



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

June 15, 2022

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

**RE: Notice of Exempt Modification for T-Mobile: CT11078B
Crown Site ID# 806355
281 Wood House Road Fairfield, CT 06824
Latitude: 41° 11' 45.30" / Longitude: -73° 16' 52.90"**

Dear Ms. Bachman:

T-Mobile currently maintains nine (9) antennas at the 140-foot mount on the existing 171-foot monopole tower located at 281 Wood House Road, Fairfield, CT. The property is owned by J Fernandes Properties and the tower is owned by Crown Castle. T-Mobile now intends to replace nine (9) antennas and ancillary equipment at the 140ft level. 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:

- (3) RFS RPXVAALL24_43_U-NA20 Antennas
- (3) Ericsson – Air6419 B41 Antenna
- (3) Commscope -W-65A-R1 Antenna
- (3) Ericsson-Radio 4480 B71+ B85 RRU
- (3) Ericsson-Radio 4460 B25+ B66 RRU
- (4) Hybrid Cable 6x24
- Antenna Mount Modification

Remove:

- (3) Andrew – LNX-6515DS-A1M Antennas
- (3) Ericsson Air21 KRC118023-1_B2A_B4P Antennas
- (3) Ericsson Air21 KRC118023-1_B2P_B4A Antennas
- (3) Ericsson RRUS-11-B12
- (3) Generic Twin Style 1B-AWS
- (6) 1-5/8" Coaxial Cables
- (1) Hybrid Cable

Ground:

Install New:

- (1) RP6651 IN Cabinet
- (1.) 6160 & B160 Battery Cabinet
- (2.) PSU 4813 Voltage Booster
- (1^) CSR IXRE Router IN Cabinet

Removal:

- (1) DUW30 From € Cabinet
- (6) RU22 From € Cabinet

The facility was approved by the Connecticut Siting Council on February 17, 1988, Docket Number 86. This approval was given without conditions.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Brenda L Kupchick, First Selectwoman, Town of Fairfield CT, Jim Wendt, Planning Director, Town of Fairfield, CT. J Fernandes Properties LLC – Property Owner and Crown Castle is the tower owner.

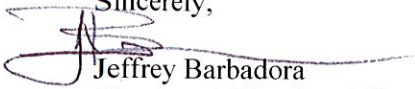
1. The proposed modifications will not result in an increase in the height of the existing tower.
2. The proposed modifications will not require the extension of the site boundary.
3. The proposed modification will not increase noise levels at the facility by six decibels or more, or to levels that exceed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

Melanie A. Bachman

Page 3

Sincerely,



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

Attachments

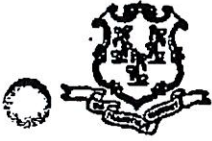
cc:

Brenda L Kupchick, First Selectwoman
Sullivan Independence Hall, 2nd Fl
725 Old Post Road
Fairfield, CT 06824
(203) 256-3030

Jim Wendt, Planning Director
Sullivan Independence Hall
725 Old Post Road
Fairfield, CT 06824
(203) 256-3050

J Fernandes Properties LLC – Property Owner
281 Woodhouse Road
Fairfield, CT 06824

Crown Castle - Tower Owner



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

135 Main Street, Suite 401
New Britain, Connecticut 06051
Phone: 827-7682

BK

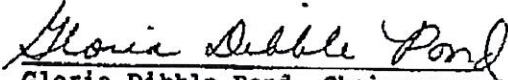
CERTIFICATE

OF

ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED

Pursuant to section 15-50k of the General Statutes of Connecticut, as amended, the Connecticut Siting Council hereby issues a Certificate of Environmental Compatibility and Public Need in Docket No. 86 to Metro Mobile CTS of Fairfield County Inc., for tower sites in Greenwich and Fairfield, Connecticut. This Certificate is issued in accordance with and subject to the terms and conditions set forth in the Decision and Order of the Council on February 17, 1988.

By order of the Council,


Gloria Dibble Pond, Chairperson

February 17, 1988

1009E



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

136 Main Street, Suite 401
New Britain, Connecticut 06051-4225
Phone: 827-7682

August 6, 1992

David S. Malko
Manager, Engineering and
Regulatory Services
Bell Atlantic Metro Mobile
20 Alexander Drive
Wallingford, CT 06492

RE: Metro Mobile CTS of Fairfield County, Inc., notice of intent to allow Springwich Cellular Limited Partnership to install cellular telecommunications antennas and associated equipment on an existing facility site located off Wood House Road, Fairfield, Connecticut.

Dear Mr. Malko:

At a meeting held August 4, 1992, the Connecticut Siting Council acknowledged your notice of an exempt modification for an existing tower site on Wood House Road in Fairfield, Connecticut.

As proposed in your notice dated July 21, 1992, the modification is in compliance with the exception criteria specified in Regulations of State Agencies 16-50j-72 for changes to an existing facility site that would not increase the tower height, extend the boundary of the tower site, increase noise levels at the tower site boundary by 6 decibels, and add radio frequency transmitting capability which increases the total power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to Section 22a-162 of the Connecticut General Statutes.

The Council is pleased to acknowledge this first shared use of existing cellular towers by two cellular carriers which meets the Council's long-time goal and the public interest of sharing facilities to avoid the proliferation of additional tower structures.

Very truly yours,

A handwritten signature in cursive script, appearing to read "Mortimer A. Gelston".

Mortimer A. Gelston
Chairman

MAG/TEF/cp

cc: Peter Van Wilgan

5766E-3

**④ Bell Atlantic
Metro Mobile**

Bell Atlantic Metro Mobile
20 Alexander Drive
P.O. Box 5029
Wallingford, CT 06492
203 269-8838

July 21, 1992

Connecticut Siting Council
136 Main Street
Suite 401
New Britain, Connecticut 06051

Attention: Joel M. Rinebold, Executive Director

Re: Metro Mobile CTS of Fairfield County, Inc. - Fairfield Cell

Dear Mr. Rinebold:

Metro Mobile CTS of Fairfield County, Inc. ("Metro Mobile" or the "Company") plans to allow Springwich Cellular Limited Partnership to install cellular antennas and related equipment at the existing tower facility owned by Metro Mobile in Fairfield, Connecticut. Please accept this letter as notification, pursuant to R.C.S.A. Section 16-50j-73, of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b).

The existing facility is a 160' self supporting monopole tower located on a 70' by 70' parcel off of Wood House Road in Fairfield. Metro Mobile plans to add a 15' by 21' addition to the existing equipment building while Springwich Cellular Limited Partnership plans to install 9 antennas to the existing tower and cellular equipment to the building addition.

The addition of Springwich Cellular's antennas and equipment and Metro Mobile's building addition to the tower site does not constitute a modification as defined in C.G.S. Section 16-50i(d) because the general physical characteristics of the facility will not be significantly changed or altered. Rather, Metro Mobile's and Springwich Cellular's planned use of the facility falls squarely within those activities which explicitly do not constitute a modification to an existing tower, as set forth in R.C.S.A. Section 16-50j-72(b).

First, the height of the existing facility will be unaffected. Nine panel type transmit/receive antennas, Model DB-834-RF, will be face mounted on the lower platform at 144' AGL. The antennas will extend upward approximately 3 1/2' from the 144' level points. Thus, Springwich Cellular's antennas will extend no higher than the 148' level of the 173' tower including existing Metro Mobile appurtenances.

Second, the proposed addition will not expand the site (See attached site plan). Metro Mobile's equipment building addition to accommodate Springwich Cellular's equipment will extend 15' from the existing building and will be within the leased parcel. No strengthening of the tower is necessary in order for the tower to support the additional loading.

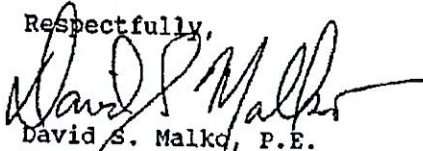
Third, the proposed addition will not increase the noise levels at the existing facility by six decibels or more. Except during construction, the only noise associate with Springwrich Cellular's equipment will be from air conditioning, when in use.

Fourth, Springwrich Cellular's additional antennas will not increase the total radio frequency electromagnetic radiation power density measured at the tower site boundary to a level at or above the State Department of Environmental Protection standard. A worst case calculation at the base of the tower indicates that Springwrich Cellular's antennas combined with Metro Mobile's operation would result in a power density level of 0.15964 mW/cm². This power density level is 18.3% of the standard for cellular frequencies of 2.92mW/cm².

For the foregoing reasons, Metro Mobile respectfully submits that the planned addition of Springwrich Cellular's antennas and equipment, and Metro Mobile's building addition to the existing facility, constitutes an exempt modification under R.C.S.A. Section 16-50j-72(b).

By copy of this letter, the chief elected official of the Town of Fairfield is receiving written notice of the intent to construct an exempt modification to the Metro Mobile facility in Fairfield, as required by R.C.S.A. Section 16-50j-73.

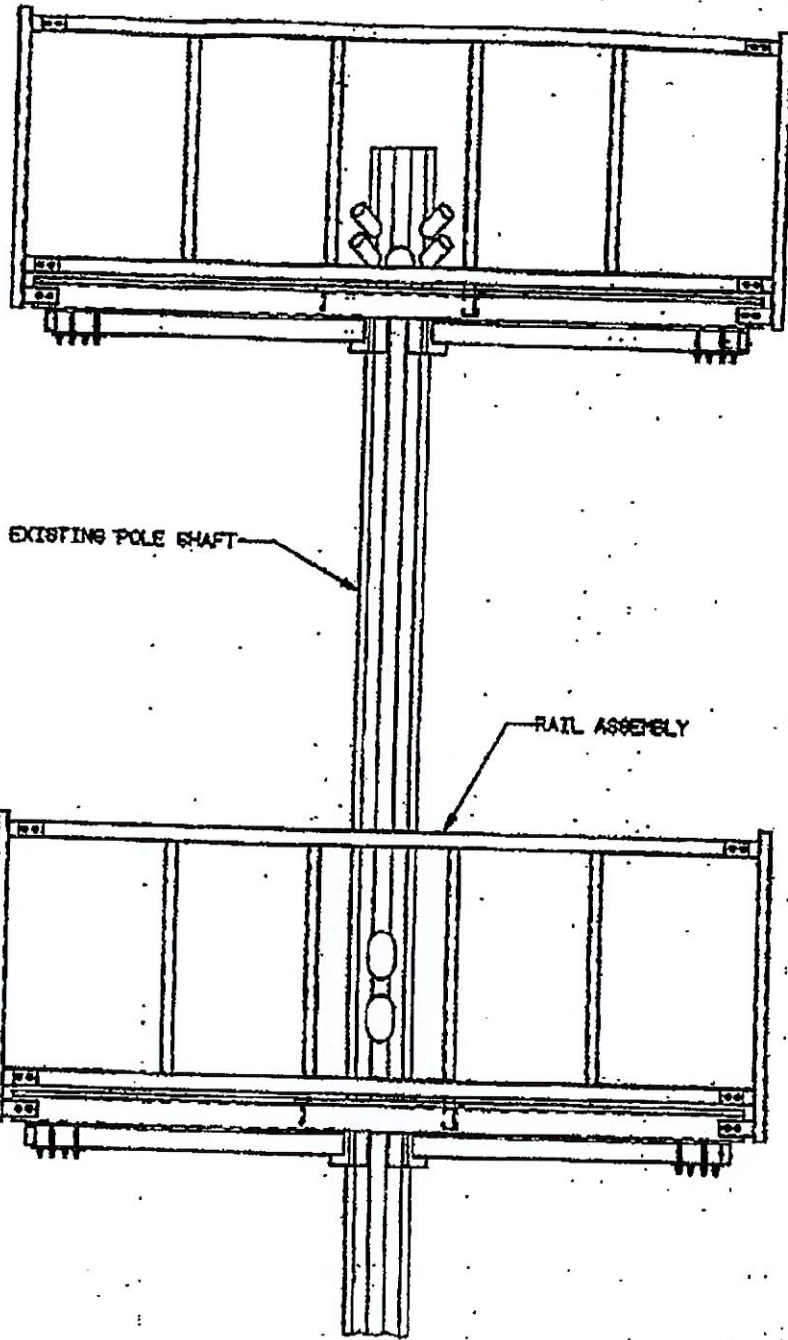
Respectfully,




David S. Malko, P.E.
Manager, Engineering and Regulatory Services

Attachments

cc: Jacquelyn C. Durrell, 1st Selectman



NUMBER METROMOBILE - CT PROPOSED PLATFORM MODIFICATION FOR THE EXISTING FAIRFIELD SITE		MODEL 10750-00	UNIT 160 FT	WEIGHT NONE	DATE 04-01-92	 VERMONT <small>STATE ENGINEER</small>
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**© Bell Atlantic
Metro Mobile**

Bell Atlantic Metro Mobile
20 Alexander Drive
PO Box 5029
Wallingford, CT 06492
203 269-8858

July 31, 1992

Mr. Joel M. Rinebold, Executive Director
Connecticut Siting Council
136 Main Street
New Britain, Connecticut 06051

Re: Fairfield Exempt Modification

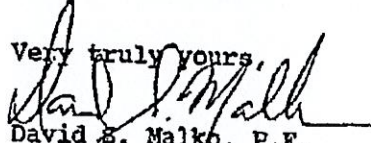
Dear Joel:

This is to provide you additional information in response to the recent memorandum from the Town of Fairfield. As indicated in the original filing, Metro Mobile plans to expand its existing building to accommodate a Springwichee cell site. This building expansion will be accomplished by adding two new sections, identical in all respect, to the two sections currently in place. These sections will house the Springwichee Cellular equipment which, like ours, requires heating, air-conditioning and ventilation. Enclosed are a copy of the manufacturer's engineered drawings and our electrical, mechanical, structural and grounding plans for your information and/or review. Also enclosed are the Valmont drawings for the platform reworking necessary to accommodate Springwichee's antennas.

Our procedure would be to provide these plans and drawings to the town's building department in order to secure the necessary building permits after receipt of the Council's acknowledgement of our exempt modification filing.

I trust this information will answer any outstanding questions raised by either the town or your staff such that a favorable ruling can be issued at your upcoming August 4, 1992 meeting. As always, Metro Mobile remains committed to our common goal of shared tower use as a means of minimizing the proliferation of towers wherever possible.

Very truly yours,


David S. Malko, P.E.
Manager, Engineering &
Regulatory Services

Enclosures

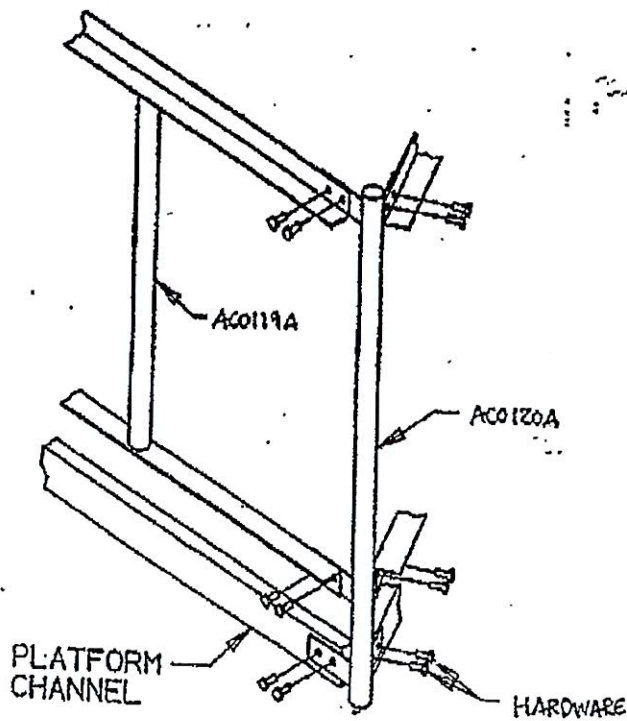
cc: Joseph E. Devonshuk, Director of TPZ

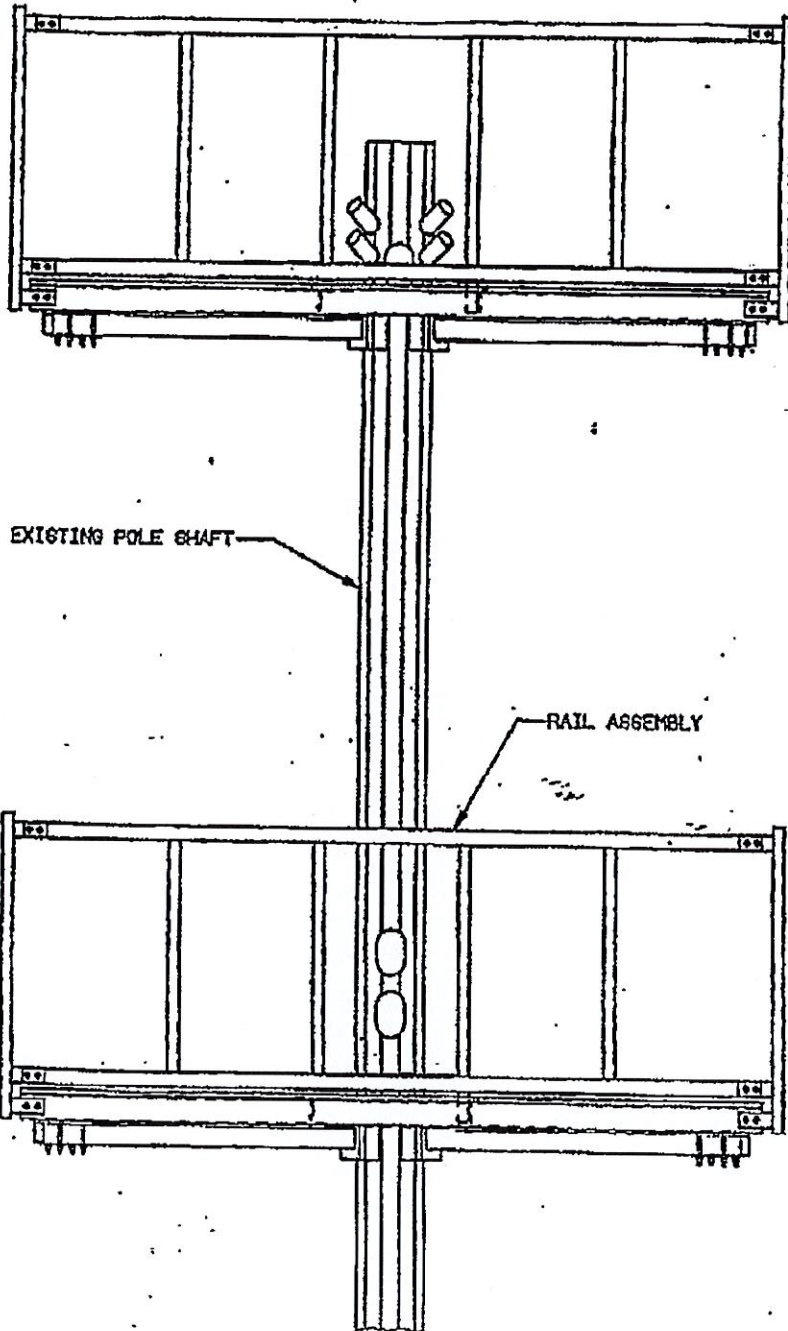
JUNE 24, 1992

ADDITIONAL PARTS FOR ADDING RAILS TO TWO (2) PLATFORMS:

PART NO	DESCRIPTION	WEIGHT	QTY
AC0119A	PLATFORM RAIL ASSEMBLY	188#	6
	angle - 3 x 3 x 1/4 x 12'-10" lg	2ea	
	pipe - 2" schedule 40 x 3'-8.25" lg	4ea	
AC0120A	CORNER POST ASSEMBLY	28#	6
	pipe - 2" schedule 40 x 4'-11" lg	1ea	
	tabs - 1/2 x 3 x 0'-7 1/4"	6ea	
161147	5/8" dia x 1 1/2" lg bolt - A325		76
333014	5/8" dia lock nut - A563		76

Total price for both rail kits and hardware: \$1,750.00






DESIGNER
 METROMOBILE - CT
 PROPOSED PLATFORM MODIFICATION
 FOR THE EXISTING FAIRFIELD SITE

NUMBER 10730-08	BOARD MAL	SCALE NONE
DATE 11/20/01	DATE 11/20/01	
SCALE 1/4" = 1'-0"		



VALMONT
 VALLEY SPRING, DE.
 VALLEY SPRING, DE.

TOWN OF FAIRFIELD
INTER-OFFICE CORRESPONDENCE

TO: Sam D. Koutas, Executive Assistant to First Selectman
FROM: Joseph E. Devonshuk, Director of TRZ. 
SUBJECT: Bell Atlantic Metro Mobile
DATE: July 29, 1992

This memo is in response to the letters from the Bell Atlantic Metro Mobile concerning expansion of their existing tower facility.

Please be advised that based on the information submitted, the Town Plan and Zoning department feels that the addition of Springwich Cellular's antennas and equipment and Metro Mobiles building addition to the tower site does constitute a modification and does significantly change and alter the physical characteristics of this facility.

This department, therefore, requests additional information including engineered building plans for the 15' by 21' addition to the existing equipment building and for the installation of the nine (9) antennas. A more specific explanation of the use of this facility is, also, required including an explanation for the need of air-conditioning equipment. Section 5.1.4. of the Fairfield Zoning Regulations states that public utility substations are subject to the securing of a special exception from ~~the~~ Town Plan and Zoning Commission.

This requested information is essential to determine if a special exception is required. If you have any questions or need any further comment please do not hesitate to contact me.

cc: David S. Malko, P.E., Bell Atlantic Metro Mobile
Joel M. Rinebond, Executive Director, CT. Siting Council



Town of Fairfield
FAIRFIELD, CONNECTICUT 06430

tl # 256-3000

Jacquelyn C. Durrell
First Selectman

July 29, 1992

Mr. David S. Malko, P.E.
Manager, Engineering and Regulatory Services
Bell Atlantic Metro Mobile
20 Alexander Drive
P.O. Box 5029
Wallingford, CT 06492

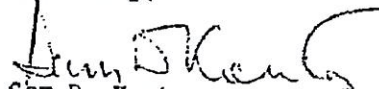
Dear Mr. Malkos:

Please be advised that based on the information submitted, the Fairfield Town Plan and Zoning Department feels that the addition of Springwich Cellular's antennas and equipment and Metro Mobile's building addition to the tower site does constitute a modification and does significantly change and alter the physical characteristics of this facility.

Town Plan and Zoning; therefore, requests additional information including engineered building plans for the 15' by 21' addition to the existing equipment building and for the installation of the nine (9) antennas. A more specific explanation of the use of this facility is, also, required including an explanation for the need of air-conditioning equipment. Section 5.1.4. of the Fairfield Zoning Regulations states that public utility substations are subject to the securing of a special exeption from the Town Plan and Zoning Commission.

This requested information is essential to determine if a special exception is required. If you have any questions or need any further comment please do not hesitate to contact Mr. Joe Devonshuk, Planning Director, or me.

Sincerely,


Sam D. Koutas
Executive Assistant

Sublease
 7/30/92 (in 1st option)

Records Information Management System (TIMS) - LEASE OPTION
 Lease (Module) Module (Revision 4.5)

Property Information

Site Number: _____
 Property Type: _____
 Parcel ID: 0
 Alternate Name: _____

Name: 507 RICHMOND RD
 Address 1: 507 RICHMOND RD
 Address 2: 9th E BLDG
 City/State: NEW BRUNSWICK NJ

ship

Owner Information: Owner ID: 0

Lease Information

INSTRUMENT: METRO MOBILE CTS OFFICE Field City.
 ADDRESS: 180 WASHINGTON VALLEY Rd.
 CITY/STATE: BEDMINSTER NJ 07921

Field City.

Lease Information

Quantity: 200
 Base Term: 1,000 (m)
 Annual Base Amount: \$0.00
 Renewal: 0

Lease Term: option to renew same as overlease, if sublease still in effect, w/ 90 days notice.

Lease Charge Dates

Start Date	End Date	Notify Date	Action Date	Action Amount	Note
				\$0.00	*
				\$0.00	*
				\$0.00	*

Lease Increments

Increment Type	Next	Notify Date	Action Date	Period (months)	Increase Amount	Note
						*
						*
						*

Standard Lease?
 Can Sublease?
 Insurance Notes: _____
 Additional Insurance Required?
 Certificate Required?

* SubLEASE

NO CONSENTS REQ'D FROM OVERLEASED LOCAL TO THIS SUBLEASE.

Sublease (Language):
 sublease to expire one (1) day prior to term of overlease.

The Notes:
 NO CONSENTS REQ'D FROM OVERLEASED LOCAL TO THIS SUBLEASE.

* sublessor to furnish/install a 290' tower in addition to existing shelter, all antennas, cabling and route cables to sublessor's equipment in bldg. sublessor to provide cable rack support

Parcel: 4, 773 A
 min (9) transmit cellular receive antennas mounted on existing 160 FT tower

© Bell Atlantic
Metro Mobile

Bell Atlantic Metro Mobile
20 Alexander Drive
P.O. Box 5029
Wallingford, CT 06492
203 269-8858

July 21, 1992

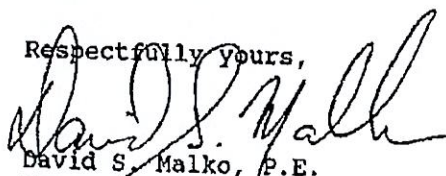
The Honorable Jacquelyn C. Durrell
Office of the First Selectman
725 Old Post Road
Fairfield, Connecticut 06430

Dear Ms. Durrell:

Metro Mobile CTS of Fairfield County, Inc. and Springwich Cellular Limited Partnership plan to install cellular antennas and related equipment at an existing tower site owned by Metro Mobile CTS of Fairfield County, Inc. in Fairfield, Connecticut. As required by Section 16-50j-73 of the Regulations of Connecticut State Agencies (R.C.S.A.), please accept this letter and the attached letter to the Connecticut Siting Council dated May 27, 1992, as notice of intent of our exempt modification to an existing tower pursuant to R.C.S.A. Section 16-50j-72(b).

The attached letter fully sets forth Metro Mobile's proposal. However, if you have any questions or require any further information on our plans or the Siting Council's procedures, please contact the undersigned at 294-7403, or Mr. Joel M. Rinebold, Executive Director, Connecticut Siting Council at 827-7682.

Respectfully yours,



David S. Malko, P.E.
Manager, Engineering and Regulatory Services

Attachments

281 WOOD HOUSE ROAD

Location 281 WOOD HOUSE ROAD

Mblu 118/ 57/ / /

Acct# 06700

Owner J FERNANDES PROPERTIES
LLC

Assessment \$563,850

Appraisal \$805,500

PID 8854

Building Count 1

Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2021	\$422,600	\$382,900	\$805,500

Assessment			
Valuation Year	Improvements	Land	Total
2021	\$295,820	\$268,030	\$563,850

Owner of Record

Owner J FERNANDES PROPERTIES LLC

Sale Price \$0

Co-Owner

Certificate

Address 281 WOOD HOUSE ROAD
FAIRFIELD, CT 06824-1823

Book & Page 5620/0132

Sale Date 12/08/2017

Instrument 02

Ownership History

Ownership History					
Owner	Sale Price	Certificate	Book & Page	Instrument	Sale Date
J FERNANDES PROPERTIES LLC	\$0		5620/0132	02	12/08/2017
J FERNANDES HOME IMPROVEMENT	\$450,000		5592/0251	25	09/20/2017
GHOSH MOITRAYEE & RANJAN	\$172,000		0706/0293		06/13/1983

Building Information

Building 1 : Section 1

Year Built: 1968
Living Area: 2,426
Replacement Cost: \$423,187

Building Percent Good: 77
 Replacement Cost
 Less Depreciation: \$325,900

Building Attributes

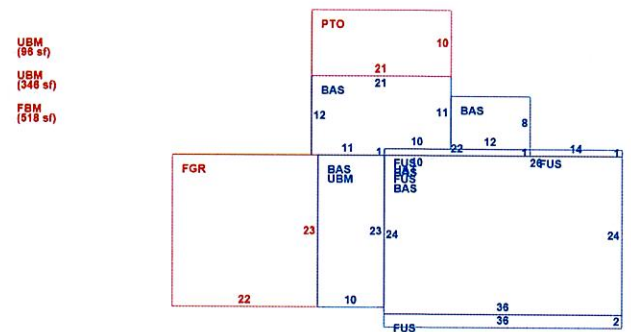
Field	Description
Style:	Colonial
Model	Residential
Grade:	05
Stories:	2 Stories
Occupancy	1
Exterior Wall 1	Vinyl Siding
Exterior Wall 2	
Roof Structure:	Gable/Hip
Roof Cover	Asphalt
Interior Wall 1	Drywall
Interior Wall 2	
Interior Flr 1	Hardwood
Interior Flr 2	Carpet
Heat Fuel	Oil
Heat Type:	Hot Water
AC Type:	None
Total Bedrooms:	4 Bedrooms
Total Bthrms:	2
Total Half Baths:	1
Total Xtra Fixtrs:	
Total Rooms:	8 Rooms
Bath Style:	Average
Kitchen Style:	Average
Num Kitchens	01
FCPZ	
Num Park	
Fireplaces	
Fndtn Cndtn	
Basement	

Building Photo



(https://images.vgsi.com/photos2/FairfieldCTPhotos/A0087\IMG_5839_876)

Building Layout



(ParcelSketch.aspx?pid=8854&bid=8636)

Building Sub-Areas (sq ft)

Code	Description	Gross Area	Living Area
BAS	First Floor	1,454	1,454
FUS	Upper Story, Finished	972	972
FBM	Basement, Finished	518	0
FGR	Garage	506	0
PTO	Patio	210	0
UAT	Attic, Unfinished	864	0
UBM	Basement, Unfinished	672	0
		5,196	2,426

Extra Features

Extra Features				
Code	Description	Size	Value	Bldg #
FPL3	2.0 STORY FIREPLACE	1.00 UNITS	\$5,800	1
FPL1	1.0 STORY FIREPLACE	1.00 UNITS	\$3,900	1

Land**Land Use**

Use Code 1010
Description Single Fam MDL-01
Zone AAA
Neighborhood 0057
Alt Land Appr No
Category

Land Line Valuation

Size (Sqr Feet) 87188
Depth 0
Assessed Value \$268,030
Appraised Value \$382,900

Outbuildings

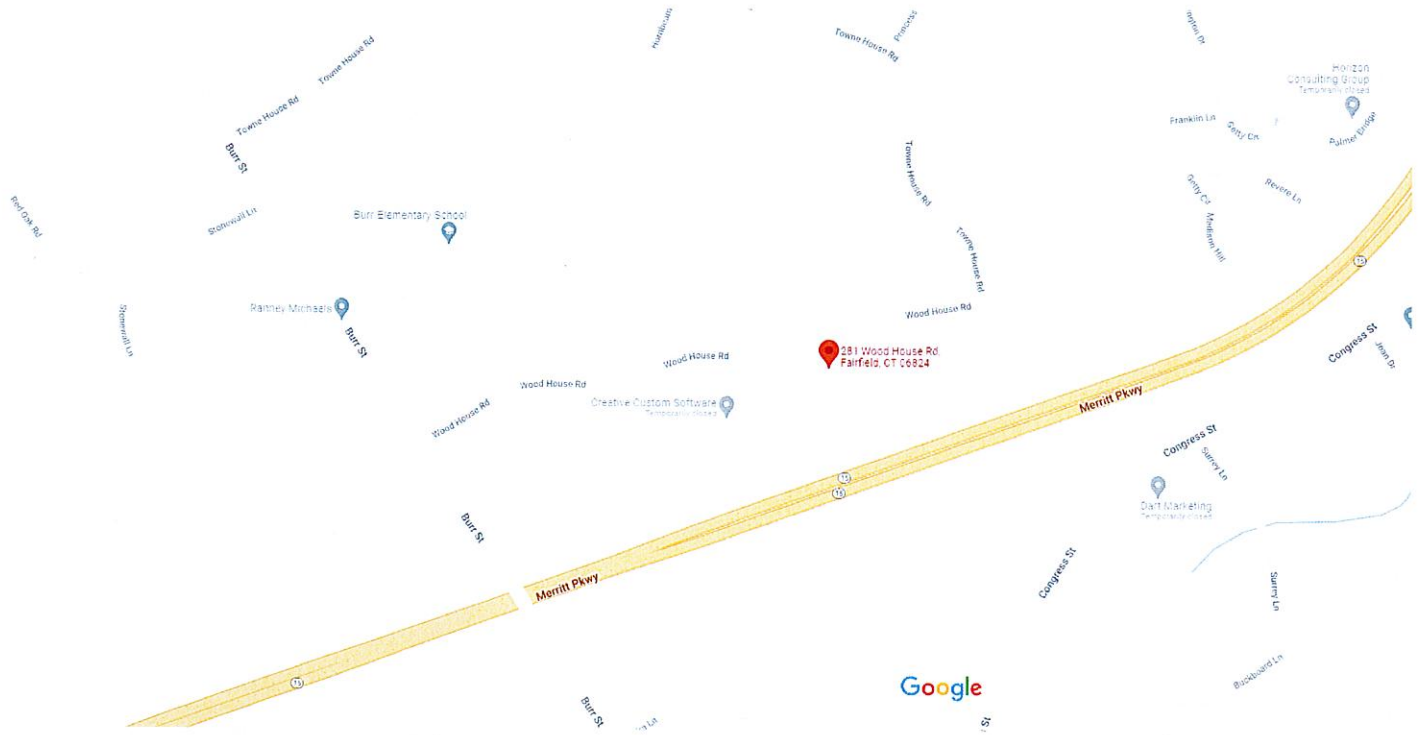
Outbuildings						Legend
Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
MSC40	UTIL BLD			1.00 UNIT	\$31,000	1
MSC40	UTIL BLD			1.00 UNIT	\$31,000	1
MSC19	EQUIP SHED			1.00 UNIT	\$10,000	1
GEN1	GENERATOR			1.00 UNITS	\$15,000	1

Valuation History

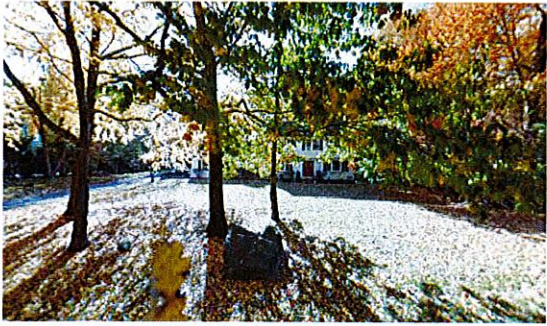
Appraisal			
Valuation Year	Improvements	Land	Total
2021	\$422,600	\$382,900	\$805,500
2020	\$422,600	\$382,900	\$805,500
2019	\$387,400	\$368,600	\$756,000

Assessment			
Valuation Year	Improvements	Land	Total
2021	\$295,820	\$268,030	\$563,850
2020	\$295,820	\$268,030	\$563,850
2019	\$271,180	\$258,020	\$529,200

281 Wood House Rd



Map data ©2022 200 ft



281 Wood House Rd

Fairfield, CT 06824
Building

- 
Directions
- 
Save
- 
Nearby
- 
Send to phone
- 
Share

Photos

Barbadora, Jeff

From: TrackingUpdates@fedex.com
Sent: Thursday, June 16, 2022 9:51 AM
To: Barbadora, Jeff
Subject: FedEx Shipment 777140626209: Your package has been delivered

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



Hi. Your package was
delivered Thu, 06/16/2022 at
9:47am.



Delivered to 725 OLD POST RD, FAIRFIELD, CT 06824

OBTAIN PROOF OF DELIVERY

TRACKING NUMBER [777140626209](#)

FROM Jeff Barbadora
1800 W. Park Drive
WESTBOROUGH, MA, US, 01581

TO Town of Fairfield
Brenda Kuponick, First Selectwoman
Sullivan Independence Hall, 2nd FL
726 Old Post Road
FAIRFIELD, CT, US, 06824

REFERENCE 799001 7630

SHIPPER REFERENCE 799001 7630

SHIP DATE Wed 6/15/2022 05:11 PM

PACKAGING TYPE FedEx Envelope

ORIGIN WESTBOROUGH, MA, US, 01581

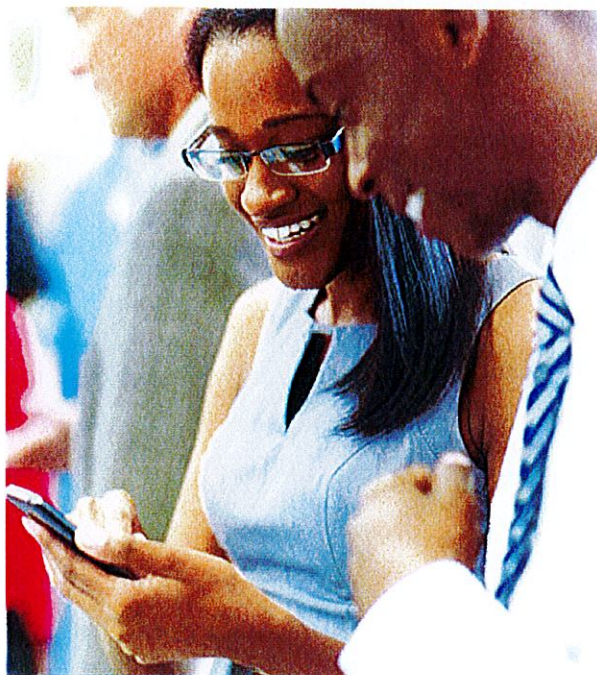
DESTINATION FAIRFIELD, CT, US, 06824

SPECIAL HANDLING Deliver Weekday

NUMBER OF PIECES 1

TOTAL SHIPMENT WEIGHT 1.00 LB

SERVICE TYPE FedEx Priority Overnight



Get the FedEx® Mobile app

Create shipments, receive tracking alerts, redirect packages to a FedEx retail location for pickup, and more from the palm of your hand - [Download now.](#)

Barbadora, Jeff

From: TrackingUpdates@fedex.com
Sent: Thursday, June 16, 2022 9:51 AM
To: Barbadora, Jeff
Subject: FedEx Shipment 777140660410: Your package has been delivered

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



Hi. Your package was
delivered Thu, 06/16/2022 at
9:47am.



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TO Town of Fairfield
Jim Wendt, Planning Director
Sullivan Independence Hall
725 Old Post Road
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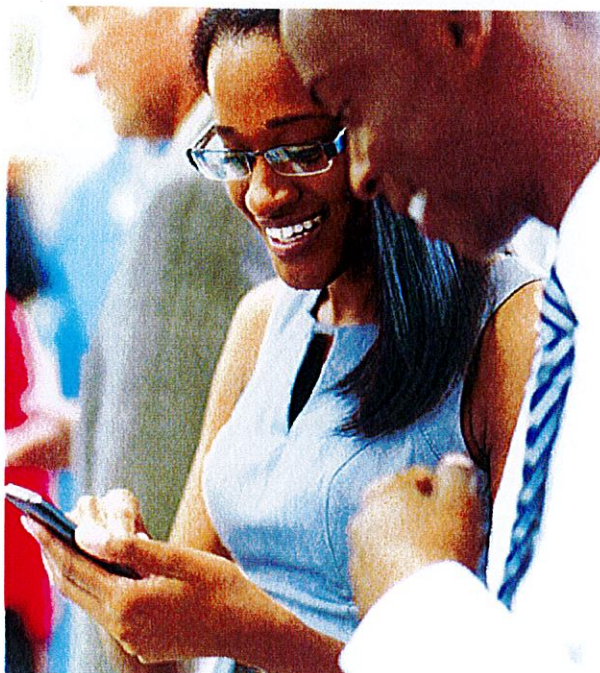
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Hi. Your package was
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Delivered to 281 WOOD HOUSE RD, FAIRFIELD, CT 06824

OBTAIN PROOF OF DELIVERY

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FROM	Jeff Barbadora 1800 W. Park Drive WESTBOROUGH, MA, US, 01581
TO	J Fernandes Properties LLC Property Owner 281 Woodhouse Road FAIRFIELD, CT, US, 06824
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SHIPPER REFERENCE	799001.7680
SHIP DATE	Wed 6/15/2022 05:11 PM
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Date: **May 2nd, 2022**

B+T Group
1717 S. Boulder, Suite 300
Tulsa, OK 74119
(918) 587-4630

Subject: **Structural Analysis Report**

Carrier Designation: **T-Mobile Co-Locate**
Site Number: CT11078B
Site Name: Fairfield/ MP X43/ Burr S

Crown Castle Designation: **BU Number:** 806355
Site Name: BRG 126 943086
JDE Job Number: 709214
Work Order Number: 2103846
Order Number: 608635 Rev. 0

Engineering Firm Designation: **B+T Group Project Number:** 80964.017.01

Site Data: **281 Wood House Road, Fairfield, Fairfield County, CT**
Latitude 41° 11' 45.3", Longitude -73° 16' 52.9"
170.5 Foot - Monopole

B+T Group 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:

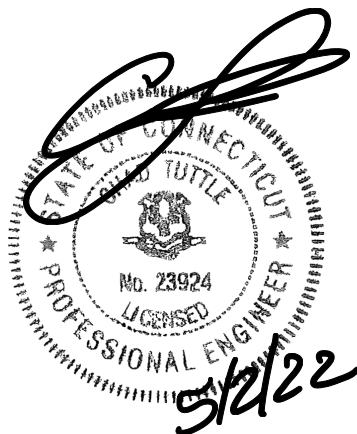
LC7: Proposed Equipment Configuration

Sufficient Capacity

"This analysis utilizes an ultimate 3-second gust wind speed of 118 mph as required by the 2018 Connecticut State Building Code. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria."

Structural analysis prepared by: Mahsa Abdeveis

Respectfully submitted by: B+T Engineering, Inc.
COA: PEC.0001564; Expires: 02/1/2023



Chad E. Tuttle, P.E.

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1) INTRODUCTION

This is a 170.5 ft. Monopole designed by Engineered Endeavors, Inc.

2) ANALYSIS CRITERIA

TIA-222 Revision:	TIA-222-H
Risk Category:	II
Wind Speed:	118 mph
Exposure Category:	B
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)
138.0	141.0	3	Sitepro1	TELESCOPOIC ARM KIT	4	1-5/8
		3	--	10' horizontal x 2" Pipe Mount		
	140.0	3	Commscope	VV-65A-R1_TMO		
		3	Ericsson	AIR 6419 B41_TMO		
		3	Ericsson	RADIO 4460 B2/B25 B66_TMO		
		3	Ericsson	Radio 4480_TMOV2		
		3	RFS Celwave	APXVAALL24_43-U-NA20_TMO		
	138.0	3	--	9' x 2" Pipe Mount		
1		--	Platform Mount [LP 713-1]			

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)
166.0	166.0	3	Fujitsu	TA08025-B604	1	1-3/4
		3	Fujitsu	TA08025-B605		
		3	JMA Wireless	MX08FRO665-21		
		1	Raycap	RDIDC-9181-PF-48		
		1	Commscope	MC-PK8-DSH (3)		
156.0	160.0	1	--	GPS_A	14 1	1-5/8 1-1/4
	159.0	6	Commscope	SBNHH-1D85B		
		6	Decibel	DB844G65ZAXY		
		3	Ryma Wireless	MG D3-800TV		
	156.0	3	Alcatel Lucent	B13 RRH 4X30		
		3	Alcatel Lucent	B66A RRH4X45		
		1	Raycap	RRFDC-3315-PF-48		
		6	RFS Celwave	FD9R6004/2C-3L		
		1	--	Platform Mount [LP 713-1]		
146.0	150.0	3	Ericsson	AIR 6419 B77G_CCIV3	12	1-5/8

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	
	148.0	3	CCI Antennas	OPA65R-BU6D	4	7/8	
		3	Ericsson	RRUS 4449 B5/B12	4	13/16	
		3	Ericsson	RRUS 4478 B14_CCIV2	3	3/8	
		3	Ericsson	RRUS-32 B30			
		3	Quintel Tech.	QD6616-7			
		1	Raycap	DC9-48-60-24-8C-EV_CCIV2			
	146.0	3	Ericsson	AIR 6449 B77D_CCVI2			
		3	Ericsson	RRUS 32 B2			
		3	Ericsson	RRUS 32 B66			
		2	Raycap	DC6-48-60-18-8F			
		6	Site Pro 1	Side Arm Mount WWM02-DCP			
		1	--	Platform Mount [LP 713-1]			
	128.0	128.0	1	Andrew	VHLP800-11	3 1	1-5/8 Elliptical
			3	Ericsson	AIR6449 B41_T-MOBILE		
3			Ericsson	RADIO 4460 B2/B25 B66_TMO			
3			Ericsson	Radio 4480_TMOV2			
3			RFS Celwave	APXVAALL24_43-U-NA20_TMO			
1			Site Pro 1	RMQP-496-HK			

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Reference	Source
Tower manufacture drawing	653293	CCI Sites
Foundation Drawing	1098364	CCI Sites
Geotech Drawing	1099974	CCI Sites
Crown CAD Package	Date: 04/14/2022	CCI Sites

3.1) Analysis Method

tnxTower (version 8.1.1.0), 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.

3.2) Assumptions

- 1) The 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. B+T Group should be notified to determine the effect on the structural integrity of the tower.

4) ANALYSIS RESULTS

Table 4 - Section Capacity (Summary)

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
L1	170.5 - 156.5	Pole	TP10.75x10.75x0.365	1	-3.478	393.867	31.0	Pass
L2	156.5 - 156	Pole	TP19.5x10.75x0.365	2	-3.480	393.867	30.9	Pass
L3	156 - 132.67	Pole	TP24.79x19.5x0.188	3	-17.139	868.938	58.3	Pass
L4	132.67 - 87.09	Pole	TP34.63x23.583x0.375	4	-30.956	2425.216	64.8	Pass
L5	87.09 - 43	Pole	TP43.75x32.797x0.438	5	-44.726	3579.807	64.9	Pass
L6	43 - 0	Pole	TP52.5x41.532x0.5	6	-65.353	5069.032	59.4	Pass
							Summary	
						Pole (L5)	64.9	Pass
						Rating =	64.9	Pass

Table 5 - Tower Component Stresses vs. Capacity – LC7

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1,2	Flange Connection	156	17.9	Pass
1,2	Anchor Rods	Base	58.7	Pass
1,2	Base Plate	Base	66.8	Pass
1,2	Base Foundation (Structure)	Base	66.0	Pass
1,2	Base Foundation (Soil Interaction)	Base	65.0	Pass

Structure Rating (max from all components) =	66.8%
---	--------------

Notes:

- 1) See additional documentation in "Appendix C – Additional Calculations" for calculations supporting the % capacity consumed.
- 2) Rating per TIA-222-H, Section 15.5.

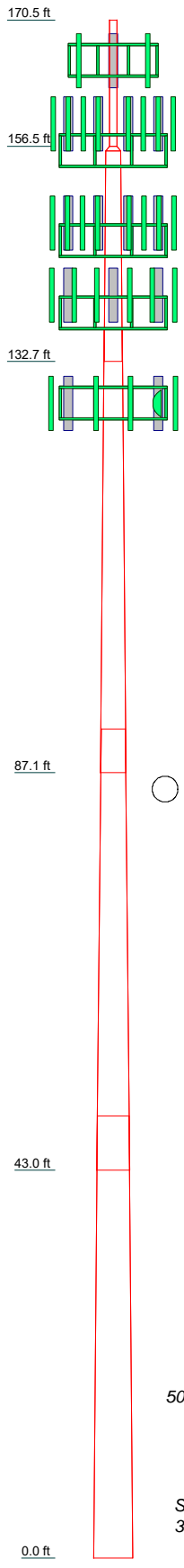
4.1) Recommendations

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

APPENDIX A

TNXTOWER OUTPUT

Section	2	3	4	5	6	1
Length (ft)	0.900	23.330	49.250	48.920	49.000	14.000
Number of Sides	1	18	18	18	18	1
Thickness (in)	0.365	0.188	0.375	0.438	0.500	0.365
Socket Length (ft)		3.670	4.830	6.000	41.532	
Top Dia (in)		19.500	23.563	32.797	52.500	
Bot Dia (in)		19.500	34.630	43.750		
Grade	A53-B-35		A572-65			
Weight (K)	0.0	1.0	5.7	8.7	12.3	28.4

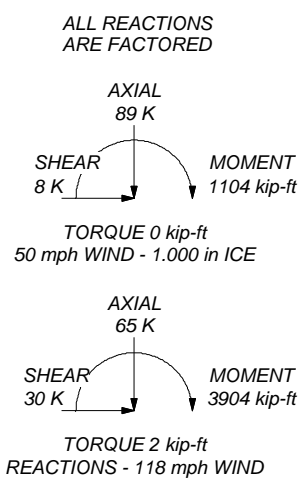


MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A53-B-35	35 ksi	63 ksi	A572-65	65 ksi	80 ksi

TOWER DESIGN NOTES

1. Tower is located in Fairfield County, Connecticut.
2. Tower designed for Exposure B to the TIA-222-H Standard.
3. Tower designed for a 118 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 50 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Risk Category II.
7. Topographic Category 1 with Crest Height of 0.000 ft
8. TIA-222-H Annex S
9. TOWER RATING: 64.9%



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 Phone: (918) 587-4630
 FAX: (918) 295-0265

Job: 80964.017.01 - BRG 126 943086, CT (BU# 80635)		
Project:		
Client: Crown Castle	Drawn by: R AITHAL	App'd:
Code: TIA-222-H	Date: 04/30/22	Scale: NTS
Path:	Dwg No. E-1	

Vx

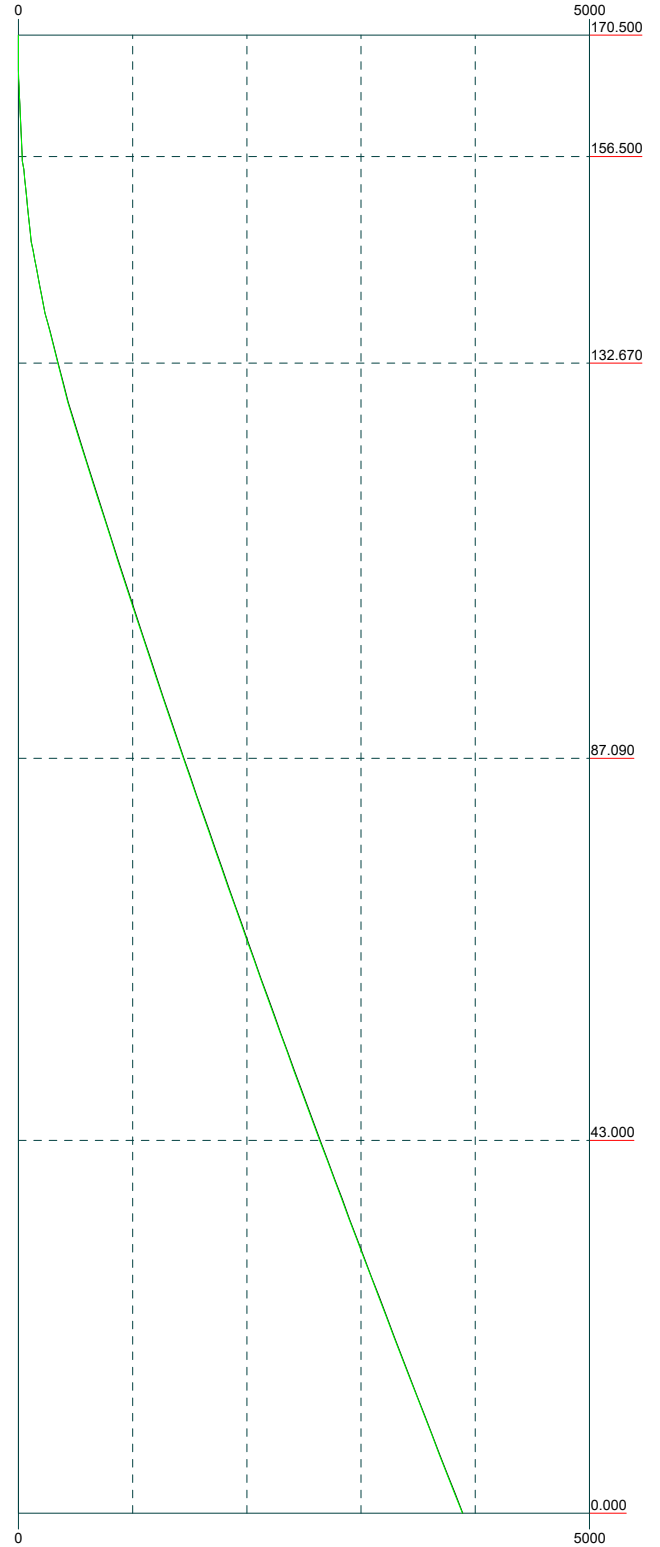
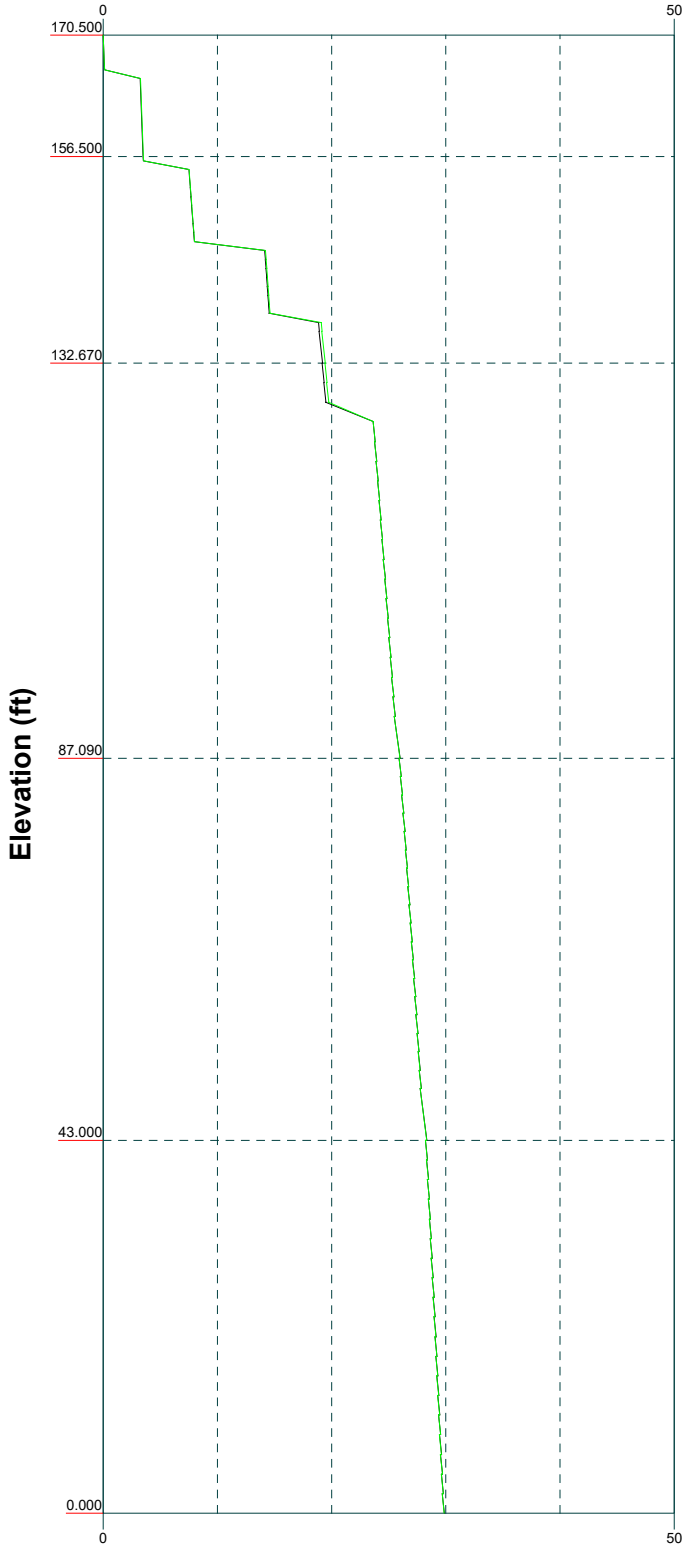
Vz

Mx

Mz

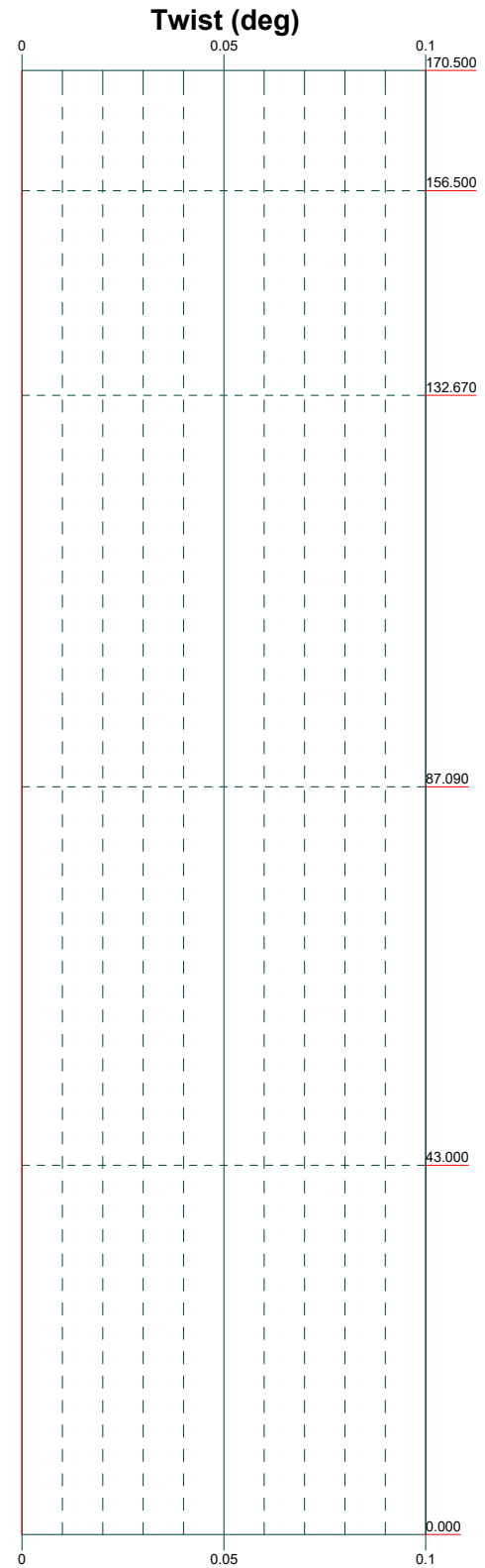
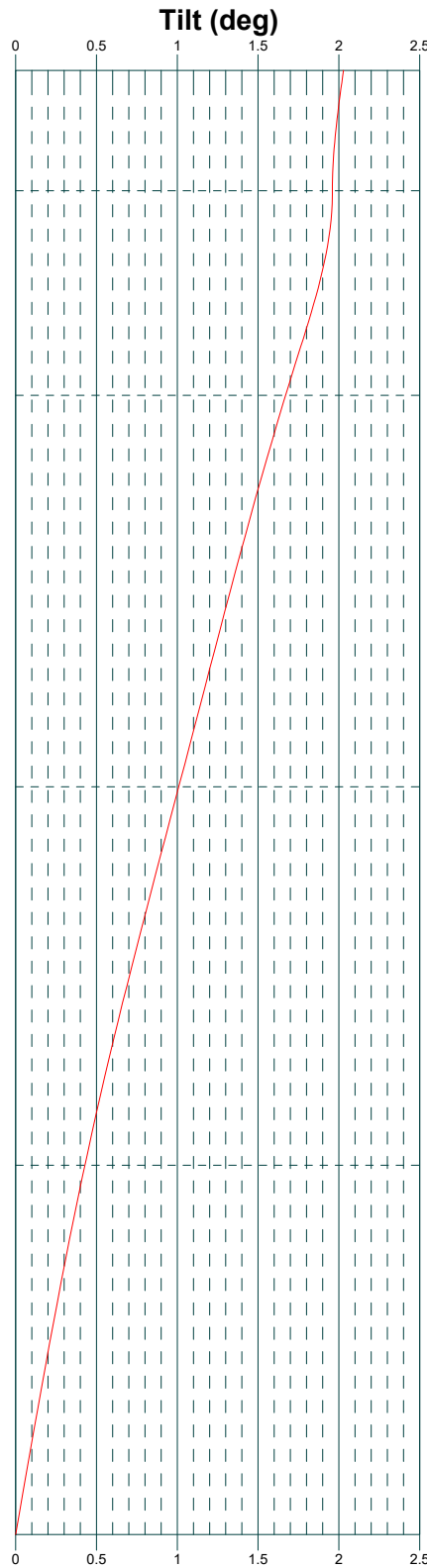
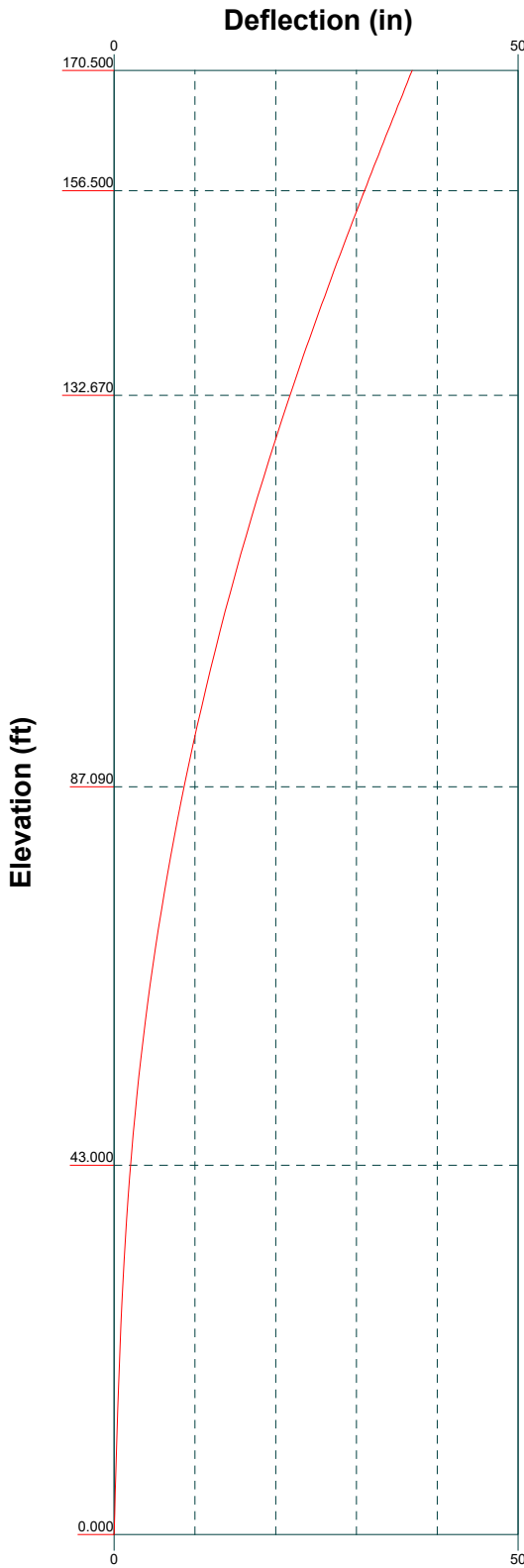
Global Mast Shear (K)

Global Mast Moment (kip-ft)



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Project:		
Client: Crown Castle	Drawn by: R AITHAL	App'd:
Code: TIA-222-H	Date: 04/30/22	Scale: NTS
Path:	Dwg No. E-4	



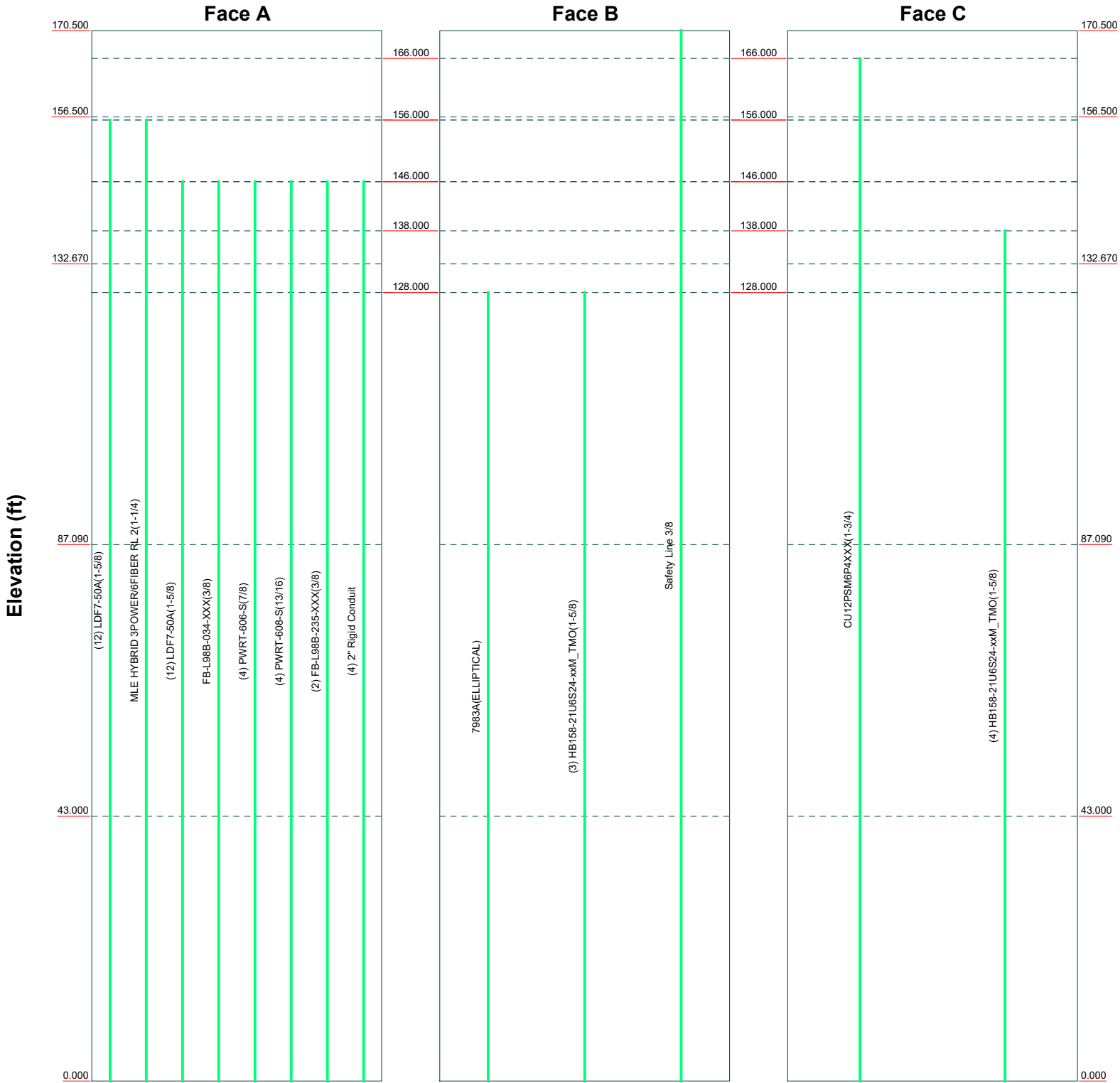
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Job: 80964.017.01 - BRG 126 943086, CT (BU# 80635)		
Project:		
Client: Crown Castle	Drawn by: R AITHAL	App'd:
Code: TIA-222-H	Date: 04/30/22	Scale: NTS
Path:	Dwg No. E-5	

Feed Line Distribution Chart

0' - 170'6"

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




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Job: 80964.017.01 - BRG 126 943086, CT (BU# 80635)		
Project:		
Client: Crown Castle	Drawn by: R AITHAL	App'd:
Code: TIA-222-H	Date: 04/30/22	Scale: NTS
Path:	Dwg No. E-7	

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	Project	Date 11:38:38 04/30/22
	Client Crown Castle	Designed by R AITHAL

Tower Input Data

The tower is a monopole.

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

The following design criteria apply:

- Tower is located in Fairfield County, Connecticut.
- Tower base elevation above sea level: 334.000 ft.
- Basic wind speed of 118 mph.
- Risk Category II.
- Exposure Category B.
- Simplified Topographic Factor Procedure for wind speed-up calculations is used.
- Topographic Category: 1.
- Crest Height: 0.000 ft.
- Nominal ice thickness of 1.000 in.
- Ice thickness is considered to increase with height.
- Ice density of 56.000 pcf.
- A wind speed of 50 mph is used in combination with ice.
- Temperature drop of 50.000 °F.
- Deflections calculated using a wind speed of 60 mph.
- TIA-222-H Annex S.
- 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

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

tnxTower B+T Group 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job 80964.017.01 - BRG 126 943086, CT (BU# 806355)	Page 2 of 20
	Project	Date 11:38:38 04/30/22
	Client Crown Castle	Designed by R AITHAL

Tapered Pole Section Geometry

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
L1	170.500-156.500	14.000	0.000	Round	10.750	10.750	0.365		A53-B-35 (35 ksi)
L2	156.500-156.000	0.500	0.000	Round	10.750	19.500	0.365		A53-B-35 (35 ksi)
L3	156.000-132.670	23.330	3.670	18	19.500	24.790	0.188	0.750	A572-65 (65 ksi)
L4	132.670-87.090	49.250	4.830	18	23.583	34.630	0.375	1.500	A572-65 (65 ksi)
L5	87.090-43.000	48.920	6.000	18	32.797	43.750	0.438	1.750	A572-65 (65 ksi)
L6	43.000-0.000	49.000		18	41.532	52.500	0.500	2.000	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	10.750	11.908	160.734	3.674	5.375	29.904	321.468	5.951	0.000	0
L2	10.750	11.908	160.734	3.674	5.375	29.904	321.468	5.951	0.000	0
L3	19.500	21.942	1004.607	6.766	9.750	103.037	2009.214	10.964	0.000	0
L4	19.772	11.493	541.578	6.856	9.906	54.672	1083.869	5.748	3.102	16.544
L5	25.144	14.642	1119.653	8.734	12.593	88.908	2240.779	7.322	4.033	21.51
L6	24.725	27.623	1879.662	8.239	11.980	156.899	3761.798	13.814	3.491	9.308
L3	35.106	40.772	6044.321	12.161	17.592	343.583	12096.596	20.390	5.435	14.493
L4	34.333	44.935	5944.447	11.487	16.661	356.795	11896.716	22.472	5.002	11.434
L5	44.357	60.145	14254.835	15.376	22.225	641.387	28528.426	30.078	6.930	15.84
L6	43.459	65.117	13850.609	14.566	21.098	656.488	27719.443	32.565	6.430	12.859
	53.233	82.524	28191.904	18.460	26.670	1057.064	56420.904	41.270	8.360	16.72

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 170.500-156.500				1	1	1			
L2 156.500-156.000				1	1	1			
L3 156.000-132.670				1	1	1			
L4 132.670-87.090				1	1	1			
L5 87.090-43.000				1	1	1			
L6 43.000-0.000				1	1	1			

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	Project	Date 11:38:38 04/30/22
	Client Crown Castle	Designed by R AITHAL

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight klf
*											
*											
*											

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} ft ² /ft	Weight klf
CU12PSM6P4XXX(1-3/4)	C	No	No	Inside Pole	166.000 - 0.000	1	No Ice 1/2" Ice 1" Ice	0.000 0.000 0.000	0.003 0.003 0.003
*									
LDF7-50A(1-5/8)	A	No	No	Inside Pole	156.000 - 0.000	12	No Ice 1/2" Ice 1" Ice	0.000 0.000 0.000	0.001 0.001 0.001
MLE HYBRID 3POWER/6FIBER RL 2(1-1/4)	A	No	No	Inside Pole	156.000 - 0.000	1	No Ice 1/2" Ice 1" Ice	0.000 0.000 0.000	0.001 0.001 0.001
*									
LDF7-50A(1-5/8)	A	No	No	Inside Pole	146.000 - 0.000	12	No Ice 1/2" Ice 1" Ice	0.000 0.000 0.000	0.001 0.001 0.001
FB-L98B-034-XXX(3/8)	A	No	No	Inside Pole	146.000 - 0.000	1	No Ice 1/2" Ice 1" Ice	0.000 0.000 0.000	0.000 0.000 0.000
PWRT-606-S(7/8)	A	No	No	Inside Pole	146.000 - 0.000	4	No Ice 1/2" Ice 1" Ice	0.000 0.000 0.000	0.001 0.001 0.001
PWRT-608-S(13/16)	A	No	No	Inside Pole	146.000 - 0.000	4	No Ice 1/2" Ice 1" Ice	0.000 0.000 0.000	0.001 0.001 0.001
FB-L98B-235-XXX(3/8)	A	No	No	Inside Pole	146.000 - 0.000	2	No Ice 1/2" Ice 1" Ice	0.000 0.000 0.000	0.000 0.000 0.000
2" Rigid Conduit	A	No	No	Inside Pole	146.000 - 0.000	4	No Ice 1/2" Ice 1" Ice	0.000 0.000 0.000	0.003 0.003 0.003
*									
HB158-21U6S24-xx M_TMO(1-5/8)	C	No	No	Inside Pole	138.000 - 0.000	4	No Ice 1/2" Ice 1" Ice	0.000 0.000 0.000	0.003 0.003 0.003
*									
7983A(ELLIPTICAL)	B	No	No	Inside Pole	128.000 - 0.000	1	No Ice 1/2" Ice 1" Ice	0.000 0.000 0.000	0.000 0.000 0.000
HB158-21U6S24-xx M_TMO(1-5/8)	B	No	No	Inside Pole	128.000 - 0.000	3	No Ice 1/2" Ice 1" Ice	0.000 0.000 0.000	0.003 0.003 0.003
*									
Safety Line 3/8	B	No	No	CaAa (Out	170.500 - 0.000	1	No Ice	0.037	0.000

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Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	C _{AA} ft ² /ft	Weight klf
				Of Face)		1/2" Ice	0.137	0.001
						1" Ice	0.238	0.001
*								

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A _R ft ²	A _F ft ²	C _{AA} In Face ft ²	C _{AA} Out Face ft ²	Weight K
L1	170.500-156.500	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.525	0.003
		C	0.000	0.000	0.000	0.000	0.026
L2	156.500-156.000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.019	0.000
		C	0.000	0.000	0.000	0.000	0.001
L3	156.000-132.670	A	0.000	0.000	0.000	0.000	0.609
		B	0.000	0.000	0.000	0.875	0.005
		C	0.000	0.000	0.000	0.000	0.117
L4	132.670-87.090	A	0.000	0.000	0.000	0.000	1.722
		B	0.000	0.000	0.000	1.709	0.320
		C	0.000	0.000	0.000	0.000	0.580
L5	87.090-43.000	A	0.000	0.000	0.000	0.000	1.666
		B	0.000	0.000	0.000	1.653	0.344
		C	0.000	0.000	0.000	0.000	0.561
L6	43.000-0.000	A	0.000	0.000	0.000	0.000	1.624
		B	0.000	0.000	0.000	1.613	0.336
		C	0.000	0.000	0.000	0.000	0.547

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A _R ft ²	A _F ft ²	C _{AA} In Face ft ²	C _{AA} Out Face ft ²	Weight K
L1	170.500-156.500	A	0.998	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	3.318	0.018
		C		0.000	0.000	0.000	0.000	0.026
L2	156.500-156.000	A	0.993	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.118	0.001
		C		0.000	0.000	0.000	0.000	0.001
L3	156.000-132.670	A	0.985	0.000	0.000	0.000	0.000	0.609
		B		0.000	0.000	0.000	5.470	0.029
		C		0.000	0.000	0.000	0.000	0.117
L4	132.670-87.090	A	0.958	0.000	0.000	0.000	0.000	1.722
		B		0.000	0.000	0.000	10.687	0.368
		C		0.000	0.000	0.000	0.000	0.580
L5	87.090-43.000	A	0.909	0.000	0.000	0.000	0.000	1.666
		B		0.000	0.000	0.000	10.099	0.389
		C		0.000	0.000	0.000	0.000	0.561
L6	43.000-0.000	A	0.812	0.000	0.000	0.000	0.000	1.624
		B		0.000	0.000	0.000	9.431	0.377
		C		0.000	0.000	0.000	0.000	0.547

tnxTower B+T Group 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job 80964.017.01 - BRG 126 943086, CT (BU# 806355)	Page 5 of 20
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	Client Crown Castle	Designed by R AITHAL

Feed Line Center of Pressure

Section	Elevation	CP _x	CP _z	CP _x Ice	CP _z Ice
	ft	in	in	in	in
L1	170.500-156.500	0.304	0.175	0.730	0.421
L2	156.500-156.000	0.309	0.179	0.794	0.458
L3	156.000-132.670	0.256	0.148	0.840	0.485
L4	132.670-87.090	0.258	0.149	0.877	0.506
L5	87.090-43.000	0.259	0.150	0.886	0.511
L6	43.000-0.000	0.260	0.150	0.868	0.501

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

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	C _{AA} Front ft ²	C _{AA} Side ft ²	Weight K	
MX08FRO665-21 w/ Mount Pipe	A	From Leg	4.000	0.000	166.000	No Ice	8.010	4.230	0.108
			0.000			1/2" Ice	8.520	4.690	0.194
			0.000			1" Ice	9.040	5.160	0.292
MX08FRO665-21 w/ Mount Pipe	B	From Leg	4.000	0.000	166.000	No Ice	8.010	4.230	0.108
			0.000			1/2" Ice	8.520	4.690	0.194
			0.000			1" Ice	9.040	5.160	0.292
MX08FRO665-21 w/ Mount Pipe	C	From Leg	4.000	0.000	166.000	No Ice	8.010	4.230	0.108
			0.000			1/2" Ice	8.520	4.690	0.194
			0.000			1" Ice	9.040	5.160	0.292
TA08025-B605	A	From Leg	4.000	0.000	166.000	No Ice	1.964	1.129	0.075
			0.000			1/2" Ice	2.138	1.267	0.093
			0.000			1" Ice	2.320	1.411	0.114
TA08025-B605	B	From Leg	4.000	0.000	166.000	No Ice	1.964	1.129	0.075
			0.000			1/2" Ice	2.138	1.267	0.093
			0.000			1" Ice	2.320	1.411	0.114
TA08025-B605	C	From Leg	4.000	0.000	166.000	No Ice	1.964	1.129	0.075
			0.000			1/2" Ice	2.138	1.267	0.093
			0.000			1" Ice	2.320	1.411	0.114
TA08025-B604	A	From Leg	4.000	0.000	166.000	No Ice	1.964	0.981	0.064
			0.000			1/2" Ice	2.138	1.112	0.081
			0.000			1" Ice	2.320	1.250	0.100
TA08025-B604	B	From Leg	4.000	0.000	166.000	No Ice	1.964	0.981	0.064
			0.000			1/2" Ice	2.138	1.112	0.081
			0.000			1" Ice	2.320	1.250	0.100
TA08025-B604	C	From Leg	4.000	0.000	166.000	No Ice	1.964	0.981	0.064
			0.000			1/2" Ice	2.138	1.112	0.081
			0.000			1" Ice	2.320	1.250	0.100
RDIDC-9181-PF-48	A	From Leg	4.000	0.000	166.000	No Ice	2.012	1.168	0.022
			0.000			1/2" Ice	2.189	1.311	0.040
			0.000			1" Ice	2.373	1.461	0.060

tnxTower

B+T Group
 1717 S. Boulder, Suite 300
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Client
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Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment °	Placement ft	C _{AA} Front ft ²	C _{AA} Side ft ²	Weight K
			Horz Lateral ft	Vert ft					
(2) 8' x 2" Mount Pipe	A	From Leg	4.000	0.000	0.000	166.000	No Ice 1.900	1.900	0.029
			0.000				1/2" Ice 2.728	2.728	0.044
			0.000				1" Ice 3.401	3.401	0.063
(2) 8' x 2" Mount Pipe	B	From Leg	4.000	0.000	0.000	166.000	No Ice 1.900	1.900	0.029
			0.000				1/2" Ice 2.728	2.728	0.044
			0.000				1" Ice 3.401	3.401	0.063
(2) 8' x 2" Mount Pipe	C	From Leg	4.000	0.000	0.000	166.000	No Ice 1.900	1.900	0.029
			0.000				1/2" Ice 2.728	2.728	0.044
			0.000				1" Ice 3.401	3.401	0.063
Commscope_MC-PK8-DSH	C	None		0.000	0.000	166.000	No Ice 34.240	34.240	1.749
							1/2" Ice 62.950	62.950	2.099
							1" Ice 91.660	91.660	2.450
*									
(2) DB844G65ZAXY w/ Mount Pipe	A	From Leg	4.000	0.000	0.000	156.000	No Ice 4.230	4.510	0.034
			0.000				1/2" Ice 4.710	5.000	0.076
			3.000				1" Ice 5.210	5.500	0.126
(2) DB844G65ZAXY w/ Mount Pipe	B	From Leg	4.000	0.000	0.000	156.000	No Ice 4.230	4.510	0.034
			0.000				1/2" Ice 4.710	5.000	0.076
			3.000				1" Ice 5.210	5.500	0.126
(2) DB844G65ZAXY w/ Mount Pipe	C	From Leg	4.000	0.000	0.000	156.000	No Ice 4.230	4.510	0.034
			0.000				1/2" Ice 4.710	5.000	0.076
			3.000				1" Ice 5.210	5.500	0.126
(2) SBNHH-1D85B w/ Mount Pipe	A	From Leg	4.000	0.000	0.000	156.000	No Ice 4.090	3.300	0.068
			0.000				1/2" Ice 4.490	3.680	0.131
			3.000				1" Ice 4.890	4.070	0.205
(2) SBNHH-1D85B w/ Mount Pipe	B	From Leg	4.000	0.000	0.000	156.000	No Ice 4.090	3.300	0.068
			0.000				1/2" Ice 4.490	3.680	0.131
			3.000				1" Ice 4.890	4.070	0.205
(2) SBNHH-1D85B w/ Mount Pipe	C	From Leg	4.000	0.000	0.000	156.000	No Ice 4.090	3.300	0.068
			0.000				1/2" Ice 4.490	3.680	0.131
			3.000				1" Ice 4.890	4.070	0.205
MG D3-800TV w/ Mount Pipe	A	From Leg	4.000	0.000	0.000	156.000	No Ice 2.400	2.290	0.045
			0.000				1/2" Ice 2.810	2.680	0.074
			3.000				1" Ice 3.220	3.100	0.111
MG D3-800TV w/ Mount Pipe	B	From Leg	4.000	0.000	0.000	156.000	No Ice 2.400	2.290	0.045
			0.000				1/2" Ice 2.810	2.680	0.074
			3.000				1" Ice 3.220	3.100	0.111
MG D3-800TV w/ Mount Pipe	C	From Leg	4.000	0.000	0.000	156.000	No Ice 2.400	2.290	0.045
			0.000				1/2" Ice 2.810	2.680	0.074
			3.000				1" Ice 3.220	3.100	0.111
GPS_A	A	From Leg	4.000	0.000	0.000	156.000	No Ice 0.255	0.255	0.001
			0.000				1/2" Ice 0.320	0.320	0.005
			4.000				1" Ice 0.393	0.393	0.010
(2) FD9R6004/2C-3L	A	From Leg	4.000	0.000	0.000	156.000	No Ice 0.314	0.076	0.003
			0.000				1/2" Ice 0.386	0.119	0.005
			0.000				1" Ice 0.466	0.169	0.009
(2) FD9R6004/2C-3L	B	From Leg	4.000	0.000	0.000	156.000	No Ice 0.314	0.076	0.003
			0.000				1/2" Ice 0.386	0.119	0.005
			0.000				1" Ice 0.466	0.169	0.009
(2) FD9R6004/2C-3L	C	From Leg	4.000	0.000	0.000	156.000	No Ice 0.314	0.076	0.003
			0.000				1/2" Ice 0.386	0.119	0.005
			0.000				1" Ice 0.466	0.169	0.009
B13 RRH 4X30	A	From Leg	4.000	0.000	0.000	156.000	No Ice 2.055	1.320	0.056
			0.000				1/2" Ice 2.241	1.475	0.073
			0.000				1" Ice 2.433	1.638	0.093
B13 RRH 4X30	B	From Leg	4.000	0.000	0.000	156.000	No Ice 2.055	1.320	0.056
			0.000				1/2" Ice 2.241	1.475	0.073

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Client	Designed by	
	Crown Castle	R AITHAL

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _{AA} Front	C _{AA} Side	Weight	
			Horz Lateral	Vert						
			ft	ft	°	ft	ft ²	ft ²	K	
B13 RRH 4X30	C	From Leg	0.000		0.000	156.000	1" Ice	2.433	1.638	0.093
			4.000				No Ice	2.055	1.320	0.056
			0.000				1/2" Ice	2.241	1.475	0.073
B66A RRH4X45	A	From Leg	0.000		0.000	156.000	1" Ice	2.433	1.638	0.093
			4.000				No Ice	2.537	1.610	0.057
			0.000				1/2" Ice	2.750	1.791	0.077
B66A RRH4X45	B	From Leg	0.000		0.000	156.000	1" Ice	2.970	1.978	0.100
			4.000				No Ice	2.537	1.610	0.057
			0.000				1/2" Ice	2.750	1.791	0.077
B66A RRH4X45	C	From Leg	0.000		0.000	156.000	1" Ice	2.970	1.978	0.100
			4.000				No Ice	2.537	1.610	0.057
			0.000				1/2" Ice	2.750	1.791	0.077
RRFDC-3315-PF-48	C	From Leg	0.000		0.000	156.000	1" Ice	2.970	1.978	0.100
			4.000				No Ice	3.364	2.192	0.021
			0.000				1/2" Ice	3.597	2.395	0.050
Platform Mount [LP 713-1]	C	None	0.000		0.000	156.000	1" Ice	3.838	2.606	0.082
							No Ice	32.890	32.890	1.510
							1/2" Ice	35.760	35.760	2.228
*							1" Ice	38.760	38.760	3.026
RRUS 32 B66	B	From Leg	4.000		0.000	146.000	No Ice	2.743	1.668	0.053
			0.000				1/2" Ice	2.965	1.855	0.074
			0.000				1" Ice	3.194	2.049	0.098
(2) RRUS 32 B66	C	From Leg	4.000		0.000	146.000	No Ice	2.743	1.668	0.053
			0.000				1/2" Ice	2.965	1.855	0.074
			0.000				1" Ice	3.194	2.049	0.098
(2) RRUS 32 B2	A	From Leg	4.000		0.000	146.000	No Ice	2.731	1.668	0.053
			0.000				1/2" Ice	2.953	1.855	0.074
			0.000				1" Ice	3.182	2.049	0.098
RRUS 32 B2	B	From Leg	4.000		0.000	146.000	No Ice	2.731	1.668	0.053
			0.000				1/2" Ice	2.953	1.855	0.074
			0.000				1" Ice	3.182	2.049	0.098
DC6-48-60-18-8F	B	From Leg	4.000		0.000	146.000	No Ice	1.212	1.212	0.033
			0.000				1/2" Ice	1.892	1.892	0.055
			0.000				1" Ice	2.105	2.105	0.080
DC6-48-60-18-8F	C	From Leg	4.000		0.000	146.000	No Ice	1.212	1.212	0.033
			0.000				1/2" Ice	1.892	1.892	0.055
			0.000				1" Ice	2.105	2.105	0.080
QD6616-7 w/ Mount Pipe	A	From Leg	4.000		0.000	146.000	No Ice	12.560	6.930	0.156
			0.000				1/2" Ice	13.300	7.600	0.252
			2.000				1" Ice	14.060	8.280	0.360
QD6616-7 w/ Mount Pipe	B	From Leg	4.000		0.000	146.000	No Ice	12.560	6.930	0.156
			0.000				1/2" Ice	13.300	7.600	0.252
			2.000				1" Ice	14.060	8.280	0.360
QD6616-7 w/ Mount Pipe	C	From Leg	4.000		0.000	146.000	No Ice	12.560	6.930	0.156
			0.000				1/2" Ice	13.300	7.600	0.252
			2.000				1" Ice	14.060	8.280	0.360
AIR 6419 B77G_CCIV3 w/ Mount Pipe	A	From Leg	4.000		0.000	146.000	No Ice	4.380	2.760	0.057
			0.000				1/2" Ice	4.708	3.191	0.096
			4.000				1" Ice	5.045	3.639	0.140
AIR 6419 B77G_CCIV3 w/ Mount Pipe	B	From Leg	4.000		0.000	146.000	No Ice	4.380	2.760	0.057
			0.000				1/2" Ice	4.708	3.191	0.096
			4.000				1" Ice	5.045	3.639	0.140
AIR 6419 B77G_CCIV3 w/ Mount Pipe	C	From Leg	4.000		0.000	146.000	No Ice	4.380	2.760	0.057
			0.000				1/2" Ice	4.708	3.191	0.096
			4.000				1" Ice	5.045	3.639	0.140
AIR 6449 B77D_CCIV2 w/	A	From Leg	4.000		0.000	146.000	No Ice	3.580	2.310	0.095

tnxTower

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Project
Date
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Client
Crown Castle
Designed by
R AITHAL

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _{AA} Front	C _{AA} Side	Weight
			Horz	Lateral					
			ft	ft	°	ft	ft ²	ft ²	K
Mount Pipe			0.000			1/2" Ice	3.920	2.600	0.130
			0.000			1" Ice	4.270	2.910	0.173
AIR 6449 B77D_CCIV2 w/ Mount Pipe	B	From Leg	4.000	0.000	146.000	No Ice	3.580	2.310	0.095
			0.000			1/2" Ice	3.920	2.600	0.130
			0.000			1" Ice	4.270	2.910	0.173
AIR 6449 B77D_CCIV2 w/ Mount Pipe	C	From Leg	4.000	0.000	146.000	No Ice	3.580	2.310	0.095
			0.000			1/2" Ice	3.920	2.600	0.130
			0.000			1" Ice	4.270	2.910	0.173
OPA65R-BU6D w/ Mount Pipe	A	From Leg	4.000	0.000	146.000	No Ice	12.250	6.050	0.089
			0.000			1/2" Ice	13.000	6.710	0.176
			2.000			1" Ice	13.760	7.390	0.275
OPA65R-BU6D w/ Mount Pipe	B	From Leg	4.000	0.000	146.000	No Ice	12.250	6.050	0.089
			0.000			1/2" Ice	13.000	6.710	0.176
			2.000			1" Ice	13.760	7.390	0.275
OPA65R-BU6D w/ Mount Pipe	C	From Leg	4.000	0.000	146.000	No Ice	12.250	6.050	0.089
			0.000			1/2" Ice	13.000	6.710	0.176
			2.000			1" Ice	13.760	7.390	0.275
(2) RRUS 4449 B5/B12	A	From Leg	4.000	0.000	146.000	No Ice	1.968	1.408	0.071
			0.000			1/2" Ice	2.144	1.564	0.090
			2.000			1" Ice	2.328	1.727	0.111
RRUS 4449 B5/B12	C	From Leg	4.000	0.000	146.000	No Ice	1.968	1.408	0.071
			0.000			1/2" Ice	2.144	1.564	0.090
			2.000			1" Ice	2.328	1.727	0.111
RRUS 4478 B14_CCIV2	A	From Leg	4.000	0.000	146.000	No Ice	2.021	1.246	0.059
			0.000			1/2" Ice	2.200	1.396	0.077
			2.000			1" Ice	2.386	1.554	0.097
RRUS 4478 B14_CCIV2	B	From Leg	4.000	0.000	146.000	No Ice	2.021	1.246	0.059
			0.000			1/2" Ice	2.200	1.396	0.077
			2.000			1" Ice	2.386	1.554	0.097
RRUS 4478 B14_CCIV2	C	From Leg	4.000	0.000	146.000	No Ice	2.021	1.246	0.059
			0.000			1/2" Ice	2.200	1.396	0.077
			2.000			1" Ice	2.386	1.554	0.097
RRUS-32 B30	A	From Leg	4.000	0.000	146.000	No Ice	3.314	2.424	0.077
			0.000			1/2" Ice	3.558	2.638	0.105
			2.000			1" Ice	3.809	2.860	0.136
RRUS-32 B30	B	From Leg	4.000	0.000	146.000	No Ice	3.314	2.424	0.077
			0.000			1/2" Ice	3.558	2.638	0.105
			2.000			1" Ice	3.809	2.860	0.136
RRUS-32 B30	C	From Leg	4.000	0.000	146.000	No Ice	3.314	2.424	0.077
			0.000			1/2" Ice	3.558	2.638	0.105
			2.000			1" Ice	3.809	2.860	0.136
DC9-48-60-24-8C-EV_CCIV2	C	From Leg	4.000	0.000	146.000	No Ice	2.736	2.736	0.016
			0.000			1/2" Ice	2.962	2.962	0.042
			2.000			1" Ice	3.195	3.195	0.071
7'x2" Antenna Mount Pipe	A	From Leg	4.000	0.000	146.000	No Ice	1.663	1.663	0.026
			0.000			1/2" Ice	2.391	2.391	0.039
			0.000			1" Ice	2.825	2.825	0.056
7'x2" Antenna Mount Pipe	B	From Leg	4.000	0.000	146.000	No Ice	1.663	1.663	0.026
			0.000			1/2" Ice	2.391	2.391	0.039
			0.000			1" Ice	2.825	2.825	0.056
7'x2" Antenna Mount Pipe	C	From Leg	4.000	0.000	146.000	No Ice	1.663	1.663	0.026
			0.000			1/2" Ice	2.391	2.391	0.039
			0.000			1" Ice	2.825	2.825	0.056
8' x 2" Mount Pipe	A	From Leg	4.000	0.000	146.000	No Ice	1.900	1.900	0.029
			0.000			1/2" Ice	2.728	2.728	0.044
			0.000			1" Ice	3.401	3.401	0.063
8' x 2" Mount Pipe	B	From Leg	4.000	0.000	146.000	No Ice	1.900	1.900	0.029

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	Client	Crown Castle		Designed by

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _{AA} Front	C _{AA} Side	Weight
			Horz	Lateral					
			0.000						
			0.000			1/2" Ice	2.728	2.728	0.044
			0.000			1" Ice	3.401	3.401	0.063
8' x 2" Mount Pipe	C	From Leg	4.000	0.000	146.000	No Ice	1.900	1.900	0.029
			0.000			1/2" Ice	2.728	2.728	0.044
			0.000			1" Ice	3.401	3.401	0.063
Platform Mount [LP 713-1]	C	None		0.000	146.000	No Ice	32.890	32.890	1.510
						1/2" Ice	35.760	35.760	2.228
						1" Ice	38.760	38.760	3.026
(4) Side Arm Mount [SO 901-1]	A	From Leg	4.000	0.000	146.000	No Ice	0.330	0.620	0.105
			0.000			1/2" Ice	0.460	0.780	0.113
			0.000			1" Ice	0.620	0.970	0.123
(4) Side Arm Mount [SO 901-1]	B	From Leg	4.000	0.000	146.000	No Ice	0.330	0.620	0.105
			0.000			1/2" Ice	0.460	0.780	0.113
			0.000			1" Ice	0.620	0.970	0.123
(4) Side Arm Mount [SO 901-1]	C	From Leg	4.000	0.000	146.000	No Ice	0.330	0.620	0.105
			0.000			1/2" Ice	0.460	0.780	0.113
			0.000			1" Ice	0.620	0.970	0.123
*									
AIR 6419 B41_TMO w/ Mount Pipe	A	From Leg	4.000	0.000	138.000	No Ice	6.580	3.500	0.111
			0.000			1/2" Ice	7.060	3.900	0.162
			2.000			1" Ice	7.570	4.320	0.220
AIR 6419 B41_TMO w/ Mount Pipe	B	From Leg	4.000	0.000	138.000	No Ice	6.580	3.500	0.111
			0.000			1/2" Ice	7.060	3.900	0.162
			2.000			1" Ice	7.570	4.320	0.220
AIR 6419 B41_TMO w/ Mount Pipe	C	From Leg	4.000	0.000	138.000	No Ice	6.580	3.500	0.111
			0.000			1/2" Ice	7.060	3.900	0.162
			2.000			1" Ice	7.570	4.320	0.220
VV-65A-R1_TMO w/ Mount Pipe	A	From Leg	4.000	0.000	138.000	No Ice	4.460	2.690	0.054
			0.000			1/2" Ice	4.910	3.100	0.097
			2.000			1" Ice	5.360	3.520	0.149
VV-65A-R1_TMO w/ Mount Pipe	B	From Leg	4.000	0.000	138.000	No Ice	4.460	2.690	0.054
			0.000			1/2" Ice	4.910	3.100	0.097
			2.000			1" Ice	5.360	3.520	0.149
VV-65A-R1_TMO w/ Mount Pipe	C	From Leg	4.000	0.000	138.000	No Ice	4.460	2.690	0.054
			0.000			1/2" Ice	4.910	3.100	0.097
			2.000			1" Ice	5.360	3.520	0.149
APXVAALL24_43-U-NA20_TMO w/ Mount Pipe	A	From Leg	4.000	0.000	138.000	No Ice	14.690	6.870	0.183
			0.000			1/2" Ice	15.460	7.550	0.311
			2.000			1" Ice	16.230	8.250	0.453
APXVAALL24_43-U-NA20_TMO w/ Mount Pipe	B	From Leg	4.000	0.000	138.000	No Ice	14.690	6.870	0.183
			0.000			1/2" Ice	15.460	7.550	0.311
			2.000			1" Ice	16.230	8.250	0.453
APXVAALL24_43-U-NA20_TMO w/ Mount Pipe	C	From Leg	4.000	0.000	138.000	No Ice	14.690	6.870	0.183
			0.000			1/2" Ice	15.460	7.550	0.311
			2.000			1" Ice	16.230	8.250	0.453
RADIO 4460 B2/B25 B66_TMO	A	From Leg	4.000	0.000	138.000	No Ice	2.139	1.686	0.109
			0.000			1/2" Ice	2.321	1.850	0.131
			2.000			1" Ice	2.511	2.022	0.156
RADIO 4460 B2/B25 B66_TMO	B	From Leg	4.000	0.000	138.000	No Ice	2.139	1.686	0.109
			0.000			1/2" Ice	2.321	1.850	0.131
			2.000			1" Ice	2.511	2.022	0.156
RADIO 4460 B2/B25 B66_TMO	C	From Leg	4.000	0.000	138.000	No Ice	2.139	1.686	0.109
			0.000			1/2" Ice	2.321	1.850	0.131
			2.000			1" Ice	2.511	2.022	0.156
Radio 4480_TMOV2	A	From Leg	4.000	0.000	138.000	No Ice	2.878	1.397	0.081
			0.000			1/2" Ice	3.091	1.558	0.103
			2.000			1" Ice	3.312	1.727	0.128

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	Client	Crown Castle	Designed by	R AITHAL

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _{AA} Front	C _{AA} Side	Weight
			Horz Lateral ft	Vert ft					
Radio 4480_TMOV2	B	From Leg	4.000	0.000	0.000	138.000	No Ice 2.878	1.397	0.081
			0.000				1/2" Ice 3.091	1.558	0.103
			2.000				1" Ice 3.312	1.727	0.128
Radio 4480_TMOV2	C	From Leg	4.000	0.000	0.000	138.000	No Ice 2.878	1.397	0.081
			0.000				1/2" Ice 3.091	1.558	0.103
			2.000				1" Ice 3.312	1.727	0.128
9' x 2" Pipe Mount	A	From Leg	4.000	0.000	0.000	138.000	No Ice 2.138	2.138	0.065
			0.000				1/2" Ice 3.066	3.066	0.081
			0.000				1" Ice 4.010	4.010	0.103
9' x 2" Pipe Mount	B	From Leg	4.000	0.000	0.000	138.000	No Ice 2.138	2.138	0.065
			0.000				1/2" Ice 3.066	3.066	0.081
			0.000				1" Ice 4.010	4.010	0.103
9' x 2" Pipe Mount	C	From Leg	4.000	0.000	0.000	138.000	No Ice 2.138	2.138	0.065
			0.000				1/2" Ice 3.066	3.066	0.081
			0.000				1" Ice 4.010	4.010	0.103
10' horizontal x 2" Pipe Mount	A	From Leg	4.000	0.000	0.000	138.000	No Ice 1.900	0.010	0.027
			0.000				1/2" Ice 2.920	0.040	0.042
			5.000				1" Ice 3.970	0.090	0.063
10' horizontal x 2" Pipe Mount	A	From Leg	4.000	0.000	0.000	138.000	No Ice 1.900	0.010	0.027
			0.000				1/2" Ice 2.920	0.040	0.042
			5.000				1" Ice 3.970	0.090	0.063
10' horizontal x 2" Pipe Mount	A	From Leg	4.000	0.000	0.000	138.000	No Ice 1.900	0.010	0.027
			0.000				1/2" Ice 2.920	0.040	0.042
			5.000				1" Ice 3.970	0.090	0.063
3' x 2" Pipe Mount	A	From Leg	4.000	0.000	0.000	138.000	No Ice 0.583	0.583	0.011
			0.000				1/2" Ice 0.770	0.770	0.017
			0.000				1" Ice 0.967	0.967	0.024
3' x 2" Pipe Mount	B	From Leg	4.000	0.000	0.000	138.000	No Ice 0.583	0.583	0.011
			0.000				1/2" Ice 0.770	0.770	0.017
			0.000				1" Ice 0.967	0.967	0.024
3' x 2" Pipe Mount	C	From Leg	4.000	0.000	0.000	138.000	No Ice 0.583	0.583	0.011
			0.000				1/2" Ice 0.770	0.770	0.017
			0.000				1" Ice 0.967	0.967	0.024
TELESCOPOIC ARM KIT	A	From Leg	4.000	0.000	0.000	138.000	No Ice 2.950	0.030	0.053
			0.000				1/2" Ice 3.220	0.090	0.070
			5.000				1" Ice 3.530	0.170	0.092
TELESCOPOIC ARM KIT	B	From Leg	4.000	0.000	0.000	138.000	No Ice 2.950	0.030	0.053
			0.000				1/2" Ice 3.220	0.090	0.070
			5.000				1" Ice 3.530	0.170	0.092
TELESCOPOIC ARM KIT	C	From Leg	4.000	0.000	0.000	138.000	No Ice 2.950	0.030	0.053
			0.000				1/2" Ice 3.220	0.090	0.070
			5.000				1" Ice 3.530	0.170	0.092
Platform Mount [LP 713-1]	C	None		0.000		138.000	No Ice 32.890	32.890	1.510
							1/2" Ice 35.760	35.760	2.228
							1" Ice 38.760	38.760	3.026
*									
AIR6449 B41_T-MOBILE w/ Mount Pipe	A	From Leg	4.000	0.000	0.000	128.000	No Ice 5.190	2.710	0.128
			0.000				1/2" Ice 5.590	3.040	0.174
			0.000				1" Ice 6.020	3.380	0.227
AIR6449 B41_T-MOBILE w/ Mount Pipe	B	From Leg	4.000	0.000	0.000	128.000	No Ice 5.190	2.710	0.128
			0.000				1/2" Ice 5.590	3.040	0.174
			0.000				1" Ice 6.020	3.380	0.227
AIR6449 B41_T-MOBILE w/ Mount Pipe	C	From Leg	4.000	0.000	0.000	128.000	No Ice 5.190	2.710	0.128
			0.000				1/2" Ice 5.590	3.040	0.174
			0.000				1" Ice 6.020	3.380	0.227
APXVAALL24_43-U-NA20_TMO w/ Mount Pipe	A	From Leg	4.000	0.000	0.000	128.000	No Ice 14.690	6.870	0.183
			0.000				1/2" Ice 15.460	7.550	0.311

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Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _{AA}		Weight	
			Horz	Lateral			Front	Side		
			ft	ft	°	ft	ft ²	ft ²	K	
APXVAALL24_43-U-NA20 _TMO w/ Mount Pipe	B	From Leg	0.000		0.000	128.000	1" Ice	16.230	8.250	0.453
			4.000				No Ice	14.690	6.870	0.183
			0.000				1/2" Ice	15.460	7.550	0.311
			0.000				1" Ice	16.230	8.250	0.453
APXVAALL24_43-U-NA20 _TMO w/ Mount Pipe	C	From Leg	4.000		0.000	128.000	No Ice	14.690	6.870	0.183
			0.000				1/2" Ice	15.460	7.550	0.311
			0.000				1" Ice	16.230	8.250	0.453
			0.000				1" Ice	16.230	8.250	0.453
RADIO 4460 B2/B25 B66_TMO	A	From Leg	4.000		0.000	128.000	No Ice	2.139	1.686	0.109
			0.000				1/2" Ice	2.321	1.850	0.131
			0.000				1" Ice	2.511	2.022	0.156
RADIO 4460 B2/B25 B66_TMO	B	From Leg	4.000		0.000	128.000	No Ice	2.139	1.686	0.109
			0.000				1/2" Ice	2.321	1.850	0.131
			0.000				1" Ice	2.511	2.022	0.156
RADIO 4460 B2/B25 B66_TMO	C	From Leg	4.000		0.000	128.000	No Ice	2.139	1.686	0.109
			0.000				1/2" Ice	2.321	1.850	0.131
			0.000				1" Ice	2.511	2.022	0.156
Radio 4480_TMOV2	A	From Leg	4.000		0.000	128.000	No Ice	2.878	1.397	0.081
			0.000				1/2" Ice	3.091	1.558	0.103
			0.000				1" Ice	3.312	1.727	0.128
Radio 4480_TMOV2	B	From Leg	4.000		0.000	128.000	No Ice	2.878	1.397	0.081
			0.000				1/2" Ice	3.091	1.558	0.103
			0.000				1" Ice	3.312	1.727	0.128
Radio 4480_TMOV2	C	From Leg	4.000		0.000	128.000	No Ice	2.878	1.397	0.081
			0.000				1/2" Ice	3.091	1.558	0.103
			0.000				1" Ice	3.312	1.727	0.128
(2) 8' x 2" Mount Pipe	A	From Leg	4.000		0.000	128.000	No Ice	1.900	1.900	0.029
			0.000				1/2" Ice	2.728	2.728	0.044
			0.000				1" Ice	3.401	3.401	0.063
(2) 8' x 2" Mount Pipe	B	From Leg	4.000		0.000	128.000	No Ice	1.900	1.900	0.029
			0.000				1/2" Ice	2.728	2.728	0.044
			0.000				1" Ice	3.401	3.401	0.063
(2) 8' x 2" Mount Pipe	C	From Leg	4.000		0.000	128.000	No Ice	1.900	1.900	0.029
			0.000				1/2" Ice	2.728	2.728	0.044
			0.000				1" Ice	3.401	3.401	0.063
6' x 2" Mount Pipe	A	From Leg	4.000		0.000	128.000	No Ice	1.425	1.425	0.022
			0.000				1/2" Ice	1.925	1.925	0.033
			0.000				1" Ice	2.294	2.294	0.048
6' x 2" Mount Pipe	B	From Leg	4.000		0.000	128.000	No Ice	1.425	1.425	0.022
			0.000				1/2" Ice	1.925	1.925	0.033
			0.000				1" Ice	2.294	2.294	0.048
6' x 2" Mount Pipe	C	From Leg	4.000		0.000	128.000	No Ice	1.425	1.425	0.022
			0.000				1/2" Ice	1.925	1.925	0.033
			0.000				1" Ice	2.294	2.294	0.048
Platform Mount [LP 303-1_KCKR-HR-1]	C	None			0.000	128.000	No Ice	28.310	28.310	1.770
							1/2" Ice	35.690	35.690	2.297
							1" Ice	43.110	43.110	2.943
			*							
			*							
			*							

Dishes

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Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft	Aperture Area ft ²	Weight K
VHLP800-11	B	Paraboloid w/o Radome	From Leg	4.000 0.000 0.000	-20.000		128.000	2.917	No Ice 6.681 1/2" Ice 7.069 1" Ice 7.456	0.022 0.058 0.094
*										

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice
3	0.9 Dead+1.0 Wind 0 deg - No Ice
4	1.2 Dead+1.0 Wind 30 deg - No Ice
5	0.9 Dead+1.0 Wind 30 deg - No Ice
6	1.2 Dead+1.0 Wind 60 deg - No Ice
7	0.9 Dead+1.0 Wind 60 deg - No Ice
8	1.2 Dead+1.0 Wind 90 deg - No Ice
9	0.9 Dead+1.0 Wind 90 deg - No Ice
10	1.2 Dead+1.0 Wind 120 deg - No Ice
11	0.9 Dead+1.0 Wind 120 deg - No Ice
12	1.2 Dead+1.0 Wind 150 deg - No Ice
13	0.9 Dead+1.0 Wind 150 deg - No Ice
14	1.2 Dead+1.0 Wind 180 deg - No Ice
15	0.9 Dead+1.0 Wind 180 deg - No Ice
16	1.2 Dead+1.0 Wind 210 deg - No Ice
17	0.9 Dead+1.0 Wind 210 deg - No Ice
18	1.2 Dead+1.0 Wind 240 deg - No Ice
19	0.9 Dead+1.0 Wind 240 deg - No Ice
20	1.2 Dead+1.0 Wind 270 deg - No Ice
21	0.9 Dead+1.0 Wind 270 deg - No Ice
22	1.2 Dead+1.0 Wind 300 deg - No Ice
23	0.9 Dead+1.0 Wind 300 deg - No Ice
24	1.2 Dead+1.0 Wind 330 deg - No Ice
25	0.9 Dead+1.0 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service

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Comb. No.	Description
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load	Axial	Major Axis Moment	Minor Axis Moment
				Comb.	K	kip-ft	kip-ft
L1	170.5 - 156.5	Pole	Max Tension	39	0.000	-0.000	0.000
			Max. Compression	26	-5.873	0.004	0.293
			Max. Mx	20	-3.484	32.180	0.106
			Max. My	2	-3.478	0.030	32.568
			Max. Vy	20	-3.489	32.180	0.106
			Max. Vx	2	-3.517	0.030	32.568
			Max. Torque	9			0.157
L2	156.5 - 156	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-5.919	0.004	0.294
			Max. Mx	20	-3.519	33.928	0.105
			Max. My	2	-3.513	0.032	34.330
			Max. Vy	20	-3.508	33.928	0.105
			Max. Vx	2	-3.536	0.032	34.330
			Max. Torque	9			0.154
L3	156 - 132.67	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-33.225	1.351	1.448
			Max. Mx	20	-17.178	274.158	0.946
			Max. My	2	-17.139	0.539	276.873
			Max. Vy	20	-18.924	274.158	0.946
			Max. Vx	2	-19.169	0.539	276.873
			Max. Torque	15			-1.069
L4	132.67 - 87.09	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-51.300	0.919	1.238
			Max. Mx	20	-30.974	1320.031	4.240
			Max. My	2	-30.970	7.460	1324.773
			Max. Vy	20	-25.575	1320.031	4.240
			Max. Vx	2	-25.571	7.460	1324.773
			Max. Torque	24			1.696
L5	87.09 - 43	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-66.266	0.844	1.195
			Max. Mx	20	-44.734	2469.192	8.015
			Max. My	2	-44.733	15.480	2473.716
			Max. Vy	20	-27.858	2469.192	8.015
			Max. Vx	2	-27.851	15.480	2473.716
			Max. Torque	24			1.652
L6	43 - 0	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-88.611	0.742	1.136
			Max. Mx	20	-65.353	3886.732	12.145
			Max. My	2	-65.353	24.246	3890.887
			Max. Vy	20	-29.874	3886.732	12.145
			Max. Vx	2	-29.865	24.246	3890.887
			Max. Torque	24			1.604

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	27	88.611	0.035	8.228
	Max. H _x	20	65.377	29.823	0.081
	Max. H _z	3	49.033	0.173	29.814
	Max. M _x	2	3890.887	0.173	29.814
	Max. M _z	8	3867.101	-29.686	-0.009
	Max. Torsion	24	1.562	15.130	25.806
	Min. Vert	7	49.033	-25.661	14.925
	Min. H _x	8	65.377	-29.686	-0.009
	Min. H _z	14	65.377	-0.086	-29.799
	Min. M _x	14	-3886.977	-0.086	-29.799
	Min. M _z	20	-3886.732	29.823	0.081
	Min. Torsion	8	-0.976	-29.686	-0.009

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	54.481	0.000	0.000	-0.705	0.337	0.000
1.2 Dead+1.0 Wind 0 deg - No Ice	65.377	-0.173	-29.814	-3890.887	24.246	-0.630
0.9 Dead+1.0 Wind 0 deg - No Ice	49.033	-0.173	-29.814	-3810.100	23.663	-0.635
1.2 Dead+1.0 Wind 30 deg - No Ice	65.377	14.852	-25.790	-3365.802	-1934.496	0.265
0.9 Dead+1.0 Wind 30 deg - No Ice	49.033	14.852	-25.790	-3295.874	-1894.610	0.252
1.2 Dead+1.0 Wind 60 deg - No Ice	65.377	25.661	-14.925	-1948.543	-3342.389	0.786
0.9 Dead+1.0 Wind 60 deg - No Ice	49.033	25.661	-14.925	-1907.952	-3273.370	0.769
1.2 Dead+1.0 Wind 90 deg - No Ice	65.377	29.686	0.009	0.225	-3867.101	0.976
0.9 Dead+1.0 Wind 90 deg - No Ice	49.033	29.686	0.009	0.482	-3787.251	0.960
1.2 Dead+1.0 Wind 120 deg - No Ice	65.377	25.705	14.956	1950.806	-3348.327	0.682
0.9 Dead+1.0 Wind 120 deg - No Ice	49.033	25.705	14.956	1910.687	-3279.188	0.671
1.2 Dead+1.0 Wind 150 deg - No Ice	65.377	14.822	25.847	3371.678	-1930.362	0.432
0.9 Dead+1.0 Wind 150 deg - No Ice	49.033	14.822	25.847	3302.140	-1890.551	0.428
1.2 Dead+1.0 Wind 180 deg - No Ice	65.377	0.086	29.799	3886.977	-11.267	0.460
0.9 Dead+1.0 Wind 180 deg - No Ice	49.033	0.086	29.799	3806.782	-11.169	0.465
1.2 Dead+1.0 Wind 210 deg - No Ice	65.377	-15.074	25.762	3359.911	1966.098	-0.555
0.9 Dead+1.0 Wind 210 deg - No Ice	49.033	-15.074	25.762	3290.602	1925.353	-0.543
1.2 Dead+1.0 Wind 240 deg - No Ice	65.377	-25.891	14.774	1925.824	3374.908	-0.540
0.9 Dead+1.0 Wind 240 deg - No Ice	49.033	-25.891	14.774	1886.186	3305.015	-0.523
1.2 Dead+1.0 Wind 270 deg - No Ice	65.377	-29.823	-0.081	-12.145	3886.732	-0.956

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	<p>Client</p> <p style="text-align: center;">Crown Castle</p>	<p>Designed by</p> <p style="text-align: center;">R AITHAL</p>

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 270 deg - No Ice	49.033	-29.823	-0.081	-11.653	3806.267	-0.939
1.2 Dead+1.0 Wind 300 deg - No Ice	65.377	-25.885	-14.902	-1945.215	3373.989	-1.495
0.9 Dead+1.0 Wind 300 deg - No Ice	49.033	-25.885	-14.902	-1904.691	3304.129	-1.483
1.2 Dead+1.0 Wind 330 deg - No Ice	65.377	-15.130	-25.806	-3367.897	1973.563	-1.562
0.9 Dead+1.0 Wind 330 deg - No Ice	49.033	-15.130	-25.806	-3297.932	1932.694	-1.559
1.2 Dead+1.0 Ice+1.0 Temp	88.611	-0.000	-0.000	-1.136	0.742	-0.000
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	88.611	-0.035	-8.228	-1102.185	5.861	0.079
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	88.611	4.089	-7.120	-953.870	-545.108	0.307
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	88.611	7.070	-4.118	-552.303	-942.972	0.392
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	88.611	8.175	0.002	-1.088	-1090.571	0.349
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	88.611	7.079	4.124	550.513	-944.211	0.167
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	88.611	4.083	7.132	952.845	-544.222	-0.015
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	88.611	0.017	8.226	1099.115	-1.569	-0.115
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	88.611	-4.134	7.115	950.391	553.308	-0.370
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	88.611	-7.116	4.088	545.293	951.370	-0.346
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	88.611	-8.202	-0.016	-3.661	1096.268	-0.345
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	88.611	-7.115	-4.113	-551.592	951.174	-0.329
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	88.611	-4.145	-7.123	-954.312	554.863	-0.212
Dead+Wind 0 deg - Service	54.481	-0.042	-7.290	-942.326	6.113	-0.160
Dead+Wind 30 deg - Service	54.481	3.631	-6.306	-815.255	-467.994	0.062
Dead+Wind 60 deg - Service	54.481	6.274	-3.649	-472.187	-808.781	0.194
Dead+Wind 90 deg - Service	54.481	7.259	0.002	-0.500	-935.747	0.247
Dead+Wind 120 deg - Service	54.481	6.285	3.657	471.623	-810.212	0.178
Dead+Wind 150 deg - Service	54.481	3.624	6.320	815.554	-466.996	0.115
Dead+Wind 180 deg - Service	54.481	0.021	7.286	940.264	-2.441	0.116
Dead+Wind 210 deg - Service	54.481	-3.686	6.299	812.728	476.146	-0.141
Dead+Wind 240 deg - Service	54.481	-6.330	3.613	465.611	817.164	-0.140
Dead+Wind 270 deg - Service	54.481	-7.292	-0.020	-3.479	941.035	-0.241
Dead+Wind 300 deg - Service	54.481	-6.329	-3.644	-471.396	816.957	-0.372
Dead+Wind 330 deg - Service	54.481	-3.699	-6.310	-815.776	477.960	-0.389

Solution Summary

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
1	0.000	-54.481	0.000	0.000	54.481	0.000	0.000%
2	-0.173	-65.377	-29.814	0.173	65.377	29.814	0.000%
3	-0.173	-49.033	-29.814	0.173	49.033	29.814	0.000%
4	14.852	-65.377	-25.790	-14.852	65.377	25.790	0.000%
5	14.852	-49.033	-25.790	-14.852	49.033	25.790	0.000%

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Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
6	25.661	-65.377	-14.925	-25.661	65.377	14.925	0.000%
7	25.661	-49.033	-14.925	-25.661	49.033	14.925	0.000%
8	29.686	-65.377	0.009	-29.686	65.377	-0.009	0.000%
9	29.686	-49.033	0.009	-29.686	49.033	-0.009	0.000%
10	25.705	-65.377	14.956	-25.705	65.377	-14.956	0.000%
11	25.705	-49.033	14.956	-25.705	49.033	-14.956	0.000%
12	14.822	-65.377	25.847	-14.822	65.377	-25.847	0.000%
13	14.822	-49.033	25.847	-14.822	49.033	-25.847	0.000%
14	0.086	-65.377	29.799	-0.086	65.377	-29.799	0.000%
15	0.086	-49.033	29.799	-0.086	49.033	-29.799	0.000%
16	-15.074	-65.377	25.762	15.074	65.377	-25.762	0.000%
17	-15.074	-49.033	25.762	15.074	49.033	-25.762	0.000%
18	-25.891	-65.377	14.774	25.891	65.377	-14.774	0.000%
19	-25.891	-49.033	14.774	25.891	49.033	-14.774	0.000%
20	-29.823	-65.377	-0.081	29.823	65.377	0.081	0.000%
21	-29.823	-49.033	-0.081	29.823	49.033	0.081	0.000%
22	-25.885	-65.377	-14.902	25.885	65.377	14.902	0.000%
23	-25.885	-49.033	-14.902	25.885	49.033	14.902	0.000%
24	-15.130	-65.377	-25.806	15.130	65.377	25.806	0.000%
25	-15.130	-49.033	-25.806	15.130	49.033	25.806	0.000%
26	0.000	-88.611	0.000	0.000	88.611	0.000	0.000%
27	-0.035	-88.611	-8.228	0.035	88.611	8.228	0.000%
28	4.089	-88.611	-7.120	-4.089	88.611	7.120	0.000%
29	7.070	-88.611	-4.118	-7.070	88.611	4.118	0.000%
30	8.175	-88.611	0.002	-8.175	88.611	-0.002	0.000%
31	7.079	-88.611	4.124	-7.079	88.611	-4.124	0.000%
32	4.083	-88.611	7.132	-4.083	88.611	-7.132	0.000%
33	0.017	-88.611	8.226	-0.017	88.611	-8.226	0.000%
34	-4.134	-88.611	7.115	4.134	88.611	-7.115	0.000%
35	-7.116	-88.611	4.088	7.116	88.611	-4.088	0.000%
36	-8.202	-88.611	-0.016	8.202	88.611	0.016	0.000%
37	-7.115	-88.611	-4.113	7.115	88.611	4.113	0.000%
38	-4.145	-88.611	-7.123	4.145	88.611	7.123	0.000%
39	-0.042	-54.481	-7.290	0.042	54.481	7.290	0.000%
40	3.631	-54.481	-6.306	-3.631	54.481	6.306	0.000%
41	6.274	-54.481	-3.649	-6.274	54.481	3.649	0.000%
42	7.259	-54.481	0.002	-7.259	54.481	-0.002	0.000%
43	6.285	-54.481	3.657	-6.285	54.481	-3.657	0.000%
44	3.624	-54.481	6.320	-3.624	54.481	-6.320	0.000%
45	0.021	-54.481	7.286	-0.021	54.481	-7.286	0.000%
46	-3.686	-54.481	6.299	3.686	54.481	-6.299	0.000%
47	-6.330	-54.481	3.613	6.330	54.481	-3.613	0.000%
48	-7.292	-54.481	-0.020	7.292	54.481	0.020	0.000%
49	-6.329	-54.481	-3.644	6.329	54.481	3.644	0.000%
50	-3.699	-54.481	-6.310	3.699	54.481	6.310	0.000%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	4	0.00000001	0.00000001
2	Yes	6	0.00000001	0.00011247
3	Yes	5	0.00000001	0.00056812
4	Yes	7	0.00000001	0.00024504
5	Yes	6	0.00000001	0.00086148
6	Yes	7	0.00000001	0.00024507

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7	Yes	6	0.00000001	0.00086247
8	Yes	5	0.00000001	0.00043518
9	Yes	5	0.00000001	0.00021456
10	Yes	7	0.00000001	0.00024928
11	Yes	6	0.00000001	0.00087830
12	Yes	7	0.00000001	0.00024274
13	Yes	6	0.00000001	0.00085331
14	Yes	5	0.00000001	0.00050052
15	Yes	5	0.00000001	0.00025080
16	Yes	7	0.00000001	0.00024937
17	Yes	6	0.00000001	0.00087746
18	Yes	7	0.00000001	0.00024597
19	Yes	6	0.00000001	0.00086516
20	Yes	5	0.00000001	0.00022720
21	Yes	5	0.00000001	0.00011431
22	Yes	7	0.00000001	0.00024238
23	Yes	6	0.00000001	0.00085059
24	Yes	7	0.00000001	0.00025618
25	Yes	6	0.00000001	0.00090238
26	Yes	4	0.00000001	0.00002901
27	Yes	6	0.00000001	0.00027022
28	Yes	6	0.00000001	0.00067913
29	Yes	6	0.00000001	0.00067374
30	Yes	6	0.00000001	0.00026594
31	Yes	6	0.00000001	0.00067869
32	Yes	6	0.00000001	0.00066553
33	Yes	6	0.00000001	0.00026787
34	Yes	6	0.00000001	0.00068468
35	Yes	6	0.00000001	0.00068131
36	Yes	6	0.00000001	0.00026784
37	Yes	6	0.00000001	0.00067935
38	Yes	6	0.00000001	0.00070882
39	Yes	4	0.00005199	0.00068889
40	Yes	5	0.00000001	0.00043699
41	Yes	5	0.00000001	0.00043924
42	Yes	4	0.00000001	0.00047455
43	Yes	5	0.00000001	0.00045701
44	Yes	5	0.00000001	0.00042302
45	Yes	4	0.00000001	0.00057116
46	Yes	5	0.00000001	0.00045338
47	Yes	5	0.00000001	0.00044301
48	Yes	4	0.00000001	0.00045613
49	Yes	5	0.00000001	0.00042714
50	Yes	5	0.00000001	0.00049183

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	170.5 - 156.5	36.891	50	2.030	0.003
L2	156.5 - 156	30.988	50	1.962	0.003
L3	156 - 132.67	30.782	50	1.961	0.003
L4	136.34 - 87.09	23.093	50	1.730	0.002
L5	91.92 - 43	9.754	50	1.080	0.001
L6	49 - 0	2.596	50	0.498	0.000

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Critical Deflections and Radius of Curvature - Service Wind

Elevation	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
166.000	MX08FRO665-21 w/ Mount Pipe	50	34.972	2.003	0.004	14789
156.000	(2) DB844G65ZAXY w/ Mount Pipe	50	30.782	1.961	0.004	6765
146.000	RRUS 32 B66	50	26.765	1.876	0.004	5445
138.000	AIR 6419 B41 TMO w/ Mount Pipe	50	23.706	1.757	0.003	4275
128.000	VHLP800-11	50	20.135	1.601	0.002	4026

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	170.5 - 156.5	151.899	24	8.366	0.010
L2	156.5 - 156	127.701	24	8.092	0.010
L3	156 - 132.67	126.859	24	8.087	0.010
L4	136.34 - 87.09	95.281	24	7.148	0.006
L5	91.92 - 43	40.300	24	4.466	0.002
L6	49 - 0	10.728	24	2.057	0.001

Critical Deflections and Radius of Curvature - Design Wind

Elevation	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
166.000	MX08FRO665-21 w/ Mount Pipe	24	144.036	8.257	0.018	3818
156.000	(2) DB844G65ZAXY w/ Mount Pipe	24	126.859	8.087	0.019	1733
146.000	RRUS 32 B66	24	110.370	7.743	0.017	1377
138.000	AIR 6419 B41 TMO w/ Mount Pipe	24	97.803	7.256	0.014	1076
128.000	VHLP800-11	24	83.112	6.618	0.010	1006

Compression Checks

Pole Design Data

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
L1	170.5 - 156.5 (1)	TP10.75x10.75x0.365	14.000	0.000	0.0	11.908	-3.478	375.111	0.009
L2	156.5 - 156 (2)	TP19.5x10.75x0.365	0.500	0.000	0.0	11.908	-3.480	375.111	0.009
L3	156 - 132.67 (3)	TP24.79x19.5x0.188	23.330	0.000	0.0	14.146	-17.139	827.560	0.021

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Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
L4	132.67 - 87.09 (4)	TP34.63x23.583x0.375	49.250	0.000	0.0	39.482	-30.956	2309.730	0.013
L5	87.09 - 43 (5)	TP43.75x32.797x0.438	48.920	0.000	0.0	58.279	-44.726	3409.340	0.013
L6	43 - 0 (6)	TP52.5x41.532x0.5	49.000	0.000	0.0	82.524	-65.353	4827.650	0.014

Pole Bending Design Data

Section No.	Elevation ft	Size	M _{ux} kip-ft	φM _{ux} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{ux}}$	M _{uy} kip-ft	φM _{uy} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{uy}}$
L1	170.5 - 156.5 (1)	TP10.75x10.75x0.365	32.568	103.375	0.315	0.000	103.375	0.000
L2	156.5 - 156 (2)	TP19.5x10.75x0.365	32.568	103.375	0.315	0.000	103.375	0.000
L3	156 - 132.67 (3)	TP24.79x19.5x0.188	276.874	472.858	0.586	0.000	472.858	0.000
L4	132.67 - 87.09 (4)	TP34.63x23.583x0.375	1327.742	1994.075	0.666	0.000	1994.075	0.000
L5	87.09 - 43 (5)	TP43.75x32.797x0.438	2481.283	3719.175	0.667	0.000	3719.175	0.000
L6	43 - 0 (6)	TP52.5x41.532x0.5	3903.550	6397.867	0.610	0.000	6397.867	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	170.5 - 156.5 (1)	TP10.75x10.75x0.365	3.517	112.533	0.031	0.008	102.747	0.000
L2	156.5 - 156 (2)	TP19.5x10.75x0.365	3.536	207.350	0.017	0.008	102.747	0.000
L3	156 - 132.67 (3)	TP24.79x19.5x0.188	19.169	248.268	0.077	1.051	516.816	0.002
L4	132.67 - 87.09 (4)	TP34.63x23.583x0.375	25.679	692.918	0.037	1.659	2012.925	0.001
L5	87.09 - 43 (5)	TP43.75x32.797x0.438	27.957	1022.800	0.027	1.612	3759.250	0.000
L6	43 - 0 (6)	TP52.5x41.532x0.5	29.966	1448.300	0.021	1.564	6595.391	0.000

Pole Interaction Design Data

Section No.	Elevation ft	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{ux}}$	Ratio $\frac{M_{uy}}{\phi M_{uy}}$	Ratio $\frac{V_u}{\phi V_n}$	Ratio $\frac{T_u}{\phi T_n}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	170.5 - 156.5 (1)	0.009	0.315	0.000	0.031	0.000	0.325	1.050	4.8.2 ✓
L2	156.5 - 156 (2)	0.009	0.315	0.000	0.017	0.000	0.325	1.050	4.8.2 ✓
L3	156 - 132.67 (3)	0.021	0.586	0.000	0.077	0.002	0.613	1.050	4.8.2 ✓

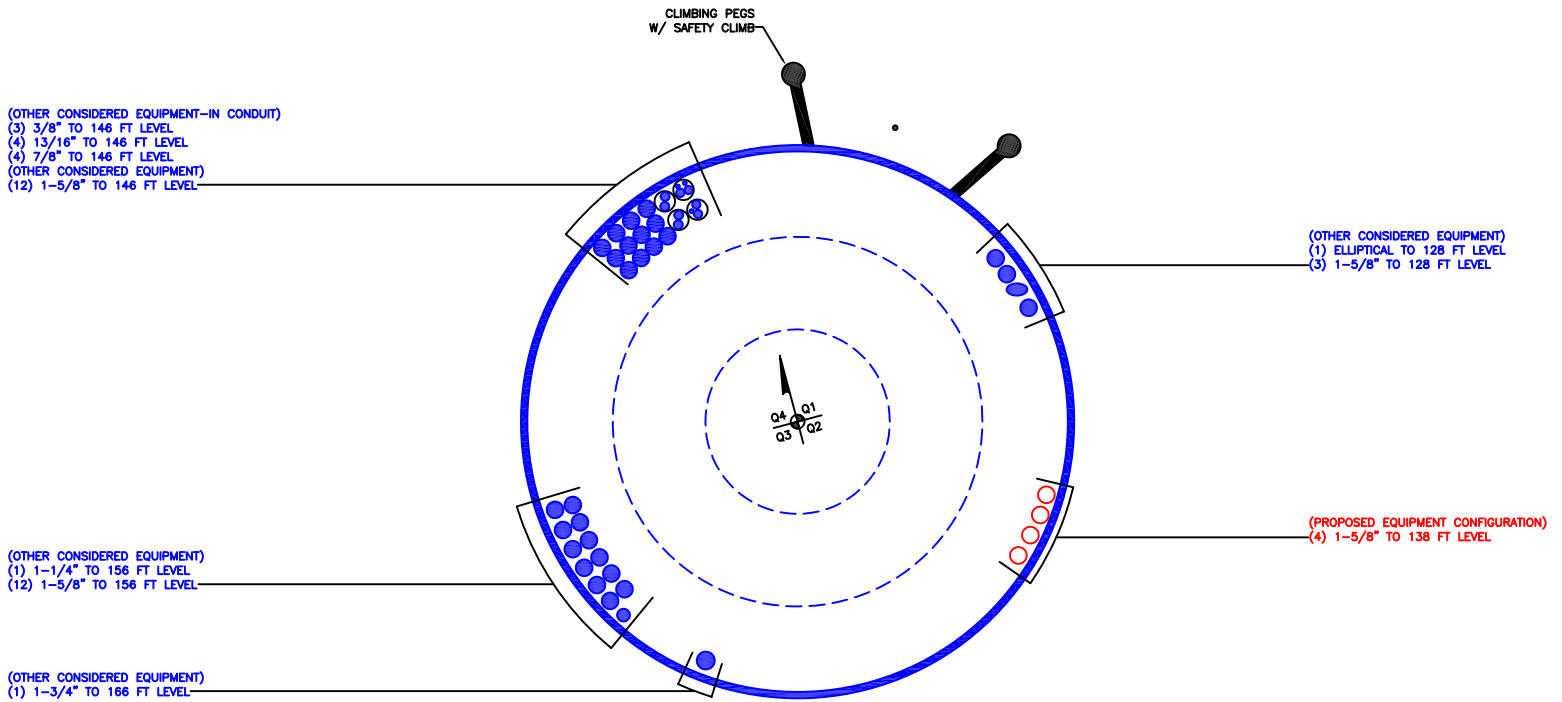
tnxTower B+T Group 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job 80964.017.01 - BRG 126 943086, CT (BU# 806355)	Page 20 of 20
	Project	Date 11:38:38 04/30/22
	Client Crown Castle	Designed by R AITHAL

Section No.	Elevation ft	Ratio P_u	Ratio M_{ux}	Ratio M_{uy}	Ratio V_u	Ratio T_u	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
		ϕP_n	ϕM_{nx}	ϕM_{ny}	ϕV_n	ϕT_n			
L4	132.67 - 87.09 (4)	0.013	0.666	0.000	0.037	0.001	0.681	1.050	4.8.2 ✓
L5	87.09 - 43 (5)	0.013	0.667	0.000	0.027	0.000	0.681	1.050	4.8.2 ✓
L6	43 - 0 (6)	0.014	0.610	0.000	0.021	0.000	0.624	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	170.5 - 156.5	Pole	TP10.75x10.75x0.365	1	-3.478	393.867	31.0	Pass
L2	156.5 - 156	Pole	TP19.5x10.75x0.365	2	-3.480	393.867	30.9	Pass
L3	156 - 132.67	Pole	TP24.79x19.5x0.188	3	-17.139	868.938	58.3	Pass
L4	132.67 - 87.09	Pole	TP34.63x23.583x0.375	4	-30.956	2425.216	64.8	Pass
L5	87.09 - 43	Pole	TP43.75x32.797x0.438	5	-44.726	3579.807	64.9	Pass
L6	43 - 0	Pole	TP52.5x41.532x0.5	6	-65.353	5069.032	59.4	Pass
Summary								
Pole (L5)							64.9	Pass
RATING =							64.9	Pass

APPENDIX B
BASE LEVEL DRAWING



BUSINESS UNIT: 806355

APPENDIX C
ADDITIONAL CALCULATIONS

Monopole Flange Plate Connection

Elevation = 156 ft.



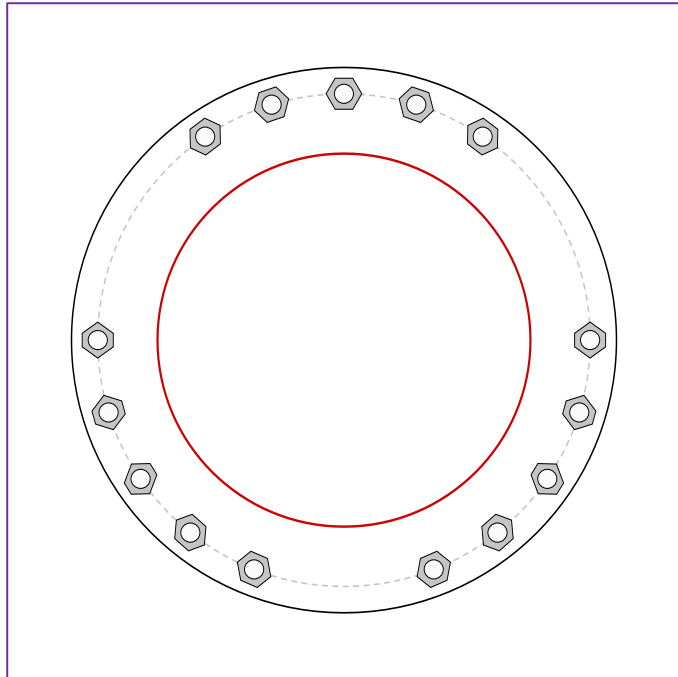
BU #	806355
Site Name	BRG 126 943086, CT
Order #	608635, Rev# 0

Applied Loads	
Moment (kip-ft)	34.33
Axial Force (kips)	3.51
Shear Force (kips)	3.54

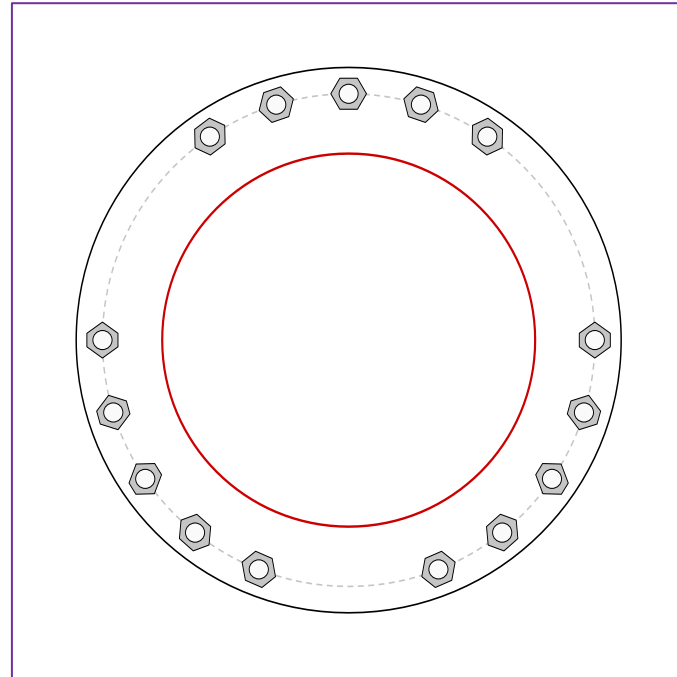
TIA-222 Revision	H
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*TIA-222-H Section 15.5 Applied

Top Plate - External



Bottom Plate - External



Connection Properties

Bolt Data

(15) 1" ϕ bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 25.75" BC
 pos. (deg): 0, 55.7, 72.9, 90, 107.1, 124.3, 180, 197.1, 214.3, 231.4, 248.6, 291.4, 308.6, 325.7, 342.9

Top Plate Data

28.5" OD x 1" Plate (A572-60; Fy=60 ksi, Fu=75 ksi)

Bottom Plate Data

28.5" OD x 1" Plate (A572-60; Fy=60 ksi, Fu=75 ksi)

Top Stiffener Data

N/A

Bottom Stiffener Data

N/A

Top Pole Data

19.5" x 0.365" round pole (A53-B-35; Fy=35 ksi, Fu=60 ksi)

Bottom Pole Data

19.5" x 0.1875" 18-sided pole (A572-65; Fy=65 ksi, Fu=80 ksi)

Analysis Results

Bolt Capacity

Max Load (kips)	4.30
Allowable (kips)	54.54
Stress Rating:	7.5% Pass

Top Plate Capacity

Max Stress (ksi):	10.14	(Flexural)
Allowable Stress (ksi):	54.00	
Stress Rating:	17.9%	Pass
Tension Side Stress Rating:	13.4%	Pass

Bottom Plate Capacity

Max Stress (ksi):	10.14	(Flexural)
Allowable Stress (ksi):	54.00	
Stress Rating:	17.9%	Pass
Tension Side Stress Rating:	13.4%	Pass

Monopole Base Plate Connection

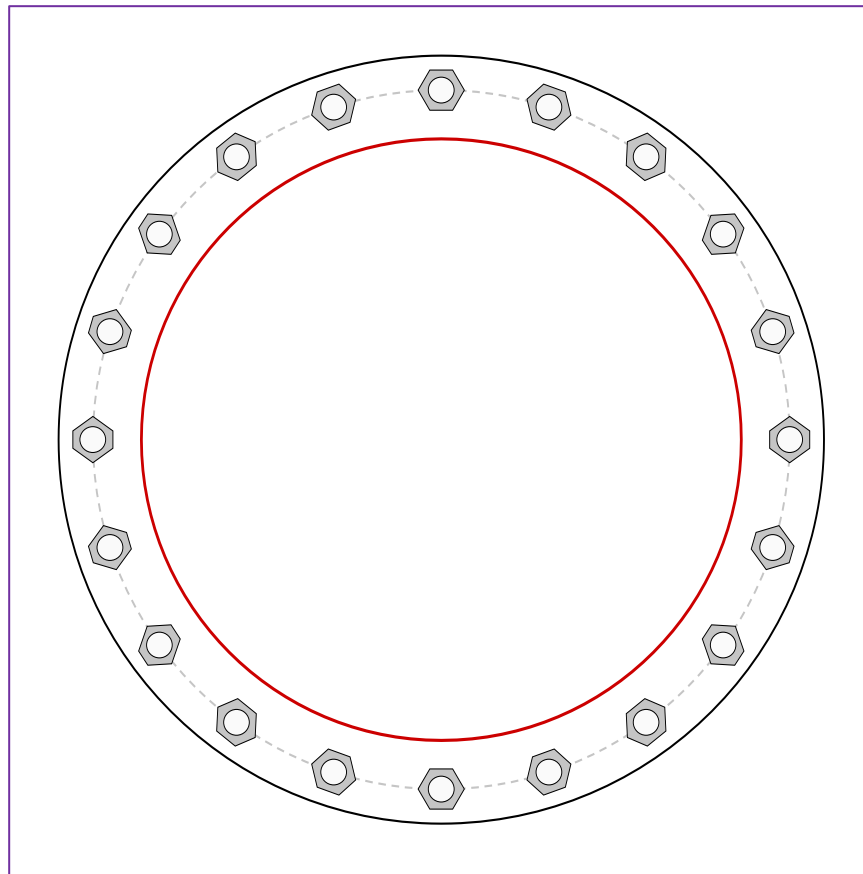


Site Info	
BU #	806355
Site Name	BRG 126 943086, CT
Order #	608635, Rev# 0

Analysis Considerations	
TIA-222 Revision	H
Grout Considered:	No
l_{ar} (in)	1.625

Applied Loads	
Moment (kip-ft)	3903.55
Axial Force (kips)	65.35
Shear Force (kips)	29.97

*TIA-222-H Section 15.5 Applied



Connection Properties	Analysis Results
-----------------------	------------------

Anchor Rod Data
(20) 2-1/4" ϕ bolts (A615-75 N; $F_y=75$ ksi, $F_u=100$ ksi) on 61" BC
Base Plate Data
67" OD x 2.25" Plate (A572-60; $F_y=60$ ksi, $F_u=75$ ksi)
Stiffener Data
N/A
Pole Data
52.5" x 0.5" 18-sided pole (A572-65; $F_y=65$ ksi, $F_u=80$ ksi)

Anchor Rod Summary		<i>(units of kips, kip-in)</i>
$P_{u_t} = 150.23$	$\phi P_{n_t} = 243.75$	Stress Rating
$V_u = 1.5$	$\phi V_n = 149.1$	58.7%
$M_u = n/a$	$\phi M_n = n/a$	Pass
Base Plate Summary		
Max Stress (ksi):	37.88	(Flexural)
Allowable Stress (ksi):	54	
Stress Rating:	66.8%	Pass

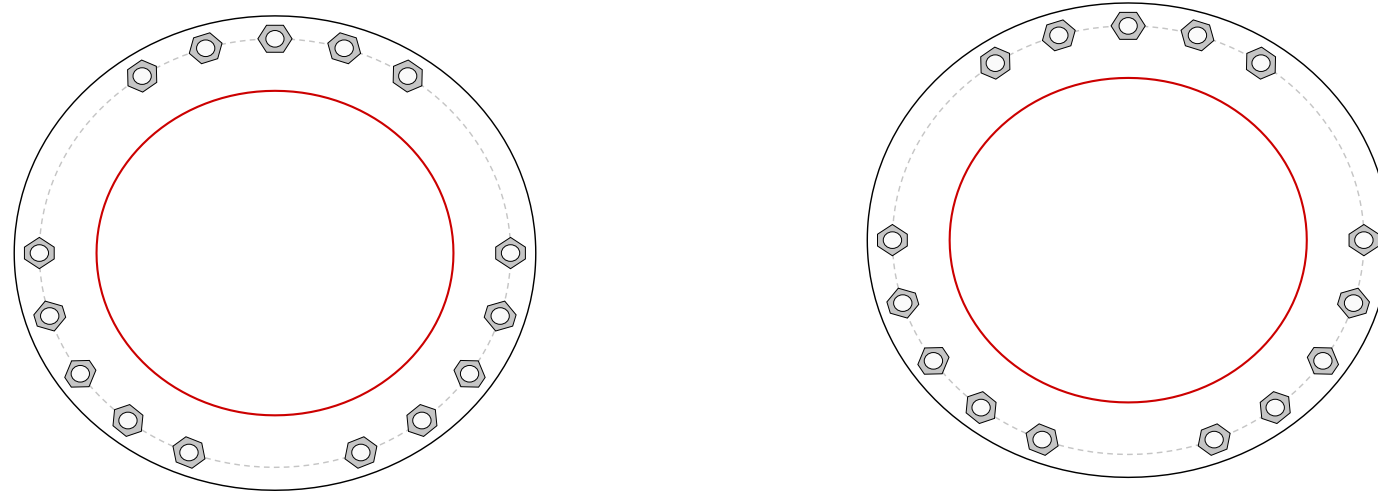
CCIplate

Elevation (ft) 156 (Flange)

Bolt Group	Resist Axial	Resist Shear	Induce Plate Bending
1	Yes	Yes	Yes

Custom Bolt Connection										
Bolt	Bolt Group ID	Location (deg.)	Diameter (in)	Material	Bolt Circle (in)	Eta Factor, η :	I_{ar} (in):	Thread Type	Area Override, in ²	Tension Only
1	1	0	1	A325	25.75	0.5	0	N-Included		No
2	1	55.7	1	A325	25.75	0.5	0	N-Included		No
3	1	72.9	1	A325	25.75	0.5	0	N-Included		No
4	1	90	1	A325	25.75	0.5	0	N-Included		No
5	1	107.1	1	A325	25.75	0.5	0	N-Included		No
6	1	124.3	1	A325	25.75	0.5	0	N-Included		No
7	1	180	1	A325	25.75	0.5	0	N-Included		No
8	1	197.1	1	A325	25.75	0.5	0	N-Included		No
9	1	214.3	1	A325	25.75	0.5	0	N-Included		No
10	1	231.4	1	A325	25.75	0.5	0	N-Included		No
11	1	248.6	1	A325	25.75	0.5	0	N-Included		No
12	1	291.4	1	A325	25.75	0.5	0	N-Included		No
13	1	308.6	1	A325	25.75	0.5	0	N-Included		No
14	1	325.7	1	A325	25.75	0.5	0	N-Included		No
15	1	342.9	1	A325	25.75	0.5	0	N-Included		No

Plot Graphic



Pier and Pad Foundation



BU #: 806355
Site Name: BRG 126 943086, C
App. Number: 608635, Rev# 0

TIA-222 Revision: H
Tower Type: Monopole

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

Superstructure Analysis Reactions		
Compression, P_{comp} :	65.38	kips
Base Shear, Vu_{comp} :	29.91	kips
Moment, M_u :	3903.55	ft-kips
Tower Height, H :	170.5	ft
BP Dist. Above Fdn, bp_{dist} :	3.875	in

Foundation Analysis Checks				
	Capacity	Demand	Rating*	Check
<i>Lateral (Sliding) (kips)</i>	414.74	29.91	6.9%	Pass
<i>Bearing Pressure (ksf)</i>	18.00	3.40	18.9%	Pass
<i>Overturning (kip*ft)</i>	6484.88	4212.31	65.0%	Pass
<i>Pier Flexure (Comp.) (kip*ft)</i>	5930.62	4112.92	66.0%	Pass
<i>Pier Compression (kip)</i>	31187.52	127.12	0.4%	Pass
<i>Pad Flexure (kip*ft)</i>	3909.72	1897.89	46.2%	Pass
<i>Pad Shear - 1-way (kips)</i>	788.93	334.01	40.3%	Pass
<i>Pad Shear - 2-way (Comp) (ksi)</i>	0.190	0.000	0.0%	Pass
<i>Flexural 2-way (Comp) (kip*ft)</i>	4403.40	2467.75	53.4%	Pass

Pier Properties		
Pier Shape:	Square	
Pier Diameter, $dpier$:	7	ft
Ext. Above Grade, E :	1	ft
Pier Rebar Size, Sc :	8	
Pier Rebar Quantity, mc :	46	
Pier Tie/Spiral Size, St :	4	
Pier Tie/Spiral Quantity, mt :	7	
Pier Reinforcement Type:	Tie	
Pier Clear Cover, cc_{pier} :	3	in

*Rating per TIA-222-H Section 15.5

Structural Rating*:	66.0%
Soil Rating*:	65.0%

Pad Properties		
Depth, D :	9	ft
Pad Width, W_1 :	22	ft
Pad Thickness, T :	3	ft
Pad Rebar Size (Top dir.2), Sp_{top2} :	8	
Pad Rebar Quantity (Top dir. 2), mp_{top2} :	20	
Pad Rebar Size (Bottom dir. 2), Sp_2 :	8	
Pad Rebar Quantity (Bottom dir. 2), mp_2 :	36	
Pad Clear Cover, cc_{pad} :	3	in

Material Properties		
Rebar Grade, F_y :	60	ksi
Concrete Compressive Strength, F'_c :	4	ksi
Dry Concrete Density, δ_c :	150	pcf

Soil Properties		
Total Soil Unit Weight, γ :	124	pcf
Ultimate Gross Bearing, Q_{ult} :	24.000	ksf
Cohesion, C_u :	0.000	ksf
Friction Angle, ϕ :	36	degrees
SPT Blow Count, N_{blows} :	50	
Base Friction, μ :	0.6	
Neglected Depth, N :	3.50	ft
Foundation Bearing on Rock?	No	
Groundwater Depth, gw :	6	ft

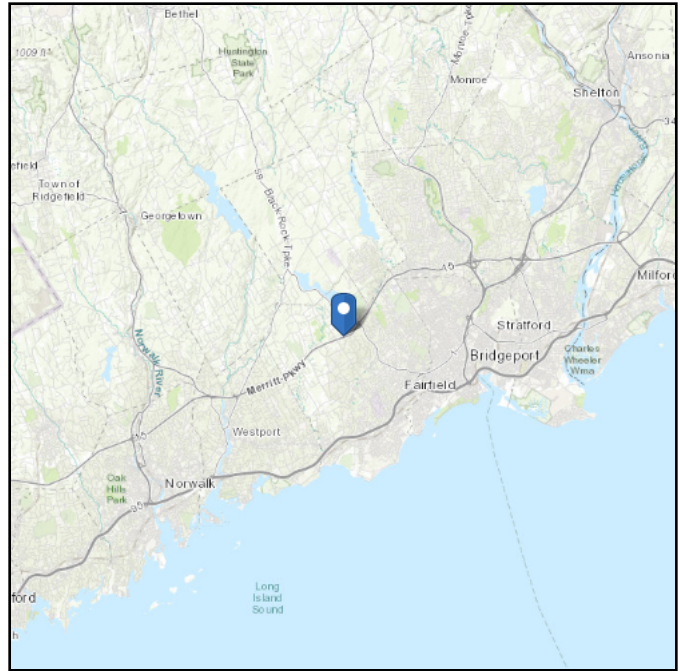
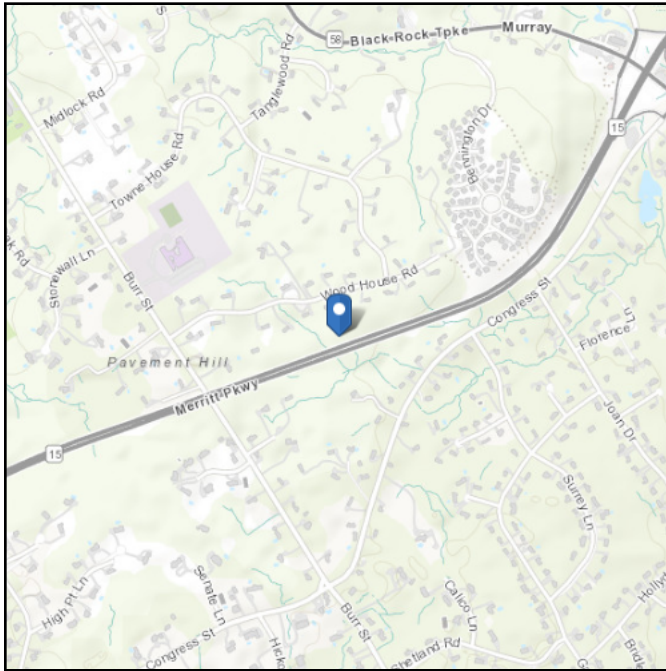
--Toggle between Gross and Net

ASCE 7 Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-16
Risk Category: II
Soil Class: D - Default (see Section 11.4.3)

Elevation: 333.8 ft (NAVD 88)
Latitude: 41.195917
Longitude: -73.281361



Wind

Results:

Wind Speed	118 Vmph
10-year MRI	75 Vmph
25-year MRI	85 Vmph
50-year MRI	90 Vmph
100-year MRI	98 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 Apr 14 2022

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).

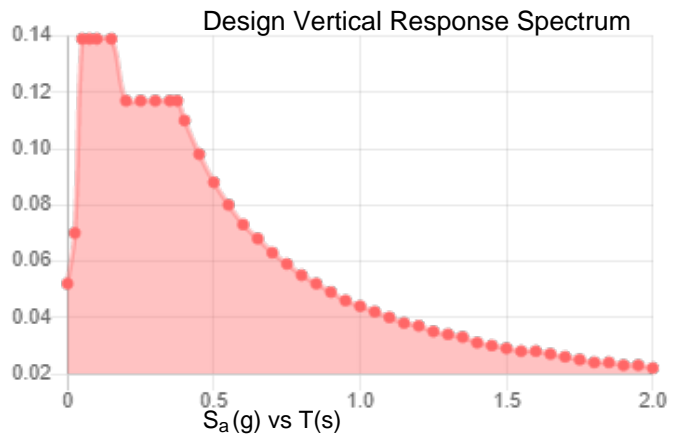
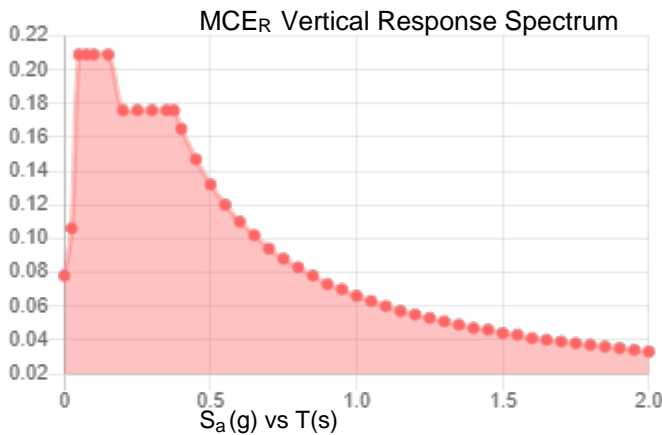
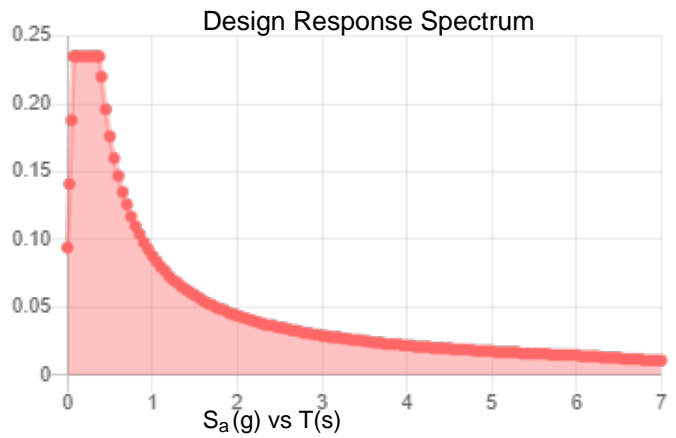
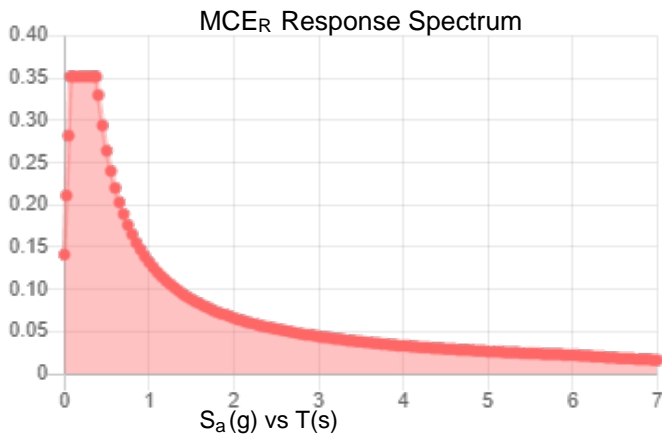
Site is in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2. Glazed openings need not be protected against wind-borne debris.

Site Soil Class: D - Default (see Section 11.4.3)

Results:

S_s :	0.22	S_{D1} :	0.088
S_1 :	0.055	T_L :	6
F_a :	1.6	PGA :	0.127
F_v :	2.4	PGA _M :	0.196
S_{MS} :	0.352	F_{PGA} :	1.546
S_{M1} :	0.132	I_e :	1
S_{DS} :	0.235	C_v :	0.74

Seismic Design Category B



Data Accessed: Thu Apr 14 2022

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 Apr 14 2022

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.

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

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Date: April 26, 2022



B+T Group
1717 S. Boulder, Suite 300
Tulsa, OK 74119
(918) 587-4630
towersupport@btgrp.com

Subject: Mount Modification Report

Carrier Designation: T-Mobile Equipment Change-Out
Carrier Site Number: CT11078B
Carrier Site Name: Fairfield/ MP X43/ Burr S

Crown Castle Designation: **BU Number:** 806355
Site Name: BRG 126 943086
JDE Job Number: 709214
Order Number: 608635, Rev.0

Engineering Firm Designation: **B+T Group Report Designation:** 80964.016.01

Site Data: 281 Wood House Road, Fairfield, CT, Fairfield County, 06824
Latitude 41° 11' 45.30" Longitude -73° 16' 52.90"

Structure Information: **Tower Height & Type:** 170.5 ft. Monopole
Mount Elevation: 138 ft.
Mount Type: 12 ft. Platform Mount

B+T Group is pleased to submit this "Mount Modification 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's stress level. Based on our analysis we have determined the stress level to be:

Platform Mount

Sufficient

*See Section 4.1 of this report for the structural modifications required in order for the mount to support the loading listed in Table 1.

This analysis utilizes an ultimate 3-second gust wind speed of 118 mph as required by the 2018 Connecticut State Building Code. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Mount structural analysis prepared by: Isaac Fulton

Respectfully submitted by: B&T Engineering, Inc.
COA: PEC.0001564 Expires: 02/01/2023

Chad E. Tuttle, P.E.

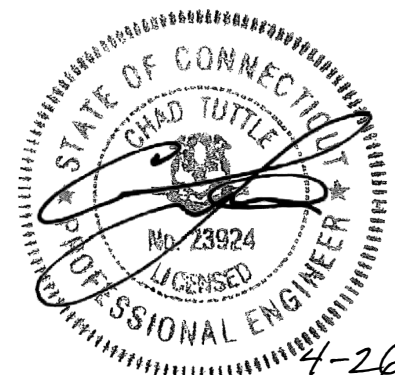


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Mount Modification Design Drawings (MDD)

1) INTRODUCTION

This is an existing 3 -Sector 12' Platform Mount, mapped by B+T Group.

2) ANALYSIS CRITERIA

Building Code:	2015 IBC
TIA-222 Revision:	TIA-222-H
Risk Category:	II
Ultimate Wind Speed:	118 mph
Exposure Category:	B
Topographic Factor at Base:	1
Topographic Factor at Mount:	1
Ice Thickness:	1 in
Wind Speed with Ice:	50 mph
Seismic S_s :	0.22
Seismic S_1 :	0.055
Live Loading Wind Speed:	30 mph
Man Live Load at Mid/End-Points:	250 lb.
Man Live Load at Mount Pipes:	500 lb.

Table 1 - Proposed Equipment Configuration

Mount Centerline (ft.)	Antenna Centerline (ft.)	Number of Antennas	Manufacturer	Model/Type	Mount / Modification Details
138	140	3	Commscope	VV-65A-R1_TMO	12' Platform Mount
		3	Ericsson	AIR 6419 B41_TMO	
		3	RFS/Celwave	APXVAALL24_43-U-NA20_TMO	
		3	Ericsson	RADIO 4460 B2/B25 B66_TMO	
		3	Ericsson	Radio 4480_TMOV2	

Table 2 - Documents Provided

Document	Remarks	Reference	Source
CCI Order	Existing Loading Proposed Loading	Date: 04/12/2022	Crown Castle
RFDS		Date: 03/22/2022	
Mount Mapping	B+T Group	Date: 06/28/2019	On File
Previous MA		Date: 07/01/2019	
Failing MA		Date: 04/20/2022	

3) ANALYSIS PROCEDURE

3.1) Analysis Method

RISA-3D (Version 20.0.1), 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 by B+T Group, was used to calculate wind loading on all appurtenances, dishes and mount members for various loading cases. Selected output from the analysis is included in Appendix B.

This analysis was performed in accordance with Crown Castle's ENG-SOW-10208 *Mount Analysis* (Revision E). In addition, this analysis is in accordance with OTHER SOW.

3.2) Assumptions

1. The antenna mounting system was properly fabricated, installed and maintained in good condition in accordance with its original design, TIA Standards, and/or manufacturer's specifications.
2. The configuration of antennas, mounts, and other appurtenances are as specified in Table-1.
3. All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected members unless otherwise specified in this report.
4. Mount areas and weights are determined from field measurements, standard material properties, and/or manufacturer product data.

The following assumptions have been included in the analysis of the mount

Component	Section	Length	Note
Proposed Mount Pipes	2-1/2" Std. Pipe	9'-0"	Positions 3, All Sectors

5. Serviceability with respect to antenna twist, tilt, roll or lateral translation is not checked and is left to the carrier or tower owner to ensure conformance.
6. Prior structural modifications to the tower mounting system are assumed to be installed as shown per available data.
7. The analysis will be required to be revised if the existing conditions in the field differ from those shown in the above-referenced documents or assumed in this analysis. No allowance was made for any damaged, missing, or rusted members.
8. The following material grades were assumed (Unless Noted Otherwise):
 - (a) Connection Bolts : ASTM A325
 - (b) Steel Pipe : ASTM A53 (GR. 35)
 - (c) HSS (Round) : ASTM 500 (GR. B-42)
 - (d) HSS (Rectangular) : ASTM 500 (GR. B-46)
 - (e) Channel : ASTM A36 (GR. 36)
 - (f) Steel Solid Rod : ASTM A36 (GR. 36)
 - (g) Steel Plate : ASTM A36 (GR. 36)
 - (h) Steel Angle : ASTM A36 (GR. 36)
 - (i) UNISTRUT : ASTM A570 (GR. 33)

This analysis may be affected if any assumptions are not valid or have been made in error. B+T Group 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 (Platform Mount)

Notes	Component	Centerline (ft.)	Critical Member	% Capacity	Pass / Fail
1,2	Main Horizontals	138	96	27.5	Pass
	Support Rails		8	9.1	Pass
	Support Tubes		91	19.1	Pass
	Support Channels		1	40.7	Pass
	Diagonals		40	22.8	Pass
	Mount Pipes		70	17.7	Pass
	Verticals		36	49.5	Pass
	Support Angles		95	21.0	Pass
	Telescopic Arm		M127	28.4	Pass
	Additional Horizontal Pipe		M121	71.3	Pass
3	Mount To Tower Connection	-	-	23.9	Pass

Structure Rating (max from all components) =	71.3%
---	--------------

Notes:

- 1) See additional documentation in "Appendix C - Software Analysis Output" for calculations supporting the % capacity consumed.
- 2) All sectors are typical
- 3) See additional documentation in "Appendix D - Additional Calculations" for calculations supporting the % capacity reported.

4.1) Recommendations

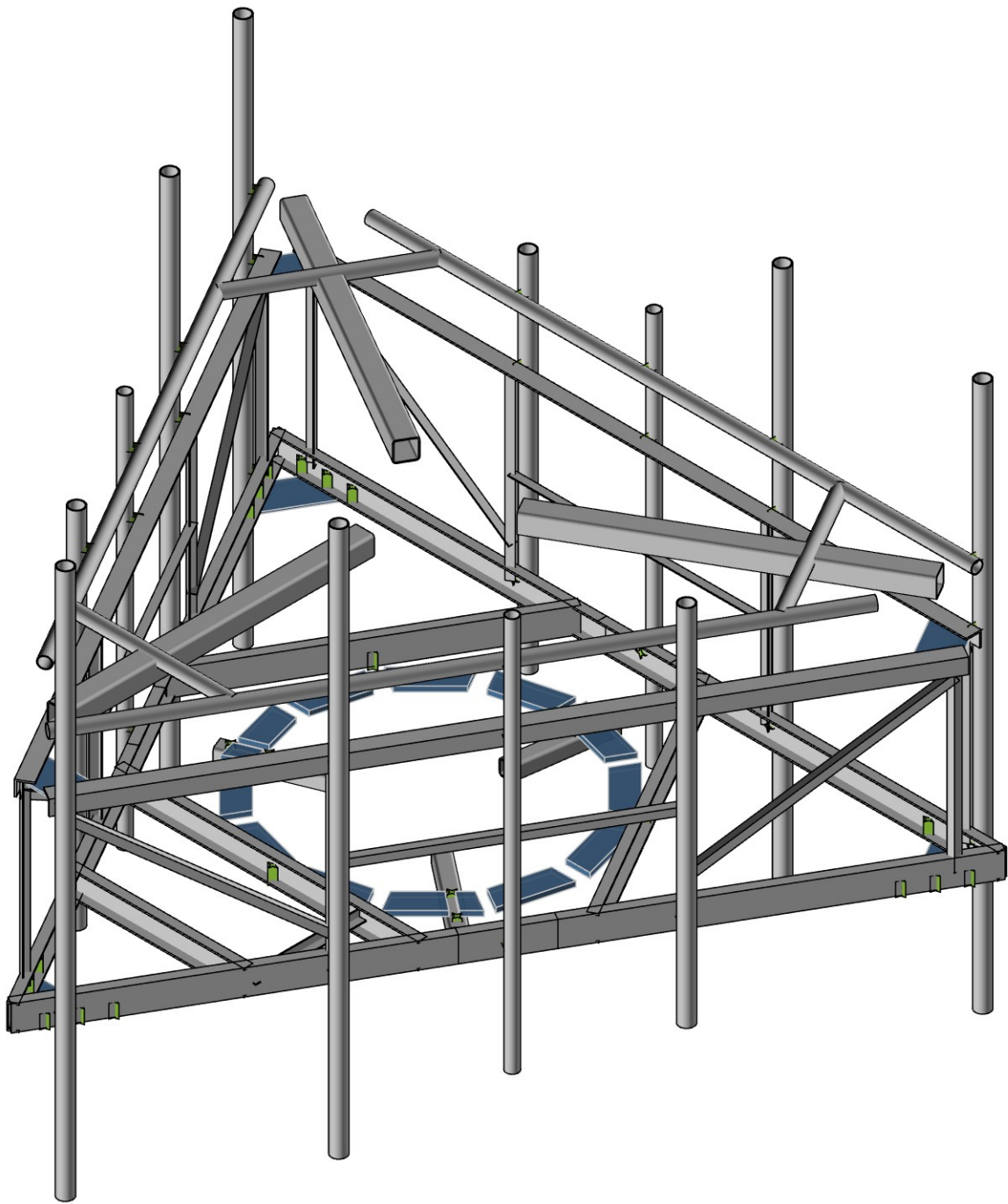
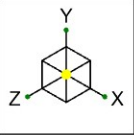
The mount has sufficient capacity to carry the proposed loading configuration. In order for the results of the analysis to be considered valid, the structural modifications listed below must be completed.

1. Add (1) 9 ft., 2-1/2" Std. pipe on Pos. 3 in all sectors.
2. Add (1) 10 ft., 2" Std. horizontal pipe above existing support rails in all sectors.
3. Add (1) Telescoping arm SITEPRO1 PART# X-SNP-STL connected to the mount via new 3' LONG, 2" Std. bracing pipe on all sectors.

Engineering detail drawings have been provided in Appendix E – Mount Modification Design Drawings.

Connection from the mount to the tower and local stresses on the tower are sufficient.

APPENDIX A
WIRE FRAME AND RENDERED MODELS



Envelope Only Solution

B+T Group

IF

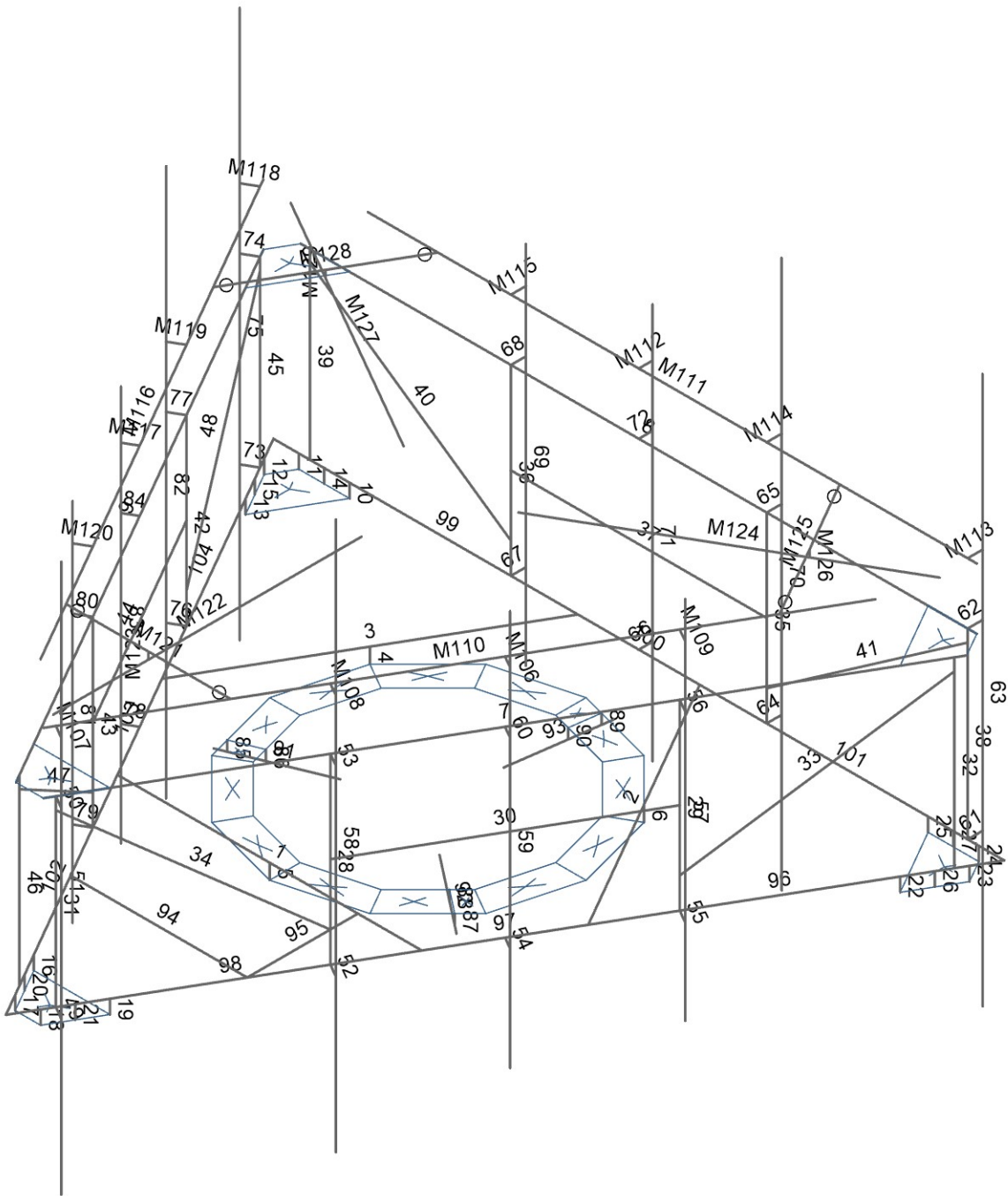
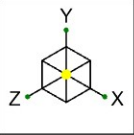
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Envelope Only Solution

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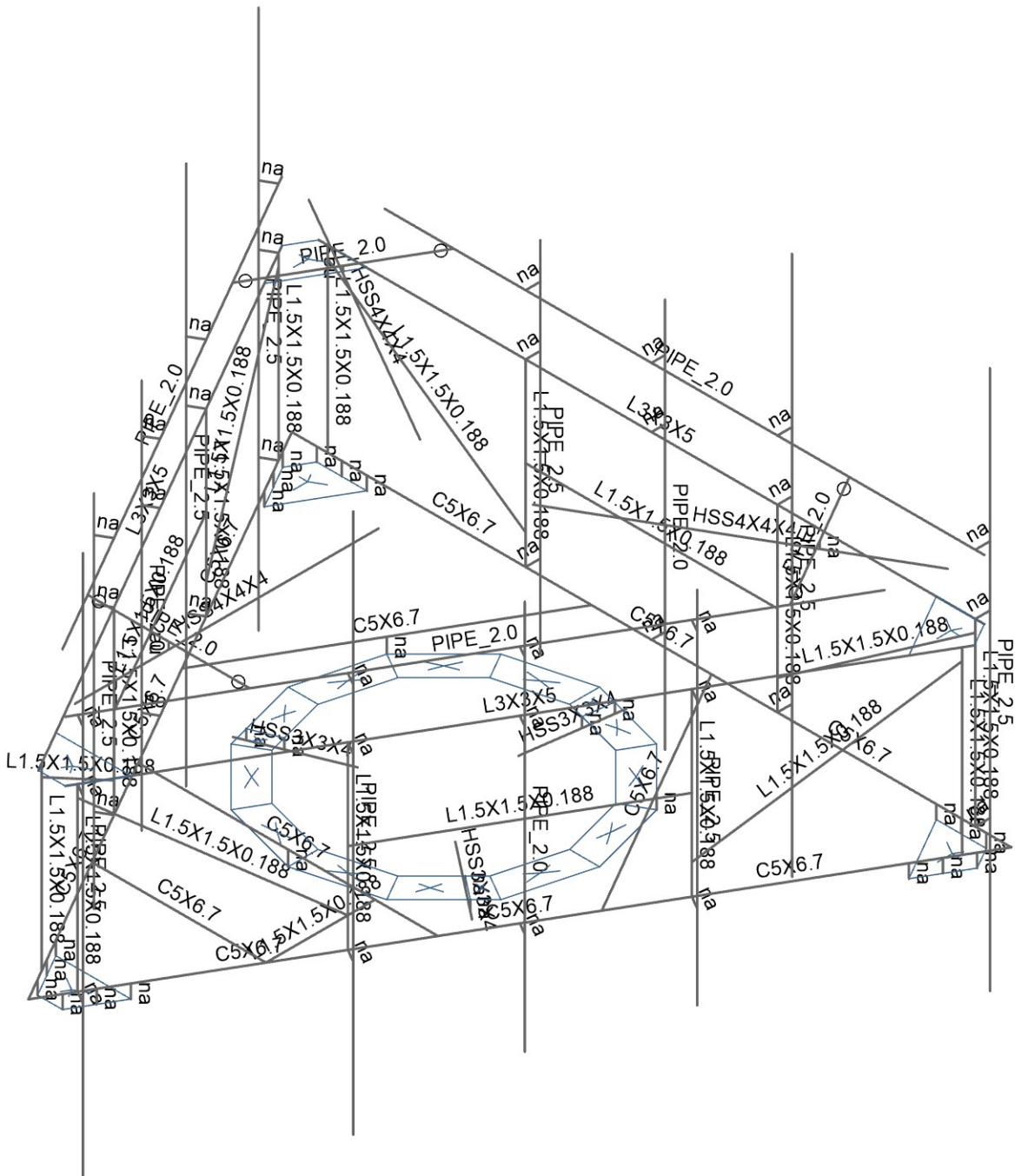
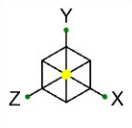
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IF

Apr 25, 2022

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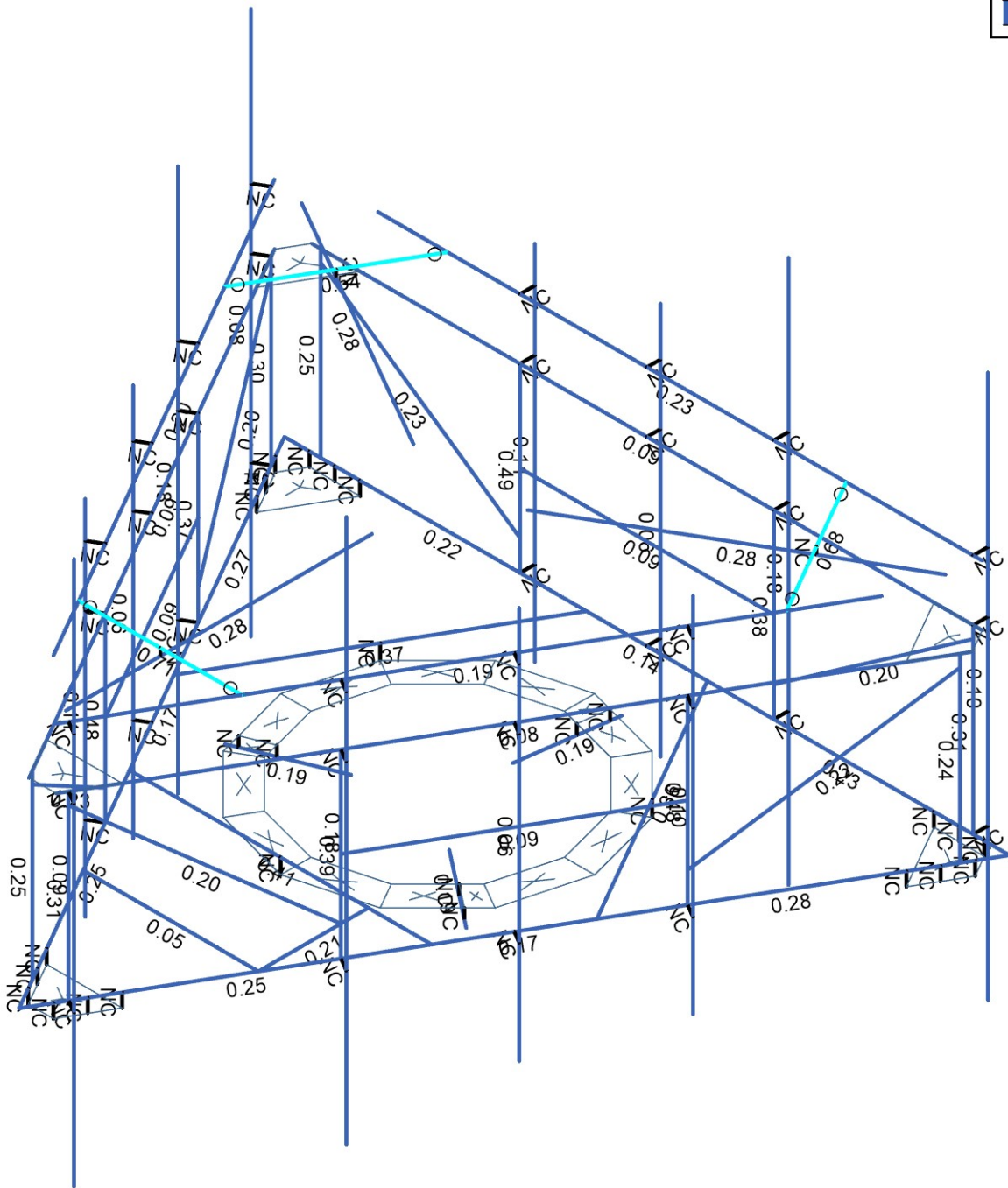
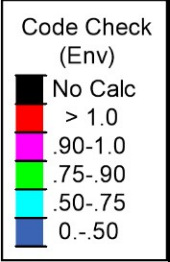
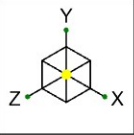


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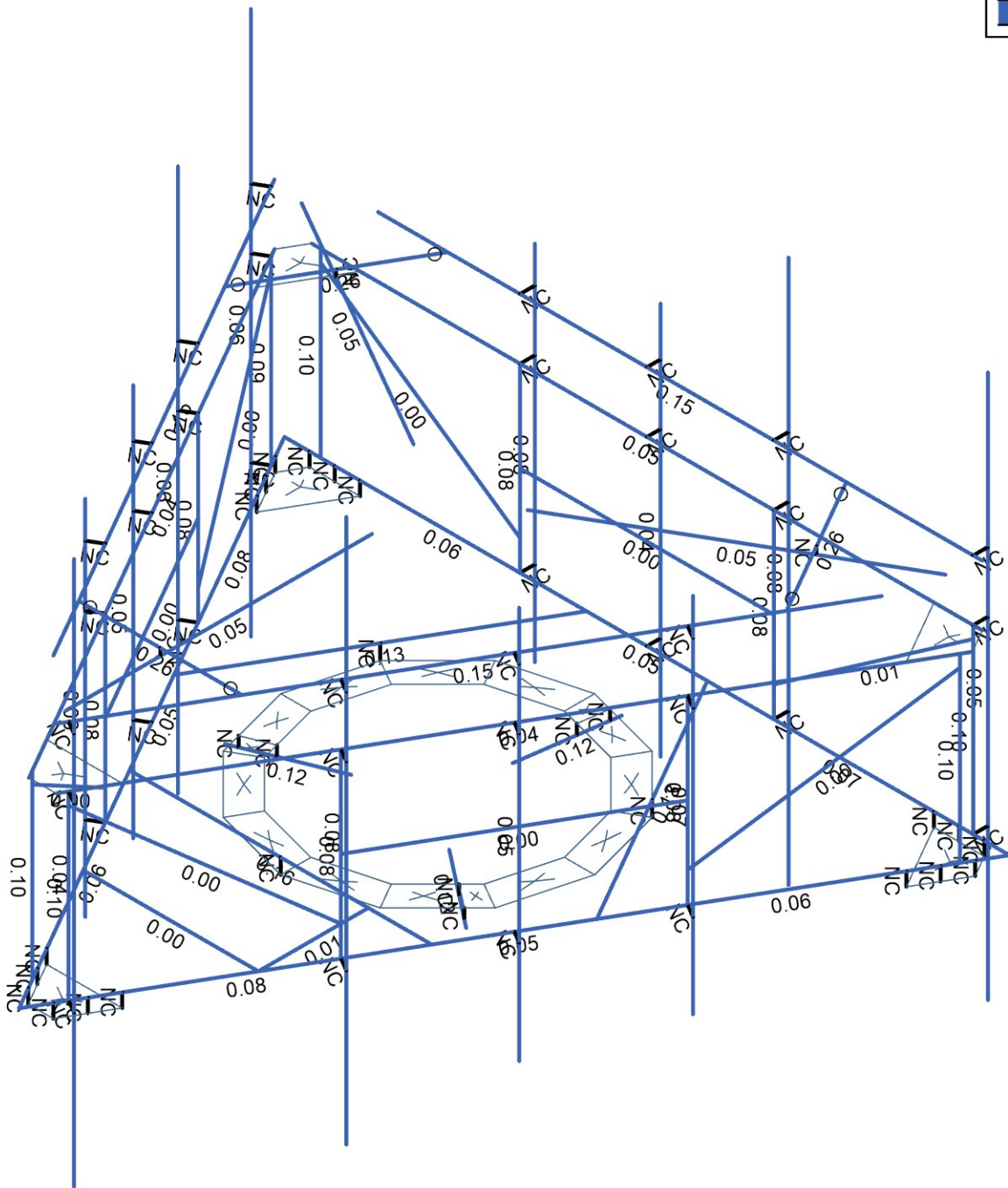
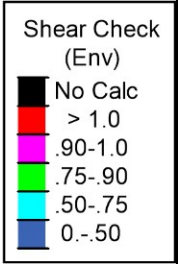
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Member Code Checks Displayed (Enveloped)
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Member Shear Checks Displayed (Enveloped)
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SK-5
Apr 25, 2022
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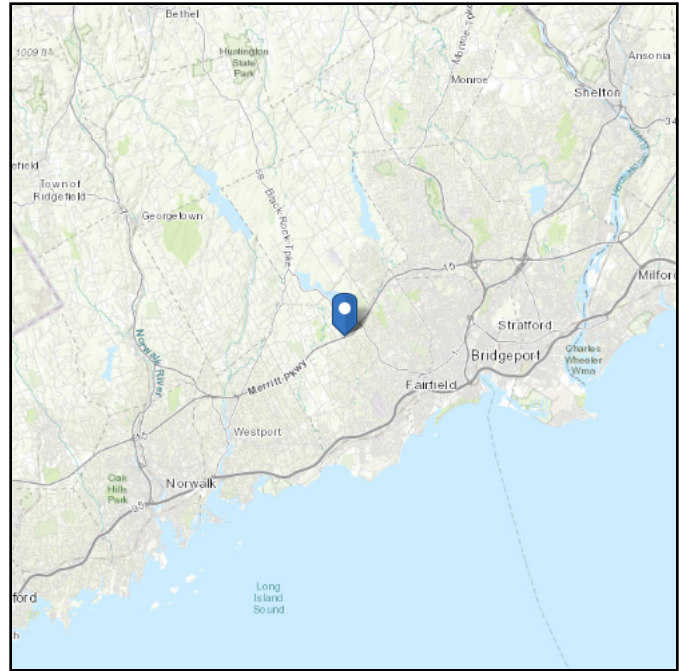
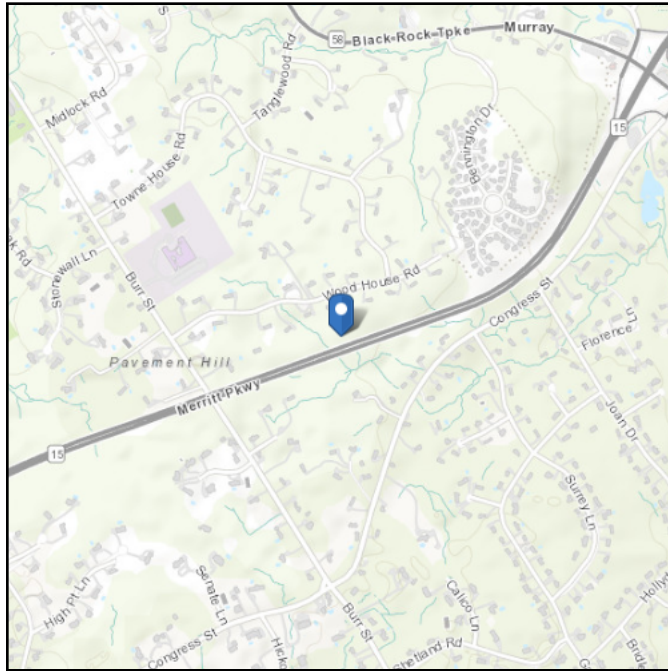
APPENDIX B
SOFTWARE INPUT CALCULATIONS

ASCE 7 Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-16
Risk Category: II
Soil Class: D - Default (see Section 11.4.3)

Elevation: 333.8 ft (NAVD 88)
Latitude: 41.195917
Longitude: -73.281361



Wind

Results:

Wind Speed	118 Vmph
10-year MRI	75 Vmph
25-year MRI	85 Vmph
50-year MRI	90 Vmph
100-year MRI	98 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 Apr 14 2022

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).

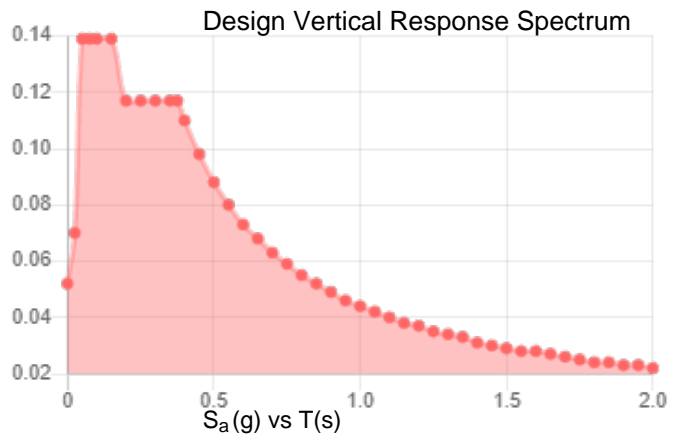
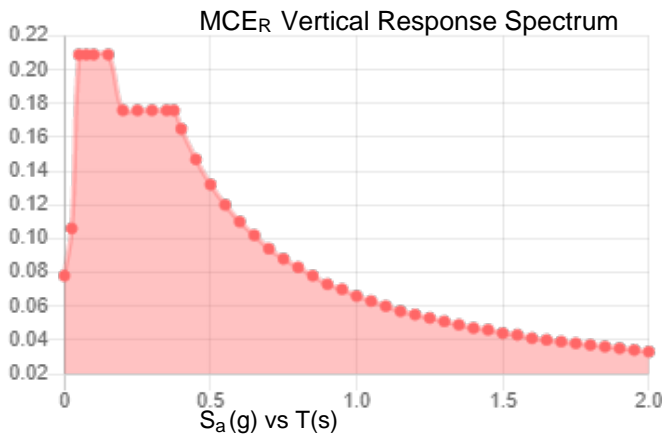
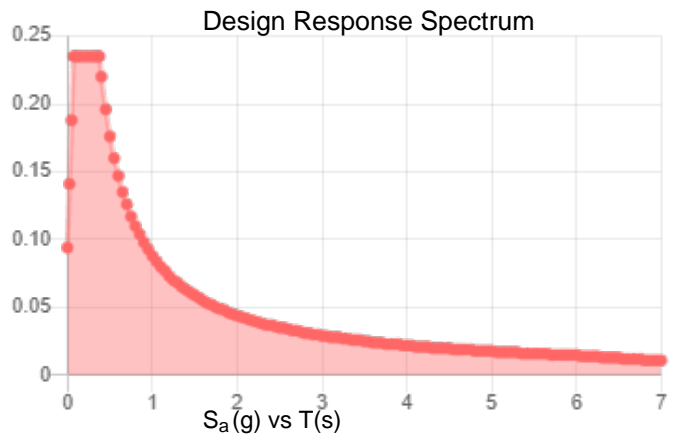
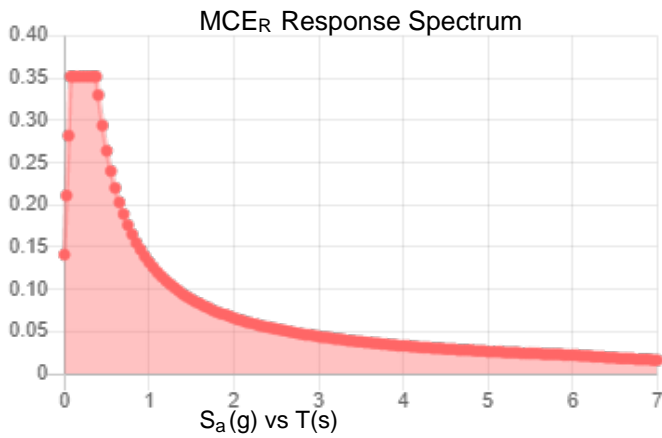
Site is in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2. Glazed openings need not be protected against wind-borne debris.

Site Soil Class: D - Default (see Section 11.4.3)

Results:

S_s :	0.22	S_{D1} :	0.088
S_1 :	0.055	T_L :	6
F_a :	1.6	PGA :	0.127
F_v :	2.4	PGA _M :	0.196
S_{MS} :	0.352	F_{PGA} :	1.546
S_{M1} :	0.132	I_e :	1
S_{DS} :	0.235	C_v :	0.74

Seismic Design Category B



Data Accessed: Thu Apr 14 2022

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 Apr 14 2022

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.

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

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

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PROJECT	80964.015.01 - BRG 126 943086, CT KSC
SUBJECT	Platform Mount Analysis
DATE	04/15/22



B+T Group
1717 S. Boulder, Suite 300
Tulsa, OK 74119
(918) 587-4630

Tower Type	:	Monopole	
Ground Elevation	z_s	: 334 ft	[ASCE7 Hazard Tool]
Tower Height	:	170.50 ft	
Mount Elevation	:	138.00 ft	
Antenna Elevation	:	140.00 ft	
Crest Height	:	0 ft	
Risk Category	:	II	[Table 2-1]
Exposure Category	:	B	[Sec. 2.6.5.1.2]
Topography Category	:	1.00	[Sec. 2.6.6.2]
Wind Velocity	V	: 118 mph	[ASCE7 Hazard Tool]
Ice wind Velocity	V_i	: 50 mph	[ASCE7 Hazard Tool]
Service Velocity	V_s	: 30 mph	[ASCE7 Hazard Tool]
Base Ice thickness	t_i	: 1.00 in	[ASCE7 Hazard Tool]
Seismic Design Cat.	:	B	[ASCE7 Hazard Tool]
	S_S	: 0.22	
	S_1	: 0.06	
	S_{DS}	: 0.24	
	S_{D1}	: 0.09	
Gust Factor	G_h	: 1.00	[Sec. 16.6]
Pressure Coefficient	K_z	: 1.09	[Sec. 2.6.5.2]
Topography Factor	K_{zt}	: 1.00	[Sec. 2.6.6]
Elevation Factor	K_e	: 0.99	[Sec. 2.6.8]
Directionality Factor	K_d	: 0.95	[Sec. 16.6]
Shielding Factor	K_a	: 0.90	[Sec. 16.6]
Design Ice Thickness	t_{iz}	: 1.16 in	[Sec. 2.6.10]
Importance Factor	I_e	: 1	[Table 2-3]
Response Coefficient	C_s	: 0.118	[Sec. 2.7.7.1]
Amplification	A_s	: 2.237537	[Sec. 16.7]
	q_z	: 36.25 psf	

PROJECT	80964.015.01 - BRG 126 943086, CT KSC
SUBJECT	Platform Mount Analysis
DATE	04/15/22



B+T Group
 1717 S. Boulder, Suite 300
 Tulsa, OK 74119
 (918) 587-4630

B+T GRP

Manufacturer	Model	Qty	Height (in ²)	Width (in ²)	Depth (in ²)	Weight (lbs)	C _a A _a (N) (ft ²)	C _a A _a (T) (ft ²)	C _a A _a (N) Ice (ft ²)	C _a A _a (T) Ice (ft ²)	F _A (N) (k)	F _A (T) (k)	F _A (N) Ice (k)	F _A (T) Ice (k)
COMMSCOPE	VV-65A-R1_TMO	0.5	54.7	12.0	4.6	33.3	2.24	0.87	2.71	1.29	0.08	0.03	0.02	0.01
COMMSCOPE	VV-65A-R1_TMO	0.5					2.24	0.87	2.71	1.29	0.08	0.03	0.02	0.01
ERICSSON	ADIO 4460 B2/B25 B66_TM	1	17.0	15.1	11.9	109.0	2.14	1.69	2.80	2.29	0.07	0.06	0.01	0.01
RFS/CELWAVE	XVAALL24_43-U-NA20_TM	0.5	95.9	24.0	8.5	149.9	7.34	2.66	8.11	3.34	0.27	0.10	0.05	0.02
RFS/CELWAVE	XVAALL24_43-U-NA20_TM	0.5					7.34	2.66	8.11	3.34	0.27	0.10	0.05	0.02
ERICSSON	Radio 4480_TMOV2	1	22.0	15.7	7.5	81.0	2.88	1.40	3.65	2.02	0.09	0.05	0.02	0.01
ERICSSON	AIR 6419 B41_TMO	0.5	36.3	20.9	9.0	96.5	3.50	1.42	4.04	1.84	0.13	0.05	0.03	0.01
ERICSSON	AIR 6419 B41_TMO	0.5					3.50	1.42	4.04	1.84	0.13	0.05	0.03	0.01
COMMSCOPE	VV-65A-R1_TMO	0.5	54.7	12.0	4.6	33.3	2.24	0.87	2.71	1.29	0.08	0.03	0.02	0.01
COMMSCOPE	VV-65A-R1_TMO	0.5					2.24	0.87	2.71	1.29	0.08	0.03	0.02	0.01
ERICSSON	ADIO 4460 B2/B25 B66_TM	1	17.0	15.1	11.9	109.0	2.14	1.69	2.80	2.29	0.07	0.06	0.01	0.01
RFS/CELWAVE	XVAALL24_43-U-NA20_TM	0.5	95.9	24.0	8.5	149.9	7.34	2.66	8.11	3.34	0.27	0.10	0.05	0.02
RFS/CELWAVE	XVAALL24_43-U-NA20_TM	0.5					7.34	2.66	8.11	3.34	0.27	0.10	0.05	0.02
ERICSSON	Radio 4480_TMOV2	1	22.0	15.7	7.5	81.0	2.88	1.40	3.65	2.02	0.09	0.05	0.02	0.01
ERICSSON	AIR 6419 B41_TMO	0.5	36.3	20.9	9.0	96.5	3.50	1.42	4.04	1.84	0.13	0.05	0.03	0.01
ERICSSON	AIR 6419 B41_TMO	0.5					3.50	1.42	4.04	1.84	0.13	0.05	0.03	0.01
COMMSCOPE	VV-65A-R1_TMO	0.5	54.7	12.0	4.6	33.3	2.24	0.87	2.71	1.29	0.08	0.03	0.02	0.01
COMMSCOPE	VV-65A-R1_TMO	0.5					2.24	0.87	2.71	1.29	0.08	0.03	0.02	0.01
ERICSSON	ADIO 4460 B2/B25 B66_TM	1	17.0	15.1	11.9	109.0	2.14	1.69	2.80	2.29	0.07	0.06	0.01	0.01
RFS/CELWAVE	XVAALL24_43-U-NA20_TM	0.5	95.9	24.0	8.5	149.9	7.34	2.66	8.11	3.34	0.27	0.10	0.05	0.02
RFS/CELWAVE	XVAALL24_43-U-NA20_TM	0.5					7.34	2.66	8.11	3.34	0.27	0.10	0.05	0.02
ERICSSON	Radio 4480_TMOV2	1	22.0	15.7	7.5	81.0	2.88	1.40	3.65	2.02	0.09	0.05	0.02	0.01

APPENDIX C
SOFTWARE ANALYSIS OUTPUT

Node Coordinates

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
1	1	0	0	0	
2	2	2.5	0.416667	2.598076	
3	3	-2.5	0.416667	2.598076	
4	4	1	0.416667	-3.464102	
5	5	3.5	0.416667	0.866025	
6	6	-3.5	0.416667	0.866025	
7	7	-1.	0.416667	-3.464102	
8	8	1.049038	0.166667	1.816987	
9	9	1.299038	0.166667	2.25	
10	10	1.816987	0.166667	1.049038	
11	11	2.25	0.166667	1.299038	
12	12	2.098076	0.166667	0	
13	13	2.598076	0.166667	0	
14	14	1.816987	0.166667	-1.049038	
15	15	1.049038	0.166667	-1.816987	
16	16	1.299038	0.166667	-2.25	
17	17	0	0.166667	-2.098076	
18	18	0	0.166667	-2.598076	
19	19	-1.049038	0.166667	-1.816987	
20	20	-1.299038	0.166667	-2.25	
21	21	-1.816987	0.166667	-1.049038	
22	22	-2.098076	0.166667	0	
23	23	-2.598076	0.166667	0	
24	24	-1.816987	0.166667	1.049038	
25	25	-2.25	0.166667	1.299038	
26	26	-1.049038	0.166667	1.816987	
27	27	0	0.166667	2.098076	
28	28	-1.299038	0.166667	2.25	
29	29	-2.25	0.416667	-1.299038	
30	30	-2.25	0.166667	-1.299038	
31	31	0	0.416667	2.598076	
32	32	0	0.166667	2.598076	
33	33	2.25	0.416667	-1.299038	
34	34	2.25	0.166667	-1.299038	
35	35	-4.75	0.416667	-3.464102	
36	36	-5.583333	0.416667	-3.464102	
37	37	-5.791667	0.416667	-3.103258	
38	38	-5.375	0.416667	-2.38157	
39	39	-5.791667	0.192467	-3.103258	
40	40	-5.375	0.192467	-2.38157	
41	41	-5.583333	0.192467	-3.464102	
42	42	-4.75	0.192467	-3.464102	
43	43	-5.166667	0.416667	-3.464102	
44	44	-5.166667	0.192467	-3.464102	
45	45	-5.583333	0.416667	-2.742414	
46	46	-5.583333	0.192467	-2.742414	
47	47	-0.625	0.416667	5.845671	
48	48	-0.208333	0.416667	6.567359	
49	49	0.208333	0.416667	6.567359	
50	50	0.625	0.416667	5.845671	
51	51	0.208333	0.192467	6.567359	
52	52	0.625	0.192467	5.845671	
53	53	-0.208333	0.192467	6.567359	
54	54	-0.625	0.192467	5.845671	
55	55	-0.416667	0.416667	6.206515	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
56	56	-0.416667	0.192467	6.206515	
57	57	0.416667	0.416667	6.206515	
58	58	0.416667	0.192467	6.206515	
59	59	5.375	0.416667	-2.38157	
60	60	5.791667	0.416667	-3.103258	
61	61	5.583333	0.416667	-3.464102	
62	62	4.75	0.416667	-3.464102	
63	63	5.583333	0.192467	-3.464102	
64	64	4.75	0.192467	-3.464102	
65	65	5.791667	0.192467	-3.103258	
66	66	5.375	0.192467	-2.38157	
67	67	5.583333	0.416667	-2.742414	
68	68	5.583333	0.192467	-2.742414	
69	69	5.166667	0.416667	-3.464102	
70	70	5.166667	0.192467	-3.464102	
71	71	4.75	3.416667	-3.464102	
72	72	5.375	3.416667	-2.38157	
73	73	5.55	3.416667	-3.464102	
74	74	5.775	3.416667	-3.07439	
75	75	-5.375	3.416667	-2.38157	
76	76	-4.75	3.416667	-3.464102	
77	77	-5.775	3.416667	-3.07439	
78	78	-5.55	3.416667	-3.464102	
79	79	0.625	3.416667	5.845671	
80	80	-0.625	3.416667	5.845671	
81	81	0.225	3.416667	6.538492	
82	82	-0.225	3.416667	6.538492	
83	83	1.95	1.916667	3.550704	
84	84	4.05	1.916667	-0.086603	
85	85	5.7	3.416667	-2.944486	
86	86	5.7	0.416667	-2.944486	
87	87	4.05	0.916667	-0.086603	
88	88	5.7	3.216667	-2.944486	
89	89	0.3	3.216667	6.408588	
90	90	1.95	0.916667	3.550704	
91	91	2.1	1.916667	-3.464102	
92	92	-2.1	1.916667	-3.464102	
93	93	-5.4	3.416667	-3.464102	
94	94	-5.4	0.416667	-3.464102	
95	95	-2.1	0.916667	-3.464102	
96	96	-5.4	3.216667	-3.464102	
97	97	5.4	3.216667	-3.464102	
98	98	2.1	0.916667	-3.464102	
99	99	-4.05	1.916667	-0.086603	
100	100	-1.95	1.916667	3.550704	
101	101	-0.3	3.416667	6.408588	
102	102	-0.3	0.416667	6.408588	
103	103	-1.95	0.916667	3.550704	
104	104	-0.3	3.216667	6.408588	
105	105	-5.7	3.216667	-2.944486	
106	106	-4.05	0.916667	-0.086603	
107	107	0.3	0.416667	6.408588	
108	108	0.512176	0.416667	6.531088	
109	109	0.3	3.416667	6.408588	
110	110	0.512176	3.416667	6.531088	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
111	111	0.512176	6.916667	6.531088	
112	112	0.512176	-2.083333	6.531088	
113	113	1.95	0.416667	3.550704	
114	114	2.162177	0.416667	3.673204	
115	115	1.95	3.416667	3.550704	
116	116	2.162177	3.416667	3.673204	
117	117	3	0.416667	1.732051	
118	118	3.194163	0.416667	1.844151	
119	119	4.05	0.416667	-0.086603	
120	120	4.262176	0.416667	0.035897	
121	121	4.05	3.416667	-0.086603	
122	122	4.262176	3.416667	0.035897	
123	123	4.262176	5.016667	0.035897	
124	124	4.262176	-0.983333	0.035897	
125	125	2.162177	6.916667	3.673204	
126	126	2.162177	-2.083333	3.673204	
127	127	3.194163	5.216667	1.844151	
128	128	3.194163	-1.283333	1.844151	
129	129	3	3.416667	1.732051	
130	130	3.194163	3.416667	1.844151	
131	131	5.4	0.416667	-3.464102	
132	132	5.4	0.416667	-3.709102	
133	133	5.4	3.416667	-3.464102	
134	134	5.4	3.416667	-3.709102	
135	135	5.4	6.916667	-3.709102	
136	136	5.4	-2.083333	-3.709102	
137	137	2.1	0.416667	-3.464102	
138	138	2.1	0.416667	-3.709101	
139	139	2.1	3.416667	-3.464102	
140	140	2.1	3.416667	-3.709101	
141	141	0	0.416667	-3.464102	
142	142	0	0.416667	-3.688302	
143	143	-2.1	0.416667	-3.464102	
144	144	-2.1	0.416667	-3.709102	
145	145	-2.1	3.416667	-3.464102	
146	146	-2.1	3.416667	-3.709102	
147	147	-2.1	5.016667	-3.709102	
148	148	-2.1	-0.983333	-3.709102	
149	149	2.1	6.916667	-3.709101	
150	150	2.1	-2.083333	-3.709101	
151	151	0	5.216667	-3.688302	
152	152	0	-1.283333	-3.688302	
153	153	0	3.416667	-3.464102	
154	154	0	3.416667	-3.688302	
155	155	-5.7	0.416667	-2.944486	
156	156	-5.912176	0.416667	-2.821986	
157	157	-5.7	3.416667	-2.944486	
158	158	-5.912176	3.416667	-2.821986	
159	159	-5.912176	6.916667	-2.821986	
160	160	-5.912176	-2.083333	-2.821986	
161	161	-4.05	0.416667	-0.086603	
162	162	-4.262176	0.416667	0.035897	
163	163	-4.05	3.416667	-0.086603	
164	164	-4.262176	3.416667	0.035897	
165	165	-3	0.416667	1.732051	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
166	166	-3.194163	0.416667	1.844151	
167	167	-1.95	0.416667	3.550704	
168	168	-2.162176	0.416667	3.673204	
169	169	-1.95	3.416667	3.550704	
170	170	-2.162176	3.416667	3.673204	
171	171	-2.162176	5.016667	3.673204	
172	172	-2.162176	-0.983333	3.673204	
173	173	-4.262176	6.916667	0.035897	
174	174	-4.262176	-2.083333	0.035897	
175	175	-3.194163	5.216667	1.844151	
176	176	-3.194163	-1.283333	1.844151	
177	177	-3	3.416667	1.732051	
178	178	-3.194163	3.416667	1.844151	
179	179	-2.343195	0.166667	0.951231	
180	180	-2.343195	0	0.951231	
181	181	-1.892247	0.166667	0.768167	
182	182	-1.892247	0	0.768167	
183	183	1.995388	0.166667	1.553651	
184	184	1.995388	0	1.553651	
185	185	1.611375	0.166667	1.25465	
186	186	1.611375	0	1.25465	
187	187	0.347807	0.166667	-2.504882	
188	188	0.347807	0	-2.504882	
189	189	0.280872	0.166667	-2.022817	
190	190	0.280872	0	-2.022817	
191	191	0.725	0.416667	5.672466	
192	192	-0.725	0.416667	5.672466	
193	193	4.55	0.416667	-3.464102	
194	194	5.275	0.416667	-2.208365	
195	195	-5.275	0.416667	-2.208365	
196	196	-4.55	0.416667	-3.464102	
197	197	-2.501717	0	1.015584	
198	198	-1.019218	0	0.413756	
199	199	2.13038	0	1.658759	
200	200	0.867933	0	0.675791	
201	201	0.371337	0	-2.674343	
202	202	0.151285	0	-1.089547	
203	203	-1.45	0.416667	4.41673	
204	204	1.45	0.416667	4.41673	
205	205	1.45	0.416667	2.598076	
206	206	2.211325	0.416667	2.598076	
207	207	3.355662	0.416667	0.616025	
208	208	1.249074	0.416667	2.598076	
209	209	2.874537	0.416667	-0.217308	
210	210	1.144338	0.416667	-3.214102	
211	211	-1.144338	0.416667	-3.214102	
212	212	1.625463	0.416667	-2.380768	
213	213	-1.625463	0.416667	-2.380768	
214	214	-3.355662	0.416667	0.616025	
215	215	-2.211325	0.416667	2.598076	
216	216	-2.874537	0.416667	-0.217308	
217	217	-1.249074	0.416667	2.598076	
218	218	3.3	0.416667	1.212436	
219	219	2.7	0.416667	2.251666	
220	220	-0.6	0.416667	-3.464102	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
221	221	0.6	0.416667	-3.464102	
222	222	6	0.416667	-3.464102	
223	223	0	0.416667	6.928203	
224	224	-2.7	0.416667	2.251666	
225	225	-3.3	0.416667	1.212436	
226	226	-6	0.416667	-3.464102	
227	N227	0.225	4.416667	6.538492	
228	N229	3	4.416667	1.732051	
229	N230	3.194163	4.416667	1.844151	
230	N231	0.3	4.416667	6.408588	
231	N232	0.512176	4.416667	6.531088	
232	N233	1.95	4.416667	3.550704	
233	N234	2.162177	4.416667	3.673204	
234	N235	4.05	4.416667	-0.086603	
235	N236	4.262176	4.416667	0.035897	
236	N237	5.225	4.416667	-2.121762	
237	N238	-4.45	4.416667	-3.464102	
238	N239	2.1	4.416667	-3.709101	
239	N240	5.55	4.416667	-3.464102	
240	N241	0	4.416667	-3.464102	
241	N242	0	4.416667	-3.688302	
242	N243	5.4	4.416667	-3.464102	
243	N244	5.4	4.416667	-3.709102	
244	N245	2.1	4.416667	-3.464102	
245	N246	-2.1	4.416667	-3.464102	
246	N247	-2.1	4.416667	-3.709102	
247	N248	-0.775	4.416667	5.585864	
248	N249	-4.262176	4.416667	0.035897	
249	N250	-5.775	4.416667	-3.07439	
250	N251	-3	4.416667	1.732051	
251	N252	-3.194163	4.416667	1.844151	
252	N253	-5.7	4.416667	-2.944486	
253	N254	-5.912176	4.416667	-2.821986	
254	N255	-4.05	4.416667	-0.086603	
255	N256	-1.95	4.416667	3.550704	
256	N257	-2.162176	4.416667	3.673204	
257	N258	0	4.3	1.089547	
258	N260	0	4.3	6.152047	
259	N259	1.350224	4.416667	4.589547	
260	N261	-1.350224	4.416667	4.589547	
261	N262	0	4.416667	4.589547	
262	N263	0	4.3	4.590047	
263	N264	0.943575	4.3	-0.544774	
264	N265	5.327829	4.3	-3.076024	
265	N266	3.299552	4.416667	-3.464102	
266	N267	4.649776	4.416667	-1.125445	
267	N268	3.974664	4.416667	-2.294774	
268	N269	3.975097	4.3	-2.295024	
269	N270	-0.943575	4.3	-0.544774	
270	N271	-5.327829	4.3	-3.076024	
271	N272	-4.649776	4.416667	-1.125445	
272	N273	-3.299552	4.416667	-3.464102	
273	N274	-3.974664	4.416667	-2.294774	
274	N275	-3.975097	4.3	-2.295024	

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	200	Reaction	Reaction	Reaction	Reaction	Reaction
2	198	Reaction	Reaction	Reaction	Reaction	Reaction
3	202	Reaction	Reaction	Reaction	Reaction	Reaction
4	N258	Reaction	Reaction	Reaction	Reaction	Reaction
5	N264	Reaction	Reaction	Reaction	Reaction	Reaction
6	N270	Reaction	Reaction	Reaction	Reaction	Reaction

Hot Rolled Steel Properties

Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [1e ⁶ 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

Hot Rolled Steel Section Sets

Label	Shape	Type	Design List	Material	Design Rule	Area [in ²]	Iyy [in ⁴]	Izz [in ⁴]	J [in ⁴]	
1	MF-H1	C5X6.7	Beam	Channel	A36 Gr.36	Typical	1.97	0.47	7.48	0.055
2	Support Rail	L3X3X5	Beam	Single Angle	A36 Gr.36	Typical	1.78	1.5	1.5	0.06
3	F1-S1	HSS3X3X4	Beam	Tube	A500 Gr.B Rect	Typical	2.44	3.02	3.02	5.08
4	F1-SCH1	C5X6.7	Beam	Channel	A36 Gr.36	Typical	1.97	0.47	7.48	0.055
5	F1-D1	L1.5X1.5X0.188	VBrace	Single Angle	A36 Gr.36	Typical	0.529	0.11	0.11	0.006
6	MF-P1	PIPE 2.0	Column	Pipe	A53 Gr.B	Typical	1.02	0.627	0.627	1.25
7	MF-P2	PIPE 2.5	Column	Pipe	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
8	F1-V1	L1.5X1.5X0.188	Column	Single Angle	A36 Gr.36	Typical	0.529	0.11	0.11	0.006
9	F1-SA1	L1.5X1.5X0.188	Beam	Single Angle	A36 Gr.36	Typical	0.529	0.11	0.11	0.006
10	SF-S2	HSS4X4X4	Beam	Tube	A500 Gr.B Rect	Typical	3.37	7.8	7.8	12.8
11	SF-P1	PIPE 2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	0.627	0.627	1.25

Member Primary Data

Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule	
1	1	2	3	180	F1-SCH1	Beam	Channel	A36 Gr.36	Typical
2	2	4	5	180	F1-SCH1	Beam	Channel	A36 Gr.36	Typical
3	3	6	7	180	F1-SCH1	Beam	Channel	A36 Gr.36	Typical
4	4	29	30		RIGID	None	None	RIGID	Typical
5	5	31	32		RIGID	None	None	RIGID	Typical
6	6	33	34		RIGID	None	None	RIGID	Typical
7	7	81	74	180	Support Rail	Beam	Single Angle	A36 Gr.36	Typical
8	8	73	78	180	Support Rail	Beam	Single Angle	A36 Gr.36	Typical
9	9	77	82	180	Support Rail	Beam	Single Angle	A36 Gr.36	Typical
10	10	35	42		RIGID	None	None	RIGID	Typical
11	11	36	41		RIGID	None	None	RIGID	Typical
12	12	37	39		RIGID	None	None	RIGID	Typical
13	13	38	40		RIGID	None	None	RIGID	Typical
14	14	43	44		RIGID	None	None	RIGID	Typical
15	15	45	46		RIGID	None	None	RIGID	Typical
16	16	47	54		RIGID	None	None	RIGID	Typical
17	17	48	53		RIGID	None	None	RIGID	Typical
18	18	49	51		RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
19	19	50	52		RIGID	None	RIGID	Typical
20	20	55	56		RIGID	None	RIGID	Typical
21	21	57	58		RIGID	None	RIGID	Typical
22	22	59	66		RIGID	None	RIGID	Typical
23	23	60	65		RIGID	None	RIGID	Typical
24	24	61	63		RIGID	None	RIGID	Typical
25	25	62	64		RIGID	None	RIGID	Typical
26	26	67	68		RIGID	None	RIGID	Typical
27	27	69	70		RIGID	None	RIGID	Typical
28	28	115	113		F1-V1	Column	A36 Gr.36	Typical
29	29	121	119	90	F1-V1	Column	A36 Gr.36	Typical
30	30	83	84	180	F1-SA1	Beam	A36 Gr.36	Typical
31	31	109	107	90	F1-V1	Column	A36 Gr.36	Typical
32	32	85	86		F1-V1	Column	A36 Gr.36	Typical
33	33	87	88	180	F1-D1	VBrace	A36 Gr.36	Typical
34	34	89	90	180	F1-D1	VBrace	A36 Gr.36	Typical
35	35	139	137	240	F1-V1	Column	A36 Gr.36	Typical
36	36	145	143	330	F1-V1	Column	A36 Gr.36	Typical
37	37	91	92	180	F1-SA1	Beam	A36 Gr.36	Typical
38	38	133	131	330	F1-V1	Column	A36 Gr.36	Typical
39	39	93	94	240	F1-V1	Column	A36 Gr.36	Typical
40	40	95	96	180	F1-D1	VBrace	A36 Gr.36	Typical
41	41	97	98	180	F1-D1	VBrace	A36 Gr.36	Typical
42	42	163	161	120	F1-V1	Column	A36 Gr.36	Typical
43	43	169	167	205	F1-V1	Column	A36 Gr.36	Typical
44	44	99	100	180	F1-SA1	Beam	A36 Gr.36	Typical
45	45	157	155	210	F1-V1	Column	A36 Gr.36	Typical
46	46	101	102	120	F1-V1	Column	A36 Gr.36	Typical
47	47	103	104	180	F1-D1	VBrace	A36 Gr.36	Typical
48	48	105	106	180	F1-D1	VBrace	A36 Gr.36	Typical
49	49	107	108		RIGID	None	RIGID	Typical
50	50	109	110		RIGID	None	RIGID	Typical
51	51	111	112		MF-P2	Column	A53 Gr.B	Typical
52	52	113	114		RIGID	None	RIGID	Typical
53	53	115	116		RIGID	None	RIGID	Typical
54	54	117	118		RIGID	None	RIGID	Typical
55	55	119	120		RIGID	None	RIGID	Typical
56	56	121	122		RIGID	None	RIGID	Typical
57	57	123	124		MF-P2	Column	A53 Gr.B	Typical
58	58	125	126		MF-P2	Column	A53 Gr.B	Typical
59	59	127	128		MF-P1	Column	A53 Gr.B	Typical
60	60	129	130		RIGID	None	RIGID	Typical
61	61	131	132		RIGID	None	RIGID	Typical
62	62	133	134		RIGID	None	RIGID	Typical
63	63	135	136		MF-P2	Column	A53 Gr.B	Typical
64	64	137	138		RIGID	None	RIGID	Typical
65	65	139	140		RIGID	None	RIGID	Typical
66	66	141	142		RIGID	None	RIGID	Typical
67	67	143	144		RIGID	None	RIGID	Typical
68	68	145	146		RIGID	None	RIGID	Typical
69	69	147	148		MF-P2	Column	A53 Gr.B	Typical
70	70	149	150		MF-P2	Column	A53 Gr.B	Typical
71	71	151	152		MF-P1	Column	A53 Gr.B	Typical
72	72	153	154		RIGID	None	RIGID	Typical
73	73	155	156		RIGID	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
74	74	157	158		RIGID	None	None	RIGID	Typical
75	75	159	160		MF-P2	Column	Pipe	A53 Gr.B	Typical
76	76	161	162		RIGID	None	None	RIGID	Typical
77	77	163	164		RIGID	None	None	RIGID	Typical
78	78	165	166		RIGID	None	None	RIGID	Typical
79	79	167	168		RIGID	None	None	RIGID	Typical
80	80	169	170		RIGID	None	None	RIGID	Typical
81	81	171	172		MF-P2	Column	Pipe	A53 Gr.B	Typical
82	82	173	174		MF-P2	Column	Pipe	A53 Gr.B	Typical
83	83	175	176		MF-P1	Column	Pipe	A53 Gr.B	Typical
84	84	177	178		RIGID	None	None	RIGID	Typical
85	85	179	180		RIGID	None	None	RIGID	Typical
86	86	181	182		RIGID	None	None	RIGID	Typical
87	87	183	184		RIGID	None	None	RIGID	Typical
88	88	185	186		RIGID	None	None	RIGID	Typical
89	89	187	188		RIGID	None	None	RIGID	Typical
90	90	189	190		RIGID	None	None	RIGID	Typical
91	91	197	198		F1-S1	Beam	Tube	A500 Gr.B Rect	Typical
92	92	199	200		F1-S1	Beam	Tube	A500 Gr.B Rect	Typical
93	93	201	202		F1-S1	Beam	Tube	A500 Gr.B Rect	Typical
94	94	204	203	180	F1-SCH1	Beam	Channel	A36 Gr.36	Typical
95	95	204	205		F1-SA1	Beam	Single Angle	A36 Gr.36	Typical
96	96	218	222	180	MF-H1	Beam	Channel	A36 Gr.36	Typical
97	97	219	218	180	MF-H1	Beam	Channel	A36 Gr.36	Typical
98	98	219	223		MF-H1	Beam	Channel	A36 Gr.36	Typical
99	99	220	226	180	MF-H1	Beam	Channel	A36 Gr.36	Typical
100	100	221	220	180	MF-H1	Beam	Channel	A36 Gr.36	Typical
101	101	221	222		MF-H1	Beam	Channel	A36 Gr.36	Typical
102	102	224	223	180	MF-H1	Beam	Channel	A36 Gr.36	Typical
103	103	225	224	180	MF-H1	Beam	Channel	A36 Gr.36	Typical
104	104	225	226		MF-H1	Beam	Channel	A36 Gr.36	Typical
105	M106	N229	N230		RIGID	None	None	RIGID	Typical
106	M107	N231	N232		RIGID	None	None	RIGID	Typical
107	M108	N233	N234		RIGID	None	None	RIGID	Typical
108	M109	N235	N236		RIGID	None	None	RIGID	Typical
109	M110	N227	N237		SF-P1	Beam	Pipe	A53 Gr.B	Typical
110	M111	N240	N238		SF-P1	Beam	Pipe	A53 Gr.B	Typical
111	M112	N241	N242		RIGID	None	None	RIGID	Typical
112	M113	N243	N244		RIGID	None	None	RIGID	Typical
113	M114	N245	N239		RIGID	None	None	RIGID	Typical
114	M115	N246	N247		RIGID	None	None	RIGID	Typical
115	M116	N250	N248		SF-P1	Beam	Pipe	A53 Gr.B	Typical
116	M117	N251	N252		RIGID	None	None	RIGID	Typical
117	M118	N253	N254		RIGID	None	None	RIGID	Typical
118	M119	N255	N249		RIGID	None	None	RIGID	Typical
119	M120	N256	N257		RIGID	None	None	RIGID	Typical
120	M122	N258	N260		SF-S2	Beam	Tube	A500 Gr.B Rect	Typical
121	M121	N259	N261		SF-P1	Beam	Pipe	A53 Gr.B	Typical
122	M123	N262	N263		RIGID	None	None	RIGID	Typical
123	M124	N264	N265		SF-S2	Beam	Tube	A500 Gr.B Rect	Typical
124	M125	N266	N267		SF-P1	Beam	Pipe	A53 Gr.B	Typical
125	M126	N268	N269		RIGID	None	None	RIGID	Typical
126	M127	N270	N271		SF-S2	Beam	Tube	A500 Gr.B Rect	Typical
127	M128	N272	N273		SF-P1	Beam	Pipe	A53 Gr.B	Typical
128	M129	N274	N275		RIGID	None	None	RIGID	Typical



Company : B+T Group
Designer : IF
Job Number : 80964.016.01
Model Name : 806355 - BRG 126 943086

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Member Primary Data (Continued)

Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
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Member Advanced Data

	Label	I Release	J Release	Physical	Deflection Ratio Options	Seismic DR
1	1			Yes	N/A	None
2	2			Yes	N/A	None
3	3			Yes	N/A	None
4	4			Yes	** NA **	None
5	5			Yes	** NA **	None
6	6			Yes	** NA **	None
7	7			Yes	N/A	None
8	8			Yes	N/A	None
9	9			Yes	N/A	None
10	10			Yes	** NA **	None
11	11			Yes	** NA **	None
12	12			Yes	** NA **	None
13	13			Yes	** NA **	None
14	14			Yes	** NA **	None
15	15			Yes	** NA **	None
16	16			Yes	** NA **	None
17	17			Yes	** NA **	None
18	18			Yes	** NA **	None
19	19			Yes	** NA **	None
20	20			Yes	** NA **	None
21	21			Yes	** NA **	None
22	22			Yes	** NA **	None
23	23			Yes	** NA **	None
24	24			Yes	** NA **	None
25	25			Yes	** NA **	None
26	26			Yes	** NA **	None
27	27			Yes	** NA **	None
28	28			Yes	** NA **	None
29	29			Yes	** NA **	None
30	30			Yes	N/A	None
31	31			Yes	** NA **	None
32	32			Yes	** NA **	None
33	33			Yes	** NA **	None
34	34			Yes	** NA **	None
35	35			Yes	** NA **	None
36	36			Yes	** NA **	None
37	37			Yes	N/A	None
38	38			Yes	** NA **	None
39	39			Yes	** NA **	None
40	40			Yes	** NA **	None
41	41			Yes	** NA **	None
42	42			Yes	** NA **	None
43	43			Yes	** NA **	None
44	44			Yes	N/A	None
45	45			Yes	** NA **	None
46	46			Yes	** NA **	None
47	47			Yes	** NA **	None
48	48			Yes	** NA **	None
49	49			Yes	** NA **	None
50	50			Yes	** NA **	None
51	51			Yes	** NA **	None
52	52			Yes	** NA **	None
53	53			Yes	** NA **	None
54	54			Yes	** NA **	None
55	55			Yes	** NA **	None

Member Advanced Data (Continued)

	Label	I Release	J Release	Physical	Deflection Ratio Options	Seismic DR
56	56			Yes	** NA **	None
57	57			Yes	** NA **	None
58	58			Yes	** NA **	None
59	59			Yes	** NA **	None
60	60			Yes	** NA **	None
61	61			Yes	** NA **	None
62	62			Yes	** NA **	None
63	63			Yes	** NA **	None
64	64			Yes	** NA **	None
65	65			Yes	** NA **	None
66	66			Yes	** NA **	None
67	67			Yes	** NA **	None
68	68			Yes	** NA **	None
69	69			Yes	** NA **	None
70	70			Yes	** NA **	None
71	71			Yes	** NA **	None
72	72			Yes	** NA **	None
73	73			Yes	** NA **	None
74	74			Yes	** NA **	None
75	75			Yes	** NA **	None
76	76			Yes	** NA **	None
77	77			Yes	** NA **	None
78	78			Yes	** NA **	None
79	79			Yes	** NA **	None
80	80			Yes	** NA **	None
81	81			Yes	** NA **	None
82	82			Yes	** NA **	None
83	83			Yes	** NA **	None
84	84			Yes	** NA **	None
85	85			Yes	** NA **	None
86	86			Yes	** NA **	None
87	87			Yes	** NA **	None
88	88			Yes	** NA **	None
89	89			Yes	** NA **	None
90	90			Yes	** NA **	None
91	91			Yes	N/A	None
92	92			Yes	N/A	None
93	93			Yes	N/A	None
94	94			Yes	N/A	None
95	95			Yes	N/A	None
96	96			Yes	N/A	None
97	97			Yes	N/A	None
98	98			Yes	N/A	None
99	99			Yes	N/A	None
100	100			Yes	N/A	None
101	101			Yes	N/A	None
102	102			Yes	N/A	None
103	103			Yes	N/A	None
104	104			Yes	N/A	None
105	M106			Yes	** NA **	None
106	M107			Yes	** NA **	None
107	M108			Yes	** NA **	None
108	M109			Yes	** NA **	None
109	M110			Yes	Default	None
110	M111			Yes	Default	None

Member Advanced Data (Continued)

	Label	I Release	J Release	Physical	Deflection Ratio Options	Seismic DR
111	M112			Yes	** NA **	None
112	M113			Yes	** NA **	None
113	M114			Yes	** NA **	None
114	M115			Yes	** NA **	None
115	M116			Yes	Default	None
116	M117			Yes	** NA **	None
117	M118			Yes	** NA **	None
118	M119			Yes	** NA **	None
119	M120			Yes	** NA **	None
120	M122			Yes	Default	None
121	M121	BenPIN	BenPIN	Yes	Default	None
122	M123			Yes	** NA **	None
123	M124			Yes	Default	None
124	M125	BenPIN	BenPIN	Yes	Default	None
125	M126			Yes	** NA **	None
126	M127			Yes	Default	None
127	M128	BenPIN	BenPIN	Yes	Default	None
128	M129			Yes	** NA **	None

Hot Rolled Steel Design Parameters

	Label	Shape	Length [ft]	Lcomp top [ft]	Channel Conn.	a [ft]	Function
1	1	F1-SCH1	5	Lbyy	N/A	N/A	Lateral
2	2	F1-SCH1	5	Lbyy	N/A	N/A	Lateral
3	3	F1-SCH1	5	Lbyy	N/A	N/A	Lateral
4	7	Support Rail	11.1	Lbyy	N/A	N/A	Lateral
5	8	Support Rail	11.1	Lbyy	N/A	N/A	Lateral
6	9	Support Rail	11.1	Lbyy	N/A	N/A	Lateral
7	28	F1-V1	3	Lbyy	N/A	N/A	Lateral
8	29	F1-V1	3	Lbyy	N/A	N/A	Lateral
9	30	F1-SA1	4.2	Lbyy	N/A	N/A	Lateral
10	31	F1-V1	3	Lbyy	N/A	N/A	Lateral
11	32	F1-V1	3	Lbyy	N/A	N/A	Lateral
12	33	F1-D1	4.022	Lbyy	N/A	N/A	Lateral
13	34	F1-D1	4.022	Lbyy	N/A	N/A	Lateral
14	35	F1-V1	3	Lbyy	N/A	N/A	Lateral
15	36	F1-V1	3	Lbyy	N/A	N/A	Lateral
16	37	F1-SA1	4.2	Lbyy	N/A	N/A	Lateral
17	38	F1-V1	3	Lbyy	N/A	N/A	Lateral
18	39	F1-V1	3	Lbyy	N/A	N/A	Lateral
19	40	F1-D1	4.022	Lbyy	N/A	N/A	Lateral
20	41	F1-D1	4.022	Lbyy	N/A	N/A	Lateral
21	42	F1-V1	3	Lbyy	N/A	N/A	Lateral
22	43	F1-V1	3	Lbyy	N/A	N/A	Lateral
23	44	F1-SA1	4.2	Lbyy	N/A	N/A	Lateral
24	45	F1-V1	3	Lbyy	N/A	N/A	Lateral
25	46	F1-V1	3	Lbyy	N/A	N/A	Lateral
26	47	F1-D1	4.022	Lbyy	N/A	N/A	Lateral
27	48	F1-D1	4.022	Lbyy	N/A	N/A	Lateral
28	51	MF-P2	9	Lbyy	N/A	N/A	Lateral
29	57	MF-P2	6	Lbyy	N/A	N/A	Lateral
30	58	MF-P2	9	Lbyy	N/A	N/A	Lateral
31	59	MF-P1	6.5	Lbyy	N/A	N/A	Lateral
32	63	MF-P2	9	Lbyy	N/A	N/A	Lateral
33	69	MF-P2	6	Lbyy	N/A	N/A	Lateral
34	70	MF-P2	9	Lbyy	N/A	N/A	Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length [ft]	Lcomp top [ft]	Channel Conn.	a [ft]	Function
35	71	MF-P1	6.5	Lbyy	N/A	N/A	Lateral
36	75	MF-P2	9	Lbyy	N/A	N/A	Lateral
37	81	MF-P2	6	Lbyy	N/A	N/A	Lateral
38	82	MF-P2	9	Lbyy	N/A	N/A	Lateral
39	83	MF-P1	6.5	Lbyy	N/A	N/A	Lateral
40	91	F1-S1	1.6	Lbyy	N/A	N/A	Lateral
41	92	F1-S1	1.6	Lbyy	N/A	N/A	Lateral
42	93	F1-S1	1.6	Lbyy	N/A	N/A	Lateral
43	94	F1-SCH1	2.9	Lbyy	N/A	N/A	Lateral
44	95	F1-SA1	1.819	Lbyy	N/A	N/A	Lateral
45	96	MF-H1	5.4	Lbyy	N/A	N/A	Lateral
46	97	MF-H1	1.2	Lbyy	N/A	N/A	Lateral
47	98	MF-H1	5.4	Lbyy	N/A	N/A	Lateral
48	99	MF-H1	5.4	Lbyy	N/A	N/A	Lateral
49	100	MF-H1	1.2	Lbyy	N/A	N/A	Lateral
50	101	MF-H1	5.4	Lbyy	N/A	N/A	Lateral
51	102	MF-H1	5.4	Lbyy	N/A	N/A	Lateral
52	103	MF-H1	1.2	Lbyy	N/A	N/A	Lateral
53	104	MF-H1	5.4	Lbyy	N/A	N/A	Lateral
54	M110	SF-P1	10	Lbyy	N/A	N/A	Lateral
55	M111	SF-P1	10	Lbyy	N/A	N/A	Lateral
56	M116	SF-P1	10	Lbyy	N/A	N/A	Lateral
57	M122	SF-S2	5.063	Lbyy	N/A	N/A	Lateral
58	M121	SF-P1	2.7	Lbyy	N/A	N/A	Lateral
59	M124	SF-S2	5.062	Lbyy	N/A	N/A	Lateral
60	M125	SF-P1	2.7	Lbyy	N/A	N/A	Lateral
61	M127	SF-S2	5.062	Lbyy	N/A	N/A	Lateral
62	M128	SF-P1	2.7	Lbyy	N/A	N/A	Lateral

Member Point Loads (BLC 1 : Dead)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	57	Y	-0.017	%5
2	57	Y	-0.017	%80
3	57	Y	-0.109	%10
4	57	Y	0	0
5	57	Y	0	0
6	58	Y	-0.075	%5
7	58	Y	-0.075	%90
8	58	Y	-0.081	%20
9	58	Y	0	0
10	58	Y	0	0
11	51	Y	-0.048	%5
12	51	Y	-0.048	%35
13	51	Y	0	0
14	51	Y	0	0
15	51	Y	0	0
16	81	Y	-0.017	%5
17	81	Y	-0.017	%80
18	81	Y	-0.109	%10
19	81	Y	0	0
20	81	Y	0	0
21	82	Y	-0.075	%5
22	82	Y	-0.075	%90
23	82	Y	-0.081	%20
24	82	Y	0	0

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
25	82	Y	0	0
26	75	Y	-0.048	%5
27	75	Y	-0.048	%35
28	75	Y	0	0
29	75	Y	0	0
30	75	Y	0	0
31	69	Y	-0.017	%5
32	69	Y	-0.017	%80
33	69	Y	-0.109	%10
34	69	Y	0	0
35	69	Y	0	0
36	70	Y	-0.075	%5
37	70	Y	-0.075	%90
38	70	Y	-0.081	%20
39	70	Y	0	0
40	70	Y	0	0
41	63	Y	-0.048	%5
42	63	Y	-0.048	%35
43	63	Y	0	0
44	63	Y	0	0
45	63	Y	0	0

Member Point Loads (BLC 2 : 0 Wind - No Ice)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	57	Z	-0.082	%5
2	57	Z	-0.082	%80
3	57	Z	-0.07	%10
4	57	Z	0	0
5	57	Z	0	0
6	58	Z	-0.267	%5
7	58	Z	-0.267	%90
8	58	Z	-0.094	%20
9	58	Z	0	0
10	58	Z	0	0
11	51	Z	-0.127	%5
12	51	Z	-0.127	%35
13	51	Z	0	0
14	51	Z	0	0
15	51	Z	0	0
16	81	Z	-0.082	%5
17	81	Z	-0.082	%80
18	81	Z	-0.07	%10
19	81	Z	0	0
20	81	Z	0	0
21	82	Z	-0.267	%5
22	82	Z	-0.267	%90
23	82	Z	-0.094	%20
24	82	Z	0	0
25	82	Z	0	0
26	75	Z	-0.127	%5
27	75	Z	-0.127	%35
28	75	Z	0	0
29	75	Z	0	0
30	75	Z	0	0
31	69	Z	-0.082	%5

Member Point Loads (BLC 2 : 0 Wind - No Ice) (Continued)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
32	69	Z	-0.082	%80
33	69	Z	-0.07	%10
34	69	Z	0	0
35	69	Z	0	0
36	70	Z	-0.267	%5
37	70	Z	-0.267	%90
38	70	Z	-0.094	%20
39	70	Z	0	0
40	70	Z	0	0
41	63	Z	-0.127	%5
42	63	Z	-0.127	%35
43	63	Z	0	0
44	63	Z	0	0
45	63	Z	0	0

Member Point Loads (BLC 3 : 90 Wind - No Ice)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	57	X	-0.032	%5
2	57	X	-0.032	%80
3	57	X	-0.055	%10
4	57	X	0	0
5	57	X	0	0
6	58	X	-0.097	%5
7	58	X	-0.097	%90
8	58	X	-0.045	%20
9	58	X	0	0
10	58	X	0	0
11	51	X	-0.052	%5
12	51	X	-0.052	%35
13	51	X	0	0
14	51	X	0	0
15	51	X	0	0
16	81	X	-0.032	%5
17	81	X	-0.032	%80
18	81	X	-0.055	%10
19	81	X	0	0
20	81	X	0	0
21	82	X	-0.097	%5
22	82	X	-0.097	%90
23	82	X	-0.045	%20
24	82	X	0	0
25	82	X	0	0
26	75	X	-0.052	%5
27	75	X	-0.052	%35
28	75	X	0	0
29	75	X	0	0
30	75	X	0	0
31	69	X	-0.032	%5
32	69	X	-0.032	%80
33	69	X	-0.055	%10
34	69	X	0	0
35	69	X	0	0
36	70	X	-0.097	%5
37	70	X	-0.097	%90
38	70	X	-0.045	%20

Member Point Loads (BLC 3 : 90 Wind - No Ice) (Continued)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
39	70	X	0	0
40	70	X	0	0
41	63	X	-0.052	%5
42	63	X	-0.052	%35
43	63	X	0	0
44	63	X	0	0
45	63	X	0	0

Member Point Loads (BLC 4 : 0 Wind - Ice)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	57	Z	-0.018	%5
2	57	Z	-0.018	%80
3	57	Z	-0.013	%10
4	57	Z	0	0
5	57	Z	0	0
6	58	Z	-0.053	%5
7	58	Z	-0.053	%90
8	58	Z	-0.017	%20
9	58	Z	0	0
10	58	Z	0	0
11	51	Z	-0.026	%5
12	51	Z	-0.026	%35
13	51	Z	0	0
14	51	Z	0	0
15	51	Z	0	0
16	81	Z	-0.018	%5
17	81	Z	-0.018	%80
18	81	Z	-0.013	%10
19	81	Z	0	0
20	81	Z	0	0
21	82	Z	-0.053	%5
22	82	Z	-0.053	%90
23	82	Z	-0.017	%20
24	82	Z	0	0
25	82	Z	0	0
26	75	Z	-0.026	%5
27	75	Z	-0.026	%35
28	75	Z	0	0
29	75	Z	0	0
30	75	Z	0	0
31	69	Z	-0.018	%5
32	69	Z	-0.018	%80
33	69	Z	-0.013	%10
34	69	Z	0	0
35	69	Z	0	0
36	70	Z	-0.053	%5
37	70	Z	-0.053	%90
38	70	Z	-0.017	%20
39	70	Z	0	0
40	70	Z	0	0
41	63	Z	-0.026	%5
42	63	Z	-0.026	%35
43	63	Z	0	0
44	63	Z	0	0
45	63	Z	0	0

Member Point Loads (BLC 5 : 90 Wind - Ice)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	57	X	-0.008	%5
2	57	X	-0.008	%80
3	57	X	-0.01	%10
4	57	X	0	0
5	57	X	0	0
6	58	X	-0.022	%5
7	58	X	-0.022	%90
8	58	X	-0.008	%20
9	58	X	0	0
10	58	X	0	0
11	51	X	-0.012	%5
12	51	X	-0.012	%35
13	51	X	0	0
14	51	X	0	0
15	51	X	0	0
16	81	X	-0.008	%5
17	81	X	-0.008	%80
18	81	X	-0.01	%10
19	81	X	0	0
20	81	X	0	0
21	82	X	-0.022	%5
22	82	X	-0.022	%90
23	82	X	-0.008	%20
24	82	X	0	0
25	82	X	0	0
26	75	X	-0.012	%5
27	75	X	-0.012	%35
28	75	X	0	0
29	75	X	0	0
30	75	X	0	0
31	69	X	-0.008	%5
32	69	X	-0.008	%80
33	69	X	-0.01	%10
34	69	X	0	0
35	69	X	0	0
36	70	X	-0.022	%5
37	70	X	-0.022	%90
38	70	X	-0.008	%20
39	70	X	0	0
40	70	X	0	0
41	63	X	-0.012	%5
42	63	X	-0.012	%35
43	63	X	0	0
44	63	X	0	0
45	63	X	0	0

Member Point Loads (BLC 6 : 0 Wind - Service)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	57	Z	-0.005	%5
2	57	Z	-0.005	%80
3	57	Z	-0.005	%10
4	57	Z	0	0
5	57	Z	0	0
6	58	Z	-0.017	%5

Member Point Loads (BLC 6 : 0 Wind - Service) (Continued)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
7	58	Z	-0.017	%90
8	58	Z	-0.006	%20
9	58	Z	0	0
10	58	Z	0	0
11	51	Z	-0.008	%5
12	51	Z	-0.008	%35
13	51	Z	0	0
14	51	Z	0	0
15	51	Z	0	0
16	81	Z	-0.005	%5
17	81	Z	-0.005	%80
18	81	Z	-0.005	%10
19	81	Z	0	0
20	81	Z	0	0
21	82	Z	-0.017	%5
22	82	Z	-0.017	%90
23	82	Z	-0.006	%20
24	82	Z	0	0
25	82	Z	0	0
26	75	Z	-0.008	%5
27	75	Z	-0.008	%35
28	75	Z	0	0
29	75	Z	0	0
30	75	Z	0	0
31	69	Z	-0.005	%5
32	69	Z	-0.005	%80
33	69	Z	-0.005	%10
34	69	Z	0	0
35	69	Z	0	0
36	70	Z	-0.017	%5
37	70	Z	-0.017	%90
38	70	Z	-0.006	%20
39	70	Z	0	0
40	70	Z	0	0
41	63	Z	-0.008	%5
42	63	Z	-0.008	%35
43	63	Z	0	0
44	63	Z	0	0
45	63	Z	0	0

Member Point Loads (BLC 7 : 90 Wind - Service)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	57	X	-0.002	%5
2	57	X	-0.002	%80
3	57	X	-0.004	%10
4	57	X	0	0
5	57	X	0	0
6	58	X	-0.006	%5
7	58	X	-0.006	%90
8	58	X	-0.003	%20
9	58	X	0	0
10	58	X	0	0
11	51	X	-0.003	%5
12	51	X	-0.003	%35
13	51	X	0	0

Member Point Loads (BLC 7 : 90 Wind - Service) (Continued)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
14	51	X	0	0
15	51	X	0	0
16	81	X	-0.002	%5
17	81	X	-0.002	%80
18	81	X	-0.004	%10
19	81	X	0	0
20	81	X	0	0
21	82	X	-0.006	%5
22	82	X	-0.006	%90
23	82	X	-0.003	%20
24	82	X	0	0
25	82	X	0	0
26	75	X	-0.003	%5
27	75	X	-0.003	%35
28	75	X	0	0
29	75	X	0	0
30	75	X	0	0
31	69	X	-0.002	%5
32	69	X	-0.002	%80
33	69	X	-0.004	%10
34	69	X	0	0
35	69	X	0	0
36	70	X	-0.006	%5
37	70	X	-0.006	%90
38	70	X	-0.003	%20
39	70	X	0	0
40	70	X	0	0
41	63	X	-0.003	%5
42	63	X	-0.003	%35
43	63	X	0	0
44	63	X	0	0
45	63	X	0	0

Member Point Loads (BLC 8 : Ice)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	57	Y	-0.053	%5
2	57	Y	-0.053	%80
3	57	Y	-0.041	%10
4	57	Y	0	0
5	57	Y	0	0
6	58	Y	-0.191	%5
7	58	Y	-0.191	%90
8	58	Y	-0.048	%20
9	58	Y	0	0
10	58	Y	0	0
11	51	Y	-0.094	%5
12	51	Y	-0.094	%35
13	51	Y	0	0
14	51	Y	0	0
15	51	Y	0	0
16	81	Y	-0.053	%5
17	81	Y	-0.053	%80
18	81	Y	-0.041	%10
19	81	Y	0	0
20	81	Y	0	0

Member Point Loads (BLC 8 : Ice) (Continued)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
21	82	Y	-0.191	%5
22	82	Y	-0.191	%90
23	82	Y	-0.048	%20
24	82	Y	0	0
25	82	Y	0	0
26	75	Y	-0.094	%5
27	75	Y	-0.094	%35
28	75	Y	0	0
29	75	Y	0	0
30	75	Y	0	0
31	69	Y	-0.053	%5
32	69	Y	-0.053	%80
33	69	Y	-0.041	%10
34	69	Y	0	0
35	69	Y	0	0
36	70	Y	-0.191	%5
37	70	Y	-0.191	%90
38	70	Y	-0.048	%20
39	70	Y	0	0
40	70	Y	0	0
41	63	Y	-0.094	%5
42	63	Y	-0.094	%35
43	63	Y	0	0
44	63	Y	0	0
45	63	Y	0	0

Member Point Loads (BLC 9 : 0 Seismic)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	57	Z	-0.009	%5
2	57	Z	-0.009	%80
3	57	Z	-0.029	%10
4	57	Z	0	0
5	57	Z	0	0
6	58	Z	-0.039	%5
7	58	Z	-0.039	%90
8	58	Z	-0.021	%20
9	58	Z	0	0
10	58	Z	0	0
11	51	Z	-0.025	%5
12	51	Z	-0.025	%35
13	51	Z	0	0
14	51	Z	0	0
15	51	Z	0	0
16	81	Z	-0.009	%5
17	81	Z	-0.009	%80
18	81	Z	-0.029	%10
19	81	Z	0	0
20	81	Z	0	0
21	82	Z	-0.039	%5
22	82	Z	-0.039	%90
23	82	Z	-0.021	%20
24	82	Z	0	0
25	82	Z	0	0
26	75	Z	-0.025	%5
27	75	Z	-0.025	%35

Member Point Loads (BLC 9 : 0 Seismic) (Continued)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
28	75	Z	0	0
29	75	Z	0	0
30	75	Z	0	0
31	69	Z	-0.009	%5
32	69	Z	-0.009	%80
33	69	Z	-0.029	%10
34	69	Z	0	0
35	69	Z	0	0
36	70	Z	-0.039	%5
37	70	Z	-0.039	%90
38	70	Z	-0.021	%20
39	70	Z	0	0
40	70	Z	0	0
41	63	Z	-0.025	%5
42	63	Z	-0.025	%35
43	63	Z	0	0
44	63	Z	0	0
45	63	Z	0	0

Member Point Loads (BLC 10 : 90 Seismic)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	57	X	-0.009	%5
2	57	X	-0.009	%80
3	57	X	-0.029	%10
4	57	X	0	0
5	57	X	0	0
6	58	X	-0.039	%5
7	58	X	-0.039	%90
8	58	X	-0.021	%20
9	58	X	0	0
10	58	X	0	0
11	51	X	-0.025	%5
12	51	X	-0.025	%35
13	51	X	0	0
14	51	X	0	0
15	51	X	0	0
16	81	X	-0.009	%5
17	81	X	-0.009	%80
18	81	X	-0.029	%10
19	81	X	0	0
20	81	X	0	0
21	82	X	-0.039	%5
22	82	X	-0.039	%90
23	82	X	-0.021	%20
24	82	X	0	0
25	82	X	0	0
26	75	X	-0.025	%5
27	75	X	-0.025	%35
28	75	X	0	0
29	75	X	0	0
30	75	X	0	0
31	69	X	-0.009	%5
32	69	X	-0.009	%80
33	69	X	-0.029	%10
34	69	X	0	0

Member Point Loads (BLC 10 : 90 Seismic) (Continued)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
35	69	X	0	0
36	70	X	-0.039	%5
37	70	X	-0.039	%90
38	70	X	-0.021	%20
39	70	X	0	0
40	70	X	0	0
41	63	X	-0.025	%5
42	63	X	-0.025	%35
43	63	X	0	0
44	63	X	0	0
45	63	X	0	0

Member Point Loads (BLC 15 : Maint LL 1)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	7	Y	-0.25	%5

Member Point Loads (BLC 16 : Maint LL 2)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	98	Y	-0.25	%95

Member Point Loads (BLC 17 : Maint LL 3)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	7	Y	-0.25	%95

Member Point Loads (BLC 18 : Maint LL 4)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	96	Y	-0.25	%95

Member Point Loads (BLC 19 : Maint LL 5)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	8	Y	-0.25	%95

Member Point Loads (BLC 20 : Maint LL 6)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	99	Y	-0.25	%95

Member Point Loads (BLC 21 : Maint LL 7)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	8	Y	-0.25	%5

Member Point Loads (BLC 22 : Maint LL 8)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	101	Y	-0.25	%95

Member Point Loads (BLC 23 : Maint LL 9)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	9	Y	-0.25	%95

Member Point Loads (BLC 24 : Maint LL 10)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	102	Y	-0.25	%95

Member Point Loads (BLC 25 : Maint LL 11)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	9	Y	-0.25	%5

Member Point Loads (BLC 26 : Maint LL 12)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	104	Y	-0.25	%95

Member Point Loads (BLC 27 : Maint LL 13)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	92	Y	-0.25	%5

Member Point Loads (BLC 28 : Maint LL 14)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	93	Y	-0.25	%5

Member Point Loads (BLC 29 : Maint LL 15)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	91	Y	-0.25	%5

Member Distributed Loads (BLC 2 : 0 Wind - No Ice)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	Z	-0.021	-0.021	0	%100
2	2	Z	-0.021	-0.021	0	%100
3	3	Z	-0.021	-0.021	0	%100
4	7	Z	-0.016	-0.016	0	%100
5	8	Z	-0.016	-0.016	0	%100
6	9	Z	-0.016	-0.016	0	%100
7	28	Z	-0.008	-0.008	0	%100
8	29	Z	-0.008	-0.008	0	%100
9	30	Z	-0.008	-0.008	0	%100
10	31	Z	-0.008	-0.008	0	%100
11	32	Z	-0.008	-0.008	0	%100
12	33	Z	-0.008	-0.008	0	%100
13	34	Z	-0.008	-0.008	0	%100
14	35	Z	-0.008	-0.008	0	%100
15	36	Z	-0.008	-0.008	0	%100
16	37	Z	-0.008	-0.008	0	%100
17	38	Z	-0.008	-0.008	0	%100

Member Distributed Loads (BLC 2 : 0 Wind - No Ice) (Continued)

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
18	39	Z	-0.008	-0.008	0	%100
19	40	Z	-0.008	-0.008	0	%100
20	41	Z	-0.008	-0.008	0	%100
21	42	Z	-0.008	-0.008	0	%100
22	43	Z	-0.008	-0.008	0	%100
23	44	Z	-0.008	-0.008	0	%100
24	45	Z	-0.008	-0.008	0	%100
25	46	Z	-0.008	-0.008	0	%100
26	47	Z	-0.008	-0.008	0	%100
27	48	Z	-0.008	-0.008	0	%100
28	51	Z	-0.009	-0.009	0	%100
29	57	Z	-0.009	-0.009	0	%100
30	58	Z	-0.009	-0.009	0	%100
31	59	Z	-0.008	-0.008	0	%100
32	63	Z	-0.009	-0.009	0	%100
33	69	Z	-0.009	-0.009	0	%100
34	70	Z	-0.009	-0.009	0	%100
35	71	Z	-0.008	-0.008	0	%100
36	75	Z	-0.009	-0.009	0	%100
37	81	Z	-0.009	-0.009	0	%100
38	82	Z	-0.009	-0.009	0	%100
39	83	Z	-0.008	-0.008	0	%100
40	91	Z	-0.011	-0.011	0	%100
41	92	Z	-0.011	-0.011	0	%100
42	93	Z	-0.011	-0.011	0	%100
43	94	Z	-0.019	-0.019	0	%100
44	95	Z	-0.007	-0.007	0	%100
45	96	Z	-0.022	-0.022	0	%100
46	97	Z	-0.017	-0.017	0	%100
47	98	Z	-0.022	-0.022	0	%100
48	99	Z	-0.022	-0.022	0	%100
49	100	Z	-0.017	-0.017	0	%100
50	101	Z	-0.022	-0.022	0	%100
51	102	Z	-0.022	-0.022	0	%100
52	103	Z	-0.017	-0.017	0	%100
53	104	Z	-0.022	-0.022	0	%100
54	M110	Z	-0.008	-0.008	0	%100
55	M111	Z	-0.008	-0.008	0	%100
56	M116	Z	-0.008	-0.008	0	%100
57	M122	Z	-0.018	-0.018	0	%100
58	M121	Z	-0.006	-0.006	0	%100
59	M124	Z	-0.018	-0.018	0	%100
60	M125	Z	-0.006	-0.006	0	%100
61	M127	Z	-0.018	-0.018	0	%100
62	M128	Z	-0.006	-0.006	0	%100

Member Distributed Loads (BLC 3 : 90 Wind - No Ice)

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	X	-0.021	-0.021	0	%100
2	2	X	-0.021	-0.021	0	%100
3	3	X	-0.021	-0.021	0	%100
4	7	X	-0.016	-0.016	0	%100
5	8	X	-0.016	-0.016	0	%100
6	9	X	-0.016	-0.016	0	%100
7	28	X	-0.008	-0.008	0	%100



Member Distributed Loads (BLC 3 : 90 Wind - No Ice) (Continued)

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
8	29	X	-0.008	-0.008	0	%100
9	30	X	-0.008	-0.008	0	%100
10	31	X	-0.008	-0.008	0	%100
11	32	X	-0.008	-0.008	0	%100
12	33	X	-0.008	-0.008	0	%100
13	34	X	-0.008	-0.008	0	%100
14	35	X	-0.008	-0.008	0	%100
15	36	X	-0.008	-0.008	0	%100
16	37	X	-0.008	-0.008	0	%100
17	38	X	-0.008	-0.008	0	%100
18	39	X	-0.008	-0.008	0	%100
19	40	X	-0.008	-0.008	0	%100
20	41	X	-0.008	-0.008	0	%100
21	42	X	-0.008	-0.008	0	%100
22	43	X	-0.008	-0.008	0	%100
23	44	X	-0.008	-0.008	0	%100
24	45	X	-0.008	-0.008	0	%100
25	46	X	-0.008	-0.008	0	%100
26	47	X	-0.008	-0.008	0	%100
27	48	X	-0.008	-0.008	0	%100
28	51	X	-0.009	-0.009	0	%100
29	57	X	-0.009	-0.009	0	%100
30	58	X	-0.009	-0.009	0	%100
31	59	X	-0.008	-0.008	0	%100
32	63	X	-0.009	-0.009	0	%100
33	69	X	-0.009	-0.009	0	%100
34	70	X	-0.009	-0.009	0	%100
35	71	X	-0.008	-0.008	0	%100
36	75	X	-0.009	-0.009	0	%100
37	81	X	-0.009	-0.009	0	%100
38	82	X	-0.009	-0.009	0	%100
39	83	X	-0.008	-0.008	0	%100
40	91	X	-0.011	-0.011	0	%100
41	92	X	-0.011	-0.011	0	%100
42	93	X	-0.011	-0.011	0	%100
43	94	X	-0.019	-0.019	0	%100
44	95	X	-0.007	-0.007	0	%100
45	96	X	-0.022	-0.022	0	%100
46	97	X	-0.017	-0.017	0	%100
47	98	X	-0.022	-0.022	0	%100
48	99	X	-0.022	-0.022	0	%100
49	100	X	-0.017	-0.017	0	%100
50	101	X	-0.022	-0.022	0	%100
51	102	X	-0.022	-0.022	0	%100
52	103	X	-0.017	-0.017	0	%100
53	104	X	-0.022	-0.022	0	%100
54	M110	X	-0.008	-0.008	0	%100
55	M111	X	-0.008	-0.008	0	%100
56	M116	X	-0.008	-0.008	0	%100
57	M122	X	-0.018	-0.018	0	%100
58	M121	X	-0.006	-0.006	0	%100
59	M124	X	-0.018	-0.018	0	%100
60	M125	X	-0.006	-0.006	0	%100
61	M127	X	-0.018	-0.018	0	%100
62	M128	X	-0.006	-0.006	0	%100



Company : B+T Group
Designer : IF
Job Number : 80964.016.01
Model Name : 806355 - BRG 126 943086

4/25/2022
12:05:37 PM
Checked By : _____

Member Distributed Loads (BLC 3 : 90 Wind - No Ice) (Continued)

Member Label Direction Start Magnitude [k/ft, F, ksf, k-ft/ft] End Magnitude [k/ft, F, ksf, k-ft/ft] Start Location [(ft, %)] End Location [(ft, %)]

Member Distributed Loads (BLC 4 : 0 Wind - Ice)

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	Z	-0.006	-0.006	0	%100
2	2	Z	-0.006	-0.006	0	%100
3	3	Z	-0.006	-0.006	0	%100
4	7	Z	-0.005	-0.005	0	%100
5	8	Z	-0.005	-0.005	0	%100
6	9	Z	-0.005	-0.005	0	%100
7	28	Z	-0.004	-0.004	0	%100
8	29	Z	-0.004	-0.004	0	%100
9	30	Z	-0.004	-0.004	0	%100
10	31	Z	-0.004	-0.004	0	%100
11	32	Z	-0.004	-0.004	0	%100
12	33	Z	-0.004	-0.004	0	%100
13	34	Z	-0.004	-0.004	0	%100
14	35	Z	-0.004	-0.004	0	%100
15	36	Z	-0.004	-0.004	0	%100
16	37	Z	-0.004	-0.004	0	%100
17	38	Z	-0.004	-0.004	0	%100
18	39	Z	-0.004	-0.004	0	%100
19	40	Z	-0.004	-0.004	0	%100
20	41	Z	-0.004	-0.004	0	%100
21	42	Z	-0.004	-0.004	0	%100
22	43	Z	-0.004	-0.004	0	%100
23	44	Z	-0.004	-0.004	0	%100
24	45	Z	-0.004	-0.004	0	%100
25	46	Z	-0.004	-0.004	0	%100
26	47	Z	-0.004	-0.004	0	%100
27	48	Z	-0.004	-0.004	0	%100
28	51	Z	-0.002	-0.002	0	%100
29	57	Z	-0.002	-0.002	0	%100
30	58	Z	-0.002	-0.002	0	%100
31	59	Z	-0.001	-0.001	0	%100
32	63	Z	-0.002	-0.002	0	%100
33	69	Z	-0.002	-0.002	0	%100
34	70	Z	-0.002	-0.002	0	%100
35	71	Z	-0.001	-0.001	0	%100
36	75	Z	-0.002	-0.002	0	%100
37	81	Z	-0.002	-0.002	0	%100
38	82	Z	-0.002	-0.002	0	%100
39	83	Z	-0.001	-0.001	0	%100
40	91	Z	-0.004	-0.004	0	%100
41	92	Z	-0.004	-0.004	0	%100
42	93	Z	-0.004	-0.004	0	%100
43	94	Z	-0.005	-0.005	0	%100
44	95	Z	-0.003	-0.003	0	%100
45	96	Z	-0.006	-0.006	0	%100
46	97	Z	-0.005	-0.005	0	%100
47	98	Z	-0.006	-0.006	0	%100
48	99	Z	-0.006	-0.006	0	%100
49	100	Z	-0.005	-0.005	0	%100
50	101	Z	-0.006	-0.006	0	%100
51	102	Z	-0.006	-0.006	0	%100
52	103	Z	-0.005	-0.005	0	%100
53	104	Z	-0.006	-0.006	0	%100
54	M110	Z	-0.001	-0.001	0	%100
55	M111	Z	-0.001	-0.001	0	%100

Member Distributed Loads (BLC 4 : 0 Wind - Ice) (Continued)

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
56	M116	Z	-0.001	-0.001	0	%100
57	M122	Z	-0.005	-0.005	0	%100
58	M121	Z	-0.002	-0.002	0	%100
59	M124	Z	-0.005	-0.005	0	%100
60	M125	Z	-0.002	-0.002	0	%100
61	M127	Z	-0.005	-0.005	0	%100
62	M128	Z	-0.002	-0.002	0	%100

Member Distributed Loads (BLC 5 : 90 Wind - Ice)

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	X	-0.006	-0.006	0	%100
2	2	X	-0.006	-0.006	0	%100
3	3	X	-0.006	-0.006	0	%100
4	7	X	-0.005	-0.005	0	%100
5	8	X	-0.005	-0.005	0	%100
6	9	X	-0.005	-0.005	0	%100
7	28	X	-0.004	-0.004	0	%100
8	29	X	-0.004	-0.004	0	%100
9	30	X	-0.004	-0.004	0	%100
10	31	X	-0.004	-0.004	0	%100
11	32	X	-0.004	-0.004	0	%100
12	33	X	-0.004	-0.004	0	%100
13	34	X	-0.004	-0.004	0	%100
14	35	X	-0.004	-0.004	0	%100
15	36	X	-0.004	-0.004	0	%100
16	37	X	-0.004	-0.004	0	%100
17	38	X	-0.004	-0.004	0	%100
18	39	X	-0.004	-0.004	0	%100
19	40	X	-0.004	-0.004	0	%100
20	41	X	-0.004	-0.004	0	%100
21	42	X	-0.004	-0.004	0	%100
22	43	X	-0.004	-0.004	0	%100
23	44	X	-0.004	-0.004	0	%100
24	45	X	-0.004	-0.004	0	%100
25	46	X	-0.004	-0.004	0	%100
26	47	X	-0.004	-0.004	0	%100
27	48	X	-0.004	-0.004	0	%100
28	51	X	-0.002	-0.002	0	%100
29	57	X	-0.002	-0.002	0	%100
30	58	X	-0.002	-0.002	0	%100
31	59	X	-0.001	-0.001	0	%100
32	63	X	-0.002	-0.002	0	%100
33	69	X	-0.002	-0.002	0	%100
34	70	X	-0.002	-0.002	0	%100
35	71	X	-0.001	-0.001	0	%100
36	75	X	-0.002	-0.002	0	%100
37	81	X	-0.002	-0.002	0	%100
38	82	X	-0.002	-0.002	0	%100
39	83	X	-0.001	-0.001	0	%100
40	91	X	-0.004	-0.004	0	%100
41	92	X	-0.004	-0.004	0	%100
42	93	X	-0.004	-0.004	0	%100
43	94	X	-0.005	-0.005	0	%100
44	95	X	-0.003	-0.003	0	%100
45	96	X	-0.006	-0.006	0	%100

Member Distributed Loads (BLC 5 : 90 Wind - Ice) (Continued)

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
46	97	X	-0.005	-0.005	0	%100
47	98	X	-0.006	-0.006	0	%100
48	99	X	-0.006	-0.006	0	%100
49	100	X	-0.005	-0.005	0	%100
50	101	X	-0.006	-0.006	0	%100
51	102	X	-0.006	-0.006	0	%100
52	103	X	-0.005	-0.005	0	%100
53	104	X	-0.006	-0.006	0	%100
54	M110	X	-0.001	-0.001	0	%100
55	M111	X	-0.001	-0.001	0	%100
56	M116	X	-0.001	-0.001	0	%100
57	M122	X	-0.005	-0.005	0	%100
58	M121	X	-0.002	-0.002	0	%100
59	M124	X	-0.005	-0.005	0	%100
60	M125	X	-0.002	-0.002	0	%100
61	M127	X	-0.005	-0.005	0	%100
62	M128	X	-0.002	-0.002	0	%100

Member Distributed Loads (BLC 6 : 0 Wind - Service)

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	Z	-0.001	-0.001	0	%100
2	2	Z	-0.001	-0.001	0	%100
3	3	Z	-0.001	-0.001	0	%100
4	7	Z	-0.001	-0.001	0	%100
5	8	Z	-0.001	-0.001	0	%100
6	9	Z	-0.001	-0.001	0	%100
7	28	Z	-0.0005	-0.0005	0	%100
8	29	Z	-0.0005	-0.0005	0	%100
9	30	Z	-0.0005	-0.0005	0	%100
10	31	Z	-0.0005	-0.0005	0	%100
11	32	Z	-0.0005	-0.0005	0	%100
12	33	Z	-0.0005	-0.0005	0	%100
13	34	Z	-0.0005	-0.0005	0	%100
14	35	Z	-0.0005	-0.0005	0	%100
15	36	Z	-0.0005	-0.0005	0	%100
16	37	Z	-0.0005	-0.0005	0	%100
17	38	Z	-0.0005	-0.0005	0	%100
18	39	Z	-0.0005	-0.0005	0	%100
19	40	Z	-0.0005	-0.0005	0	%100
20	41	Z	-0.0005	-0.0005	0	%100
21	42	Z	-0.0005	-0.0005	0	%100
22	43	Z	-0.0005	-0.0005	0	%100
23	44	Z	-0.0005	-0.0005	0	%100
24	45	Z	-0.0005	-0.0005	0	%100
25	46	Z	-0.0005	-0.0005	0	%100
26	47	Z	-0.0005	-0.0005	0	%100
27	48	Z	-0.0005	-0.0005	0	%100
28	51	Z	-0.0003	-0.0003	0	%100
29	57	Z	-0.0003	-0.0003	0	%100
30	58	Z	-0.0003	-0.0003	0	%100
31	59	Z	-0.0003	-0.0003	0	%100
32	63	Z	-0.0003	-0.0003	0	%100
33	69	Z	-0.0003	-0.0003	0	%100
34	70	Z	-0.0003	-0.0003	0	%100
35	71	Z	-0.0003	-0.0003	0	%100

Member Distributed Loads (BLC 6 : 0 Wind - Service) (Continued)

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
36	75	Z	-0.0003	-0.0003	0	%100
37	81	Z	-0.0003	-0.0003	0	%100
38	82	Z	-0.0003	-0.0003	0	%100
39	83	Z	-0.0003	-0.0003	0	%100
40	91	Z	-0.0007	-0.0007	0	%100
41	92	Z	-0.0007	-0.0007	0	%100
42	93	Z	-0.0007	-0.0007	0	%100
43	94	Z	-0.001	-0.001	0	%100
44	95	Z	-0.0004	-0.0004	0	%100
45	96	Z	-0.001	-0.001	0	%100
46	97	Z	-0.001	-0.001	0	%100
47	98	Z	-0.001	-0.001	0	%100
48	99	Z	-0.001	-0.001	0	%100
49	100	Z	-0.001	-0.001	0	%100
50	101	Z	-0.001	-0.001	0	%100
51	102	Z	-0.001	-0.001	0	%100
52	103	Z	-0.001	-0.001	0	%100
53	104	Z	-0.001	-0.001	0	%100
54	M110	Z	-0.0003	-0.0003	0	%100
55	M111	Z	-0.0003	-0.0003	0	%100
56	M116	Z	-0.0003	-0.0003	0	%100
57	M122	Z	-0.001	-0.001	0	%100
58	M121	Z	-0.0003	-0.0003	0	%100
59	M124	Z	-0.001	-0.001	0	%100
60	M125	Z	-0.0003	-0.0003	0	%100
61	M127	Z	-0.001	-0.001	0	%100
62	M128	Z	-0.0003	-0.0003	0	%100

Member Distributed Loads (BLC 7 : 90 Wind - Service)

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	X	-0.001	-0.001	0	%100
2	2	X	-0.001	-0.001	0	%100
3	3	X	-0.001	-0.001	0	%100
4	7	X	-0.001	-0.001	0	%100
5	8	X	-0.001	-0.001	0	%100
6	9	X	-0.001	-0.001	0	%100
7	28	X	-0.0005	-0.0005	0	%100
8	29	X	-0.0005	-0.0005	0	%100
9	30	X	-0.0005	-0.0005	0	%100
10	31	X	-0.0005	-0.0005	0	%100
11	32	X	-0.0005	-0.0005	0	%100
12	33	X	-0.0005	-0.0005	0	%100
13	34	X	-0.0005	-0.0005	0	%100
14	35	X	-0.0005	-0.0005	0	%100
15	36	X	-0.0005	-0.0005	0	%100
16	37	X	-0.0005	-0.0005	0	%100
17	38	X	-0.0005	-0.0005	0	%100
18	39	X	-0.0005	-0.0005	0	%100
19	40	X	-0.0005	-0.0005	0	%100
20	41	X	-0.0005	-0.0005	0	%100
21	42	X	-0.0005	-0.0005	0	%100
22	43	X	-0.0005	-0.0005	0	%100
23	44	X	-0.0005	-0.0005	0	%100
24	45	X	-0.0005	-0.0005	0	%100
25	46	X	-0.0005	-0.0005	0	%100

Member Distributed Loads (BLC 7 : 90 Wind - Service) (Continued)

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
26	47	X	-0.0005	-0.0005	0	%100
27	48	X	-0.0005	-0.0005	0	%100
28	51	X	-0.0003	-0.0003	0	%100
29	57	X	-0.0003	-0.0003	0	%100
30	58	X	-0.0003	-0.0003	0	%100
31	59	X	-0.0003	-0.0003	0	%100
32	63	X	-0.0003	-0.0003	0	%100
33	69	X	-0.0003	-0.0003	0	%100
34	70	X	-0.0003	-0.0003	0	%100
35	71	X	-0.0003	-0.0003	0	%100
36	75	X	-0.0003	-0.0003	0	%100
37	81	X	-0.0003	-0.0003	0	%100
38	82	X	-0.0003	-0.0003	0	%100
39	83	X	-0.0003	-0.0003	0	%100
40	91	X	-0.0007	-0.0007	0	%100
41	92	X	-0.0007	-0.0007	0	%100
42	93	X	-0.0007	-0.0007	0	%100
43	94	X	-0.001	-0.001	0	%100
44	95	X	-0.0004	-0.0004	0	%100
45	96	X	-0.001	-0.001	0	%100
46	97	X	-0.001	-0.001	0	%100
47	98	X	-0.001	-0.001	0	%100
48	99	X	-0.001	-0.001	0	%100
49	100	X	-0.001	-0.001	0	%100
50	101	X	-0.001	-0.001	0	%100
51	102	X	-0.001	-0.001	0	%100
52	103	X	-0.001	-0.001	0	%100
53	104	X	-0.001	-0.001	0	%100
54	M110	X	-0.0003	-0.0003	0	%100
55	M111	X	-0.0003	-0.0003	0	%100
56	M116	X	-0.0003	-0.0003	0	%100
57	M122	X	-0.001	-0.001	0	%100
58	M121	X	-0.0003	-0.0003	0	%100
59	M124	X	-0.001	-0.001	0	%100
60	M125	X	-0.0003	-0.0003	0	%100
61	M127	X	-0.001	-0.001	0	%100
62	M128	X	-0.0003	-0.0003	0	%100

Member Distributed Loads (BLC 8 : Ice)

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	Y	-0.009	-0.009	0	%100
2	2	Y	-0.009	-0.009	0	%100
3	3	Y	-0.009	-0.009	0	%100
4	7	Y	-0.008	-0.008	0	%100
5	8	Y	-0.008	-0.008	0	%100
6	9	Y	-0.008	-0.008	0	%100
7	28	Y	-0.005	-0.005	0	%100
8	29	Y	-0.005	-0.005	0	%100
9	30	Y	-0.005	-0.005	0	%100
10	31	Y	-0.005	-0.005	0	%100
11	32	Y	-0.005	-0.005	0	%100
12	33	Y	-0.005	-0.005	0	%100
13	34	Y	-0.005	-0.005	0	%100
14	35	Y	-0.005	-0.005	0	%100
15	36	Y	-0.005	-0.005	0	%100



Member Distributed Loads (BLC 8 : Ice) (Continued)

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
16	37	Y	-0.005	-0.005	0	%100
17	38	Y	-0.005	-0.005	0	%100
18	39	Y	-0.005	-0.005	0	%100
19	40	Y	-0.005	-0.005	0	%100
20	41	Y	-0.005	-0.005	0	%100
21	42	Y	-0.005	-0.005	0	%100
22	43	Y	-0.005	-0.005	0	%100
23	44	Y	-0.005	-0.005	0	%100
24	45	Y	-0.005	-0.005	0	%100
25	46	Y	-0.005	-0.005	0	%100
26	47	Y	-0.005	-0.005	0	%100
27	48	Y	-0.005	-0.005	0	%100
28	51	Y	-0.006	-0.006	0	%100
29	57	Y	-0.006	-0.006	0	%100
30	58	Y	-0.006	-0.006	0	%100
31	59	Y	-0.005	-0.005	0	%100
32	63	Y	-0.006	-0.006	0	%100
33	69	Y	-0.006	-0.006	0	%100
34	70	Y	-0.006	-0.006	0	%100
35	71	Y	-0.005	-0.005	0	%100
36	75	Y	-0.006	-0.006	0	%100
37	81	Y	-0.006	-0.006	0	%100
38	82	Y	-0.006	-0.006	0	%100
39	83	Y	-0.005	-0.005	0	%100
40	91	Y	-0.008	-0.008	0	%100
41	92	Y	-0.008	-0.008	0	%100
42	93	Y	-0.008	-0.008	0	%100
43	94	Y	-0.009	-0.009	0	%100
44	95	Y	-0.005	-0.005	0	%100
45	96	Y	-0.009	-0.009	0	%100
46	97	Y	-0.009	-0.009	0	%100
47	98	Y	-0.009	-0.009	0	%100
48	99	Y	-0.009	-0.009	0	%100
49	100	Y	-0.009	-0.009	0	%100
50	101	Y	-0.009	-0.009	0	%100
51	102	Y	-0.009	-0.009	0	%100
52	103	Y	-0.009	-0.009	0	%100
53	104	Y	-0.009	-0.009	0	%100
54	M110	Y	-0.005	-0.005	0	%100
55	M111	Y	-0.005	-0.005	0	%100
56	M116	Y	-0.005	-0.005	0	%100
57	M122	Y	-0.01	-0.01	0	%100
58	M121	Y	-0.005	-0.005	0	%100
59	M124	Y	-0.01	-0.01	0	%100
60	M125	Y	-0.005	-0.005	0	%100
61	M127	Y	-0.01	-0.01	0	%100
62	M128	Y	-0.005	-0.005	0	%100
63	104	Y	-0.009	-0.009	0	%100
64	M110	Y	-0.005	-0.005	0	%100
65	M111	Y	-0.005	-0.005	0	%100
66	M116	Y	-0.005	-0.005	0	%100
67	M122	Y	-0.01	-0.01	0	%100
68	M121	Y	-0.005	-0.005	0	%100
69	M124	Y	-0.01	-0.01	0	%100
70	M125	Y	-0.005	-0.005	0	%100

Member Distributed Loads (BLC 8 : Ice) (Continued)

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
71	M127	Y	-0.01	-0.01	0	%100
72	M128	Y	-0.005	-0.005	0	%100

Member Distributed Loads (BLC 9 : 0 Seismic)

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	Z	-0.002	-0.002	0	%100
2	2	Z	-0.002	-0.002	0	%100
3	3	Z	-0.002	-0.002	0	%100
4	7	Z	-0.002	-0.002	0	%100
5	8	Z	-0.002	-0.002	0	%100
6	9	Z	-0.002	-0.002	0	%100
7	28	Z	-0.0005	-0.0005	0	%100
8	29	Z	-0.0005	-0.0005	0	%100
9	30	Z	-0.0005	-0.0005	0	%100
10	31	Z	-0.0005	-0.0005	0	%100
11	32	Z	-0.0005	-0.0005	0	%100
12	33	Z	-0.0005	-0.0005	0	%100
13	34	Z	-0.0005	-0.0005	0	%100
14	35	Z	-0.0005	-0.0005	0	%100
15	36	Z	-0.0005	-0.0005	0	%100
16	37	Z	-0.0005	-0.0005	0	%100
17	38	Z	-0.0005	-0.0005	0	%100
18	39	Z	-0.0005	-0.0005	0	%100
19	40	Z	-0.0005	-0.0005	0	%100
20	41	Z	-0.0005	-0.0005	0	%100
21	42	Z	-0.0005	-0.0005	0	%100
22	43	Z	-0.0005	-0.0005	0	%100
23	44	Z	-0.0005	-0.0005	0	%100
24	45	Z	-0.0005	-0.0005	0	%100
25	46	Z	-0.0005	-0.0005	0	%100
26	47	Z	-0.0005	-0.0005	0	%100
27	48	Z	-0.0005	-0.0005	0	%100
28	51	Z	-0.002	-0.002	0	%100
29	57	Z	-0.002	-0.002	0	%100
30	58	Z	-0.002	-0.002	0	%100
31	59	Z	-0.001	-0.001	0	%100
32	63	Z	-0.002	-0.002	0	%100
33	69	Z	-0.002	-0.002	0	%100
34	70	Z	-0.002	-0.002	0	%100
35	71	Z	-0.001	-0.001	0	%100
36	75	Z	-0.002	-0.002	0	%100
37	81	Z	-0.002	-0.002	0	%100
38	82	Z	-0.002	-0.002	0	%100
39	83	Z	-0.001	-0.001	0	%100
40	91	Z	-0.002	-0.002	0	%100
41	92	Z	-0.002	-0.002	0	%100
42	93	Z	-0.002	-0.002	0	%100
43	94	Z	-0.002	-0.002	0	%100
44	95	Z	-0.0005	-0.0005	0	%100
45	96	Z	-0.002	-0.002	0	%100
46	97	Z	-0.002	-0.002	0	%100
47	98	Z	-0.002	-0.002	0	%100
48	99	Z	-0.002	-0.002	0	%100
49	100	Z	-0.002	-0.002	0	%100
50	101	Z	-0.002	-0.002	0	%100

Member Distributed Loads (BLC 9 : 0 Seismic) (Continued)

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
51	102	Z	-0.002	-0.002	0	%100
52	103	Z	-0.002	-0.002	0	%100
53	104	Z	-0.002	-0.002	0	%100
54	M110	Z	-0.001	-0.001	0	%100
55	M111	Z	-0.001	-0.001	0	%100
56	M116	Z	-0.001	-0.001	0	%100
57	M122	Z	-0.003	-0.003	0	%100
58	M121	Z	-0.001	-0.001	0	%100
59	M124	Z	-0.003	-0.003	0	%100
60	M125	Z	-0.001	-0.001	0	%100
61	M127	Z	-0.003	-0.003	0	%100
62	M128	Z	-0.001	-0.001	0	%100

Member Distributed Loads (BLC 10 : 90 Seismic)

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	X	-0.002	-0.002	0	%100
2	2	X	-0.002	-0.002	0	%100
3	3	X	-0.002	-0.002	0	%100
4	7	X	-0.002	-0.002	0	%100
5	8	X	-0.002	-0.002	0	%100
6	9	X	-0.002	-0.002	0	%100
7	28	X	-0.0005	-0.0005	0	%100
8	29	X	-0.0005	-0.0005	0	%100
9	30	X	-0.0005	-0.0005	0	%100
10	31	X	-0.0005	-0.0005	0	%100
11	32	X	-0.0005	-0.0005	0	%100
12	33	X	-0.0005	-0.0005	0	%100
13	34	X	-0.0005	-0.0005	0	%100
14	35	X	-0.0005	-0.0005	0	%100
15	36	X	-0.0005	-0.0005	0	%100
16	37	X	-0.0005	-0.0005	0	%100
17	38	X	-0.0005	-0.0005	0	%100
18	39	X	-0.0005	-0.0005	0	%100
19	40	X	-0.0005	-0.0005	0	%100
20	41	X	-0.0005	-0.0005	0	%100
21	42	X	-0.0005	-0.0005	0	%100
22	43	X	-0.0005	-0.0005	0	%100
23	44	X	-0.0005	-0.0005	0	%100
24	45	X	-0.0005	-0.0005	0	%100
25	46	X	-0.0005	-0.0005	0	%100
26	47	X	-0.0005	-0.0005	0	%100
27	48	X	-0.0005	-0.0005	0	%100
28	51	X	-0.002	-0.002	0	%100
29	57	X	-0.002	-0.002	0	%100
30	58	X	-0.002	-0.002	0	%100
31	59	X	-0.001	-0.001	0	%100
32	63	X	-0.002	-0.002	0	%100
33	69	X	-0.002	-0.002	0	%100
34	70	X	-0.002	-0.002	0	%100
35	71	X	-0.001	-0.001	0	%100
36	75	X	-0.002	-0.002	0	%100
37	81	X	-0.002	-0.002	0	%100
38	82	X	-0.002	-0.002	0	%100
39	83	X	-0.001	-0.001	0	%100
40	91	X	-0.002	-0.002	0	%100

Member Distributed Loads (BLC 10 : 90 Seismic) (Continued)

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
41	92	X	-0.002	-0.002	0	%100
42	93	X	-0.002	-0.002	0	%100
43	94	X	-0.002	-0.002	0	%100
44	95	X	-0.0005	-0.0005	0	%100
45	96	X	-0.002	-0.002	0	%100
46	97	X	-0.002	-0.002	0	%100
47	98	X	-0.002	-0.002	0	%100
48	99	X	-0.002	-0.002	0	%100
49	100	X	-0.002	-0.002	0	%100
50	101	X	-0.002	-0.002	0	%100
51	102	X	-0.002	-0.002	0	%100
52	103	X	-0.002	-0.002	0	%100
53	104	X	-0.002	-0.002	0	%100
54	M110	X	-0.001	-0.001	0	%100
55	M111	X	-0.001	-0.001	0	%100
56	M116	X	-0.001	-0.001	0	%100
57	M122	X	-0.003	-0.003	0	%100
58	M121	X	-0.001	-0.001	0	%100
59	M124	X	-0.003	-0.003	0	%100
60	M125	X	-0.001	-0.001	0	%100
61	M127	X	-0.003	-0.003	0	%100
62	M128	X	-0.001	-0.001	0	%100

Member Distributed Loads (BLC 30 : BLC 1 Transient Area Loads)

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	2	Y	-0.012	-0.009	0	2.5
2	2	Y	-0.009	-0.006	2.5	5
3	96	Y	-0.002	-0.011	1.08	2.34
4	96	Y	-0.011	-0.011	2.34	3.6
5	96	Y	-0.011	-0.002	3.6	4.86
6	101	Y	-0.002	-0.008	1.08	2.7
7	101	Y	-0.008	-0.014	2.7	4.32
8	1	Y	-0.006	-0.008	0	1.5
9	2	Y	-0.006	-0.003	3.5	5
10	97	Y	-0.008	-0.008	0	0.6
11	97	Y	-0.008	-0.008	0.6	1.2
12	98	Y	-0.004	-0.004	0	0.607
13	1	Y	-0.005	-0.004	3.5	5
14	3	Y	-0.002	-0.004	0	1.5
15	103	Y	-0.008	-0.008	0	0.6
16	103	Y	-0.008	-0.008	0.6	1.2
17	104	Y	-0.004	-0.004	0	0.607
18	2	Y	-0.005	-0.004	0	1.5
19	3	Y	-0.008	-0.008	3.962	4.501
20	99	Y	-0.004	-0.004	0	0.614
21	100	Y	-0.008	-0.008	0	0.6
22	100	Y	-0.008	-0.008	0.6	1.2
23	94	Y	-0.0006923	-0.008	0.29	2.9
24	98	Y	-0.0003034	-0.008	2.16	4.86
25	102	Y	-0.005	-0.005	3.269	4.269
26	1	Y	-0.005	-0.006	1.5	3
27	1	Y	-0.006	-0.005	3	4.5
28	94	Y	-0.004	-0.008	0	1.45
29	94	Y	-0.008	-0.012	1.45	2.9
30	95	Y	-0.008	-0.005	0.182	1

Member Distributed Loads (BLC 30 : BLC 1 Transient Area Loads) (Continued)

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
31	95	Y	-0.005	-0.002	1	1.819
32	98	Y	-0.004	-0.003	0.957	1.394
33	98	Y	-0.003	-0.002	1.394	1.831
34	98	Y	-0.002	-0.003	1.831	2.268
35	102	Y	-0.007	-0.007	0.561	2.632
36	3	Y	-0.006	-0.009	0	2.5
37	3	Y	-0.009	-0.012	2.5	5
38	99	Y	-0.002	-0.008	1.08	2.7
39	99	Y	-0.008	-0.014	2.7	4.32
40	104	Y	-0.002	-0.011	1.08	2.34
41	104	Y	-0.011	-0.011	2.34	3.6
42	104	Y	-0.011	-0.002	3.6	4.86

Member Distributed Loads (BLC 31 : BLC 8 Transient Area Loads)

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	Y	-0.003	-0.005	0	1.5
2	2	Y	-0.003	-0.002	3.5	5
3	97	Y	-0.004	-0.004	0	0.6
4	97	Y	-0.004	-0.005	0.6	1.2
5	98	Y	-0.002	-0.002	0	0.607
6	1	Y	-0.003	-0.002	3.5	5
7	3	Y	-0.001	-0.002	0	1.5
8	103	Y	-0.005	-0.005	0	0.6
9	103	Y	-0.005	-0.005	0.6	1.2
10	104	Y	-0.002	-0.002	0	0.607
11	2	Y	-0.003	-0.002	0	1.5
12	3	Y	-0.005	-0.005	3.962	4.501
13	99	Y	-0.002	-0.002	0	0.614
14	100	Y	-0.005	-0.005	0	0.6
15	100	Y	-0.005	-0.005	0.6	1.2
16	94	Y	-0.0004154	-0.005	0.29	2.9
17	98	Y	-0.0001821	-0.005	2.16	4.86
18	102	Y	-0.003	-0.003	3.269	4.269
19	1	Y	-0.003	-0.004	1.5	3
20	1	Y	-0.004	-0.003	3	4.5
21	94	Y	-0.002	-0.005	0	1.45
22	94	Y	-0.005	-0.007	1.45	2.9
23	95	Y	-0.005	-0.003	0.182	1
24	95	Y	-0.003	-0.001	1	1.819
25	98	Y	-0.002	-0.002	0.957	1.394
26	98	Y	-0.002	-0.001	1.394	1.831
27	98	Y	-0.001	-0.002	1.831	2.268
28	102	Y	-0.004	-0.004	0.561	2.632
29	3	Y	-0.003	-0.005	0	2.5
30	3	Y	-0.005	-0.007	2.5	5
31	99	Y	-0.001	-0.005	1.08	2.7
32	99	Y	-0.005	-0.008	2.7	4.32
33	104	Y	-0.001	-0.007	1.08	2.34
34	104	Y	-0.007	-0.007	2.34	3.6
35	104	Y	-0.007	-0.0009219	3.6	4.86
36	2	Y	-0.007	-0.005	0	2.5
37	2	Y	-0.005	-0.003	2.5	5
38	96	Y	-0.001	-0.007	1.08	2.34
39	96	Y	-0.007	-0.007	2.34	3.6
40	96	Y	-0.007	-0.0009217	3.6	4.86

Member Distributed Loads (BLC 31 : BLC 8 Transient Area Loads) (Continued)

Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
41	101	Y	-0.001	-0.005	1.08 2.7
42	101	Y	-0.005	-0.008	2.7 4.32

Member Area Loads (BLC 1 : Dead)

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [ksf]
1	206	208	209	207	Y	Two Way	-0.01
2	214	216	217	215	Y	Two Way	-0.01
3	210	212	213	211	Y	Two Way	-0.01
4	203	204	191	192	Y	Two Way	-0.01
5	204	203	3	2	Y	Two Way	-0.01
6	195	196	7	6	Y	Two Way	-0.01
7	193	194	5	4	Y	Two Way	-0.01

Member Area Loads (BLC 8 : Ice)

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [ksf]
1	206	208	209	207	Y	Two Way	-0.006
2	214	216	217	215	Y	Two Way	-0.006
3	210	212	213	211	Y	Two Way	-0.006
4	203	204	191	192	Y	Two Way	-0.006
5	204	203	3	2	Y	Two Way	-0.006
6	195	196	7	6	Y	Two Way	-0.006
7	193	194	5	4	Y	Two Way	-0.006

Node Loads and Enforced Displacements (BLC 11 : Live Load a)

	Node Label	L, D, M	Direction	Magnitude [(k, k-ft), (in, rad), (k*s ² /ft, k*s ² *ft)]
1	107	L	Y	-0.5
2	131	L	Y	-0.5
3	155	L	Y	-0.5

Node Loads and Enforced Displacements (BLC 12 : Live Load b)

	Node Label	L, D, M	Direction	Magnitude [(k, k-ft), (in, rad), (k*s ² /ft, k*s ² *ft)]
1	113	L	Y	-0.5
2	137	L	Y	-0.5
3	161	L	Y	-0.5

Node Loads and Enforced Displacements (BLC 13 : Live Load c)

	Node Label	L, D, M	Direction	Magnitude [(k, k-ft), (in, rad), (k*s ² /ft, k*s ² *ft)]
1	117	L	Y	-0.5
2	141	L	Y	-0.5
3	165	L	Y	-0.5

Node Loads and Enforced Displacements (BLC 14 : Live Load d)

	Node Label	L, D, M	Direction	Magnitude [(k, k-ft), (in, rad), (k*s ² /ft, k*s ² *ft)]
1	119	L	Y	-0.5
2	143	L	Y	-0.5
3	167	L	Y	-0.5

Basic Load Cases

	BLC Description	Category	Y Gravity	Nodal	Point	Distributed	Area(Member)
1	Dead	DL	-1		45		7
2	0 Wind - No Ice	WLZ			45	62	
3	90 Wind - No Ice	WLX			45	62	
4	0 Wind - Ice	WLZ			45	62	
5	90 Wind - Ice	WLX			45	62	
6	0 Wind - Service	WLZ			45	62	
7	90 Wind - Service	WLX			45	62	
8	Ice	OL1			45	72	7
9	0 Seismic	ELZ			45	62	
10	90 Seismic	ELX			45	62	
11	Live Load a	LL		3			
12	Live Load b	LL		3			
13	Live Load c	LL		3			
14	Live Load d	LL		3			
15	Maint LL 1	LL			1		
16	Maint LL 2	LL			1		
17	Maint LL 3	LL			1		
18	Maint LL 4	LL			1		
19	Maint LL 5	LL			1		
20	Maint LL 6	LL			1		
21	Maint LL 7	LL			1		
22	Maint LL 8	LL			1		
23	Maint LL 9	LL			1		
24	Maint LL 10	LL			1		
25	Maint LL 11	LL			1		
26	Maint LL 12	LL			1		
27	Maint LL 13	LL			1		
28	Maint LL 14	LL			1		
29	Maint LL 15	LL			1		
30	BLC 1 Transient Area Loads	None				42	
31	BLC 8 Transient Area Loads	None				42	

Load Combinations

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
1	1.4 Dead	Yes	Y	1	1.4						
2	1.2 D + 1.0 - 0 W	Yes	Y	1	1.2	2	1				
3	1.2 D + 1.0 - 30 W	Yes	Y	1	1.2	2	0.866	3	0.5		
4	1.2 D + 1.0 - 60 W	Yes	Y	1	1.2	3	0.866	2	0.5		
5	1.2 D + 1.0 - 90 W	Yes	Y	1	1.2	3	1				
6	1.2 D + 1.0 - 120 W	Yes	Y	1	1.2	3	0.866	2	-0.5		
7	1.2 D + 1.0 - 150 W	Yes	Y	1	1.2	2	-0.866	3	0.5		
8	1.2 D + 1.0 - 180 W	Yes	Y	1	1.2	2	-1				
9	1.2 D + 1.0 - 210 W	Yes	Y	1	1.2	2	-0.866	3	-0.5		
10	1.2 D + 1.0 - 240 W	Yes	Y	1	1.2	3	-0.866	2	-0.5		
11	1.2 D + 1.0 - 270 W	Yes	Y	1	1.2	3	-1				
12	1.2 D + 1.0 - 300 W	Yes	Y	1	1.2	3	-0.866	2	0.5		
13	1.2 D + 1.0 - 330 W	Yes	Y	1	1.2	2	0.866	3	-0.5		
14	1.2 D + 1.0 - 0 W/Ice	Yes	Y	1	1.2	4	1			8	1
15	1.2 D + 1.0 - 30 W/Ice	Yes	Y	1	1.2	4	0.866	5	0.5	8	1
16	1.2 D + 1.0 - 60 W/Ice	Yes	Y	1	1.2	5	0.866	4	0.5	8	1
17	1.2 D + 1.0 - 90 W/Ice	Yes	Y	1	1.2	5	1			8	1
18	1.2 D + 1.0 - 120 W/Ice	Yes	Y	1	1.2	5	0.866	4	-0.5	8	1
19	1.2 D + 1.0 - 150 W/Ice	Yes	Y	1	1.2	4	-0.866	5	0.5	8	1
20	1.2 D + 1.0 - 180 W/Ice	Yes	Y	1	1.2	4	-1			8	1

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
21	1.2 D + 1.0 - 210 W/Ice	Yes	Y	1	1.2	4	-0.866	5	-0.5	8	1
22	1.2 D + 1.0 - 240 W/Ice	Yes	Y	1	1.2	5	-0.866	4	-0.5	8	1
23	1.2 D + 1.0 - 270 W/Ice	Yes	Y	1	1.2	5	-1			8	1
24	1.2 D + 1.0 - 300 W/Ice	Yes	Y	1	1.2	5	-0.866	4	0.5	8	1
25	1.2 D + 1.0 - 330 W/Ice	Yes	Y	1	1.2	4	0.866	5	-0.5	8	1
26	1.2 D + 1.0 E - 0	Yes	Y	1	1.2	9	1				
27	1.2 D + 1.0 E - 30	Yes	Y	1	1.2	9	0.866	10	0.5		
28	1.2 D + 1.0 E - 60	Yes	Y	1	1.2	10	0.866	9	0.5		
29	1.2 D + 1.0 E - 90	Yes	Y	1	1.2	10	1				
30	1.2 D + 1.0 E - 120	Yes	Y	1	1.2	10	0.866	9	-0.5		
31	1.2 D + 1.0 E - 150	Yes	Y	1	1.2	9	-0.866	10	0.5		
32	1.2 D + 1.0 E - 180	Yes	Y	1	1.2	9	-1				
33	1.2 D + 1.0 E - 210	Yes	Y	1	1.2	9	-0.866	10	-0.5		
34	1.2 D + 1.0 E - 240	Yes	Y	1	1.2	10	-0.866	9	-0.5		
35	1.2 D + 1.0 E - 270	Yes	Y	1	1.2	10	-1				
36	1.2 D + 1.0 E - 300	Yes	Y	1	1.2	10	-0.866	9	0.5		
37	1.2 D + 1.0 E - 330	Yes	Y	1	1.2	9	0.866	10	-0.5		
38	1.2 D + 1.5 LL a + Service - 0 W	Yes	Y	1	1.2	6	1			11	1.5
39	1.2 D + 1.5 LL a + Service - 30 W	Yes	Y	1	1.2	6	0.866	7	0.5	11	1.5
40	1.2 D + 1.5 LL a + Service - 60 W	Yes	Y	1	1.2	7	0.866	6	0.5	11	1.5
41	1.2 D + 1.5 LL a + Service - 90 W	Yes	Y	1	1.2	7	1			11	1.5
42	1.2 D + 1.5 LL a + Service - 120 W	Yes	Y	1	1.2	7	0.866	6	-0.5	11	1.5
43	1.2 D + 1.5 LL a + Service - 150 W	Yes	Y	1	1.2	6	-0.866	7	0.5	11	1.5
44	1.2 D + 1.5 LL a + Service - 180 W	Yes	Y	1	1.2	6	-1			11	1.5
45	1.2 D + 1.5 LL a + Service - 210 W	Yes	Y	1	1.2	6	-0.866	7	-0.5	11	1.5
46	1.2 D + 1.5 LL a + Service - 240 W	Yes	Y	1	1.2	7	-0.866	6	-0.5	11	1.5
47	1.2 D + 1.5 LL a + Service - 270 W	Yes	Y	1	1.2	7	-1			11	1.5
48	1.2 D + 1.5 LL a + Service - 300 W	Yes	Y	1	1.2	7	-0.866	6	0.5	11	1.5
49	1.2 D + 1.5 LL a + Service - 330 W	Yes	Y	1	1.2	6	0.866	7	-0.5	11	1.5
50	1.2 D + 1.5 LL b + Service - 0 W	Yes	Y	1	1.2	6	1			12	1.5
51	1.2 D + 1.5 LL b + Service - 30 W	Yes	Y	1	1.2	6	0.866	7	0.5	12	1.5
52	1.2 D + 1.5 LL b + Service - 60 W	Yes	Y	1	1.2	7	0.866	6	0.5	12	1.5
53	1.2 D + 1.5 LL b + Service - 90 W	Yes	Y	1	1.2	7	1			12	1.5
54	1.2 D + 1.5 LL b + Service - 120 W	Yes	Y	1	1.2	7	0.866	6	-0.5	12	1.5
55	1.2 D + 1.5 LL b + Service - 150 W	Yes	Y	1	1.2	6	-0.866	7	0.5	12	1.5
56	1.2 D + 1.5 LL b + Service - 180 W	Yes	Y	1	1.2	6	-1			12	1.5
57	1.2 D + 1.5 LL b + Service - 210 W	Yes	Y	1	1.2	6	-0.866	7	-0.5	12	1.5
58	1.2 D + 1.5 LL b + Service - 240 W	Yes	Y	1	1.2	7	-0.866	6	-0.5	12	1.5
59	1.2 D + 1.5 LL b + Service - 270 W	Yes	Y	1	1.2	7	-1			12	1.5
60	1.2 D + 1.5 LL b + Service - 300 W	Yes	Y	1	1.2	7	-0.866	6	0.5	12	1.5
61	1.2 D + 1.5 LL b + Service - 330 W	Yes	Y	1	1.2	6	0.866	7	-0.5	12	1.5
62	1.2 D + 1.5 LL c + Service - 0 W	Yes	Y	1	1.2	6	1			13	1.5
63	1.2 D + 1.5 LL c + Service - 30 W	Yes	Y	1	1.2	6	0.866	7	0.5	13	1.5
64	1.2 D + 1.5 LL c + Service - 60 W	Yes	Y	1	1.2	7	0.866	6	0.5	13	1.5
65	1.2 D + 1.5 LL c + Service - 90 W	Yes	Y	1	1.2	7	1			13	1.5
66	1.2 D + 1.5 LL c + Service - 120 W	Yes	Y	1	1.2	7	0.866	6	-0.5	13	1.5
67	1.2 D + 1.5 LL c + Service - 150 W	Yes	Y	1	1.2	6	-0.866	7	0.5	13	1.5
68	1.2 D + 1.5 LL c + Service - 180 W	Yes	Y	1	1.2	6	-1			13	1.5
69	1.2 D + 1.5 LL c + Service - 210 W	Yes	Y	1	1.2	6	-0.866	7	-0.5	13	1.5
70	1.2 D + 1.5 LL c + Service - 240 W	Yes	Y	1	1.2	7	-0.866	6	-0.5	13	1.5
71	1.2 D + 1.5 LL c + Service - 270 W	Yes	Y	1	1.2	7	-1			13	1.5
72	1.2 D + 1.5 LL c + Service - 300 W	Yes	Y	1	1.2	7	-0.866	6	0.5	13	1.5
73	1.2 D + 1.5 LL c + Service - 330 W	Yes	Y	1	1.2	6	0.866	7	-0.5	13	1.5
74	1.2 D + 1.5 LL d + Service - 0 W	Yes	Y	1	1.2	6	1			14	1.5
75	1.2 D + 1.5 LL d + Service - 30 W	Yes	Y	1	1.2	6	0.866	7	0.5	14	1.5

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
76	1.2 D + 1.5 LL d + Service - 60 W	Yes	Y	1	1.2	7	0.866	6	0.5	14	1.5
77	1.2 D + 1.5 LL d + Service - 90 W	Yes	Y	1	1.2	7	1			14	1.5
78	1.2 D + 1.5 LL d + Service - 120 W	Yes	Y	1	1.2	7	0.866	6	-0.5	14	1.5
79	1.2 D + 1.5 LL d + Service - 150 W	Yes	Y	1	1.2	6	-0.866	7	0.5	14	1.5
80	1.2 D + 1.5 LL d + Service - 180 W	Yes	Y	1	1.2	6	-1			14	1.5
81	1.2 D + 1.5 LL d + Service - 210 W	Yes	Y	1	1.2	6	-0.866	7	-0.5	14	1.5
82	1.2 D + 1.5 LL d + Service - 240 W	Yes	Y	1	1.2	7	-0.866	6	-0.5	14	1.5
83	1.2 D + 1.5 LL d + Service - 270 W	Yes	Y	1	1.2	7	-1			14	1.5
84	1.2 D + 1.5 LL d + Service - 300 W	Yes	Y	1	1.2	7	-0.866	6	0.5	14	1.5
85	1.2 D + 1.5 LL d + Service - 330 W	Yes	Y	1	1.2	6	0.866	7	-0.5	14	1.5
86	1.2 D + 1.5 LL Maint (1)	Yes	Y	1	1.2					15	1.5
87	1.2 D + 1.5 LL Maint (2)	Yes	Y	1	1.2					16	1.5
88	1.2 D + 1.5 LL Maint (3)	Yes	Y	1	1.2					17	1.5
89	1.2 D + 1.5 LL Maint (4)	Yes	Y	1	1.2					18	1.5
90	1.2 D + 1.5 LL Maint (5)	Yes	Y	1	1.2					19	1.5
91	1.2 D + 1.5 LL Maint (6)	Yes	Y	1	1.2					20	1.5
92	1.2 D + 1.5 LL Maint (7)	Yes	Y	1	1.2					21	1.5
93	1.2 D + 1.5 LL Maint (8)	Yes	Y	1	1.2					22	1.5
94	1.2 D + 1.5 LL Maint (9)	Yes	Y	1	1.2					23	1.5
95	1.2 D + 1.5 LL Maint (10)	Yes	Y	1	1.2					24	1.5
96	1.2 D + 1.5 LL Maint (11)	Yes	Y	1	1.2					25	1.5
97	1.2 D + 1.5 LL Maint (12)	Yes	Y	1	1.2					26	1.5
98	1.2 D + 1.5 LL Maint (13)	Yes	Y	1	1.2					27	1.5
99	1.2 D + 1.5 LL Maint (14)	Yes	Y	1	1.2					28	1.5
100	1.2 D + 1.5 LL Maint (15)	Yes	Y	1	1.2					29	1.5

Envelope Node Reactions

Node Label	X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC		
1	200	max	2.953	16	1.746	21	2.405	15	-0.284	3	0.341	7	0.861	22
2		min	0.357	10	0.746	3	0.099	9	-1.19	21	-0.346	13	0.19	4
3	198	max	-0.464	5	1.757	18	1.497	14	0.077	2	0.372	3	-0.426	12
4		min	-3.494	23	0.764	12	-0.103	8	-0.244	100	-0.346	9	-1.463	18
5	202	max	0.705	6	1.744	14	-0.238	2	1.354	14	0.251	11	0.594	24
6		min	-0.233	12	0.694	8	-3.778	20	0.249	8	-0.237	5	0.167	6
7	N258	max	0.593	5	1.394	20	1.802	2	-1.196	2	1.526	5	0.145	23
8		min	-0.605	11	0.488	2	-1.713	8	-4.169	20	-1.504	11	-0.03	5
9	N264	max	1.129	6	1.377	25	1.231	2	2.182	25	2.201	9	3.486	24
10		min	-1.01	12	0.553	7	-1.293	8	0.694	7	-2.161	3	1.249	6
11	N270	max	1.051	5	1.401	15	0.941	2	1.979	15	2.039	13	-1.291	10
12		min	-1.159	11	0.535	9	-1.021	8	0.626	9	-2.034	7	-3.681	16
13	Totals:	max	5.092	5	9.304	23	7.06	2						
14		min	-5.092	11	4.369	5	-7.06	8						

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

Member	Shape	Code Check	Loc[ft]	LC	Shear	Check	Loc[ft]	Dir	LC	phi*Pnc [k]	phi*Pnt [k]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
1	1	C5X6.7	0.407	2.5	14	0.162	2.5	y	20	28.842	63.828	1.604	9.585	1.368	H1-1b
2	2	C5X6.7	0.365	2.5	18	0.132	2.5	y	24	28.842	63.828	1.604	9.585	1.373	H1-1b
3	3	C5X6.7	0.367	2.5	22	0.132	2.5	y	15	28.842	63.828	1.604	9.585	1.37	H1-1b
4	7	L3X3X5	0.08	5.55	8	0.038	0	y	50	7.704	57.672	2.015	3.735	1.449	H2-1
5	8	L3X3X5	0.091	3.353	3	0.052	0	z	8	7.704	57.672	2.015	3.648	1.337	H2-1
6	9	L3X3X5	0.086	3.353	7	0.037	0	z	13	7.704	57.672	2.015	3.72	1.429	H2-1
7	28	L1.5X1.5X0.188	0.392	3	38	0.076	2.5	z	48	7.751	17.128	0.293	0.653	1.5	H2-1
8	29	L1.5X1.5X0.188	0.483	3	44	0.082	3	y	45	7.751	17.128	0.293	0.653	1.5	H2-1

APPENDIX D
ADDITIONAL CALCULATIONS

PROJECT	80964.015.01 - BRG 126 943086, CT KSC		
SUBJECT	Platform Mount Analysis		
DATE	04/26/22	PAGE	1 OF 1



B+T Group
 1717 S. Boulder, Suite 300
 Tulsa, OK 74119
 (918) 587-4630

B+T GRP

[REF: AISC 360-05]

Reactions at Bolted Connection

Tension	:	3.817	k
Vertical Shear	:	1.769	k
Horizontal Shear	:	0.548	k
Torsion	:	0.423	k.ft
Moment from Horizontal Forces	:	0.322	k.ft
Moment from Vertical Forces	:	1.438	k.ft

Bolt Parameters

Bolt Grade	:	A325	
Bolt Diameter	:	0.625	in
Nominal Bolt Area	:	0.307	in ²
Bolt spacing, Horizontal	:	6	in
Bolt spacing, Vertical	:	6	in
Bolt edge distance, plate height	:	1.5	in
Bolt edge distance, plate width	:	1.5	in
Total Number of Bolts	:	4	bolts

Summary of Forces

Shear Resultant Force	:	1.85	k
Force from Horz. Moment	:	0.58	k
Force from Vert. Moment	:	2.60	k
Shear Load / Bolt	:	0.46	k
Tension Load / Bolt	:	0.95	k
Resultant from Moments / Bolt	:	1.33	k

Bolt Checks

Nominal Tensile Stress, F_{nt}	:	90.00	ksi	[AISC Table J3.2]
Available Tensile Stress, ΦR_{nt}	:	20.72	k/bolt	[Eq. J3-1]
Unity Check, Bolt Tension	:	11.05%		OKAY
Nominal Shear Stress, F_{nv}	:	48.00	ksi	[AISC Table J3.2]
Available Shear Stress, ΦR_{nv}	:	11.05	k/bolt	[Eq. J3-1]
Unity Check, Bolt Shear	:	12.82%		OKAY
Unity Check, Combined	:	23.87%		OKAY
Available Bearing Strength, ΦR_n	:	34.66	k/bolt	
Unity Check, Bolt Bearing	:	1.34%		OKAY

APPENDIX E
MOUNT MODIFICATION DESIGN DRAWINGS (MDD)

MODIFICATIONS BASED ON THE FAILING STRUCTURAL ANALYSIS FROM B+T GROUP DATED 04/20/22 AND ACCOMPANIED BY ANALYSIS FROM B+T GROUP DATED 04/23/22

GENERAL NOTES

- 1.1 CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND DIMENSIONS PRIOR TO THE MOBILIZING ON THE SITE FOR INSTALLATION OF THE MOUNT MODIFICATION AND SHALL NOTIFY THE ENGINEER OF RECORD IF THE FIELD CONDITIONS VARY FROM WHAT IS SHOWN ON THE DRAWINGS. IN ADDITION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD PRIOR TO MOBILIZING AT THE SITE IF THE MOUNT REINFORCEMENT SHOWN WILL NEED TO BE REVISED TO SATISFY FIELD CONDITIONS
 - 1.2 CONTRACTOR SHALL RELOCATE NON-ANTENNA EQUIPMENT ALONG THE EXISTING PIPE MOUNT THAT IT IS MOUNTED TO, TO ALLOW FOR INSTALLATION OF MOUNT REINFORCEMENT. ENGINEER OF RECORD WILL BE NOTIFIED IF NON-ANTENNA EQUIPMENT NEEDS TO BE RELOCATED TO ANY OTHER EXISTING MEMBERS TO ALLOW FOR INSTALLATION OF MOUNT MODIFICATION.
 - 1.3 MODIFICATION SHALL BE COMPLETED PRIOR TO ADDING THE PROPOSED APPURTENANCES.
 - 1.4 ALL WORK SHALL COMPLY WITH THE TIA-222-H STANDARD, ANSI/TIA-322 AND ANSI/ASSE A10.48, AS WELL AS ANY OTHER GOVERNING BUILDING CODES.
 - 1.5 FIELD WORK WILL BE DONE AROUND EXISTING COAXIAL CABLE AND EQUIPMENT. ALL WORK SHALL BE DONE IN A MANNER SUCH THAT NO DAMAGE OCCURS TO THE EXISTING EQUIPMENT OR THE STRUCTURE. A MINIMUM OF TWO COATS OF ZINGA COLD GALVANIZING COMPOUND (OR APPROVED EQUIVALENT) SHALL BE APPLIED TO ANY FIELD CUTS OR FIELD DRILLED HOLES.
 - 1.7 THE USE OF A GAS TORCH OR WELDER WILL NOT BE PERMITTED ON THE TOWER WITHOUT THE CONSENT OF THE OWNER.
 - 1.8 ALL FIELD CONNECTIONS SHALL BE MADE WITH A325N BOLTS, U.N.O.
 - 1.9 IN LIEU OF TEMPORARY BRACING, CONTRACTOR MAY HAVE A STABILITY ANALYSIS PERFORMED BY AN ENGINEER LICENSED IN THE STATE THE TOWER IS LOCATED. THE ANALYSIS SHALL USE A MINIMUM WIND SPEED OF 45 mph (3-SEC) PER ANSI/TIA-322 and ANSI/ASSE A10.48
 - 1.10 ALL CUTTING AND WELDING ACTIVITIES SHALL BE CONDUCTED IN ACCORDANCE WITH CCUA POLICY "CUTTING AND WELDING PLAN" (DOC #ENG-PLN-10015) ON AN ONGOING BASIS THROUGHOUT THE ENTIRE LIFE OF THE PROJECT.
 - 1.11 DIMENSIONS WITH "±" MUST BE WITHIN 3" OF THE INDICATED DIMENSION.
- FABRICATION**
- 2.1 ALL WORK SHALL BE DONE IN ACCORDANCE WITH A.I.S.C. "SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS."
 - 2.2 STRUCTURAL STEEL SHALL MEET THE FOLLOWING SPECIFICATIONS:

STEEL PIPE, U.N.O.	YIELD 35ksi	ASTM SPECS A53 GR.B
--------------------	-----------------------	-------------------------------
 - 2.3 ALL NEW MATERIAL INCLUDING STRUCTURAL STEEL AND FASTENERS SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 AND A153.
 - 2.4 WELDING SHALL MEET ANSI/AWS D1.1 STRUCTURAL WELDING CODE (LATEST REVISION). ELECTRODES SHALL BE E80 SERIES.
 - 2.5 CONTRACTOR SHALL PROVIDE SHOP FABRICATION DRAWINGS TO B+T GROUP 5 DAYS PRIOR TO FABRICATION.



B+T GRP
1717 S. BOULDER
SUITE 300
TULSA, OK 74119
PH: (918) 587-4630
www.btgrp.com




BRG 126 943086

281 WOOD HOUSE ROAD
FAIRFIELD, CT 06824
FAIRFIELD

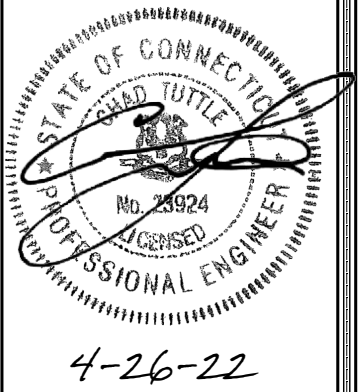
EXISTING PLATFORM
AT 138'-00"

PROJECT NO: 80964.016.01
CHECKED BY: IF

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION
0	04/23/22	PMS	CONSTRUCTION

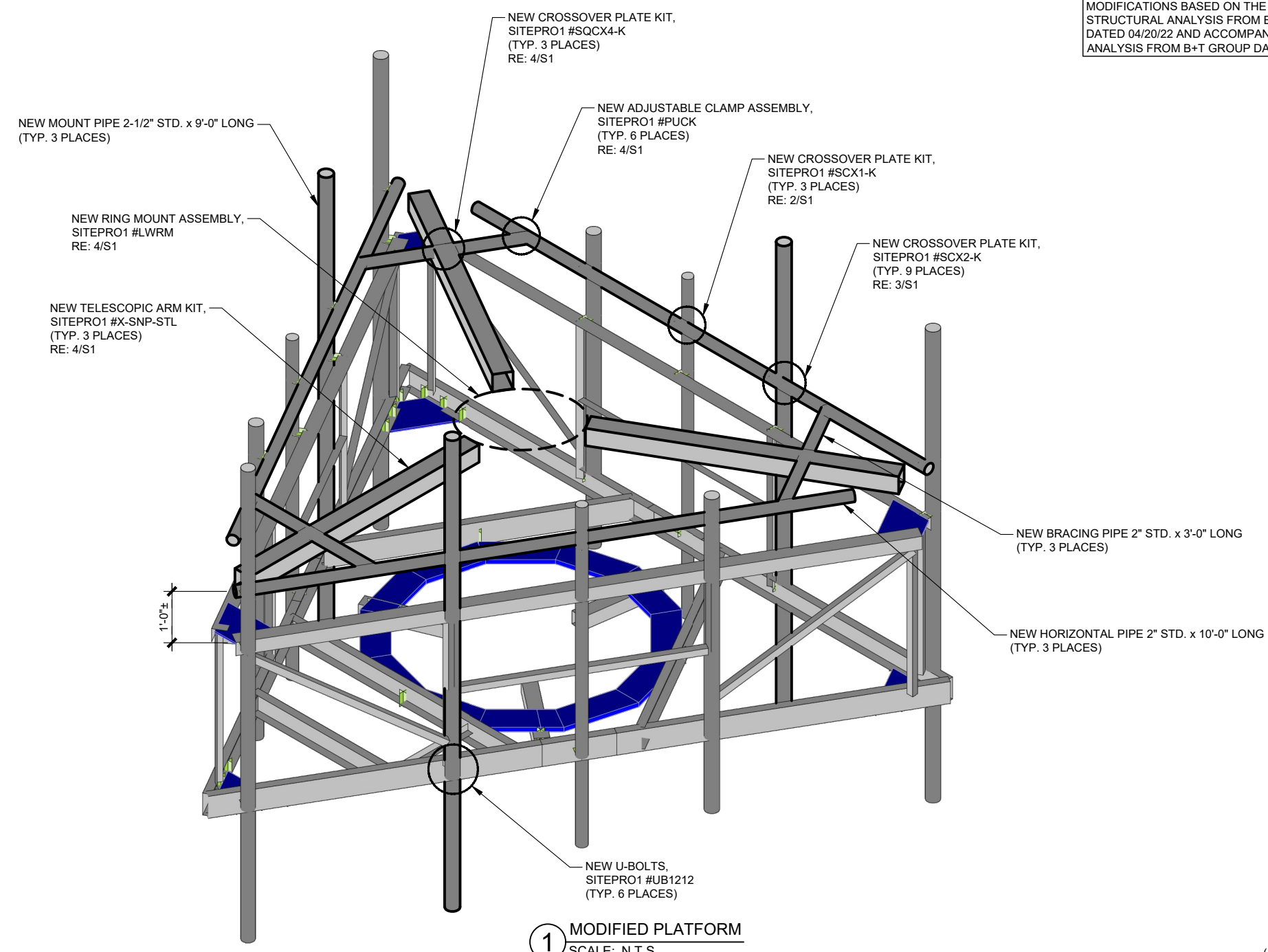
B&T ENGINEERING, INC.
PEC.0001564
Expires 2/01/23



4-26-22

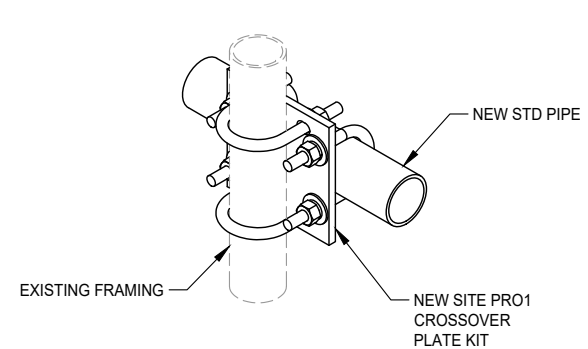
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SHEET NUMBER: S1	REVISION: 0
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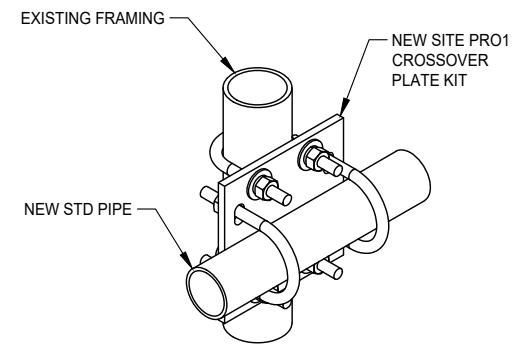


1 MODIFIED PLATFORM
SCALE: N.T.S.

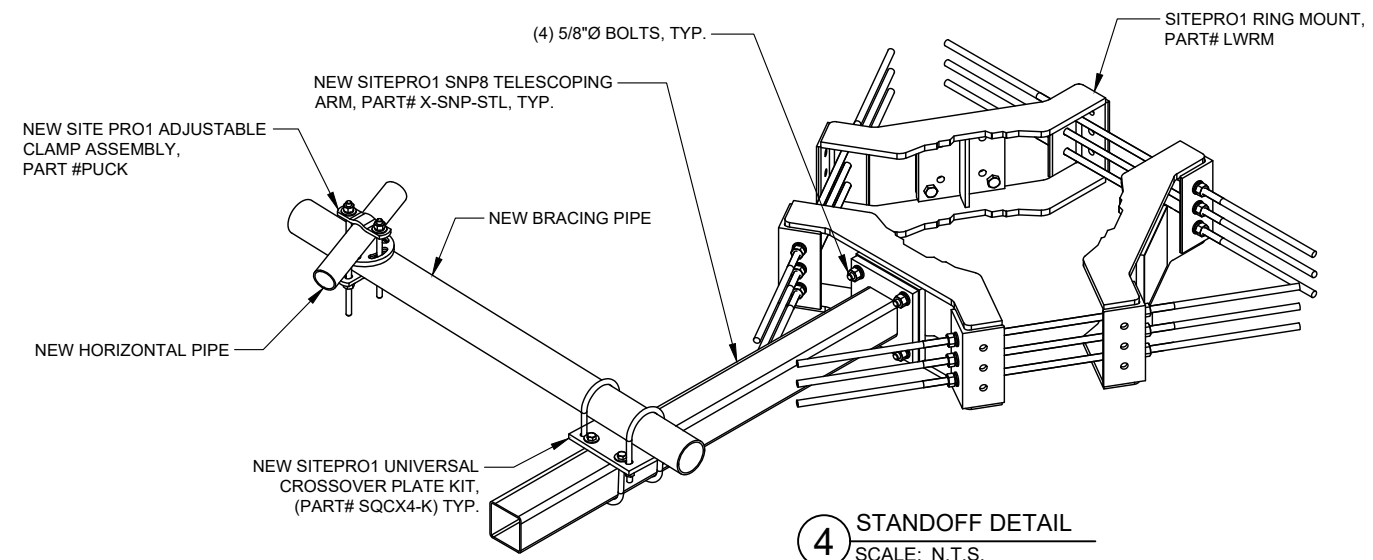
NOTE:
THE U-BOLTS ARE ONLY FOR THE NEW MOUNT PIPES.
THERE SHOULD ONLY BE 6 ORDERED IN TOTAL.



2 SITE PRO1 SCX1-K CROSSOVER PLATE KIT
SCALE: N.T.S.



3 SITE PRO1 SCX2-K CROSSOVER PLATE KIT
SCALE: N.T.S.



4 STANDOFF DETAIL
SCALE: N.T.S.

RADIO FREQUENCY EMISSIONS ANALYSIS REPORT
EVALUATION OF HUMAN EXPOSURE POTENTIAL
TO NON-IONIZING EMISSIONS

T-Mobile Existing Facility

Site ID: CT11078B

Fairfield/ MP X43/ Burr S
281 Wood House Road
Fairfield, Connecticut 06824

May 15, 2022

EBI Project Number: 6222003229

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	31.85%

May 15, 2022

T-Mobile

Attn: Jason Overbey, RF Manager
35 Griffin Road South
Bloomfield, Connecticut 06002

Emissions Analysis for Site: CT11078B - Fairfield/ MP X43/ Burr S

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **281 Wood House Road in Fairfield, Connecticut** for the purpose of determining whether the emissions from the Proposed T-Mobile Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01 and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The number of $\mu\text{W}/\text{cm}^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits; therefore, it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (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.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The general population exposure limits for the 600 MHz and 700 MHz frequency bands are approximately $400 \mu\text{W}/\text{cm}^2$ and $467 \mu\text{W}/\text{cm}^2$, respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS) and 11 GHz frequency bands is $1000 \mu\text{W}/\text{cm}^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.



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 (see below), 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.

CALCULATIONS

Calculations were done for the proposed T-Mobile Wireless antenna facility located at 281 Wood House Road in Fairfield, Connecticut using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-Mobile is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was focused at the base of the tower. For this report, the sample point is the top of a 6-foot person standing at the base of the tower.

For all calculations, all equipment was calculated using the following assumptions:

- 1) 2 LTE channels (600 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 2) 1 NR channel (600 MHz Band) was considered for each sector of the proposed installation. This Channel has a transmit power of 80 Watts.
- 3) 2 LTE channels (700 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 4) 4 GSM channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 5) 2 LTE channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.
- 6) 2 LTE channels (AWS Band – 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.

- 7) 1 LTE Traffic channel (LTE 1C and 2C BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 60 Watts.
- 8) 1 LTE Broadcast channel (LTE 1C and 2C BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 20 Watts.
- 9) 1 NR Traffic channel (BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 120 Watts.
- 10) 1 NR Broadcast channel (BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 40 Watts.
- 11) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
- 12) For the following calculations, the sample point was the top of a 6-foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 13) The antennas used in this modeling are the Commscope VV-65A-R1 for the 1900 MHz / 1900 MHz / 2100 MHz channel(s), the RFS APXVAALL24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz channel(s), the Ericsson AIR 6419 for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s) in Sector A, the Commscope VV-65A-R1 for the 1900 MHz / 1900 MHz / 2100 MHz channel(s), the RFS APXVAALL24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz channel(s), the Ericsson AIR 6419 for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s) in Sector B, the Commscope VV-65A-R1 for the 1900 MHz / 1900 MHz / 2100 MHz channel(s), the RFS APXVAALL24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz channel(s), the Ericsson AIR 6419 for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s) in Sector C. This is based on feedback from the carrier with regard to anticipated antenna selection. All Antenna gain values and associated transmit power levels are shown in the Site Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used for all

calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

- 14) The antenna mounting height centerline of the proposed antennas is 140 feet above ground level (AGL).
- 15) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.
- 16) All calculations were done with respect to uncontrolled / general population threshold limits.

T-Mobile Site Inventory and Power Data

Sector:	A	Sector:	B	Sector:	C
Antenna #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	Commscope VV-65A-R1	Make / Model:	Commscope VV-65A-R1	Make / Model:	Commscope VV-65A-R1
Frequency Bands:	1900 MHz / 1900 MHz / 2100 MHz	Frequency Bands:	1900 MHz / 1900 MHz / 2100 MHz	Frequency Bands:	1900 MHz / 1900 MHz / 2100 MHz
Gain:	15.55 dBd / 15.55 dBd / 16.05 dBd	Gain:	15.55 dBd / 15.55 dBd / 16.05 dBd	Gain:	15.55 dBd / 15.55 dBd / 16.05 dBd
Height (AGL):	140 feet	Height (AGL):	140 feet	Height (AGL):	140 feet
Channel Count:	8	Channel Count:	8	Channel Count:	8
Total TX Power (W):	360.00 Watts	Total TX Power (W):	360.00 Watts	Total TX Power (W):	360.00 Watts
ERP (W):	13,446.73	ERP (W):	13,446.73	ERP (W):	13,446.73
Antenna A1 MPE %:	2.69%	Antenna B1 MPE %:	2.69%	Antenna C1 MPE %:	2.69%
Antenna #:	2	Antenna #:	2	Antenna #:	2
Make / Model:	RFS APXVAALL24_43-U-NA20	Make / Model:	RFS APXVAALL24_43-U-NA20	Make / Model:	RFS APXVAALL24_43-U-NA20
Frequency Bands:	600 MHz / 600 MHz / 700 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz
Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd
Height (AGL):	140 feet	Height (AGL):	140 feet	Height (AGL):	140 feet
Channel Count:	5	Channel Count:	5	Channel Count:	5
Total TX Power (W):	200.00 Watts	Total TX Power (W):	200.00 Watts	Total TX Power (W):	200.00 Watts
ERP (W):	4,151.83	ERP (W):	4,151.83	ERP (W):	4,151.83
Antenna A2 MPE %:	1.98%	Antenna B2 MPE %:	1.98%	Antenna C2 MPE %:	1.98%
Antenna #:	3	Antenna #:	3	Antenna #:	3
Make / Model:	Ericsson AIR 6419	Make / Model:	Ericsson AIR 6419	Make / Model:	Ericsson AIR 6419
Frequency Bands:	2500 MHz / 2500 MHz / 2500 MHz	Frequency Bands:	2500 MHz / 2500 MHz / 2500 MHz	Frequency Bands:	2500 MHz / 2500 MHz / 2500 MHz
Gain:	22.05 dBd / 15.55 dBd / 22.05 dBd / 15.55 dBd	Gain:	22.05 dBd / 15.55 dBd / 22.05 dBd / 15.55 dBd	Gain:	22.05 dBd / 15.55 dBd / 22.05 dBd / 15.55 dBd
Height (AGL):	140 feet	Height (AGL):	140 feet	Height (AGL):	140 feet
Channel Count:	4	Channel Count:	4	Channel Count:	4
Total TX Power (W):	240.00 Watts	Total TX Power (W):	240.00 Watts	Total TX Power (W):	240.00 Watts
ERP (W):	31,011.95	ERP (W):	31,011.95	ERP (W):	31,011.95
Antenna A3 MPE %:	6.21%	Antenna B3 MPE %:	6.21%	Antenna C3 MPE %:	6.21%

Site Composite MPE %	
Carrier	MPE %
T-Mobile (Max at Sector A):	10.88%
AT&T	2.77%
T-Mobile Existing	14.48%
PageNet	0.19%
Verizon	1.5%
XM Radio	2.03%
Metricom	0%
Site Total MPE % :	31.85%

T-Mobile MPE % Per Sector	
T-Mobile Sector A Total:	10.88%
T-Mobile Sector B Total:	10.88%
T-Mobile Sector C Total:	10.88%
Site Total MPE % :	31.85%

T-Mobile Maximum MPE Power Values (Sector A)							
T-Mobile Frequency Band / Technology (Sector A)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu\text{W}/\text{cm}^2$)	Frequency (MHz)	Allowable MPE ($\mu\text{W}/\text{cm}^2$)	Calculated % MPE
T-Mobile 1900 MHz GSM	4	1076.77	140.0	8.62	1900 MHz GSM	1000	0.86%
T-Mobile 1900 MHz LTE	2	2153.53	140.0	8.62	1900 MHz LTE	1000	0.86%
T-Mobile 2100 MHz LTE	2	2416.30	140.0	9.68	2100 MHz LTE	1000	0.97%
T-Mobile 600 MHz LTE	2	591.73	140.0	2.37	600 MHz LTE	400	0.59%
T-Mobile 600 MHz NR	1	1577.94	140.0	3.16	600 MHz NR	400	0.79%
T-Mobile 700 MHz LTE	2	695.22	140.0	2.78	700 MHz LTE	467	0.60%
T-Mobile 2500 MHz LTE IC & 2C Traffic	1	9619.47	140.0	19.26	2500 MHz LTE IC & 2C Traffic	1000	1.93%
T-Mobile 2500 MHz LTE IC & 2C Broadcast	1	717.84	140.0	1.44	2500 MHz LTE IC & 2C Broadcast	1000	0.14%
T-Mobile 2500 MHz NR Traffic	1	19238.94	140.0	38.52	2500 MHz NR Traffic	1000	3.85%
T-Mobile 2500 MHz NR Broadcast	1	1435.69	140.0	2.87	2500 MHz NR Broadcast	1000	0.29%
						Total:	10.88%

• NOTE: Totals may vary by approximately 0.01% due to summation of remainders in calculations.

Summary

All calculations performed for this analysis yielded results that were **within** the allowable limits for general population exposure to RF Emissions.

The anticipated maximum composite contributions from the T-Mobile facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general population exposure to RF Emissions are shown here:

T-Mobile Sector	Power Density Value (%)
Sector A:	10.88%
Sector B:	10.88%
Sector C:	10.88%
T-Mobile Maximum MPE % (Sector A):	10.88%
Site Total:	31.85%
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **31.85%** of the allowable FCC established general population limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were well within the allowable 100% threshold standard per the federal government.

T-Mobile

T-MOBILE SITE NUMBER: CT11078B

T-MOBILE SITE NAME: FAIRFIELD/ MP X43/ BURR S

SITE TYPE: MONOPOLE

TOWER HEIGHT: 171'-0"

BUSINESS UNIT #: 806355

**SITE ADDRESS: 281 WOOD HOUSE ROAD
FAIRFIELD, CT 06824**

COUNTY: FAIRFIELD

JURISDICTION: FAIRFIELD COUNTY

T-MOBILE ANCHOR SITE CONFIGURATION: 67E5998E_1XAIR+1OP+1QP

T-Mobile

12920 SE 38TH STREET
BELLEVUE, WA 98006

CROWN CASTLE

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CLIFTON PARK, NY 12065

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T-MOBILE SITE NUMBER:
CT11078B

BU #: **806355**
BRG **126 943086**

281 WOOD HOUSE ROAD
FAIRFIELD, CT 06824

EXISTING 171'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	05/09/2022	RCD	PRELIMINARY	SS
0	06/13/2022	CB	100% FINALS	SS

SITE INFORMATION

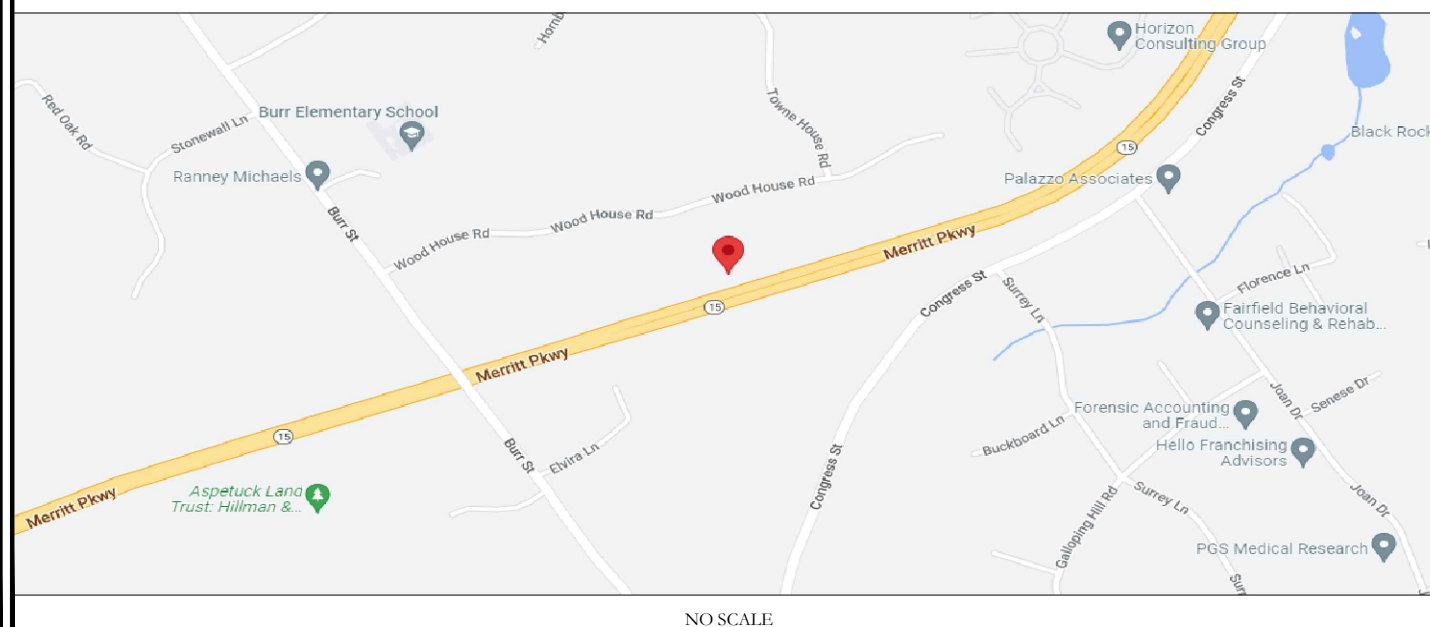
CROWN CASTLE USA INC. BRG 126 943086
 SITE NAME:
 SITE ADDRESS: 281 WOOD HOUSE ROAD
 FAIRFIELD, CT 06824
 COUNTY: FAIRFIELD
 MAP/PARCEL #: 1180570000
 AREA OF CONSTRUCTION: EXISTING
 LATITUDE: 41.19593200° (41° 11' 45.30")
 LONGITUDE: -73.28136900° (-73° 16' 52.90")
 LAT/LONG TYPE: NAD83
 GROUND ELEVATION: ±357FT
 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: J FERNANDES PROPERTIES LLC
 281 WOOD HOUSE ROAD
 FAIRFIELD, CT
 TOWER OWNER: CROWN CASTLE
 2000 CORPORATE DRIVE
 CANONSBURG, PA 15317
 CARRIER/APPLICANT: T-MOBILE
 12920 SE 38TH STREET
 BELLEVUE, WA 98006
 ELECTRIC PROVIDER: TBD
 TELCO PROVIDER: TBD

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
C-6	EQUIPMENT SPECS
E-1	AC PANEL SCHEDULES & ONE LINE DIAGRAM
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.

LOCATION MAP



NO SCALE

PROJECT DESCRIPTION

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

TOWER SCOPE OF WORK:

- REMOVE (9) ANTENNAS
- REMOVE (3) TMAS
- REMOVE (3) RRHS
- REMOVE (6) COAX CABLES
- REMOVE (1) HYBRID CABLE
- INSTALL (9) ANTENNAS
- INSTALL (6) RRHS
- INSTALL (4) HYBRID CABLES

GROUND SCOPE OF WORK:

- REMOVE (1) DUW30 FROM (E) RBS 6131 CABINET
- REMOVE (6) RU22 FROM (E) RBS 6131 CABINET
- INSTALL (1) RP6651 IN (E) RBS 6131 CABINET
- INSTALL (1) 6160 & (1) B160 BATTERY CABINET
- INSTALL (2) PSU4813 VOLTAGE BOOSTER IN (P) CABINET
- INSTALL (1) CSR IXRE ROUTER IN (P) CABINET
- INSTALL (1) RP6651 IN (P) CABINET

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

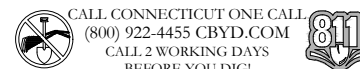
APPLICABLE CODES/REFERENCE DOCUMENTS

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	2018 CT STATE BUILDING CODE
MECHANICAL	2015 IMC
ELECTRICAL	2017 NEC

REFERENCE DOCUMENTS:

STRUCTURAL ANALYSIS:	B+T GROUP
DATED:	05/02/2022
MOUNT ANALYSIS:	B+T GROUP
DATED:	04/26/2022
RFDS REVISION:	8
DATED:	10/21/2021
ORDER ID:	608635
REVISION:	0



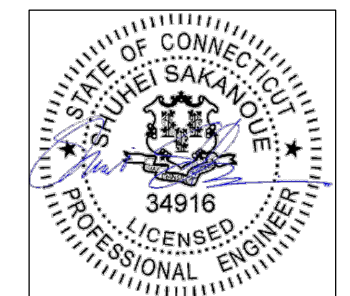
APPROVALS

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.

PROJECT TEAM

A&E FIRM: INFINIGY
 500 WEST OFFICE CENTER DRIVE / SUITE 150
 FORT WASHINGTON, PA 19034
 CROWN CASTLE USA INC. DISTRICT CONTACTS:
 3 CORPORATE PARK DRIVE, SUITE 101
 CLIFTON PARK, NY 12065
 PATRICIA PELON - PROJECT MANAGER
 TRICIA.PELON@CROWNCastle.COM
 JASON D'AMICO - CONSTRUCTION MANAGER
 JASON.DAMICO@CROWNCastle.COM



06/13/2022

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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.

GREENFIELD GROUNDING NOTES:

- 1. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION AND AC POWER GEG'S) SHALL BE BONDED TOGETHER AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.

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.

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.

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.

CONDUCTOR COLOR CODE table with columns for SYSTEM, CONDUCTOR, and COLOR. Includes entries for 120/240V, 10, 120/208V, 30, 277/480V, 30, and DC VOLTAGE.

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

ABBREVIATIONS:

- ANT ANTENNA
(E) EXISTING
FIF FACILITY INTERFACE FRAME
GEN GENERATOR



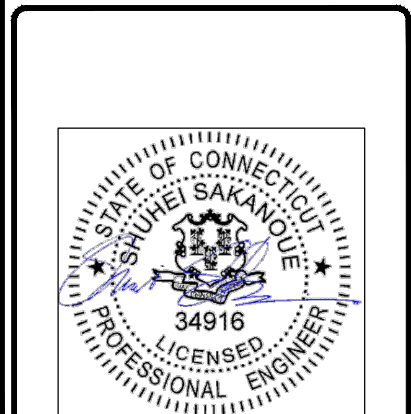
T-MOBILE SITE NUMBER: CT11078B
BU #: 806355
BRG 126 943086

281 WOOD HOUSE ROAD
FAIRFIELD, CT 06824

EXISTING 171'-0" MONOPOLE

ISSUED FOR:

Table with columns: REV, DATE, DRWN, DESCRIPTION, DES./QA. Shows revisions for 05/09/2022 and 06/13/2022.

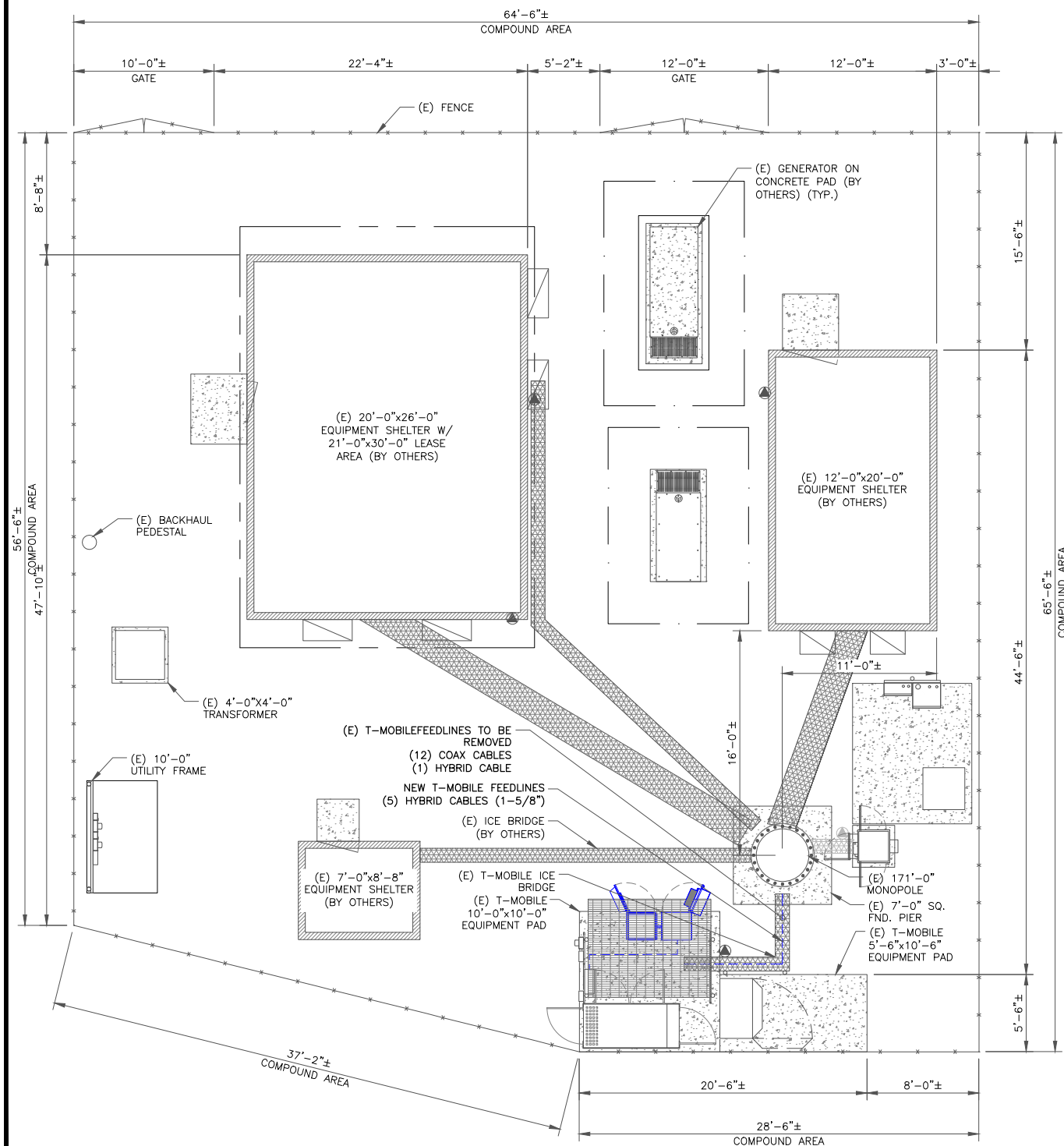


06/13/2022

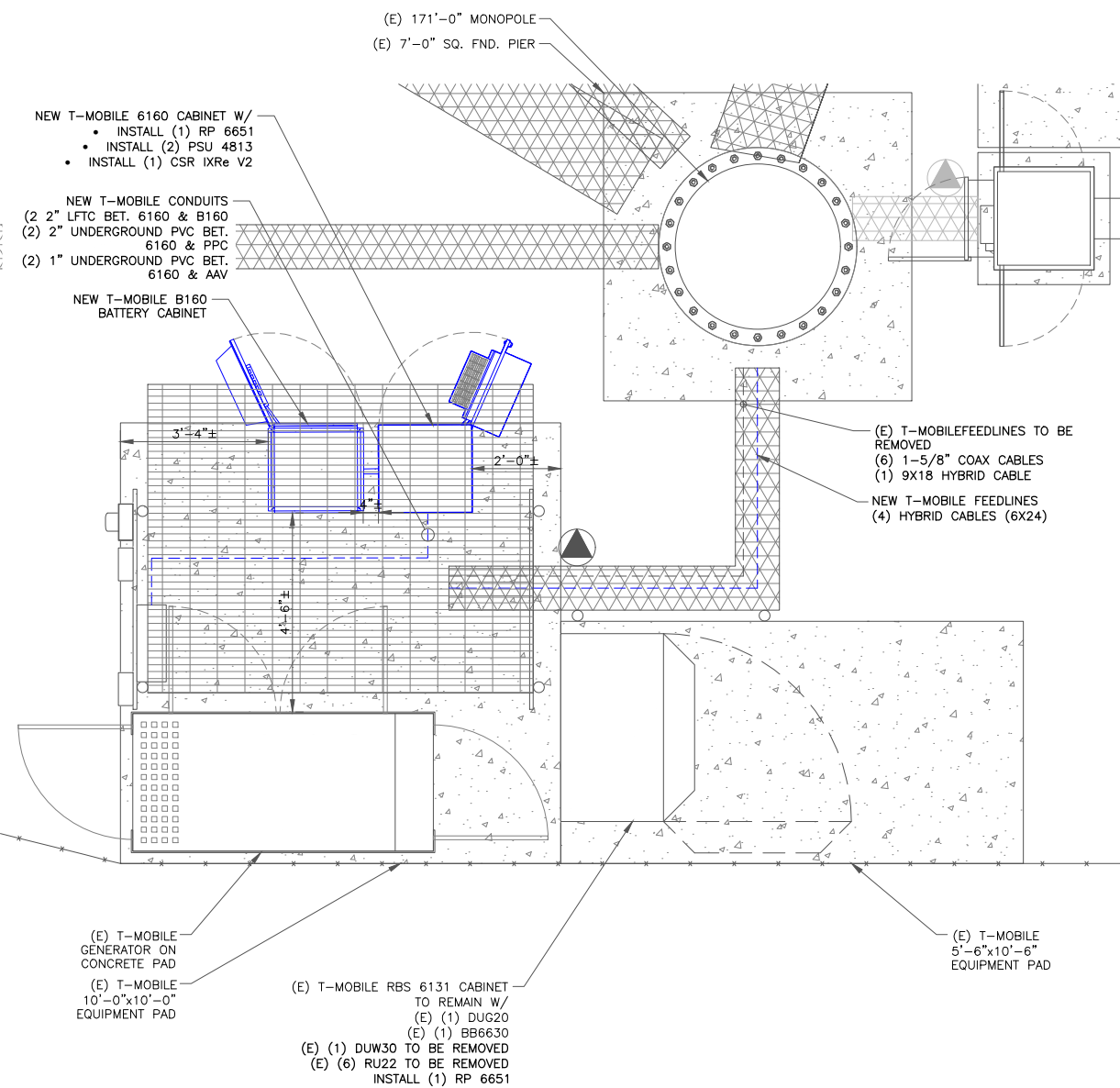
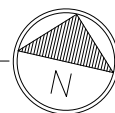
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SHEET NUMBER: T-2 REVISION: 0

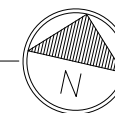
NOTE:
 1. PLANS BASED ON SITE PLAN PROVIDED BY TOWER OWNER AND SITE VISIT PERFORMED BY INFINIGY. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND LOCATION/ORIENTATION OF EXISTING T-MOBILE EQUIPMENT.



1 SITE PLAN
 SCALE: 3/16"=1'-0" (FULL SIZE)
 3/32"=1'-0" (11x17)



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



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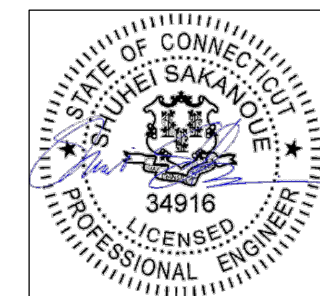
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 BRG 126 943086

281 WOOD HOUSE ROAD
 FAIRFIELD, CT 06824

EXISTING 171'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	05/09/2022	RCD	PRELIMINARY	SS
0	06/13/2022	CB	100% FINALS	SS



06/13/2022

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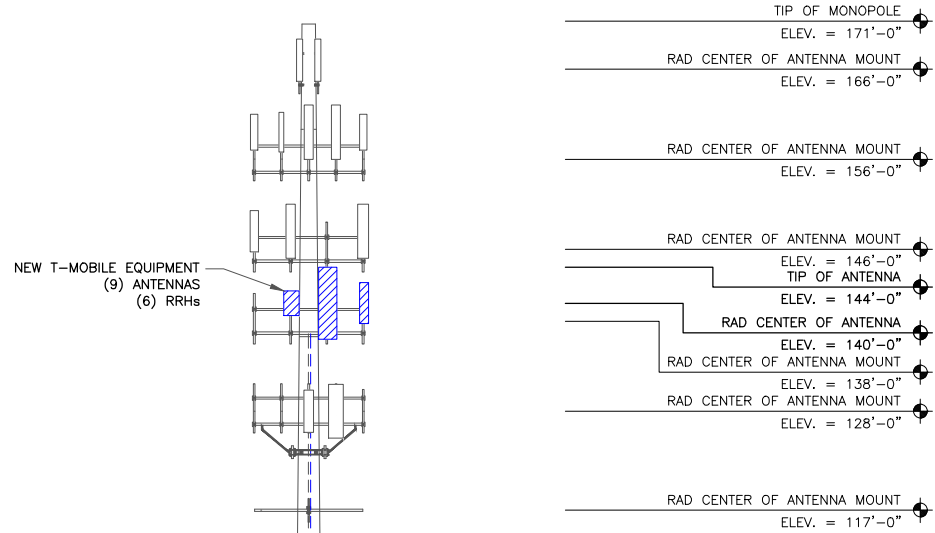
SHEET NUMBER: REVISION:

C-1

0

NOTES:

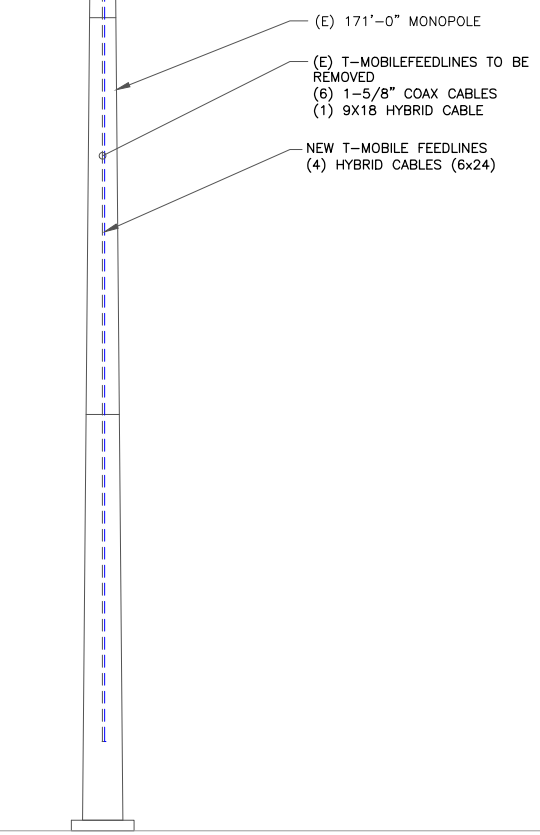
- ELEVATION BASED ON DRAWING PROVIDED BY TOWER OWNER. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND LOCATION/ORIENTATION OF EXISTING EQUIPMENT.
- INFINIGY HAS NOT EVALUATED THE TOWER OR MOUNT STRUCTURE AND ASSUMES NO RESPONSIBILITY FOR THEIR STRUCTURAL INTEGRITY REGARDING PROPOSED LOADINGS. FINAL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



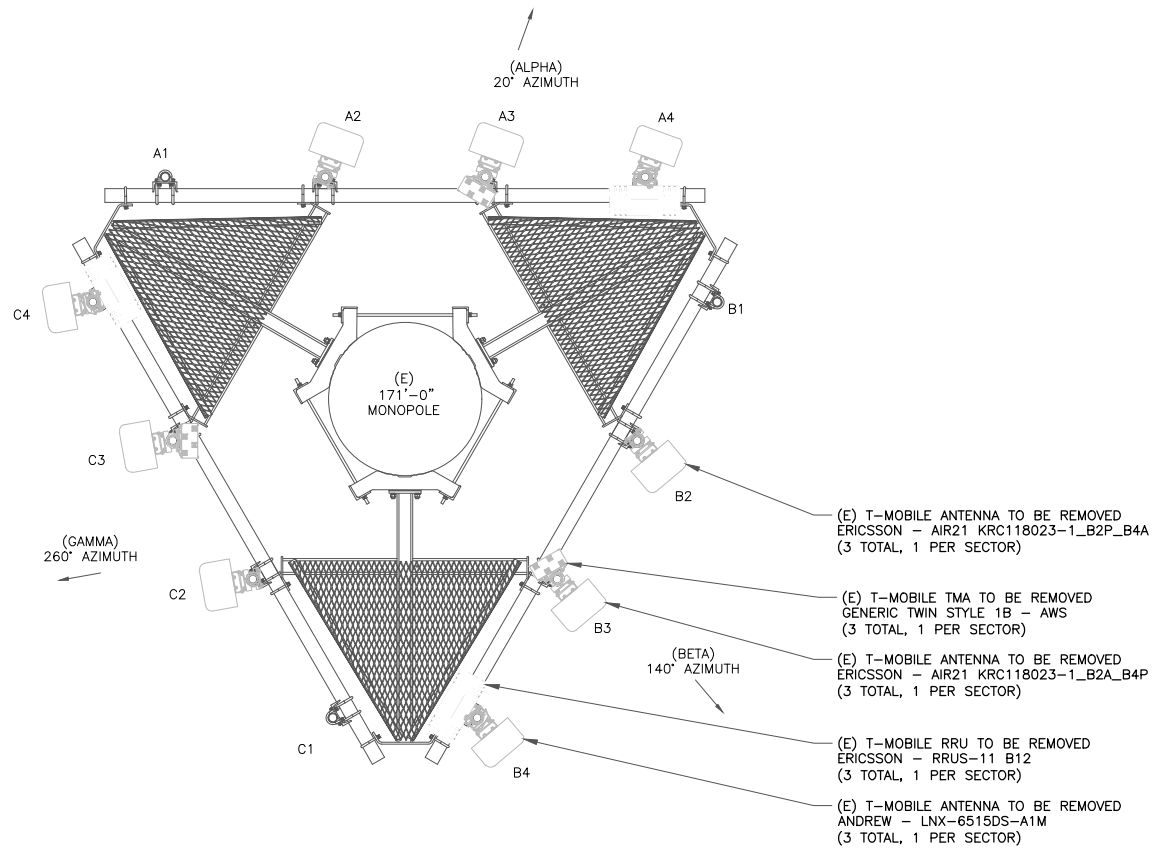
T-MOBILE EQUIPMENT

ANTENNA CL: 140'-0"
MOUNT CL: 138'-0"

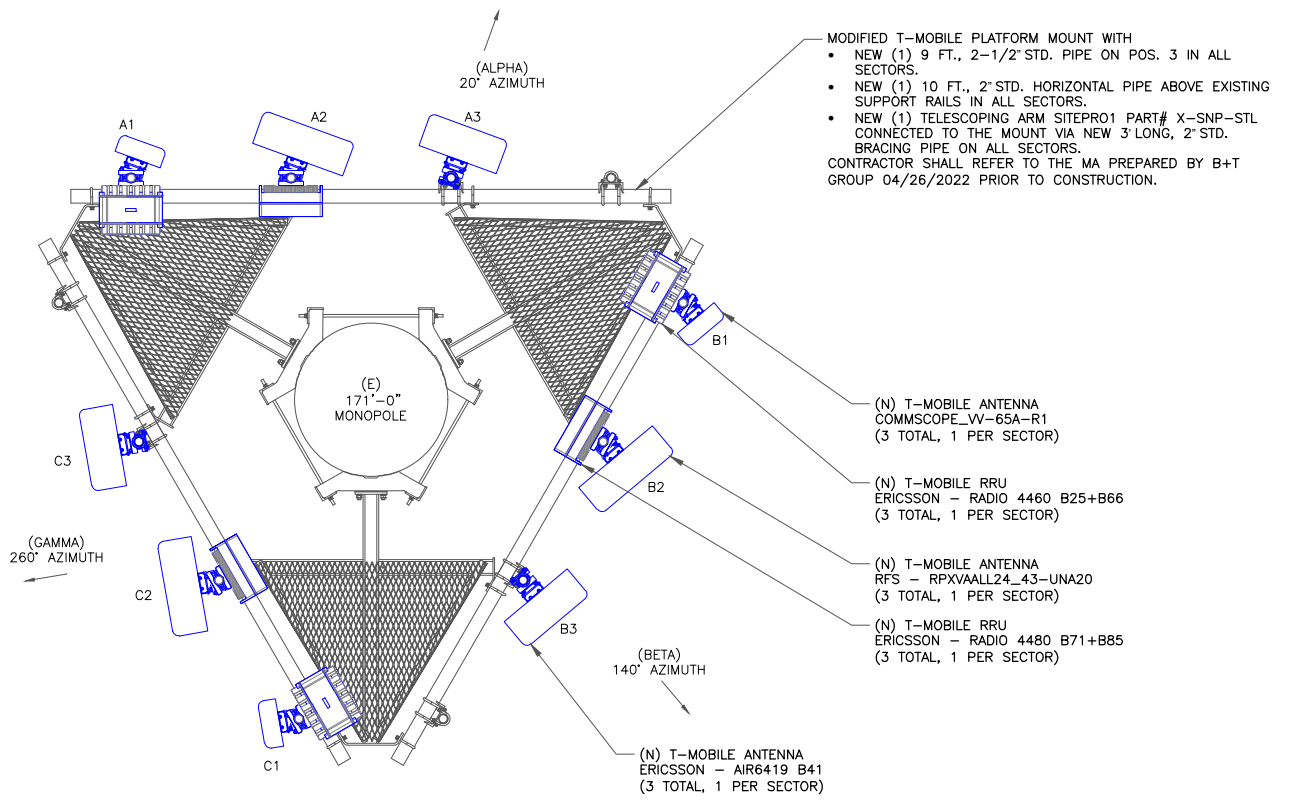
ANY AND ALL TOWER MOUNTED EQUIPMENT MUST NOT TRAP OR INTERFERE W/ EXISTING SAFETY CLIMB



1 FINAL ELEVATION
SCALE: 3/16"=1'-0" (FULL SIZE)
3/32"=1'-0" (11x17)



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



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

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T-MOBILE SITE NUMBER:
CT11078B

BU #: 806355
BRG 126 943086

281 WOOD HOUSE ROAD
FAIRFIELD, CT 06824

EXISTING 171'-0" MONOPOLE

ISSUED FOR:

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A	05/09/2022	RCD	PRELIMINARY	SS
0	06/13/2022	CB	100% FINALS	SS

STATE OF CONNECTICUT
SHUHEI SAKANQUE
34916
LICENSED PROFESSIONAL ENGINEER

06/13/2022

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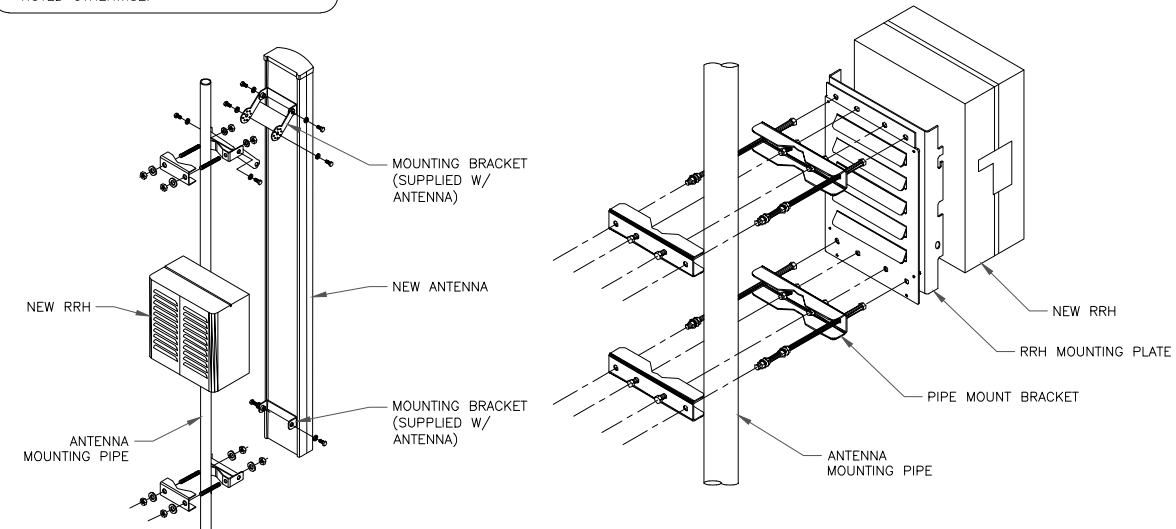
SHEET NUMBER: **C-2** REVISION: **0**

ANTENNA SCHEDULE										
SECTOR	POS.	TECHNOLOGY	RAD CENTER	AZIMUTH	ANTENNA MANUFACTURER	ANTENNA MODEL	MECH. TILT	ELECT. TILT	TOWER MOUNTED EQUIPMENT	FEEDLINE TYPE
ALPHA	A1	L2100, L1900, G1900	140'-0"	20°	COMMSCOPE	COMMSCOPE - VV-65A-R1	0	-	(1) ERICSSON - RRUS 4460 B25+B66	(2) 6X24 HYBRID 60M IN LENGTH
ALPHA	A2	L700, L600, N600	140'-0"	20°	RFS	RFS - APXVAALL24_43-UNA20	0	-	(1) ERICSSON - RRUS 4480 B71+B85	-
ALPHA	A3	L2500, N2500	140'-0"	20°	ERICSSON	ERICSSON - AIR6419 B41	0	-	-	-
BETA	B1	L2100, L1900, G1900	140'-0"	140°	COMMSCOPE	COMMSCOPE - VV-65A-R1	0	-	(1) ERICSSON - RRUS 4460 B25+B66	(1) 6X24 HYBRID 60M IN LENGTH
BETA	B2	L700, L600, N600	140'-0"	140°	RFS	RFS - APXVAALL24_43-UNA20	0	-	(1) ERICSSON - RRUS 4480 B71+B85	-
BETA	B3	L2500, N2500	140'-0"	140°	ERICSSON	ERICSSON - AIR6419 B41	0	-	-	-
GAMMA	C1	L2100, L1900, G1900	140'-0"	260°	COMMSCOPE	COMMSCOPE - VV-65A-R1	0	-	(1) ERICSSON - RRUS 4460 B25+B66	(1) 6X24 HYBRID 60M IN LENGTH
GAMMA	C2	L700, L600, N600	140'-0"	260°	RFS	RFS - APXVAALL24_43-UNA20	0	-	(1) ERICSSON - RRUS 4480 B71+B85	-
GAMMA	C3	L2500, N2500	140'-0"	260°	ERICSSON	ERICSSON - AIR6419 B41	0	-	-	-

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.



NOTE:

1. CONTRACTOR SHALL INSTALL 3RD DUAL RRH MOUNT TO ACCOMMODATE ALL RRH BRACKETS HOLES IF NECESSARY.

2 ANTENNA WITH RRH MOUNTING DETAIL
SCALE: NOT TO SCALE

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T-MOBILE SITE NUMBER:
CT11078B

BU #: **806355**
BRG **126 943086**

281 WOOD HOUSE ROAD
FAIRFIELD, CT 06824

EXISTING 171'-0" MONOPOLE

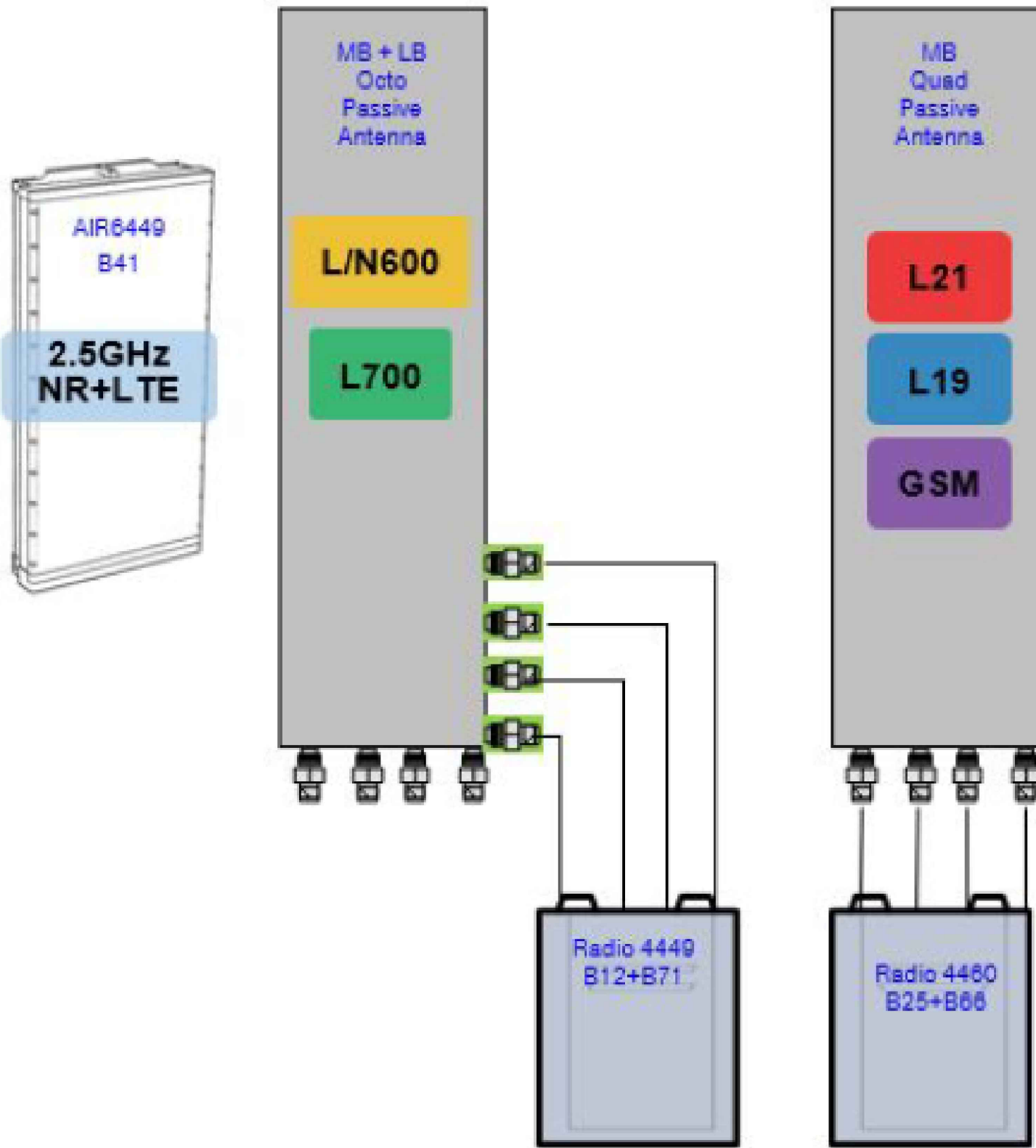
ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	05/09/2022	RCD	PRELIMINARY	SS
0	06/13/2022	CB	100% FINALS	SS

STATE OF CONNECTICUT
SHUHEI SAKANOU
34916
LICENSED PROFESSIONAL ENGINEER
06/13/2022

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SHEET NUMBER: **C-3** REVISION: **0**



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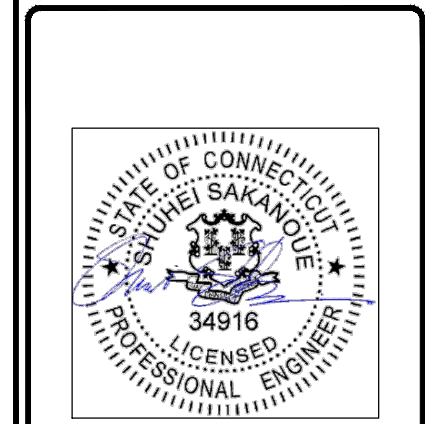
BU #: **806355**
 BRG **126 943086**

281 WOOD HOUSE ROAD
 FAIRFIELD, CT 06824

EXISTING 171'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	05/09/2022	RCD	PRELIMINARY	SS
0	06/13/2022	CB	100% FINALS	SS

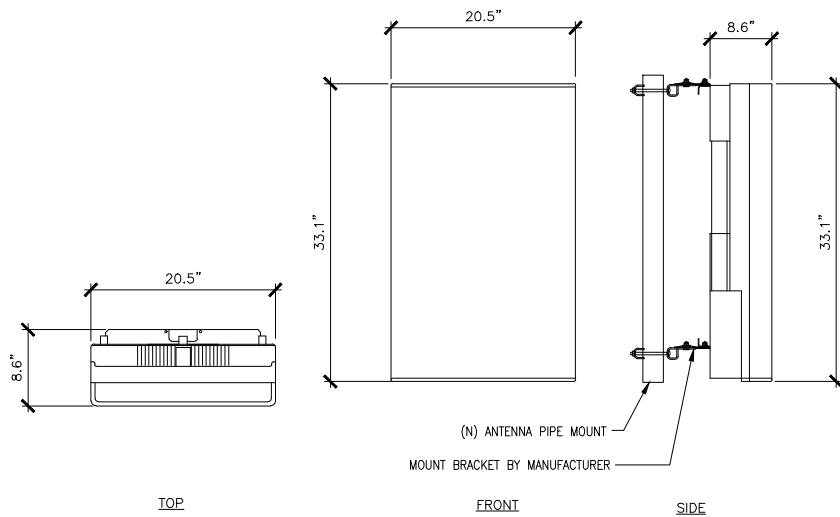


06/13/2022

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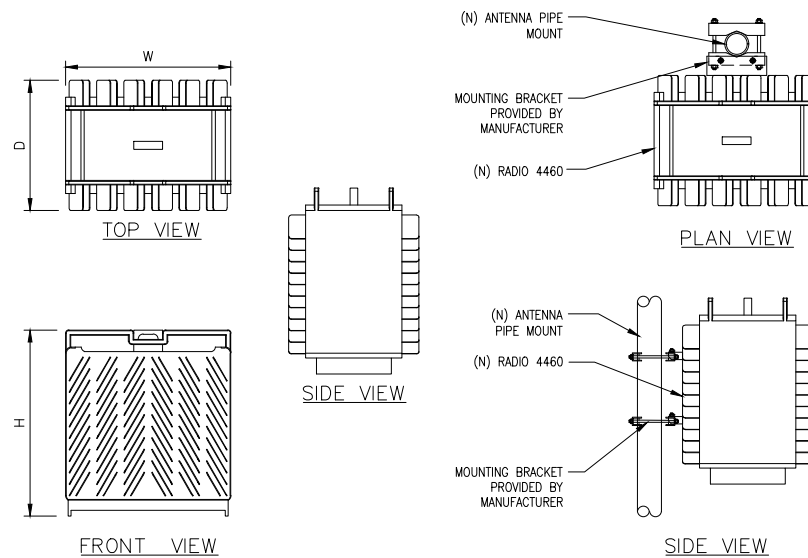
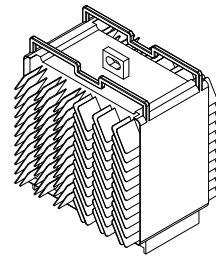
SHEET NUMBER: **C-4** REVISION: **0**

MANUFACTURER: ERICSSON
 MODEL: AIR6449 B41
 WEIGHT: 104 LBS (W/ MOUNT BRACKET 113)
 DIMENSIONS: 33.1"H. X 20.5"W. X 8.6"D.
 FREQUENCY: REFER TO RF DATA SHEET

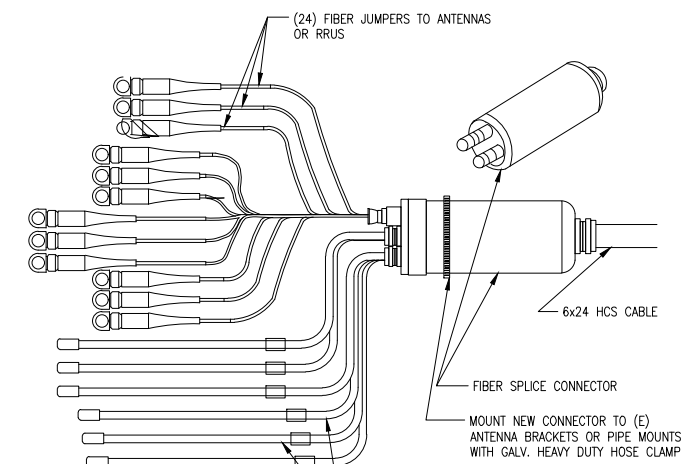


1 (N) AIR6419 B41 ANTENNA SPEC
 SCALE: NOT TO SCALE

ERICSSON RADIO-4460 B25 B66
 DIMENSIONS, WxDxH: 17.0"x15.1"x11.9"
 MAX OUTPUT POWER: 4x80W (2x(2x80W))
 TOTAL WEIGHT: 109 lbs
 TEMPERATURE: -40° TO 55° C



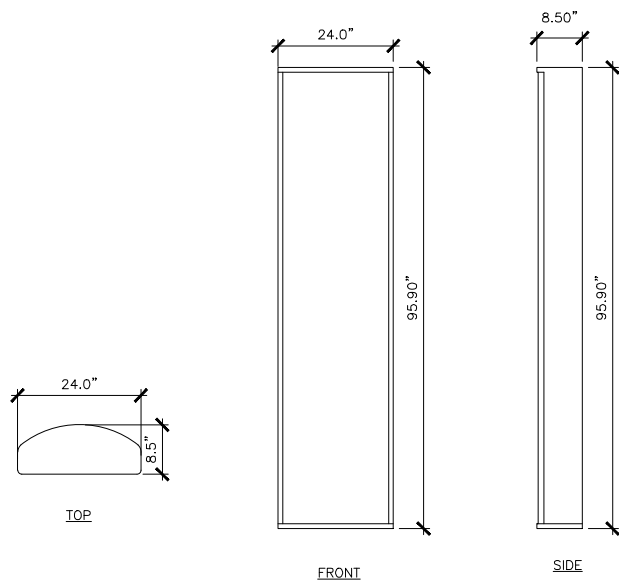
2 (N) RADIO 4460 SPEC
 SCALE: NOT TO SCALE



NOTE:
 NUMBER OF LINES SHOWN FOR REFERENCE ONLY.
 ACTUAL # OF DC AND FIBER LINES SPECIFIC TO
 MODEL OF HCS CABLES

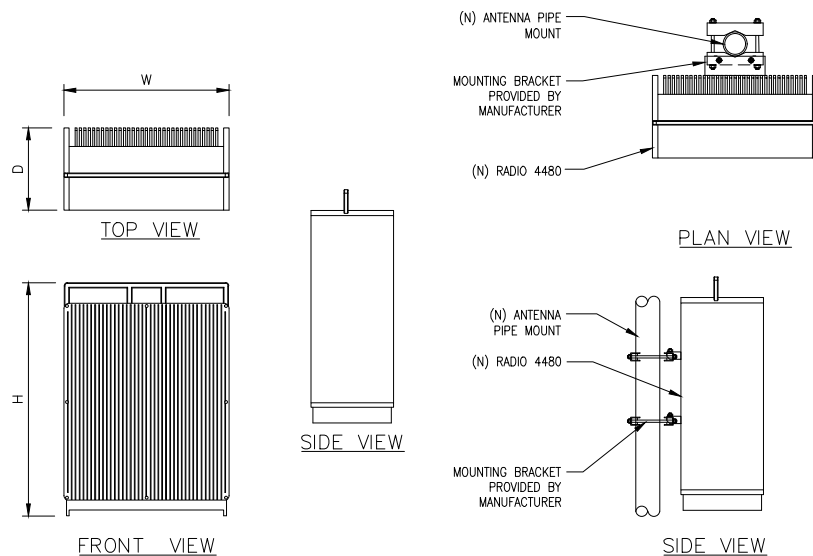
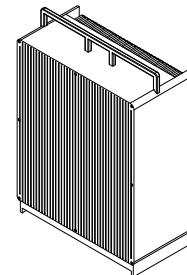
3 (N) 6X24 HCS CABLE DETAIL
 SCALE: NOT TO SCALE

MANUFACTURER: RFS
 MODEL: APXVAALL24_43-UNA20
 WEIGHT: 149.9 LBS
 DIMENSIONS: 95.6"H. X 24.0"W. X 8.5"D.
 FREQUENCY: REFER TO RF DATA SHEET

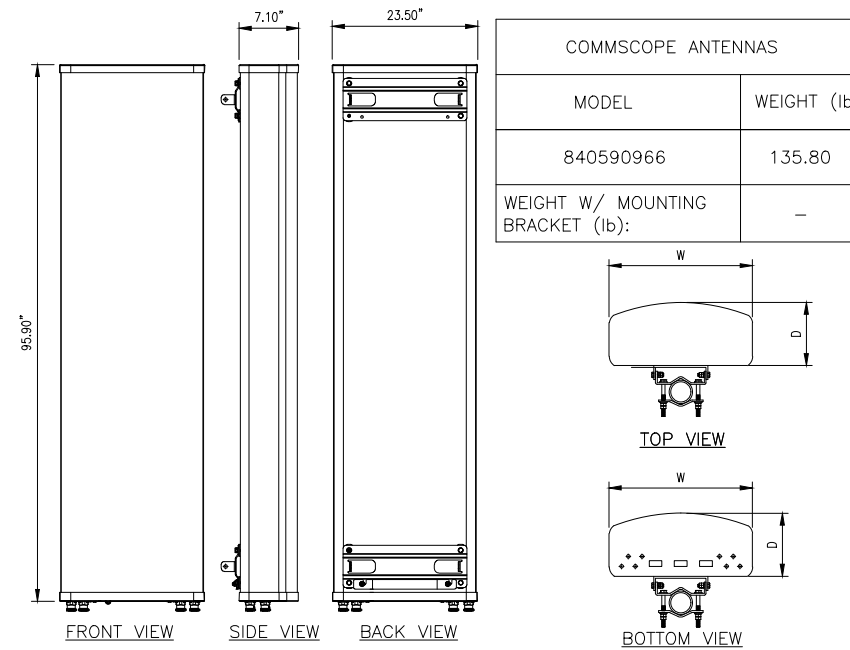


4 (N) APXVAALL24_43-UNA20_ ANTENNA SPEC
 SCALE: NOT TO SCALE

ERICSSON RADIO-4480 B71 B85
 DIMENSIONS, WxDxH: 21.8"x15.7"x7.5"
 MAX OUTPUT POWER: 4x80W (2x(2x80W))
 TOTAL WEIGHT: 93 lbs
 TEMPERATURE: -40° TO 55° C



5 (N) RADIO 4480 SPEC
 SCALE: NOT TO SCALE



6 (N) COMMSCOPE - VV-65A-R1 ANTENNA SPEC
 SCALE: NOT TO SCALE

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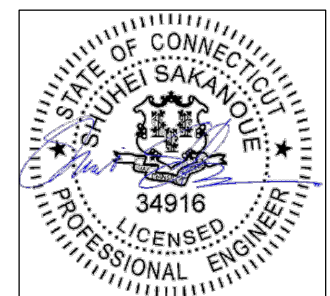
BU #: 806355
 BRG 126 943086

281 WOOD HOUSE ROAD
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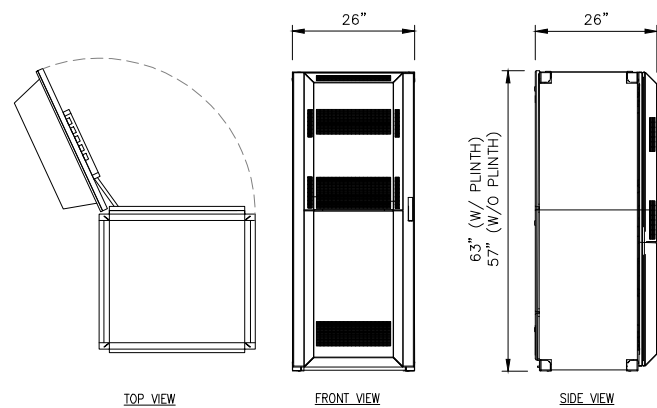
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SHEET NUMBER:

C-5

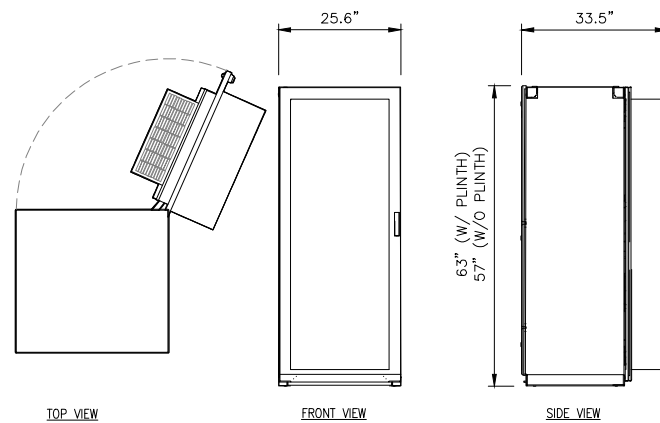
REVISION:

0



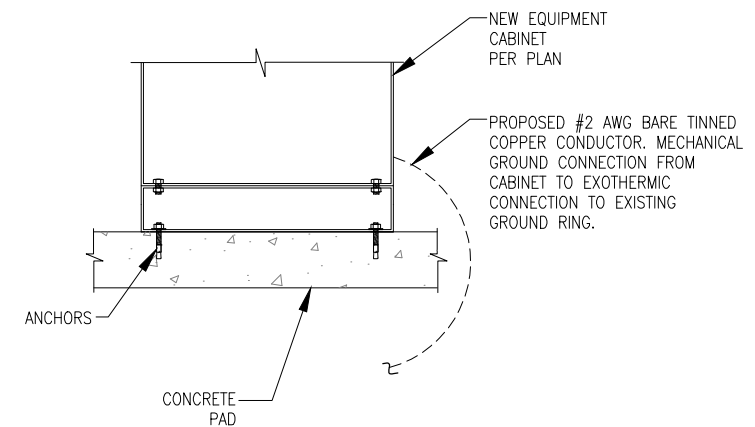
ERICSSON MODEL NO.:	B160
RACK SPACE:	19U
DIMENSIONS, HxWxD:	63"x26"x26" (W/ 6" PLINTH)
CABINET WEIGHT, EMPTY:	485 LBS
MAXIMUM WEIGHT:	2100± LBS

1 (N) B160 CABINET DETAIL
SCALE: NOT TO SCALE

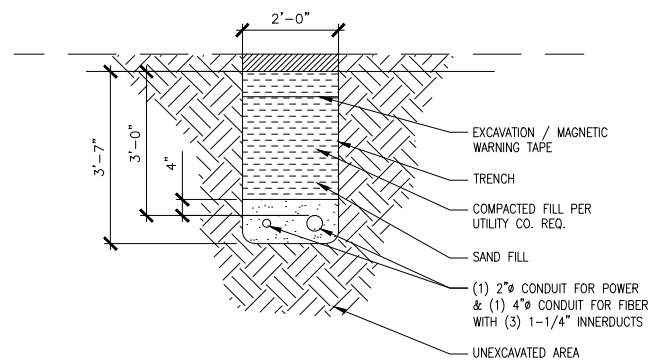


ERICSSON MODEL NO.:	6160
RACK SPACE:	19U
DIMENSIONS, HxWxD:	63"x25.6"x25.6" (W/ 6" PLINTH)
CABINET WEIGHT, EMPTY:	410 LBS
MAXIMUM WEIGHT:	770± LBS

2 (N) 6160 CABINET DETAIL
SCALE: NOT TO SCALE



3 (N) EQUIPMENT CABINET MOUNTING DETAIL
SCALE: NOT TO SCALE



4 (N) CONDUIT TRENCH DETAIL
SCALE: NOT TO SCALE

5 NOT USED
SCALE: NOT TO SCALE

6 NOT USED
SCALE: NOT TO SCALE

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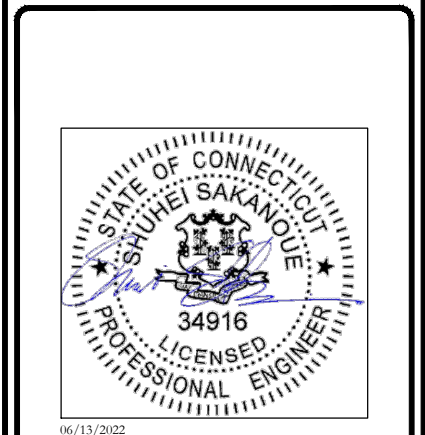
BU #: **806355**
BRG **126 943086**

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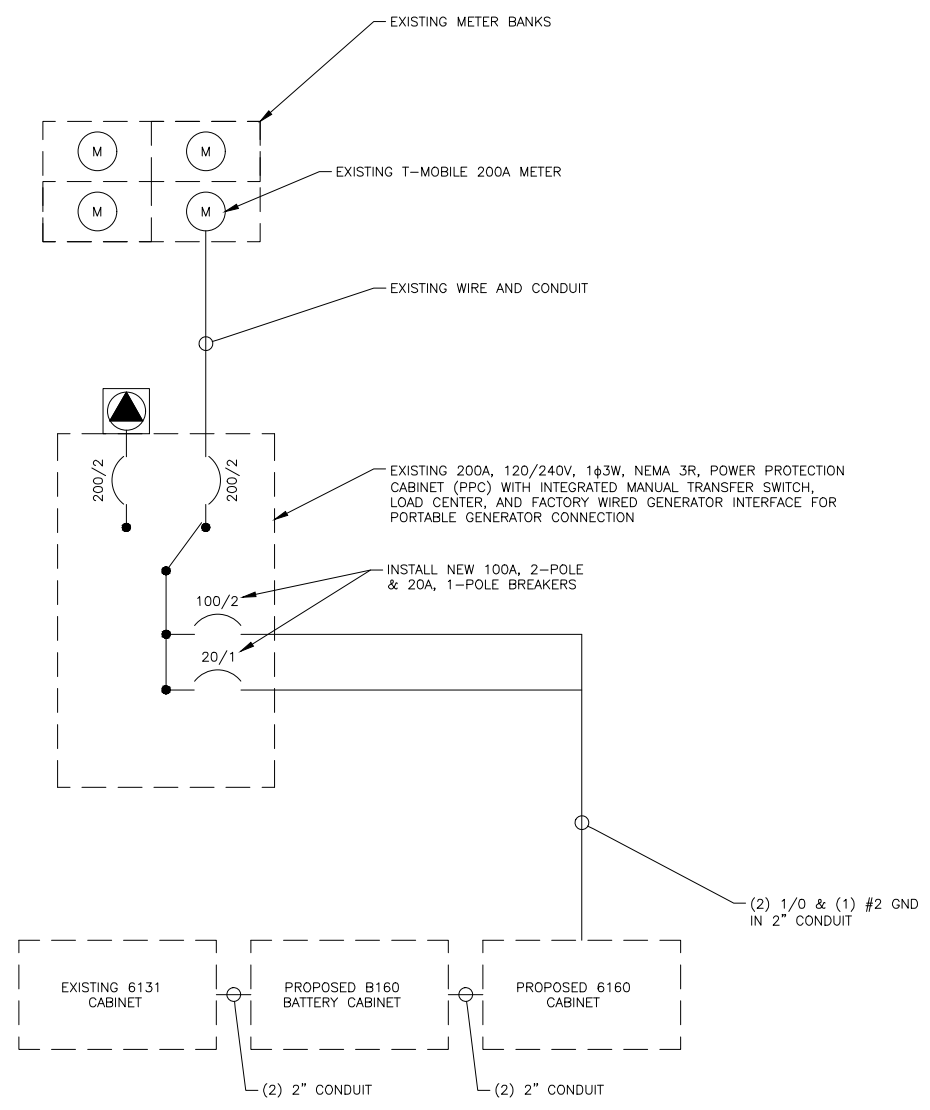
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SHEET NUMBER: **C-6** REVISION: **0**

T-MOBILE PANEL SCHEDULE											
MAIN: 200A MAIN BREAKER			VOTAGE/PHASE: 120/240V, 1-PHASE, 3-WIRE				SHORT CIRCUIT CURRENT RATING: --				
MOUNTING: INSIDE PPC ENCLOSURE			ENCLOSURE: NEMA 3R				SURGE PROTECTION DEVICE: YES				
DESCRIPTION	LOAD (VA)	C or NC	C/B	CIR No.	PHASE LOADS (VA)		CIR No.	C/B	C or NC	LOAD (VA)	DESCRIPTION
					A	B					
BTS 1 (OFF)	0	NC	50	1	0		2	50	NC	0	BTS 3 (OFF)
	0	NC		3	0	4	NC		0		
6131	3000	C	100	5	3000		6	20	NC	0	LED LIGHT (OFF)
	3000	C		7	3000	8					
6160	3500	3500	100	9	3500		10				
	3500	3500		11	3500	12					
6160 GFI	180	180	20	13	180		14				
				15	0		16				
				17	0		18				
				19	0		20				
				21	0		22				
				23	0		24				
BASE LOAD (VA) =					6680	6500					
25% OF CONTINUOUS LOAD (VA) =					1750	1800					
TOTAL LOAD (VA) =					8430	8300					
TOTAL LOAD (A) =					70	69					

C = CONTINUOUS LOAD; NC = NON-CONTINUOUS LOAD
 NEW BREAKER TO BE SAME TYPE AND HAVE SAME AIC RATING AS EXISTING.
 CUSTOMER HAS NOT PROVIDED LOADS FOR EQUIPMENT CABINETS
 THEREFORE THE CABINET LOADS SHOWN ARE ESTIMATED VALUES.

- NOTES:
- ALL NEW CONDUCTORS TO BE INSTALLED SHALL BE COPPER. ALL CONDUCTORS SHALL BE THHW, THWN, THWN-2, XHHW, OR XHHW-2 UNLESS NOTED OTHERWISE.
 - CONTRACTOR IS TO FIELD VERIFY ALL EXISTING ITEMS SHOWN ON THE ELECTRICAL ONE-LINE DIAGRAM AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
 - ALL GROUNDING AND BONDING PER THE NEC.



1 AC PANEL SCHEDULE
 SCALE: NOT TO SCALE

2 ONE LINE DIAGRAM
 SCALE: NOT TO SCALE

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 BRG **126 943086**
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STATE OF CONNECTICUT
 SHUHEI SAKANOU
 34916
 LICENSED PROFESSIONAL ENGINEER
 06/13/2022

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SHEET NUMBER: **E-1** REVISION: **0**

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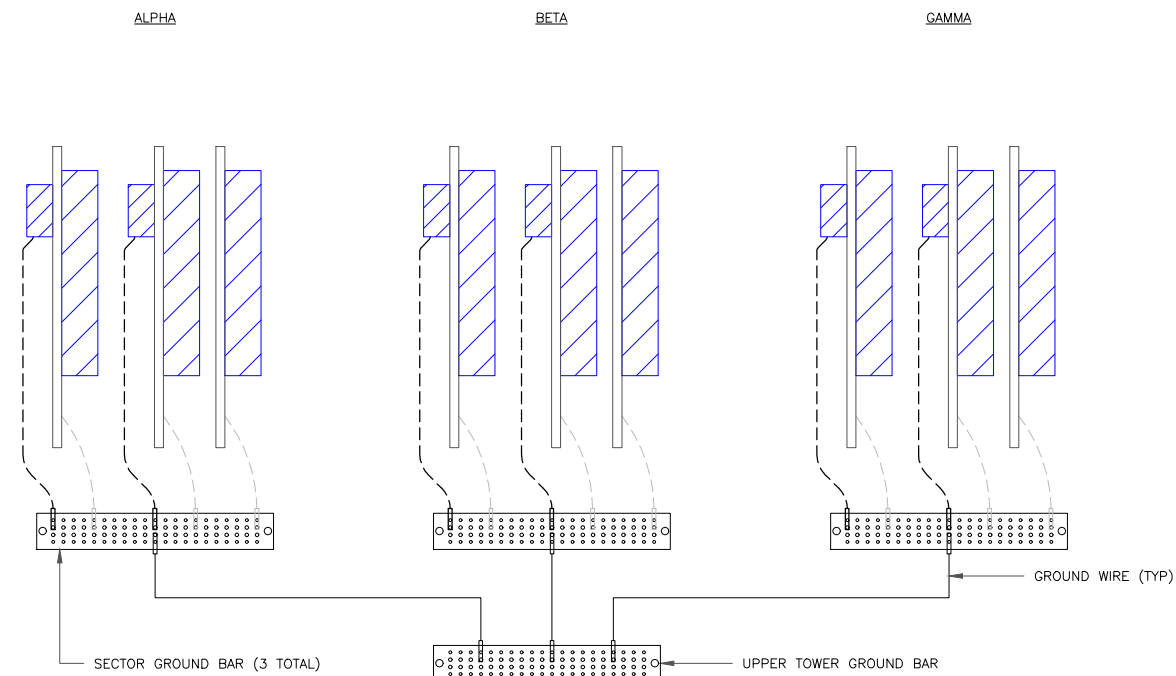
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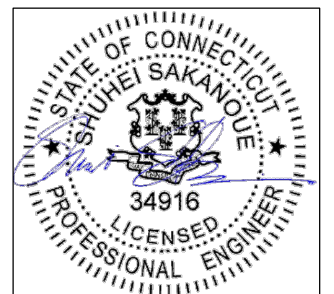
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NOTE:
ALL NEW GROUNDS TO BE #6 STRANDED
COPPER WITH GREEN INSULATION UNLESS
NOTED OTHERWISE.

1 ANTENNA GROUNDING DIAGRAM
SCALE: NOT TO SCALE



06/13/2022

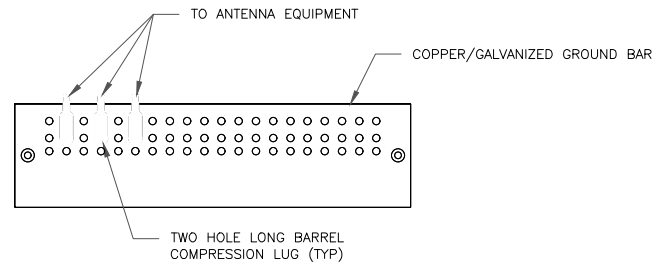
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SHEET NUMBER:

G-1

REVISION:

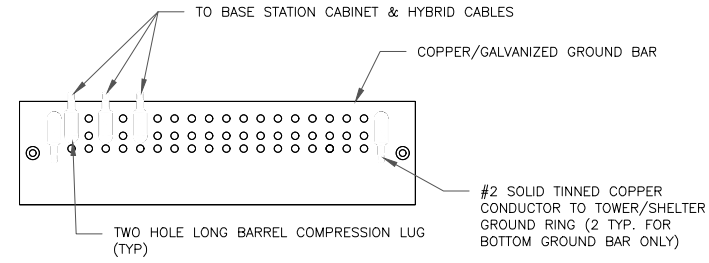
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NOTES:

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.

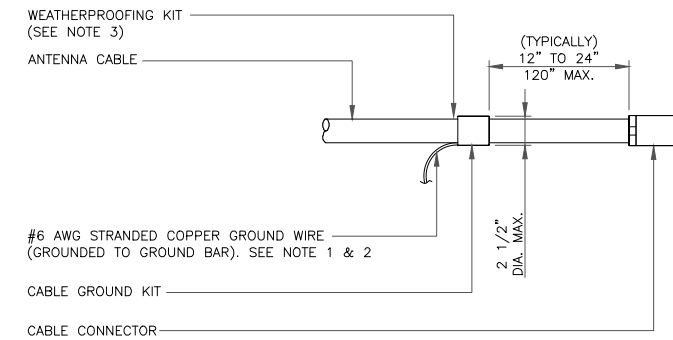
1 ANTENNA SECTOR GROUND BAR DETAIL
SCALE: NOT TO SCALE



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.

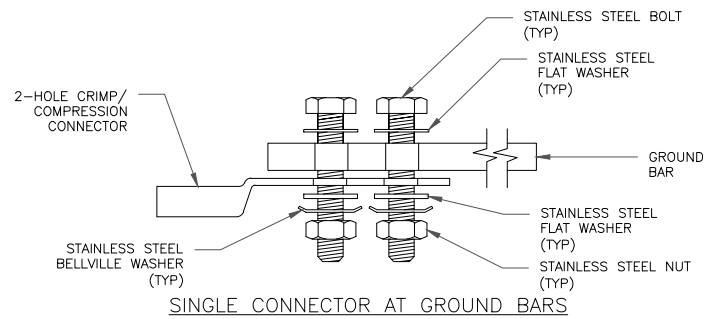
2 TOWER/SHELTER GROUND BAR DETAIL
SCALE: NOT TO SCALE



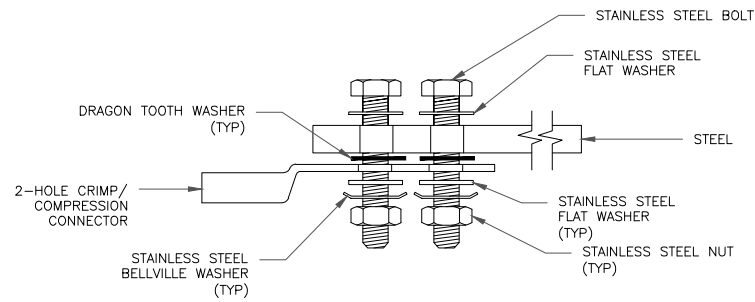
NOTES:

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.

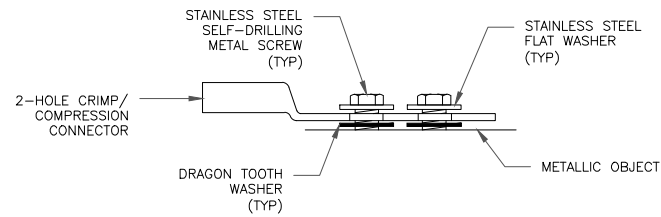
3 CABLE GROUND KIT CONNECTION
SCALE: NOT TO SCALE



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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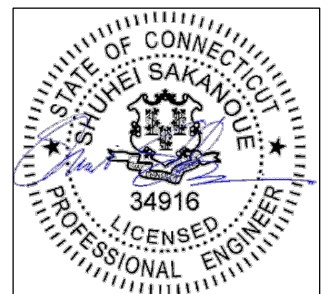
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