



December 26, 2023

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

Re: Notice of Exempt Modification – Antenna and RRU Swap/Add
Property Address: 548 Green Hollow Road Plainfield, CT 06374
Applicant: AT&T Mobility, LLC

Dear Ms. Bachman:

On behalf of AT&T, please accept this application as notification pursuant to R.C.S.A. §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. §16- 50j-72(b) (2).

AT&T currently maintains a wireless telecommunications facility consisting of nine (9) wireless telecommunication antennas at an antenna center line height of 155-foot level on an existing 178-foot monopole, owned by SBA Communications.

AT&T desires to modify its existing telecommunications facility by swapping six (6) antennas, (6) remote radio units and associated lines. The centerline height of said antennas and remote radio units is and will remain at 155' on the existing antenna mount.

Attached is a summary of the planned modifications including power density calculations reflecting the change in AT&T's operations at the site. Also included is documentation of the structural sufficiency of the tower to accommodate the revised antenna configuration.

Please accept this letter pursuant to Regulation 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., a copy of this letter is being sent to The Honorable Paul E. Sweet, First Selectman, 8 Community Ave Plainfield, CT 06374, Ryan Brais, Zoning Officer, , 8 Community Ave Plainfield, CT 06374, Lou Soja, Planning and Engineering, 8 Community Ave Plainfield, CT 06374. A copy of this letter is being sent to the Tower & Property owner SBA Communications at 8051 Congress Ave Boca Raton, FL 33478.

The following is a list of subsequent decisions by the Connecticut Siting Council:

- **EM-CING-109-081205** – AT&T Mobility, LLC notice of intent to modify an existing telecommunications facility located at 548 Green Hollow Road, Plainfield, Connecticut.

The planned modifications to AT&T's facility fall squarely within those activities explicitly provided for in R.C.S.A. §16-50j-72(b) (2).

1. The proposed modifications will not result in an increase in the height of the existing tower. AT&T's replacement antennas will be installed at the 155-foot level of the 178-foot monopole.
2. The proposed modifications will not involve any changes to ground-mounted equipment and, therefore, will not require an extension of the site boundary.
3. The proposed modifications will not increase the noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The operation of the modified facility will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. A cumulative worst-case RF emissions calculation for AT&T's modified facility is provided in the RF Emissions Compliance Report, included in Tab 2.



5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The tower and its foundation can support AT&T's proposed modifications. (See Structural Analysis Report included in Tab 3).

For the foregoing reasons, AT&T respectfully submits that the proposed modifications to the above referenced telecommunications facility constitutes an exempt modification under R.C.S.A. §16-50j-72(b) (2).

Sincerely,

Carolyn Seeley
Real Estate Specialist
Smartlink on behalf of AT&T
(978) 760-5577
Carolyn.seeley@smartlinkgroup.com

CC w/enclosures:

The Honorable Paul E. Sweet, First Selectman
Town of Plainfield
8 Community Ave
Plainfield, CT 06374

Ryan Brais, Zoning Officer
Town of Plainfield
8 Community Ave
Plainfield, CT 06374

Lou Soja, Planning and Engineering
Town of Plainfield
8 Community Ave
Plainfield, CT 06374

SBA – Tower & Property Owner
8051 Congress Ave
Boca Raton, FL 33478

548 GREEN HOLLOW RD

Location 548 GREEN HOLLOW RD

Mblu 020/ 0124/ 0008/ /

Acct# 00276500

Owner QUIKRETE COMPANIES INC
THE

Assessment \$64,720

Appraisal \$92,440

PID 2981

Building Count 1

Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2022	\$50,460	\$41,980	\$92,440

Assessment			
Valuation Year	Improvements	Land	Total
2022	\$35,330	\$29,390	\$64,720

Owner of Record

Owner QUIKRETE COMPANIES INC THE
Co-Owner ATTN: KAREN KULP/PROP TAX
Address 3490 PIEMONT RD SUITE 1300
ATLANTA, GA 30305

Sale Price \$0
Certificate
Book & Page 0427/0217
Sale Date 08/05/2010
Instrument 29

Ownership History

Ownership History					
Owner	Sale Price	Certificate	Book & Page	Instrument	Sale Date
QUIKRETE COMPANIES INC THE	\$0		0427/0217	29	08/05/2010
SECRETARY OF HOUSING AND URBAN DEVELOPME	\$0		0422/0172	29	03/23/2010
CONNECTICUT HOUSING FINANCE AUTHORITY	\$0		0422/0169	14	03/23/2010
CURIO JOANNE M	\$68,600		0249/0226	00	02/02/1998
ESPINOLA THELMA N	\$0		0141/0785		

Building Information

Building 1 : Section 1

Year Built:
Living Area: 0
Replacement Cost: \$0
Building Percent Good:
Replacement Cost
Less Depreciation: \$0

Building Attributes

Field	Description
Style:	Outbuildings
Model	
Grade:	
Stories:	
Occupancy:	
Exterior Wall 1:	
Exterior Wall 2:	
Roof Structure:	
Roof Cover:	
Interior Wall 1:	
Interior Wall 2:	
Interior Flr 1:	
Interior Flr 2:	
Heat Fuel:	
Heat Type:	
AC Type:	
Total Bedrooms:	
Full Baths:	
Half Baths:	
Extra Fixtures:	
Total Rooms:	
Bath Style:	
Kitchen Style:	
Fireplaces:	
Xtra Openings:	
Gas Fireplaces:	
Woodstove/Pellet	
Bsmt Gar:	
Num Park	
Fireplaces	
Color	
Basement:	
Fndtn Cndtn	
Basement	

Building Photo



(<https://images.vgsi.com/photos/PlainfieldCTPhotos//00\00\24\63.JPG>)

Building Layout

 Building Layout (ParcelSketch.ashx?pid=2981&bid=2981)

Building Sub-Areas (sq ft)	<u>Legend</u>
No Data for Building Sub-Areas	

Extra Features

Extra Features	<u>Legend</u>
No Data for Extra Features	

Land

Land Use		Land Line Valuation	
Use Code	103V	Size (Acres)	0.91
Description	Vacant	Frontage	
Zone	RA60	Depth	
Neighborhood	80	Assessed Value	\$29,390
Alt Land Appr Category	No	Appraised Value	\$41,980

Outbuildings

Outbuildings						<u>Legend</u>
Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
LT10	w/ Double Light			2.00 UNITS	\$2,950	1
LT12	w/ Four Lights			1.00 UNITS	\$2,530	1
PAV1	Paving-Asphalt			44980.00 S.F.	\$44,980	1

Valuation History

Appraisal			
Valuation Year	Improvements	Land	Total
2022	\$50,460	\$41,980	\$92,440
2021	\$0	\$38,060	\$38,060

Assessment			
Valuation Year	Improvements	Land	Total
2022	\$35,330	\$29,390	\$64,720
2021	\$0	\$26,640	\$26,640



SBA Communications Corporation
8051 Congress Avenue
Boca Raton, FL 33487-1307

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sbsite.com

Structural Analysis Report

Client: AT&T

Client Site ID / Name: CTL02059 / Plainfield North
Application #: 221986, v4

SBA Site ID / Name: CT00594-S / Plainfield North

178 ft Monopole

56 Roper Road
Plainfield, Connecticut 06354
Lat: 41.746003, Long: -71.880158

Project number: CT00594-ATT-060623

Analysis Results

Tower	84.0%	Pass
Foundation	80.0%	Pass

Change in tower stress due to mount modification / replacement	+3.0%
--	-------

Prepared by:

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June 13, 2023



06/13/23

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Introduction

The purpose of this report is to summarize the analysis results on the 178 ft Monopole to support the proposed antennas and transmissions lines in addition to those currently installed.

Table 1 List of Documents Used

Item	Document
Tower design/drawings	Valmont, Project No F138, Dated 09-14-1998.
Foundation Mapping	FDH Engineering, Inc., Project No 1207132EN1, Dated 08-16-2012.
Geotechnical report	Jaworski Geotech, Inc., Project No C98326G, Dated 07-23-1998.
Mount Analysis	TEP, Project No. CT2059, Dated 11-16-2022
Modification drawings	TES, Job No 18414, Dated 11-25-2015
Latest SA	TES, Project No. 127329, Dated 04/08/2022

Analysis Criteria

Table 2 Code Related Data

Jurisdiction (State/County/City)	Connecticut/Windham/Plainfield
Governing Codes	ANSI/TIA/EIA 222-H, 2021 IBC, 2022 CSBC
Ultimate Wind Speed (3-Sec gust)	123.0 mph
Wind Speed with Ice (3-Sec gust)	50 mph
Service Wind Speed (3-Sec gust)	60 mph
Ice Thickness	1.00"
Risk Category	II
Exposure Category	B
Topographic Category	1
Crest Height	0 ft
Ground Elevation	305.56 ft.
Seismic Parameter S_s	0.186
Seismic Parameter S_1	0.054

This structural analysis is based upon the tower being classified as a risk category II; however, if a different classification is required subsequent to the date hereof, the tower classification will be changed to meet such requirement and a new structural analysis will be run.

Appurtenance Loading

Existing Loading:

Table 3 Existing Appurtenances

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
-	175.0	-	-	Low Profile Platform	-	Abandoned
1	165.0	3	Kathrein 782 11056	Low Profile Platform w/ Handrails & Reinforcement Kit [PRK-1245 & PRK-SFS]	(4) 1.9" Fiber (6) 1 5/8"	T-Mobile
2		3	Ericsson AIR6419 B41 - Panel			
3		3	Ericsson 4460 B25 + B66			
4		3	RFS APXVAALL24-43-U-NA20 - Panel			
5		6	Ericsson KRY 112 489/2			
6		3	Ericsson 4449 B71 + B85 -			
-	155.0	6	Powerwave 7770 – Panel	Low Profile Platform w/ Handrails	(12) 1 5/8" (1) 1/2" (1) 3" Flex Conduit [Housing: (2) 3/4" DC Power (1) 7/16" Fiber]	AT&T
-		1	Kathrein 800-10764 – Panel			
-		1	KMW AM-X-CD-17-65-00T-RET (96") - Panel			
-		1	Powerwave P65-17-XLH-RR - Panel			
-		6	Powerwave 21401 TMA			
-		6	Powerwave LGP21903 Diplexer			
-		6	Ericsson RRUS-11 700MHz			
-		1	Raycap DC6-48-60-18-8F (24x11" 32.8 lbs)			
-		1	Nokia CS72188.01 LMU			
13		152.5	6			
14	1		Raycap DC2 48 60 18 8F			
15	145.0	3	RFS APXVTM14-C-I20 - Panel	Platform w/ Handrails and Reinforcement Kits [SitePro PRK-1245L + PRK-SFS-H-L + V-Brace Kit]	(4) 1-1/4" Fiber	T-Mobile Sprint
16		3	Commscope NNVV-65B-R4 - Panel			
17		3	ALU 1900 Mhz- RRUs			
18		6	ALU 800 Mhz- RRUs			
19		3	ALU TD-RRH8x20-25- RRUs			
20	135.0	3	JMA Wireless MX08FRO665-21 Panel - Panel	Low Profile Platform w/ Handrail [Commscope MC-PK8-DSH]	(1) 1.6" Hybrid	Dish Wireless
21		3	Fujitsu TA08025-B605 RRU			
22		3	Fujitsu TA08025-B604 RRU			
23		1	Raycap RDIDC-9181-PF-48 OVP			
24	126	1	Lucent KS-24019-GPS	Low Profile Platform + [(3) JMA 91900314-02 (15) VZWSMART-MSK1 (1) VZWSMART-PLK7 (1) VZWSMART-PLK5 (3) L3x3x1/4 (3) P2 1/2 STD (6) HSS 3x2 1/2x1/4]	(11) 1 5/8" (2) 1 5/8" Fiber (1) 1/2"	Verizon
25	125.0	6	JMA Wireless MX06FRO660-03 - Panel			
26		3	Samsung MT6407-77A - Panel			
27		3	Samsung RF4439d-25A			
28		3	Samsung RF4440d-13A			
29		6	Antel LPA-80080-4CF-EDIN-0 - Panel			
30		2	RFS DB-T1-6Z-8AB-0Z			



Proposed Loading:

Information pertaining to proposed antennas and transmission lines were based upon the Application #: 221986, v4 from AT&T and is listed in Table 4.

Table 4 Proposed Appurtenances

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
7	155.0	4	Cci OPA65R-BU8DA - Panel	Low Profile Platform w/ Handrails + Sector Frame Stabilizer [Site Pro PRK-SFS + Site Pro PRK-1245]	(12) 1 5/8" (1) 1/2" (1) 3" Flex Conduit Housing: (2) 3/4" DC Power (1) 7/16" Fiber	AT&T
8		2	Cci OPA65R-BU4DA - Panel			
9		3	Ericsson 4449 B5/B12			
10		3	Ericsson 8843 B2/B66A			
11		1	Raycap DC6-48-60-18-8F			
12		1	Nokia CS72188.01 LMU*			

* Omni elevation not currently determined, but included at carrier elevation for consideration

Analysis Results

Tower

The results of the structural analysis are shown below in table 5. Additional information for the tower analysis is provided within the Appendix.

Table 5 Tower Analysis Summary

	Pole shafts	Anchor Bolts	Base Plate
Max. Usage:	84.0%	71.8%	51.3%
Pass/Fail	Pass	Pass	Pass

Foundation

The results of the foundation analysis are shown below in table 6. Additional information for the foundation analysis is provided within the Appendix.

Table 6 Foundation Analysis Summary

Structural Component	Max Usage (%)	Analysis Result
Foundation	80.0%	Pass

Conclusions

Based on the analysis results, the existing tower and foundation were found to be **sufficient** to safely support the equipment listed in this analysis. No modification to the tower and foundation is needed at this time.

Installation Requirements

This analysis was performed under the assumption that the carrier will place the proposed equipment and feed lines at the installation height listed in Table 4 and in accordance with the coax layout shown. TMAs and RRUs are to be installed on existing mounts behind tenant's antennas unless otherwise noted. No equipment is to be installed directly in the climbing path. All equipment is to be installed per mount manufacturer specifications. In case site conditions do not allow for the required installation parameters to be met the carrier must notify SBA Communications Corporation engineers for approval of an alternative placement.

Assumptions and Limitations

Assumptions

This analysis was completed based on the following assumptions:

- Tower and foundation were built in accordance to manufacturer specifications.
- Tower and foundation has been properly maintained in accordance with the manufacturer's specifications
- All existing structural members were assumed to be in good condition with no physical damage or deterioration associated with corrosion
- Welds and bolts are assumed able to carry their intended original design loads.
- The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Table 3 and 4.
- This analysis may be affected if any assumptions are not valid or have been made in error. SBA should be notified to determine the effect on the structural integrity of the tower.

Limitations

The computer generated analysis performed by the tower software is limited to theoretical capacities of the towers structural members and does not account for any missing or damaged members or connections. The tower and foundation are assumed to have been properly designed, fabricated, installed and maintained, barring any conflicting findings from the most recent inspection.

SBA Communications Corporation has used its due diligence to verify the information provided to perform this analysis. It is unreasonable to perform a more detailed inspection of a tower and its components. This report is not a condition assessment of the tower or foundation.

Appendix

Usage Diagram - Max Ratio 84.04% at 0.0ft

Structure: CT00594-S
Site Name: Plainfield North
Height: 178.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-H
Exposure: B
Gh: 1.1

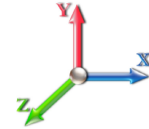
6/13/2023



Page: 1

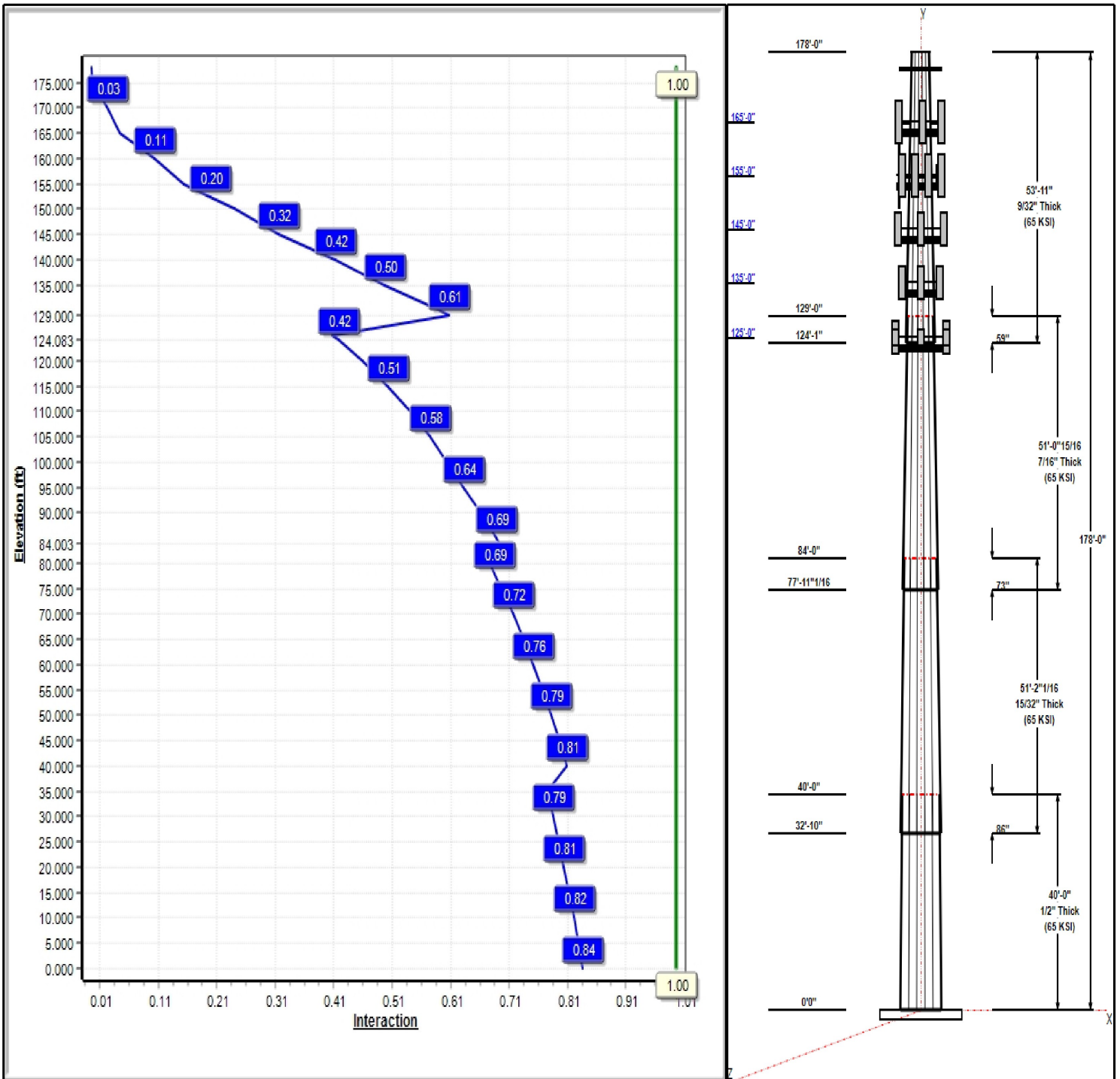
Dead Load Factor: 1.20
Wind Load Factor: 1.00

Load Case : 1.2D + 1.0W 123 mph Wind



Iterations: 25

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Structure: CT00594-S

Type: Tapered
Site Name: Plainfield North
Height: 178.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 12 Sided
Taper: 0.22997

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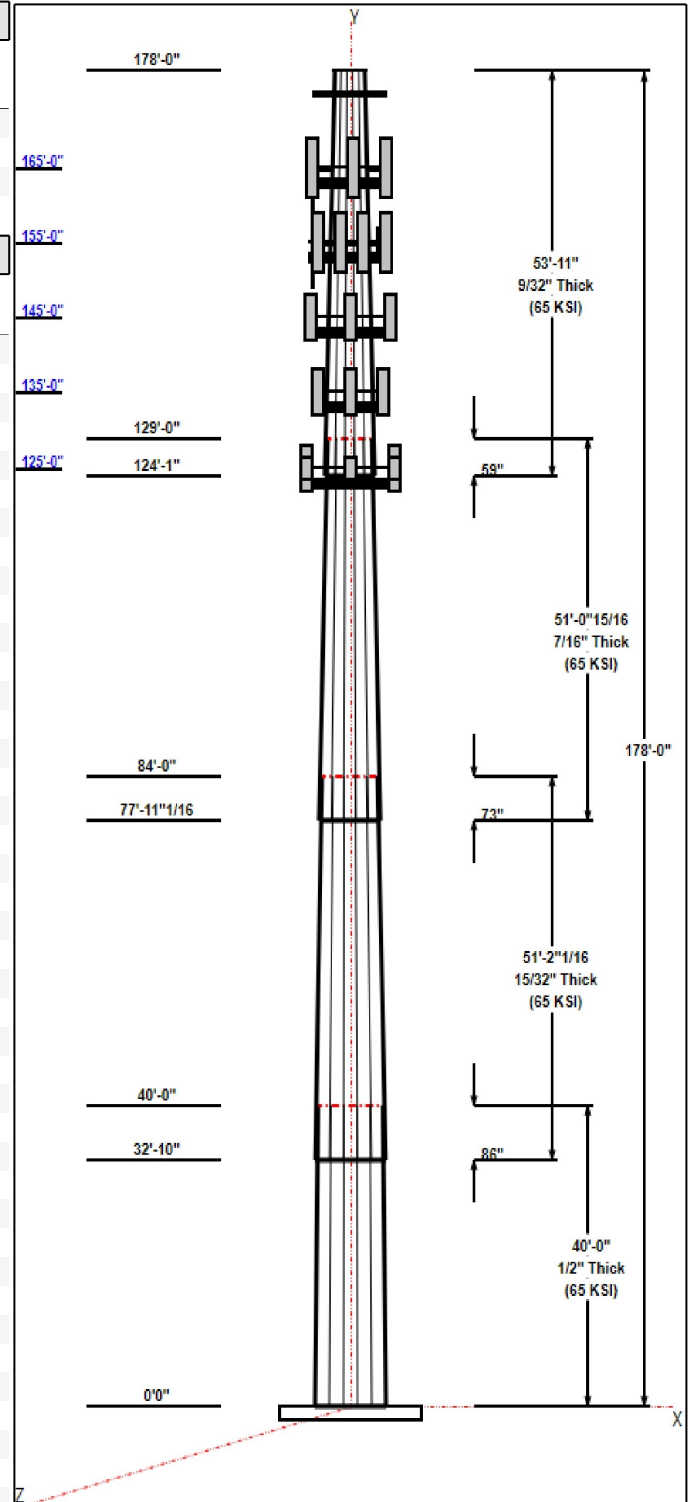


Shaft Properties

Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	40.00	49.05	58.25	0.500		0.22997	65
2	51.17	39.87	51.64	0.469	Slip	0.22997	65
3	51.08	30.40	42.14	0.438	Slip	0.22997	65
4	53.92	19.69	32.09	0.281	Slip	0.22997	65

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
175.00	175.00	1	Abandoned Mount	
175.00	175.00	9	Exposed Mount Pipes	
165.00	165.00	3	Kathrein 782 11056	T-Mobile
165.00	165.00	3	Reinf. Kit (SitePro1	T-Mobile
165.00	165.00	3	Ericsson AIR6419 B41	T-Mobile
165.00	165.00	3	Ericsson 4460 B25 + B66	T-Mobile
165.00	165.00	1	Platform w/ Hand Rails	T-Mobile
165.00	165.00	3	RFS	T-Mobile
165.00	165.00	6	Ericsson KRY 112 489/2	T-Mobile
165.00	165.00	3	Ericsson 4449 B71 + B85	T-Mobile
165.00	165.00	1	(3) SFS-H-L (V-Braces)	T-Mobile
155.00	155.00	1	Platform w/ Hand Rails	AT&T
155.00	155.00	1	(3) Stabilizer Kit (12' FW)	AT&T
155.00	155.00	3	(3) 12.5' - 2" Horizontal	AT&T
155.00	155.00	1	PRK-1245 (kicker kit)	AT&T
155.00	155.00	4	Cci OPA65R-BU8DA	AT&T
155.00	155.00	2	Cci OPA65R-BU4DA	AT&T
155.00	155.00	3	Ericsson 4449 B5/B12	AT&T
155.00	155.00	3	Ericsson 8843 B2/B66A	AT&T
155.00	155.00	1	Raycap DC6-48-60-18-8F	AT&T
155.00	155.00	1	Nokia CS72188.01 LMU	AT&T
155.00	155.00	12	Exposed Mount Pipes	AT&T
152.50	152.50	1	Raycap DC2-48-60-18-8F	---
152.50	152.50	1	Ring Mount (Part No	---
152.50	152.50	6	Ericsson RRUS11 RRUs	---
145.00	145.00	1	Platform w/ Hand Rails	Sprint/T-Mobile
145.00	145.00	3	APXVTM14-C-I20	Sprint/T-Mobile
145.00	145.00	3	NNVV-65B-R4	Sprint/T-Mobile
145.00	145.00	1	(3) SFS-H-L (V-Braces)	Sprint/T-Mobile
145.00	145.00	1	PRK-1245 (kicker kit)	Sprint/T-Mobile
145.00	145.00	3	ALU 1900 Mhz- RRUs	Sprint/T-Mobile
145.00	145.00	6	ALU 800 Mhz- RRUs	Sprint/T-Mobile
145.00	145.00	3	ALU TD-RRH8x20-25-	Sprint/T-Mobile
145.00	145.00	12	Exposed Mount Pipes	Sprint/T-Mobile
135.00	135.00	3	JMA Wireless	Dish Wireless
135.00	135.00	1	Platform w/ Handrails	Dish Wireless
135.00	135.00	3	Fujitsu TA08025-B605	Dish Wireless
135.00	135.00	3	Fujitsu TA08025-B604	Dish Wireless
135.00	135.00	1	Raycap	Dish Wireless
125.00	126.00	1	Lucent KS-24019-GPS	Verizon
125.00	125.00	1	Low Profile Platform	Verizon
125.00	125.00	6	JMA Wireless	Verizon
125.00	125.00	3	Samsung MT6407-77A	Verizon
125.00	125.00	3	Samsung RF4439d-25A	Verizon
125.00	125.00	3	Samsung RF4440d-13A	Verizon



Structure: CT00594-S

Type: Tapered	Base Shape: 12 Sided	6/13/2023
Site Name: Plainfield North	Taper: 0.22997	
Height: 178.00 (ft)		
Base Elev: 0.00 (ft)		Page: 3



125.00	125.00	1	Handrail Kit (P2 1/2 STD)	Verizon
125.00	125.00	1	VZWSMART	Verizon
125.00	125.00	1	VZWSMART	Verizon
125.00	125.00	6	Antel	Verizon
125.00	125.00	2	RFS DB-T1-6Z-8AB-0Z	Verizon

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	165.00	Inside	1.9" Fiber	T-Mobile
0.00	165.00	Outside	Safety Cable	
0.00	165.00	Outside	Step bolts (ladder)	
3.00	165.00	Inside	1 5/8" Coax	T-Mobile
3.00	155.00	Inside	1 5/8" Coax	AT&T
3.00	155.00	Inside	1/2" Coax	AT&T
3.00	155.00	Inside	3" Flex Conduit	AT&T
3.00	155.00	Inside	3/4" DC Power	AT&T
3.00	155.00	Inside	7/16" Fiber	AT&T
3.00	145.00	Inside	1-1/4" Fiber	Sprint Nextel
3.00	135.00	Inside	1.6" Hybrid	Dish Wireless
3.00	125.00	Outside	1 5/8" Coax	Verizon
3.00	125.00	Outside	1 5/8" Fiber	Verizon
3.00	125.00	Outside	1/2" Coax	Verizon

Anchor Bolts

Qty	Specifications	Grade (ksi)	Arrangement
24	2.25" 18J	75.0	Radial

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
3.0000	72.8	60.0	Polygon

Reactions

Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.0W 123 mph Wind	5947.9	47.0	73.7
0.9D + 1.0W 123 mph Wind	5855.1	46.9	55.3
1.2D + 1.0Di + 1.0Wi 50 mph Wind	1388.1	10.6	98.5
1.2D + 1.0Ev + 1.0Eh	124.2	0.8	76.3
0.9D + 1.0Ev + 1.0Eh	122.4	0.8	57.8
1.0D + 1.0W 60 mph Wind	1255.9	10.0	61.5

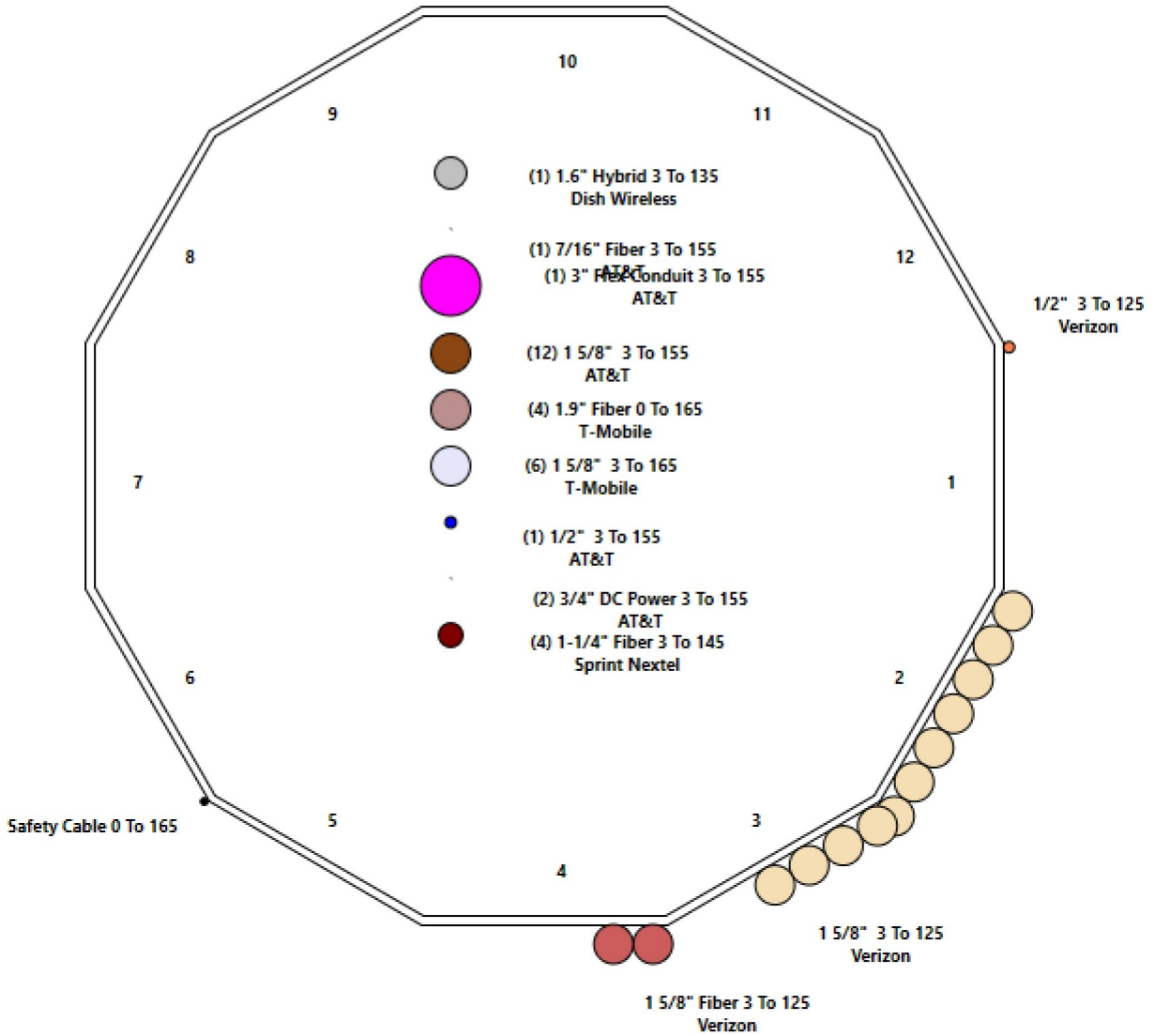
Structure: CT00594-S - Coax Line Placement

Type: Monopole
 Site Name: Plainfield North
 Height: 178.00 (ft)

6/13/2023



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Shaft Properties

Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	12	40.000	0.5000	65		0.00	11,647
2	12	51.170	0.4688	65	Slip	86.00	11,901
3	12	51.080	0.4375	65	Slip	73.00	8,774
4	12	53.917	0.2813	65	Slip	59.00	4,255
Total Shaft Weight:							36,577

Bottom

Top

Sec. No.	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Taper
1	58.25	0.00	92.98	39579.27	29.07	116.50	49.05	40.00	78.17	23518.5	24.14	98.10	0.229972
2	51.64	32.83	77.23	25809.44	27.37	110.16	39.87	84.00	59.47	11783.7	20.65	85.05	0.229972
3	42.14	77.92	58.75	13043.76	23.67	96.33	30.40	129.00	42.20	4834.88	16.47	69.48	0.229972
4	32.09	124.0	28.81	3720.03	28.43	114.10	19.69	178.00	17.58	845.14	16.62	70.01	0.229972

Load Summary

Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice			Ice			Hor. Ecc. (ft)	Vert Ecc (ft)
				Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor		
1	175.00	Abandoned Mount	1	1122.00	28.50	1.00	2076.50	45.337	1.00	0.00	0.00
2	175.00	Exposed Mount Pipes	9	30.00	1.90	1.00	51.27	2.574	1.00	0.00	0.00
3	165.00	Kathrein 782 11056	3	1.80	0.13	0.78	3.47	0.327	0.78	0.00	0.00
4	165.00	Reinf. Kit (SitePro1 PRK-1245)	3	95.00	3.50	0.75	223.42	8.880	0.75	0.00	0.00
5	165.00	Ericsson AIR6419 B41	3	66.10	3.80	0.76	130.85	4.336	0.76	0.00	0.00
6	165.00	Ericsson 4460 B25 + B66	3	109.00	2.85	0.67	157.40	3.304	0.67	0.00	0.00
7	165.00	Platform w/ Hand Rails	1	2000.00	40.00	1.00	3409.54	54.095	1.00	0.00	0.00
8	165.00	RFS APXVAALL24-43-U-NA20	3	122.80	20.24	0.70	399.00	21.503	0.70	0.00	0.00
9	165.00	Ericsson KRY 112 489/2	6	15.40	0.65	0.67	27.26	1.062	0.67	0.00	0.00
10	165.00	Ericsson 4449 B71 + B85	3	71.00	1.97	0.67	106.93	2.338	0.67	0.00	0.00
11	165.00	(3) SFS-H-L (V-Braces)	1	230.00	6.70	1.00	446.13	11.422	1.00	0.00	0.00
12	155.00	Platform w/ Hand Rails	1	1122.00	28.50	1.00	1907.83	38.480	1.00	0.00	0.00
13	155.00	(3) Stabilizer Kit (12' FW)	1	180.00	6.10	1.00	331.28	10.372	1.00	0.00	0.00
14	155.00	(3) 12.5' - 2" Horizontal Pipe	3	137.25	5.94	1.00	226.97	10.928	1.00	0.00	0.00
15	155.00	PRK-1245 (kicker kit)	1	464.91	9.50	1.00	681.99	16.154	1.00	0.00	0.00
16	155.00	Cci OPA65R-BU8DA	4	76.50	11.47	0.86	252.45	12.584	0.87	0.00	0.00
17	155.00	Cci OPA65R-BU4DA	2	52.50	8.44	0.71	186.56	9.248	0.72	0.00	0.00
18	155.00	Ericsson 4449 B5/B12	3	71.00	1.97	0.86	437.32	2.346	0.87	0.00	0.00
19	155.00	Ericsson 8843 B2/B66A	3	72.00	1.73	0.86	104.11	2.081	0.87	0.00	0.00
20	155.00	Raycap DC6-48-60-18-8F	1	32.80	2.20	1.00	80.02	2.620	1.00	0.00	0.00
21	155.00	Nokia CS72188.01 LMU	1	0.31	0.17	1.00	0.57	0.269	1.00	0.00	0.00
22	155.00	Exposed Mount Pipes	12	30.00	1.53	1.00	51.01	2.066	1.00	0.00	0.00
23	152.50	Raycap DC2-48-60-18-8F	1	32.80	1.47	1.00	74.08	1.937	1.00	0.00	0.00
24	152.50	Ring Mount (Part No LWRM)	1	150.00	5.00	1.00	233.91	7.331	1.00	0.00	0.00
25	152.50	Ericsson RRUS11 RRUs	6	51.00	3.26	0.67	101.92	4.116	0.67	0.00	0.00
26	145.00	Platform w/ Hand Rails	1	1500.00	28.50	1.00	2543.59	38.414	1.00	0.00	0.00
27	145.00	APXVTM14-C-I20	3	56.20	6.34	0.77	155.65	7.064	0.77	0.00	0.00
28	145.00	NNVV-65B-R4	3	77.40	12.27	0.74	267.13	13.238	0.74	0.00	0.00
29	145.00	(3) SFS-H-L (V-Braces)	1	230.00	6.70	1.00	443.36	11.361	1.00	0.00	0.00
30	145.00	PRK-1245 (kicker kit)	1	464.91	9.50	1.00	680.54	16.109	1.00	0.00	0.00
31	145.00	ALU 1900 Mhz- RRUs	3	60.00	2.77	0.67	115.44	3.613	0.67	0.00	0.00
32	145.00	ALU 800 Mhz- RRUs	6	53.00	2.49	0.67	102.14	3.250	0.67	0.00	0.00
33	145.00	ALU TD-RRH8x20-25- RRUs	3	70.00	4.05	0.67	138.36	4.576	0.67	0.00	0.00
34	145.00	Exposed Mount Pipes	12	30.00	1.57	1.00	55.05	2.480	1.00	0.00	0.00
35	135.00	JMA Wireless MX08FRO665-21	3	64.50	12.49	0.74	256.38	13.456	0.74	0.00	0.00
36	135.00	Platform w/ Handrails [MC-PK8-DSH]	1	1727.00	37.59	1.00	2840.43	68.749	1.00	0.00	0.00
37	135.00	Fujitsu TA08025-B605	3	75.00	1.96	0.67	109.50	2.330	0.67	0.00	0.00
38	135.00	Fujitsu TA08025-B604	3	63.90	1.96	0.67	97.30	2.330	0.67	0.00	0.00
39	135.00	Raycap RDIDC-9181-PF-48	1	21.85	2.01	1.00	56.90	2.385	1.00	0.00	0.00
40	125.00	Lucent KS-24019-GPS	1	4.00	1.00	1.00	11.68	1.466	1.00	0.00	1.00
41	125.00	Low Profile Platform w/Mods	1	1200.00	25.00	1.00	1885.47	38.709	1.00	0.00	0.00
42	125.00	JMA Wireless MX06FRO660-03	6	60.00	9.87	0.87	226.87	10.754	0.87	0.00	0.00
43	125.00	Samsung MT6407-77A	3	87.10	4.69	0.70	159.78	5.303	0.70	0.00	0.00
44	125.00	Samsung RF4439d-25A	3	74.70	1.46	0.67	107.51	1.782	0.67	0.00	0.00
45	125.00	Samsung RF4440d-13A	3	70.33	1.46	0.67	101.22	1.782	0.67	0.00	0.00
46	125.00	Handrail Kit (P2 1/2 STD)	1	261.72	6.75	1.00	465.04	11.069	1.00	0.00	0.00
47	125.00	VZWSMART VZWSMART-PLK5	1	464.91	9.50	1.00	677.37	16.012	1.00	0.00	0.00
48	125.00	VZWSMART	1	150.60	2.50	1.00	288.24	4.214	1.00	0.00	0.00
49	125.00	Antel LPA-80080-4CF-EDIN-0	6	12.00	2.61	0.74	87.69	3.198	0.74	0.00	0.00
50	125.00	RFS DB-T1-6Z-8AB-OZ	2	44.00	4.10	1.00	203.65	4.625	1.00	0.00	0.00

Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice			Ice			Hor. Ecc. (ft)	Vert Ecc (ft)
				Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor		
Totals:			148	18,332.45			35,827.19				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	165.00	(4) 1.9" Fiber	0.00	Inside
0.00	165.00	(1) Safety Cable	0.38	Outside
0.00	165.00	(1) Step bolts (ladder)	0.63	Outside
3.00	165.00	(6) 1 5/8" Coax	0.00	Inside
3.00	155.00	(12) 1 5/8" Coax	0.00	Inside
3.00	155.00	(1) 1/2" Coax	0.00	Inside
3.00	155.00	(1) 3" Flex Conduit	0.00	Inside
3.00	155.00	(2) 3/4" DC Power	0.00	Inside
3.00	155.00	(1) 7/16" Fiber	0.00	Inside
3.00	145.00	(4) 1-1/4" Fiber	0.00	Inside
3.00	135.00	(1) 1.6" Hybrid	0.00	Inside
3.00	125.00	(11) 1 5/8" Coax	3.96	Outside
3.00	125.00	(2) 1 5/8" Fiber	0.00	Outside
3.00	125.00	(1) 1/2" Coax	0.50	Outside

Shaft Section Properties

Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Increment Length: 5 (ft)

Elev (ft)	Description	Thick (in)	Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fpy (ksi)	S (in^3)	Weight (lb)
0.00		0.5000	58.250	92.978	39579.3	29.07	116.50	73.0	1312.	0.0
5.00		0.5000	57.100	91.126	37261.8	28.46	114.20	73.7	1260.	1566.2
10.00		0.5000	55.950	89.275	35036.7	27.84	111.90	74.4	1209.	1534.7
15.00		0.5000	54.800	87.424	32901.9	27.22	109.60	75.0	1159.	1503.2
20.00		0.5000	53.651	85.572	30855.7	26.61	107.30	75.7	1111.	1471.7
25.00		0.5000	52.501	83.721	28896.1	25.99	105.00	76.4	1063.	1440.2
30.00		0.5000	51.351	81.870	27021.3	25.38	102.70	77.0	1016.	1408.7
32.83	Bot - Section 2	0.5000	50.699	80.821	25995.8	25.03	101.40	77.4	990.5	784.3
35.00		0.5000	50.201	80.019	25229.4	24.76	100.40	77.7	970.9	1159.5
40.00	Top - Section 1	0.4688	49.989	74.744	23394.9	26.43	106.64	0.0	0.0	2632.1
45.00		0.4688	48.839	73.008	21802.8	25.77	104.19	76.6	862.4	1256.9
50.00		0.4688	47.689	71.273	20284.5	25.12	101.74	77.3	821.7	1227.4
55.00		0.4688	46.539	69.537	18838.5	24.46	99.28	78.0	782.0	1197.9
60.00		0.4688	45.389	67.802	17462.8	23.80	96.83	78.8	743.3	1168.3
65.00		0.4688	44.239	66.066	16155.9	23.14	94.38	79.5	705.5	1138.8
70.00		0.4688	43.089	64.331	14915.8	22.49	91.92	80.2	668.7	1109.3
75.00		0.4688	41.940	62.595	13740.8	21.83	89.47	80.9	632.9	1079.8
77.92	Bot - Section 3	0.4688	41.268	61.582	13084.1	21.45	88.04	81.3	612.5	616.9
80.00		0.4688	40.790	60.860	12629.2	21.17	87.02	81.6	598.1	846.8
84.00	Top - Section 2	0.4375	40.744	56.782	11774.7	22.81	93.13	0.0	0.0	1601.9
85.00		0.4375	40.515	56.459	11574.9	22.67	92.61	80.0	551.9	192.0
90.00		0.4375	39.365	54.839	10606.9	21.97	89.98	80.8	520.5	946.8
95.00		0.4375	38.215	53.219	9694.5	21.26	87.35	81.5	490.1	919.2
100.00		0.4375	37.065	51.599	8835.9	20.56	84.72	81.9	460.5	891.7
105.00		0.4375	35.915	49.980	8029.6	19.85	82.09	81.9	431.9	864.1
110.00		0.4375	34.766	48.360	7273.9	19.15	79.46	81.9	404.2	836.6
115.00		0.4375	33.616	46.740	6567.2	18.44	76.84	81.9	377.4	809.0
120.00		0.4375	32.466	45.120	5907.8	17.74	74.21	81.9	351.5	781.4
124.08	Bot - Section 4	0.4375	31.527	43.797	5403.2	17.17	72.06	81.9	331.1	617.7
125.00		0.4375	31.316	43.500	5294.1	17.04	71.58	81.9	326.6	225.7
129.00	Top - Section 3	0.2813	30.959	27.782	3337.3	27.35	110.08	0.0	0.0	967.1
130.00		0.2813	30.729	27.574	3262.8	27.13	109.26	75.1	205.1	94.2
135.00		0.2813	29.579	26.533	2906.9	26.04	105.17	76.3	189.9	460.3
140.00		0.2813	28.429	25.491	2577.9	24.94	101.08	77.5	175.2	442.6
145.00		0.2813	27.279	24.450	2274.7	23.85	96.99	78.7	161.1	424.8
150.00		0.2813	26.129	23.409	1996.2	22.75	92.90	79.9	147.6	407.1
152.50		0.2813	25.554	22.888	1866.0	22.20	90.86	80.5	141.1	196.9
155.00		0.2813	24.979	22.367	1741.5	21.65	88.82	81.1	134.7	192.5
160.00		0.2813	23.829	21.326	1509.4	20.56	84.73	81.9	122.4	371.7
165.00		0.2813	22.680	20.285	1298.9	19.46	80.64	81.9	110.6	354.0
170.00		0.2813	21.530	19.243	1109.0	18.37	76.55	81.9	99.5	336.3
175.00		0.2813	20.380	18.202	938.5	17.27	72.46	81.9	89.0	318.5
178.00		0.2813	19.690	17.577	845.1	16.62	70.01	81.9	82.9	182.6

36577.3

Wind Loading - Shaft

Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
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Load Case: 1.2D + 1.0W 123 mph Wind

Iterations 25

Dead Load Factor 1.20

Wind Load Factor 1.00



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	25.472	28.02	514.31	0.950	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	25.472	28.02	504.16	0.950	0.000	5.00	24.879	23.64	662.2	0.0	1879.4
10.00		1.00	0.70	25.472	28.02	494.00	0.950	0.000	5.00	24.383	23.16	649.0	0.0	1841.6
15.00		1.00	0.70	25.472	28.02	483.85	0.950	0.000	5.00	23.887	22.69	635.8	0.0	1803.8
20.00		1.00	0.70	25.472	28.02	473.70	0.950	0.000	5.00	23.391	22.22	622.6	0.0	1766.0
25.00		1.00	0.70	25.472	28.02	463.55	0.950	0.000	5.00	22.895	21.75	609.4	0.0	1728.2
30.00		1.00	0.70	25.494	28.04	453.58	0.955*	0.000	5.00	22.399	21.39	599.9	0.0	1690.4
32.83	Bot - Section 2	1.00	0.72	26.160	28.78	453.64	0.960*	0.000	2.83	12.473	11.98	344.6	0.0	941.1
35.00		1.00	0.73	26.642	29.31	453.30	0.963*	0.000	2.17	9.606	9.25	271.2	0.0	1391.5
40.00	Top - Section 1	1.00	0.76	27.678	30.45	451.45	0.968*	0.000	5.00	21.811	21.12	643.1	0.0	3158.6
45.00		1.00	0.79	28.625	31.49	457.12	0.970*	0.000	5.00	21.315	20.67	650.9	0.0	1508.3
50.00		1.00	0.81	29.500	32.45	453.13	0.977*	0.000	5.00	20.819	20.34	660.0	0.0	1472.9
55.00		1.00	0.83	30.314	33.35	448.26	0.985*	0.000	5.00	20.323	20.01	667.3	0.0	1437.4
60.00		1.00	0.85	31.077	34.19	442.66	0.993*	0.000	5.00	19.827	19.68	672.8	0.0	1402.0
65.00		1.00	0.87	31.796	34.98	436.40	1.001*	0.000	5.00	19.331	19.35	676.8	0.0	1366.6
70.00		1.00	0.89	32.477	35.72	429.59	1.010*	0.000	5.00	18.835	19.02	679.5	0.0	1331.1
75.00		1.00	0.91	33.123	36.44	422.26	1.019*	0.000	5.00	18.339	18.69	681.0	0.0	1295.7
77.92	Bot - Section 3	1.00	0.92	33.487	36.84	417.78	1.027*	0.000	2.92	10.481	10.76	396.5	0.0	740.3
80.00		1.00	0.93	33.740	37.11	414.49	1.032*	0.000	2.08	7.520	7.76	288.0	0.0	1016.1
84.00	Top - Section 2	1.00	0.94	34.214	37.64	407.97	1.038*	0.000	4.00	14.231	14.78	556.1	0.0	1922.3
85.00		1.00	0.94	34.329	37.76	415.28	1.036*	0.000	1.00	3.494	3.62	136.6	0.0	230.4
90.00		1.00	0.96	34.894	38.38	406.80	1.042*	0.000	5.00	17.229	17.95	689.1	0.0	1136.2
95.00		1.00	0.97	35.438	38.98	397.98	1.053*	0.000	5.00	16.733	17.62	687.0	0.0	1103.1
100.00		1.00	0.99	35.961	39.56	388.84	1.065*	0.000	5.00	16.237	17.29	684.1	0.0	1070.0
105.00		1.00	1.00	36.466	40.11	379.42	1.078*	0.000	5.00	15.741	16.96	680.4	0.0	1037.0
110.00		1.00	1.02	36.953	40.65	369.72	1.091*	0.000	5.00	15.245	16.63	676.1	0.0	1003.9
115.00		1.00	1.03	37.426	41.17	359.77	1.105*	0.000	5.00	14.749	16.30	671.2	0.0	970.8
120.00		1.00	1.04	37.884	41.67	349.58	1.121*	0.000	5.00	14.253	15.97	665.7	0.0	937.7
124.08	Bot - Section 4	1.00	1.05	38.248	42.07	341.10	1.136*	0.000	4.08	11.272	12.80	538.5	0.0	741.3
125.00	Appurtenance(s)	1.00	1.05	38.328	42.16	339.17	1.144*	0.000	0.92	2.529	2.89	122.0	0.0	270.8
129.00	Top - Section 3	1.00	1.06	38.675	42.54	330.69	0.950	0.000	4.00	10.842	10.30	438.2	0.0	1160.5
130.00		1.00	1.07	38.760	42.64	334.68	0.950	0.000	1.00	2.661	2.53	107.8	0.0	113.0
135.00	Appurtenance(s)	1.00	1.08	39.180	43.10	323.90	0.950	0.000	5.00	13.007	12.36	532.6	0.0	552.3
140.00		1.00	1.09	39.589	43.55	312.93	0.950	0.000	5.00	12.511	11.89	517.6	0.0	531.1
145.00	Appurtenance(s)	1.00	1.10	39.988	43.99	301.78	0.950	0.000	5.00	12.015	11.41	502.1	0.0	509.8
150.00		1.00	1.11	40.378	44.42	290.46	0.950	0.000	5.00	11.519	10.94	486.0	0.0	488.6
152.50	Appurtenance(s)	1.00	1.11	40.569	44.63	284.74	0.950	0.000	2.50	5.574	5.29	236.3	0.0	236.3
155.00	Appurtenance(s)	1.00	1.12	40.758	44.83	278.98	0.950	0.000	2.50	5.450	5.18	232.1	0.0	231.0
160.00		1.00	1.13	41.129	45.24	267.35	0.950	0.000	5.00	10.527	10.00	452.5	0.0	446.0
165.00	Appurtenance(s)	1.00	1.14	41.492	45.64	255.57	0.950	0.000	5.00	10.031	9.53	434.9	0.0	424.8
170.00		1.00	1.15	41.848	46.03	243.65	0.950	0.000	5.00	9.535	9.06	417.0	0.0	403.5
175.00	Appurtenance(s)	1.00	1.16	42.196	46.42	231.60	0.950	0.000	5.00	9.039	8.59	398.6	0.0	382.3
178.00		1.00	1.17	42.401	46.64	224.30	0.950	0.000	3.00	5.185	4.93	229.8	0.0	219.1
Totals:									178.00			21,503.0		43,892.8

* Cf Adjusted by Linear Load Ra Effect

Discrete Appurtenance Forces

Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.2D + 1.0W 123 mph Wind	Iterations 25
Dead Load Factor 1.20	
Wind Load Factor 1.00	

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	175.00	Exposed Mount Pipes	9	42.196	46.415	0.90	0.90	15.39	324.00	0.000	0.000	714.33	0.00	0.00
2	175.00	Abandoned Mount	1	42.196	46.415	1.00	1.00	28.50	1346.40	0.000	0.000	1322.84	0.00	0.00
3	165.00	Kathrein 782 11056	3	41.492	45.642	0.58	0.75	0.23	6.48	0.000	0.000	10.41	0.00	0.00
4	165.00	Reinf. Kit (SitePro1)	3	41.492	45.642	0.75	1.00	7.88	342.00	0.000	0.000	359.43	0.00	0.00
5	165.00	Ericsson AIR6419 B41	3	41.492	45.642	0.57	0.75	6.50	237.96	0.000	0.000	296.58	0.00	0.00
6	165.00	Ericsson 4460 B25 + B66	3	41.492	45.642	0.50	0.75	4.30	392.40	0.000	0.000	196.09	0.00	0.00
7	165.00	Platform w/ Hand Rails	1	41.492	45.642	1.00	1.00	40.00	2400.00	0.000	0.000	1825.66	0.00	0.00
8	165.00	RFS	3	41.492	45.642	0.52	0.75	31.88	442.08	0.000	0.000	1454.96	0.00	0.00
9	165.00	Ericsson KRY 112 489/2	6	41.492	45.642	0.50	0.75	1.96	110.88	0.000	0.000	89.45	0.00	0.00
10	165.00	Ericsson 4449 B71 + B85	3	41.492	45.642	0.50	0.75	2.97	255.60	0.000	0.000	135.55	0.00	0.00
11	165.00	(3) SFS-H-L (V-Braces)	1	41.492	45.642	1.00	1.00	6.70	276.00	0.000	0.000	305.80	0.00	0.00
12	155.00	PRK-1245 (kicker kit)	1	40.758	44.833	1.00	1.00	9.50	557.89	0.000	0.000	425.92	0.00	0.00
13	155.00	(3) 12.5' - 2" Horizontal	3	40.758	44.833	1.00	1.00	17.81	494.10	0.000	0.000	798.60	0.00	0.00
14	155.00	Cci OPA65R-BU8DA	4	40.758	44.833	0.65	0.75	29.59	367.20	0.000	0.000	1326.74	0.00	0.00
15	155.00	(3) Stabilizer Kit (12' FW)	1	40.758	44.833	1.00	1.00	6.10	216.00	0.000	0.000	273.48	0.00	0.00
16	155.00	Platform w/ Hand Rails	1	40.758	44.833	1.00	1.00	28.50	1346.40	0.000	0.000	1277.75	0.00	0.00
17	155.00	Nokia CS72188.01 LMU	1	40.758	44.833	1.00	1.00	0.17	0.37	0.000	0.000	7.62	0.00	0.00
18	155.00	Cci OPA65R-BU4DA	2	40.758	44.833	0.53	0.75	8.99	126.00	0.000	0.000	402.99	0.00	0.00
19	155.00	Ericsson 4449 B5/B12	3	40.758	44.833	0.65	0.75	3.81	255.60	0.000	0.000	170.90	0.00	0.00
20	155.00	Ericsson 8843 B2/B66A	3	40.758	44.833	0.65	0.75	3.35	259.20	0.000	0.000	150.08	0.00	0.00
21	155.00	Raycap DC6-48-60-18-8F	1	40.758	44.833	0.75	0.75	1.65	39.36	0.000	0.000	73.98	0.00	0.00
22	155.00	Exposed Mount Pipes	12	40.758	44.833	0.75	0.75	13.77	432.00	0.000	0.000	617.36	0.00	0.00
23	152.50	Ericsson RRUS11 RRUs	6	40.569	44.626	0.60	0.90	11.79	367.20	0.000	0.000	526.35	0.00	0.00
24	152.50	Ring Mount (Part No	1	40.569	44.626	1.00	1.00	5.00	180.00	0.000	0.000	223.13	0.00	0.00
25	152.50	Raycap DC2-48-60-18-8F	1	40.569	44.626	0.90	0.90	1.32	39.36	0.000	0.000	59.04	0.00	0.00
26	145.00	Exposed Mount Pipes	12	39.988	43.987	0.75	0.75	14.13	432.00	0.000	0.000	621.54	0.00	0.00
27	145.00	ALU 800 Mhz- RRUs	6	39.988	43.987	0.50	0.75	7.51	381.60	0.000	0.000	330.23	0.00	0.00
28	145.00	ALU 1900 Mhz- RRUs	3	39.988	43.987	0.50	0.75	4.18	216.00	0.000	0.000	183.68	0.00	0.00
29	145.00	PRK-1245 (kicker kit)	1	39.988	43.987	1.00	1.00	9.50	557.89	0.000	0.000	417.88	0.00	0.00
30	145.00	(3) SFS-H-L (V-Braces)	1	39.988	43.987	1.00	1.00	6.70	276.00	0.000	0.000	294.71	0.00	0.00
31	145.00	NNVV-65B-R4	3	39.988	43.987	0.55	0.75	20.43	278.64	0.000	0.000	898.64	0.00	0.00
32	145.00	APXVTM14-C-I20	3	39.988	43.987	0.58	0.75	10.98	202.32	0.000	0.000	483.16	0.00	0.00
33	145.00	Platform w/ Hand Rails	1	39.988	43.987	1.00	1.00	28.50	1800.00	0.000	0.000	1253.64	0.00	0.00
34	145.00	ALU TD-RRH8x20-25-	3	39.988	43.987	0.50	0.75	6.11	252.00	0.000	0.000	268.56	0.00	0.00
35	135.00	Fujitsu TA08025-B605	3	39.180	43.098	0.50	0.75	2.95	270.00	0.000	0.000	127.34	0.00	0.00
36	135.00	JMA Wireless	3	39.180	43.098	0.55	0.75	20.80	232.20	0.000	0.000	896.27	0.00	0.00
37	135.00	Platform w/ Handrails	1	39.180	43.098	1.00	1.00	37.59	2072.40	0.000	0.000	1620.06	0.00	0.00
38	135.00	Raycap	1	39.180	43.098	1.00	1.00	2.01	26.22	0.000	0.000	86.63	0.00	0.00
39	135.00	Fujitsu TA08025-B604	3	39.180	43.098	0.50	0.75	2.95	230.04	0.000	0.000	127.34	0.00	0.00
40	125.00	Samsung RF4439d-25A	3	38.328	42.161	0.50	0.75	2.20	268.92	0.000	0.000	92.79	0.00	0.00
41	125.00	Lucent KS-24019-GPS	1	38.415	42.257	1.00	1.00	1.00	4.80	0.000	1.000	42.26	0.00	42.26
42	125.00	Low Profile Platform	1	38.328	42.161	1.00	1.00	25.00	1440.00	0.000	0.000	1054.02	0.00	0.00
43	125.00	JMA Wireless	6	38.328	42.161	0.65	0.75	38.64	432.00	0.000	0.000	1629.14	0.00	0.00
44	125.00	Samsung MT6407-77A	3	38.328	42.161	0.52	0.75	7.39	313.56	0.000	0.000	311.43	0.00	0.00
45	125.00	Handrail Kit (P2 1/2 STD)	1	38.328	42.161	1.00	1.00	6.75	314.06	0.000	0.000	284.59	0.00	0.00
46	125.00	Samsung RF4440d-13A	3	38.328	42.161	0.50	0.75	2.20	253.19	0.000	0.000	92.79	0.00	0.00
47	125.00	VZWSMART	1	38.328	42.161	1.00	1.00	9.50	557.89	0.000	0.000	400.53	0.00	0.00

Discrete Appurtenance Forces

Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 11
Struct Class: II		



48	125.00	VZWSMART	1	38.328	42.161	1.00	1.00	2.50	180.72	0.000	0.000	105.40	0.00	0.00
49	125.00	Antel	6	38.328	42.161	0.56	0.75	8.73	86.40	0.000	0.000	367.92	0.00	0.00
50	125.00	RFS DB-T1-6Z-8AB-OZ	2	38.328	42.161	0.80	0.80	6.56	105.60	0.000	0.000	276.58	0.00	0.00

Totals:	21,998.94	25,312.15
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Total Applied Force Summary

Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 12



Load Case: 1.2D + 1.0W 123 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 25

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		662.24	2009.64	0.00	0.00
10.00		649.04	2115.79	0.00	0.00
15.00		635.84	2077.99	0.00	0.00
20.00		622.63	2040.20	0.00	0.00
25.00		609.43	2002.40	0.00	0.00
30.00		599.87	1964.60	0.00	0.00
32.83		344.59	1096.50	0.00	0.00
35.00		271.22	1510.27	0.00	0.00
40.00		643.10	3432.75	0.00	0.00
45.00		650.86	1782.50	0.00	0.00
50.00		660.05	1747.07	0.00	0.00
55.00		667.27	1711.63	0.00	0.00
60.00		672.79	1676.20	0.00	0.00
65.00		676.82	1640.76	0.00	0.00
70.00		679.52	1605.33	0.00	0.00
75.00		681.03	1569.89	0.00	0.00
77.92		396.46	900.43	0.00	0.00
80.00		288.01	1130.18	0.00	0.00
84.00		556.15	2141.86	0.00	0.00
85.00		136.62	285.09	0.00	0.00
90.00		689.09	1410.36	0.00	0.00
95.00		686.96	1377.29	0.00	0.00
100.00		684.06	1344.22	0.00	0.00
105.00		680.43	1311.15	0.00	0.00
110.00		676.13	1278.07	0.00	0.00
115.00		671.19	1245.00	0.00	0.00
120.00		665.65	1211.93	0.00	0.00
124.08		538.55	965.21	0.00	0.00
125.00	(28) attachments	4779.48	4278.26	0.00	42.26
129.00		438.19	1313.61	0.00	0.00
130.00		107.78	151.30	0.00	0.00
135.00	(11) attachments	3390.20	3574.59	0.00	0.00
140.00		517.60	716.47	0.00	0.00
145.00	(33) attachments	5254.13	5091.66	0.00	0.00
150.00		486.05	651.05	0.00	0.00
152.50	(8) attachments	1044.80	904.11	0.00	0.00
155.00	(32) attachments	5757.53	4406.36	0.00	0.00
160.00		452.46	517.75	0.00	0.00
165.00	(26) attachments	5108.87	4959.89	0.00	0.00
170.00		416.98	403.51	0.00	0.00
175.00	(10) attachments	2435.75	2052.65	0.00	0.00
178.00		229.76	219.15	0.00	0.00
Totals:		46,815.18	73,824.67	0.00	42.26

Linear Appurtenance Segment Forces (Factored)

Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 13

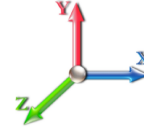


Load Case: 1.2D + 1.0W 123 mph Wind

Iterations 25

Dead Load Factor 1.20

Wind Load Factor 1.00



Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.047	0.000	25.472	0.00	1.64
5.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.047	0.000	25.472	0.00	6.24
5.00	1 5/8" Coax	Yes	2.00	0.000	3.96	0.66	0.00	0.047	0.000	25.472	0.00	27.46
5.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.047	0.000	25.472	0.00	5.28
5.00	1/2" Coax	Yes	2.00	0.000	0.50	0.08	0.00	0.047	0.000	25.472	0.00	0.38
10.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.093	0.000	25.472	0.00	1.64
10.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.093	0.000	25.472	0.00	6.24
10.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.093	0.000	25.472	0.00	68.64
10.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.093	0.000	25.472	0.00	13.20
10.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.093	0.000	25.472	0.00	0.96
15.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.095	0.000	25.472	0.00	1.64
15.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.095	0.000	25.472	0.00	6.24
15.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.095	0.000	25.472	0.00	68.64
15.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.095	0.000	25.472	0.00	13.20
15.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.095	0.000	25.472	0.00	0.96
20.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.097	0.000	25.472	0.00	1.64
20.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.097	0.000	25.472	0.00	6.24
20.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.097	0.000	25.472	0.00	68.64
20.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.097	0.000	25.472	0.00	13.20
20.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.097	0.000	25.472	0.00	0.96
25.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.100	0.000	25.472	0.00	1.64
25.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.100	0.000	25.472	0.00	6.24
25.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.100	0.000	25.472	0.00	68.64
25.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.100	0.000	25.472	0.00	13.20
25.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.100	0.000	25.472	0.00	0.96
30.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.102	1.005	25.494	0.00	1.64
30.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.102	1.005	25.494	0.00	6.24
30.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.102	1.005	25.494	0.00	68.64
30.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.102	1.005	25.494	0.00	13.20
30.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.102	1.005	25.494	0.00	0.96
32.83	Safety Cable	Yes	2.83	0.000	0.38	0.09	0.00	0.104	1.011	26.160	0.00	0.93
32.83	Step bolts (ladder)	Yes	2.83	0.000	0.63	0.15	0.00	0.104	1.011	26.160	0.00	3.54
32.83	1 5/8" Coax	Yes	2.83	0.000	3.96	0.93	0.00	0.104	1.011	26.160	0.00	38.90
32.83	1 5/8" Fiber	Yes	2.83	0.000	0.00	0.00	0.00	0.104	1.011	26.160	0.00	7.48
32.83	1/2" Coax	Yes	2.83	0.000	0.50	0.12	0.00	0.104	1.011	26.160	0.00	0.54
35.00	Safety Cable	Yes	2.17	0.000	0.38	0.07	0.00	0.105	1.014	26.642	0.00	0.71
35.00	Step bolts (ladder)	Yes	2.17	0.000	0.63	0.11	0.00	0.105	1.014	26.642	0.00	2.70
35.00	1 5/8" Coax	Yes	2.17	0.000	3.96	0.72	0.00	0.105	1.014	26.642	0.00	29.74
35.00	1 5/8" Fiber	Yes	2.17	0.000	0.00	0.00	0.00	0.105	1.014	26.642	0.00	5.72
35.00	1/2" Coax	Yes	2.17	0.000	0.50	0.09	0.00	0.105	1.014	26.642	0.00	0.42
40.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.106	1.019	27.678	0.00	1.64
40.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.106	1.019	27.678	0.00	6.24
40.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.106	1.019	27.678	0.00	68.64
40.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.106	1.019	27.678	0.00	13.20
40.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.106	1.019	27.678	0.00	0.96
45.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.107	1.021	28.625	0.00	1.64
45.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.107	1.021	28.625	0.00	6.24

Linear Appurtenance Segment Forces (Factored)

Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.2D + 1.0W 123 mph Wind	Iterations 25
Dead Load Factor 1.20	
Wind Load Factor 1.00	

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
45.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.107	1.021	28.625	0.00	68.64
45.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.107	1.021	28.625	0.00	13.20
45.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.107	1.021	28.625	0.00	0.96
50.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.109	1.028	29.500	0.00	1.64
50.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.109	1.028	29.500	0.00	6.24
50.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.109	1.028	29.500	0.00	68.64
50.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.109	1.028	29.500	0.00	13.20
50.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.109	1.028	29.500	0.00	0.96
55.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.112	1.036	30.314	0.00	1.64
55.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.112	1.036	30.314	0.00	6.24
55.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.112	1.036	30.314	0.00	68.64
55.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.112	1.036	30.314	0.00	13.20
55.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.112	1.036	30.314	0.00	0.96
60.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.115	1.045	31.077	0.00	1.64
60.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.115	1.045	31.077	0.00	6.24
60.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.115	1.045	31.077	0.00	68.64
60.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.115	1.045	31.077	0.00	13.20
60.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.115	1.045	31.077	0.00	0.96
65.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.118	1.054	31.796	0.00	1.64
65.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.118	1.054	31.796	0.00	6.24
65.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.118	1.054	31.796	0.00	68.64
65.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.118	1.054	31.796	0.00	13.20
65.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.118	1.054	31.796	0.00	0.96
70.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.121	1.063	32.477	0.00	1.64
70.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.121	1.063	32.477	0.00	6.24
70.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.121	1.063	32.477	0.00	68.64
70.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.121	1.063	32.477	0.00	13.20
70.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.121	1.063	32.477	0.00	0.96
75.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.124	1.073	33.123	0.00	1.64
75.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.124	1.073	33.123	0.00	6.24
75.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.124	1.073	33.123	0.00	68.64
75.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.124	1.073	33.123	0.00	13.20
75.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.124	1.073	33.123	0.00	0.96
77.92	Safety Cable	Yes	2.92	0.000	0.38	0.09	0.00	0.127	1.081	33.487	0.00	0.96
77.92	Step bolts (ladder)	Yes	2.92	0.000	0.63	0.15	0.00	0.127	1.081	33.487	0.00	3.64
77.92	1 5/8" Coax	Yes	2.92	0.000	3.96	0.96	0.00	0.127	1.081	33.487	0.00	40.09
77.92	1 5/8" Fiber	Yes	2.92	0.000	0.00	0.00	0.00	0.127	1.081	33.487	0.00	7.71
77.92	1/2" Coax	Yes	2.92	0.000	0.50	0.12	0.00	0.127	1.081	33.487	0.00	0.56
80.00	Safety Cable	Yes	2.08	0.000	0.38	0.07	0.00	0.129	1.086	33.740	0.00	0.68
80.00	Step bolts (ladder)	Yes	2.08	0.000	0.63	0.11	0.00	0.129	1.086	33.740	0.00	2.60
80.00	1 5/8" Coax	Yes	2.08	0.000	3.96	0.69	0.00	0.129	1.086	33.740	0.00	28.55
80.00	1 5/8" Fiber	Yes	2.08	0.000	0.00	0.00	0.00	0.129	1.086	33.740	0.00	5.49
80.00	1/2" Coax	Yes	2.08	0.000	0.50	0.09	0.00	0.129	1.086	33.740	0.00	0.40
84.00	Safety Cable	Yes	4.00	0.000	0.38	0.13	0.00	0.131	1.093	34.214	0.00	1.31
84.00	Step bolts (ladder)	Yes	4.00	0.000	0.63	0.21	0.00	0.131	1.093	34.214	0.00	5.00
84.00	1 5/8" Coax	Yes	4.00	0.000	3.96	1.32	0.00	0.131	1.093	34.214	0.00	54.96
84.00	1 5/8" Fiber	Yes	4.00	0.000	0.00	0.00	0.00	0.131	1.093	34.214	0.00	10.57

Linear Appurtenance Segment Forces (Factored)

Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

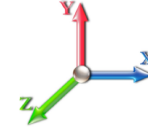


Load Case: 1.2D + 1.0W 123 mph Wind

Iterations 25

Dead Load Factor 1.20

Wind Load Factor 1.00



Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
84.00	1/2" Coax	Yes	4.00	0.000	0.50	0.17	0.00	0.131	1.093	34.214	0.00	0.77
85.00	Safety Cable	Yes	1.00	0.000	0.38	0.03	0.00	0.130	1.090	34.329	0.00	0.33
85.00	Step bolts (ladder)	Yes	1.00	0.000	0.63	0.05	0.00	0.130	1.090	34.329	0.00	1.24
85.00	1 5/8" Coax	Yes	1.00	0.000	3.96	0.33	0.00	0.130	1.090	34.329	0.00	13.68
85.00	1 5/8" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.130	1.090	34.329	0.00	2.63
85.00	1/2" Coax	Yes	1.00	0.000	0.50	0.04	0.00	0.130	1.090	34.329	0.00	0.19
90.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.132	1.097	34.894	0.00	1.64
90.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.132	1.097	34.894	0.00	6.24
90.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.132	1.097	34.894	0.00	68.64
90.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.132	1.097	34.894	0.00	13.20
90.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.132	1.097	34.894	0.00	0.96
95.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.136	1.109	35.438	0.00	1.64
95.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.136	1.109	35.438	0.00	6.24
95.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.136	1.109	35.438	0.00	68.64
95.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.136	1.109	35.438	0.00	13.20
95.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.136	1.109	35.438	0.00	0.96
100.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.140	1.121	35.961	0.00	1.64
100.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.140	1.121	35.961	0.00	6.24
100.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.140	1.121	35.961	0.00	68.64
100.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.140	1.121	35.961	0.00	13.20
100.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.140	1.121	35.961	0.00	0.96
105.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.145	1.134	36.466	0.00	1.64
105.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.145	1.134	36.466	0.00	6.24
105.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.145	1.134	36.466	0.00	68.64
105.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.145	1.134	36.466	0.00	13.20
105.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.145	1.134	36.466	0.00	0.96
110.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.150	1.149	36.953	0.00	1.64
110.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.150	1.149	36.953	0.00	6.24
110.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.150	1.149	36.953	0.00	68.64
110.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.150	1.149	36.953	0.00	13.20
110.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.150	1.149	36.953	0.00	0.96
115.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.155	1.164	37.426	0.00	1.64
115.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.155	1.164	37.426	0.00	6.24
115.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.155	1.164	37.426	0.00	68.64
115.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.155	1.164	37.426	0.00	13.20
115.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.155	1.164	37.426	0.00	0.96
120.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.160	1.180	37.884	0.00	1.64
120.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.160	1.180	37.884	0.00	6.24
120.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.160	1.180	37.884	0.00	68.64
120.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.160	1.180	37.884	0.00	13.20
120.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.160	1.180	37.884	0.00	0.96
124.08	Safety Cable	Yes	4.08	0.000	0.38	0.13	0.00	0.165	1.195	38.248	0.00	1.34
124.08	Step bolts (ladder)	Yes	4.08	0.000	0.63	0.21	0.00	0.165	1.195	38.248	0.00	5.10
124.08	1 5/8" Coax	Yes	4.08	0.000	3.96	1.35	0.00	0.165	1.195	38.248	0.00	56.06
124.08	1 5/8" Fiber	Yes	4.08	0.000	0.00	0.00	0.00	0.165	1.195	38.248	0.00	10.78
124.08	1/2" Coax	Yes	4.08	0.000	0.50	0.17	0.00	0.165	1.195	38.248	0.00	0.78
125.00	Safety Cable	Yes	0.92	0.000	0.38	0.03	0.00	0.168	1.204	38.328	0.00	0.30

Linear Appurtenance Segment Forces (Factored)

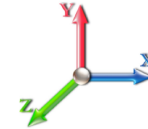
Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 16



Load Case: 1.2D + 1.0W 123 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 25

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
125.00	Step bolts (ladder)	Yes	0.92	0.000	0.63	0.05	0.00	0.168	1.204	38.328	0.00	1.14
125.00	1 5/8" Coax	Yes	0.92	0.000	3.96	0.30	0.00	0.168	1.204	38.328	0.00	12.58
125.00	1 5/8" Fiber	Yes	0.92	0.000	0.00	0.00	0.00	0.168	1.204	38.328	0.00	2.42
125.00	1/2" Coax	Yes	0.92	0.000	0.50	0.04	0.00	0.168	1.204	38.328	0.00	0.18
129.00	Safety Cable	Yes	4.00	0.000	0.38	0.13	0.00	0.032	0.000	38.675	0.00	1.31
129.00	Step bolts (ladder)	Yes	4.00	0.000	0.63	0.21	0.00	0.032	0.000	38.675	0.00	4.99
130.00	Safety Cable	Yes	1.00	0.000	0.38	0.03	0.00	0.032	0.000	38.760	0.00	0.33
130.00	Step bolts (ladder)	Yes	1.00	0.000	0.63	0.05	0.00	0.032	0.000	38.760	0.00	1.25
135.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.032	0.000	39.180	0.00	1.64
135.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.032	0.000	39.180	0.00	6.24
140.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.034	0.000	39.589	0.00	1.64
140.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.034	0.000	39.589	0.00	6.24
145.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.035	0.000	39.988	0.00	1.64
145.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.035	0.000	39.988	0.00	6.24
150.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.037	0.000	40.378	0.00	1.64
150.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.037	0.000	40.378	0.00	6.24
152.50	Safety Cable	Yes	2.50	0.000	0.38	0.08	0.00	0.038	0.000	40.569	0.00	0.82
152.50	Step bolts (ladder)	Yes	2.50	0.000	0.63	0.13	0.00	0.038	0.000	40.569	0.00	3.12
155.00	Safety Cable	Yes	2.50	0.000	0.38	0.08	0.00	0.039	0.000	40.758	0.00	0.82
155.00	Step bolts (ladder)	Yes	2.50	0.000	0.63	0.13	0.00	0.039	0.000	40.758	0.00	3.12
160.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.040	0.000	41.129	0.00	1.64
160.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.040	0.000	41.129	0.00	6.24
165.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.042	0.000	41.492	0.00	1.64
165.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.042	0.000	41.492	0.00	6.24
Totals:											0.0	2,280.3

Calculated Forces

Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 17

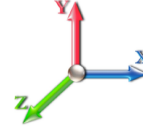


Load Case: 1.2D + 1.0W 123 mph Wind

Iterations 25

Dead Load Factor 1.20

Wind Load Factor 1.00



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-73.74	-46.95	0.00	-5947.9	0.00	5947.91	6109.19	1631.76	7852.82	7187.37	0.00	0.000	0.000	0.840
5.00	-71.56	-46.55	0.00	-5713.1	0.00	5713.16	6042.67	1599.27	7543.22	6966.35	0.11	-0.210	0.000	0.833
10.00	-69.27	-46.15	0.00	-5480.4	0.00	5480.41	5973.91	1566.78	7239.84	6745.94	0.45	-0.423	0.000	0.825
15.00	-67.02	-45.75	0.00	-5249.6	0.00	5249.65	5902.91	1534.29	6942.70	6526.30	1.01	-0.641	0.000	0.817
20.00	-64.82	-45.36	0.00	-5020.8	0.00	5020.89	5829.67	1501.80	6651.77	6307.60	1.80	-0.863	0.000	0.808
25.00	-62.64	-44.97	0.00	-4794.1	0.00	4794.10	5754.19	1469.31	6367.08	6089.98	2.82	-1.089	0.000	0.799
30.00	-60.55	-44.52	0.00	-4569.2	0.00	4569.28	5676.47	1436.82	6088.61	5873.62	4.09	-1.320	0.000	0.790
32.83	-59.37	-44.27	0.00	-4443.1	0.00	4443.15	5631.44	1418.41	5933.57	5751.63	4.91	-1.454	0.000	0.784
35.00	-57.74	-44.13	0.00	-4347.2	0.00	4347.23	5596.51	1404.33	5816.37	5658.66	5.60	-1.558	0.000	0.780
40.00	-54.14	-43.62	0.00	-4126.5	0.00	4126.58	5104.93	1311.76	5413.18	5145.84	7.36	-1.797	0.000	0.814
45.00	-52.20	-43.13	0.00	-3908.5	0.00	3908.50	5033.50	1281.30	5164.70	4954.92	9.37	-2.040	0.000	0.800
50.00	-50.29	-42.63	0.00	-3692.8	0.00	3692.85	4959.83	1250.84	4922.07	4765.22	11.64	-2.288	0.000	0.786
55.00	-48.42	-42.10	0.00	-3479.7	0.00	3479.73	4883.92	1220.38	4685.27	4576.90	14.17	-2.540	0.000	0.771
60.00	-46.60	-41.56	0.00	-3269.2	0.00	3269.23	4805.76	1189.92	4454.32	4390.12	16.97	-2.795	0.000	0.756
65.00	-44.81	-41.00	0.00	-3061.4	0.00	3061.44	4725.37	1159.46	4229.19	4205.04	20.03	-3.052	0.000	0.739
70.00	-43.06	-40.43	0.00	-2856.4	0.00	2856.43	4642.74	1129.00	4009.91	4021.83	23.36	-3.313	0.000	0.721
75.00	-41.39	-39.81	0.00	-2654.2	0.00	2654.27	4557.87	1098.54	3796.46	3840.63	26.97	-3.576	0.000	0.701
77.92	-40.42	-39.45	0.00	-2538.0	0.00	2538.03	4507.27	1080.76	3674.51	3735.80	29.21	-3.733	0.000	0.690
80.00	-39.20	-39.20	0.00	-2455.9	0.00	2455.98	4470.76	1068.08	3588.85	3661.61	30.86	-3.846	0.000	0.681
84.00	-37.01	-38.59	0.00	-2299.0	0.00	2299.04	4079.95	996.52	3347.20	3342.88	34.17	-4.060	0.000	0.698
85.00	-36.63	-38.53	0.00	-2260.5	0.00	2260.58	4064.53	990.86	3309.24	3311.11	35.03	-4.115	0.000	0.693
90.00	-35.10	-37.90	0.00	-2067.9	0.00	2067.92	3985.82	962.43	3122.08	3152.82	39.48	-4.381	0.000	0.666
95.00	-33.61	-37.27	0.00	-1878.4	0.00	1878.41	3904.88	934.00	2940.36	2996.54	44.20	-4.646	0.000	0.637
100.00	-32.16	-36.62	0.00	-1692.0	0.00	1692.08	3803.39	905.57	2764.09	2828.81	49.20	-4.907	0.000	0.608
105.00	-30.75	-35.96	0.00	-1508.9	0.00	1508.99	3683.99	877.14	2593.26	2652.97	54.48	-5.165	0.000	0.579
110.00	-29.39	-35.30	0.00	-1329.1	0.00	1329.18	3564.59	848.71	2427.89	2482.78	60.01	-5.417	0.000	0.545
115.00	-28.07	-34.63	0.00	-1152.6	0.00	1152.69	3445.19	820.28	2267.96	2318.23	65.81	-5.659	0.000	0.507
120.00	-26.81	-33.94	0.00	-979.56	0.00	979.56	3325.79	791.86	2113.49	2159.32	71.85	-5.890	0.000	0.464
124.08	-25.85	-33.35	0.00	-840.98	0.00	840.98	3228.28	768.64	1991.37	2033.73	76.96	-6.069	0.000	0.423
125.00	-22.05	-28.18	0.00	-810.37	0.00	810.37	3206.39	763.43	1964.46	2006.05	78.13	-6.109	0.000	0.412
129.00	-20.74	-27.64	0.00	-697.64	0.00	697.64	1872.41	487.58	1246.47	1169.59	83.31	-6.271	0.000	0.611
130.00	-20.53	-27.57	0.00	-670.00	0.00	670.00	1864.30	483.92	1227.85	1155.72	84.63	-6.311	0.000	0.594
135.00	-17.26	-23.88	0.00	-532.12	0.00	532.12	1822.43	465.65	1136.86	1086.70	91.37	-6.573	0.000	0.502
140.00	-16.52	-23.34	0.00	-412.73	0.00	412.73	1778.31	447.37	1049.37	1018.38	98.36	-6.805	0.000	0.417
145.00	-12.04	-17.55	0.00	-296.02	0.00	296.02	1731.96	429.10	965.39	950.92	105.58	-7.000	0.000	0.320
150.00	-11.42	-17.01	0.00	-208.26	0.00	208.26	1683.36	410.82	884.91	884.47	112.99	-7.158	0.000	0.244
152.50	-10.64	-15.87	0.00	-165.74	0.00	165.74	1658.23	401.68	845.98	851.67	116.74	-7.224	0.000	0.203
155.00	-6.98	-9.61	0.00	-126.06	0.00	126.06	1632.53	392.54	807.93	819.19	120.53	-7.280	0.000	0.159
160.00	-6.52	-9.11	0.00	-78.00	0.00	78.00	1571.93	374.27	734.45	751.65	128.18	-7.363	0.000	0.109
165.00	-2.25	-3.40	0.00	-32.47	0.00	32.47	1495.17	355.99	664.47	679.62	135.91	-7.415	0.000	0.049
170.00	-1.91	-2.94	0.00	-15.46	0.00	15.46	1418.42	337.72	598.00	611.22	143.67	-7.442	0.000	0.027
175.00	-0.19	-0.26	0.00	-0.77	0.00	0.77	1341.66	319.44	535.03	546.45	151.44	-7.452	0.000	0.002
178.00	0.00	-0.23	0.00	0.00	0.00	0.00	1295.60	308.48	498.93	509.33	156.11	-7.452	0.000	0.000

Wind Loading - Shaft

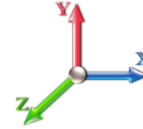
Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 18



Load Case: 0.9D + 1.0W 123 mph Wind

Iterations 25

Dead Load Factor 0.90
Wind Load Factor 1.00



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	25.472	28.02	514.31	0.950	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	25.472	28.02	504.16	0.950	0.000	5.00	24.879	23.64	662.2	0.0	1409.5
10.00		1.00	0.70	25.472	28.02	494.00	0.950	0.000	5.00	24.383	23.16	649.0	0.0	1381.2
15.00		1.00	0.70	25.472	28.02	483.85	0.950	0.000	5.00	23.887	22.69	635.8	0.0	1352.8
20.00		1.00	0.70	25.472	28.02	473.70	0.950	0.000	5.00	23.391	22.22	622.6	0.0	1324.5
25.00		1.00	0.70	25.472	28.02	463.55	0.950	0.000	5.00	22.895	21.75	609.4	0.0	1296.2
30.00		1.00	0.70	25.494	28.04	453.58	0.955*	0.000	5.00	22.399	21.39	599.9	0.0	1267.8
32.83	Bot - Section 2	1.00	0.72	26.160	28.78	453.64	0.960*	0.000	2.83	12.473	11.98	344.6	0.0	705.8
35.00		1.00	0.73	26.642	29.31	453.30	0.963*	0.000	2.17	9.606	9.25	271.2	0.0	1043.6
40.00	Top - Section 1	1.00	0.76	27.678	30.45	451.45	0.968*	0.000	5.00	21.811	21.12	643.1	0.0	2368.9
45.00		1.00	0.79	28.625	31.49	457.12	0.970*	0.000	5.00	21.315	20.67	650.9	0.0	1131.2
50.00		1.00	0.81	29.500	32.45	453.13	0.977*	0.000	5.00	20.819	20.34	660.0	0.0	1104.7
55.00		1.00	0.83	30.314	33.35	448.26	0.985*	0.000	5.00	20.323	20.01	667.3	0.0	1078.1
60.00		1.00	0.85	31.077	34.19	442.66	0.993*	0.000	5.00	19.827	19.68	672.8	0.0	1051.5
65.00		1.00	0.87	31.796	34.98	436.40	1.001*	0.000	5.00	19.331	19.35	676.8	0.0	1024.9
70.00		1.00	0.89	32.477	35.72	429.59	1.010*	0.000	5.00	18.835	19.02	679.5	0.0	998.4
75.00		1.00	0.91	33.123	36.44	422.26	1.019*	0.000	5.00	18.339	18.69	681.0	0.0	971.8
77.92	Bot - Section 3	1.00	0.92	33.487	36.84	417.78	1.027*	0.000	2.92	10.481	10.76	396.5	0.0	555.2
80.00		1.00	0.93	33.740	37.11	414.49	1.032*	0.000	2.08	7.520	7.76	288.0	0.0	762.1
84.00	Top - Section 2	1.00	0.94	34.214	37.64	407.97	1.038*	0.000	4.00	14.231	14.78	556.1	0.0	1441.7
85.00		1.00	0.94	34.329	37.76	415.28	1.036*	0.000	1.00	3.494	3.62	136.6	0.0	172.8
90.00		1.00	0.96	34.894	38.38	406.80	1.042*	0.000	5.00	17.229	17.95	689.1	0.0	852.1
95.00		1.00	0.97	35.438	38.98	397.98	1.053*	0.000	5.00	16.733	17.62	687.0	0.0	827.3
100.00		1.00	0.99	35.961	39.56	388.84	1.065*	0.000	5.00	16.237	17.29	684.1	0.0	802.5
105.00		1.00	1.00	36.466	40.11	379.42	1.078*	0.000	5.00	15.741	16.96	680.4	0.0	777.7
110.00		1.00	1.02	36.953	40.65	369.72	1.091*	0.000	5.00	15.245	16.63	676.1	0.0	752.9
115.00		1.00	1.03	37.426	41.17	359.77	1.105*	0.000	5.00	14.749	16.30	671.2	0.0	728.1
120.00		1.00	1.04	37.884	41.67	349.58	1.121*	0.000	5.00	14.253	15.97	665.7	0.0	703.3
124.08	Bot - Section 4	1.00	1.05	38.248	42.07	341.10	1.136*	0.000	4.08	11.272	12.80	538.5	0.0	556.0
125.00	Appurtenance(s)	1.00	1.05	38.328	42.16	339.17	1.144*	0.000	0.92	2.529	2.89	122.0	0.0	203.1
129.00	Top - Section 3	1.00	1.06	38.675	42.54	330.69	0.950	0.000	4.00	10.842	10.30	438.2	0.0	870.4
130.00		1.00	1.07	38.760	42.64	334.68	0.950	0.000	1.00	2.661	2.53	107.8	0.0	84.8
135.00	Appurtenance(s)	1.00	1.08	39.180	43.10	323.90	0.950	0.000	5.00	13.007	12.36	532.6	0.0	414.3
140.00		1.00	1.09	39.589	43.55	312.93	0.950	0.000	5.00	12.511	11.89	517.6	0.0	398.3
145.00	Appurtenance(s)	1.00	1.10	39.988	43.99	301.78	0.950	0.000	5.00	12.015	11.41	502.1	0.0	382.4
150.00		1.00	1.11	40.378	44.42	290.46	0.950	0.000	5.00	11.519	10.94	486.0	0.0	366.4
152.50	Appurtenance(s)	1.00	1.11	40.569	44.63	284.74	0.950	0.000	2.50	5.574	5.29	236.3	0.0	177.2
155.00	Appurtenance(s)	1.00	1.12	40.758	44.83	278.98	0.950	0.000	2.50	5.450	5.18	232.1	0.0	173.2
160.00		1.00	1.13	41.129	45.24	267.35	0.950	0.000	5.00	10.527	10.00	452.5	0.0	334.5
165.00	Appurtenance(s)	1.00	1.14	41.492	45.64	255.57	0.950	0.000	5.00	10.031	9.53	434.9	0.0	318.6
170.00		1.00	1.15	41.848	46.03	243.65	0.950	0.000	5.00	9.535	9.06	417.0	0.0	302.6
175.00	Appurtenance(s)	1.00	1.16	42.196	46.42	231.60	0.950	0.000	5.00	9.039	8.59	398.6	0.0	286.7
178.00		1.00	1.17	42.401	46.64	224.30	0.950	0.000	3.00	5.185	4.93	229.8	0.0	164.4
Totals:									178.00			21,503.0		32,919.6

* Cf Adjusted by Linear Load Ra Effect

Discrete Appurtenance Forces

Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 0.9D + 1.0W 123 mph Wind	Iterations 25
Dead Load Factor 0.90	
Wind Load Factor 1.00	

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	175.00	Exposed Mount Pipes	9	42.196	46.415	0.90	0.90	15.39	243.00	0.000	0.000	714.33	0.00	0.00
2	175.00	Abandoned Mount	1	42.196	46.415	1.00	1.00	28.50	1009.80	0.000	0.000	1322.84	0.00	0.00
3	165.00	Kathrein 782 11056	3	41.492	45.642	0.58	0.75	0.23	4.86	0.000	0.000	10.41	0.00	0.00
4	165.00	Reinf. Kit (SitePro1)	3	41.492	45.642	0.75	1.00	7.88	256.50	0.000	0.000	359.43	0.00	0.00
5	165.00	Ericsson AIR6419 B41	3	41.492	45.642	0.57	0.75	6.50	178.47	0.000	0.000	296.58	0.00	0.00
6	165.00	Ericsson 4460 B25 + B66	3	41.492	45.642	0.50	0.75	4.30	294.30	0.000	0.000	196.09	0.00	0.00
7	165.00	Platform w/ Hand Rails	1	41.492	45.642	1.00	1.00	40.00	1800.00	0.000	0.000	1825.66	0.00	0.00
8	165.00	RFS	3	41.492	45.642	0.52	0.75	31.88	331.56	0.000	0.000	1454.96	0.00	0.00
9	165.00	Ericsson KRY 112 489/2	6	41.492	45.642	0.50	0.75	1.96	83.16	0.000	0.000	89.45	0.00	0.00
10	165.00	Ericsson 4449 B71 + B85	3	41.492	45.642	0.50	0.75	2.97	191.70	0.000	0.000	135.55	0.00	0.00
11	165.00	(3) SFS-H-L (V-Braces)	1	41.492	45.642	1.00	1.00	6.70	207.00	0.000	0.000	305.80	0.00	0.00
12	155.00	PRK-1245 (kicker kit)	1	40.758	44.833	1.00	1.00	9.50	418.42	0.000	0.000	425.92	0.00	0.00
13	155.00	(3) 12.5' - 2" Horizontal	3	40.758	44.833	1.00	1.00	17.81	370.57	0.000	0.000	798.60	0.00	0.00
14	155.00	Cci OPA65R-BU8DA	4	40.758	44.833	0.65	0.75	29.59	275.40	0.000	0.000	1326.74	0.00	0.00
15	155.00	(3) Stabilizer Kit (12' FW)	1	40.758	44.833	1.00	1.00	6.10	162.00	0.000	0.000	273.48	0.00	0.00
16	155.00	Platform w/ Hand Rails	1	40.758	44.833	1.00	1.00	28.50	1009.80	0.000	0.000	1277.75	0.00	0.00
17	155.00	Nokia CS72188.01 LMU	1	40.758	44.833	1.00	1.00	0.17	0.28	0.000	0.000	7.62	0.00	0.00
18	155.00	Cci OPA65R-BU4DA	2	40.758	44.833	0.53	0.75	8.99	94.50	0.000	0.000	402.99	0.00	0.00
19	155.00	Ericsson 4449 B5/B12	3	40.758	44.833	0.65	0.75	3.81	191.70	0.000	0.000	170.90	0.00	0.00
20	155.00	Ericsson 8843 B2/B66A	3	40.758	44.833	0.65	0.75	3.35	194.40	0.000	0.000	150.08	0.00	0.00
21	155.00	Raycap DC6-48-60-18-8F	1	40.758	44.833	0.75	0.75	1.65	29.52	0.000	0.000	73.98	0.00	0.00
22	155.00	Exposed Mount Pipes	12	40.758	44.833	0.75	0.75	13.77	324.00	0.000	0.000	617.36	0.00	0.00
23	152.50	Ericsson RRUS11 RRUs	6	40.569	44.626	0.60	0.90	11.79	275.40	0.000	0.000	526.35	0.00	0.00
24	152.50	Ring Mount (Part No	1	40.569	44.626	1.00	1.00	5.00	135.00	0.000	0.000	223.13	0.00	0.00
25	152.50	Raycap DC2-48-60-18-8F	1	40.569	44.626	0.90	0.90	1.32	29.52	0.000	0.000	59.04	0.00	0.00
26	145.00	Exposed Mount Pipes	12	39.988	43.987	0.75	0.75	14.13	324.00	0.000	0.000	621.54	0.00	0.00
27	145.00	ALU 800 Mhz- RRUs	6	39.988	43.987	0.50	0.75	7.51	286.20	0.000	0.000	330.23	0.00	0.00
28	145.00	ALU 1900 Mhz- RRUs	3	39.988	43.987	0.50	0.75	4.18	162.00	0.000	0.000	183.68	0.00	0.00
29	145.00	PRK-1245 (kicker kit)	1	39.988	43.987	1.00	1.00	9.50	418.42	0.000	0.000	417.88	0.00	0.00
30	145.00	(3) SFS-H-L (V-Braces)	1	39.988	43.987	1.00	1.00	6.70	207.00	0.000	0.000	294.71	0.00	0.00
31	145.00	NNVV-65B-R4	3	39.988	43.987	0.55	0.75	20.43	208.98	0.000	0.000	898.64	0.00	0.00
32	145.00	APXVTM14-C-I20	3	39.988	43.987	0.58	0.75	10.98	151.74	0.000	0.000	483.16	0.00	0.00
33	145.00	Platform w/ Hand Rails	1	39.988	43.987	1.00	1.00	28.50	1350.00	0.000	0.000	1253.64	0.00	0.00
34	145.00	ALU TD-RRH8x20-25-	3	39.988	43.987	0.50	0.75	6.11	189.00	0.000	0.000	268.56	0.00	0.00
35	135.00	Fujitsu TA08025-B605	3	39.180	43.098	0.50	0.75	2.95	202.50	0.000	0.000	127.34	0.00	0.00
36	135.00	JMA Wireless	3	39.180	43.098	0.55	0.75	20.80	174.15	0.000	0.000	896.27	0.00	0.00
37	135.00	Platform w/ Handrails	1	39.180	43.098	1.00	1.00	37.59	1554.30	0.000	0.000	1620.06	0.00	0.00
38	135.00	Raycap	1	39.180	43.098	1.00	1.00	2.01	19.67	0.000	0.000	86.63	0.00	0.00
39	135.00	Fujitsu TA08025-B604	3	39.180	43.098	0.50	0.75	2.95	172.53	0.000	0.000	127.34	0.00	0.00
40	125.00	Samsung RF4439d-25A	3	38.328	42.161	0.50	0.75	2.20	201.69	0.000	0.000	92.79	0.00	0.00
41	125.00	Lucent KS-24019-GPS	1	38.415	42.257	1.00	1.00	1.00	3.60	0.000	1.000	42.26	0.00	42.26
42	125.00	Low Profile Platform	1	38.328	42.161	1.00	1.00	25.00	1080.00	0.000	0.000	1054.02	0.00	0.00
43	125.00	JMA Wireless	6	38.328	42.161	0.65	0.75	38.64	324.00	0.000	0.000	1629.14	0.00	0.00
44	125.00	Samsung MT6407-77A	3	38.328	42.161	0.52	0.75	7.39	235.17	0.000	0.000	311.43	0.00	0.00
45	125.00	Handrail Kit (P2 1/2 STD)	1	38.328	42.161	1.00	1.00	6.75	235.55	0.000	0.000	284.59	0.00	0.00
46	125.00	Samsung RF4440d-13A	3	38.328	42.161	0.50	0.75	2.20	189.89	0.000	0.000	92.79	0.00	0.00
47	125.00	VZWSMART	1	38.328	42.161	1.00	1.00	9.50	418.42	0.000	0.000	400.53	0.00	0.00

Discrete Appurtenance Forces

Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 20
	Struct Class: II	



48	125.00	VZWSMART	1	38.328	42.161	1.00	1.00	2.50	135.54	0.000	0.000	105.40	0.00	0.00
49	125.00	Antel	6	38.328	42.161	0.56	0.75	8.73	64.80	0.000	0.000	367.92	0.00	0.00
50	125.00	RFS DB-T1-6Z-8AB-OZ	2	38.328	42.161	0.80	0.80	6.56	79.20	0.000	0.000	276.58	0.00	0.00

Totals: 16,499.21

25,312.15

Total Applied Force Summary

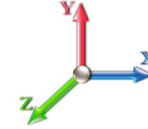
Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 21



Load Case: 0.9D + 1.0W 123 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.00



Iterations 25

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		662.24	1507.23	0.00	0.00
10.00		649.04	1586.84	0.00	0.00
15.00		635.84	1558.49	0.00	0.00
20.00		622.63	1530.15	0.00	0.00
25.00		609.43	1501.80	0.00	0.00
30.00		599.87	1473.45	0.00	0.00
32.83		344.59	822.37	0.00	0.00
35.00		271.22	1132.70	0.00	0.00
40.00		643.10	2574.56	0.00	0.00
45.00		650.86	1336.88	0.00	0.00
50.00		660.05	1310.30	0.00	0.00
55.00		667.27	1283.72	0.00	0.00
60.00		672.79	1257.15	0.00	0.00
65.00		676.82	1230.57	0.00	0.00
70.00		679.52	1204.00	0.00	0.00
75.00		681.03	1177.42	0.00	0.00
77.92		396.46	675.32	0.00	0.00
80.00		288.01	847.63	0.00	0.00
84.00		556.15	1606.39	0.00	0.00
85.00		136.62	213.81	0.00	0.00
90.00		689.09	1057.77	0.00	0.00
95.00		686.96	1032.97	0.00	0.00
100.00		684.06	1008.16	0.00	0.00
105.00		680.43	983.36	0.00	0.00
110.00		676.13	958.56	0.00	0.00
115.00		671.19	933.75	0.00	0.00
120.00		665.65	908.95	0.00	0.00
124.08		538.55	723.91	0.00	0.00
125.00	(28) attachments	4779.48	3208.69	0.00	42.26
129.00		438.19	985.21	0.00	0.00
130.00		107.78	113.47	0.00	0.00
135.00	(11) attachments	3390.20	2680.94	0.00	0.00
140.00		517.60	537.35	0.00	0.00
145.00	(33) attachments	5254.13	3818.75	0.00	0.00
150.00		486.05	488.29	0.00	0.00
152.50	(8) attachments	1044.80	678.09	0.00	0.00
155.00	(32) attachments	5757.53	3304.77	0.00	0.00
160.00		452.46	388.31	0.00	0.00
165.00	(26) attachments	5108.87	3719.92	0.00	0.00
170.00		416.98	302.63	0.00	0.00
175.00	(10) attachments	2435.75	1539.49	0.00	0.00
178.00		229.76	164.36	0.00	0.00
	Totals:	46,815.18	55,368.50	0.00	42.26

Linear Appurtenance Segment Forces (Factored)

Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



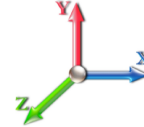
Page: 22

Load Case: 0.9D + 1.0W 123 mph Wind

Iterations 25

Dead Load Factor 0.90

Wind Load Factor 1.00



Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.047	0.000	25.472	0.00	1.23
5.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.047	0.000	25.472	0.00	4.68
5.00	1 5/8" Coax	Yes	2.00	0.000	3.96	0.66	0.00	0.047	0.000	25.472	0.00	20.59
5.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.047	0.000	25.472	0.00	3.96
5.00	1/2" Coax	Yes	2.00	0.000	0.50	0.08	0.00	0.047	0.000	25.472	0.00	0.29
10.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.093	0.000	25.472	0.00	1.23
10.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.093	0.000	25.472	0.00	4.68
10.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.093	0.000	25.472	0.00	51.48
10.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.093	0.000	25.472	0.00	9.90
10.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.093	0.000	25.472	0.00	0.72
15.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.095	0.000	25.472	0.00	1.23
15.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.095	0.000	25.472	0.00	4.68
15.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.095	0.000	25.472	0.00	51.48
15.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.095	0.000	25.472	0.00	9.90
15.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.095	0.000	25.472	0.00	0.72
20.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.097	0.000	25.472	0.00	1.23
20.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.097	0.000	25.472	0.00	4.68
20.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.097	0.000	25.472	0.00	51.48
20.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.097	0.000	25.472	0.00	9.90
20.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.097	0.000	25.472	0.00	0.72
25.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.100	0.000	25.472	0.00	1.23
25.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.100	0.000	25.472	0.00	4.68
25.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.100	0.000	25.472	0.00	51.48
25.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.100	0.000	25.472	0.00	9.90
25.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.100	0.000	25.472	0.00	0.72
30.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.102	1.005	25.494	0.00	1.23
30.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.102	1.005	25.494	0.00	4.68
30.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.102	1.005	25.494	0.00	51.48
30.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.102	1.005	25.494	0.00	9.90
30.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.102	1.005	25.494	0.00	0.72
32.83	Safety Cable	Yes	2.83	0.000	0.38	0.09	0.00	0.104	1.011	26.160	0.00	0.70
32.83	Step bolts (ladder)	Yes	2.83	0.000	0.63	0.15	0.00	0.104	1.011	26.160	0.00	2.65
32.83	1 5/8" Coax	Yes	2.83	0.000	3.96	0.93	0.00	0.104	1.011	26.160	0.00	29.17
32.83	1 5/8" Fiber	Yes	2.83	0.000	0.00	0.00	0.00	0.104	1.011	26.160	0.00	5.61
32.83	1/2" Coax	Yes	2.83	0.000	0.50	0.12	0.00	0.104	1.011	26.160	0.00	0.41
35.00	Safety Cable	Yes	2.17	0.000	0.38	0.07	0.00	0.105	1.014	26.642	0.00	0.53
35.00	Step bolts (ladder)	Yes	2.17	0.000	0.63	0.11	0.00	0.105	1.014	26.642	0.00	2.03
35.00	1 5/8" Coax	Yes	2.17	0.000	3.96	0.72	0.00	0.105	1.014	26.642	0.00	22.31
35.00	1 5/8" Fiber	Yes	2.17	0.000	0.00	0.00	0.00	0.105	1.014	26.642	0.00	4.29
35.00	1/2" Coax	Yes	2.17	0.000	0.50	0.09	0.00	0.105	1.014	26.642	0.00	0.31
40.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.106	1.019	27.678	0.00	1.23
40.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.106	1.019	27.678	0.00	4.68
40.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.106	1.019	27.678	0.00	51.48
40.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.106	1.019	27.678	0.00	9.90
40.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.106	1.019	27.678	0.00	0.72
45.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.107	1.021	28.625	0.00	1.23
45.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.107	1.021	28.625	0.00	4.68

Linear Appurtenance Segment Forces (Factored)

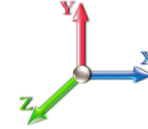
Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 0.9D + 1.0W 123 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.00



Iterations 25

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
45.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.107	1.021	28.625	0.00	51.48
45.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.107	1.021	28.625	0.00	9.90
45.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.107	1.021	28.625	0.00	0.72
50.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.109	1.028	29.500	0.00	1.23
50.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.109	1.028	29.500	0.00	4.68
50.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.109	1.028	29.500	0.00	51.48
50.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.109	1.028	29.500	0.00	9.90
50.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.109	1.028	29.500	0.00	0.72
55.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.112	1.036	30.314	0.00	1.23
55.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.112	1.036	30.314	0.00	4.68
55.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.112	1.036	30.314	0.00	51.48
55.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.112	1.036	30.314	0.00	9.90
55.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.112	1.036	30.314	0.00	0.72
60.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.115	1.045	31.077	0.00	1.23
60.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.115	1.045	31.077	0.00	4.68
60.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.115	1.045	31.077	0.00	51.48
60.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.115	1.045	31.077	0.00	9.90
60.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.115	1.045	31.077	0.00	0.72
65.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.118	1.054	31.796	0.00	1.23
65.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.118	1.054	31.796	0.00	4.68
65.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.118	1.054	31.796	0.00	51.48
65.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.118	1.054	31.796	0.00	9.90
65.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.118	1.054	31.796	0.00	0.72
70.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.121	1.063	32.477	0.00	1.23
70.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.121	1.063	32.477	0.00	4.68
70.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.121	1.063	32.477	0.00	51.48
70.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.121	1.063	32.477	0.00	9.90
70.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.121	1.063	32.477	0.00	0.72
75.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.124	1.073	33.123	0.00	1.23
75.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.124	1.073	33.123	0.00	4.68
75.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.124	1.073	33.123	0.00	51.48
75.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.124	1.073	33.123	0.00	9.90
75.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.124	1.073	33.123	0.00	0.72
77.92	Safety Cable	Yes	2.92	0.000	0.38	0.09	0.00	0.127	1.081	33.487	0.00	0.72
77.92	Step bolts (ladder)	Yes	2.92	0.000	0.63	0.15	0.00	0.127	1.081	33.487	0.00	2.73
77.92	1 5/8" Coax	Yes	2.92	0.000	3.96	0.96	0.00	0.127	1.081	33.487	0.00	30.06
77.92	1 5/8" Fiber	Yes	2.92	0.000	0.00	0.00	0.00	0.127	1.081	33.487	0.00	5.78
77.92	1/2" Coax	Yes	2.92	0.000	0.50	0.12	0.00	0.127	1.081	33.487	0.00	0.42
80.00	Safety Cable	Yes	2.08	0.000	0.38	0.07	0.00	0.129	1.086	33.740	0.00	0.51
80.00	Step bolts (ladder)	Yes	2.08	0.000	0.63	0.11	0.00	0.129	1.086	33.740	0.00	1.95
80.00	1 5/8" Coax	Yes	2.08	0.000	3.96	0.69	0.00	0.129	1.086	33.740	0.00	21.42
80.00	1 5/8" Fiber	Yes	2.08	0.000	0.00	0.00	0.00	0.129	1.086	33.740	0.00	4.12
80.00	1/2" Coax	Yes	2.08	0.000	0.50	0.09	0.00	0.129	1.086	33.740	0.00	0.30
84.00	Safety Cable	Yes	4.00	0.000	0.38	0.13	0.00	0.131	1.093	34.214	0.00	0.98
84.00	Step bolts (ladder)	Yes	4.00	0.000	0.63	0.21	0.00	0.131	1.093	34.214	0.00	3.75
84.00	1 5/8" Coax	Yes	4.00	0.000	3.96	1.32	0.00	0.131	1.093	34.214	0.00	41.22
84.00	1 5/8" Fiber	Yes	4.00	0.000	0.00	0.00	0.00	0.131	1.093	34.214	0.00	7.93

Linear Appurtenance Segment Forces (Factored)

Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 0.9D + 1.0W 123 mph Wind	Iterations 25
Dead Load Factor 0.90	
Wind Load Factor 1.00	

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
84.00	1/2" Coax	Yes	4.00	0.000	0.50	0.17	0.00	0.131	1.093	34.214	0.00	0.58
85.00	Safety Cable	Yes	1.00	0.000	0.38	0.03	0.00	0.130	1.090	34.329	0.00	0.24
85.00	Step bolts (ladder)	Yes	1.00	0.000	0.63	0.05	0.00	0.130	1.090	34.329	0.00	0.93
85.00	1 5/8" Coax	Yes	1.00	0.000	3.96	0.33	0.00	0.130	1.090	34.329	0.00	10.26
85.00	1 5/8" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.130	1.090	34.329	0.00	1.97
85.00	1/2" Coax	Yes	1.00	0.000	0.50	0.04	0.00	0.130	1.090	34.329	0.00	0.14
90.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.132	1.097	34.894	0.00	1.23
90.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.132	1.097	34.894	0.00	4.68
90.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.132	1.097	34.894	0.00	51.48
90.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.132	1.097	34.894	0.00	9.90
90.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.132	1.097	34.894	0.00	0.72
95.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.136	1.109	35.438	0.00	1.23
95.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.136	1.109	35.438	0.00	4.68
95.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.136	1.109	35.438	0.00	51.48
95.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.136	1.109	35.438	0.00	9.90
95.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.136	1.109	35.438	0.00	0.72
100.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.140	1.121	35.961	0.00	1.23
100.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.140	1.121	35.961	0.00	4.68
100.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.140	1.121	35.961	0.00	51.48
100.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.140	1.121	35.961	0.00	9.90
100.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.140	1.121	35.961	0.00	0.72
105.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.145	1.134	36.466	0.00	1.23
105.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.145	1.134	36.466	0.00	4.68
105.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.145	1.134	36.466	0.00	51.48
105.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.145	1.134	36.466	0.00	9.90
105.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.145	1.134	36.466	0.00	0.72
110.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.150	1.149	36.953	0.00	1.23
110.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.150	1.149	36.953	0.00	4.68
110.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.150	1.149	36.953	0.00	51.48
110.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.150	1.149	36.953	0.00	9.90
110.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.150	1.149	36.953	0.00	0.72
115.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.155	1.164	37.426	0.00	1.23
115.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.155	1.164	37.426	0.00	4.68
115.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.155	1.164	37.426	0.00	51.48
115.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.155	1.164	37.426	0.00	9.90
115.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.155	1.164	37.426	0.00	0.72
120.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.160	1.180	37.884	0.00	1.23
120.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.160	1.180	37.884	0.00	4.68
120.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.160	1.180	37.884	0.00	51.48
120.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.160	1.180	37.884	0.00	9.90
120.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.160	1.180	37.884	0.00	0.72
124.08	Safety Cable	Yes	4.08	0.000	0.38	0.13	0.00	0.165	1.195	38.248	0.00	1.00
124.08	Step bolts (ladder)	Yes	4.08	0.000	0.63	0.21	0.00	0.165	1.195	38.248	0.00	3.82
124.08	1 5/8" Coax	Yes	4.08	0.000	3.96	1.35	0.00	0.165	1.195	38.248	0.00	42.04
124.08	1 5/8" Fiber	Yes	4.08	0.000	0.00	0.00	0.00	0.165	1.195	38.248	0.00	8.08
124.08	1/2" Coax	Yes	4.08	0.000	0.50	0.17	0.00	0.165	1.195	38.248	0.00	0.59
125.00	Safety Cable	Yes	0.92	0.000	0.38	0.03	0.00	0.168	1.204	38.328	0.00	0.23

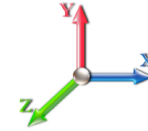
Linear Appurtenance Segment Forces (Factored)

Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 25



Load Case: 0.9D + 1.0W 123 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.00



Iterations 25

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
125.00	Step bolts (ladder)	Yes	0.92	0.000	0.63	0.05	0.00	0.168	1.204	38.328	0.00	0.86
125.00	1 5/8" Coax	Yes	0.92	0.000	3.96	0.30	0.00	0.168	1.204	38.328	0.00	9.44
125.00	1 5/8" Fiber	Yes	0.92	0.000	0.00	0.00	0.00	0.168	1.204	38.328	0.00	1.82
125.00	1/2" Coax	Yes	0.92	0.000	0.50	0.04	0.00	0.168	1.204	38.328	0.00	0.13
129.00	Safety Cable	Yes	4.00	0.000	0.38	0.13	0.00	0.032	0.000	38.675	0.00	0.98
129.00	Step bolts (ladder)	Yes	4.00	0.000	0.63	0.21	0.00	0.032	0.000	38.675	0.00	3.74
130.00	Safety Cable	Yes	1.00	0.000	0.38	0.03	0.00	0.032	0.000	38.760	0.00	0.25
130.00	Step bolts (ladder)	Yes	1.00	0.000	0.63	0.05	0.00	0.032	0.000	38.760	0.00	0.94
135.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.032	0.000	39.180	0.00	1.23
135.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.032	0.000	39.180	0.00	4.68
140.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.034	0.000	39.589	0.00	1.23
140.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.034	0.000	39.589	0.00	4.68
145.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.035	0.000	39.988	0.00	1.23
145.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.035	0.000	39.988	0.00	4.68
150.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.037	0.000	40.378	0.00	1.23
150.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.037	0.000	40.378	0.00	4.68
152.50	Safety Cable	Yes	2.50	0.000	0.38	0.08	0.00	0.038	0.000	40.569	0.00	0.61
152.50	Step bolts (ladder)	Yes	2.50	0.000	0.63	0.13	0.00	0.038	0.000	40.569	0.00	2.34
155.00	Safety Cable	Yes	2.50	0.000	0.38	0.08	0.00	0.039	0.000	40.758	0.00	0.61
155.00	Step bolts (ladder)	Yes	2.50	0.000	0.63	0.13	0.00	0.039	0.000	40.758	0.00	2.34
160.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.040	0.000	41.129	0.00	1.23
160.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.040	0.000	41.129	0.00	4.68
165.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.042	0.000	41.492	0.00	1.23
165.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.042	0.000	41.492	0.00	4.68
Totals:											0.0	1,710.2

Calculated Forces

Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 26



Load Case: 0.9D + 1.0W 123 mph Wind

Iterations 25

Dead Load Factor 0.90

Wind Load Factor 1.00



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-55.28	-46.92	0.00	-5855.1	0.00	5855.14	6109.19	1631.76	7852.82	7187.37	0.00	0.000	0.000	0.825
5.00	-53.61	-46.45	0.00	-5620.5	0.00	5620.56	6042.67	1599.27	7543.22	6966.35	0.11	-0.206	0.000	0.817
10.00	-51.85	-45.98	0.00	-5388.3	0.00	5388.33	5973.91	1566.78	7239.84	6745.94	0.44	-0.416	0.000	0.808
15.00	-50.13	-45.52	0.00	-5158.4	0.00	5158.42	5902.91	1534.29	6942.70	6526.30	0.99	-0.630	0.000	0.800
20.00	-48.44	-45.06	0.00	-4930.8	0.00	4930.83	5829.67	1501.80	6651.77	6307.60	1.77	-0.849	0.000	0.791
25.00	-46.77	-44.61	0.00	-4705.5	0.00	4705.51	5754.19	1469.31	6367.08	6089.98	2.78	-1.071	0.000	0.782
30.00	-45.17	-44.12	0.00	-4482.4	0.00	4482.44	5676.47	1436.82	6088.61	5873.62	4.02	-1.297	0.000	0.772
32.83	-44.27	-43.85	0.00	-4357.4	0.00	4357.43	5631.44	1418.41	5933.57	5751.63	4.83	-1.429	0.000	0.766
35.00	-43.01	-43.68	0.00	-4262.4	0.00	4262.42	5596.51	1404.33	5816.37	5658.66	5.50	-1.531	0.000	0.762
40.00	-40.28	-43.13	0.00	-4044.0	0.00	4044.04	5104.93	1311.76	5413.18	5145.84	7.23	-1.765	0.000	0.795
45.00	-38.79	-42.60	0.00	-3828.4	0.00	3828.41	5033.50	1281.30	5164.70	4954.92	9.21	-2.003	0.000	0.781
50.00	-37.33	-42.05	0.00	-3615.4	0.00	3615.43	4959.83	1250.84	4922.07	4765.22	11.43	-2.246	0.000	0.767
55.00	-35.89	-41.48	0.00	-3405.2	0.00	3405.20	4883.92	1220.38	4685.27	4576.90	13.92	-2.492	0.000	0.753
60.00	-34.49	-40.90	0.00	-3197.7	0.00	3197.79	4805.76	1189.92	4454.32	4390.12	16.66	-2.741	0.000	0.737
65.00	-33.11	-40.31	0.00	-2993.2	0.00	2993.27	4725.37	1159.46	4229.19	4205.04	19.67	-2.994	0.000	0.720
70.00	-31.77	-39.71	0.00	-2791.7	0.00	2791.71	4642.74	1129.00	4009.91	4021.83	22.94	-3.248	0.000	0.702
75.00	-30.50	-39.07	0.00	-2593.1	0.00	2593.15	4557.87	1098.54	3796.46	3840.63	26.48	-3.505	0.000	0.683
77.92	-29.76	-38.70	0.00	-2479.0	0.00	2479.06	4507.27	1080.76	3674.51	3735.80	28.67	-3.658	0.000	0.671
80.00	-28.82	-38.44	0.00	-2398.5	0.00	2398.56	4470.76	1068.08	3588.85	3661.61	30.28	-3.769	0.000	0.663
84.00	-27.17	-37.84	0.00	-2244.6	0.00	2244.67	4079.95	996.52	3347.20	3342.88	33.53	-3.978	0.000	0.680
85.00	-26.87	-37.76	0.00	-2206.9	0.00	2206.96	4064.53	990.86	3309.24	3311.11	34.37	-4.032	0.000	0.675
90.00	-25.69	-37.12	0.00	-2018.1	0.00	2018.15	3985.82	962.43	3122.08	3152.82	38.73	-4.291	0.000	0.648
95.00	-24.55	-36.46	0.00	-1832.5	0.00	1832.58	3904.88	934.00	2940.36	2996.54	43.36	-4.549	0.000	0.619
100.00	-23.45	-35.80	0.00	-1650.2	0.00	1650.28	3803.39	905.57	2764.09	2828.81	48.25	-4.805	0.000	0.591
105.00	-22.37	-35.14	0.00	-1471.2	0.00	1471.28	3683.99	877.14	2593.26	2652.97	53.42	-5.056	0.000	0.562
110.00	-21.33	-34.47	0.00	-1295.6	0.00	1295.60	3564.59	848.71	2427.89	2482.78	58.84	-5.301	0.000	0.529
115.00	-20.33	-33.79	0.00	-1123.2	0.00	1123.27	3445.19	820.28	2267.96	2318.23	64.51	-5.538	0.000	0.492
120.00	-19.38	-33.11	0.00	-954.32	0.00	954.32	3325.79	791.86	2113.49	2159.32	70.42	-5.763	0.000	0.450
124.08	-18.65	-32.53	0.00	-819.13	0.00	819.13	3228.28	768.64	1991.37	2033.73	75.42	-5.937	0.000	0.410
125.00	-15.91	-27.47	0.00	-789.27	0.00	789.27	3206.39	763.43	1964.46	2006.05	76.56	-5.976	0.000	0.400
129.00	-14.93	-26.96	0.00	-679.38	0.00	679.38	1872.41	487.58	1246.47	1169.59	81.63	-6.134	0.000	0.592
130.00	-14.76	-26.88	0.00	-652.42	0.00	652.42	1864.30	483.92	1227.85	1155.72	82.92	-6.173	0.000	0.576
135.00	-12.37	-23.27	0.00	-518.03	0.00	518.03	1822.43	465.65	1136.86	1086.70	89.51	-6.428	0.000	0.486
140.00	-11.81	-22.73	0.00	-401.70	0.00	401.70	1778.31	447.37	1049.37	1018.38	96.36	-6.653	0.000	0.404
145.00	-8.59	-17.09	0.00	-288.04	0.00	288.04	1731.96	429.10	965.39	950.92	103.41	-6.844	0.000	0.309
150.00	-8.13	-16.57	0.00	-202.58	0.00	202.58	1683.36	410.82	884.91	884.47	110.65	-6.997	0.000	0.235
152.50	-7.57	-15.45	0.00	-161.16	0.00	161.16	1658.23	401.68	845.98	851.67	114.33	-7.062	0.000	0.195
155.00	-4.99	-9.34	0.00	-122.53	0.00	122.53	1632.53	392.54	807.93	819.19	118.03	-7.116	0.000	0.153
160.00	-4.65	-8.85	0.00	-75.83	0.00	75.83	1571.93	374.27	734.45	751.65	125.51	-7.197	0.000	0.104
165.00	-1.60	-3.31	0.00	-31.60	0.00	31.60	1495.17	355.99	664.47	679.62	133.06	-7.248	0.000	0.048
170.00	-1.35	-2.86	0.00	-15.05	0.00	15.05	1418.42	337.72	598.00	611.22	140.64	-7.273	0.000	0.026
175.00	-0.13	-0.25	0.00	-0.75	0.00	0.75	1341.66	319.44	535.03	546.45	148.25	-7.283	0.000	0.001
178.00	0.00	-0.23	0.00	0.00	0.00	0.00	1295.60	308.48	498.93	509.33	152.81	-7.284	0.000	0.000

Wind Loading - Shaft

Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 27



Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Iterations 24

Dead Load Factor 1.20
Wind Load Factor 1.00



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	4.209	4.63	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	4.209	4.63	0.00	1.200	0.828	5.00	25.569	30.68	142.1	310.8	2190.2
10.00		1.00	0.70	4.209	4.63	0.00	1.200	0.887	5.00	25.123	30.15	139.6	326.8	2168.4
15.00		1.00	0.70	4.209	4.63	0.00	1.200	0.924	5.00	24.657	29.59	137.0	333.6	2137.4
20.00		1.00	0.70	4.209	4.63	0.00	1.200	0.951	5.00	24.184	29.02	134.4	336.4	2102.4
25.00		1.00	0.70	4.209	4.63	0.00	1.200	0.973	5.00	23.705	28.45	131.7	336.9	2065.1
30.00		1.00	0.70	4.213	4.63	0.00	1.206 *	0.991	5.00	23.224	28.02	129.8	335.8	2026.2
32.83	Bot - Section 2	1.00	0.72	4.323	4.76	0.00	1.213 *	0.999	2.83	12.945	15.70	74.6	189.7	1130.8
35.00		1.00	0.73	4.402	4.84	0.00	1.217 *	1.006	2.17	9.969	12.13	58.8	147.2	1538.7
40.00	Top - Section 1	1.00	0.76	4.574	5.03	0.00	1.223 *	1.019	5.00	22.661	27.72	139.5	336.8	3495.4
45.00		1.00	0.79	4.730	5.20	0.00	1.225 *	1.032	5.00	22.175	27.16	141.3	333.2	1841.5
50.00		1.00	0.81	4.875	5.36	0.00	1.234 *	1.042	5.00	21.688	26.77	143.5	329.0	1801.9
55.00		1.00	0.83	5.009	5.51	0.00	1.244 *	1.052	5.00	21.200	26.37	145.3	324.4	1761.8
60.00		1.00	0.85	5.135	5.65	0.00	1.254 *	1.062	5.00	20.712	25.97	146.7	319.4	1721.4
65.00		1.00	0.87	5.254	5.78	0.00	1.264 *	1.070	5.00	20.223	25.57	147.8	314.0	1680.6
70.00		1.00	0.89	5.367	5.90	0.00	1.276 *	1.078	5.00	19.734	25.17	148.6	308.4	1639.5
75.00		1.00	0.91	5.473	6.02	0.00	1.287 *	1.086	5.00	19.244	24.77	149.2	302.5	1598.2
77.92	Bot - Section 3	1.00	0.92	5.534	6.09	0.00	1.297 *	1.090	2.92	11.011	14.28	86.9	174.6	914.9
80.00		1.00	0.93	5.575	6.13	0.00	1.304 *	1.093	2.08	7.898	10.30	63.1	125.9	1142.0
84.00	Top - Section 2	1.00	0.94	5.654	6.22	0.00	1.312 *	1.098	4.00	14.964	19.63	122.1	238.2	2160.5
85.00		1.00	0.94	5.673	6.24	0.00	1.308 *	1.099	1.00	3.676	4.81	30.0	59.1	289.5
90.00		1.00	0.96	5.766	6.34	0.00	1.316 *	1.106	5.00	18.150	23.89	151.5	289.7	1425.9
95.00		1.00	0.97	5.856	6.44	0.00	1.330 *	1.112	5.00	17.659	23.49	151.3	283.1	1386.2
100.00		1.00	0.99	5.942	6.54	0.00	1.345 *	1.117	5.00	17.168	23.10	151.0	276.2	1346.3
105.00		1.00	1.00	6.026	6.63	0.00	1.361 *	1.123	5.00	16.676	22.70	150.5	269.3	1306.2
110.00		1.00	1.02	6.106	6.72	0.00	1.378 *	1.128	5.00	16.185	22.31	149.8	262.1	1266.0
115.00		1.00	1.03	6.184	6.80	0.00	1.396 *	1.133	5.00	15.693	21.91	149.1	254.9	1225.7
120.00		1.00	1.04	6.260	6.89	0.00	1.416 *	1.138	5.00	15.201	21.52	148.2	247.5	1185.3
124.08	Bot - Section 4	1.00	1.05	6.320	6.95	0.00	1.434 *	1.142	4.08	12.049	17.28	120.2	197.2	938.5
125.00	Appurtenance(s)	1.00	1.05	6.334	6.97	0.00	1.445 *	1.142	0.92	2.704	3.91	27.2	44.8	315.6
129.00	Top - Section 3	1.00	1.06	6.391	7.03	0.00	1.200	1.146	4.00	11.606	13.93	97.9	190.6	1351.1
130.00		1.00	1.07	6.405	7.05	0.00	1.200	1.147	1.00	2.852	3.42	24.1	47.3	160.4
135.00	Appurtenance(s)	1.00	1.08	6.474	7.12	0.00	1.200	1.151	5.00	13.967	16.76	119.4	229.0	781.4
140.00		1.00	1.09	6.542	7.20	0.00	1.200	1.155	5.00	13.474	16.17	116.4	221.3	752.4
145.00	Appurtenance(s)	1.00	1.10	6.608	7.27	0.00	1.200	1.160	5.00	12.982	15.58	113.2	213.5	723.3
150.00		1.00	1.11	6.672	7.34	0.00	1.200	1.163	5.00	12.489	14.99	110.0	205.5	694.1
152.50	Appurtenance(s)	1.00	1.11	6.704	7.37	0.00	1.200	1.165	2.50	6.059	7.27	53.6	100.8	337.1
155.00	Appurtenance(s)	1.00	1.12	6.735	7.41	0.00	1.200	1.167	2.50	5.936	7.12	52.8	98.8	329.8
160.00		1.00	1.13	6.796	7.48	0.00	1.200	1.171	5.00	11.503	13.80	103.2	189.5	635.5
165.00	Appurtenance(s)	1.00	1.14	6.856	7.54	0.00	1.200	1.175	5.00	11.010	13.21	99.6	181.3	606.1
170.00		1.00	1.15	6.915	7.61	0.00	1.200	1.178	5.00	10.517	12.62	96.0	173.1	576.6
175.00	Appurtenance(s)	1.00	1.16	6.973	7.67	0.00	1.200	1.182	5.00	10.024	12.03	92.3	164.8	547.1
178.00		1.00	1.17	7.007	7.71	0.00	1.200	1.184	3.00	5.777	6.93	53.4	95.9	315.0
Totals:									178.00			4,742.6	53,611.8	

* Cf Adjusted by Linear Load Ra Effect

Discrete Appurtenance Forces

Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

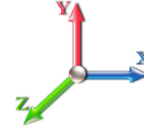


Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Iterations 24

Dead Load Factor 1.20

Wind Load Factor 1.00



No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	175.00	Exposed Mount Pipes	9	6.973	7.670	0.90	0.90	20.85	785.41	0.000	0.000	159.88	0.00	0.00
2	175.00	Abandoned Mount	1	6.973	7.670	1.00	1.00	45.34	1346.40	0.000	0.000	347.73	0.00	0.00
3	165.00	Kathrein 782 11056	3	6.856	7.542	0.58	0.75	0.57	4.89	0.000	0.000	4.32	0.00	0.00
4	165.00	Reinf. Kit (SitePro1)	3	6.856	7.542	0.75	1.00	19.98	760.25	0.000	0.000	150.69	0.00	0.00
5	165.00	Ericsson AIR6419 B41	3	6.856	7.542	0.57	0.75	7.41	364.12	0.000	0.000	55.92	0.00	0.00
6	165.00	Ericsson 4460 B25 + B66	3	6.856	7.542	0.50	0.75	4.98	486.59	0.000	0.000	37.56	0.00	0.00
7	165.00	Platform w/ Hand Rails	1	6.856	7.542	1.00	1.00	54.10	3209.54	0.000	0.000	407.99	0.00	0.00
8	165.00	RFS	3	6.856	7.542	0.52	0.75	33.87	1270.69	0.000	0.000	255.43	0.00	0.00
9	165.00	Ericsson KRY 112 489/2	6	6.856	7.542	0.50	0.75	3.20	152.04	0.000	0.000	24.15	0.00	0.00
10	165.00	Ericsson 4449 B71 + B85	3	6.856	7.542	0.50	0.75	3.53	322.58	0.000	0.000	26.59	0.00	0.00
11	165.00	(3) SFS-H-L (V-Braces)	1	6.856	7.542	1.00	1.00	11.42	391.13	0.000	0.000	86.15	0.00	0.00
12	155.00	PRK-1245 (kicker kit)	1	6.735	7.409	1.00	1.00	16.15	679.88	0.000	0.000	119.67	0.00	0.00
13	155.00	(3) 12.5' - 2" Horizontal	3	6.735	7.409	1.00	1.00	32.78	635.01	0.000	0.000	242.87	0.00	0.00
14	155.00	Cci OPA65R-BU8DA	4	6.735	7.409	0.65	0.75	32.84	468.09	0.000	0.000	243.33	0.00	0.00
15	155.00	(3) Stabilizer Kit (12' FW)	1	6.735	7.409	1.00	1.00	10.37	297.28	0.000	0.000	76.84	0.00	0.00
16	155.00	Platform w/ Hand Rails	1	6.735	7.409	1.00	1.00	38.48	654.23	0.000	0.000	285.08	0.00	0.00
17	155.00	Nokia CS72188.01 LMU	1	6.735	7.409	1.00	1.00	0.27	0.94	0.000	0.000	1.99	0.00	0.00
18	155.00	Cci OPA65R-BU4DA	2	6.735	7.409	0.54	0.75	9.99	164.45	0.000	0.000	73.99	0.00	0.00
19	155.00	Ericsson 4449 B5/B12	3	6.735	7.409	0.65	0.75	4.59	1261.56	0.000	0.000	34.03	0.00	0.00
20	155.00	Ericsson 8843 B2/B66A	3	6.735	7.409	0.65	0.75	4.07	273.05	0.000	0.000	30.17	0.00	0.00
21	155.00	Raycap DC6-48-60-18-8F	1	6.735	7.409	0.75	0.75	1.97	45.88	0.000	0.000	14.56	0.00	0.00
22	155.00	Exposed Mount Pipes	12	6.735	7.409	0.75	0.75	18.59	1044.14	0.000	0.000	137.74	0.00	0.00
23	152.50	Ericsson RRUS11 RRUs	6	6.704	7.374	0.60	0.90	14.89	541.35	0.000	0.000	109.80	0.00	0.00
24	152.50	Ring Mount (Part No	1	6.704	7.374	1.00	1.00	7.33	-36.09	0.000	0.000	54.06	0.00	0.00
25	152.50	Raycap DC2-48-60-18-8F	1	6.704	7.374	0.90	0.90	1.74	62.94	0.000	0.000	12.86	0.00	0.00
26	145.00	Exposed Mount Pipes	12	6.608	7.269	0.75	0.75	22.32	1092.55	0.000	0.000	162.25	0.00	0.00
27	145.00	ALU 800 Mhz- RRUs	6	6.608	7.269	0.50	0.75	9.80	549.84	0.000	0.000	71.22	0.00	0.00
28	145.00	ALU 1900 Mhz- RRUs	3	6.608	7.269	0.50	0.75	5.45	310.61	0.000	0.000	39.59	0.00	0.00
29	145.00	PRK-1245 (kicker kit)	1	6.608	7.269	1.00	1.00	16.11	678.43	0.000	0.000	117.09	0.00	0.00
30	145.00	(3) SFS-H-L (V-Braces)	1	6.608	7.269	1.00	1.00	11.36	388.36	0.000	0.000	82.58	0.00	0.00
31	145.00	NNVV-65B-R4	3	6.608	7.269	0.55	0.75	22.04	650.42	0.000	0.000	160.20	0.00	0.00
32	145.00	APXVTM14-C-I20	3	6.608	7.269	0.58	0.75	12.24	500.66	0.000	0.000	88.95	0.00	0.00
33	145.00	Platform w/ Hand Rails	1	6.608	7.269	1.00	1.00	38.41	1743.59	0.000	0.000	279.22	0.00	0.00
34	145.00	ALU TD-RRH8x20-25-	3	6.608	7.269	0.50	0.75	6.90	457.07	0.000	0.000	50.14	0.00	0.00
35	135.00	Fujitsu TA08025-B605	3	6.474	7.122	0.50	0.75	3.51	335.71	0.000	0.000	25.02	0.00	0.00
36	135.00	JMA Wireless	3	6.474	7.122	0.55	0.75	22.40	606.25	0.000	0.000	159.56	0.00	0.00
37	135.00	Platform w/ Handrails	1	6.474	7.122	1.00	1.00	68.75	2812.83	0.000	0.000	489.62	0.00	0.00
38	135.00	Raycap	1	6.474	7.122	1.00	1.00	2.38	83.12	0.000	0.000	16.98	0.00	0.00
39	135.00	Fujitsu TA08025-B604	3	6.474	7.122	0.50	0.75	3.51	293.94	0.000	0.000	25.02	0.00	0.00
40	125.00	Samsung RF4439d-25A	3	6.334	6.967	0.50	0.75	2.69	377.54	0.000	0.000	18.72	0.00	0.00
41	125.00	Lucent KS-24019-GPS	1	6.348	6.983	1.00	1.00	1.47	-1.52	0.000	1.000	10.24	0.00	10.24
42	125.00	Low Profile Platform	1	6.334	6.967	1.00	1.00	38.71	1825.47	0.000	0.000	269.69	0.00	0.00
43	125.00	JMA Wireless	6	6.334	6.967	0.65	0.75	42.10	1433.20	0.000	0.000	293.31	0.00	0.00
44	125.00	Samsung MT6407-77A	3	6.334	6.967	0.52	0.75	8.35	531.59	0.000	0.000	58.19	0.00	0.00
45	125.00	Handrail Kit (P2 1/2 STD)	1	6.334	6.967	1.00	1.00	11.07	779.11	0.000	0.000	77.11	0.00	0.00
46	125.00	Samsung RF4440d-13A	3	6.334	6.967	0.50	0.75	2.69	342.94	0.000	0.000	18.72	0.00	0.00
47	125.00	VZWSMART	1	6.334	6.967	1.00	1.00	16.01	675.26	0.000	0.000	111.55	0.00	0.00

Discrete Appurtenance Forces

Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 29
Struct Class: II		



48	125.00	VZWSMART	1	6.334	6.967	1.00	1.00	4.21	252.06	0.000	0.000	29.36	0.00	0.00
49	125.00	Antel	6	6.334	6.967	0.56	0.75	10.69	341.92	0.000	0.000	74.49	0.00	0.00
50	125.00	RFS DB-T1-6Z-8AB-OZ	2	6.334	6.967	0.80	0.80	7.40	410.70	0.000	0.000	51.55	0.00	0.00

Totals: 32,657.96

5,773.79

Total Applied Force Summary

Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 30

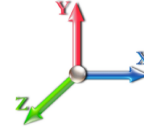


Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Iterations 24

Dead Load Factor 1.20

Wind Load Factor 1.00



Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		142.06	2379.89	0.00	0.00
10.00		139.58	2583.03	0.00	0.00
15.00		137.00	2558.03	0.00	0.00
20.00		134.37	2527.46	0.00	0.00
25.00		131.71	2493.69	0.00	0.00
30.00		129.83	2457.80	0.00	0.00
32.83		74.65	1376.19	0.00	0.00
35.00		58.75	1726.81	0.00	0.00
40.00		139.46	3931.79	0.00	0.00
45.00		141.33	2279.97	0.00	0.00
50.00		143.52	2242.22	0.00	0.00
55.00		145.29	2203.86	0.00	0.00
60.00		146.70	2164.99	0.00	0.00
65.00		147.79	2125.67	0.00	0.00
70.00		148.60	2085.96	0.00	0.00
75.00		149.16	2045.91	0.00	0.00
77.92		86.94	1176.76	0.00	0.00
80.00		63.15	1328.73	0.00	0.00
84.00		122.06	2520.72	0.00	0.00
85.00		30.01	379.20	0.00	0.00
90.00		151.53	1877.10	0.00	0.00
95.00		151.33	1838.40	0.00	0.00
100.00		150.97	1799.49	0.00	0.00
105.00		150.47	1760.40	0.00	0.00
110.00		149.83	1721.13	0.00	0.00
115.00		149.07	1681.70	0.00	0.00
120.00		148.19	1642.12	0.00	0.00
124.08		120.16	1312.11	0.00	0.00
125.00	(28) attachments	1040.16	7367.79	0.00	10.24
129.00		97.91	1520.76	0.00	0.00
130.00		24.11	202.79	0.00	0.00
135.00	(11) attachments	835.56	5125.50	0.00	0.00
140.00		116.35	958.78	0.00	0.00
145.00	(33) attachments	1164.49	7301.34	0.00	0.00
150.00		109.99	877.87	0.00	0.00
152.50	(8) attachments	230.34	997.20	0.00	0.00
155.00	(32) attachments	1313.06	5946.21	0.00	0.00
160.00		103.20	728.74	0.00	0.00
165.00	(26) attachments	1148.44	7661.28	0.00	0.00
170.00		96.00	576.62	0.00	0.00
175.00	(10) attachments	599.87	2678.89	0.00	0.00
178.00		53.43	315.04	0.00	0.00
Totals:		10,516.41	98,479.95	0.00	10.24

Linear Appurtenance Segment Forces (Factored)

Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

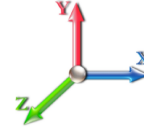


Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Iterations 24

Dead Load Factor 1.20

Wind Load Factor 1.00



Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	Safety Cable	Yes	5.00	0.000	0.38	0.85	0.00	0.047	0.000	4.209	0.00	7.09
5.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.95	0.00	0.047	0.000	4.209	0.00	12.60
5.00	1 5/8" Coax	Yes	2.00	0.000	3.96	0.94	0.00	0.047	0.000	4.209	0.00	64.38
5.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.047	0.000	4.209	0.00	13.44
5.00	1/2" Coax	Yes	2.00	0.000	0.50	0.36	0.00	0.047	0.000	4.209	0.00	2.97
10.00	Safety Cable	Yes	5.00	0.000	0.38	0.90	0.00	0.093	0.000	4.209	0.00	7.80
10.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.00	0.00	0.093	0.000	4.209	0.00	13.37
10.00	1 5/8" Coax	Yes	5.00	0.000	3.96	2.39	0.00	0.093	0.000	4.209	0.00	166.61
10.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.093	0.000	4.209	0.00	35.15
10.00	1/2" Coax	Yes	5.00	0.000	0.50	0.95	0.00	0.093	0.000	4.209	0.00	8.19
15.00	Safety Cable	Yes	5.00	0.000	0.38	0.93	0.00	0.095	0.000	4.209	0.00	8.26
15.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.03	0.00	0.095	0.000	4.209	0.00	13.87
15.00	1 5/8" Coax	Yes	5.00	0.000	3.96	2.42	0.00	0.095	0.000	4.209	0.00	170.13
15.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.095	0.000	4.209	0.00	36.13
15.00	1/2" Coax	Yes	5.00	0.000	0.50	0.98	0.00	0.095	0.000	4.209	0.00	8.69
20.00	Safety Cable	Yes	5.00	0.000	0.38	0.95	0.00	0.097	0.000	4.209	0.00	8.61
20.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.06	0.00	0.097	0.000	4.209	0.00	14.24
20.00	1 5/8" Coax	Yes	5.00	0.000	3.96	2.44	0.00	0.097	0.000	4.209	0.00	172.72
20.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.097	0.000	4.209	0.00	36.86
20.00	1/2" Coax	Yes	5.00	0.000	0.50	1.00	0.00	0.097	0.000	4.209	0.00	9.07
25.00	Safety Cable	Yes	5.00	0.000	0.38	0.97	0.00	0.100	0.000	4.209	0.00	8.89
25.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.07	0.00	0.100	0.000	4.209	0.00	14.55
25.00	1 5/8" Coax	Yes	5.00	0.000	3.96	2.46	0.00	0.100	0.000	4.209	0.00	174.79
25.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.100	0.000	4.209	0.00	37.45
25.00	1/2" Coax	Yes	5.00	0.000	0.50	1.02	0.00	0.100	0.000	4.209	0.00	9.37
30.00	Safety Cable	Yes	5.00	0.000	0.38	0.98	0.00	0.102	1.005	4.213	0.00	9.13
30.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.09	0.00	0.102	1.005	4.213	0.00	14.80
30.00	1 5/8" Coax	Yes	5.00	0.000	3.96	2.48	0.00	0.102	1.005	4.213	0.00	176.52
30.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.102	1.005	4.213	0.00	37.94
30.00	1/2" Coax	Yes	5.00	0.000	0.50	1.03	0.00	0.102	1.005	4.213	0.00	9.63
32.83	Safety Cable	Yes	2.83	0.000	0.38	0.56	0.00	0.104	1.011	4.323	0.00	5.25
32.83	Step bolts (ladder)	Yes	2.83	0.000	0.63	0.62	0.00	0.104	1.011	4.323	0.00	8.46
32.83	1 5/8" Coax	Yes	2.83	0.000	3.96	1.41	0.00	0.104	1.011	4.323	0.00	100.52
32.83	1 5/8" Fiber	Yes	2.83	0.000	0.00	0.00	0.00	0.104	1.011	4.323	0.00	21.64
32.83	1/2" Coax	Yes	2.83	0.000	0.50	0.59	0.00	0.104	1.011	4.323	0.00	5.53
35.00	Safety Cable	Yes	2.17	0.000	0.38	0.43	0.00	0.105	1.014	4.402	0.00	4.05
35.00	Step bolts (ladder)	Yes	2.17	0.000	0.63	0.48	0.00	0.105	1.014	4.402	0.00	6.51
35.00	1 5/8" Coax	Yes	2.17	0.000	3.96	1.08	0.00	0.105	1.014	4.402	0.00	77.14
35.00	1 5/8" Fiber	Yes	2.17	0.000	0.00	0.00	0.00	0.105	1.014	4.402	0.00	16.63
35.00	1/2" Coax	Yes	2.17	0.000	0.50	0.45	0.00	0.105	1.014	4.402	0.00	4.27
40.00	Safety Cable	Yes	5.00	0.000	0.38	1.01	0.00	0.106	1.019	4.574	0.00	9.53
40.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.11	0.00	0.106	1.019	4.574	0.00	15.23
40.00	1 5/8" Coax	Yes	5.00	0.000	3.96	2.50	0.00	0.106	1.019	4.574	0.00	179.33
40.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.106	1.019	4.574	0.00	38.74
40.00	1/2" Coax	Yes	5.00	0.000	0.50	1.06	0.00	0.106	1.019	4.574	0.00	10.06
45.00	Safety Cable	Yes	5.00	0.000	0.38	1.02	0.00	0.107	1.021	4.730	0.00	9.70
45.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.12	0.00	0.107	1.021	4.730	0.00	15.41

Linear Appurtenance Segment Forces (Factored)

Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

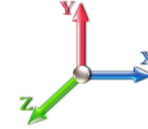


Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Iterations 24

Dead Load Factor 1.20

Wind Load Factor 1.00



Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
45.00	1 5/8" Coax	Yes	5.00	0.000	3.96	2.51	0.00	0.107	1.021	4.730	0.00	180.50
45.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.107	1.021	4.730	0.00	39.08
45.00	1/2" Coax	Yes	5.00	0.000	0.50	1.07	0.00	0.107	1.021	4.730	0.00	10.24
50.00	Safety Cable	Yes	5.00	0.000	0.38	1.03	0.00	0.109	1.028	4.875	0.00	9.85
50.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.13	0.00	0.109	1.028	4.875	0.00	15.57
50.00	1 5/8" Coax	Yes	5.00	0.000	3.96	2.52	0.00	0.109	1.028	4.875	0.00	181.57
50.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.109	1.028	4.875	0.00	39.39
50.00	1/2" Coax	Yes	5.00	0.000	0.50	1.08	0.00	0.109	1.028	4.875	0.00	10.41
55.00	Safety Cable	Yes	5.00	0.000	0.38	1.04	0.00	0.112	1.036	5.009	0.00	10.00
55.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.14	0.00	0.112	1.036	5.009	0.00	15.73
55.00	1 5/8" Coax	Yes	5.00	0.000	3.96	2.53	0.00	0.112	1.036	5.009	0.00	182.54
55.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.112	1.036	5.009	0.00	39.67
55.00	1/2" Coax	Yes	5.00	0.000	0.50	1.09	0.00	0.112	1.036	5.009	0.00	10.56
60.00	Safety Cable	Yes	5.00	0.000	0.38	1.04	0.00	0.115	1.045	5.135	0.00	10.13
60.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.15	0.00	0.115	1.045	5.135	0.00	15.87
60.00	1 5/8" Coax	Yes	5.00	0.000	3.96	2.53	0.00	0.115	1.045	5.135	0.00	183.44
60.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.115	1.045	5.135	0.00	39.94
60.00	1/2" Coax	Yes	5.00	0.000	0.50	1.09	0.00	0.115	1.045	5.135	0.00	10.70
65.00	Safety Cable	Yes	5.00	0.000	0.38	1.05	0.00	0.118	1.054	5.254	0.00	10.25
65.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.15	0.00	0.118	1.054	5.254	0.00	16.00
65.00	1 5/8" Coax	Yes	5.00	0.000	3.96	2.54	0.00	0.118	1.054	5.254	0.00	184.27
65.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.118	1.054	5.254	0.00	40.18
65.00	1/2" Coax	Yes	5.00	0.000	0.50	1.10	0.00	0.118	1.054	5.254	0.00	10.84
70.00	Safety Cable	Yes	5.00	0.000	0.38	1.06	0.00	0.121	1.063	5.367	0.00	10.37
70.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.16	0.00	0.121	1.063	5.367	0.00	16.12
70.00	1 5/8" Coax	Yes	5.00	0.000	3.96	2.55	0.00	0.121	1.063	5.367	0.00	185.05
70.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.121	1.063	5.367	0.00	40.41
70.00	1/2" Coax	Yes	5.00	0.000	0.50	1.11	0.00	0.121	1.063	5.367	0.00	10.96
75.00	Safety Cable	Yes	5.00	0.000	0.38	1.06	0.00	0.124	1.073	5.473	0.00	10.48
75.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.17	0.00	0.124	1.073	5.473	0.00	16.24
75.00	1 5/8" Coax	Yes	5.00	0.000	3.96	2.55	0.00	0.124	1.073	5.473	0.00	185.78
75.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.124	1.073	5.473	0.00	40.62
75.00	1/2" Coax	Yes	5.00	0.000	0.50	1.11	0.00	0.124	1.073	5.473	0.00	11.08
77.92	Safety Cable	Yes	2.92	0.000	0.38	0.62	0.00	0.127	1.081	5.534	0.00	6.16
77.92	Step bolts (ladder)	Yes	2.92	0.000	0.63	0.68	0.00	0.127	1.081	5.534	0.00	9.52
77.92	1 5/8" Coax	Yes	2.92	0.000	3.96	1.49	0.00	0.127	1.081	5.534	0.00	108.73
77.92	1 5/8" Fiber	Yes	2.92	0.000	0.00	0.00	0.00	0.127	1.081	5.534	0.00	23.79
77.92	1/2" Coax	Yes	2.92	0.000	0.50	0.65	0.00	0.127	1.081	5.534	0.00	6.51
80.00	Safety Cable	Yes	2.08	0.000	0.38	0.44	0.00	0.129	1.086	5.575	0.00	4.40
80.00	Step bolts (ladder)	Yes	2.08	0.000	0.63	0.49	0.00	0.129	1.086	5.575	0.00	6.80
80.00	1 5/8" Coax	Yes	2.08	0.000	3.96	1.07	0.00	0.129	1.086	5.575	0.00	77.57
80.00	1 5/8" Fiber	Yes	2.08	0.000	0.00	0.00	0.00	0.129	1.086	5.575	0.00	16.98
80.00	1/2" Coax	Yes	2.08	0.000	0.50	0.47	0.00	0.129	1.086	5.575	0.00	4.66
84.00	Safety Cable	Yes	4.00	0.000	0.38	0.86	0.00	0.131	1.093	5.654	0.00	8.54
84.00	Step bolts (ladder)	Yes	4.00	0.000	0.63	0.94	0.00	0.131	1.093	5.654	0.00	13.16
84.00	1 5/8" Coax	Yes	4.00	0.000	3.96	2.05	0.00	0.131	1.093	5.654	0.00	149.72
84.00	1 5/8" Fiber	Yes	4.00	0.000	0.00	0.00	0.00	0.131	1.093	5.654	0.00	32.81

Linear Appurtenance Segment Forces (Factored)

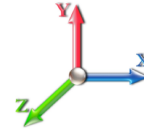
Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Iterations 24

Dead Load Factor 1.20
Wind Load Factor 1.00



Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
84.00	1/2" Coax	Yes	4.00	0.000	0.50	0.90	0.00	0.131	1.093	5.654	0.00	9.03
85.00	Safety Cable	Yes	1.00	0.000	0.38	0.21	0.00	0.130	1.090	5.673	0.00	2.13
85.00	Step bolts (ladder)	Yes	1.00	0.000	0.63	0.23	0.00	0.130	1.090	5.673	0.00	3.28
85.00	1 5/8" Coax	Yes	1.00	0.000	3.96	0.51	0.00	0.130	1.090	5.673	0.00	37.30
85.00	1 5/8" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.130	1.090	5.673	0.00	8.18
85.00	1/2" Coax	Yes	1.00	0.000	0.50	0.22	0.00	0.130	1.090	5.673	0.00	2.25
90.00	Safety Cable	Yes	5.00	0.000	0.38	1.08	0.00	0.132	1.097	5.766	0.00	10.77
90.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.18	0.00	0.132	1.097	5.766	0.00	16.56
90.00	1 5/8" Coax	Yes	5.00	0.000	3.96	2.57	0.00	0.132	1.097	5.766	0.00	187.74
90.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.132	1.097	5.766	0.00	41.20
90.00	1/2" Coax	Yes	5.00	0.000	0.50	1.13	0.00	0.132	1.097	5.766	0.00	11.40
95.00	Safety Cable	Yes	5.00	0.000	0.38	1.08	0.00	0.136	1.109	5.856	0.00	10.86
95.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.19	0.00	0.136	1.109	5.856	0.00	16.65
95.00	1 5/8" Coax	Yes	5.00	0.000	3.96	2.58	0.00	0.136	1.109	5.856	0.00	188.33
95.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.136	1.109	5.856	0.00	41.38
95.00	1/2" Coax	Yes	5.00	0.000	0.50	1.13	0.00	0.136	1.109	5.856	0.00	11.49
100.00	Safety Cable	Yes	5.00	0.000	0.38	1.09	0.00	0.140	1.121	5.942	0.00	10.95
100.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.19	0.00	0.140	1.121	5.942	0.00	16.74
100.00	1 5/8" Coax	Yes	5.00	0.000	3.96	2.58	0.00	0.140	1.121	5.942	0.00	188.89
100.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.140	1.121	5.942	0.00	41.54
100.00	1/2" Coax	Yes	5.00	0.000	0.50	1.14	0.00	0.140	1.121	5.942	0.00	11.59
105.00	Safety Cable	Yes	5.00	0.000	0.38	1.09	0.00	0.145	1.134	6.026	0.00	11.03
105.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.20	0.00	0.145	1.134	6.026	0.00	16.83
105.00	1 5/8" Coax	Yes	5.00	0.000	3.96	2.59	0.00	0.145	1.134	6.026	0.00	189.43
105.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.145	1.134	6.026	0.00	41.70
105.00	1/2" Coax	Yes	5.00	0.000	0.50	1.14	0.00	0.145	1.134	6.026	0.00	11.67
110.00	Safety Cable	Yes	5.00	0.000	0.38	1.10	0.00	0.150	1.149	6.106	0.00	11.11
110.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.20	0.00	0.150	1.149	6.106	0.00	16.92
110.00	1 5/8" Coax	Yes	5.00	0.000	3.96	2.59	0.00	0.150	1.149	6.106	0.00	189.94
110.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.150	1.149	6.106	0.00	41.86
110.00	1/2" Coax	Yes	5.00	0.000	0.50	1.15	0.00	0.150	1.149	6.106	0.00	11.76
115.00	Safety Cable	Yes	5.00	0.000	0.38	1.10	0.00	0.155	1.164	6.184	0.00	11.19
115.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.21	0.00	0.155	1.164	6.184	0.00	17.00
115.00	1 5/8" Coax	Yes	5.00	0.000	3.96	2.59	0.00	0.155	1.164	6.184	0.00	190.44
115.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.155	1.164	6.184	0.00	42.00
115.00	1/2" Coax	Yes	5.00	0.000	0.50	1.15	0.00	0.155	1.164	6.184	0.00	11.84
120.00	Safety Cable	Yes	5.00	0.000	0.38	1.11	0.00	0.160	1.180	6.260	0.00	11.26
120.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.21	0.00	0.160	1.180	6.260	0.00	17.08
120.00	1 5/8" Coax	Yes	5.00	0.000	3.96	2.60	0.00	0.160	1.180	6.260	0.00	190.92
120.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.160	1.180	6.260	0.00	42.15
120.00	1/2" Coax	Yes	5.00	0.000	0.50	1.16	0.00	0.160	1.180	6.260	0.00	11.92
124.08	Safety Cable	Yes	4.08	0.000	0.38	0.91	0.00	0.165	1.195	6.320	0.00	9.25
124.08	Step bolts (ladder)	Yes	4.08	0.000	0.63	0.99	0.00	0.165	1.195	6.320	0.00	14.00
124.08	1 5/8" Coax	Yes	4.08	0.000	3.96	2.12	0.00	0.165	1.195	6.320	0.00	156.22
124.08	1 5/8" Fiber	Yes	4.08	0.000	0.00	0.00	0.00	0.165	1.195	6.320	0.00	34.51
124.08	1/2" Coax	Yes	4.08	0.000	0.50	0.95	0.00	0.165	1.195	6.320	0.00	9.79
125.00	Safety Cable	Yes	0.92	0.000	0.38	0.20	0.00	0.168	1.204	6.334	0.00	2.08

Linear Appurtenance Segment Forces (Factored)

Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



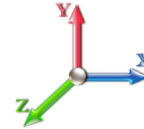
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Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Iterations 24

Dead Load Factor 1.20

Wind Load Factor 1.00



Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
125.00	Step bolts (ladder)	Yes	0.92	0.000	0.63	0.22	0.00	0.168	1.204	6.334	0.00	3.14
125.00	1 5/8" Coax	Yes	0.92	0.000	3.96	0.48	0.00	0.168	1.204	6.334	0.00	35.09
125.00	1 5/8" Fiber	Yes	0.92	0.000	0.00	0.00	0.00	0.168	1.204	6.334	0.00	7.75
125.00	1/2" Coax	Yes	0.92	0.000	0.50	0.21	0.00	0.168	1.204	6.334	0.00	2.20
129.00	Safety Cable	Yes	4.00	0.000	0.38	0.89	0.00	0.032	0.000	6.391	0.00	9.11
129.00	Step bolts (ladder)	Yes	4.00	0.000	0.63	0.97	0.00	0.032	0.000	6.391	0.00	13.77
130.00	Safety Cable	Yes	1.00	0.000	0.38	0.22	0.00	0.032	0.000	6.405	0.00	2.28
130.00	Step bolts (ladder)	Yes	1.00	0.000	0.63	0.24	0.00	0.032	0.000	6.405	0.00	3.45
135.00	Safety Cable	Yes	5.00	0.000	0.38	1.12	0.00	0.032	0.000	6.474	0.00	11.47
135.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.22	0.00	0.032	0.000	6.474	0.00	17.30
140.00	Safety Cable	Yes	5.00	0.000	0.38	1.12	0.00	0.034	0.000	6.542	0.00	11.54
140.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.23	0.00	0.034	0.000	6.542	0.00	17.37
145.00	Safety Cable	Yes	5.00	0.000	0.38	1.12	0.00	0.035	0.000	6.608	0.00	11.60
145.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.23	0.00	0.035	0.000	6.608	0.00	17.43
150.00	Safety Cable	Yes	5.00	0.000	0.38	1.13	0.00	0.037	0.000	6.672	0.00	11.66
150.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.23	0.00	0.037	0.000	6.672	0.00	17.50
152.50	Safety Cable	Yes	2.50	0.000	0.38	0.56	0.00	0.038	0.000	6.704	0.00	5.85
152.50	Step bolts (ladder)	Yes	2.50	0.000	0.63	0.62	0.00	0.038	0.000	6.704	0.00	8.77
155.00	Safety Cable	Yes	2.50	0.000	0.38	0.57	0.00	0.039	0.000	6.735	0.00	5.86
155.00	Step bolts (ladder)	Yes	2.50	0.000	0.63	0.62	0.00	0.039	0.000	6.735	0.00	8.78
160.00	Safety Cable	Yes	5.00	0.000	0.38	1.13	0.00	0.040	0.000	6.796	0.00	11.78
160.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.24	0.00	0.040	0.000	6.796	0.00	17.63
165.00	Safety Cable	Yes	5.00	0.000	0.38	1.14	0.00	0.042	0.000	6.856	0.00	11.84
165.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.24	0.00	0.042	0.000	6.856	0.00	17.69
Totals:											0.0	6,557.5

Calculated Forces

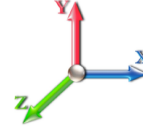
Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 35



Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Iterations 24

Dead Load Factor 1.20
Wind Load Factor 1.00



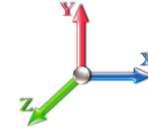
Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-98.48	-10.56	0.00	-1388.1	0.00	1388.13	6109.19	1631.76	7852.82	7187.37	0.00	0.000	0.000	0.209
5.00	-96.09	-10.50	0.00	-1335.3	0.00	1335.33	6042.67	1599.27	7543.22	6966.35	0.03	-0.049	0.000	0.208
10.00	-93.49	-10.44	0.00	-1282.8	0.00	1282.84	5973.91	1566.78	7239.84	6745.94	0.10	-0.099	0.000	0.206
15.00	-90.93	-10.38	0.00	-1230.6	0.00	1230.65	5902.91	1534.29	6942.70	6526.30	0.24	-0.150	0.000	0.204
20.00	-88.39	-10.32	0.00	-1178.7	0.00	1178.77	5829.67	1501.80	6651.77	6307.60	0.42	-0.202	0.000	0.202
25.00	-85.89	-10.26	0.00	-1127.1	0.00	1127.19	5754.19	1469.31	6367.08	6089.98	0.66	-0.255	0.000	0.200
30.00	-83.42	-10.18	0.00	-1075.9	0.00	1075.91	5676.47	1436.82	6088.61	5873.62	0.96	-0.309	0.000	0.198
32.83	-82.04	-10.13	0.00	-1047.0	0.00	1047.08	5631.44	1418.41	5933.57	5751.63	1.15	-0.341	0.000	0.197
35.00	-80.31	-10.12	0.00	-1025.1	0.00	1025.13	5596.51	1404.33	5816.37	5658.66	1.31	-0.366	0.000	0.196
40.00	-76.37	-10.03	0.00	-974.52	0.00	974.52	5104.93	1311.76	5413.18	5145.84	1.72	-0.422	0.000	0.204
45.00	-74.08	-9.95	0.00	-924.37	0.00	924.37	5033.50	1281.30	5164.70	4954.92	2.20	-0.479	0.000	0.201
50.00	-71.83	-9.86	0.00	-874.64	0.00	874.64	4959.83	1250.84	4922.07	4765.22	2.73	-0.538	0.000	0.198
55.00	-69.62	-9.76	0.00	-825.36	0.00	825.36	4883.92	1220.38	4685.27	4576.90	3.33	-0.598	0.000	0.195
60.00	-67.44	-9.66	0.00	-776.55	0.00	776.55	4805.76	1189.92	4454.32	4390.12	3.98	-0.658	0.000	0.191
65.00	-65.31	-9.56	0.00	-728.23	0.00	728.23	4725.37	1159.46	4229.19	4205.04	4.71	-0.720	0.000	0.187
70.00	-63.21	-9.45	0.00	-680.42	0.00	680.42	4642.74	1129.00	4009.91	4021.83	5.49	-0.782	0.000	0.183
75.00	-61.16	-9.33	0.00	-633.16	0.00	633.16	4557.87	1098.54	3796.46	3840.63	6.35	-0.844	0.000	0.178
77.92	-59.98	-9.26	0.00	-605.92	0.00	605.92	4507.27	1080.76	3674.51	3735.80	6.87	-0.882	0.000	0.176
80.00	-58.65	-9.21	0.00	-586.66	0.00	586.66	4470.76	1068.08	3588.85	3661.61	7.26	-0.909	0.000	0.173
84.00	-56.13	-9.08	0.00	-549.77	0.00	549.77	4079.95	996.52	3347.20	3342.88	8.05	-0.960	0.000	0.178
85.00	-55.74	-9.08	0.00	-540.72	0.00	540.72	4064.53	990.86	3309.24	3311.11	8.25	-0.973	0.000	0.177
90.00	-53.86	-8.96	0.00	-495.31	0.00	495.31	3985.82	962.43	3122.08	3152.82	9.30	-1.037	0.000	0.171
95.00	-52.01	-8.83	0.00	-450.51	0.00	450.51	3904.88	934.00	2940.36	2996.54	10.42	-1.100	0.000	0.164
100.00	-50.21	-8.70	0.00	-406.36	0.00	406.36	3803.39	905.57	2764.09	2828.81	11.61	-1.163	0.000	0.157
105.00	-48.44	-8.56	0.00	-362.86	0.00	362.86	3683.99	877.14	2593.26	2652.97	12.86	-1.225	0.000	0.150
110.00	-46.71	-8.42	0.00	-320.05	0.00	320.05	3564.59	848.71	2427.89	2482.78	14.18	-1.285	0.000	0.142
115.00	-45.03	-8.28	0.00	-277.92	0.00	277.92	3445.19	820.28	2267.96	2318.23	15.55	-1.344	0.000	0.133
120.00	-43.38	-8.13	0.00	-236.52	0.00	236.52	3325.79	791.86	2113.49	2159.32	16.99	-1.400	0.000	0.123
124.08	-42.07	-8.00	0.00	-203.31	0.00	203.31	3228.28	768.64	1991.37	2033.73	18.21	-1.443	0.000	0.113
125.00	-34.73	-6.79	0.00	-195.97	0.00	195.97	3206.39	763.43	1964.46	2006.05	18.49	-1.452	0.000	0.109
129.00	-33.21	-6.66	0.00	-168.82	0.00	168.82	1872.41	487.58	1246.47	1169.59	19.72	-1.492	0.000	0.162
130.00	-33.00	-6.66	0.00	-162.16	0.00	162.16	1864.30	483.92	1227.85	1155.72	20.03	-1.501	0.000	0.158
135.00	-27.89	-5.71	0.00	-128.87	0.00	128.87	1822.43	465.65	1136.86	1086.70	21.64	-1.565	0.000	0.134
140.00	-26.93	-5.59	0.00	-100.31	0.00	100.31	1778.31	447.37	1049.37	1018.38	23.31	-1.621	0.000	0.114
145.00	-19.67	-4.24	0.00	-72.34	0.00	72.34	1731.96	429.10	965.39	950.92	25.03	-1.668	0.000	0.088
150.00	-18.79	-4.11	0.00	-51.16	0.00	51.16	1683.36	410.82	884.91	884.47	26.80	-1.707	0.000	0.069
152.50	-17.80	-3.85	0.00	-40.89	0.00	40.89	1658.23	401.68	845.98	851.67	27.70	-1.723	0.000	0.059
155.00	-11.89	-2.36	0.00	-31.25	0.00	31.25	1632.53	392.54	807.93	819.19	28.61	-1.737	0.000	0.045
160.00	-11.17	-2.24	0.00	-19.43	0.00	19.43	1571.93	374.27	734.45	751.65	30.44	-1.758	0.000	0.033
165.00	-3.55	-0.86	0.00	-8.22	0.00	8.22	1495.17	355.99	664.47	679.62	32.29	-1.771	0.000	0.014
170.00	-2.97	-0.75	0.00	-3.92	0.00	3.92	1418.42	337.72	598.00	611.22	34.15	-1.778	0.000	0.009
175.00	-0.31	-0.06	0.00	-0.19	0.00	0.19	1341.66	319.44	535.03	546.45	36.01	-1.780	0.000	0.001
178.00	0.00	-0.05	0.00	0.00	0.00	0.00	1295.60	308.48	498.93	509.33	37.13	-1.780	0.000	0.000

Seismic Segment Forces (Factored)

Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.2D + 1.0Ev + 1.0Eh						Iterations 22
Gust Response Factor	1.10	Sds	0.20			Ss 0.19
Dead Load Factor	1.20	Seismic Load Factor	1.00	Sd1	0.09	S1 0.05
Wind Load Factor	0.00	Structure Frequency (f1)	0.26	SA	0.02	Seismic Importance Factor 1.00



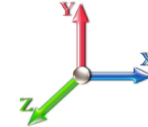
Top Elev (ft)	Description	Wz (lb)	Hz (lb)	Vertical Ev (lb)	Lateral Fs (lb)		R: 1.50
0.00		0.00	0.00	0.00	0.00		
5.00		1696.4	2.50	67.31	0.01		
10.00		1808.8	7.50	71.78	0.08		
15.00		1777.3	12.50	70.53	0.22		
20.00		1745.8	17.50	69.28	0.41		
25.00		1714.3	22.50	68.03	0.65		
30.00		1682.8	27.50	66.78	0.94		
32.83	Bot - Section 2	939.64	31.42	37.29	0.38		
35.00		1278.3	33.92	50.73	0.82		
40.00	Top - Section 1	2906.3	37.50	115.32	5.19		
45.00		1531.1	42.50	60.75	1.85		
50.00		1501.5	47.50	59.58	2.22		
55.00		1472.0	52.50	58.41	2.61		
60.00		1442.5	57.50	57.24	3.00		
65.00		1413.0	62.50	56.07	3.41		
70.00		1383.4	67.50	54.90	3.81		
75.00		1353.9	72.50	53.72	4.21		
77.92	Bot - Section 3	777.05	76.46	30.83	1.54		
80.00		960.82	78.96	38.13	2.51		
84.00	Top - Section 2	1821.4	82.00	72.28	9.74		
85.00		246.68	84.50	9.79	0.19		
90.00		1221.0	87.50	48.45	4.98		
95.00		1193.4	92.50	47.36	5.32		
100.00		1165.8	97.50	46.26	5.64		
105.00		1138.3	102.50	45.17	5.94		
110.00		1110.7	107.50	44.07	6.23		
115.00		1083.2	112.50	42.98	6.48		
120.00		1055.6	117.50	41.89	6.72		
124.08	Bot - Section 4	841.66	122.04	33.40	4.61		
125.00	Appurtenance(s)	3573.5	124.54	141.80	86.49		
129.00	Top - Section 3	1120.2	127.00	44.45	8.84		
130.00		132.46	129.50	5.26	0.13		
135.00	Appurtenance(s)	3010.7	132.50	119.47	69.48		
140.00		627.96	137.50	24.92	3.26		
145.00	Appurtenance(s)	4273.9	142.50	169.59	161.96		
150.00		569.63	147.50	22.60	3.08		
152.50	Appurtenance(s)	766.97	151.25	30.43	5.88		
155.00	Appurtenance(s)	3685.5	153.75	146.24	140.20		
160.00		443.41	157.50	17.59	2.13		
165.00	Appurtenance(s)	4145.2	162.50	164.48	198.11		
170.00		336.26	167.50	13.34	1.39		
175.00	Appurtenance(s)	1710.5	172.50	67.87	38.02		
178.00		182.62	176.50	7.25	0.45		
Totals:		62,842.7		2,493.6	809.1	Total Wind:	46,815.2

Calculated Forces

Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.2D + 1.0Ev + 1.0Eh										Iterations 22
Gust Response Factor 1.10					Sds 0.20					Ss 0.19
Dead Load Factor 1.20			Seismic Load Factor 1.00			Sd1 0.09		S1 0.05		
Wind Load Factor 0.00		Structure Frequency (f1) 0.26		SA 0.02		Seismic Importance Factor 1.00				



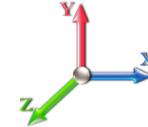
Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-76.32	-0.81	0.00	-124.16	0.00	124.16	6109.19	1631.76	7852.82	7187.37	0.00	0.00	0.00	0.030
5.00	-74.24	-0.82	0.00	-120.10	0.00	120.10	6042.67	1599.27	7543.22	6966.35	0.00	0.00	0.00	0.030
10.00	-72.05	-0.82	0.00	-116.01	0.00	116.01	5973.91	1566.78	7239.84	6745.94	0.01	-0.01	0.029	0.029
15.00	-69.90	-0.83	0.00	-111.90	0.00	111.90	5902.91	1534.29	6942.70	6526.30	0.02	-0.01	0.029	0.029
20.00	-67.80	-0.83	0.00	-107.76	0.00	107.76	5829.67	1501.80	6651.77	6307.60	0.04	-0.02	0.029	0.029
25.00	-65.72	-0.84	0.00	-103.60	0.00	103.60	5754.19	1469.31	6367.08	6089.98	0.06	-0.02	0.028	0.028
30.00	-63.69	-0.84	0.00	-99.42	0.00	99.42	5676.47	1436.82	6088.61	5873.62	0.09	-0.03	0.028	0.028
32.83	-62.56	-0.84	0.00	-97.04	0.00	97.04	5631.44	1418.41	5933.57	5751.63	0.10	-0.03	0.028	0.028
35.00	-61.00	-0.84	0.00	-95.22	0.00	95.22	5596.51	1404.33	5816.37	5658.66	0.12	-0.03	0.028	0.028
40.00	-57.45	-0.84	0.00	-91.00	0.00	91.00	5104.93	1311.76	5413.18	5145.84	0.16	-0.04	0.029	0.029
45.00	-55.61	-0.84	0.00	-86.79	0.00	86.79	5033.50	1281.30	5164.70	4954.92	0.20	-0.04	0.029	0.029
50.00	-53.80	-0.85	0.00	-82.58	0.00	82.58	4959.83	1250.84	4922.07	4765.22	0.25	-0.05	0.028	0.028
55.00	-52.03	-0.85	0.00	-78.35	0.00	78.35	4883.92	1220.38	4685.27	4576.90	0.30	-0.06	0.028	0.028
60.00	-50.30	-0.85	0.00	-74.12	0.00	74.12	4805.76	1189.92	4454.32	4390.12	0.36	-0.06	0.027	0.027
65.00	-48.60	-0.85	0.00	-69.89	0.00	69.89	4725.37	1159.46	4229.19	4205.04	0.43	-0.07	0.027	0.027
70.00	-46.94	-0.85	0.00	-65.66	0.00	65.66	4642.74	1129.00	4009.91	4021.83	0.50	-0.07	0.026	0.026
75.00	-45.32	-0.84	0.00	-61.44	0.00	61.44	4557.87	1098.54	3796.46	3840.63	0.58	-0.08	0.026	0.026
77.92	-44.38	-0.84	0.00	-58.97	0.00	58.97	4507.27	1080.76	3674.51	3735.80	0.63	-0.08	0.026	0.026
80.00	-43.22	-0.84	0.00	-57.22	0.00	57.22	4470.76	1068.08	3588.85	3661.61	0.67	-0.09	0.025	0.025
84.00	-41.00	-0.83	0.00	-53.86	0.00	53.86	4079.95	996.52	3347.20	3342.88	0.74	-0.09	0.026	0.026
85.00	-40.71	-0.83	0.00	-53.03	0.00	53.03	4064.53	990.86	3309.24	3311.11	0.76	-0.09	0.026	0.026
90.00	-39.25	-0.83	0.00	-48.87	0.00	48.87	3985.82	962.43	3122.08	3152.82	0.86	-0.10	0.025	0.025
95.00	-37.82	-0.83	0.00	-44.72	0.00	44.72	3904.88	934.00	2940.36	2996.54	0.97	-0.10	0.025	0.025
100.00	-36.43	-0.82	0.00	-40.60	0.00	40.60	3803.39	905.57	2764.09	2828.81	1.08	-0.11	0.024	0.024
105.00	-35.08	-0.82	0.00	-36.49	0.00	36.49	3683.99	877.14	2593.26	2652.97	1.20	-0.12	0.023	0.023
110.00	-33.75	-0.81	0.00	-32.41	0.00	32.41	3564.59	848.71	2427.89	2482.78	1.32	-0.12	0.023	0.023
115.00	-32.47	-0.80	0.00	-28.36	0.00	28.36	3445.19	820.28	2267.96	2318.23	1.45	-0.13	0.022	0.022
120.00	-31.21	-0.80	0.00	-24.34	0.00	24.34	3325.79	791.86	2113.49	2159.32	1.59	-0.13	0.021	0.021
124.08	-30.21	-0.79	0.00	-21.08	0.00	21.08	3228.28	768.64	1991.37	2033.73	1.71	-0.14	0.020	0.020
125.00	-25.79	-0.70	0.00	-20.35	0.00	20.35	3206.39	763.43	1964.46	2006.05	1.74	-0.14	0.018	0.018
129.00	-24.44	-0.69	0.00	-17.57	0.00	17.57	1872.41	487.58	1246.47	1169.59	1.85	-0.14	0.028	0.028
130.00	-24.28	-0.69	0.00	-16.88	0.00	16.88	1864.30	483.92	1227.85	1155.72	1.88	-0.14	0.028	0.028
135.00	-20.59	-0.61	0.00	-13.45	0.00	13.45	1822.43	465.65	1136.86	1086.70	2.04	-0.15	0.024	0.024
140.00	-19.84	-0.61	0.00	-10.40	0.00	10.40	1778.31	447.37	1049.37	1018.38	2.20	-0.16	0.021	0.021
145.00	-14.58	-0.43	0.00	-7.37	0.00	7.37	1731.96	429.10	965.39	950.92	2.37	-0.16	0.016	0.016
150.00	-13.91	-0.43	0.00	-5.21	0.00	5.21	1683.36	410.82	884.91	884.47	2.54	-0.17	0.014	0.014
152.50	-12.97	-0.42	0.00	-4.15	0.00	4.15	1658.23	401.68	845.98	851.67	2.63	-0.17	0.013	0.013
155.00	-8.42	-0.26	0.00	-3.10	0.00	3.10	1632.53	392.54	807.93	819.19	2.72	-0.17	0.009	0.009
160.00	-7.89	-0.26	0.00	-1.78	0.00	1.78	1571.93	374.27	734.45	751.65	2.89	-0.17	0.007	0.007
165.00	-2.76	-0.05	0.00	-0.47	0.00	0.47	1495.17	355.99	664.47	679.62	3.07	-0.17	0.003	0.003
170.00	-2.35	-0.05	0.00	-0.23	0.00	0.23	1418.42	337.72	598.00	611.22	3.25	-0.17	0.002	0.002
175.00	-0.23	0.00	0.00	0.00	0.00	0.00	1341.66	319.44	535.03	546.45	3.44	-0.17	0.000	0.000
178.00	0.00	0.00	0.00	0.00	0.00	0.00	1295.60	308.48	498.93	509.33	3.54	-0.17	0.000	0.000

Seismic Segment Forces (Factored)

Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 0.9D + 1.0Ev + 1.0Eh						Iterations 21
Gust Response Factor	1.10	Sds	0.20			Ss 0.19
Dead Load Factor	0.90	Seismic Load Factor	1.00	Sd1	0.09	S1 0.05
Wind Load Factor	0.00	Structure Frequency (f1)	0.26	SA	0.02	Seismic Importance Factor 1.00



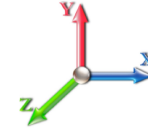
Top Elev (ft)	Description	Wz (lb)	Hz (lb)	Vertical Ev (lb)	Lateral Fs (lb)	
0.00		0.00	0.00	0.00	0.00	
5.00		1663.8	2.50	66.02	0.01	
10.00		1740.3	7.50	69.06	0.08	
15.00		1708.8	12.50	67.81	0.20	
20.00		1677.3	17.50	66.56	0.39	
25.00		1645.8	22.50	65.31	0.61	
30.00		1614.3	27.50	64.06	0.88	
32.83	Bot - Section 2	900.80	31.42	35.74	0.36	
35.00		1248.6	33.92	49.55	0.80	
40.00	Top - Section 1	2837.7	37.50	112.60	5.07	
45.00		1462.5	42.50	58.03	1.73	
50.00		1433.0	47.50	56.86	2.08	
55.00		1403.5	52.50	55.69	2.43	
60.00		1373.9	57.50	54.52	2.80	
65.00		1344.4	62.50	53.35	3.16	
70.00		1314.9	67.50	52.18	3.53	
75.00		1285.4	72.50	51.00	3.89	
77.92	Bot - Section 3	737.01	76.46	29.24	1.42	
80.00		932.31	78.96	36.99	2.43	
84.00	Top - Section 2	1766.5	82.00	70.10	9.40	
85.00		233.02	84.50	9.25	0.17	
90.00		1152.4	87.50	45.73	4.55	
95.00		1124.8	92.50	44.64	4.85	
100.00		1097.3	97.50	43.54	5.13	
105.00		1069.7	102.50	42.45	5.39	
110.00		1042.2	107.50	41.35	5.62	
115.00		1014.6	112.50	40.26	5.84	
120.00		987.09	117.50	39.17	6.03	
124.08	Bot - Section 4	785.68	122.04	31.18	4.12	
125.00	Appurtenance(s)	3561.0	124.54	141.30	88.10	
129.00	Top - Section 3	1081.9	127.00	42.93	8.46	
130.00		122.89	129.50	4.88	0.11	
135.00	Appurtenance(s)	2962.8	132.50	117.57	69.03	
140.00		581.61	137.50	23.08	2.86	
145.00	Appurtenance(s)	4227.6	142.50	167.75	162.55	
150.00		529.00	147.50	20.99	2.73	
152.50	Appurtenance(s)	746.66	151.25	29.63	5.71	
155.00	Appurtenance(s)	3665.2	153.75	145.44	142.23	
160.00		425.48	157.50	16.88	2.01	
165.00	Appurtenance(s)	4127.2	162.50	163.77	201.47	
170.00		336.26	167.50	13.34	1.42	
175.00	Appurtenance(s)	1710.5	172.50	67.87	39.00	
178.00		182.62	176.50	7.25	0.47	
Totals:		60,859.5		2,414.9	809.1	Total Wind: 46,815.2

Calculated Forces

Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 0.9D + 1.0Ev + 1.0Eh						Iterations 21
Gust Response Factor	1.10		Sds	0.20		Ss 0.19
Dead Load Factor	0.90	Seismic Load Factor	1.00	Sd1	0.09	S1 0.05
Wind Load Factor	0.00	Structure Frequency (f1)	0.26	SA	0.02	Seismic Importance Factor 1.00



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-57.78	-0.81	0.00	-122.41	0.00	122.41	6109.19	1631.76	7852.82	7187.37	0.00	0.00	0.00	0.026
5.00	-56.21	-0.81	0.00	-118.36	0.00	118.36	6042.67	1599.27	7543.22	6966.35	0.00	0.00	0.00	0.026
10.00	-54.55	-0.82	0.00	-114.29	0.00	114.29	5973.91	1566.78	7239.84	6745.94	0.01	-0.01	0.00	0.026
15.00	-52.93	-0.82	0.00	-110.20	0.00	110.20	5902.91	1534.29	6942.70	6526.30	0.02	-0.01	0.00	0.026
20.00	-51.33	-0.83	0.00	-106.09	0.00	106.09	5829.67	1501.80	6651.77	6307.60	0.04	-0.02	0.00	0.026
25.00	-49.76	-0.83	0.00	-101.97	0.00	101.97	5754.19	1469.31	6367.08	6089.98	0.06	-0.02	0.00	0.025
30.00	-48.23	-0.83	0.00	-97.82	0.00	97.82	5676.47	1436.82	6088.61	5873.62	0.09	-0.03	0.00	0.025
32.83	-47.37	-0.83	0.00	-95.47	0.00	95.47	5631.44	1418.41	5933.57	5751.63	0.10	-0.03	0.00	0.025
35.00	-46.19	-0.83	0.00	-93.67	0.00	93.67	5596.51	1404.33	5816.37	5658.66	0.12	-0.03	0.00	0.025
40.00	-43.50	-0.83	0.00	-89.51	0.00	89.51	5104.93	1311.76	5413.18	5145.84	0.15	-0.04	0.00	0.026
45.00	-42.10	-0.83	0.00	-85.35	0.00	85.35	5033.50	1281.30	5164.70	4954.92	0.20	-0.04	0.00	0.026
50.00	-40.74	-0.83	0.00	-81.20	0.00	81.20	4959.83	1250.84	4922.07	4765.22	0.25	-0.05	0.00	0.025
55.00	-39.40	-0.83	0.00	-77.04	0.00	77.04	4883.92	1220.38	4685.27	4576.90	0.30	-0.05	0.00	0.025
60.00	-38.09	-0.83	0.00	-72.88	0.00	72.88	4805.76	1189.92	4454.32	4390.12	0.36	-0.06	0.00	0.025
65.00	-36.80	-0.83	0.00	-68.72	0.00	68.72	4725.37	1159.46	4229.19	4205.04	0.42	-0.07	0.00	0.024
70.00	-35.54	-0.83	0.00	-64.56	0.00	64.56	4642.74	1129.00	4009.91	4021.83	0.50	-0.07	0.00	0.024
75.00	-34.32	-0.83	0.00	-60.41	0.00	60.41	4557.87	1098.54	3796.46	3840.63	0.57	-0.08	0.00	0.023
77.92	-33.61	-0.83	0.00	-57.99	0.00	57.99	4507.27	1080.76	3674.51	3735.80	0.62	-0.08	0.00	0.023
80.00	-32.73	-0.83	0.00	-56.27	0.00	56.27	4470.76	1068.08	3588.85	3661.61	0.66	-0.08	0.00	0.023
84.00	-31.05	-0.81	0.00	-52.97	0.00	52.97	4079.95	996.52	3347.20	3342.88	0.73	-0.09	0.00	0.023
85.00	-30.83	-0.82	0.00	-52.16	0.00	52.16	4064.53	990.86	3309.24	3311.11	0.75	-0.09	0.00	0.023
90.00	-29.72	-0.81	0.00	-48.08	0.00	48.08	3985.82	962.43	3122.08	3152.82	0.85	-0.10	0.00	0.023
95.00	-28.65	-0.81	0.00	-44.01	0.00	44.01	3904.88	934.00	2940.36	2996.54	0.95	-0.10	0.00	0.022
100.00	-27.59	-0.81	0.00	-39.96	0.00	39.96	3803.39	905.57	2764.09	2828.81	1.06	-0.11	0.00	0.021
105.00	-26.57	-0.80	0.00	-35.93	0.00	35.93	3683.99	877.14	2593.26	2652.97	1.18	-0.11	0.00	0.021
110.00	-25.57	-0.80	0.00	-31.93	0.00	31.93	3564.59	848.71	2427.89	2482.78	1.30	-0.12	0.00	0.020
115.00	-24.59	-0.79	0.00	-27.95	0.00	27.95	3445.19	820.28	2267.96	2318.23	1.43	-0.13	0.00	0.019
120.00	-23.65	-0.78	0.00	-23.99	0.00	23.99	3325.79	791.86	2113.49	2159.32	1.57	-0.13	0.00	0.018
124.08	-22.89	-0.78	0.00	-20.79	0.00	20.79	3228.28	768.64	1991.37	2033.73	1.68	-0.14	0.00	0.017
125.00	-19.54	-0.68	0.00	-20.08	0.00	20.08	3206.39	763.43	1964.46	2006.05	1.71	-0.14	0.00	0.016
129.00	-18.51	-0.67	0.00	-17.34	0.00	17.34	1872.41	487.58	1246.47	1169.59	1.82	-0.14	0.00	0.025
130.00	-18.39	-0.68	0.00	-16.66	0.00	16.66	1864.30	483.92	1227.85	1155.72	1.85	-0.14	0.00	0.024
135.00	-15.60	-0.60	0.00	-13.29	0.00	13.29	1822.43	465.65	1136.86	1086.70	2.01	-0.15	0.00	0.021
140.00	-15.04	-0.60	0.00	-10.28	0.00	10.28	1778.31	447.37	1049.37	1018.38	2.17	-0.15	0.00	0.019
145.00	-11.05	-0.43	0.00	-7.29	0.00	7.29	1731.96	429.10	965.39	950.92	2.33	-0.16	0.00	0.014
150.00	-10.54	-0.42	0.00	-5.16	0.00	5.16	1683.36	410.82	884.91	884.47	2.50	-0.16	0.00	0.012
152.50	-9.83	-0.41	0.00	-4.11	0.00	4.11	1658.23	401.68	845.98	851.67	2.59	-0.17	0.00	0.011
155.00	-6.38	-0.26	0.00	-3.07	0.00	3.07	1632.53	392.54	807.93	819.19	2.67	-0.17	0.00	0.008
160.00	-5.98	-0.26	0.00	-1.76	0.00	1.76	1571.93	374.27	734.45	751.65	2.85	-0.17	0.00	0.006
165.00	-2.09	-0.05	0.00	-0.46	0.00	0.46	1495.17	355.99	664.47	679.62	3.03	-0.17	0.00	0.002
170.00	-1.78	-0.04	0.00	-0.23	0.00	0.23	1418.42	337.72	598.00	611.22	3.20	-0.17	0.00	0.002
175.00	-0.17	0.00	0.00	0.00	0.00	0.00	1341.66	319.44	535.03	546.45	3.38	-0.17	0.00	0.000
178.00	0.00	0.00	0.00	0.00	0.00	0.00	1295.60	308.48	498.93	509.33	3.49	-0.17	0.00	0.000

Wind Loading - Shaft

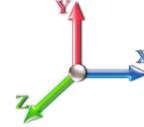
Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 40



Load Case: 1.0D + 1.0W 60 mph Wind

Iterations 24

Dead Load Factor 1.00
Wind Load Factor 1.00



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	5.423	5.97	250.88	0.950	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	5.423	5.97	245.93	0.950	0.000	5.00	24.879	23.64	141.0	0.0	1566.2
10.00		1.00	0.70	5.423	5.97	240.98	0.950	0.000	5.00	24.383	23.16	138.2	0.0	1534.7
15.00		1.00	0.70	5.423	5.97	236.02	0.950	0.000	5.00	23.887	22.69	135.4	0.0	1503.2
20.00		1.00	0.70	5.423	5.97	231.07	0.950	0.000	5.00	23.391	22.22	132.6	0.0	1471.7
25.00		1.00	0.70	5.423	5.97	226.12	0.950	0.000	5.00	22.895	21.75	129.8	0.0	1440.2
30.00		1.00	0.70	5.428	5.97	221.26	0.955*	0.000	5.00	22.399	21.39	127.7	0.0	1408.7
32.83	Bot - Section 2	1.00	0.72	5.570	6.13	221.29	0.960*	0.000	2.83	12.473	11.98	73.4	0.0	784.3
35.00		1.00	0.73	5.672	6.24	221.12	0.963*	0.000	2.17	9.606	9.25	57.7	0.0	1159.5
40.00	Top - Section 1	1.00	0.76	5.893	6.48	220.22	0.968*	0.000	5.00	21.811	21.12	136.9	0.0	2632.1
45.00		1.00	0.79	6.094	6.70	222.99	0.970*	0.000	5.00	21.315	20.67	138.6	0.0	1256.9
50.00		1.00	0.81	6.281	6.91	221.04	0.977*	0.000	5.00	20.819	20.34	140.5	0.0	1227.4
55.00		1.00	0.83	6.454	7.10	218.67	0.985*	0.000	5.00	20.323	20.01	142.1	0.0	1197.9
60.00		1.00	0.85	6.617	7.28	215.93	0.993*	0.000	5.00	19.827	19.68	143.2	0.0	1168.3
65.00		1.00	0.87	6.770	7.45	212.88	1.001*	0.000	5.00	19.331	19.35	144.1	0.0	1138.8
70.00		1.00	0.89	6.914	7.61	209.55	1.010*	0.000	5.00	18.835	19.02	144.7	0.0	1109.3
75.00		1.00	0.91	7.052	7.76	205.98	1.019*	0.000	5.00	18.339	18.69	145.0	0.0	1079.8
77.92	Bot - Section 3	1.00	0.92	7.130	7.84	203.79	1.027*	0.000	2.92	10.481	10.76	84.4	0.0	616.9
80.00		1.00	0.93	7.183	7.90	202.19	1.032*	0.000	2.08	7.520	7.76	61.3	0.0	846.8
84.00	Top - Section 2	1.00	0.94	7.284	8.01	199.01	1.038*	0.000	4.00	14.231	14.78	118.4	0.0	1601.9
85.00		1.00	0.94	7.309	8.04	202.57	1.036*	0.000	1.00	3.494	3.62	29.1	0.0	192.0
90.00		1.00	0.96	7.429	8.17	198.44	1.042*	0.000	5.00	17.229	17.95	146.7	0.0	946.8
95.00		1.00	0.97	7.545	8.30	194.14	1.053*	0.000	5.00	16.733	17.62	146.3	0.0	919.2
100.00		1.00	0.99	7.656	8.42	189.68	1.065*	0.000	5.00	16.237	17.29	145.6	0.0	891.7
105.00		1.00	1.00	7.764	8.54	185.08	1.078*	0.000	5.00	15.741	16.96	144.9	0.0	864.1
110.00		1.00	1.02	7.868	8.65	180.35	1.091*	0.000	5.00	15.245	16.63	144.0	0.0	836.6
115.00		1.00	1.03	7.968	8.76	175.50	1.105*	0.000	5.00	14.749	16.30	142.9	0.0	809.0
120.00		1.00	1.04	8.066	8.87	170.53	1.121*	0.000	5.00	14.253	15.97	141.7	0.0	781.4
124.08	Bot - Section 4	1.00	1.05	8.143	8.96	166.39	1.136*	0.000	4.08	11.272	12.80	114.7	0.0	617.7
125.00	Appurtenance(s)	1.00	1.05	8.160	8.98	165.45	1.144*	0.000	0.92	2.529	2.89	26.0	0.0	225.7
129.00	Top - Section 3	1.00	1.06	8.234	9.06	161.31	0.950	0.000	4.00	10.842	10.30	93.3	0.0	967.1
130.00		1.00	1.07	8.252	9.08	163.26	0.950	0.000	1.00	2.661	2.53	22.9	0.0	94.2
135.00	Appurtenance(s)	1.00	1.08	8.342	9.18	158.00	0.950	0.000	5.00	13.007	12.36	113.4	0.0	460.3
140.00		1.00	1.09	8.429	9.27	152.65	0.950	0.000	5.00	12.511	11.89	110.2	0.0	442.6
145.00	Appurtenance(s)	1.00	1.10	8.514	9.37	147.21	0.950	0.000	5.00	12.015	11.41	106.9	0.0	424.8
150.00		1.00	1.11	8.597	9.46	141.69	0.950	0.000	5.00	11.519	10.94	103.5	0.0	407.1
152.50	Appurtenance(s)	1.00	1.11	8.637	9.50	138.90	0.950	0.000	2.50	5.574	5.29	50.3	0.0	196.9
155.00	Appurtenance(s)	1.00	1.12	8.678	9.55	136.09	0.950	0.000	2.50	5.450	5.18	49.4	0.0	192.5
160.00		1.00	1.13	8.757	9.63	130.42	0.950	0.000	5.00	10.527	10.00	96.3	0.0	371.7
165.00	Appurtenance(s)	1.00	1.14	8.834	9.72	124.67	0.950	0.000	5.00	10.031	9.53	92.6	0.0	354.0
170.00		1.00	1.15	8.910	9.80	118.85	0.950	0.000	5.00	9.535	9.06	88.8	0.0	336.3
175.00	Appurtenance(s)	1.00	1.16	8.984	9.88	112.97	0.950	0.000	5.00	9.039	8.59	84.9	0.0	318.5
178.00		1.00	1.17	9.027	9.93	109.41	0.950	0.000	3.00	5.185	4.93	48.9	0.0	182.6
Totals:									178.00			4,578.1		36,577.3

* Cf Adjusted by Linear Load Ra Effect

Discrete Appurtenance Forces

Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.0D + 1.0W 60 mph Wind	Iterations 24
Dead Load Factor 1.00	
Wind Load Factor 1.00	

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	175.00	Exposed Mount Pipes	9	8.984	9.882	0.90	0.90	15.39	270.00	0.000	0.000	152.09	0.00	0.00
2	175.00	Abandoned Mount	1	8.984	9.882	1.00	1.00	28.50	1122.00	0.000	0.000	281.64	0.00	0.00
3	165.00	Kathrein 782 11056	3	8.834	9.717	0.58	0.75	0.23	5.40	0.000	0.000	2.22	0.00	0.00
4	165.00	Reinf. Kit (SitePro1)	3	8.834	9.717	0.75	1.00	7.88	285.00	0.000	0.000	76.52	0.00	0.00
5	165.00	Ericsson AIR6419 B41	3	8.834	9.717	0.57	0.75	6.50	198.30	0.000	0.000	63.14	0.00	0.00
6	165.00	Ericsson 4460 B25 + B66	3	8.834	9.717	0.50	0.75	4.30	327.00	0.000	0.000	41.75	0.00	0.00
7	165.00	Platform w/ Hand Rails	1	8.834	9.717	1.00	1.00	40.00	2000.00	0.000	0.000	388.69	0.00	0.00
8	165.00	RFS	3	8.834	9.717	0.52	0.75	31.88	368.40	0.000	0.000	309.77	0.00	0.00
9	165.00	Ericsson KRY 112 489/2	6	8.834	9.717	0.50	0.75	1.96	92.40	0.000	0.000	19.04	0.00	0.00
10	165.00	Ericsson 4449 B71 + B85	3	8.834	9.717	0.50	0.75	2.97	213.00	0.000	0.000	28.86	0.00	0.00
11	165.00	(3) SFS-H-L (V-Braces)	1	8.834	9.717	1.00	1.00	6.70	230.00	0.000	0.000	65.11	0.00	0.00
12	155.00	PRK-1245 (kicker kit)	1	8.678	9.545	1.00	1.00	9.50	464.91	0.000	0.000	90.68	0.00	0.00
13	155.00	(3) 12.5' - 2" Horizontal	3	8.678	9.545	1.00	1.00	17.81	411.75	0.000	0.000	170.03	0.00	0.00
14	155.00	Cci OPA65R-BU8DA	4	8.678	9.545	0.65	0.75	29.59	306.00	0.000	0.000	282.47	0.00	0.00
15	155.00	(3) Stabilizer Kit (12' FW)	1	8.678	9.545	1.00	1.00	6.10	180.00	0.000	0.000	58.23	0.00	0.00
16	155.00	Platform w/ Hand Rails	1	8.678	9.545	1.00	1.00	28.50	1122.00	0.000	0.000	272.04	0.00	0.00
17	155.00	Nokia CS72188.01 LMU	1	8.678	9.545	1.00	1.00	0.17	0.31	0.000	0.000	1.62	0.00	0.00
18	155.00	Cci OPA65R-BU4DA	2	8.678	9.545	0.53	0.75	8.99	105.00	0.000	0.000	85.80	0.00	0.00
19	155.00	Ericsson 4449 B5/B12	3	8.678	9.545	0.65	0.75	3.81	213.00	0.000	0.000	36.39	0.00	0.00
20	155.00	Ericsson 8843 B2/B66A	3	8.678	9.545	0.65	0.75	3.35	216.00	0.000	0.000	31.95	0.00	0.00
21	155.00	Raycap DC6-48-60-18-8F	1	8.678	9.545	0.75	0.75	1.65	32.80	0.000	0.000	15.75	0.00	0.00
22	155.00	Exposed Mount Pipes	12	8.678	9.545	0.75	0.75	13.77	360.00	0.000	0.000	131.44	0.00	0.00
23	152.50	Ericsson RRUS11 RRUs	6	8.637	9.501	0.60	0.90	11.79	306.00	0.000	0.000	112.06	0.00	0.00
24	152.50	Ring Mount (Part No	1	8.637	9.501	1.00	1.00	5.00	150.00	0.000	0.000	47.51	0.00	0.00
25	152.50	Raycap DC2-48-60-18-8F	1	8.637	9.501	0.90	0.90	1.32	32.80	0.000	0.000	12.57	0.00	0.00
26	145.00	Exposed Mount Pipes	12	8.514	9.365	0.75	0.75	14.13	360.00	0.000	0.000	132.33	0.00	0.00
27	145.00	ALU 800 Mhz- RRUs	6	8.514	9.365	0.50	0.75	7.51	318.00	0.000	0.000	70.31	0.00	0.00
28	145.00	ALU 1900 Mhz- RRUs	3	8.514	9.365	0.50	0.75	4.18	180.00	0.000	0.000	39.11	0.00	0.00
29	145.00	PRK-1245 (kicker kit)	1	8.514	9.365	1.00	1.00	9.50	464.91	0.000	0.000	88.97	0.00	0.00
30	145.00	(3) SFS-H-L (V-Braces)	1	8.514	9.365	1.00	1.00	6.70	230.00	0.000	0.000	62.75	0.00	0.00
31	145.00	NNVV-65B-R4	3	8.514	9.365	0.55	0.75	20.43	232.20	0.000	0.000	191.33	0.00	0.00
32	145.00	APXVTM14-C-I20	3	8.514	9.365	0.58	0.75	10.98	168.60	0.000	0.000	102.87	0.00	0.00
33	145.00	Platform w/ Hand Rails	1	8.514	9.365	1.00	1.00	28.50	1500.00	0.000	0.000	266.91	0.00	0.00
34	145.00	ALU TD-RRH8x20-25-	3	8.514	9.365	0.50	0.75	6.11	210.00	0.000	0.000	57.18	0.00	0.00
35	135.00	Fujitsu TA08025-B605	3	8.342	9.176	0.50	0.75	2.95	225.00	0.000	0.000	27.11	0.00	0.00
36	135.00	JMA Wireless	3	8.342	9.176	0.55	0.75	20.80	193.50	0.000	0.000	190.82	0.00	0.00
37	135.00	Platform w/ Handrails	1	8.342	9.176	1.00	1.00	37.59	1727.00	0.000	0.000	344.92	0.00	0.00
38	135.00	Raycap	1	8.342	9.176	1.00	1.00	2.01	21.85	0.000	0.000	18.44	0.00	0.00
39	135.00	Fujitsu TA08025-B604	3	8.342	9.176	0.50	0.75	2.95	191.70	0.000	0.000	27.11	0.00	0.00
40	125.00	Samsung RF4439d-25A	3	8.160	8.976	0.50	0.75	2.20	224.10	0.000	0.000	19.76	0.00	0.00
41	125.00	Lucent KS-24019-GPS	1	8.179	8.997	1.00	1.00	1.00	4.00	0.000	1.000	9.00	0.00	9.00
42	125.00	Low Profile Platform	1	8.160	8.976	1.00	1.00	25.00	1200.00	0.000	0.000	224.41	0.00	0.00
43	125.00	JMA Wireless	6	8.160	8.976	0.65	0.75	38.64	360.00	0.000	0.000	346.85	0.00	0.00
44	125.00	Samsung MT6407-77A	3	8.160	8.976	0.52	0.75	7.39	261.30	0.000	0.000	66.31	0.00	0.00
45	125.00	Handrail Kit (P2 1/2 STD)	1	8.160	8.976	1.00	1.00	6.75	261.72	0.000	0.000	60.59	0.00	0.00
46	125.00	Samsung RF4440d-13A	3	8.160	8.976	0.50	0.75	2.20	210.99	0.000	0.000	19.76	0.00	0.00
47	125.00	VZWSMART	1	8.160	8.976	1.00	1.00	9.50	464.91	0.000	0.000	85.27	0.00	0.00

Discrete Appurtenance Forces

Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 42



48	125.00	VZWSMART	1	8.160	8.976	1.00	1.00	2.50	150.60	0.000	0.000	22.44	0.00	0.00
49	125.00	Antel	6	8.160	8.976	0.56	0.75	8.73	72.00	0.000	0.000	78.33	0.00	0.00
50	125.00	RFS DB-T1-6Z-8AB-OZ	2	8.160	8.976	0.80	0.80	6.56	88.00	0.000	0.000	58.88	0.00	0.00

Totals:	18,332.45	5,389.11
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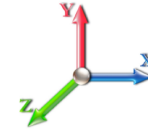
Total Applied Force Summary

Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 43



Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 24

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		141.00	1674.70	0.00	0.00
10.00		138.18	1763.16	0.00	0.00
15.00		135.37	1731.66	0.00	0.00
20.00		132.56	1700.16	0.00	0.00
25.00		129.75	1668.67	0.00	0.00
30.00		127.72	1637.17	0.00	0.00
32.83		73.37	913.75	0.00	0.00
35.00		57.74	1258.56	0.00	0.00
40.00		136.92	2860.63	0.00	0.00
45.00		138.57	1485.42	0.00	0.00
50.00		140.53	1455.89	0.00	0.00
55.00		142.07	1426.36	0.00	0.00
60.00		143.24	1396.83	0.00	0.00
65.00		144.10	1367.30	0.00	0.00
70.00		144.67	1337.77	0.00	0.00
75.00		144.99	1308.25	0.00	0.00
77.92		84.41	750.36	0.00	0.00
80.00		61.32	941.81	0.00	0.00
84.00		118.41	1784.88	0.00	0.00
85.00		29.09	237.57	0.00	0.00
90.00		146.71	1175.30	0.00	0.00
95.00		146.26	1147.74	0.00	0.00
100.00		145.64	1120.18	0.00	0.00
105.00		144.87	1092.62	0.00	0.00
110.00		143.95	1065.06	0.00	0.00
115.00		142.90	1037.50	0.00	0.00
120.00		141.72	1009.94	0.00	0.00
124.08		114.66	804.34	0.00	0.00
125.00	(28) attachments	1017.58	3565.21	0.00	9.00
129.00		93.29	1094.68	0.00	0.00
130.00		22.95	126.08	0.00	0.00
135.00	(11) attachments	721.79	2978.83	0.00	0.00
140.00		110.20	597.06	0.00	0.00
145.00	(33) attachments	1118.63	4243.05	0.00	0.00
150.00		103.48	542.54	0.00	0.00
152.50	(8) attachments	222.44	753.43	0.00	0.00
155.00	(32) attachments	1225.81	3671.97	0.00	0.00
160.00		96.33	431.46	0.00	0.00
165.00	(26) attachments	1087.71	4133.24	0.00	0.00
170.00		88.78	336.26	0.00	0.00
175.00	(10) attachments	518.58	1710.54	0.00	0.00
178.00		48.92	182.62	0.00	0.00
Totals:		9,967.22	61,520.56	0.00	9.00

Linear Appurtenance Segment Forces (Factored)

Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

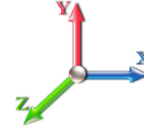


Load Case: 1.0D + 1.0W 60 mph Wind

Iterations 24

Dead Load Factor 1.00

Wind Load Factor 1.00



Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.047	0.000	5.423	0.00	1.37
5.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.047	0.000	5.423	0.00	5.20
5.00	1 5/8" Coax	Yes	2.00	0.000	3.96	0.66	0.00	0.047	0.000	5.423	0.00	22.88
5.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.047	0.000	5.423	0.00	4.40
5.00	1/2" Coax	Yes	2.00	0.000	0.50	0.08	0.00	0.047	0.000	5.423	0.00	0.32
10.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.093	0.000	5.423	0.00	1.37
10.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.093	0.000	5.423	0.00	5.20
10.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.093	0.000	5.423	0.00	57.20
10.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.093	0.000	5.423	0.00	11.00
10.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.093	0.000	5.423	0.00	0.80
15.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.095	0.000	5.423	0.00	1.37
15.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.095	0.000	5.423	0.00	5.20
15.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.095	0.000	5.423	0.00	57.20
15.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.095	0.000	5.423	0.00	11.00
15.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.095	0.000	5.423	0.00	0.80
20.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.097	0.000	5.423	0.00	1.37
20.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.097	0.000	5.423	0.00	5.20
20.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.097	0.000	5.423	0.00	57.20
20.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.097	0.000	5.423	0.00	11.00
20.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.097	0.000	5.423	0.00	0.80
25.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.100	0.000	5.423	0.00	1.37
25.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.100	0.000	5.423	0.00	5.20
25.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.100	0.000	5.423	0.00	57.20
25.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.100	0.000	5.423	0.00	11.00
25.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.100	0.000	5.423	0.00	0.80
30.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.102	1.005	5.428	0.00	1.37
30.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.102	1.005	5.428	0.00	5.20
30.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.102	1.005	5.428	0.00	57.20
30.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.102	1.005	5.428	0.00	11.00
30.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.102	1.005	5.428	0.00	0.80
32.83	Safety Cable	Yes	2.83	0.000	0.38	0.09	0.00	0.104	1.011	5.570	0.00	0.77
32.83	Step bolts (ladder)	Yes	2.83	0.000	0.63	0.15	0.00	0.104	1.011	5.570	0.00	2.95
32.83	1 5/8" Coax	Yes	2.83	0.000	3.96	0.93	0.00	0.104	1.011	5.570	0.00	32.41
32.83	1 5/8" Fiber	Yes	2.83	0.000	0.00	0.00	0.00	0.104	1.011	5.570	0.00	6.23
32.83	1/2" Coax	Yes	2.83	0.000	0.50	0.12	0.00	0.104	1.011	5.570	0.00	0.45
35.00	Safety Cable	Yes	2.17	0.000	0.38	0.07	0.00	0.105	1.014	5.672	0.00	0.59
35.00	Step bolts (ladder)	Yes	2.17	0.000	0.63	0.11	0.00	0.105	1.014	5.672	0.00	2.25
35.00	1 5/8" Coax	Yes	2.17	0.000	3.96	0.72	0.00	0.105	1.014	5.672	0.00	24.79
35.00	1 5/8" Fiber	Yes	2.17	0.000	0.00	0.00	0.00	0.105	1.014	5.672	0.00	4.77
35.00	1/2" Coax	Yes	2.17	0.000	0.50	0.09	0.00	0.105	1.014	5.672	0.00	0.35
40.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.106	1.019	5.893	0.00	1.37
40.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.106	1.019	5.893	0.00	5.20
40.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.106	1.019	5.893	0.00	57.20
40.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.106	1.019	5.893	0.00	11.00
40.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.106	1.019	5.893	0.00	0.80
45.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.107	1.021	6.094	0.00	1.37
45.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.107	1.021	6.094	0.00	5.20

Linear Appurtenance Segment Forces (Factored)

Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

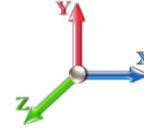


Load Case: 1.0D + 1.0W 60 mph Wind

Iterations 24

Dead Load Factor 1.00

Wind Load Factor 1.00



Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
45.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.107	1.021	6.094	0.00	57.20
45.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.107	1.021	6.094	0.00	11.00
45.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.107	1.021	6.094	0.00	0.80
50.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.109	1.028	6.281	0.00	1.37
50.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.109	1.028	6.281	0.00	5.20
50.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.109	1.028	6.281	0.00	57.20
50.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.109	1.028	6.281	0.00	11.00
50.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.109	1.028	6.281	0.00	0.80
55.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.112	1.036	6.454	0.00	1.37
55.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.112	1.036	6.454	0.00	5.20
55.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.112	1.036	6.454	0.00	57.20
55.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.112	1.036	6.454	0.00	11.00
55.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.112	1.036	6.454	0.00	0.80
60.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.115	1.045	6.617	0.00	1.37
60.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.115	1.045	6.617	0.00	5.20
60.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.115	1.045	6.617	0.00	57.20
60.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.115	1.045	6.617	0.00	11.00
60.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.115	1.045	6.617	0.00	0.80
65.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.118	1.054	6.770	0.00	1.37
65.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.118	1.054	6.770	0.00	5.20
65.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.118	1.054	6.770	0.00	57.20
65.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.118	1.054	6.770	0.00	11.00
65.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.118	1.054	6.770	0.00	0.80
70.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.121	1.063	6.914	0.00	1.37
70.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.121	1.063	6.914	0.00	5.20
70.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.121	1.063	6.914	0.00	57.20
70.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.121	1.063	6.914	0.00	11.00
70.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.121	1.063	6.914	0.00	0.80
75.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.124	1.073	7.052	0.00	1.37
75.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.124	1.073	7.052	0.00	5.20
75.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.124	1.073	7.052	0.00	57.20
75.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.124	1.073	7.052	0.00	11.00
75.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.124	1.073	7.052	0.00	0.80
77.92	Safety Cable	Yes	2.92	0.000	0.38	0.09	0.00	0.127	1.081	7.130	0.00	0.80
77.92	Step bolts (ladder)	Yes	2.92	0.000	0.63	0.15	0.00	0.127	1.081	7.130	0.00	3.04
77.92	1 5/8" Coax	Yes	2.92	0.000	3.96	0.96	0.00	0.127	1.081	7.130	0.00	33.40
77.92	1 5/8" Fiber	Yes	2.92	0.000	0.00	0.00	0.00	0.127	1.081	7.130	0.00	6.42
77.92	1/2" Coax	Yes	2.92	0.000	0.50	0.12	0.00	0.127	1.081	7.130	0.00	0.47
80.00	Safety Cable	Yes	2.08	0.000	0.38	0.07	0.00	0.129	1.086	7.183	0.00	0.57
80.00	Step bolts (ladder)	Yes	2.08	0.000	0.63	0.11	0.00	0.129	1.086	7.183	0.00	2.16
80.00	1 5/8" Coax	Yes	2.08	0.000	3.96	0.69	0.00	0.129	1.086	7.183	0.00	23.80
80.00	1 5/8" Fiber	Yes	2.08	0.000	0.00	0.00	0.00	0.129	1.086	7.183	0.00	4.58
80.00	1/2" Coax	Yes	2.08	0.000	0.50	0.09	0.00	0.129	1.086	7.183	0.00	0.33
84.00	Safety Cable	Yes	4.00	0.000	0.38	0.13	0.00	0.131	1.093	7.284	0.00	1.09
84.00	Step bolts (ladder)	Yes	4.00	0.000	0.63	0.21	0.00	0.131	1.093	7.284	0.00	4.16
84.00	1 5/8" Coax	Yes	4.00	0.000	3.96	1.32	0.00	0.131	1.093	7.284	0.00	45.80
84.00	1 5/8" Fiber	Yes	4.00	0.000	0.00	0.00	0.00	0.131	1.093	7.284	0.00	8.81

Linear Appurtenance Segment Forces (Factored)

Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

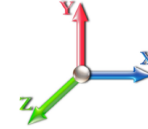


Load Case: 1.0D + 1.0W 60 mph Wind

Iterations 24

Dead Load Factor 1.00

Wind Load Factor 1.00



Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
84.00	1/2" Coax	Yes	4.00	0.000	0.50	0.17	0.00	0.131	1.093	7.284	0.00	0.64
85.00	Safety Cable	Yes	1.00	0.000	0.38	0.03	0.00	0.130	1.090	7.309	0.00	0.27
85.00	Step bolts (ladder)	Yes	1.00	0.000	0.63	0.05	0.00	0.130	1.090	7.309	0.00	1.04
85.00	1 5/8" Coax	Yes	1.00	0.000	3.96	0.33	0.00	0.130	1.090	7.309	0.00	11.40
85.00	1 5/8" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.130	1.090	7.309	0.00	2.19
85.00	1/2" Coax	Yes	1.00	0.000	0.50	0.04	0.00	0.130	1.090	7.309	0.00	0.16
90.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.132	1.097	7.429	0.00	1.37
90.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.132	1.097	7.429	0.00	5.20
90.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.132	1.097	7.429	0.00	57.20
90.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.132	1.097	7.429	0.00	11.00
90.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.132	1.097	7.429	0.00	0.80
95.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.136	1.109	7.545	0.00	1.37
95.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.136	1.109	7.545	0.00	5.20
95.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.136	1.109	7.545	0.00	57.20
95.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.136	1.109	7.545	0.00	11.00
95.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.136	1.109	7.545	0.00	0.80
100.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.140	1.121	7.656	0.00	1.37
100.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.140	1.121	7.656	0.00	5.20
100.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.140	1.121	7.656	0.00	57.20
100.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.140	1.121	7.656	0.00	11.00
100.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.140	1.121	7.656	0.00	0.80
105.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.145	1.134	7.764	0.00	1.37
105.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.145	1.134	7.764	0.00	5.20
105.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.145	1.134	7.764	0.00	57.20
105.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.145	1.134	7.764	0.00	11.00
105.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.145	1.134	7.764	0.00	0.80
110.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.150	1.149	7.868	0.00	1.37
110.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.150	1.149	7.868	0.00	5.20
110.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.150	1.149	7.868	0.00	57.20
110.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.150	1.149	7.868	0.00	11.00
110.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.150	1.149	7.868	0.00	0.80
115.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.155	1.164	7.968	0.00	1.37
115.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.155	1.164	7.968	0.00	5.20
115.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.155	1.164	7.968	0.00	57.20
115.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.155	1.164	7.968	0.00	11.00
115.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.155	1.164	7.968	0.00	0.80
120.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.160	1.180	8.066	0.00	1.37
120.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.160	1.180	8.066	0.00	5.20
120.00	1 5/8" Coax	Yes	5.00	0.000	3.96	1.65	0.00	0.160	1.180	8.066	0.00	57.20
120.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.160	1.180	8.066	0.00	11.00
120.00	1/2" Coax	Yes	5.00	0.000	0.50	0.21	0.00	0.160	1.180	8.066	0.00	0.80
124.08	Safety Cable	Yes	4.08	0.000	0.38	0.13	0.00	0.165	1.195	8.143	0.00	1.11
124.08	Step bolts (ladder)	Yes	4.08	0.000	0.63	0.21	0.00	0.165	1.195	8.143	0.00	4.25
124.08	1 5/8" Coax	Yes	4.08	0.000	3.96	1.35	0.00	0.165	1.195	8.143	0.00	46.71
124.08	1 5/8" Fiber	Yes	4.08	0.000	0.00	0.00	0.00	0.165	1.195	8.143	0.00	8.98
124.08	1/2" Coax	Yes	4.08	0.000	0.50	0.17	0.00	0.165	1.195	8.143	0.00	0.65
125.00	Safety Cable	Yes	0.92	0.000	0.38	0.03	0.00	0.168	1.204	8.160	0.00	0.25

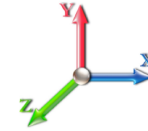
Linear Appurtenance Segment Forces (Factored)

Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 47



Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 24

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
125.00	Step bolts (ladder)	Yes	0.92	0.000	0.63	0.05	0.00	0.168	1.204	8.160	0.00	0.95
125.00	1 5/8" Coax	Yes	0.92	0.000	3.96	0.30	0.00	0.168	1.204	8.160	0.00	10.49
125.00	1 5/8" Fiber	Yes	0.92	0.000	0.00	0.00	0.00	0.168	1.204	8.160	0.00	2.02
125.00	1/2" Coax	Yes	0.92	0.000	0.50	0.04	0.00	0.168	1.204	8.160	0.00	0.15
129.00	Safety Cable	Yes	4.00	0.000	0.38	0.13	0.00	0.032	0.000	8.234	0.00	1.09
129.00	Step bolts (ladder)	Yes	4.00	0.000	0.63	0.21	0.00	0.032	0.000	8.234	0.00	4.16
130.00	Safety Cable	Yes	1.00	0.000	0.38	0.03	0.00	0.032	0.000	8.252	0.00	0.27
130.00	Step bolts (ladder)	Yes	1.00	0.000	0.63	0.05	0.00	0.032	0.000	8.252	0.00	1.04
135.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.032	0.000	8.342	0.00	1.37
135.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.032	0.000	8.342	0.00	5.20
140.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.034	0.000	8.429	0.00	1.37
140.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.034	0.000	8.429	0.00	5.20
145.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.035	0.000	8.514	0.00	1.37
145.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.035	0.000	8.514	0.00	5.20
150.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.037	0.000	8.597	0.00	1.37
150.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.037	0.000	8.597	0.00	5.20
152.50	Safety Cable	Yes	2.50	0.000	0.38	0.08	0.00	0.038	0.000	8.637	0.00	0.68
152.50	Step bolts (ladder)	Yes	2.50	0.000	0.63	0.13	0.00	0.038	0.000	8.637	0.00	2.60
155.00	Safety Cable	Yes	2.50	0.000	0.38	0.08	0.00	0.039	0.000	8.678	0.00	0.68
155.00	Step bolts (ladder)	Yes	2.50	0.000	0.63	0.13	0.00	0.039	0.000	8.678	0.00	2.60
160.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.040	0.000	8.757	0.00	1.37
160.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.040	0.000	8.757	0.00	5.20
165.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.042	0.000	8.834	0.00	1.37
165.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.042	0.000	8.834	0.00	5.20
Totals:											0.0	1,900.2

Calculated Forces

Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 48



Load Case: 1.0D + 1.0W 60 mph Wind

Iterations 24

Dead Load Factor 1.00

Wind Load Factor 1.00



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-61.52	-9.99	0.00	-1255.9	0.00	1255.94	6109.19	1631.76	7852.82	7187.37	0.00	0.000	0.000	0.185
5.00	-59.83	-9.90	0.00	-1205.9	0.00	1205.99	6042.67	1599.27	7543.22	6966.35	0.02	-0.044	0.000	0.183
10.00	-58.06	-9.80	0.00	-1156.5	0.00	1156.51	5973.91	1566.78	7239.84	6745.94	0.09	-0.089	0.000	0.181
15.00	-56.32	-9.71	0.00	-1107.5	0.00	1107.50	5902.91	1534.29	6942.70	6526.30	0.21	-0.135	0.000	0.179
20.00	-54.62	-9.62	0.00	-1058.9	0.00	1058.96	5829.67	1501.80	6651.77	6307.60	0.38	-0.182	0.000	0.177
25.00	-52.94	-9.53	0.00	-1010.8	0.00	1010.88	5754.19	1469.31	6367.08	6089.98	0.60	-0.230	0.000	0.175
30.00	-51.30	-9.42	0.00	-963.25	0.00	963.25	5676.47	1436.82	6088.61	5873.62	0.86	-0.278	0.000	0.173
32.83	-50.38	-9.37	0.00	-936.55	0.00	936.55	5631.44	1418.41	5933.57	5751.63	1.04	-0.307	0.000	0.172
35.00	-49.12	-9.34	0.00	-916.25	0.00	916.25	5596.51	1404.33	5816.37	5658.66	1.18	-0.329	0.000	0.171
40.00	-46.25	-9.22	0.00	-869.57	0.00	869.57	5104.93	1311.76	5413.18	5145.84	1.55	-0.379	0.000	0.178
45.00	-44.76	-9.11	0.00	-823.47	0.00	823.47	5033.50	1281.30	5164.70	4954.92	1.98	-0.430	0.000	0.175
50.00	-43.29	-9.00	0.00	-777.90	0.00	777.90	4959.83	1250.84	4922.07	4765.22	2.46	-0.483	0.000	0.172
55.00	-41.86	-8.88	0.00	-732.90	0.00	732.90	4883.92	1220.38	4685.27	4576.90	2.99	-0.536	0.000	0.169
60.00	-40.46	-8.77	0.00	-688.48	0.00	688.48	4805.76	1189.92	4454.32	4390.12	3.58	-0.589	0.000	0.165
65.00	-39.08	-8.64	0.00	-644.65	0.00	644.65	4725.37	1159.46	4229.19	4205.04	4.23	-0.643	0.000	0.162
70.00	-37.74	-8.52	0.00	-601.43	0.00	601.43	4642.74	1129.00	4009.91	4021.83	4.93	-0.698	0.000	0.158
75.00	-36.42	-8.39	0.00	-558.83	0.00	558.83	4557.87	1098.54	3796.46	3840.63	5.69	-0.754	0.000	0.154
77.92	-35.67	-8.31	0.00	-534.34	0.00	534.34	4507.27	1080.76	3674.51	3735.80	6.16	-0.787	0.000	0.151
80.00	-34.73	-8.26	0.00	-517.05	0.00	517.05	4470.76	1068.08	3588.85	3661.61	6.51	-0.810	0.000	0.149
84.00	-32.94	-8.13	0.00	-484.00	0.00	484.00	4079.95	996.52	3347.20	3342.88	7.21	-0.856	0.000	0.153
85.00	-32.70	-8.12	0.00	-475.90	0.00	475.90	4064.53	990.86	3309.24	3311.11	7.39	-0.867	0.000	0.152
90.00	-31.52	-7.98	0.00	-435.32	0.00	435.32	3985.82	962.43	3122.08	3152.82	8.33	-0.923	0.000	0.146
95.00	-30.36	-7.84	0.00	-395.42	0.00	395.42	3904.88	934.00	2940.36	2996.54	9.32	-0.979	0.000	0.140
100.00	-29.24	-7.71	0.00	-356.20	0.00	356.20	3803.39	905.57	2764.09	2828.81	10.38	-1.034	0.000	0.134
105.00	-28.14	-7.57	0.00	-317.66	0.00	317.66	3683.99	877.14	2593.26	2652.97	11.49	-1.088	0.000	0.127
110.00	-27.07	-7.43	0.00	-279.82	0.00	279.82	3564.59	848.71	2427.89	2482.78	12.66	-1.141	0.000	0.120
115.00	-26.03	-7.29	0.00	-242.67	0.00	242.67	3445.19	820.28	2267.96	2318.23	13.88	-1.192	0.000	0.112
120.00	-25.02	-7.14	0.00	-206.24	0.00	206.24	3325.79	791.86	2113.49	2159.32	15.16	-1.241	0.000	0.103
124.08	-24.22	-7.02	0.00	-177.07	0.00	177.07	3228.28	768.64	1991.37	2033.73	16.24	-1.279	0.000	0.095
125.00	-20.67	-5.93	0.00	-170.63	0.00	170.63	3206.39	763.43	1964.46	2006.05	16.48	-1.287	0.000	0.092
129.00	-19.58	-5.82	0.00	-146.90	0.00	146.90	1872.41	487.58	1246.47	1169.59	17.58	-1.321	0.000	0.136
130.00	-19.45	-5.81	0.00	-141.08	0.00	141.08	1864.30	483.92	1227.85	1155.72	17.85	-1.330	0.000	0.133
135.00	-16.48	-5.03	0.00	-112.06	0.00	112.06	1822.43	465.65	1136.86	1086.70	19.28	-1.385	0.000	0.112
140.00	-15.89	-4.92	0.00	-86.92	0.00	86.92	1778.31	447.37	1049.37	1018.38	20.75	-1.433	0.000	0.094
145.00	-11.67	-3.70	0.00	-62.34	0.00	62.34	1731.96	429.10	965.39	950.92	22.28	-1.475	0.000	0.072
150.00	-11.13	-3.58	0.00	-43.85	0.00	43.85	1683.36	410.82	884.91	884.47	23.84	-1.508	0.000	0.056
152.50	-10.38	-3.34	0.00	-34.89	0.00	34.89	1658.23	401.68	845.98	851.67	24.63	-1.522	0.000	0.047
155.00	-6.74	-2.02	0.00	-26.53	0.00	26.53	1632.53	392.54	807.93	819.19	25.43	-1.534	0.000	0.037
160.00	-6.31	-1.92	0.00	-16.42	0.00	16.42	1571.93	374.27	734.45	751.65	27.05	-1.551	0.000	0.026
165.00	-2.21	-0.72	0.00	-6.84	0.00	6.84	1495.17	355.99	664.47	679.62	28.68	-1.562	0.000	0.012
170.00	-1.88	-0.62	0.00	-3.26	0.00	3.26	1418.42	337.72	598.00	611.22	30.32	-1.568	0.000	0.007
175.00	-0.18	-0.05	0.00	-0.16	0.00	0.16	1341.66	319.44	535.03	546.45	31.96	-1.570	0.000	0.000
178.00	0.00	-0.05	0.00	0.00	0.00	0.00	1295.60	308.48	498.93	509.33	32.95	-1.570	0.000	0.000

Final Analysis Summary

Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 49



Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
1.2D + 1.0W 123 mph Wind	47.0	0.00	73.74	0.00	0.00	5947.91
0.9D + 1.0W 123 mph Wind	46.9	0.00	55.28	0.00	0.00	5855.14
1.2D + 1.0Di + 1.0Wi 50 mph Wind	10.6	0.00	98.48	0.00	0.00	1388.13
1.2D + 1.0Ev + 1.0Eh	0.8	0.00	76.32	0.00	0.00	124.16
0.9D + 1.0Ev + 1.0Eh	0.8	0.00	57.78	0.00	0.00	122.41
1.0D + 1.0W 60 mph Wind	10.0	0.00	61.52	0.00	0.00	1255.94

Max Stresses


Load Case	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Elev (ft)	Stress Ratio
1.2D + 1.0W 123 mph Wind	-73.74	-46.95	0.00	-5947.9	0.00	-5947.9	6109.19	1631.7	7852.82	7187.37	0.00	0.840
0.9D + 1.0W 123 mph Wind	-55.28	-46.92	0.00	-5855.1	0.00	-5855.1	6109.19	1631.7	7852.82	7187.37	0.00	0.825
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-98.48	-10.56	0.00	-1388.1	0.00	-1388.1	6109.19	1631.7	7852.82	7187.37	0.00	0.209
1.2D + 1.0Ev + 1.0Eh	-76.32	-0.81	0.00	-124.16	0.00	-124.16	6109.19	1631.7	7852.82	7187.37	0.00	0.030
0.9D + 1.0Ev + 1.0Eh	-57.78	-0.81	0.00	-122.41	0.00	-122.41	6109.19	1631.7	7852.82	7187.37	0.00	0.026
1.0D + 1.0W 60 mph Wind	-61.52	-9.99	0.00	-1255.9	0.00	-1255.9	6109.19	1631.7	7852.82	7187.37	0.00	0.185

Base Plate Summary

Structure: CT00594-S	Code: TIA-222-H	6/13/2023
Site Name: Plainfield North	Exposure: B	
Height: 178.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 50



Reactions	Base Plate	Anchor Bolts
Original Design	Yield (ksi): 60.00	Bolt Circle: 66.81
Moment (kip-ft): 5595.92	Width (in): 72.81	Number Bolts: 24.00
Axial (kip): 50.66	Style: Polygon	Bolt Type: 2.25" 18J
Shear (kip): 45.22	Polygon Sides: 12.00	Bolt Diameter (in): 2.25
Analysis (1.2D + 1.0W)	Clip Length (in): 0.00	Yield (ksi): 75.00
Moment (kip-ft): 5947.91	Effective Len (in): 12.43	Ultimate (ksi): 100.00
Axial (kip): 73.74	Moment (kip-in): 775.22	Arrangement: Radial
Shear (kip): 46.95	Allow Stress (ksi): 81.00	Cluster Dist (in): 0.00
	Applied Stress (ksi): 41.31	Start Angle (deg): 15.00
	Stress Ratio: 0.51	Compression
		Force (kip): 181.13
		Allowable (kip): 268.39
		Ratio: 0.68
		Tension
		Force (kip): 174.98
		Allowable (kip): 243.75
		Ratio: 0.72

	Monopole Mat Foundation Design			Date
				6/13/2023
	Customer Name:	AT&T	TIA Standard:	TIA-222-H
	Site Name:		Structure Height (Ft.):	178
	Site Number:	CT00594-S	Engineer Name:	SBA Engineer
Engr. Number:		Engineer Login ID:		

Foundation Info Obtained from:

Drawings/Calculations
Monopole
Analysis

Structure Type:

Analysis or Design?

Base Reactions (Factored):

Axial Load (Kips):	73.7	Shear Force (Kips):	47.0
Uplift Force (Kips):	0.0	Moment (Kips-ft):	5947.9

Foundation Geometries:

Diameter of Pier (ft.):	6.0	Depth of Base BG (ft.):	3.2	Mods required -Yes/No ?:	No
Pier Height A. G. (ft.):	0.00	Thickness of Pad (ft):	3.20		
Length of Pad (ft.):	31	Width of Pad (ft.):	31		
Final Length of pad (ft)	31.0	Final width of pad (ft):	31.0		

Material Properties and Reabr Info:

Concrete Strength (psi):	3000	Steel Elastic Modulus:	29000	ksi
Pad Rebar Yield (Ksi):	60	Pad Steel Rebar Size (#):	60	
Concrete Cover (in.):	8	Unit Weight of Concrete:	8	

Qty. of Rebar in Pad (L):	29	Qty. of Rebar in Pad (W):	29
Rebar at the top of the concrete pad:			
Qty. of Rebar in Pad (L):	29	Qty. of Rebar in Pad (W):	29

Apply 1.35 factor for e/w Per G: 1.35

Soil Design Parameters:

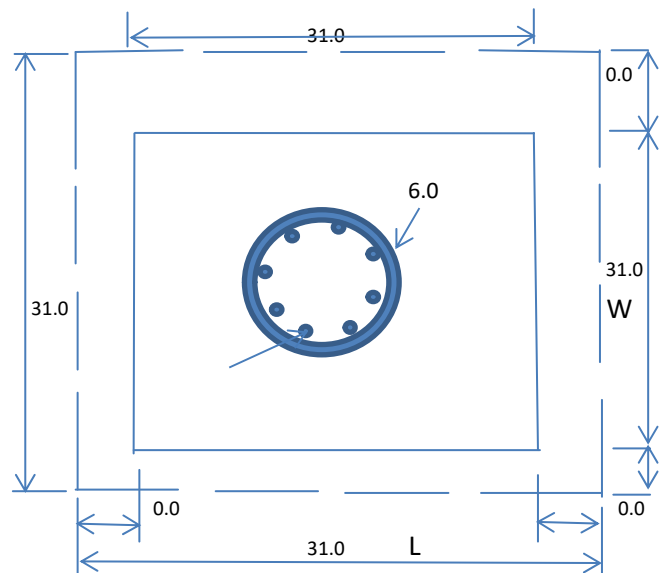
Soil Unit Weight (pcf):	125.0	Soil Buoyant Weight:	52.6	Pcf	
Water Table B.G.S. (ft):	99.0	Unit Weight of Water:	62.4	pcf	Angle from Top of Pad: 30
Ultimate Bearing Pressure (psf):	16000	Ultimate Skin Friction:	0	Psf	Angle from Bottm of Pad: 25
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	No		Angle from Bottm of Pad: 25
Consider soil hor. resist. for OTM.:	No	Reduction factor on the maximum soil bearing pressure:	1.00		

Foundation Analysis and Design:

Uplift Strength Reduction Factor:	0.75	Compression Strength Reduction Factor:	0.75
Total Dry Soil Volume (cu. Ft.):	0.00	Total Dry Soil Weight (Kips):	0.00
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	0.00	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	3075.34	Total Dry Concrete Weight (Kips):	461.30
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	461.30	Total Vertical Load on Base (Kips):	535.00

Check Soil Capacities:

Calculated Maxium Net Soil Pressure under the base (psf):	2494	<	Allowable Factored Soil Bearing (psf):	12000	0.21	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	7577.5	>	Design Factored Momont (kips-ft):	6099	0.80	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	1.24					OK!



Check the capacities of Reinforceing Concrete:

Strength reduction factor (Flexure and axial tension): 0.90 Strength reduction factor (Shear): 0.75
 Strength reduction factor (Axial compresion): 0.65 Wind Load Factor on Concrete Design: 1.00

Load/
Capacity
Ratio

Concrete Pad:

One-Way Design Shear Capacity (L-Direction, Kips):	1066.6	>	One-Way Factored Shear (L-D. Kips):	333.1	0.31	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	1066.6	>	One-Way Factored Shear (W-D., Kips):	333.1	0.31	OK!
One-Way Design Shear Capacity (Corner-Corner, Kips):	1101.9	>	One-Way Factored Shear (C-C, Kips):	351.7	0.32	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0018	OK!	Lower Steel Pad Reinf. Ratio (W-Direct.):	0.0018		
Lower Steel Pad Moment Capacity (L-Direction, Kips-ft):	3523.3	>	Moment at Bottom (L-Dir. K-Ft):	2227.7	0.63	OK!
Lower Steel Pad Moment Capacity (W-Direction, Kips-ft):	3523.3	>	Moment at Bottom (W-Dir. K-Ft):	2227.7	0.63	OK!
Lower Steel Pad Moment Capacity (Corner-Corner, K-ft):	4966.0	>	Moment at Bottom (C-C Dir. K-Ft):	3150.5	0.63	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct.):	0.0018	OK!	Upper Steel Reinf. Ratio (W-Dir.):	0.0018		
Upper Steel Pad Moment Capacity (L-Direc. Kips-ft):	3523.3	>	Moment at the top (L-Dir K-Ft):	1122.7	0.32	OK!
Upper Steel Pad Moment Capacity (W-Direc. Kips-ft):	3523.3	>	Moment at the top (W-Dir K-Ft):	1122.7	0.32	OK!
Upper Steel Pad Moment Capacity (Corner-Corner, K-ft):	4966.0	>	Moment at the top (C-C Dir. K-Ft):	1046.6	0.21	OK!

PROJECT INFORMATION

SCOPE OF WORK: ITEMS TO BE MOUNTED ON THE EXISTING MONOPOLE:

- NEW AT&T ANTENNAS: (OPA65R-BU4DA) @ POS. 3 & 4 (ALPHA SECTOR, TOTAL OF 2)
- NEW AT&T ANTENNAS: (OPA65R-BU8DA) @ POS. 3 & 4 (TYP. 2 PER BETA & GAMMA SECTORS, TOTAL OF 4)
- NEW AT&T RRUS 4449 B5/B12 (850/700) (TYP. OF 1 PER SECTOR, TOTAL OF 3)
- NEW AT&T RRUS 8843 B2/B66 (1900) (TYP. OF 1 PER SECTOR, TOTAL OF 3)
- NEW AT&T (6) Y-CABLES, (2) #6 AWG DC TRUNKS, (1) #18 PAIR PAIR FIBER.
- INSTALL FRAME STABILIZER REINFORCEMENT KIT (SITE PRO 1 PART # PRK-SFS) (OR APPROVED EQUAL).
- INSTALL CROSSOVER PLATE KIT (SITEPRO1 PART# SCX7-U) (TYP. OF 8 PER SECTOR, TOTAL OF 24).
- INSTALL 2" STD. (2.38" O.D.) X 13'-0" LONG HORIZONTAL PIPE MAST (TYP. OF 2 PER SECTOR, TOTAL OF 6).
- INSTALL 2" STD. (2.38" O.D.) 10' LONG PIPE MAST (TYP. OF 4 PER SECTOR, TOTAL OF 12).
- INSTALL PLATFORM REINFORCEMENT KIT (SITE PRO 1 PART # PRK-1245) (OR APPROVED EQUAL).

ITEMS TO BE MOUNTED AT EQUIPMENT LOCATION:

- INSTALL (1) 6651+XCEDE CABLE
- FINAL=1x6630/1xXMMU/1x6651+XCEDE CABLE
- NEW AT&T RRUS 4478 B14 (700) (TYP. OF 1 PER SECTOR, TOTAL OF 3)
- NEW AT&T TSXDC-4310FM RRU INTEGRATED SURGE ARRESTOR (TYP. OF 4 PER SECTOR, TOTAL OF 12).
- INSTALL (2) -48V RECTIFIERS IN EXISTING POWER PLANT.

ITEMS TO BE REMOVED:

- EXISTING AT&T ANTENNAS: (AM-X-CD-17-65-00T-RET) @ POS. 4 (ALPHA SECTOR, TOTAL OF 1)
- EXISTING AT&T ANTENNAS: (AM-X-CD-16-65-00T-RET) @ POS. 4 (TYP. OF 1 PER BETA & GAMMA SECTOR, TOTAL OF 2)
- EXISTING AT&T ANTENNAS: (7770) (TYP. OF 1 PER SECTOR, TOTAL OF 3)
- EXISTING AT&T RRUS-12 B2 (TYP. OF 1 PER SECTOR, TOTAL OF 3)
- EXISTING AT&T RRUS-11 B12 (TYP. OF 1 PER SECTOR, TOTAL OF 3)
- EXISTING AT&T TMA'S: LGP21401 (TYP. OF 2 PER SECTOR, TOTAL OF 6)
- EXISTING AT&T DIPLEXERS: LGP21901 (TYP. OF 6 PER SECTOR, TOTAL OF 18)
- EXISTING AT&T SURGE ARRESTOR: 1000860 (TYP. OF 1 PER SECTOR, TOTAL OF 3)
- EXISTING AT&T TMA PDU: LGP12104 (ALPHA SECTOR, TOTAL OF 1)
- EXISTING AT&T (6) LINES OF 1-5/8" COAX CABLES.

ITEMS TO REMAIN:

- (6) LINES OF 1-5/8" COAX CABLES, (1) SQUIDS,
- (2) DC POWER & (1) FIBER.

RFDS: FINAL-APPROVED V3 RFDS DATED 05/19/23

SITE ADDRESS: 548 GREEN HOLLOW ROAD
PLAINFIELD, CT 06374

LATITUDE: 41.745991° N, 41° 44' 45.57" N
LONGITUDE: 71.880166° W, 71° 52' 48.60" W

TYPE OF SITE: MONOPOLE / INDOOR EQUIPMENT

STRUCTURE HEIGHT: 178'-0"±
RAD CENTER: 155'-0"±

CURRENT USE: TELECOMMUNICATIONS FACILITY
PROPOSED USE: TELECOMMUNICATIONS FACILITY

DRAWING INDEX

SHEET NO.	DESCRIPTION	REV.
T-1	TITLE SHEET	4
GN-1	GENERAL NOTES	4
A-1	COMPOUND & EQUIPMENT PLANS	4
A-2	ANTENNA PLANS & ELEVATION	4
A-3	DETAILS	4
A-4	DETAILS	4
SN-1	STRUCTURAL NOTES	4
S-1	STRUCTURAL DETAILS	4
G-1	GROUNDING DETAILS	4
RF-1	RF PLUMBING DIAGRAM	4

NOTE TO GENERAL CONTRACTOR: (PRIOR TO CONSTRUCTION COMPLETION)

- TEP NORTHEAST (TEP OPCO, LLC.) TO PERFORM POST/CLIMB AND INSPECTION TO CONFIRM PROPOSED INSTALLATION COMPLIES WITH THE RECORD STAMPED DRAWINGS AND STRUCTURAL REPORTS PRIOR TO SUBMITTING FCCA (FINAL CONSTRUCTION CONTROL AFFIDAVIT). GC IS RESPONSIBLE FOR COORDINATING INSPECTIONS WITH TEP NORTHEAST (TEP OPCO, LLC.) PRIOR TO CONSTRUCTION BEING COMPLETED.



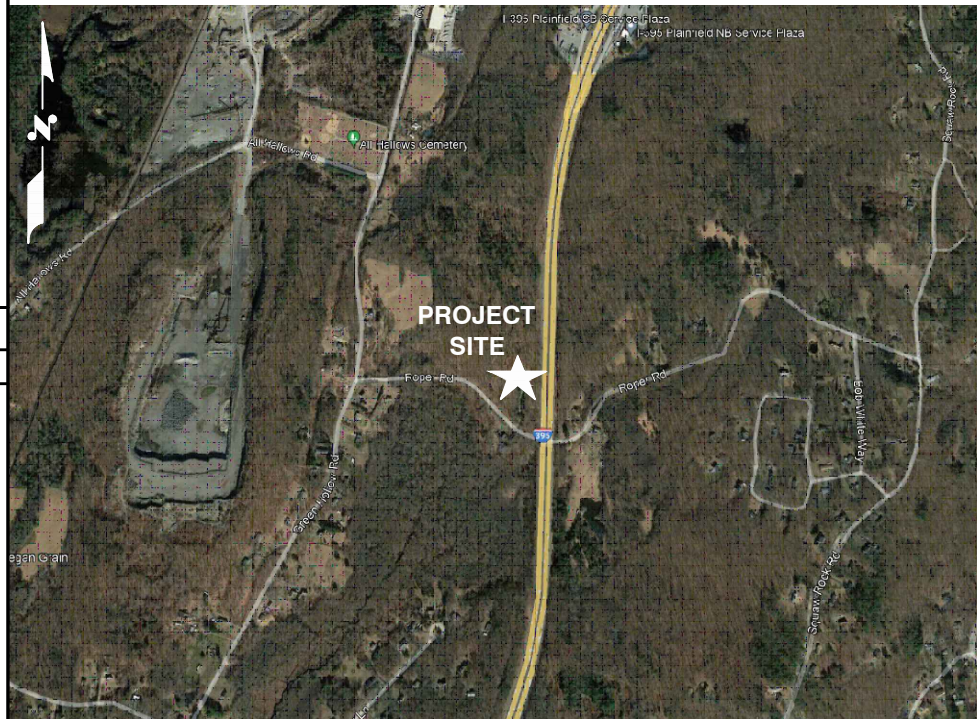
SITE NUMBER: CTL02059
SITE NAME: PLAINFIELD NORTH
FA CODE: 10035255

PACE ID: MRCTB066196, MRCTB066191, MRCTB066195,
MRCTB066185 MRCTB066247
PROJECT: ANTENNA MODIFICATIONS 4TX4RX, 5G NR RADIO
5G NR 1DR-1, LTE NEXT CARRIER, LTE 3C, 2023 UPGRADE

VICINITY MAP

DIRECTIONS TO SITE:

START OUT GOING I-395 SOUTH. TAKE EXIT 89 TURN RIGHT AT THE BOTTOM OF THE RAMP, AND TAKE IMMEDIATE RIGHT ONTO GREEN HOLLOW RD. FOLLOW GREEN HOLLOW RD FOR 1.8 MILES TO ROPER ROAD ON RIGHT. .1 MILE TO ACCESS ROAD ON LEFT (JUST PRIOR TO BRIDGES). SITE IS A GROUND LEVEL SHELTER. ALL SMART CARDS EXCEPT ONE ARE LOCATED IN HOFFMAN BOX OUTSIDE COMPOUND. LADDER IS NEEDED TO ACCESS THIS HOFFMAN BOX AS IT IS SLIGHTLY ELEVATED. COMBO 4722. ACCESS ROAD IS SHORT BUT STEEP ROAD, USE CAUTION IN SNOW.



GENERAL NOTES

1. THIS DOCUMENT IS THE CREATION, DESIGN, PROPERTY AND COPYRIGHTED WORK OF AT&T. ANY DUPLICATION OR USE WITHOUT EXPRESS WRITTEN CONSENT IS STRICTLY PROHIBITED. DUPLICATION AND USE BY GOVERNMENT AGENCIES FOR THE PURPOSES OF CONDUCTING THEIR LAWFULLY AUTHORIZED REGULATORY AND ADMINISTRATIVE FUNCTIONS IS SPECIFICALLY ALLOWED.
2. THE FACILITY IS AN UNMANNED PRIVATE AND SECURED EQUIPMENT INSTALLATION. IT IS ONLY ACCESSED BY TRAINED TECHNICIANS FOR PERIODIC ROUTINE MAINTENANCE AND THEREFORE DOES NOT REQUIRE ANY WATER OR SANITARY SEWER SERVICE. THE FACILITY IS NOT GOVERNED BY REGULATIONS REQUIRING PUBLIC ACCESS PER ADA REQUIREMENTS.
3. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE AT&T MOBILITY REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.
4. CONSTRUCTION DRAWINGS ARE VALID FOR SIX MONTHS AFTER ENGINEER OF RECORD'S STAMPED AND SIGNED SUBMITTAL DATE LISTED HEREIN.

72 HOURS



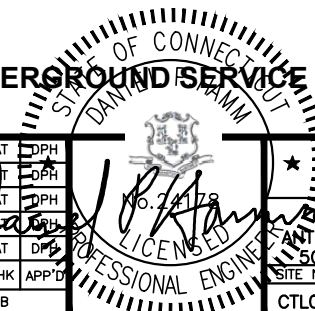
CALL BEFORE YOU DIG



CALL TOLL FREE 1-800-922-4455

OR CALL 811

UNDERGROUND SERVICE ALERT



45 BEECHWOOD DRIVE, NORTH ANDOVER, MA 01845
TEL: (978) 557-5553



SMARTLINK
1997 ANNAPOLIS EXCHANGE PKWY SUITE 200
ANNAPOLIS, MD 21401

SITE NUMBER: CTL02059
SITE NAME: PLAINFIELD NORTH

548 GREEN HOLLOW ROAD
PLAINFIELD, CT 06374
WINDHAM COUNTY



500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

NO.	DATE	REVISIONS	BY	CHK	APP'D
4	12/18/23	ISSUED FOR CONSTRUCTION	JS	AT	DPH
3	06/08/23	ISSUED FOR CONSTRUCTION	KW	AT	DPH
2	02/09/23	ISSUED FOR CONSTRUCTION	JS	AT	DPH
1	11/18/22	ISSUED FOR CONSTRUCTION	JS	AT	DPH
0	10/21/22	ISSUED FOR REVIEW	EB	AT	DPH

SCALE: AS SHOWN DESIGNED BY: EB DRAWN BY: EB

SITE NUMBER	DRAWING NUMBER	REV
CTL02059	T-1	4

AT&T

TITLE SHEET
ANTENNA MODIFICATIONS 4TX4RX, 5G NR RADIO
5G NR 1DR-1, LTE NEXT CARRIER, LTE 3C

GROUNDING NOTES

1. THE SUBCONTRACTOR SHALL REVIEW AND INSPECT THE EXISTING FACILITY GROUNDING SYSTEM AND LIGHTNING PROTECTION SYSTEM (AS DESIGNED AND INSTALLED) FOR STRICT COMPLIANCE WITH THE NEC (AS ADOPTED BY THE AHJ), THE SITE-SPECIFIC (UL, LPI, OR NFPA) LIGHTING PROTECTION CODE, AND GENERAL COMPLIANCE WITH TELCORDIA AND TIA GROUNDING STANDARDS. THE SUBCONTRACTOR SHALL REPORT ANY VIOLATIONS OR ADVERSE FINDINGS TO THE CONTRACTOR FOR RESOLUTION.
2. 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.
3. THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81 STANDARDS) FOR NEW GROUND ELECTRODE SYSTEMS. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
4. 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.
5. EACH BTS CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, #6 AWG STRANDED COPPER OR LARGER FOR INDOOR BTS AND #2 AWG STRANDED COPPER FOR OUTDOOR BTS.
6. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
7. APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
8. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO GROUND BAR.
9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
10. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
11. METAL CONDUIT SHALL BE MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 AWG COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
12. ALL NEW STRUCTURES WITH A FOUNDATION AND/OR FOOTING HAVING 20 FT. OR MORE OF 1/2 IN. OR GREATER ELECTRICALLY CONDUCTIVE REINFORCING STEEL MUST HAVE IT BONDED TO THE GROUND RING USING AN EXOTHERMIC WELD CONNECTION USING #2 AWG SOLID BARE TINNED COPPER GROUND WIRE, PER NEC 250.50

GENERAL NOTES

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
 CONTRACTOR – SMARTLINK
 SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)
 OWNER – AT&T MOBILITY
2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR 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 CONTRACTOR.
3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR 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.
4. DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.
5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
6. "KITTING LIST" SUPPLIED WITH THE BID PACKAGE IDENTIFIES ITEMS THAT WILL BE SUPPLIED BY CONTRACTOR. ITEMS NOT INCLUDED IN THE BILL OF MATERIALS AND KITTING LIST SHALL BE SUPPLIED BY THE SUBCONTRACTOR.
7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE CONTRACTOR.
9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR.
10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
11. SUBCONTRACTOR 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.
12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.
13. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.

14. ANY NEW CONCRETE NEEDED FOR THE CONSTRUCTION SHALL BE AIR-ENTRAINED AND SHALL HAVE 4000 PSI STRENGTH AT 28 DAYS. ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.
15. ALL STRUCTURAL STEEL WORK SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS. ALL STRUCTURAL STEEL SHALL BE ASTM A36 (Fy = 36 ksi) UNLESS OTHERWISE NOTED. PIPES SHALL BE ASTM A53 TYPE E (Fy = 36 ksi). ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED. TOUCH UP ALL SCRATCHES AND OTHER MARKS IN THE FIELD AFTER STEEL IS ERECTED USING A COMPATIBLE ZINC RICH PAINT.
16. CONSTRUCTION SHALL COMPLY WITH SPECIFICATIONS AND "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF AT&T SITES."
17. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
18. THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.
19. SINCE THE CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE ADVISED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.
20. **APPLICABLE BUILDING CODES:**
 SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.

**BUILDING CODE: IBC 2021 WITH 2022 CT STATE BUILDING CODE AMENDMENTS
 ELECTRICAL CODE: 2020 NATIONAL ELECTRICAL CODE (NFPA 70-2020)**

SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:

AMERICAN CONCRETE INSTITUTE (ACI) 318; BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE;

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION, ASD, FOURTEENTH EDITION;

TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-H, STRUCTURAL STANDARDS FOR STEEL

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

ABBREVIATIONS

AGL	ABOVE GRADE LEVEL	EQ	EQUAL	REQ	REQUIRED
AWG	AMERICAN WIRE GAUGE	GC	GENERAL CONTRACTOR	RF	RADIO FREQUENCY
BBU	BATTERY BACKUP UNIT	GRC	GALVANIZED RIGID CONDUIT	TBD	TO BE DETERMINED
BTCW	BARE TINNED SOLID COPPER WIRE	MGB	MASTER GROUND BAR	TBR	TO BE REMOVED
BGR	BURIED GROUND RING	MIN	MINIMUM	TBRR	TO BE REMOVED AND REPLACED
BTS	BASE TRANSCEIVER STATION	P	PROPOSED	TYP	TYPICAL
E	EXISTING	NTS	NOT TO SCALE	UG	UNDER GROUND
EGB	EQUIPMENT GROUND BAR	RAD	RADIATION CENTER LINE	VIF	VERIFY IN FIELD
EGR	EQUIPMENT GROUND RING	REF	REFERENCE		



**SITE NUMBER: CTL02059
 SITE NAME: PLAINFIELD NORTH**
 548 GREEN HOLLOW ROAD
 PLAINFIELD, CT 06374
 WINDHAM COUNTY



4	12/18/23	ISSUED FOR CONSTRUCTION	JS	AT	DPH
3	06/08/23	ISSUED FOR CONSTRUCTION	KW	AT	DPH
2	02/09/23	ISSUED FOR CONSTRUCTION	JS	AT	DPH
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0	10/21/22	ISSUED FOR REVIEW	EB	AT	DPH
NO.	DATE	REVISIONS	BY	CHK	APP'D



AT&T	
GENERAL NOTES	
ANTENNA MODIFICATIONS 4TX4RX, 5G NR RADIO	
5G NR 1DR-1, LTE NEXT CARRIER, LTE 3C	
SITE NUMBER	DRAWING NUMBER
CTL02059	GN-1
REV	4

45 BEECHWOOD DRIVE, NORTH ANDOVER, MA 01845
 TEL: (978) 557-5553

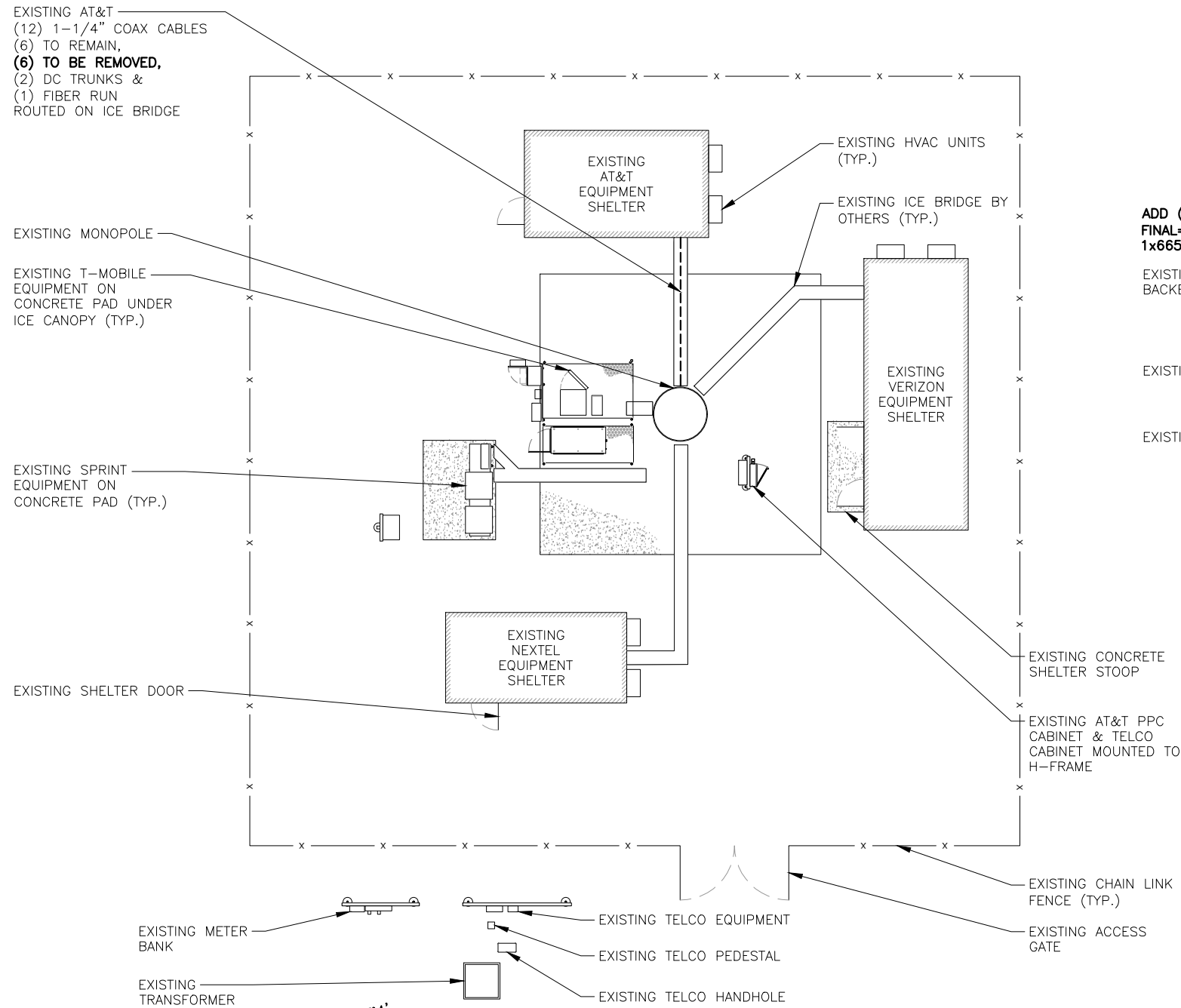
SMARTLINK
 1997 ANNAPOLIS EXCHANGE PKWY SUITE 200
 ANNAPOLIS, MD 21401

500 ENTERPRISE DRIVE, SUITE 3A
 ROCKY HILL, CT 06067

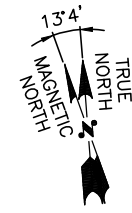
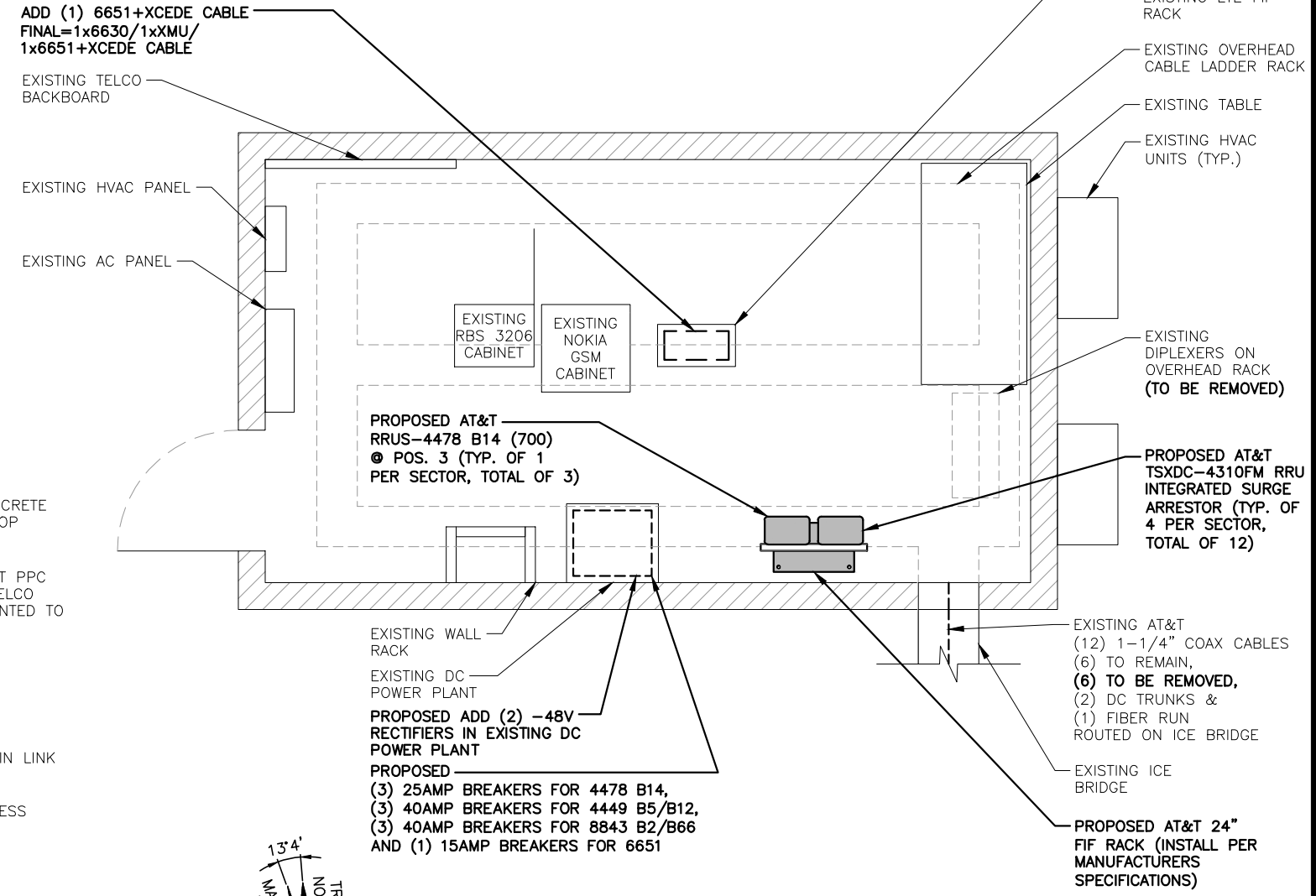
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NOTE:
 REFER TO MOUNT STRUCTURAL ANALYSIS BY: TEP NORTHEAST. DATED: JUNE 8, 2023 (REV 3) FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.

NOTE:
 REFER TO FINAL-APPROVED V3 RFDS DATED 05/19/23



COMPOUND PLAN
 22x34 SCALE: 1/8"=1'-0"
 11x17 SCALE: 1/16"=1'-0"



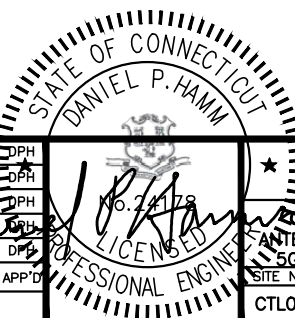
EQUIPMENT PLAN
 22x34 SCALE: 1/2"=1'-0"
 11x17 SCALE: 1/4"=1'-0"



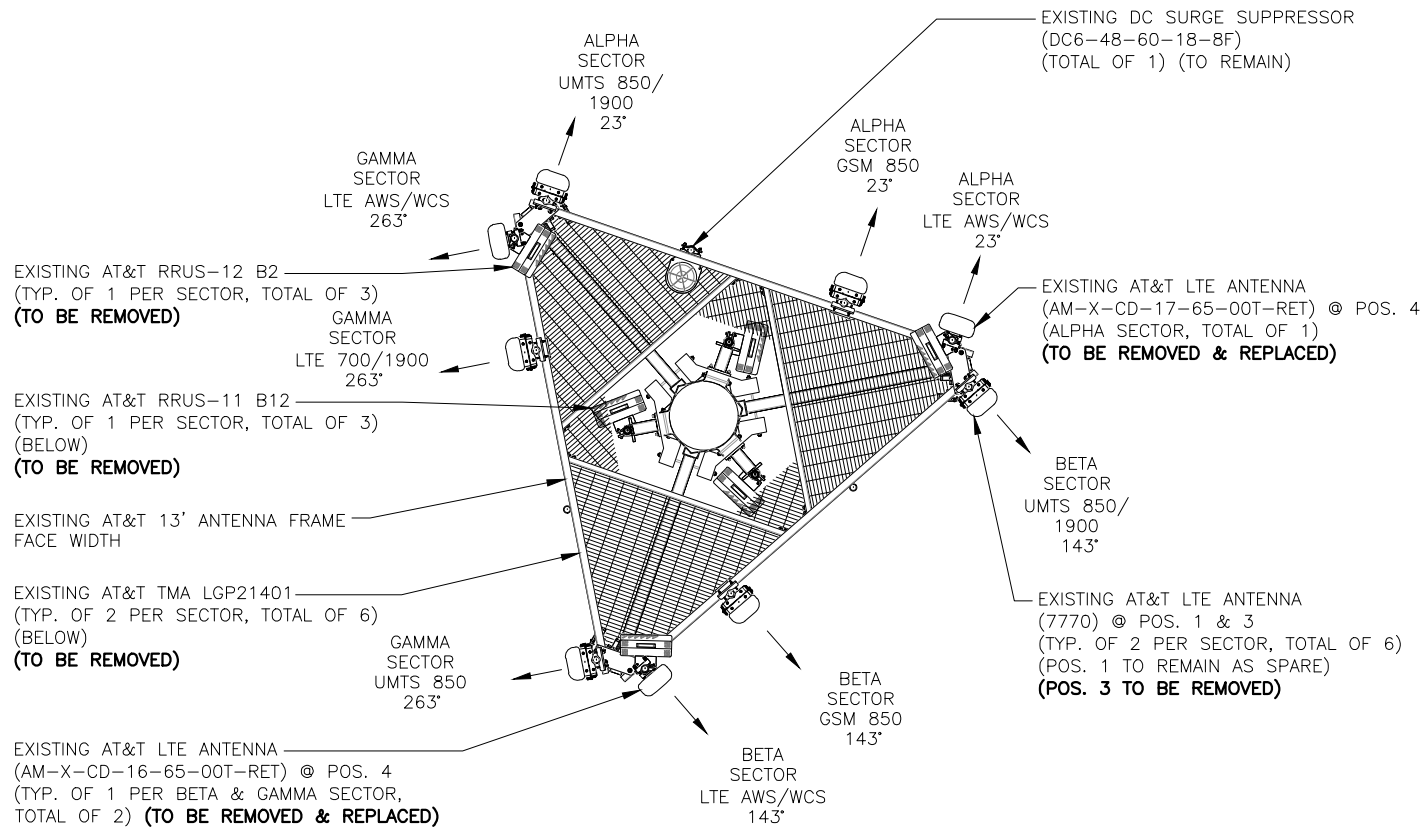
SITE NUMBER: CTL02059
 SITE NAME: PLAINFIELD NORTH
 548 GREEN HOLLOW ROAD
 PLAINFIELD, CT 06374
 WINDHAM COUNTY



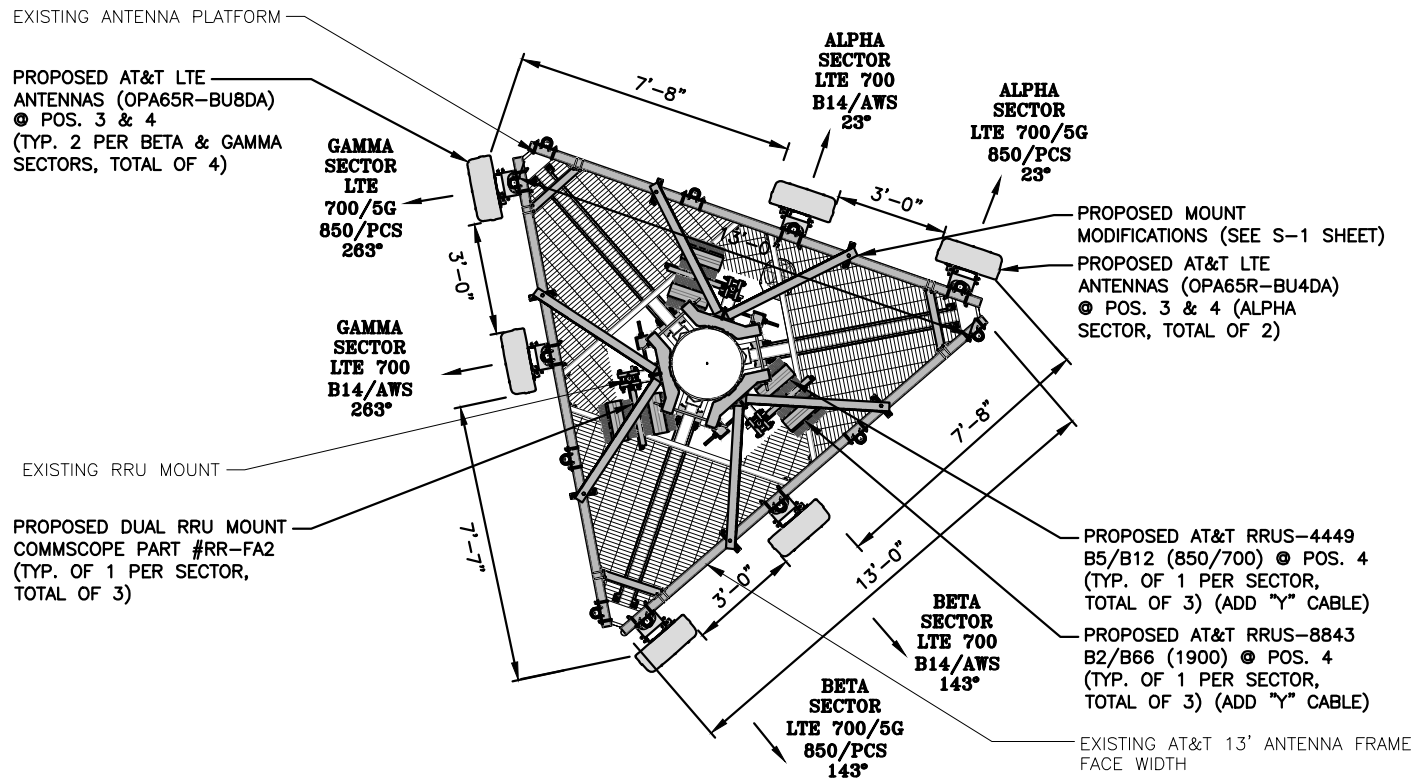
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3	06/08/23	ISSUED FOR CONSTRUCTION	KW	AT	DPH
2	02/09/23	ISSUED FOR CONSTRUCTION	JS	AT	DPH
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0	10/21/22	ISSUED FOR REVIEW	EB	AT	DPH
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: EB	DRAWN BY: EB		



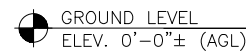
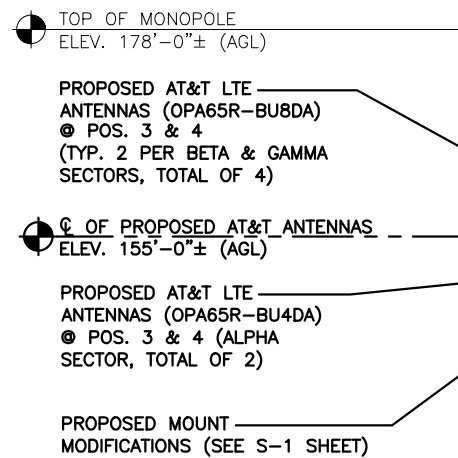
AT&T	
COMPOUND & EQUIPMENT PLANS	
ANTENNA MODIFICATIONS 4TX4RX, 5G NR RADIO	
5G NR 1DR-1, LTE NEXT CARRIER, LTE 3C	
SITE NUMBER	DRAWING NUMBER
CTL02059	A-1
REV	4



EXISTING ANTENNA LAYOUT 1
SCALE: N.T.S. A-2



PROPOSED ANTENNA LAYOUT 2
SCALE: N.T.S. A-2



ELEVATION 3
22x34 SCALE: 3/32"=1'-0"
11x17 SCALE: 3/64"=1'-0" A-2

NOTE:
REFER TO FINAL-APPROVED V3 RFDS DATED 05/19/23

NOTE:
REFER TO MOUNT STRUCTURAL ANALYSIS BY: TEP NORTHEAST. DATED: JUNE 8, 2023 (REV 3) FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.

NOTE:
ADD (1) PHH-AL HOISTING GRIP HANGER.

EXISTING MONOPOLE
EXISTING AT&T (12) 1-1/4" COAX CABLES (6) TO REMAIN, (6) TO BE REMOVED, (2) DC TRUNKS & (1) FIBER RUN ROUTED ON ICE BRIDGE



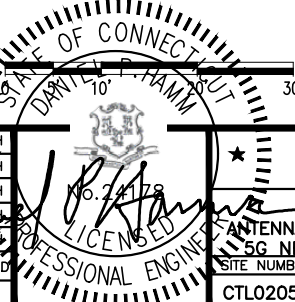
SITE NUMBER: CTL02059
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548 GREEN HOLLOW ROAD
PLAINFIELD, CT 06374
WINDHAM COUNTY



500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

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AT&T	
SITE NUMBER	DRAWING NUMBER
CTL02059	A-2
ANTENNA PLANS & ELEVATION ANTENNA MODIFICATIONS 4TX4RX, 5G NR RADIO 5G NR 1DR-1, LTE NEXT CARRIER, LTE 3C	
SCALE: AS SHOWN	DESIGNED BY: EB
DRAWN BY: EB	REV 4

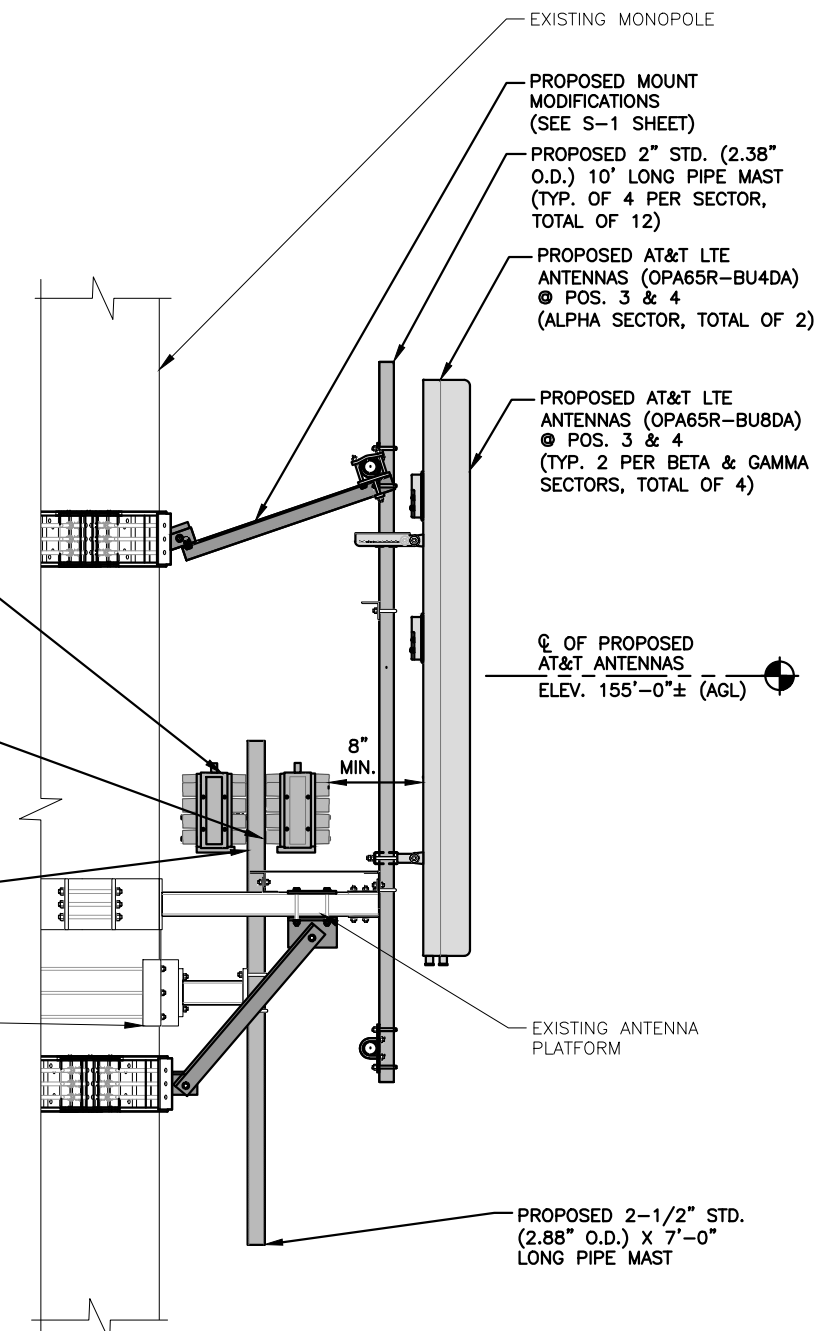
ANTENNA SCHEDULE

FINAL-APPROVED V3 RFDS DATED 05/19/23

SECTOR	EXISTING/ PROPOSED	BAND	ANTENNA	SIZE (INCHES) (L x W x D)	ANTENNA CL HEIGHT	AZIMUTH	TMA/ DIPLEXER	RRU	SIZE (INCHES) (L x W x D)	FEEDER	RAYCAP
A1	7770	SPARE	POWERWAVE	55X11X5	±155'-0"	23°	-	-	-	(2)(E)1-5/8 COAX	(E) (1) RAYCAP DC6-48-60-18-8F (P) (4) TSXDC-4310FM
A2	-	-	-	-	-	-	-	-	-	-	
A3	PROPOSED	LTE 700 B14/AWS	OPA65R-BU4DA	48.2X21X7.8	±155'-0"	23°	-	(1)(P)(G) 4478 B14 (700)	18.1"x13.4"x8.3"	(2)(E) DC (1)(E) FIBER	
A4	PROPOSED	LTE 700/ 5G/850/PCS	OPA65R-BU4DA	48.2X21X7.8	±155'-0"	23°	-	(1)(P) 4449 B5/B12 (850/700) (1)(P) 8843 B2/B66 (1900)	17.9"x13.2"x10.4" 14.9"x13.2"x10.9"	(1)(P) Y CABLE (1)(P) Y CABLE	
B1	7770	SPARE	POWERWAVE	55X11X5	±155'-0"	143°	-	-	-	(2)(E)1-5/8 COAX	(P) (4) TSXDC-4310FM
B2	-	-	-	-	-	-	-	-	-	-	
B3	PROPOSED	LTE 700 B14/AWS	OPA65R-BU8DA	96X21X7.8	±155'-0"	143°	-	(1)(P)(G) 4478 B14 (700)	18.1"x13.4"x8.3"	-	
B4	PROPOSED	LTE 700/ 5G/850/PCS	OPA65R-BU8DA	96X21X7.8	±155'-0"	143°	-	(1)(P) 4449 B5/B12 (850/700) (1)(P) 8843 B2/B66 (1900)	17.9"x13.2"x10.4" 14.9"x13.2"x10.9"	(1)(P) Y CABLE (1)(P) Y CABLE	
C1	7770	SPARE	POWERWAVE	55X11X5	±155'-0"	263°	-	-	-	(2)(E)1-5/8 COAX	(P) (4) TSXDC-4310FM
C2	-	-	-	-	-	-	-	-	-	-	
C3	PROPOSED	LTE 700 B14/AWS	OPA65R-BU8DA	96X21X7.8	±155'-0"	263°	-	(1)(P)(G) 4478 B14 (700)	18.1"x13.4"x8.3"	-	
C4	PROPOSED	LTE 700/ 5G/850/PCS	OPA65R-BU8DA	96X21X7.8	±155'-0"	263°	-	(1)(P) 4449 B5/B12 (850/700) (1)(P) 8843 B2/B66 (1900)	17.9"x13.2"x10.4" 14.9"x13.2"x10.9"	(1)(P) Y CABLE (1)(P) Y CABLE	

NOTE:
REFER TO MOUNT STRUCTURAL ANALYSIS BY: TEP NORTHEAST. DATED: JUNE 8, 2023 (REV 3) FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.

NOTE:
REFER TO FINAL-APPROVED V3 RFDS DATED 05/19/23



FINAL ANTENNA SCHEDULE 1
SCALE: N.T.S. A-3

RRU CHART

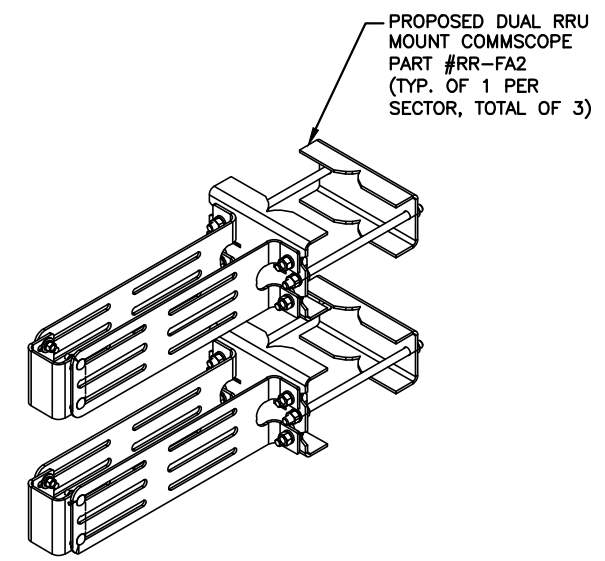
QUANTITY	MODEL	SIZE (L x W x D)
P(3)	4449 B5/B12 (850/700)	17.9"x13.2"x10.4"
P(3)	8843 B2/B66A (1900)	14.9"x13.2"x10.9"
P(G)(3)	4478 B14(700)	17.9"x13.2"x10.4"

NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS

NOTE:
SEE RFDS FOR RRH FREQUENCY AND MODEL NUMBER

PROPOSED RRU REFER TO THE FINAL RFDS AND CHART FOR QUANTITY, MODEL AND DIMENSIONS

NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS.



BACK TO BACK RRU MOUNT DETAIL 4
SCALE: N.T.S. A-3

PROPOSED RRUS DETAIL 2
SCALE: N.T.S. A-3

PROPOSED AT&T RRUS-4449 B5/B12 (850/700) @ POS. 4 (TYP. OF 1 PER SECTOR, TOTAL OF 3) (ADD "Y" CABLE)

PROPOSED AT&T RRUS-8843 B2/B66 (1900) @ POS. 4 (TYP. OF 1 PER SECTOR, TOTAL OF 3) (ADD "Y" CABLE)

PROPOSED DUAL RRU MOUNT COMMSCOPE PART #RR-FA2 (TYP. OF 1 PER SECTOR, TOTAL OF 3)

EXISTING RRU MOUNT

PROPOSED ANTENNA, RRUS & SURGE ARRESTOR MOUNTING DETAIL
22x34 SCALE: 3/4"=1'-0"
11x17 SCALE: 3/8"=1'-0"

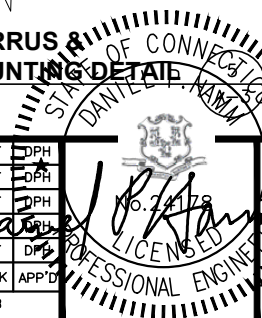


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WINDHAM COUNTY



NO.	DATE	REVISIONS	BY	CHK	APP'D
4	12/18/23	ISSUED FOR CONSTRUCTION	JS	AT	DPH
3	06/08/23	ISSUED FOR CONSTRUCTION	KW	AT	DPH
2	02/09/23	ISSUED FOR CONSTRUCTION	JS	AT	DPH
1	11/18/22	ISSUED FOR CONSTRUCTION	JS	AT	DPH
0	10/21/22	ISSUED FOR REVIEW	EB	AT	DPH

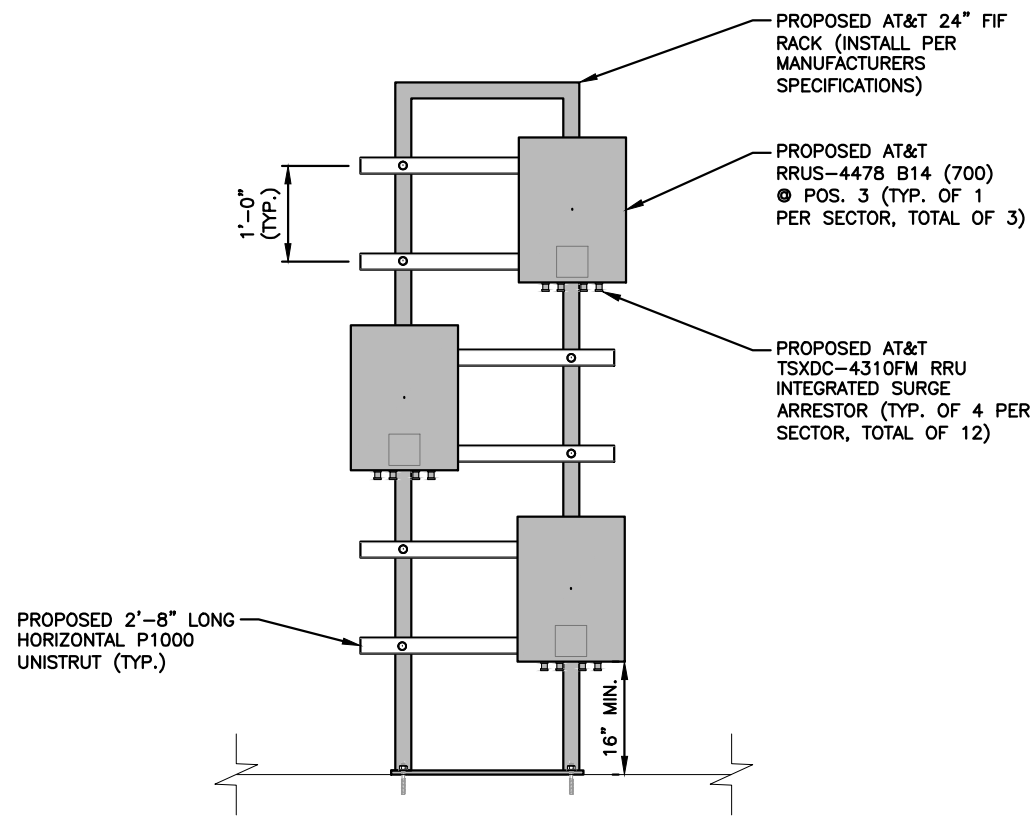
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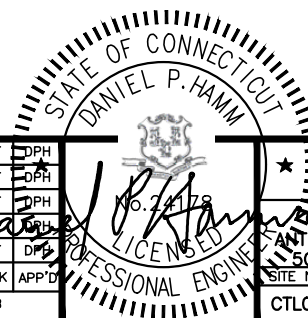
AT&T	
DETAILS	
ANTENNA MODIFICATIONS 4TX4RX, 5G NR RADIO	
5G NR 1DR-1, LTE NEXT CARRIER, LTE 3C	
SITE NUMBER	DRAWING NUMBER
CTL02059	A-3
REV	4

NOTE:
 REFER TO MOUNT STRUCTURAL ANALYSIS BY: TEP NORTHEAST. DATED: JUNE 8, 2023 (REV 3) FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.

NOTE:
 REFER TO FINAL-APPROVED V3 RFDS DATED 05/19/23



PROPOSED RRU RACK MOUNTING DETAIL ①
 SCALE: N.T.S



SITE NUMBER: CTL02059
SITE NAME: PLAINFIELD NORTH
 548 GREEN HOLLOW ROAD
 PLAINFIELD, CT 06374
 WINDHAM COUNTY



4	12/18/23	ISSUED FOR CONSTRUCTION	JS	AT	DPH
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AT&T	
DETAILS	
ANTENNA MODIFICATIONS 4TX4RX, 5G NR RADIO	
5G NR 1DR-1, LTE NEXT CARRIER, LTE 3C	
SITE NUMBER	DRAWING NUMBER
CTL02059	A-4
REV	4

STRUCTURAL NOTES:

- DESIGN REQUIREMENTS ARE PER STATE BUILDING CODE AND APPLICABLE SUPPLEMENTS, INTERNATIONAL BUILDING CODE, EIA/TIA-222-H STRUCTURAL STANDARDS FOR STEEL ANTENNA, TOWERS AND ANTENNA SUPPORTING STRUCTURES.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND ENGINEER OF RECORD.
- DESIGN AND CONSTRUCTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
- STRUCTURAL STEEL SHALL CONFORM TO ASTM A992 (Fy=50 ksi), MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A36 UNLESS OTHERWISE INDICATED.
- STEEL PIPE SHALL CONFORM TO ASTM A500 "COLD-FORMED WELDED & SEAMLESS CARBON STEEL STRUCTURAL TUBING", GRADE B, OR ASTM A53 PIPE STEEL BLACK AND HOT-DIPPED ZINC-COATED WELDED AND SEAMLESS TYPE E OR S, GRADE B. PIPE SIZES INDICATED ARE NOMINAL. ACTUAL OUTSIDE DIAMETER IS LARGER.
- STRUCTURAL CONNECTION BOLTS SHALL BE HIGH STRENGTH BOLTS (BEARING TYPE) AND CONFORM TO ASTM A325 TYPE-X "HIGH STRENGTH BOLTS FOR STRUCTURAL JOINTS, INCLUDING SUITABLE NUTS AND PLAIN HARDENED WASHERS". ALL BOLTS SHALL BE 3/4" DIA UON.
- ALL STEEL MATERIALS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS", UNLESS OTHERWISE NOTED.
- ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC-COATING (HOT-DIP) ON IRON AND STEEL HARDWARE", UNLESS OTHERWISE NOTED.
- FIELD WELDS, DRILL HOLES, SAW CUTS AND ALL DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED WITH AN ORGANIC ZINC REPAIR PAINT COMPLYING WITH REQUIREMENTS OF ASTM A780. GALVANIZING REPAIR PAINT SHALL HAVE 65 PERCENT ZINC BY WEIGHT, ZIRP BY DUNCAN GALVANIZING, GALVA BRIGHT PREMIUM BY CROWN OR EQUAL. THICKNESS OF APPLIED GALVANIZING REPAIR PAINT SHALL BE NOT LESS THAN 4 COATS (ALLOW TIME TO DRY BETWEEN COATS) WITH A RESULTING COATING THICKNESS REQUIRED BY ASTM A123 OR A153 AS APPLICABLE.
- CONTRACTOR SHALL COMPLY WITH AWS CODE FOR PROCEDURES, APPEARANCE AND QUALITY OF WELDS, AND FOR METHODS USED IN CORRECTING WELDING. ALL WELDERS AND WELDING PROCESSES SHALL BE QUALIFIED IN ACCORDANCE WITH AWS "STANDARD QUALIFICATION PROCEDURES". ALL WELDING SHALL BE DONE USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND D.I. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "STEEL CONSTRUCTION MANUAL". 14TH EDITION.
- INCORRECTLY FABRICATED, DAMAGED OR OTHERWISE MISFITTING OR NON-CONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE CONSTRUCTION MANAGER PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH ACTION SHALL REQUIRE CONSTRUCTION MANAGER APPROVAL.
- UNISTRUT SHALL BE FORMED STEEL CHANNEL STRUT FRAMING AS MANUFACTURED BY UNISTRUT CORP., WAYNE, MI OR EQUAL. STRUT MEMBERS SHALL BE 1 5/8"x1 5/8"x12GA, UNLESS OTHERWISE NOTED, AND SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
- EPOXY ANCHOR ASSEMBLY SHALL CONSIST OF STAINLESS STEEL ANCHOR ROD WITH NUTS & WASHERS. AN INTERNALLY THREADED INSERT, A SCREEN TUBE AND A EPOXY ADHESIVE. THE ANCHORING SYSTEM SHALL BE THE HILTI-HIT HY-270 AND OR HY-200 SYSTEMS (AS SPECIFIED IN DWG.) OR ENGINEERS APPROVED EQUAL.
- EXPANSION BOLTS SHALL CONFORM TO FEDERAL SPECIFICATION FF-S-325, GROUP II, TYPE 4, CLASS I, HILTI KWIK BOLT III OR APPROVED EQUAL. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- LUMBER SHALL COMPLY WITH THE REQUIREMENTS OF THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION AND THE NATIONAL FOREST PRODUCTS ASSOCIATION'S NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION. ALL LUMBER SHALL BE PRESSURE TREATED AND SHALL BE STRUCTURAL GRADE NO. 2 OR BETTER.
- WHERE ROOF PENETRATIONS ARE REQUIRED, THE CONTRACTOR SHALL CONTACT AND COORDINATE RELATED WORK WITH THE BUILDING OWNER AND THE EXISTING ROOF INSTALLER. WORK SHALL BE PERFORMED IN SUCH A MANNER AS TO NOT VOID THE EXISTING ROOF WARRANTY. ROOF SHALL BE WATERTIGHT.
- ALL FIBERGLASS MEMBERS USED ARE AS MANUFACTURED BY STRONGWELL COMPANY OF BRISTOL, VA 24203. ALL DESIGN CRITERIA FOR THESE MEMBERS IS BASED ON INFORMATION PROVIDED IN THE DESIGN MANUAL. ALL REQUIREMENTS PUBLISHED IN SAID MANUAL MUST BE STRICTLY ADHERED TO.
- NO MATERIALS TO BE ORDERED AND NO WORK TO BE COMPLETED UNTIL SHOP DRAWINGS HAVE BEEN REVIEWED AND APPROVED IN WRITING.
- SUBCONTRACTOR SHALL FIREPROOF ALL STEEL TO PRE-EXISTING CONDITIONS.

SPECIAL INSPECTION CHECKLIST

BEFORE CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
N/A	ENGINEER OF RECORD APPROVED SHOP DRAWINGS ¹
N/A	MATERIAL SPECIFICATIONS REPORT ²
N/A	FABRICATOR NDE INSPECTION
N/A	PACKING SLIPS ³
ADDITIONAL TESTING AND INSPECTIONS:	
DURING CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
REQUIRED	STEEL INSPECTIONS
N/A	HIGH STRENGTH BOLT INSPECTIONS
N/A	HIGH WIND ZONE INSPECTIONS ⁴
N/A	FOUNDATION INSPECTIONS
N/A	CONCRETE COMP. STRENGTH, SLUMP TESTS AND PLACEMENT
N/A	POST INSTALLED ANCHOR VERIFICATION ⁵
N/A	GROUT VERIFICATION
N/A	CERTIFIED WELD INSPECTION
N/A	EARTHWORK: LIFT AND DENSITY
N/A	ON SITE COLD GALVANIZING VERIFICATION
N/A	GUY WIRE TENSION REPORT
ADDITIONAL TESTING AND INSPECTIONS:	
AFTER CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
REQUIRED	MODIFICATION INSPECTOR REDLINE OR RECORD DRAWINGS ⁶
N/A	POST INSTALLED ANCHOR PULL-OUT TESTING
REQUIRED	PHOTOGRAPHS
ADDITIONAL TESTING AND INSPECTIONS:	

- NOTES:**
- REQUIRED FOR ANY NEW SHOP FABRICATED FRP OR STEEL.
 - PROVIDED BY MANUFACTURER, REQUIRED IF HIGH STRENGTH BOLTS OR STEEL.
 - PROVIDED BY GENERAL CONTRACTOR; PROOF OF MATERIALS.
 - HIGH WIND ZONE INSPECTION CATB 120MPH OR CAT C,D 110MPH INSPECT FRAMING OF WALLS, ANCHORING, FASTENING SCHEDULE.
 - ADHESIVE FOR REBAR AND ANCHORS SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ACI 355.4 AND ICC-ES AC308 FOR CRACKED CONCRETE AND SEISMIC APPLICATIONS. DESIGN ADHESIVE BOND STRENGTH HAS BEEN BASED ON ACI 355.4 TEMPERATURE CATEGORY B WITH INSTALLATIONS INTO DRY HOLES DRILLED USING A CARBIDE BIT INTO CRACKED CONCRETE THAT HAS CURED FOR AT LEAST 21 DAYS. ADHESIVE ANCHORS REQUIRING CERTIFIED INSTALLATIONS SHALL BE INSTALLED BY A CERTIFIED ADHESIVE ANCHOR INSTALLER PER ACI 318-11 D.9.2.2. INSTALLATIONS REQUIRING CERTIFIED INSTALLERS SHALL BE INSPECTED PER ACI 318-11 D.8.2.4.
 - AS REQUIRED; FOR ANY FIELD CHANGES TO THE ITEMS IN THIS TABLE.

- NOTES:**
- ALL CONNECTIONS TO BE SHOP WELDED & FIELD BOLTED USING 3/4" A325-X BOLTS, UNLESS OTHERWISE NOTIFIED.
 - SHOP DRAWING ENGINEER REVIEW & APPROVAL REQUIRED BEFORE ORDERING MATERIAL.
 - SHOP DRAWING ENGINEER REVIEW & APPROVAL REQUIRED PRIOR TO STEEL FABRICATION.
 - VERIFICATION OF EXISTING ROOF CONSTRUCTION IS REQUIRED PRIOR TO THE INSTALLATION OF THE ROOF PLATFORM. ENGINEER OF RECORD IS TO APPROVE EXISTING CONDITIONS IN ORDER TO MOVE FORWARD.
 - CENTERLINE OF PROPOSED STEEL PLATFORM SUPPORT COLUMNS TO BE CENTRALLY LOCATED OVER THE EXISTING BUILDING COLUMNS.
 - EXISTING BRICK MASONRY COLUMNS/BEARING TO BE REPAIRED/REPLACED AT ALL PROPOSED PLATFORM SUPPORT POINTS. ENGINEER OF RECORD TO REVIEW AND APPROVE.

SPECIAL INSPECTIONS (REFERENCE IBC CHAPTER 17):

GENERAL: WHERE APPLICATION IS MADE FOR CONSTRUCTION, THE OWNER OR THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE ACTING AS THE OWNER'S AGENT SHALL EMPLOY ONE OR MORE APPROVED AGENCIES TO PERFORM INSPECTIONS DURING CONSTRUCTION ON THE TYPES OF WORK LISTED IN THE INSPECTION CHECKLIST ABOVE.

THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE AND ENGINEERS OF RECORD INVOLVED IN THE DESIGN OF THE PROJECT ARE PERMITTED TO ACT AS THE APPROVED AGENCY AND THEIR PERSONNEL ARE PERMITTED TO ACT AS THE SPECIAL INSPECTOR FOR THE WORK DESIGNED BY THEM, PROVIDED THOSE PERSONNEL MEET THE QUALIFICATION REQUIREMENTS.

STATEMENT OF SPECIAL INSPECTIONS: THE APPLICANT SHALL SUBMIT A STATEMENT OF SPECIAL INSPECTIONS PREPARED BY THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE IN ACCORDANCE WITH SECTION 107.1 AS A CONDITION FOR ISSUANCE. THIS STATEMENT SHALL BE IN ACCORDANCE WITH SECTION 1705.

REPORT REQUIREMENT: SPECIAL INSPECTORS SHALL KEEP RECORDS OF INSPECTIONS. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. REPORTS SHALL INDICATE THAT WORK INSPECTED WAS OR WAS NOT COMPLETED IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THEY ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS SHALL BE SUBMITTED.

REQUIRED INSPECTIONS AND SITE REVIEW DOCUMENT AS A CONDITION OF THE BUILDING PERMIT THE FOLLOWING INSPECTIONS AND SITE REVIEWS IDENTIFIED BY THE BUILDING OFFICIAL ARE REQUIRED FOR WORK PER THE 9TH EDITION OF THE MASSACHUSETTS STATE BUILDING CODE, 780 CMR, SECTION 110 AND CHAPTER 17

REQUIRED SITE REVIEW AND DOCUMENTATION FOR PORTIONS OR PHASES CONSTRUCTION 1,6,7
(TO BE PERFORMED BY THE APPROPRIATE REGISTERED DESIGN PROFESSIONAL OR HIS/HER DESIGNEE OR M.G.L.C 112 §81R CONTRACTOR)

SITE REVIEW AND DOCUMENTATION	X	SITE REVIEW AND DOCUMENTATION	X
SOIL CONDITION/ANALYSIS/REPORT		ENERGY EFFICIENCY REQUIREMENTS	
FOOTING AND FOUNDATION (INCLUDING REINFORCEMENT AND FOUNDATION ATTACHMENT)		FIRE ALARM INSTALLATION ²	
CONCRETE FLOOR AND UNDER FLOOR		FIRE SUPPRESSION INSTALLATION ³	
LOWEST FLOOR FLOOD ELEVATION		FIELD REPORTS ⁵	
STRUCTURAL FRAME - WALL/FLOOR/ROOF		CARBON MONOXIDE DETECTION SYSTEM ⁴	
LATH AND PLASTER/GYPSUM		SEISMIC REINFORCEMENT	
FIRE RESISTANT WALL/PARTITIONS FRAMING		SMOKE CONTROL SYSTEMS	
FIRE RESISTANT WALL/PARTITIONS FINISH ATTACHMENTS		SMOKE AND HEAT VENTS	
ABOVE CEILING INSPECTION		ACCESSIBILITY (521 CMR)	
FIRE BLOCKING/STOPPING SYSTEM		OTHER:	
EMERGENCY LIGHTING/EXIT SIGNAGE			
MEANS OF EGRESS COMPONENTS		SPECIAL INSPECTIONS (SECTION 1704):	X
ROOFING, COPING/SYSTEM			
VENTING SYSTEMS (KITCHEN, CHEMICAL, FUME)			
MECHANICAL SYSTEMS			

- IT IS THE RESPONSIBILITY OF THE PERMIT APPLICANT TO NOTIFY THE BUILDING OFFICIAL OF REQUIRED INSPECTIONS (X). INSPECTION OF 780 CMR FIRE PROTECTION SYSTEMS MAY BE WITNESSED BY THE FIRE OFFICIAL AND INSTALLATION PERMITS ARE REQUIRED FROM THE FIRE DEPARTMENT PER 527 CMR.
- INCLUDE NFPA 72 TEST AND ACCEPTANCE DOCUMENTATION
- INCLUDE APPLICABLE NFPA 13, 13R, 13D, 14, 15, 17, 20, 241, ETC. - TEST AND ACCEPTANCE DOCUMENTATION
- INCLUDE NFPA 720 RECORD OF COMPLETION AND INSPECTION AND TEST FORM
- INCLUDE FIELD REPORTS AND RELATED DOCUMENTATION
- WORK SHALL NOT PROCEED, OR BE CONCEALED, UNTIL THE REQUIRED INSPECTION HAS BEEN APPROVED BY THE BUILDING OFFICIAL, AND NOTHING WITHIN CONSTRUCTION CONTROL SHALL HAVE THE EFFECT OF WAIVING OR LIMITING THE BUILDING OFFICIAL'S AUTHORITY TO ENFORCE THIS CODE WITH RESPECT TO EXAMINATION OF THE CONTRACT DOCUMENTS, INCLUDING PLANS, COMPUTATIONS AND SPECIFICATIONS, AND FIELD INSPECTIONS.
- ROUGH AND/OR FINISH INSPECTIONS OF ELECTRICAL, PLUMBING, OR SHEET METAL SHALL BE INSPECTED PRIOR TO ROUGH AND FINISH INSPECTIONS BY THE BUILDING OFFICIAL.

MASSACHUSETTS AMENDMENTS TO THE IBC (REFERENCE 780 CMR):

107.6 CONSTRUCTION CONTROL.
107.6.1 GENERAL. THIS SECTION SHALL APPLY TO THE CONSTRUCTION CONTROLS, PROFESSIONAL SERVICES AND CONTRACTOR SERVICES REQUIRED FOR BUILDINGS AND STRUCTURES NEEDING REGISTERED DESIGN PROFESSIONAL SERVICES.

107.6.1.1 SPECIALIZED STRUCTURES. TELECOMMUNICATION TOWERS, WIND TURBINE TOWERS, AND SIMILAR STRUCTURES ARE ENGINEERED STRUCTURES AND SHALL BE SUBJECT TO THE REQUIREMENTS OF SECTION 107.6.

107.6.2.2 CONSTRUCTION. THE REGISTERED DESIGN PROFESSIONALS WHO ARE RESPONSIBLE FOR THE DESIGN, PLANS, CALCULATIONS, AND SPECIFICATIONS, THEIR DESIGNEE OR THE REGISTERED DESIGN PROFESSIONALS WHO HAVE BEEN RETAINED FOR CONSTRUCTION PHASE SERVICES, SHALL PERFORM THE FOLLOWING TASKS:

- REVIEW, FOR CONFORMANCE TO 780 CMR AND THE DESIGN CONCEPT, SHOP DRAWINGS, SAMPLES AND OTHER SUBMITTALS BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS.
- PERFORM THE DUTIES FOR REGISTERED DESIGN PROFESSIONALS IN 780 CMR 17.00 SPECIAL INSPECTIONS AND TESTS.
- BE PRESENT AT INTERVALS APPROPRIATE TO THE STAGE OF CONSTRUCTION TO BECOME GENERALLY FAMILIAR WITH THE PROGRESS AND QUALITY OF THE WORK AND TO DETERMINE IF THE WORK IS BEING PERFORMED IN A MANNER CONSISTENT WITH THE CONSTRUCTION DOCUMENTS AND 780 CMR.

THE PERMIT APPLICATION SHALL NOT BE DEEMED COMPLETED UNTIL ALL OF THE CONSTRUCTION DOCUMENTS REQUIRED BY 780 CMR HAVE BEEN SUBMITTED. DOCUMENTATION INDICATING THAT WORK COMPLIES WITH THE PLANS AND SPECIFICATIONS SHALL BE PROVIDED AT THE COMPLETION OF EACH PHASE WHEN REQUIRED BY THE BUILDING OFFICIAL. UPON COMPLETION OF THE WORK, THE REGISTERED DESIGN PROFESSIONAL SHALL FILE A FINAL DOCUMENT TO THE BUILDING OFFICIAL INDICATING THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE APPROVED PLANS AND 780 CMR. FORMS FOR CONSTRUCTION CONTROL WHEN REQUIRED BY THE BUILDING OFFICIAL SHALL BE THOSE FOUND AT <http://www.mass.gov/ocabr/government/oca-agencies/dpi-lp/opsi/>.

107.6.2.3 SPECIAL INSPECTIONS AND TESTS. SPECIAL INSPECTIONS AND TESTS SHALL BE PROVIDED IN ACCORDANCE WITH 780 CMR 17.00 SPECIAL INSPECTIONS AND TESTS.

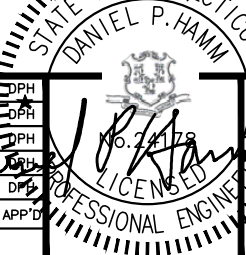
170.6.2.4 NON STRUCTURAL SYSTEM TEST AND INSPECTION. TESTS AND INSPECTIONS OF NON-STRUCTURAL SYSTEMS SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE ENGINEERING PRACTICE STANDARDS, REFERENCED STANDARDS LISTED IN 780 CMR 35.00: REFERENCED STANDARDS, OR AS OTHERWISE SPECIFIED IN 780 CMR.

107.6.3 CONSTRUCTION CONTRACTOR SERVICES. THE ACTUAL CONSTRUCTION OF THE WORK SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AS IDENTIFIED ON THE APPROVED PERMIT AND SHALL INVOLVE THE FOLLOWING:

- EXECUTION OF ALL WORK IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.
- EXECUTION AND CONTROL OF ALL METHODS OF CONSTRUCTION IN A SAFE AND SATISFACTORY MANNER IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL STATUTES AND REGULATIONS.
- UPON COMPLETION OF THE CONSTRUCTION, CERTIFICATION IN WRITING TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE THAT, TO THE BEST OF THE CONTRACTOR'S KNOWLEDGE AND BELIEF, CONSTRUCTION HAS BEEN DONE IN SUBSTANTIAL ACCORD WITH SECTION 107.6 AND WITH ALL PERTINENT DEVIATIONS SPECIFICALLY NOTED. THE BUILDING OFFICIAL MAY REQUIRE A COPY OF THIS CERTIFICATION.

107.6.4 PROJECT REPRESENTATION. A PROJECT REPRESENTATIVE MAY BE REQUIRED BY THE BUILDING OFFICIAL. THIS REPRESENTATIVE SHALL KEEP DAILY RECORDS AND SUBMIT REPORTS AS MAY BE REQUIRED BY THE BUILDING OFFICIAL. THIS PROJECT REPRESENTATION REQUIREMENT SHALL BE DETERMINED PRIOR TO THE ISSUANCE OF THE PERMIT AND MAY BE A PREREQUISITE FOR PERMIT ISSUANCE. REFUSAL BY THE APPLICANT TO PROVIDE SUCH SERVICE IF REQUIRED BY THE BUILDING OFFICIAL SHALL RESULT IN THE DENIAL OF THE PERMIT. ALL FEES AND COSTS RELATED TO THE PERFORMANCE OF PROJECT REPRESENTATION SHALL BE BORNE BY THE OWNER. WHEN APPLICATIONS FOR UNUSUAL DESIGNS OR MAGNITUDE OF CONSTRUCTION ARE FILED, OR WHERE REFERENCE STANDARDS REQUIRE SPECIAL ARCHITECTURAL OR ENGINEERING INSPECTIONS, THE BUILDING OFFICIAL MAY REQUIRE THAT THE PROJECT REPRESENTATIVE BE A REGISTERED DESIGN PROFESSIONAL IN ADDITION TO THOSE REGISTERED DESIGN PROFESSIONALS REQUIRED ELSEWHERE IN ACCORDANCE WITH SECTION 107.6.

107.6.5 BUILDING OFFICIAL RESPONSIBILITY. NOTHING CONTAINED IN SECTION 107.6 SHALL HAVE THE EFFECT OF WAIVING OR LIMITING THE BUILDING OFFICIAL'S AUTHORITY TO ENFORCE 780 CMR WITH RESPECT TO EXAMINATION OF THE CONTRACT DOCUMENTS, INCLUDING PLANS, COMPUTATIONS AND SPECIFICATIONS, AND FIELD INSPECTIONS.



TEP NORTH EAST
45 BEECHWOOD DRIVE, NORTH ANDOVER, MA 01845
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smartlink
SMARTLINK
1997 ANNAPOLIS EXCHANGE PKWY SUITE 200
ANNAPOLIS, MD 21401

SITE NUMBER: CTL02059
SITE NAME: PLAINFIELD NORTH
548 GREEN HOLLOW ROAD
PLAINFIELD, CT 06374
WINDHAM COUNTY

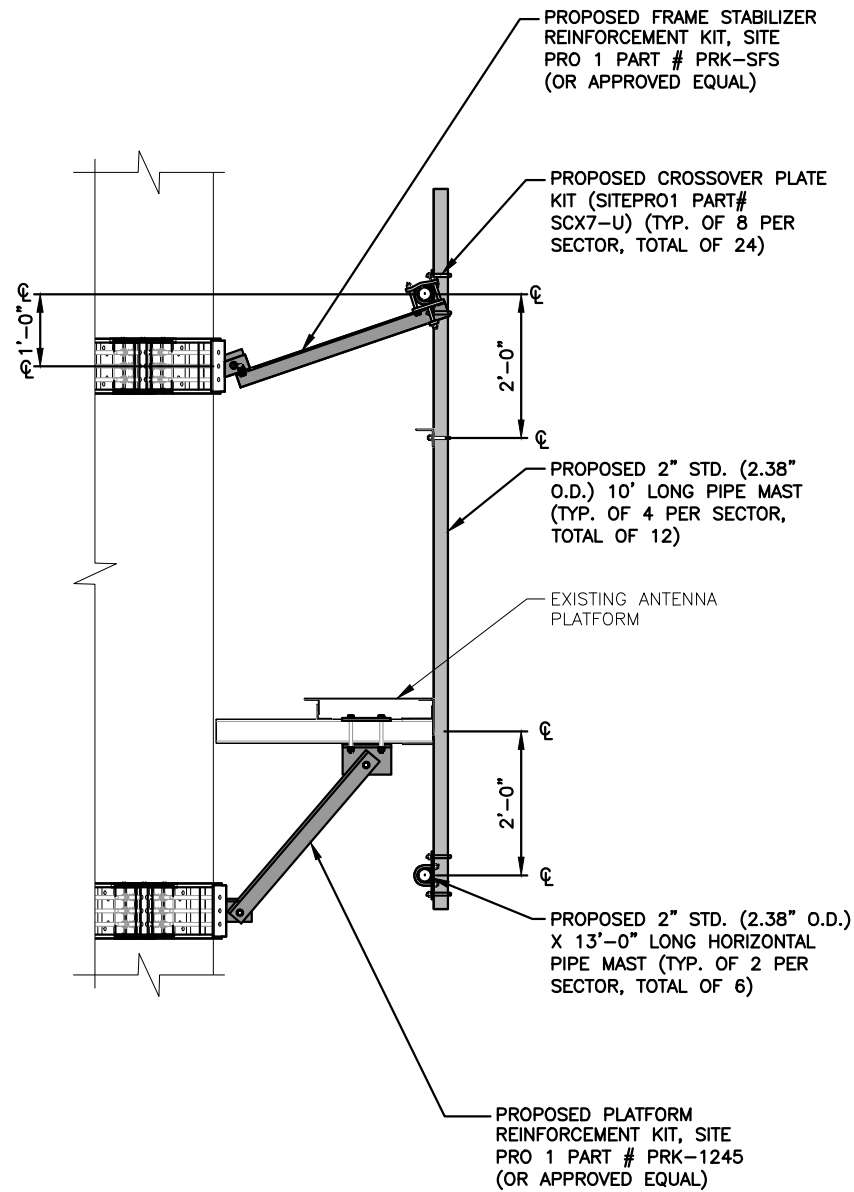
at&t
500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

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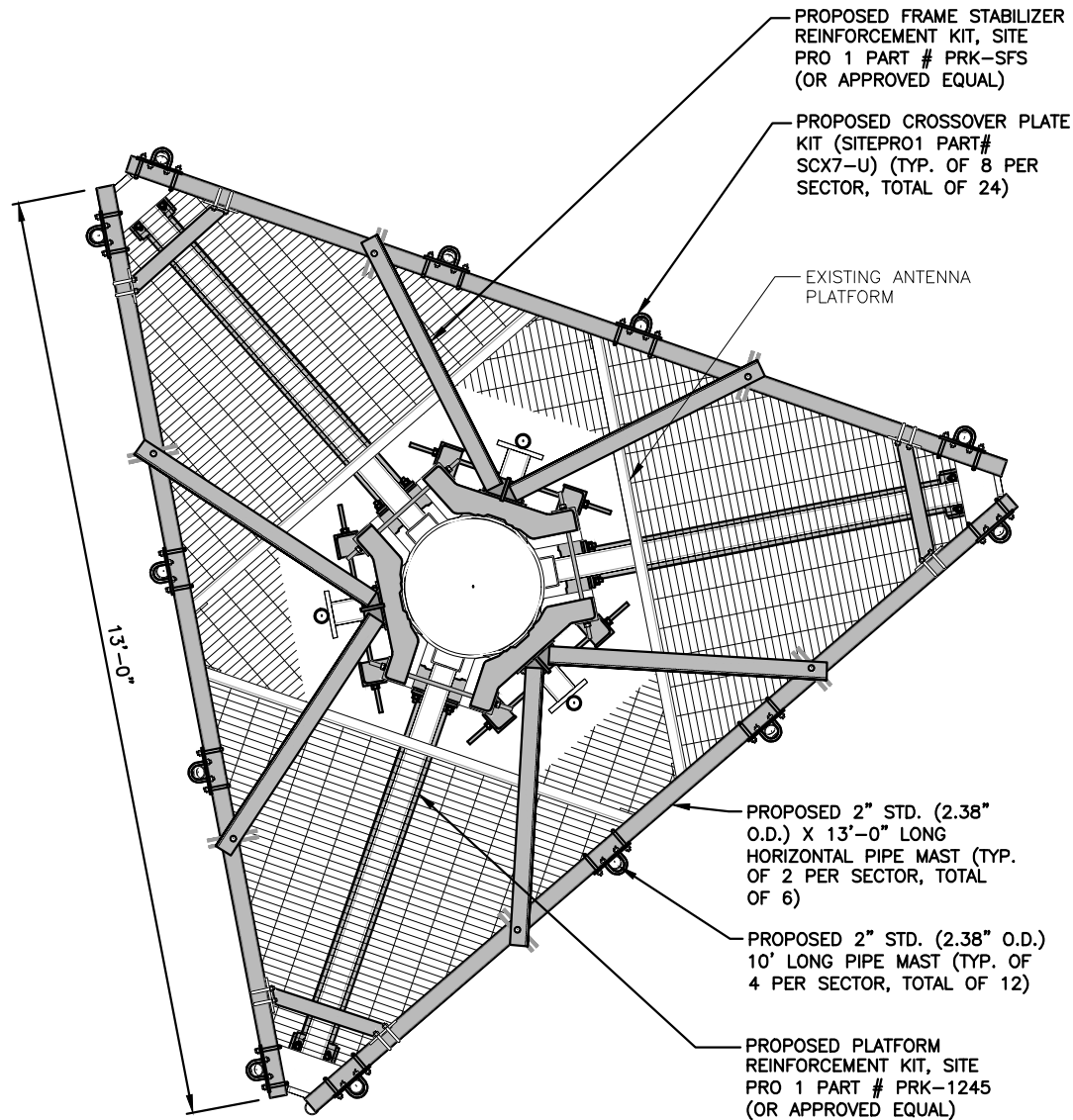
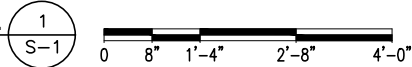
AT&T
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ANTENNA MODIFICATIONS 4TX4RX, 5G NR RADIO
5G NR 1DR-1, LTE NEXT CARRIER, LTE 3C
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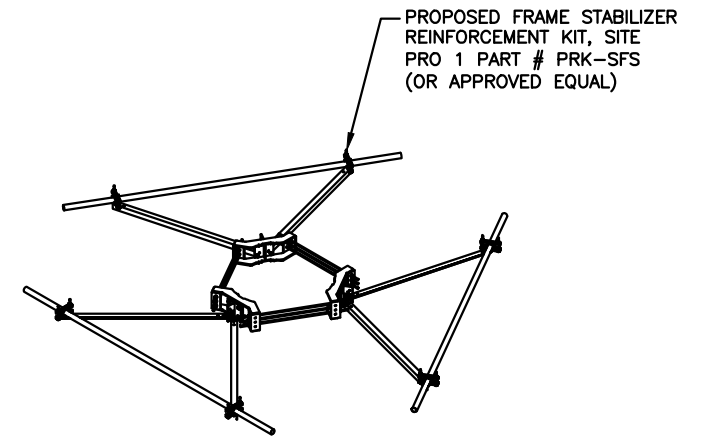
NOTE:
 REFER TO FINAL-APPROVED V3 RFDS DATED 05/19/23



PROPOSED MOUNT MODIFICATION DETAIL
 22x34 SCALE: 3/4"=1'-0"
 11x17 SCALE: 3/8"=1'-0"

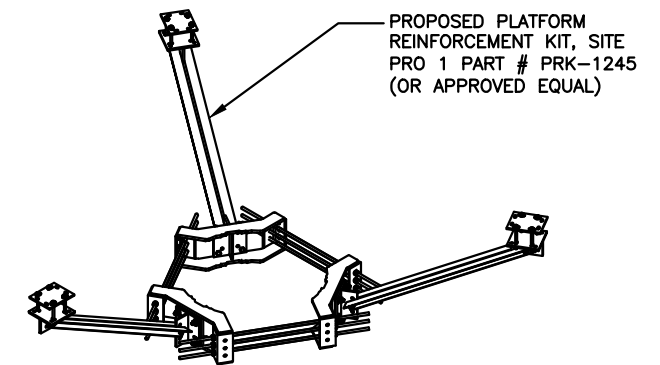


PLATFORM REINFORCEMENT PLAN
 22x34 SCALE: 3/4"=1'-0"
 11x17 SCALE: 3/8"=1'-0"



PROPOSED REINFORCEMENT KIT
 SCALE: N.T.S.

3
S-1



PROPOSED PLATFORM REINFORCEMENT KIT
 SCALE: N.T.S.

4
S-1



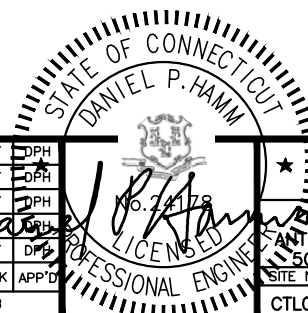
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 SITE NAME: PLAINFIELD NORTH

548 GREEN HOLLOW ROAD
 PLAINFIELD, CT 06374
 WINDHAM COUNTY

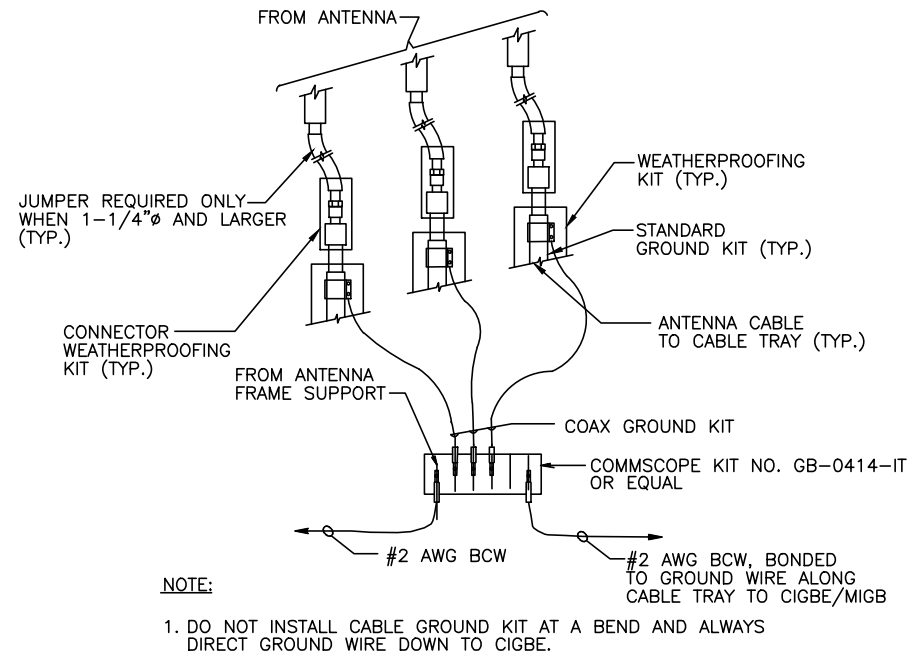


500 ENTERPRISE DRIVE, SUITE 3A
 ROCKY HILL, CT 06067

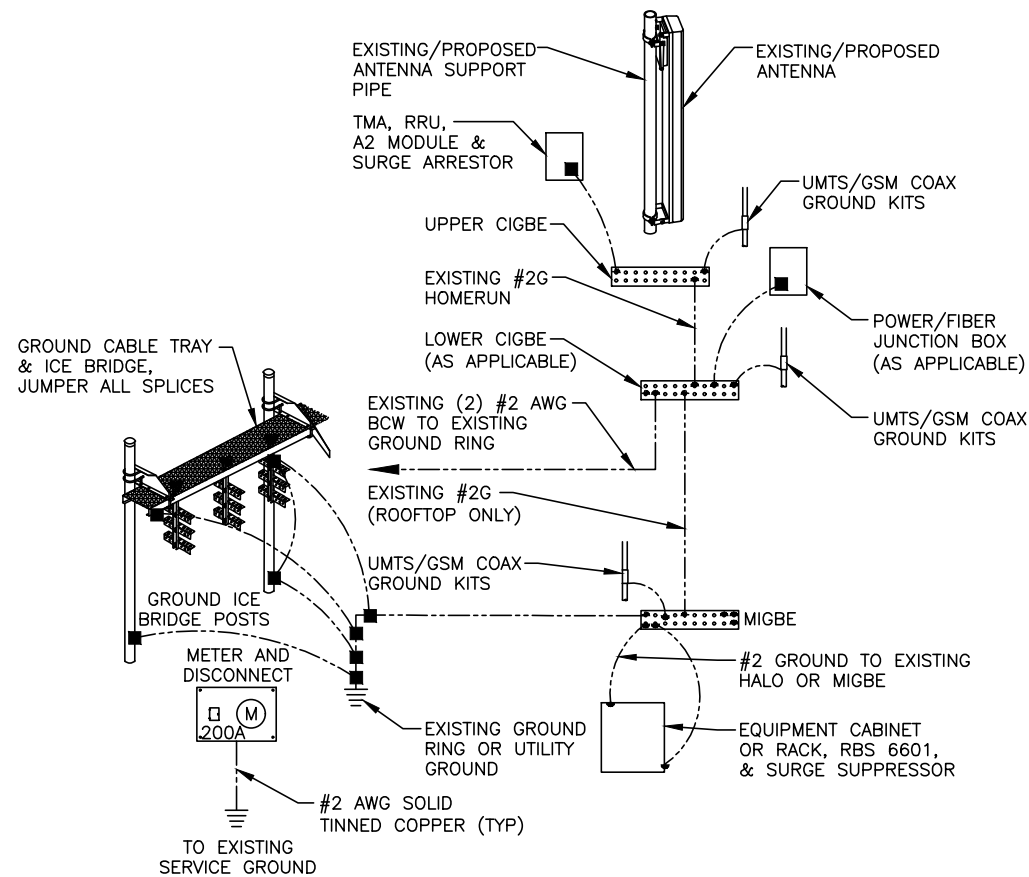
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CTL02059	S-1
REV	4



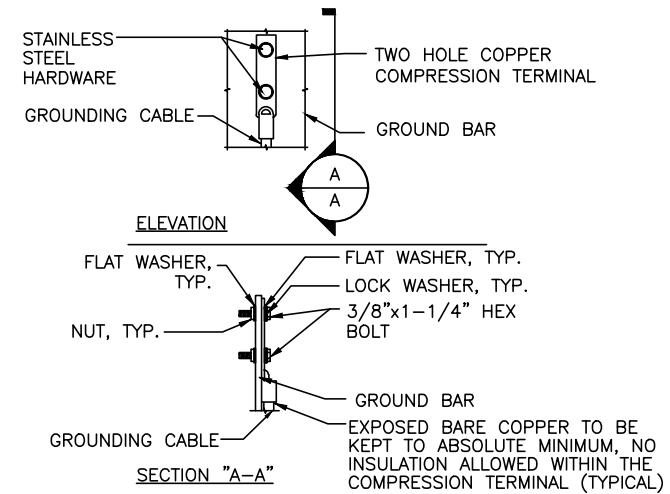
GROUND WIRE TO GROUND BAR CONNECTION DETAIL 1
SCALE: N.T.S. G-1



GROUNDING RISER DIAGRAM 2
SCALE: N.T.S. G-1

AT&T GROUNDING STANDARDS TO BE FOLLOWED:

- ATT-TP-76416
- ATT-TP-76300
- ATT-CEM-18002
- ATT-002-290-531
- ATT-002-290-701
- ATT-CEM-23001



- NOTES:
- "DOUBLING UP" OR "STACKING" OF CONNECTION IS NOT PERMITTED.
 - OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATION.
 - CADWELD DOWNLEADS FROM UPPER EGB, LOWER EGB, AND MGB

TYPICAL GROUND BAR CONNECTION DETAIL 3
SCALE: N.T.S. G-1

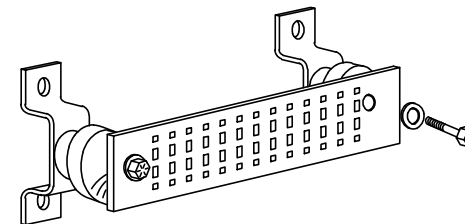
EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

SECTION "P" - SURGE PRODUCERS

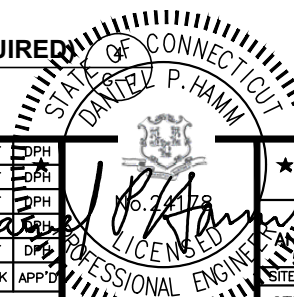
- CABLE ENTRY PORTS (HATCH PLATES) (#2 AWG)
- GENERATOR FRAMEWORK (IF AVAILABLE) (#2 AWG)
- TELCO GROUND BAR
- COMMERCIAL POWER COMMON NEUTRAL/GROUND BOND (#2 AWG)
- +24V POWER SUPPLY RETURN BAR (#2 AWG)
- 48V POWER SUPPLY RETURN BAR (#2 AWG)
- RECTIFIER FRAMES.

SECTION "A" - SURGE ABSORBERS

- INTERIOR GROUND RING (#2 AWG)
- EXTERNAL EARTH GROUND FIELD (BURIED GROUND RING) (#2 AWG)
- METALLIC COLD WATER PIPE (IF AVAILABLE) (#2 AWG)
- BUILDING STEEL (IF AVAILABLE) (#2 AWG)



GROUND BAR - DETAIL (AS REQUIRED)
SCALE: N.T.S.



SITE NUMBER: CTL02059
SITE NAME: PLAINFIELD NORTH
548 GREEN HOLLOW ROAD
PLAINFIELD, CT 06374
WINDHAM COUNTY



NO.	DATE	REVISIONS	BY	CHK	APP'D
4	12/18/23	ISSUED FOR CONSTRUCTION	JS	AT	DPH
3	06/08/23	ISSUED FOR CONSTRUCTION	KW	AT	DPH
2	02/09/23	ISSUED FOR CONSTRUCTION	JS	AT	DPH
1	11/18/22	ISSUED FOR CONSTRUCTION	JS	AT	DPH
0	10/21/22	ISSUED FOR REVIEW	EB	AT	DPH

SCALE: AS SHOWN	DESIGNED BY: EB	DRAWN BY: EB
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SITE NUMBER	DRAWING NUMBER	REV
CTL02059	G-1	4

AT&T
GROUNDING DETAILS
ANTENNA MODIFICATIONS 4TX4RX, 5G NR RADIO
5G NR 1DR-1, LTE NEXT CARRIER, LTE 3C

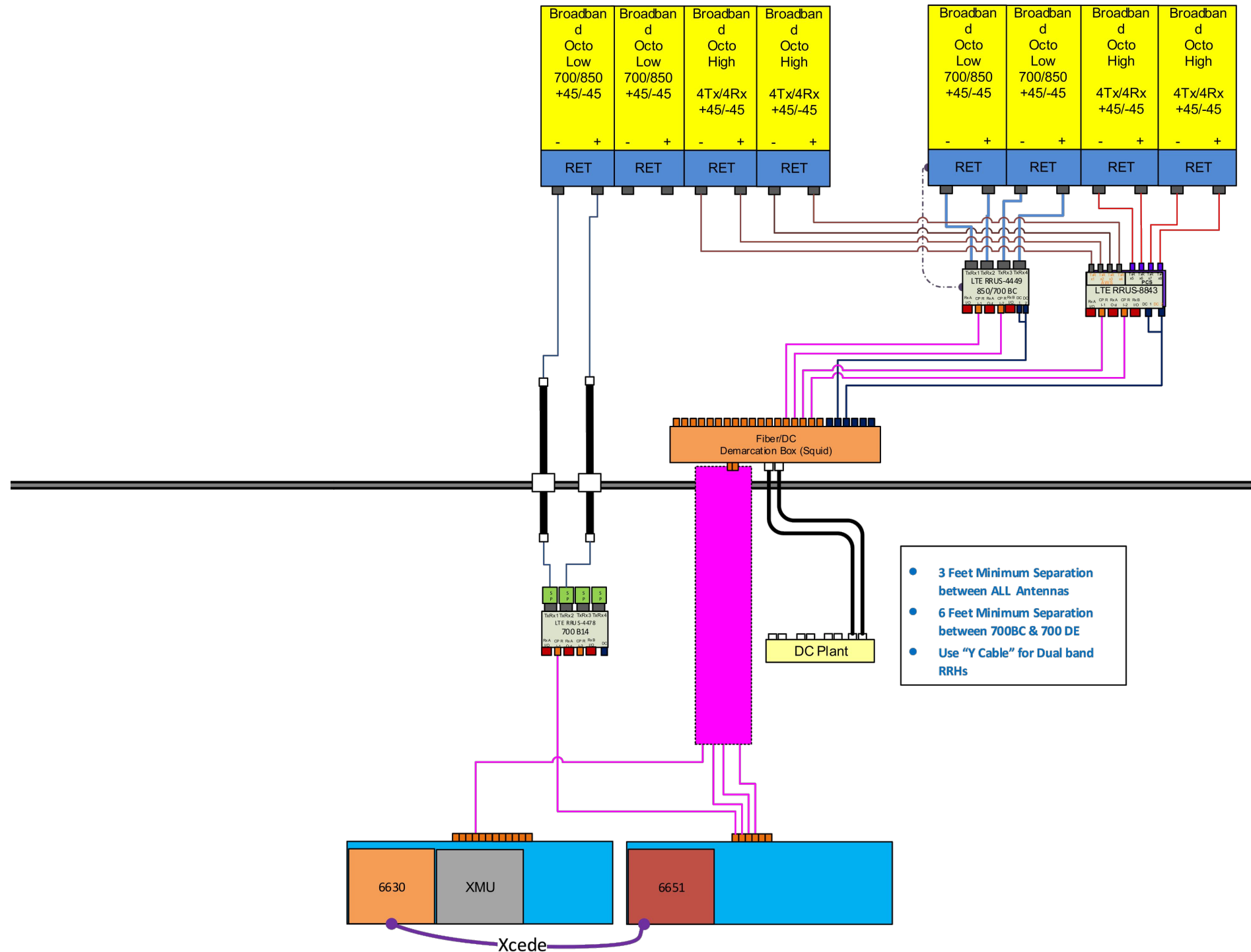
FINAL-APPROVED V3 RFDS DATED 05/19/23

Antenna 1
SPARE

Antenna 2

Antenna 3
LTE 700 B14 / AWS

Antenna 4
LTE 700 /5G 850 / PCS



- 3 Feet Minimum Separation between ALL Antennas
- 6 Feet Minimum Separation between 700BC & 700 DE
- Use "Y Cable" for Dual band RRHs

NOTE:
1. CONTRACTOR TO CONFIRM ALL PARTS.
2. INSTALL ALL EQUIPMENT TO MANUFACTURER'S RECOMMENDATIONS

NOTE:
REFER TO FINAL-APPROVED V3 RFDS DATED 05/19/23

RF PLUMBING DIAGRAM 1
SCALE: N.T.S. RF-1



SITE NUMBER: CTL02059
SITE NAME: PLAINFIELD NORTH
548 GREEN HOLLOW ROAD
PLAINFIELD, CT 06374
WINDHAM COUNTY



4	12/18/23	ISSUED FOR CONSTRUCTION	JS	AT	DPH
3	06/08/23	ISSUED FOR CONSTRUCTION	KW	AT	DPH
2	02/09/23	ISSUED FOR CONSTRUCTION	JS	AT	DPH
1	11/18/22	ISSUED FOR CONSTRUCTION	JS	AT	DPH
0	10/21/22	ISSUED FOR REVIEW	EB	AT	DPH
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: EB	DRAWN BY: EB		

AT&T		
RF PLUMBING DIAGRAM ANTENNA MODIFICATIONS 4TX4RX, 5G NR RADIO 5G NR 1DR-1, LTE NEXT CARRIER, LTE 3C		
SITE NUMBER	DRAWING NUMBER	REV
CTL02059	RF-1	4

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



Site Name:	PLAINFIELD NORTH
AT&T Mobility FA#	10035255
Site ID:	CTL02059
Project Name:	LTE
Address:	548 GREEN HOLLOW ROAD, PLAINFIELD, CT 06374
County:	WINDHAM
Latitude:	41.7459919
Longitude:	-71.8801669
Structure Type:	MONOPOLE
Property Owner:	NA
Property Contact:	NA

AT&T Existing Facility

Report Information

Report Writer:	Monti Kumar	Report Generated Date:	05-01-2023
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Site Compliance Statement

Compliance Status	Compliant
Cumulative General Population % MPE (Ground Level)	0.2878%

May 01, 2023

Emissions Analysis for Site: **CTL02059– PLAINFIELD NORTH**

MobileComm Professionals, Inc was directed to analyze the proposed AT&T facility located at **548 GREEN HOLLOW ROAD, PLAINFIELD, CT 06374**, for the purpose of determining whether the emissions from the Proposed AT&T 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 milliwatts per square centimeter (mW/cm^2) or microwatts per square centimeter ($\mu W/cm^2$). The number of mW/cm^2 or $\mu W/cm^2$ 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 public 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 public 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 milliwatts per square centimeter (mW/cm^2). The general population exposure limits for the 700 and 850 MHz Bands are approximately $0.467 mW/cm^2$ and $0.567 mW/cm^2$ respectively or $466.667 \mu W/cm^2$ and $566.667 \mu W/cm^2$ respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS), 2300 MHz (WCS), 3540 MHz (DoD Band) and 3840 MHz (C-Band) bands is $1 mW/cm^2$ or $1000 \mu W/cm^2$. 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.

1. Theoretical Calculations: Methods and Procedures

MobileComm Professionals, Inc has performed theoretical modeling of the site using a software tool, RoofMaster® Version 40.12.23.2022, which incorporates calculation methodologies detailed in FCC OET 65. RoofMaster® uses a cylindrical model for conservative power density predictions within the near field of the antenna where the antenna pattern has not truly formed yet. Within this area power density values tend to decrease based upon an inverse distance function. At the point where it is appropriate for modeling to change from near-field calculations to far-field calculations, the power decreases inversely with the square of the distance. The modeling is based on worst-case assumptions in terms of transmitter power and duty cycle. No losses were included in the power calculations unless they were specifically provided for the project.

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

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

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

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

2. Antenna Inventory & Power Data

Sector	Ant ID	Operator	Antenna Mfg	Antenna Model	Antenna Type	FREQ. (MHz)	TECH.	AZ. (°)	H B W (°)	Antenna Gain (dBd)	Antenna Aperture (ft)	#of Channels	Transmitter Power Per Channel (Watts)	Total ERP (Watts)	Total EIRP (Watts)	Height (ft)	Calculated Power Density (µW/cm ²)	Allowable MPE (µW/cm ²)	Calculated MPE%
A	1	AT&T	CCI	OPA65R-BU4D	Panel	700	LTE(FN)	23	73	11.05	4	4	40.00	1816.02	2979.34	155.00	0.000052	466.67	0.000011
A	1	AT&T	CCI	OPA65R-BU4D	Panel	2100	LTE/5G	23	70	14.55	4	4	40.00	4065.56	6669.91	155.00	0.000000	1000.00	0.000000
A	2	AT&T	CCI	OPA65R-BU4D	Panel	700	LTE(B12)	23	73	11.05	4	4	40.00	1816.02	2979.34	155.00	0.000020	466.67	0.000004
A	2	AT&T	CCI	OPA65R-BU4D	Panel	850	5G	23	62	11.85	4	4	40.00	2183.33	3581.95	155.00	0.000025	566.67	0.000004
A	2	AT&T	CCI	OPA65R-BU4D	Panel	1900	LTE/5G	23	69	14.25	4	4	40.00	3794.20	6224.72	155.00	0.000005	1000.00	0.000001
B	3	AT&T	CCI	OPA65R-BU8D	Panel	700	LTE(FN)	143	75	13.55	8	4	40.00	3229.39	5298.10	155.00	0.000014	466.67	0.000003
B	3	AT&T	CCI	OPA65R-BU8D	Panel	2100	LTE/5G	143	69	16.05	8	4	40.00	5742.75	9421.50	155.00	0.000020	1000.00	0.000002
B	4	AT&T	CCI	OPA65R-BU8D	Panel	700	LTE(B12)	143	75	13.55	8	4	40.00	3229.39	5298.10	155.00	0.000020	466.67	0.000004
B	4	AT&T	CCI	OPA65R-BU8D	Panel	850	5G	143	63	14.45	8	4	40.00	3973.01	6518.08	155.00	0.000006	566.67	0.000001
B	4	AT&T	CCI	OPA65R-BU8D	Panel	1900	LTE/5G	143	67	15.75	8	4	40.00	5359.45	8792.65	155.00	0.000066	1000.00	0.000007
C	5	AT&T	CCI	OPA65R-BU8D	Panel	700	LTE(FN)	263	75	13.55	8	4	40.00	3229.39	5298.10	155.00	0.021531	466.67	0.004614
C	5	AT&T	CCI	OPA65R-BU8D	Panel	2100	LTE/5G	263	69	16.05	8	4	40.00	5742.75	9421.50	155.00	0.027173	1000.00	0.002717
C	6	AT&T	CCI	OPA65R-BU8D	Panel	700	LTE(B12)	263	75	13.55	8	4	40.00	3229.39	5298.10	155.00	0.000121	466.67	0.000026
C	6	AT&T	CCI	OPA65R-BU8D	Panel	850	5G	263	63	14.45	8	4	40.00	3973.01	6518.08	155.00	0.000154	566.67	0.000027
C	6	AT&T	CCI	OPA65R-BU8D	Panel	1900	LTE/5G	263	67	15.75	8	4	40.00	5359.45	8792.65	155.00	0.000039	1000.00	0.000004
A	7	T-Mobile	Ericsson	AIR6419_LTE_B41	Panel	2500	LTE	40	12.5	22.65	2.86	1	40.67	7485.61	12280.81	165.00	0.123191	1000.00	0.012319
A	7	T-Mobile	Ericsson	AIR6419_NR_B41	Panel	2500	5G	40	12.5	22.65	2.86	1	67.78	12476.02	20468.02	165.00	0.205318	1000.00	0.020532
A	8	T-Mobile	RFS	APXVAALL24_43-U-NA20	Panel	600	LTE	40	64.3	12.95	8	2	30.00	1054.75	1730.42	165.00	0.001796	400.00	0.000449
A	8	T-Mobile	RFS	APXVAALL24_43-U-NA20	Panel	600	5G	40	64.3	12.95	8	1	80.00	1406.34	2307.23	165.00	0.002394	400.00	0.000599
A	8	T-Mobile	RFS	APXVAALL24_43-U-NA20	Panel	700	LTE	40	63.3	14.05	8	2	30.00	1358.79	2229.21	165.00	0.000671	466.67	0.000144
A	8	T-Mobile	RFS	APXVAALL24_43-U-NA20	Panel	1900	GSM	40	64.8	15.25	8	4	30.00	3582.46	5877.35	165.00	0.002010	1000.00	0.000201
A	8	T-Mobile	RFS	APXVAALL24_43-U-NA20	Panel	1900	LTE	40	64.8	15.25	8	2	60.00	3582.46	5877.35	165.00	0.002010	1000.00	0.000201
A	8	T-Mobile	RFS	APXVAALL24_43-U-NA20	Panel	2100	LTE	40	59.4	16.45	8	2	60.00	4722.60	7747.85	165.00	0.002615	1000.00	0.000261
B	9	T-Mobile	Ericsson	AIR6419_LTE_B41	Panel	2500	LTE	160	12.5	22.65	2.86	1	40.67	7485.61	12280.81	165.00	0.001286	1000.00	0.000129
B	9	T-Mobile	Ericsson	AIR6419_NR_B41	Panel	2500	5G	160	12.5	22.65	2.86	1	67.78	12476.02	20468.02	165.00	0.002144	1000.00	0.000214
B	10	T-Mobile	RFS	APXVAALL24_43-U-NA20	Panel	600	LTE	160	64.3	12.95	8	2	30.00	1054.75	1730.42	165.00	0.000822	400.00	0.000206
B	10	T-Mobile	RFS	APXVAALL24_43-U-NA20	Panel	600	5G	160	64.3	12.95	8	1	80.00	1406.34	2307.23	165.00	0.001096	400.00	0.000274
B	10	T-Mobile	RFS	APXVAALL24_43-U-NA20	Panel	700	LTE	160	63.3	14.05	8	2	30.00	1358.79	2229.21	165.00	0.000217	466.67	0.000047
B	10	T-Mobile	RFS	APXVAALL24_43-U-NA20	Panel	1900	GSM	160	64.8	15.25	8	4	30.00	3582.46	5877.35	165.00	0.000746	1000.00	0.000075
B	10	T-Mobile	RFS	APXVAALL24_43-U-NA20	Panel	1900	LTE	160	64.8	15.25	8	2	60.00	3582.46	5877.35	165.00	0.000746	1000.00	0.000075
B	10	T-Mobile	RFS	APXVAALL24_43-U-NA20	Panel	2100	LTE	160	59.4	16.45	8	2	60.00	4722.60	7747.85	165.00	0.001227	1000.00	0.000123
C	11	T-Mobile	Ericsson	AIR6419_LTE_B41	Panel	2500	LTE	280	12.5	22.65	2.86	1	40.67	7485.61	12280.81	165.00	0.000172	1000.00	0.000017
C	11	T-Mobile	Ericsson	AIR6419_NR_B41	Panel	2500	5G	280	12.5	22.65	2.86	1	67.78	12476.02	20468.02	165.00	0.000287	1000.00	0.000029
C	12	T-Mobile	RFS	APXVAALL24_43-U-NA20	Panel	600	LTE	280	64.3	12.95	8	2	30.00	1054.75	1730.42	165.00	0.000003	400.00	0.000001
C	12	T-Mobile	RFS	APXVAALL24_43-U-NA20	Panel	600	5G	280	64.3	12.95	8	1	80.00	1406.34	2307.23	165.00	0.000004	400.00	0.000001
C	12	T-Mobile	RFS	APXVAALL24_43-U-NA20	Panel	700	LTE	280	63.3	14.05	8	2	30.00	1358.79	2229.21	165.00	0.000032	466.67	0.000007
C	12	T-Mobile	RFS	APXVAALL24_43-U-NA20	Panel	1900	GSM	280	64.8	15.25	8	4	30.00	3582.46	5877.35	165.00	0.000001	1000.00	0.000000
C	12	T-Mobile	RFS	APXVAALL24_43-U-NA20	Panel	1900	LTE	280	64.8	15.25	8	2	60.00	3582.46	5877.35	165.00	0.000001	1000.00	0.000000
C	12	T-Mobile	RFS	APXVAALL24_43-U-NA20	Panel	2100	LTE	280	59.4	16.45	8	2	60.00	4722.60	7747.85	165.00	0.000018	1000.00	0.000002

Table 2.1: Antenna Inventory & Power Data

*NOTE: 75% Duty Cycle and adjusted power reduction factor of 0.32 was applied to the AIR6449 & AIR6449 antennas per guidance from AT&T.

Specifications were not available for the Ericsson AIR 6449 antenna. Per AT&T, specifications for the AIR 6449 antenna were used to model the 6449 due to its similarity.

Sector	Ant ID	Operator	Antenna Mfg	Antenna Model	Antenna Type	FREQ. (MHz)	TECH.	AZ. (°)	H B W (°)	Antenna Gain (dBd)	Antenna Aperture (ft)	#of Channels	Transmitter Power Per Channel (Watts)	Total ERP (Watts)	Total EIRP (Watts)	Height (ft)	Calculated Power Density (μW/cm ²)	Allowable MPE (μW/cm ²)	Calculated MPE%
A	13	Sprint	CommScope	NNVV-65B-R4	Panel	850	CDMA	0	64	12.75	6	1	20.00	335.76	550.85	145.00	0.000014	566.67	0.000002
A	13	Sprint	CommScope	NNVV-65B-R4	Panel	850	LTE	0	64	12.75	6	2	50.00	1678.80	2754.23	145.00	0.000068	566.67	0.000012
A	13	Sprint	CommScope	NNVV-65B-R4	Panel	1900	CDMA	0	60	15.05	6	5	16.00	2280.81	3741.88	145.00	0.000043	1000.00	0.000004
A	13	Sprint	CommScope	NNVV-65B-R4	Panel	1900	LTE	0	60	15.05	6	2	40.00	2280.81	3741.88	145.00	0.000043	1000.00	0.000004
A	14	Sprint	RFS	APXVTM14-ALU-I20	Panel	2500	LTE	0	65	16.5	4.59	8	20.00	2158.57	3541.33	145.00	0.032956	1000.00	0.003296
B	15	Sprint	CommScope	NNVV-65B-R4	Panel	850	CDMA	180	64	12.75	6	1	20.00	335.76	550.85	145.00	0.000001	566.67	0.000000
B	15	Sprint	CommScope	NNVV-65B-R4	Panel	850	LTE	180	64	12.75	6	2	50.00	1678.80	2754.23	145.00	0.000006	566.67	0.000001
B	15	Sprint	CommScope	NNVV-65B-R4	Panel	1900	CDMA	180	60	15.05	6	5	16.00	2280.81	3741.88	145.00	0.000005	1000.00	0.000000
B	15	Sprint	CommScope	NNVV-65B-R4	Panel	1900	LTE	180	60	15.05	6	2	40.00	2280.81	3741.88	145.00	0.000005	1000.00	0.000000
C	16	Sprint	RFS	APXVTM14-ALU-I20	Panel	2500	LTE	180	65	16.5	4.59	8	20.00	2158.57	3541.33	145.00	0.000008	1000.00	0.000001
C	17	Sprint	CommScope	NNVV-65B-R4	Panel	850	CDMA	270	64	12.75	6	1	20.00	335.76	550.85	145.00	0.008176	566.67	0.001443
C	17	Sprint	CommScope	NNVV-65B-R4	Panel	850	LTE	270	64	12.75	6	2	50.00	1678.80	2754.23	145.00	0.040882	566.67	0.007214
C	17	Sprint	CommScope	NNVV-65B-R4	Panel	1900	CDMA	270	60	15.05	6	5	16.00	2280.81	3741.88	145.00	0.038154	1000.00	0.003815
C	17	Sprint	CommScope	NNVV-65B-R4	Panel	1900	LTE	270	60	15.05	6	2	40.00	2280.81	3741.88	145.00	0.038154	1000.00	0.003815
C	18	Sprint	RFS	APXVTM14-ALU-I20	Panel	2500	LTE	270	65	16.5	4.59	8	20.00	2158.57	3541.33	145.00	0.000006	1000.00	0.000001
A	19	Verizon	Antel	LPA-80080-4CF	Panel	850	CDMA	60	80	12.5	3.9	1	40.00	633.96	1040.06	125.00	0.027577	566.67	0.004866
A	20	Verizon	JMA Wireless	MX06FRO660-03	Panel	700	LTE	60	60.5	12.25	5.9	4	40.00	2393.98	3927.53	125.00	0.070393	466.67	0.015084
A	20	Verizon	JMA Wireless	MX06FRO660-03	Panel	850	LTE	60	53	11.85	5.9	4	40.00	2183.33	3581.95	125.00	0.075478	566.67	0.013320
A	21	Verizon	JMA Wireless	MX06FRO660-03	Panel	1900	LTE	60	55	15.85	5.9	4	40.00	5484.28	8997.46	125.00	0.091607	1000.00	0.009161
A	21	Verizon	JMA Wireless	MX06FRO660-03	Panel	2100	LTE	60	55.5	16.05	5.9	4	40.00	5742.75	9421.50	125.00	0.119615	1000.00	0.011962
A	22	Verizon	Samsung	MT6407-77A	Panel	3700	5G	60	17	22.85	2.93	4	35.00	27047.56	44373.94	125.00	0.703479	1000.00	0.070348
A	23	Verizon	Antel	LPA-80080-4CF	Panel	850	CDMA	60	80	12.5	3.9	1	40.00	633.96	1040.06	125.00	0.001567	566.67	0.000277
B	24	Verizon	Antel	LPA-80080-4CF	Panel	850	CDMA	180	80	12.5	3.9	1	40.00	633.96	1040.06	125.00	0.010223	566.67	0.001804
B	25	Verizon	JMA Wireless	MX06FRO660-03	Panel	700	LTE	180	60.5	12.25	5.9	4	40.00	2393.98	3927.53	125.00	0.000200	466.67	0.000043
B	25	Verizon	JMA Wireless	MX06FRO660-03	Panel	850	LTE	180	53	11.85	5.9	4	40.00	2183.33	3581.95	125.00	0.000033	566.67	0.000006
B	26	Verizon	JMA Wireless	MX06FRO660-03	Panel	1900	LTE	180	55	15.85	5.9	4	40.00	5484.28	8997.46	125.00	0.000020	1000.00	0.000002
B	26	Verizon	JMA Wireless	MX06FRO660-03	Panel	2100	LTE	180	55.5	16.05	5.9	4	40.00	5742.75	9421.50	125.00	0.000243	1000.00	0.000024
B	27	Verizon	Samsung	MT6407-77A	Panel	3700	5G	180	17	22.85	2.93	4	35.00	27047.56	44373.94	125.00	0.001050	1000.00	0.000105
B	28	Verizon	Antel	LPA-80080-4CF	Panel	850	CDMA	180	80	12.5	3.9	1	40.00	633.96	1040.06	125.00	0.000082	566.67	0.000014
C	29	Verizon	Antel	LPA-80080-4CF	Panel	850	CDMA	300	80	12.5	3.9	1	40.00	633.96	1040.06	125.00	0.006428	566.67	0.001134
C	30	Verizon	JMA Wireless	MX06FRO660-03	Panel	700	LTE	300	60.5	12.25	5.9	4	40.00	2393.98	3927.53	125.00	0.004197	466.67	0.000899
C	30	Verizon	JMA Wireless	MX06FRO660-03	Panel	850	LTE	300	53	11.85	5.9	4	40.00	2183.33	3581.95	125.00	0.002987	566.67	0.000527
C	31	Verizon	JMA Wireless	MX06FRO660-03	Panel	1900	LTE	300	55	15.85	5.9	4	40.00	5484.28	8997.46	125.00	0.000071	1000.00	0.000007
C	31	Verizon	JMA Wireless	MX06FRO660-03	Panel	2100	LTE	300	55.5	16.05	5.9	4	40.00	5742.75	9421.50	125.00	0.000049	1000.00	0.000005
C	32	Verizon	Samsung	MT6407-77A	Panel	3700	5G	300	17	22.85	2.93	4	35.00	27047.56	44373.94	125.00	0.601165	1000.00	0.060116
C	33	Verizon	Antel	LPA-80080-4CF	Panel	850	CDMA	300	80	12.5	3.9	1	40.00	633.96	1040.06	125.00	0.028998	566.67	0.005117

Table 2.2: Antenna Inventory & Power Data

*NOTE: 75% Duty Cycle and adjusted power reduction factor of 0.32 was applied to the AIR6449 & AIR6449 antennas per guidance from AT&T. Specifications were not available for the Ericsson AIR 6449 antenna. Per AT&T, specifications for the AIR 6449 antenna were used to model the 6449 due to its similarity.

Sector	Ant ID	Operator	Antenna Mfg	Antenna Model	Antenna Type	FREQ. (MHz)	TECH.	AZ. (°)	H B W (°)	Antenna Gain (dBd)	Antenna Aperture (ft)	#of Channels	Transmitter Power Per Channel (Watts)	Total ERP (Watts)	Total EIRP (Watts)	Height (ft)	Calculated Power Density ($\mu\text{W}/\text{cm}^2$)	Allowable MPE ($\mu\text{W}/\text{cm}^2$)	Calculated MPE%
A	34	Dish	CommScope	FFVW-65B-R3-V1	Panel	600	5G	0	63	11.85	6	4	61.50	3358.08	5507.25	135.00	0.029075	400.00	0.007269
A	34	Dish	CommScope	FFVW-65B-R3-V1	Panel	1900	5G	0	61	15.65	6	4	40.00	5237.45	8592.51	135.00	0.010121	1000.00	0.001012
A	34	Dish	CommScope	FFVW-65B-R3-V1	Panel	2100	5G	0	61	16.05	6	4	40.00	5742.75	9421.50	135.00	0.023841	1000.00	0.002384
B	35	Dish	CommScope	FFVW-65B-R3-V1	Panel	600	5G	120	63	11.85	6	4	61.50	3358.08	5507.25	135.00	0.002683	400.00	0.000671
B	35	Dish	CommScope	FFVW-65B-R3-V1	Panel	1900	5G	120	61	15.65	6	4	40.00	5237.45	8592.51	135.00	0.000355	1000.00	0.000036
B	35	Dish	CommScope	FFVW-65B-R3-V1	Panel	2100	5G	120	61	16.05	6	4	40.00	5742.75	9421.50	135.00	0.000280	1000.00	0.000028
C	36	Dish	CommScope	FFVW-65B-R3-V1	Panel	600	5G	240	63	11.85	6	4	61.50	3358.08	5507.25	135.00	0.046745	400.00	0.011686
C	36	Dish	CommScope	FFVW-65B-R3-V1	Panel	1900	5G	240	61	15.65	6	4	40.00	5237.45	8592.51	135.00	0.027953	1000.00	0.002795
C	36	Dish	CommScope	FFVW-65B-R3-V1	Panel	2100	5G	240	61	16.05	6	4	40.00	5742.75	9421.50	135.00	0.042029	1000.00	0.004203
																Calculated Power Density ($\mu\text{W}/\text{cm}^2$)	2.485118%	Calculated MPE%	0.2878%

Table 2.3: Antenna Inventory & Power Data

*NOTE: 75% Duty Cycle and adjusted power reduction factor of 0.32 was applied to the AIR6449 & AIR6449 antennas per guidance from AT&T. Specifications were not available for the Ericsson AIR 6449 antenna. Per AT&T, specifications for the AIR 6449 antenna were used to model the 6449 due to its similarity.

3. Compliance Summary

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

The anticipated composite MPE value for this site assuming all carriers present is 0.2878% of the allowable FCC established general public limit sampled at the ground level.

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 within the allowable 100% threshold standard per the federal government.



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DELIVERED

Tuesday

1/2/24 at 12:14 PM

Signed for by: R.BRAIS

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DELIVERY STATUS

Delivered

TRACKING ID

774604238057

FROM

Smartlink LLC
Carolyn Seeley
6 Jasmine Rd
Oxford, MA US 01540
9787605577

Label Created
12/26/23 12:54 PM

WE HAVE YOUR PACKAGE

WEST BOYLSTON, MA
12/28/23 3:17 PM

ON THE WAY

WILLINGTON, CT
1/2/24 3:54 AM

OUT FOR DELIVERY

WILLINGTON, CT
1/2/24 6:20 AM

DELIVERED

Ryan Brais
Town of Plainfield
8 Community Ave
PLAINFIELD, CT US 06374
8602303001

Delivered
1/2/24 at 12:14 PM

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Shipment facts 



Shipment overview

TRACKING NUMBER 774604238057

DELIVERED TO Shipping/Receiving

SHIPPER REFERENCE CTL02059

SHIP DATE  12/28/23

STANDARD TRANSIT  1/3/24 before 5:00 PM

ACTUAL DELIVERY 1/2/24 at 12:14 PM



Services

SERVICE FedEx 2Day

TERMS Shipper

SPECIAL HANDLING SECTION Deliver Weekday



Package details

WEIGHT 0.5 lbs / 0.23 kgs

TOTAL PIECES 1

TOTAL SHIPMENT WEIGHT 0.5 lbs / 0.23 kgs

PACKAGING FedEx Envelope

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Travel history 



Local Scan Time



Tuesday, 12/26/23

- 12:54 PM
Shipment information sent to FedEx

Thursday, 12/28/23

- 3:17 PM
Shipment arriving early
WEST BOYLSTON, MA
- 3:17 PM
Picked up
WEST BOYLSTON, MA
- 9:33 PM
Left FedEx origin facility
WEST BOYLSTON, MA

Friday, 12/29/23

- 2:00 AM
Arrived at FedEx hub
WILLINGTON, CT
- 4:12 AM
At local FedEx facility
WILLINGTON, CT
- 6:20 AM
On FedEx vehicle for delivery
WILLINGTON, CT
- 7:11 AM
Delay
A request was made to change this delivery date.
WILLINGTON, CT
- 7:11 AM
Delay
A request was made to change this delivery date.
WILLINGTON, CT
- 7:12 AM
Shipment arriving early
WILLINGTON, CT

Saturday, 12/30/23

- 4:43 AM
At local FedEx facility
WILLINGTON, CT



- 3:53 AM
At local FedEx facility
WILLINGTON, CT
- 3:54 AM
Shipment arriving early
WILLINGTON, CT
- 6:20 AM
On FedEx vehicle for delivery
WILLINGTON, CT
- ☑ 12:14 PM
Delivered
PLAINFIELD, CT

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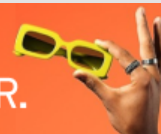


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DELIVERED

Wednesday

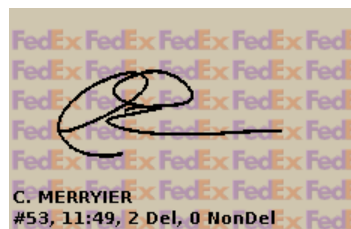
12/27/23 at 11:48 AM

Signed for by: C.MERRYIER

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DELIVERY STATUS

Delivered 



TRACKING ID

774604585304   

FROM

Smartlink LLC
Carolyn Seeley
6 Jasmine Rd
Oxford, MA US 01540
9787605577

Label Created
12/26/23 1:19 PM

WE HAVE YOUR PACKAGE

WEST BOYLSTON, MA
12/26/23 3:55 PM

ON THE WAY

WILLINGTON, CT
12/27/23 4:49 AM

OUT FOR DELIVERY

WILLINGTON, CT
12/27/23 4:54 AM

DELIVERED

Lou Soja
Town of Plainfield



Delivered
12/27/23 at 11:48 AM

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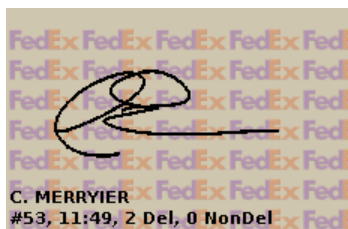
12/27/23 at 11:48 AM

Signed for by: C.MERRYIER

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DELIVERY STATUS

Delivered



TRACKING ID

774603599782

FROM

Smartlink LLC
Carolyn Seeley
6 Jasmine Rd
Oxford, MA US 01540
9787605577

Label Created
12/26/23 12:05 PM

WE HAVE YOUR PACKAGE

WEST BOYLSTON, MA
12/26/23 3:55 PM

ON THE WAY

WILLINGTON, CT
12/27/23 4:48 AM

OUT FOR DELIVERY

WILLINGTON, CT
12/27/23 4:53 AM

DELIVERED

Paul E. Sweet
Town of Plainfield



Delivered
12/27/23 at 11:48 AM

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Shipment overview

TRACKING NUMBER 774603599782

DELIVERED TO Shipping/Receiving

SHIPPER REFERENCE CTL02059

SHIP DATE 12/26/23

STANDARD TRANSIT 12/28/23 before 5:00 PM

ACTUAL DELIVERY 12/27/23 at 11:48 AM

Services

SERVICE FedEx 2Day

TERMS Shipper

SPECIAL HANDLING SECTION Deliver Weekday

Package details

WEIGHT 0.5 lbs / 0.23 kgs

TOTAL PIECES 1

TOTAL SHIPMENT WEIGHT 0.5 lbs / 0.23 kgs



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Ascending



Local Scan Time



Tuesday, 12/26/23

- 12:05 PM
Shipment information sent to FedEx
- 3:55 PM
Picked up
WEST BOYLSTON, MA
- 3:56 PM
Shipment arriving early
WEST BOYLSTON, MA
- 8:32 PM
Left FedEx origin facility
WEST BOYLSTON, MA

Wednesday, 12/27/23

- 2:21 AM
Arrived at FedEx hub
WILLINGTON, CT
- 4:48 AM
At local FedEx facility
WILLINGTON, CT
- 4:53 AM
On FedEx vehicle for delivery
WILLINGTON, CT
- 11:48 AM
Delivered
PLAINFIELD, CT

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DELIVERED

Wednesday

1/10/24 at 10:17 AM

Signed for by: J.HAWKINS

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How was your delivery?



DELIVERY STATUS

Delivered



TRACKING ID

774705052238

FROM

Smartlink LLC
Carolyn Seeley
6 Jasmine Rd
Oxford, MA US 01540
9787605577

Label Created
1/5/24 2:06 PM

WE HAVE YOUR PACKAGE

WEST BOYLSTON, MA
1/8/24 4:58 PM

ON THE WAY

BOCA RATON, FL
1/10/24 8:54 AM

OUT FOR DELIVERY

BOCA RATON, FL
1/10/24 8:54 AM

DELIVERED

Carla Shorter



5612269476

Delivered

1/10/24 at 10:17 AM

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TRACKING NUMBER 774705052238

DELIVERED TO Mailroom

SHIPPER REFERENCE MAL02059 2nd

SHIP DATE 1/8/24

STANDARD TRANSIT 1/10/24 before 10:30 AM

ACTUAL DELIVERY 1/10/24 at 10:17 AM

Services

SERVICE FedEx 2Day AM

TERMS Shipper

SPECIAL HANDLING SECTION Deliver Weekday

Package details

WEIGHT 0.5 lbs / 0.23 kgs

TOTAL PIECES 1

TOTAL SHIPMENT WEIGHT 0.5 lbs / 0.23 kgs



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Local Scan Time 

Friday, 1/5/24

- 2:06 PM
Shipment information sent to FedEx

Monday, 1/8/24

- 4:58 PM
Shipment arriving On-Time
WEST BOYLSTON, MA
- 4:58 PM
Picked up
WEST BOYLSTON, MA
- 7:40 PM
Left FedEx origin facility
WEST BOYLSTON, MA
- 11:33 PM
At local FedEx facility
EAST BOSTON, MA

Tuesday, 1/9/24

- 11:19 AM
Arrived at FedEx hub
MEMPHIS, TN
- 5:50 PM
Departed FedEx hub
MEMPHIS, TN
- 8:52 PM
At destination sort facility
FORT LAUDERDALE, FL
- 11:06 PM
At local FedEx facility
FORT LAUDERDALE, FL



- 8:40 AM
At local FedEx facility
BOCA RATON, FL
- 8:54 AM
On FedEx vehicle for delivery
BOCA RATON, FL
- 8:54 AM
At local FedEx facility
BOCA RATON, FL
- ☑ 10:17 AM
Delivered
BOCA RATON, FL

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