Robinson+Cole

KENNETH C. BALDWIN

280 Trumbull Street
Hartford, CT 06103-3597
Main (860) 275-8200
Fax (860) 275-8299
kbaldwin@rc.com
Direct (860) 275-8345

Also admitted in Massachusetts
and New York

October 14, 2021

Via Electronic Mail

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

Re: **Notice of Exempt Modification – Facility Modification**
44 Rich Road (a/k/a 38 Rich Road), Thompson, Connecticut

Dear Attorney Bachman:

Cellco Partnership d/b/a Verizon Wireless ("Cellco") currently maintains an existing wireless telecommunications facility at the above-referenced property address (the "Property"). The facility consists of antennas and remote radio heads attached to a tower and associated equipment on the ground near the base of the tower. The tower and Cellco's use of the tower were approved by the Siting Council ("Council") in January of 2008 (Docket No. 344). A copy of the Docket No. 344 Decision and Order is included in Attachment 1.

Cellco now intends to modify its facility by replacing twelve (12) existing antennas with three (3) new Samsung MT6407-77A antennas and six (6) MX06FRO660-03 antennas on Cellco's existing antenna t-arm mounts. Cellco also intends to replace six (6) remote radio heads ("RRHs') with six (6) new RRHs behind its antennas. A set of project plans showing Cellco's proposed facility modifications and new antennas specifications are included in Attachment 2.

Please accept this letter 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). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Thompson's Chief Elected Official and Land Use Officer. The Town of Thompson is the owner of the Property.

The planned modifications to the 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. Cellco's replacement antennas will be installed on Cellco's existing t-arm antenna mounts.

2. The proposed modifications will not involve any change to ground-mounted equipment and, therefore, will not require the extension of the site boundary.

3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.

4. The installation of Cellco's new antennas 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 General Power Density table for Cellco's modified facility is included in Attachment 3. The modified facility will be capable of providing Cellco's 5G wireless service.

5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.

6. According to the attached Structural Analysis ("SA") and Mount Analysis ("MA"), the existing tower, tower foundation and antenna platform can support Cellco's proposed modifications. Copies of the SA and MA are included in Attachment 4.

A copy of the parcel map and Property owner information is included in Attachment 5. A Certificate of Mailing verifying that this filing was sent to municipal officials is included in Attachment 6.

For the foregoing reasons, Cellco 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,

Kenneth C. Baldwin

Enclosures
Copy to:
Amy St. Onge, Thompson First Selectman
Tyra Penn-Gesek, Director of Planning and Development
Karla Hanna

ATTACHMENT 1

DOCKET NO. 344 - MCF Communications bg, Inc. and Omnipoint Communications, Inc. application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a telecommunications facility located at Rich Road, Thompson, Connecticut.	}	Connecticut
	}	Siting
	}	Council

January 10, 2008

Decision and Order

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, operation, and maintenance of a telecommunications facility including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate either alone or cumulatively with other effects when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by General Statutes § 16-50k, be issued to MCF Communications bg, Inc. for the construction, maintenance and operation of a wireless telecommunications facility to be located on Rich Road in Thompson, Connecticut.

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

1. The tower shall be designed and constructed as a monopole no taller than 150 feet above ground level to provide telecommunications services to both public and private entities. Panel antennas to be installed on the tower shall be flush-mounted or attached to the tower using T-arm mounts.

2. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be served on the Town of Thompson and all parties and intervenors, as listed in the service list, and submitted to and approved by the Council prior to the commencement of facility construction and shall include:

   a) a final site plan(s) of site development to include specifications for the tower, tower foundation, antenna mountings, equipment building, access road, and utility line;

   b) construction plans for site clearing, water drainage, and erosion and sedimentation control consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.

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

4. Upon the establishment of any new state or federal radio frequency standards applicable to frequencies of this facility, the facility granted herein shall be brought into compliance with such standards.

5. The Certificate Holder shall permit public or private entities to share space on the proposed tower for fair consideration, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing.

6. The Certificate Holder shall provide reasonable space on the tower for no compensation for any Town of Thompson public safety services (police, fire and medical services), provided such use can be accommodated and is compatible with the structural integrity of the tower.

7. Unless otherwise approved by the Council, if the facility authorized herein is not fully constructed and providing wireless services within eighteen months from the date of the mailing of the Council's Findings of Fact, Opinion, and Decision and Order (collectively called "Final Decision"), this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made. The time between the filing and resolution of any appeals of the Council's Final Decision shall not be counted in calculating this deadline.

8. Any request for extension of the time period referred to in Condition 7 shall be filed with the Council not later than 60 days prior to the expiration date of this Certificate and shall be served on all parties and intervenors, as listed in the service list, and the Town of Thompson. Any proposed modifications to this Decision and Order shall likewise be so served.

9. If the facility ceases to provide wireless services for a period of one year, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made.

10. The Certificate Holder shall remove any nonfunctioning antenna, and associated antenna mounting equipment, within 60 days of the date the antenna ceased to function.

11. In accordance with Section 16-50j-77 of the Regulations of Connecticut State Agencies, the Certificate Holder shall provide the Council with written notice two weeks prior to the commencement of construction activities. In addition, the Certificate Holder shall provide the Council with written notice of the completion of site construction and the commencement of site operation.

Pursuant to General Statutes § 16-50p, we hereby direct that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed below, and notice of issuance shall be published in The Norwich Bulletin and The Thompson Villager.

By this Decision and Order, the Council disposes of the legal rights, duties, and privileges of each party named or admitted to the proceeding in accordance with Section 16-50j-17 of the Regulations of Connecticut State Agencies.

The parties and intervenors in this proceeding are:

Status Granted	**Status Holder (name, address & phone number)**	**Representative (name, address & phone number)**
Applicant	MCF Communications bg, Inc. and Omnipoint Communications, Inc.	Julie Kohler, Esq. Carrie Larson, Esq. Cohen and Wolf, P.C 1115 Broad Street Bridgeport, CT 06604 Tel: 203-368-0211 Fax: 203-394-9901 JKohler@cohenandwolf.com Clarson@cohenandwolf.com
Intervenor Approved 08/29/07	Cellco Partnership d/b/a Verizon Wireless	Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103-3597 (860) 275-8200

ATTACHMENT 2

THOMPSON_NORTH_CT

44 RICH ROAD
NORTH GROSVENORDALE, CT 06277
SBA SITE I.D.#: CT11559-A

LOCATION CODE (PSLC): 535838
FUZE ID: 16244622
EQUIPMENT UPGRADE PROJECT
RFDS DATE: 06/23/21

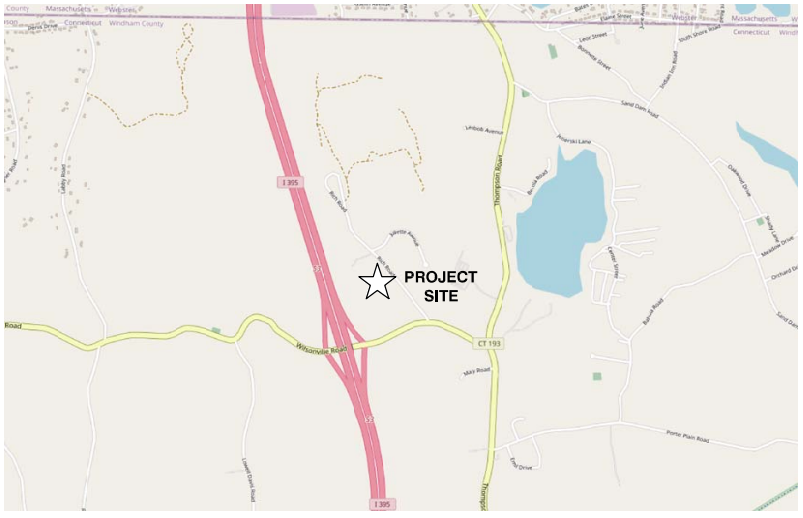
PROJECT SUMMARY

SCOPE OF WORK:	EXISTING TELECOMMUNICATIONS FACILITY EQUIPMENT ALTERATION
SITE NAME:	THOMPSON_NORTH_CT
LOCATION CODE (PSLC):	535838
FUZE PROJECT ID:	16244622
SITE ADDRESS:	44 RICH ROAD NORTH GROSVENORDALE, CT 06277
LATITUDE:	42.0115 N (RFDS)
LONGITUDE:	-71.852028 W (RFDS)
FACILITY:	SBA MONOPOLE SITE I.D.#: CT11559-A
APPLICANT, LESSEE/LICENSEE, PROJECT OWNER:	CELLCO PARTNERSHIP dba VERIZON WIRELESS 118 FLANDERS ROAD THIRD FLOOR WESTBOROUGH, MA 01581
SITE ENGINEER:	PROTERRA DESIGN GROUP, LLC 4 BAY ROAD BUILDING A, SUITE 200 HADLEY, MA 01035

SHEET INDEX

SHT. NO.	DESCRIPTION	REV. NO.
T-1	TITLE SHEET	1
A-1	COMPOUND PLAN & ELEVATION	1
A-2	EXISTING AND PROPOSED ANTENNA PLAN	1
D-1	DETAIL	1
X-1	ANTENNA LAYOUT RENDERINGS (BY OTHERS)	1

LOCATION MAP



N

IMAGE SOURCE: OPENSTREETMAP

GENERAL NOTES

1. VERIFY COAX CONFIGURATION, ANTENNA CONFIGURATION, AND ANTENNA HEIGHT WITH LATEST RF DATA SHEET PRIOR TO INSTALLATION.
2. THE CONTRACTOR SHALL SCHEDULE AND SEQUENCE ALL REQUIRED WORK WITH THE OWNER'S REPRESENTATIVE AND CONSTRUCTION MANAGER.
3. REPAIR ANY DAMAGE DURING CONSTRUCTION TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE CONSTRUCTION MANAGER
4. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES FOR THE WORK.
5. ANTENNAS TO BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS, GLOBAL STRUCTURAL ANALYSIS, AND LOCAL ANTENNA MOUNT ANALYSIS INCLUDING ANTENNA MOUNT MODIFICATIONS AND STRUCTURAL AUGMENTS AS APPLICABLE.
6. REPLACE AND/OR REUSE (E) MOUNTING HARDWARE, INSPECT FOR DAMAGE, AND REPLACE AS NECESSARY TO THE SATISFACTION OF THE ENGINEER.
7. EQUIPMENT LOCATIONS AND CONDITIONS TO BE FIELD VERIFIED PRIOR TO COMMENCEMENT OF CONSTRUCTION. ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES OR BE RESPONSIBLE FOR THE SAME.
8. NORTH SHOWN IS APPROXIMATE. NOT ALL (E) OR (P) IMPROVEMENTS REQUIRED MAY BE SHOWN FOR CLARITY.
9. ANTENNA ELEVATIONS SHALL BE PER ZONING OR AS APPROVALS DICTATE.
10. THESE CONSTRUCTION DRAWINGS ARE CONTINGENT UPON A PASSING GLOBAL STRUCTURAL ANALYSIS INCLUDING THE INSTALLATION OF ANY REQUIRED MODIFICATIONS AND INSPECTION REPORTS AS A RESULT THEREIN.

STRUCTURAL NOTES

GLOBAL TOWER STRUCTURAL ANALYSIS REPORT:

PASSING REPORT – NO MODIFICATIONS REQUIRED
BY TOWER ENGINEERING SOLUTIONS DATED 08/18/21.

LOCAL ANTENNA MOUNT ANALYSIS REPORT:

PASSING REPORT – NO MODIFICATIONS REQUIRED
BY MASER CONSULTING DATED 07/02/21.

CONTRACTOR MOUNT POST MODIFICATION INSPECTION (PMI) REPORT REQUIREMENTS

PMI ONLINE ACCESS:	https://pmi.vzwsmart.com
SMART TOOL VENDOR PROJECT NUMBER:	10081940
VzW LOCATION CODE (PSLC):	535838

*** PMI AND REQUIREMENTS ALSO EMBEDDED IN ANTENNA MOUNT ANALYSIS REPORT BY MASER CONSULTING DATED 07/02/21.

MOUNT MODIFICATIONS REQUIRED (Y/N): NO

VZW APPROVED SMART KIT VENDORS

REFER TO MOUNT MODIFICATION DRAWINGS PAGE FOR VzW SMART KIT APPROVED VENDORS

Jesse Moreno, PE

Digitally signed by Jesse Moreno, PE
Date: 2021.08.27 13:09:52 -04'00'

verizon
118 FLANDERS ROAD
THIRD FLOOR
WESTBOROUGH, MA 01581

PREPARED BY:
ProTerra DESIGN GROUP, LLC
4 Bay Road, Bldg A
Suite 200
Hadley, MA 01035
Ph: (413)320-4918

REVISIONS

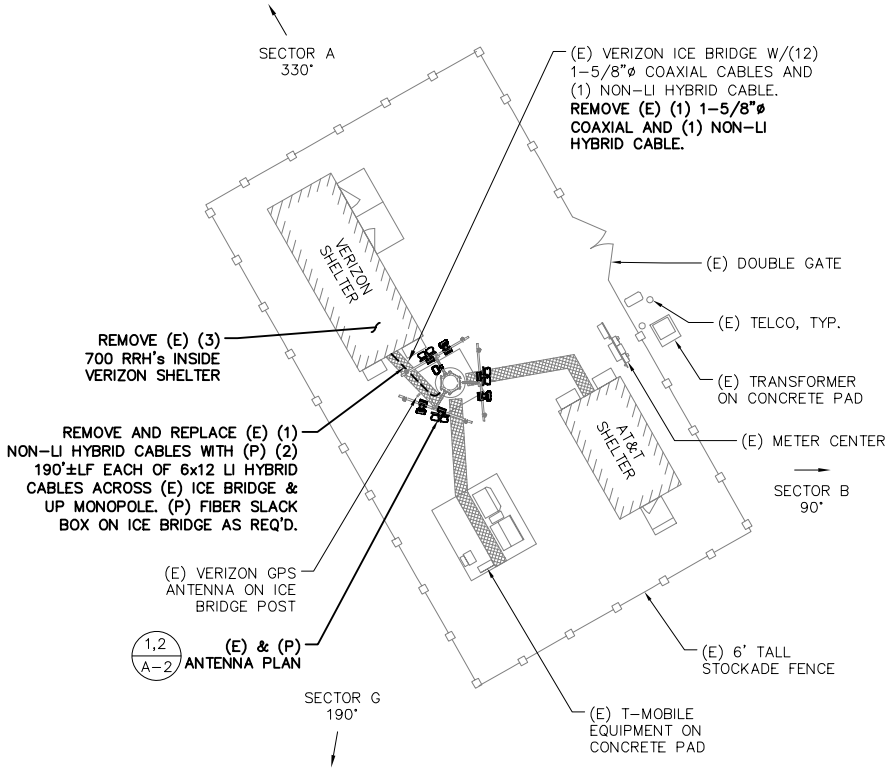
REV	DATE	DESCRIPTION	BY	CHK	APP'D
0	07/09/21	PER RFDS DATED 06/23/21	TBD	JWG	JMM
1	08/27/21	PER RFDS DATED 06/23/21	TBD	JWG	JMM

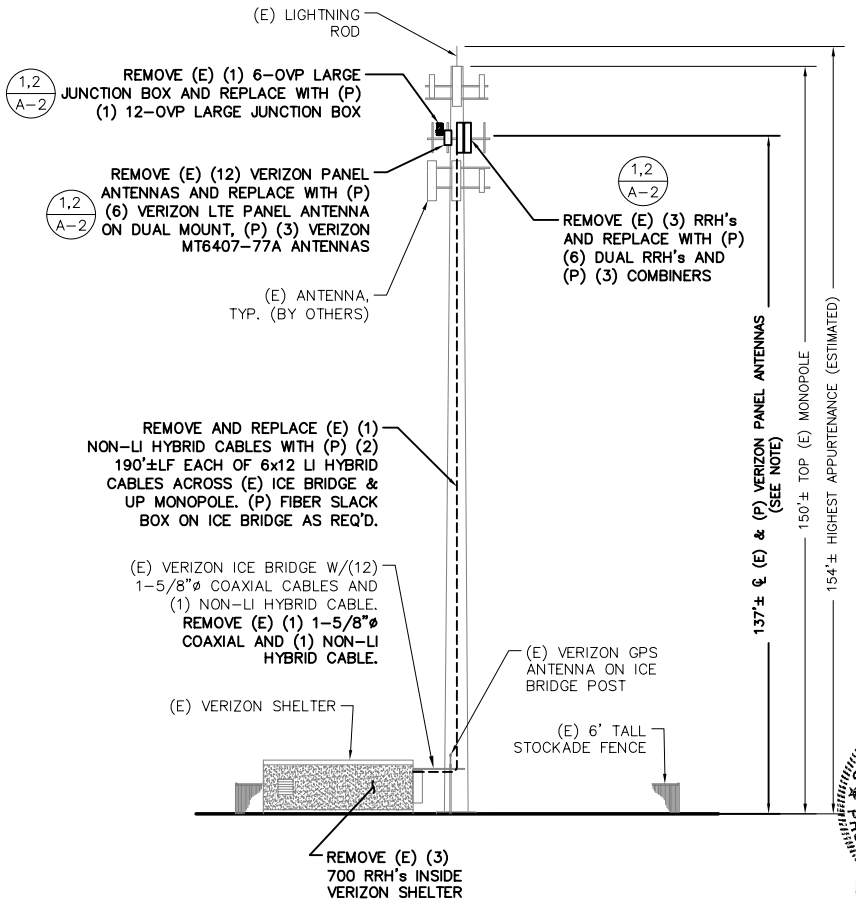
STATE OF CONNECTICUT
JESSE M. MORENO
No. 24389
LICENSED PROFESSIONAL ENGINEER
08/27/2021

THOMPSON_NORTH_CT
44 RICH ROAD
NORTH GROSVENORDALE, CT 06277
FUZE PROJECT ID: 16244622
SBA SITE I.D.#: CT11559-A

T-1

NOTE: AGL ELEVATIONS SHOWN HEREON FOR GENERAL REFERENCE ONLY, REFER TO LOCAL ANTENNA MOUNT ANALYSIS BY MASER CONSULTING AND SHEET X-1 FOR REQUIRED EQUIPMENT MOUNTING CONFIGURATION INCLUDING VERTICAL AND HORIZONTAL MOUNTING LOCATIONS LISTED IN TABLES. COORDINATE EQUIPMENT LOCATIONS AND ANY CONFLICTS WITH MASER CONSULTING.





N

COMPOUND PLAN

SCALE: 1"=20' (11x17)

1 A-1

20 10 0 20

SOUTHWEST ELEVATION

SCALE: 1"=25' (11x17)

2 A-1

25 12.5 0 25

verizon

118 FLANDERS ROAD
THIRD FLOOR
WESTBOROUGH, MA 01581

PREPARED BY:
ProTerra DESIGN GROUP, LLC
4 Bay Road, Bldg A
Suite 200
Hadley, MA 01035
Ph:(413)320-4918

REVISIONS

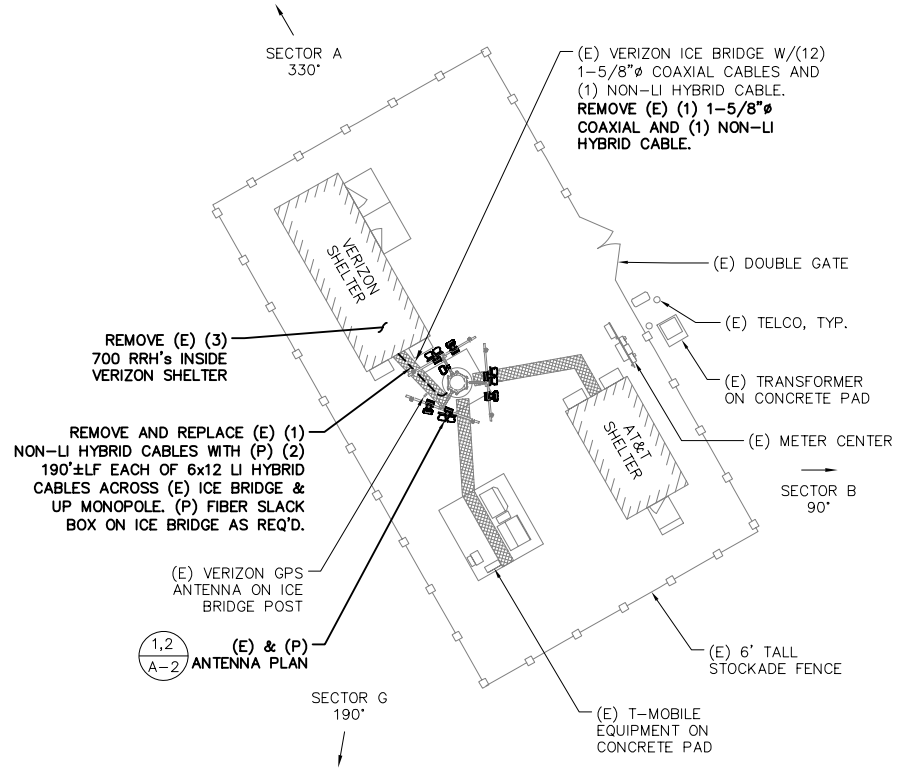
REV	DATE	DESCRIPTION	BY	CHK	APP'D
0	07/09/21	PER RFDS DATED 06/23/21	TBD	JWG	JMM
1	08/27/21	PER RFDS DATED 06/23/21	TBD	JWG	JMM

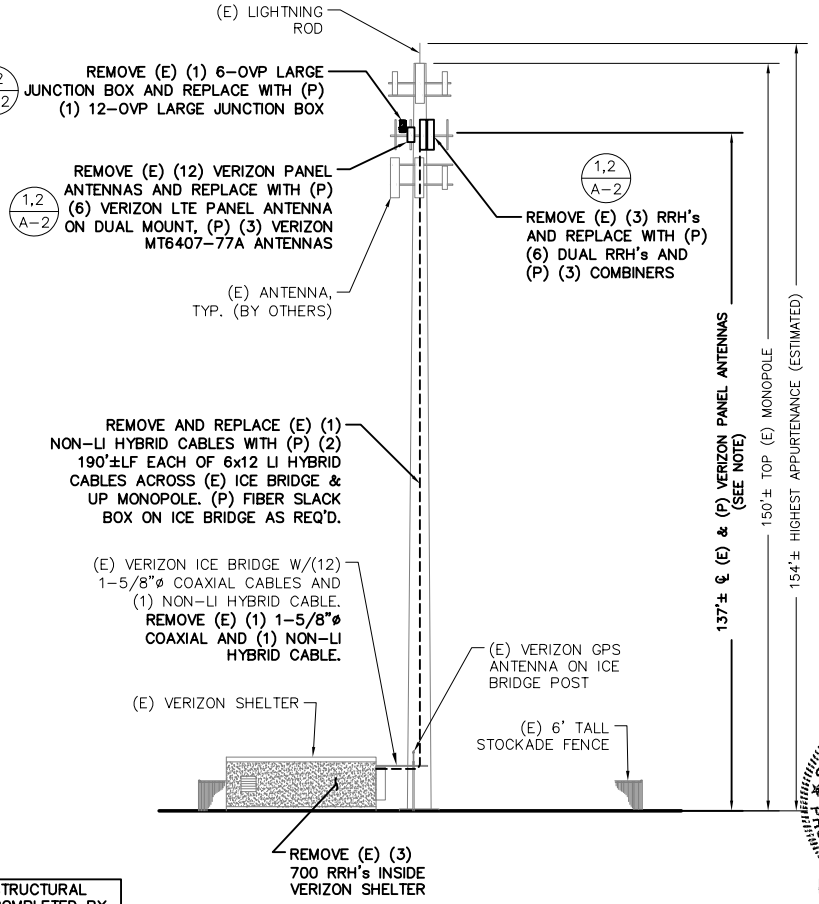
JESSE M. MORENO
No. 24389
LICENSED PROFESSIONAL ENGINEER
8/27/2021

THOMPSON, NORTH, CT
44 RICH ROAD
NORTH GROSVENORDALE, CT 06277
FUZE PROJECT ID: 16244622
SBA SITE LOC#: CT11559-A

A-1

NOTE: AGL ELEVATIONS SHOWN HEREON FOR GENERAL REFERENCE ONLY, REFER TO LOCAL ANTENNA MOUNT ANALYSIS BY MASER CONSULTING AND SHEET X-1 FOR REQUIRED EQUIPMENT MOUNTING CONFIGURATION INCLUDING VERTICAL AND HORIZONTAL MOUNTING LOCATIONS LISTED IN TABLES. COORDINATE EQUIPMENT LOCATIONS AND ANY CONFLICTS WITH MASER CONSULTING.





A GLOBAL TOWER STRUCTURAL ANALYSIS SHALL BE COMPLETED BY OTHERS PRIOR TO CONSTRUCTION TO CONFIRM CAPACITY.

COMPOUND PLAN

1 / A-1

SCALE: 1"=20' (11x17)

20 10 0 20

SOUTHWEST ELEVATION

2 / A-1

SCALE: 1"=25' (11x17)

25 12.5 0 25

verizon
118 FLANDERS ROAD
THIRD FLOOR
WESTBOROUGH, MA 01581

PREPARED BY:
ProTerra DESIGN GROUP, LLC
4 Bay Road, Bldg A
Suite 200
Hadley, MA 01035
Ph:(413)320-4918

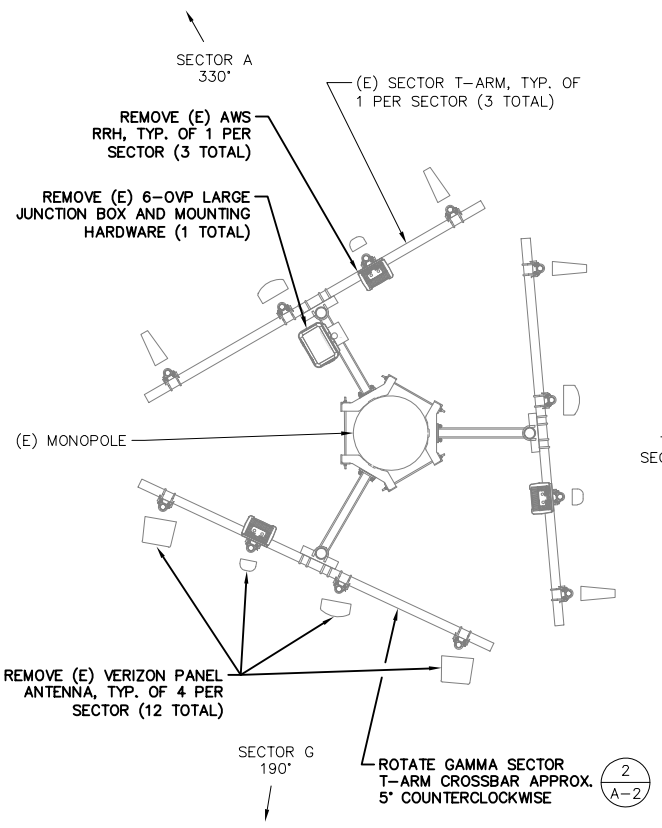
REVISIONS

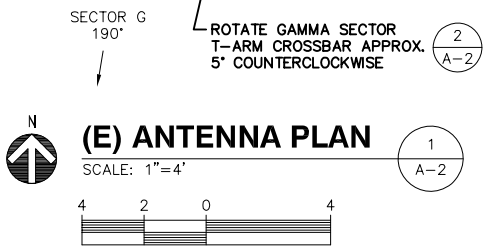
REV	DATE	DESCRIPTION	BY	CHK	APP'D
0	07/09/21	PER RFDS DATED 06/23/21	TBD	JWG	JMM
1	08/27/21	PER RFDS DATED 06/23/21	TBD	JWG	JMM

STATE OF CONNECTICUT
JESSE M. MORENO
No. 24389
LICENSED PROFESSIONAL ENGINEER
08/27/2021

THOMPSON, NORTH, CT
44 RICH ROAD
NORTH GROSVENORDALE, CT 06277
FUZE PROJECT ID: 16244622
SBA SITE LOC#: CT11559-A

A-1



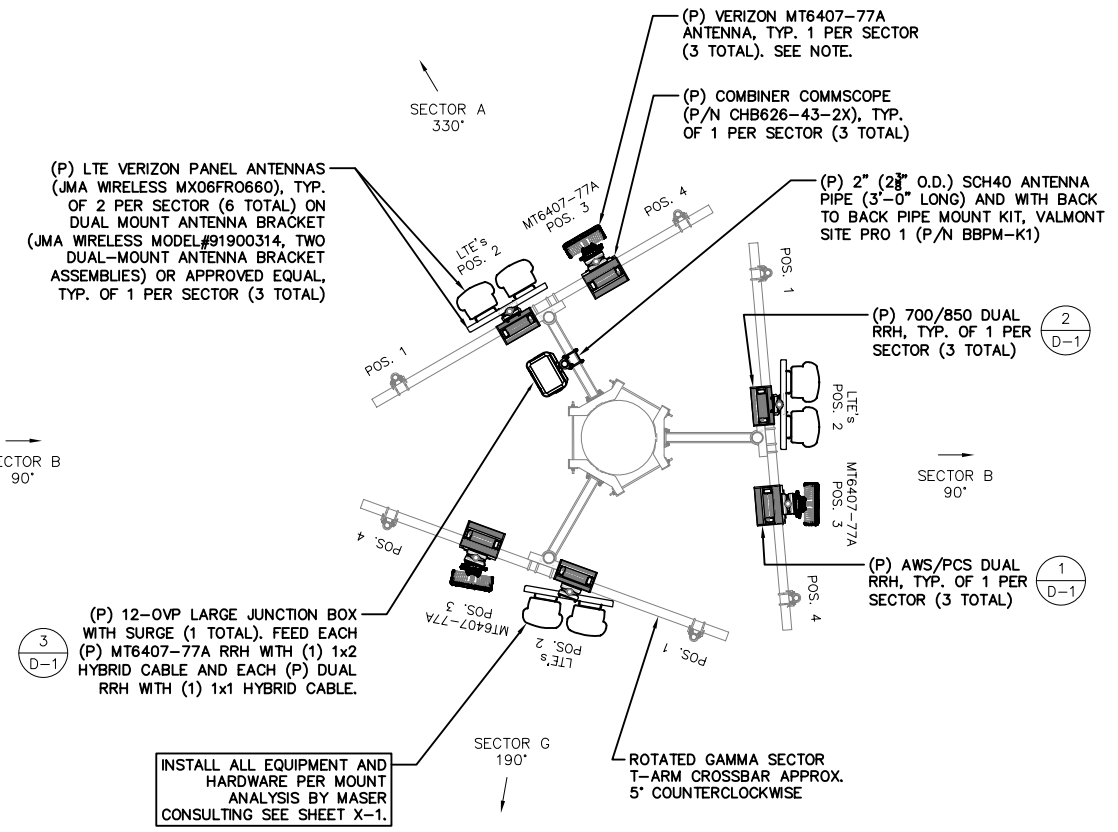


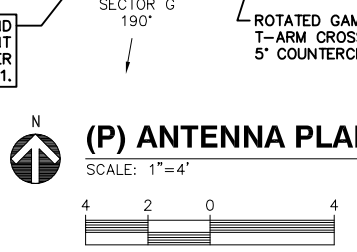
(E) ANTENNA PLAN

SCALE: 1"=4'

1 A-2

4 2 0 4





(P) ANTENNA PLAN

SCALE: 1"=4'

2 A-2

4 2 0 4

NOTE: AT TIME OF PUBLICATION, THE DESIGN OF THE VERIZON MT6407-77A ANTENNA WAS NOT FINALIZED. BASED UPON DIRECTIVE BY VERIZON WIRELESS, FOR DESIGN PURPOSES THE PROPOSED EQUIPMENT HAS BEEN CONSIDERED TO BE A MAXIMUM SIZE NOT TO EXCEED 35.1"±H x 16.1"±W x 5.6"±D AND WEIGH APPROXIMATELY 87.1±LBS. IF ANY OF THESE PARAMETERS ARE EXCEEDED BY THE EQUIPMENT THE ENGINEER(S) SHALL BE NOTIFIED TO REVISE THE DRAWINGS, STRUCTURAL ANALYSIS, AND MOUNT ANALYSIS.

verizon
118 FLANDERS ROAD
THIRD FLOOR
WESTBOROUGH, MA 01581

PREPARED BY:
ProTerra DESIGN GROUP, LLC
4 Bay Road, Bldg A
Suite 200
Hadley, MA 01035
Ph:(413)320-4918

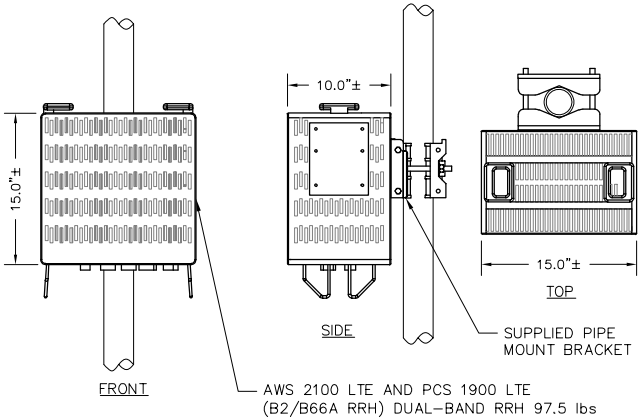
REVISIONS

REV	DATE	DESCRIPTION	BY	CHK	APP'D
0	07/09/21	PER RFDS DATED 06/23/21	TBD	JWG	JMM
1	08/27/21	PER RFDS DATED 06/23/21	TBD	JWG	JMM

STATE OF CONNECTICUT
JESSE M. MORENO
No. 24389
LICENSED PROFESSIONAL ENGINEER
08/27/2021

THOMPSON, NORTH, CT
44 RICH ROAD
NORTH GROSVENORDALE, CT 06277
FUZE PROJECT ID: 16244622
SBA SITE LOC#: CT11559-A

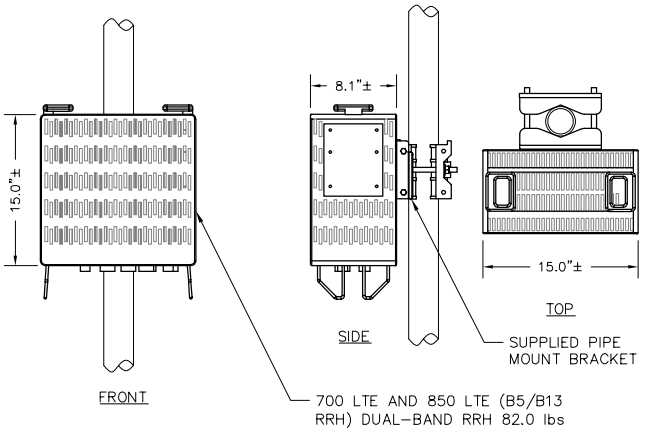
A-2



(P) AWS/PCS RRH MOUNTING DETAIL

SCALE: NONE

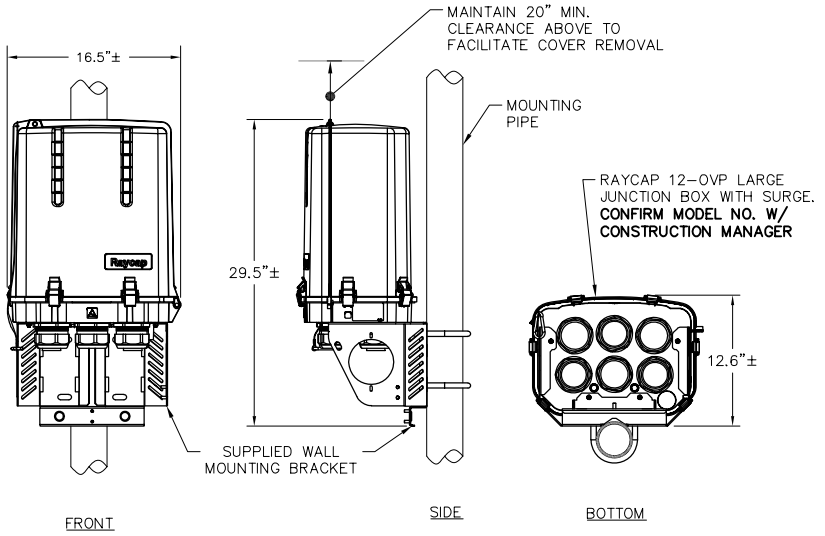
1 / D-1



(P) 700/850 RRH MOUNTING DETAIL

SCALE: NONE

2 / D-1



(P) LARGE JUNCTION BOX MOUNTING DETAIL

SCALE: NONE

3 / D-1

INSTALLATION NOTES:

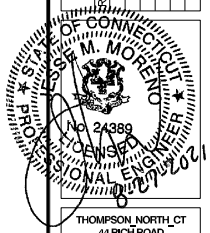
1. INSTALL ALL EQUIPMENT, MOUNTING BRACKETS, AND HARDWARE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
2. GROUND DISTRIBUTION BOXES, MOUNTING PIPES, AND RRHs IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
3. INSTALL EQUIPMENT AND MOUNTING BRACKETS TO PRESERVE CLIMBING ACCESS ON TOWER.
4. EQUIPMENT TO BE INSTALLED AT VERIZON RAD. CENTER IN ACCORDANCE WITH GLOBAL TOWER STRUCTURAL ANALYSIS AND MOUNT ANALYSIS (BY OTHERS).

verizon
118 FLANDERS ROAD
THIRD FLOOR
WESTBOROUGH, MA 01581

PREPARED BY:
ProTerra DESIGN GROUP, LLC
4 Bay Road, Bldg A
Suite 200
Hadley, MA 01035
Ph:(413)320-4918

REVISIONS

REV	DATE	DESCRIPTION	BY	CHK	APP'D
0	07/09/21	PER RFDS DATED 06/23/21	TBD	JWG	JMM
1	08/27/21	PER RFDS DATED 06/23/21	TBD	JWG	JMM



THOMPSON, NORTH_CT
44 RICH ROAD
NORTH GROSVENORDALE,
CT 06277

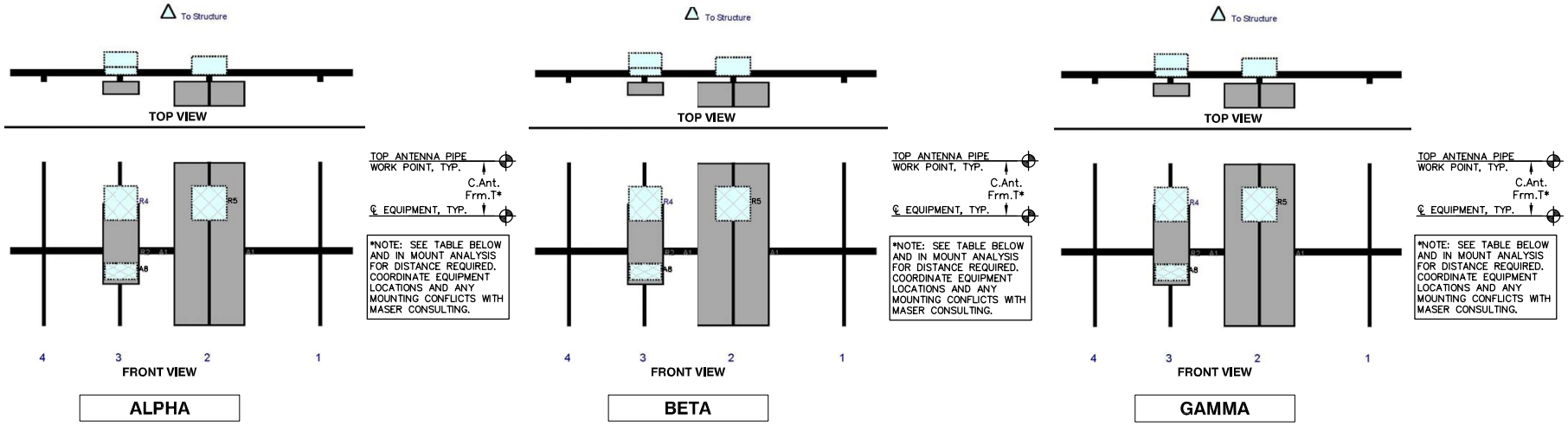
FUZE PROJECT ID: 16244622

SBA SITE LOC#: CT11559-A

D-1

ANTENNA LAYOUT SCHEMATIC RENDERINGS SHOWN HEREON PROVIDED BY OTHERS

REFER TO ANTENNA MOUNT ANALYSIS REPORT BY MASER CONSULTING DATED 07/02/21



ALPHA

Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.*	Ant H Off	Status	Validation
A1	MX06FRO660-03	71.3	15.4	87.5	2	a	Front	36	8	Added	
A1	MX06FRO660-03	71.3	15.4	87.5	2	b	Front	36	-8	Added	
R5	B5/B13 RRH-BR04C	15	15	87.5	2	a	Behind	18	0	Added	
R2	MT6407-77A	35.1	16.1	48.5	3	a	Front	36	0	Added	
R4	B2/B66A RRH-BR049	15	15	48.5	3	a	Behind	18	0	Added	
A8	CHB626-43-2X	7.1	14.6	48.5	3	a	Behind	48	0	Added	

BETA

Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.*	Ant H Off	Status	Validation
A1	MX06FRO660-03	71.3	15.4	87.5	2	a	Front	36	8	Added	
A1	MX06FRO660-03	71.3	15.4	87.5	2	b	Front	36	-8	Added	
R5	B5/B13 RRH-BR04C	15	15	87.5	2	a	Behind	18	0	Added	
R2	MT6407-77A	35.1	16.1	48.5	3	a	Front	36	0	Added	
R4	B2/B66A RRH-BR049	15	15	48.5	3	a	Behind	18	0	Added	
A8	CHB626-43-2X	7.1	14.6	48.5	3	a	Behind	48	0	Added	

GAMMA

Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.*	Ant H Off	Status	Validation
A1	MX06FRO660-03	71.3	15.4	87.5	2	a	Front	36	8	Added	
A1	MX06FRO660-03	71.3	15.4	87.5	2	b	Front	36	-8	Added	
R5	B5/B13 RRH-BR04C	15	15	87.5	2	a	Behind	18	0	Added	
R2	MT6407-77A	35.1	16.1	48.5	3	a	Front	36	0	Added	
R4	B2/B66A RRH-BR049	15	15	48.5	3	a	Behind	18	0	Added	
A8	CHB626-43-2X	7.1	14.6	48.5	3	a	Behind	48	0	Added	

CONTRACTOR MOUNT POST MODIFICATION INSPECTION (PMI) REPORT REQUIREMENTS

PMI ONLINE ACCESS: https://pmi.vzwsmart.com

SMART TOOL VENDOR PROJECT NUMBER: 10081940

VzW LOCATION CODE (PSLC): 535838

*** PMI AND REQUIREMENTS ALSO EMBEDDED IN ANTENNA MOUNT ANALYSIS REPORT BY MASER CONSULTING DATED 07/02/21.

MOUNT MODIFICATIONS REQUIRED (Y/N): NO

VZW APPROVED SMART KIT VENDORS

REFER TO MOUNT MODIFICATION DRAWINGS PAGE FOR VzW SMART KIT APPROVED VENDORS

verizon
118 FLANDERS ROAD
THIRD FLOOR
WESTBOROUGH, MA 01581

PREPARED BY:
ProTerra DESIGN GROUP, LLC
4 Bay Road, Bldg A
Suite 200
Hadley, MA 01035
Ph: (413)320-4918

REVISIONS

REV	DATE	DESCRIPTION	BY	CHK	APP'D
0	07/09/21	PER RFDS DATED 06/23/21	TBD	JWG	JMM
1	08/27/21	PER RFDS DATED 06/23/21	TBD	JWG	JMM

RENDERINGS BY:
MASER CONSULTING
MT. LAUREL OFFICE
2000 MIDLANTIC DRIVE - SUITE 100
MOUNT LAUREL, NJ 08054
Phone: 856-797-0412

THOMPSON_NORTH_CT
44 RICH ROAD
NORTH GROSVENORDALE, CT 06277
FUZE PROJECT ID: 16244622
SBA SITE LOC#: CT11559-A

X-1

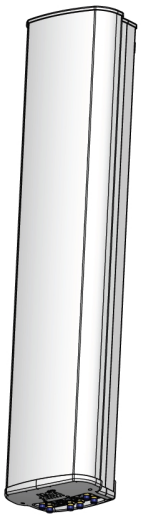
MX06FRO660-03

NWAV™ X-Pol Hex-Port Antenna

X-Pol Hex-Port 6 ft 60° Fast Roll Off antenna with independent tilt on 700 & 850 MHz:

2 ports 698-798, 824-894 MHz and 4 ports 1695-2180 MHz

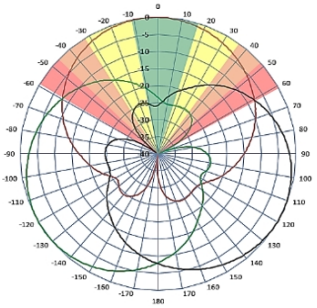
- Fast Roll Off (FRO™) azimuth beam pattern improves Intra- and Inter-cell SINR
- Compatible with dual band 700/850 MHz radios with independent low band EDT without external diplexers
- Fully integrated (iRETs) with independent RET control for low and high bands for ease of network optimization
- SON-Ready array spacing supports beamforming capabilities
- Suitable for LTE/CDMA/PCS/UMTS/GSM air interface technologies
- Integrated Smart Bias-Ts reduce leasing costs



Fast Roll-Off antennas increase data throughput without compromising coverage

The horizontal beam produced by Fast Roll-Off (FRO) technology increases the Signal to Interference & Noise Ratio (SINR) by eliminating overlap between sectors .

Non-FRO antenna



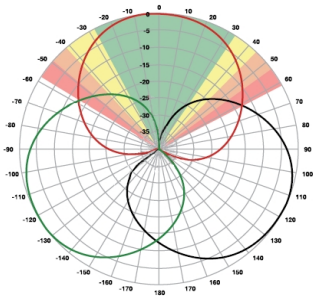
Large traditional antenna pattern overlap creates harmful interference.

JMA's FRO antenna pattern minimizes overlap, thereby minimizing interference.

LTE throughput	SINR	Speed (bps/Hz)	Speed increase	CQI
Excellent	>18	>4.5	333+%	8-10
Good	15-18	3.3-4.5	277%	6-7
Fair	10-15	2-3.3	160%	4-6
Poor	<10	<2	0%	1-3

The LTE radio automatically selects the best throughput based on measured SINR.

JMA FRO antenna



Electrical specification (minimum/maximum)	Ports 1, 2		Ports 3, 4, 5, 6		
Frequency bands, MHz	698-798	824-894	1695-1880	1850-1990	1920-2180
Polarization	± 45°		± 45°		
Average gain over all tilts, dBi	14.4	14.0	17.6	18.0	18.2
Horizontal beamwidth (HBW), degrees	60.5	53.0	55.0	55.0	55.5
Front-to-back ratio, co-polar power @180°± 30°, dB	>24	>24.0	>25.0	>25.0	>25.0
X-Pol discrimination (CPR) at boresight, dB	>15.0	>14.2	>18	>18	>15
Sector power ratio, percent	<3.5	<3.0	<3.7	<3.8	<3.6
Vertical beamwidth (VBW), degrees[1]	13.1	11.8	6.0	5.5	5.5
Electrical downtilt (EDT) range, degrees	2-14	2-14	0-9		
First upper side lobe (USLS) suppression, dB[1]	≤-15.0	≤-16.5	≤-16.0	≤-16.0	≤-16.0
Cross-polar isolation, port-to-port, dB[1]	25	25	25	25	25
Max VSWR / return loss, dB	1.5:1 / -14.0		1.5:1 / -14.0		
Max passive intermodulation (PIM), 2x20W carrier, dBc	-153		-153		
Max input power per any port, watts	300		250		
Total composite power all ports, watts	1500				

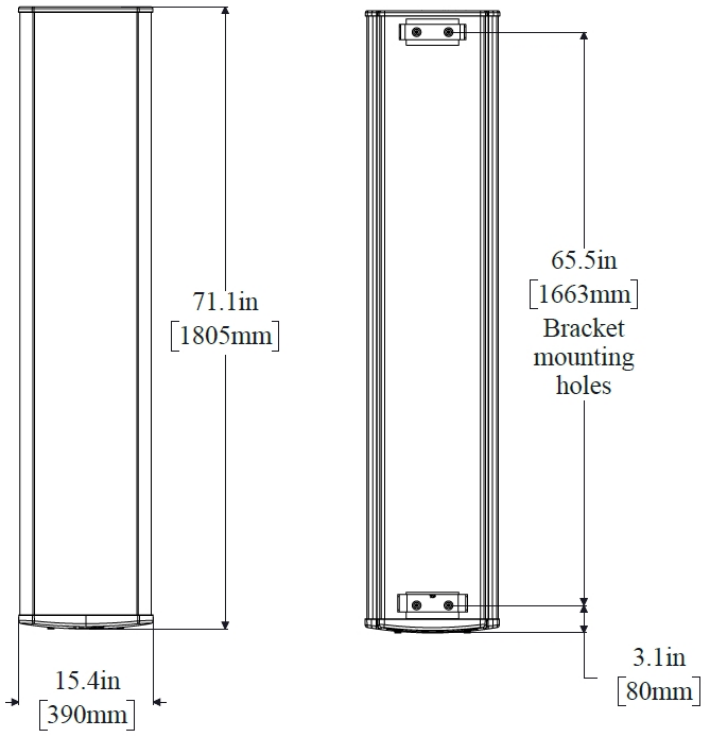
[1] Typical value over frequency and tilt

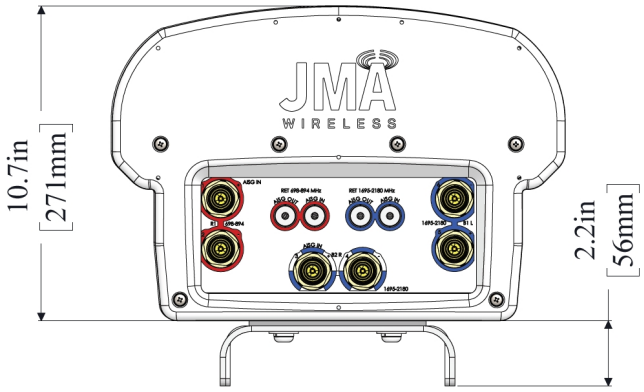
MX06FRO660-03

NWAV™ X-Pol Hex-Port Antenna

Mechanical specifications	
Dimensions height/width/depth, inches (mm)	71.3/ 15.4/ 10.7 (1811/ 392/ 273)
Shipping dimensions length/width/height, inches (mm)	82/ 20/ 15 (2083/ 508/ 381)
No. of RF input ports, connector type, and location	6 x 4.3-10 female, bottom
RF connector torque	96 lbf·in (10.85 N·m or 8 lbf·ft)
Net antenna weight, lb (kg)	60 (27.0)
Shipping weight, lb (kg)	90 (41.0)
Antenna mounting and downtilt kit included with antenna	91900318
Net weight of the mounting and downtilt kit, lb (kg)	18 (8.18)
Range of mechanical up/down tilt	-2° to 14°
Rated wind survival speed, mph (km/h)	150 (241)
Frontal, lateral, and rear wind loading @ 150 km/h, lbf (N)	154 (685), 73 (325), 158 (703)
Equivalent flat plate @ 100 mph and Cd=2, sq ft	2.6

Front view | **Back view** | **Bottom view**





Ordering information	
Antenna model	**Description**
MX06FRO660-03	6F X-Pol HEX FRO 60° independent tilt 700/850 RET, 4.3-10 & SBT
Optional accessories	
AISG cables	M/F cables for AISG connections
PCU-1000 RET controller	Stand-alone controller for RET control and configurations

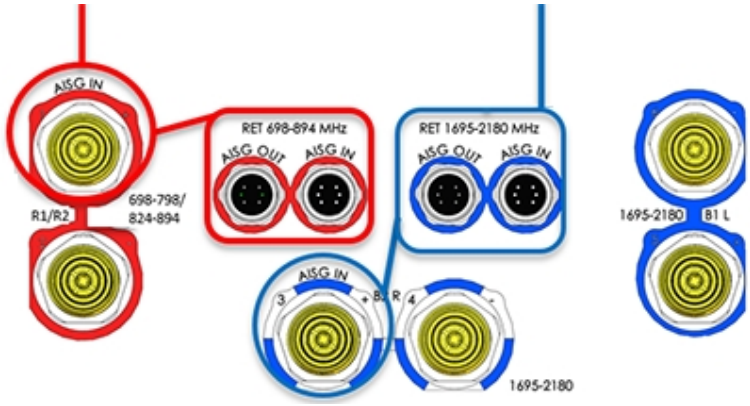
Remote electrical tilt (RET 1000) information	
RET location	Integrated into antenna
RET interface connector type	8-pin AISG connector per IEC 60130-9
RET connector torque	Min 0.5 N·m to max 1.0 N·m (hand pressure & finger tight)
RET interface connector quantity	2 pairs of AISG male/female connectors
RET interface connector location	Bottom of the antenna
Total no. of internal RETs (low bands)	2
Total no. of internal RETs (high bands)	1
RET input operating voltage, vdc	10-30
RET max power consumption, idle state, W	≤ 2.0
RET max power consumption, normal operating conditions, W	≤ 13.0
RET communication protocol	AISG 2.0 / 3GPP

RET and RF connector topology

Each RET device can be controlled either via the designated external AISG connector or RF port as shown below:

RET device	Band	RF port
R1	698-798	1-2
R2	824-894	1-2

RET device	Band	RF port
B1/B2	1695-2180	3-6

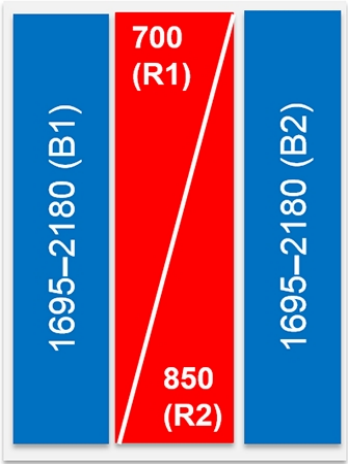


Array topology

3 sets of radiating arrays

R1/R2: 698-894 MHz
B1: 1695-2180 MHz
B2: 1695-2180 MHz

Band	RF port
1695-2180	3-4
698-894	1-2
1695-2180	5-6



SAMSUNG

Dual-Band Radio Unit
700/850MHz (B13/B5)
RFV01U-D2A

Samsung's RFV01U-D2A is a compact remote Radio Unit (RU) designed for deployments that require flexibility in installation and rapid onlining, without compromising on coverage, capacity or operational expenses.

The RFV01U-D2A RU targets dual-band support across Band 13 (700MHz) and Band 5 (850MHz), making it an ideal product for broad coverage footprints across multiple common low-end, long-range frequencies.

The RU handles all Radio Frequency (RF) processing in a single, compact unit, and is designed to interface via CPRI with Samsung's CDU baseband offerings, in both distributed- and central-RAN configurations.

In addition to its minimal footprint and ease of installation, the RU is also designed to reduce cost of ownership through its integrated spectrum analyzer, which allows for remote RF monitoring, greatly reducing the need for on-site maintenance visits.

Features and Benefits

- Dual-band support for broad frequency coverage
- Minimal footprint reduces site costs
- Rapid, easy installation
- Flexibly deployable in any location
- Remote RF monitoring capability
- Convection cooled, silent operation

Key Technical Specifications

Duplex Type: FDD
Operating Frequencies:
B13: DL(746-756MHz)/UL(777-787MHz)
B5: DL(869-894MHz)/UL(824-849MHz)
Instantaneous Bandwidth: 10MHz(B13) + 25MHz(B5)
RF Chain: 4T4R/2T4R/2T2R
Output Power: Total 320W
DU-RU Interface: CPRI (10Gbps)
Dimensions: 380 x 380 x 207mm (29.9L)
Weight: 31.9kg
Input Power: -48V DC
Operating Temp.: -40 - 55°(w/o solar load)
Cooling: Natural convection

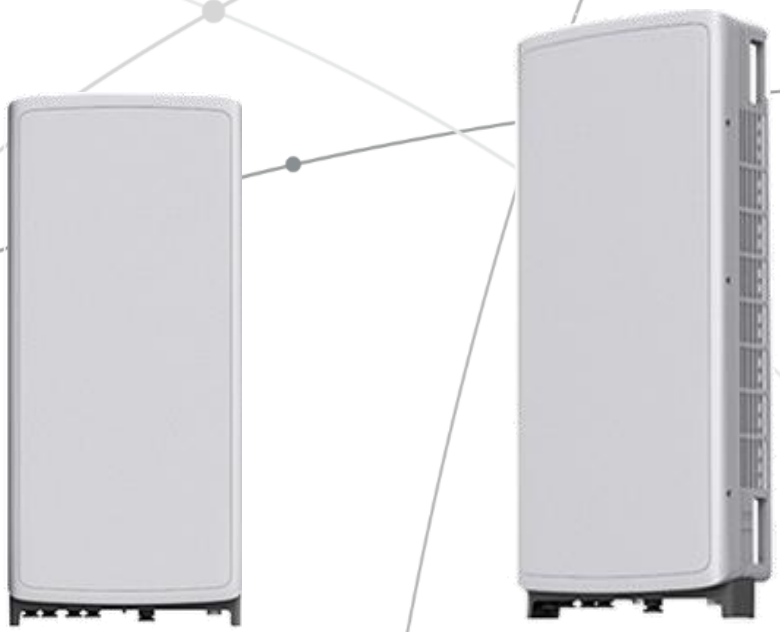
SAMSUNG

SAMSUNG C-Band 64T64R Massive MIMO Radio

for High Capacity and Wide Coverage

Samsung C-Band 64T64R Massive MIMO Radio enables mobile operators to increase coverage range, boost data speeds and ultimately offer enriched 5G experiences to users in the U.S..

Model Code : MT6407-77A

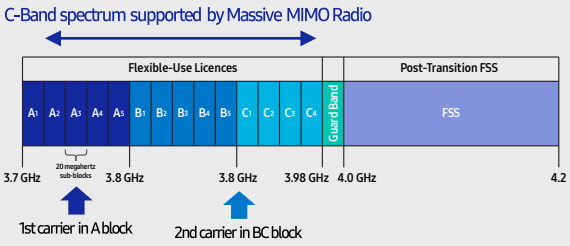


Points of Differentiation

Wide Bandwidth

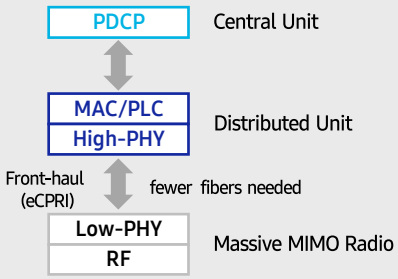
With capability to support up to 2 CC carrier configuration, Samsung C-Band massive MIMO Radio supports 200 MHz bandwidth in the C-Band spectrum.

Samsung C-Band massive MIMO Radio covers the entire C-Band 280 MHz spectrum, so it can meet the operator's needs in current A block and future B/C blocks



Future Proof Product

Samsung C-Band 64T64R Massive MIMO radio supports not only CPRI but also eCPRI as front-haul interface.
It enables operators can cut down on OPEX/CAPEX by reducing front-haul bandwidth through low layer split and using ethernet based higher efficient line.



Enhanced Performance

C-Band massive MIMO Radio creates sharp beams and extends networks' coverage on the critical mid-band spectrum using a large number of antenna elements and high output power to boost data speeds.

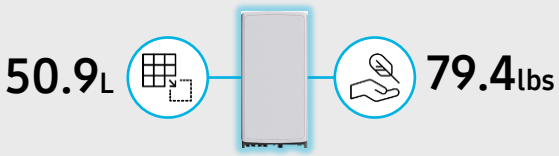
This helps operators reduce their CAPEX as they now need less products to cover the same area than before.

Furthermore, as C-Band massive MIMO Radio supports MU-MIMO(Multi-user MIMO) , it enables to increase user throughput by minimizing interference.

Well Matched Design

Samsung C-Band Massive MIMO radio utilizes 64 antennas, supports up to 280MHz bandwidth, and delivers a 200W output power. despite the above advanced performance, the Radio has a compact size of 50.9L and 79.4lbs. This makes it easy to install the Radio.

It is designed to look solid and compact, with a low profile appearance so that, when installed, harmonizes well with the surrounding environment..



Technical Specifications

Item	Specification
Tech	NR
Band	n77
Frequency Band	3700 - 3980 MHz
EIRP	78.5dBm (53.0 dBm+25.5 dBi)
IBW/OBW	280 MHz / 200 MHz
Installation	Pole/Wall
Size/ Weight	16.06 x 35.06 x 5.51 inch (50.86L)/ 79.4 lbs

SAMSUNG

About Samsung Electronics Co., Ltd.

Samsung inspires the world and shapes the future with transformative ideas and technologies. The company is redefining the worlds of TVs, smartphones, wearable devices, tablets, digital appliances, network systems, and memory, system LSI, foundry and LED solutions.

129 Samsung-ro, Yeongtong-gu, Suwon-si Gyeonggi-do, Korea

SAMSUNG

Dual-Band Radio Unit
AWS/PCS (B66/B2)
RFV01U-D1A

Samsung's RFV01U-D1A is a compact remote Radio Unit (RU) designed for deployments that require flexibility in installation and rapid onlining, without compromising on coverage, capacity or operational expenses.

The RFV01U-D1A RU targets dual-band support across Band 66 (AWS) and Band 2 (PCS), making it an ideal product for broad coverage footprints across multiple common mid-range frequencies.

The RU handles all Radio Frequency (RF) processing in a single, compact unit, and is designed to interface via CPRI with Samsung's CDU baseband offerings, in both distributed- and central-RAN configurations.

In addition to its minimal footprint and ease of installation, the RU is also designed to reduce cost of ownership through its integrated spectrum analyzer, which allows for remote RF monitoring, greatly reducing the need for on-site maintenance visits.

Features and Benefits

- Dual-band support for broad frequency coverage
- Minimal footprint reduces site costs
- Rapid, easy installation
- Flexibly deployable in any location
- Remote RF monitoring capability
- Convection cooled, silent operation
- Built-in Broadcast Auxiliary Services (BAS) filter ensures compliant AWS operation without impacting footprint

Key Technical Specifications

Duplex Type: FDD
Operating Frequencies:
    B66: DL(2,110-2,180MHz)/UL(1,710-1,780MHz)
    B2: DL(1,930-1,990MHz)/UL(1,850-1,910MHz)
Instantaneous Bandwidth:
    70MHz(B66) + 60MHz(B2)
RF Chain: 4T4R/2T4R/2T2R
Output Power: Total 320W
DU-RU Interface: CPRI (10Gbps)
Dimensions: 380 x 380 x 255mm (36.8L)
Weight: 38.3kg
Input Power: -48V DC
Operating Temp.: -40 - 55°(w/o solar load)
Cooling: Natural convection

ATTACHMENT 3

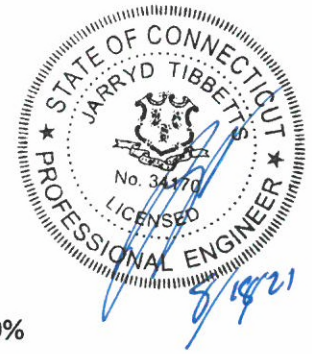
	General	Power	Density					
Site Name: Thompson N								
Tower Height: Verizon @ 137ft								
CARRIER	**# OF CHAN.**	**WATTS ERP**	**HEIGHT**	**FREQ.**	**CALC. POWER DENS**	**MAX. PERMISS. EXP.**	**FRACTION MPE**	**Total**
*T-Mobile	1	1556	148.7	1900	0.0275	1.0000	0.27%	
*T-Mobile	1	584	148.7	1900	0.0103	1.0000	0.10%	
*T-Mobile	1	1014	148.7	2100	0.0179	1.0000	0.18%	
*T-Mobile	2	2334	148.7	2100	0.0824	1.0000	0.82%	
*T-Mobile	2	789	148.7	600	0.0279	0.4000	0.70%	
*T-Mobile	2	433	148.7	700	0.0153	0.4667	0.33%	
*AT&T-UMTS	1	308	127	850	0.0076	0.5667	0.13%	
*AT&T-UMTS	1	1000	127	850	0.0246	0.5667	0.43%	
*AT&T-UMTS	1	1000	127	850	0.0246	0.5667	0.43%	
*AT&T-PCS-UMTS	1	1476	127	700	0.0363	0.4667	0.78%	
*AT&T-GSM	1	2951	127	700	0.0725	0.4667	1.55%	
*AT&T-LTE	2	3664	127	1900	0.1800	1.0000	1.80%	
*AT&T-PCS-LTE	1	3837	127	2100	0.0942	1.0000	0.94%	
VZW 700	**4**	**609**	**137**	**751**	**0.0047**	**0.5007**	**0.93%**	
VZW CDMA	**2**	**326**	**137**	**877.26**	**0.0012**	**0.5848**	**0.21%**	
VZW Cellular	**4**	**623**	**137**	**874**	**0.0048**	**0.5827**	**0.82%**	
VZW PCS	**4**	**1428**	**137**	**1975**	**0.0109**	**1.0000**	**1.09%**	
VZW AWS	**4**	**1530**	**137**	**2120**	**0.0117**	**1.0000**	**1.17%**	
VZW CBAND	**4**	**6531**	**137**	**3730.08**	**0.0501**	**1.0000**	**5.01%**	
								17.70%
* Source: Siting Council								

ATTACHMENT 4

Tower Engineering Solutions
Phone (972) 483-0607, Fax (972) 975-9615
1320 Greenway Drive, Suite 600, Irving, Texas 75038

Structural Analysis Report

Existing 149 ft Nudd Corporation Monopole
Customer Name: SBA Communications Corp
Customer Site Number: CT11559-A
Customer Site Name: Thompson 1, CT
Carrier Name: Verizon (App#: 154487, V3)
Carrier Site ID / Name: 171757 / Thompson North CT
Site Location: 39 Rich Road
North Grosvenordale, Connecticut
Windham County
Latitude: 42.011550
Longitude: -71.851908



Analysis Result:

Max Structural Usage: 61.4% [Pass]
Max Foundation Usage: 67.0% [Pass]
Additional Usage Caused by Mount Modification: +0.0%

Report Prepared By: Younus Alkarawi

Tower Engineering Solutions
Phone (972) 483-0607, Fax (972) 975-9615
1320 Greenway Drive, Suite 600, Irving, Texas 75038

Structural Analysis Report

Existing 149 ft Nudd Corporation Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT11559-A

Customer Site Name: Thompson 1, CT

Carrier Name: Verizon (App#: 154487, V3)

Carrier Site ID / Name: 171757 / Thompson North CT

Site Location: 39 Rich Road

North Grosvenordale, Connecticut

Windham County

Latitude: 42.011550

Longitude: -71.851908

Analysis Result:

Max Structural Usage: 61.4% [Pass]

Max Foundation Usage: 67.0% [Pass]

Additional Usage Caused by Mount Modification:

Report Prepared By: Younus Alkarawi

Introduction

The purpose of this report is to summarize the analysis results on the 149 ft Nudd Corporation Monopole to support the proposed antennas and transmission lines in addition to those currently installed. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

Sources of Information

Tower Drawings	Fred A. Nudd Corporation (Project No. 308-13019) original design drawings dated April 25, 2008.
Foundation Drawing	Fred A. Nudd Corporation (Project No. 308-13019) original design drawings dated April 25, 2008.
Geotechnical Report	
Modification Drawings	
Mount Analysis	Verizon MA by Maser Consulting Connecticut Project #: 21777328A (REV 1), dated

Analysis Criteria

The rigorous analysis was performed in accordance with the requirements and stipulations of the TIA- In accordance with this standard, the structure was analyzed using **TESPoles,** a proprietary analysis software. The program considers the structure as an elastic 3-D model with second-order effects and temperature effects incorporated in the analysis. The analysis was performed using multiple wind directions.

Wind Speed Used in the Analysis:	Ultimate Design Wind Speed V_{ult} = 130.0 mph (3-Sec. Gust)/ Nominal Design Wind Speed V_{asd} = 101.0 mph (3-Sec. Gust)
Wind Speed with Ice:	50 mph (3-Sec. Gust) with 1" radial ice concurrent
Operational Wind Speed:	60 mph + 0" Radial ice
Standard/Codes:	TIA-222-G-2 / 2015 IBC / 2018 Connecticut State Building Code
Exposure Category:	
Structure Class:	
Topographic Category:	
Crest Height:	0 ft
Seismic Parameters:	

This structural analysis is based upon the tower being classified as a Structure Class 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.

Existing Antennas, Mounts and Transmission Lines

The table below summarizes the antennas, mounts and transmission lines that were considered in the analysis as existing on the tower.

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
			Ericsson Air 21 B2A/B4P	(3)T-Arms w/ (1) Metrosite Heavy Collar Mount Assembly: MS-H1436 (1) Metrosite Support rail kit: braces: L2.5"x2.5"x1/4"	(2) 1 5/8" Fiber	T-Mobile
			Ericsson Air 21 B4A/B2P			
			Ericsson KRY 112 144/1			
			Ericsson Radio 4449 B71+B12			
			Antel/BXA-70063-6CF - Panel	(3) T-Arms	(1) 1 5/8" Fiber	Verizon
			Antel/BXA-171085-12BF - Panel			
			Antel/LPA-80080-6CF - Panel			
			Antel/LPA-4019 - Panel			
			ALU/RRH 2x40 AWS			
			RFS DB-T1-6Z-8AB-0Z Distribution			
			Powerwave 7770- Panel	(3) Modified T-Arms W/ (3) 2.38" Horizontal Pipe, (3) 2.38" Pipe Brace & (6) 2.88" Antenna Pipes	(1) 1/2" RET (3) 3/8" RET (1) 3" Conduit (2) 3" Conduit	
			Cci OPA65R-BU8DA- Panel			
			Cci DMP65R-BU8DA- Panel			
			Powerwave LGP21401 TMA			
			Powerwave LGP13519 Diplexer			
			Powerwave 860 10025			
			Ericsson RRUS 4478 B14			
			Ericsson RRUS 4449 B5/B12			
			Ericsson RRUS 8843 B2 B66A			
			Raycap DC6-48-60-18-8F			
			Raycap DC9-48-60-24-8C-EV			
			Powerwave 1001983- Bias T			

(Housing (2) 3/4" DC & (1) 7/16" fiber cables)

(Housing (1) 7/16" fiber, & (3) 1" DC power cables)

Proposed Carrier's Final Configuration of Antennas, Mounts and Transmission Lines

Information pertaining to the proposed carrier's final configuration of antennas and transmission lines was provided by SBA Communications Corp. The proposed antennas and lines are listed below.

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
		6	JMA Wireless MX06FRO660-03 - Panel	(3) Modified T-Arms W/ (3) JMA Wireless 91900314 (Mount Bracket)	Hybrid	Verizon
			Samsung MT6407-77A - Panel			
			Samsung RFV01U-D1A RRU			
			Samsung RFV01U-D2A RRU			
		3	Commscope CHB626-43-2X-Combiner			
			Raycap RCMDC-6627-PF-48-OVP			

See the attached coax layout for the line placement considered in the analysis.

Analysis Results

The results of the structural analysis, performed for the wind and ice loading and antenna equipment as defined above, are summarized as the following:

	Pole shafts	Anchor Bolts	Base Plate
Max. Usage:			
Pass/Fail	**Pass**	**Pass**	**Pass**

Foundations

	Moment (Kip-Ft)	Shear (Kips)
Original Design Reactions		
Analysis Reactions		
Factored Reactions*		
% of Design Reactions		

* Per section 15.5.1 of the TIA-222-G standard, factored reactions were obtained by multiplying a 1.35 factor to the original design reactions.

The foundation has been investigated using the supplied documents and soils report and was found adequate. Therefore, no modification to the foundation will be required.

Operational Condition (Rigidity):

Operational characteristics of the tower are found to be within the limits prescribed by TIA-222 for the installed antennas. The maximum twist/sway at the elevation of the proposed equipment is 0.9186 degrees under the operational wind speed as specified in the Analysis Criteria.

Conclusions

Based on the analysis results, the existing structure and its foundation were found to be adequate to safely support the existing and proposed equipment and meet the minimum requirements per the TIA-222 Standard under the design basic wind speed as specified in the Analysis Criteria.

Standard Conditions

This analysis was performed based on the information supplied to **Tower Engineering Solutions,** Verification of the information provided was not included in the Scope of Work for . The accuracy of the analysis is dependent on the accuracy of the information provided.

The structural analysis was performance based upon the evidence available at the time of this report. All information provided by the client is considered to be accurate.

The analyses will be performed based on the codes as specified by the client or based on the best knowledge of the engineering staff of . In the absence of information to the contrary, all work will be performed in accordance with the latest relevant revision of ANSI/TIA-222. If wind speed and/or ice loads are different from the minimum values recommended by the ANSI/TIA-222 standard or other codes, should be notified in writing and the applicable minimum values provided by the client.

The configuration of the existing mounts, antennas, coax and other appurtenances were supplied by the customer for the current structural analysis. has not visited the tower site to verify the adequacy of the information provided. If there is any discrepancy found in the report regarding the existing conditions, should be notified immediately to evaluate the effect of the discrepancy on the analysis results.

The client will assume responsibility for rework associated with the differences in initially provided information, including tower and foundation information, existing and/or proposed equipment and transmission lines.

If a feasibility analysis was performed, final acceptance of changed conditions shall be based upon a rigorous structural analysis.

Usage Diagram - Max Ratio 60.90% at 25.0ft

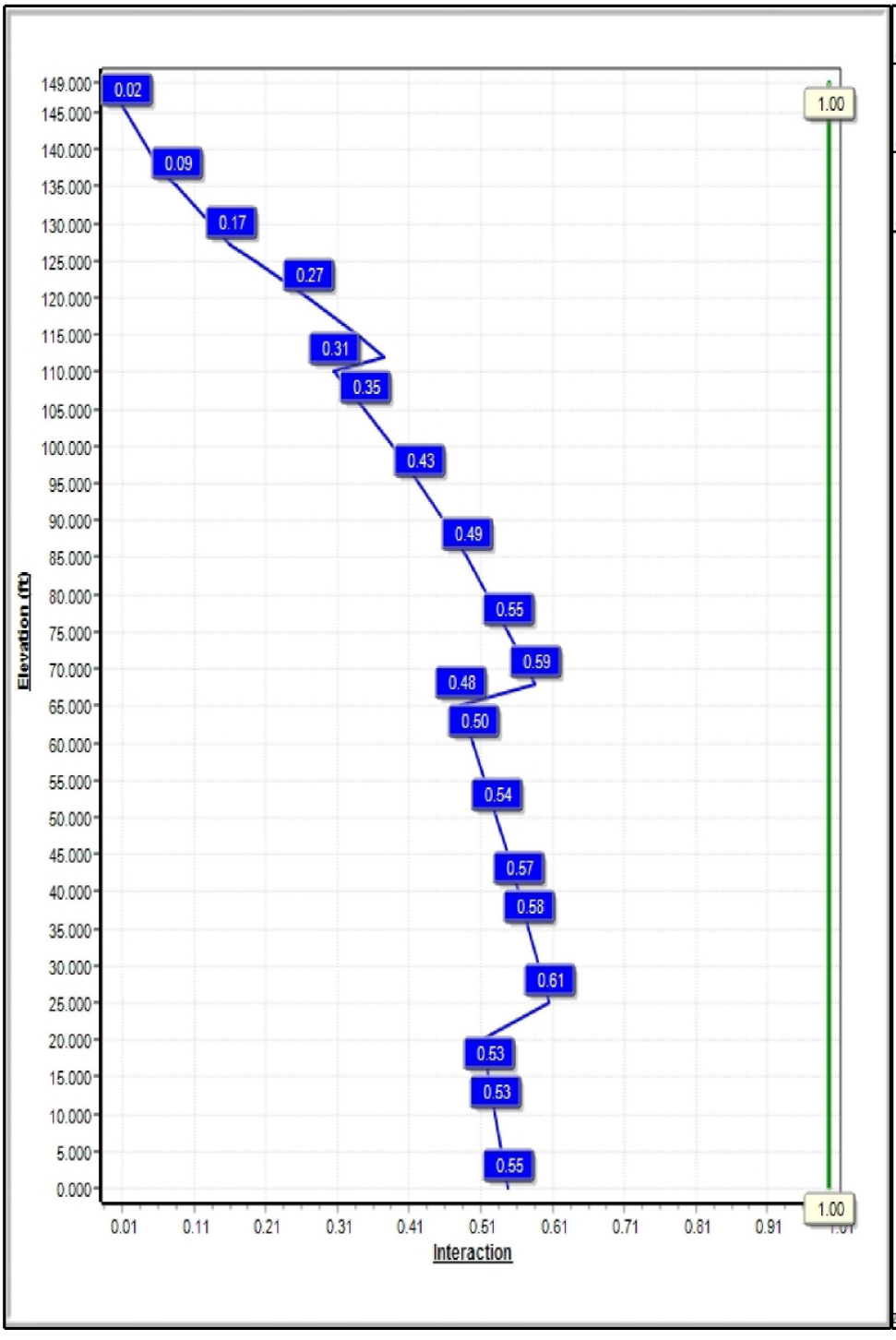
Structure:	CT11559-A-SBA	**Code:**	EIA/TIA-222-G	8/18/2021
Site Name:	Thompson 1, CT	**Exposure:**	C	
Height:	149.00 (ft)	**Gh:**	1.1	
Base Elev:	0.000 (ft)			Page: 1

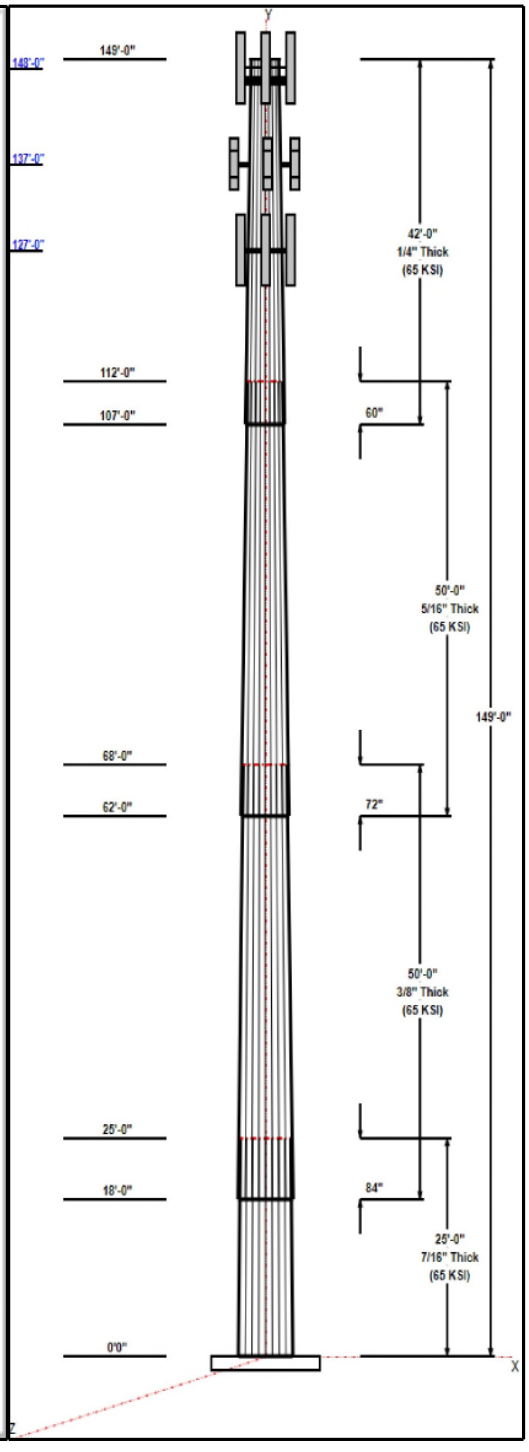
Tower Engineering Solutions

Dead Load Factor:	1.20
Wind Load Factor:	1.60

Load Case : 1.2D + 1.6W 101 mph Wind

Iterations: 22





Structure: CT11559-A-SBA

Type: Tapered
Site Name: Thompson 1, CT
Height: 149.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.23532

8/18/2021

Tower Engineering Solutions

Shaft Properties

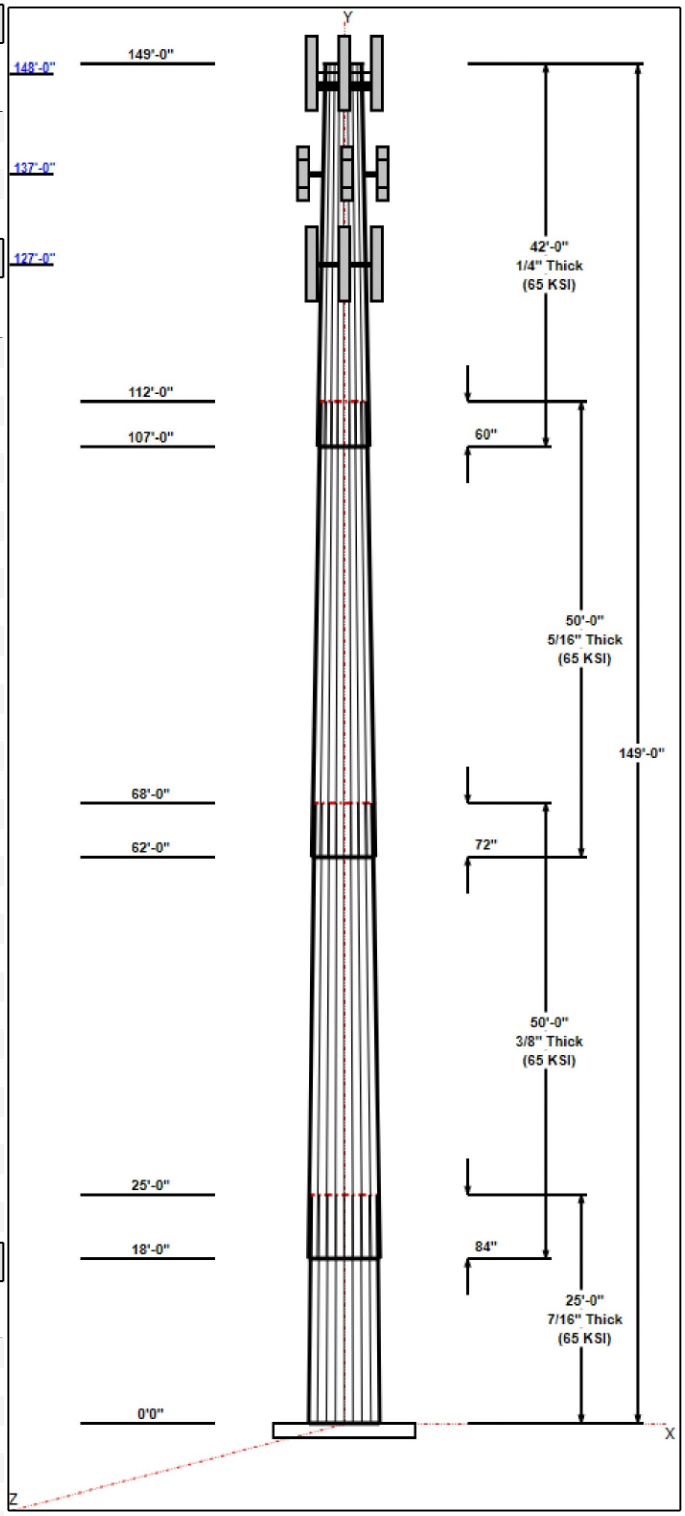
Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	25.00	53.18	59.06	0.438		0.23532	65
2	50.00	43.81	55.58	0.375	Slip	0.23532	65
3	50.00	34.08	45.85	0.313	Slip	0.23532	65
4	42.00	25.88	35.76	0.250	Slip	0.23532	65

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
148.00	148.00	3	AIR21 B2A B4P	T-Mobile
148.00	148.00	3	AIR21 B2A B4P	T-Mobile
148.00	148.00	3	APXVAARR24_43-U-NA20	T-Mobile
148.00	148.00	3	Ericsson KRY112 144/1	T-Mobile
148.00	148.00	3	4449	T-Mobile
148.00	148.00	1	HRK12 (Handrail Kit)	T-Mobile
148.00	148.00	1	(3) Stabilizer Kit (4' FW)	T-Mobile
148.00	148.00	1	T-Arms	T-Mobile
137.00	137.00	3	T-Arms	Verizon
137.00	137.00	6	JMA Wireless	Verizon
137.00	137.00	3	Samsung MT6407-77A	Verizon
137.00	137.00	3	91900314	Verizon
137.00	137.00	3	Samsung RFV01U-D1A	Verizon
137.00	137.00	3	Samsung RFV01U-D2A	Verizon
137.00	137.00	3	Commscope	Verizon
137.00	137.00	1	RCMDC-6627-PF-48	Verizon
127.00	127.00	6	7770.00	AT&T
127.00	127.00	12	Powerwave LGP21401	AT&T
127.00	127.00	12	Kathrein 860 10025 RET	AT&T
127.00	127.00	6	Powerwave LGP13519	AT&T
127.00	127.00	1	Raycap DC6-48-60-18-8F	AT&T
127.00	127.00	3	Powerwave 1001983 Bias	AT&T
127.00	127.00	3	OPA65R-BU8DA	AT&T
127.00	127.00	3	DMP65R-BU8DA	AT&T
127.00	127.00	3	Horizontal Pipe	AT&T
127.00	127.00	3	RRUS 4478 B14	AT&T
127.00	127.00	3	4449 B5/B12	AT&T
127.00	127.00	3	RRUS 8843 B2 B66A	AT&T
127.00	127.00	1	DC9-48-60-24-8C-EV	AT&T
127.00	127.00	1	(3) Stabilizer Kit	AT&T
127.00	127.00	3	T-Arms	AT&T

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	148.00	Inside	1 5/8" Coax	T-Mobile
0.00	148.00	Inside	1 5/8" Fiber	T-Mobile
0.00	137.00	Inside	1 5/8" Coax	Verizon
0.00	137.00	Inside	1 5/8" Hybrid	Verizon
0.00	127.00	Inside	1 5/8" Coax	AT&T
0.00	127.00	Inside	1" DC	AT&T
0.00	127.00	Inside	1/2" RET	AT&T
0.00	127.00	Inside	3" flex Conduit	AT&T
0.00	127.00	Inside	3/4" DC	AT&T
0.00	127.00	Inside	7/16" Fiber	AT&T



Anchor Bolts

Qty	Specifications	Grade (ksi)	Arrangement
18	2.00" F1554 105	105.0	Radial

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
2.7500	72.0	50.0	Round

Reactions

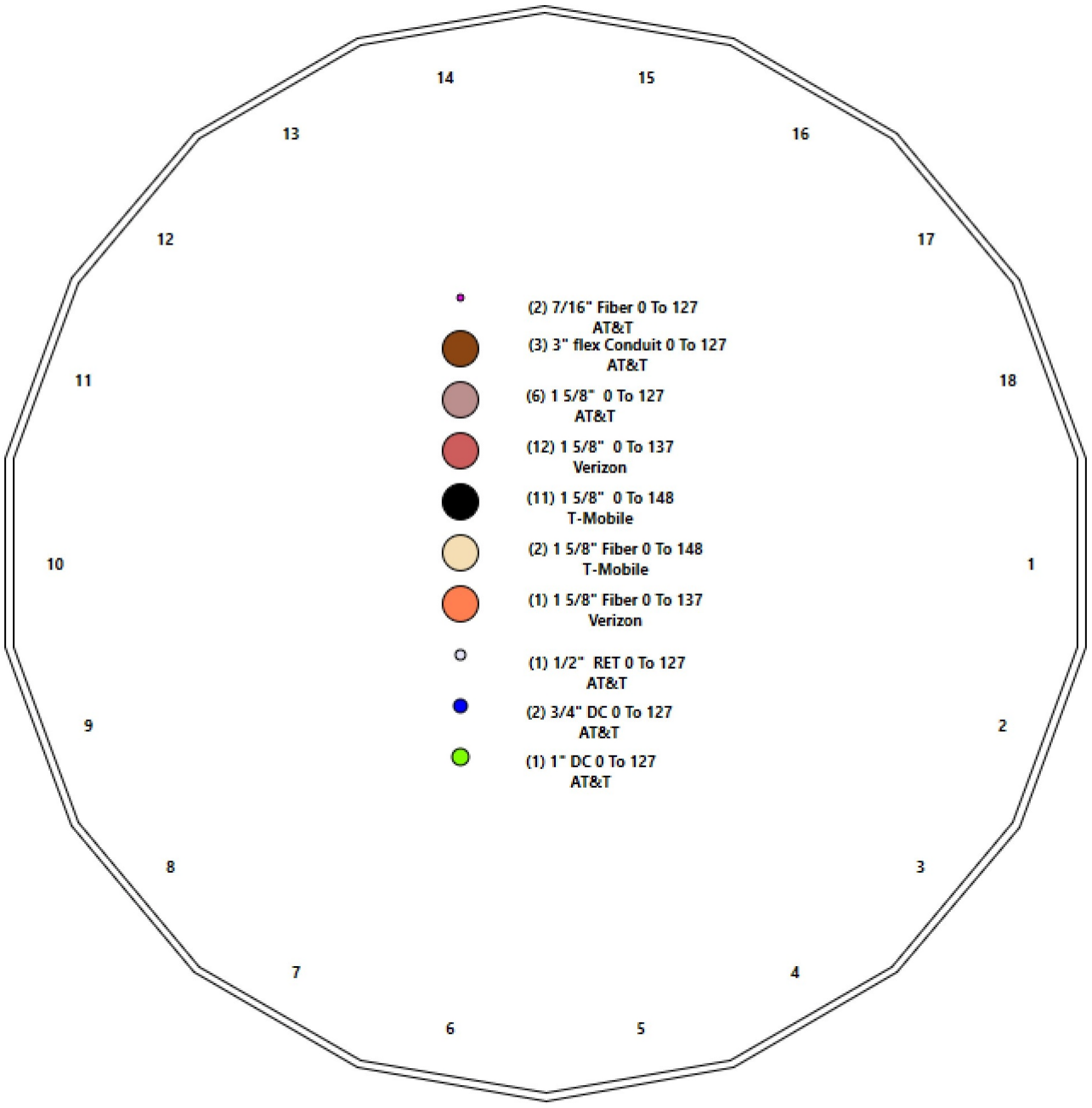
Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W 101 mph Wind	3600.8	33.8	47.3
0.9D + 1.6W 101 mph Wind	3574.6	33.8	35.4
1.2D + 1.0Di + 1.0Wi 50 mph Wind	961.8	9.1	78.7
1.2D + 1.0E	194.2	1.7	47.3
0.9D + 1.0E	192.7	1.7	35.5
1.0D + 1.0W 60 mph Wind	790.9	7.5	39.4

Structure: CT11559-A-SBA - Coax Line Placement

Type: Monopole
Site Name: Thompson 1, CT
Height: 149.00 (ft)

8/18/2021

Tower Engineering Solutions



Shaft Properties

Structure:	CT11559-A-SBA		**Code:**	EIA/TIA-222-G	8/18/2021
Site Name:	Thompson 1, CT		**Exposure:**	C	
Height:	149.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 5

Tower Engineering Solutions

Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	25.000	0.4375	65		0.00	6,578
2	18	50.000	0.3750	65	Slip	84.00	9,987
3	18	50.000	0.3125	65	Slip	72.00	6,691
4	18	42.000	0.2500	65	Slip	60.00	3,466
					Total Shaft Weight:		**26,722**

	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	59.06	0.00	81.41	35348.50	22.39	135.00	53.18	25.00	73.24	25739.0	20.02	121.5	0.235319
2	55.58	18.00	65.70	25294.99	24.72	148.20	43.81	68.00	51.70	12323.0	19.19	116.8	0.235319
3	45.85	62.00	45.16	11831.43	24.46	146.71	34.08	112.00	33.49	4825.70	17.82	109.0	0.235319
4	35.76	107.0	28.17	4488.25	23.81	143.03	25.88	149.00	20.33	1686.85	16.84	103.5	0.235319

Load Summary

Structure:	CT11559-A-SBA	**Code:**	EIA/TIA-222-G	8/18/2021	
Site Name:	Thompson 1, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 6	

Tower Engineering Solutions

Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice Weight (lb)	No Ice CaAa (sf)	No Ice CaAa Factor	Ice Weight (lb)	Ice CaAa (sf)	Ice CaAa Factor	Hor. Ecc. (ft)	Vert Ecc (ft)
1	148.00	AIR21 B2A B4P	3	91.50	6.09	0.86	329.95	7.583	0.86	0.00	0.00
2	148.00	AIR21 B2A B4P	3	90.40	6.09	0.86	329.95	7.583	0.86	0.00	0.00
3	148.00	APXVAARR24_43-U-NA20	3	128.00	20.24	0.70	708.17	22.801	0.70	0.00	0.00
4	148.00	Ericsson KRY112 144/1 TMA	3	11.00	0.41	0.70	25.36	1.043	0.70	0.00	0.00
5	148.00	4449	3	70.00	1.65	0.67	168.83	2.392	0.67	0.00	0.00
6	148.00	HRK12 (Handrail Kit)	1	261.72	6.75	0.75	675.29	15.534	0.75	0.00	0.00
7	148.00	(3) Stabilizer Kit (4' FW)	1	140.00	3.70	0.75	374.24	8.859	0.75	0.00	0.00
8	148.00	T-Arms	1	500.00	15.00	0.75	1197.15	41.027	0.75	0.00	0.00
9	137.00	T-Arms	3	350.00	8.00	0.75	672.83	17.224	0.75	0.00	0.00
10	137.00	JMA Wireless MX06FRO660-03	6	60.00	9.87	0.87	433.08	11.720	0.87	0.00	0.00
11	137.00	Samsung MT6407-77A	3	87.10	4.69	0.70	255.91	5.960	0.70	0.00	0.00
12	137.00	91900314	3	28.00	0.00	1.00	53.83	0.000	1.00	0.00	0.00
13	137.00	Samsung RFV01U-D1A RRU	3	84.40	1.88	0.67	152.13	2.608	0.67	0.00	0.00
14	137.00	Samsung RFV01U-D2A RRU	3	70.30	1.88	0.67	134.56	2.608	0.67	0.00	0.00
15	137.00	Commscope CHB626-43-2X	3	19.40	1.33	0.50	59.82	2.471	0.50	0.00	0.00
16	137.00	RCMDC-6627-PF-48	1	32.00	4.06	1.00	182.53	5.146	1.00	0.00	0.00
17	127.00	7770.00	6	35.00	5.50	0.73	225.00	6.925	0.73	0.00	0.00
18	127.00	Powerwave LGP21401 TMAs	12	14.10	1.29	1.00	46.88	2.386	1.00	0.00	0.00
19	127.00	Kathrein 860 10025 RET	12	1.10	0.14	1.00	7.02	0.561	1.00	0.00	0.00
20	127.00	Powerwave LGP13519 Diplexer	6	5.30	0.34	1.00	17.75	0.935	1.00	0.00	0.00
21	127.00	Raycap DC6-48-60-18-8F	1	31.80	0.92	1.00	112.87	1.494	1.00	0.00	0.00
22	127.00	Powerwave 1001983 Bias T	3	4.40	0.21	1.00	11.69	0.684	1.00	0.00	0.00
23	127.00	OPA65R-BU8DA	3	76.50	18.09	0.73	462.99	21.617	0.74	0.00	0.00
24	127.00	DMP65R-BU8DA	3	95.70	17.87	0.73	561.24	20.569	0.75	0.00	0.00
25	127.00	Horizontal Pipe	3	45.75	2.97	0.75	104.38	7.861	0.75	0.00	0.00
26	127.00	RRUS 4478 B14	3	59.40	1.65	0.67	113.78	2.330	0.67	0.00	0.00
27	127.00	4449 B5/B12	3	71.00	1.97	0.67	141.00	2.688	0.67	0.00	0.00
28	127.00	RRUS 8843 B2 B66A	3	72.00	1.64	0.67	133.43	2.292	0.67	0.00	0.00
29	127.00	DC9-48-60-24-8C-EV	1	26.20	1.14	1.00	165.19	3.221	1.00	0.00	0.00
30	127.00	(3) Stabilizer Kit	1	180.00	6.10	0.75	476.60	14.476	0.75	0.00	0.00
31	127.00	T-Arms	3	350.00	8.00	0.75	670.40	17.154	0.75	0.00	0.00
		Totals:	**106**	**7,370.47**			**23,156.39**				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	148.00	(11) 1 5/8" Coax	0.00	Inside
0.00	148.00	(2) 1 5/8" Fiber	0.00	Inside
0.00	137.00	(11) 1 5/8" Coax	0.00	Inside
0.00	137.00	(1) 1 5/8" Hybrid	0.00	Inside
0.00	127.00	(6) 1 5/8" Coax	0.00	Inside
0.00	127.00	(1) 1" DC	0.00	Inside
0.00	127.00	(1) 1/2" RET	0.00	Inside
0.00	127.00	(3) 3" flex Conduit	0.00	Inside
0.00	127.00	(2) 3/4" DC	0.00	Inside
0.00	127.00	(2) 7/16" Fiber	0.00	Inside

Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice Weight (lb)	No Ice CaAa (sf)	No Ice CaAa Factor	Ice Weight (lb)	Ice CaAa (sf)	Ice CaAa Factor	Hor. Ecc. (ft)	Vert Ecc (ft)

Shaft Section Properties

Structure:	CT11559-A-SBA	**Code:**	EIA/TIA-222-G	8/18/2021	
Site Name:	Thompson 1, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 8	

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		0.4375	59.063	81.405	35348.5	22.39	135.00	75.1	1178.	0.0
5.00		0.4375	57.886	79.771	33262.6	21.92	132.31	75.6	1131.	1371.1
10.00		0.4375	56.709	78.138	31260.4	21.45	129.62	76.2	1085.	1343.3
15.00		0.4375	55.533	76.504	29340.3	20.97	126.93	76.7	1040.	1315.5
18.00	Bot - Section 2	0.4375	54.827	75.524	28226.8	20.69	125.32	77.1	1014.	776.0
20.00		0.4375	54.356	74.870	27500.4	20.50	124.24	77.3	996.5	957.0
25.00	Top - Section 1	0.3750	53.930	63.741	23097.5	23.95	143.81	0.0	0.0	2356.3
30.00		0.3750	52.753	62.341	21608.3	23.39	140.67	73.9	806.8	1072.6
35.00		0.3750	51.576	60.940	20184.6	22.84	137.54	74.5	770.8	1048.7
40.00		0.3750	50.400	59.540	18824.8	22.29	134.40	75.2	735.7	1024.9
45.00		0.3750	49.223	58.139	17527.5	21.73	131.26	75.8	701.3	1001.1
50.00		0.3750	48.047	56.739	16291.2	21.18	128.12	76.5	667.8	977.3
55.00		0.3750	46.870	55.339	15114.5	20.63	124.99	77.1	635.2	953.4
60.00		0.3750	45.693	53.938	13995.8	20.07	121.85	77.8	603.3	929.6
62.00	Bot - Section 3	0.3750	45.223	53.378	13564.3	19.85	120.59	78.0	590.8	365.2
65.00		0.3750	44.517	52.538	12933.8	19.52	118.71	78.4	572.2	998.1
68.00	Top - Section 2	0.3125	44.436	43.763	10764.6	23.66	142.19	0.0	0.0	982.4
70.00		0.3125	43.965	43.296	10423.8	23.40	140.69	73.9	467.0	296.2
75.00		0.3125	42.789	42.129	9603.5	22.73	136.92	74.7	442.1	726.7
80.00		0.3125	41.612	40.962	8827.3	22.07	133.16	75.4	417.8	706.9
85.00		0.3125	40.435	39.795	8094.2	21.40	129.39	76.2	394.3	687.0
90.00		0.3125	39.259	38.628	7402.8	20.74	125.63	77.0	371.4	667.1
95.00		0.3125	38.082	37.461	6751.9	20.08	121.86	77.8	349.2	647.3
100.00		0.3125	36.906	36.294	6140.3	19.41	118.10	78.6	327.7	627.4
105.00		0.3125	35.729	35.128	5566.9	18.75	114.33	79.3	306.9	607.6
107.00	Bot - Section 4	0.3125	35.258	34.661	5347.9	18.48	112.83	79.7	298.7	237.5
110.00		0.3125	34.552	33.961	5030.3	18.09	110.57	80.1	286.7	635.0
112.00	Top - Section 3	0.2500	34.582	27.241	4056.7	22.98	138.33	0.0	0.0	416.2
115.00		0.2500	33.876	26.681	3811.6	22.48	135.50	75.0	221.6	275.2
120.00		0.2500	32.699	25.748	3425.3	21.65	130.80	75.9	206.3	446.0
125.00		0.2500	31.523	24.814	3066.0	20.82	126.09	76.9	191.6	430.1
127.00		0.2500	31.052	24.441	2929.7	20.49	124.21	77.3	185.8	167.6
130.00		0.2500	30.346	23.880	2732.8	19.99	121.38	77.9	177.4	246.6
135.00		0.2500	29.169	22.947	2424.7	19.16	116.68	78.9	163.7	398.4
137.00		0.2500	28.699	22.573	2308.2	18.83	114.80	79.3	158.4	154.9
140.00		0.2500	27.993	22.013	2140.6	18.33	111.97	79.8	150.6	227.6
145.00		0.2500	26.816	21.080	1879.6	17.50	107.27	80.8	138.1	366.6
148.00		0.2500	26.110	20.519	1733.7	17.01	104.44	81.4	130.8	212.3
149.00		0.2500	25.875	20.333	1686.8	16.84	103.50	81.6	128.4	69.5
										26722.3

Wind Loading - Shaft

Structure:	CT11559-A-SBA	**Code:**	EIA/TIA-222-G	8/18/2021	
Site Name:	Thompson 1, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 9	

Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60

Iterations 22

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	0.85	21.088	23.20	465.38	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	21.088	23.20	456.11	0.650	0.000	5.00	24.740	16.08	596.8	0.0	1645.3
10.00		1.00	0.85	21.088	23.20	446.84	0.650	0.000	5.00	24.242	15.76	584.8	0.0	1612.0
15.00		1.00	0.85	21.088	23.20	437.57	0.650	0.000	5.00	23.744	15.43	572.8	0.0	1578.6
18.00	Bot - Section 2	1.00	0.88	21.884	24.07	440.09	0.650	0.000	3.00	14.008	9.11	350.7	0.0	931.2
20.00		1.00	0.90	22.375	24.61	441.18	0.650	0.000	2.00	9.366	6.09	239.7	0.0	1148.4
25.00	Top - Section 1	1.00	0.95	23.451	25.80	441.89	0.650	0.000	5.00	23.066	14.99	618.8	0.0	2827.6
30.00		1.00	0.98	24.369	26.81	446.83	0.650	0.000	5.00	22.568	14.67	629.2	0.0	1287.1
35.00		1.00	1.01	25.172	27.69	444.02	0.650	0.000	5.00	22.071	14.35	635.6	0.0	1258.5
40.00		1.00	1.04	25.890	28.48	440.03	0.650	0.000	5.00	21.573	14.02	638.9	0.0	1229.9
45.00		1.00	1.07	26.540	29.19	435.12	0.650	0.000	5.00	21.075	13.70	639.9	0.0	1201.3
50.00		1.00	1.09	27.135	29.85	429.45	0.650	0.000	5.00	20.577	13.38	638.8	0.0	1172.7
55.00		1.00	1.12	27.685	30.45	423.16	0.650	0.000	5.00	20.079	13.05	636.0	0.0	1144.1
60.00		1.00	1.14	28.197	31.02	416.33	0.650	0.000	5.00	19.582	12.73	631.7	0.0	1115.5
62.00	Bot - Section 3	1.00	1.14	28.392	31.23	413.47	0.650	0.000	2.00	7.693	5.00	249.9	0.0	438.2
65.00		1.00	1.16	28.676	31.54	409.04	0.650	0.000	3.00	11.549	7.51	378.9	0.0	1197.7
68.00	Top - Section 2	1.00	1.17	28.950	31.84	404.47	0.650	0.000	3.00	11.370	7.39	376.6	0.0	1178.8
70.00		1.00	1.17	29.127	32.04	407.14	0.650	0.000	2.00	7.480	4.86	249.3	0.0	355.5
75.00		1.00	1.19	29.553	32.51	399.13	0.650	0.000	5.00	18.353	11.93	620.5	0.0	872.1
80.00		1.00	1.21	29.958	32.95	390.80	0.650	0.000	5.00	17.855	11.61	611.9	0.0	848.2
85.00		1.00	1.22	30.342	33.38	382.18	0.650	0.000	5.00	17.357	11.28	602.5	0.0	824.4
90.00		1.00	1.24	30.710	33.78	373.30	0.650	0.000	5.00	16.859	10.96	592.3	0.0	800.6
95.00		1.00	1.25	31.061	34.17	364.18	0.650	0.000	5.00	16.361	10.63	581.4	0.0	776.8
100.00		1.00	1.27	31.399	34.54	354.84	0.650	0.000	5.00	15.863	10.31	569.8	0.0	752.9
105.00		1.00	1.28	31.723	34.89	345.30	0.650	0.000	5.00	15.366	9.99	557.6	0.0	729.1
107.00	Bot - Section 4	1.00	1.28	31.849	35.03	341.43	0.650	0.000	2.00	6.007	3.90	218.9	0.0	285.0
110.00		1.00	1.29	32.035	35.24	335.56	0.650	0.000	3.00	8.988	5.84	329.4	0.0	762.0
112.00	Top - Section 3	1.00	1.30	32.157	35.37	331.62	0.650	0.000	2.00	5.892	3.83	216.8	0.0	499.4
115.00		1.00	1.30	32.336	35.57	330.54	0.650	0.000	3.00	8.689	5.65	321.4	0.0	330.3
120.00		1.00	1.32	32.627	35.89	320.49	0.650	0.000	5.00	14.084	9.15	525.7	0.0	535.2
125.00		1.00	1.33	32.909	36.20	310.29	0.650	0.000	5.00	13.586	8.83	511.5	0.0	516.1
127.00	Appurtenance(s)	1.00	1.33	33.019	36.32	306.17	0.650	0.000	2.00	5.295	3.44	200.0	0.0	201.1
130.00		1.00	1.34	33.182	36.50	299.94	0.650	0.000	3.00	7.793	5.07	295.8	0.0	296.0
135.00		1.00	1.35	33.446	36.79	289.46	0.650	0.000	5.00	12.590	8.18	481.7	0.0	478.0
137.00	Appurtenance(s)	1.00	1.35	33.550	36.90	285.23	0.650	0.000	2.00	4.897	3.18	187.9	0.0	185.9
140.00		1.00	1.36	33.703	37.07	278.85	0.650	0.000	3.00	7.196	4.68	277.4	0.0	273.1
145.00		1.00	1.37	33.953	37.35	268.12	0.650	0.000	5.00	11.595	7.54	450.4	0.0	439.9
148.00	Appurtenance(s)	1.00	1.37	34.100	37.51	261.62	0.650	0.000	3.00	6.718	4.37	262.1	0.0	254.8
149.00		1.00	1.38	34.148	37.56	259.45	0.650	0.000	1.00	2.199	1.43	85.9	0.0	83.4
								Totals:	**149.00**			**17,169.1**		**32,066.8**

Discrete Appurtenance Forces

Structure:	CT11559-A-SBA	**Code:**	EIA/TIA-222-G	8/18/2021	
Site Name:	Thompson 1, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 10	

Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60

Iterations 22

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	148.00	T-Arms	1	34.100	37.510	0.56	0.75	8.44	600.00	0.000	0.000	506.38	0.00	0.00
2	148.00	4449	3	34.100	37.510	0.54	0.80	2.65	252.00	0.000	0.000	159.23	0.00	0.00
3	148.00	HRK12 (Handrail Kit)	1	34.100	37.510	0.56	0.75	3.80	314.06	0.000	0.000	227.87	0.00	0.00
4	148.00	(3) Stabilizer Kit (4' FW)	1	34.100	37.510	0.56	0.75	2.08	168.00	0.000	0.000	124.91	0.00	0.00
5	148.00	Ericsson KRY112 144/1	3	34.100	37.510	0.56	0.80	0.69	39.60	0.000	0.000	41.34	0.00	0.00
6	148.00	AIR21 B2A B4P	3	34.100	37.510	0.69	0.80	12.57	329.40	0.000	0.000	754.39	0.00	0.00
7	148.00	AIR21 B2A B4P	3	34.100	37.510	0.69	0.80	12.57	325.44	0.000	0.000	754.39	0.00	0.00
8	148.00	APXVAARR24_43-U-NA2	3	34.100	37.510	0.56	0.80	34.00	460.80	0.000	0.000	2040.73	0.00	0.00
9	137.00	T-Arms	3	33.550	36.905	0.56	0.75	13.50	1260.00	0.000	0.000	797.15	0.00	0.00
10	137.00	RCMDC-6627-PF-48	1	33.550	36.905	1.00	1.00	4.06	38.40	0.000	0.000	239.73	0.00	0.00
11	137.00	Commscope	3	33.550	36.905	0.40	0.80	1.60	69.84	0.000	0.000	94.24	0.00	0.00
12	137.00	Samsung RFV01U-D2A	3	33.550	36.905	0.54	0.80	3.02	253.08	0.000	0.000	178.50	0.00	0.00
13	137.00	Samsung RFV01U-D1A	3	33.550	36.905	0.54	0.80	3.02	303.84	0.000	0.000	178.50	0.00	0.00
14	137.00	91900314	3	33.550	36.905	1.00	1.00	0.00	100.80	0.000	0.000	0.00	0.00	0.00
15	137.00	Samsung MT6407-77A	3	33.550	36.905	0.56	0.80	7.88	313.56	0.000	0.000	465.25	0.00	0.00
16	137.00	JMA Wireless	6	33.550	36.905	0.70	0.80	41.22	432.00	0.000	0.000	2433.79	0.00	0.00
17	127.00	T-Arms	3	33.019	36.321	0.56	0.75	13.50	1260.00	0.000	0.000	784.53	0.00	0.00
18	127.00	7770.00	6	33.019	36.321	0.58	0.80	19.27	252.00	0.000	0.000	1119.96	0.00	0.00
19	127.00	Powerwave LGP21401	12	33.019	36.321	0.80	0.80	12.38	203.04	0.000	0.000	719.67	0.00	0.00
20	127.00	Kathrein 860 10025 RET	12	33.019	36.321	0.80	0.80	1.34	15.84	0.000	0.000	78.10	0.00	0.00
21	127.00	Powerwave LGP13519	6	33.019	36.321	0.80	0.80	1.63	38.16	0.000	0.000	94.84	0.00	0.00
22	127.00	Raycap DC6-48-60-18-8F	1	33.019	36.321	1.00	1.00	0.92	38.16	0.000	0.000	53.46	0.00	0.00
23	127.00	Powerwave 1001983 Bias	3	33.019	36.321	0.80	0.80	0.50	15.84	0.000	0.000	29.29	0.00	0.00
24	127.00	(3) Stabilizer Kit	1	33.019	36.321	0.56	0.75	3.43	216.00	0.000	0.000	199.40	0.00	0.00
25	127.00	OPA65R-BU8DA	3	33.019	36.321	0.58	0.80	31.56	275.40	0.000	0.000	1834.25	0.00	0.00
26	127.00	DMP65R-BU8DA	3	33.019	36.321	0.58	0.80	31.18	344.52	0.000	0.000	1811.95	0.00	0.00
27	127.00	Horizontal Pipe	3	33.019	36.321	0.56	0.75	5.01	164.70	0.000	0.000	291.14	0.00	0.00
28	127.00	RRUS 4478 B14	3	33.019	36.321	0.54	0.80	2.65	213.84	0.000	0.000	154.19	0.00	0.00
29	127.00	4449 B5/B12	3	33.019	36.321	0.54	0.80	3.17	255.60	0.000	0.000	184.09	0.00	0.00
30	127.00	RRUS 8843 B2 B66A	3	33.019	36.321	0.54	0.80	2.64	259.20	0.000	0.000	153.25	0.00	0.00
31	127.00	DC9-48-60-24-8C-EV	1	33.019	36.321	1.00	1.00	1.14	31.44	0.000	0.000	66.25	0.00	0.00
							Totals:		**8,844.56**			**16,570.79**		

Total Applied Force Summary

Structure:	CT11559-A-SBA		**Code:**	EIA/TIA-222-G	8/18/2021
Site Name:	Thompson 1, CT		**Exposure:**	C	
Height:	149.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 11

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60

Iterations 22

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		596.83	1877.96	0.00	0.00
10.00		584.82	1844.61	0.00	0.00
15.00		572.81	1811.25	0.00	0.00
18.00		350.69	1070.74	0.00	0.00
20.00		239.73	1241.43	0.00	0.00
25.00		618.82	3060.21	0.00	0.00
30.00		629.15	1519.70	0.00	0.00
35.00		635.57	1491.11	0.00	0.00
40.00		638.95	1462.52	0.00	0.00
45.00		639.87	1433.93	0.00	0.00
50.00		638.77	1405.34	0.00	0.00
55.00		635.95	1376.75	0.00	0.00
60.00		631.65	1348.15	0.00	0.00
62.00		249.88	531.26	0.00	0.00
65.00		378.88	1337.27	0.00	0.00
68.00		376.56	1318.40	0.00	0.00
70.00		249.26	448.54	0.00	0.00
75.00		620.48	1104.68	0.00	0.00
80.00		611.91	1080.85	0.00	0.00
85.00		602.49	1057.02	0.00	0.00
90.00		592.29	1033.20	0.00	0.00
95.00		581.38	1009.37	0.00	0.00
100.00		569.81	985.55	0.00	0.00
105.00		557.63	961.72	0.00	0.00
107.00		218.86	378.02	0.00	0.00
110.00		329.39	901.59	0.00	0.00
112.00		216.76	592.48	0.00	0.00
115.00		321.44	469.85	0.00	0.00
120.00		525.68	767.83	0.00	0.00
125.00		511.48	748.77	0.00	0.00
127.00	(63) attachments	7774.39	3877.91	0.00	0.00
130.00		295.83	390.21	0.00	0.00
135.00		481.74	635.11	0.00	0.00
137.00	(25) attachments	4575.11	3020.23	0.00	0.00
140.00		277.45	322.20	0.00	0.00
145.00		450.37	521.75	0.00	0.00
148.00	(18) attachments	4871.31	2793.20	0.00	0.00
149.00		85.92	83.41	0.00	0.00
	Totals:	**33,739.92**	**47,314.11**	**0.00**	**0.00**

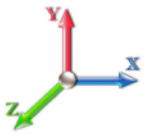
Calculated Forces

Structure:	CT11559-A-SBA	**Code:**	EIA/TIA-222-G	8/18/2021	
Site Name:	Thompson 1, CT	**Exposure:**	C		
Height:	149.00 (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 + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 22

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	-47.27	-33.80	0.00	-3600.8	0.00	3600.80	5499.39	2749.69	13252.7	6636.23	0.00	0.000	0.000	0.551
5.00	-45.31	-33.31	0.00	-3431.8	0.00	3431.80	5429.06	2714.53	12818.7	6418.90	0.08	-0.142	0.000	0.543
10.00	-43.39	-32.83	0.00	-3265.2	0.00	3265.24	5357.09	2678.54	12387.8	6203.11	0.30	-0.285	0.000	0.535
15.00	-41.51	-32.33	0.00	-3101.1	0.00	3101.10	5283.48	2641.74	11960.1	5988.97	0.68	-0.430	0.000	0.526
18.00	-40.40	-32.02	0.00	-3004.1	0.00	3004.11	5238.53	2619.26	11705.2	5861.33	0.98	-0.518	0.000	0.520
20.00	-39.11	-31.84	0.00	-2940.0	0.00	2940.06	5208.23	2604.11	11536.0	5776.60	1.21	-0.578	0.000	0.517
25.00	-35.97	-31.28	0.00	-2780.8	0.00	2780.85	4201.23	2100.61	9252.96	4633.35	1.89	-0.726	0.000	0.609
30.00	-34.38	-30.73	0.00	-2624.4	0.00	2624.44	4145.44	2072.72	8928.09	4470.68	2.73	-0.876	0.000	0.596
35.00	-32.81	-30.16	0.00	-2470.8	0.00	2470.81	4088.00	2044.00	8605.21	4309.00	3.74	-1.043	0.000	0.582
40.00	-31.27	-29.59	0.00	-2319.9	0.00	2319.99	4028.93	2014.47	8284.56	4148.44	4.93	-1.212	0.000	0.567
45.00	-29.77	-29.00	0.00	-2172.0	0.00	2172.05	3968.22	1984.11	7966.37	3989.11	6.29	-1.382	0.000	0.552
50.00	-28.29	-28.41	0.00	-2027.0	0.00	2027.03	3905.86	1952.93	7650.88	3831.13	7.83	-1.552	0.000	0.537
55.00	-26.85	-27.82	0.00	-1884.9	0.00	1884.96	3841.87	1920.93	7338.34	3674.63	9.54	-1.723	0.000	0.520
60.00	-25.47	-27.20	0.00	-1745.8	0.00	1745.86	3776.23	1888.12	7028.98	3519.72	11.44	-1.894	0.000	0.503
62.00	-24.90	-26.97	0.00	-1691.4	0.00	1691.47	3749.52	1874.76	6906.19	3458.23	12.25	-1.964	0.000	0.496
65.00	-23.53	-26.59	0.00	-1610.5	0.00	1610.56	3708.96	1854.48	6723.05	3366.52	13.52	-2.068	0.000	0.485
68.00	-22.19	-26.19	0.00	-1530.8	0.00	1530.80	2897.69	1448.84	5257.67	2632.74	14.85	-2.171	0.000	0.589
70.00	-21.69	-25.98	0.00	-1478.4	0.00	1478.42	2878.95	1439.48	5167.56	2587.62	15.77	-2.241	0.000	0.579
75.00	-20.53	-25.38	0.00	-1348.5	0.00	1348.53	2830.96	1415.48	4943.48	2475.42	18.23	-2.434	0.000	0.552
80.00	-19.39	-24.79	0.00	-1221.6	0.00	1221.62	2781.33	1390.66	4721.30	2364.16	20.88	-2.624	0.000	0.524
85.00	-18.29	-24.19	0.00	-1097.6	0.00	1097.68	2730.06	1365.03	4501.25	2253.97	23.73	-2.811	0.000	0.494
90.00	-17.21	-23.60	0.00	-976.71	0.00	976.71	2677.14	1338.57	4283.57	2144.97	26.77	-2.993	0.000	0.462
95.00	-16.17	-23.02	0.00	-858.69	0.00	858.69	2622.59	1311.30	4068.50	2037.27	30.00	-3.170	0.000	0.428
100.00	-15.15	-22.44	0.00	-743.60	0.00	743.60	2566.40	1283.20	3856.28	1931.01	33.41	-3.338	0.000	0.391
105.00	-14.18	-21.85	0.00	-631.42	0.00	631.42	2508.57	1254.28	3647.16	1826.29	36.99	-3.498	0.000	0.352
107.00	-13.79	-21.63	0.00	-587.72	0.00	587.72	2484.97	1242.49	3564.43	1784.86	38.47	-3.560	0.000	0.335
110.00	-12.89	-21.26	0.00	-522.84	0.00	522.84	2449.09	1224.55	3441.37	1723.24	40.73	-3.649	0.000	0.309
112.00	-12.28	-21.02	0.00	-480.32	0.00	480.32	1823.39	911.69	2573.73	1288.78	42.27	-3.705	0.000	0.380
115.00	-11.79	-20.69	0.00	-417.27	0.00	417.27	1799.96	899.98	2488.04	1245.87	44.63	-3.785	0.000	0.342
120.00	-11.02	-20.14	0.00	-313.83	0.00	313.83	1759.59	879.80	2346.51	1175.00	48.67	-3.921	0.000	0.274
125.00	-10.29	-19.59	0.00	-213.14	0.00	213.14	1717.59	858.79	2206.80	1105.04	52.83	-4.030	0.000	0.199
127.00	-6.96	-11.56	0.00	-173.97	0.00	173.97	1700.33	850.16	2151.49	1077.34	54.53	-4.066	0.000	0.166
130.00	-6.58	-11.25	0.00	-139.28	0.00	139.28	1673.94	836.97	2069.17	1036.12	57.10	-4.112	0.000	0.139
135.00	-5.97	-10.72	0.00	-83.05	0.00	83.05	1628.66	814.33	1933.84	968.36	61.43	-4.170	0.000	0.090
137.00	-3.29	-5.94	0.00	-61.60	0.00	61.60	1610.09	805.04	1880.41	941.60	63.18	-4.187	0.000	0.068
140.00	-2.99	-5.64	0.00	-43.77	0.00	43.77	1581.73	790.87	1801.05	901.87	65.82	-4.206	0.000	0.050
145.00	-2.50	-5.16	0.00	-15.56	0.00	15.56	1533.17	766.58	1671.06	836.77	70.23	-4.226	0.000	0.020
148.00	-0.08	-0.09	0.00	-0.09	0.00	0.09	1503.24	751.62	1594.49	798.43	72.89	-4.230	0.000	0.000
149.00	0.00	-0.09	0.00	0.00	0.00	0.00	1493.13	746.57	1569.22	785.78	73.77	-4.230	0.000	0.000

Wind Loading - Shaft

Structure:	CT11559-A-SBA	**Code:**	EIA/TIA-222-G	8/18/2021	
Site Name:	Thompson 1, CT	**Exposure:**	C		
Height:	149.00 (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	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60

Iterations 22

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	0.85	21.088	23.20	465.38	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	21.088	23.20	456.11	0.650	0.000	5.00	24.740	16.08	596.8	0.0	1234.0
10.00		1.00	0.85	21.088	23.20	446.84	0.650	0.000	5.00	24.242	15.76	584.8	0.0	1209.0
15.00		1.00	0.85	21.088	23.20	437.57	0.650	0.000	5.00	23.744	15.43	572.8	0.0	1184.0
18.00	Bot - Section 2	1.00	0.88	21.884	24.07	440.09	0.650	0.000	3.00	14.008	9.11	350.7	0.0	698.4
20.00		1.00	0.90	22.375	24.61	441.18	0.650	0.000	2.00	9.366	6.09	239.7	0.0	861.3
25.00	Top - Section 1	1.00	0.95	23.451	25.80	441.89	0.650	0.000	5.00	23.066	14.99	618.8	0.0	2120.7
30.00		1.00	0.98	24.369	26.81	446.83	0.650	0.000	5.00	22.568	14.67	629.2	0.0	965.3
35.00		1.00	1.01	25.172	27.69	444.02	0.650	0.000	5.00	22.071	14.35	635.6	0.0	943.9
40.00		1.00	1.04	25.890	28.48	440.03	0.650	0.000	5.00	21.573	14.02	638.9	0.0	922.4
45.00		1.00	1.07	26.540	29.19	435.12	0.650	0.000	5.00	21.075	13.70	639.9	0.0	901.0
50.00		1.00	1.09	27.135	29.85	429.45	0.650	0.000	5.00	20.577	13.38	638.8	0.0	879.5
55.00		1.00	1.12	27.685	30.45	423.16	0.650	0.000	5.00	20.079	13.05	636.0	0.0	858.1
60.00		1.00	1.14	28.197	31.02	416.33	0.650	0.000	5.00	19.582	12.73	631.7	0.0	836.7
62.00	Bot - Section 3	1.00	1.14	28.392	31.23	413.47	0.650	0.000	2.00	7.693	5.00	249.9	0.0	328.7
65.00		1.00	1.16	28.676	31.54	409.04	0.650	0.000	3.00	11.549	7.51	378.9	0.0	898.3
68.00	Top - Section 2	1.00	1.17	28.950	31.84	404.47	0.650	0.000	3.00	11.370	7.39	376.6	0.0	884.1
70.00		1.00	1.17	29.127	32.04	407.14	0.650	0.000	2.00	7.480	4.86	249.3	0.0	266.6
75.00		1.00	1.19	29.553	32.51	399.13	0.650	0.000	5.00	18.353	11.93	620.5	0.0	654.0
80.00		1.00	1.21	29.958	32.95	390.80	0.650	0.000	5.00	17.855	11.61	611.9	0.0	636.2
85.00		1.00	1.22	30.342	33.38	382.18	0.650	0.000	5.00	17.357	11.28	602.5	0.0	618.3
90.00		1.00	1.24	30.710	33.78	373.30	0.650	0.000	5.00	16.859	10.96	592.3	0.0	600.4
95.00		1.00	1.25	31.061	34.17	364.18	0.650	0.000	5.00	16.361	10.63	581.4	0.0	582.6
100.00		1.00	1.27	31.399	34.54	354.84	0.650	0.000	5.00	15.863	10.31	569.8	0.0	564.7
105.00		1.00	1.28	31.723	34.89	345.30	0.650	0.000	5.00	15.366	9.99	557.6	0.0	546.8
107.00	Bot - Section 4	1.00	1.28	31.849	35.03	341.43	0.650	0.000	2.00	6.007	3.90	218.9	0.0	213.7
110.00		1.00	1.29	32.035	35.24	335.56	0.650	0.000	3.00	8.988	5.84	329.4	0.0	571.5
112.00	Top - Section 3	1.00	1.30	32.157	35.37	331.62	0.650	0.000	2.00	5.892	3.83	216.8	0.0	374.6
115.00		1.00	1.30	32.336	35.57	330.54	0.650	0.000	3.00	8.689	5.65	321.4	0.0	247.7
120.00		1.00	1.32	32.627	35.89	320.49	0.650	0.000	5.00	14.084	9.15	525.7	0.0	401.4
125.00		1.00	1.33	32.909	36.20	310.29	0.650	0.000	5.00	13.586	8.83	511.5	0.0	387.1
127.00	Appurtenance(s)	1.00	1.33	33.019	36.32	306.17	0.650	0.000	2.00	5.295	3.44	200.0	0.0	150.8
130.00		1.00	1.34	33.182	36.50	299.94	0.650	0.000	3.00	7.793	5.07	295.8	0.0	222.0
135.00		1.00	1.35	33.446	36.79	289.46	0.650	0.000	5.00	12.590	8.18	481.7	0.0	358.5
137.00	Appurtenance(s)	1.00	1.35	33.550	36.90	285.23	0.650	0.000	2.00	4.897	3.18	187.9	0.0	139.4
140.00		1.00	1.36	33.703	37.07	278.85	0.650	0.000	3.00	7.196	4.68	277.4	0.0	204.8
145.00		1.00	1.37	33.953	37.35	268.12	0.650	0.000	5.00	11.595	7.54	450.4	0.0	329.9
148.00	Appurtenance(s)	1.00	1.37	34.100	37.51	261.62	0.650	0.000	3.00	6.718	4.37	262.1	0.0	191.1
149.00		1.00	1.38	34.148	37.56	259.45	0.650	0.000	1.00	2.199	1.43	85.9	0.0	62.6
								Totals:	**149.00**			**17,169.1**		**24,050.1**

Discrete Appurtenance Forces

Structure:	CT11559-A-SBA	**Code:**	EIA/TIA-222-G	8/18/2021	
Site Name:	Thompson 1, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 14	

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60

Iterations 22

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	148.00	T-Arms	1	34.100	37.510	0.56	0.75	8.44	450.00	0.000	0.000	506.38	0.00	0.00
2	148.00	4449	3	34.100	37.510	0.54	0.80	2.65	189.00	0.000	0.000	159.23	0.00	0.00
3	148.00	HRK12 (Handrail Kit)	1	34.100	37.510	0.56	0.75	3.80	235.55	0.000	0.000	227.87	0.00	0.00
4	148.00	(3) Stabilizer Kit (4' FW)	1	34.100	37.510	0.56	0.75	2.08	126.00	0.000	0.000	124.91	0.00	0.00
5	148.00	Ericsson KRY112 144/1	3	34.100	37.510	0.56	0.80	0.69	29.70	0.000	0.000	41.34	0.00	0.00
6	148.00	AIR21 B2A B4P	3	34.100	37.510	0.69	0.80	12.57	247.05	0.000	0.000	754.39	0.00	0.00
7	148.00	AIR21 B2A B4P	3	34.100	37.510	0.69	0.80	12.57	244.08	0.000	0.000	754.39	0.00	0.00
8	148.00	APXVAARR24_43-U-NA2	3	34.100	37.510	0.56	0.80	34.00	345.60	0.000	0.000	2040.73	0.00	0.00
9	137.00	T-Arms	3	33.550	36.905	0.56	0.75	13.50	945.00	0.000	0.000	797.15	0.00	0.00
10	137.00	RCMDC-6627-PF-48	1	33.550	36.905	1.00	1.00	4.06	28.80	0.000	0.000	239.73	0.00	0.00
11	137.00	Commscope	3	33.550	36.905	0.40	0.80	1.60	52.38	0.000	0.000	94.24	0.00	0.00
12	137.00	Samsung RFV01U-D2A	3	33.550	36.905	0.54	0.80	3.02	189.81	0.000	0.000	178.50	0.00	0.00
13	137.00	Samsung RFV01U-D1A	3	33.550	36.905	0.54	0.80	3.02	227.88	0.000	0.000	178.50	0.00	0.00
14	137.00	91900314	3	33.550	36.905	1.00	1.00	0.00	75.60	0.000	0.000	0.00	0.00	0.00
15	137.00	Samsung MT6407-77A	3	33.550	36.905	0.56	0.80	7.88	235.17	0.000	0.000	465.25	0.00	0.00
16	137.00	JMA Wireless	6	33.550	36.905	0.70	0.80	41.22	324.00	0.000	0.000	2433.79	0.00	0.00
17	127.00	T-Arms	3	33.019	36.321	0.56	0.75	13.50	945.00	0.000	0.000	784.53	0.00	0.00
18	127.00	7770.00	6	33.019	36.321	0.58	0.80	19.27	189.00	0.000	0.000	1119.96	0.00	0.00
19	127.00	Powerwave LGP21401	12	33.019	36.321	0.80	0.80	12.38	152.28	0.000	0.000	719.67	0.00	0.00
20	127.00	Kathrein 860 10025 RET	12	33.019	36.321	0.80	0.80	1.34	11.88	0.000	0.000	78.10	0.00	0.00
21	127.00	Powerwave LGP13519	6	33.019	36.321	0.80	0.80	1.63	28.62	0.000	0.000	94.84	0.00	0.00
22	127.00	Raycap DC6-48-60-18-8F	1	33.019	36.321	1.00	1.00	0.92	28.62	0.000	0.000	53.46	0.00	0.00
23	127.00	Powerwave 1001983 Bias	3	33.019	36.321	0.80	0.80	0.50	11.88	0.000	0.000	29.29	0.00	0.00
24	127.00	(3) Stabilizer Kit	1	33.019	36.321	0.56	0.75	3.43	162.00	0.000	0.000	199.40	0.00	0.00
25	127.00	OPA65R-BU8DA	3	33.019	36.321	0.58	0.80	31.56	206.55	0.000	0.000	1834.25	0.00	0.00
26	127.00	DMP65R-BU8DA	3	33.019	36.321	0.58	0.80	31.18	258.39	0.000	0.000	1811.95	0.00	0.00
27	127.00	Horizontal Pipe	3	33.019	36.321	0.56	0.75	5.01	123.53	0.000	0.000	291.14	0.00	0.00
28	127.00	RRUS 4478 B14	3	33.019	36.321	0.54	0.80	2.65	160.38	0.000	0.000	154.19	0.00	0.00
29	127.00	4449 B5/B12	3	33.019	36.321	0.54	0.80	3.17	191.70	0.000	0.000	184.09	0.00	0.00
30	127.00	RRUS 8843 B2 B66A	3	33.019	36.321	0.54	0.80	2.64	194.40	0.000	0.000	153.25	0.00	0.00
31	127.00	DC9-48-60-24-8C-EV	1	33.019	36.321	1.00	1.00	1.14	23.58	0.000	0.000	66.25	0.00	0.00
							Totals:		**6,633.42**			**16,570.79**		

Total Applied Force Summary

Structure:	CT11559-A-SBA		**Code:**	EIA/TIA-222-G	8/18/2021
Site Name:	Thompson 1, CT		**Exposure:**	C	
Height:	149.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 15

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60

Iterations 22

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		596.83	1408.47	0.00	0.00
10.00		584.82	1383.46	0.00	0.00
15.00		572.81	1358.44	0.00	0.00
18.00		350.69	803.05	0.00	0.00
20.00		239.73	931.07	0.00	0.00
25.00		618.82	2295.16	0.00	0.00
30.00		629.15	1139.78	0.00	0.00
35.00		635.57	1118.33	0.00	0.00
40.00		638.95	1096.89	0.00	0.00
45.00		639.87	1075.45	0.00	0.00
50.00		638.77	1054.00	0.00	0.00
55.00		635.95	1032.56	0.00	0.00
60.00		631.65	1011.12	0.00	0.00
62.00		249.88	398.44	0.00	0.00
65.00		378.88	1002.95	0.00	0.00
68.00		376.56	988.80	0.00	0.00
70.00		249.26	336.41	0.00	0.00
75.00		620.48	828.51	0.00	0.00
80.00		611.91	810.64	0.00	0.00
85.00		602.49	792.77	0.00	0.00
90.00		592.29	774.90	0.00	0.00
95.00		581.38	757.03	0.00	0.00
100.00		569.81	739.16	0.00	0.00
105.00		557.63	721.29	0.00	0.00
107.00		218.86	283.51	0.00	0.00
110.00		329.39	676.19	0.00	0.00
112.00		216.76	444.36	0.00	0.00
115.00		321.44	352.39	0.00	0.00
120.00		525.68	575.87	0.00	0.00
125.00		511.48	561.58	0.00	0.00
127.00	(63) attachments	7774.39	2908.43	0.00	0.00
130.00		295.83	292.66	0.00	0.00
135.00		481.74	476.33	0.00	0.00
137.00	(25) attachments	4575.11	2265.17	0.00	0.00
140.00		277.45	241.65	0.00	0.00
145.00		450.37	391.31	0.00	0.00
148.00	(18) attachments	4871.31	2094.90	0.00	0.00
149.00		85.92	62.55	0.00	0.00
	Totals:	**33,739.92**	**35,485.58**	**0.00**	**0.00**

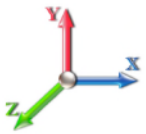
Calculated Forces

Structure:	CT11559-A-SBA	**Code:**	EIA/TIA-222-G	8/18/2021	
Site Name:	Thompson 1, CT	**Exposure:**	C		
Height:	149.00 (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: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 22

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	-35.44	-33.78	0.00	-3574.6	0.00	3574.60	5499.39	2749.69	13252.7	6636.23	0.00	0.000	0.000	0.545
5.00	-33.95	-33.27	0.00	-3405.6	0.00	3405.69	5429.06	2714.53	12818.7	6418.90	0.08	-0.140	0.000	0.537
10.00	-32.49	-32.76	0.00	-3239.3	0.00	3239.35	5357.09	2678.54	12387.8	6203.11	0.30	-0.283	0.000	0.528
15.00	-31.07	-32.24	0.00	-3075.5	0.00	3075.55	5283.48	2641.74	11960.1	5988.97	0.67	-0.426	0.000	0.520
18.00	-30.23	-31.92	0.00	-2978.8	0.00	2978.82	5238.53	2619.26	11705.2	5861.33	0.97	-0.514	0.000	0.514
20.00	-29.24	-31.73	0.00	-2914.9	0.00	2914.98	5208.23	2604.11	11536.0	5776.60	1.20	-0.574	0.000	0.510
25.00	-26.88	-31.15	0.00	-2756.3	0.00	2756.34	4201.23	2100.61	9252.96	4633.35	1.88	-0.720	0.000	0.602
30.00	-25.66	-30.58	0.00	-2600.5	0.00	2600.59	4145.44	2072.72	8928.09	4470.68	2.71	-0.868	0.000	0.588
35.00	-24.47	-29.99	0.00	-2447.7	0.00	2447.70	4088.00	2044.00	8605.21	4309.00	3.71	-1.035	0.000	0.574
40.00	-23.30	-29.40	0.00	-2297.7	0.00	2297.73	4028.93	2014.47	8284.56	4148.44	4.89	-1.202	0.000	0.560
45.00	-22.15	-28.80	0.00	-2150.7	0.00	2150.71	3968.22	1984.11	7966.37	3989.11	6.24	-1.370	0.000	0.545
50.00	-21.03	-28.20	0.00	-2006.7	0.00	2006.70	3905.86	1952.93	7650.88	3831.13	7.76	-1.539	0.000	0.529
55.00	-19.93	-27.60	0.00	-1865.6	0.00	1865.69	3841.87	1920.93	7338.34	3674.63	9.46	-1.708	0.000	0.513
60.00	-18.89	-26.97	0.00	-1727.7	0.00	1727.72	3776.23	1888.12	7028.98	3519.72	11.34	-1.877	0.000	0.496
62.00	-18.46	-26.74	0.00	-1673.7	0.00	1673.78	3749.52	1874.76	6906.19	3458.23	12.14	-1.946	0.000	0.489
65.00	-17.42	-26.35	0.00	-1593.5	0.00	1593.57	3708.96	1854.48	6723.05	3366.52	13.40	-2.049	0.000	0.478
68.00	-16.41	-25.97	0.00	-1514.5	0.00	1514.51	2897.69	1448.84	5257.67	2632.74	14.72	-2.151	0.000	0.581
70.00	-16.02	-25.74	0.00	-1462.5	0.00	1462.58	2878.95	1439.48	5167.56	2587.62	15.64	-2.220	0.000	0.571
75.00	-15.14	-25.14	0.00	-1333.8	0.00	1333.88	2830.96	1415.48	4943.48	2475.42	18.07	-2.411	0.000	0.545
80.00	-14.27	-24.54	0.00	-1208.2	0.00	1208.20	2781.33	1390.66	4721.30	2364.16	20.69	-2.599	0.000	0.516
85.00	-13.43	-23.94	0.00	-1085.5	0.00	1085.52	2730.06	1365.03	4501.25	2253.97	23.51	-2.784	0.000	0.487
90.00	-12.62	-23.35	0.00	-965.81	0.00	965.81	2677.14	1338.57	4283.57	2144.97	26.53	-2.964	0.000	0.455
95.00	-11.82	-22.76	0.00	-849.07	0.00	849.07	2622.59	1311.30	4068.50	2037.27	29.72	-3.138	0.000	0.422
100.00	-11.06	-22.18	0.00	-735.25	0.00	735.25	2566.40	1283.20	3856.28	1931.01	33.10	-3.305	0.000	0.385
105.00	-10.33	-21.61	0.00	-624.33	0.00	624.33	2508.57	1254.28	3647.16	1826.29	36.65	-3.463	0.000	0.346
107.00	-10.03	-21.38	0.00	-581.12	0.00	581.12	2484.97	1242.49	3564.43	1784.86	38.11	-3.524	0.000	0.330
110.00	-9.35	-21.02	0.00	-516.97	0.00	516.97	2449.09	1224.55	3441.37	1723.24	40.35	-3.612	0.000	0.304
112.00	-8.90	-20.79	0.00	-474.92	0.00	474.92	1823.39	911.69	2573.73	1288.78	41.88	-3.668	0.000	0.374
115.00	-8.53	-20.46	0.00	-412.55	0.00	412.55	1799.96	899.98	2488.04	1245.87	44.21	-3.747	0.000	0.336
120.00	-7.94	-19.92	0.00	-310.24	0.00	310.24	1759.59	879.80	2346.51	1175.00	48.21	-3.882	0.000	0.269
125.00	-7.40	-19.38	0.00	-210.66	0.00	210.66	1717.59	858.79	2206.80	1105.04	52.33	-3.990	0.000	0.195
127.00	-5.03	-11.42	0.00	-171.91	0.00	171.91	1700.33	850.16	2151.49	1077.34	54.01	-4.025	0.000	0.163
130.00	-4.75	-11.11	0.00	-137.65	0.00	137.65	1673.94	836.97	2069.17	1036.12	56.55	-4.070	0.000	0.136
135.00	-4.30	-10.60	0.00	-82.10	0.00	82.10	1628.66	814.33	1933.84	968.36	60.85	-4.128	0.000	0.088
137.00	-2.37	-5.87	0.00	-60.90	0.00	60.90	1610.09	805.04	1880.41	941.60	62.58	-4.144	0.000	0.066
140.00	-2.15	-5.58	0.00	-43.29	0.00	43.29	1581.73	790.87	1801.05	901.87	65.19	-4.164	0.000	0.049
145.00	-1.79	-5.10	0.00	-15.39	0.00	15.39	1533.17	766.58	1671.06	836.77	69.56	-4.183	0.000	0.020
148.00	-0.06	-0.09	0.00	-0.09	0.00	0.09	1503.24	751.62	1594.49	798.43	72.18	-4.187	0.000	0.000
149.00	0.00	-0.09	0.00	0.00	0.00	0.00	1493.13	746.57	1569.22	785.78	73.06	-4.187	0.000	0.000

Wind Loading - Shaft

Structure:	CT11559-A-SBA	**Code:**	EIA/TIA-222-G	8/18/2021	
Site Name:	Thompson 1, CT	**Exposure:**	C		
Height:	149.00 (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 + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00

Iterations 22

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	0.85	5.168	5.68	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	5.168	5.68	0.00	1.200	1.656	5.00	26.120	31.34	178.2	617.7	2263.0
10.00		1.00	0.85	5.168	5.68	0.00	1.200	1.775	5.00	25.721	30.87	175.5	650.2	2262.2
15.00		1.00	0.85	5.168	5.68	0.00	1.200	1.848	5.00	25.285	30.34	172.5	664.3	2243.0
18.00	Bot - Section 2	1.00	0.88	5.363	5.90	0.00	1.200	1.882	3.00	14.949	17.94	105.8	401.2	1332.3
20.00		1.00	0.90	5.483	6.03	0.00	1.200	1.902	2.00	10.000	12.00	72.4	271.7	1420.1
25.00	Top - Section 1	1.00	0.95	5.747	6.32	0.00	1.200	1.945	5.00	24.687	29.62	187.3	680.8	3508.4
30.00		1.00	0.98	5.972	6.57	0.00	1.200	1.981	5.00	24.219	29.06	190.9	679.1	1966.2
35.00		1.00	1.01	6.169	6.79	0.00	1.200	2.012	5.00	23.747	28.50	193.4	675.2	1933.7
40.00		1.00	1.04	6.345	6.98	0.00	1.200	2.039	5.00	23.272	27.93	194.9	669.6	1899.5
45.00		1.00	1.07	6.504	7.15	0.00	1.200	2.063	5.00	22.794	27.35	195.7	662.6	1863.9
50.00		1.00	1.09	6.650	7.32	0.00	1.200	2.085	5.00	22.315	26.78	195.9	654.6	1827.3
55.00		1.00	1.12	6.785	7.46	0.00	1.200	2.105	5.00	21.833	26.20	195.5	645.6	1789.7
60.00		1.00	1.14	6.910	7.60	0.00	1.200	2.123	5.00	21.351	25.62	194.8	635.8	1751.3
62.00	Bot - Section 3	1.00	1.14	6.958	7.65	0.00	1.200	2.130	2.00	8.403	10.08	77.2	252.7	690.9
65.00		1.00	1.16	7.028	7.73	0.00	1.200	2.140	3.00	12.619	15.14	117.1	380.2	1577.9
68.00	Top - Section 2	1.00	1.17	7.095	7.80	0.00	1.200	2.150	3.00	12.445	14.93	116.5	376.3	1555.2
70.00		1.00	1.17	7.138	7.85	0.00	1.200	2.156	2.00	8.199	9.84	77.3	249.1	604.6
75.00		1.00	1.19	7.243	7.97	0.00	1.200	2.171	5.00	20.162	24.19	192.8	611.3	1483.3
80.00		1.00	1.21	7.342	8.08	0.00	1.200	2.185	5.00	19.676	23.61	190.7	599.3	1447.5
85.00		1.00	1.22	7.436	8.18	0.00	1.200	2.198	5.00	19.189	23.03	188.4	586.9	1411.3
90.00		1.00	1.24	7.526	8.28	0.00	1.200	2.211	5.00	18.702	22.44	185.8	574.1	1374.7
95.00		1.00	1.25	7.612	8.37	0.00	1.200	2.223	5.00	18.214	21.86	183.0	561.0	1337.8
100.00		1.00	1.27	7.695	8.46	0.00	1.200	2.234	5.00	17.726	21.27	180.0	547.6	1300.5
105.00		1.00	1.28	7.774	8.55	0.00	1.200	2.245	5.00	17.237	20.68	176.9	533.9	1263.0
107.00	Bot - Section 4	1.00	1.28	7.805	8.59	0.00	1.200	2.250	2.00	6.757	8.11	69.6	211.3	496.3
110.00		1.00	1.29	7.851	8.64	0.00	1.200	2.256	3.00	10.116	12.14	104.8	316.2	1078.2
112.00	Top - Section 3	1.00	1.30	7.881	8.67	0.00	1.200	2.260	2.00	6.646	7.97	69.1	208.5	707.9
115.00		1.00	1.30	7.925	8.72	0.00	1.200	2.266	3.00	9.822	11.79	102.7	307.6	637.9
120.00		1.00	1.32	7.996	8.80	0.00	1.200	2.276	5.00	15.980	19.18	168.7	498.3	1033.5
125.00		1.00	1.33	8.065	8.87	0.00	1.200	2.285	5.00	15.490	18.59	164.9	483.6	999.7
127.00	Appurtenance(s)	1.00	1.33	8.092	8.90	0.00	1.200	2.289	2.00	6.058	7.27	64.7	191.1	392.2
130.00		1.00	1.34	8.132	8.95	0.00	1.200	2.294	3.00	8.940	10.73	96.0	281.2	577.2
135.00		1.00	1.35	8.197	9.02	0.00	1.200	2.303	5.00	14.509	17.41	157.0	453.6	931.6
137.00	Appurtenance(s)	1.00	1.35	8.222	9.04	0.00	1.200	2.306	2.00	5.665	6.80	61.5	179.0	364.9
140.00		1.00	1.36	8.260	9.09	0.00	1.200	2.311	3.00	8.351	10.02	91.1	263.0	536.1
145.00		1.00	1.37	8.321	9.15	0.00	1.200	2.319	5.00	13.527	16.23	148.6	422.9	862.8
148.00	Appurtenance(s)	1.00	1.37	8.357	9.19	0.00	1.200	2.324	3.00	7.880	9.46	86.9	248.1	502.9
149.00		1.00	1.38	8.369	9.21	0.00	1.200	2.325	1.00	2.587	3.10	28.6	82.1	165.5
								Totals:	**149.00**			**5,352.5**		**49,394.0**

Discrete Appurtenance Forces

Structure:	CT11559-A-SBA	**Code:**	EIA/TIA-222-G	8/18/2021	
Site Name:	Thompson 1, CT	**Exposure:**	C		
Height:	149.00 (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: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00

Iterations 22

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	148.00	T-Arms	1	8.357	9.193	0.56	0.75	23.08	1147.15	0.000	0.000	212.15	0.00	0.00
2	148.00	4449	3	8.357	9.193	0.54	0.80	3.85	548.48	0.000	0.000	35.36	0.00	0.00
3	148.00	HRK12 (Handrail Kit)	1	8.357	9.193	0.56	0.75	8.74	314.06	0.000	0.000	80.33	0.00	0.00
4	148.00	(3) Stabilizer Kit (4' FW)	1	8.357	9.193	0.56	0.75	4.98	342.24	0.000	0.000	45.81	0.00	0.00
5	148.00	Ericsson KRY112 144/1	3	8.357	9.193	0.56	0.80	1.75	73.37	0.000	0.000	16.10	0.00	0.00
6	148.00	AIR21 B2A B4P	3	8.357	9.193	0.69	0.80	15.65	1048.04	0.000	0.000	143.88	0.00	0.00
7	148.00	AIR21 B2A B4P	3	8.357	9.193	0.69	0.80	15.65	1044.08	0.000	0.000	143.88	0.00	0.00
8	148.00	APXVAARR24_43-U-NA2	3	8.357	9.193	0.56	0.80	38.31	2201.32	0.000	0.000	352.14	0.00	0.00
9	137.00	T-Arms	3	8.222	9.044	0.56	0.75	29.07	2018.50	0.000	0.000	262.88	0.00	0.00
10	137.00	RCMDC-6627-PF-48	1	8.222	9.044	1.00	1.00	5.15	163.73	0.000	0.000	46.54	0.00	0.00
11	137.00	Commscope	3	8.222	9.044	0.40	0.80	2.97	153.61	0.000	0.000	26.82	0.00	0.00
12	137.00	Samsung RFV01U-D2A	3	8.222	9.044	0.54	0.80	4.19	411.06	0.000	0.000	37.93	0.00	0.00
13	137.00	Samsung RFV01U-D1A	3	8.222	9.044	0.54	0.80	4.19	401.43	0.000	0.000	37.93	0.00	0.00
14	137.00	91900314	3	8.222	9.044	1.00	1.00	0.00	182.78	0.000	0.000	0.00	0.00	0.00
15	137.00	Samsung MT6407-77A	3	8.222	9.044	0.56	0.80	10.01	819.99	0.000	0.000	90.57	0.00	0.00
16	137.00	JMA Wireless	6	8.222	9.044	0.70	0.80	48.94	2670.47	0.000	0.000	442.65	0.00	0.00
17	127.00	T-Arms	3	8.092	8.901	0.56	0.75	28.95	2011.19	0.000	0.000	257.67	0.00	0.00
18	127.00	7770.00	6	8.092	8.901	0.58	0.80	24.27	1392.01	0.000	0.000	216.00	0.00	0.00
19	127.00	Powerwave LGP21401	12	8.092	8.901	0.80	0.80	22.90	511.26	0.000	0.000	203.88	0.00	0.00
20	127.00	Kathrein 860 10025 RET	12	8.092	8.901	0.80	0.80	5.38	70.03	0.000	0.000	47.93	0.00	0.00
21	127.00	Powerwave LGP13519	6	8.092	8.901	0.80	0.80	4.49	96.69	0.000	0.000	39.97	0.00	0.00
22	127.00	Raycap DC6-48-60-18-8F	1	8.092	8.901	1.00	1.00	1.49	101.53	0.000	0.000	13.30	0.00	0.00
23	127.00	Powerwave 1001983 Bias	3	8.092	8.901	0.80	0.80	1.64	33.22	0.000	0.000	14.61	0.00	0.00
24	127.00	(3) Stabilizer Kit	1	8.092	8.901	0.56	0.75	8.14	442.60	0.000	0.000	72.48	0.00	0.00
25	127.00	OPA65R-BU8DA	3	8.092	8.901	0.60	0.80	38.65	1439.68	0.000	0.000	344.05	0.00	0.00
26	127.00	DMP65R-BU8DA	3	8.092	8.901	0.60	0.80	36.83	1588.13	0.000	0.000	327.81	0.00	0.00
27	127.00	Horizontal Pipe	3	8.092	8.901	0.56	0.75	13.26	297.85	0.000	0.000	118.07	0.00	0.00
28	127.00	RRUS 4478 B14	3	8.092	8.901	0.54	0.80	3.75	348.77	0.000	0.000	33.35	0.00	0.00
29	127.00	4449 B5/B12	3	8.092	8.901	0.54	0.80	4.32	424.80	0.000	0.000	38.47	0.00	0.00
30	127.00	RRUS 8843 B2 B66A	3	8.092	8.901	0.54	0.80	3.68	407.48	0.000	0.000	32.80	0.00	0.00
31	127.00	DC9-48-60-24-8C-EV	1	8.092	8.901	1.00	1.00	3.22	153.33	0.000	0.000	28.67	0.00	0.00
							Totals:		**22,858.86**			**3,764.03**		

Total Applied Force Summary

Structure:	CT11559-A-SBA		**Code:**	EIA/TIA-222-G	8/18/2021
Site Name:	Thompson 1, CT		**Exposure:**	C	
Height:	149.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 19

Tower Engineering Solutions

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

Dead Load Factor 1.20

Wind Load Factor 1.00

Iterations 22

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		178.19	2495.63	0.00	0.00
10.00		175.47	2494.82	0.00	0.00
15.00		172.49	2475.57	0.00	0.00
18.00		105.83	1471.91	0.00	0.00
20.00		72.38	1513.13	0.00	0.00
25.00		187.29	3740.97	0.00	0.00
30.00		190.92	2198.82	0.00	0.00
35.00		193.38	2166.33	0.00	0.00
40.00		194.91	2132.12	0.00	0.00
45.00		195.70	2096.56	0.00	0.00
50.00		195.88	2059.89	0.00	0.00
55.00		195.54	2022.31	0.00	0.00
60.00		194.76	1983.95	0.00	0.00
62.00		77.18	783.93	0.00	0.00
65.00		117.07	1717.51	0.00	0.00
68.00		116.55	1694.73	0.00	0.00
70.00		77.26	697.64	0.00	0.00
75.00		192.76	1715.93	0.00	0.00
80.00		190.68	1680.14	0.00	0.00
85.00		188.35	1643.93	0.00	0.00
90.00		185.79	1607.34	0.00	0.00
95.00		183.02	1570.40	0.00	0.00
100.00		180.04	1533.14	0.00	0.00
105.00		176.89	1495.59	0.00	0.00
107.00		69.62	589.34	0.00	0.00
110.00		104.83	1217.75	0.00	0.00
112.00		69.13	800.99	0.00	0.00
115.00		102.75	777.48	0.00	0.00
120.00		168.67	1266.09	0.00	0.00
125.00		164.91	1232.35	0.00	0.00
127.00	(63) attachments	1853.77	9803.78	0.00	0.00
130.00		95.96	671.43	0.00	0.00
135.00		156.99	1088.72	0.00	0.00
137.00	(25) attachments	1006.81	7249.29	0.00	0.00
140.00		91.05	585.21	0.00	0.00
145.00		148.58	944.65	0.00	0.00
148.00	(18) attachments	1116.57	7270.78	0.00	0.00
149.00		28.58	165.49	0.00	0.00
	Totals:	**9,116.52**	**78,655.66**	**0.00**	**0.00**

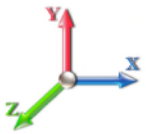
Calculated Forces

Structure:	CT11559-A-SBA	**Code:**	EIA/TIA-222-G	8/18/2021	
Site Name:	Thompson 1, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 20	

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 22

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	-78.65	-9.14	0.00	-961.82	0.00	961.82	5499.39	2749.69	13252.7	6636.23	0.00	0.000	0.000	0.159
5.00	-76.15	-9.01	0.00	-916.10	0.00	916.10	5429.06	2714.53	12818.7	6418.90	0.02	-0.038	0.000	0.157
10.00	-73.65	-8.89	0.00	-871.03	0.00	871.03	5357.09	2678.54	12387.8	6203.11	0.08	-0.076	0.000	0.154
15.00	-71.17	-8.75	0.00	-826.61	0.00	826.61	5283.48	2641.74	11960.1	5988.97	0.18	-0.115	0.000	0.152
18.00	-69.70	-8.66	0.00	-800.36	0.00	800.36	5238.53	2619.26	11705.2	5861.33	0.26	-0.138	0.000	0.150
20.00	-68.18	-8.62	0.00	-783.04	0.00	783.04	5208.23	2604.11	11536.0	5776.60	0.32	-0.154	0.000	0.149
25.00	-64.43	-8.47	0.00	-739.94	0.00	739.94	4201.23	2100.61	9252.96	4633.35	0.51	-0.194	0.000	0.175
30.00	-62.23	-8.31	0.00	-697.62	0.00	697.62	4145.44	2072.72	8928.09	4470.68	0.73	-0.233	0.000	0.171
35.00	-60.06	-8.16	0.00	-656.06	0.00	656.06	4088.00	2044.00	8605.21	4309.00	1.00	-0.278	0.000	0.167
40.00	-57.92	-8.00	0.00	-615.28	0.00	615.28	4028.93	2014.47	8284.56	4148.44	1.31	-0.323	0.000	0.163
45.00	-55.82	-7.83	0.00	-575.30	0.00	575.30	3968.22	1984.11	7966.37	3989.11	1.68	-0.368	0.000	0.158
50.00	-53.75	-7.66	0.00	-536.15	0.00	536.15	3905.86	1952.93	7650.88	3831.13	2.08	-0.413	0.000	0.154
55.00	-51.73	-7.49	0.00	-497.84	0.00	497.84	3841.87	1920.93	7338.34	3674.63	2.54	-0.458	0.000	0.149
60.00	-49.74	-7.31	0.00	-460.37	0.00	460.37	3776.23	1888.12	7028.98	3519.72	3.05	-0.503	0.000	0.144
62.00	-48.95	-7.24	0.00	-445.75	0.00	445.75	3749.52	1874.76	6906.19	3458.23	3.26	-0.521	0.000	0.142
65.00	-47.23	-7.13	0.00	-424.02	0.00	424.02	3708.96	1854.48	6723.05	3366.52	3.60	-0.549	0.000	0.139
68.00	-45.54	-7.02	0.00	-402.62	0.00	402.62	2897.69	1448.84	5257.67	2632.74	3.95	-0.576	0.000	0.169
70.00	-44.84	-6.96	0.00	-388.58	0.00	388.58	2878.95	1439.48	5167.56	2587.62	4.20	-0.594	0.000	0.166
75.00	-43.12	-6.79	0.00	-353.78	0.00	353.78	2830.96	1415.48	4943.48	2475.42	4.85	-0.645	0.000	0.158
80.00	-41.43	-6.61	0.00	-319.84	0.00	319.84	2781.33	1390.66	4721.30	2364.16	5.55	-0.695	0.000	0.150
85.00	-39.79	-6.44	0.00	-286.77	0.00	286.77	2730.06	1365.03	4501.25	2253.97	6.30	-0.744	0.000	0.142
90.00	-38.18	-6.26	0.00	-254.58	0.00	254.58	2677.14	1338.57	4283.57	2144.97	7.11	-0.791	0.000	0.133
95.00	-36.60	-6.09	0.00	-223.27	0.00	223.27	2622.59	1311.30	4068.50	2037.27	7.96	-0.837	0.000	0.124
100.00	-35.07	-5.91	0.00	-192.85	0.00	192.85	2566.40	1283.20	3856.28	1931.01	8.86	-0.881	0.000	0.114
105.00	-33.57	-5.72	0.00	-163.31	0.00	163.31	2508.57	1254.28	3647.16	1826.29	9.81	-0.922	0.000	0.103
107.00	-32.98	-5.66	0.00	-151.86	0.00	151.86	2484.97	1242.49	3564.43	1784.86	10.20	-0.938	0.000	0.098
110.00	-31.77	-5.54	0.00	-134.89	0.00	134.89	2449.09	1224.55	3441.37	1723.24	10.80	-0.961	0.000	0.091
112.00	-30.97	-5.47	0.00	-123.81	0.00	123.81	1823.39	911.69	2573.73	1288.78	11.20	-0.976	0.000	0.113
115.00	-30.19	-5.37	0.00	-107.40	0.00	107.40	1799.96	899.98	2488.04	1245.87	11.82	-0.996	0.000	0.103
120.00	-28.92	-5.19	0.00	-80.57	0.00	80.57	1759.59	879.80	2346.51	1175.00	12.89	-1.032	0.000	0.085
125.00	-27.69	-5.01	0.00	-54.60	0.00	54.60	1717.59	858.79	2206.80	1105.04	13.98	-1.060	0.000	0.066
127.00	-17.92	-2.98	0.00	-44.58	0.00	44.58	1700.33	850.16	2151.49	1077.34	14.43	-1.069	0.000	0.052
130.00	-17.25	-2.88	0.00	-35.63	0.00	35.63	1673.94	836.97	2069.17	1036.12	15.10	-1.080	0.000	0.045
135.00	-16.17	-2.70	0.00	-21.25	0.00	21.25	1628.66	814.33	1933.84	968.36	16.24	-1.095	0.000	0.032
137.00	-8.94	-1.56	0.00	-15.85	0.00	15.85	1610.09	805.04	1880.41	941.60	16.70	-1.100	0.000	0.022
140.00	-8.35	-1.46	0.00	-11.18	0.00	11.18	1581.73	790.87	1801.05	901.87	17.40	-1.105	0.000	0.018
145.00	-7.41	-1.29	0.00	-3.90	0.00	3.90	1533.17	766.58	1671.06	836.77	18.56	-1.110	0.000	0.009
148.00	-0.16	-0.03	0.00	-0.03	0.00	0.03	1503.24	751.62	1594.49	798.43	19.25	-1.111	0.000	0.000
149.00	0.00	-0.03	0.00	0.00	0.00	0.00	1493.13	746.57	1569.22	785.78	19.49	-1.111	0.000	0.000

Seismic Segment Forces (Factored)

Structure:	CT11559-A-SBA		**Code:**	EIA/TIA-222-G	8/18/2021
Site Name:	Thompson 1, CT		**Exposure:**	C	
Height:	149.00 (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:	1.2D + 1.0E							**Iterations**	20
Gust Response Factor	1.10				**Sds**	0.18		**Ss**	0.17
Dead Load Factor	1.20	**Seismic Load Factor**	1.00		**Sd1**	0.10		**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.45		**SA**	0.05	**Seismic Importance Factor**		1.00

Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		1371.1	0.00	0.03	0.02	19.86	
10.00		1343.3	0.01	0.05	0.03	29.20	
15.00		1315.5	0.02	0.06	0.04	33.57	
18.00	Bot - Section 2	775.97	0.03	0.07	0.04	20.85	
20.00		956.99	0.03	0.07	0.04	26.37	
25.00	Top - Section 1	2356.3	0.05	0.07	0.04	67.80	
30.00		1072.5	0.08	0.07	0.04	31.84	
35.00		1048.7	0.10	0.07	0.04	32.00	
40.00		1024.9	0.14	0.07	0.03	32.06	
45.00		1001.0	0.17	0.07	0.03	31.86	
50.00		977.26	0.21	0.06	0.02	31.12	
55.00		953.44	0.26	0.05	0.02	29.49	
60.00		929.61	0.31	0.04	0.01	26.57	
62.00	Bot - Section 3	365.17	0.33	0.04	0.01	9.91	
65.00		998.08	0.36	0.03	0.01	24.32	
68.00	Top - Section 2	982.36	0.39	0.02	0.01	20.44	
70.00		296.24	0.42	0.01	0.01	5.33	
75.00		726.71	0.48	-0.01	0.01	6.99	
80.00		706.86	0.54	-0.03	0.01	-0.02	
85.00		687.00	0.62	-0.06	0.02	-6.62	
90.00		667.15	0.69	-0.08	0.03	-11.76	
95.00		647.29	0.77	-0.11	0.05	-14.59	
100.00		627.44	0.85	-0.12	0.07	-14.66	
105.00		607.58	0.94	-0.12	0.10	-11.85	
107.00	Bot - Section 4	237.47	0.97	-0.12	0.12	-3.94	
110.00		635.01	1.03	-0.10	0.15	-6.79	
112.00	Top - Section 3	416.19	1.07	-0.09	0.17	-2.40	
115.00		275.23	1.13	-0.05	0.20	0.87	
120.00		446.01	1.23	0.03	0.27	9.85	
125.00		430.12	1.33	0.16	0.36	19.85	
127.00	Appurtenance(s)	3154.0	1.37	0.23	0.40	180.48	
130.00		246.64	1.44	0.36	0.47	18.59	
135.00		398.36	1.55	0.64	0.61	43.77	
137.00	Appurtenance(s)	2464.4	1.60	0.77	0.67	308.44	
140.00		227.58	1.67	1.01	0.77	34.06	
145.00		366.59	1.79	1.49	0.96	71.45	
148.00	Appurtenance(s)	2286.7	1.86	1.85	1.09	513.83	
149.00		69.51	1.89	1.98	1.14	16.34	
	Totals:	**34,092.8**				**1,624.5**	**Total Wind:** **33,739.9**

Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

Calculated Forces

Structure:	CT11559-A-SBA	**Code:**	EIA/TIA-222-G	8/18/2021	
Site Name:	Thompson 1, CT	**Exposure:**	C		
Height:	149.00 (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	

Tower Engineering Solutions

Load Case:	1.2D + 1.0E							**Iterations**	20
Gust Response Factor	1.10			**Sds**	0.18			**Ss**	0.17
Dead Load Factor	1.20	**Seismic Load Factor**	1.00	**Sd1**	0.10			**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.45	**SA**	0.05	**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	-47.31	-1.70	0.00	-194.21	0.00	194.21	5499.39	2749.69	13252.7	6636.23		0.00	0.00	0.038
5.00	-45.44	-1.69	0.00	-185.71	0.00	185.71	5429.06	2714.53	12818.7	6418.90		0.00	-0.01	0.037
10.00	-43.59	-1.66	0.00	-177.28	0.00	177.28	5357.09	2678.54	12387.8	6203.11		0.02	-0.02	0.037
15.00	-41.78	-1.63	0.00	-168.97	0.00	168.97	5283.48	2641.74	11960.1	5988.97		0.04	-0.02	0.036
18.00	-40.71	-1.61	0.00	-164.08	0.00	164.08	5238.53	2619.26	11705.2	5861.33		0.05	-0.03	0.036
20.00	-39.47	-1.59	0.00	-160.85	0.00	160.85	5208.23	2604.11	11536.0	5776.60		0.07	-0.03	0.035
25.00	-36.41	-1.53	0.00	-152.89	0.00	152.89	4201.23	2100.61	9252.96	4633.35		0.10	-0.04	0.042
30.00	-34.89	-1.50	0.00	-145.26	0.00	145.26	4145.44	2072.72	8928.09	4470.68		0.15	-0.05	0.041
35.00	-33.40	-1.47	0.00	-137.77	0.00	137.77	4088.00	2044.00	8605.21	4309.00		0.20	-0.06	0.040
40.00	-31.93	-1.44	0.00	-130.41	0.00	130.41	4028.93	2014.47	8284.56	4148.44		0.27	-0.07	0.039
45.00	-30.50	-1.41	0.00	-123.20	0.00	123.20	3968.22	1984.11	7966.37	3989.11		0.34	-0.08	0.039
50.00	-29.09	-1.39	0.00	-116.13	0.00	116.13	3905.86	1952.93	7650.88	3831.13		0.43	-0.09	0.038
55.00	-27.72	-1.36	0.00	-109.20	0.00	109.20	3841.87	1920.93	7338.34	3674.63		0.52	-0.10	0.037
60.00	-26.37	-1.33	0.00	-102.41	0.00	102.41	3776.23	1888.12	7028.98	3519.72		0.63	-0.11	0.036
62.00	-25.84	-1.32	0.00	-99.74	0.00	99.74	3749.52	1874.76	6906.19	3458.23		0.67	-0.11	0.036
65.00	-24.50	-1.30	0.00	-95.77	0.00	95.77	3708.96	1854.48	6723.05	3366.52		0.74	-0.12	0.035
68.00	-23.18	-1.28	0.00	-91.87	0.00	91.87	2897.69	1448.84	5257.67	2632.74		0.82	-0.12	0.043
70.00	-22.73	-1.28	0.00	-89.31	0.00	89.31	2878.95	1439.48	5167.56	2587.62		0.87	-0.13	0.042
75.00	-21.63	-1.27	0.00	-82.93	0.00	82.93	2830.96	1415.48	4943.48	2475.42		1.01	-0.14	0.041
80.00	-20.55	-1.27	0.00	-76.57	0.00	76.57	2781.33	1390.66	4721.30	2364.16		1.16	-0.15	0.040
85.00	-19.49	-1.27	0.00	-70.21	0.00	70.21	2730.06	1365.03	4501.25	2253.97		1.32	-0.16	0.038
90.00	-18.46	-1.27	0.00	-63.84	0.00	63.84	2677.14	1338.57	4283.57	2144.97		1.50	-0.17	0.037
95.00	-17.45	-1.28	0.00	-57.46	0.00	57.46	2622.59	1311.30	4068.50	2037.27		1.69	-0.19	0.035
100.00	-16.46	-1.28	0.00	-51.09	0.00	51.09	2566.40	1283.20	3856.28	1931.01		1.89	-0.20	0.033
105.00	-15.50	-1.27	0.00	-44.71	0.00	44.71	2508.57	1254.28	3647.16	1826.29		2.10	-0.21	0.031
107.00	-15.12	-1.27	0.00	-42.17	0.00	42.17	2484.97	1242.49	3564.43	1784.86		2.19	-0.21	0.030
110.00	-14.22	-1.27	0.00	-38.35	0.00	38.35	2449.09	1224.55	3441.37	1723.24		2.32	-0.22	0.028
112.00	-13.63	-1.27	0.00	-35.80	0.00	35.80	1823.39	911.69	2573.73	1288.78		2.42	-0.22	0.035
115.00	-13.16	-1.27	0.00	-31.99	0.00	31.99	1799.96	899.98	2488.04	1245.87		2.56	-0.23	0.033
120.00	-12.39	-1.26	0.00	-25.64	0.00	25.64	1759.59	879.80	2346.51	1175.00		2.80	-0.24	0.029
125.00	-11.64	-1.24	0.00	-19.34	0.00	19.34	1717.59	858.79	2206.80	1105.04		3.06	-0.25	0.024
127.00	-7.76	-1.04	0.00	-16.87	0.00	16.87	1700.33	850.16	2151.49	1077.34		3.16	-0.25	0.020
130.00	-7.37	-1.02	0.00	-13.75	0.00	13.75	1673.94	836.97	2069.17	1036.12		3.32	-0.26	0.018
135.00	-6.74	-0.97	0.00	-8.64	0.00	8.64	1628.66	814.33	1933.84	968.36		3.60	-0.26	0.013
137.00	-3.72	-0.65	0.00	-6.69	0.00	6.69	1610.09	805.04	1880.41	941.60		3.71	-0.26	0.009
140.00	-3.40	-0.62	0.00	-4.73	0.00	4.73	1581.73	790.87	1801.05	901.87		3.87	-0.27	0.007
145.00	-2.87	-0.54	0.00	-1.65	0.00	1.65	1533.17	766.58	1671.06	836.77		4.15	-0.27	0.004
148.00	-0.08	-0.02	0.00	-0.02	0.00	0.02	1503.24	751.62	1594.49	798.43		4.32	-0.27	0.000
149.00	0.00	-0.02	0.00	0.00	0.00	0.00	1493.13	746.57	1569.22	785.78		4.38	-0.27	0.000

Seismic Segment Forces (Factored)

Structure:	CT11559-A-SBA		**Code:**	EIA/TIA-222-G	8/18/2021
Site Name:	Thompson 1, CT		**Exposure:**	C	
Height:	149.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 23

Load Case:	0.9D + 1.0E							**Iterations**	20
Gust Response Factor	1.10				**Sds**	0.18		**Ss**	0.17
Dead Load Factor	0.90	**Seismic Load Factor**	1.00		**Sd1**	0.10		**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.45		**SA**	0.05	**Seismic Importance Factor**		1.00

Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		1371.1	0.00	0.03	0.02	19.86	
10.00		1343.3	0.01	0.05	0.03	29.20	
15.00		1315.5	0.02	0.06	0.04	33.57	
18.00	Bot - Section 2	775.97	0.03	0.07	0.04	20.85	
20.00		956.99	0.03	0.07	0.04	26.37	
25.00	Top - Section 1	2356.3	0.05	0.07	0.04	67.80	
30.00		1072.5	0.08	0.07	0.04	31.84	
35.00		1048.7	0.10	0.07	0.04	32.00	
40.00		1024.9	0.14	0.07	0.03	32.06	
45.00		1001.0	0.17	0.07	0.03	31.86	
50.00		977.26	0.21	0.06	0.02	31.12	
55.00		953.44	0.26	0.05	0.02	29.49	
60.00		929.61	0.31	0.04	0.01	26.57	
62.00	Bot - Section 3	365.17	0.33	0.04	0.01	9.91	
65.00		998.08	0.36	0.03	0.01	24.32	
68.00	Top - Section 2	982.36	0.39	0.02	0.01	20.44	
70.00		296.24	0.42	0.01	0.01	5.33	
75.00		726.71	0.48	-0.01	0.01	6.99	
80.00		706.86	0.54	-0.03	0.01	-0.02	
85.00		687.00	0.62	-0.06	0.02	-6.62	
90.00		667.15	0.69	-0.08	0.03	-11.76	
95.00		647.29	0.77	-0.11	0.05	-14.59	
100.00		627.44	0.85	-0.12	0.07	-14.66	
105.00		607.58	0.94	-0.12	0.10	-11.85	
107.00	Bot - Section 4	237.47	0.97	-0.12	0.12	-3.94	
110.00		635.01	1.03	-0.10	0.15	-6.79	
112.00	Top - Section 3	416.19	1.07	-0.09	0.17	-2.40	
115.00		275.23	1.13	-0.05	0.20	0.87	
120.00		446.01	1.23	0.03	0.27	9.85	
125.00		430.12	1.33	0.16	0.36	19.85	
127.00	Appurtenance(s)	3154.0	1.37	0.23	0.40	180.48	
130.00		246.64	1.44	0.36	0.47	18.59	
135.00		398.36	1.55	0.64	0.61	43.77	
137.00	Appurtenance(s)	2464.4	1.60	0.77	0.67	308.44	
140.00		227.58	1.67	1.01	0.77	34.06	
145.00		366.59	1.79	1.49	0.96	71.45	
148.00	Appurtenance(s)	2286.7	1.86	1.85	1.09	513.83	
149.00		69.51	1.89	1.98	1.14	16.34	
	Totals:	**34,092.8**				**1,624.5**	**Total Wind:** **33,739.9**

Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

Calculated Forces

Structure:	CT11559-A-SBA	**Code:**	EIA/TIA-222-G	8/18/2021	
Site Name:	Thompson 1, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 24	

Tower Engineering Solutions

Load Case:	0.9D + 1.0E							**Iterations**	20
Gust Response Factor	1.10			**Sds**	0.18			**Ss**	0.17
Dead Load Factor	0.90	**Seismic Load Factor**	1.00	**Sd1**	0.10			**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.45	**SA**	0.05	**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	-35.49	-1.70	0.00	-192.70	0.00	192.70	5499.39	2749.69	13252.7	6636.23		0.00	0.00	0.035
5.00	-34.08	-1.68	0.00	-184.21	0.00	184.21	5429.06	2714.53	12818.7	6418.90		0.00	-0.01	0.035
10.00	-32.69	-1.66	0.00	-175.79	0.00	175.79	5357.09	2678.54	12387.8	6203.11		0.02	-0.02	0.034
15.00	-31.33	-1.63	0.00	-167.50	0.00	167.50	5283.48	2641.74	11960.1	5988.97		0.04	-0.02	0.034
18.00	-30.53	-1.61	0.00	-162.61	0.00	162.61	5238.53	2619.26	11705.2	5861.33		0.05	-0.03	0.034
20.00	-29.60	-1.58	0.00	-159.40	0.00	159.40	5208.23	2604.11	11536.0	5776.60		0.06	-0.03	0.033
25.00	-27.30	-1.52	0.00	-151.47	0.00	151.47	4201.23	2100.61	9252.96	4633.35		0.10	-0.04	0.039
30.00	-26.16	-1.49	0.00	-143.88	0.00	143.88	4145.44	2072.72	8928.09	4470.68		0.15	-0.05	0.038
35.00	-25.05	-1.46	0.00	-136.42	0.00	136.42	4088.00	2044.00	8605.21	4309.00		0.20	-0.06	0.038
40.00	-23.95	-1.43	0.00	-129.12	0.00	129.12	4028.93	2014.47	8284.56	4148.44		0.27	-0.07	0.037
45.00	-22.87	-1.40	0.00	-121.96	0.00	121.96	3968.22	1984.11	7966.37	3989.11		0.34	-0.08	0.036
50.00	-21.82	-1.37	0.00	-114.94	0.00	114.94	3905.86	1952.93	7650.88	3831.13		0.42	-0.09	0.036
55.00	-20.79	-1.35	0.00	-108.07	0.00	108.07	3841.87	1920.93	7338.34	3674.63		0.52	-0.09	0.035
60.00	-19.78	-1.32	0.00	-101.34	0.00	101.34	3776.23	1888.12	7028.98	3519.72		0.62	-0.10	0.034
62.00	-19.38	-1.31	0.00	-98.70	0.00	98.70	3749.52	1874.76	6906.19	3458.23		0.67	-0.11	0.034
65.00	-18.37	-1.29	0.00	-94.76	0.00	94.76	3708.96	1854.48	6723.05	3366.52		0.74	-0.11	0.033
68.00	-17.38	-1.27	0.00	-90.90	0.00	90.90	2897.69	1448.84	5257.67	2632.74		0.81	-0.12	0.041
70.00	-17.05	-1.26	0.00	-88.37	0.00	88.37	2878.95	1439.48	5167.56	2587.62		0.86	-0.13	0.040
75.00	-16.22	-1.26	0.00	-82.05	0.00	82.05	2830.96	1415.48	4943.48	2475.42		1.00	-0.14	0.039
80.00	-15.41	-1.26	0.00	-75.77	0.00	75.77	2781.33	1390.66	4721.30	2364.16		1.15	-0.15	0.038
85.00	-14.62	-1.26	0.00	-69.47	0.00	69.47	2730.06	1365.03	4501.25	2253.97		1.31	-0.16	0.036
90.00	-13.84	-1.26	0.00	-63.18	0.00	63.18	2677.14	1338.57	4283.57	2144.97		1.49	-0.17	0.035
95.00	-13.08	-1.26	0.00	-56.88	0.00	56.88	2622.59	1311.30	4068.50	2037.27		1.67	-0.18	0.033
100.00	-12.34	-1.26	0.00	-50.58	0.00	50.58	2566.40	1283.20	3856.28	1931.01		1.87	-0.19	0.031
105.00	-11.62	-1.26	0.00	-44.28	0.00	44.28	2508.57	1254.28	3647.16	1826.29		2.08	-0.21	0.029
107.00	-11.34	-1.26	0.00	-41.76	0.00	41.76	2484.97	1242.49	3564.43	1784.86		2.17	-0.21	0.028
110.00	-10.66	-1.26	0.00	-37.98	0.00	37.98	2449.09	1224.55	3441.37	1723.24		2.30	-0.22	0.026
112.00	-10.22	-1.26	0.00	-35.47	0.00	35.47	1823.39	911.69	2573.73	1288.78		2.39	-0.22	0.033
115.00	-9.87	-1.26	0.00	-31.70	0.00	31.70	1799.96	899.98	2488.04	1245.87		2.53	-0.23	0.031
120.00	-9.29	-1.25	0.00	-25.42	0.00	25.42	1759.59	879.80	2346.51	1175.00		2.78	-0.24	0.027
125.00	-8.73	-1.22	0.00	-19.19	0.00	19.19	1717.59	858.79	2206.80	1105.04		3.03	-0.25	0.022
127.00	-5.82	-1.03	0.00	-16.74	0.00	16.74	1700.33	850.16	2151.49	1077.34		3.13	-0.25	0.019
130.00	-5.53	-1.01	0.00	-13.64	0.00	13.64	1673.94	836.97	2069.17	1036.12		3.29	-0.25	0.016
135.00	-5.05	-0.97	0.00	-8.58	0.00	8.58	1628.66	814.33	1933.84	968.36		3.56	-0.26	0.012
137.00	-2.79	-0.65	0.00	-6.65	0.00	6.65	1610.09	805.04	1880.41	941.60		3.67	-0.26	0.009
140.00	-2.55	-0.61	0.00	-4.70	0.00	4.70	1581.73	790.87	1801.05	901.87		3.84	-0.26	0.007
145.00	-2.15	-0.54	0.00	-1.64	0.00	1.64	1533.17	766.58	1671.06	836.77		4.11	-0.27	0.003
148.00	-0.06	-0.02	0.00	-0.02	0.00	0.02	1503.24	751.62	1594.49	798.43		4.28	-0.27	0.000
149.00	0.00	-0.02	0.00	0.00	0.00	0.00	1493.13	746.57	1569.22	785.78		4.34	-0.27	0.000

Wind Loading - Shaft

Structure:	CT11559-A-SBA	**Code:**	EIA/TIA-222-G	8/18/2021	
Site Name:	Thompson 1, CT	**Exposure:**	C		
Height:	149.00 (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	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00

Iterations 21

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	0.85	7.442	8.19	276.46	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	7.442	8.19	270.96	0.650	0.000	5.00	24.740	16.08	131.6	0.0	1371.1
10.00		1.00	0.85	7.442	8.19	265.45	0.650	0.000	5.00	24.242	15.76	129.0	0.0	1343.3
15.00		1.00	0.85	7.442	8.19	259.94	0.650	0.000	5.00	23.744	15.43	126.3	0.0	1315.5
18.00	Bot - Section 2	1.00	0.88	7.723	8.50	261.44	0.650	0.000	3.00	14.008	9.11	77.3	0.0	776.0
20.00		1.00	0.90	7.896	8.69	262.09	0.650	0.000	2.00	9.366	6.09	52.9	0.0	957.0
25.00	Top - Section 1	1.00	0.95	8.276	9.10	262.51	0.650	0.000	5.00	23.066	14.99	136.5	0.0	2356.3
30.00		1.00	0.98	8.600	9.46	265.45	0.650	0.000	5.00	22.568	14.67	138.8	0.0	1072.6
35.00		1.00	1.01	8.883	9.77	263.77	0.650	0.000	5.00	22.071	14.35	140.2	0.0	1048.7
40.00		1.00	1.04	9.137	10.05	261.40	0.650	0.000	5.00	21.573	14.02	140.9	0.0	1024.9
45.00		1.00	1.07	9.366	10.30	258.49	0.650	0.000	5.00	21.075	13.70	141.1	0.0	1001.1
50.00		1.00	1.09	9.576	10.53	255.12	0.650	0.000	5.00	20.577	13.38	140.9	0.0	977.3
55.00		1.00	1.12	9.770	10.75	251.38	0.650	0.000	5.00	20.079	13.05	140.3	0.0	953.4
60.00		1.00	1.14	9.951	10.95	247.33	0.650	0.000	5.00	19.582	12.73	139.3	0.0	929.6
62.00	Bot - Section 3	1.00	1.14	10.020	11.02	245.63	0.650	0.000	2.00	7.693	5.00	55.1	0.0	365.2
65.00		1.00	1.16	10.120	11.13	243.00	0.650	0.000	3.00	11.549	7.51	83.6	0.0	998.1
68.00	Top - Section 2	1.00	1.17	10.217	11.24	240.28	0.650	0.000	3.00	11.370	7.39	83.1	0.0	982.4
70.00		1.00	1.17	10.279	11.31	241.87	0.650	0.000	2.00	7.480	4.86	55.0	0.0	296.2
75.00		1.00	1.19	10.430	11.47	237.11	0.650	0.000	5.00	18.353	11.93	136.9	0.0	726.7
80.00		1.00	1.21	10.572	11.63	232.16	0.650	0.000	5.00	17.855	11.61	135.0	0.0	706.9
85.00		1.00	1.22	10.708	11.78	227.04	0.650	0.000	5.00	17.357	11.28	132.9	0.0	687.0
90.00		1.00	1.24	10.838	11.92	221.76	0.650	0.000	5.00	16.859	10.96	130.6	0.0	667.1
95.00		1.00	1.25	10.962	12.06	216.35	0.650	0.000	5.00	16.361	10.63	128.2	0.0	647.3
100.00		1.00	1.27	11.081	12.19	210.80	0.650	0.000	5.00	15.863	10.31	125.7	0.0	627.4
105.00		1.00	1.28	11.195	12.31	205.13	0.650	0.000	5.00	15.366	9.99	123.0	0.0	607.6
107.00	Bot - Section 4	1.00	1.28	11.240	12.36	202.83	0.650	0.000	2.00	6.007	3.90	48.3	0.0	237.5
110.00		1.00	1.29	11.305	12.44	199.35	0.650	0.000	3.00	8.988	5.84	72.7	0.0	635.0
112.00	Top - Section 3	1.00	1.30	11.348	12.48	197.00	0.650	0.000	2.00	5.892	3.83	47.8	0.0	416.2
115.00		1.00	1.30	11.412	12.55	196.36	0.650	0.000	3.00	8.689	5.65	70.9	0.0	275.2
120.00		1.00	1.32	11.514	12.67	190.39	0.650	0.000	5.00	14.084	9.15	115.9	0.0	446.0
125.00		1.00	1.33	11.614	12.78	184.33	0.650	0.000	5.00	13.586	8.83	112.8	0.0	430.1
127.00	Appurtenance(s)	1.00	1.33	11.653	12.82	181.88	0.650	0.000	2.00	5.295	3.44	44.1	0.0	167.6
130.00		1.00	1.34	11.710	12.88	178.18	0.650	0.000	3.00	7.793	5.07	65.2	0.0	246.6
135.00		1.00	1.35	11.803	12.98	171.96	0.650	0.000	5.00	12.590	8.18	106.3	0.0	398.4
137.00	Appurtenance(s)	1.00	1.35	11.840	13.02	169.44	0.650	0.000	2.00	4.897	3.18	41.5	0.0	154.9
140.00		1.00	1.36	11.894	13.08	165.65	0.650	0.000	3.00	7.196	4.68	61.2	0.0	227.6
145.00		1.00	1.37	11.982	13.18	159.28	0.650	0.000	5.00	11.595	7.54	99.3	0.0	366.6
148.00	Appurtenance(s)	1.00	1.37	12.034	13.24	155.42	0.650	0.000	3.00	6.718	4.37	57.8	0.0	212.3
149.00		1.00	1.38	12.051	13.26	154.13	0.650	0.000	1.00	2.199	1.43	19.0	0.0	69.5
								Totals:	**149.00**			**3,786.9**		**26,722.3**

Discrete Appurtenance Forces

Structure:	CT11559-A-SBA	**Code:**	EIA/TIA-222-G	8/18/2021	
Site Name:	Thompson 1, CT	**Exposure:**	C		
Height:	149.00 (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: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00

Iterations 21

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	148.00	T-Arms	1	12.034	13.238	0.56	0.75	8.44	500.00	0.000	0.000	111.69	0.00	0.00
2	148.00	4449	3	12.034	13.238	0.54	0.80	2.65	210.00	0.000	0.000	35.12	0.00	0.00
3	148.00	HRK12 (Handrail Kit)	1	12.034	13.238	0.56	0.75	3.80	261.72	0.000	0.000	50.26	0.00	0.00
4	148.00	(3) Stabilizer Kit (4' FW)	1	12.034	13.238	0.56	0.75	2.08	140.00	0.000	0.000	27.55	0.00	0.00
5	148.00	Ericsson KRY112 144/1	3	12.034	13.238	0.56	0.80	0.69	33.00	0.000	0.000	9.12	0.00	0.00
6	148.00	AIR21 B2A B4P	3	12.034	13.238	0.69	0.80	12.57	274.50	0.000	0.000	166.39	0.00	0.00
7	148.00	AIR21 B2A B4P	3	12.034	13.238	0.69	0.80	12.57	271.20	0.000	0.000	166.39	0.00	0.00
8	148.00	APXVAARR24_43-U-NA2	3	12.034	13.238	0.56	0.80	34.00	384.00	0.000	0.000	450.12	0.00	0.00
9	137.00	T-Arms	3	11.840	13.024	0.56	0.75	13.50	1050.00	0.000	0.000	175.82	0.00	0.00
10	137.00	RCMDC-6627-PF-48	1	11.840	13.024	1.00	1.00	4.06	32.00	0.000	0.000	52.88	0.00	0.00
11	137.00	Commscope	3	11.840	13.024	0.40	0.80	1.60	58.20	0.000	0.000	20.79	0.00	0.00
12	137.00	Samsung RFV01U-D2A	3	11.840	13.024	0.54	0.80	3.02	210.90	0.000	0.000	39.37	0.00	0.00
13	137.00	Samsung RFV01U-D1A	3	11.840	13.024	0.54	0.80	3.02	253.20	0.000	0.000	39.37	0.00	0.00
14	137.00	91900314	3	11.840	13.024	1.00	1.00	0.00	84.00	0.000	0.000	0.00	0.00	0.00
15	137.00	Samsung MT6407-77A	3	11.840	13.024	0.56	0.80	7.88	261.30	0.000	0.000	102.62	0.00	0.00
16	137.00	JMA Wireless	6	11.840	13.024	0.70	0.80	41.22	360.00	0.000	0.000	536.81	0.00	0.00
17	127.00	T-Arms	3	11.653	12.818	0.56	0.75	13.50	1050.00	0.000	0.000	173.04	0.00	0.00
18	127.00	7770.00	6	11.653	12.818	0.58	0.80	19.27	210.00	0.000	0.000	247.03	0.00	0.00
19	127.00	Powerwave LGP21401	12	11.653	12.818	0.80	0.80	12.38	169.20	0.000	0.000	158.74	0.00	0.00
20	127.00	Kathrein 860 10025 RET	12	11.653	12.818	0.80	0.80	1.34	13.20	0.000	0.000	17.23	0.00	0.00
21	127.00	Powerwave LGP13519	6	11.653	12.818	0.80	0.80	1.63	31.80	0.000	0.000	20.92	0.00	0.00
22	127.00	Raycap DC6-48-60-18-8F	1	11.653	12.818	1.00	1.00	0.92	31.80	0.000	0.000	11.79	0.00	0.00
23	127.00	Powerwave 1001983 Bias	3	11.653	12.818	0.80	0.80	0.50	13.20	0.000	0.000	6.46	0.00	0.00
24	127.00	(3) Stabilizer Kit	1	11.653	12.818	0.56	0.75	3.43	180.00	0.000	0.000	43.98	0.00	0.00
25	127.00	OPA65R-BU8DA	3	11.653	12.818	0.58	0.80	31.56	229.50	0.000	0.000	404.58	0.00	0.00
26	127.00	DMP65R-BU8DA	3	11.653	12.818	0.58	0.80	31.18	287.10	0.000	0.000	399.66	0.00	0.00
27	127.00	Horizontal Pipe	3	11.653	12.818	0.56	0.75	5.01	137.25	0.000	0.000	64.22	0.00	0.00
28	127.00	RRUS 4478 B14	3	11.653	12.818	0.54	0.80	2.65	178.20	0.000	0.000	34.01	0.00	0.00
29	127.00	4449 B5/B12	3	11.653	12.818	0.54	0.80	3.17	213.00	0.000	0.000	40.60	0.00	0.00
30	127.00	RRUS 8843 B2 B66A	3	11.653	12.818	0.54	0.80	2.64	216.00	0.000	0.000	33.80	0.00	0.00
31	127.00	DC9-48-60-24-8C-EV	1	11.653	12.818	1.00	1.00	1.14	26.20	0.000	0.000	14.61	0.00	0.00
							Totals:		**7,370.47**			**3,654.96**		

Total Applied Force Summary

Structure:	CT11559-A-SBA		**Code:**	EIA/TIA-222-G	8/18/2021
Site Name:	Thompson 1, CT		**Exposure:**	C	
Height:	149.00 (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

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00

Iterations 21

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		131.64	1564.97	0.00	0.00
10.00		128.99	1537.17	0.00	0.00
15.00		126.34	1509.38	0.00	0.00
18.00		77.35	892.28	0.00	0.00
20.00		52.88	1034.53	0.00	0.00
25.00		136.49	2550.18	0.00	0.00
30.00		138.77	1266.42	0.00	0.00
35.00		140.19	1242.59	0.00	0.00
40.00		140.93	1218.77	0.00	0.00
45.00		141.13	1194.94	0.00	0.00
50.00		140.89	1171.11	0.00	0.00
55.00		140.27	1147.29	0.00	0.00
60.00		139.32	1123.46	0.00	0.00
62.00		55.12	442.71	0.00	0.00
65.00		83.57	1114.39	0.00	0.00
68.00		83.06	1098.67	0.00	0.00
70.00		54.98	373.78	0.00	0.00
75.00		136.86	920.56	0.00	0.00
80.00		134.97	900.71	0.00	0.00
85.00		132.89	880.85	0.00	0.00
90.00		130.64	861.00	0.00	0.00
95.00		128.23	841.14	0.00	0.00
100.00		125.68	821.29	0.00	0.00
105.00		122.99	801.43	0.00	0.00
107.00		48.27	315.01	0.00	0.00
110.00		72.65	751.32	0.00	0.00
112.00		47.81	493.73	0.00	0.00
115.00		70.90	391.54	0.00	0.00
120.00		115.95	639.86	0.00	0.00
125.00		112.82	623.97	0.00	0.00
127.00	(63) attachments	1714.77	3231.59	0.00	0.00
130.00		65.25	325.18	0.00	0.00
135.00		106.26	529.26	0.00	0.00
137.00	(25) attachments	1009.12	2516.85	0.00	0.00
140.00		61.20	268.50	0.00	0.00
145.00		99.34	434.79	0.00	0.00
148.00	(18) attachments	1074.45	2327.67	0.00	0.00
149.00		18.95	69.51	0.00	0.00
	Totals:	**7,441.90**	**39,428.42**	**0.00**	**0.00**

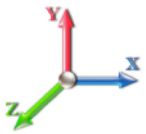
Calculated Forces

Structure:	CT11559-A-SBA	**Code:**	EIA/TIA-222-G	8/18/2021	
Site Name:	Thompson 1, CT	**Exposure:**	C		
Height:	149.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 28	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 21

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	-39.43	-7.45	0.00	-790.91	0.00	790.91	5499.39	2749.69	13252.7	6636.23	0.00	0.000	0.000	0.126
5.00	-37.86	-7.34	0.00	-753.65	0.00	753.65	5429.06	2714.53	12818.7	6418.90	0.02	-0.031	0.000	0.124
10.00	-36.32	-7.23	0.00	-716.95	0.00	716.95	5357.09	2678.54	12387.8	6203.11	0.07	-0.063	0.000	0.122
15.00	-34.80	-7.12	0.00	-680.80	0.00	680.80	5283.48	2641.74	11960.1	5988.97	0.15	-0.094	0.000	0.120
18.00	-33.91	-7.05	0.00	-659.44	0.00	659.44	5238.53	2619.26	11705.2	5861.33	0.21	-0.114	0.000	0.119
20.00	-32.87	-7.01	0.00	-645.35	0.00	645.35	5208.23	2604.11	11536.0	5776.60	0.27	-0.127	0.000	0.118
25.00	-30.32	-6.88	0.00	-610.32	0.00	610.32	4201.23	2100.61	9252.96	4633.35	0.42	-0.159	0.000	0.139
30.00	-29.05	-6.76	0.00	-575.91	0.00	575.91	4145.44	2072.72	8928.09	4470.68	0.60	-0.192	0.000	0.136
35.00	-27.80	-6.63	0.00	-542.14	0.00	542.14	4088.00	2044.00	8605.21	4309.00	0.82	-0.229	0.000	0.133
40.00	-26.58	-6.50	0.00	-508.99	0.00	508.99	4028.93	2014.47	8284.56	4148.44	1.08	-0.266	0.000	0.129
45.00	-25.38	-6.37	0.00	-476.49	0.00	476.49	3968.22	1984.11	7966.37	3989.11	1.38	-0.303	0.000	0.126
50.00	-24.21	-6.24	0.00	-444.65	0.00	444.65	3905.86	1952.93	7650.88	3831.13	1.72	-0.341	0.000	0.122
55.00	-23.06	-6.11	0.00	-413.46	0.00	413.46	3841.87	1920.93	7338.34	3674.63	2.10	-0.378	0.000	0.119
60.00	-21.93	-5.97	0.00	-382.93	0.00	382.93	3776.23	1888.12	7028.98	3519.72	2.51	-0.416	0.000	0.115
62.00	-21.49	-5.92	0.00	-371.00	0.00	371.00	3749.52	1874.76	6906.19	3458.23	2.69	-0.431	0.000	0.113
65.00	-20.37	-5.83	0.00	-353.24	0.00	353.24	3708.96	1854.48	6723.05	3366.52	2.97	-0.454	0.000	0.110
68.00	-19.27	-5.75	0.00	-335.75	0.00	335.75	2897.69	1448.84	5257.67	2632.74	3.26	-0.476	0.000	0.134
70.00	-18.90	-5.70	0.00	-324.25	0.00	324.25	2878.95	1439.48	5167.56	2587.62	3.46	-0.492	0.000	0.132
75.00	-17.97	-5.57	0.00	-295.76	0.00	295.76	2830.96	1415.48	4943.48	2475.42	4.00	-0.534	0.000	0.126
80.00	-17.07	-5.44	0.00	-267.92	0.00	267.92	2781.33	1390.66	4721.30	2364.16	4.58	-0.576	0.000	0.119
85.00	-16.19	-5.31	0.00	-240.75	0.00	240.75	2730.06	1365.03	4501.25	2253.97	5.21	-0.617	0.000	0.113
90.00	-15.32	-5.18	0.00	-214.22	0.00	214.22	2677.14	1338.57	4283.57	2144.97	5.88	-0.657	0.000	0.106
95.00	-14.48	-5.05	0.00	-188.34	0.00	188.34	2622.59	1311.30	4068.50	2037.27	6.58	-0.695	0.000	0.098
100.00	-13.66	-4.92	0.00	-163.11	0.00	163.11	2566.40	1283.20	3856.28	1931.01	7.33	-0.732	0.000	0.090
105.00	-12.86	-4.79	0.00	-138.51	0.00	138.51	2508.57	1254.28	3647.16	1826.29	8.12	-0.767	0.000	0.081
107.00	-12.54	-4.74	0.00	-128.93	0.00	128.93	2484.97	1242.49	3564.43	1784.86	8.44	-0.781	0.000	0.077
110.00	-11.79	-4.66	0.00	-114.70	0.00	114.70	2449.09	1224.55	3441.37	1723.24	8.94	-0.800	0.000	0.071
112.00	-11.29	-4.61	0.00	-105.38	0.00	105.38	1823.39	911.69	2573.73	1288.78	9.28	-0.813	0.000	0.088
115.00	-10.90	-4.54	0.00	-91.55	0.00	91.55	1799.96	899.98	2488.04	1245.87	9.80	-0.830	0.000	0.080
120.00	-10.26	-4.42	0.00	-68.85	0.00	68.85	1759.59	879.80	2346.51	1175.00	10.68	-0.860	0.000	0.064
125.00	-9.64	-4.30	0.00	-46.76	0.00	46.76	1717.59	858.79	2206.80	1105.04	11.60	-0.884	0.000	0.048
127.00	-6.43	-2.54	0.00	-38.16	0.00	38.16	1700.33	850.16	2151.49	1077.34	11.97	-0.892	0.000	0.039
130.00	-6.11	-2.47	0.00	-30.55	0.00	30.55	1673.94	836.97	2069.17	1036.12	12.53	-0.902	0.000	0.033
135.00	-5.58	-2.35	0.00	-18.22	0.00	18.22	1628.66	814.33	1933.84	968.36	13.49	-0.915	0.000	0.022
137.00	-3.08	-1.30	0.00	-13.52	0.00	13.52	1610.09	805.04	1880.41	941.60	13.87	-0.919	0.000	0.016
140.00	-2.81	-1.24	0.00	-9.61	0.00	9.61	1581.73	790.87	1801.05	901.87	14.45	-0.923	0.000	0.012
145.00	-2.38	-1.13	0.00	-3.42	0.00	3.42	1533.17	766.58	1671.06	836.77	15.42	-0.927	0.000	0.006
148.00	-0.07	-0.02	0.00	-0.02	0.00	0.02	1503.24	751.62	1594.49	798.43	16.00	-0.928	0.000	0.000
149.00	0.00	-0.02	0.00	0.00	0.00	0.00	1493.13	746.57	1569.22	785.78	16.20	-0.928	0.000	0.000

Final Analysis Summary

Structure:	CT11559-A-SBA		**Code:**	EIA/TIA-222-G	8/18/2021
Site Name:	Thompson 1, CT		**Exposure:**	C	
Height:	149.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 29

Tower Engineering Solutions

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 + 1.6W 101 mph Wind	33.8	0.00	47.27	0.00	0.00	3600.80
0.9D + 1.6W 101 mph Wind	33.8	0.00	35.44	0.00	0.00	3574.60
1.2D + 1.0Di + 1.0Wi 50 mph Wind	9.1	0.00	78.65	0.00	0.00	961.82
1.2D + 1.0E	1.7	0.00	47.31	0.00	0.00	194.21
0.9D + 1.0E	1.7	0.00	35.49	0.00	0.00	192.70
1.0D + 1.0W 60 mph Wind	7.5	0.00	39.43	0.00	0.00	790.91

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 + 1.6W 101 mph Wind	-35.97	-31.28	0.00	-2780.8	0.00	-2780.8	4201.23	2100.6	9252.96	4633.35	25.00	0.609
0.9D + 1.6W 101 mph Wind	-26.88	-31.15	0.00	-2756.3	0.00	-2756.3	4201.23	2100.6	9252.96	4633.35	25.00	0.602
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-64.43	-8.47	0.00	-739.94	0.00	-739.94	4201.23	2100.6	9252.96	4633.35	25.00	0.175
1.2D + 1.0E	-23.18	-1.28	0.00	-91.87	0.00	-91.87	2897.69	1448.8	5257.67	2632.74	68.00	0.043
0.9D + 1.0E	-17.38	-1.27	0.00	-90.90	0.00	-90.90	2897.69	1448.8	5257.67	2632.74	68.00	0.041
1.0D + 1.0W 60 mph Wind	-30.32	-6.88	0.00	-610.32	0.00	-610.32	4201.23	2100.6	9252.96	4633.35	25.00	0.139

Base Plate Summary

Structure:	CT11559-A-SB		**Code:**	EIA/TIA-222-G	8/18/2021
Site Name:	Thompson 1, CT		**Exposure:**	C	
Height:	149.00 (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

Tower Engineering Solutions

Reactions	
Original Design	
Moment (kip-ft):	4056.00
Axial (kip):	38.00
Shear (kip):	36.00
Analysis (1.2D + 1.6W)	
Moment (kip-ft):	3600.80
Axial (kip):	47.27
Shear (kip):	33.80

Base Plate	
Yield (ksi):	50.00
Width (in):	72.00
Style:	Round
Polygon Sides:	0.00
Clip Length (in):	0.00
Effective Len (in):	16.22
Moment (kip-in):	519.81
Allow Stress (ksi):	67.50
Applied Stress (ksi):	25.65
Stress Ratio:	0.38

Anchor Bolts	
Bolt Circle:	66.00
Number Bolts:	18.00
Bolt Type:	2.00" F1554 105
Bolt Diameter (in):	2.00
Yield (ksi):	105.00
Ultimate (ksi):	125.00
Arrangement:	Radial
Cluster Dist (in):	0.00
Start Angle (deg):	0.00
Compression	
Force (kip):	149.86
Allowable (kip):	250.00
Ratio:	0.61
Tension	
Force (kip):	141.12
Allowable (kip):	250.00
Ratio:	0.58

Monopole Mat Foundation Design

			Date: 8/18/2021
Customer Name:	Verizon	**EIA/TIA Standard:**	EIA-222-G
Site Name:		**Structure Height (Ft.):**	149
Site Number:	CT11559-A-SBA	**Engineer Name:**	T. Alajaj
Engr. Number:	111975	**Engineer Login ID:**	

Foundation Info Obtained from: Mapping Operation

Structure Type: Monopole

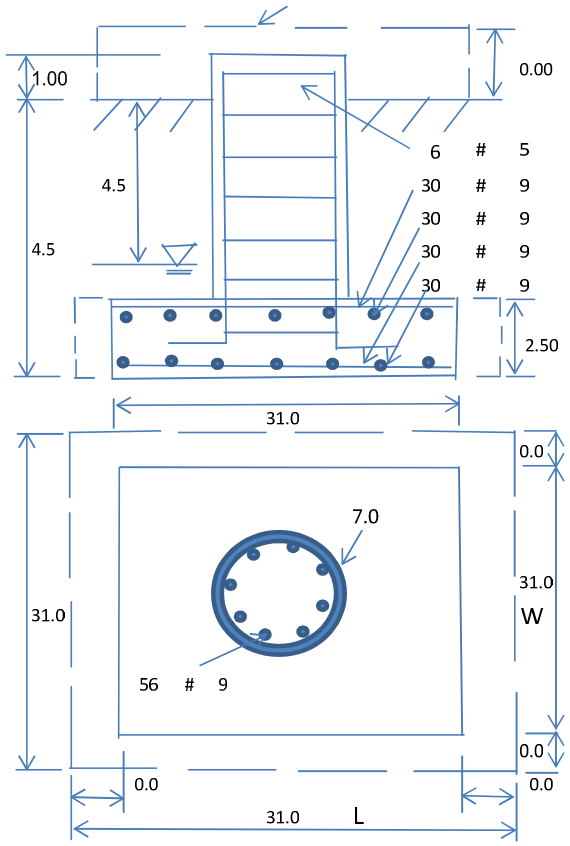
Analysis or Design? Analysis

Base Reactions (Factored):

Axial Load (Kips):	47.3	Shear Force (Kips):	33.8
Uplift Force (Kips):	0.0	Moment (Kips-ft):	3600.8
Allowable overstress %:	5.0%		

Foundation Geometries:

		Mods required -Yes/No ?:	No
Diameter of Pier (ft.):	7.0	Depth of Base BG (ft.):	4.5
Pier Height A. G. (ft.):	1.00	Thickness of Pad (ft):	2.50
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
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	60	
Vertical Rebar Size #:	9	Tie / Stirrup Size #:	5	
Qty. of Vertical Rebars:	56	Tie Spacing (in):	12.0	
Pad Rebar Yield (Ksi):	60	Pad Steel Rebar Size (#):	9	
Concrete Cover (in.):	3	Unit Weight of Concrete:	150.0	pcf
Rebar at the bottom of the concrete pad:				
Qty. of Rebar in Pad (L):	30	Qty. of Rebar in Pad (W):	30	
Rebar at the top of the concrete pad:				
Qty. of Rebar in Pad (L):	30	Qty. of Rebar in Pad (W):	30	
Apply 1.35 factor for e/w Per G:	1.35			

Soil Design Parameters:

Soil Unit Weight (pcf):	120.0	Soil Buoyant Weight:	50.0	Pcf		
Water Table B.G.S. (ft):	4.5	Unit Weight of Water:	62.4	pcf	Angle from Top of Pad:	30
Ultimate Bearing Pressure (psf):	10400	Ultimate Skin Friction:	175	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.):	1845.03	Total Dry Soil Weight (Kips):	221.40
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	221.40	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	2517.95	Total Dry Concrete Weight (Kips):	377.69
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	377.69	Total Vertical Load on Base (Kips):	646.40

Check Soil Capacities:

					Load/ Capacity Ratio	
Calculated Maxium Net Soil Pressure under the base (psf):	1726	<	Allowable Factored Soil Bearing (psf):	7800	0.22	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	9090.5	>	Design Factored Momont (kips-ft):	3787	0.42	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	2.40	OK!				

Check the capacities of Reinforceing Concrete:

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

ad Capacity Ratio

(1) Concrete Pier:

Vertical Steel Rebar Area (sq. in./each):			Tie / Stirrup Area (sq. in./each):	
Calculated Moment Capacity (Mn,Kips-Ft):		>	Design Factored Moment (Mu, Kips-	
Calculated Shear Capacity (Kips):		>	Design Factored Shear (Kips):	
Calculated Tension Capacity (Tn, Kips):		>	Design Factored Tension (Tu Kips):	
Calculated Compression Capacity (Pn, Kips):		>	Design Factored Axial Load (Pu Kips):	
Moment & Axial Strength Combination:		OK!	Check Tie Spacing (Design/Required):	
Pier Reinforcement Ratio:			Reinforcement Ratio is satisfied per ACI	

(2).Concrete Pad:

One-Way Design Shear Capacity (L-Direction, Kips):			One-Way Factored Shear (L-D. Kips): 334.5	
One-Way Design Shear Capacity (W-Direction, Kips):			One-Way Factored Shear (W-D., Kips	
One-Way Design Shear Capacity (Corner-Corner. Kips):			One-Way Factored Shear (C-C, Kips): 319.3	
Lower Steel Pad Reinforcement Ratio (L-Direct.):			Lower Steel Pad Reinf. Ratio (W-Direc	
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):			Moment at Bottom (L-Dir. K-Ft):	
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):			Moment at Bottom (W-Dir. K-Ft):	
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):			Moment at Bottom (C-C Dir. K-Ft): 3251.0	
Upper Steel Pad Reinforcement Ratio (L-Direct.):			Upper Steel Reinf. Ratio (W-Dir.):	
Upper Steel Pad Moment Capacity (L-Direc. Kips-ft):			Moment at the top (L-Dir K-Ft):	
Upper Steel Pad Moment Capacity (W-Direc. Kips-ft):			Moment at the top (W-Dir K-Ft):	
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):			Moment at the top (C-C Dir. K-Ft):	

(3).Check Punching Shear Capacity due to Moment in the Pier:

Moment transferred by punching shear:	1440.3	k-ft.	Max. factored shear stress v_{u_CD}	Psi
Max. factored shear stress v_{u_AB}		Psi	Factored shear Strength ϕv_n	Psi
Max. factored shear stress v_u		Psi	Check Usage of Punching Shear Capacity:	OK!

Maser Consulting Connecticut
2000 Midlantic Drive, Suite 100
Mt. Laurel, NJ 08054
(856) 797-0412
peter.albano@colliersengineering.com

Antenna Mount Analysis Report and PMI Requirements

Mount Analysis

SMART Tool Project #: 10081940
Maser Consulting Connecticut Project #: 21777328A (REV 1)

July 2, 2021

Site Information	*Site ID:*	*535838-VZW / THOMPSON NORTH CT*
	Site Name:	*THOMPSON NORTH CT*
	Carrier Name:	*Verizon Wireless*
	Address:	*44 Rich Road* *North Grosvenordale, Connecticut 06277* *Windham County*
	Latitude:	*42.011500°*
	Longitude:	*-71.852028°*
Structure Information	*Tower Type:*	*141-Ft Monopole*
	Mount Type:	*12.54-Ft T-Arm*

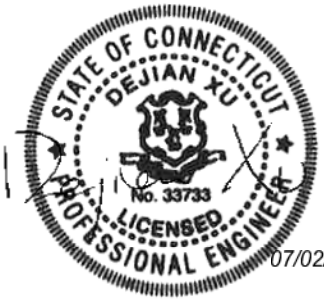
FUZE ID # 16244622

Analysis Results

T-Arm: **96.2% Pass**

******Contractor PMI Requirements*:**
Included at the end of this MA report
Available & Submitted via portal at https://pmi.vzwsmart.com
Contractor - Please Review Specific Site PMI Requirements Upon Award
Requirements also Noted on Mount Modification Drawings
Requirements may also be Noted on A & E drawings

Report Prepared By: Devin Castillo



07/02/2021

Executive Summary:

The objective of this report is to determine the capacity of the antenna support mount at the subject facility for the final wireless telecommunications configuration, per the applicable codes and standards. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

This analysis is inclusive of the mount structure only and does not address the structural capacity of the supporting structure. This mounting frame was not analyzed as an anchor attachment point for fall protection. All climbing activities are required to have a fall protection plan completed by a competent person.

Sources of Information:

Document Type	Remarks
Radio Frequency Data Sheet (RFDS)	*Verizon RFDS, Site ID: 324966, dated June 23, 2021*
Mount Mapping Report	*Roaming Networks Inc., Site ID: 533838, dated April 26, 2021*

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H	
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), V_{ULT}:	120 mph
	Ice Wind Speed (3-sec. Gust):	50 mph
	Design Ice Thickness:	1.00 in
	Risk Category:	II
	Exposure Category:	C
	Topographic Category:	1
	Topographic Feature Considered:	N/A
	Topographic Method:	N/A
	Ground Elevation Factor, K_e:	0.978
Seismic Parameters:	S_S:	0.187
	S_1:	0.056
Maintenance Parameters:	Wind Speed (3-sec. Gust):	30 mph
	Maintenance Live Load, Lv:	250 lbs.
	Maintenance Live Load, Lm:	500 lbs.
Analysis Software:	RISA-3D (V17)	

Final Loading Configuration:

The following equipment has been considered for the analysis of the mounts:

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
136.00	137.00	6	JMA Wireless	MX06FRO660-03	Added
		3	Samsung	MT6407-77A	
		1	Raycap	RVZDC-6627-PF-48	
		3	Samsung	B2/B66A RRH-BR049	
		3	Samsung	B5/B13 RRH-BR04C	
		3	Commscope	CHB626-43-2X	

It is acceptable to install up to any three (3) of the OVP model numbers listed below as required at any location other than the mount face without affecting the structural capacity of the mount. If OVP units are installed on the mount face, a mount re-analysis may be required unless replacing an existing OVP.

Model Number	Ports	AKA
DB-B1-6C-12AB-0Z	6	OVP-6
RVZDC-6627-PF-48	12	OVP-12

Standard Conditions:

1. All engineering services are performed on the basis that the information provided to Maser Consulting Connecticut and used in this analysis is current and correct. The existing equipment loading has been applied at locations determined from the supplied documentation and field observations. Any deviation from the loading locations specified in this report shall be communicated to Maser Consulting Connecticut to verify deviation will not adversely impact the analysis.

2. Mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer's specifications.

   Obvious safety and structural issues/deficiencies noticed at the time of the mount mapping and reported in the Mount Mapping Report are assumed to be corrected and documented as part of the PMI process and are not considered in the mount analysis.

   The mount analysis and the mount mapping are not a condition assessment of the mount. Proper maintenance and condition assessments are still required post analysis.

3. For mount analyses completed from other data sources (including new replacement mounts) and not specifically mapped by Maser Consulting Connecticut, the mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer's specifications.

4. All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected member unless otherwise specified in this report.

5. The mount was checked up to, and including, the bolts that fasten it to the mount collar/attachment and threaded rod connections in collar members if applicable. Local deformation and interaction between the mount collar/attachment and the supporting tower structure are outside the scope of this analysis.

6. All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. Maser Consulting Connecticut is not responsible for the conclusion, opinions, and recommendations made by others based on the information supplied.

7. Structural Steel Grades have been assumed as follows, if applicable, unless otherwise noted in this analysis:
   - Channel, Solid Round, Angle, Plate — ASTM A36 (Gr. 36)
   - HSS (Rectangular) — ASTM 500 (Gr. B-46)
   - Pipe — ASTM A53 (Gr. B-35)
   - Threaded Rod — F1554 (Gr. 36)
   - Bolts — ASTM A325

Discrepancies between in-field conditions and the assumptions listed above may render this analysis invalid unless explicitly approved by Maser Consulting Connecticut.

Analysis Results:

Component	Utilization %	Pass/Fail
Connection	96.2 %	Pass
Standoff	49.5 %	Pass
Face Horizontal	55.9 %	Pass
Mount Pipe	37.3 %	Pass

Structure Rating – *(Controlling Utilization of all Components)*	**96.2%**

The Mount has been found structurally adequate for all steel and external connection capacities. Serviceability in accordance with TIA-222-H section 4.9.11.3 has not been considered.

Recommendation:

The existing mounts are **SUFFICIENT** for the final loading configuration and does not require modifications.

ANSI/ASSP rigging plan review services compliant with the requirements of ANSI/TIA 322 are available for a Construction Class IV site or other, if required. Separate review fees will apply.

Attachments:

1. Mount Photos
2. Mount Mapping Report (for reference only)
3. Analysis Calculations
4. **Contractor Required Post Installation Inspection (PMI) Report Deliverables**
5. Antenna Placement Diagrams
6. TIA Adoption and Wind Speed Usage Letter


04/24/2021 13:14:17
-71.85185697222222, 42.011583972222224
THOMPSON NORTH CT


04/24/2021 14:02:19
-71.85184497222221, 42.012208972222226
THOMPSON NORTH CT

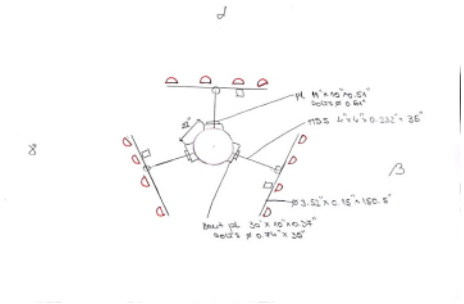
V3.0 Updated on 8-31-2020

PAUL J. FORD & COMPANY

Antenna Mount Mapping Form (PATENT PENDING)

FCC # 1261046

Tower Owner:	SBA	**Mapping Date:**	04.26.2021
Site Name:	THOMPSON NORTH CT	**Tower Type:**	Monopole
Site Number or ID:	533838	**Tower Height (Ft.):**	140.7
Mapping Contractor:	Roaming Networks inc.	**Mount Elevation (Ft.):**	139.58



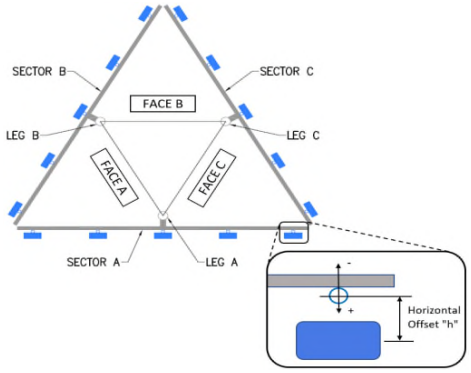
Mount Pipe Configuration and Geometries [Unit = Inches]

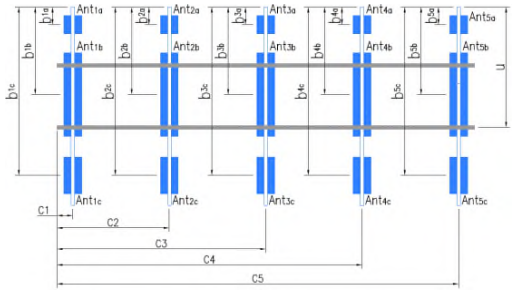
Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."	Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."
A1	PIPE Ø2.40"X0.15"X72"	39.00	14.00	C1	PIPE Ø2.40"X0.15"X72"	39.00	14.00
A2	PIPE Ø2.40"X0.15"X72"	39.00	63.00	C2	PIPE Ø2.40"X0.15"X72"	39.00	63.00
A3	PIPE Ø2.40"X0.15"X72"	39.00	102.00	C3	PIPE Ø2.40"X0.15"X72"	39.00	102.00
A4	PIPE Ø2.40"X0.15"X72"	39.00	136.00	C4	PIPE Ø2.40"X0.15"X72"	39.00	136.00
A5				C5			
A6				C6			
B1	PIPE Ø2.40"X0.15"X72"	39.00	14.00	D1			
B2	PIPE Ø2.40"X0.15"X72"	39.00	63.00	D2			
B3	PIPE Ø2.40"X0.15"X72"	39.00	102.00	D3			
B4	PIPE Ø2.40"X0.15"X72"	39.00	143.00	D4			
B5				D5			
B6				D6			

Distance between bottom rail and mount CL elevation (dim d). Unit is inches. See 'Mount Elev Ref' tab for details. :	0.00
Distance from top of bottom support rail to lowest tip of ant./eqpt. of Carrier above. (N/A if > 10 ft.) :	29
Distance from top of bottom support rail to highest tip of ant./eqpt. of Carrier below. (N/A if > 10 ft.) :	24

Please enter additional infomation or comments below.

Tower Face Width at Mount Elev. (ft.):		Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.):	30.87



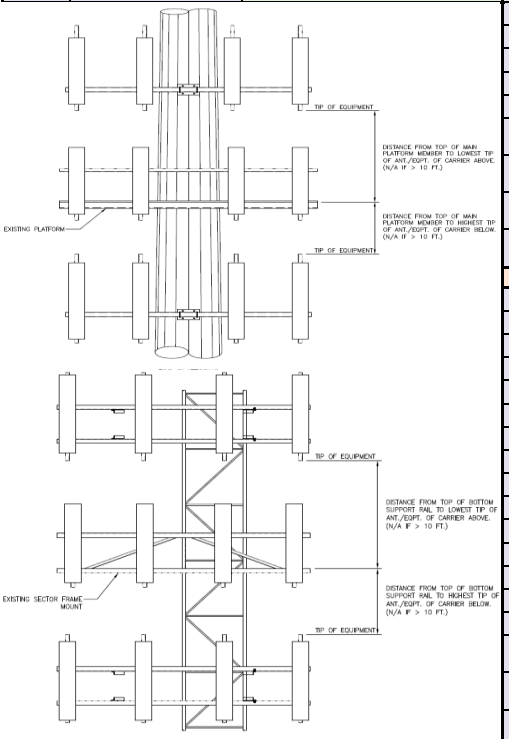


Antenna Layout (Looking Out From Tower)

Ants. Items	Enter antenna model. If not labeled, enter "Unknown". Antenna Models if Known	Width (in.)	Depth (in.)	Height (in.)	Coax Size and Qty	Antenna Center-line (Ft.)	Mounting Locations [Units are inches and degrees] Vertical Distances"b_{1a}, b_{2a}, b_{3a}, b_{1b},..." (Inches)	Horiz. Offset "h" (Use "-" if Ant. is behind)	Antenna Azimuth (Degrees)	Photos of antennas Photo Numbers
Sector A										
Ant_{1a}	LPA 80080/6CF EDIN	13.20	5.50	70.90		140.163	32.00	17.00	78.00	149
Ant_{1b}										
Ant_{1c}										
Ant_{2a}	BXA-70063-6CF-EDIN-	11.20	5.20	94.70		139.83	36.00	18.00	78.00	150
Ant_{2b}										
Ant_{2c}										
Ant_{3a}	BXA17108512BFEDIN	13.20	5.50	70.90		139.913	35.00	8.00	78.00	151
Ant_{3b}	RRH2x40-AWS	10.63	6.70	24.40		140.58	27.00	8.00		151
Ant_{3c}										
Ant_{4a}	LPA 80080/6CF EDIN5	13.20	5.50	70.90		139.83	36.00	17.00	78.00	151,152
Ant_{4b}										
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										

Mount Azimuth (Degree) for Each Sector			Tower Leg Azimuth (Degree) for Each Sector		
Sector A:		Deg	Leg A:		Deg
Sector B:		Deg	Leg B:		Deg
Sector C:		Deg	Leg C:		Deg
Sector D:		Deg	Leg D:		Deg

Climbing Facility Information			
Location:		Deg	Sector A
Climbing Facility	Corrosion Type:		
	Access:		Climbing path was obstructed.
	Condition:		Loose hardware.



Sector B										
Ant										
Ant_{1b}										
Ant_{1c}										
Ant										
Ant_{2b}										
Ant_{2c}										
Ant										
Ant_{3b}	RRH2x40-AWS									
Ant_{3c}										
Ant										
Ant_{4b}										
Ant_{4c}										
Ant										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										

Sector C										
Ant										
Ant_{1b}										
Ant_{1c}										
Ant										
Ant_{2b}										
Ant_{2c}										
Ant										
Ant_{3b}	RRH2x40-AWS									
Ant_{3c}										
Ant										
Ant_{4b}										
Ant_{4c}										
Ant										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										

Sector D										
Ant										
Ant_{1b}										
Ant_{1c}										
Ant										
Ant_{2b}										
Ant_{2c}										
Ant										
Ant_{3b}										
Ant_{3c}										
Ant										
Ant_{4b}										
Ant_{4c}										
Ant										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										

Observed Safety and Structural Issues During the Mount Mapping		
Issue #	Description of Issue	Photo #

V3.0 Updated on 8-31-2020

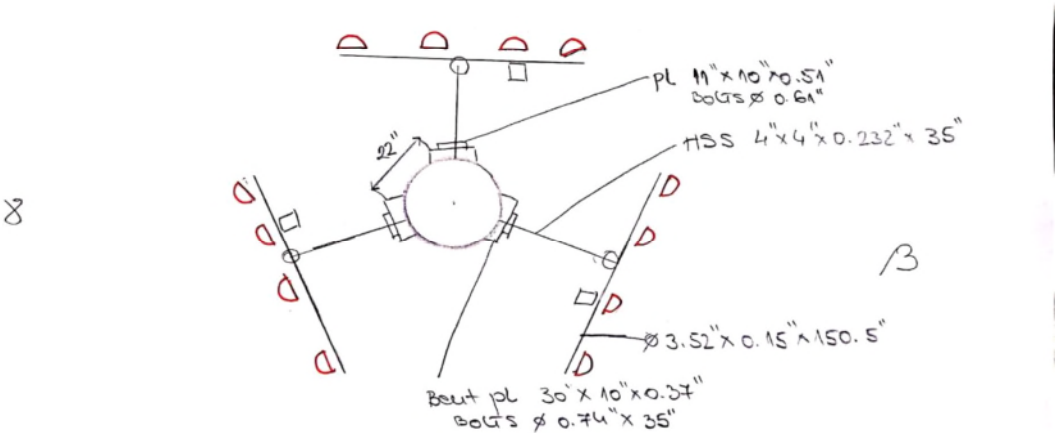
PAUL J. FORD & COMPANY

Antenna Mount Mapping Form (PATENT PENDING)

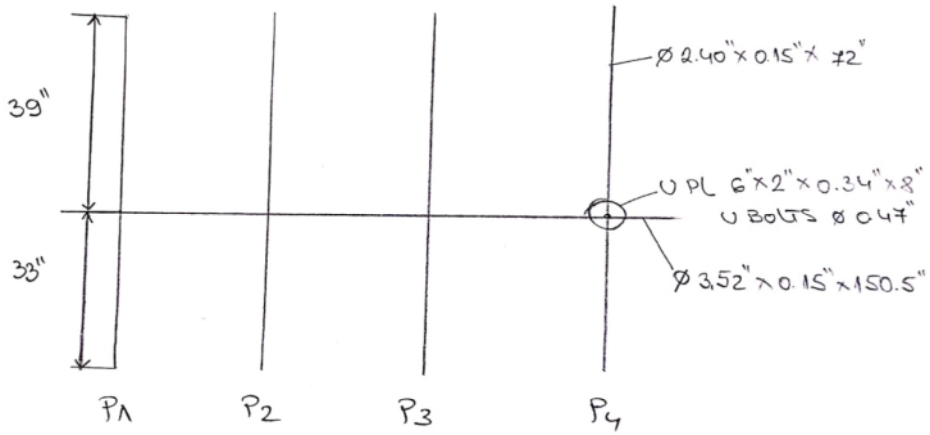
FCC #
1261046

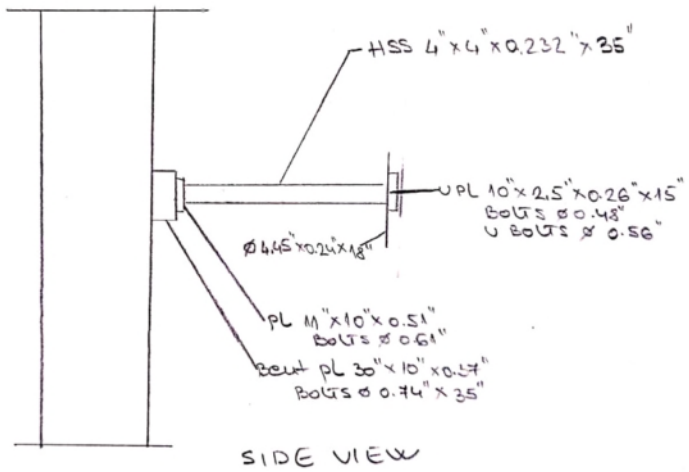
Tower Owner:	SBA	**Mapping Date:**	04.26.2021
Site Name:	THOMPSON NORTH CT	**Tower Type:**	Monopole
Site Number or ID:	533838	**Tower Height (Ft.):**	140.7
Mapping Contractor:	Roaming Networks inc.	**Mount Elevation (Ft.):**	139.58

Please Insert Sketches of the Antenna Mount

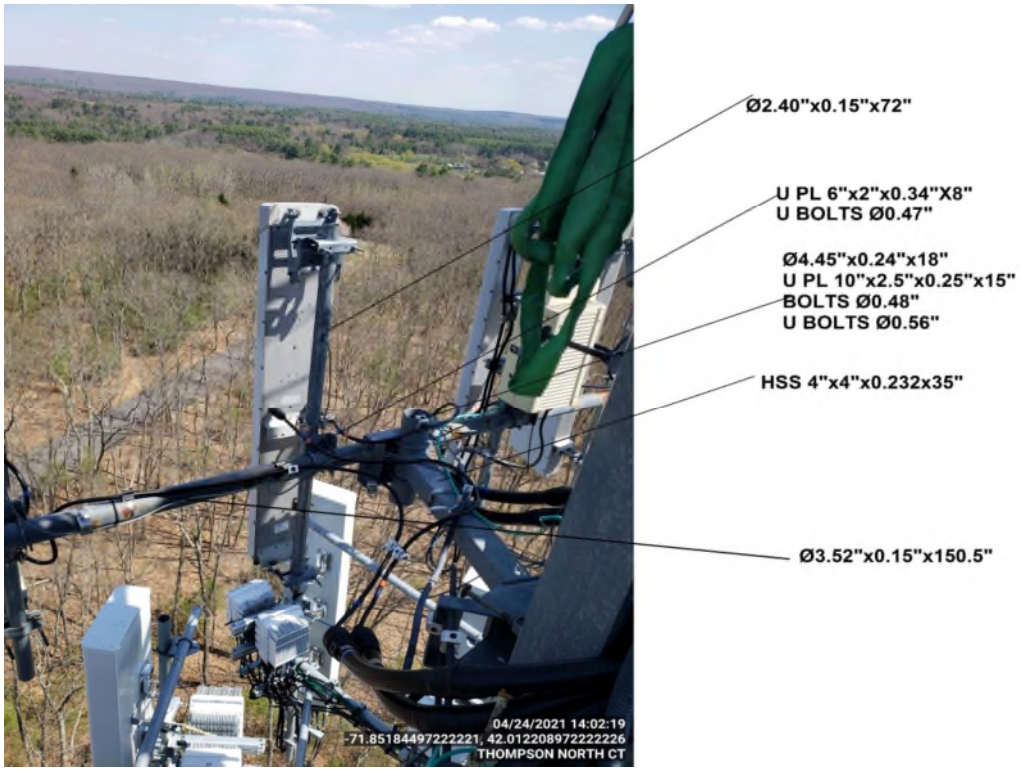


Please Insert Sketches of the Antenna Mount, cont'd

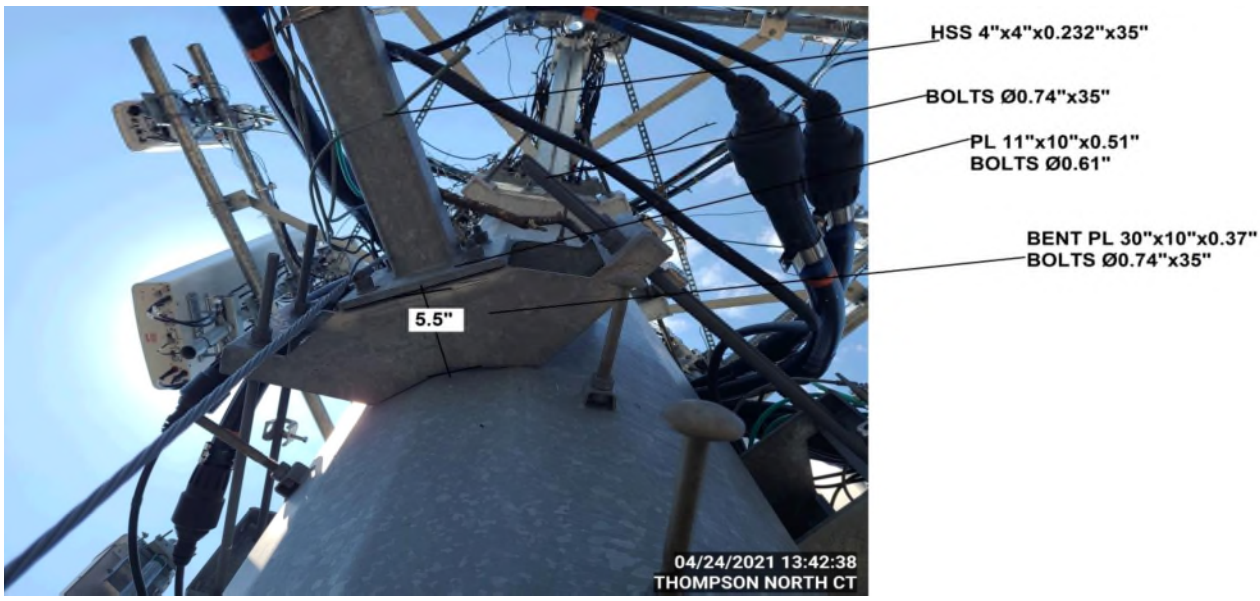


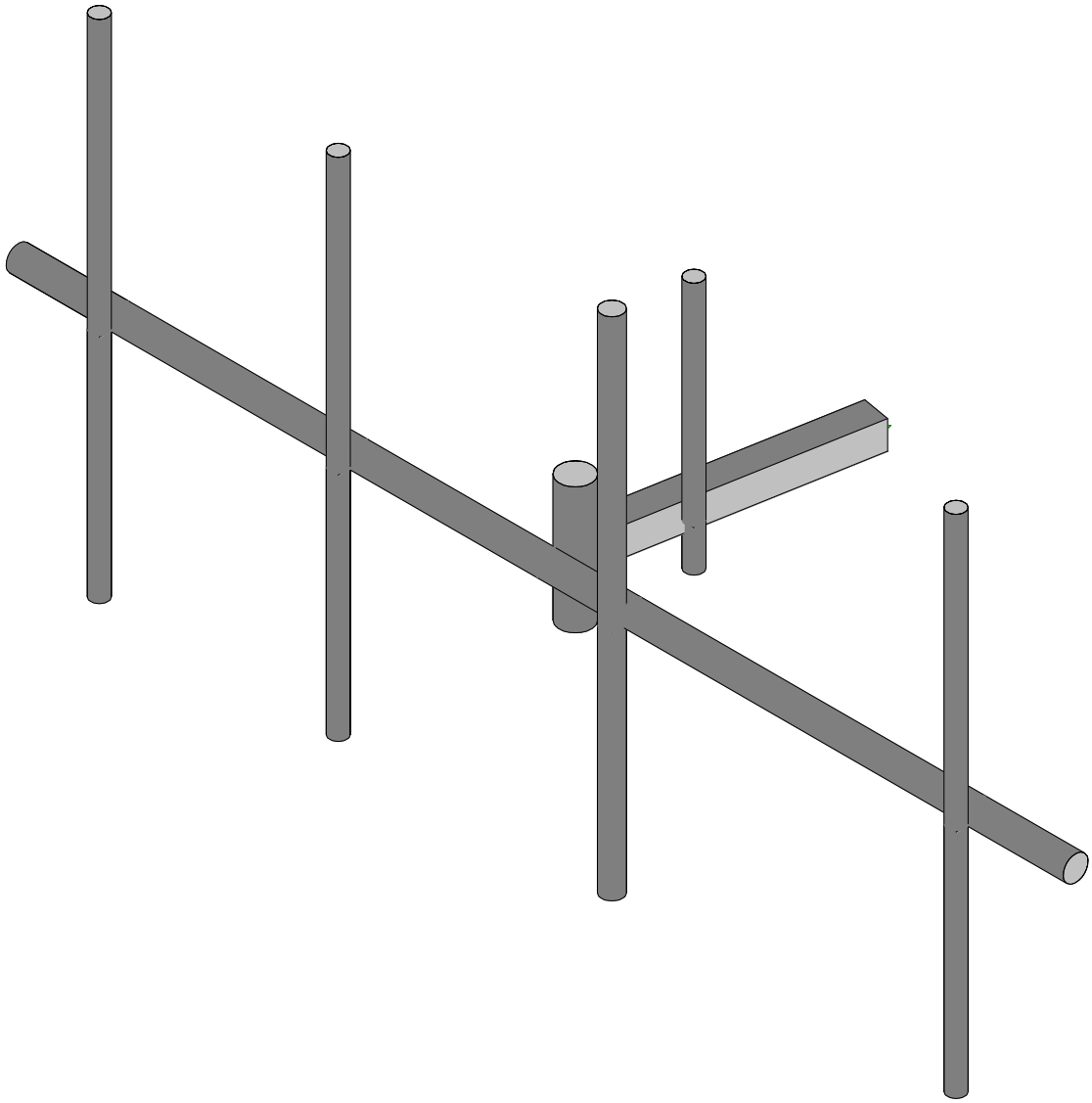


Please Insert Sketches of the Antenna Mount, cont'd



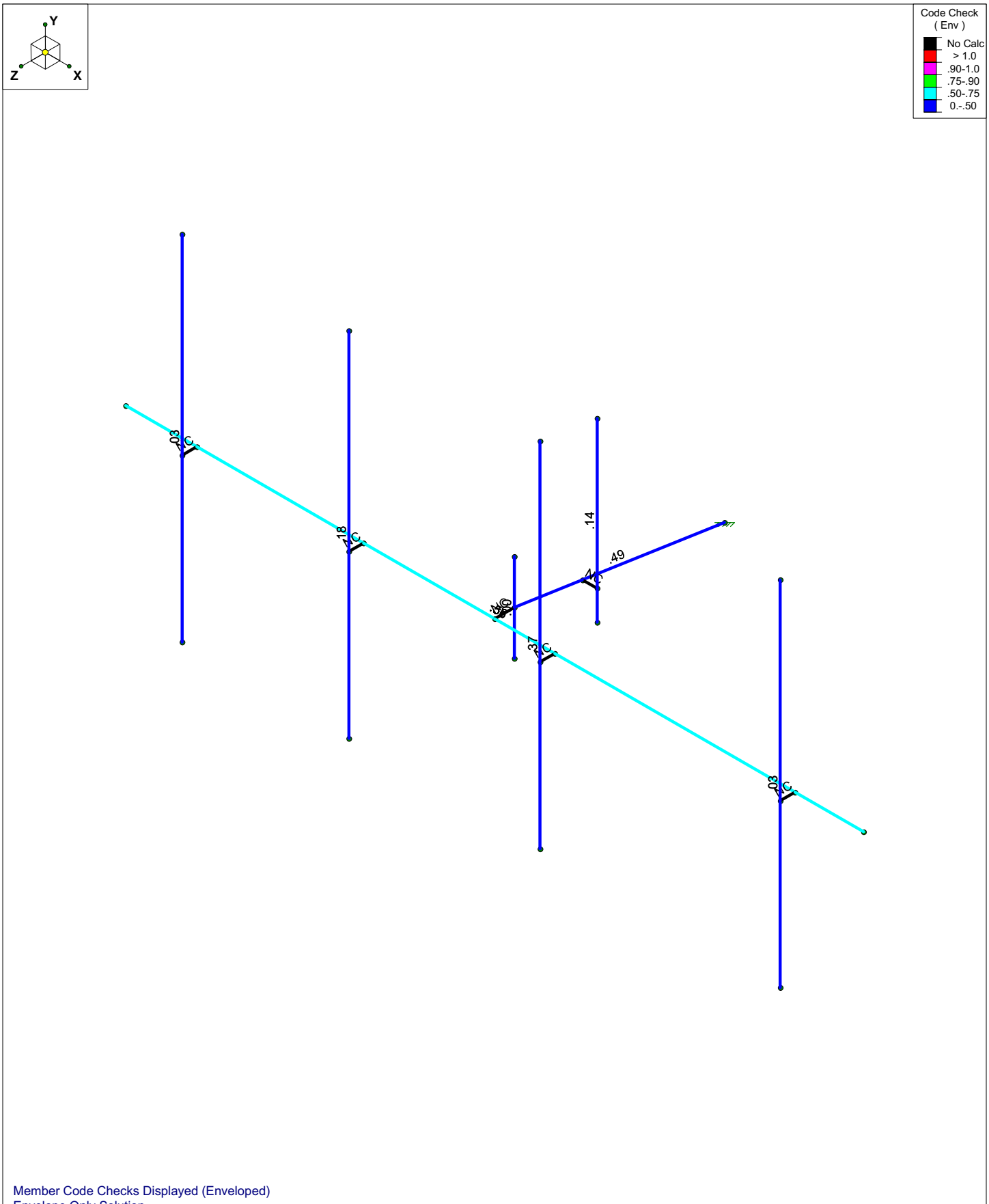
Please Insert Sketches of the Antenna Mount, cont'd





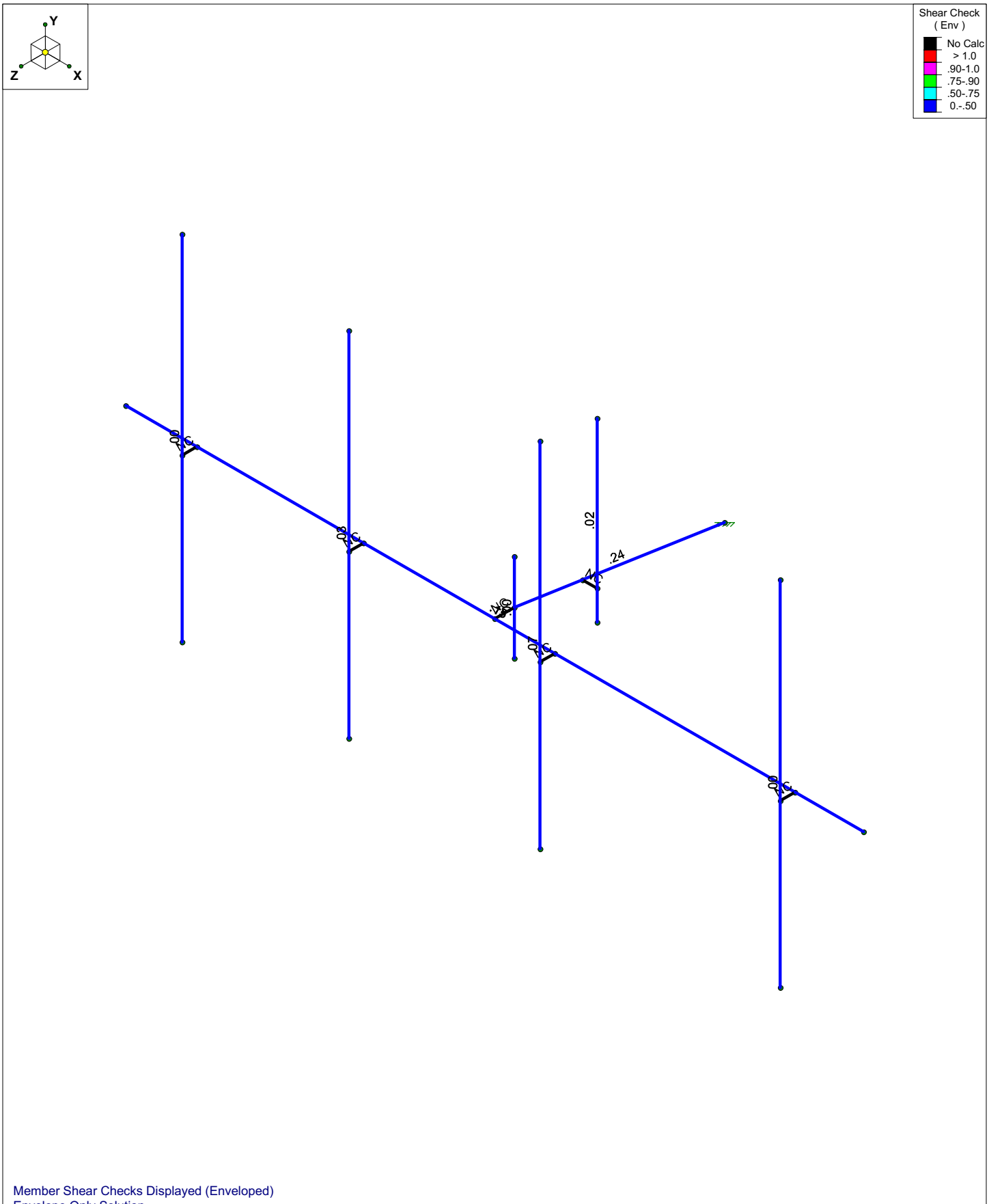
Envelope Only Solution

Maser Consulting	Antenna Mount Analysis	SK - 1
DC		July 2, 2021 at 10:51 AM
		535838-VZW_MT_LOT_A_H.r3d



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

Maser Consulting	Antenna Mount Analysis	SK - 2
DC		July 2, 2021 at 10:51 AM
		535838-VZW_MT_LOT_A_H.r3d



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

Maser Consulting	Antenna Mount Analysis	SK - 3
DC		July 2, 2021 at 10:51 AM
		535838-VZW_MT_LOT_A_H.r3d

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
1	Antenna D	None					30			
2	Antenna Di	None					30			
3	Antenna Wo (0 Deg)	None					30			
4	Antenna Wo (30 Deg)	None					30			
5	Antenna Wo (60 Deg)	None					30			
6	Antenna Wo (90 Deg)	None					30			
7	Antenna Wo (120 Deg)	None					30			
8	Antenna Wo (150 Deg)	None					30			
9	Antenna Wo (180 Deg)	None					30			
10	Antenna Wo (210 Deg)	None					30			
11	Antenna Wo (240 Deg)	None					30			
12	Antenna Wo (270 Deg)	None					30			
13	Antenna Wo (300 Deg)	None					30			
14	Antenna Wo (330 Deg)	None					30			
15	Antenna Wi (0 Deg)	None					30			
16	Antenna Wi (30 Deg)	None					30			
17	Antenna Wi (60 Deg)	None					30			
18	Antenna Wi (90 Deg)	None					30			
19	Antenna Wi (120 Deg)	None					30			
20	Antenna Wi (150 Deg)	None					30			
21	Antenna Wi (180 Deg)	None					30			
22	Antenna Wi (210 Deg)	None					30			
23	Antenna Wi (240 Deg)	None					30			
24	Antenna Wi (270 Deg)	None					30			
25	Antenna Wi (300 Deg)	None					30			
26	Antenna Wi (330 Deg)	None					30			
27	Antenna Wm (0 Deg)	None					30			
28	Antenna Wm (30 Deg)	None					30			
29	Antenna Wm (60 Deg)	None					30			
30	Antenna Wm (90 Deg)	None					30			
31	Antenna Wm (120 Deg)	None					30			
32	Antenna Wm (150 Deg)	None					30			
33	Antenna Wm (180 Deg)	None					30			
34	Antenna Wm (210 Deg)	None					30			
35	Antenna Wm (240 Deg)	None					30			
36	Antenna Wm (270 Deg)	None					30			
37	Antenna Wm (300 Deg)	None					30			
38	Antenna Wm (330 Deg)	None					30			
39	Structure D	None		-1						
40	Structure Di	None						8		
41	Structure Wo (0 Deg)	None						16		
42	Structure Wo (30 Deg)	None						16		
43	Structure Wo (60 Deg)	None						16		
44	Structure Wo (90 Deg)	None						16		
45	Structure Wo (120 D...	None						16		
46	Structure Wo (150 D...	None						16		
47	Structure Wo (180 D...	None						16		
48	Structure Wo (210 D...	None						16		
49	Structure Wo (240 D...	None						16		
50	Structure Wo (270 D...	None						16		
51	Structure Wo (300 D...	None						16		
52	Structure Wo (330 D...	None						16		
53	Structure Wi (0 Deg)	None						16		
54	Structure Wi (30 Deg)	None						16		
55	Structure Wi (60 Deg)	None						16		
56	Structure Wi (90 Deg)	None						16		

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
57	Structure Wi (120 De...	None						16		
58	Structure Wi (150 De...	None						16		
59	Structure Wi (180 De...	None						16		
60	Structure Wi (210 De...	None						16		
61	Structure Wi (240 De...	None						16		
62	Structure Wi (270 De...	None						16		
63	Structure Wi (300 De...	None						16		
64	Structure Wi (330 De...	None						16		
65	Structure Wm (0 Deg)	None						16		
66	Structure Wm (30 De...	None						16		
67	Structure Wm (60 De...	None						16		
68	Structure Wm (90 De...	None						16		
69	Structure Wm (120 D...	None						16		
70	Structure Wm (150 D...	None						16		
71	Structure Wm (180 D...	None						16		
72	Structure Wm (210 D...	None						16		
73	Structure Wm (240 D...	None						16		
74	Structure Wm (270 D...	None						16		
75	Structure Wm (300 D...	None						16		
76	Structure Wm (330 D...	None						16		
77	Lm1	None					1			
78	Lm2	None					1			
79	Lv1	None					1			
80	Lv2	None					1			

Load Combinations

	Description	Sol..	PD..	SR..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact...
1	1.2D+1.0Wo ...	Yes	Y		1	1.2	39	1.2	3	1	41	1												
2	1.2D+1.0Wo ...	Yes	Y		1	1.2	39	1.2	4	1	42	1												
3	1.2D+1.0Wo ...	Yes	Y		1	1.2	39	1.2	5	1	43	1												
4	1.2D+1.0Wo ...	Yes	Y		1	1.2	39	1.2	6	1	44	1												
5	1.2D+1.0Wo ...	Yes	Y		1	1.2	39	1.2	7	1	45	1												
6	1.2D+1.0Wo ...	Yes	Y		1	1.2	39	1.2	8	1	46	1												
7	1.2D+1.0Wo ...	Yes	Y		1	1.2	39	1.2	9	1	47	1												
8	1.2D+1.0Wo ...	Yes	Y		1	1.2	39	1.2	10	1	48	1												
9	1.2D+1.0Wo ...	Yes	Y		1	1.2	39	1.2	11	1	49	1												
10	1.2D+1.0Wo ...	Yes	Y		1	1.2	39	1.2	12	1	50	1												
11	1.2D+1.0Wo ...	Yes	Y		1	1.2	39	1.2	13	1	51	1												
12	1.2D+1.0Wo ...	Yes	Y		1	1.2	39	1.2	14	1	52	1												
13	1.2D + 1.0Di ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	15	1	53	1								
14	1.2D + 1.0Di ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	16	1	54	1								
15	1.2D + 1.0Di ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	17	1	55	1								
16	1.2D + 1.0Di ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	18	1	56	1								
17	1.2D + 1.0Di ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	19	1	57	1								
18	1.2D + 1.0Di ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	20	1	58	1								
19	1.2D + 1.0Di ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	21	1	59	1								
20	1.2D + 1.0Di ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	22	1	60	1								
21	1.2D + 1.0Di ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	23	1	61	1								
22	1.2D + 1.0Di ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	24	1	62	1								
23	1.2D + 1.0Di ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	25	1	63	1								
24	1.2D + 1.0Di ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	26	1	64	1								
25	1.2D + 1.5L...	Yes	Y		1	1.2	39	1.2	77	1.5	27	1	65	1										
26	1.2D + 1.5L...	Yes	Y		1	1.2	39	1.2	77	1.5	28	1	66	1										
27	1.2D + 1.5L...	Yes	Y		1	1.2	39	1.2	77	1.5	29	1	67	1										
28	1.2D + 1.5L...	Yes	Y		1	1.2	39	1.2	77	1.5	30	1	68	1										

Load Combinations (Continued)

	Description	Sol..	PD..	SR..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact...
29	1.2D + 1.5L...	Yes	Y		1	1.2	39	1.2	77	1.5	31	1	69	1										
30	1.2D + 1.5L...	Yes	Y		1	1.2	39	1.2	77	1.5	32	1	70	1										
31	1.2D + 1.5L...	Yes	Y		1	1.2	39	1.2	77	1.5	33	1	71	1										
32	1.2D + 1.5L...	Yes	Y		1	1.2	39	1.2	77	1.5	34	1	72	1										
33	1.2D + 1.5L...	Yes	Y		1	1.2	39	1.2	77	1.5	35	1	73	1										
34	1.2D + 1.5L...	Yes	Y		1	1.2	39	1.2	77	1.5	36	1	74	1										
35	1.2D + 1.5L...	Yes	Y		1	1.2	39	1.2	77	1.5	37	1	75	1										
36	1.2D + 1.5L...	Yes	Y		1	1.2	39	1.2	77	1.5	38	1	76	1										
37	1.2D + 1.5L...	Yes	Y		1	1.2	39	1.2	78	1.5	27	1	65	1										
38	1.2D + 1.5L...	Yes	Y		1	1.2	39	1.2	78	1.5	28	1	66	1										
39	1.2D + 1.5L...	Yes	Y		1	1.2	39	1.2	78	1.5	29	1	67	1										
40	1.2D + 1.5L...	Yes	Y		1	1.2	39	1.2	78	1.5	30	1	68	1										
41	1.2D + 1.5L...	Yes	Y		1	1.2	39	1.2	78	1.5	31	1	69	1										
42	1.2D + 1.5L...	Yes	Y		1	1.2	39	1.2	78	1.5	32	1	70	1										
43	1.2D + 1.5L...	Yes	Y		1	1.2	39	1.2	78	1.5	33	1	71	1										
44	1.2D + 1.5L...	Yes	Y		1	1.2	39	1.2	78	1.5	34	1	72	1										
45	1.2D + 1.5L...	Yes	Y		1	1.2	39	1.2	78	1.5	35	1	73	1										
46	1.2D + 1.5L...	Yes	Y		1	1.2	39	1.2	78	1.5	36	1	74	1										
47	1.2D + 1.5L...	Yes	Y		1	1.2	39	1.2	78	1.5	37	1	75	1										
48	1.2D + 1.5L...	Yes	Y		1	1.2	39	1.2	78	1.5	38	1	76	1										
49	1.2D + 1.5Lv1	Yes	Y		1	1.2	39	1.2	79	1.5														
50	1.2D + 1.5Lv2	Yes	Y		1	1.2	39	1.2	80	1.5														
51	1.4D	Yes	Y		1	1.4	39	1.4																
52	Seismic Mass		Y		1	1	39	1																
53	1.2D + 1.0Ev...		Y		1	1.2	39	1.2	SX		SY	1	SZ	-1										
54	1.2D + 1.0Ev...		Y		1	1.2	39	1.2	SX	.5	SY	1	SZ	-.866										
55	1.2D + 1.0Ev...		Y		1	1.2	39	1.2	SX	.866	SY	1	SZ	-.5										
56	1.2D + 1.0Ev...		Y		1	1.2	39	1.2	SX	1	SY	1	SZ											
57	1.2D + 1.0Ev...		Y		1	1.2	39	1.2	SX	.866	SY	1	SZ	.5										
58	1.2D + 1.0Ev...		Y		1	1.2	39	1.2	SX	.5	SY	1	SZ	.866										
59	1.2D + 1.0Ev...		Y		1	1.2	39	1.2	SX		SY	1	SZ	1										
60	1.2D + 1.0Ev...		Y		1	1.2	39	1.2	SX	-.5	SY	1	SZ	.866										
61	1.2D + 1.0Ev...		Y		1	1.2	39	1.2	SX	-.866	SY	1	SZ	.5										
62	1.2D + 1.0Ev...		Y		1	1.2	39	1.2	SX	-1	SY	1	SZ											
63	1.2D + 1.0Ev...		Y		1	1.2	39	1.2	SX	-.866	SY	1	SZ	-.5										
64	1.2D + 1.0Ev...		Y		1	1.2	39	1.2	SX	-.5	SY	1	SZ	-.866										

Joint Coordinates and Temperatures

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
1	N1	6.424983	0	0.562113	0	
2	N2	0	0	37.	0	
3	N3	0	9	37.	0	
4	N4	0	-9	37.	0	
5	N5	0	0	41.	0	
6	N6	75.25	0	41.	0	
7	N7	-75.25	0	41.	0	
8	N8	61.25	0	41.	0	
9	N9	61.25	0	44.	0	
10	N10	61.25	39	44.	0	
11	N11	61.25	-33	44.	0	
12	N12	12.25	0	41.	0	
13	N13	12.25	0	44.	0	
14	N14	12.25	39	44.	0	
15	N15	12.25	-33	44.	0	
16	N16	-26.75	0	41.	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
17	N17	-26.75	0	44.	0	
18	N18	-26.75	39	44.	0	
19	N19	-26.75	-33	44.	0	
20	N20	-60.75	0	41.	0	
21	N21	-60.75	0	44.	0	
22	N22	-60.75	39	44.	0	
23	N23	-60.75	-33	44.	0	
24	N24	5.083778	0	25.182307	0	
25	N25	5.083778	30	25.182307	0	
26	N26	2.083778	0	25.182307	0	
27	N27	5.083778	-6	25.182307	0	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design R...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Standoff	HSS4X4X4	Beam	Tube	A500 Gr. B 42	Typical	3.37	7.8	7.8	12.8
2	Mast Pipe	PIPE_4.0	Column	Pipe	A53 Gr. B	Typical	2.96	6.82	6.82	13.6
3	Face Horizontal	PIPE_3.0	Beam	Pipe	A53 Gr. B	Typical	2.07	2.85	2.85	5.69
4	Mount Pipe	PIPE_2.0	Column	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
5	Dual Antenna	PIPE_2.5	Column	Pipe	A53 Gr. B	Typical	1.61	1.45	1.45	2.89

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/1E...	Density[k/ft...	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A36 Gr.36	29000	11154	.3	.65	.49	36	1.5	58	1.2
2	A53 Gr. B	29000	11154	.3	.65	.49	35	1.5	60	1.2
3	A572 Gr.50	29000	11154	.3	.65	.49	50	1.1	65	1.1
4	A992	29000	11154	.3	.65	.49	50	1.1	65	1.1
5	A500 Gr. B 42	29000	11154	.3	.65	.49	42	1.4	58	1.3
6	A500 Gr. B 46	29000	11154	.3	.65	.49	46	1.4	58	1.3

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N1	N2			Standoff	Beam	Tube	A500 Gr. ...	Typical
2	M2	N3	N4			Mast Pipe	Column	Pipe	A53 Gr. B	Typical
3	M3	N2	N5			RIGID	None	None	RIGID	Typical
4	M4	N7	N6			Face Horizontal	Beam	Pipe	A53 Gr. B	Typical
5	M5	N8	N9			RIGID	None	None	RIGID	Typical
6	MP1A	N10	N11			Mount Pipe	Column	Pipe	A53 Gr. B	Typical
7	M7	N12	N13			RIGID	None	None	RIGID	Typical
8	MP2A	N14	N15			Dual Antenna	Column	Pipe	A53 Gr. B	Typical
9	M9	N16	N17			RIGID	None	None	RIGID	Typical
10	MP3A	N18	N19			Mount Pipe	Column	Pipe	A53 Gr. B	Typical
11	M11	N20	N21			RIGID	None	None	RIGID	Typical
12	MP4A	N22	N23			Mount Pipe	Column	Pipe	A53 Gr. B	Typical
13	M13	N25	N27			Mount Pipe	Column	Pipe	A53 Gr. B	Typical
14	M14	N26	N24			RIGID	None	None	RIGID	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	M1						Yes				None
2	M2						Yes	** NA **			None
3	M3						Yes	** NA **			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
4	M4						Yes				None
5	M5						Yes	** NA **			None
6	MP1A						Yes	** NA **			None
7	M7						Yes	** NA **			None
8	MP2A						Yes	** NA **			None
9	M9						Yes	** NA **			None
10	MP3A						Yes	** NA **			None
11	M11						Yes	** NA **			None
12	MP4A						Yes	** NA **			None
13	M13						Yes	** NA **			None
14	M14						Yes	** NA **			None

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	Y	-19.4	48
2	MP3A	My	.01	48
3	MP3A	Mz	0	48
4	MP2A	Y	-23	6
5	MP2A	My	-.011	6
6	MP2A	Mz	.015	6
7	MP2A	Y	-23	66
8	MP2A	My	-.011	66
9	MP2A	Mz	.015	66
10	MP2A	Y	-23	6
11	MP2A	My	-.011	6
12	MP2A	Mz	-.015	6
13	MP2A	Y	-23	66
14	MP2A	My	-.011	66
15	MP2A	Mz	-.015	66
16	MP3A	Y	-43.55	24
17	MP3A	My	-.022	24
18	MP3A	Mz	0	24
19	MP3A	Y	-43.55	48
20	MP3A	My	-.022	48
21	MP3A	Mz	0	48
22	M13	Y	-32	12
23	M13	My	0	12
24	M13	Mz	0	12
25	MP3A	Y	-84.4	18
26	MP3A	My	.042	18
27	MP3A	Mz	0	18
28	MP2A	Y	-70.3	18
29	MP2A	My	.035	18
30	MP2A	Mz	0	18

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	Y	-16.85	48
2	MP3A	My	.008	48
3	MP3A	Mz	0	48
4	MP2A	Y	-82.321	6
5	MP2A	My	-.041	6
6	MP2A	Mz	.055	6
7	MP2A	Y	-82.321	66
8	MP2A	My	-.041	66

Member Point Loads (BLC 2 : Antenna Di) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
9	MP2A	Mz	.055	66
10	MP2A	Y	-82.321	6
11	MP2A	My	-.041	6
12	MP2A	Mz	-.055	6
13	MP2A	Y	-82.321	66
14	MP2A	My	-.041	66
15	MP2A	Mz	-.055	66
16	MP3A	Y	-35.549	24
17	MP3A	My	-.018	24
18	MP3A	Mz	0	24
19	MP3A	Y	-35.549	48
20	MP3A	My	-.018	48
21	MP3A	Mz	0	48
22	M13	Y	-75.814	12
23	M13	My	0	12
24	M13	Mz	0	12
25	MP3A	Y	-44.818	18
26	MP3A	My	.022	18
27	MP3A	Mz	0	18
28	MP2A	Y	-40.305	18
29	MP2A	My	.02	18
30	MP2A	Mz	0	18

Member Point Loads (BLC 3 : Antenna Wo (0 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	0	48
2	MP3A	Z	-36.198	48
3	MP3A	Mx	0	48
4	MP2A	X	0	6
5	MP2A	Z	-205.33	6
6	MP2A	Mx	-.137	6
7	MP2A	X	0	66
8	MP2A	Z	-205.33	66
9	MP2A	Mx	-.137	66
10	MP2A	X	0	6
11	MP2A	Z	-205.33	6
12	MP2A	Mx	.137	6
13	MP2A	X	0	66
14	MP2A	Z	-205.33	66
15	MP2A	Mx	.137	66
16	MP3A	X	0	24
17	MP3A	Z	-97.776	24
18	MP3A	Mx	0	24
19	MP3A	X	0	48
20	MP3A	Z	-97.776	48
21	MP3A	Mx	0	48
22	M13	X	0	12
23	M13	Z	-144.362	12
24	M13	Mx	0	12
25	MP3A	X	0	18
26	MP3A	Z	-77.805	18
27	MP3A	Mx	0	18
28	MP2A	X	0	18
29	MP2A	Z	-77.805	18
30	MP2A	Mx	0	18

Member Point Loads (BLC 4 : Antenna Wo (30 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	14.62	48
2	MP3A	Z	-25.323	48
3	MP3A	Mx	.007	48
4	MP2A	X	96.08	6
5	MP2A	Z	-166.416	6
6	MP2A	Mx	-.159	6
7	MP2A	X	96.08	66
8	MP2A	Z	-166.416	66
9	MP2A	Mx	-.159	66
10	MP2A	X	96.08	6
11	MP2A	Z	-166.416	6
12	MP2A	Mx	.063	6
13	MP2A	X	96.08	66
14	MP2A	Z	-166.416	66
15	MP2A	Mx	.063	66
16	MP3A	X	41.451	24
17	MP3A	Z	-71.795	24
18	MP3A	Mx	-.021	24
19	MP3A	X	41.451	48
20	MP3A	Z	-71.795	48
21	MP3A	Mx	-.021	48
22	M13	X	78.845	12
23	M13	Z	-136.563	12
24	M13	Mx	0	12
25	MP3A	X	35.678	18
26	MP3A	Z	-61.796	18
27	MP3A	Mx	.018	18
28	MP2A	X	34.443	18
29	MP2A	Z	-59.656	18
30	MP2A	Mx	.017	18

Member Point Loads (BLC 5 : Antenna Wo (60 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	13.273	48
2	MP3A	Z	-7.663	48
3	MP3A	Mx	.007	48
4	MP2A	X	143.607	6
5	MP2A	Z	-82.912	6
6	MP2A	Mx	-.127	6
7	MP2A	X	143.607	66
8	MP2A	Z	-82.912	66
9	MP2A	Mx	-.127	66
10	MP2A	X	143.607	6
11	MP2A	Z	-82.912	6
12	MP2A	Mx	-.017	6
13	MP2A	X	143.607	66
14	MP2A	Z	-82.912	66
15	MP2A	Mx	-.017	66
16	MP3A	X	46.032	24
17	MP3A	Z	-26.577	24
18	MP3A	Mx	-.023	24
19	MP3A	X	46.032	48
20	MP3A	Z	-26.577	48
21	MP3A	Mx	-.023	48
22	M13	X	125.021	12
23	M13	Z	-72.181	12

Member Point Loads (BLC 5 : Antenna Wo (60 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
24	M13	Mx	0	12
25	MP3A	X	50.626	18
26	MP3A	Z	-29.229	18
27	MP3A	Mx	.025	18
28	MP2A	X	44.207	18
29	MP2A	Z	-25.523	18
30	MP2A	Mx	.022	18

Member Point Loads (BLC 6 : Antenna Wo (90 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	8.37	48
2	MP3A	Z	0	48
3	MP3A	Mx	.004	48
4	MP2A	X	152.655	6
5	MP2A	Z	0	6
6	MP2A	Mx	-.076	6
7	MP2A	X	152.655	66
8	MP2A	Z	0	66
9	MP2A	Mx	-.076	66
10	MP2A	X	152.655	6
11	MP2A	Z	0	6
12	MP2A	Mx	-.076	6
13	MP2A	X	152.655	66
14	MP2A	Z	0	66
15	MP2A	Mx	-.076	66
16	MP3A	X	38.279	24
17	MP3A	Z	0	24
18	MP3A	Mx	-.019	24
19	MP3A	X	38.279	48
20	MP3A	Z	0	48
21	MP3A	Mx	-.019	48
22	M13	X	117.706	12
23	M13	Z	0	12
24	M13	Mx	0	12
25	MP3A	X	52.009	18
26	MP3A	Z	0	18
27	MP3A	Mx	.026	18
28	MP2A	X	42.127	18
29	MP2A	Z	0	18
30	MP2A	Mx	.021	18

Member Point Loads (BLC 7 : Antenna Wo (120 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	13.273	48
2	MP3A	Z	7.663	48
3	MP3A	Mx	.007	48
4	MP2A	X	143.607	6
5	MP2A	Z	82.912	6
6	MP2A	Mx	-.017	6
7	MP2A	X	143.607	66
8	MP2A	Z	82.912	66
9	MP2A	Mx	-.017	66
10	MP2A	X	143.607	6
11	MP2A	Z	82.912	6
12	MP2A	Mx	-.127	6
13	MP2A	X	143.607	66

Member Point Loads (BLC 7 : Antenna Wo (120 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
14	MP2A	Z	82.912	66
15	MP2A	Mx	-.127	66
16	MP3A	X	46.032	24
17	MP3A	Z	26.577	24
18	MP3A	Mx	-.023	24
19	MP3A	X	46.032	48
20	MP3A	Z	26.577	48
21	MP3A	Mx	-.023	48
22	M13	X	90.394	12
23	M13	Z	52.189	12
24	M13	Mx	0	12
25	MP3A	X	50.626	18
26	MP3A	Z	29.229	18
27	MP3A	Mx	.025	18
28	MP2A	X	44.207	18
29	MP2A	Z	25.523	18
30	MP2A	Mx	.022	18

Member Point Loads (BLC 8 : Antenna Wo (150 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	14.62	48
2	MP3A	Z	25.323	48
3	MP3A	Mx	.007	48
4	MP2A	X	96.08	6
5	MP2A	Z	166.416	6
6	MP2A	Mx	.063	6
7	MP2A	X	96.08	66
8	MP2A	Z	166.416	66
9	MP2A	Mx	.063	66
10	MP2A	X	96.08	6
11	MP2A	Z	166.416	6
12	MP2A	Mx	-.159	6
13	MP2A	X	96.08	66
14	MP2A	Z	166.416	66
15	MP2A	Mx	-.159	66
16	MP3A	X	41.451	24
17	MP3A	Z	71.795	24
18	MP3A	Mx	-.021	24
19	MP3A	X	41.451	48
20	MP3A	Z	71.795	48
21	MP3A	Mx	-.021	48
22	M13	X	58.853	12
23	M13	Z	101.937	12
24	M13	Mx	0	12
25	MP3A	X	35.678	18
26	MP3A	Z	61.796	18
27	MP3A	Mx	.018	18
28	MP2A	X	34.443	18
29	MP2A	Z	59.656	18
30	MP2A	Mx	.017	18

Member Point Loads (BLC 9 : Antenna Wo (180 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	0	48
2	MP3A	Z	36.198	48
3	MP3A	Mx	0	48

Member Point Loads (BLC 9 : Antenna Wo (180 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
4	MP2A	X	0	6
5	MP2A	Z	205.33	6
6	MP2A	Mx	.137	6
7	MP2A	X	0	66
8	MP2A	Z	205.33	66
9	MP2A	Mx	.137	66
10	MP2A	X	0	6
11	MP2A	Z	205.33	6
12	MP2A	Mx	-.137	6
13	MP2A	X	0	66
14	MP2A	Z	205.33	66
15	MP2A	Mx	-.137	66
16	MP3A	X	0	24
17	MP3A	Z	97.776	24
18	MP3A	Mx	0	24
19	MP3A	X	0	48
20	MP3A	Z	97.776	48
21	MP3A	Mx	0	48
22	M13	X	0	12
23	M13	Z	144.362	12
24	M13	Mx	0	12
25	MP3A	X	0	18
26	MP3A	Z	77.805	18
27	MP3A	Mx	0	18
28	MP2A	X	0	18
29	MP2A	Z	77.805	18
30	MP2A	Mx	0	18

Member Point Loads (BLC 10 : Antenna Wo (210 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	-14.62	48
2	MP3A	Z	25.323	48
3	MP3A	Mx	-.007	48
4	MP2A	X	-96.08	6
5	MP2A	Z	166.416	6
6	MP2A	Mx	.159	6
7	MP2A	X	-96.08	66
8	MP2A	Z	166.416	66
9	MP2A	Mx	.159	66
10	MP2A	X	-96.08	6
11	MP2A	Z	166.416	6
12	MP2A	Mx	-.063	6
13	MP2A	X	-96.08	66
14	MP2A	Z	166.416	66
15	MP2A	Mx	-.063	66
16	MP3A	X	-41.451	24
17	MP3A	Z	71.795	24
18	MP3A	Mx	.021	24
19	MP3A	X	-41.451	48
20	MP3A	Z	71.795	48
21	MP3A	Mx	.021	48
22	M13	X	-78.845	12
23	M13	Z	136.563	12
24	M13	Mx	0	12
25	MP3A	X	-35.678	18
26	MP3A	Z	61.796	18

Member Point Loads (BLC 10 : Antenna Wo (210 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
27	MP3A	Mx	-.018	18
28	MP2A	X	-34.443	18
29	MP2A	Z	59.656	18
30	MP2A	Mx	-.017	18

Member Point Loads (BLC 11 : Antenna Wo (240 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	-13.273	48
2	MP3A	Z	7.663	48
3	MP3A	Mx	-.007	48
4	MP2A	X	-143.607	6
5	MP2A	Z	82.912	6
6	MP2A	Mx	.127	6
7	MP2A	X	-143.607	66
8	MP2A	Z	82.912	66
9	MP2A	Mx	.127	66
10	MP2A	X	-143.607	6
11	MP2A	Z	82.912	6
12	MP2A	Mx	.017	6
13	MP2A	X	-143.607	66
14	MP2A	Z	82.912	66
15	MP2A	Mx	.017	66
16	MP3A	X	-46.032	24
17	MP3A	Z	26.577	24
18	MP3A	Mx	.023	24
19	MP3A	X	-46.032	48
20	MP3A	Z	26.577	48
21	MP3A	Mx	.023	48
22	M13	X	-125.021	12
23	M13	Z	72.181	12
24	M13	Mx	0	12
25	MP3A	X	-50.626	18
26	MP3A	Z	29.229	18
27	MP3A	Mx	-.025	18
28	MP2A	X	-44.207	18
29	MP2A	Z	25.523	18
30	MP2A	Mx	-.022	18

Member Point Loads (BLC 12 : Antenna Wo (270 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	-8.37	48
2	MP3A	Z	0	48
3	MP3A	Mx	-.004	48
4	MP2A	X	-152.655	6
5	MP2A	Z	0	6
6	MP2A	Mx	.076	6
7	MP2A	X	-152.655	66
8	MP2A	Z	0	66
9	MP2A	Mx	.076	66
10	MP2A	X	-152.655	6
11	MP2A	Z	0	6
12	MP2A	Mx	.076	6
13	MP2A	X	-152.655	66
14	MP2A	Z	0	66
15	MP2A	Mx	.076	66
16	MP3A	X	-38.279	24

Member Point Loads (BLC 12 : Antenna Wo (270 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
17	MP3A	Z	0	24
18	MP3A	Mx	.019	24
19	MP3A	X	-38.279	48
20	MP3A	Z	0	48
21	MP3A	Mx	.019	48
22	M13	X	-117.706	12
23	M13	Z	0	12
24	M13	Mx	0	12
25	MP3A	X	-52.009	18
26	MP3A	Z	0	18
27	MP3A	Mx	-.026	18
28	MP2A	X	-42.127	18
29	MP2A	Z	0	18
30	MP2A	Mx	-.021	18

Member Point Loads (BLC 13 : Antenna Wo (300 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	-13.273	48
2	MP3A	Z	-7.663	48
3	MP3A	Mx	-.007	48
4	MP2A	X	-143.607	6
5	MP2A	Z	-82.912	6
6	MP2A	Mx	.017	6
7	MP2A	X	-143.607	66
8	MP2A	Z	-82.912	66
9	MP2A	Mx	.017	66
10	MP2A	X	-143.607	6
11	MP2A	Z	-82.912	6
12	MP2A	Mx	.127	6
13	MP2A	X	-143.607	66
14	MP2A	Z	-82.912	66
15	MP2A	Mx	.127	66
16	MP3A	X	-46.032	24
17	MP3A	Z	-26.577	24
18	MP3A	Mx	.023	24
19	MP3A	X	-46.032	48
20	MP3A	Z	-26.577	48
21	MP3A	Mx	.023	48
22	M13	X	-90.394	12
23	M13	Z	-52.189	12
24	M13	Mx	0	12
25	MP3A	X	-50.626	18
26	MP3A	Z	-29.229	18
27	MP3A	Mx	-.025	18
28	MP2A	X	-44.207	18
29	MP2A	Z	-25.523	18
30	MP2A	Mx	-.022	18

Member Point Loads (BLC 14 : Antenna Wo (330 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	-14.62	48
2	MP3A	Z	-25.323	48
3	MP3A	Mx	-.007	48
4	MP2A	X	-96.08	6
5	MP2A	Z	-166.416	6
6	MP2A	Mx	-.063	6

Member Point Loads (BLC 14 : Antenna Wo (330 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
7	MP2A	X	-96.08	66
8	MP2A	Z	-166.416	66
9	MP2A	Mx	-.063	66
10	MP2A	X	-96.08	6
11	MP2A	Z	-166.416	6
12	MP2A	Mx	.159	6
13	MP2A	X	-96.08	66
14	MP2A	Z	-166.416	66
15	MP2A	Mx	.159	66
16	MP3A	X	-41.451	24
17	MP3A	Z	-71.795	24
18	MP3A	Mx	.021	24
19	MP3A	X	-41.451	48
20	MP3A	Z	-71.795	48
21	MP3A	Mx	.021	48
22	M13	X	-58.853	12
23	M13	Z	-101.937	12
24	M13	Mx	0	12
25	MP3A	X	-35.678	18
26	MP3A	Z	-61.796	18
27	MP3A	Mx	-.018	18
28	MP2A	X	-34.443	18
29	MP2A	Z	-59.656	18
30	MP2A	Mx	-.017	18

Member Point Loads (BLC 15 : Antenna Wi (0 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	0	48
2	MP3A	Z	-8.182	48
3	MP3A	Mx	0	48
4	MP2A	X	0	6
5	MP2A	Z	-38.867	6
6	MP2A	Mx	-.026	6
7	MP2A	X	0	66
8	MP2A	Z	-38.867	66
9	MP2A	Mx	-.026	66
10	MP2A	X	0	6
11	MP2A	Z	-38.867	6
12	MP2A	Mx	.026	6
13	MP2A	X	0	66
14	MP2A	Z	-38.867	66
15	MP2A	Mx	.026	66
16	MP3A	X	0	24
17	MP3A	Z	-19.173	24
18	MP3A	Mx	0	24
19	MP3A	X	0	48
20	MP3A	Z	-19.173	48
21	MP3A	Mx	0	48
22	M13	X	0	12
23	M13	Z	-28.65	12
24	M13	Mx	0	12
25	MP3A	X	0	18
26	MP3A	Z	-16.158	18
27	MP3A	Mx	0	18
28	MP2A	X	0	18
29	MP2A	Z	-16.158	18

Member Point Loads (BLC 15 : Antenna Wi (0 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
30	MP2A	Mx	0	18

Member Point Loads (BLC 16 : Antenna Wi (30 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	3.379	48
2	MP3A	Z	-5.853	48
3	MP3A	Mx	.002	48
4	MP2A	X	18.25	6
5	MP2A	Z	-31.61	6
6	MP2A	Mx	-.03	6
7	MP2A	X	18.25	66
8	MP2A	Z	-31.61	66
9	MP2A	Mx	-.03	66
10	MP2A	X	18.25	6
11	MP2A	Z	-31.61	6
12	MP2A	Mx	.012	6
13	MP2A	X	18.25	66
14	MP2A	Z	-31.61	66
15	MP2A	Mx	.012	66
16	MP3A	X	8.211	24
17	MP3A	Z	-14.221	24
18	MP3A	Mx	-.004	24
19	MP3A	X	8.211	48
20	MP3A	Z	-14.221	48
21	MP3A	Mx	-.004	48
22	M13	X	15.554	12
23	M13	Z	-26.94	12
24	M13	Mx	0	12
25	MP3A	X	7.464	18
26	MP3A	Z	-12.928	18
27	MP3A	Mx	.004	18
28	MP2A	X	7.23	18
29	MP2A	Z	-12.523	18
30	MP2A	Mx	.004	18

Member Point Loads (BLC 17 : Antenna Wi (60 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	3.388	48
2	MP3A	Z	-1.956	48
3	MP3A	Mx	.002	48
4	MP2A	X	27.512	6
5	MP2A	Z	-15.884	6
6	MP2A	Mx	-.024	6
7	MP2A	X	27.512	66
8	MP2A	Z	-15.884	66
9	MP2A	Mx	-.024	66
10	MP2A	X	27.512	6
11	MP2A	Z	-15.884	6
12	MP2A	Mx	-.003	6
13	MP2A	X	27.512	66
14	MP2A	Z	-15.884	66
15	MP2A	Mx	-.003	66
16	MP3A	X	9.455	24
17	MP3A	Z	-5.459	24
18	MP3A	Mx	-.005	24
19	MP3A	X	9.455	48

Member Point Loads (BLC 17 : Antenna Wi (60 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
20	MP3A	Z	-5.459	48
21	MP3A	Mx	-.005	48
22	M13	X	24.811	12
23	M13	Z	-14.325	12
24	M13	Mx	0	12
25	MP3A	X	10.798	18
26	MP3A	Z	-6.234	18
27	MP3A	Mx	.005	18
28	MP2A	X	9.584	18
29	MP2A	Z	-5.533	18
30	MP2A	Mx	.005	18

Member Point Loads (BLC 18 : Antenna Wi (90 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	2.489	48
2	MP3A	Z	0	48
3	MP3A	Mx	.001	48
4	MP2A	X	29.402	6
5	MP2A	Z	0	6
6	MP2A	Mx	-.015	6
7	MP2A	X	29.402	66
8	MP2A	Z	0	66
9	MP2A	Mx	-.015	66
10	MP2A	X	29.402	6
11	MP2A	Z	0	6
12	MP2A	Mx	-.015	6
13	MP2A	X	29.402	66
14	MP2A	Z	0	66
15	MP2A	Mx	-.015	66
16	MP3A	X	8.166	24
17	MP3A	Z	0	24
18	MP3A	Mx	-.004	24
19	MP3A	X	8.166	48
20	MP3A	Z	0	48
21	MP3A	Mx	-.004	48
22	M13	X	23.734	12
23	M13	Z	0	12
24	M13	Mx	0	12
25	MP3A	X	11.238	18
26	MP3A	Z	0	18
27	MP3A	Mx	.006	18
28	MP2A	X	9.369	18
29	MP2A	Z	0	18
30	MP2A	Mx	.005	18

Member Point Loads (BLC 19 : Antenna Wi (120 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	3.388	48
2	MP3A	Z	1.956	48
3	MP3A	Mx	.002	48
4	MP2A	X	27.512	6
5	MP2A	Z	15.884	6
6	MP2A	Mx	-.003	6
7	MP2A	X	27.512	66
8	MP2A	Z	15.884	66
9	MP2A	Mx	-.003	66

Member Point Loads (BLC 19 : Antenna Wi (120 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
10	MP2A	X	27.512	6
11	MP2A	Z	15.884	6
12	MP2A	Mx	-.024	6
13	MP2A	X	27.512	66
14	MP2A	Z	15.884	66
15	MP2A	Mx	-.024	66
16	MP3A	X	9.455	24
17	MP3A	Z	5.459	24
18	MP3A	Mx	-.005	24
19	MP3A	X	9.455	48
20	MP3A	Z	5.459	48
21	MP3A	Mx	-.005	48
22	M13	X	18.426	12
23	M13	Z	10.638	12
24	M13	Mx	0	12
25	MP3A	X	10.798	18
26	MP3A	Z	6.234	18
27	MP3A	Mx	.005	18
28	MP2A	X	9.584	18
29	MP2A	Z	5.533	18
30	MP2A	Mx	.005	18

Member Point Loads (BLC 20 : Antenna Wi (150 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	3.379	48
2	MP3A	Z	5.853	48
3	MP3A	Mx	.002	48
4	MP2A	X	18.25	6
5	MP2A	Z	31.61	6
6	MP2A	Mx	.012	6
7	MP2A	X	18.25	66
8	MP2A	Z	31.61	66
9	MP2A	Mx	.012	66
10	MP2A	X	18.25	6
11	MP2A	Z	31.61	6
12	MP2A	Mx	-.03	6
13	MP2A	X	18.25	66
14	MP2A	Z	31.61	66
15	MP2A	Mx	-.03	66
16	MP3A	X	8.211	24
17	MP3A	Z	14.221	24
18	MP3A	Mx	-.004	24
19	MP3A	X	8.211	48
20	MP3A	Z	14.221	48
21	MP3A	Mx	-.004	48
22	M13	X	11.867	12
23	M13	Z	20.554	12
24	M13	Mx	0	12
25	MP3A	X	7.464	18
26	MP3A	Z	12.928	18
27	MP3A	Mx	.004	18
28	MP2A	X	7.23	18
29	MP2A	Z	12.523	18
30	MP2A	Mx	.004	18

Member Point Loads (BLC 21 : Antenna Wi (180 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	0	48
2	MP3A	Z	8.182	48
3	MP3A	Mx	0	48
4	MP2A	X	0	6
5	MP2A	Z	38.867	6
6	MP2A	Mx	.026	6
7	MP2A	X	0	66
8	MP2A	Z	38.867	66
9	MP2A	Mx	.026	66
10	MP2A	X	0	6
11	MP2A	Z	38.867	6
12	MP2A	Mx	-.026	6
13	MP2A	X	0	66
14	MP2A	Z	38.867	66
15	MP2A	Mx	-.026	66
16	MP3A	X	0	24
17	MP3A	Z	19.173	24
18	MP3A	Mx	0	24
19	MP3A	X	0	48
20	MP3A	Z	19.173	48
21	MP3A	Mx	0	48
22	M13	X	0	12
23	M13	Z	28.65	12
24	M13	Mx	0	12
25	MP3A	X	0	18
26	MP3A	Z	16.158	18
27	MP3A	Mx	0	18
28	MP2A	X	0	18
29	MP2A	Z	16.158	18
30	MP2A	Mx	0	18

Member Point Loads (BLC 22 : Antenna Wi (210 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	-3.379	48
2	MP3A	Z	5.853	48
3	MP3A	Mx	-.002	48
4	MP2A	X	-18.25	6
5	MP2A	Z	31.61	6
6	MP2A	Mx	.03	6
7	MP2A	X	-18.25	66
8	MP2A	Z	31.61	66
9	MP2A	Mx	.03	66
10	MP2A	X	-18.25	6
11	MP2A	Z	31.61	6
12	MP2A	Mx	-.012	6
13	MP2A	X	-18.25	66
14	MP2A	Z	31.61	66
15	MP2A	Mx	-.012	66
16	MP3A	X	-8.211	24
17	MP3A	Z	14.221	24
18	MP3A	Mx	.004	24
19	MP3A	X	-8.211	48
20	MP3A	Z	14.221	48
21	MP3A	Mx	.004	48
22	M13	X	-15.554	12
23	M13	Z	26.94	12

Member Point Loads (BLC 22 : Antenna Wi (210 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
24	M13	Mx	0	12
25	MP3A	X	-7.464	18
26	MP3A	Z	12.928	18
27	MP3A	Mx	-.004	18
28	MP2A	X	-7.23	18
29	MP2A	Z	12.523	18
30	MP2A	Mx	-.004	18

Member Point Loads (BLC 23 : Antenna Wi (240 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	-3.388	48
2	MP3A	Z	1.956	48
3	MP3A	Mx	-.002	48
4	MP2A	X	-27.512	6
5	MP2A	Z	15.884	6
6	MP2A	Mx	.024	6
7	MP2A	X	-27.512	66
8	MP2A	Z	15.884	66
9	MP2A	Mx	.024	66
10	MP2A	X	-27.512	6
11	MP2A	Z	15.884	6
12	MP2A	Mx	.003	6
13	MP2A	X	-27.512	66
14	MP2A	Z	15.884	66
15	MP2A	Mx	.003	66
16	MP3A	X	-9.455	24
17	MP3A	Z	5.459	24
18	MP3A	Mx	.005	24
19	MP3A	X	-9.455	48
20	MP3A	Z	5.459	48
21	MP3A	Mx	.005	48
22	M13	X	-24.811	12
23	M13	Z	14.325	12
24	M13	Mx	0	12
25	MP3A	X	-10.798	18
26	MP3A	Z	6.234	18
27	MP3A	Mx	-.005	18
28	MP2A	X	-9.584	18
29	MP2A	Z	5.533	18
30	MP2A	Mx	-.005	18

Member Point Loads (BLC 24 : Antenna Wi (270 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	-2.489	48
2	MP3A	Z	0	48
3	MP3A	Mx	-.001	48
4	MP2A	X	-29.402	6
5	MP2A	Z	0	6
6	MP2A	Mx	.015	6
7	MP2A	X	-29.402	66
8	MP2A	Z	0	66
9	MP2A	Mx	.015	66
10	MP2A	X	-29.402	6
11	MP2A	Z	0	6
12	MP2A	Mx	.015	6
13	MP2A	X	-29.402	66

Member Point Loads (BLC 24 : Antenna Wi (270 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
14	MP2A	Z	0	66
15	MP2A	Mx	.015	66
16	MP3A	X	-8.166	24
17	MP3A	Z	0	24
18	MP3A	Mx	.004	24
19	MP3A	X	-8.166	48
20	MP3A	Z	0	48
21	MP3A	Mx	.004	48
22	M13	X	-23.734	12
23	M13	Z	0	12
24	M13	Mx	0	12
25	MP3A	X	-11.238	18
26	MP3A	Z	0	18
27	MP3A	Mx	-.006	18
28	MP2A	X	-9.369	18
29	MP2A	Z	0	18
30	MP2A	Mx	-.005	18

Member Point Loads (BLC 25 : Antenna Wi (300 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	-3.388	48
2	MP3A	Z	-1.956	48
3	MP3A	Mx	-.002	48
4	MP2A	X	-27.512	6
5	MP2A	Z	-15.884	6
6	MP2A	Mx	.003	6
7	MP2A	X	-27.512	66
8	MP2A	Z	-15.884	66
9	MP2A	Mx	.003	66
10	MP2A	X	-27.512	6
11	MP2A	Z	-15.884	6
12	MP2A	Mx	.024	6
13	MP2A	X	-27.512	66
14	MP2A	Z	-15.884	66
15	MP2A	Mx	.024	66
16	MP3A	X	-9.455	24
17	MP3A	Z	-5.459	24
18	MP3A	Mx	.005	24
19	MP3A	X	-9.455	48
20	MP3A	Z	-5.459	48
21	MP3A	Mx	.005	48
22	M13	X	-18.426	12
23	M13	Z	-10.638	12
24	M13	Mx	0	12
25	MP3A	X	-10.798	18
26	MP3A	Z	-6.234	18
27	MP3A	Mx	-.005	18
28	MP2A	X	-9.584	18
29	MP2A	Z	-5.533	18
30	MP2A	Mx	-.005	18

Member Point Loads (BLC 26 : Antenna Wi (330 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	-3.379	48
2	MP3A	Z	-5.853	48
3	MP3A	Mx	-.002	48

Member Point Loads (BLC 26 : Antenna Wi (330 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
4	MP2A	X	-18.25	6
5	MP2A	Z	-31.61	6
6	MP2A	Mx	-.012	6
7	MP2A	X	-18.25	66
8	MP2A	Z	-31.61	66
9	MP2A	Mx	-.012	66
10	MP2A	X	-18.25	6
11	MP2A	Z	-31.61	6
12	MP2A	Mx	.03	6
13	MP2A	X	-18.25	66
14	MP2A	Z	-31.61	66
15	MP2A	Mx	.03	66
16	MP3A	X	-8.211	24
17	MP3A	Z	-14.221	24
18	MP3A	Mx	.004	24
19	MP3A	X	-8.211	48
20	MP3A	Z	-14.221	48
21	MP3A	Mx	.004	48
22	M13	X	-11.867	12
23	M13	Z	-20.554	12
24	M13	Mx	0	12
25	MP3A	X	-7.464	18
26	MP3A	Z	-12.928	18
27	MP3A	Mx	-.004	18
28	MP2A	X	-7.23	18
29	MP2A	Z	-12.523	18
30	MP2A	Mx	-.004	18

Member Point Loads (BLC 27 : Antenna Wm (0 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	0	48
2	MP3A	Z	-2.262	48
3	MP3A	Mx	0	48
4	MP2A	X	0	6
5	MP2A	Z	-12.833	6
6	MP2A	Mx	-.009	6
7	MP2A	X	0	66
8	MP2A	Z	-12.833	66
9	MP2A	Mx	-.009	66
10	MP2A	X	0	6
11	MP2A	Z	-12.833	6
12	MP2A	Mx	.009	6
13	MP2A	X	0	66
14	MP2A	Z	-12.833	66
15	MP2A	Mx	.009	66
16	MP3A	X	0	24
17	MP3A	Z	-6.111	24
18	MP3A	Mx	0	24
19	MP3A	X	0	48
20	MP3A	Z	-6.111	48
21	MP3A	Mx	0	48
22	M13	X	0	12
23	M13	Z	-9.023	12
24	M13	Mx	0	12
25	MP3A	X	0	18
26	MP3A	Z	-4.863	18

Member Point Loads (BLC 27 : Antenna Wm (0 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
27	MP3A	Mx	0	18
28	MP2A	X	0	18
29	MP2A	Z	-4.863	18
30	MP2A	Mx	0	18

Member Point Loads (BLC 28 : Antenna Wm (30 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	.914	48
2	MP3A	Z	-1.583	48
3	MP3A	Mx	.000457	48
4	MP2A	X	6.005	6
5	MP2A	Z	-10.401	6
6	MP2A	Mx	-.01	6
7	MP2A	X	6.005	66
8	MP2A	Z	-10.401	66
9	MP2A	Mx	-.01	66
10	MP2A	X	6.005	6
11	MP2A	Z	-10.401	6
12	MP2A	Mx	.004	6
13	MP2A	X	6.005	66
14	MP2A	Z	-10.401	66
15	MP2A	Mx	.004	66
16	MP3A	X	2.591	24
17	MP3A	Z	-4.487	24
18	MP3A	Mx	-.001	24
19	MP3A	X	2.591	48
20	MP3A	Z	-4.487	48
21	MP3A	Mx	-.001	48
22	M13	X	4.928	12
23	M13	Z	-8.535	12
24	M13	Mx	0	12
25	MP3A	X	2.23	18
26	MP3A	Z	-3.862	18
27	MP3A	Mx	.001	18
28	MP2A	X	2.153	18
29	MP2A	Z	-3.729	18
30	MP2A	Mx	.001	18

Member Point Loads (BLC 29 : Antenna Wm (60 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	.83	48
2	MP3A	Z	-.479	48
3	MP3A	Mx	.000415	48
4	MP2A	X	8.975	6
5	MP2A	Z	-5.182	6
6	MP2A	Mx	-.008	6
7	MP2A	X	8.975	66
8	MP2A	Z	-5.182	66
9	MP2A	Mx	-.008	66
10	MP2A	X	8.975	6
11	MP2A	Z	-5.182	6
12	MP2A	Mx	-.001	6
13	MP2A	X	8.975	66
14	MP2A	Z	-5.182	66
15	MP2A	Mx	-.001	66
16	MP3A	X	2.877	24

Member Point Loads (BLC 29 : Antenna Wm (60 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
17	MP3A	Z	-1.661	24
18	MP3A	Mx	-.001	24
19	MP3A	X	2.877	48
20	MP3A	Z	-1.661	48
21	MP3A	Mx	-.001	48
22	M13	X	7.814	12
23	M13	Z	-4.511	12
24	M13	Mx	0	12
25	MP3A	X	3.164	18
26	MP3A	Z	-1.827	18
27	MP3A	Mx	.002	18
28	MP2A	X	2.763	18
29	MP2A	Z	-1.595	18
30	MP2A	Mx	.001	18

Member Point Loads (BLC 30 : Antenna Wm (90 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	.523	48
2	MP3A	Z	0	48
3	MP3A	Mx	.000262	48
4	MP2A	X	9.541	6
5	MP2A	Z	0	6
6	MP2A	Mx	-.005	6
7	MP2A	X	9.541	66
8	MP2A	Z	0	66
9	MP2A	Mx	-.005	66
10	MP2A	X	9.541	6
11	MP2A	Z	0	6
12	MP2A	Mx	-.005	6
13	MP2A	X	9.541	66
14	MP2A	Z	0	66
15	MP2A	Mx	-.005	66
16	MP3A	X	2.392	24
17	MP3A	Z	0	24
18	MP3A	Mx	-.001	24
19	MP3A	X	2.392	48
20	MP3A	Z	0	48
21	MP3A	Mx	-.001	48
22	M13	X	7.357	12
23	M13	Z	0	12
24	M13	Mx	0	12
25	MP3A	X	3.251	18
26	MP3A	Z	0	18
27	MP3A	Mx	.002	18
28	MP2A	X	2.633	18
29	MP2A	Z	0	18
30	MP2A	Mx	.001	18

Member Point Loads (BLC 31 : Antenna Wm (120 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	.83	48
2	MP3A	Z	.479	48
3	MP3A	Mx	.000415	48
4	MP2A	X	8.975	6
5	MP2A	Z	5.182	6
6	MP2A	Mx	-.001	6

Member Point Loads (BLC 31 : Antenna Wm (120 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
7	MP2A	X	8.975	66
8	MP2A	Z	5.182	66
9	MP2A	Mx	-.001	66
10	MP2A	X	8.975	6
11	MP2A	Z	5.182	6
12	MP2A	Mx	-.008	6
13	MP2A	X	8.975	66
14	MP2A	Z	5.182	66
15	MP2A	Mx	-.008	66
16	MP3A	X	2.877	24
17	MP3A	Z	1.661	24
18	MP3A	Mx	-.001	24
19	MP3A	X	2.877	48
20	MP3A	Z	1.661	48
21	MP3A	Mx	-.001	48
22	M13	X	5.65	12
23	M13	Z	3.262	12
24	M13	Mx	0	12
25	MP3A	X	3.164	18
26	MP3A	Z	1.827	18
27	MP3A	Mx	.002	18
28	MP2A	X	2.763	18
29	MP2A	Z	1.595	18
30	MP2A	Mx	.001	18

Member Point Loads (BLC 32 : Antenna Wm (150 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	.914	48
2	MP3A	Z	1.583	48
3	MP3A	Mx	.000457	48
4	MP2A	X	6.005	6
5	MP2A	Z	10.401	6
6	MP2A	Mx	.004	6
7	MP2A	X	6.005	66
8	MP2A	Z	10.401	66
9	MP2A	Mx	.004	66
10	MP2A	X	6.005	6
11	MP2A	Z	10.401	6
12	MP2A	Mx	-.01	6
13	MP2A	X	6.005	66
14	MP2A	Z	10.401	66
15	MP2A	Mx	-.01	66
16	MP3A	X	2.591	24
17	MP3A	Z	4.487	24
18	MP3A	Mx	-.001	24
19	MP3A	X	2.591	48
20	MP3A	Z	4.487	48
21	MP3A	Mx	-.001	48
22	M13	X	3.678	12
23	M13	Z	6.371	12
24	M13	Mx	0	12
25	MP3A	X	2.23	18
26	MP3A	Z	3.862	18
27	MP3A	Mx	.001	18
28	MP2A	X	2.153	18
29	MP2A	Z	3.729	18

Member Point Loads (BLC 32 : Antenna Wm (150 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
30	MP2A	Mx	.001	18

Member Point Loads (BLC 33 : Antenna Wm (180 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	0	48
2	MP3A	Z	2.262	48
3	MP3A	Mx	0	48
4	MP2A	X	0	6
5	MP2A	Z	12.833	6
6	MP2A	Mx	.009	6
7	MP2A	X	0	66
8	MP2A	Z	12.833	66
9	MP2A	Mx	.009	66
10	MP2A	X	0	6
11	MP2A	Z	12.833	6
12	MP2A	Mx	-.009	6
13	MP2A	X	0	66
14	MP2A	Z	12.833	66
15	MP2A	Mx	-.009	66
16	MP3A	X	0	24
17	MP3A	Z	6.111	24
18	MP3A	Mx	0	24
19	MP3A	X	0	48
20	MP3A	Z	6.111	48
21	MP3A	Mx	0	48
22	M13	X	0	12
23	M13	Z	9.023	12
24	M13	Mx	0	12
25	MP3A	X	0	18
26	MP3A	Z	4.863	18
27	MP3A	Mx	0	18
28	MP2A	X	0	18
29	MP2A	Z	4.863	18
30	MP2A	Mx	0	18

Member Point Loads (BLC 34 : Antenna Wm (210 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	-.914	48
2	MP3A	Z	1.583	48
3	MP3A	Mx	-.000457	48
4	MP2A	X	-6.005	6
5	MP2A	Z	10.401	6
6	MP2A	Mx	.01	6
7	MP2A	X	-6.005	66
8	MP2A	Z	10.401	66
9	MP2A	Mx	.01	66
10	MP2A	X	-6.005	6
11	MP2A	Z	10.401	6
12	MP2A	Mx	-.004	6
13	MP2A	X	-6.005	66
14	MP2A	Z	10.401	66
15	MP2A	Mx	-.004	66
16	MP3A	X	-2.591	24
17	MP3A	Z	4.487	24
18	MP3A	Mx	.001	24
19	MP3A	X	-2.591	48

Member Point Loads (BLC 34 : Antenna Wm (210 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
20	MP3A	Z	4.487	48
21	MP3A	Mx	.001	48
22	M13	X	-4.928	12
23	M13	Z	8.535	12
24	M13	Mx	0	12
25	MP3A	X	-2.23	18
26	MP3A	Z	3.862	18
27	MP3A	Mx	-.001	18
28	MP2A	X	-2.153	18
29	MP2A	Z	3.729	18
30	MP2A	Mx	-.001	18

Member Point Loads (BLC 35 : Antenna Wm (240 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	-.83	48
2	MP3A	Z	.479	48
3	MP3A	Mx	-.000415	48
4	MP2A	X	-8.975	6
5	MP2A	Z	5.182	6
6	MP2A	Mx	.008	6
7	MP2A	X	-8.975	66
8	MP2A	Z	5.182	66
9	MP2A	Mx	.008	66
10	MP2A	X	-8.975	6
11	MP2A	Z	5.182	6
12	MP2A	Mx	.001	6
13	MP2A	X	-8.975	66
14	MP2A	Z	5.182	66
15	MP2A	Mx	.001	66
16	MP3A	X	-2.877	24
17	MP3A	Z	1.661	24
18	MP3A	Mx	.001	24
19	MP3A	X	-2.877	48
20	MP3A	Z	1.661	48
21	MP3A	Mx	.001	48
22	M13	X	-7.814	12
23	M13	Z	4.511	12
24	M13	Mx	0	12
25	MP3A	X	-3.164	18
26	MP3A	Z	1.827	18
27	MP3A	Mx	-.002	18
28	MP2A	X	-2.763	18
29	MP2A	Z	1.595	18
30	MP2A	Mx	-.001	18

Member Point Loads (BLC 36 : Antenna Wm (270 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	-.523	48
2	MP3A	Z	0	48
3	MP3A	Mx	-.000262	48
4	MP2A	X	-9.541	6
5	MP2A	Z	0	6
6	MP2A	Mx	.005	6
7	MP2A	X	-9.541	66
8	MP2A	Z	0	66
9	MP2A	Mx	.005	66

Member Point Loads (BLC 36 : Antenna Wm (270 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
10	MP2A	X	-9.541	6
11	MP2A	Z	0	6
12	MP2A	Mx	.005	6
13	MP2A	X	-9.541	66
14	MP2A	Z	0	66
15	MP2A	Mx	.005	66
16	MP3A	X	-2.392	24
17	MP3A	Z	0	24
18	MP3A	Mx	.001	24
19	MP3A	X	-2.392	48
20	MP3A	Z	0	48
21	MP3A	Mx	.001	48
22	M13	X	-7.357	12
23	M13	Z	0	12
24	M13	Mx	0	12
25	MP3A	X	-3.251	18
26	MP3A	Z	0	18
27	MP3A	Mx	-.002	18
28	MP2A	X	-2.633	18
29	MP2A	Z	0	18
30	MP2A	Mx	-.001	18

Member Point Loads (BLC 37 : Antenna Wm (300 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	-.83	48
2	MP3A	Z	-.479	48
3	MP3A	Mx	-.000415	48
4	MP2A	X	-8.975	6
5	MP2A	Z	-5.182	6
6	MP2A	Mx	.001	6
7	MP2A	X	-8.975	66
8	MP2A	Z	-5.182	66
9	MP2A	Mx	.001	66
10	MP2A	X	-8.975	6
11	MP2A	Z	-5.182	6
12	MP2A	Mx	.008	6
13	MP2A	X	-8.975	66
14	MP2A	Z	-5.182	66
15	MP2A	Mx	.008	66
16	MP3A	X	-2.877	24
17	MP3A	Z	-1.661	24
18	MP3A	Mx	.001	24
19	MP3A	X	-2.877	48
20	MP3A	Z	-1.661	48
21	MP3A	Mx	.001	48
22	M13	X	-5.65	12
23	M13	Z	-3.262	12
24	M13	Mx	0	12
25	MP3A	X	-3.164	18
26	MP3A	Z	-1.827	18
27	MP3A	Mx	-.002	18
28	MP2A	X	-2.763	18
29	MP2A	Z	-1.595	18
30	MP2A	Mx	-.001	18

Member Point Loads (BLC 38 : Antenna Wm (330 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	-.914	48
2	MP3A	Z	-1.583	48
3	MP3A	Mx	-.000457	48
4	MP2A	X	-6.005	6
5	MP2A	Z	-10.401	6
6	MP2A	Mx	-.004	6
7	MP2A	X	-6.005	66
8	MP2A	Z	-10.401	66
9	MP2A	Mx	-.004	66
10	MP2A	X	-6.005	6
11	MP2A	Z	-10.401	6
12	MP2A	Mx	.01	6
13	MP2A	X	-6.005	66
14	MP2A	Z	-10.401	66
15	MP2A	Mx	.01	66
16	MP3A	X	-2.591	24
17	MP3A	Z	-4.487	24
18	MP3A	Mx	.001	24
19	MP3A	X	-2.591	48
20	MP3A	Z	-4.487	48
21	MP3A	Mx	.001	48
22	M13	X	-3.678	12
23	M13	Z	-6.371	12
24	M13	Mx	0	12
25	MP3A	X	-2.23	18
26	MP3A	Z	-3.862	18
27	MP3A	Mx	-.001	18
28	MP2A	X	-2.153	18
29	MP2A	Z	-3.729	18
30	MP2A	Mx	-.001	18

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	M4	Y	-500	%58

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	M4	Y	-500	%32

Member Point Loads (BLC 79 : Lv1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	M4	Y	-250	0

Member Point Loads (BLC 80 : Lv2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	M4	Y	-250	%50

Member Distributed Loads (BLC 40 : Structure Di)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	Y	-9.584	-9.584	0	%100
2	M2	Y	-7.956	-7.956	0	%100
3	M4	Y	-6.548	-6.548	0	%100
4	MP1A	Y	-4.965	-4.965	0	%100

Member Distributed Loads (BLC 40 : Structure Di) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
5	MP2A	Y	-4.965	-4.965	0	%100
6	MP3A	Y	-4.965	-4.965	0	%100
7	MP4A	Y	-4.965	-4.965	0	%100
8	M13	Y	-4.965	-4.965	0	%100

Member Distributed Loads (BLC 41 : Structure Wo (0 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	0	0	0	%100
2	M1	Z	-.395	-.395	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	-10.056	-10.056	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	-14.123	-14.123	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	-9.882	-9.882	0	%100
9	MP2A	X	0	0	0	%100
10	MP2A	Z	-9.882	-9.882	0	%100
11	MP3A	X	0	0	0	%100
12	MP3A	Z	-9.882	-9.882	0	%100
13	MP4A	X	0	0	0	%100
14	MP4A	Z	-9.882	-9.882	0	%100
15	M13	X	0	0	0	%100
16	M13	Z	-7.156	-7.156	0	%100

Member Distributed Loads (BLC 42 : Structure Wo (30 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	.766	.766	0	%100
2	M1	Z	-1.326	-1.326	0	%100
3	M2	X	5.028	5.028	0	%100
4	M2	Z	-8.709	-8.709	0	%100
5	M4	X	5.296	5.296	0	%100
6	M4	Z	-9.173	-9.173	0	%100
7	MP1A	X	4.941	4.941	0	%100
8	MP1A	Z	-8.558	-8.558	0	%100
9	MP2A	X	4.941	4.941	0	%100
10	MP2A	Z	-8.558	-8.558	0	%100
11	MP3A	X	4.941	4.941	0	%100
12	MP3A	Z	-8.558	-8.558	0	%100
13	MP4A	X	4.941	4.941	0	%100
14	MP4A	Z	-8.558	-8.558	0	%100
15	M13	X	3.578	3.578	0	%100
16	M13	Z	-6.197	-6.197	0	%100

Member Distributed Loads (BLC 43 : Structure Wo (60 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	6.652	6.652	0	%100
2	M1	Z	-3.84	-3.84	0	%100
3	M2	X	8.709	8.709	0	%100
4	M2	Z	-5.028	-5.028	0	%100
5	M4	X	3.058	3.058	0	%100
6	M4	Z	-1.765	-1.765	0	%100
7	MP1A	X	8.558	8.558	0	%100
8	MP1A	Z	-4.941	-4.941	0	%100
9	MP2A	X	8.558	8.558	0	%100
10	MP2A	Z	-4.941	-4.941	0	%100

Member Distributed Loads (BLC 43 : Structure Wo (60 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
11	MP3A	X	8.558	8.558	0	%100
12	MP3A	Z	-4.941	-4.941	0	%100
13	MP4A	X	8.558	8.558	0	%100
14	MP4A	Z	-4.941	-4.941	0	%100
15	M13	X	6.197	6.197	0	%100
16	M13	Z	-3.578	-3.578	0	%100

Member Distributed Loads (BLC 44 : Structure Wo (90 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	12.694	12.694	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	10.056	10.056	0	%100
4	M2	Z	0	0	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	0	0	0	%100
7	MP1A	X	9.882	9.882	0	%100
8	MP1A	Z	0	0	0	%100
9	MP2A	X	9.882	9.882	0	%100
10	MP2A	Z	0	0	0	%100
11	MP3A	X	9.882	9.882	0	%100
12	MP3A	Z	0	0	0	%100
13	MP4A	X	9.882	9.882	0	%100
14	MP4A	Z	0	0	0	%100
15	M13	X	7.156	7.156	0	%100
16	M13	Z	0	0	0	%100

Member Distributed Loads (BLC 45 : Structure Wo (120 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	10.009	10.009	0	%100
2	M1	Z	5.779	5.779	0	%100
3	M2	X	8.709	8.709	0	%100
4	M2	Z	5.028	5.028	0	%100
5	M4	X	3.058	3.058	0	%100
6	M4	Z	1.765	1.765	0	%100
7	MP1A	X	8.558	8.558	0	%100
8	MP1A	Z	4.941	4.941	0	%100
9	MP2A	X	8.558	8.558	0	%100
10	MP2A	Z	4.941	4.941	0	%100
11	MP3A	X	8.558	8.558	0	%100
12	MP3A	Z	4.941	4.941	0	%100
13	MP4A	X	8.558	8.558	0	%100
14	MP4A	Z	4.941	4.941	0	%100
15	M13	X	6.197	6.197	0	%100
16	M13	Z	3.578	3.578	0	%100

Member Distributed Loads (BLC 46 : Structure Wo (150 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	2.704	2.704	0	%100
2	M1	Z	4.683	4.683	0	%100
3	M2	X	5.028	5.028	0	%100
4	M2	Z	8.709	8.709	0	%100
5	M4	X	5.296	5.296	0	%100
6	M4	Z	9.173	9.173	0	%100
7	MP1A	X	4.941	4.941	0	%100
8	MP1A	Z	8.558	8.558	0	%100

Member Distributed Loads (BLC 46 : Structure Wo (150 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
9	MP2A	X	4.941	4.941	0	%100
10	MP2A	Z	8.558	8.558	0	%100
11	MP3A	X	4.941	4.941	0	%100
12	MP3A	Z	8.558	8.558	0	%100
13	MP4A	X	4.941	4.941	0	%100
14	MP4A	Z	8.558	8.558	0	%100
15	M13	X	3.578	3.578	0	%100
16	M13	Z	6.197	6.197	0	%100

Member Distributed Loads (BLC 47 : Structure Wo (180 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	0	0	0	%100
2	M1	Z	.395	.395	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	10.056	10.056	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	14.123	14.123	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	9.882	9.882	0	%100
9	MP2A	X	0	0	0	%100
10	MP2A	Z	9.882	9.882	0	%100
11	MP3A	X	0	0	0	%100
12	MP3A	Z	9.882	9.882	0	%100
13	MP4A	X	0	0	0	%100
14	MP4A	Z	9.882	9.882	0	%100
15	M13	X	0	0	0	%100
16	M13	Z	7.156	7.156	0	%100

Member Distributed Loads (BLC 48 : Structure Wo (210 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	-.766	-.766	0	%100
2	M1	Z	1.326	1.326	0	%100
3	M2	X	-5.028	-5.028	0	%100
4	M2	Z	8.709	8.709	0	%100
5	M4	X	-5.296	-5.296	0	%100
6	M4	Z	9.173	9.173	0	%100
7	MP1A	X	-4.941	-4.941	0	%100
8	MP1A	Z	8.558	8.558	0	%100
9	MP2A	X	-4.941	-4.941	0	%100
10	MP2A	Z	8.558	8.558	0	%100
11	MP3A	X	-4.941	-4.941	0	%100
12	MP3A	Z	8.558	8.558	0	%100
13	MP4A	X	-4.941	-4.941	0	%100
14	MP4A	Z	8.558	8.558	0	%100
15	M13	X	-3.578	-3.578	0	%100
16	M13	Z	6.197	6.197	0	%100

Member Distributed Loads (BLC 49 : Structure Wo (240 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	-6.652	-6.652	0	%100
2	M1	Z	3.84	3.84	0	%100
3	M2	X	-8.709	-8.709	0	%100
4	M2	Z	5.028	5.028	0	%100
5	M4	X	-3.058	-3.058	0	%100
6	M4	Z	1.765	1.765	0	%100

Member Distributed Loads (BLC 49 : Structure Wo (240 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
7	MP1A	X	-8.558	-8.558	0	%100
8	MP1A	Z	4.941	4.941	0	%100
9	MP2A	X	-8.558	-8.558	0	%100
10	MP2A	Z	4.941	4.941	0	%100
11	MP3A	X	-8.558	-8.558	0	%100
12	MP3A	Z	4.941	4.941	0	%100
13	MP4A	X	-8.558	-8.558	0	%100
14	MP4A	Z	4.941	4.941	0	%100
15	M13	X	-6.197	-6.197	0	%100
16	M13	Z	3.578	3.578	0	%100

Member Distributed Loads (BLC 50 : Structure Wo (270 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	-12.694	-12.694	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	-10.056	-10.056	0	%100
4	M2	Z	0	0	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	0	0	0	%100
7	MP1A	X	-9.882	-9.882	0	%100
8	MP1A	Z	0	0	0	%100
9	MP2A	X	-9.882	-9.882	0	%100
10	MP2A	Z	0	0	0	%100
11	MP3A	X	-9.882	-9.882	0	%100
12	MP3A	Z	0	0	0	%100
13	MP4A	X	-9.882	-9.882	0	%100
14	MP4A	Z	0	0	0	%100
15	M13	X	-7.156	-7.156	0	%100
16	M13	Z	0	0	0	%100

Member Distributed Loads (BLC 51 : Structure Wo (300 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	-10.009	-10.009	0	%100
2	M1	Z	-5.779	-5.779	0	%100
3	M2	X	-8.709	-8.709	0	%100
4	M2	Z	-5.028	-5.028	0	%100
5	M4	X	-3.058	-3.058	0	%100
6	M4	Z	-1.765	-1.765	0	%100
7	MP1A	X	-8.558	-8.558	0	%100
8	MP1A	Z	-4.941	-4.941	0	%100
9	MP2A	X	-8.558	-8.558	0	%100
10	MP2A	Z	-4.941	-4.941	0	%100
11	MP3A	X	-8.558	-8.558	0	%100
12	MP3A	Z	-4.941	-4.941	0	%100
13	MP4A	X	-8.558	-8.558	0	%100
14	MP4A	Z	-4.941	-4.941	0	%100
15	M13	X	-6.197	-6.197	0	%100
16	M13	Z	-3.578	-3.578	0	%100

Member Distributed Loads (BLC 52 : Structure Wo (330 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	-2.704	-2.704	0	%100
2	M1	Z	-4.683	-4.683	0	%100
3	M2	X	-5.028	-5.028	0	%100
4	M2	Z	-8.709	-8.709	0	%100

Member Distributed Loads (BLC 52 : Structure Wo (330 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
5	M4	X	-5.296	-5.296	0	%100
6	M4	Z	-9.173	-9.173	0	%100
7	MP1A	X	-4.941	-4.941	0	%100
8	MP1A	Z	-8.558	-8.558	0	%100
9	MP2A	X	-4.941	-4.941	0	%100
10	MP2A	Z	-8.558	-8.558	0	%100
11	MP3A	X	-4.941	-4.941	0	%100
12	MP3A	Z	-8.558	-8.558	0	%100
13	MP4A	X	-4.941	-4.941	0	%100
14	MP4A	Z	-8.558	-8.558	0	%100
15	M13	X	-3.578	-3.578	0	%100
16	M13	Z	-6.197	-6.197	0	%100

Member Distributed Loads (BLC 53 : Structure Wi (0 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	0	0	0	%100
2	M1	Z	-.11	-.11	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	-3.121	-3.121	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	-4.193	-4.193	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	-3.38	-3.38	0	%100
9	MP2A	X	0	0	0	%100
10	MP2A	Z	-3.38	-3.38	0	%100
11	MP3A	X	0	0	0	%100
12	MP3A	Z	-3.38	-3.38	0	%100
13	MP4A	X	0	0	0	%100
14	MP4A	Z	-3.38	-3.38	0	%100
15	M13	X	0	0	0	%100
16	M13	Z	-2.457	-2.457	0	%100

Member Distributed Loads (BLC 54 : Structure Wi (30 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	.214	.214	0	%100
2	M1	Z	-.371	-.371	0	%100
3	M2	X	1.561	1.561	0	%100
4	M2	Z	-2.703	-2.703	0	%100
5	M4	X	1.572	1.572	0	%100
6	M4	Z	-2.723	-2.723	0	%100
7	MP1A	X	1.69	1.69	0	%100
8	MP1A	Z	-2.927	-2.927	0	%100
9	MP2A	X	1.69	1.69	0	%100
10	MP2A	Z	-2.927	-2.927	0	%100
11	MP3A	X	1.69	1.69	0	%100
12	MP3A	Z	-2.927	-2.927	0	%100
13	MP4A	X	1.69	1.69	0	%100
14	MP4A	Z	-2.927	-2.927	0	%100
15	M13	X	1.229	1.229	0	%100
16	M13	Z	-2.128	-2.128	0	%100

Member Distributed Loads (BLC 55 : Structure Wi (60 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	1.861	1.861	0	%100
2	M1	Z	-1.074	-1.074	0	%100

Member Distributed Loads (BLC 55 : Structure Wi (60 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
3	M2	X	2.703	2.703	0	%100
4	M2	Z	-1.561	-1.561	0	%100
5	M4	X	.908	.908	0	%100
6	M4	Z	-.524	-.524	0	%100
7	MP1A	X	2.927	2.927	0	%100
8	MP1A	Z	-1.69	-1.69	0	%100
9	MP2A	X	2.927	2.927	0	%100
10	MP2A	Z	-1.69	-1.69	0	%100
11	MP3A	X	2.927	2.927	0	%100
12	MP3A	Z	-1.69	-1.69	0	%100
13	MP4A	X	2.927	2.927	0	%100
14	MP4A	Z	-1.69	-1.69	0	%100
15	M13	X	2.128	2.128	0	%100
16	M13	Z	-1.229	-1.229	0	%100

Member Distributed Loads (BLC 56 : Structure Wi (90 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	3.551	3.551	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	3.121	3.121	0	%100
4	M2	Z	0	0	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	0	0	0	%100
7	MP1A	X	3.38	3.38	0	%100
8	MP1A	Z	0	0	0	%100
9	MP2A	X	3.38	3.38	0	%100
10	MP2A	Z	0	0	0	%100
11	MP3A	X	3.38	3.38	0	%100
12	MP3A	Z	0	0	0	%100
13	MP4A	X	3.38	3.38	0	%100
14	MP4A	Z	0	0	0	%100
15	M13	X	2.457	2.457	0	%100
16	M13	Z	0	0	0	%100

Member Distributed Loads (BLC 57 : Structure Wi (120 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	2.8	2.8	0	%100
2	M1	Z	1.616	1.616	0	%100
3	M2	X	2.703	2.703	0	%100
4	M2	Z	1.561	1.561	0	%100
5	M4	X	.908	.908	0	%100
6	M4	Z	.524	.524	0	%100
7	MP1A	X	2.927	2.927	0	%100
8	MP1A	Z	1.69	1.69	0	%100
9	MP2A	X	2.927	2.927	0	%100
10	MP2A	Z	1.69	1.69	0	%100
11	MP3A	X	2.927	2.927	0	%100
12	MP3A	Z	1.69	1.69	0	%100
13	MP4A	X	2.927	2.927	0	%100
14	MP4A	Z	1.69	1.69	0	%100
15	M13	X	2.128	2.128	0	%100
16	M13	Z	1.229	1.229	0	%100

Member Distributed Loads (BLC 58 : Structure Wi (150 Deg))

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

Member Distributed Loads (BLC 58 : Structure Wi (150 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	.756	.756	0	%100
2	M1	Z	1.31	1.31	0	%100
3	M2	X	1.561	1.561	0	%100
4	M2	Z	2.703	2.703	0	%100
5	M4	X	1.572	1.572	0	%100
6	M4	Z	2.723	2.723	0	%100
7	MP1A	X	1.69	1.69	0	%100
8	MP1A	Z	2.927	2.927	0	%100
9	MP2A	X	1.69	1.69	0	%100
10	MP2A	Z	2.927	2.927	0	%100
11	MP3A	X	1.69	1.69	0	%100
12	MP3A	Z	2.927	2.927	0	%100
13	MP4A	X	1.69	1.69	0	%100
14	MP4A	Z	2.927	2.927	0	%100
15	M13	X	1.229	1.229	0	%100
16	M13	Z	2.128	2.128	0	%100

Member Distributed Loads (BLC 59 : Structure Wi (180 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	0	0	0	%100
2	M1	Z	.11	.11	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	3.121	3.121	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	4.193	4.193	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	3.38	3.38	0	%100
9	MP2A	X	0	0	0	%100
10	MP2A	Z	3.38	3.38	0	%100
11	MP3A	X	0	0	0	%100
12	MP3A	Z	3.38	3.38	0	%100
13	MP4A	X	0	0	0	%100
14	MP4A	Z	3.38	3.38	0	%100
15	M13	X	0	0	0	%100
16	M13	Z	2.457	2.457	0	%100

Member Distributed Loads (BLC 60 : Structure Wi (210 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	-.214	-.214	0	%100
2	M1	Z	.371	.371	0	%100
3	M2	X	-1.561	-1.561	0	%100
4	M2	Z	2.703	2.703	0	%100
5	M4	X	-1.572	-1.572	0	%100
6	M4	Z	2.723	2.723	0	%100
7	MP1A	X	-1.69	-1.69	0	%100
8	MP1A	Z	2.927	2.927	0	%100
9	MP2A	X	-1.69	-1.69	0	%100
10	MP2A	Z	2.927	2.927	0	%100
11	MP3A	X	-1.69	-1.69	0	%100
12	MP3A	Z	2.927	2.927	0	%100
13	MP4A	X	-1.69	-1.69	0	%100
14	MP4A	Z	2.927	2.927	0	%100
15	M13	X	-1.229	-1.229	0	%100
16	M13	Z	2.128	2.128	0	%100

Member Distributed Loads (BLC 61 : Structure Wi (240 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	-1.861	-1.861	0	%100
2	M1	Z	1.074	1.074	0	%100
3	M2	X	-2.703	-2.703	0	%100
4	M2	Z	1.561	1.561	0	%100
5	M4	X	-.908	-.908	0	%100
6	M4	Z	.524	.524	0	%100
7	MP1A	X	-2.927	-2.927	0	%100
8	MP1A	Z	1.69	1.69	0	%100
9	MP2A	X	-2.927	-2.927	0	%100
10	MP2A	Z	1.69	1.69	0	%100
11	MP3A	X	-2.927	-2.927	0	%100
12	MP3A	Z	1.69	1.69	0	%100
13	MP4A	X	-2.927	-2.927	0	%100
14	MP4A	Z	1.69	1.69	0	%100
15	M13	X	-2.128	-2.128	0	%100
16	M13	Z	1.229	1.229	0	%100

Member Distributed Loads (BLC 62 : Structure Wi (270 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	-3.551	-3.551	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	-3.121	-3.121	0	%100
4	M2	Z	0	0	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	0	0	0	%100
7	MP1A	X	-3.38	-3.38	0	%100
8	MP1A	Z	0	0	0	%100
9	MP2A	X	-3.38	-3.38	0	%100
10	MP2A	Z	0	0	0	%100
11	MP3A	X	-3.38	-3.38	0	%100
12	MP3A	Z	0	0	0	%100
13	MP4A	X	-3.38	-3.38	0	%100
14	MP4A	Z	0	0	0	%100
15	M13	X	-2.457	-2.457	0	%100
16	M13	Z	0	0	0	%100

Member Distributed Loads (BLC 63 : Structure Wi (300 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	-2.8	-2.8	0	%100
2	M1	Z	-1.616	-1.616	0	%100
3	M2	X	-2.703	-2.703	0	%100
4	M2	Z	-1.561	-1.561	0	%100
5	M4	X	-.908	-.908	0	%100
6	M4	Z	-.524	-.524	0	%100
7	MP1A	X	-2.927	-2.927	0	%100
8	MP1A	Z	-1.69	-1.69	0	%100
9	MP2A	X	-2.927	-2.927	0	%100
10	MP2A	Z	-1.69	-1.69	0	%100
11	MP3A	X	-2.927	-2.927	0	%100
12	MP3A	Z	-1.69	-1.69	0	%100
13	MP4A	X	-2.927	-2.927	0	%100
14	MP4A	Z	-1.69	-1.69	0	%100
15	M13	X	-2.128	-2.128	0	%100
16	M13	Z	-1.229	-1.229	0	%100

Member Distributed Loads (BLC 64 : Structure Wi (330 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	-.756	-.756	0	%100
2	M1	Z	-1.31	-1.31	0	%100
3	M2	X	-1.561	-1.561	0	%100
4	M2	Z	-2.703	-2.703	0	%100
5	M4	X	-1.572	-1.572	0	%100
6	M4	Z	-2.723	-2.723	0	%100
7	MP1A	X	-1.69	-1.69	0	%100
8	MP1A	Z	-2.927	-2.927	0	%100
9	MP2A	X	-1.69	-1.69	0	%100
10	MP2A	Z	-2.927	-2.927	0	%100
11	MP3A	X	-1.69	-1.69	0	%100
12	MP3A	Z	-2.927	-2.927	0	%100
13	MP4A	X	-1.69	-1.69	0	%100
14	MP4A	Z	-2.927	-2.927	0	%100
15	M13	X	-1.229	-1.229	0	%100
16	M13	Z	-2.128	-2.128	0	%100

Member Distributed Loads (BLC 65 : Structure Wm (0 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	0	0	0	%100
2	M1	Z	-.025	-.025	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	-.629	-.629	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	-.883	-.883	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	-.618	-.618	0	%100
9	MP2A	X	0	0	0	%100
10	MP2A	Z	-.618	-.618	0	%100
11	MP3A	X	0	0	0	%100
12	MP3A	Z	-.618	-.618	0	%100
13	MP4A	X	0	0	0	%100
14	MP4A	Z	-.618	-.618	0	%100
15	M13	X	0	0	0	%100
16	M13	Z	-.447	-.447	0	%100

Member Distributed Loads (BLC 66 : Structure Wm (30 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	.048	.048	0	%100
2	M1	Z	-.083	-.083	0	%100
3	M2	X	.314	.314	0	%100
4	M2	Z	-.544	-.544	0	%100
5	M4	X	.331	.331	0	%100
6	M4	Z	-.573	-.573	0	%100
7	MP1A	X	.309	.309	0	%100
8	MP1A	Z	-.535	-.535	0	%100
9	MP2A	X	.309	.309	0	%100
10	MP2A	Z	-.535	-.535	0	%100
11	MP3A	X	.309	.309	0	%100
12	MP3A	Z	-.535	-.535	0	%100
13	MP4A	X	.309	.309	0	%100
14	MP4A	Z	-.535	-.535	0	%100
15	M13	X	.224	.224	0	%100
16	M13	Z	-.387	-.387	0	%100

Member Distributed Loads (BLC 67 : Structure Wm (60 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	.416	.416	0	%100
2	M1	Z	-.24	-.24	0	%100
3	M2	X	.544	.544	0	%100
4	M2	Z	-.314	-.314	0	%100
5	M4	X	.191	.191	0	%100
6	M4	Z	-.11	-.11	0	%100
7	MP1A	X	.535	.535	0	%100
8	MP1A	Z	-.309	-.309	0	%100
9	MP2A	X	.535	.535	0	%100
10	MP2A	Z	-.309	-.309	0	%100
11	MP3A	X	.535	.535	0	%100
12	MP3A	Z	-.309	-.309	0	%100
13	MP4A	X	.535	.535	0	%100
14	MP4A	Z	-.309	-.309	0	%100
15	M13	X	.387	.387	0	%100
16	M13	Z	-.224	-.224	0	%100

Member Distributed Loads (BLC 68 : Structure Wm (90 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	.793	.793	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	.629	.629	0	%100
4	M2	Z	0	0	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	0	0	0	%100
7	MP1A	X	.618	.618	0	%100
8	MP1A	Z	0	0	0	%100
9	MP2A	X	.618	.618	0	%100
10	MP2A	Z	0	0	0	%100
11	MP3A	X	.618	.618	0	%100
12	MP3A	Z	0	0	0	%100
13	MP4A	X	.618	.618	0	%100
14	MP4A	Z	0	0	0	%100
15	M13	X	.447	.447	0	%100
16	M13	Z	0	0	0	%100

Member Distributed Loads (BLC 69 : Structure Wm (120 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	.626	.626	0	%100
2	M1	Z	.361	.361	0	%100
3	M2	X	.544	.544	0	%100
4	M2	Z	.314	.314	0	%100
5	M4	X	.191	.191	0	%100
6	M4	Z	.11	.11	0	%100
7	MP1A	X	.535	.535	0	%100
8	MP1A	Z	.309	.309	0	%100
9	MP2A	X	.535	.535	0	%100
10	MP2A	Z	.309	.309	0	%100
11	MP3A	X	.535	.535	0	%100
12	MP3A	Z	.309	.309	0	%100
13	MP4A	X	.535	.535	0	%100
14	MP4A	Z	.309	.309	0	%100
15	M13	X	.387	.387	0	%100
16	M13	Z	.224	.224	0	%100

Member Distributed Loads (BLC 70 : Structure Wm (150 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	.169	.169	0	%100
2	M1	Z	.293	.293	0	%100
3	M2	X	.314	.314	0	%100
4	M2	Z	.544	.544	0	%100
5	M4	X	.331	.331	0	%100
6	M4	Z	.573	.573	0	%100
7	MP1A	X	.309	.309	0	%100
8	MP1A	Z	.535	.535	0	%100
9	MP2A	X	.309	.309	0	%100
10	MP2A	Z	.535	.535	0	%100
11	MP3A	X	.309	.309	0	%100
12	MP3A	Z	.535	.535	0	%100
13	MP4A	X	.309	.309	0	%100
14	MP4A	Z	.535	.535	0	%100
15	M13	X	.224	.224	0	%100
16	M13	Z	.387	.387	0	%100

Member Distributed Loads (BLC 71 : Structure Wm (180 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	0	0	0	%100
2	M1	Z	.025	.025	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	.629	.629	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	.883	.883	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	.618	.618	0	%100
9	MP2A	X	0	0	0	%100
10	MP2A	Z	.618	.618	0	%100
11	MP3A	X	0	0	0	%100
12	MP3A	Z	.618	.618	0	%100
13	MP4A	X	0	0	0	%100
14	MP4A	Z	.618	.618	0	%100
15	M13	X	0	0	0	%100
16	M13	Z	.447	.447	0	%100

Member Distributed Loads (BLC 72 : Structure Wm (210 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	-.048	-.048	0	%100
2	M1	Z	.083	.083	0	%100
3	M2	X	-.314	-.314	0	%100
4	M2	Z	.544	.544	0	%100
5	M4	X	-.331	-.331	0	%100
6	M4	Z	.573	.573	0	%100
7	MP1A	X	-.309	-.309	0	%100
8	MP1A	Z	.535	.535	0	%100
9	MP2A	X	-.309	-.309	0	%100
10	MP2A	Z	.535	.535	0	%100
11	MP3A	X	-.309	-.309	0	%100
12	MP3A	Z	.535	.535	0	%100
13	MP4A	X	-.309	-.309	0	%100
14	MP4A	Z	.535	.535	0	%100
15	M13	X	-.224	-.224	0	%100
16	M13	Z	.387	.387	0	%100

Member Distributed Loads (BLC 73 : Structure Wm (240 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	-.416	-.416	0	%100
2	M1	Z	.24	.24	0	%100
3	M2	X	-.544	-.544	0	%100
4	M2	Z	.314	.314	0	%100
5	M4	X	-.191	-.191	0	%100
6	M4	Z	.11	.11	0	%100
7	MP1A	X	-.535	-.535	0	%100
8	MP1A	Z	.309	.309	0	%100
9	MP2A	X	-.535	-.535	0	%100
10	MP2A	Z	.309	.309	0	%100
11	MP3A	X	-.535	-.535	0	%100
12	MP3A	Z	.309	.309	0	%100
13	MP4A	X	-.535	-.535	0	%100
14	MP4A	Z	.309	.309	0	%100
15	M13	X	-.387	-.387	0	%100
16	M13	Z	.224	.224	0	%100

Member Distributed Loads (BLC 74 : Structure Wm (270 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	-.793	-.793	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	-.629	-.629	0	%100
4	M2	Z	0	0	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	0	0	0	%100
7	MP1A	X	-.618	-.618	0	%100
8	MP1A	Z	0	0	0	%100
9	MP2A	X	-.618	-.618	0	%100
10	MP2A	Z	0	0	0	%100
11	MP3A	X	-.618	-.618	0	%100
12	MP3A	Z	0	0	0	%100
13	MP4A	X	-.618	-.618	0	%100
14	MP4A	Z	0	0	0	%100
15	M13	X	-.447	-.447	0	%100
16	M13	Z	0	0	0	%100

Member Distributed Loads (BLC 75 : Structure Wm (300 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	-.626	-.626	0	%100
2	M1	Z	-.361	-.361	0	%100
3	M2	X	-.544	-.544	0	%100
4	M2	Z	-.314	-.314	0	%100
5	M4	X	-.191	-.191	0	%100
6	M4	Z	-.11	-.11	0	%100
7	MP1A	X	-.535	-.535	0	%100
8	MP1A	Z	-.309	-.309	0	%100
9	MP2A	X	-.535	-.535	0	%100
10	MP2A	Z	-.309	-.309	0	%100
11	MP3A	X	-.535	-.535	0	%100
12	MP3A	Z	-.309	-.309	0	%100
13	MP4A	X	-.535	-.535	0	%100
14	MP4A	Z	-.309	-.309	0	%100
15	M13	X	-.387	-.387	0	%100
16	M13	Z	-.224	-.224	0	%100

Member Distributed Loads (BLC 76 : Structure Wm (330 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	-.169	-.169	0	%100
2	M1	Z	-.293	-.293	0	%100
3	M2	X	-.314	-.314	0	%100
4	M2	Z	-.544	-.544	0	%100
5	M4	X	-.331	-.331	0	%100
6	M4	Z	-.573	-.573	0	%100
7	MP1A	X	-.309	-.309	0	%100
8	MP1A	Z	-.535	-.535	0	%100
9	MP2A	X	-.309	-.309	0	%100
10	MP2A	Z	-.535	-.535	0	%100
11	MP3A	X	-.309	-.309	0	%100
12	MP3A	Z	-.535	-.535	0	%100
13	MP4A	X	-.309	-.309	0	%100
14	MP4A	Z	-.535	-.535	0	%100
15	M13	X	-.224	-.224	0	%100
16	M13	Z	-.387	-.387	0	%100

Member Area Loads

Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
No Data to Print ...						

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N1	max	1220.245	10	1591.546	15	1805.087	1	-1.742	1	4.475	11	-.111	4
2		min	-1220.245	4	755.717	9	-1805.087	7	-5.644	19	-4.459	5	-3.255	49
3	Totals:	max	1220.245	10	1591.546	15	1805.087	1						
4		min	-1220.245	4	755.717	9	-1805.087	7						

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

	Member	Shape	Code Check	Loc[in]	LC	Shea...	Loc...	Dir	LC	phi*Pnc...	phi*Pn...	phi*Mn y-...	phi*Mn z-z [...	...	Eqn
1	M1	HSS4X4X4	.495	0	5	.236	0	y	49	122841...	127386	14.774	14.774	1...	H1-1b
2	M2	PIPE_4.0	.000	9	8	.000	9		8	92571.3...	93240	10.631	10.631	1...	H1-1b
3	M4	PIPE_3.0	.559	75.25	49	.147	75.25		7	28093.2...	65205	5.749	5.749	1...	H1-1b
4	MP1A	PIPE_2.0	.028	39	7	.003	39		7	20866.7...	32130	1.872	1.872	1	H1-1b
5	MP2A	PIPE_2.5	.373	39	1	.073	39		10	37773.8...	50715	3.596	3.596	1...	H1-1b
6	MP3A	PIPE_2.0	.183	39	1	.027	39		8	20866.7...	32130	1.872	1.872	1...	H1-1b
7	MP4A	PIPE_2.0	.028	39	8	.003	39		8	20866.7...	32130	1.872	1.872	1...	H1-1b
8	M13	PIPE_2.0	.139	30	8	.018	30		8	28843.4...	32130	1.872	1.872	1...	H1-1b

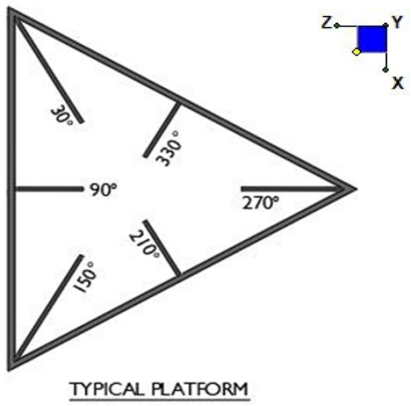
Client:	Verizon Wireless	Date:	7/2/2021
Site Name:	THOMPSON NORTH CT		
Project No.	21777328A		
Title:	Mount Analysis	Page:	1

Version 3.1

I. Mount-to-Tower Connection Check

RISA Model Data

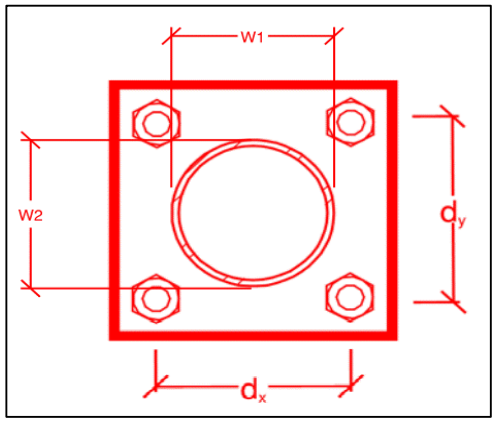
Nodes *(labeled per RISA)*	Orientation *(per graphic of typical platform)*
N1	60



TYPICAL PLATFORM

Tower Connection Bolt Checks

Any moment resistance?:	yes
Bolt Quantity per Reaction:	4
d_x (in) *(Delta X of typ. bolt config. sketch)* :	7
d_y (in) *(Delta Y of typ. bolt config. sketch)* :	7
Bolt Type:	A325N
Bolt Diameter (in):	0.625
Required Tensile Strength (kips):	20.1
Required Shear Strength (kips):	9.3
Tensile Strength / bolt (kips):	20.7
Shear Strength / bolt (kips):	12.4
Tensile Capacity Overall:	**24.3%***
Shear Capacity Overall:	**18.7%**



**Note: Tension reduction not required if tension or shear capacity < 30%*

Tower Connection Plate and Weld Check

Connecting Standoff Member Shape:	Rect
Plate Width (in):	10
Plate Height (in):	10
W1 (in):	4
W2 (in):	4
Fy (ksi, plate):	36
t_{Plate} (in):	0.5
Weld Size (1/16 in):	3
Phi*Rn (kip/in):	4.18
Required Weld Strength (kip/in):	3.29
Plate Bending Capacity:	**96.2%**
Weld Capacity:	**78.8%**

Max Plate Bending Strengths

Mu_{xx} *(kip-in)* :	8.4
Phi*Mn_{xx} *(kip-in)* :	20.3
Mu_{yy} *(kip-in)* :	11.1
Phi*Mn_{yy} *(kip-in)* :	20.3

Mount Desktop – Post Modification Inspection (PMI) Report Requirements

Documents & Photos Required from Contractor – Passing Mount Analysis

Purpose – to provide Maser Consulting the proper documentation in order to complete the required Mount Desktop review of the Post Modification Inspection Report.

- Contractor is responsible for making certain the photos provided as noted below provide confirmation that the installation was completed in accordance with this Passing Mount Analysis.
- Contractor shall relay any data that can impact the performance of the mount, this includes safety issues.

Base Requirements:

- Any special photos outside of the standard requirements will be indicated on the passing MA
- Verification that loading is as communicated in the Passing Mount Analysis. NOTE If loading is different than what is conveyed contact Maser Consulting immediately.
- Each photo should be time and date stamped
- Photos should be high resolution and submitted in a Zip File and should be organized in the file structure as depicted in Schedule A attached.
- Contractor shall ensure that the safety climb wire rope is supported and not adversely impacted by the install of the modification components. This may involve the install of wire rope guides, or other items to protect the wire rope.
- The photos in the file structure should be uploaded to ***https://pmi.vzwsmart.com*** as depicted on the drawings

Photo Requirements:

- *Base and "During Installation Photos"*
  - Base pictures include
    - Photo of Gate Signs showing the tower owner, site name, and number
    - Photo of carrier shelter showing the carrier site name and number if available
    - Photos of the galvanizing compound and/or paint used (if applicable), clearly showing the label and name
  - "During Installation Photos if provided - must be placed only in this folder
- *Photos taken at ground level*
  - Overall tower structure before and after installation of the equipment modifications
  - Photos of the appropriate mount before and after installation of the modifications; if the mounts are at different rad elevations, pictures must be provided for all elevations that the modifications were installed
- *Photos taken at Mount Elevation*
  - Photos showing each individual sector before and also after installation of equipment.
    - These photos should also certify that the placement and geometry of the equipment on the mount is as depicted on the sketch and table in the mount analysis

- Photos showing the safety climb wire rope above and below the mount prior to modification.
- Photos showing the climbing facility and safety climb if present.

Antenna & equipment placement and Geometry Confirmation:

- The contractor must certify that the antenna & equipment placement and geometry is in accordance with the antenna placement diagrams as included in this mount analysis.

☐ The contractor certifies that the photos support and the equipment on the mount is as depicted on the antenna placement diagrams as included in this mount analysis.

☐ The contractor notes that the equipment on the mount is not in accordance with the antenna placement diagrams and has accordingly marked up the diagrams or provided a diagram outlining the differences.

Certifying Individual: Company _____

Name _____

Signature _____

Special Instructions / Validation as required from the MA or any other information the contractor deems necessary to share that was identified:

Issue:

- Contractor shall replace existing position 2 mount pipe with new 72" long P2.5 STD pipe 49" from position 1 pipe. Top of pipe shall match existing position 1 pipe location on mount. attach using SitePro1 SP219-H crossover plates. Refer to placement diagrams.
- Contractor to install safety climb cable guide (SitePro1, Part #: 120-203/317 or EOR approved equivalent) in locations where the wire rope is rubbing against mount to tower attachments. Contractor to provide photos of safety climb cable guide installation.
- Install new 36" P2.0 STD OVP mount pipe in the alpha sector. Connect to existing standoff horizontal using crossover plates (SitePro 1 Part #: SQCX4-K). The new mount pipe height tip is to extend 30" over the center of the standoff horizontal.

Response:

Schedule A – Photo & Document File Structure

- VzW Site Number / Name
  - Base & “During Installation” Photos
  - Pre-Installation Photos
    - Alpha
    - Beta
    - Gamma
    - Ground Level
    - Tape Drop
  - Post-Installation Photos
    - Alpha
    - Beta
    - Gamma
    - Ground Level
    - Tape Drop
    - Photos of climbing facility and safety climb – If Present
  - Certifications – Submission of this document including certifications
  - Specific Required Additional Photos

Structure: 535838-VZW - THOMPSON NORTH CT

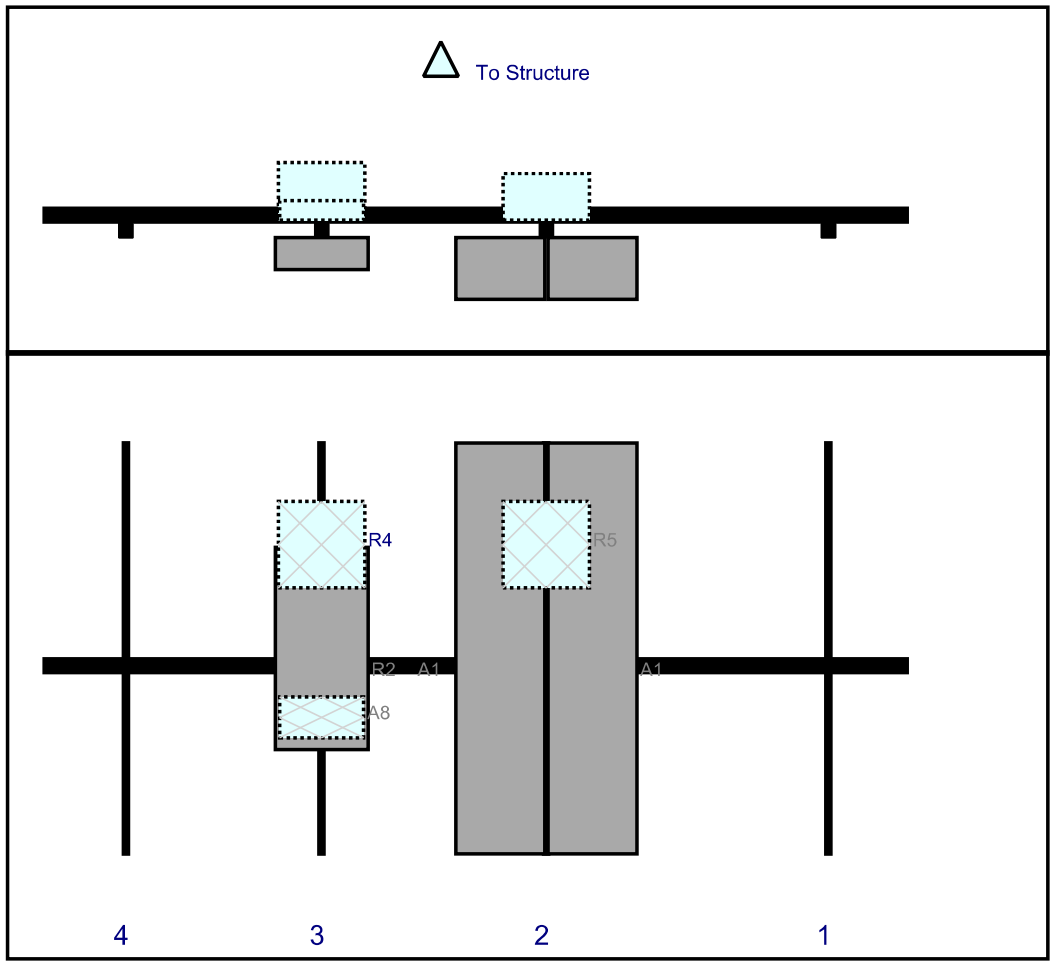
Sector: **A** 6/30/2021

Structure Type: Monopole 10081940

Mount Elev: 136.00 Page: 1

Plan View

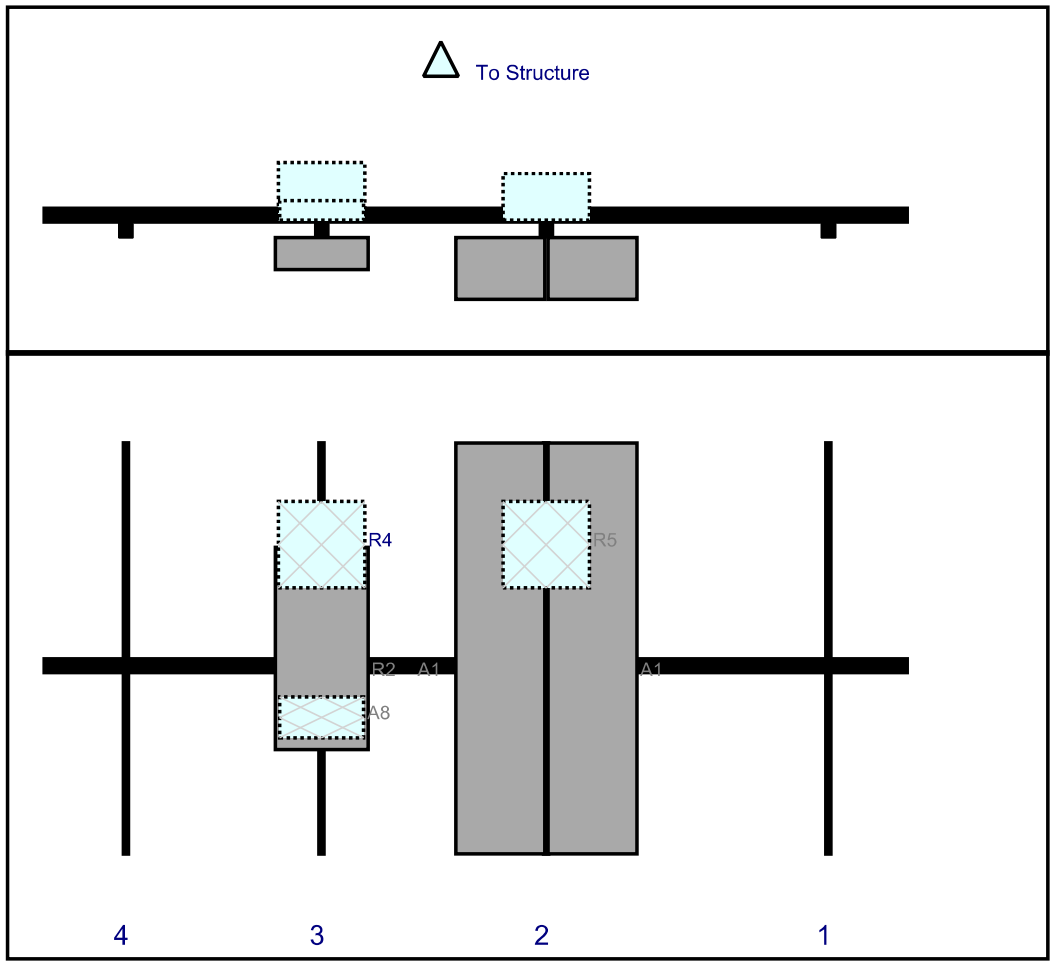
Front View
Looking at Structure



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A1	MX06FRO660-03	71.3	15.4	87.5	2	a	Front	36	8	Added	
A1	MX06FRO660-03	71.3	15.4	87.5	2	b	Front	36	-8	Added	
R5	B5/B13 RRH-BR04C	15	15	87.5	2	a	Behind	18	0	Added	
R2	MT6407-77A	35.1	16.1	48.5	3	a	Front	36	0	Added	
R4	B2/B66A RRH-BR049	15	15	48.5	3	a	Behind	18	0	Added	
A8	CHB626-43-2X	7.1	14.6	48.5	3	a	Behind	48	0	Added	

Plan View

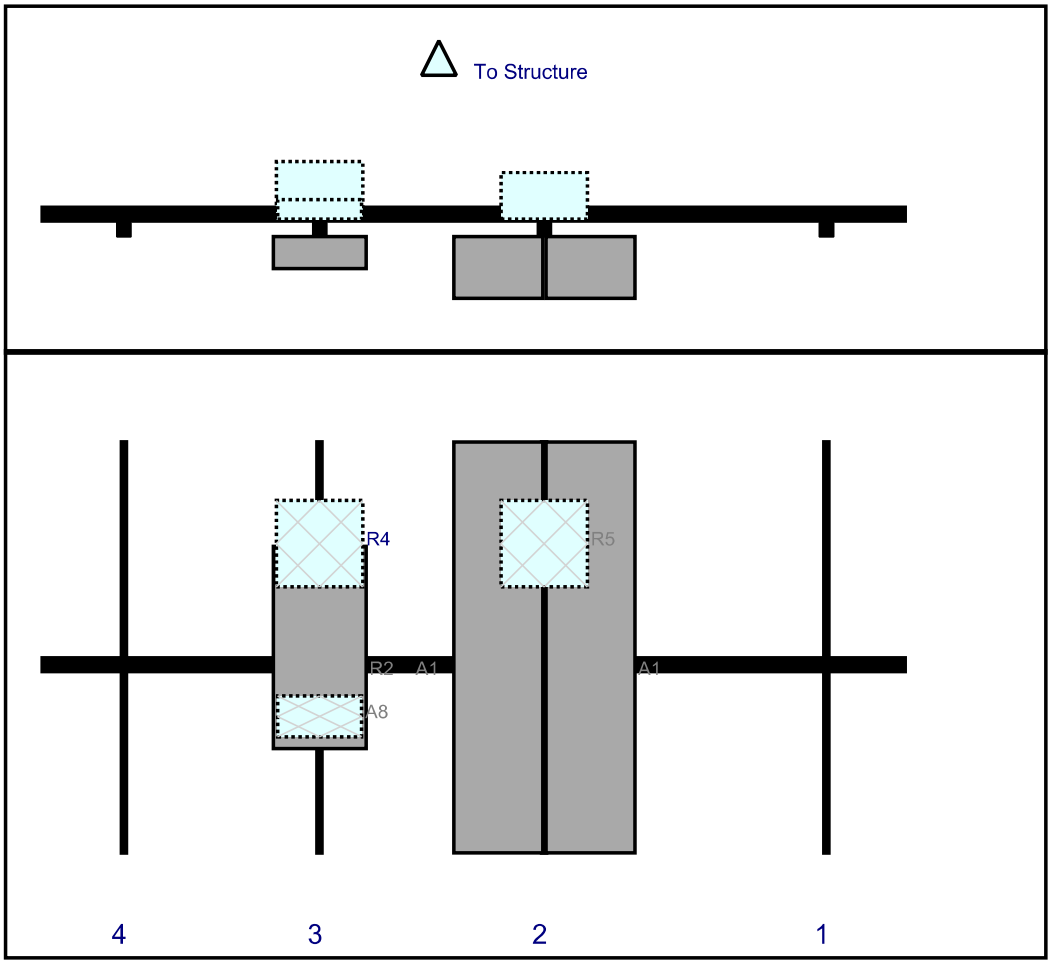
Front View
Looking at Structure



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A1	MX06FRO660-03	71.3	15.4	87.5	2	a	Front	36	8	Added	
A1	MX06FRO660-03	71.3	15.4	87.5	2	b	Front	36	-8	Added	
R5	B5/B13 RRH-BR04C	15	15	87.5	2	a	Behind	18	0	Added	
R2	MT6407-77A	35.1	16.1	48.5	3	a	Front	36	0	Added	
R4	B2/B66A RRH-BR049	15	15	48.5	3	a	Behind	18	0	Added	
A8	CHB626-43-2X	7.1	14.6	48.5	3	a	Behind	48	0	Added	

Plan View

Front View
Looking at Structure



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A1	MX06FRO660-03	71.3	15.4	87.5	2	a	Front	36	8	Added	
A1	MX06FRO660-03	71.3	15.4	87.5	2	b	Front	36	-8	Added	
R5	B5/B13 RRH-BR04C	15	15	87.5	2	a	Behind	18	0	Added	
R2	MT6407-77A	35.1	16.1	48.5	3	a	Front	36	0	Added	
R4	B2/B66A RRH-BR049	15	15	48.5	3	a	Behind	18	0	Added	
A8	CHB626-43-2X	7.1	14.6	48.5	3	a	Behind	48	0	Added	

Maser Consulting Connecticut

Subject	TIA-222-H Usage	
Site Information	Site ID:	535838-VZW / THOMPSON NORTH CT
	Site Name:	THOMPSON NORTH CT
	Carrier Name:	Verizon Wireless
	Address:	44 Rich Road North Grosvenordal, Connecticut 06277 Windham County
	Latitude:	42.0115°
	Longitude:	-71.852028°
Structure Information	Tower Type:	141-Ft Monopole
	Mount Type:	12.54-Ft T-Arm

To Whom It May Concern,

We respectfully submit the above referenced Antenna Mount Structural Analysis report in conformance with ANSI/TIA-222-H, Structural Standard for Antenna Supporting Structures and Antennas and Small Wind Turbine Support Structures.

The 2015 International Building Code states that, in Section 3108, telecommunication towers shall be designed and constructed in accordance with the provisions of TIA-222. TIA-222-H is the latest revision of the TIA-222 Standard, effective as of January 01, 2018.

As with all ANSI standards and engineering best practice is to apply the most current revision of the standard. This ensures the engineer is applying all updates. As an example, the TIA-222-H Standard includes updates to bring it in line with the latest AISC and ACI standards and it also incorporates the latest wind speed maps by ASCE 7 based on updated studies of the wind data.

The TIA-222-H standard clarifies these specific requirements for the antenna mount analysis such as modeling methods, seismic analysis, 30-degree increment wind directions and maintenance loading. Therefore, it is our opinion that TIA-222-H is the most appropriate standard for antenna mount structural analysis and is acceptable for use at this site to ensure the engineer is taking into account the most current engineering standard available.

Sincerely,

Dejian Xu

Dejian Xu, PE
Technical Manager

ATTACHMENT 5


Rich Rd
Rich Rd
Wilsonville Rd
Wilsonville Rd
Wilsonville Rd
Wilsonville Rd

THOMPSON,CT

38 RICH RD

Location
38 RICH RD
Mblu
97/ 28/ 7/ /
Acct#
005410
Owner
THOMPSON TOWN OF
Assessment
$43,900
Appraisal
$62,600
PID
2478
Building Count
1

Current Value

Appraisal

Valuation Year	Improvements	Land	Total
2019	$0	$62,600	$62,600

Assessment

Valuation Year	Improvements	Land	Total
2019	$0	$43,900	$43,900

Owner of Record

Owner THOMPSON TOWN OF
Co-Owner
Address PO BOX 899
N GROSVENORDALE, CT 06255
Sale Price $0
Certificate
Book & Page 0075/0087
Sale Date 02/10/1965

Ownership History

Ownership History

Owner	Sale Price	Certificate	Book & Page	Sale Date
THOMPSON TOWN OF	$0		0075/0087	02/10/1965

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	Vacant Land
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:	
Total Bthrms:	
Total Half Baths:	
Total Xtra Fixtrs:	
Total Rooms:	
Bath Style:	
Kitchen Style:	

Building Photo

Building Layout

Building Sub-Areas (sq ft) Legend

No Data for Building Sub-Areas

Extra Features

Extra Features Legend

No Data for Extra Features

Land

Land Use

Use Code	9030
Description	MUNICIPAL MDL-00
Zone	R40
Neighborhood	
Alt Land Appr	No
Category	

Land Line Valuation

Size (Acres)	8
Frontage	290
Depth	0
Assessed Value	$43,900
Appraised Value	$62,600

Outbuildings

Outbuildings Legend

No Data for Outbuildings

Valuation History

Appraisal

Valuation Year	Improvements	Land	Total
2018	$0	$213,500	$213,500
2017	$0	$213,500	$213,500
2016	$0	$213,500	$213,500

Assessment

Valuation Year	Improvements	Land	Total
2018	$0	$149,500	$149,500
2017	$0	$149,500	$149,500
2016	$0	$149,500	$149,500

closecloseclose

ATTACHMENT 6

THOMPSON NORTH

UNITED STATES POSTAL SERVICE®

Certificate of Mailing — Firm

Name and Address of Sender	TOTAL NO. of Pieces Listed by Sender	TOTAL NO. of Pieces Received at Post Office™	Affix Stamp Here *Postmark with Date of Receipt.*
Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103	2	2	neopost 10/14/2021 US POSTAGE $002.99 ZIP 06103 041L12203937 OLD STATE HOUSE STATION 06103 OCT 14 2021 USPS
	Postmaster, per *(name of receiving employee)*		

USPS® Tracking Number / Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	Amy St. Onge, First Selectman Town of Thompson 815 Riverside Drive North Grosvenordale, CT 06255				
2.	Tyra Penn-Gesek, Director of Planning and Development Town of Thompson 815 Riverside Drive North Grosvenordale, CT 06255				
3.					
4.					
5.					
6.					