



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

May 13, 2022

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

RE: **Notice of Exempt Modification for T-Mobile: CT11545A**
Crown Site# 801485
2715 Mountain Road, Suffield, CT 06093
Latitude: 41° 0' 41.80" / Longitude: -72° 43' 43.60"

Dear Ms. Bachman:

T-Mobile currently maintains six (6) antennas at the 182-foot mount on the existing 190-foot monopole tower located at 2715 Mountain Road, Suffield, CT. The property is owned Town of Suffield and the tower is owned by Crown Castle. T-Mobile now intends to replace three (3) antennas and ancillary equipment at the 182ft 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) Ericsson – AIR6419 B41 Antennas
- (3) Ericsson- Radio 4460 B25+B66
- (2) 6x24 4AWG Hybrid Cables

Remove:

- (3) Ericsson – APXV16DWV-16DWV-S-E-A20 Antennas
- (3) Generic Twin Style 1A- PCS
- (13) Coaxial Cables (1-58")

Ground:

Install New:

- (1) 6160 AC V1
- (1.) B160 Battery Cabinet
- (1.) RP 6651
- (1) PSU 4813 Voltage Booster
- (2.) CSR IXRE V2
- (1.) RBS 6601
- (1) 100 Amp Breaker in 6160 cabinet

The Foundation for a Wireless World.

CrownCastle.com

(1.) 100 AMP breaker in 6201

(1.) DCDCU

Remove:

(3^) Ericsson RUS01 B2 RRU's

The facility was approved by the Town of Suffield's Economic Development Commission via a Special Use Permit on May 1, 2000. The approval was given with conditions which this proposed exempt modification complies with.

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 Colin Moll, First Selectman, Town of Suffield, CT, Bill Hawkins, Director of Planning, Town of Suffield, CT. Town of Suffield is the 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.

Sincerely,


Jeffrey Barbadora

Site Acquisition Specialist

1800 W. Park Drive

Westborough, MA 01581

(781) 970-0053

Jeff.Barbadora@crowncastle.com

Melanie A. Bachman

Page 3

Attachments

cc:

Colin Moll, First Selectman
First Selectman's Office
83 Mountain Road
Suffield, CT 06078
(860) 668-3838

Bill Hawkins, Director of Planning
Planning & Zoning Office
83 Mountain Road
Suffield, CT 06078
(860) 668-3848

Town of Suffield– Property Owner

Crown Castle, Tower Owner



Town of Suffield

303/733

May 4, 2000

Ms. Elaine Sarsynski, Director
Suffield Economic Development Commission
83 Mountain Road
Suffield, Connecticut 06078

Recorded
6-21-00

Re: File #740 - Request of the Suffield Economic Development Commission for a special use permit for the approval of sites for telecommunication towers located on Town properties: WPCA, Highway Department, and Transfer Station.

Dear Ms. Sarsynski:

At a duly called Special Meeting of the Suffield Zoning and Planning Commission held on Monday, May 1, 2000, the Commission voted to approve the Town of Suffield's special use permit request for the for three (3) proposed telecommunication sites located as designated:

1. Town of Suffield Transfer Station site on the west side of Mountain Road (Route 168), on undeveloped land west of the Transfer Station operations (Site A);
2. Town of Suffield Public Works garage/maintenance facility off of Mountain Road, on land immediately adjacent to the Maintenance Facility Building (Site B); and
3. Town of Suffield Sewage Treatment Plant on the east side of East Street (Route 159), on undeveloped land along the north side of the Treatment's Plant's access driveway (Site C).

with the following conditions:

1. The heights of the respective mono-pole towers, including antennae, shall not exceed 199-feet (Site A); 120-feet (Site B); and 174-feet (Site C);
2. Each tower shall be certified as "self-collapsing" by a Connecticut registered professional engineer;
3. Details drawings are to be submitted with each request for building permits for both the towers and related facilities;
4. FCC licenses shall be produced prior to the issuance of the permits for company leasing space on the towers;
5. The Zoning Enforcement Officer shall review each proposal for zoning conformance prior to the issuance of the building permits;
6. All utilities are to be underground;
7. Site plans are to be revised.

A mylar and four (4) copies of site plans for each of the three approved sites must be submitted to this office as soon as possible for signatures.

Please remit a check in the amount of \$10.00 (payable to the Town of Suffield), *along with this original letter*, to the Office of the Town Clerk, 83 Mountain Road. This fee is required to cover the cost of recording the Special Use Permit in the Office of the Town Clerk.

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



Town of Suffield

Information on the Property Records for the Municipality of Suffield was last updated on 5/13/2022.



Parcel Information

Location:	2715 MOUNTAIN RD	Property Use:	Public Use	Primary Use:	Governmental Building
Unique ID:	R09002	Map Block Lot:	9 9 9	Acres:	51.01
490 Acres:	0.00	Zone:	R90	Volume / Page:	0180/0870
Developers Map / Lot:	17/107	Census:	4772		

Value Information

	Appraised Value	Assessed Value
Land	445,100	311,570
Buildings	140,800	98,560
Detached Outbuildings	30,600	21,420

Appraised Value

Assessed Value

Total

616,500

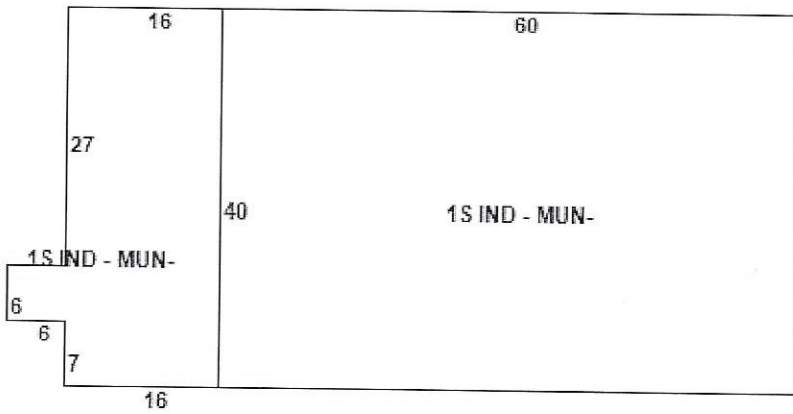
431,550

Owner's Information

Owner's Data

SUFFIELD TOWN OF
TOWN HALL
83 MOUNTAIN RD
SUFFIELD, CT 06078-2041

Building 1



Category:	Public Use	Use:	Municipal Industrial	GLA:	3,076
Stories:	1.00	Construction:	Steel	Year Built:	1990
Heating:	None	Fuel:	Wood	Cooling Percent:	0
Siding:	Pre-Finish Metal/Vinyl Siding	Roof Material:		Beds/Units:	0

Special Features

Attached Components

Detached Outbuildings

Type:	Year Built:	Length:	Width:	Area:
Scales-Electric	2018	0.00	0.00	20
Frame Shed	2003	0.00	0.00	240
Utility Storage	2006	0.00	0.00	1,152

Owner History - Sales

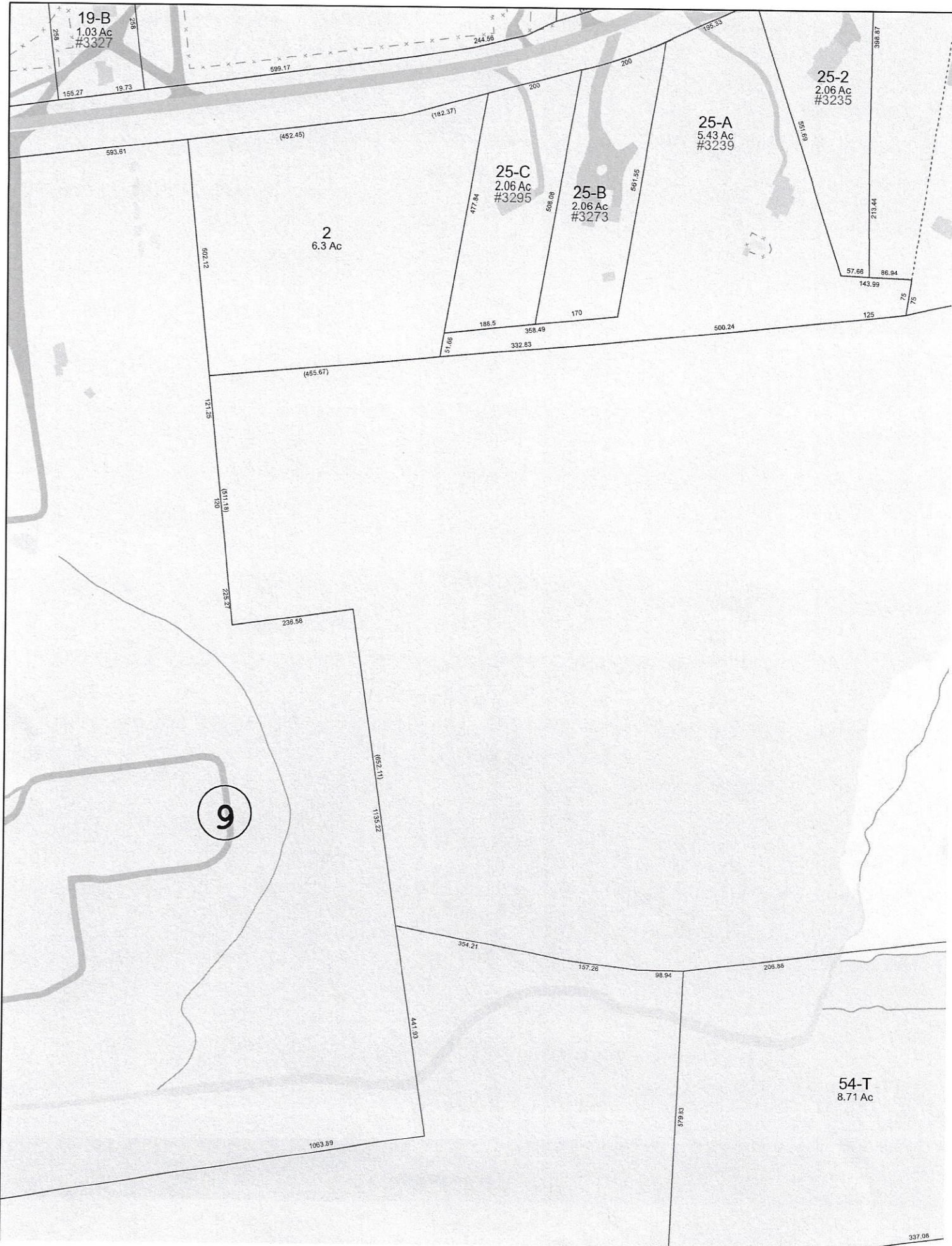
Owner Name	Volume	Page	Sale Date	Deed Type	Sale Price
SUFFIELD TOWN OF	0180	0870	06/05/1985		\$0
KEMENT WILLIAM B & IRENE N	0147	0933	05/04/1977		\$0

Building Permits

Permit Number	Permit Type	Date Opened	Reason
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Permit Number	Permit Type	Date Opened	Reason
20-00524	Miscellaneous	06/10/2020	REMOVE AND REPLACE SIX ANTENNAS
C20-022	CO Issued	04/02/2020	CERT OF COMPLETION DIESEL GENERATOR TO T-MOBILE
18-01195	Generator	12/06/2018	DIESEL GENERATOR TO T-MOBILE
17-00866	Roof	08/29/2017	STRIP AND REROOF
17-00367	Repair	05/03/2017	REPLACE 6 ANTENNAS
15-00959	Repair	09/11/2015	REPLACE ANTENNAS ON EXISTING CELL TOWER
15-00976	Electrical	09/11/2015	WIRE DIESEL FUEL PUMP
13-00231	Foundation	03/20/2013	FDNT UPGRADE FOR CELL TOWER @ LANDFILL
37005	Residential	07/29/2009	ANTENNA
07-39894	Electrical	11/07/2007	
39844	Unknown	10/25/2007	REPL LANDFILL COMPACTOR
37605	Remodel	02/21/2006	CANOPY CONSTRUCTION
34519	Electrical	02/04/2004	WIRING FOR CELL SITE
34420	Commercial New	12/23/2003	TELECOMMUNICATION ANTENNAS AND ASSOCIATED EQUIPMENT FOR T MOBILE

Information Published With Permission From The Assessor



19-B
1.03 Ac
#3327

2
6.3 Ac

25-C
2.06 Ac
#3295

25-B
2.06 Ac
#3273

25-A
5.43 Ac
#3239

25-2
2.06 Ac
#3235

54-T
8.71 Ac

9

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Received by C.URCH

OBTAIN PROOF OF DELIVERY

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FROM Jeff Barbadora
1800 W. Park Drive

WESTBOROUGH, MA, US, 01581

TO Town of Suffield, 1st Selectman's
Colin Moll - First Selectman
83 Mountain Road
SUFFIELD, CT, US, 06078

REFERENCE 799001.7680

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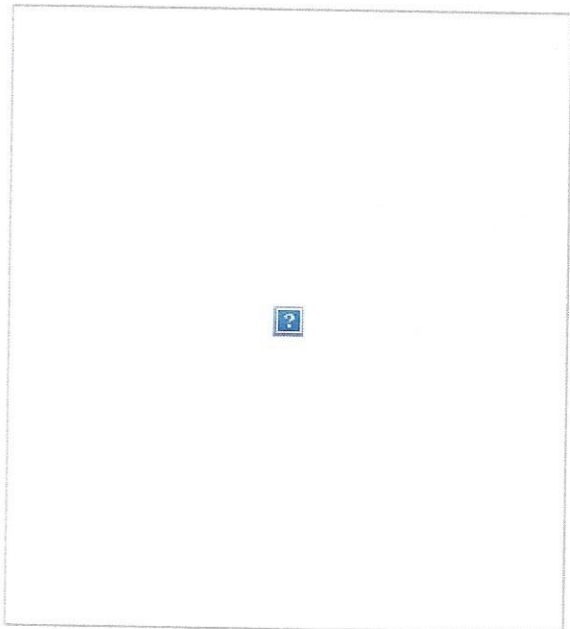
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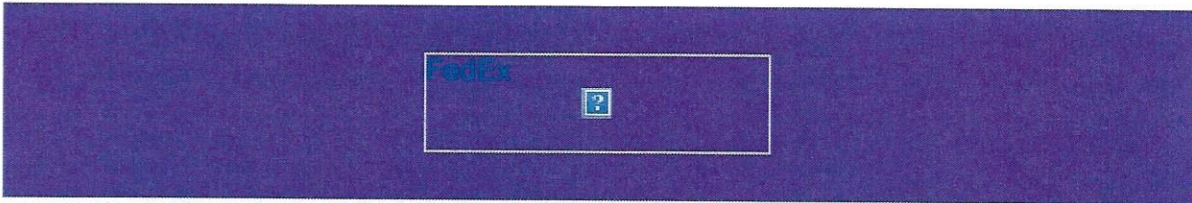
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Received by C.URCH

OBTAIN PROOF OF DELIVERY

TRACKING NUMBER [776857547280](#)

FROM Jeff Barbadora
1800 W. Park Drive

WESTBOROUGH, MA, US, 01581

TO Town of Suffield, Planning Dep
Bill Hawkins, Director Planning
83 Mountain Road
SUFFIELD, CT, US, 06078

REFERENCE 799001.7680

SHIPPER REFERENCE 799001.7680

SHIP DATE Fri 5/13/2022 05:31 PM

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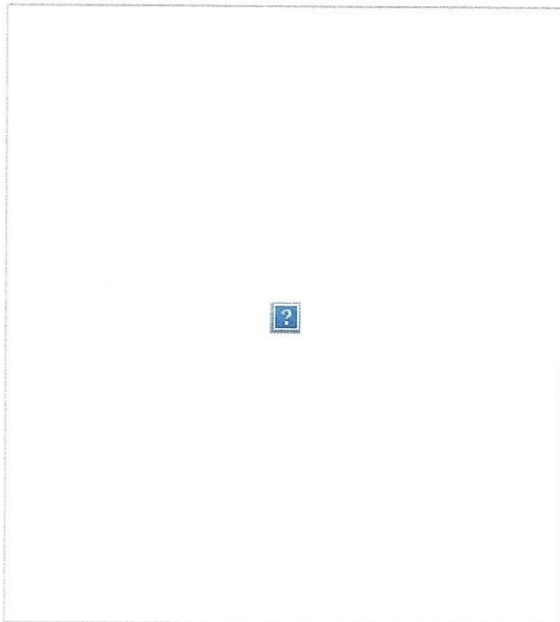
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Thank you for your business.



MORRISON HERSHFIELD

Morrison Hershfield
1455 Lincoln Parkway, Suite 500
Atlanta, GA 30346
(770) 379-8500

Date: April 06, 2022

Subject: Structural Analysis Report
Carrier Designation: T-Mobile Co-Locate
Site Number: CT11545A
Site Name: CT545/Crown Suffield
Crown Castle Designation: BU Number: 801485
Site Name: CT Suffield 1 CAC 801485
JDE Job Number: 709735
Work Order Number: 2097315
Order Number: 609060 Rev. 0
Engineering Firm Designation: Morrison Hershfield Project Number: CN9-727R1 / 2200039
Site Data: 2715 Mountain Rd., Suffield, Hartford County, CT 06093
Latitude 42° 0' 41.80", Longitude -72° 43' 43.60"
190.5 Foot – FWT Monopole Tower

Morrison Hershfield 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 – 70.3%

This analysis utilizes an ultimate 3-second gust wind speed of 115 mph as required by the 2018 Connecticut State Building Code. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Respectfully submitted by:

G. Lance Cooke, P.E. (CT License No. PEN.0028133)
Senior Engineer



Digitally signed by
G. Lance Cooke
Date: 2022.04.07
09:46:39-07'00'

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1) INTRODUCTION

This tower is a 190.5 ft monopole tower designed by FWT, Inc.

The tower was modified per reinforcement drawings prepared by Tower Engineering Professionals, Inc., in March of 2013. Modification consists of addition of concrete to the foundation. Per the post modification inspection completed by Tower Engineering Professionals, Inc., in March of 2013, modifications was properly installed and is considered in this analysis.

2) ANALYSIS CRITERIA

TIA-222 Revision:	TIA-222-H
Risk Category:	II
Wind Speed:	115 mph
Exposure Category:	C
Topographic Factor:	1
Ice Thickness:	1.5 in
Wind Speed with Ice:	50 mph
Service Wind Speed:	60 mph

Table 1 - Proposed Equipment Configuration

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
180.0	182.0	3	ericsson	AIR 6419 B41_TMO w/ Mount Pipe	3	1-5/8
		3	rfs/celwave	APXVAARR24_43-U-NA20 w/ Mount Pipe		
		3	ericsson	RADIO 4449 B71 B85A_T-MOBILE		
		3	ericsson	RADIO 4460 B2/B25 B66_TMO		
	180.0	1	-	T-Arm Mount [TA 701-3]		
		6	-	Miscellaneous [NA 509-1]		
		1	-	Miscellaneous [NA 507-1]		

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)
191.0	192.0	12	decibel	DB844H90-XY w/ Mount Pipe	12	1-5/8
	191.0	1	-	Platform Mount [LP 712-1]		
168.0	170.0	1	kmw communications	AM-X-CD-14-65-00T-RET w/ Mount Pipe	12 2 1 1	1-5/8 3/4 3/8 2C
		2	powerwave technologies	P65-17-XLH-RR w/ Mount Pipe		
		6	powerwave technologies	7770.00 w/ Mount Pipe		
		3	ericsson	RRUS-11		
		6	powerwave technologies	LGP21401		
		6	powerwave technologies	LGP21901		

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
168.0	170.0	1	raycap	DC6-48-60-18-8F	-	-
	168.0	1	-	Platform Mount [LP 303-1]		
160.0	160.0	6	commscope	SBNHH-1D65B w/ Mount Pipe	13	1-5/8
		3	samsung telecommunications	MT6407-77A w/ Mount Pipe		
		3	samsung telecommunications	RF4439D-25A		
		3	samsung telecommunications	RF4440D-13A		
		1	raycap	RVZDC-6627-PF-48_CCIV2		
		1	-	Platform Mount [LP 712-1]		

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Reference	Source
4-GEOTECHNICAL REPORTS	2240855	CCISITES
4-TOWER FOUNDATION DRAWINGS/DESIGN/SPECS	1118796	CCISITES
4-TOWER MANUFACTURER DRAWINGS	942443	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	3268394	CCISITES
4-POST-MODIFICATION INSPECTION	3770639	CCISITES

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) 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. Morrison Hershfield 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	190.5 - 143.17	Pole	TP27.778x14.75x0.25	1	-14.47	1293.66	62.3	Pass
L2	143.17 - 93.753	Pole	TP40.88x26.2917x0.375	2	-25.30	2854.11	55.9	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
L3	93.753 - 46.083	Pole	TP53.251x38.6629x0.375	3	-39.46	3726.63	63.7	Pass
L4	46.083 - 0	Pole	TP65.185x50.5971x0.375	4	-59.52	4738.33	70.3	Pass
							Summary	
						Pole (L4)	70.3	Pass
						Rating =	70.3	Pass

Table 5 - Tower Component Stresses vs. Capacity – LC7

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Anchor Rods	0	56.9	Pass
1	Base Plate		30.2	Pass
1	Base Foundation (Structure)	0	54.7	Pass
1	Base Foundation (Soil Interaction)		35.9	Pass

Structure Rating (max from all components) =	70.3%*
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Notes:

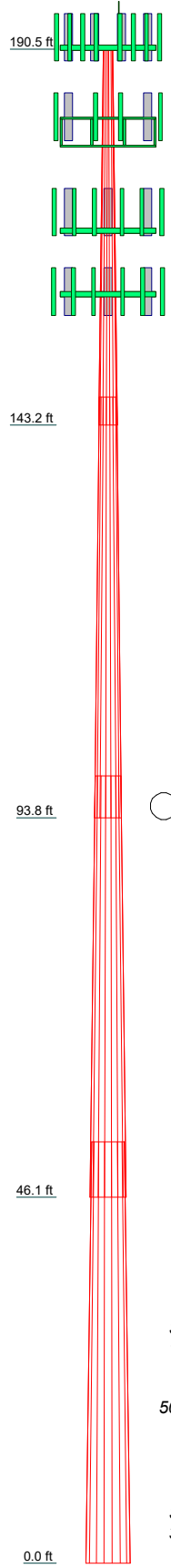
- 1) See additional documentation in "Appendix C – Additional Calculations" for calculations supporting the % capacity consumed.
- 2) *Rating per TIA-222-H, Section 15.5

4.1) Recommendations

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

APPENDIX A
TNXTOWER OUTPUT

Section	1	2	3	4	
Length (ft)	47.33	53.00	53.00	53.00	
Number of Sides	18	18	18	18	
Thickness (in)	0.2500	0.3750	0.3750	0.3750	
Socket Length (ft)	3.58	5.33	6.92	50.5971	
Top Dia (in)	14.7500	26.2917	38.6629	65.1850	
Bot Dia (in)	27.7780	40.8800	53.2510	65.1850	
Grade		A572-65			
Weight (K)	2.7	7.1	9.8	12.3	31.9

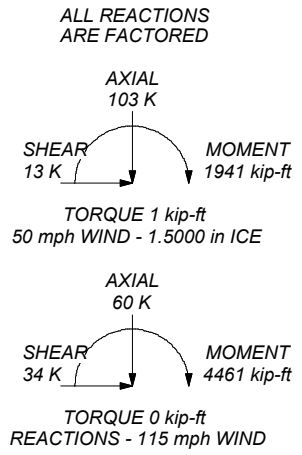



MATERIAL STRENGTH

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

TOWER DESIGN NOTES

1. Tower is located in Hartford County, Connecticut.
2. Tower designed for Exposure C to the TIA-222-H Standard.
3. Tower designed for a 115 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 50 mph basic wind with 1.50 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 0.00 ft
8. TOWER RATING: 70.3%



 <p>Morrison Hershfield Consulting Engineers</p>	<p>1455 Lincoln Parkway, Suite 500 Atlanta, GA 30346 Phone: (770) 379-8500 FAX: (770) 379-8501</p>		
	<p>Job: CN9-727R1 / 2200039</p>		
	<p>Project: 801485 / CT Suffield 1 CAC 801485</p>		
	<p>Client: Crown Castle USA</p>	<p>Drawn by: AP</p>	<p>App'd:</p>
	<p>Code: TIA-222-H</p>	<p>Date: 04/06/22</p>	<p>Scale: NTS</p>
<p>Path: C:\Users\Apoeta\Desktop\CN9-727R1_SAI\Analysis\CN9-727R1_BU_801485_WO_2097318.dwg</p>			
		<p>Dwg No. E-1</p>	

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 Hartford County, Connecticut.
- Tower base elevation above sea level: 371.00 ft.
- Basic wind speed of 115 mph.
- Risk Category II.
- Exposure Category C.
- Simplified Topographic Factor Procedure for wind speed-up calculations is used.
- Topographic Category: 1.
- Crest Height: 0.00 ft.
- Nominal ice thickness of 1.5000 in.
- Ice thickness is considered to increase with height.
- Ice density of 56 pcf.
- A wind speed of 50 mph is used in combination with ice.
- Temperature drop of 50 °F.
- Deflections calculated using a wind speed of 60 mph.
- 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 Retention 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 <p style="text-align: center; background-color: #e0e0e0; margin: 5px 0;">Poles</p> <ul style="list-style-type: none"> √ 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 |
|--|---|--|

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	190.50-143.17	47.33	3.58	18	14.7500	27.7780	0.2500	1.0000	A572-65 (65 ksi)
L2	143.17-93.75	53.00	5.33	18	26.2917	40.8800	0.3750	1.5000	A572-65 (65 ksi)
L3	93.75-46.08	53.00	6.92	18	38.6629	53.2510	0.3750	1.5000	A572-65 (65 ksi)
L4	46.08-0.00	53.00		18	50.5971	65.1850	0.3750	1.5000	A572-65

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
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(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	14.9390	11.5057	305.6247	5.1475	7.4930	40.7880	611.6515	5.7540	2.1560	8.624
	28.1680	21.8435	2091.2616	9.7724	14.1112	148.1985	4185.2749	10.9238	4.4489	17.796
L2	27.6409	30.8474	2617.6836	9.2004	13.3562	195.9900	5238.8117	15.4266	3.9673	10.58
	41.4528	48.2111	9993.1303	14.3793	20.7670	481.2015	19999.409	24.1101	6.5349	17.426
L3	40.6912	45.5722	8440.3578	13.5922	19.6408	429.7368	16891.821	22.7904	6.1447	16.386
	54.0146	62.9357	22230.612	18.7710	27.0515	821.7883	44490.475	31.4738	8.7122	23.232
L4	53.2530	59.7769	19048.496	17.8289	25.7033	741.0905	38122.058	29.8941	8.2451	21.987
	66.1327	77.1401	40935.651	23.0075	33.1140	1236.2045	81925.166	38.5774	10.8126	28.833

Tower Elevation ft	Gusset Area (per face) ft ²	Gusset Thickness in	Gusset Grade	Adjust. Factor A _r	Adjust. Factor A _r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontal in	Double Angle Stitch Bolt Spacing Redundants in
L1 190.50-143.17				1	1	1			
L2 143.17-93.75				1	1	1			
L3 93.75-46.08				1	1	1			
L4 46.08-0.00				1	1	1			

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf

Safety Line 3/8	A	No	Surface Ar (CaAa)	190.50 - 6.00	1	1	0.350	0.3750		0.22
Climbing Pegs	A	No	Surface Ar (CaAa)	190.50 - 6.00	1	1	0.300	0.7050		1.80
HCS 6X12 4AWG(1-5/8)	B	No	Surface Ar (CaAa)	180.00 - 3.00	1	1	-0.200	1.6600		2.40

HB158-21U6S24-xxM_TMO(1-5/8)	B	No	Surface Ar (CaAa)	180.00 - 3.00	2	1	-0.350	1.9960		2.50
CR-1873-PE(1-5/8)	B	No	Surface Ar (CaAa)	168.00 - 6.00	6	6	0.100	1.9800		0.86
FB-L98B-002-75000(3/8)	B	No	Surface Ar (CaAa)	168.00 - 6.00	1	1	0.080	0.0000		0.06
WR-VG86ST-BRD(3/4)	B	No	Surface Ar (CaAa)	168.00 - 6.00	2	2	0.080	0.0000		0.58
2" Conduit	B	No	Surface Ar (CaAa)	168.00 - 6.00	1	1	0.080	2.0000		2.80
LDF7-50A(1-5/8)	C	No	Surface Ar (CaAa)	160.00 - 6.00	5	5	-0.150	1.9800		0.82

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Componen t Type	Placement ft	Total Number		C_{AA} ft ² /ft	Weight plf

LDF7-50A(1-5/8)	B	No	No	Inside Pole	190.50 - 0.00	12	No Ice	0.00	0.82
							1/2" Ice	0.00	0.82
							1" Ice	0.00	0.82
							2" Ice	0.00	0.82

AVA7-50(1-5/8)	B	No	No	Inside Pole	168.00 - 6.00	6	No Ice	0.00	0.70
							1/2" Ice	0.00	0.70
							1" Ice	0.00	0.70
							2" Ice	0.00	0.70

LDF7-50A(1-5/8)	C	No	No	Inside Pole	160.00 - 6.00	6	No Ice	0.00	0.82
							1/2" Ice	0.00	0.82
							1" Ice	0.00	0.82
							2" Ice	0.00	0.82
HB158-1-08U8- S8J18(1-5/8)	C	No	No	Inside Pole	160.00 - 6.00	1	No Ice	0.00	1.30
							1/2" Ice	0.00	1.30
							1" Ice	0.00	1.30
							2" Ice	0.00	1.30

HB158-21U6S12- XXXM-01(1-5/8)	C	No	No	Inside Pole	160.00 - 6.00	1	No Ice	0.00	1.90
							1/2" Ice	0.00	1.90
							1" Ice	0.00	1.90
							2" Ice	0.00	1.90

Feed Line/Linear Appurtenances Section Areas

Tower Sectio n	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	190.50-143.17	A	0.000	0.000	5.112	0.000	0.10
		B	0.000	0.000	47.929	0.000	1.07
		C	0.000	0.000	16.662	0.000	0.21
L2	143.17-93.75	A	0.000	0.000	5.337	0.000	0.10
		B	0.000	0.000	86.658	0.000	1.51
		C	0.000	0.000	48.923	0.000	0.60
L3	93.75-46.08	A	0.000	0.000	5.148	0.000	0.10
		B	0.000	0.000	83.594	0.000	1.46
		C	0.000	0.000	47.193	0.000	0.58
L4	46.08-0.00	A	0.000	0.000	4.329	0.000	0.08
		B	0.000	0.000	71.386	0.000	1.31
		C	0.000	0.000	39.682	0.000	0.49

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Sectio n	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	190.50-143.17	A	1.497	0.000	0.000	33.458	0.000	0.45
		B		0.000	0.000	110.821	0.000	2.53
		C		0.000	0.000	27.127	0.000	0.49
L2	143.17-93.75	A	1.447	0.000	0.000	34.933	0.000	0.47
		B		0.000	0.000	197.522	0.000	3.98
		C		0.000	0.000	79.651	0.000	1.44
L3	93.75-46.08	A	1.373	0.000	0.000	32.742	0.000	0.43
		B		0.000	0.000	187.432	0.000	3.73
		C		0.000	0.000	76.238	0.000	1.36

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft ²	A_F ft ²	$C_A A_A$ In Face ft ²	$C_A A_A$ Out Face ft ²	Weight K
L4	46.08-0.00	A	1.231	0.000	0.000	26.343	0.000	0.34
		B		0.000	0.000	156.486	0.000	3.14
		C		0.000	0.000	63.362	0.000	1.11

Feed Line Center of Pressure

Section	Elevation ft	CP_x in	CP_z in	CP_x Ice in	CP_z Ice in
L1	190.50-143.17	4.1377	-0.3236	3.4235	-1.7629
L2	143.17-93.75	6.0571	1.2932	5.2751	-0.7862
L3	93.75-46.08	7.0595	1.5141	6.4100	-0.9069
L4	46.08-0.00	7.1290	1.4060	6.7665	-0.9974

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

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L1	2	Safety Line 3/8	143.17 - 190.50	1.0000	1.0000
L1	3	Climbing Pegs	143.17 - 190.50	1.0000	1.0000
L1	9	HCS 6X12 4AWG(1-5/8)	143.17 - 180.00	1.0000	1.0000
L1	11	HB158-21U6S24-xxM_TMO(1-5/8)	143.17 - 180.00	1.0000	1.0000
L1	14	CR-1873-PE(1-5/8)	143.17 - 168.00	1.0000	1.0000
L1	15	FB-L98B-002-75000(3/8)	143.17 - 168.00	1.0000	1.0000
L1	16	WR-VG86ST-BRD(3/4)	143.17 - 168.00	1.0000	1.0000
L1	17	2" Conduit	143.17 - 168.00	1.0000	1.0000
L1	21	LDF7-50A(1-5/8)	143.17 - 160.00	1.0000	1.0000
L2	2	Safety Line 3/8	93.75 - 143.17	1.0000	1.0000
L2	3	Climbing Pegs	93.75 - 143.17	1.0000	1.0000
L2	9	HCS 6X12 4AWG(1-5/8)	93.75 - 143.17	1.0000	1.0000
L2	11	HB158-21U6S24-xxM_TMO(1-5/8)	93.75 - 143.17	1.0000	1.0000
L2	14	CR-1873-PE(1-5/8)	93.75 - 143.17	1.0000	1.0000
L2	15	FB-L98B-002-75000(3/8)	93.75 - 143.17	1.0000	1.0000
L2	16	WR-VG86ST-BRD(3/4)	93.75 - 143.17	1.0000	1.0000
L2	17	2" Conduit	93.75 - 143.17	1.0000	1.0000
L2	21	LDF7-50A(1-5/8)	93.75 - 143.17	1.0000	1.0000
L3	2	Safety Line 3/8	46.08 - 93.75	1.0000	1.0000
L3	3	Climbing Pegs	46.08 - 93.75	1.0000	1.0000
L3	9	HCS 6X12 4AWG(1-5/8)	46.08 - 93.75	1.0000	1.0000
L3	11	HB158-21U6S24-	46.08 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L3	14	xxM_TMO(1-5/8) CR-1873-PE(1-5/8)	93.75 46.08 - 93.75	1.0000	1.0000
L3	15	FB-L98B-002-75000(3/8)	46.08 - 93.75	1.0000	1.0000
L3	16	WR-VG86ST-BRD(3/4)	46.08 - 93.75	1.0000	1.0000
L3	17	2" Conduit	46.08 - 93.75	1.0000	1.0000
L3	21	LDF7-50A(1-5/8)	46.08 - 93.75	1.0000	1.0000
L4	2	Safety Line 3/8	6.00 - 46.08	1.0000	1.0000
L4	3	Climbing Pegs	6.00 - 46.08	1.0000	1.0000
L4	9	HCS 6X12 4AWG(1-5/8)	3.00 - 46.08	1.0000	1.0000
L4	11	HB158-21U6S24-xxM_TMO(1-5/8)	3.00 - 46.08	1.0000	1.0000
L4	14	CR-1873-PE(1-5/8)	6.00 - 46.08	1.0000	1.0000
L4	15	FB-L98B-002-75000(3/8)	6.00 - 46.08	1.0000	1.0000
L4	16	WR-VG86ST-BRD(3/4)	6.00 - 46.08	1.0000	1.0000
L4	17	2" Conduit	6.00 - 46.08	1.0000	1.0000
L4	21	LDF7-50A(1-5/8)	6.00 - 46.08	1.0000	1.0000

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustmen t °	Placement ft	C _{AA} Front ft ²	C _{AA} Side ft ²	Weight K	
Lightning Rod 5/8" x 6'	B	From Leg	1.00 0.00 3.00	0.0000	190.50	No Ice	0.38	0.38	0.01
						1/2" Ice	0.99	0.99	0.01
						Ice	1.62	1.62	0.02
						1" Ice	2.46	2.46	0.05
						2" Ice			

(4) DB844H90-XY w/ Mount Pipe	A	From Leg	4.00 0.00 1.00	0.0000	191.00	No Ice	2.24	3.34	0.04
						1/2" Ice	2.61	3.73	0.07
						Ice	2.99	4.13	0.12
						1" Ice	3.78	4.97	0.23
						2" Ice			
(4) DB844H90-XY w/ Mount Pipe	B	From Leg	4.00 0.00 1.00	0.0000	191.00	No Ice	2.24	3.34	0.04
						1/2" Ice	2.61	3.73	0.07
						Ice	2.99	4.13	0.12
						1" Ice	3.78	4.97	0.23
						2" Ice			
(4) DB844H90-XY w/ Mount Pipe	C	From Leg	4.00 0.00 1.00	0.0000	191.00	No Ice	2.24	3.34	0.04
						1/2" Ice	2.61	3.73	0.07
						Ice	2.99	4.13	0.12
						1" Ice	3.78	4.97	0.23
						2" Ice			
Platform Mount [LP 712-1]	C	None		0.0000	191.00	No Ice	24.56	24.56	1.34
						1/2" Ice	27.92	27.92	1.91
						Ice	31.27	31.27	2.55
						1" Ice	37.98	37.98	3.97
						2" Ice			

APXVAARR24_43-U-NA20 w/ Mount Pipe	A	From Leg	4.00 0.00 2.00	0.0000	180.00	No Ice	14.69	6.87	0.19
						1/2" Ice	15.46	7.55	0.31
						Ice	16.23	8.25	0.46
						1" Ice	17.82	9.67	0.79
						2" Ice			
APXVAARR24_43-U-NA20 w/ Mount Pipe	B	From Leg	4.00 0.00 2.00	0.0000	180.00	No Ice	14.69	6.87	0.19
						1/2" Ice	15.46	7.55	0.31
						Ice	16.23	8.25	0.46
						2" Ice			

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _{AA} _{Front}	C _{AA} _{Side}	Weight
			Horz	Lateral					
							ft ²	ft ²	K
APXVAARR24_43-U-NA20 w/ Mount Pipe	C	From Leg	4.00	0.0000	180.00	1" Ice	17.82	9.67	0.79
						2" Ice			
						No Ice	14.69	6.87	0.19
						1/2" Ice	15.46	7.55	0.31
						Ice	16.23	8.25	0.46
6' x 2" Mount Pipe	A	From Leg	4.00	0.0000	180.00	1" Ice	17.82	9.67	0.79
						2" Ice			
						No Ice	1.43	1.43	0.02
						1/2" Ice	1.92	1.92	0.03
						Ice	2.29	2.29	0.05
6' x 2" Mount Pipe	B	From Leg	4.00	0.0000	180.00	1" Ice	3.06	3.06	0.09
						2" Ice			
						No Ice	1.43	1.43	0.02
						1/2" Ice	1.92	1.92	0.03
						Ice	2.29	2.29	0.05
6' x 2" Mount Pipe	C	From Leg	4.00	0.0000	180.00	1" Ice	3.06	3.06	0.09
						2" Ice			
						No Ice	1.43	1.43	0.02
						1/2" Ice	1.92	1.92	0.03
						Ice	2.29	2.29	0.05
(2) Miscellaneous [NA 509-1]	A	From Leg	2.00	0.0000	180.00	1" Ice	3.06	3.06	0.09
						2" Ice			
						No Ice	6.32	4.85	0.09
						1/2" Ice	7.79	6.36	0.14
						Ice	9.36	7.94	0.20
(2) Miscellaneous [NA 509-1]	B	From Leg	2.00	0.0000	180.00	1" Ice	12.81	11.32	0.36
						2" Ice			
						No Ice	6.32	4.85	0.09
						1/2" Ice	7.79	6.36	0.14
						Ice	9.36	7.94	0.20
(2) Miscellaneous [NA 509-1]	C	From Leg	2.00	0.0000	180.00	1" Ice	12.81	11.32	0.36
						2" Ice			
						No Ice	6.32	4.85	0.09
						1/2" Ice	7.79	6.36	0.14
						Ice	9.36	7.94	0.20
Miscellaneous [NA 507-1]	C	None	0.0000	180.00	1" Ice	11.66	11.66	0.66	
					2" Ice				
					No Ice	4.56	4.56	0.25	
					1/2" Ice	6.39	6.39	0.31	
					Ice	8.18	8.18	0.40	
(2) Side Arm Mount [SO 102-3]	C	None	0.0000	180.00	1" Ice	11.66	11.66	0.66	
					2" Ice				
					No Ice	3.60	3.60	0.07	
					1/2" Ice	4.18	4.18	0.11	
					Ice	4.75	4.75	0.14	
T-Arm Mount [TA 701-3]	C	None	0.0000	180.00	1" Ice	5.90	5.90	0.20	
					2" Ice				
					No Ice	23.94	23.94	1.09	
					1/2" Ice	30.04	30.04	1.48	
					Ice	36.16	36.16	1.95	
*** AIR 6419 B41_TMO w/ Mount Pipe	A	From Leg	4.00	0.0000	180.00	1" Ice	48.72	48.72	3.16
						2" Ice			
						No Ice	6.58	3.50	0.11
						1/2" Ice	7.06	3.90	0.16
						Ice	7.57	4.32	0.22
AIR 6419 B41_TMO w/ Mount Pipe	B	From Leg	4.00	0.0000	180.00	1" Ice	8.62	5.20	0.36
						2" Ice			
						No Ice	6.58	3.50	0.11
						1/2" Ice	7.06	3.90	0.16
						Ice	7.57	4.32	0.22
AIR 6419 B41_TMO w/ Mount Pipe	C	From Leg	4.00	0.0000	180.00	1" Ice	8.62	5.20	0.36
						2" Ice			
						No Ice	6.58	3.50	0.11
						1/2" Ice	7.06	3.90	0.16
						Ice	7.57	4.32	0.22

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C _{AA} Front ft ²	C _{AA} Side ft ²	Weight K
			2.00			Ice	7.57	4.32	0.22
						1" Ice	8.62	5.20	0.36
						2" Ice			
RADIO 4449 B71 B85A_T-MOBILE	A	From Leg	4.00 0.00 2.00	0.0000	180.00	No Ice	1.97	1.59	0.07
						1/2"	2.15	1.75	0.09
						Ice	2.33	1.92	0.12
						1" Ice	2.72	2.28	0.17
						2" Ice			
RADIO 4449 B71 B85A_T-MOBILE	B	From Leg	4.00 0.00 2.00	0.0000	180.00	No Ice	1.97	1.59	0.07
						1/2"	2.15	1.75	0.09
						Ice	2.33	1.92	0.12
						1" Ice	2.72	2.28	0.17
						2" Ice			
RADIO 4449 B71 B85A_T-MOBILE	C	From Leg	4.00 0.00 2.00	0.0000	180.00	No Ice	1.97	1.59	0.07
						1/2"	2.15	1.75	0.09
						Ice	2.33	1.92	0.12
						1" Ice	2.72	2.28	0.17
						2" Ice			
RADIO 4460 B2/B25 B66_TMO	A	From Leg	4.00 0.00 2.00	0.0000	180.00	No Ice	2.14	1.69	0.11
						1/2"	2.32	1.85	0.13
						Ice	2.51	2.02	0.16
						1" Ice	2.91	2.39	0.22
						2" Ice			
RADIO 4460 B2/B25 B66_TMO	B	From Leg	4.00 0.00 2.00	0.0000	180.00	No Ice	2.14	1.69	0.11
						1/2"	2.32	1.85	0.13
						Ice	2.51	2.02	0.16
						1" Ice	2.91	2.39	0.22
						2" Ice			
RADIO 4460 B2/B25 B66_TMO	C	From Leg	4.00 0.00 2.00	0.0000	180.00	No Ice	2.14	1.69	0.11
						1/2"	2.32	1.85	0.13
						Ice	2.51	2.02	0.16
						1" Ice	2.91	2.39	0.22
						2" Ice			

P65-17-XLH-RR w/ Mount Pipe	A	From Leg	4.00 0.00 2.00	0.0000	168.00	No Ice	7.48	5.29	0.09
						1/2"	8.17	5.96	0.17
						Ice	8.88	6.64	0.26
						1" Ice	10.33	8.05	0.49
						2" Ice			
P65-17-XLH-RR w/ Mount Pipe	B	From Leg	4.00 0.00 2.00	0.0000	168.00	No Ice	7.48	5.29	0.09
						1/2"	8.17	5.96	0.17
						Ice	8.88	6.64	0.26
						1" Ice	10.33	8.05	0.49
						2" Ice			
AM-X-CD-14-65-00T-RET w/ Mount Pipe	C	From Leg	4.00 0.00 2.00	0.0000	168.00	No Ice	2.99	2.14	0.05
						1/2"	3.30	2.43	0.10
						Ice	3.62	2.73	0.14
						1" Ice	4.28	3.36	0.27
						2" Ice			
(2) 7770.00 w/ Mount Pipe	A	From Leg	4.00 0.00 2.00	0.0000	168.00	No Ice	5.75	4.25	0.06
						1/2"	6.18	5.01	0.10
						Ice	6.61	5.71	0.16
						1" Ice	7.49	7.16	0.29
						2" Ice			
(2) 7770.00 w/ Mount Pipe	B	From Leg	4.00 0.00 2.00	0.0000	168.00	No Ice	5.75	4.25	0.06
						1/2"	6.18	5.01	0.10
						Ice	6.61	5.71	0.16
						1" Ice	7.49	7.16	0.29
						2" Ice			
(2) 7770.00 w/ Mount Pipe	C	From Leg	4.00 0.00 2.00	0.0000	168.00	No Ice	5.75	4.25	0.06
						1/2"	6.18	5.01	0.10
						Ice	6.61	5.71	0.16
						1" Ice	7.49	7.16	0.29
						2" Ice			
RRUS-11	A	From Leg	4.00	0.0000	168.00	No Ice	2.78	1.19	0.05

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _A A _{Front}	C _A A _{Side}	Weight	
			Horz	Lateral						Vert
			ft	ft	°	ft	ft ²	ft ²	K	
			0.00				1/2"	2.99	1.33	0.07
			2.00				Ice	3.21	1.49	0.09
							1" Ice	3.66	1.83	0.15
							2" Ice			
RRUS-11	B	From Leg	4.00		0.0000	168.00	No Ice	2.78	1.19	0.05
			0.00				1/2"	2.99	1.33	0.07
			2.00				Ice	3.21	1.49	0.09
							1" Ice	3.66	1.83	0.15
							2" Ice			
RRUS-11	C	From Leg	4.00		0.0000	168.00	No Ice	2.78	1.19	0.05
			0.00				1/2"	2.99	1.33	0.07
			2.00				Ice	3.21	1.49	0.09
							1" Ice	3.66	1.83	0.15
							2" Ice			
(2) LGP21401	A	From Leg	4.00		0.0000	168.00	No Ice	1.10	0.21	0.01
			0.00				1/2"	1.24	0.27	0.02
			2.00				Ice	1.38	0.35	0.03
							1" Ice	1.69	0.52	0.05
							2" Ice			
(2) LGP21401	B	From Leg	4.00		0.0000	168.00	No Ice	1.10	0.21	0.01
			0.00				1/2"	1.24	0.27	0.02
			2.00				Ice	1.38	0.35	0.03
							1" Ice	1.69	0.52	0.05
							2" Ice			
(2) LGP21401	C	From Leg	4.00		0.0000	168.00	No Ice	1.10	0.21	0.01
			0.00				1/2"	1.24	0.27	0.02
			2.00				Ice	1.38	0.35	0.03
							1" Ice	1.69	0.52	0.05
							2" Ice			
(2) LGP21901	A	From Leg	4.00		0.0000	168.00	No Ice	0.23	0.16	0.01
			0.00				1/2"	0.29	0.21	0.01
			2.00				Ice	0.36	0.28	0.01
							1" Ice	0.53	0.42	0.02
							2" Ice			
(2) LGP21901	B	From Leg	4.00		0.0000	168.00	No Ice	0.23	0.16	0.01
			0.00				1/2"	0.29	0.21	0.01
			2.00				Ice	0.36	0.28	0.01
							1" Ice	0.53	0.42	0.02
							2" Ice			
(2) LGP21901	C	From Leg	4.00		0.0000	168.00	No Ice	0.23	0.16	0.01
			0.00				1/2"	0.29	0.21	0.01
			2.00				Ice	0.36	0.28	0.01
							1" Ice	0.53	0.42	0.02
							2" Ice			
DC6-48-60-18-8F	A	From Leg	1.00		0.0000	168.00	No Ice	0.92	0.92	0.02
			0.00				1/2"	1.46	1.46	0.04
			2.00				Ice	1.64	1.64	0.06
							1" Ice	2.04	2.04	0.11
							2" Ice			
Platform Mount [LP 303-1]	C	None			0.0000	168.00	No Ice	14.69	14.69	1.25
							1/2"	18.01	18.01	1.57
							Ice	21.34	21.34	1.94
							1" Ice	28.08	28.08	2.85
							2" Ice			

(2) SBNHH-1D65B w/ Mount Pipe	A	From Leg	4.00		0.0000	160.00	No Ice	4.09	3.30	0.07
			0.00				1/2"	4.49	3.68	0.13
			0.00				Ice	4.89	4.07	0.20
							1" Ice	5.72	4.87	0.39
							2" Ice			
(2) SBNHH-1D65B w/ Mount Pipe	B	From Leg	4.00		0.0000	160.00	No Ice	4.09	3.30	0.07
			0.00				1/2"	4.49	3.68	0.13
			0.00				Ice	4.89	4.07	0.20
							1" Ice	5.72	4.87	0.39
							2" Ice			

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
(2) SBNHH-1D65B w/ Mount Pipe	C	From Leg	4.00	0.0000	160.00	No Ice	4.09	3.30	0.07
			0.00			1/2"	4.49	3.68	0.13
			0.00			Ice	4.89	4.07	0.20
						1" Ice	5.72	4.87	0.39
6' x 2" Mount Pipe	A	From Leg	4.00	0.0000	160.00	No Ice	1.43	1.43	0.02
			0.00			1/2"	1.92	1.92	0.03
			0.00			Ice	2.29	2.29	0.05
						1" Ice	3.06	3.06	0.09
6' x 2" Mount Pipe	B	From Leg	4.00	0.0000	160.00	No Ice	1.43	1.43	0.02
			0.00			1/2"	1.92	1.92	0.03
			0.00			Ice	2.29	2.29	0.05
						1" Ice	3.06	3.06	0.09
6' x 2" Mount Pipe	C	From Leg	4.00	0.0000	160.00	No Ice	1.43	1.43	0.02
			0.00			1/2"	1.92	1.92	0.03
			0.00			Ice	2.29	2.29	0.05
						1" Ice	3.06	3.06	0.09
Platform Mount [LP 712-1]	C	None		0.0000	160.00	No Ice	24.56	24.56	1.34
						1/2"	27.92	27.92	1.91
						Ice	31.27	31.27	2.55
						1" Ice	37.98	37.98	3.97
*** MT6407-77A w/ Mount Pipe	A	From Leg	4.00	0.0000	160.00	No Ice	4.91	2.68	0.10
			0.00			1/2"	5.26	3.14	0.14
			0.00			Ice	5.61	3.62	0.18
						1" Ice	6.36	4.63	0.29
MT6407-77A w/ Mount Pipe	B	From Leg	4.00	0.0000	160.00	No Ice	4.91	2.68	0.10
			0.00			1/2"	5.26	3.14	0.14
			0.00			Ice	5.61	3.62	0.18
						1" Ice	6.36	4.63	0.29
MT6407-77A w/ Mount Pipe	C	From Leg	4.00	0.0000	160.00	No Ice	4.91	2.68	0.10
			0.00			1/2"	5.26	3.14	0.14
			0.00			Ice	5.61	3.62	0.18
						1" Ice	6.36	4.63	0.29
RF4439D-25A	A	From Leg	4.00	0.0000	160.00	No Ice	1.87	1.25	0.07
			0.00			1/2"	2.03	1.39	0.09
			0.00			Ice	2.21	1.54	0.11
						1" Ice	2.59	1.87	0.17
RF4439D-25A	B	From Leg	4.00	0.0000	160.00	No Ice	1.87	1.25	0.07
			0.00			1/2"	2.03	1.39	0.09
			0.00			Ice	2.21	1.54	0.11
						1" Ice	2.59	1.87	0.17
RF4439D-25A	C	From Leg	4.00	0.0000	160.00	No Ice	1.87	1.25	0.07
			0.00			1/2"	2.03	1.39	0.09
			0.00			Ice	2.21	1.54	0.11
						1" Ice	2.59	1.87	0.17
RF4440D-13A	A	From Leg	4.00	0.0000	160.00	No Ice	1.87	1.13	0.07
			0.00			1/2"	2.03	1.27	0.09
			0.00			Ice	2.21	1.41	0.11
						1" Ice	2.59	1.72	0.16
RF4440D-13A	B	From Leg	4.00	0.0000	160.00	No Ice	1.87	1.13	0.07
			0.00			1/2"	2.03	1.27	0.09
			0.00			Ice	2.21	1.41	0.11
						1" Ice	2.59	1.72	0.16

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustmen t °	Placement ft	C _{AA} Front ft ²	C _{AA} Side ft ²	Weight K	
RF4440D-13A	C	From Leg	4.00 0.00 0.00	0.0000	160.00	2" Ice			
						No Ice	1.87	1.13	0.07
						1/2"	2.03	1.27	0.09
						Ice	2.21	1.41	0.11
						1" Ice	2.59	1.72	0.16
RVZDC-6627-PF-48_CCIV2	C	From Leg	4.00 0.00 0.00	0.0000	160.00	2" Ice			
						No Ice	4.06	3.10	0.03
						1/2"	4.32	3.34	0.07
						Ice	4.58	3.58	0.11
						1" Ice	5.14	4.09	0.20
6' x 2" Mount Pipe	A	From Leg	4.00 0.00 0.00	0.0000	160.00	2" Ice			
						No Ice	1.43	1.43	0.02
						1/2"	1.92	1.92	0.03
						Ice	2.29	2.29	0.05
						1" Ice	3.06	3.06	0.09
6' x 2" Mount Pipe	B	From Leg	4.00 0.00 0.00	0.0000	160.00	2" Ice			
						No Ice	1.43	1.43	0.02
						1/2"	1.92	1.92	0.03
						Ice	2.29	2.29	0.05
						1" Ice	3.06	3.06	0.09
6' x 2" Mount Pipe	C	From Leg	4.00 0.00 0.00	0.0000	160.00	2" Ice			
						No Ice	1.43	1.43	0.02
						1/2"	1.92	1.92	0.03
						Ice	2.29	2.29	0.05
						1" Ice	3.06	3.06	0.09

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

Comb. No.	Description
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	190.5 - 143.17	Pole	Max Tension	21	0.00	-0.00	-0.00
			Max. Compression	26	-37.31	-2.10	1.26
			Max. Mx	8	-14.55	-521.26	0.03
			Max. My	2	-14.65	-0.23	513.20
			Max. Vy	8	18.77	-521.26	0.03
			Max. Vx	2	-18.37	-0.23	513.20
			Max. Torque	32			-1.15
			Max Tension	1	0.00	0.00	0.00
L2	143.17 - 93.753	Pole	Max. Compression	26	-54.26	-6.49	2.86
			Max. Mx	8	-25.37	-1526.89	0.18
			Max. My	2	-25.48	-1.04	1486.13
			Max. Vy	8	23.56	-1526.89	0.18
			Max. Vx	2	-22.58	-1.04	1486.13
			Max. Torque	32			-1.15
			Max Tension	1	0.00	0.00	0.00
			L3	93.753 - 46.083	Pole	Max. Compression	26
Max. Mx	8	-39.50				-2724.78	0.47
Max. My	2	-39.56				-2.20	2633.05
Max. Vy	8	28.30				-2724.78	0.47
Max. Vx	2	-27.17				-2.20	2633.05
Max. Torque	38						1.15
Max Tension	1	0.00				0.00	0.00
L4	46.083 - 0	Pole				Max. Compression	26
			Max. Mx	8	-59.52	-4360.71	0.89
			Max. My	2	-59.52	-3.70	4207.98
			Max. Vy	8	33.10	-4360.71	0.89
			Max. Vx	2	-31.99	-3.70	4207.98
			Max. Torque	38			1.15
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-102.94	-17.60	6.72

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	30	102.94	-12.93	0.03
	Max. H _x	21	44.66	33.06	0.01
	Max. H _z	3	44.66	0.01	31.95
	Max. M _x	2	4207.98	0.01	31.95
	Max. M _z	8	4360.71	-33.06	-0.01
	Max. Torsion	38	1.15	6.44	11.15
	Min. Vert	19	44.66	27.66	-15.97
	Min. H _x	9	44.66	-33.06	-0.01
	Min. H _z	15	44.66	-0.01	-31.95
	Min. M _x	14	-4203.55	-0.01	-31.95
	Min. M _z	20	-4350.69	33.06	0.01
	Min. Torsion	32	-1.15	-6.44	-11.15

Tower Mast Reaction Summary

Load Combination	Vertical K	Shear _x K	Shear _z K	Overturning Moment, M _x kip-ft	Overturning Moment, M _z kip-ft	Torque kip-ft
Dead Only	49.62	0.00	0.00	-1.77	-4.02	0.00
1.2 Dead+1.0 Wind 0 deg - No Ice	59.54	-0.01	-31.95	-4207.98	-3.70	0.03
0.9 Dead+1.0 Wind 0 deg - No Ice	44.66	-0.01	-31.95	-4143.84	-2.41	0.03
1.2 Dead+1.0 Wind 30 deg - No Ice	59.54	15.97	-27.67	-3643.86	-2105.99	0.00
0.9 Dead+1.0 Wind 30 deg - No Ice	44.66	15.97	-27.67	-3588.27	-2072.95	0.00
1.2 Dead+1.0 Wind 60 deg - No Ice	59.54	27.66	-15.97	-2103.95	-3645.33	-0.03
0.9 Dead+1.0 Wind 60 deg - No Ice	44.66	27.66	-15.97	-2071.63	-3589.04	-0.03
1.2 Dead+1.0 Wind 90 deg - No Ice	59.54	33.06	0.01	-0.89	-4360.71	-0.05
0.9 Dead+1.0 Wind 90 deg - No Ice	44.66	33.06	0.01	-0.34	-4293.87	-0.05
1.2 Dead+1.0 Wind 120 deg - No Ice	59.54	29.23	16.88	2227.66	-3864.65	-0.06
0.9 Dead+1.0 Wind 120 deg - No Ice	44.66	29.23	16.88	2194.74	-3805.35	-0.06
1.2 Dead+1.0 Wind 150 deg - No Ice	59.54	15.98	27.67	3640.74	-2108.30	-0.05
0.9 Dead+1.0 Wind 150 deg - No Ice	44.66	15.98	27.67	3586.29	-2075.21	-0.05
1.2 Dead+1.0 Wind 180 deg - No Ice	59.54	0.01	31.95	4203.55	-6.37	-0.03
0.9 Dead+1.0 Wind 180 deg - No Ice	44.66	0.01	31.95	4140.57	-5.03	-0.03
1.2 Dead+1.0 Wind 210 deg - No Ice	59.54	-15.97	27.67	3639.44	2095.94	-0.00
0.9 Dead+1.0 Wind 210 deg - No Ice	44.66	-15.97	27.67	3585.00	2065.52	-0.00
1.2 Dead+1.0 Wind 240 deg - No Ice	59.54	-27.66	15.97	2099.52	3635.30	0.03
0.9 Dead+1.0 Wind 240 deg - No Ice	44.66	-27.66	15.97	2068.36	3581.62	0.03
1.2 Dead+1.0 Wind 270 deg - No Ice	59.54	-33.06	-0.01	-3.56	4350.69	0.05
0.9 Dead+1.0 Wind 270 deg - No Ice	44.66	-33.06	-0.01	-2.95	4286.47	0.05
1.2 Dead+1.0 Wind 300 deg - No Ice	59.54	-29.23	-16.88	-2232.13	3854.61	0.06

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 300 deg - No Ice	44.66	-29.23	-16.88	-2198.03	3797.93	0.06
1.2 Dead+1.0 Wind 330 deg - No Ice	59.54	-15.98	-27.67	-3645.20	2098.23	0.05
0.9 Dead+1.0 Wind 330 deg - No Ice	44.66	-15.98	-27.67	-3589.57	2067.77	0.05
1.2 Dead+1.0 Ice+1.0 Temp	102.94	0.00	-0.00	-6.72	-17.60	0.00
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	102.94	0.03	-12.89	-1920.67	-22.65	-0.99
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	102.94	6.49	-11.18	-1666.67	-981.74	-0.57
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	102.94	11.21	-6.47	-967.93	-1682.52	0.01
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	102.94	12.93	-0.03	-11.66	-1937.26	0.58
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	102.94	11.18	6.42	945.93	-1677.69	1.00
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	102.94	6.44	11.15	1648.26	-973.34	1.15
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	102.94	-0.03	12.89	1907.13	-12.93	0.99
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	102.94	-6.49	11.18	1653.15	946.20	0.57
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	102.94	-11.21	6.47	954.39	1647.03	-0.01
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	102.94	-12.93	0.03	-1.93	1901.76	-0.58
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	102.94	-11.18	-6.42	-959.55	1642.15	-1.00
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	102.94	-6.44	-11.15	-1661.85	937.76	-1.15
Dead+Wind 0 deg - Service	49.62	-0.00	-8.19	-1071.37	-3.82	0.01
Dead+Wind 30 deg - Service	49.62	4.09	-7.09	-927.91	-538.44	-0.00
Dead+Wind 60 deg - Service	49.62	7.09	-4.09	-536.31	-929.89	-0.01
Dead+Wind 90 deg - Service	49.62	8.48	0.00	-1.50	-1111.97	-0.01
Dead+Wind 120 deg - Service	49.62	7.49	4.33	565.35	-985.89	-0.02
Dead+Wind 150 deg - Service	49.62	4.10	7.10	924.57	-539.02	-0.01
Dead+Wind 180 deg - Service	49.62	0.00	8.19	1067.69	-4.50	-0.01
Dead+Wind 210 deg - Service	49.62	-4.09	7.09	924.23	530.12	0.00
Dead+Wind 240 deg - Service	49.62	-7.09	4.09	532.63	921.57	0.01
Dead+Wind 270 deg - Service	49.62	-8.48	-0.00	-2.18	1103.65	0.01
Dead+Wind 300 deg - Service	49.62	-7.49	-4.33	-569.03	977.57	0.02
Dead+Wind 330 deg - Service	49.62	-4.10	-7.10	-928.25	530.70	0.01

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	0.00	-49.62	0.00	-0.00	49.62	0.00	0.000%
2	-0.01	-59.54	-31.95	0.01	59.54	31.95	0.000%
3	-0.01	-44.66	-31.95	0.01	44.66	31.95	0.000%
4	15.97	-59.54	-27.67	-15.97	59.54	27.67	0.000%
5	15.97	-44.66	-27.67	-15.97	44.66	27.67	0.000%
6	27.66	-59.54	-15.97	-27.66	59.54	15.97	0.000%
7	27.66	-44.66	-15.97	-27.66	44.66	15.97	0.000%
8	33.06	-59.54	0.01	-33.06	59.54	-0.01	0.000%
9	33.06	-44.66	0.01	-33.06	44.66	-0.01	0.000%

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
10	29.23	-59.54	16.88	-29.23	59.54	-16.88	0.000%
11	29.23	-44.66	16.88	-29.23	44.66	-16.88	0.000%
12	15.98	-59.54	27.67	-15.98	59.54	-27.67	0.000%
13	15.98	-44.66	27.67	-15.98	44.66	-27.67	0.000%
14	0.01	-59.54	31.95	-0.01	59.54	-31.95	0.000%
15	0.01	-44.66	31.95	-0.01	44.66	-31.95	0.000%
16	-15.97	-59.54	27.67	15.97	59.54	-27.67	0.000%
17	-15.97	-44.66	27.67	15.97	44.66	-27.67	0.000%
18	-27.66	-59.54	15.97	27.66	59.54	-15.97	0.000%
19	-27.66	-44.66	15.97	27.66	44.66	-15.97	0.000%
20	-33.06	-59.54	-0.01	33.06	59.54	0.01	0.000%
21	-33.06	-44.66	-0.01	33.06	44.66	0.01	0.000%
22	-29.23	-59.54	-16.88	29.23	59.54	16.88	0.000%
23	-29.23	-44.66	-16.88	29.23	44.66	16.88	0.000%
24	-15.98	-59.54	-27.67	15.98	59.54	27.67	0.000%
25	-15.98	-44.66	-27.67	15.98	44.66	27.67	0.000%
26	0.00	-102.94	0.00	-0.00	102.94	0.00	0.000%
27	0.03	-102.94	-12.89	-0.03	102.94	12.89	0.000%
28	6.49	-102.94	-11.18	-6.49	102.94	11.18	0.000%
29	11.21	-102.94	-6.47	-11.21	102.94	6.47	0.000%
30	12.92	-102.94	-0.03	-12.93	102.94	0.03	0.000%
31	11.18	-102.94	6.42	-11.18	102.94	-6.42	0.000%
32	6.44	-102.94	11.15	-6.44	102.94	-11.15	0.000%
33	-0.03	-102.94	12.89	0.03	102.94	-12.89	0.000%
34	-6.49	-102.94	11.18	6.49	102.94	-11.18	0.000%
35	-11.21	-102.94	6.47	11.21	102.94	-6.47	0.000%
36	-12.92	-102.94	0.03	12.93	102.94	-0.03	0.000%
37	-11.18	-102.94	-6.42	11.18	102.94	6.42	0.000%
38	-6.44	-102.94	-11.15	6.44	102.94	11.15	0.000%
39	-0.00	-49.62	-8.19	0.00	49.62	8.19	0.000%
40	4.09	-49.62	-7.09	-4.09	49.62	7.09	0.000%
41	7.09	-49.62	-4.09	-7.09	49.62	4.09	0.000%
42	8.48	-49.62	0.00	-8.48	49.62	-0.00	0.000%
43	7.49	-49.62	4.33	-7.49	49.62	-4.33	0.000%
44	4.10	-49.62	7.10	-4.10	49.62	-7.10	0.000%
45	0.00	-49.62	8.19	-0.00	49.62	-8.19	0.000%
46	-4.09	-49.62	7.09	4.09	49.62	-7.09	0.000%
47	-7.09	-49.62	4.09	7.09	49.62	-4.09	0.000%
48	-8.48	-49.62	-0.00	8.48	49.62	0.00	0.000%
49	-7.49	-49.62	-4.33	7.49	49.62	4.33	0.000%
50	-4.10	-49.62	-7.10	4.10	49.62	7.10	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	5	0.00000001	0.00002456
3	Yes	4	0.00000001	0.00072376
4	Yes	6	0.00000001	0.00019803
5	Yes	6	0.00000001	0.00006364
6	Yes	6	0.00000001	0.00019798
7	Yes	6	0.00000001	0.00006363
8	Yes	5	0.00000001	0.00002336
9	Yes	4	0.00000001	0.00074028
10	Yes	6	0.00000001	0.00021620
11	Yes	6	0.00000001	0.00006795
12	Yes	6	0.00000001	0.00019821
13	Yes	6	0.00000001	0.00006371
14	Yes	5	0.00000001	0.00002711
15	Yes	4	0.00000001	0.00072872
16	Yes	6	0.00000001	0.00019683
17	Yes	6	0.00000001	0.00006338
18	Yes	6	0.00000001	0.00019683
19	Yes	6	0.00000001	0.00006337
20	Yes	5	0.00000001	0.00002523

21	Yes	4	0.00000001	0.00074289
22	Yes	6	0.00000001	0.00021639
23	Yes	6	0.00000001	0.00006806
24	Yes	6	0.00000001	0.00019726
25	Yes	6	0.00000001	0.00006345
26	Yes	4	0.00000001	0.00009199
27	Yes	6	0.00000001	0.00026702
28	Yes	6	0.00000001	0.00057087
29	Yes	6	0.00000001	0.00057528
30	Yes	6	0.00000001	0.00026836
31	Yes	6	0.00000001	0.00057206
32	Yes	6	0.00000001	0.00055306
33	Yes	6	0.00000001	0.00026519
34	Yes	6	0.00000001	0.00055669
35	Yes	6	0.00000001	0.00055254
36	Yes	6	0.00000001	0.00026380
37	Yes	6	0.00000001	0.00054509
38	Yes	6	0.00000001	0.00056375
39	Yes	4	0.00000001	0.00013639
40	Yes	4	0.00000001	0.00078700
41	Yes	4	0.00000001	0.00078652
42	Yes	4	0.00000001	0.00014343
43	Yes	4	0.00000001	0.00089985
44	Yes	4	0.00000001	0.00078522
45	Yes	4	0.00000001	0.00013562
46	Yes	4	0.00000001	0.00076587
47	Yes	4	0.00000001	0.00076595
48	Yes	4	0.00000001	0.00014167
49	Yes	4	0.00000001	0.00090030
50	Yes	4	0.00000001	0.00077140

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	190.5 - 143.17	39.824	43	2.1381	0.0006
L2	146.753 - 93.753	22.016	43	1.5965	0.0001
L3	99.083 - 46.083	9.305	43	0.9485	0.0000
L4	53 - 0	2.532	43	0.4477	0.0000

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
191.00	(4) DB844H90-XY w/ Mount Pipe	43	39.824	2.1381	0.0006	26061
190.50	Lightning Rod 5/8" x 6'	43	39.824	2.1381	0.0006	26061
180.00	APXVAARR24_43-U-NA20 w/ Mount Pipe	43	35.259	2.0127	0.0005	12410
168.00	P65-17-XLH-RR w/ Mount Pipe	43	30.178	1.8672	0.0003	5790
160.00	(2) SBNHH-1D65B w/ Mount Pipe	43	26.947	1.7677	0.0002	4271

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	190.5 - 143.17	156.190	10	8.4112	0.0096
L2	146.753 - 93.753	86.466	10	6.2828	0.0062
L3	99.083 - 46.083	36.560	10	3.7310	0.0021
L4	53 - 0	9.947	10	1.7597	0.0007

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
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Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
191.00	(4) DB844H90-XY w/ Mount Pipe	10	156.190	8.4112	0.0096	6890
190.50	Lightning Rod 5/8" x 6'	10	156.190	8.4112	0.0096	6890
180.00	APXVAARR24_43-U-NA20 w/ Mount Pipe	10	138.323	7.9186	0.0088	3279
168.00	P65-17-XLH-RR w/ Mount Pipe	10	118.435	7.3471	0.0079	1527
160.00	(2) SBNHH-1D65B w/ Mount Pipe	10	105.785	6.9563	0.0073	1124

Compression Checks

Pole Design Data

Section No.	Elevation ft	Size	L ft	L _u ft	KI/r	A in ²	P _u K	φP _n K	Ratio P _u / φP _n
L1	190.5 - 143.17 (1)	TP27.778x14.75x0.25	47.33	0.00	0.0	21.060 9	-14.47	1232.06	0.012
L2	143.17 - 93.753 (2)	TP40.88x26.2917x0.375	53.00	0.00	0.0	46.464 9	-25.30	2718.20	0.009
L3	93.753 - 46.083 (3)	TP53.251x38.6629x0.375	53.00	0.00	0.0	60.669 6	-39.46	3549.17	0.011
L4	46.083 - 0 (4)	TP65.185x50.5971x0.375	53.00	0.00	0.0	77.140 1	-59.52	4512.70	0.013

Pole Bending Design Data

Section No.	Elevation ft	Size	M _{ux} kip-ft	φM _{nx} kip-ft	Ratio M _{ux} / φM _{nx}	M _{uy} kip-ft	φM _{ny} kip-ft	Ratio M _{uy} / φM _{ny}
L1	190.5 - 143.17 (1)	TP27.778x14.75x0.25	529.93	828.94	0.639	0.00	828.94	0.000
L2	143.17 - 93.753 (2)	TP40.88x26.2917x0.375	1560.11	2703.68	0.577	0.00	2703.68	0.000
L3	93.753 - 46.083 (3)	TP53.251x38.6629x0.375	2787.62	4242.49	0.657	0.00	4242.49	0.000
L4	46.083 - 0 (4)	TP65.185x50.5971x0.375	4460.72	6161.17	0.724	0.00	6161.17	0.000

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V _u K	φV _n K	Ratio V _u / φV _n	Actual T _u kip-ft	φT _n kip-ft	Ratio T _u / φT _n
L1	190.5 - 143.17 (1)	TP27.778x14.75x0.25	19.19	369.62	0.052	0.06	859.14	0.000
L2	143.17 - 93.753 (2)	TP40.88x26.2917x0.375	24.15	815.46	0.030	0.06	2787.84	0.000

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
L3	93.753 - 46.083 (3)	TP53.251x38.6629x0.375	29.01	1064.75	0.027	0.06	4752.93	0.000
L4	46.083 - 0 (4)	TP65.185x50.5971x0.375	33.79	1353.81	0.025	0.06	7683.86	0.000

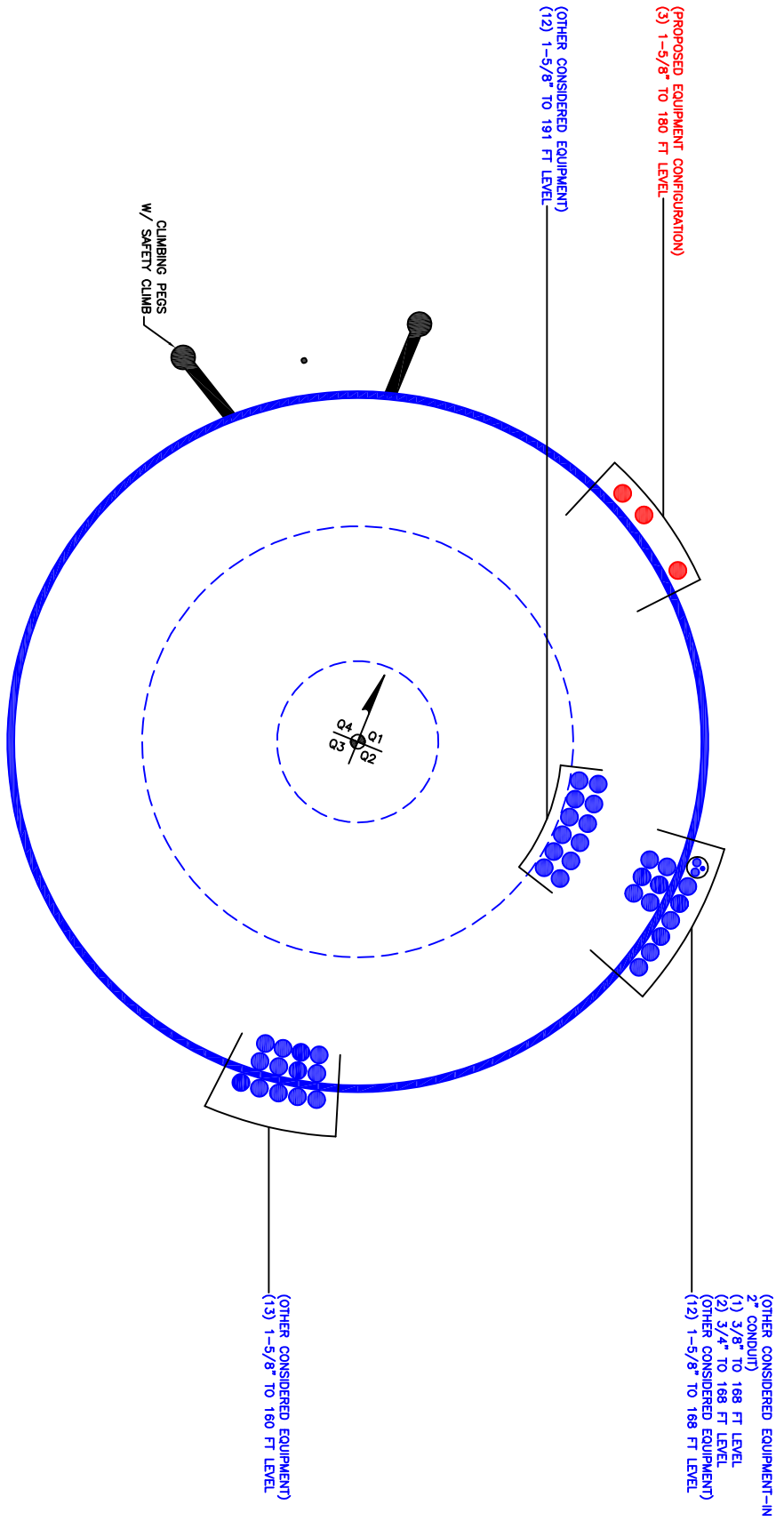
Pole Interaction Design Data

Section No.	Elevation ft	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	Ratio $\frac{M_{uy}}{\phi M_{ny}}$	Ratio $\frac{V_u}{\phi V_n}$	Ratio $\frac{T_u}{\phi T_n}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	190.5 - 143.17 (1)	0.012	0.639	0.000	0.052	0.000	0.654	1.050	4.8.2
L2	143.17 - 93.753 (2)	0.009	0.577	0.000	0.030	0.000	0.587	1.050	4.8.2
L3	93.753 - 46.083 (3)	0.011	0.657	0.000	0.027	0.000	0.669	1.050	4.8.2
L4	46.083 - 0 (4)	0.013	0.724	0.000	0.025	0.000	0.738	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	190.5 - 143.17	Pole	TP27.778x14.75x0.25	1	-14.47	1293.66	62.3	Pass	
L2	143.17 - 93.753	Pole	TP40.88x26.2917x0.375	2	-25.30	2854.11	55.9	Pass	
L3	93.753 - 46.083	Pole	TP53.251x38.6629x0.375	3	-39.46	3726.63	63.7	Pass	
L4	46.083 - 0	Pole	TP65.185x50.5971x0.375	4	-59.52	4738.33	70.3	Pass	
							Summary		
							Pole (L4)	70.3	Pass
							RATING =	70.3	Pass

APPENDIX B
BASE LEVEL DRAWING



APPENDIX C
ADDITIONAL CALCULATIONS

Monopole Base Plate Connection

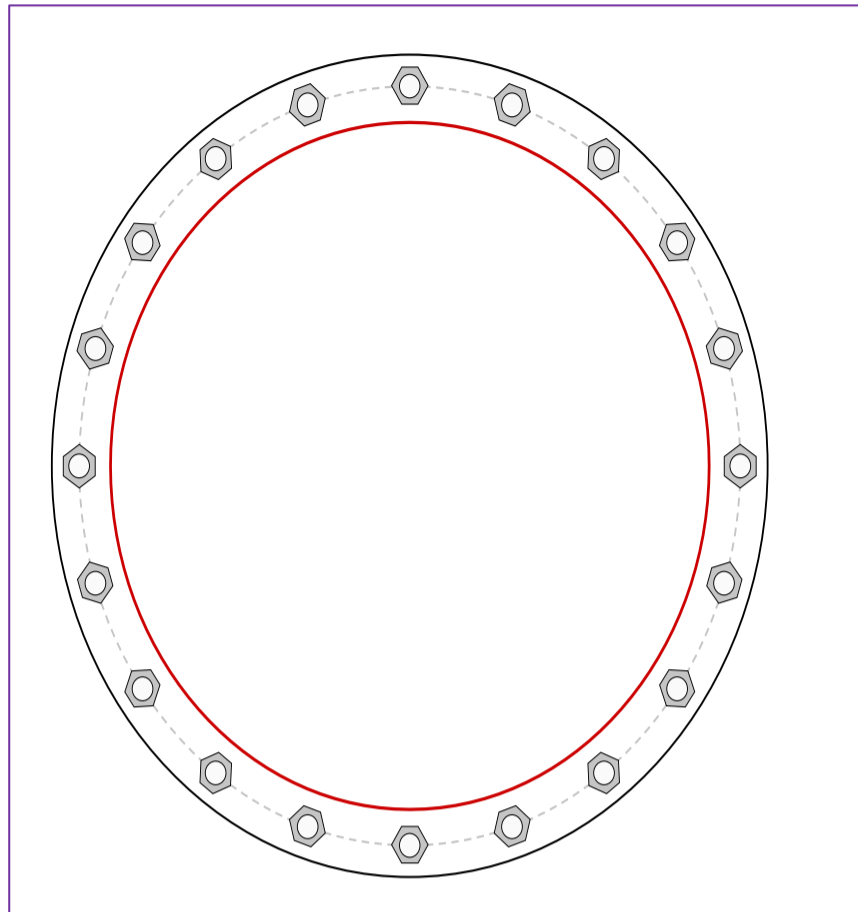


Site Info	
BU #	801485
Site Name	T Suffield 1 CAC 80148
Order #	609060 Rev. 0

Analysis Considerations	
TIA-222 Revision	H
Grout Considered:	No
l_{ar} (in)	1.5

Applied Loads	
Moment (kip-ft)	4460.72
Axial Force (kips)	59.52
Shear Force (kips)	33.79

*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 72" BC
Base Plate Data
78" OD x 2.75" Plate (A633 Gr. E; $F_y=60$ ksi, $F_u=70$ ksi)
Stiffener Data
N/A
Pole Data
65.185" x 0.375" 18-sided pole (A572-65; $F_y=65$ ksi, $F_u=80$ ksi)

Anchor Rod Summary			<i>(units of kips, kip-in)</i>
$P_{u,t} = 145.66$	$\phi P_{n,t} = 243.75$	Stress Rating	
$V_u = 1.69$	$\phi V_n = 149.1$	56.9%	
$M_u = n/a$	$\phi M_n = n/a$	Pass	
Base Plate Summary			
Max Stress (ksi):	17.15	(Flexural)	
Allowable Stress (ksi):	54		
Stress Rating:	30.2%	Pass	

Pier and Pad Foundation



BU #: 801485
 Site Name: CT Suffield 1 CAC
 App. Number: 609060 Rev. 0

TIA-222 Revision: H
 Tower Type: Monopole

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

Superstructure Analysis Reactions		
Compression, P_{comp} :	59.54	kips
Base Shear, Vu_{comp} :	33.75	kips
Moment, M_u :	4460.72	ft-kips
Tower Height, H :	190.5	ft
BP Dist. Above Fdn, bp_{dist} :	3.75	in

Foundation Analysis Checks				
	Capacity	Demand	Rating*	Check
<i>Lateral (Sliding) (kips)</i>	361.04	33.75	8.9%	Pass
<i>Bearing Pressure (ksf)</i>	9.00	1.79	18.9%	Pass
<i>Overturning (kip*ft)</i>	13115.13	4707.52	35.9%	Pass
<i>Pier Flexure (Comp.) (kip*ft)</i>	7877.75	4528.22	54.7%	Pass
<i>Pier Compression (kip)</i>	23994.73	77.64	0.3%	Pass
<i>Pad Flexure (kip*ft)</i>	8302.75	1639.74	18.8%	Pass
<i>Pad Shear - 1-way (kips)</i>	1744.90	172.20	9.4%	Pass
<i>Pad Shear - 2-way (Comp) (ksi)</i>	0.164	0.015	8.8%	Pass
<i>Flexural 2-way (Comp) (kip*ft)</i>	13203.03	2716.93	19.6%	Pass

Pier Properties		
Pier Shape:	Circular	
Pier Diameter, $dpier$:	8	ft
Ext. Above Grade, E :	0.5	ft
Pier Rebar Size, Sc :	9	
Pier Rebar Quantity, mc :	43	
Pier Tie/Spiral Size, St :	5	
Pier Tie/Spiral Quantity, mt :	9	
Pier Reinforcement Type:	Tie	
Pier Clear Cover, cc_{pier} :	3	in

*Rating per TIA-222-H Section 15.5

Structural Rating*:	54.7%
Soil Rating*:	35.9%

Pad Properties		
Depth, D :	6.5	ft
Pad Width, W_1 :	32	ft
Pad Thickness, T :	5	ft
Pad Rebar Size (Top dir.2), Sp_{top2} :	9	
Pad Rebar Quantity (Top dir. 2), mp_{top2} :	42	
Pad Rebar Size (Bottom dir. 2), Sp_2 :	9	
Pad Rebar Quantity (Bottom dir. 2), mp_2 :	34	
Pad Clear Cover, cc_{pad} :	3	in

Material Properties		
Rebar Grade, F_y :	60	ksi
Concrete Compressive Strength, F'_c :	3	ksi
Dry Concrete Density, δ_c :	150	pcf

Soil Properties		
Total Soil Unit Weight, γ :	120	pcf
Ultimate Gross Bearing, Q_{ult} :	12.000	ksf
Cohesion, C_u :	0.000	ksf
Friction Angle, ϕ :	30	degrees
SPT Blow Count, N_{blows} :	23	
Base Friction, μ :		
Neglected Depth, N :	4.00	ft
Foundation Bearing on Rock?	No	
Groundwater Depth, gw :	7	ft

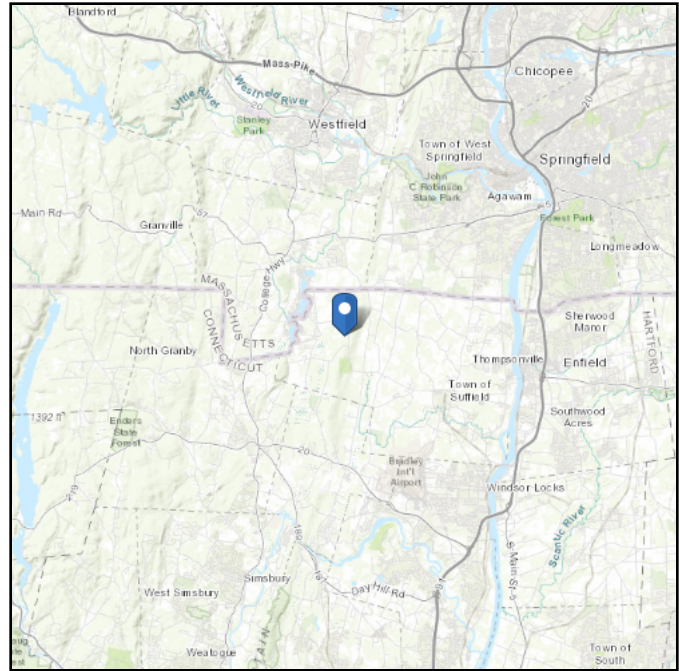
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ASCE 7 Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-16
Risk Category: II
Soil Class: D - Stiff Soil

Elevation: 370.57 ft (NAVD 88)
Latitude: 42.011611
Longitude: -72.728778



Wind

Results:

Wind Speed	115 Vmph
10-year MRI	75 Vmph
25-year MRI	83 Vmph
50-year MRI	89 Vmph
100-year MRI	96 Vmph

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

Date Accessed: Wed Apr 06 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).

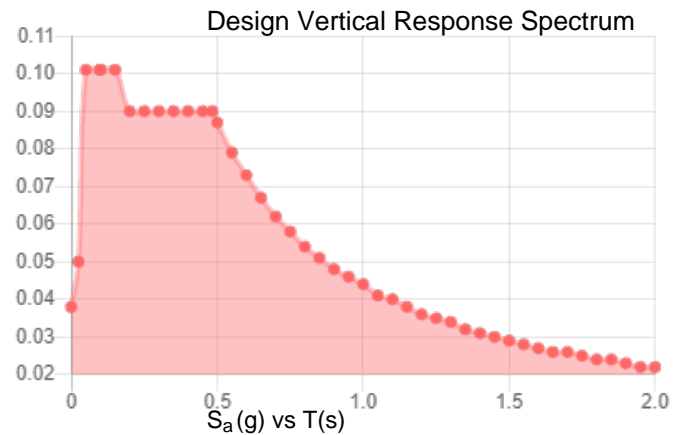
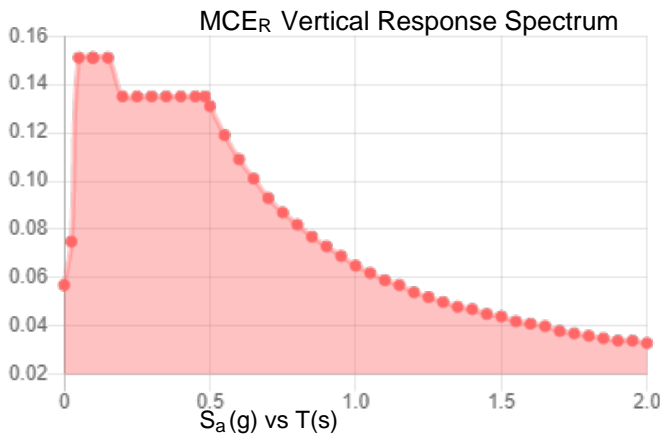
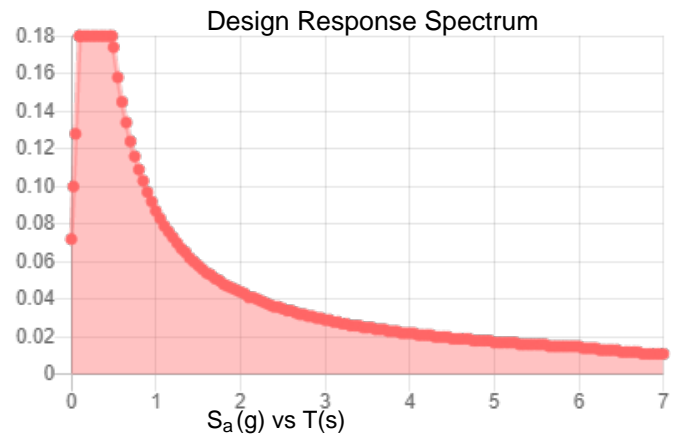
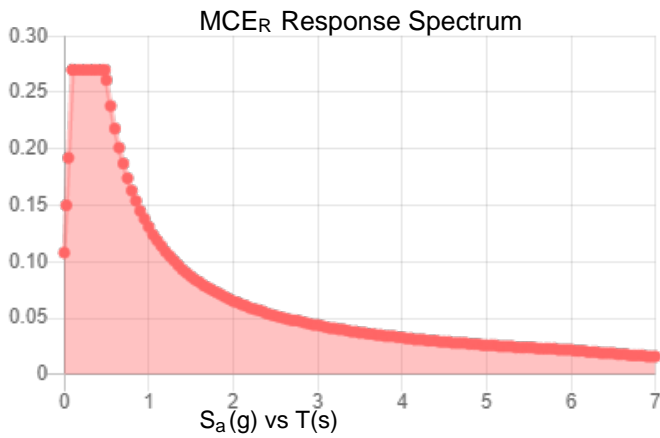
Site is not in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2.

Site Soil Class: D - Stiff Soil

Results:

S_s :	0.169	S_{D1} :	0.087
S_1 :	0.054	T_L :	6
F_a :	1.6	PGA :	0.088
F_v :	2.4	PGA _M :	0.141
S_{MS} :	0.27	F_{PGA} :	1.6
S_{M1} :	0.131	I_e :	1
S_{DS} :	0.18	C_v :	0.7

Seismic Design Category B



Data Accessed: Wed Apr 06 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: 1.50 in.

Concurrent Temperature: 5 F

Gust Speed 50 mph

Data Source: Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8

Date Accessed: Wed Apr 06 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.

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Date: March 30, 2022



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

Subject: Mount Analysis Report

Carrier Designation: T-Mobile Equipment Change-Out
Carrier Site Number: CT11545A
Carrier Site Name: CT545/Crown Suffield

Crown Castle Designation: BU Number: 801485
Site Name: CT Suffield 1 CAC 801485
JDE Job Number: 709735
Order Number: 609060, Rev.0

Engineering Firm Designation: B+T Group Report Designation: 84855.017.01

Site Data: 2715 Mountain Rd., Suffield, CT, Hartford County, 06093
Latitude 42° 0' 41.80" Longitude -72° 43' 43.60"

Structure Information: Tower Height & Type: 190.5 ft. Monopole
Mount Elevation: 180 ft.
Mount Type: 13 ft. T-Arm Mount

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

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

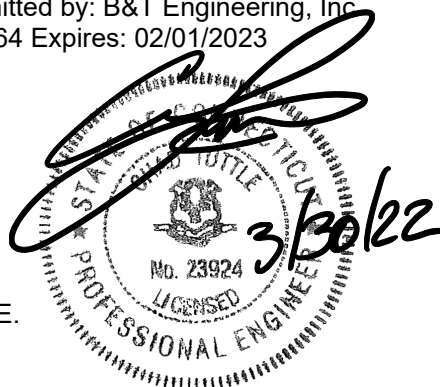
T-Arm Mount

Sufficient

"This analysis utilizes an ultimate 3-second gust wind speed of 115 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: Austin Steward

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



Chad E. Tuttle, P.E.

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1) INTRODUCTION

This is an existing 13' T-Arm Mount, analyzed by B+T Group.

The mount has been modified per reinforcement drawings prepared by B+T Group, in July of 2019. Reinforcement consists of SitePro1 #PRK-SFS-L & Horizontal Pipe 2"Std. x 13'-0" Long.

2) ANALYSIS CRITERIA

Building Code:	2015 IBC
TIA-222 Revision:	TIA-222-H
Risk Category:	II
Ultimate Wind Speed:	115 mph
Exposure Category:	C
Topographic Factor at Base:	1
Topographic Factor at Mount:	1
Ice Thickness:	1.5 in
Wind Speed with Ice:	50 mph
Seismic S _s :	0.169
Seismic S ₁ :	0.054
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
180	182	3	Ericsson	AIR 6419 B41 TMO	13 ft. T-Arm Mount
		3	RFS/Celwave	APXVAARR24 43-U-NA20	
		3	Ericsson	RADIO 4449 B71 B85A_T-MOBILE	
		3	Ericsson	RADIO 4460 B2/B25 B66 TMO	

Table 2 – Documents Provided

Document	Remarks	Reference	Source
CCI Order	Existing and Proposed Equipment's	Date: 03/28/2022	Crown Castle
RFDS		Date: 03/10/2022	
Previous MA	B+T Group	Date: 07/11/2019	On File
Mount Modification		Date: 07/28/2019	
Mount MOD PMI		Date: 11/25/2020	

3) ANALYSIS PROCEDURE

3.1) Analysis Method

RISA-3D (Version 19.0.4), a commercially available analysis software package, was used to create a three-dimensional model of the antenna mounting system and calculate member stresses for various loading cases.

A tool internally developed by us, 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).

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
Tieback	2" Std. Pipe	1.78'	-
		3.106'	
		4.418'	
Mount Pipe		8'-0"	In Pos.2
		7'-6"	In Pos.3

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. All prior structural modifications, if any are assumed to be correctly installed and fully effective.
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 (T-Arm Mount)

Notes	Component	Centerline (ft.)	Critical Member	% Capacity	Pass / Fail
1,2	Main Horizontals	130	1	48.0	Pass
	Mount Pipes		69	61.5	Pass
	Verticals		17	57.7	Pass
	Support Tubes		65	32.4	Pass
	Connection Plates		46	16.1	Pass
	Additional Horizontal Pipe		55	75.6	Pass
	Reinforcement Angles		58	95.0	Pass
	Tiebacks		99	15.6	Pass
	Unistruts		15	40.1	Pass
3	Mount to Tower Connection		--	18.4	pass

Structure Rating with Recommendations (max from all components) =	95.0%
--	--------------

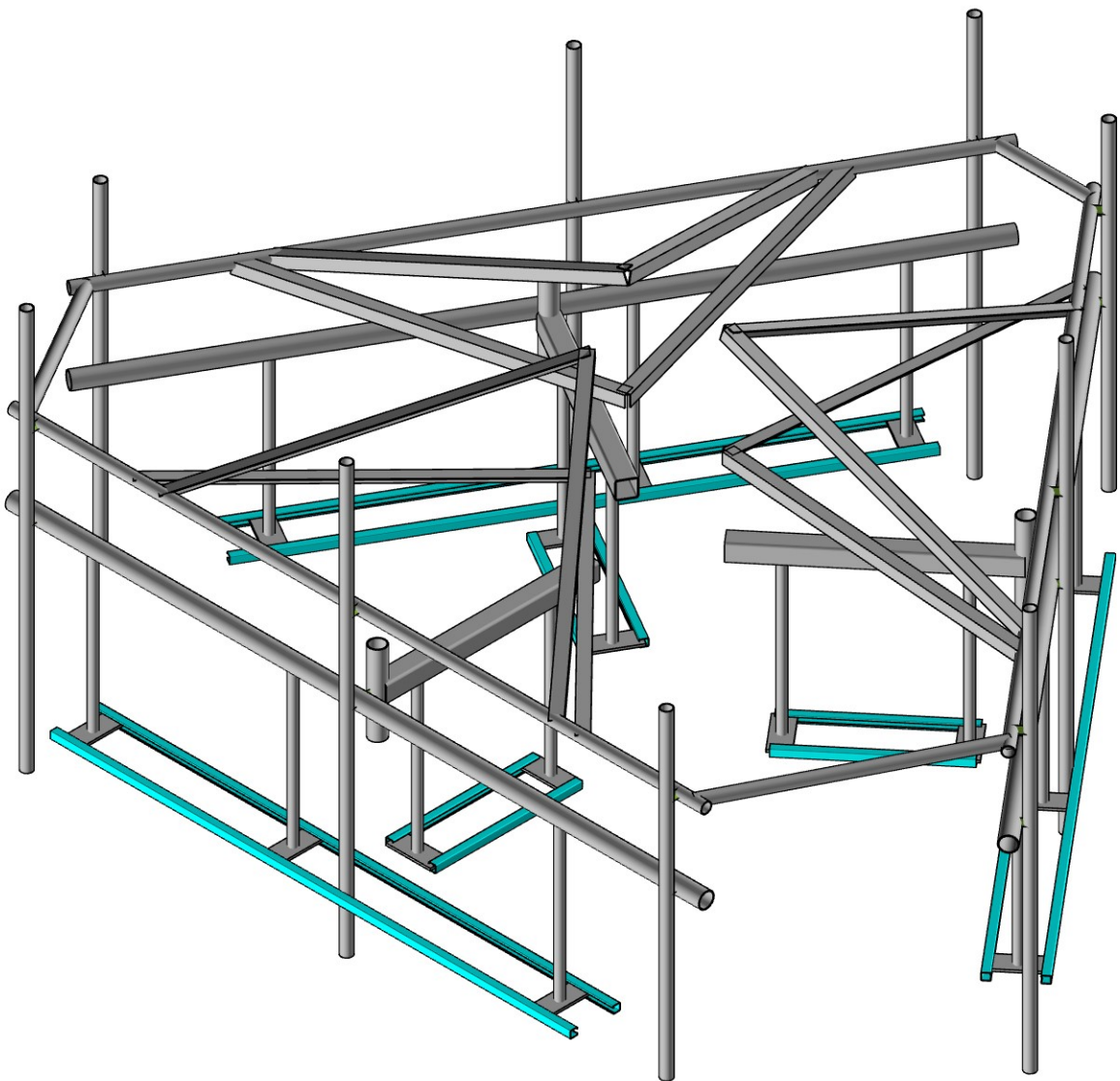
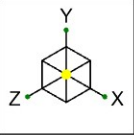
Notes:

- 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. No modifications are required at this time.

APPENDIX A
WIRE FRAME AND RENDERED MODELS



Envelope Only Solution

B+T Group

APK

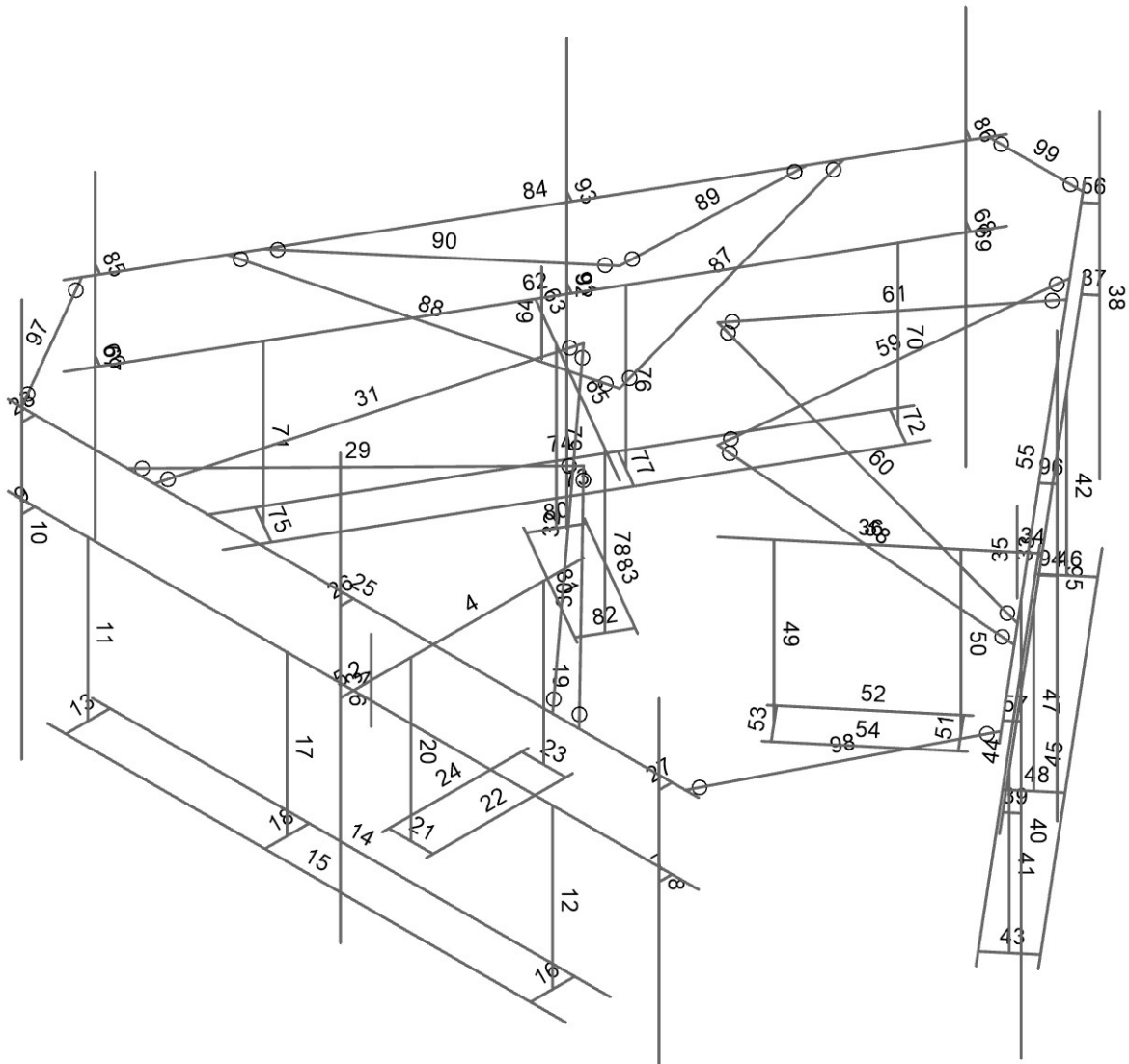
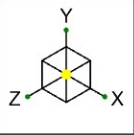
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801485 - CT Suffield 1 CAC 801485

SK-1

Mar 30, 2022

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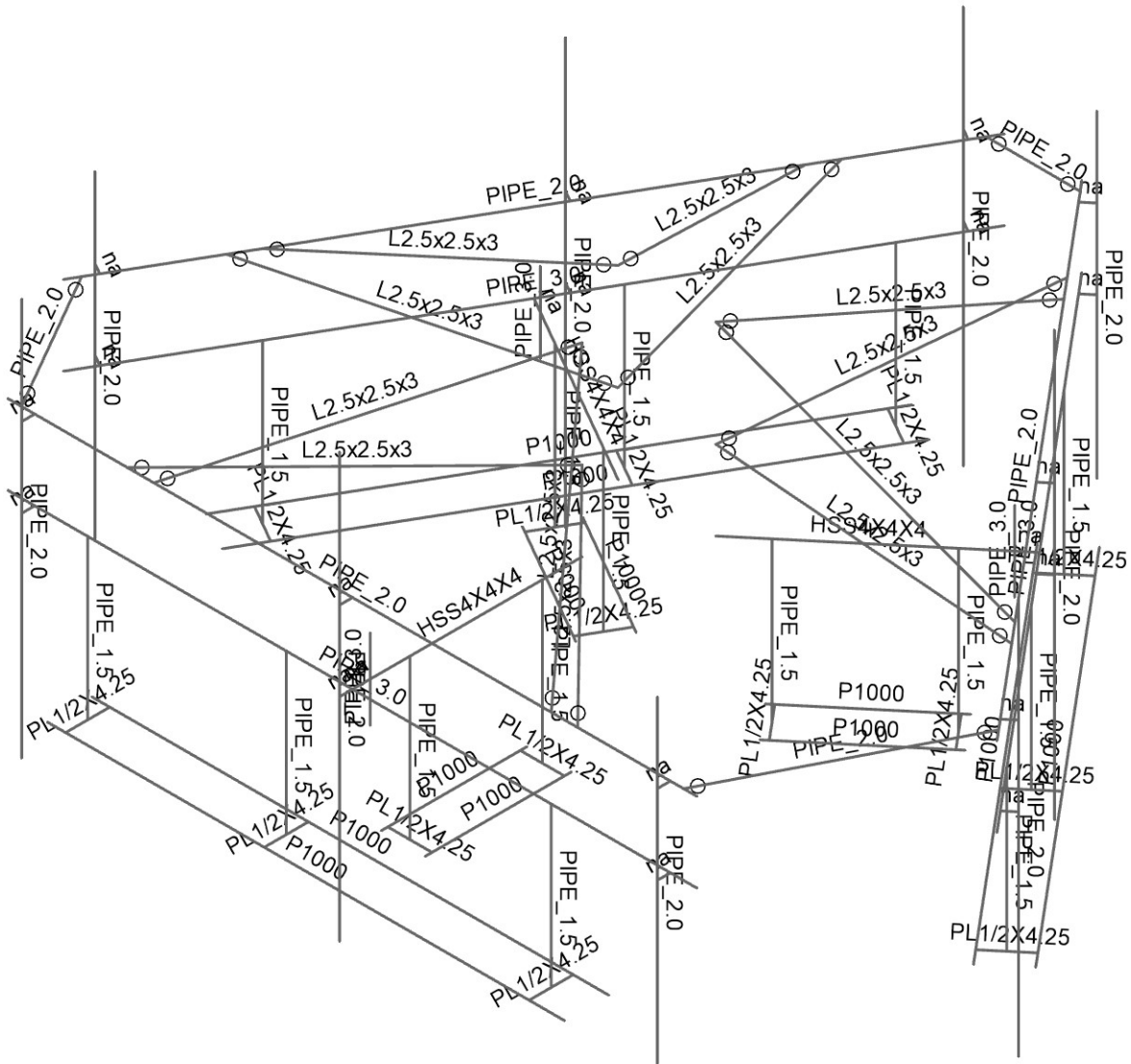


Envelope Only Solution

B+T Group
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SK-2
 Mar 30, 2022
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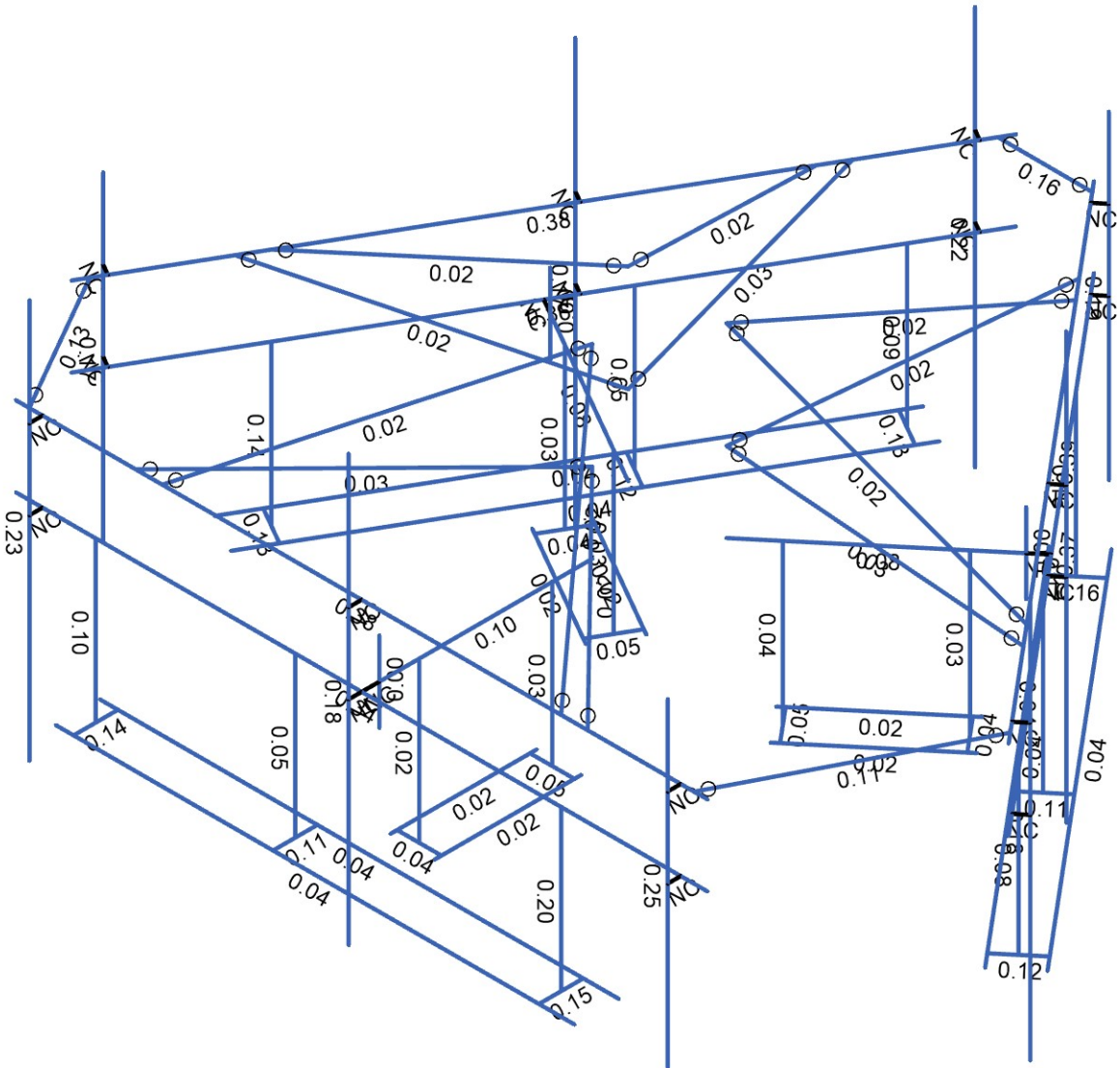
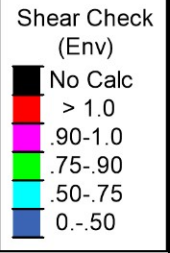


Envelope Only Solution

B+T Group
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801485 - CT Suffield 1 CAC 801485

SK-3
 Mar 30, 2022
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Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

B+T Group
APK
84855.017.01

801485 - CT Suffield 1 CAC 801485

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Mar 30, 2022
84855_017_01_CT Suffield 1 CAC...

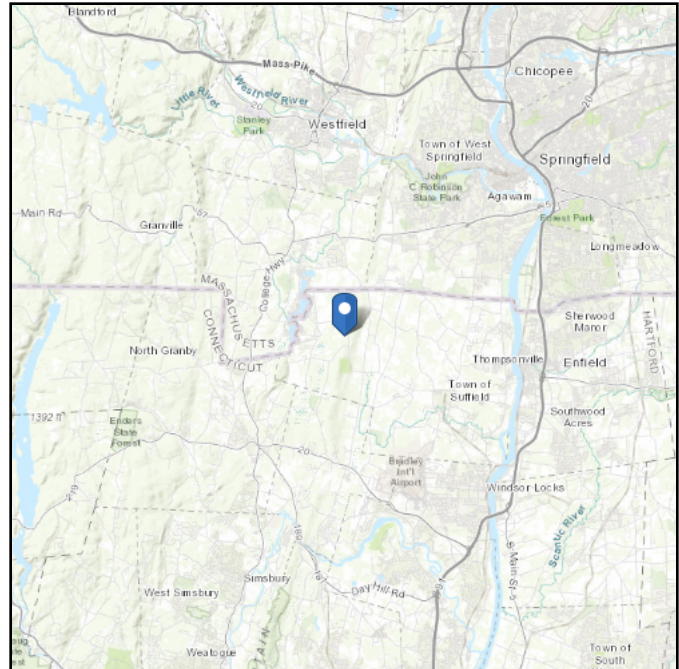
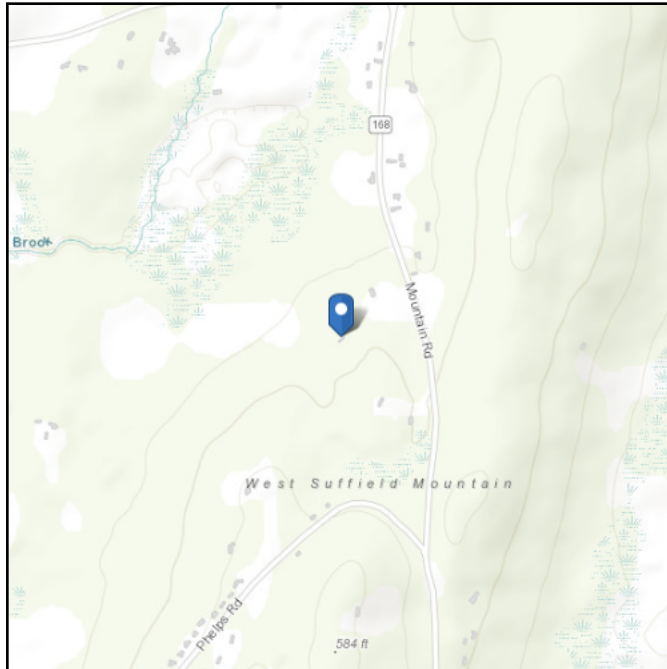
APPENDIX B
SOFTWARE INPUT CALCULATIONS

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: 370.57 ft (NAVD 88)
Latitude: 42.011611
Longitude: -72.728778



Wind

Results:

Wind Speed	115 Vmph
10-year MRI	75 Vmph
25-year MRI	83 Vmph
50-year MRI	89 Vmph
100-year MRI	96 Vmph

Data Source: ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4, and Section 26.5.2
Date Accessed: Tue Mar 29 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).

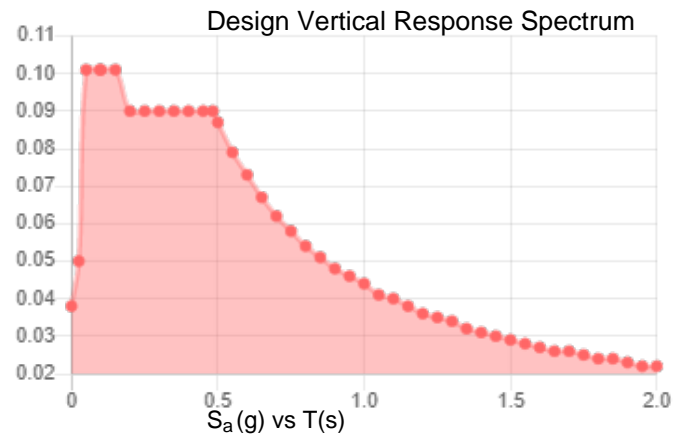
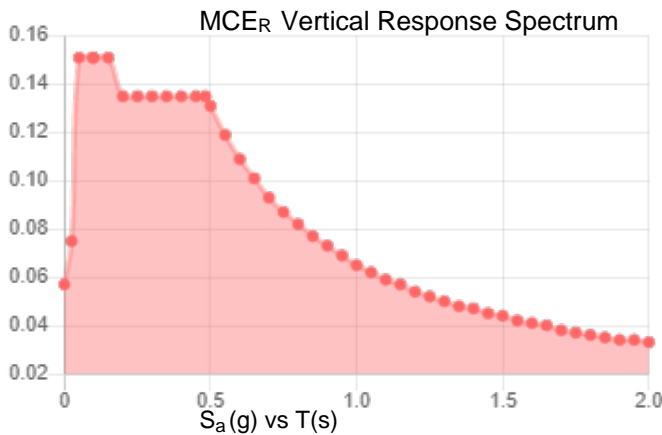
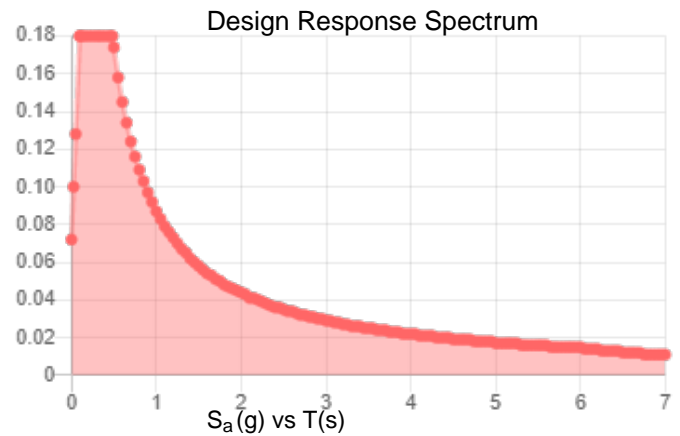
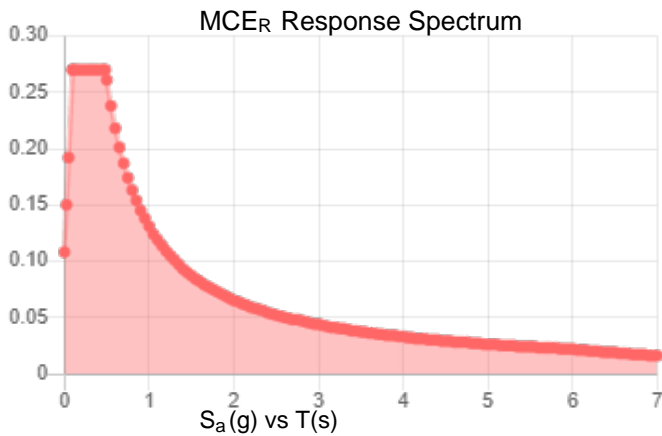
Site is not in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2.

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

Results:

S_s :	0.169	S_{D1} :	0.087
S_1 :	0.054	T_L :	6
F_a :	1.6	PGA :	0.088
F_v :	2.4	PGA _M :	0.141
S_{MS} :	0.27	F_{PGA} :	1.6
S_{M1} :	0.131	I_e :	1
S_{DS} :	0.18	C_v :	0.7

Seismic Design Category B



Data Accessed: Tue Mar 29 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: 1.50 in.
Concurrent Temperature: 5 F
Gust Speed 50 mph

Data Source: Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8

Date Accessed: Tue Mar 29 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.

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PROJECT	84855.017.01 - CT Suffield 1	KSC
SUBJECT	T-Arm Mount Analysis	
DATE	03-30-22	PAGE OF



Tower Type	:	Monopole	
Ground Elevation	z_s	: 371 ft	[ASCE7 Hazard Tool]
Tower Height	:	190.50 ft	
Mount Elevation	:	180.00 ft	
Antenna Elevation	:	182.00 ft	
Crest Height	:	0 ft	
Risk Category	:	II	[Table 2-1]
Exposure Category	:	C	[Sec. 2.6.5.1.2]
Topography Category	:	1.00	[Sec. 2.6.6.2]
Wind Velocity	V	: 115 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	: 1.50 in	[ASCE7 Hazard Tool]
Seismic Design Cat.	:	B	[ASCE7 Hazard Tool]
	S_s	: 0.17	
	S_1	: 0.05	
	S_{DS}	: 0.18	
	S_{D1}	: 0.09	
Gust Factor	G_h	: 1.00	[Sec. 16.6]
Pressure Coefficient	K_z	: 1.44	[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}	: 1.78 in	[Sec. 2.6.10]
Importance Factor	I_e	: 1	[Table 2-3]
Response Coefficient	C_s	: 0.090	[Sec. 2.7.7.1]
Amplification	A_s	: 2.779528	[Sec. 16.7]
	q_z	: 45.45 psf	

PROJECT	84855.017.01 - CT Suffield 1	KSC
SUBJECT	T-Arm Mount Analysis	
DATE	03-30-22	PAGE OF



Manufacturer	Model	Qty	Aspect Ratio	C _a flat/round	EPA _N (ft ²)	EPA _T (ft ²)	EPA _{N-ice} (ft ²)	EPA _{T-ice} (ft ²)	F _A No Ice (N)	F _A No Ice (T)	F _A Ice (N)	F _A Ice (T)
ERICSSON	AIR 6419 B41_TMO	0.5	1.73	1.20	2.63	1.14	3.38	1.74	0.13	0.06	0.02	0.01
ERICSSON	AIR 6419 B41_TMO	0.5	1.73	1.20	2.63	1.14	3.38	1.74	0.13	0.06	0.02	0.01
RFS/CELWAVE	APXVAARR24_43-U-NA20	0.5	4.00	1.27	7.33	2.66	8.51	3.69	0.33	0.12	0.07	0.03
RFS/CELWAVE	APXVAARR24_43-U-NA20	0.5	4.00	1.27	7.33	2.66	8.51	3.69	0.33	0.12	0.07	0.03
ERICSSON	RADIO 4460 B2/B25 B66_TMC	1	1.13	1.20	1.78	1.40	2.66	2.21	0.09	0.07	0.02	0.01
ERICSSON	RADIO 4449 B71 B85A_T-MOBI	1	1.36	1.20	1.64	1.32	2.50	2.11	0.08	0.07	0.02	0.01
ERICSSON	AIR 6419 B41_TMO	0.5	1.73	1.20	2.63	1.14	3.38	1.74	0.13	0.06	0.02	0.01
ERICSSON	AIR 6419 B41_TMO	0.5	1.73	1.20	2.63	1.14	3.38	1.74	0.13	0.06	0.02	0.01
RFS/CELWAVE	APXVAARR24_43-U-NA20	0.5	4.00	1.27	7.33	2.66	8.51	3.69	0.33	0.12	0.07	0.03
RFS/CELWAVE	APXVAARR24_43-U-NA20	0.5	4.00	1.27	7.33	2.66	8.51	3.69	0.33	0.12	0.07	0.03
ERICSSON	RADIO 4460 B2/B25 B66_TMC	1	1.13	1.20	1.78	1.40	2.66	2.21	0.09	0.07	0.02	0.01
ERICSSON	RADIO 4449 B71 B85A_T-MOBI	1	1.36	1.20	1.64	1.32	2.50	2.11	0.08	0.07	0.02	0.01

APPENDIX C
SOFTWARE ANALYSIS OUTPUT



Node Coordinates

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
1	1	-6.5	0	5.401752	
2	2	6.5	0	5.401752	
3	3	0	-0.75	5.068419	
4	4	0	0.75	5.068419	
5	5	0	0	5.068419	
6	6	0	0	1.068419	
7	7	0	0	5.401752	
8	8	0	0	5.646752	
9	9	0	4	5.646752	
10	10	0	-4	5.646752	
11	11	6	0	5.401752	
12	12	6	0	5.646752	
13	13	6	3	5.646752	
14	14	6	-3	5.646752	
15	15	-6	0	5.401752	
16	16	-6	0	5.646752	
17	17	-6	3.5	5.646752	
18	18	-6	-4	5.646752	
19	19	-5	0	5.401752	
20	20	-5	-3	5.401752	
21	21	3.75	0	5.401752	
22	22	3.75	-3	5.401752	
23	23	-5	-3	4.985086	
24	24	-5	-3	5.818419	
25	25	-5.333333	-3	4.985086	
26	26	4.416667	-3	4.985086	
27	27	-5.333333	-3	5.818419	
28	28	4.416667	-3	5.818419	
29	29	3.75	-3	4.985086	
30	30	3.75	-3	5.818419	
31	31	-1.25	0	5.401752	
32	32	-1.25	-3	5.401752	
33	33	-1.25	-3	4.985086	
34	34	-1.25	-3	5.818419	
35	35	0	0	1.818419	
36	36	0	-3	1.818419	
37	37	0	0	4.318419	
38	38	0	-3	4.318419	
39	39	-0.416667	-3	4.318419	
40	40	0.416667	-3	4.318419	
41	41	0.416667	-3	1.693419	
42	42	0.416667	-3	4.443419	
43	43	-0.416667	-3	1.818419	
44	44	0.416667	-3	1.818419	
45	45	-0.416667	-3	1.693419	
46	46	-0.416667	-3	4.443419	
47	47	-6.5	1.5	5.401752	
48	48	6.5	1.5	5.401752	
49	49	0	1.5	1.068419	
50	50	0	1.5	5.401752	
51	51	0	1.5	5.646752	
52	52	6	1.5	5.401752	
53	53	6	1.5	5.646752	
54	54	-6	1.5	5.401752	
55	55	-6	1.5	5.646752	



Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
56	56	-4.25	1.5	5.401752	
57	57	4.25	1.5	5.401752	
58	58	0	3.5	1.068419	
59	59	-3.75	1.5	5.401752	
60	60	3.75	1.5	5.401752	
61	61	0	0	0	
62	62	8.422923	0	1.659666	
63	63	0.066684	0	-8.298911	
64	64	3.989456	-0.75	-3.10536	
65	65	3.989456	0.75	-3.10536	
66	66	3.989456	0	-3.10536	
67	67	0.925278	0	-0.53421	
68	68	4.244804	0	-3.319622	
69	69	0.388078	0	-7.915889	
70	70	0.575759	0	-8.073372	
71	71	0.575759	3	-8.073372	
72	72	0.575759	-3	-8.073372	
73	73	8.10153	0	1.276644	
74	74	8.28921	0	1.119161	
75	75	8.28921	3.5	1.119161	
76	76	8.28921	-4	1.119161	
77	77	7.458742	0	0.5106	
78	78	7.458742	-3	0.5106	
79	79	1.83435	0	-6.192289	
80	80	1.83435	-3	-6.192289	
81	81	7.139557	-3	0.778428	
82	82	7.777927	-3	0.242772	
83	83	7.353819	-3	1.033776	
84	84	1.08664	-3	-6.435157	
85	85	7.99219	-3	0.49812	
86	86	1.72501	-3	-6.970814	
87	87	1.515165	-3	-5.924461	
88	88	2.153536	-3	-6.460117	
89	89	5.048288	0	-2.362067	
90	90	5.048288	-3	-2.362067	
91	91	4.729103	-3	-2.094239	
92	92	5.367474	-3	-2.629895	
93	93	1.499811	0	-1.0163	
94	94	1.499811	-3	-1.0163	
95	95	3.414922	0	-2.623269	
96	96	3.414922	-3	-2.623269	
97	97	3.682751	-3	-2.304084	
98	98	3.147094	-3	-2.942454	
99	99	1.136228	-3	-1.255137	
100	100	3.24285	-3	-3.022803	
101	101	1.767639	-3	-0.697115	
102	102	1.231983	-3	-1.335485	
103	103	1.671884	-3	-0.616767	
104	104	3.778506	-3	-2.384432	
105	105	8.422923	1.5	1.659666	
106	106	0.066684	1.5	-8.298911	
107	107	0.925278	1.5	-0.53421	
108	108	0.388078	1.5	-7.915889	
109	109	0.575759	1.5	-8.073372	
110	110	8.10153	1.5	1.276644	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
111	111	8.28921	1.5	1.119161	
112	112	6.976651	1.5	-0.063934	
113	113	1.512957	1.5	-6.575311	
114	114	0.925278	3.5	-0.53421	
115	115	6.655257	1.5	-0.446956	
116	116	1.83435	1.5	-6.192289	
117	117	-1.428055	0	-8.330041	
118	118	-7.928055	0	2.928289	
119	119	-4.38938	-0.75	-2.53421	
120	120	-4.38938	0.75	-2.53421	
121	121	-4.38938	0	-2.53421	
122	122	-0.925278	0	-0.53421	
123	123	-4.678055	0	-2.700876	
124	124	-7.678055	0	2.495276	
125	125	-7.890231	0	2.372776	
126	126	-7.890231	3	2.372776	
127	127	-7.890231	-3	2.372776	
128	128	-1.678055	0	-7.897029	
129	129	-1.890231	0	-8.019529	
130	130	-1.890231	3.5	-8.019529	
131	131	-1.890231	-4	-8.019529	
132	132	-2.178055	0	-7.031003	
133	133	-2.178055	-3	-7.031003	
134	134	-6.553055	0	0.546719	
135	135	-6.553055	-3	0.546719	
136	136	-1.817211	-3	-6.82267	
137	137	-2.538899	-3	-7.239337	
138	138	-1.650544	-3	-7.111345	
139	139	-6.525544	-3	1.332403	
140	140	-2.372232	-3	-7.528012	
141	141	-7.247232	-3	0.915736	
142	142	-6.192211	-3	0.755052	
143	143	-6.913899	-3	0.338386	
144	144	-4.053055	0	-3.783408	
145	145	-4.053055	-3	-3.783408	
146	146	-3.692211	-3	-3.575075	
147	147	-4.413899	-3	-3.991741	
148	148	-1.574797	0	-0.90921	
149	149	-1.574797	-3	-0.90921	
150	150	-3.739861	0	-2.15921	
151	151	-3.739861	-3	-2.15921	
152	152	-3.531527	-3	-2.520053	
153	153	-3.948194	-3	-1.798366	
154	154	-1.674877	-3	-0.485866	
155	155	-4.056447	-3	-1.860866	
156	156	-1.366464	-3	-1.270053	
157	157	-1.78313	-3	-0.548366	
158	158	-1.258211	-3	-1.207553	
159	159	-3.63978	-3	-2.582553	
160	160	-1.428055	1.5	-8.330041	
161	161	-7.928055	1.5	2.928289	
162	162	-0.925278	1.5	-0.53421	
163	163	-7.678055	1.5	2.495276	
164	164	-7.890231	1.5	2.372776	
165	165	-1.678055	1.5	-7.897029	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
166	166	-1.890231	1.5	-8.019529	
167	167	-2.553055	1.5	-6.381484	
168	168	-6.803055	1.5	0.979732	
169	169	-0.925278	3.5	-0.53421	
170	170	-2.803055	1.5	-5.948471	
171	171	-6.553055	1.5	0.546719	
172	172	-6.25	1.5	5.401752	
173	173	6.25	1.5	5.401752	
174	174	-7.803055	1.5	2.711783	
175	175	0.227381	1.5	-8.1074	
176	176	-1.553055	1.5	-8.113535	
177	177	8.262226	1.5	1.468155	
178	178	-4.428055	1.5	-3.133889	
179	179	4.566198	1.5	-2.9366	
180	180	-4.428055	0	-3.133889	
181	181	-4.640231	0	-3.256389	
182	182	-4.640231	4	-3.256389	
183	183	-4.640231	-4	-3.256389	
184	184	-4.640231	1.5	-3.256389	
185	185	4.566198	0	-2.9366	
186	186	4.753879	0	-3.094083	
187	187	4.753879	4	-3.094083	
188	188	4.753879	-4	-3.094083	
189	189	4.753879	1.5	-3.094083	

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	6	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
2	49	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
3	58	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
4	61						
5	67	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
6	107	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
7	114	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
8	122	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
9	162	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
10	169	Reaction	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

Cold Formed Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [1e ⁶ F ⁻¹]	Density [k/ft ³]	Yield [ksi]	Fu [ksi]
1	A653 SS Gr33	29500	11346	0.3	0.65	0.49	33	45
2	A653 SS Gr50/1	29500	11346	0.3	0.65	0.49	50	65

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	PIPE 3.0	Beam	Pipe	A53 Gr.B	Typical	2.07	2.85	2.85	5.69
2	MF-P1	PIPE 2.0	Column	Pipe	A53 Gr.B	Typical	1.02	0.627	0.627	1.25
3	F1-V1	PIPE 1.5	Column	Pipe	A53 Gr.B	Typical	0.749	0.293	0.293	0.586
4	F1-ST1	HSS4X4X4	Beam	Tube	A500 Gr.B Rect	Typical	3.37	7.8	7.8	12.8
5	F1-C1	PL1/2X4.25	Beam	RECT	A36 Gr.36	Typical	2.125	0.044	3.199	0.164
6	F1-P1	PIPE 3.0	Column	Pipe	A53 Gr.B	Typical	2.07	2.85	2.85	5.69
7	New Horizontal Pipe	PIPE 2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	0.627	0.627	1.25
8	New Reinforcement Angles	L2.5x2.5x3	Beam	Single Angle	A36 Gr.36	Typical	0.901	0.535	0.535	0.011
9	Tieback	PIPE 2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	0.627	0.627	1.25

Cold Formed Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rule	Area [in ²]	Iyy [in ⁴]	Izz [in ⁴]	J [in ⁴]
1	CF1	P1000	Beam	CS	A653 SS Gr33	Typical	0.517	0.165	0.222	0.002

Member Primary Data

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
1	1	1	2		MF-H1	Beam	Pipe	A53 Gr.B	Typical
2	2	7	5		RIGID	None	None	RIGID	Typical
3	3	3	4		F1-P1	Column	Pipe	A53 Gr.B	Typical
4	4	5	6		F1-ST1	Beam	Tube	A500 Gr.B Rect	Typical
5	5	7	8		RIGID	None	None	RIGID	Typical
6	6	9	10		MF-P1	Column	Pipe	A53 Gr.B	Typical
7	7	11	12		RIGID	None	None	RIGID	Typical
8	8	13	14		MF-P1	Column	Pipe	A53 Gr.B	Typical
9	9	15	16		RIGID	None	None	RIGID	Typical
10	10	17	18		MF-P1	Column	Pipe	A53 Gr.B	Typical
11	11	19	20		F1-V1	Column	Pipe	A53 Gr.B	Typical
12	12	21	22		F1-V1	Column	Pipe	A53 Gr.B	Typical
13	13	23	24	90	F1-C1	Beam	RECT	A36 Gr.36	Typical
14	14	25	26		CF1	Beam	CS	A653 SS Gr33	Typical
15	15	27	28	180	CF1	Beam	CS	A653 SS Gr33	Typical
16	16	29	30	90	F1-C1	Beam	RECT	A36 Gr.36	Typical
17	17	31	32		F1-V1	Column	Pipe	A53 Gr.B	Typical
18	18	33	34	90	F1-C1	Beam	RECT	A36 Gr.36	Typical
19	19	35	36		F1-V1	Column	Pipe	A53 Gr.B	Typical
20	20	37	38		F1-V1	Column	Pipe	A53 Gr.B	Typical
21	21	39	40	90	F1-C1	Beam	RECT	A36 Gr.36	Typical
22	22	41	42		CF1	Beam	CS	A653 SS Gr33	Typical
23	23	43	44	90	F1-C1	Beam	RECT	A36 Gr.36	Typical
24	24	45	46	180	CF1	Beam	CS	A653 SS Gr33	Typical
25	25	47	48		New Horizontal Pipe	Beam	Pipe	A53 Gr.B	Typical
26	26	50	51		RIGID	None	None	RIGID	Typical
27	27	52	53		RIGID	None	None	RIGID	Typical
28	28	54	55		RIGID	None	None	RIGID	Typical
29	29	49	56	180	New Reinforcement Angles	Beam	Single Angle	A36 Gr.36	Typical
30	30	49	57	90	New Reinforcement Angles	Beam	Single Angle	A36 Gr.36	Typical
31	31	58	59	180	New Reinforcement Angles	Beam	Single Angle	A36 Gr.36	Typical
32	32	58	60	90	New Reinforcement Angles	Beam	Single Angle	A36 Gr.36	Typical
33	33	62	63		MF-H1	Beam	Pipe	A53 Gr.B	Typical
34	34	68	66		RIGID	None	None	RIGID	Typical
35	35	64	65		F1-P1	Column	Pipe	A53 Gr.B	Typical
36	36	66	67		F1-ST1	Beam	Tube	A500 Gr.B Rect	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
37	37	69	70		RIGID	None	None	RIGID	Typical
38	38	71	72		MF-P1	Column	Pipe	A53 Gr.B	Typical
39	39	73	74		RIGID	None	None	RIGID	Typical
40	40	75	76		MF-P1	Column	Pipe	A53 Gr.B	Typical
41	41	77	78		F1-V1	Column	Pipe	A53 Gr.B	Typical
42	42	79	80		F1-V1	Column	Pipe	A53 Gr.B	Typical
43	43	81	82	90	F1-C1	Beam	RECT	A36 Gr.36	Typical
44	44	83	84		CF1	Beam	CS	A653 SS Gr33	Typical
45	45	85	86	180	CF1	Beam	CS	A653 SS Gr33	Typical
46	46	87	88	90	F1-C1	Beam	RECT	A36 Gr.36	Typical
47	47	89	90		F1-V1	Column	Pipe	A53 Gr.B	Typical
48	48	91	92	90	F1-C1	Beam	RECT	A36 Gr.36	Typical
49	49	93	94		F1-V1	Column	Pipe	A53 Gr.B	Typical
50	50	95	96		F1-V1	Column	Pipe	A53 Gr.B	Typical
51	51	97	98	90	F1-C1	Beam	RECT	A36 Gr.36	Typical
52	52	99	100		CF1	Beam	CS	A653 SS Gr33	Typical
53	53	101	102	90	F1-C1	Beam	RECT	A36 Gr.36	Typical
54	54	103	104	180	CF1	Beam	CS	A653 SS Gr33	Typical
55	55	105	106		New Horizontal Pipe	Beam	Pipe	A53 Gr.B	Typical
56	56	108	109		RIGID	None	None	RIGID	Typical
57	57	110	111		RIGID	None	None	RIGID	Typical
58	58	107	112	180	New Reinforcement Angles	Beam	Single Angle	A36 Gr.36	Typical
59	59	107	113	90	New Reinforcement Angles	Beam	Single Angle	A36 Gr.36	Typical
60	60	114	115	180	New Reinforcement Angles	Beam	Single Angle	A36 Gr.36	Typical
61	61	114	116	90	New Reinforcement Angles	Beam	Single Angle	A36 Gr.36	Typical
62	62	117	118		MF-H1	Beam	Pipe	A53 Gr.B	Typical
63	63	123	121		RIGID	None	None	RIGID	Typical
64	64	119	120		F1-P1	Column	Pipe	A53 Gr.B	Typical
65	65	121	122		F1-ST1	Beam	Tube	A500 Gr.B Rect	Typical
66	66	124	125		RIGID	None	None	RIGID	Typical
67	67	126	127		MF-P1	Column	Pipe	A53 Gr.B	Typical
68	68	128	129		RIGID	None	None	RIGID	Typical
69	69	130	131		MF-P1	Column	Pipe	A53 Gr.B	Typical
70	70	132	133		F1-V1	Column	Pipe	A53 Gr.B	Typical
71	71	134	135		F1-V1	Column	Pipe	A53 Gr.B	Typical
72	72	136	137	90	F1-C1	Beam	RECT	A36 Gr.36	Typical
73	73	138	139		CF1	Beam	CS	A653 SS Gr33	Typical
74	74	140	141	180	CF1	Beam	CS	A653 SS Gr33	Typical
75	75	142	143	90	F1-C1	Beam	RECT	A36 Gr.36	Typical
76	76	144	145		F1-V1	Column	Pipe	A53 Gr.B	Typical
77	77	146	147	90	F1-C1	Beam	RECT	A36 Gr.36	Typical
78	78	148	149		F1-V1	Column	Pipe	A53 Gr.B	Typical
79	79	150	151		F1-V1	Column	Pipe	A53 Gr.B	Typical
80	80	152	153	90	F1-C1	Beam	RECT	A36 Gr.36	Typical
81	81	154	155		CF1	Beam	CS	A653 SS Gr33	Typical
82	82	156	157	90	F1-C1	Beam	RECT	A36 Gr.36	Typical
83	83	158	159	180	CF1	Beam	CS	A653 SS Gr33	Typical
84	84	160	161		New Horizontal Pipe	Beam	Pipe	A53 Gr.B	Typical
85	85	163	164		RIGID	None	None	RIGID	Typical
86	86	165	166		RIGID	None	None	RIGID	Typical
87	87	162	167	180	New Reinforcement Angles	Beam	Single Angle	A36 Gr.36	Typical
88	88	162	168	90	New Reinforcement Angles	Beam	Single Angle	A36 Gr.36	Typical
89	89	169	170	180	New Reinforcement Angles	Beam	Single Angle	A36 Gr.36	Typical
90	90	169	171	90	New Reinforcement Angles	Beam	Single Angle	A36 Gr.36	Typical
91	91	180	181		RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
92	92	182	183		MF-P1	Column	Pipe	A53 Gr.B	Typical
93	93	178	184		RIGID	None	None	RIGID	Typical
94	94	185	186		RIGID	None	None	RIGID	Typical
95	95	187	188		MF-P1	Column	Pipe	A53 Gr.B	Typical
96	96	179	189		RIGID	None	None	RIGID	Typical
97	97	172	174		Tieback	Beam	Pipe	A53 Gr.B	Typical
98	98	173	177		Tieback	Beam	Pipe	A53 Gr.B	Typical
99	99	176	175		Tieback	Beam	Pipe	A53 Gr.B	Typical

Member Advanced Data

	Label	I Release	J Release	Physical	Deflection Ratio Options	Seismic DR
1	1			Yes	N/A	None
2	2			Yes	** NA **	None
3	3			Yes	** NA **	None
4	4			Yes	N/A	None
5	5			Yes	** NA **	None
6	6			Yes	** NA **	None
7	7			Yes	** NA **	None
8	8			Yes	** NA **	None
9	9			Yes	** NA **	None
10	10			Yes	** NA **	None
11	11			Yes	** NA **	None
12	12			Yes	** NA **	None
13	13			Yes	N/A	None
14	14			Yes	N/A	None
15	15			Yes	N/A	None
16	16			Yes	N/A	None
17	17			Yes	** NA **	None
18	18			Yes	N/A	None
19	19			Yes	** NA **	None
20	20			Yes	** NA **	None
21	21			Yes	N/A	None
22	22			Yes	N/A	None
23	23			Yes	N/A	None
24	24			Yes	N/A	None
25	25			Yes	N/A	None
26	26			Yes	** NA **	None
27	27			Yes	** NA **	None
28	28			Yes	** NA **	None
29	29	BenPIN	BenPIN	Yes	N/A	None
30	30	BenPIN	BenPIN	Yes	N/A	None
31	31	BenPIN	BenPIN	Yes	N/A	None
32	32	BenPIN	BenPIN	Yes	N/A	None
33	33			Yes	N/A	None
34	34			Yes	** NA **	None
35	35			Yes	** NA **	None
36	36			Yes	N/A	None
37	37			Yes	** NA **	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	N/A	None
44	44			Yes	N/A	None

Member Advanced Data (Continued)

	Label	I Release	J Release	Physical	Deflection Ratio Options	Seismic DR
45	45			Yes	N/A	None
46	46			Yes	N/A	None
47	47			Yes	** NA **	None
48	48			Yes	N/A	None
49	49			Yes	** NA **	None
50	50			Yes	** NA **	None
51	51			Yes	N/A	None
52	52			Yes	N/A	None
53	53			Yes	N/A	None
54	54			Yes	N/A	None
55	55			Yes	N/A	None
56	56			Yes	** NA **	None
57	57			Yes	** NA **	None
58	58	BenPIN	BenPIN	Yes	N/A	None
59	59	BenPIN	BenPIN	Yes	N/A	None
60	60	BenPIN	BenPIN	Yes	N/A	None
61	61	BenPIN	BenPIN	Yes	N/A	None
62	62			Yes	N/A	None
63	63			Yes	** NA **	None
64	64			Yes	** NA **	None
65	65			Yes	N/A	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	N/A	None
73	73			Yes	N/A	None
74	74			Yes	N/A	None
75	75			Yes	N/A	None
76	76			Yes	** NA **	None
77	77			Yes	N/A	None
78	78			Yes	** NA **	None
79	79			Yes	** NA **	None
80	80			Yes	N/A	None
81	81			Yes	N/A	None
82	82			Yes	N/A	None
83	83			Yes	N/A	None
84	84			Yes	N/A	None
85	85			Yes	** NA **	None
86	86			Yes	** NA **	None
87	87	BenPIN	BenPIN	Yes	N/A	None
88	88	BenPIN	BenPIN	Yes	N/A	None
89	89	BenPIN	BenPIN	Yes	N/A	None
90	90	BenPIN	BenPIN	Yes	N/A	None
91	91			Yes	** NA **	None
92	92			Yes	** NA **	None
93	93			Yes	** NA **	None
94	94			Yes	** NA **	None
95	95			Yes	** NA **	None
96	96			Yes	** NA **	None
97	97	BenPIN	BenPIN	Yes	N/A	None
98	98	BenPIN	BenPIN	Yes	N/A	None
99	99	BenPIN	BenPIN	Yes	N/A	None

Hot Rolled Steel Design Parameters

	Label	Shape	Length [ft]	Lcomp top [ft]	Function
1	1	MF-H1	13	Lbyy	Lateral
2	3	F1-P1	1.5	Lbyy	Lateral
3	4	F1-ST1	4	Lbyy	Lateral
4	6	MF-P1	8	Lbyy	Lateral
5	8	MF-P1	6	Lbyy	Lateral
6	10	MF-P1	7.5	Lbyy	Lateral
7	11	F1-V1	3	Lbyy	Lateral
8	12	F1-V1	3	Lbyy	Lateral
9	13	F1-C1	0.833	Lbyy	Lateral
10	16	F1-C1	0.833	Lbyy	Lateral
11	17	F1-V1	3	Lbyy	Lateral
12	18	F1-C1	0.833	Lbyy	Lateral
13	19	F1-V1	3	Lbyy	Lateral
14	20	F1-V1	3	Lbyy	Lateral
15	21	F1-C1	0.833	Lbyy	Lateral
16	23	F1-C1	0.833	Lbyy	Lateral
17	25	New Horizontal Pipe	13	Lbyy	Lateral
18	29	New Reinforcement Angles	6.07	Lbyy	Lateral
19	30	New Reinforcement Angles	6.07	Lbyy	Lateral
20	31	New Reinforcement Angles	6.07	Lbyy	Lateral
21	32	New Reinforcement Angles	6.07	Lbyy	Lateral
22	33	MF-H1	13	Lbyy	Lateral
23	35	F1-P1	1.5	Lbyy	Lateral
24	36	F1-ST1	4	Lbyy	Lateral
25	38	MF-P1	6	Lbyy	Lateral
26	40	MF-P1	7.5	Lbyy	Lateral
27	41	F1-V1	3	Lbyy	Lateral
28	42	F1-V1	3	Lbyy	Lateral
29	43	F1-C1	0.833	Lbyy	Lateral
30	46	F1-C1	0.833	Lbyy	Lateral
31	47	F1-V1	3	Lbyy	Lateral
32	48	F1-C1	0.833	Lbyy	Lateral
33	49	F1-V1	3	Lbyy	Lateral
34	50	F1-V1	3	Lbyy	Lateral
35	51	F1-C1	0.833	Lbyy	Lateral
36	53	F1-C1	0.833	Lbyy	Lateral
37	55	New Horizontal Pipe	13	Lbyy	Lateral
38	58	New Reinforcement Angles	6.07	Lbyy	Lateral
39	59	New Reinforcement Angles	6.07	Lbyy	Lateral
40	60	New Reinforcement Angles	6.07	Lbyy	Lateral
41	61	New Reinforcement Angles	6.07	Lbyy	Lateral
42	62	MF-H1	13	Lbyy	Lateral
43	64	F1-P1	1.5	Lbyy	Lateral
44	65	F1-ST1	4	Lbyy	Lateral
45	67	MF-P1	6	Lbyy	Lateral
46	69	MF-P1	7.5	Lbyy	Lateral
47	70	F1-V1	3	Lbyy	Lateral
48	71	F1-V1	3	Lbyy	Lateral
49	72	F1-C1	0.833	Lbyy	Lateral
50	75	F1-C1	0.833	Lbyy	Lateral
51	76	F1-V1	3	Lbyy	Lateral
52	77	F1-C1	0.833	Lbyy	Lateral
53	78	F1-V1	3	Lbyy	Lateral
54	79	F1-V1	3	Lbyy	Lateral
55	80	F1-C1	0.833	Lbyy	Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length [ft]	Lcomp top [ft]	Function
56	82	F1-C1	0.833	Lbyy	Lateral
57	84	New Horizontal Pipe	13	Lbyy	Lateral
58	87	New Reinforcement Angles	6.07	Lbyy	Lateral
59	88	New Reinforcement Angles	6.07	Lbyy	Lateral
60	89	New Reinforcement Angles	6.07	Lbyy	Lateral
61	90	New Reinforcement Angles	6.07	Lbyy	Lateral
62	92	MF-P1	8	Lbyy	Lateral
63	95	MF-P1	8	Lbyy	Lateral
64	97	Tieback	3.106	Lbyy	Lateral
65	98	Tieback	4.418	Lbyy	Lateral
66	99	Tieback	1.78	Lbyy	Lateral

Cold Formed Steel Design Parameters

	Label	Shape	Length [ft]	Lcomp top [ft]	Function
1	14	CF1	9.75	Lbyy	Lateral
2	15	CF1	9.75	Lbyy	Lateral
3	22	CF1	2.75	Lbyy	Lateral
4	24	CF1	2.75	Lbyy	Lateral
5	44	CF1	9.75	Lbyy	Lateral
6	45	CF1	9.75	Lbyy	Lateral
7	52	CF1	2.75	Lbyy	Lateral
8	54	CF1	2.75	Lbyy	Lateral
9	73	CF1	9.75	Lbyy	Lateral
10	74	CF1	9.75	Lbyy	Lateral
11	81	CF1	2.75	Lbyy	Lateral
12	83	CF1	2.75	Lbyy	Lateral

Member Point Loads (BLC 1 : Dead)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	8	Y	-0.048	%5
2	8	Y	-0.048	%45
3	8	Y	0	0
4	8	Y	0	0
5	8	Y	0	0
6	10	Y	-0.077	%5
7	10	Y	-0.077	%85
8	10	Y	-0.109	%65
9	10	Y	0	0
10	10	Y	0	0
11	17	Y	-0.073	%50
12	17	Y	0	0
13	17	Y	0	0
14	17	Y	0	0
15	17	Y	0	0
16	67	Y	-0.048	%5
17	67	Y	-0.048	%45
18	67	Y	0	0
19	67	Y	0	0
20	67	Y	0	0
21	69	Y	-0.077	%5
22	69	Y	-0.077	%85
23	69	Y	-0.109	%65
24	69	Y	0	0

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
25	69	Y	0	0
26	76	Y	-0.073	%50
27	76	Y	0	0
28	76	Y	0	0
29	76	Y	0	0
30	76	Y	0	0
31	38	Y	-0.048	%5
32	38	Y	-0.048	%45
33	38	Y	0	0
34	38	Y	0	0
35	38	Y	0	0
36	40	Y	-0.077	%5
37	40	Y	-0.077	%85
38	40	Y	-0.109	%65
39	40	Y	0	0
40	40	Y	0	0
41	47	Y	-0.073	%50
42	47	Y	0	0
43	47	Y	0	0
44	47	Y	0	0
45	47	Y	0	0

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	8	Z	-0.13	%5
2	8	Z	-0.13	%45
3	8	Z	0	0
4	8	Z	0	0
5	8	Z	0	0
6	10	Z	-0.334	%5
7	10	Z	-0.334	%85
8	10	Z	-0.088	%65
9	10	Z	0	0
10	10	Z	0	0
11	17	Z	-0.081	%50
12	17	Z	0	0
13	17	Z	0	0
14	17	Z	0	0
15	17	Z	0	0
16	67	Z	-0.13	%5
17	67	Z	-0.13	%45
18	67	Z	0	0
19	67	Z	0	0
20	67	Z	0	0
21	69	Z	-0.334	%5
22	69	Z	-0.334	%85
23	69	Z	-0.088	%65
24	69	Z	0	0
25	69	Z	0	0
26	76	Z	-0.081	%50
27	76	Z	0	0
28	76	Z	0	0
29	76	Z	0	0
30	76	Z	0	0
31	38	Z	-0.13	%5

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
32	38	Z	-0.13	%45
33	38	Z	0	0
34	38	Z	0	0
35	38	Z	0	0
36	40	Z	-0.334	%5
37	40	Z	-0.334	%85
38	40	Z	-0.088	%65
39	40	Z	0	0
40	40	Z	0	0
41	47	Z	-0.081	%50
42	47	Z	0	0
43	47	Z	0	0
44	47	Z	0	0
45	47	Z	0	0

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	8	X	-0.056	%5
2	8	X	-0.056	%45
3	8	X	0	0
4	8	X	0	0
5	8	X	0	0
6	10	X	-0.121	%5
7	10	X	-0.121	%85
8	10	X	-0.069	%65
9	10	X	0	0
10	10	X	0	0
11	17	X	-0.065	%50
12	17	X	0	0
13	17	X	0	0
14	17	X	0	0
15	17	X	0	0
16	67	X	-0.056	%5
17	67	X	-0.056	%45
18	67	X	0	0
19	67	X	0	0
20	67	X	0	0
21	69	X	-0.121	%5
22	69	X	-0.121	%85
23	69	X	-0.069	%65
24	69	X	0	0
25	69	X	0	0
26	76	X	-0.065	%50
27	76	X	0	0
28	76	X	0	0
29	76	X	0	0
30	76	X	0	0
31	38	X	-0.056	%5
32	38	X	-0.056	%45
33	38	X	0	0
34	38	X	0	0
35	38	X	0	0
36	40	X	-0.121	%5
37	40	X	-0.121	%85
38	40	X	-0.069	%65

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
39	40	X	0	0
40	40	X	0	0
41	47	X	-0.065	%50
42	47	X	0	0
43	47	X	0	0
44	47	X	0	0
45	47	X	0	0

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	8	Z	-0.025	%5
2	8	Z	-0.025	%45
3	8	Z	0	0
4	8	Z	0	0
5	8	Z	0	0
6	10	Z	-0.073	%5
7	10	Z	-0.073	%85
8	10	Z	-0.017	%65
9	10	Z	0	0
10	10	Z	0	0
11	17	Z	-0.015	%50
12	17	Z	0	0
13	17	Z	0	0
14	17	Z	0	0
15	17	Z	0	0
16	67	Z	-0.025	%5
17	67	Z	-0.025	%45
18	67	Z	0	0
19	67	Z	0	0
20	67	Z	0	0
21	69	Z	-0.073	%5
22	69	Z	-0.073	%85
23	69	Z	-0.017	%65
24	69	Z	0	0
25	69	Z	0	0
26	76	Z	-0.015	%50
27	76	Z	0	0
28	76	Z	0	0
29	76	Z	0	0
30	76	Z	0	0
31	38	Z	-0.025	%5
32	38	Z	-0.025	%45
33	38	Z	0	0
34	38	Z	0	0
35	38	Z	0	0
36	40	Z	-0.073	%5
37	40	Z	-0.073	%85
38	40	Z	-0.017	%65
39	40	Z	0	0
40	40	Z	0	0
41	47	Z	-0.015	%50
42	47	Z	0	0
43	47	Z	0	0
44	47	Z	0	0
45	47	Z	0	0

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	8	X	-0.011	%5
2	8	X	-0.011	%45
3	8	X	0	0
4	8	X	0	0
5	8	X	0	0
6	10	X	-0.032	%5
7	10	X	-0.032	%85
8	10	X	-0.013	%65
9	10	X	0	0
10	10	X	0	0
11	17	X	-0.012	%50
12	17	X	0	0
13	17	X	0	0
14	17	X	0	0
15	17	X	0	0
16	67	X	-0.011	%5
17	67	X	-0.011	%45
18	67	X	0	0
19	67	X	0	0
20	67	X	0	0
21	69	X	-0.032	%5
22	69	X	-0.032	%85
23	69	X	-0.013	%65
24	69	X	0	0
25	69	X	0	0
26	76	X	-0.012	%50
27	76	X	0	0
28	76	X	0	0
29	76	X	0	0
30	76	X	0	0
31	38	X	-0.011	%5
32	38	X	-0.011	%45
33	38	X	0	0
34	38	X	0	0
35	38	X	0	0
36	40	X	-0.032	%5
37	40	X	-0.032	%85
38	40	X	-0.013	%65
39	40	X	0	0
40	40	X	0	0
41	47	X	-0.012	%50
42	47	X	0	0
43	47	X	0	0
44	47	X	0	0
45	47	X	0	0

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	8	Z	-0.009	%5
2	8	Z	-0.009	%45
3	8	Z	0	0
4	8	Z	0	0
5	8	Z	0	0
6	10	Z	-0.023	%5

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
7	10	Z	-0.023	%85
8	10	Z	-0.006	%65
9	10	Z	0	0
10	10	Z	0	0
11	17	Z	-0.006	%50
12	17	Z	0	0
13	17	Z	0	0
14	17	Z	0	0
15	17	Z	0	0
16	67	Z	-0.009	%5
17	67	Z	-0.009	%45
18	67	Z	0	0
19	67	Z	0	0
20	67	Z	0	0
21	69	Z	-0.023	%5
22	69	Z	-0.023	%85
23	69	Z	-0.006	%65
24	69	Z	0	0
25	69	Z	0	0
26	76	Z	-0.006	%50
27	76	Z	0	0
28	76	Z	0	0
29	76	Z	0	0
30	76	Z	0	0
31	38	Z	-0.009	%5
32	38	Z	-0.009	%45
33	38	Z	0	0
34	38	Z	0	0
35	38	Z	0	0
36	40	Z	-0.023	%5
37	40	Z	-0.023	%85
38	40	Z	-0.006	%65
39	40	Z	0	0
40	40	Z	0	0
41	47	Z	-0.006	%50
42	47	Z	0	0
43	47	Z	0	0
44	47	Z	0	0
45	47	Z	0	0

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	8	X	-0.004	%5
2	8	X	-0.004	%45
3	8	X	0	0
4	8	X	0	0
5	8	X	0	0
6	10	X	-0.008	%5
7	10	X	-0.008	%85
8	10	X	-0.005	%65
9	10	X	0	0
10	10	X	0	0
11	17	X	-0.004	%50
12	17	X	0	0
13	17	X	0	0

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
14	17	X	0	0
15	17	X	0	0
16	67	X	-0.004	%5
17	67	X	-0.004	%45
18	67	X	0	0
19	67	X	0	0
20	67	X	0	0
21	69	X	-0.008	%5
22	69	X	-0.008	%85
23	69	X	-0.005	%65
24	69	X	0	0
25	69	X	0	0
26	76	X	-0.004	%50
27	76	X	0	0
28	76	X	0	0
29	76	X	0	0
30	76	X	0	0
31	38	X	-0.004	%5
32	38	X	-0.004	%45
33	38	X	0	0
34	38	X	0	0
35	38	X	0	0
36	40	X	-0.008	%5
37	40	X	-0.008	%85
38	40	X	-0.005	%65
39	40	X	0	0
40	40	X	0	0
41	47	X	-0.004	%50
42	47	X	0	0
43	47	X	0	0
44	47	X	0	0
45	47	X	0	0

Member Point Loads (BLC 8 : Ice)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	8	Y	-0.081	%5
2	8	Y	-0.081	%45
3	8	Y	0	0
4	8	Y	0	0
5	8	Y	0	0
6	10	Y	-0.261	%5
7	10	Y	-0.261	%85
8	10	Y	-0.065	%65
9	10	Y	0	0
10	10	Y	0	0
11	17	Y	-0.061	%50
12	17	Y	0	0
13	17	Y	0	0
14	17	Y	0	0
15	17	Y	0	0
16	67	Y	-0.081	%5
17	67	Y	-0.081	%45
18	67	Y	0	0
19	67	Y	0	0
20	67	Y	0	0

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
21	69	Y	-0.261	%5
22	69	Y	-0.261	%85
23	69	Y	-0.065	%65
24	69	Y	0	0
25	69	Y	0	0
26	76	Y	-0.061	%50
27	76	Y	0	0
28	76	Y	0	0
29	76	Y	0	0
30	76	Y	0	0
31	38	Y	-0.081	%5
32	38	Y	-0.081	%45
33	38	Y	0	0
34	38	Y	0	0
35	38	Y	0	0
36	40	Y	-0.261	%5
37	40	Y	-0.261	%85
38	40	Y	-0.065	%65
39	40	Y	0	0
40	40	Y	0	0
41	47	Y	-0.061	%50
42	47	Y	0	0
43	47	Y	0	0
44	47	Y	0	0
45	47	Y	0	0

Member Point Loads (BLC 9 : 0 Seismic)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	8	Z	-0.024	%5
2	8	Z	-0.024	%45
3	8	Z	0	0
4	8	Z	0	0
5	8	Z	0	0
6	10	Z	-0.038	%5
7	10	Z	-0.038	%85
8	10	Z	-0.027	%65
9	10	Z	0	0
10	10	Z	0	0
11	17	Z	-0.018	%50
12	17	Z	0	0
13	17	Z	0	0
14	17	Z	0	0
15	17	Z	0	0
16	67	Z	-0.024	%5
17	67	Z	-0.024	%45
18	67	Z	0	0
19	67	Z	0	0
20	67	Z	0	0
21	69	Z	-0.038	%5
22	69	Z	-0.038	%85
23	69	Z	-0.027	%65
24	69	Z	0	0
25	69	Z	0	0
26	76	Z	-0.018	%50
27	76	Z	0	0

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
28	76	Z	0	0
29	76	Z	0	0
30	76	Z	0	0
31	38	Z	-0.024	%5
32	38	Z	-0.024	%45
33	38	Z	0	0
34	38	Z	0	0
35	38	Z	0	0
36	40	Z	-0.038	%5
37	40	Z	-0.038	%85
38	40	Z	-0.027	%65
39	40	Z	0	0
40	40	Z	0	0
41	47	Z	-0.018	%50
42	47	Z	0	0
43	47	Z	0	0
44	47	Z	0	0
45	47	Z	0	0

Member Point Loads (BLC 10 : 90 Seismic)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	8	X	-0.024	%5
2	8	X	-0.024	%45
3	8	X	0	0
4	8	X	0	0
5	8	X	0	0
6	10	X	-0.038	%5
7	10	X	-0.038	%85
8	10	X	-0.027	%65
9	10	X	0	0
10	10	X	0	0
11	17	X	-0.018	%50
12	17	X	0	0
13	17	X	0	0
14	17	X	0	0
15	17	X	0	0
16	67	X	-0.024	%5
17	67	X	-0.024	%45
18	67	X	0	0
19	67	X	0	0
20	67	X	0	0
21	69	X	-0.038	%5
22	69	X	-0.038	%85
23	69	X	-0.027	%65
24	69	X	0	0
25	69	X	0	0
26	76	X	-0.018	%50
27	76	X	0	0
28	76	X	0	0
29	76	X	0	0
30	76	X	0	0
31	38	X	-0.024	%5
32	38	X	-0.024	%45
33	38	X	0	0
34	38	X	0	0

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
35	38	X	0	0
36	40	X	-0.038	%5
37	40	X	-0.038	%85
38	40	X	-0.027	%65
39	40	X	0	0
40	40	X	0	0
41	47	X	-0.018	%50
42	47	X	0	0
43	47	X	0	0
44	47	X	0	0
45	47	X	0	0

Member Point Loads (BLC 15 : Maint LL 1)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	4	Y	-0.25	%50

Member Point Loads (BLC 16 : Maint LL 2)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	36	Y	-0.25	%50

Member Point Loads (BLC 17 : Maint LL 3)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	65	Y	-0.25	%50

Member Point Loads (BLC 18 : Maint LL 4)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	32	Y	-0.25	%50

Member Point Loads (BLC 19 : Maint LL 5)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	30	Y	-0.25	%50

Member Point Loads (BLC 20 : Maint LL 6)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	31	Y	-0.25	%50

Member Point Loads (BLC 21 : Maint LL 7)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	29	Y	-0.25	%50

Member Point Loads (BLC 22 : Maint LL 8)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	90	Y	-0.25	%50

Member Point Loads (BLC 23 : Maint LL 9)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	88	Y	-0.25	%50

Member Point Loads (BLC 24 : Maint LL 10)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	89	Y	-0.25	%50

Member Point Loads (BLC 25 : Maint LL 11)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	87	Y	-0.25	%50

Member Point Loads (BLC 26 : Maint LL 12)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	61	Y	-0.25	%50

Member Point Loads (BLC 27 : Maint LL 13)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	59	Y	-0.25	%50

Member Point Loads (BLC 28 : Maint LL 14)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	60	Y	-0.25	%50

Member Point Loads (BLC 29 : Maint LL 15)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	58	Y	-0.25	%50

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	-0.014	-0.014	0	%100
2	3	Z	-0.009	-0.009	0	%100
3	4	Z	-0.021	-0.021	0	%100
4	6	Z	-0.01	-0.01	0	%100
5	8	Z	-0.01	-0.01	0	%100
6	10	Z	-0.01	-0.01	0	%100
7	11	Z	-0.007	-0.007	0	%100
8	12	Z	-0.007	-0.007	0	%100
9	13	Z	-0.003	-0.003	0	%100
10	16	Z	-0.003	-0.003	0	%100
11	17	Z	-0.007	-0.007	0	%100
12	18	Z	-0.003	-0.003	0	%100
13	19	Z	-0.007	-0.007	0	%100
14	20	Z	-0.007	-0.007	0	%100
15	21	Z	-0.003	-0.003	0	%100
16	23	Z	-0.003	-0.003	0	%100
17	25	Z	-0.01	-0.01	0	%100



Company : B+T Group
 Designer : APK
 Job Number : 84855.017.01
 Model Name : 801485 - CT Suffield 1 CAC 801...

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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	29	Z	-0.017	-0.017	0	%100
19	30	Z	-0.017	-0.017	0	%100
20	31	Z	-0.017	-0.017	0	%100
21	32	Z	-0.017	-0.017	0	%100
22	33	Z	-0.014	-0.014	0	%100
23	35	Z	-0.009	-0.009	0	%100
24	36	Z	-0.021	-0.021	0	%100
25	38	Z	-0.01	-0.01	0	%100
26	40	Z	-0.01	-0.01	0	%100
27	41	Z	-0.007	-0.007	0	%100
28	42	Z	-0.007	-0.007	0	%100
29	43	Z	-0.003	-0.003	0	%100
30	46	Z	-0.003	-0.003	0	%100
31	47	Z	-0.007	-0.007	0	%100
32	48	Z	-0.003	-0.003	0	%100
33	49	Z	-0.007	-0.007	0	%100
34	50	Z	-0.007	-0.007	0	%100
35	51	Z	-0.003	-0.003	0	%100
36	53	Z	-0.003	-0.003	0	%100
37	55	Z	-0.01	-0.01	0	%100
38	58	Z	-0.017	-0.017	0	%100
39	59	Z	-0.017	-0.017	0	%100
40	60	Z	-0.017	-0.017	0	%100
41	61	Z	-0.017	-0.017	0	%100
42	62	Z	-0.014	-0.014	0	%100
43	64	Z	-0.009	-0.009	0	%100
44	65	Z	-0.021	-0.021	0	%100
45	67	Z	-0.01	-0.01	0	%100
46	69	Z	-0.01	-0.01	0	%100
47	70	Z	-0.007	-0.007	0	%100
48	71	Z	-0.007	-0.007	0	%100
49	72	Z	-0.003	-0.003	0	%100
50	75	Z	-0.003	-0.003	0	%100
51	76	Z	-0.007	-0.007	0	%100
52	77	Z	-0.003	-0.003	0	%100
53	78	Z	-0.007	-0.007	0	%100
54	79	Z	-0.007	-0.007	0	%100
55	80	Z	-0.003	-0.003	0	%100
56	82	Z	-0.003	-0.003	0	%100
57	84	Z	-0.01	-0.01	0	%100
58	87	Z	-0.017	-0.017	0	%100
59	88	Z	-0.017	-0.017	0	%100
60	89	Z	-0.017	-0.017	0	%100
61	90	Z	-0.017	-0.017	0	%100
62	92	Z	-0.01	-0.01	0	%100
63	95	Z	-0.01	-0.01	0	%100
64	97	Z	-0.008	-0.008	0	%100
65	98	Z	-0.009	-0.009	0	%100
66	99	Z	-0.007	-0.007	0	%100
67	14	Z	-0.011	-0.011	0	%100
68	15	Z	-0.011	-0.011	0	%100
69	22	Z	-0.01	-0.01	0	%100
70	24	Z	-0.01	-0.01	0	%100
71	44	Z	-0.011	-0.011	0	%100
72	45	Z	-0.011	-0.011	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, %)]
73	52	Z	-0.01	-0.01	0	%100
74	54	Z	-0.01	-0.01	0	%100
75	73	Z	-0.011	-0.011	0	%100
76	74	Z	-0.011	-0.011	0	%100
77	81	Z	-0.01	-0.01	0	%100
78	83	Z	-0.01	-0.01	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	-0.014	-0.014	0	%100
2	3	X	-0.009	-0.009	0	%100
3	4	X	-0.021	-0.021	0	%100
4	6	X	-0.01	-0.01	0	%100
5	8	X	-0.01	-0.01	0	%100
6	10	X	-0.01	-0.01	0	%100
7	11	X	-0.007	-0.007	0	%100
8	12	X	-0.007	-0.007	0	%100
9	13	X	-0.003	-0.003	0	%100
10	16	X	-0.003	-0.003	0	%100
11	17	X	-0.007	-0.007	0	%100
12	18	X	-0.003	-0.003	0	%100
13	19	X	-0.007	-0.007	0	%100
14	20	X	-0.007	-0.007	0	%100
15	21	X	-0.003	-0.003	0	%100
16	23	X	-0.003	-0.003	0	%100
17	25	X	-0.01	-0.01	0	%100
18	29	X	-0.017	-0.017	0	%100
19	30	X	-0.017	-0.017	0	%100
20	31	X	-0.017	-0.017	0	%100
21	32	X	-0.017	-0.017	0	%100
22	33	X	-0.014	-0.014	0	%100
23	35	X	-0.009	-0.009	0	%100
24	36	X	-0.021	-0.021	0	%100
25	38	X	-0.01	-0.01	0	%100
26	40	X	-0.01	-0.01	0	%100
27	41	X	-0.007	-0.007	0	%100
28	42	X	-0.007	-0.007	0	%100
29	43	X	-0.003	-0.003	0	%100
30	46	X	-0.003	-0.003	0	%100
31	47	X	-0.007	-0.007	0	%100
32	48	X	-0.003	-0.003	0	%100
33	49	X	-0.007	-0.007	0	%100
34	50	X	-0.007	-0.007	0	%100
35	51	X	-0.003	-0.003	0	%100
36	53	X	-0.003	-0.003	0	%100
37	55	X	-0.01	-0.01	0	%100
38	58	X	-0.017	-0.017	0	%100
39	59	X	-0.017	-0.017	0	%100
40	60	X	-0.017	-0.017	0	%100
41	61	X	-0.017	-0.017	0	%100
42	62	X	-0.014	-0.014	0	%100
43	64	X	-0.009	-0.009	0	%100
44	65	X	-0.021	-0.021	0	%100
45	67	X	-0.01	-0.01	0	%100
46	69	X	-0.01	-0.01	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, %)]
47	70	X	-0.007	-0.007	0	%100
48	71	X	-0.007	-0.007	0	%100
49	72	X	-0.003	-0.003	0	%100
50	75	X	-0.003	-0.003	0	%100
51	76	X	-0.007	-0.007	0	%100
52	77	X	-0.003	-0.003	0	%100
53	78	X	-0.007	-0.007	0	%100
54	79	X	-0.007	-0.007	0	%100
55	80	X	-0.003	-0.003	0	%100
56	82	X	-0.003	-0.003	0	%100
57	84	X	-0.01	-0.01	0	%100
58	87	X	-0.017	-0.017	0	%100
59	88	X	-0.017	-0.017	0	%100
60	89	X	-0.017	-0.017	0	%100
61	90	X	-0.017	-0.017	0	%100
62	92	X	-0.01	-0.01	0	%100
63	95	X	-0.01	-0.01	0	%100
64	97	X	-0.008	-0.008	0	%100
65	98	X	-0.009	-0.009	0	%100
66	99	X	-0.007	-0.007	0	%100
67	14	X	-0.011	-0.011	0	%100
68	15	X	-0.011	-0.011	0	%100
69	22	X	-0.01	-0.01	0	%100
70	24	X	-0.01	-0.01	0	%100
71	44	X	-0.011	-0.011	0	%100
72	45	X	-0.011	-0.011	0	%100
73	52	X	-0.01	-0.01	0	%100
74	54	X	-0.01	-0.01	0	%100
75	73	X	-0.011	-0.011	0	%100
76	74	X	-0.011	-0.011	0	%100
77	81	X	-0.01	-0.01	0	%100
78	83	X	-0.01	-0.01	0	%100

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	-0.003	-0.003	0	%100
2	3	Z	-0.003	-0.003	0	%100
3	4	Z	-0.008	-0.008	0	%100
4	6	Z	-0.002	-0.002	0	%100
5	8	Z	-0.002	-0.002	0	%100
6	10	Z	-0.002	-0.002	0	%100
7	11	Z	-0.002	-0.002	0	%100
8	12	Z	-0.002	-0.002	0	%100
9	13	Z	-0.007	-0.007	0	%100
10	16	Z	-0.007	-0.007	0	%100
11	17	Z	-0.002	-0.002	0	%100
12	18	Z	-0.007	-0.007	0	%100
13	19	Z	-0.002	-0.002	0	%100
14	20	Z	-0.002	-0.002	0	%100
15	21	Z	-0.007	-0.007	0	%100
16	23	Z	-0.007	-0.007	0	%100
17	25	Z	-0.002	-0.002	0	%100
18	29	Z	-0.008	-0.008	0	%100
19	30	Z	-0.008	-0.008	0	%100
20	31	Z	-0.008	-0.008	0	%100



Company : B+T Group
 Designer : APK
 Job Number : 84855.017.01
 Model Name : 801485 - CT Suffield 1 CAC 801...

3/30/2022
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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, %)]
21	32	Z	-0.008	-0.008	0	%100
22	33	Z	-0.003	-0.003	0	%100
23	35	Z	-0.003	-0.003	0	%100
24	36	Z	-0.008	-0.008	0	%100
25	38	Z	-0.002	-0.002	0	%100
26	40	Z	-0.002	-0.002	0	%100
27	41	Z	-0.002	-0.002	0	%100
28	42	Z	-0.002	-0.002	0	%100
29	43	Z	-0.007	-0.007	0	%100
30	46	Z	-0.007	-0.007	0	%100
31	47	Z	-0.002	-0.002	0	%100
32	48	Z	-0.007	-0.007	0	%100
33	49	Z	-0.002	-0.002	0	%100
34	50	Z	-0.002	-0.002	0	%100
35	51	Z	-0.007	-0.007	0	%100
36	53	Z	-0.007	-0.007	0	%100
37	55	Z	-0.002	-0.002	0	%100
38	58	Z	-0.008	-0.008	0	%100
39	59	Z	-0.008	-0.008	0	%100
40	60	Z	-0.008	-0.008	0	%100
41	61	Z	-0.008	-0.008	0	%100
42	62	Z	-0.003	-0.003	0	%100
43	64	Z	-0.003	-0.003	0	%100
44	65	Z	-0.008	-0.008	0	%100
45	67	Z	-0.002	-0.002	0	%100
46	69	Z	-0.002	-0.002	0	%100
47	70	Z	-0.002	-0.002	0	%100
48	71	Z	-0.002	-0.002	0	%100
49	72	Z	-0.007	-0.007	0	%100
50	75	Z	-0.007	-0.007	0	%100
51	76	Z	-0.002	-0.002	0	%100
52	77	Z	-0.007	-0.007	0	%100
53	78	Z	-0.002	-0.002	0	%100
54	79	Z	-0.002	-0.002	0	%100
55	80	Z	-0.007	-0.007	0	%100
56	82	Z	-0.007	-0.007	0	%100
57	84	Z	-0.002	-0.002	0	%100
58	87	Z	-0.008	-0.008	0	%100
59	88	Z	-0.008	-0.008	0	%100
60	89	Z	-0.008	-0.008	0	%100
61	90	Z	-0.008	-0.008	0	%100
62	92	Z	-0.002	-0.002	0	%100
63	95	Z	-0.002	-0.002	0	%100
64	97	Z	-0.003	-0.003	0	%100
65	98	Z	-0.003	-0.003	0	%100
66	99	Z	-0.003	-0.003	0	%100
67	14	Z	-0.007	-0.007	0	%100
68	15	Z	-0.007	-0.007	0	%100
69	22	Z	-0.007	-0.007	0	%100
70	24	Z	-0.007	-0.007	0	%100
71	44	Z	-0.007	-0.007	0	%100
72	45	Z	-0.007	-0.007	0	%100
73	52	Z	-0.007	-0.007	0	%100
74	54	Z	-0.007	-0.007	0	%100
75	73	Z	-0.007	-0.007	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, %)]
76	74	Z	-0.007	-0.007	0	%100
77	81	Z	-0.007	-0.007	0	%100
78	83	Z	-0.007	-0.007	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	-0.003	-0.003	0	%100
2	3	X	-0.003	-0.003	0	%100
3	4	X	-0.008	-0.008	0	%100
4	6	X	-0.002	-0.002	0	%100
5	8	X	-0.002	-0.002	0	%100
6	10	X	-0.002	-0.002	0	%100
7	11	X	-0.002	-0.002	0	%100
8	12	X	-0.002	-0.002	0	%100
9	13	X	-0.007	-0.007	0	%100
10	16	X	-0.007	-0.007	0	%100
11	17	X	-0.002	-0.002	0	%100
12	18	X	-0.007	-0.007	0	%100
13	19	X	-0.002	-0.002	0	%100
14	20	X	-0.002	-0.002	0	%100
15	21	X	-0.007	-0.007	0	%100
16	23	X	-0.007	-0.007	0	%100
17	25	X	-0.002	-0.002	0	%100
18	29	X	-0.008	-0.008	0	%100
19	30	X	-0.008	-0.008	0	%100
20	31	X	-0.008	-0.008	0	%100
21	32	X	-0.008	-0.008	0	%100
22	33	X	-0.003	-0.003	0	%100
23	35	X	-0.003	-0.003	0	%100
24	36	X	-0.008	-0.008	0	%100
25	38	X	-0.002	-0.002	0	%100
26	40	X	-0.002	-0.002	0	%100
27	41	X	-0.002	-0.002	0	%100
28	42	X	-0.002	-0.002	0	%100
29	43	X	-0.007	-0.007	0	%100
30	46	X	-0.007	-0.007	0	%100
31	47	X	-0.002	-0.002	0	%100
32	48	X	-0.007	-0.007	0	%100
33	49	X	-0.002	-0.002	0	%100
34	50	X	-0.002	-0.002	0	%100
35	51	X	-0.007	-0.007	0	%100
36	53	X	-0.007	-0.007	0	%100
37	55	X	-0.002	-0.002	0	%100
38	58	X	-0.008	-0.008	0	%100
39	59	X	-0.008	-0.008	0	%100
40	60	X	-0.008	-0.008	0	%100
41	61	X	-0.008	-0.008	0	%100
42	62	X	-0.003	-0.003	0	%100
43	64	X	-0.003	-0.003	0	%100
44	65	X	-0.008	-0.008	0	%100
45	67	X	-0.002	-0.002	0	%100
46	69	X	-0.002	-0.002	0	%100
47	70	X	-0.002	-0.002	0	%100
48	71	X	-0.002	-0.002	0	%100
49	72	X	-0.007	-0.007	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, %)]
50	75	X	-0.007	-0.007	0	%100
51	76	X	-0.002	-0.002	0	%100
52	77	X	-0.007	-0.007	0	%100
53	78	X	-0.002	-0.002	0	%100
54	79	X	-0.002	-0.002	0	%100
55	80	X	-0.007	-0.007	0	%100
56	82	X	-0.007	-0.007	0	%100
57	84	X	-0.002	-0.002	0	%100
58	87	X	-0.008	-0.008	0	%100
59	88	X	-0.008	-0.008	0	%100
60	89	X	-0.008	-0.008	0	%100
61	90	X	-0.008	-0.008	0	%100
62	92	X	-0.002	-0.002	0	%100
63	95	X	-0.002	-0.002	0	%100
64	97	X	-0.003	-0.003	0	%100
65	98	X	-0.003	-0.003	0	%100
66	99	X	-0.003	-0.003	0	%100
67	14	X	-0.007	-0.007	0	%100
68	15	X	-0.007	-0.007	0	%100
69	22	X	-0.007	-0.007	0	%100
70	24	X	-0.007	-0.007	0	%100
71	44	X	-0.007	-0.007	0	%100
72	45	X	-0.007	-0.007	0	%100
73	52	X	-0.007	-0.007	0	%100
74	54	X	-0.007	-0.007	0	%100
75	73	X	-0.007	-0.007	0	%100
76	74	X	-0.007	-0.007	0	%100
77	81	X	-0.007	-0.007	0	%100
78	83	X	-0.007	-0.007	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	-0.0005	-0.0005	0	%100
2	3	Z	-0.0005	-0.0005	0	%100
3	4	Z	-0.001	-0.001	0	%100
4	6	Z	-0.0003	-0.0003	0	%100
5	8	Z	-0.0003	-0.0003	0	%100
6	10	Z	-0.0003	-0.0003	0	%100
7	11	Z	-0.0003	-0.0003	0	%100
8	12	Z	-0.0003	-0.0003	0	%100
9	13	Z	-0.0002	-0.0002	0	%100
10	16	Z	-0.0002	-0.0002	0	%100
11	17	Z	-0.0003	-0.0003	0	%100
12	18	Z	-0.0002	-0.0002	0	%100
13	19	Z	-0.0003	-0.0003	0	%100
14	20	Z	-0.0003	-0.0003	0	%100
15	21	Z	-0.0002	-0.0002	0	%100
16	23	Z	-0.0002	-0.0002	0	%100
17	25	Z	-0.0003	-0.0003	0	%100
18	29	Z	-0.001	-0.001	0	%100
19	30	Z	-0.001	-0.001	0	%100
20	31	Z	-0.001	-0.001	0	%100
21	32	Z	-0.001	-0.001	0	%100
22	33	Z	-0.0005	-0.0005	0	%100
23	35	Z	-0.0005	-0.0005	0	%100



Company : B+T Group
 Designer : APK
 Job Number : 84855.017.01
 Model Name : 801485 - CT Suffield 1 CAC 801...

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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, %)]
24	36	Z	-0.001	-0.001	0	%100
25	38	Z	-0.0003	-0.0003	0	%100
26	40	Z	-0.0003	-0.0003	0	%100
27	41	Z	-0.0003	-0.0003	0	%100
28	42	Z	-0.0003	-0.0003	0	%100
29	43	Z	-0.0002	-0.0002	0	%100
30	46	Z	-0.0002	-0.0002	0	%100
31	47	Z	-0.0003	-0.0003	0	%100
32	48	Z	-0.0002	-0.0002	0	%100
33	49	Z	-0.0003	-0.0003	0	%100
34	50	Z	-0.0003	-0.0003	0	%100
35	51	Z	-0.0002	-0.0002	0	%100
36	53	Z	-0.0002	-0.0002	0	%100
37	55	Z	-0.0003	-0.0003	0	%100
38	58	Z	-0.001	-0.001	0	%100
39	59	Z	-0.001	-0.001	0	%100
40	60	Z	-0.001	-0.001	0	%100
41	61	Z	-0.001	-0.001	0	%100
42	62	Z	-0.0005	-0.0005	0	%100
43	64	Z	-0.0005	-0.0005	0	%100
44	65	Z	-0.001	-0.001	0	%100
45	67	Z	-0.0003	-0.0003	0	%100
46	69	Z	-0.0003	-0.0003	0	%100
47	70	Z	-0.0003	-0.0003	0	%100
48	71	Z	-0.0003	-0.0003	0	%100
49	72	Z	-0.0002	-0.0002	0	%100
50	75	Z	-0.0002	-0.0002	0	%100
51	76	Z	-0.0003	-0.0003	0	%100
52	77	Z	-0.0002	-0.0002	0	%100
53	78	Z	-0.0003	-0.0003	0	%100
54	79	Z	-0.0003	-0.0003	0	%100
55	80	Z	-0.0002	-0.0002	0	%100
56	82	Z	-0.0002	-0.0002	0	%100
57	84	Z	-0.0003	-0.0003	0	%100
58	87	Z	-0.001	-0.001	0	%100
59	88	Z	-0.001	-0.001	0	%100
60	89	Z	-0.001	-0.001	0	%100
61	90	Z	-0.001	-0.001	0	%100
62	92	Z	-0.0003	-0.0003	0	%100
63	95	Z	-0.0003	-0.0003	0	%100
64	97	Z	-0.0003	-0.0003	0	%100
65	98	Z	-0.0003	-0.0003	0	%100
66	99	Z	-0.0003	-0.0003	0	%100
67	14	Z	-0.0008	-0.0008	0	%100
68	15	Z	-0.0008	-0.0008	0	%100
69	22	Z	-0.0007	-0.0007	0	%100
70	24	Z	-0.0007	-0.0007	0	%100
71	44	Z	-0.0008	-0.0008	0	%100
72	45	Z	-0.0008	-0.0008	0	%100
73	52	Z	-0.0007	-0.0007	0	%100
74	54	Z	-0.0007	-0.0007	0	%100
75	73	Z	-0.0008	-0.0008	0	%100
76	74	Z	-0.0008	-0.0008	0	%100
77	81	Z	-0.0007	-0.0007	0	%100
78	83	Z	-0.0007	-0.0007	0	%100



Company : B+T Group
 Designer : APK
 Job Number : 84855.017.01
 Model Name : 801485 - CT Suffield 1 CAC 801...

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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	-0.0005	-0.0005	0	%100
2	3	X	-0.0005	-0.0005	0	%100
3	4	X	-0.001	-0.001	0	%100
4	6	X	-0.0003	-0.0003	0	%100
5	8	X	-0.0003	-0.0003	0	%100
6	10	X	-0.0003	-0.0003	0	%100
7	11	X	-0.0003	-0.0003	0	%100
8	12	X	-0.0003	-0.0003	0	%100
9	13	X	-0.0002	-0.0002	0	%100
10	16	X	-0.0002	-0.0002	0	%100
11	17	X	-0.0003	-0.0003	0	%100
12	18	X	-0.0002	-0.0002	0	%100
13	19	X	-0.0003	-0.0003	0	%100
14	20	X	-0.0003	-0.0003	0	%100
15	21	X	-0.0002	-0.0002	0	%100
16	23	X	-0.0002	-0.0002	0	%100
17	25	X	-0.0003	-0.0003	0	%100
18	29	X	-0.001	-0.001	0	%100
19	30	X	-0.001	-0.001	0	%100
20	31	X	-0.001	-0.001	0	%100
21	32	X	-0.001	-0.001	0	%100
22	33	X	-0.0005	-0.0005	0	%100
23	35	X	-0.0005	-0.0005	0	%100
24	36	X	-0.001	-0.001	0	%100
25	38	X	-0.0003	-0.0003	0	%100
26	40	X	-0.0003	-0.0003	0	%100
27	41	X	-0.0003	-0.0003	0	%100
28	42	X	-0.0003	-0.0003	0	%100
29	43	X	-0.0002	-0.0002	0	%100
30	46	X	-0.0002	-0.0002	0	%100
31	47	X	-0.0003	-0.0003	0	%100
32	48	X	-0.0002	-0.0002	0	%100
33	49	X	-0.0003	-0.0003	0	%100
34	50	X	-0.0003	-0.0003	0	%100
35	51	X	-0.0002	-0.0002	0	%100
36	53	X	-0.0002	-0.0002	0	%100
37	55	X	-0.0003	-0.0003	0	%100
38	58	X	-0.001	-0.001	0	%100
39	59	X	-0.001	-0.001	0	%100
40	60	X	-0.001	-0.001	0	%100
41	61	X	-0.001	-0.001	0	%100
42	62	X	-0.0005	-0.0005	0	%100
43	64	X	-0.0005	-0.0005	0	%100
44	65	X	-0.001	-0.001	0	%100
45	67	X	-0.0003	-0.0003	0	%100
46	69	X	-0.0003	-0.0003	0	%100
47	70	X	-0.0003	-0.0003	0	%100
48	71	X	-0.0003	-0.0003	0	%100
49	72	X	-0.0002	-0.0002	0	%100
50	75	X	-0.0002	-0.0002	0	%100
51	76	X	-0.0003	-0.0003	0	%100
52	77	X	-0.0002	-0.0002	0	%100
53	78	X	-0.0003	-0.0003	0	%100
54	79	X	-0.0003	-0.0003	0	%100
55	80	X	-0.0002	-0.0002	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, %)]
56	82	X	-0.0002	-0.0002	0	%100
57	84	X	-0.0003	-0.0003	0	%100
58	87	X	-0.001	-0.001	0	%100
59	88	X	-0.001	-0.001	0	%100
60	89	X	-0.001	-0.001	0	%100
61	90	X	-0.001	-0.001	0	%100
62	92	X	-0.0003	-0.0003	0	%100
63	95	X	-0.0003	-0.0003	0	%100
64	97	X	-0.0003	-0.0003	0	%100
65	98	X	-0.0003	-0.0003	0	%100
66	99	X	-0.0003	-0.0003	0	%100
67	14	X	-0.0008	-0.0008	0	%100
68	15	X	-0.0008	-0.0008	0	%100
69	22	X	-0.0007	-0.0007	0	%100
70	24	X	-0.0007	-0.0007	0	%100
71	44	X	-0.0008	-0.0008	0	%100
72	45	X	-0.0008	-0.0008	0	%100
73	52	X	-0.0007	-0.0007	0	%100
74	54	X	-0.0007	-0.0007	0	%100
75	73	X	-0.0008	-0.0008	0	%100
76	74	X	-0.0008	-0.0008	0	%100
77	81	X	-0.0007	-0.0007	0	%100
78	83	X	-0.0007	-0.0007	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	-0.011	-0.011	0	%100
2	3	Y	-0.011	-0.011	0	%100
3	4	Y	-0.016	-0.016	0	%100
4	6	Y	-0.009	-0.009	0	%100
5	8	Y	-0.009	-0.009	0	%100
6	10	Y	-0.009	-0.009	0	%100
7	11	Y	-0.008	-0.008	0	%100
8	12	Y	-0.008	-0.008	0	%100
9	13	Y	-0.013	-0.013	0	%100
10	16	Y	-0.013	-0.013	0	%100
11	17	Y	-0.008	-0.008	0	%100
12	18	Y	-0.013	-0.013	0	%100
13	19	Y	-0.008	-0.008	0	%100
14	20	Y	-0.008	-0.008	0	%100
15	21	Y	-0.013	-0.013	0	%100
16	23	Y	-0.013	-0.013	0	%100
17	25	Y	-0.009	-0.009	0	%100
18	29	Y	-0.012	-0.012	0	%100
19	30	Y	-0.012	-0.012	0	%100
20	31	Y	-0.012	-0.012	0	%100
21	32	Y	-0.012	-0.012	0	%100
22	33	Y	-0.011	-0.011	0	%100
23	35	Y	-0.011	-0.011	0	%100
24	36	Y	-0.016	-0.016	0	%100
25	38	Y	-0.009	-0.009	0	%100
26	40	Y	-0.009	-0.009	0	%100
27	41	Y	-0.008	-0.008	0	%100
28	42	Y	-0.008	-0.008	0	%100
29	43	Y	-0.013	-0.013	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, %)]
30	46	Y	-0.013	-0.013	0	%100
31	47	Y	-0.008	-0.008	0	%100
32	48	Y	-0.013	-0.013	0	%100
33	49	Y	-0.008	-0.008	0	%100
34	50	Y	-0.008	-0.008	0	%100
35	51	Y	-0.013	-0.013	0	%100
36	53	Y	-0.013	-0.013	0	%100
37	55	Y	-0.009	-0.009	0	%100
38	58	Y	-0.012	-0.012	0	%100
39	59	Y	-0.012	-0.012	0	%100
40	60	Y	-0.012	-0.012	0	%100
41	61	Y	-0.012	-0.012	0	%100
42	62	Y	-0.011	-0.011	0	%100
43	64	Y	-0.011	-0.011	0	%100
44	65	Y	-0.016	-0.016	0	%100
45	67	Y	-0.009	-0.009	0	%100
46	69	Y	-0.009	-0.009	0	%100
47	70	Y	-0.008	-0.008	0	%100
48	71	Y	-0.008	-0.008	0	%100
49	72	Y	-0.013	-0.013	0	%100
50	75	Y	-0.013	-0.013	0	%100
51	76	Y	-0.008	-0.008	0	%100
52	77	Y	-0.013	-0.013	0	%100
53	78	Y	-0.008	-0.008	0	%100
54	79	Y	-0.008	-0.008	0	%100
55	80	Y	-0.013	-0.013	0	%100
56	82	Y	-0.013	-0.013	0	%100
57	84	Y	-0.009	-0.009	0	%100
58	87	Y	-0.012	-0.012	0	%100
59	88	Y	-0.012	-0.012	0	%100
60	89	Y	-0.012	-0.012	0	%100
61	90	Y	-0.012	-0.012	0	%100
62	92	Y	-0.009	-0.009	0	%100
63	95	Y	-0.009	-0.009	0	%100
64	97	Y	-0.009	-0.009	0	%100
65	98	Y	-0.009	-0.009	0	%100
66	99	Y	-0.009	-0.009	0	%100
67	14	Y	-0.009	-0.009	0	%100
68	15	Y	-0.009	-0.009	0	%100
69	22	Y	-0.009	-0.009	0	%100
70	24	Y	-0.009	-0.009	0	%100
71	44	Y	-0.009	-0.009	0	%100
72	45	Y	-0.009	-0.009	0	%100
73	52	Y	-0.009	-0.009	0	%100
74	54	Y	-0.009	-0.009	0	%100
75	73	Y	-0.009	-0.009	0	%100
76	74	Y	-0.009	-0.009	0	%100
77	81	Y	-0.009	-0.009	0	%100
78	83	Y	-0.009	-0.009	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	3	Z	-0.002	-0.002	0	%100
3	4	Z	-0.003	-0.003	0	%100



Company : B+T Group
 Designer : APK
 Job Number : 84855.017.01
 Model Name : 801485 - CT Suffield 1 CAC 801...

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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, %)]
4	6	Z	-0.0009	-0.0009	0	%100
5	8	Z	-0.0009	-0.0009	0	%100
6	10	Z	-0.0009	-0.0009	0	%100
7	11	Z	-0.0007	-0.0007	0	%100
8	12	Z	-0.0007	-0.0007	0	%100
9	13	Z	-0.002	-0.002	0	%100
10	16	Z	-0.002	-0.002	0	%100
11	17	Z	-0.0007	-0.0007	0	%100
12	18	Z	-0.002	-0.002	0	%100
13	19	Z	-0.0007	-0.0007	0	%100
14	20	Z	-0.0007	-0.0007	0	%100
15	21	Z	-0.002	-0.002	0	%100
16	23	Z	-0.002	-0.002	0	%100
17	25	Z	-0.0009	-0.0009	0	%100
18	29	Z	-0.0008	-0.0008	0	%100
19	30	Z	-0.0008	-0.0008	0	%100
20	31	Z	-0.0008	-0.0008	0	%100
21	32	Z	-0.0008	-0.0008	0	%100
22	33	Z	-0.002	-0.002	0	%100
23	35	Z	-0.002	-0.002	0	%100
24	36	Z	-0.003	-0.003	0	%100
25	38	Z	-0.0009	-0.0009	0	%100
26	40	Z	-0.0009	-0.0009	0	%100
27	41	Z	-0.0007	-0.0007	0	%100
28	42	Z	-0.0007	-0.0007	0	%100
29	43	Z	-0.002	-0.002	0	%100
30	46	Z	-0.002	-0.002	0	%100
31	47	Z	-0.0007	-0.0007	0	%100
32	48	Z	-0.002	-0.002	0	%100
33	49	Z	-0.0007	-0.0007	0	%100
34	50	Z	-0.0007	-0.0007	0	%100
35	51	Z	-0.002	-0.002	0	%100
36	53	Z	-0.002	-0.002	0	%100
37	55	Z	-0.0009	-0.0009	0	%100
38	58	Z	-0.0008	-0.0008	0	%100
39	59	Z	-0.0008	-0.0008	0	%100
40	60	Z	-0.0008	-0.0008	0	%100
41	61	Z	-0.0008	-0.0008	0	%100
42	62	Z	-0.002	-0.002	0	%100
43	64	Z	-0.002	-0.002	0	%100
44	65	Z	-0.003	-0.003	0	%100
45	67	Z	-0.0009	-0.0009	0	%100
46	69	Z	-0.0009	-0.0009	0	%100
47	70	Z	-0.0007	-0.0007	0	%100
48	71	Z	-0.0007	-0.0007	0	%100
49	72	Z	-0.002	-0.002	0	%100
50	75	Z	-0.002	-0.002	0	%100
51	76	Z	-0.0007	-0.0007	0	%100
52	77	Z	-0.002	-0.002	0	%100
53	78	Z	-0.0007	-0.0007	0	%100
54	79	Z	-0.0007	-0.0007	0	%100
55	80	Z	-0.002	-0.002	0	%100
56	82	Z	-0.002	-0.002	0	%100
57	84	Z	-0.0009	-0.0009	0	%100
58	87	Z	-0.0008	-0.0008	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, %)]
59	88	Z	-0.0008	-0.0008	0	%100
60	89	Z	-0.0008	-0.0008	0	%100
61	90	Z	-0.0008	-0.0008	0	%100
62	92	Z	-0.0009	-0.0009	0	%100
63	95	Z	-0.0009	-0.0009	0	%100
64	97	Z	-0.0009	-0.0009	0	%100
65	98	Z	-0.0009	-0.0009	0	%100
66	99	Z	-0.0009	-0.0009	0	%100
67	14	Z	-0.0004	-0.0004	0	%100
68	15	Z	-0.0004	-0.0004	0	%100
69	22	Z	-0.0004	-0.0004	0	%100
70	24	Z	-0.0004	-0.0004	0	%100
71	44	Z	-0.0004	-0.0004	0	%100
72	45	Z	-0.0004	-0.0004	0	%100
73	52	Z	-0.0004	-0.0004	0	%100
74	54	Z	-0.0004	-0.0004	0	%100
75	73	Z	-0.0004	-0.0004	0	%100
76	74	Z	-0.0004	-0.0004	0	%100
77	81	Z	-0.0004	-0.0004	0	%100
78	83	Z	-0.0004	-0.0004	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	3	X	-0.002	-0.002	0	%100
3	4	X	-0.003	-0.003	0	%100
4	6	X	-0.0009	-0.0009	0	%100
5	8	X	-0.0009	-0.0009	0	%100
6	10	X	-0.0009	-0.0009	0	%100
7	11	X	-0.0007	-0.0007	0	%100
8	12	X	-0.0007	-0.0007	0	%100
9	13	X	-0.002	-0.002	0	%100
10	16	X	-0.002	-0.002	0	%100
11	17	X	-0.0007	-0.0007	0	%100
12	18	X	-0.002	-0.002	0	%100
13	19	X	-0.0007	-0.0007	0	%100
14	20	X	-0.0007	-0.0007	0	%100
15	21	X	-0.002	-0.002	0	%100
16	23	X	-0.002	-0.002	0	%100
17	25	X	-0.0009	-0.0009	0	%100
18	29	X	-0.0008	-0.0008	0	%100
19	30	X	-0.0008	-0.0008	0	%100
20	31	X	-0.0008	-0.0008	0	%100
21	32	X	-0.0008	-0.0008	0	%100
22	33	X	-0.002	-0.002	0	%100
23	35	X	-0.002	-0.002	0	%100
24	36	X	-0.003	-0.003	0	%100
25	38	X	-0.0009	-0.0009	0	%100
26	40	X	-0.0009	-0.0009	0	%100
27	41	X	-0.0007	-0.0007	0	%100
28	42	X	-0.0007	-0.0007	0	%100
29	43	X	-0.002	-0.002	0	%100
30	46	X	-0.002	-0.002	0	%100
31	47	X	-0.0007	-0.0007	0	%100
32	48	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, %)]
33	49	X	-0.0007	-0.0007	0	%100
34	50	X	-0.0007	-0.0007	0	%100
35	51	X	-0.002	-0.002	0	%100
36	53	X	-0.002	-0.002	0	%100
37	55	X	-0.0009	-0.0009	0	%100
38	58	X	-0.0008	-0.0008	0	%100
39	59	X	-0.0008	-0.0008	0	%100
40	60	X	-0.0008	-0.0008	0	%100
41	61	X	-0.0008	-0.0008	0	%100
42	62	X	-0.002	-0.002	0	%100
43	64	X	-0.002	-0.002	0	%100
44	65	X	-0.003	-0.003	0	%100
45	67	X	-0.0009	-0.0009	0	%100
46	69	X	-0.0009	-0.0009	0	%100
47	70	X	-0.0007	-0.0007	0	%100
48	71	X	-0.0007	-0.0007	0	%100
49	72	X	-0.002	-0.002	0	%100
50	75	X	-0.002	-0.002	0	%100
51	76	X	-0.0007	-0.0007	0	%100
52	77	X	-0.002	-0.002	0	%100
53	78	X	-0.0007	-0.0007	0	%100
54	79	X	-0.0007	-0.0007	0	%100
55	80	X	-0.002	-0.002	0	%100
56	82	X	-0.002	-0.002	0	%100
57	84	X	-0.0009	-0.0009	0	%100
58	87	X	-0.0008	-0.0008	0	%100
59	88	X	-0.0008	-0.0008	0	%100
60	89	X	-0.0008	-0.0008	0	%100
61	90	X	-0.0008	-0.0008	0	%100
62	92	X	-0.0009	-0.0009	0	%100
63	95	X	-0.0009	-0.0009	0	%100
64	97	X	-0.0009	-0.0009	0	%100
65	98	X	-0.0009	-0.0009	0	%100
66	99	X	-0.0009	-0.0009	0	%100
67	14	X	-0.0004	-0.0004	0	%100
68	15	X	-0.0004	-0.0004	0	%100
69	22	X	-0.0004	-0.0004	0	%100
70	24	X	-0.0004	-0.0004	0	%100
71	44	X	-0.0004	-0.0004	0	%100
72	45	X	-0.0004	-0.0004	0	%100
73	52	X	-0.0004	-0.0004	0	%100
74	54	X	-0.0004	-0.0004	0	%100
75	73	X	-0.0004	-0.0004	0	%100
76	74	X	-0.0004	-0.0004	0	%100
77	81	X	-0.0004	-0.0004	0	%100
78	83	X	-0.0004	-0.0004	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	13	Y	-0.005	-0.005	0	0.417
2	13	Y	-0.005	-0.005	0.417	0.833
3	14	Y	-0.003	-0.004	0	1.95
4	14	Y	-0.004	-0.004	1.95	3.9
5	14	Y	-0.004	-0.004	3.9	5.85
6	14	Y	-0.004	-0.003	5.85	7.8



Company : B+T Group
 Designer : APK
 Job Number : 84855.017.01
 Model Name : 801485 - CT Suffield 1 CAC 801...

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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, %)]
7	14	Y	-0.003	-0.002	7.8	9.75
8	15	Y	-0.003	-0.004	0	1.95
9	15	Y	-0.004	-0.005	1.95	3.9
10	15	Y	-0.005	-0.004	3.9	5.85
11	15	Y	-0.004	-0.003	5.85	7.8
12	15	Y	-0.003	-0.002	7.8	9.75
13	16	Y	-0.007	-0.007	5.829e-16	0.833
14	21	Y	-0.0003413	-0.004	0	0.208
15	21	Y	-0.004	-0.005	0.208	0.417
16	21	Y	-0.005	-0.004	0.417	0.625
17	21	Y	-0.004	-0.0003413	0.625	0.833
18	22	Y	-0.0005532	-0.004	0	0.55
19	22	Y	-0.004	-0.004	0.55	1.1
20	22	Y	-0.004	-0.004	1.1	1.65
21	22	Y	-0.004	-0.003	1.65	2.2
22	22	Y	-0.003	-0.001	2.2	2.75
23	23	Y	-0.0003393	-0.004	0	0.208
24	23	Y	-0.004	-0.006	0.208	0.417
25	23	Y	-0.006	-0.003	0.417	0.625
26	23	Y	-0.003	-0.0003393	0.625	0.833
27	24	Y	-0.0002555	-0.003	0	0.55
28	24	Y	-0.003	-0.004	0.55	1.1
29	24	Y	-0.004	-0.004	1.1	1.65
30	24	Y	-0.004	-0.003	1.65	2.2
31	24	Y	-0.003	-0.001	2.2	2.75
32	43	Y	-0.005	-0.005	0	0.417
33	43	Y	-0.005	-0.005	0.417	0.833
34	44	Y	-0.003	-0.004	0	1.95
35	44	Y	-0.004	-0.004	1.95	3.9
36	44	Y	-0.004	-0.004	3.9	5.85
37	44	Y	-0.004	-0.003	5.85	7.8
38	44	Y	-0.003	-0.002	7.8	9.75
39	45	Y	-0.003	-0.004	0	1.95
40	45	Y	-0.004	-0.005	1.95	3.9
41	45	Y	-0.005	-0.004	3.9	5.85
42	45	Y	-0.004	-0.003	5.85	7.8
43	45	Y	-0.003	-0.002	7.8	9.75
44	46	Y	-0.007	-0.007	0	0.833
45	51	Y	-0.0003413	-0.004	0	0.208
46	51	Y	-0.004	-0.005	0.208	0.417
47	51	Y	-0.005	-0.004	0.417	0.625
48	51	Y	-0.004	-0.0003413	0.625	0.833
49	52	Y	-0.0005532	-0.004	0	0.55
50	52	Y	-0.004	-0.004	0.55	1.1
51	52	Y	-0.004	-0.004	1.1	1.65
52	52	Y	-0.004	-0.003	1.65	2.2
53	52	Y	-0.003	-0.001	2.2	2.75
54	53	Y	-0.0003393	-0.004	0	0.208
55	53	Y	-0.004	-0.006	0.208	0.417
56	53	Y	-0.006	-0.003	0.417	0.625
57	53	Y	-0.003	-0.0003393	0.625	0.833
58	54	Y	-0.0002555	-0.003	0	0.55
59	54	Y	-0.003	-0.004	0.55	1.1
60	54	Y	-0.004	-0.004	1.1	1.65
61	54	Y	-0.004	-0.003	1.65	2.2

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, %)]
62	54	Y	-0.003	-0.001	2.2	2.75
63	72	Y	-0.005	-0.005	0	0.417
64	72	Y	-0.005	-0.005	0.417	0.833
65	73	Y	-0.003	-0.004	0	1.95
66	73	Y	-0.004	-0.004	1.95	3.9
67	73	Y	-0.004	-0.004	3.9	5.85
68	73	Y	-0.004	-0.003	5.85	7.8
69	73	Y	-0.003	-0.002	7.8	9.75
70	74	Y	-0.003	-0.004	0	1.95
71	74	Y	-0.004	-0.005	1.95	3.9
72	74	Y	-0.005	-0.004	3.9	5.85
73	74	Y	-0.004	-0.003	5.85	7.8
74	74	Y	-0.003	-0.002	7.8	9.75
75	75	Y	-0.007	-0.007	4.522e-13	0.833
76	80	Y	-0.0003413	-0.004	0	0.208
77	80	Y	-0.004	-0.005	0.208	0.417
78	80	Y	-0.005	-0.004	0.417	0.625
79	80	Y	-0.004	-0.0003413	0.625	0.833
80	81	Y	-0.0005532	-0.004	0	0.55
81	81	Y	-0.004	-0.004	0.55	1.1
82	81	Y	-0.004	-0.004	1.1	1.65
83	81	Y	-0.004	-0.003	1.65	2.2
84	81	Y	-0.003	-0.001	2.2	2.75
85	82	Y	-0.0003393	-0.004	0	0.208
86	82	Y	-0.004	-0.006	0.208	0.417
87	82	Y	-0.006	-0.003	0.417	0.625
88	82	Y	-0.003	-0.0003393	0.625	0.833
89	83	Y	-0.0002555	-0.003	0	0.55
90	83	Y	-0.003	-0.004	0.55	1.1
91	83	Y	-0.004	-0.004	1.1	1.65
92	83	Y	-0.004	-0.003	1.65	2.2
93	83	Y	-0.003	-0.001	2.2	2.75

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	24	Y	-0.002	-0.003	0.55	1.1
2	24	Y	-0.003	-0.002	1.1	1.65
3	24	Y	-0.002	-0.002	1.65	2.2
4	24	Y	-0.002	-0.0006273	2.2	2.75
5	43	Y	-0.003	-0.003	0	0.417
6	43	Y	-0.003	-0.003	0.417	0.833
7	44	Y	-0.002	-0.002	0	1.95
8	44	Y	-0.002	-0.003	1.95	3.9
9	44	Y	-0.003	-0.003	3.9	5.85
10	44	Y	-0.003	-0.002	5.85	7.8
11	44	Y	-0.002	-0.001	7.8	9.75
12	45	Y	-0.002	-0.002	0	1.95
13	45	Y	-0.002	-0.003	1.95	3.9
14	45	Y	-0.003	-0.003	3.9	5.85
15	45	Y	-0.003	-0.002	5.85	7.8
16	45	Y	-0.002	-0.001	7.8	9.75
17	46	Y	-0.004	-0.004	0	0.833
18	51	Y	-0.0002048	-0.002	0	0.208
19	51	Y	-0.002	-0.003	0.208	0.417
20	51	Y	-0.003	-0.002	0.417	0.625

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, %)]
21	51	Y	-0.002	-0.0002048	0.625	0.833
22	52	Y	-0.0003319	-0.002	0	0.55
23	52	Y	-0.002	-0.003	0.55	1.1
24	52	Y	-0.003	-0.002	1.1	1.65
25	52	Y	-0.002	-0.002	1.65	2.2
26	52	Y	-0.002	-0.0006304	2.2	2.75
27	53	Y	-0.0002036	-0.002	0	0.208
28	53	Y	-0.002	-0.003	0.208	0.417
29	53	Y	-0.003	-0.002	0.417	0.625
30	53	Y	-0.002	-0.0002036	0.625	0.833
31	54	Y	-0.0001533	-0.002	0	0.55
32	54	Y	-0.002	-0.003	0.55	1.1
33	54	Y	-0.003	-0.002	1.1	1.65
34	54	Y	-0.002	-0.002	1.65	2.2
35	54	Y	-0.002	-0.0006273	2.2	2.75
36	72	Y	-0.003	-0.003	0	0.417
37	72	Y	-0.003	-0.003	0.417	0.833
38	73	Y	-0.002	-0.002	0	1.95
39	73	Y	-0.002	-0.003	1.95	3.9
40	73	Y	-0.003	-0.003	3.9	5.85
41	73	Y	-0.003	-0.002	5.85	7.8
42	73	Y	-0.002	-0.001	7.8	9.75
43	74	Y	-0.002	-0.002	0	1.95
44	74	Y	-0.002	-0.003	1.95	3.9
45	74	Y	-0.003	-0.003	3.9	5.85
46	74	Y	-0.003	-0.002	5.85	7.8
47	74	Y	-0.002	-0.001	7.8	9.75
48	75	Y	-0.004	-0.004	4.522e-13	0.833
49	80	Y	-0.0002048	-0.002	0	0.208
50	80	Y	-0.002	-0.003	0.208	0.417
51	80	Y	-0.003	-0.002	0.417	0.625
52	80	Y	-0.002	-0.0002048	0.625	0.833
53	81	Y	-0.0003319	-0.002	0	0.55
54	81	Y	-0.002	-0.003	0.55	1.1
55	81	Y	-0.003	-0.002	1.1	1.65
56	81	Y	-0.002	-0.002	1.65	2.2
57	81	Y	-0.002	-0.0006304	2.2	2.75
58	82	Y	-0.0002036	-0.002	0	0.208
59	82	Y	-0.002	-0.003	0.208	0.417
60	82	Y	-0.003	-0.002	0.417	0.625
61	82	Y	-0.002	-0.0002036	0.625	0.833
62	83	Y	-0.0001533	-0.002	0	0.55
63	83	Y	-0.002	-0.003	0.55	1.1
64	83	Y	-0.003	-0.002	1.1	1.65
65	83	Y	-0.002	-0.002	1.65	2.2
66	83	Y	-0.002	-0.0006273	2.2	2.75
67	13	Y	-0.003	-0.003	0	0.417
68	13	Y	-0.003	-0.003	0.417	0.833
69	14	Y	-0.002	-0.002	0	1.95
70	14	Y	-0.002	-0.003	1.95	3.9
71	14	Y	-0.003	-0.002	3.9	5.85
72	14	Y	-0.002	-0.002	5.85	7.8
73	14	Y	-0.002	-0.001	7.8	9.75
74	15	Y	-0.001	-0.002	0	1.95
75	15	Y	-0.002	-0.003	1.95	3.9

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, %)]
76	15	Y	-0.003	-0.002	3.9	5.85
77	15	Y	-0.002	-0.002	5.85	7.8
78	15	Y	-0.002	-0.001	7.8	9.75
79	16	Y	-0.004	-0.004	5.829e-16	0.833
80	21	Y	-0.0002048	-0.002	0	0.208
81	21	Y	-0.002	-0.003	0.208	0.417
82	21	Y	-0.003	-0.002	0.417	0.625
83	21	Y	-0.002	-0.0002048	0.625	0.833
84	22	Y	-0.0003319	-0.002	0	0.55
85	22	Y	-0.002	-0.003	0.55	1.1
86	22	Y	-0.003	-0.002	1.1	1.65
87	22	Y	-0.002	-0.002	1.65	2.2
88	22	Y	-0.002	-0.0006304	2.2	2.75
89	23	Y	-0.0002036	-0.002	0	0.208
90	23	Y	-0.002	-0.003	0.208	0.417
91	23	Y	-0.003	-0.002	0.417	0.625
92	23	Y	-0.002	-0.0002036	0.625	0.833
93	24	Y	-0.0001533	-0.002	0	0.55

Member Area Loads (BLC 1 : Dead)

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [ksf]
1	27	25	26	28	Y	Two Way	-0.01
2	46	45	41	42	Y	Two Way	-0.01
3	85	83	84	86	Y	Two Way	-0.01
4	104	103	99	100	Y	Two Way	-0.01
5	140	138	139	141	Y	Two Way	-0.01
6	159	158	154	155	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	27	25	26	28	Y	Two Way	-0.006
2	46	45	41	42	Y	Two Way	-0.006
3	85	83	84	86	Y	Two Way	-0.006
4	104	103	99	100	Y	Two Way	-0.006
5	140	138	139	141	Y	Two Way	-0.006
6	159	158	154	155	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	15	L	Y	-0.5
2	73	L	Y	-0.5
3	128	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	7	L	Y	-0.5
2	185	L	Y	-0.5
3	180	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	11	L	Y	-0.5
2	69	L	Y	-0.5
3	124	L	Y	-0.5

Basic Load Cases

	BLC Description	Category	Y Gravity	Nodal	Point	Distributed	Area(Member)
1	Dead	DL	-1		45		6
2	0 Wind - No Ice	WLZ			45	78	
3	90 Wind - No Ice	WLX			45	78	
4	0 Wind - Ice	WLZ			45	78	
5	90 Wind - Ice	WLX			45	78	
6	0 Wind - Service	WLZ			45	78	
7	90 Wind - Service	WLX			45	78	
8	Ice	OL1			45	78	6
9	0 Seismic	ELZ			45	78	
10	90 Seismic	ELX			45	78	
11	Live Load a	LL		3			
12	Live Load b	LL		3			
13	Live Load c	LL		3			
14	Live Load d	LL					
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				93	
31	BLC 8 Transient Area Loads	None				93	

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		

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
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
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

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
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
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	6	max	0.835	5	1.28	20	1.047	2	-0.873	13	2.426	5	0.436	64
2		min	-0.869	11	-0.209	2	-0.525	8	-3.247	16	-2.392	11	-0.951	46
3	49	max	1.237	65	0.207	90	5.133	14	0.001	8	0	100	0.001	63
4		min	-2.282	47	0.01	48	-1.97	8	-0.001	2	0	1	-0.001	45
5	58	max	2.313	47	2.383	14	-0.353	8	0	8	0	45	0	63
6		min	-1.231	65	0.138	8	-4.872	14	0	2	0	63	-0.001	45
7	67	max	1.136	5	1.209	24	0.876	2	1.794	21	3.344	9	2.727	17
8		min	-0.676	11	-0.054	6	-1.158	8	0.172	3	-3.403	3	0.895	5
9	107	max	5.022	17	0.207	98	1.464	13	0.001	7	0	100	0	42
10		min	-0.53	11	0.01	40	-2.667	67	-0.001	13	0	1	-0.001	72
11	114	max	-0.837	11	2.387	18	2.732	68	0.001	7	0	49	0	18
12		min	-4.943	17	0.319	12	-0.25	2	-0.001	13	0	67	0	73
13	122	max	0.619	5	1.22	15	0.986	2	2.041	18	3.493	13	-0.334	8
14		min	-1.037	11	-0.123	9	-1.29	8	0.501	69	-3.477	7	-2.601	25
15	162	max	1.137	4	0.207	94	1.199	2	0.001	43	0	100	0.001	17
16		min	-3.526	22	0.01	44	-4.28	20	-0.001	62	0	1	0	10
17	169	max	3.36	22	2.381	21	4.104	20	0.001	39	0	40	0.001	41
18		min	0.322	4	0.247	3	0.266	2	-0.001	69	0	70	0	11
19	Totals:	max	5.795	5	9.984	18	7.617	2						

Envelope Node Reactions (Continued)

Node Label	X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
20	min	-5.795	11	3.618	11	-7.617	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	PIPE 3.0	0.48	6.5	8	0.344	6.5	8	26.387	65.205	5.749	5.749	1.839	H3-6	
2	3	PIPE 3.0	0	0.75	24	0	0.75	6	64.424	65.205	5.749	5.749	1.57	H1-1b*	
3	4	HSS4X4X4	0.258	4	17	0.096	4	y	22	130.482	139.518	16.181	16.181	2.022	H1-1b
4	6	PIPE 2.0	0.392	4	21	0.179	2.5	45	14.916	32.13	1.872	1.872	2.388	H1-1b	
5	8	PIPE 2.0	0.423	1.5	67	0.245	1.5	9	20.867	32.13	1.872	1.872	1.478	H1-1b	
6	10	PIPE 2.0	0.612	3.516	8	0.23	2.031	7	16.369	32.13	1.872	1.872	3	H1-1b	
7	11	PIPE 1.5	0.164	0	18	0.103	0	13	19.914	23.593	1.105	1.105	2.228	H1-1b	
8	12	PIPE 1.5	0.282	0	9	0.196	0	2	19.914	23.593	1.105	1.105	2.187	H1-1b	
9	13	PL1/2X4.25	0.034	0.417	13	0.135	0.417	y	7	53.476	68.85	0.717	6.096	1.705	H1-1b
10	16	PL1/2X4.25	0.042	0.417	3	0.152	0.417	y	9	53.476	68.85	0.717	6.096	1.375	H1-1b
11	17	PIPE 1.5	0.578	0	2	0.049	0	7	19.914	23.593	1.105	1.105	2.264	H1-1b	
12	18	PL1/2X4.25	0.098	0.417	19	0.112	0.417	y	5	53.476	68.85	0.717	6.096	1.443	H1-1b
13	19	PIPE 1.5	0.133	0	12	0.029	0	11	19.914	23.593	1.105	1.105	1.782	H1-1b	
14	20	PIPE 1.5	0.112	0	5	0.021	0	18	19.914	23.593	1.105	1.105	1.791	H1-1b	
15	21	PL1/2X4.25	0.024	0.417	14	0.039	0.417	y	8	53.476	68.85	0.717	6.096	1.15	H1-1b
16	23	PL1/2X4.25	0.026	0.417	20	0.051	0.417	y	2	53.476	68.85	0.717	6.096	1.088	H1-1b
17	25	PIPE 2.0	0.741	2.708	23	0.378	2.708	25	5.82	32.13	1.872	1.872	1.736	H1-1b	
18	29	L2.5x2.5x3	0.946	3.035	92	0.025	6.07	y	92	8.914	29.192	0.873	1.594	1.31	H2-1
19	30	L2.5x2.5x3	0.863	3.035	90	0.022	6.07	z	90	8.914	29.192	0.873	1.594	1.31	H2-1
20	31	L2.5x2.5x3	0.767	3.035	91	0.022	6.07	y	91	8.914	29.192	0.873	1.594	1.31	H2-1
21	32	L2.5x2.5x3	0.737	3.035	89	0.022	6.07	z	89	8.914	29.192	0.873	1.594	1.31	H2-1
22	33	PIPE 3.0	0.398	6.5	13	0.369	6.5	13	26.387	65.205	5.749	5.749	1.725	H3-6	
23	35	PIPE 3.0	0	0.75	20	0	0.75	10	64.424	65.205	5.749	5.749	1.316	H1-1b*	
24	36	HSS4X4X4	0.304	4	9	0.081	4	y	14	130.482	139.518	16.181	16.181	1.554	H1-1b
25	38	PIPE 2.0	0.419	1.5	72	0.192	1.5	13	20.867	32.13	1.872	1.872	1.432	H1-1b	
26	40	PIPE 2.0	0.613	3.516	8	0.177	3.438	4	16.369	32.13	1.872	1.872	3	H1-1b	
27	41	PIPE 1.5	0.173	0	23	0.08	0	6	19.914	23.593	1.105	1.105	2.175	H1-1b	
28	42	PIPE 1.5	0.303	0	2	0.161	0	7	19.914	23.593	1.105	1.105	2.22	H1-1b	
29	43	PL1/2X4.25	0.026	0.417	6	0.118	0.417	y	11	53.476	68.85	0.717	6.096	1.629	H1-1b
30	46	PL1/2X4.25	0.038	0.417	8	0.162	0.417	y	2	53.476	68.85	0.717	6.096	1.382	H1-1b
31	47	PIPE 1.5	0.502	0	6	0.04	0	12	19.914	23.593	1.105	1.105	1.962	H1-1b	
32	48	PL1/2X4.25	0.099	0.417	24	0.114	0.417	y	9	53.476	68.85	0.717	6.096	1.515	H1-1b
33	49	PIPE 1.5	0.133	0	8	0.036	0	3	19.914	23.593	1.105	1.105	2.236	H1-1b	
34	50	PIPE 1.5	0.112	0	10	0.026	0	9	19.914	23.593	1.105	1.105	1.979	H1-1b	
35	51	PL1/2X4.25	0.023	0.417	18	0.039	0.417	y	12	53.476	68.85	0.717	6.096	1.174	H1-1b
36	53	PL1/2X4.25	0.025	0.417	25	0.049	0.417	y	6	53.476	68.85	0.717	6.096	1.063	H1-1b
37	55	PIPE 2.0	0.758	2.708	16	0.387	2.708	17	5.82	32.13	1.872	1.872	2.176	H1-1b	
38	58	L2.5x2.5x3	0.951	3.035	100	0.025	6.07	y	100	8.914	29.192	0.873	1.594	1.31	H2-1
39	59	L2.5x2.5x3	0.86	3.035	98	0.022	6.07	z	98	8.914	29.192	0.873	1.594	1.31	H2-1
40	60	L2.5x2.5x3	0.764	3.035	99	0.022	6.07	y	99	8.914	29.192	0.873	1.594	1.31	H2-1
41	61	L2.5x2.5x3	0.732	3.035	97	0.022	6.07	z	97	8.914	29.192	0.873	1.594	1.31	H2-1
42	62	PIPE 3.0	0.414	6.5	3	0.358	6.5	4	26.387	65.205	5.749	5.749	1.778	H3-6	
43	64	PIPE 3.0	0	0.75	25	0	0.75	2	64.424	65.205	5.749	5.749	1.572	H1-1b*	
44	65	HSS4X4X4	0.324	4	13	0.079	4	y	18	130.482	139.518	16.181	16.181	2.145	H1-1b
45	67	PIPE 2.0	0.428	1.5	62	0.169	2.75	4	20.867	32.13	1.872	1.872	1.618	H1-1b	
46	69	PIPE 2.0	0.615	3.516	2	0.224	3.438	8	16.369	32.13	1.872	1.872	3	H1-1b	
47	70	PIPE 1.5	0.168	0	14	0.095	0	9	19.914	23.593	1.105	1.105	2.198	H1-1b	
48	71	PIPE 1.5	0.276	0	5	0.145	0	10	19.914	23.593	1.105	1.105	1.924	H1-1b	
49	72	PL1/2X4.25	0.029	0.417	9	0.128	0.417	y	2	53.476	68.85	0.717	6.096	1.6	H1-1b
50	75	PL1/2X4.25	0.032	0.417	11	0.134	0.417	y	7	53.476	68.85	0.717	6.096	1.329	H1-1b
51	76	PIPE 1.5	0.504	0	10	0.047	0	2	19.914	23.593	1.105	1.105	1.891	H1-1b	

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

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
52	77	PL1/2X4.25	0.098	0.417	15	0.118	0.417	y	13	53.476	68.85	0.717	6.096	1.484	H1-1b	
53	78	PIPE 1.5	0.127	0	7	0.034	0		7	19.914	23.593	1.105	1.105	1.816	H1-1b	
54	79	PIPE 1.5	0.111	0	13	0.025	0		13	19.914	23.593	1.105	1.105	1.677	H1-1b	
55	80	PL1/2X4.25	0.023	0.417	22	0.04	0.417	y	4	53.476	68.85	0.717	6.096	1.155	H1-1b	
56	82	PL1/2X4.25	0.025	0.417	16	0.049	0.417	y	10	53.476	68.85	0.717	6.096	1.106	H1-1b	
57	84	PIPE 2.0	0.739	2.708	20	0.383	2.708		21	5.82	32.13	1.872	1.872	2.13	H1-1b	
58	87	L2.5x2.5x3	0.949	3.035	96	0.025	6.07	y	96	8.914	29.192	0.873	1.594	1.31	H2-1	
59	88	L2.5x2.5x3	0.863	3.035	94	0.022	6.07	z	94	8.914	29.192	0.873	1.594	1.31	H2-1	
60	89	L2.5x2.5x3	0.763	3.035	95	0.022	6.07	y	95	8.914	29.192	0.873	1.594	1.31	H2-1	
61	90	L2.5x2.5x3	0.736	3.035	93	0.022	6.07	z	93	8.914	29.192	0.873	1.594	1.31	H2-1	
62	92	PIPE 2.0	0.352	4	15	0.166	2.5		40	14.916	32.13	1.872	1.872	1.916	H1-1b	
63	95	PIPE 2.0	0.348	4	25	0.168	2.5		49	14.916	32.13	1.872	1.872	1.912	H1-1b	
64	97	PIPE 2.0	0.014	1.553	23	0.135	3.106		3	28.62	32.13	1.872	1.872	1.136	H1-1b	
65	98	PIPE 2.0	0.023	2.209	15	0.107	4.418		44	25.425	32.13	1.872	1.872	1.136	H1-1b	
66	99	PIPE 2.0	0.017	0	8	0.157	1.78		47	30.932	32.13	1.872	1.872	1.136	H1-1b*	

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

Member	Shape	Code	Check	Loc[ft]	LC	Shear	Check	Loc[ft]	Dir	LC	phi*Pn[k]	phi*Tn[k]	phi*Mnyy[k-ft]	phi*Mnzz[k-ft]	phi*Vny[k]	phi*Vnz[k]	Cb	Eqn
1	14	P1000	0.271	4.062	2	0.038	4.062	y	18	2.457	15.355	0.43	0.657	2.36	4.72	2.136	H1.2-1	
2	15	P1000	0.401	4.062	8	0.038	4.062	y	18	2.457	15.355	0.43	0.651	2.36	4.72	2.001	H1.2-1	
3	22	P1000	0.048	0.143	9	0.016	0.143	y	20	9.055	15.355	0.431	0.676	2.36	4.72	2.098	H1.1-1	
4	24	P1000	0.049	0.143	13	0.016	0.143	y	20	9.055	15.355	0.429	0.676	2.36	4.72	1.819	H1.2-1	
5	44	P1000	0.267	4.164	17	0.038	4.063	y	22	2.457	15.355	0.43	0.651	2.36	4.72	2.001	H1.2-1	
6	45	P1000	0.31	4.063	12	0.039	4.063	y	22	2.457	15.355	0.43	0.658	2.36	4.72	2.142	H1.2-1	
7	52	P1000	0.047	0.143	13	0.016	0.143	y	24	9.055	15.355	0.431	0.676	2.36	4.72	2.132	H1.1-1	
8	54	P1000	0.046	0.143	6	0.015	0.143	y	24	9.055	15.355	0.429	0.676	2.36	4.72	1.84	H1.2-1	
9	73	P1000	0.269	4.164	21	0.039	4.062	y	14	2.457	15.355	0.43	0.651	2.36	4.72	2.012	H1.2-1	
10	74	P1000	0.312	4.063	3	0.039	4.063	y	14	2.457	15.355	0.43	0.672	2.36	4.72	2.532	H1.2-1	
11	81	P1000	0.045	0.143	5	0.016	0.143	y	16	9.055	15.355	0.431	0.676	2.36	4.72	2.018	H1.1-1	
12	83	P1000	0.046	0.143	9	0.015	0.143	y	16	9.055	15.355	0.429	0.676	2.36	4.72	1.817	H1.2-1	

APPENDIX D
ADDITIONAL CALCUATIONS

PROJECT	84855.017.01 - CT Suffield 1 CAC 8014 KSC		
SUBJECT	T-Arm Mount Analysis		
DATE	03/30/22	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	:	1.047	k
Vertical Shear	:	1.28	k
Horizontal Shear	:	0.835	k
Torsion	:	0.436	k.ft
Moment from Horizontal Forces	:	2.426	k.ft
Moment from Vertical Forces	:	-0.873	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	:	1.53	k
Force from Horz. Moment	:	4.39	k
Force from Vert. Moment	:	-1.58	k
Shear Load / Bolt	:	0.38	k
Tension Load / Bolt	:	0.26	k
Resultant from Moments / Bolt	:	2.34	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	:	12.53%		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	:	5.83%		OKAY
Unity Check, Combined	:	18.36%		OKAY
Available Bearing Strength, ΦR_n	:	34.66	k/bolt	
Unity Check, Bolt Bearing	:	1.10%		OKAY

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

T-Mobile Existing Facility

Site ID: CT11545A

CT545/Crown Suffield
2715 Mountain Road
Suffield, Connecticut 06093

April 28, 2022

EBI Project Number: 6222002866

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	15.49%

April 28, 2022

T-Mobile

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

Emissions Analysis for Site: CT11545A - CT545/Crown Suffield

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **2715 Mountain Road** in **Suffield, 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 2715 Mountain Road in Suffield, 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 Ericsson AIR 6419 for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s), the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz channel(s) in Sector A, the Ericsson AIR 6419 for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s), the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz channel(s) in Sector B, the Ericsson AIR 6419 for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s), the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 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 182 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:	Ericsson AIR 6419	Make / Model:	Ericsson AIR 6419	Make / Model:	Ericsson AIR 6419
Frequency Bands:	2500 MHz / 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):	182 feet	Height (AGL):	182 feet	Height (AGL):	182 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 A1 MPE %:	3.60%	Antenna B1 MPE %:	3.60%	Antenna C1 MPE %:	3.60%
Antenna #:	2	Antenna #:	2	Antenna #:	2
Make / Model:	RFS APXVAARR24_43-U-NA20	Make / Model:	RFS APXVAARR24_43-U-NA20	Make / Model:	RFS APXVAARR24_43-U-NA20
Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz
Gain:	12.95 dBd / 12.95 dBd / 13.35 dBd / 15.65 dBd / 15.65 dBd / 16.35 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.35 dBd / 15.65 dBd / 15.65 dBd / 16.35 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.35 dBd / 15.65 dBd / 15.65 dBd / 16.35 dBd
Height (AGL):	182 feet	Height (AGL):	182 feet	Height (AGL):	182 feet
Channel Count:	13	Channel Count:	13	Channel Count:	13
Total TX Power (W):	560.00 Watts	Total TX Power (W):	560.00 Watts	Total TX Power (W):	560.00 Watts
ERP (W):	18,052.03	ERP (W):	18,052.03	ERP (W):	18,052.03
Antenna A2 MPE %:	2.75%	Antenna B2 MPE %:	2.75%	Antenna C2 MPE %:	2.75%

Site Composite MPE %	
Carrier	MPE %
T-Mobile (Max at Sector A):	6.35%
AT&T	1.28%
Nextel	0.16%
Verizon	7.7%
Site Total MPE % :	15.49%

T-Mobile MPE % Per Sector	
T-Mobile Sector A Total:	6.35%
T-Mobile Sector B Total:	6.35%
T-Mobile Sector C Total:	6.35%
Site Total MPE % :	15.49%

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 2500 MHz LTE IC & 2C Traffic	1	9619.47	182.0	11.16	2500 MHz LTE IC & 2C Traffic	1000	1.12%
T-Mobile 2500 MHz LTE IC & 2C Broadcast	1	717.84	182.0	0.83	2500 MHz LTE IC & 2C Broadcast	1000	0.08%
T-Mobile 2500 MHz NR Traffic	1	19238.94	182.0	22.33	2500 MHz NR Traffic	1000	2.23%
T-Mobile 2500 MHz NR Broadcast	1	1435.69	182.0	1.67	2500 MHz NR Broadcast	1000	0.17%
T-Mobile 600 MHz LTE	2	591.73	182.0	1.37	600 MHz LTE	400	0.34%
T-Mobile 600 MHz NR	1	1577.94	182.0	1.83	600 MHz NR	400	0.46%
T-Mobile 700 MHz LTE	2	648.82	182.0	1.51	700 MHz LTE	467	0.32%
T-Mobile 1900 MHz GSM	4	1101.85	182.0	5.12	1900 MHz GSM	1000	0.51%
T-Mobile 1900 MHz LTE	2	2203.69	182.0	5.12	1900 MHz LTE	1000	0.51%
T-Mobile 2100 MHz LTE	2	2589.11	182.0	6.01	2100 MHz LTE	1000	0.60%
						Total:	6.35%

• 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:	6.35%
Sector B:	6.35%
Sector C:	6.35%
T-Mobile Maximum MPE % (Sector A):	6.35%
Site Total:	15.49%
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **15.49%** 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: CT11545A
T-MOBILE SITE NAME: CT545/CROWN SUFFIELD
SITE TYPE: MONOPOLE
TOWER HEIGHT: 190'-6"

BUSINESS UNIT #: 801485
SITE ADDRESS: 2715 MOUNTAIN RD.
 SUFFIELD, CT 06093
COUNTY: HARTFORD
JURISDICTION: CONNECTICUT SITING COUNCIL

T-MOBILE ANCHOR SITE CONFIGURATION: 67D5D998E ODE+6160

T-Mobile
 35 GRIFFIN ROAD
 BLOOMFIELD, CT 06002

CROWN CASTLE
 1505 WESTLAKE AVENUE NORTH, SUITE 800
 SEATTLE, WA 98109

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

T-MOBILE SITE NUMBER:
CT11545A
BU #: 801485
CT SUFFIELD 1 CAC 801485
 2715 MOUNTAIN RD.
 SUFFIELD, CT 06093
 EXISTING
 190'-6" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	4/28/22	MEH	PRELIMINARY REVIEW	KT
0	5/12/22	MEH	CONSTRUCTION	KT

SITE INFORMATION	
CROWN CASTLE USA INC. SITE NAME:	CT SUFFIELD 1 CAC 801485
SITE ADDRESS:	2715 MOUNTAIN RD. SUFFIELD, CT 06093
COUNTY:	HARTFORD
MAP/PARCEL #:	9-9-9-X
AREA OF CONSTRUCTION:	EXISTING
LATITUDE:	42.011611°
LONGITUDE:	-72.728778°
LAT/LONG TYPE:	NAD83
GROUND ELEVATION:	426'
CURRENT ZONING:	R-90
JURISDICTION:	CONNECTICUT SITING COUNCIL
OCCUPANCY CLASSIFICATION:	U
TYPE OF CONSTRUCTION:	IIB
A.D.A. COMPLIANCE:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION
PROPERTY OWNER:	CROWN ATLANTIC COMPANY LLC 4017 WASHINGTON RD MCMURRAY, PA 15317
TOWER OWNER:	CROWN CASTLE 2000 CORPORATE DRIVE CANONSBURG, PA 15317
CARRIER/APPLICANT:	T-MOBILE 35 GRIFFIN ROAD BLOOMFIELD, CT 06002
ELECTRIC PROVIDER:	CONNECTICUT LIGHT & POWER CO (860) 947-2000
TELCO PROVIDER:	AT&T (855) 637-9527

PROJECT TEAM	
A&E FIRM:	B+T GROUP 1717 S. BOULDER AVE. TULSA, OK 74119 MARVIN PHILLIPS marvin.phillips@btgrp.com
CROWN CASTLE USA INC. DISTRICT CONTACTS:	1505 WESTLAKE AVENUE NORTH, SUITE 800 SEATTLE, WA 98109
	TRICIA PELON - PROJECT MANAGER TRICIA.PELON@CROWNCastle.COM
	JASON D'AMICO - CONSTRUCTION MANAGER JASON.D'AMICO@CROWNCastle.COM

DRAWING INDEX	
SHEET #	SHEET DESCRIPTION
T-1	TITLE SHEET
T-2	CODE SUMMARY
T-3	CODE SUMMARY
T-4	GENERAL NOTES
C-1.1	OVERALL SITE PLAN
C-1.2	SITE PLAN & ENLARGED SITE PLAN
C-2	FINAL ELEVATION & ANTENNA PLANS
C-3	ANTENNA & CABLE SCHEDULE
C-4	PLUMBING DIAGRAM
C-5	EQUIPMENT SPECS
G-1	ANTENNA GROUNDING DIAGRAM
G-2	GROUNDING DETAILS
G-3	GROUNDING DETAILS

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

PROJECT DESCRIPTION	
THE PURPOSE OF THIS PROJECT IS TO ENHANCE BROADBAND CONNECTIVITY AND CAPACITY TO THE EXISTING ELIGIBLE WIRELESS FACILITY.	
TOWER SCOPE OF WORK:	
<ul style="list-style-type: none"> REMOVE (13) COAX (1-5/8") REMOVE (3) ANTENNAS REMOVE (3) TMAs INSTALL (3) ANTENNAS INSTALL (3) RRHs INSTALL (2) HYBRID CABLES 	
GROUND SCOPE OF WORK:	
<ul style="list-style-type: none"> REMOVE (3) RUS01 B2 RADIO FROM RBS 6201 INSTALL (1) 6160 AC V1 INSTALL (1) B160 BATTERY CABINET INSTALL (1) RP 6651 IN 6160 CABINET INSTALL (1) PSU 4813 VR4A (KIT) IN 6160 CABINET INSTALL (1) CSR IXRE V2 (GEN2) IN 6160 CABINET INSTALL (1) 100AMP BREAKERS IN RBS 6201 INSTALL (1) 100AMP BREAKERS IN 6160 CABINET INSTALL (1) DCDU KIT TO 6160 FOR RP6651 INSTALL (6) 40 AMP BREAKERS AND (3) 50 AMP SPD'S FOR POWER UP OF 4460 TO 6160. INSTALL (1) CSR IXRE V2 (GEN2) ROUTER TO ENCLOSURE 6160 	
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 IBC
MECHANICAL	2018 IMC
ELECTRICAL	2017 NEC
REFERENCE DOCUMENTS:	
STRUCTURAL ANALYSIS:	MORRISON HERSHFIELD
DATED:	4/7/22
MOUNT ANALYSIS:	B+T GROUP
DATED:	3/30/22
RFDS REVISION:	4
DATED:	3/10/22
ORDER ID:	609060
REVISION:	0

CALL CONNECTICUT ONE CALL
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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.

PROFESSIONAL ENGINEER
 No. 23924
 LICENSED
 5/12/22

B&T ENGINEERING, INC.
 PEC.0001564
 Expires 2/10/23

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:	REVISION:
T-1	0

84855.018.01_CT_SUFFIELD_1_CAC_801485.dwg - User: chad.vandergraft - May 12, 2022 - 1:38pm

CROWN CASTLE USA INC. SITE ACTIVITY REQUIREMENTS:

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

GREENFIELD GROUNDING NOTES:

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

GENERAL NOTES:

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

CONCRETE, FOUNDATIONS, AND REINFORCING STEEL:

- 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.
- UNLESS NOTED OTHERWISE, SOIL BEARING PRESSURE USED FOR DESIGN OF SLABS AND FOUNDATIONS IS ASSUMED TO BE 1000 psf.
- ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (f'c) OF 3000 psi AT 28 DAYS, UNLESS NOTED OTHERWISE. NO MORE THAN 90 MINUTES SHALL ELAPSE FROM BATCH TIME TO TIME OF PLACEMENT UNLESS APPROVED BY THE ENGINEER OF RECORD. TEMPERATURE OF CONCRETE SHALL NOT EXCEED 90°f AT TIME OF PLACEMENT.
- CONCRETE EXPOSED TO FREEZE--THAW CYCLES SHALL CONTAIN AIR ENTRAINING ADMIXTURES. AMOUNT OF AIR ENTRAINMENT TO BE BASED ON SIZE OF AGGREGATE AND F3 CLASS EXPOSURE (VERY SEVERE). CEMENT USED TO BE TYPE II PORTLAND CEMENT WITH A MAXIMUM WATER--TO--CEMENT RATIO (W/C) OF 0.45.
- ALL STEEL REINFORCING SHALL CONFORM TO ASTM A615. ALL WELDED WIRE FABRIC (WWF) SHALL CONFORM TO ASTM A185. ALL SPLICES SHALL BE CLASS "B" TENSION SPLICES, UNLESS NOTED OTHERWISE. ALL HOOKS SHALL BE STANDARD 90 DEGREE HOOKS, UNLESS NOTED OTHERWISE. YIELD STRENGTH (Fy) OF STANDARD DEFORMED BARS ARE AS FOLLOWS:
#4 BARS AND SMALLER.....40 ksi
#5 BARS AND LARGER.....60 ksi
- THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH.....3"
CONCRETE EXPOSED TO EARTH OR WEATHER:
#6 BARS AND LARGER.....2"
#5 BARS AND SMALLER.....1-1/2"
CONCRETE NOT EXPOSED TO EARTH OR WEATHER:
SLAB AND WALLS.....3/4"
BEAMS AND COLUMNS.....1-1/2"
- A TOOLED EDGE OR A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNLESS NOTED OTHERWISE, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.

ELECTRICAL INSTALLATION NOTES:

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

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

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

ABBREVIATIONS:

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

APWA UNIFORM COLOR CODE:

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

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**T-MOBILE SITE NUMBER:
CT11545A**


**BU #: 801485
CT SUFFIELD 1 CAC 801485**

2715 MOUNTAIN RD.
SUFFIELD, CT 06093

EXISTING
190'-6" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	4/28/22	MEH	PRELIMINARY REVIEW	KT
0	5/12/22	MEH	CONSTRUCTION	KT



5/12/22

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PEC.0001564
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SHEET NUMBER: T-2 **REVISION: 0**

SITE PLAN DISCLAIMER:
 PROPERTY LINES AND STRUCTURES HAVE BEEN DIGITIZED FROM GOOGLE MAPS. CROWN CASTLE USA INC. HAS NOT COMPLETED A SITE SURVEY AND THEREFORE MAKES NO CLAIMS AS TO THE ACCURACY OF INFORMATION DEPICTED ON THIS SHEET.



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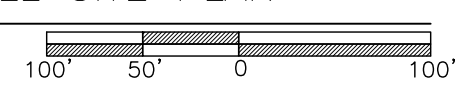

 5/12/22

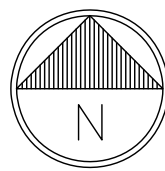
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SHEET NUMBER: C-1.1 **REVISION:** 0

84855.018.01_CT_SUFFIELD_1_CAC_801485.dwg - User: chad.vandergraff - May 12, 2022 - 1:40pm

1 OVERALL SITE PLAN
 SCALE:  1" = 100'-0" (FULL SIZE)
 1" = 200'-0" (11x17)



T-MOBILE SITE NUMBER:
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BU #: 801485
CT SUFFIELD 1 CAC 801485

2715 MOUNTAIN RD.
SUFFIELD, CT 06093

EXISTING
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ISSUED FOR:

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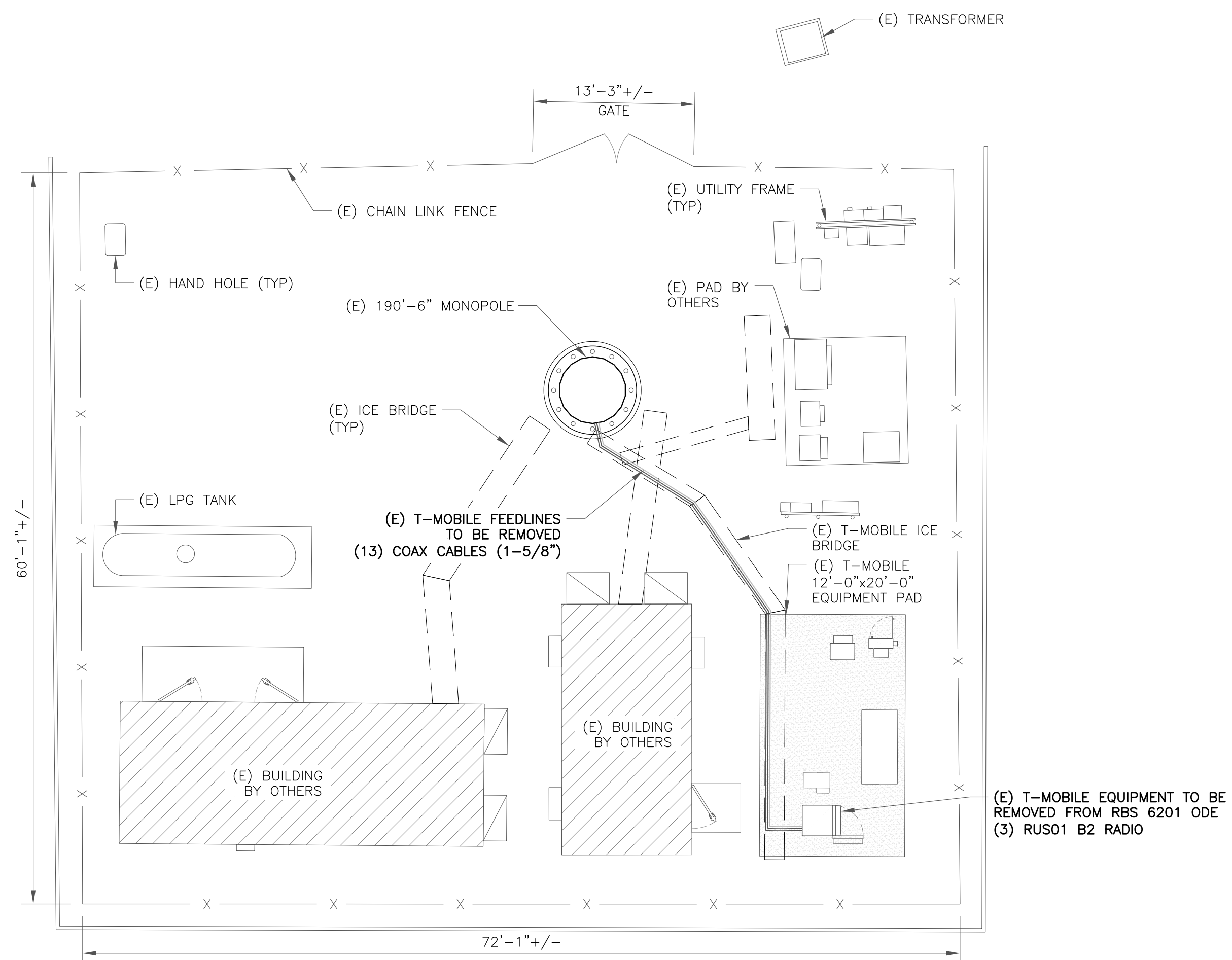
5/12/22

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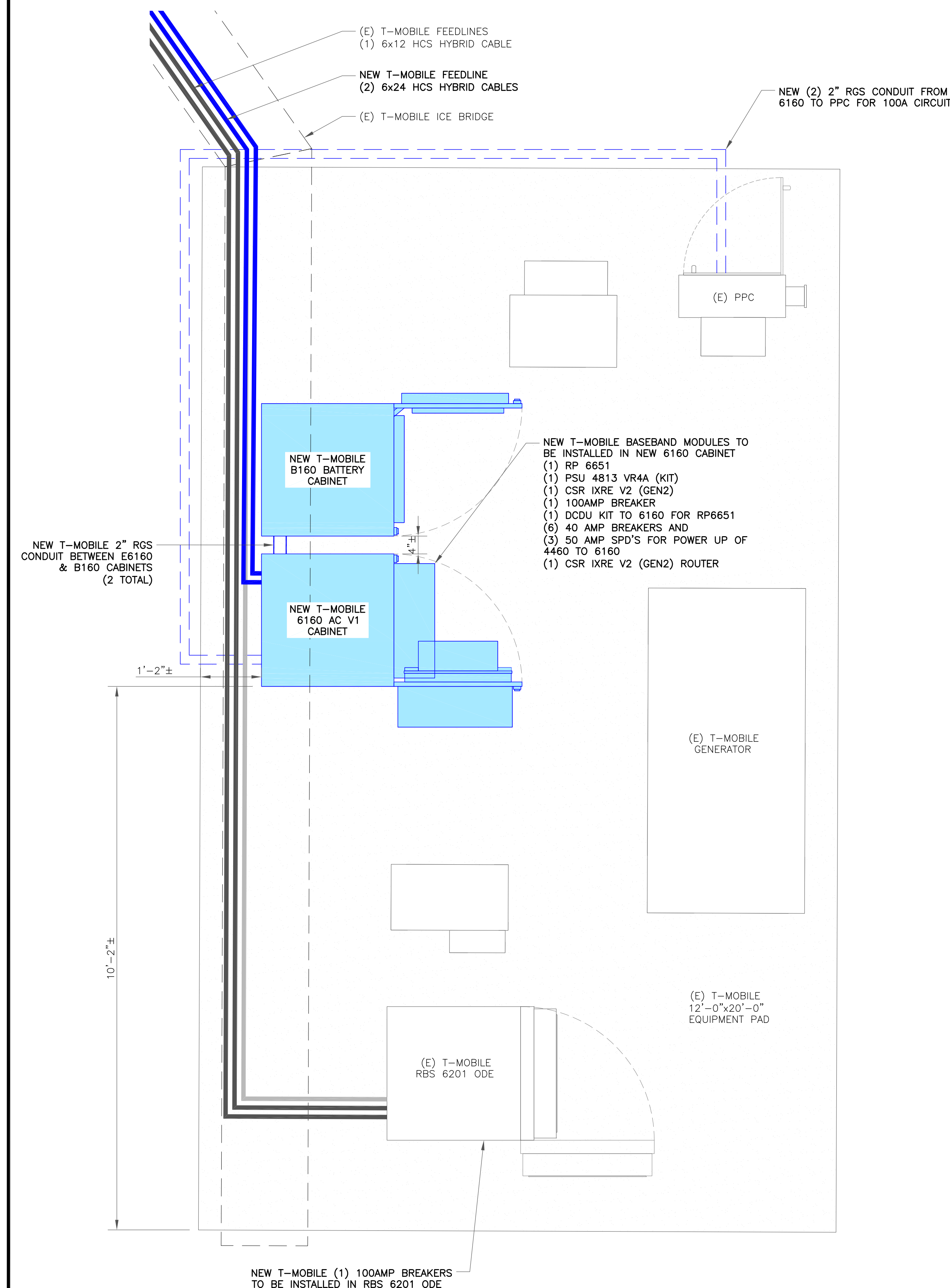
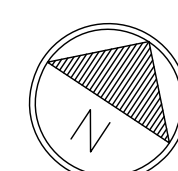
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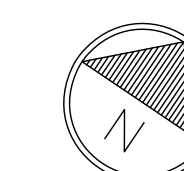
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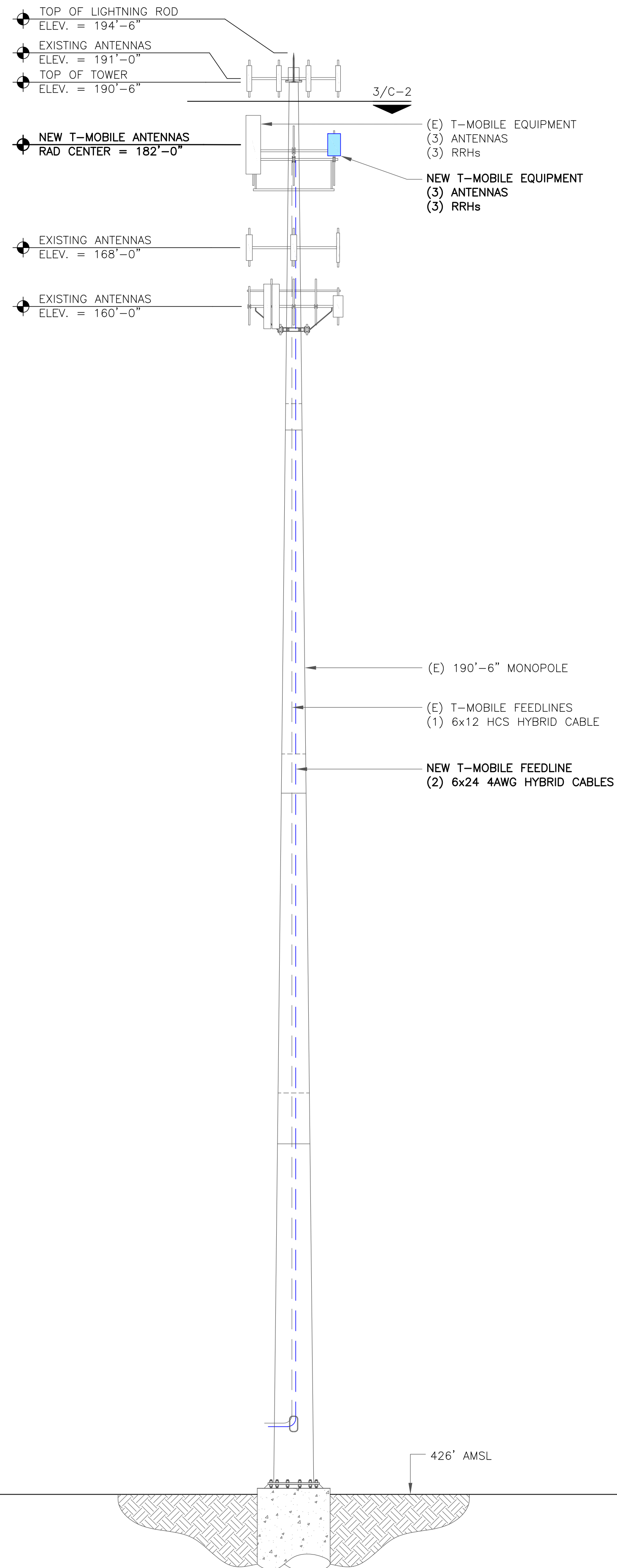


1 SITE PLAN
SCALE: 1/8"=1'-0" (FULL SIZE)
1/16"=1'-0" (11x17)



2 ENLARGED SITE PLAN
SCALE: 3/4"=1'-0" (FULL SIZE)
3/8"=1'-0" (11x17)



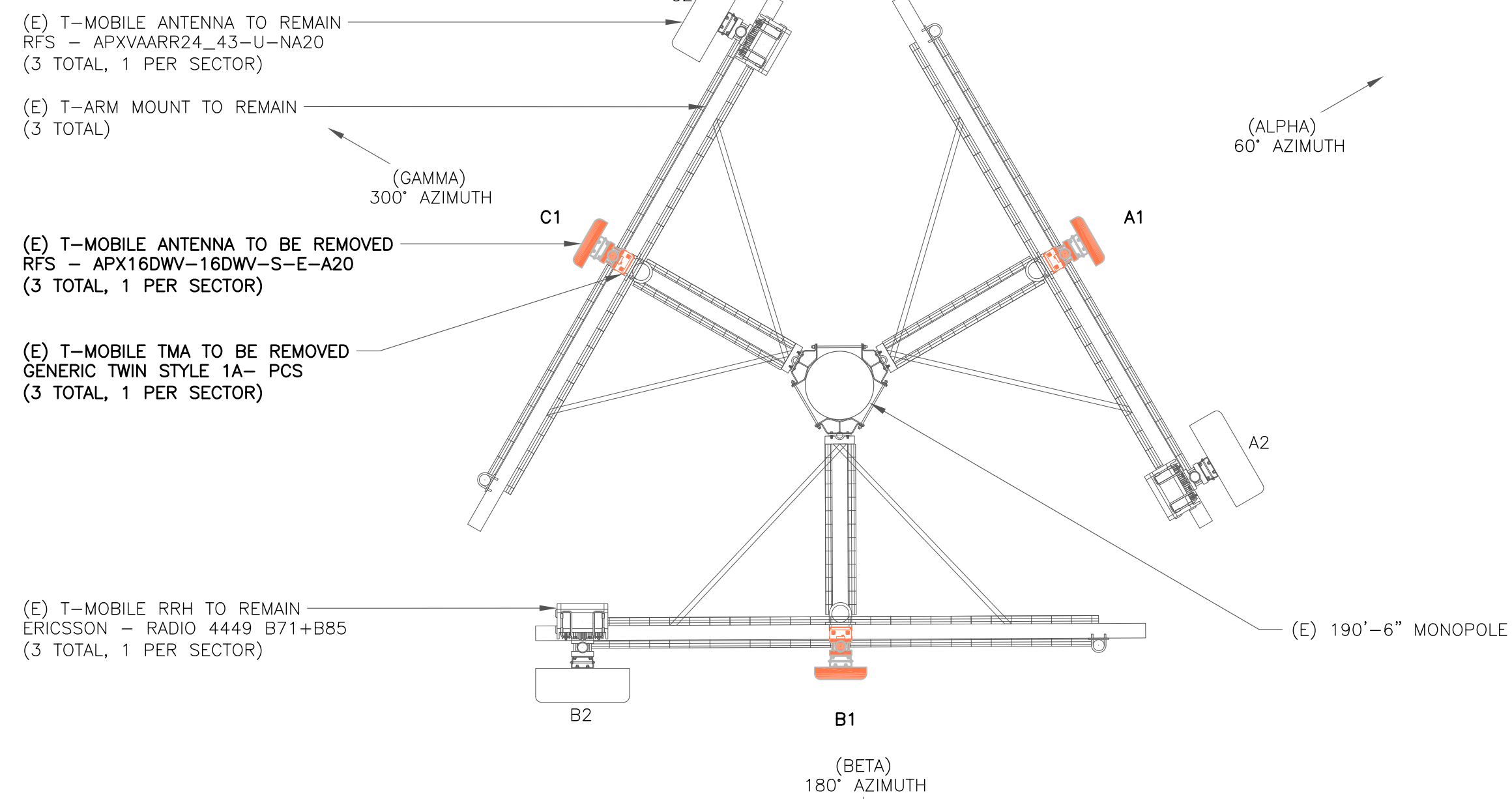


1 FINAL ELEVATION
SCALE: NOT TO SCALE

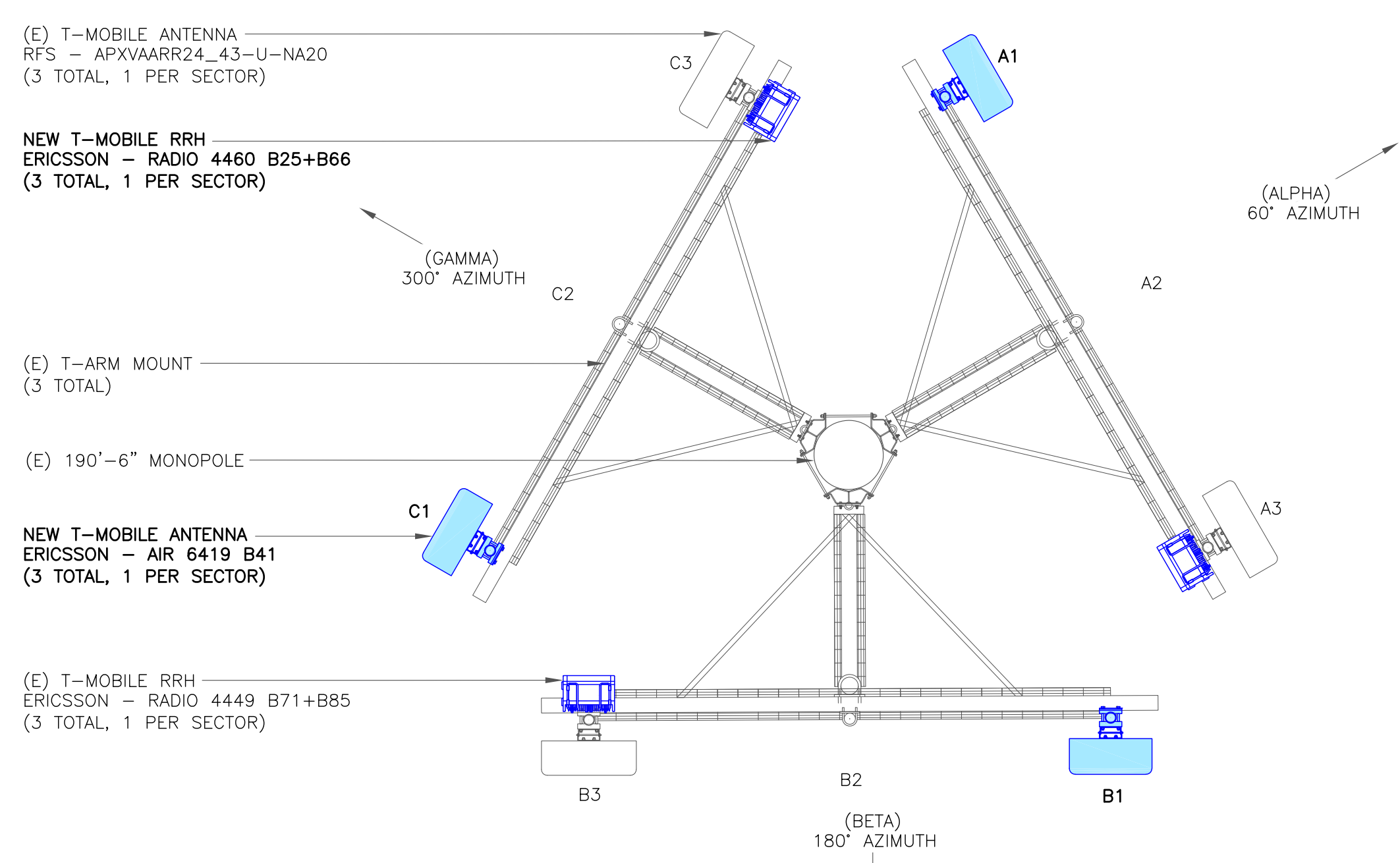
T-MOBILE EQUIPMENT

ANTENNA CL: 182'-0"
MOUNT CL: 180'-0"

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



2 EXISTING ANTENNA LAYOUT
SCALE: NOT TO SCALE



3 FINAL ANTENNA LAYOUT
SCALE: NOT TO SCALE

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SHEET NUMBER: C-2
REVISION: 0

84855.018.01_CT_SUFFIELD_1_CAC_801485.dwg - Sheet: C-2 - User: chad.vandergraaf - May 12, 2022 - 1:40pm

T-MOBILE SITE NUMBER:
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BU #: 801485
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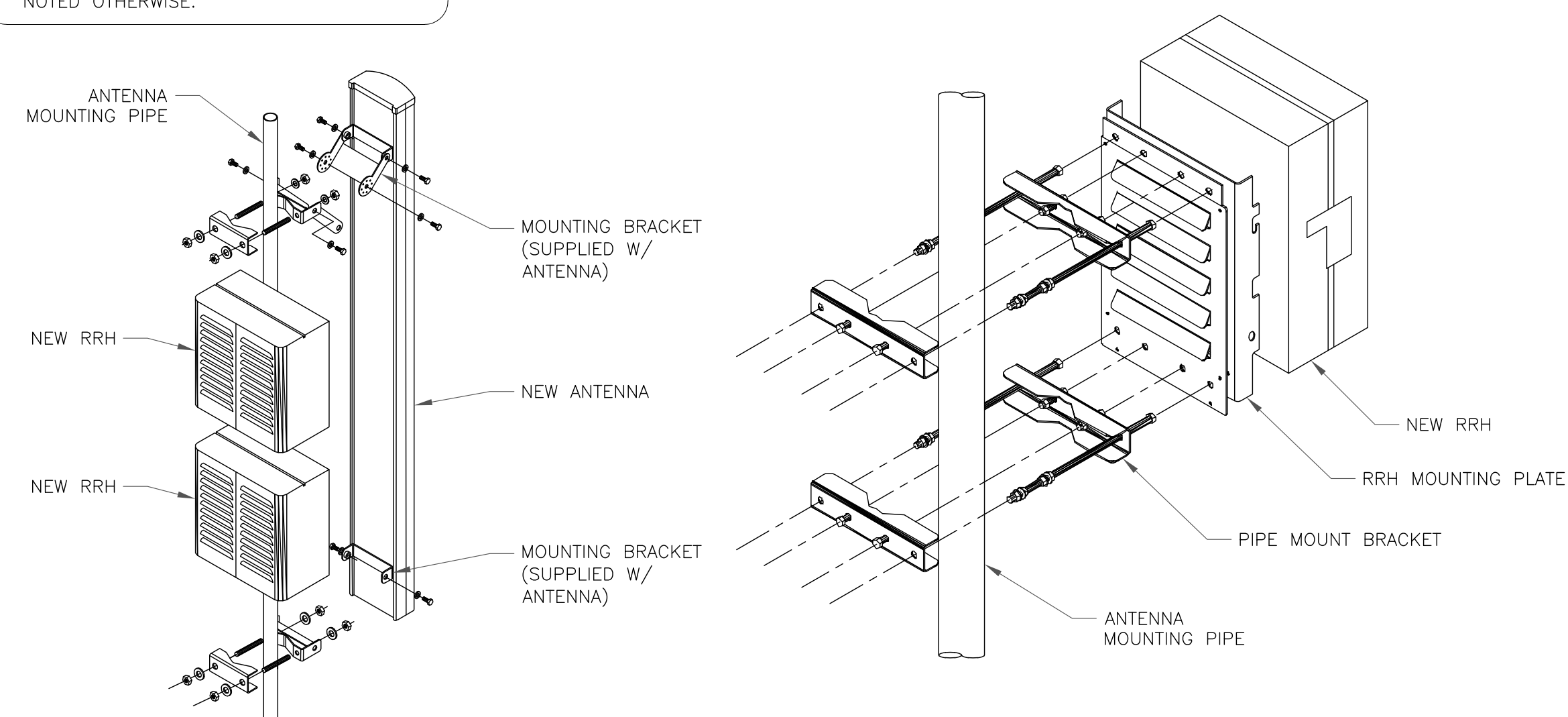
EXISTING
190'-6" MONOPOLE

RF SYSTEM SCHEDULE										
SECTOR	ANTENNA	TECH	MANUFACTURER	ANTENNA MODEL	AZIMUTH	M-TILT	E-TILT	RAD CENTER	TMA/RRU	FEEDLINE TYPE
ALPHA	A1	L2500/N2500	ERICSSON	AIR 6419 B41	60°	0°	2'/2'	182'-0"	-	(1) 6X12 HYBRID
	A2	-	-	EMPTY MOUNT PIPE	-	-	-	-	-	-
	A3	L700/L600/N600/L2100/L1900/G1900	RFS	APXVAARR24_43-U-NA20	60°	0°	2'/2'/2'/2'	182'-0"	(1) 4449 B71+B85 (1) 4460 B25+B66	-
BETA	B1	L2500/N2500	ERICSSON	AIR 6419 B41	180°	0°	2'/2'	182'-0"	-	(1) 6/24 HYBRID
	B2	-	-	EMPTY MOUNT PIPE	-	-	-	-	-	-
	B3	L700/L600/N600/L2100/L1900/G1900	RFS	APXVAARR24_43-U-NA20	180°	0°	2'/2'/2'/2'	182'-0"	(1) 4449 B71+B85 (1) 4460 B25+B66	-
GAMMA	C1	L2500/N2500	ERICSSON	AIR 6419 B41	300°	0°	2'/2'	182'-0"	-	(1) 6/24 HYBRID
	C2	-	-	EMPTY MOUNT PIPE	-	-	-	-	-	-
	C3	L700/L600/N600/L2100/L1900/G1900	RFS	APXVAARR24_43-U-NA20	300°	0°	2'/2'/2'/2'	182'-0"	(1) 4449 B71+B85 (1) 4460 B25+B66	-

1 ANTENNA AND CABLE SCHEDULE
SCALE: NOT TO SCALE

INSTALLER NOTES:

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



2 ANTENNA WITH RRHs MOUNTING DETAIL
SCALE: NOT TO SCALE

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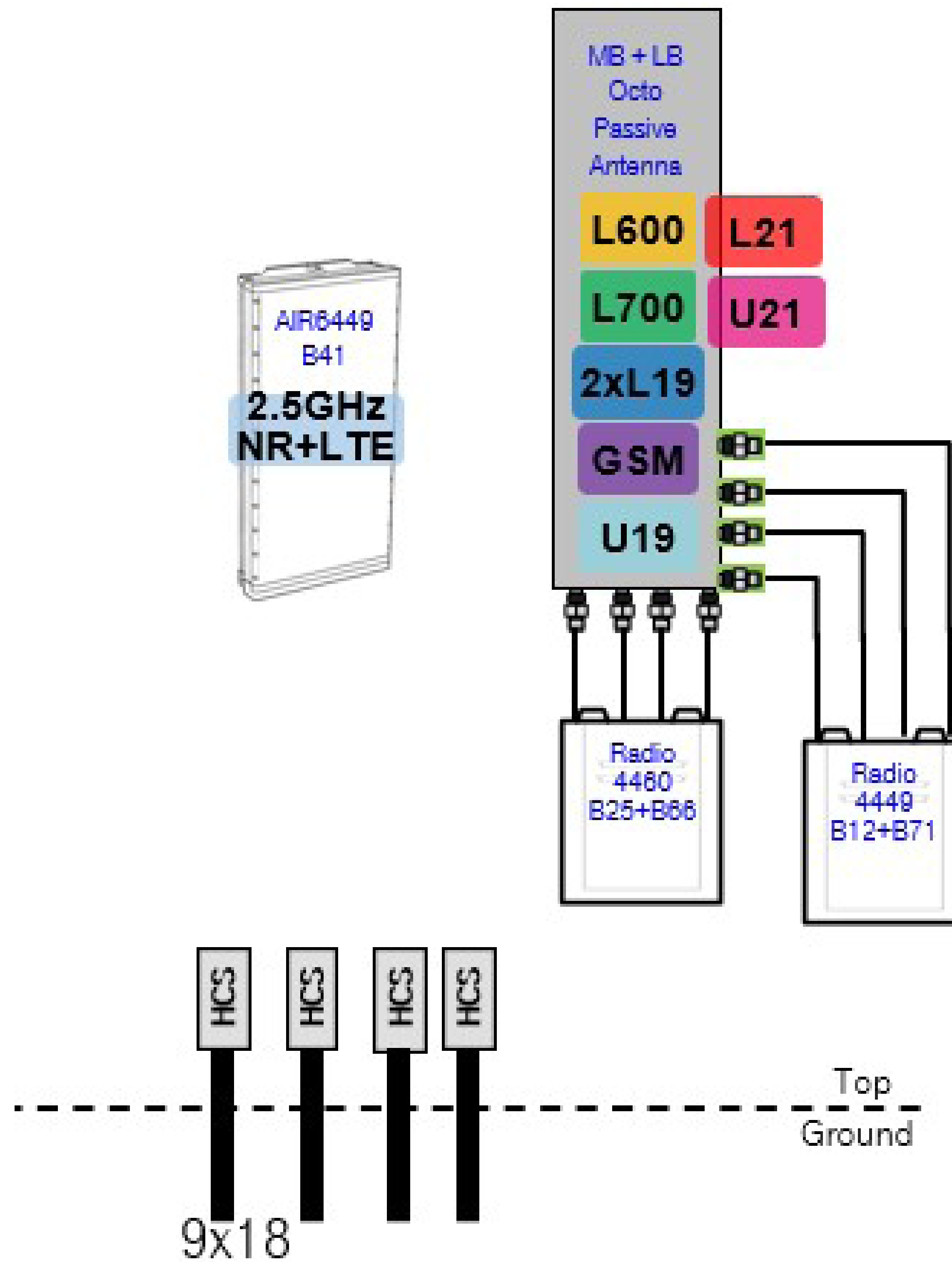
SHEET NUMBER:

C-3

REVISION:

0

Final Config: 67D5A998E



1 PLUMBING DIAGRAM
SCALE: NOT TO SCALE

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T-MOBILE SITE NUMBER:
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BU #: 801485
CT SUFFIELD 1 CAC 801485

2715 MOUNTAIN RD.
SUFFIELD, CT 06093

EXISTING
190'-6" MONOPOLE

ISSUED FOR:

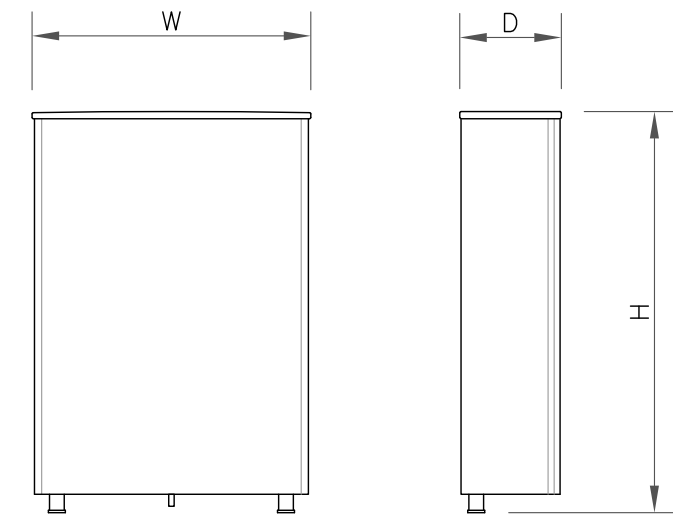
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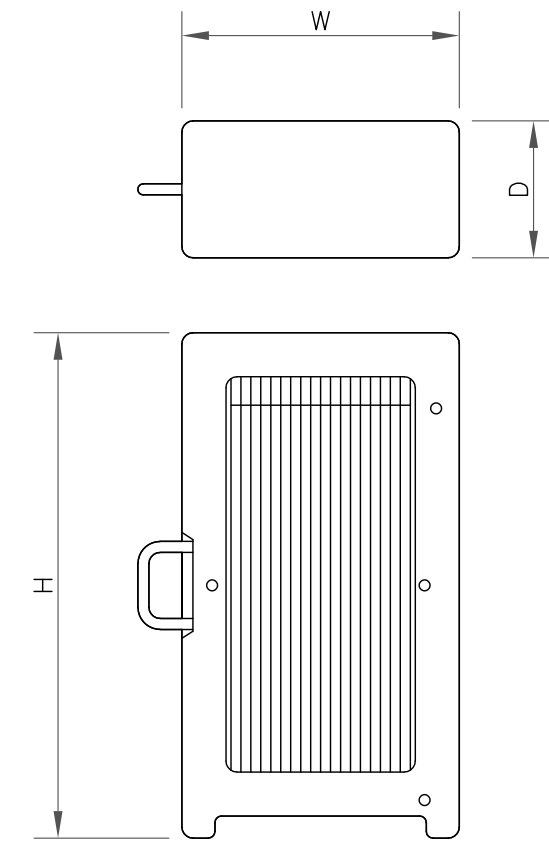
SHEET NUMBER: **C-4** REVISION: **0**



ANTENNA SPECS

MANUFACTURER	ERICSSON
MODEL #	AIR 6419 B41
WIDTH	20.91"
DEPTH	9.02"
HEIGHT	36.25"
WEIGHT	96.50 LBS

1 ANTENNA SPECS
SCALE: NOT TO SCALE



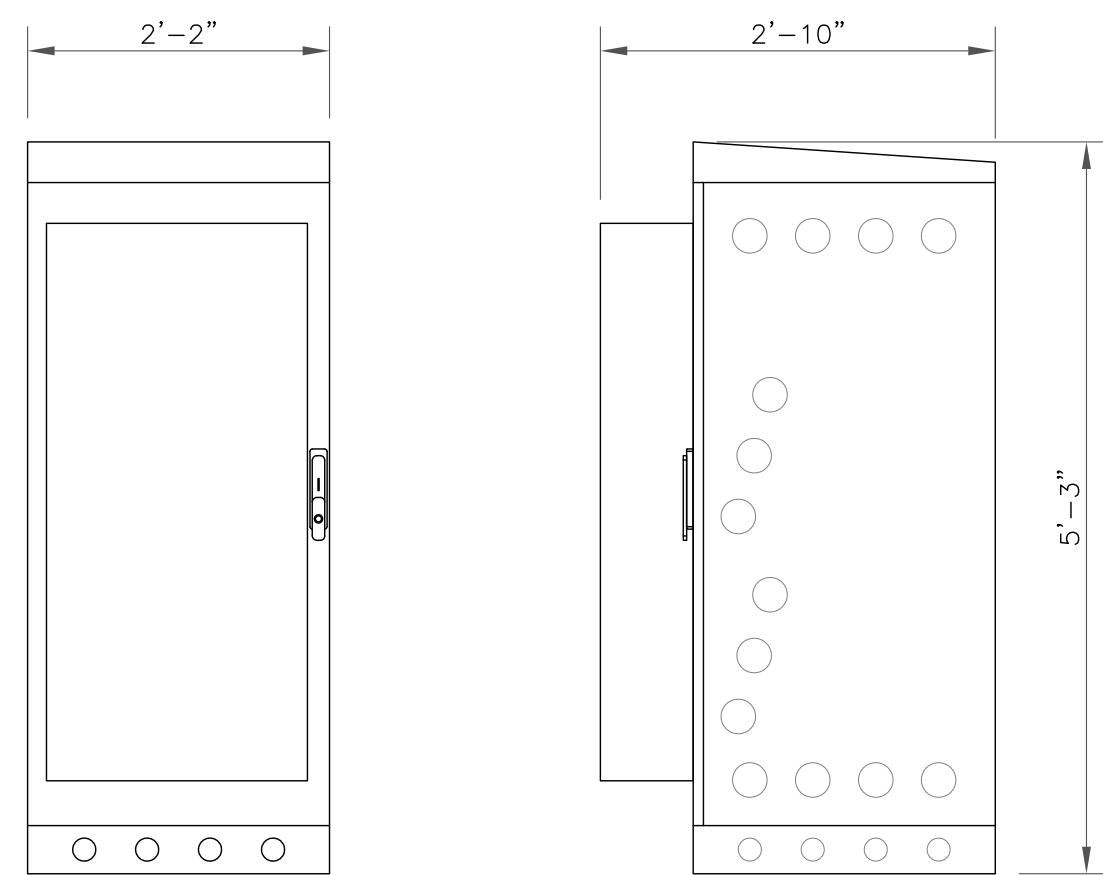
RRU SPECIFICATIONS

MANUFACTURER	ERICSSON
MODEL #	RADIO 4460 B25+B66
WIDTH	15.10"
DEPTH	11.90"
HEIGHT	17.00"
WEIGHT	109 LBS

2 RRU SPECS
SCALE: NOT TO SCALE

3 NOT USED
SCALE: NOT TO SCALE

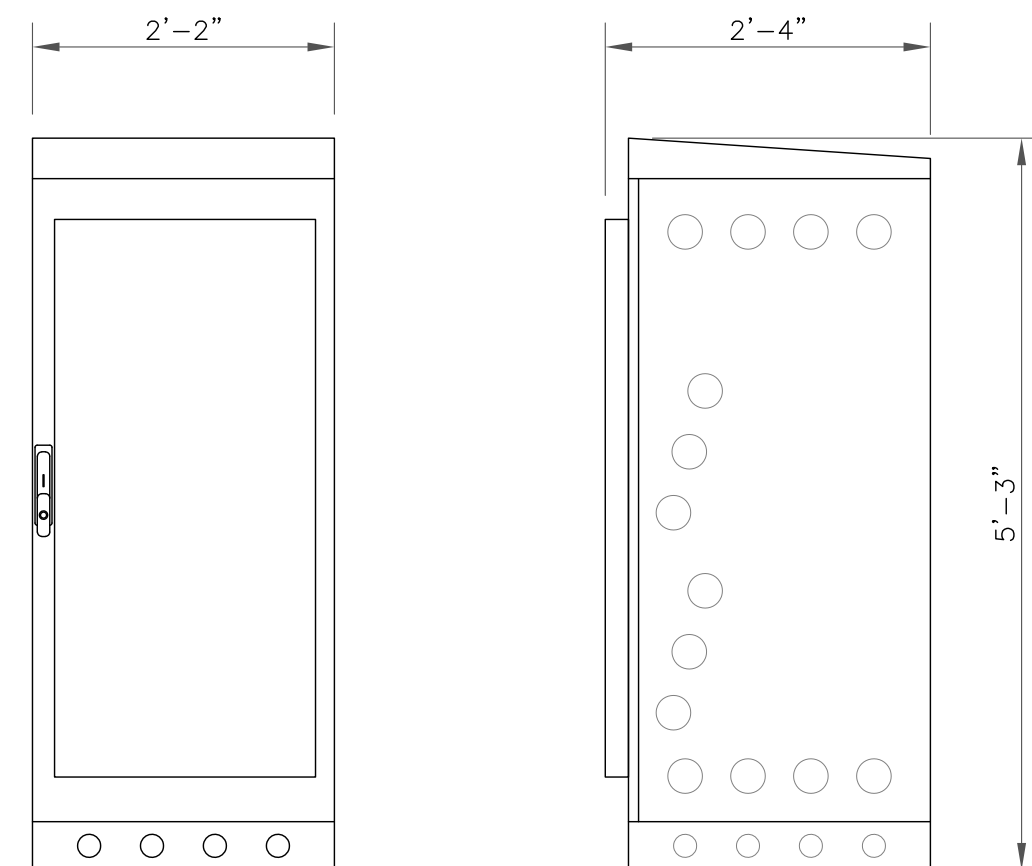
4 NOT USED
SCALE: NOT TO SCALE



EQUIPMENT NOTES:

HEIGHTxWIDTHxDEPTH:	63.0" x 26.0" x 34.0" (1600.0mm x 660.0mm x 864.0mm)
WEIGHT (EMPTY):	320 LBS (145 kg)
WEIGHT (FULLY LOADED):	1000 LBS (454 kg)

5 ERICSSON 6160 SSC
SCALE: NOT TO SCALE



EQUIPMENT NOTES:

HEIGHTxWIDTHxDEPTH:	63.0" x 26.0" x 28.0" (1600.0mm x 660.0mm x 711.0mm)
WEIGHT (EMPTY):	295 LBS (134 kg)
WEIGHT (FULLY LOADED):	2000 LBS (908 kg)

6 ERICSSON B160 BATTERY CABINET
SCALE: NOT TO SCALE

7 NOT USED
SCALE: NOT TO SCALE

8 NOT USED
SCALE: NOT TO SCALE

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SHEET NUMBER:

E-1

REVISION:

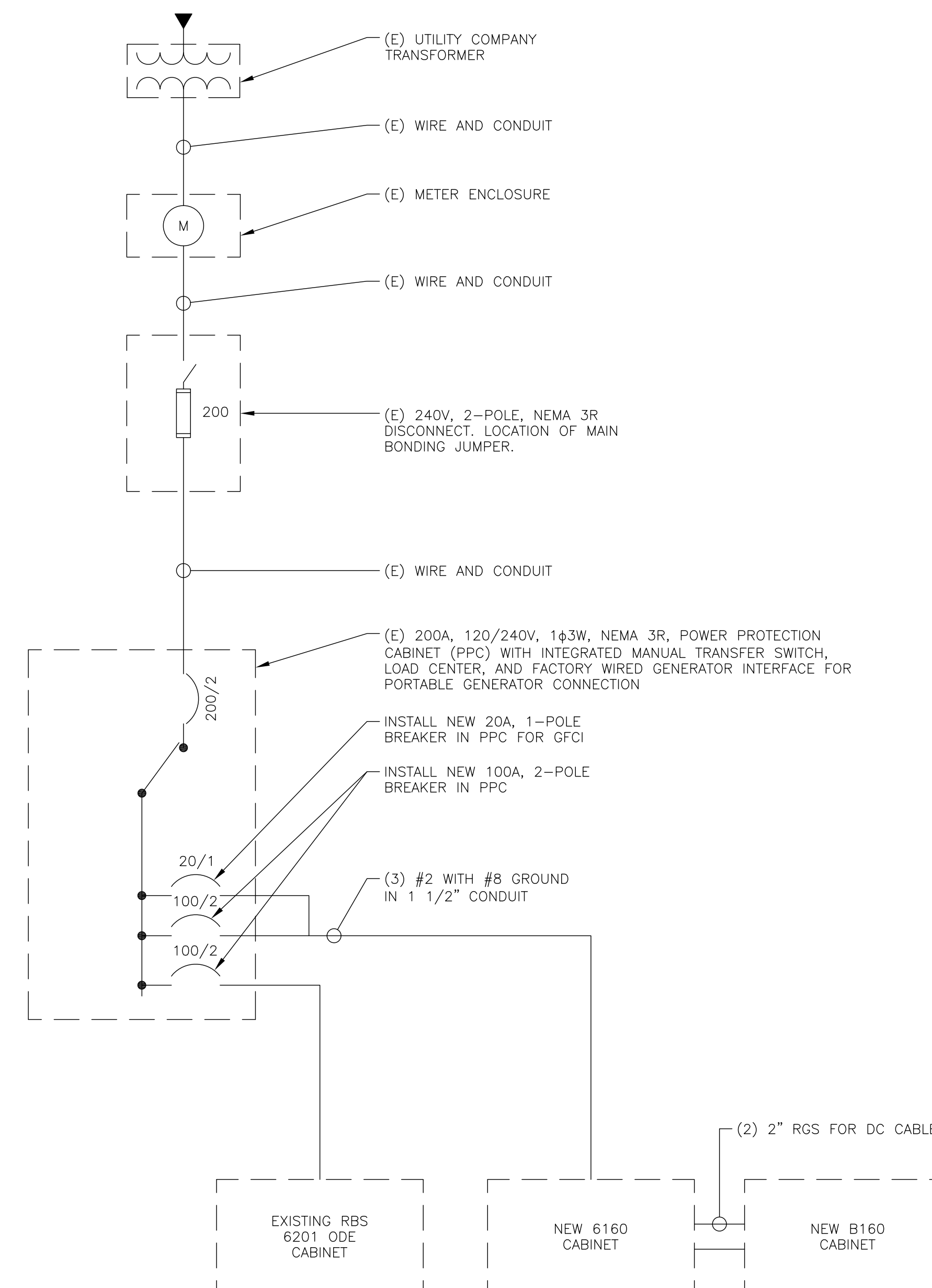
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FINAL PANEL SCHEDULE							
LOAD	POLES	AMPS	BUS		AMPS	POLES	LOAD
			L1	L2			
PANEL GFCI	1	15	1	2	30	2	REC 1
CABINET GFCI	1	15	3	4			
E6160	2	100	5	6	30	2	REC 2
			7	8			
GFI	1	20	9	10	30	2	REC 3
RBS 6201 ODE	2	100	11	12			
			13	14	30	2	REC 4
			15	16			
			17	18			
			19	20			
			21	22			
			23	24			

RATED VOLTAGE: <input checked="" type="checkbox"/> 120/240 <input type="checkbox"/> _____ 1 PHASE, 3 WIRE	BRANCH POLES: <input type="checkbox"/> 12 <input checked="" type="checkbox"/> 24 <input type="checkbox"/> 30 <input type="checkbox"/> 42	APPROVED MF'RS
RATED AMPS: <input type="checkbox"/> 100 <input checked="" type="checkbox"/> 200 <input type="checkbox"/> 400 <input type="checkbox"/> _____	CABINET: <input checked="" type="checkbox"/> SURFACE <input type="checkbox"/> FLUSH	NEMA <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 3R <input type="checkbox"/> 4X
<input type="checkbox"/> MAIN LUGS ONLY <input checked="" type="checkbox"/> MAIN 200 AMPS <input checked="" type="checkbox"/> BREAKER <input type="checkbox"/> FUSED SWITCH <input checked="" type="checkbox"/> HINGED DOOR	<input type="checkbox"/> TO BE GFCI BREAKERS	<input checked="" type="checkbox"/> KEYED DOOR LATCH
<input type="checkbox"/> FUSED <input checked="" type="checkbox"/> CIRCUIT BREAKER BRANCH DEVICES	<input type="checkbox"/> _____	FULL NEUTRAL BUS <input type="checkbox"/> GROUND BAR

REPLACE EXISTING BREAKER IN POSITION 5 AND 7 WITH A NEW 2P 100A BREAKER
REPLACE EXISTING BREAKER IN POSITION 11 AND 13 WITH A NEW 2P 100A BREAKER
REPLACE EXISTING BREAKER IN POSITION 9 WITH A NEW 1P 20A BREAKER

1 FINAL T-MOBILE PANEL DETAIL
SCALE: NOT TO SCALE



NOTES:

- ALL NEW CONDUCTORS TO BE INSTALLED SHALL BE COPPER. ALL CONDUCTORS SHALL BE THHW, THWN, THWN-2, XHHW, XHHW-2, THW, THW-2, RHW, OR RHW-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.

2 ONE LINE DIAGRAM
SCALE: NOT TO SCALE

T-Mobile

35 GRIFFIN ROAD
BLOOMFIELD, CT 06002

CROWN CASTLE

1505 WESTLAKE AVENUE NORTH, SUITE 800
SEATTLE, WA 98109

B+T GRP

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

T-MOBILE SITE NUMBER:
CT11545A

BU #: 801485
CT SUFFIELD 1 CAC 801485

2715 MOUNTAIN RD.
SUFFIELD, CT 06093

EXISTING
190'-6" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	4/28/22	MEH	PRELIMINARY REVIEW	KT
0	5/12/22	MEH	CONSTRUCTION	KT



5/12/22

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/23

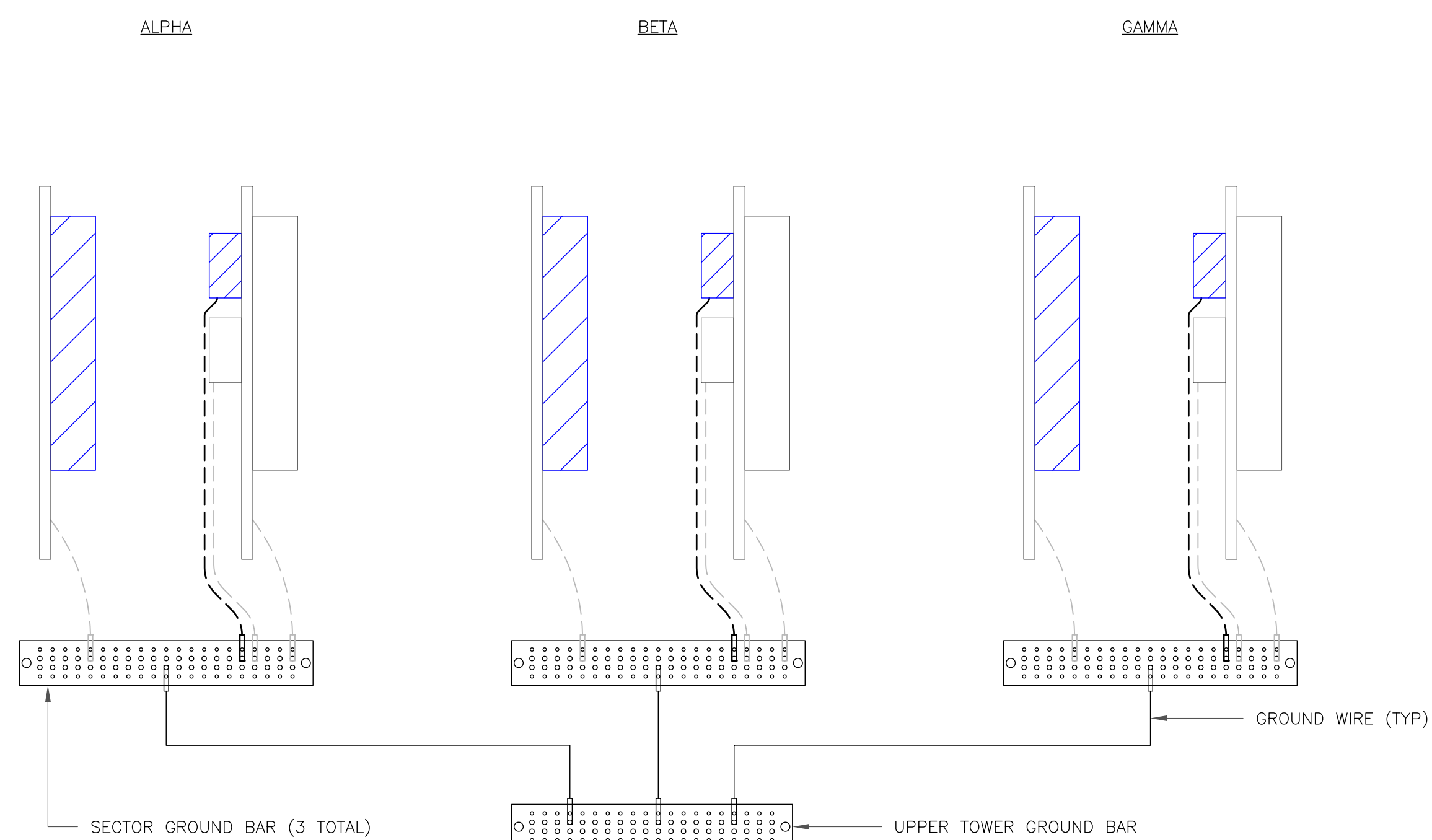
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TO ALTER THIS DOCUMENT.

SHEET NUMBER:

G-1

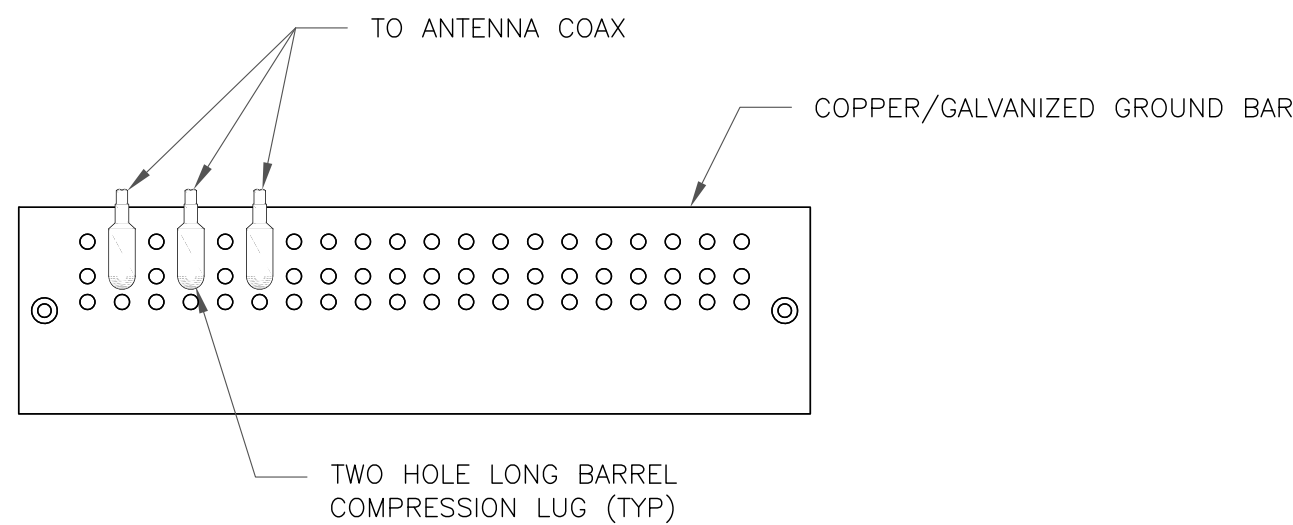
REVISION:

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

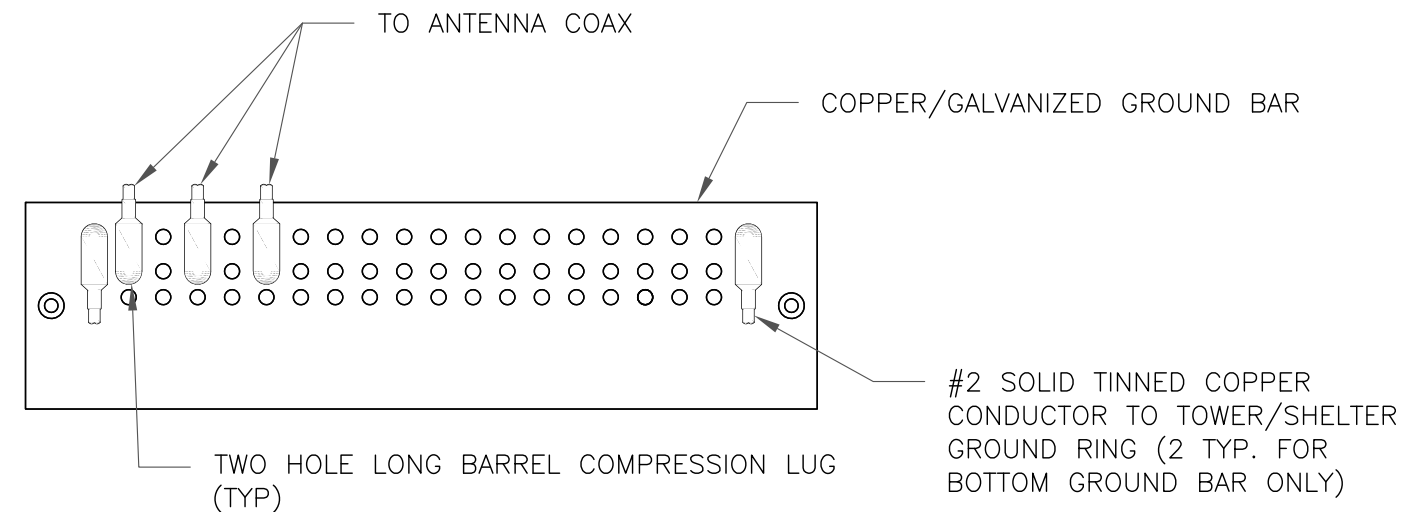
1 ANTENNA GROUNDING DIAGRAM
SCALE: NOT TO SCALE



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.

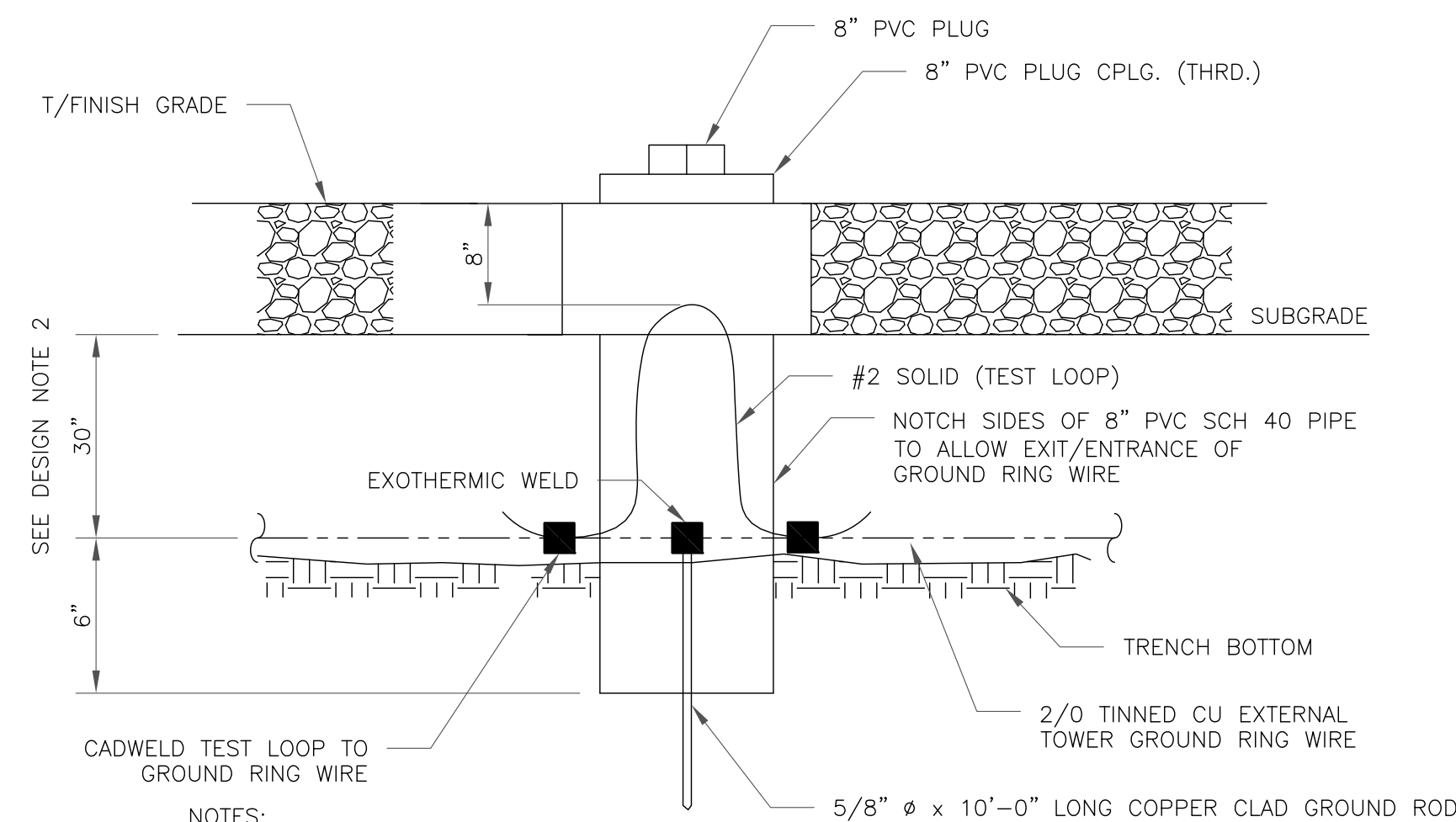
1 ANTENNA SECTOR GROUND BAR DETAIL
SCALE: NOT TO SCALE



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.

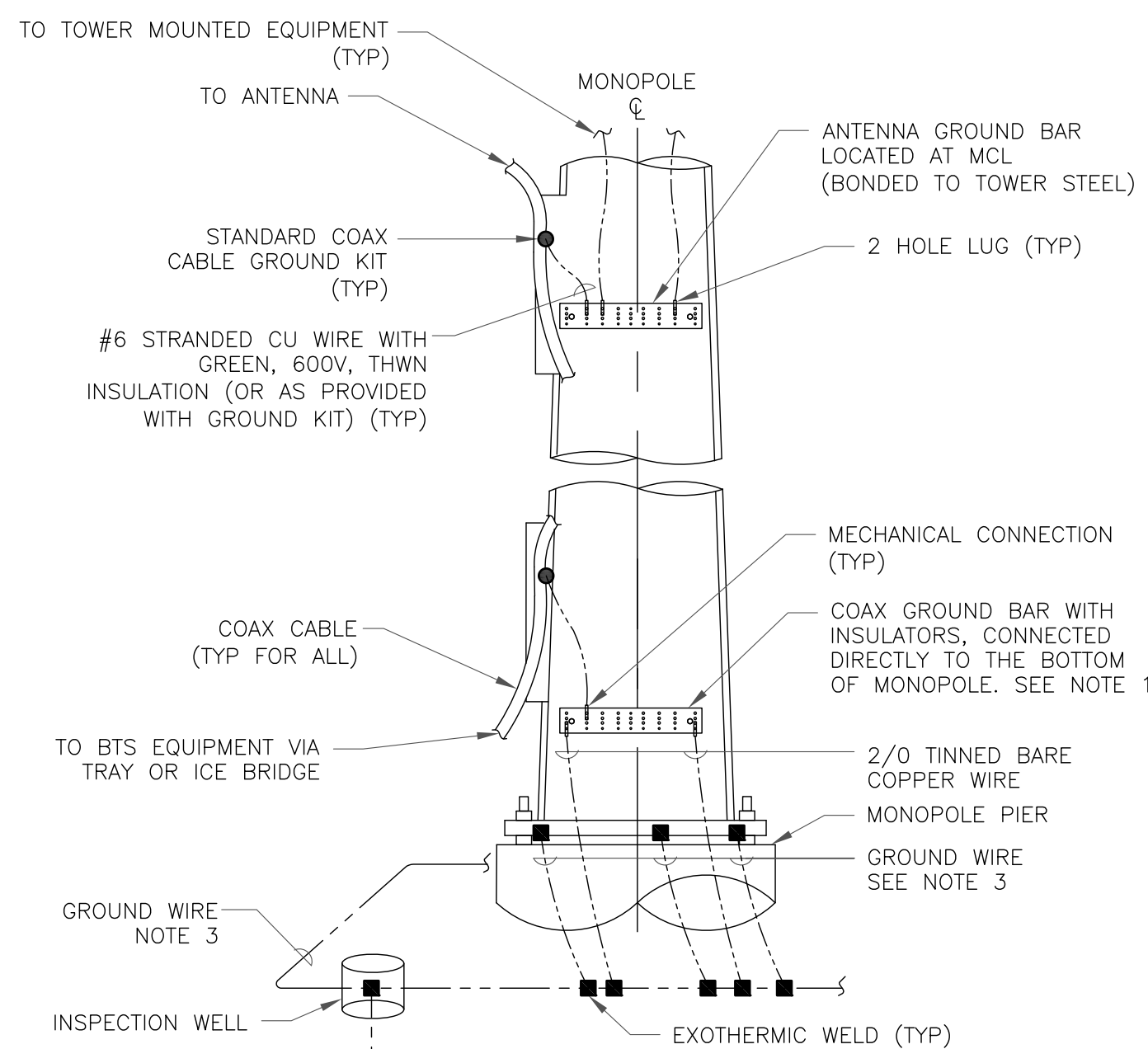
2 TOWER/SHELTER GROUND BAR DETAIL
SCALE: NOT TO SCALE



NOTES:

1. GROUND ROD SHALL BE DRIVEN VERTICALLY, NOT TO EXCEED 45 DEGREES FROM THE VERTICAL.
2. GROUND WIRE SHALL BE MIN. 30" BELOW GRADE OR 6" BELOW FROST LINE. (WHICH EVER IS GREATER) AS PER N.E.C. ARTICLE 250-50(D).

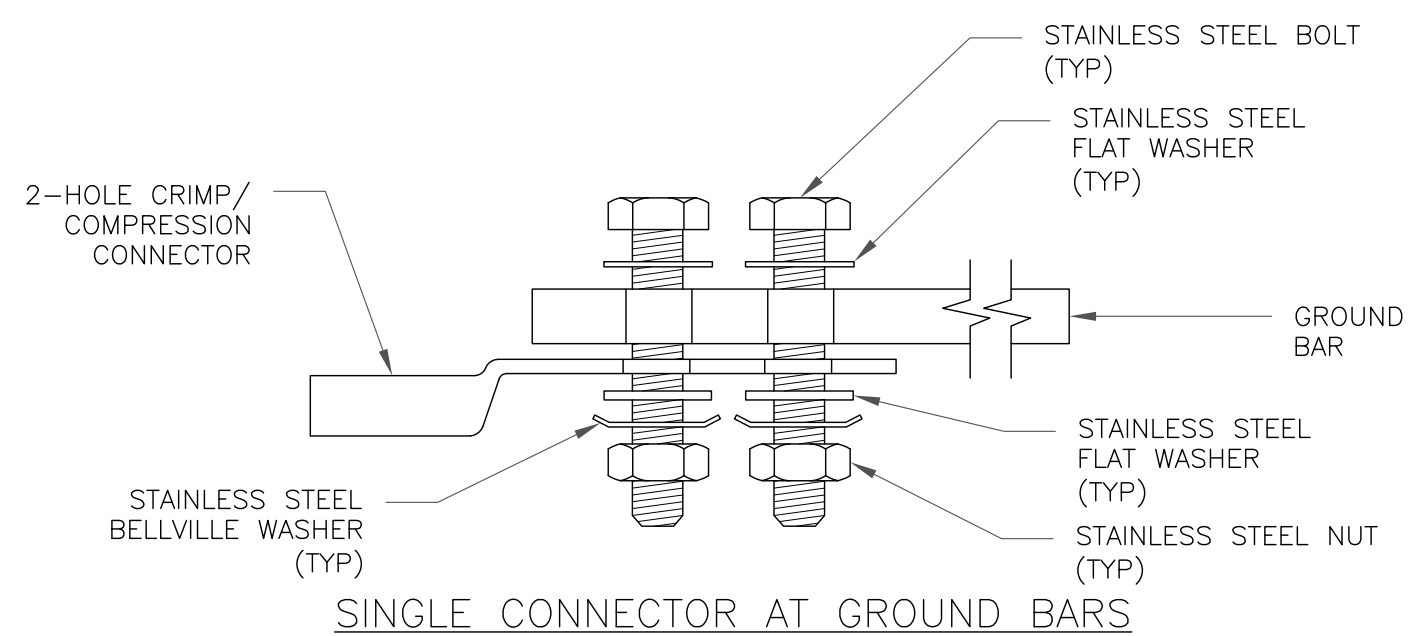
3 INSPECTION WELL DETAIL
SCALE: NOT TO SCALE



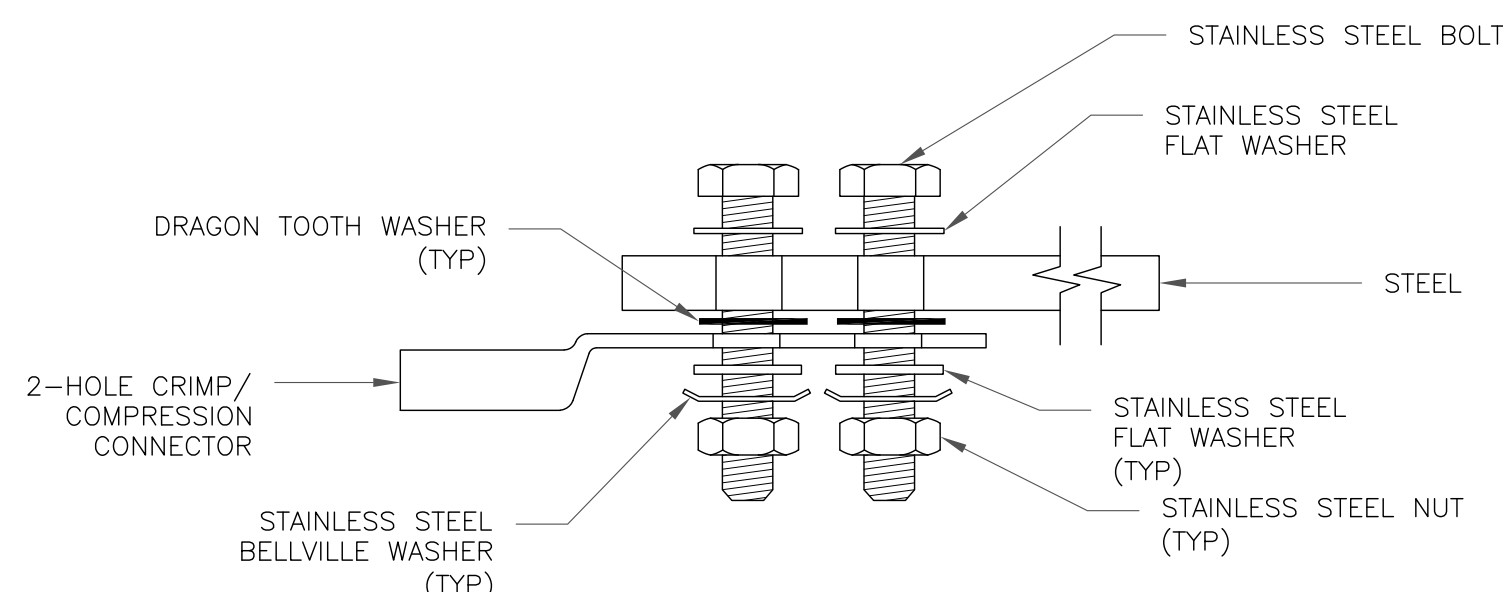
NOTES:

1. NUMBER OF GROUNDING BARS MAY VARY DEPENDING ON THE TYPE OF TOWER, ANTENNA LOCATIONS AND CONNECTION ORIENTATION. COAXIAL CABLES EXCEEDING 200 FEET ON THE TOWER SHALL HAVE GROUND KITS AT THE MIDPOINT. PROVIDE AS REQUIRED.
2. ONLY MECHANICAL CONNECTIONS ARE ALLOWED TO BE MADE TO CROWN CASTLE USA INC. TOWERS. ALL MECHANICAL CONNECTIONS SHALL BE TREATED WITH AN ANTI-OXIDANT COATING.
3. ALL TOWER GROUNDING SYSTEMS SHALL COMPLY WITH THE REQUIREMENTS OF THE RECOGNIZED EDITION OF ANSI/TIA 222 AND NFPA 780.

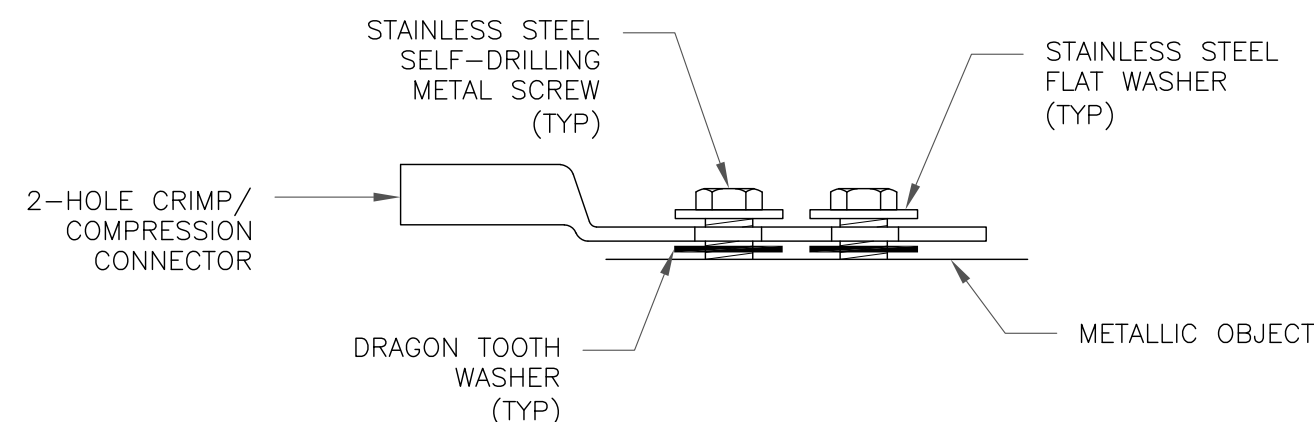
4 TYPICAL ANTENNA CABLE GROUNDING
SCALE: NOT TO SCALE



SINGLE CONNECTOR AT GROUND BARS

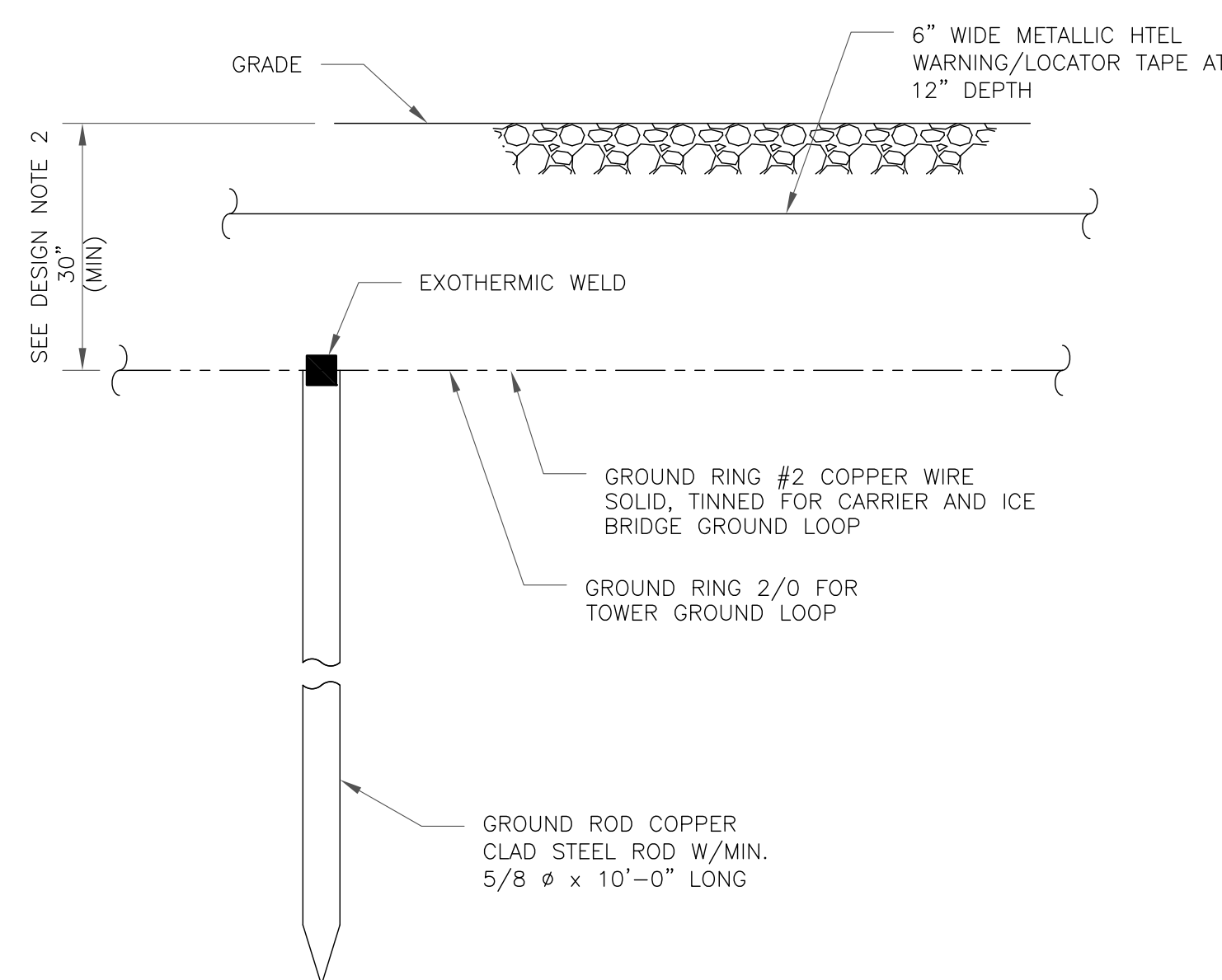


SINGLE CONNECTOR AT STEEL OBJECTS



SINGLE CONNECTOR AT METALLIC/STEEL OBJECTS

5 HARDWARE DETAIL FOR EXTERIOR CONNECTIONS
SCALE: NOT TO SCALE



NOTES:

1. GROUND ROD SHALL BE DRIVEN VERTICALLY, NOT TO EXCEED 45 DEGREES FROM THE VERTICAL.
2. GROUND WIRE SHALL BE MIN. 30" BELOW GRADE OR 6" BELOW FROST LINE. (WHICH EVER IS GREATER) AS PER N.E.C. ARTICLE 250-50(D).

6 GROUND ROD DETAIL
SCALE: NOT TO SCALE

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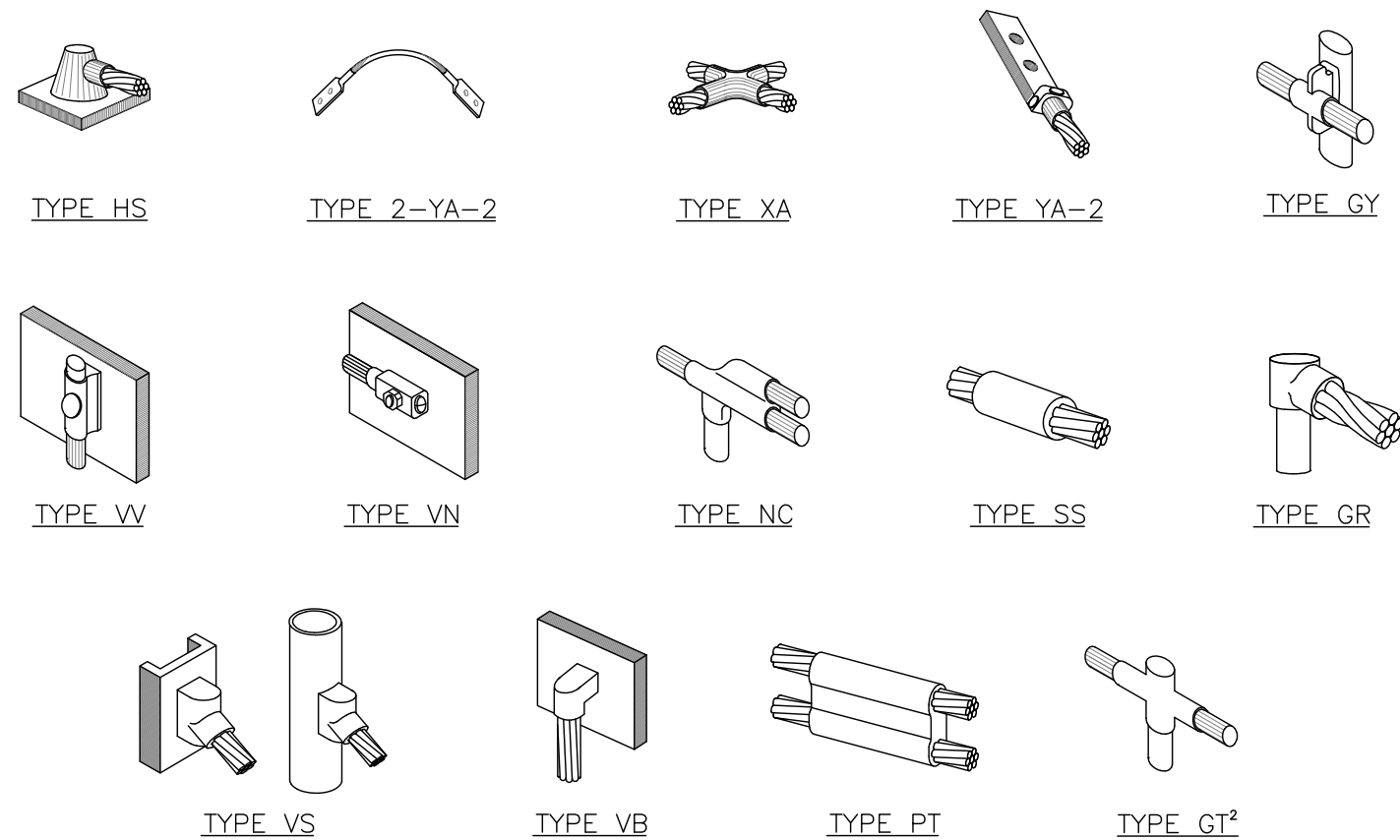
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SHEET NUMBER:

G-2

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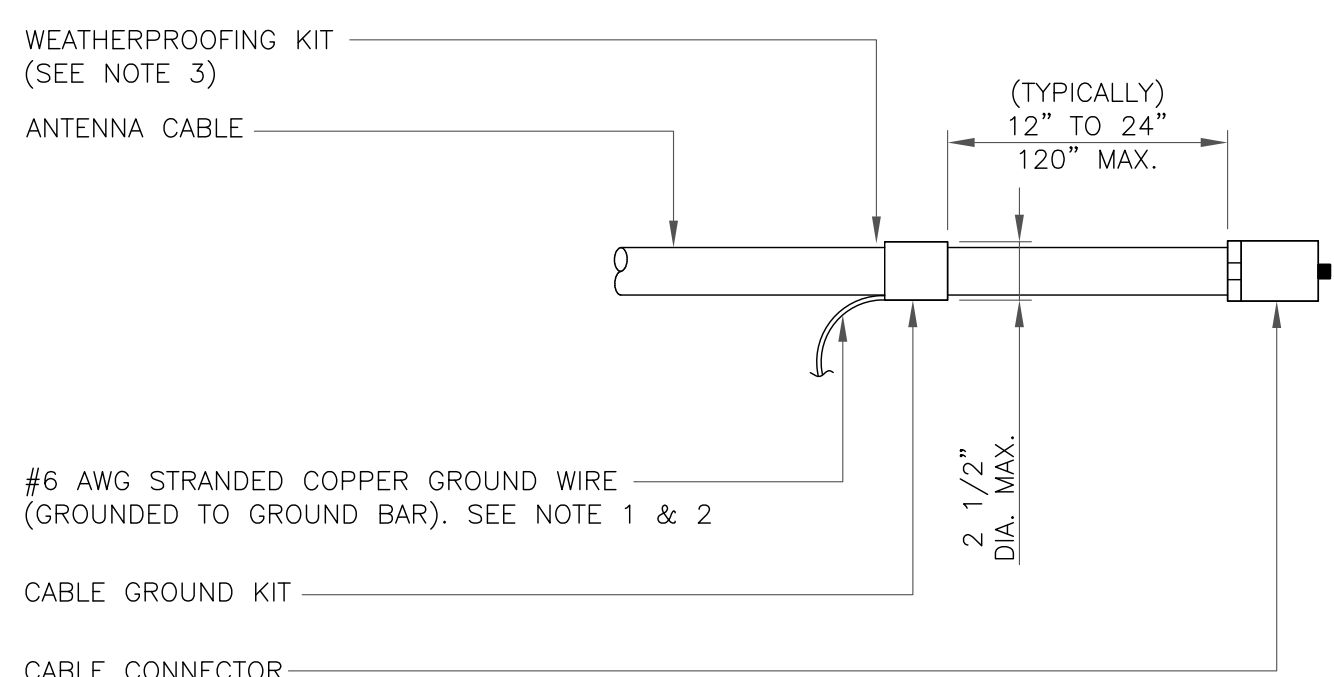
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NOTE:

1. ERICO EXOTHERMIC "MOLD TYPES" SHOWN HERE ARE EXAMPLES. CONSULT WITH CONSTRUCTION MANAGER FOR SPECIFIC MOLDS TO BE USED FOR THIS PROJECT.
2. MOLD TYPE ONLY TO BE USED BELOW GRADE WHEN CONNECTING GROUND RING TO GROUND ROD.

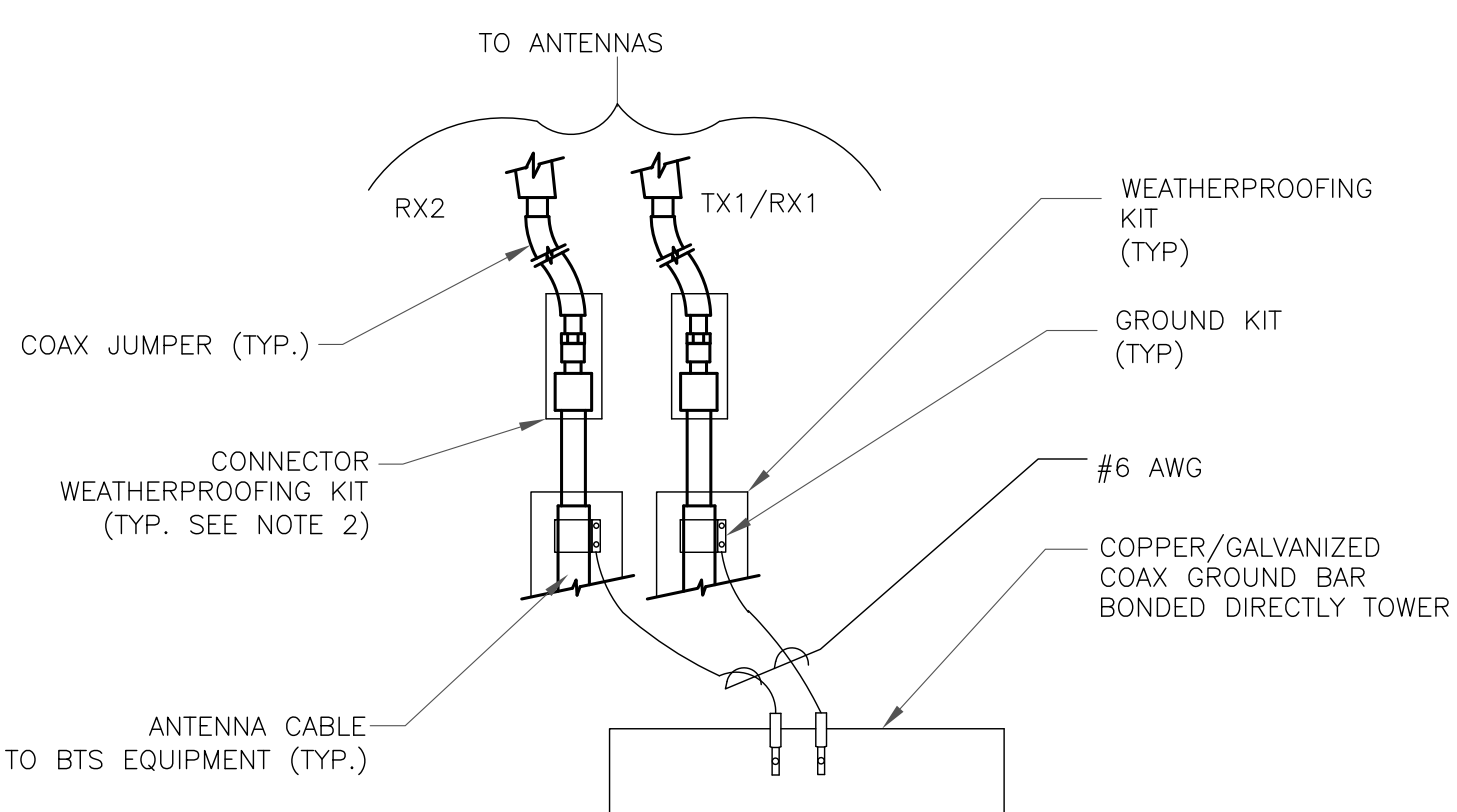
1 CADWELD GROUNDING CONNECTIONS
SCALE: NOT TO SCALE



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.

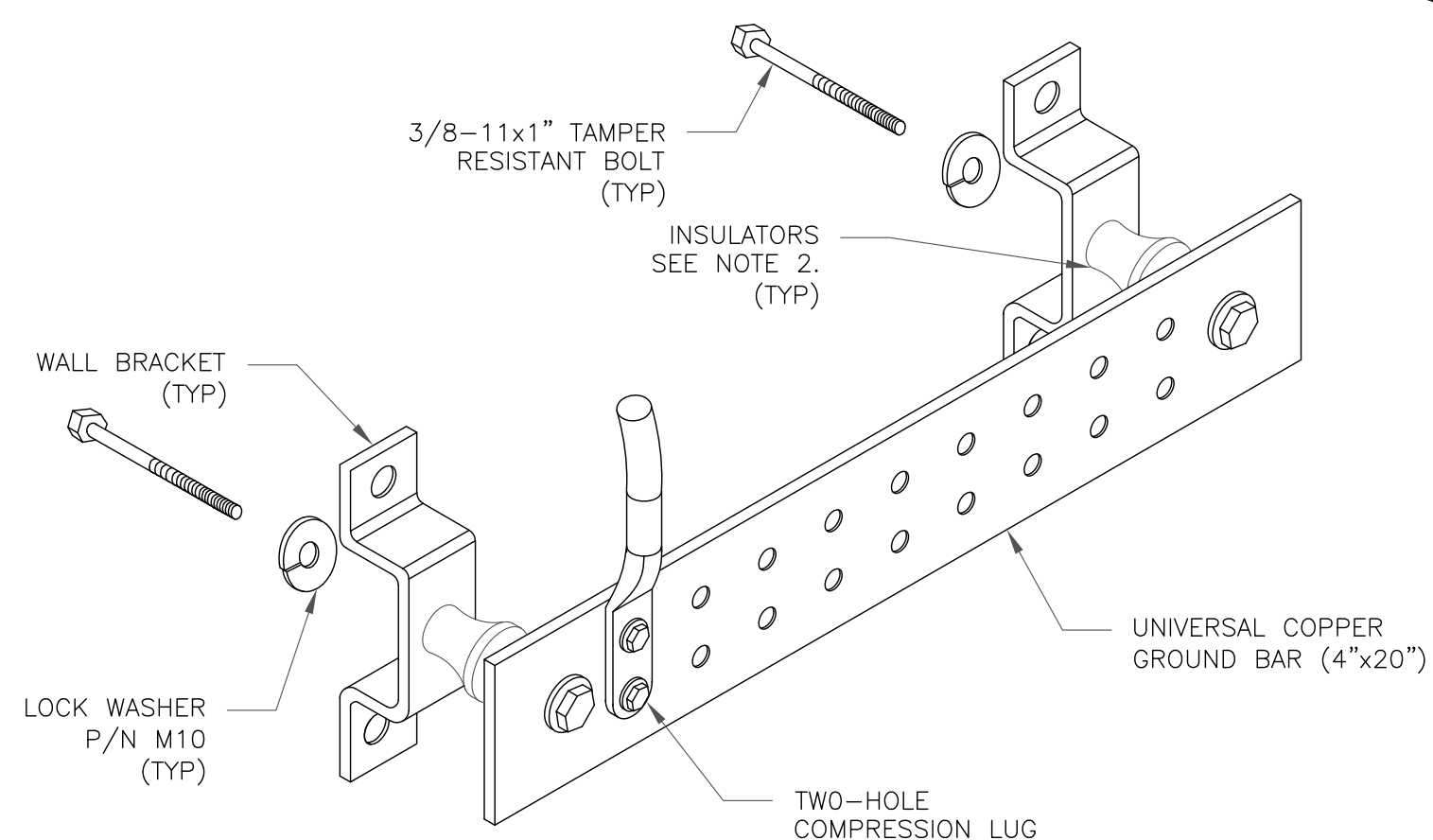
3 CABLE GROUND KIT CONNECTION
SCALE: NOT TO SCALE



NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO ANTENNA GROUND BAR.
2. WEATHER PROOFING SHALL BE TWO-PART TAPE KIT. COLD SHRINK SHALL NOT BE USED.

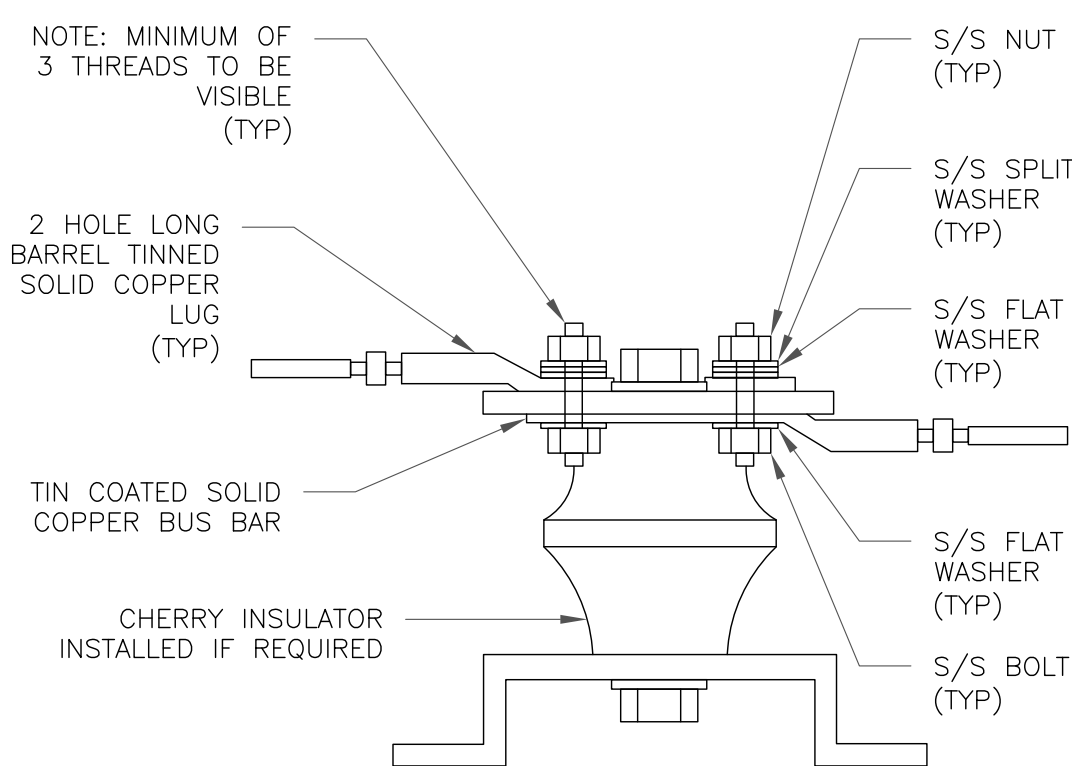
4 GROUND CABLE CONNECTION
SCALE: NOT TO SCALE



NOTES:

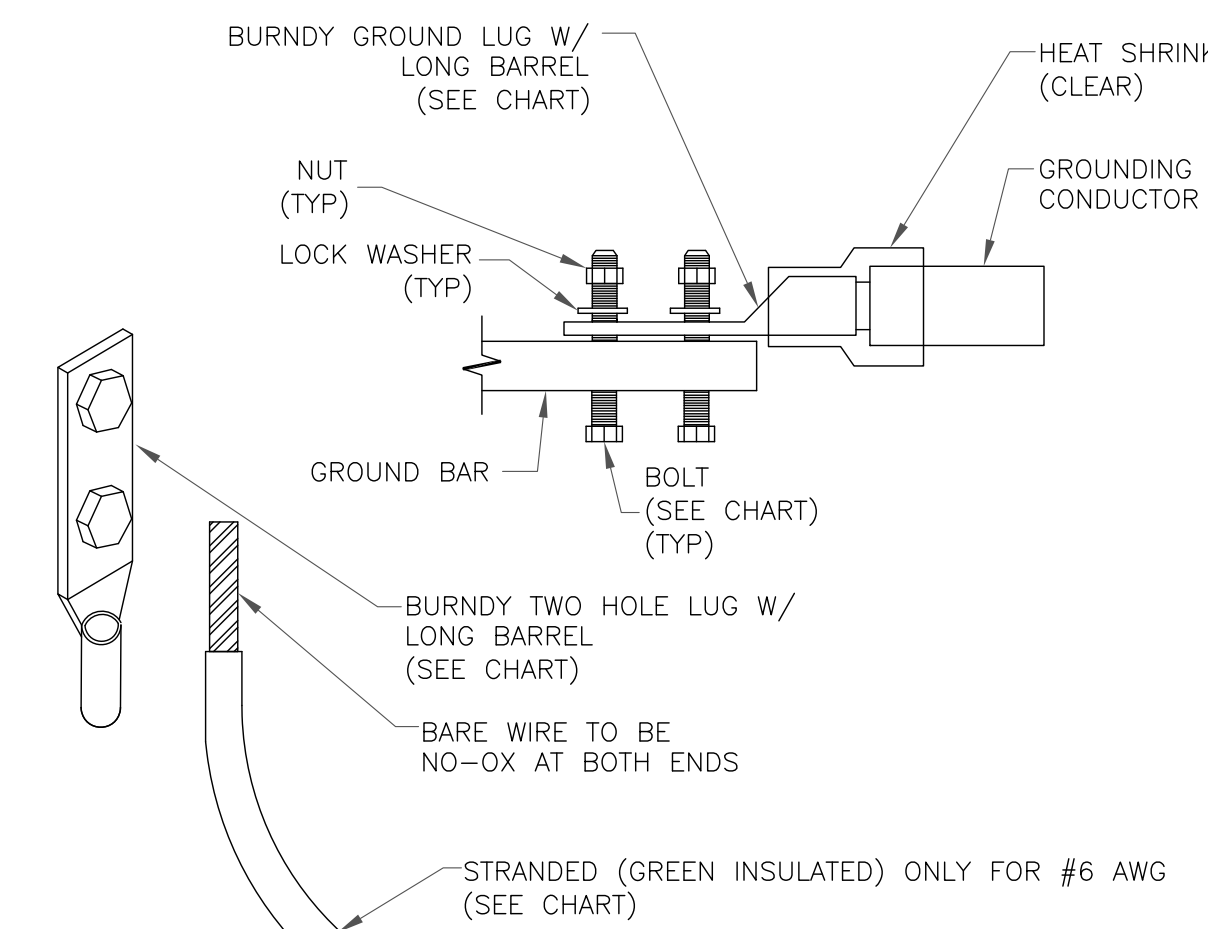
1. DOWN LEAD (HOME RUN) CONDUCTORS ARE NOT TO BE INSTALLED ON CROWN CASTLE USA INC. TOWER, PER THE GROUNDING DOWN CONDUCTOR POLICY QAS-STD-10091. NO MODIFICATION OR DRILLING TO TOWER STEEL IS ALLOWED IN ANY FORM OR FASHION, CAD-WELDING ON THE TOWER AND/OR IN THE AIR ARE NOT PERMITTED.
2. OMIT INSULATOR WHEN MOUNTING TO TOWER STEEL OR PLATFORM STEEL. USE INSULATORS WHEN ATTACHING TO BUILDING OR SHELTERS.

6 GROUND BAR DETAIL
SCALE: NOT TO SCALE



7 LUG DETAIL
SCALE: NOT TO SCALE

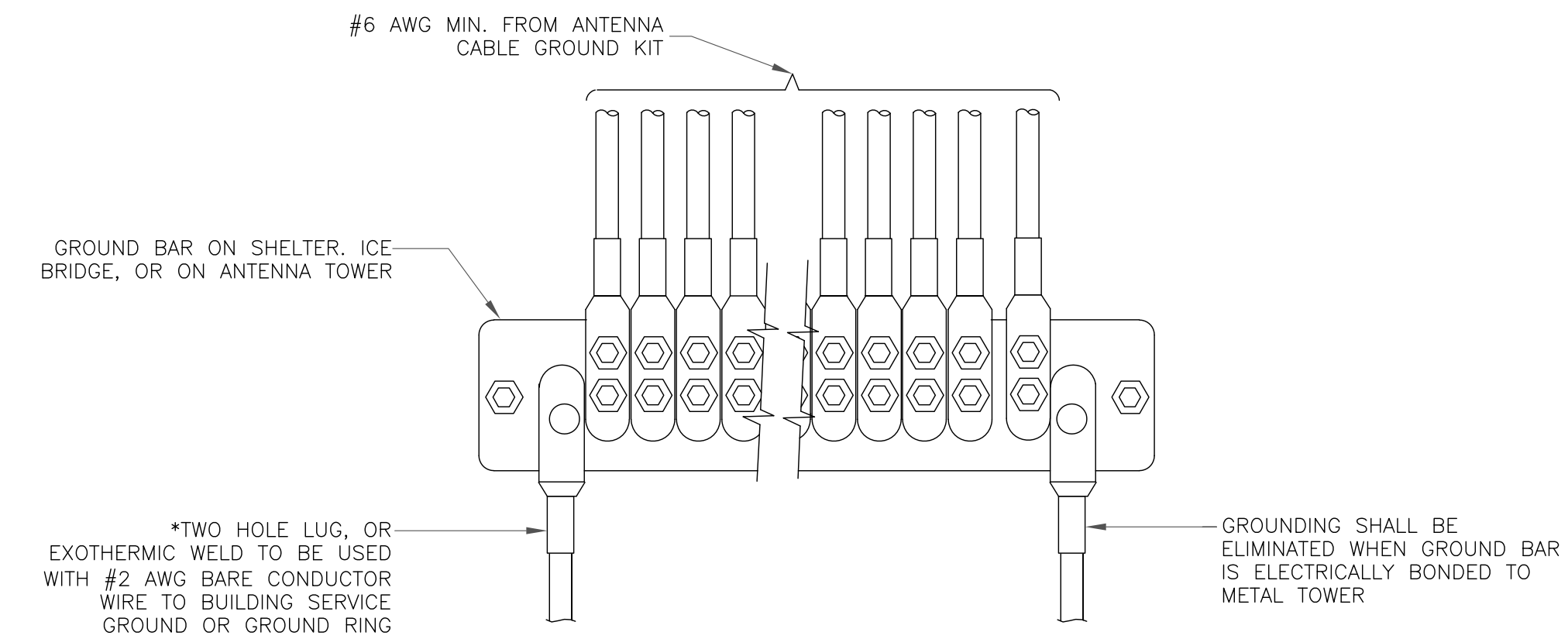
WIRE SIZE	BURNDY LUG	BOLT SIZE
#6 AWG GREEN INSULATED	YA6C-2TC38	3/8" - 16 NC S 2 BOLT
#2 AWG SOLID TINNED	YA3C-2TC38	3/8" - 16 NC S 2 BOLT
#2 AWG STRANDED	YA2C-2TC38	3/8" - 16 NC S 2 BOLT
#2/0 AWG STRANDED	YA26-2TC38	3/8" - 16 NC S 2 BOLT
#4/0 AWG STRANDED	YA28-2N	1/2" - 16 NC S 2 BOLT



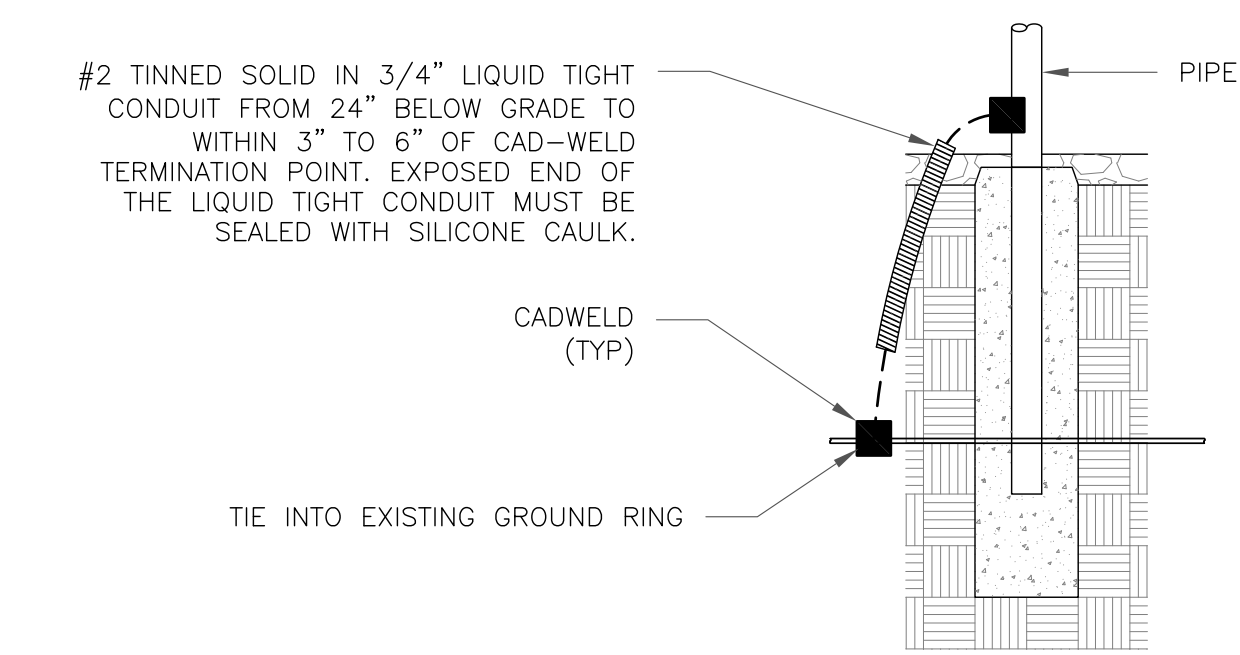
NOTES:

1. ALL GROUNDING LUGS ARE TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. ALL HARDWARE BOLTS, NUTS, LOCK WASHERS SHALL BE STAINLESS STEEL. ALL HARDWARE ARE TO BE AS FOLLOWS: BOLT, FLAT WASHER, GROUND BAR, GROUND LUG, FLAT WASHER AND NUT.

2 MECHANICAL LUG CONNECTION
SCALE: NOT TO SCALE



5 GROUNDWIRE INSTALLATION
SCALE: NOT TO SCALE



8 TRANSITIONING GROUND DETAIL
SCALE: NOT TO SCALE

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PROFESSIONAL ENGINEER
No. 23924
EXPIRES 5/12/23

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/23

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

84855.018.01_CT_SUFFIELD_1_CAC_801485.dwg - Sheet:G-3 - User: chad.vandergraaf - May 12, 2022 - 1:40pm