHW–2, THW, THW–2, RHW, OR RHW–2 INSULATION UNLESS OTHERWISE SPECIFIED.
13. ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP–STYLE, COMPRESSION WIRE LUGS AND WIRE NUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRE NUTS SHALL BE RATED FOR OPERATION NOT LESS THAN 75° C (90° C IF AVAILABLE).
14. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.
15. ELECTRICAL METALLIC TUBING (EMT), INTERMEDIATE METAL CONDUIT (IMC), OR RIGID METAL CONDUIT (RMC) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
16. ELECTRICAL METALLIC TUBING (EMT) OR METAL–CLAD CABLE (MC) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
17. SCHEDULE 40 PVC UNDERGROUND ON STRAIGHTS AND SCHEDULE 80 PVC FOR ALL ELBOWS/90s AND ALL APPROVED ABOVE GRADE PVC CONDUIT.
18. LIQUID–TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID–TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
19. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION–TYPE AND APPROVED FOR THE LOCATION USED. SET SCREW FITTINGS ARE NOT ACCEPTABLE.
20. CABINETS, BOXES AND WIRE WAYS SHALL BE LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND THE NEC.
21. WIREWAYS SHALL BE METAL WITH AN ENAMEL FINISH AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARDS (WIREMOLD SPECMATE WIREWAY).
22. SLOTTED WIRING DUCT SHALL BE PVC AND INCLUDE COVER (PANDUIT TYPE E OR EQUAL).
23. CONDUITS SHALL BE FASTENED SECURELY IN PLACE WITH APPROVED NON–PERFORATED STRAPS AND HANGERS. EXPLOSIVE DEVICES (i.e. POWDER–ACTUATED) FOR ATTACHING HANGERS TO STRUCTURE WILL NOT BE PERMITTED. CLOSELY FOLLOW THE LINES OF THE STRUCTURE, MAINTAIN CLOSE PROXIMITY TO THE STRUCTURE AND KEEP CONDUITS IN TIGHT ENVELOPES. CHANGES IN DIRECTION TO ROUTE AROUND OBSTACLES SHALL BE MADE WITH CONDUIT OUTLET BODIES. CONDUIT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER. PARALLEL AND PERPENDICULAR TO STRUCTURE WALL AND CEILING LINES. ALL CONDUIT SHALL BE FISHED TO CLEAR OBSTRUCTIONS. ENDS OF CONDUITS SHALL BE TEMPORARILY CAPPED FLUSH TO FINISH GRADE TO PREVENT CONCRETE, PLASTER OR DIRT FROM ENTERING. CONDUITS SHALL BE RIGIDLY CLAMPED TO BOXES BY GALVANIZED MALLEABLE IRON BUSHING ON INSIDE AND GALVANIZED MALLEABLE IRON LOCKNUT ON OUTSIDE AND INSIDE.
24. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES AND PULL BOXES SHALL BE GALVANIZED OR EPOXY–COATED SHEET STEEL. SHALL MEET OR EXCEED UL 50 AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND NEMA 3R (OR BETTER) FOR EXTERIOR LOCATIONS.
25. METAL RECEPTACLE, SWITCH AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY–COATED OR NON–CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1 AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND WEATHER PROTECTED (WP OR BETTER) FOR EXTERIOR LOCATIONS.
26. NONMETALLIC RECEPTACLE, SWITCH AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2 (NEWEST REVISION) AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND WEATHER PROTECTED (WP OR BETTER) FOR EXTERIOR LOCATIONS.
27. THE CONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CARRIER AND/OR CROWN CASTLE USA INC. BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
28. THE CONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD LIFE AND PROPERTY.
29. INSTALL LAMICOID LABEL ON THE METER CENTER TO SHOW "T–MOBILE".
30. ALL EMPTY/SPARE CONDUITS THAT ARE INSTALLED ARE TO HAVE A METERED MULE TAPE PULL CORD INSTALLED.

CONDUCTOR COLOR CODE

SYSTEM	CONDUCTOR	COLOR
120/240V, 1Ø	A PHASE	BLACK
	B PHASE	RED
	NEUTRAL	WHITE
	GROUND	GREEN
120/208V, 3Ø	A PHASE	BLACK
	B PHASE	RED
	C PHASE	BLUE
	NEUTRAL	WHITE
	GROUND	GREEN
277/480V, 3Ø	A PHASE	BROWN
	B PHASE	ORANGE OR PURPLE
	C PHASE	YELLOW
	NEUTRAL	GREY
	GROUND	GREEN
DC VOLTAGE	POS (+)	RED**
	NEG (–)	BLACK**

* SEE NEC 210.5(C)(1) AND (2)
** POLARITY MARKED AT TERMINATION

APWA UNIFORM COLOR CODE:

WHITE	PROPOSED EXCAVATION
PINK	TEMPORARY SURVEY MARKINGS
RED	ELECTRIC POWER LINES, CABLES, CONDUIT, AND LIGHTING CABLES
YELLOW	GAS, OIL, STEAM, PETROLEUM, OR GASEOUS MATERIALS
ORANGE	COMMUNICATION, ALARM OR SIGNAL LINES, CABLES, OR CONDUIT AND TRAFFIC LOOPS
BLUE	POTABLE WATER
PURPLE	RECLAIMED WATER, IRRIGATION, AND SLURRY LINES
GREEN	SEWERS AND DRAIN LINES

ABBREVIATIONS:

ANT	ANTENNA
(E)	EXISTING
FIF	FACILITY INTERFACE FRAME
GEN	GENERATOR
GPS	GLOBAL POSITIONING SYSTEM
GSM	GLOBAL SYSTEM FOR MOBILE
LTE	LONG TERM EVOLUTION
MGB	MASTER GROUND BAR
MW	MICROWAVE
(N)	NEW
NEC	NATIONAL ELECTRIC CODE
(P)	PROPOSED
PP	POWER PLANT
QTY	QUANTITY
RECT	RECTIFIER
RBS	RADIO BASE STATION
RET	REMOTE ELECTRIC TILT
RFDS	RADIO FREQUENCY DATA SHEET
RRH	REMOTE RADIO HEAD
RRU	REMOTE RADIO UNIT
SIAD	SMART INTEGRATED DEVICE
TMA	TOWER MOUNTED AMPLIFIER
TYP	TYPICAL
UMTS	UNIVERSAL MOBILE TELECOMMUNICATIONS SYSTEM
W.P.	WORK POINT

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BU #: **857525**
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DINGLEBROOK

24 DINGLEBROOK LANE
NEWTOWN, CT 06470

EXISTING 150'-0"
MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	05/10/23	RCD	PRELIMINARY	CB
0	05/15/23	RCD	100% FINALS	CB

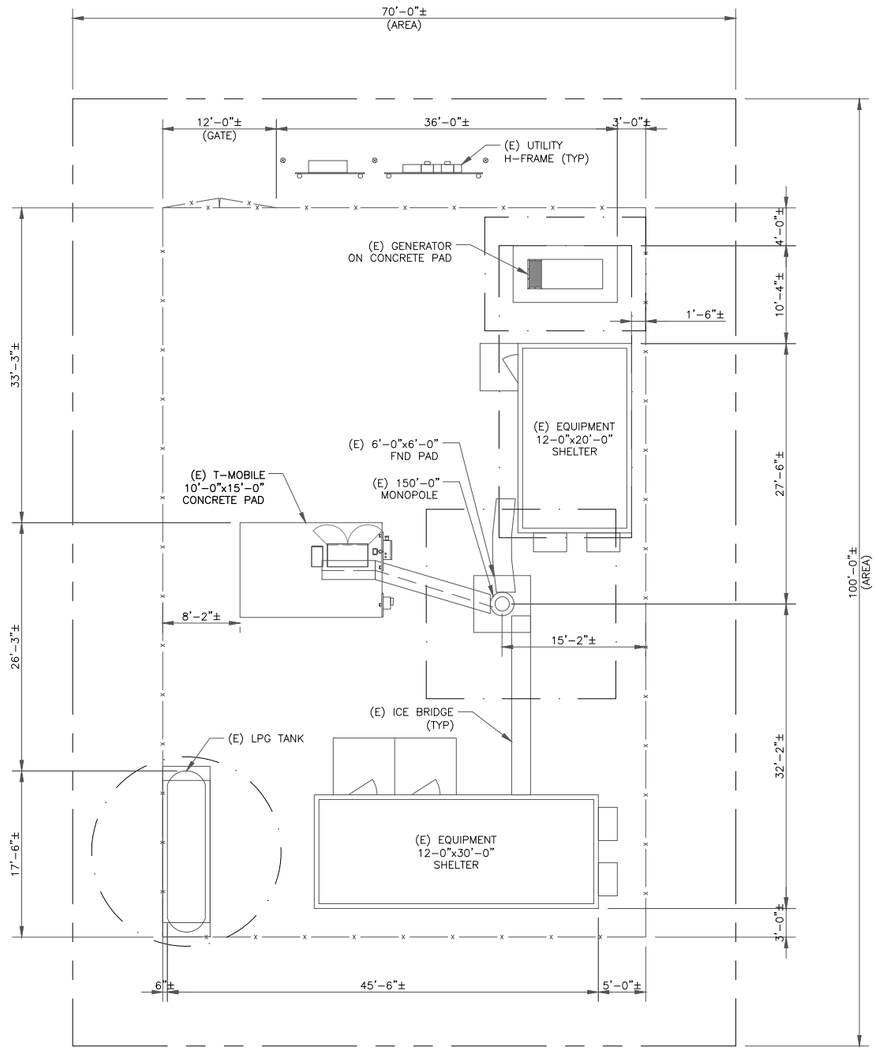
STATE OF CONNECTICUT
CHRISTOPHER J. WARREN
No. 23544
5/15/23
LICENSED
PROFESSIONAL ENGINEER

IT IS A VIOLATION OF LAW FOR ANY PERSON,
UNLESS THEY ARE ACTING UNDER THE DIRECTION
OF A LICENSED PROFESSIONAL ENGINEER,
TO ALTER THIS DOCUMENT.

SHEET NUMBER: T-2
REVISION: 0

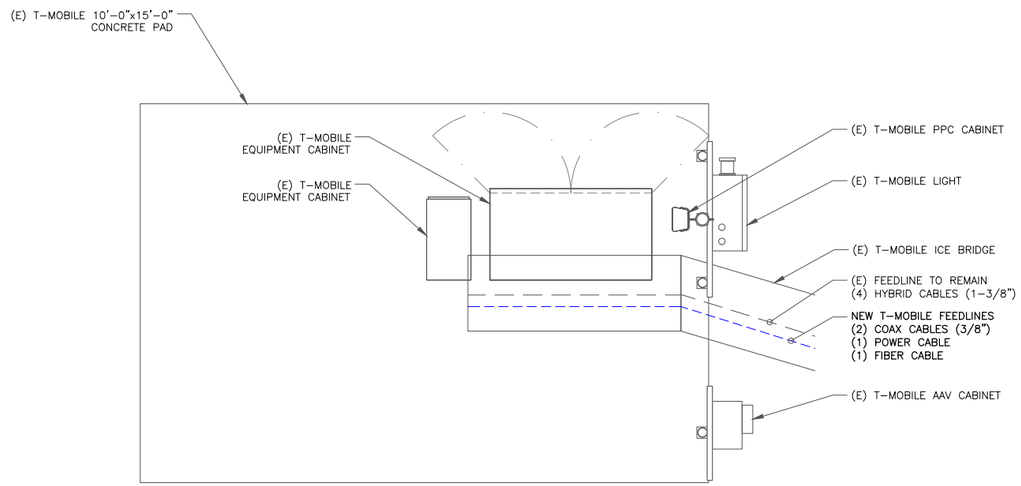
NOTE:

1. PLANS BASED ON SITE PLAN PROVIDED BY TOWER OWNER AND SITE VISIT PERFORMED BY INFINIGY. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND LOCATION/ORIENTATION OF EXISTING T-MOBILE EQUIPMENT.



1 SITE PLAN
SCALE: 8' 6' 4' 2' 0 8' 1/8"=1'-0" (FULL SIZE) 1/16"=1'-0" (11x17)

N



2 ENLARGED SITE PLAN
SCALE: 2' 1' 0 2' 1/2"=1'-0" (FULL SIZE) 1/4"=1'-0" (11x17)

N

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BU #: **857525**
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DINGLEBROOK

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EXISTING 150'-0"
MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	05/10/23	RCD	PRELIMINARY	CB
0	05/15/23	RCD	100% FINALS	CB

STATE OF CONNECTICUT
CHRISTOPHER J. WARREN
No. 23544
5/15/23
LICENSED
PROFESSIONAL ENGINEER

SHEET NUMBER: C-1

REVISION: 0

NOTES:

1. ELEVATION BASED ON DRAWING PROVIDED BY TOWER OWNER. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND LOCATION/ORIENTATION OF EXISTING EQUIPMENT.
2. INFINIGY HAS NOT EVALUATED THE TOWER OR MOUNT STRUCTURE AND ASSUMES NO RESPONSIBILITY FOR THEIR STRUCTURAL INTEGRITY REGARDING PROPOSED LOADINGS. FINAL INSTALLATION SHALL COMPLY WITH RESULTS OF PASSING STRUCTURAL ANALYSES PERFORMED BY OTHERS.

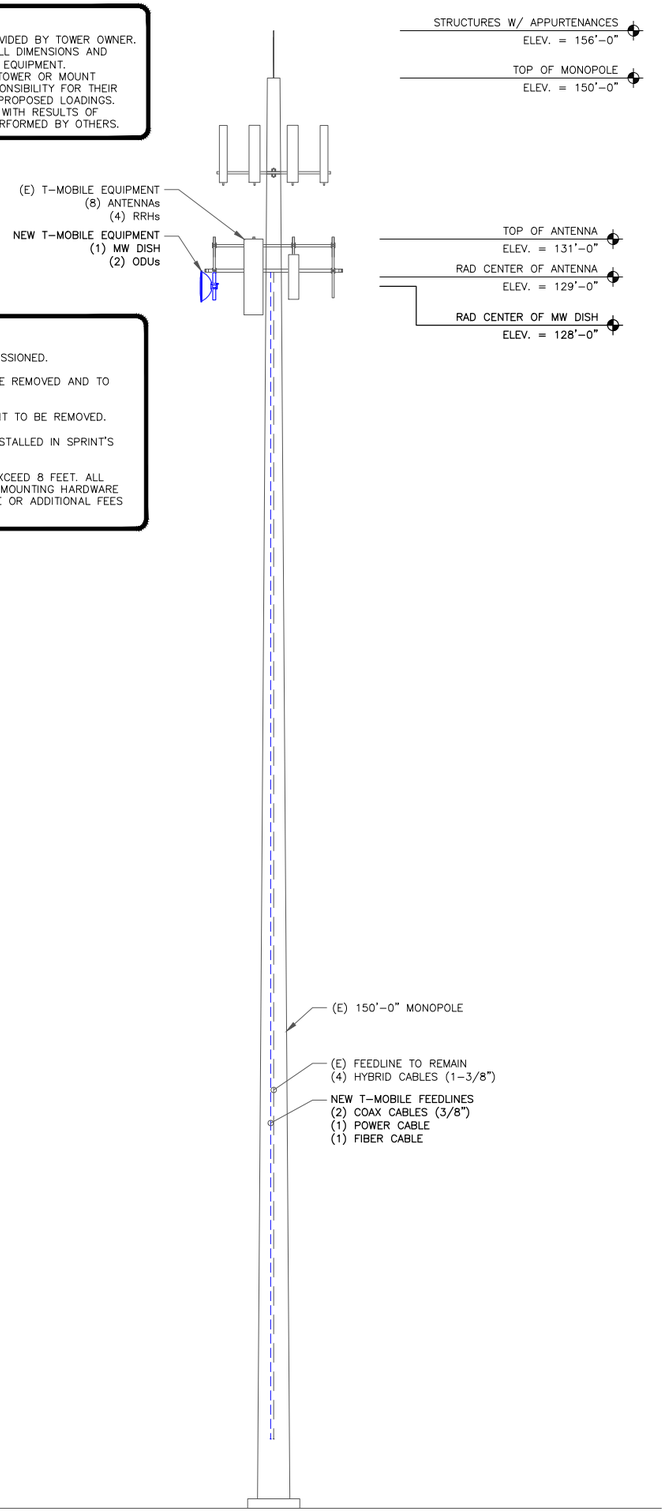
PROJECT SPECIFIC NOTES:

1. SPRINT EQUIPMENT WILL BE DECOMMISSIONED.
2. ALL SPRINT TOWER EQUIPMENT TO BE REMOVED AND TO RELINQUISH THEIR RAD CENTER.
3. EXISTING T-MOBILE TOWER EQUIPMENT TO BE REMOVED.
4. NEW T-MOBILE EQUIPMENT TO BE INSTALLED IN SPRINT'S PREVIOUS RAD CENTER.
5. VERTICAL TOWER SPACE MAY NOT EXCEED 8 FEET. ALL EQUIPMENT INCLUDING MOUNTS AND MOUNTING HARDWARE MUST FIT WITHIN VERTICAL ENVELOPE OR ADDITIONAL FEES MAY APPLY.

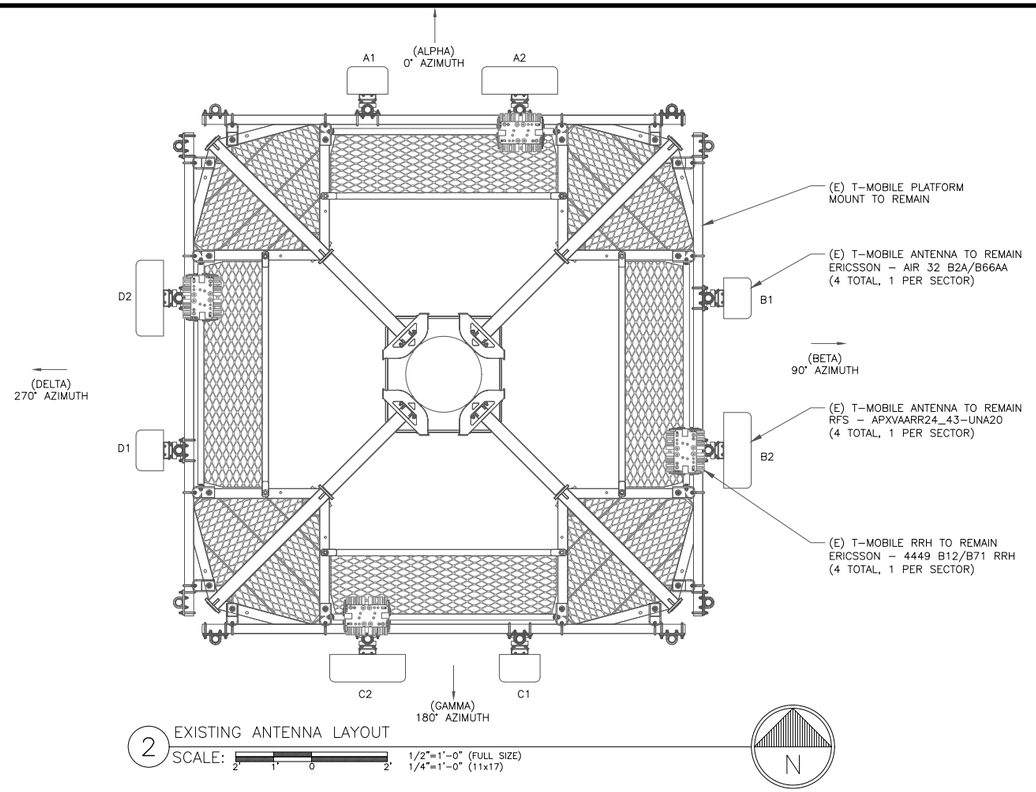
T-MOBILE EQUIPMENT

ANTENNA CL: 129'-0"
MICROWAVE DISH: 128'-0"
MOUNT CL: 131'-0"

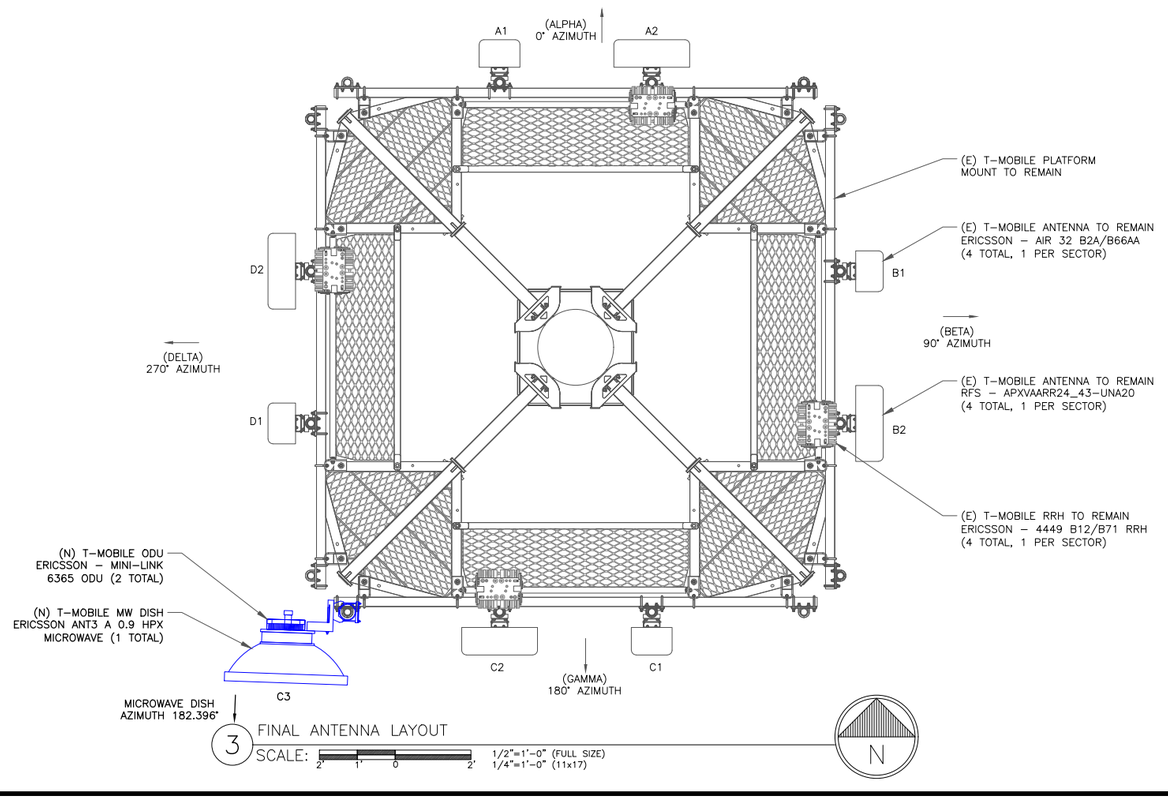
ANY AND ALL TOWER MOUNTED EQUIPMENT MUST NOT TRAP OR INTERFERE W/ EXISTING SAFETY CLIMB



1 FINAL ELEVATION
SCALE: 8' 6' 4' 2' 0 8' 1/8"=1'-0" (FULL SIZE) 1/16"=1'-0" (11x17)



2 EXISTING ANTENNA LAYOUT
SCALE: 2' 1' 0 2' 1/2"=1'-0" (FULL SIZE) 1/4"=1'-0" (11x17)



3 FINAL ANTENNA LAYOUT
SCALE: 2' 1' 0 2' 1/2"=1'-0" (FULL SIZE) 1/4"=1'-0" (11x17)

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EXISTING 150'-0"
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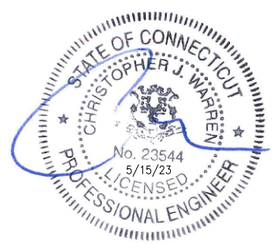


SHEET NUMBER: C-2

REVISION: 0

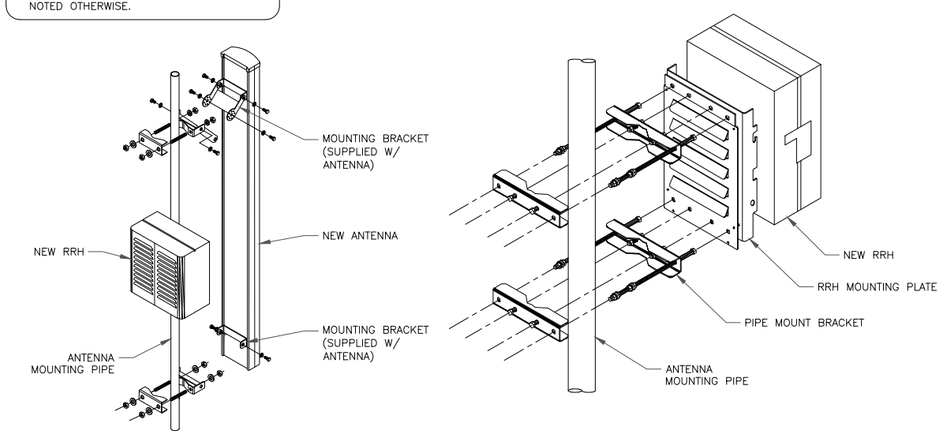
ANTENNA SCHEDULE

SECTOR	POS.	TECHNOLOGY	RAD CENTER	AZIMUTH	ANTENNA MANUFACTURER	ANTENNA MODEL	MECH. TILT	ELECT. TILT	TOWER MOUNTED EQUIPMENT	FEEDLINE TYPE
ALPHA	A1	–	129'–0"	0°	ERICSSON	AIR 32 B2A/B66AA	–	–	–	–
ALPHA	A2	–	129'–0"	0°	RFS	APXVAARR24_43–U–NA20	–	–	(1) ERICSSON – 4449 B12/B71	(1) 1–3/8" HYBRID
BETA	B1	–	129'–0"	90°	ERICSSON	AIR 32 B2A/B66AA	–	–	–	–
BETA	B2	–	129'–0"	90°	RFS	APXVAARR24_43–U–NA20	–	–	(1) ERICSSON – 4449 B12/B71	(1) 1–3/8" HYBRID
GAMMA	C1	–	129'–0"	180°	ERICSSON	AIR 32 B2A/B66AA	–	–	–	–
GAMMA	C2	–	129'–0"	180°	RFS	APXVAARR24_43–U–NA20	–	–	(1) ERICSSON – 4449 B12/B71	(1) 1–3/8" HYBRID
GAMMA	C3	–	128'–0"	182.396°	ERICSSON	ANT3 A 0.9 HPX	–	–	(2) ERICSSON – MINI–LINK 6365	(2) 3/8" COAX (1) POWER CABLE (1) FIBER CABLE
DELTA	D1	–	129'–0"	270°	ERICSSON	AIR 32 B2A/B66AA	–	–	–	–
DELTA	D2	–	129'–0"	270°	RFS	APXVAARR24_43–U–NA20	–	–	(1) ERICSSON – 4449 B12/B71	(1) 1–3/8" HYBRID

1 ANTENNA AND CABLE SCHEDULE
SCALE: NOT TO SCALE

INSTALLER NOTES:

1. COMPLY WITH MANUFACTURERS INSTRUCTIONS TO ENSURE THAT ALL RRHs RECEIVE ELECTRICAL POWER WITHIN 24 HOURS OF BEING REMOVED FROM THE MANUFACTURER'S PACKAGING.
2. DO NOT OPEN RRH PACKAGES IN THE RAIN.
3. ALL PIPES, BRACKETS, AND MISCELLANEOUS HARDWARE TO BE GALVANIZED UNLESS NOTED OTHERWISE.



2 ANTENNA WITH RRH MOUNTING DETAIL
SCALE: NOT TO SCALE

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EXISTING 150'-0"
MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
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0	05/15/23	RCD	100% FINALS	CB

STATE OF CONNECTICUT
CHRISTOPHER J. WARREN
No. 23544
5/15/23
LICENSED PROFESSIONAL ENGINEER

SHEET NUMBER: C-3

REVISION: 0

Microwave Path Datasheet

PCN Date: April 11, 2023
Job Number: 230411COMSAN01

Previous Job Number: 200601COMSRP02
RCN Number: 230411C0

ADMINISTRATIVE INFORMATION		
Site Name	CT11805A	CTFF013A
County / State	Fairfield County / CT	Fairfield County / CT
Status / License Basis	Engineering Proposal / Primary	Engineering Proposal / Primary
Radio Service	CF-Common Carrier Fixed	CF-Common Carrier Fixed
Station Class	FXO-Fixed	FXO-Fixed
Call Sign		
Licensee Name	T-Mobile License LLC	T-Mobile License LLC
SITE INFORMATION		
Latitude (NAD 83)	41 23 23.00 N	41 28 1.20 N
Longitude (NAD 83)	73 20 17.50 W	73 20 2.04 W
Ground Elevation (AMSL)	238.70 m / 783.1 ft	133.00 m / 436.3 ft
Antenna Structure Registration #	1258249	
Path Azimuth	2.393°	182.396°
Path Length / Atmospheric Loss / Free Space Loss	8.590 km (5.338 mi) / 0.1 dB / 132.1 dB	
PRIMARY ANTENNA INFORMATION		
Antenna Code	62731J	62731J
Manufacturer	ERICSSON	ERICSSON
Model / Diameter	BFZ 622 33/3D03H / 3.0 ft	BFZ 622 33/3D03H / 3.0 ft
Gain / Beamwidth / Tilt	38.40 dBi / 2.00° / -0.6°	38.40 dBi / 2.00° / 0.6°
Centerline (AGL)	24.69 m / 81.0 ft	39.01 m / 128.0 ft
Transmit Mode	Tx/Rx	Tx/Rx
RADIO INFORMATION		
Radio Code	M11051-1	M11051-1
Manufacturer	ERICSSON	ERICSSON
Model Description	Mini Link 6600 Split	Mini Link 6600 Split
Stability	0.001%	0.001%
Coordinated Power / RSL	21.0 / -35.5 dBm	21.0 / -35.5 dBm
Fixed Loss: Common / TX / RX	0.0 / 0.5 / 0.5 dBm	0.0 / 0.5 / 0.5 dBm

Radio Model	Modulation	Emission Designator	Data Rate (kbps)	Power (dBm)	EIRP (dBm)	RSL (dBm)	Power (dBm)	EIRP (dBm)	RSL (dBm)
ML6600/6365CA/1011SA/1368/080	1024 QAM	74M0D7W	679000	21.0	58.9	-35.5	21.0	58.9	-35.5
ML6600/6365CA/1011SA/1368/080	512 QAM	74M0D7W	614000	21.0	58.9	-35.5	21.0	58.9	-35.5
ML6600/6365CA/1011SA/1368/080	256 QAM	74M0D7W	542000	21.0	58.9	-35.5	21.0	58.9	-35.5
ML6600/6365CA/1011SA/1368/080	128 QAM	74M0D7W	470000	21.0	58.9	-35.5	21.0	58.9	-35.5
ML6600/6365CA/1011SA/1368/080	64 QAM	74M0D7W	397000	21.0	58.9	-35.5	21.0	58.9	-35.5
ML6600/6365CA/1011SA/1368/080	32 QAM	74M0D7W	317000	21.0	58.9	-35.5	21.0	58.9	-35.5
ML6600/6365CA/1011SA/1368/080	16 QAM	74M0D7W	253000	21.0	58.9	-35.5	21.0	58.9	-35.5
ML6600/6365CA/1011SA/1368/080	16 QAM	74M0D7W	217000	21.0	58.9	-35.5	21.0	58.9	-35.5
ML6600/6365CA/1011SA/1368/080	4 QAM	74M0D7W	126000	21.0	58.9	-35.5	21.0	58.9	-35.5
ML6600/6365CA/1011SA/1368/080	4 QAM	74M0D7W	108000	21.0	58.9	-35.5	21.0	58.9	-35.5

TRANSMIT FREQUENCIES (MHz)				
80.0 MHz Channel Bandwidth	10915.0 S (3)	10995.0 S (4)	11405.0 S (3)	11485.0 S (4)

1 PLUMBING DIAGRAM
SCALE: NOT TO SCALE

T-Mobile
1 RAVINIA DRIVE, SUITE 1000
ATLANTA, GA 30346

CROWN CASTLE
2000 CORPORATE DRIVE
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T-MOBILE SITE NUMBER:
CTFF013A

BU #: **857525**
NEWTOWN
DINGLEBROOK

24 DINGLEBROOK LANE
NEWTOWN, CT 06470

EXISTING 150'-0"
MONOPOLE

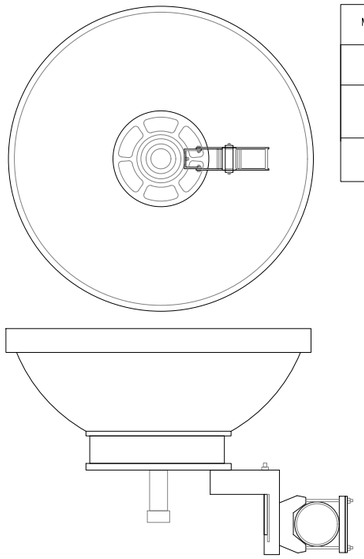
ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	05/10/23	RCD	PRELIMINARY	CB
0	05/15/23	RCD	100% FINALS	CB

STATE OF CONNECTICUT
CHRISTOPHER J. WARREN
No. 23544
5/15/23
LICENSED
PROFESSIONAL ENGINEER

SHEET NUMBER: C-4

REVISION: 0



MANUFACTURER	ERICSSON
MODEL #	ANT3 A 0.9 HPX
DIAMETER	39.37"
NET WEIGHT	45.19 lbs

1 (N) ERICSSON ANT3 A 0.9 HPX MICROWAVE DISH SPEC
SCALE: NOT TO SCALE

MANUFACTURER	ERICSSON
MODEL #	MINI-LINK 6365
DIMENSIONS, NOMINAL	7.0" x 7.8"x 3.1"
NET WEIGHT	5.5 lbs

2 (N) ERICSSON MINI-LINK 6365 ODU SPEC
SCALE: NOT TO SCALE

3 NOT USED
SCALE: NOT TO SCALE

4 NOT USED
SCALE: NOT TO SCALE

5 NOT USED
SCALE: NOT TO SCALE

6 NOT USED
SCALE: NOT TO SCALE

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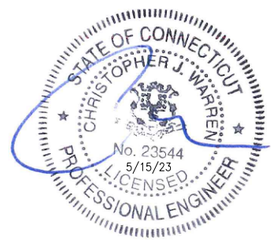
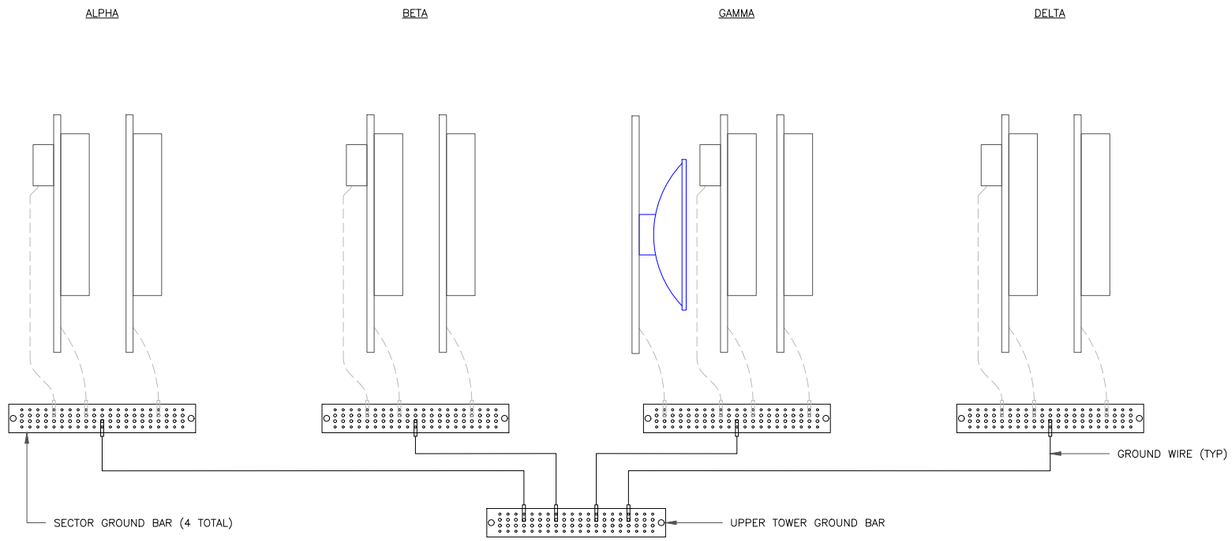


SHEET NUMBER: C-5

REVISION: 0



NOTE:

ALL NEW GROUNDS TO BE #6 STRANDED COPPER WITH GREEN INSULATION UNLESS NOTED OTHERWISE.

1 ANTENNA GROUNDING DIAGRAM
SCALE: NOT TO SCALE

T-Mobile
1 RAVINIA DRIVE, SUITE 1000
ATLANTA, GA 30346

CROWN CASTLE
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DINGLEBROOK

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EXISTING 150'-0"
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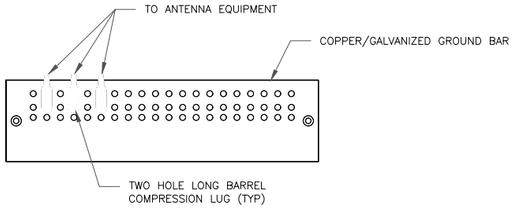
0	05/15/23	RCD	100% FINALS	CB

STATE OF CONNECTICUT
CHRISTOPHER J. WARREN
No. 23544
5/15/23
LICENSED PROFESSIONAL ENGINEER

SHEET NUMBER: G-1

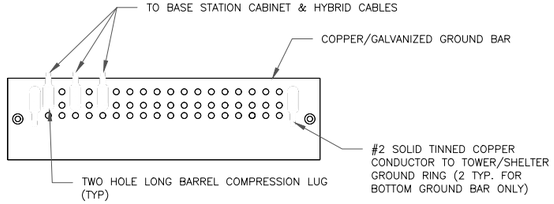
REVISION: 0



NOTES:

1. DOUBLING UP "OR STACKING" OF CONNECTIONS IS NOT PERMITTED.
2. EXTERIOR ANTIOXIDANT JOINT COMPOUND TO BE USED ON ALL EXTERIOR CONNECTIONS.
3. GROUND BAR SHALL NOT BE ISOLATED FROM TOWER. MOUNT DIRECTLY TO ANTENNA MOUNT STEEL.

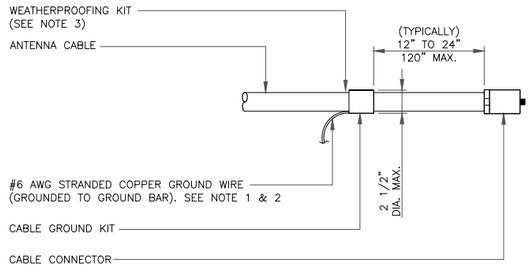
1 ANTENNA SECTOR GROUND BAR DETAIL
SCALE: NOT TO SCALE



NOTES:

1. EXTERIOR ANTIOXIDANT JOINT COMPOUND TO BE USED ON ALL EXTERIOR CONNECTIONS.
2. GROUND BAR SHALL NOT BE ISOLATED FROM TOWER. MOUNT DIRECTLY TO TOWER STEEL (TOWER ONLY).
3. GROUND BAR SHALL BE ISOLATED FROM BUILDING OR SHELTER.

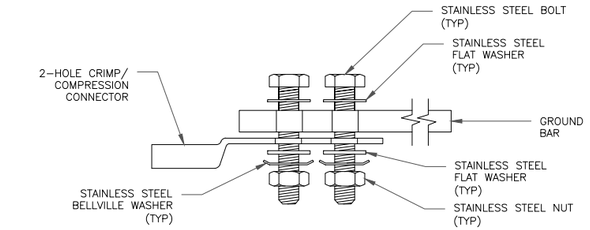
2 TOWER/SHELTER GROUND BAR DETAIL
SCALE: NOT TO SCALE



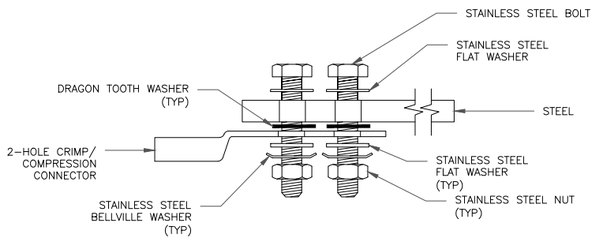
NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
3. WEATHER PROOFING SHALL BE TWO-PART TAPE KIT, COLD SHRINK SHALL NOT BE USED.

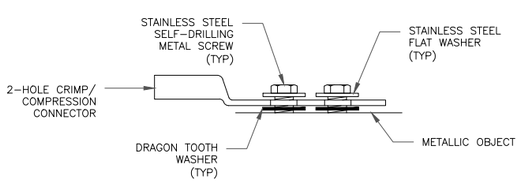
3 CABLE GROUND KIT CONNECTION
SCALE: NOT TO SCALE



SINGLE CONNECTOR AT GROUND BARS



SINGLE CONNECTOR AT STEEL OBJECTS



SINGLE CONNECTOR AT METALLIC/STEEL OBJECTS

4 HARDWARE DETAIL FOR EXTERIOR CONNECTIONS
SCALE: NOT TO SCALE

5 NOT USED
SCALE: NOT TO SCALE

6 NOT USED
SCALE: NOT TO SCALE

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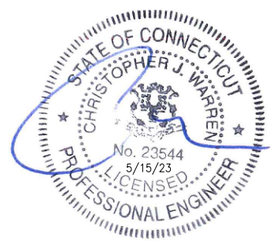

SHEET NUMBER: G-2
REVISION: 0

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2000 CORPORATE DRIVE
CANONSBURG PA 15317
724-416-2000

JPMorgan Chase Bank, N.A.
DALLAS TX
32-61/1110

2863503

SIX HUNDRED TWENTY FIVE AND 00/100********** DATE 05/15/23 $*******625.00

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Ten Franklin Square
New Britain CT 6051

2695915

VP and Controller

VOID AFTER 180 DAYS

⑈2863503⑈ ⑆111000614⑆ 1034104533⑈

Check No 2863503
Check Date 05/15/23

Stub 1 of 1

CKRQ ZONING 857525 648398	05/15/23	Invoice Summ	625.00		625.00
			625.00		625.00