

January 10, 2024

*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  
350B Cossaduck Hill Road, North Stonington, 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 (“RRHs”) on an existing tower and related equipment on the ground, near the base of the tower. The original tower was approved by the Siting Council (the “Council”) in February of 2012 (Docket No. 420). Cellco’s shared use of the tower was approved by the Siting Council in August of 2013 (TS-VER-102-130717A). A copy of the Docket No. 420 Decision and Order and Cellco’s TS-VER-102-130717A approval are included in [Attachment 1](#).

Cellco now intends to modify its facility by replacing nine (9) antennas and three (3) RRHs with nine (9) new antennas and six (6) new RRHs on Cellco’s existing antenna platform and mounting assemblies. A set of project plans showing Cellco’s proposed facility modifications and specifications for the new antenna and RRH 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 North Stonington’s Chief Elected Official and Land Use Officer. A copy of this letter is being sent to 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).

28593549-v1

Melanie A. Bachman, Esq.  
January 10, 2024  
Page 2

1. The proposed modifications will not result in an increase in the height of the existing tower. Cellco's new antennas and RRHs will be installed at the same height on the tower.
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 and RRHs will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. Included in Attachment 3 is a Calculated Radio Frequency Emissions Report demonstrating that the proposed modified facility will comply with the FCC safety standards. 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 Report ("SA") and Antenna Mount Analysis Report ("MA"), the existing tower, tower foundation and antenna mounts 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 and the property owner 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:

Robert Carlson, First Selectman  
Cheryl Konsavitch, Land Use Assistant  
Paul Buehler, Property Owner  
Aleksy Tyurin

# **ATTACHMENT 1**

<b>DOCKET NO. 420 - SBA Towers III and New Cingular Wireless PCS, LLC application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and management of a telecommunications facility at one of three sites located at 49 Mountain Avenue; 23/25 Northwest Corner Road; or 350B Cossaduck Hill Road, North Stonington, Connecticut.</b>	} } }	Connecticut  Siting  Council  February 2, 2012
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**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, maintenance, and management 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 SBA Towers III (SBA), hereinafter referred to as the Certificate Holder, for a telecommunications facility at Site C, located at 350B Cossaduck Hill Road, North Stonington, Connecticut. The Council denies certification of Site A and Site B, located at 49 Mountain Avenue and 23/25 Northwest Corner Road, respectively, in North Stonington, Connecticut.

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

1. The tower shall be constructed as a monopole, no taller than necessary to provide the proposed telecommunications services, sufficient to accommodate the antennas of New Cingular Wireless PCS, LLC (AT&T) and other entities, both public and private, but such tower shall not exceed a height of 190 feet above ground level. The height at the top of the AT&T's antennas shall not exceed 190 feet above ground level. The tower shall be designed with a yield point to ensure that the tower setback radius remains within the boundaries of the subject property.
  
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 North Stonington for comment, and all parties and intervenors as listed in the service list, and submitted to and approved by the Council prior to the commencement of facility construction and shall include:
  - a) a final site plan(s) of site development to include specifications for the tower, tower foundation, antennas, equipment compound, radio equipment, access road, utility line, and landscaping; and
  - b) construction plans for site clearing, grading, landscaping, water drainage, and erosion and sedimentation controls consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.



3. Prior to the commencement of operation, the Certificate Holder shall provide the Council worst-case modeling of the electromagnetic radio frequency power density of all proposed entities' antennas at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin No. 65, August 1997. The Certificate Holder shall ensure a recalculated report of the electromagnetic radio frequency power density be submitted to the Council if and when circumstances in operation cause a change in power density above the levels calculated and provided pursuant to this Decision and Order.
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 North Stonington 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 with at least one fully operational wireless telecommunications carrier providing wireless service 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. Authority to monitor and modify this schedule, as necessary, is delegated to the Executive Director. The Certificate Holder shall provide written notice to the Executive Director of any schedule changes as soon as is practicable.
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 North Stonington. 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. Any nonfunctioning antenna, and associated antenna mounting equipment, on this facility shall be removed 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 site 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.

12. The Certificate Holder shall remit timely payments associated with annual assessments and invoices submitted by the Council for expenses attributable to the facility under Conn. Gen. Stat. §16-50v.
13. This Certificate may be transferred in accordance with Conn. Gen. Stat. §16-50k(b), provided both the Certificate Holder/transferor and the transferee are current with payments to the Council for their respective annual assessments and invoices under Conn. Gen. Stat. §16-50v. In addition, both the Certificate Holder/transferor and the transferee shall provide the Council a written agreement as to the entity responsible for any quarterly assessment charges under Conn. Gen. Stat. §16-50v(b)(2) that may be associated with this facility.
14. The Certificate Holder shall maintain the facility and associated equipment, including but not limited to, the tower, tower foundation, antennas, equipment compound, radio equipment, access road, utility line and landscaping in a reasonable physical and operational condition that is consistent with this Decision and Order and a Development and Management Plan to be approved by the Council.
15. If the Certificate Holder is a wholly-owned subsidiary of a corporation or other entity and is sold/transferred to another corporation or other entity, the Council shall be notified of such sale and/or transfer and of any change in contact information for the individual or representative responsible for management and operations of the Certificate Holder within 30 days of the sale and/or transfer.

Pursuant to General Statutes § 16-50p, the Council hereby directs 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 Day.

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 to this proceeding are:

**Applicant**

SBA Towers III (SBA)  
and New Cingular Wireless PCS, LLC (AT&T)

**Its Representative**

Daniel M. Laub, Esq.  
Christopher B Fisher, Esq.  
Cuddy & Feder LLP  
445 Hamilton Avenue, 14<sup>th</sup> Floor  
White Plains, NY 10601

Hollis Redding  
SBA  
One Research Drive, Suite 200C  
Westborough, MA 01581

Michele Briggs  
AT&T  
500 Enterprise Drive  
Rocky Hill, CT 06067-3900

**Intervenor**

Peter R. and Gisele A. Buehler

**Its Representative**

Peter R. and Gisele A. Buehler  
350D Cossaduck Hill Rd.  
North Stonington, CT 06359

16247 Fringe Tree Drive  
Spring Hill, FL 34610



STATE OF CONNECTICUT  
CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2933 Fax: (860) 827-2930

E-Mail: [siting.council@ct.gov](mailto:siting.council@ct.gov)

[www.ct.gov/csc](http://www.ct.gov/csc)

August 9, 2013

Kenneth C. Baldwin, Esq.  
Robinson & Cole LLP  
280 Trumbull Street  
Hartford, CT 06103

RE: **TS-VER-102-130717A** – Cellco Partnership d/b/a Verizon Wireless request for an order to approve the shared use of an existing telecommunications facility located at 350B Cossaduck Hill Road, North Stonington, Connecticut.

Dear Attorney Baldwin:

At a public meeting held August 8, 2013, the Connecticut Siting Council (Council) ruled that the shared use of this existing tower site is technically, legally, environmentally, and economically feasible and meets public safety concerns, and therefore, in compliance with General Statutes § 16-50aa, the Council has ordered the shared use of this facility to avoid the unnecessary proliferation of tower structures with the following conditions:

- The coax and accessory equipment shall be installed as recommended in the Structural Analysis Report prepared by FDH Engineering dated April 5, 2013 and stamped by Christopher Murphy;
- Within 45 days following completion of the antenna installation, Verizon shall provide documentation certified by a professional engineer that its installation complied with the recommendations of the structural analysis;
- Any deviation from the proposed installation as specified in the original tower share request and supporting materials with the Council shall render this decision invalid;
- Any material changes to the proposed installation as specified in the original tower share request and supporting materials filed with the Council shall require an explicit request for modification to the Council pursuant to Connecticut General Statutes § 16-50aa, including all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65;
- Not less than 45 days after completion of the proposed installation, the Council shall be notified in writing that the installation has been completed;
- The validity of this action shall expire one year from the date of this letter; and
- The applicant may file a request for an extension of time beyond the one year deadline provided that such request is submitted to the Council not less than 60 days prior to the expiration.

This decision is under the exclusive jurisdiction of the Council. This facility has been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower. Any deviation from this format may result in the Council implementing enforcement proceedings pursuant to General Statutes § 16-50u including, without limitation, imposition of expenses resulting from such failure and of civil penalties in an amount not less than one thousand dollars per day for each day of construction or operation in material violation.

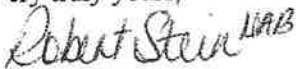


This decision applies only to this request for tower sharing and is not applicable to any other request or construction. Please be advised that the validity of this action shall expire one year from the date of this letter.

The proposed shared use is to be implemented as specified in your letter dated July 16, 2013, including the placement of all necessary equipment and shelters within the tower compound.

Thank you for your attention and cooperation.

Very truly yours,

Handwritten signature of Robert Stein in cursive, with the initials "HAB" written to the right of the signature.

Robert Stein  
Chairman

RS/CDM/jb

c: The Honorable Nicholas H. Mullane, II, First Selectman, Town of North Stonington  
Craig Grimord, Senior Planning & Zoning Official, Town of North Stonington  
Sean Gormley, SBA

# **ATTACHMENT 2**



20 ALEXANDER DRIVE, 2nd FLOOR  
WALLINGFORD, CT 06492

**WYASSUP LAKE CT**  
350B COSSADUCK HILL ROAD  
NORTH STONINGTON, CT 06359  
NEW LONDON COUNTY

**PROJECT TYPE: UPGRADE TO EXISTING WIRELESS TELECOMMUNICATIONS  
INSTALLATION ON EXISTING 190'± MONOPOLE**

**SUPPORTING DOCUMENTS**

- RADIO FREQUENCY (RF) DESIGN DATE: 11/11/09
- ANTENNA MOUNT STRUCTURAL ANALYSIS DATE: 12/04/09 (BY COLLEEN ENGINEERING & DESIGN)
- ANTENNA SUPPORT STRUCTURE MONOPOLE STRUCTURAL ANALYSIS DATE: 12/18/09 (BY SBA COMMUNICATIONS CORPORATION)



20 ALEXANDER DRIVE, 2ND FLOOR  
WALLINGFORD, CT 06492  
(860) 911-7338



SBA COMMUNICATIONS CORP.  
125 SOUTH MAIN STREET, SUITE 125  
NORTH STONINGTON, MA 01521  
(508) 251-6722



CHAPPELL  
ENGINEERING  
ASSOCIATES, LLC  
145 ESCOPE DRIVE  
201 NORTH POST ROAD, WEST, SUITE 101  
WALLINGFORD, MA 01722  
www.ChappellEngineering.com



CHECKED BY: *[Signature]* JMT  
APPROVED BY: JMT

**SUBMITTALS**

REV	DATE	DESCRIPTION	BY
1	07/14/09	ISSUE FOR PERMIT	JMT
2	07/14/09	ISSUE FOR PERMIT	JMT

**WYASSUP LAKE CT**  
350B COSSADUCK HILL ROAD  
NORTH STONINGTON, CT 06359

VER LOCATION CODE: 06359  
MAG ZOOM IN: 06359-0017  
PAGE PROJECT ID: 06359-0017

SHEET TITLE  
**TITLE SHEET**

SHEET NUMBER  
**T01**

**SHEET INDEX**

DWG.	DESCRIPTION	REV.
T01	TITLE SHEET	1
G001	GENERAL NOTES	1
A01	SITE PLAN	1
A02	COMPOUND PLAN	1
A03	TOWER ELEVATIONS	1
A04	ANTENNA PLANS & WIRE DETAILS	1
RF01	RF DATA	1
RF02	RF PULLING DIAGRAM	1
RF03	RF COLOR CODE SPECIFICATIONS	1
E01	GROUNDING NOTES & DETAILS	1

**DO NOT SCALE DRAWINGS**

ALL PLANS, EXISTING DIMENSIONS AND CONDITIONS AT THE PROPOSED PROJECT SITE SHALL BE VERIFIED IN THE FIELD DURING THE CONSTRUCTION PHASE. THE PROJECT OWNERS REPRESENTATIVE SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES IMMEDIATELY PRIOR TO THE COMMENCEMENT OF WORK. WORK SHALL BE STOPPED IMMEDIATELY IN THE EVENT OF LACK OF SUCH NOTIFICATION. SUCH NOTICE SHALL BECOME THE RESPONSIBILITY OF THE PREVAILING CONTRACTOR RESPONSIBLE FOR CONSTRUCTION.

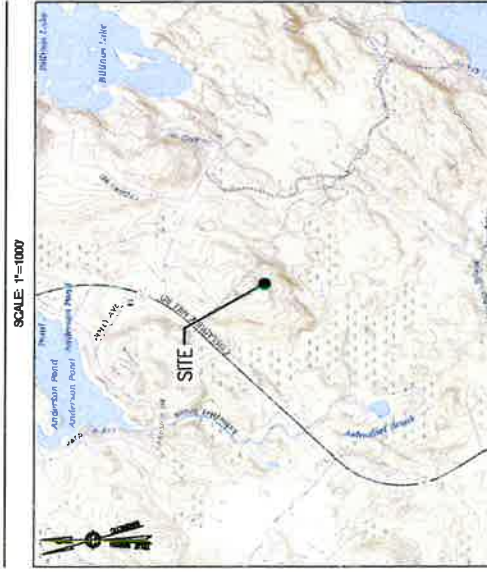
**PROJECT DESCRIPTION**

- THIS IS AN UNMANNED AND RESTRICTED ACCESS EQUIPMENT INSTALLATION AND WILL BE USED FOR THE TRANSMISSION OF RADIO SIGNAL FOR THE PURPOSE OF PROVIDING PUBLIC WIRELESS TELECOMMUNICATIONS SERVICE.
- CONSUME UNRECOVERABLE ENERGY.
- NO PORTABLE WATER SUPPLY IS OR WILL BE PROVIDED AT THIS LOCATION.
- NO PORTABLE WATER IS OR WILL BE GENERATED AT THIS LOCATION.
- NO SOLID WASTE IS OR WILL BE GENERATED AT THIS LOCATION.

**SCOPE OF WORK**

- REMOVE:
- 9 ANTENNAS
  - 3 Poles
- INSTALL:
- 6 ANTENNAS
  - 4 Poles

**VICINITY MAP**



**DRIVING DIRECTIONS**

FROM WALLINGFORD, TAKE CT-15 NORTH, TAKE EXIT 81N E FOR R1 NORTH TOWARD CT 69 (WALLINGFORD MIDDLE TOWN). AT THE PARK TO STAY ON CT 2 EAST AND FOLLOW SIGNS FOR WYASSUP LAKE. TAKE THE CT 2 EAST ONTO WYASSUP LAKE. TURN RIGHT ONTO CT 2 EAST ON WASHINGTON STREET. TAKE SLIGHT RIGHT ONTO WASHINGTON STREET. CONTINUE ONTO CHILSEA HARBOR DRIVE. TURN RIGHT ONTO WATER STREET. CONTINUE ONTO NORTH MAIN STREET WITHOUT ROAD. TURN RIGHT ONTO WYASSUP LAKE. TURN LEFT ONTO CT 201 NORTH. TURN RIGHT. THE SITE IS LOCATED ON THE LEFT HAND SIDE OF STONINGTON ROAD. TURN LEFT ONTO CT 201 NORTH. TURN RIGHT. THE SITE IS LOCATED ON THE LEFT HAND SIDE.

**SITE INFORMATION**

VERIZON LOCATION CODE: 487370  
WYASSUP LAKE CT  
CITY/TOWNS: NORTH STONINGTON, CT  
SBA SITE NUMBER: 241851\_V2  
SBA CLOUD APP NUMBER: 500024417  
MAG LOCATION ID: 1827288  
MAG PROJECT ID: 350B COSSADUCK HILL ROAD  
SITE ADDRESS: NORTH STONINGTON, CT 06359  
PROPERTY OWNER: PAUL R. GUERLEN  
TOWER OWNER: SBA TOWERS VI, LLC  
350B COSSADUCK HILL ROAD  
NORTH STONINGTON, CT 06359  
LOCAL ADDRESS: 500 CONGRESS AVENUE  
BOCA RATON, FL 33487  
LOCAL PHONE: (561) 995-2267  
COUNTY: NEW LONDON, CT  
ZONING DISTRICT: RR08 RESIDENTIAL  
STRUCTURE TYPE: MONOPOLE  
STRUCTURE HEIGHT: 190'±  
STRUCTURE HEIGHT MAINTENANCE: 444'±  
GROUND ELEVATION: 194'±  
TOTAL ANSL: 638'±  
CENTER OF EXISTING MONOPOLE: N 41° 29' 52.24" E 148897 (RAD 93)  
N 41° 29' 52.24" E 148897 (RAD 93)  
SBA PROJECT NUMBER: 06359-0017  
CHAPPELL ENGINEERING ASSOCIATES, LLC  
201 NORTH POST ROAD WEST, SUITE 101  
WALLINGFORD, MA 01722

**GENERAL NOTES**

- CONTRACTOR SHALL VERIFY ALL PLANS, EXISTING DIMENSIONS, AND CONDITIONS ON JOB SITE. DISCREPANCIES BEFORE PROCEEDING WITH THE WORK. FAILURE TO NOTIFY THE ARCHITECT/ENGINEER PLACES THE RESPONSIBILITY ON THE CONTRACTOR TO CORRECT THE DISCREPANCIES AT THE CONTRACTORS EXPENSE.
- NEW CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE CODES AND ORDINANCES.  
BUILDING CODE: 2002 CONNECTICUT STATE BUILDING CODE  
ELECTRICAL CODE: 2002 NATIONAL ELECTRICAL CODE  
STRUCTURAL CODE: 2002 INTERNATIONAL BUILDING CODES FOR ANTENNA SUPPORTING STRUCTURES AND ANTENNAS



AT LEAST 72 HOURS PRIOR TO DISMANTLING THE CONTRACTOR IS REQUIRED TO CALLING SAFE AT 811















20 ALUMBER DRIVE, 2ND FLOOR  
 134 ALBANY ROAD, SUITE 105  
 ALBANY, NY 12242  
 (518) 241-7320



SBA COMMERCIAL CODE  
 134 ALBANY ROAD, SUITE 105  
 ALBANY, NY 12242  
 (518) 241-7320



CABLE MATTERS  
 211 EASTING CENTER  
 SUITE 100  
 WASHINGTON, VA 22787  
 (540) 401-7402  
 www.cablematters.com



DATE: JET  
 APPROVED BY: JET

REV	DATE	DESCRIPTION	BY
1		ISSUED FOR PERMIT	JET
2		REVISED FOR OWNER	JET

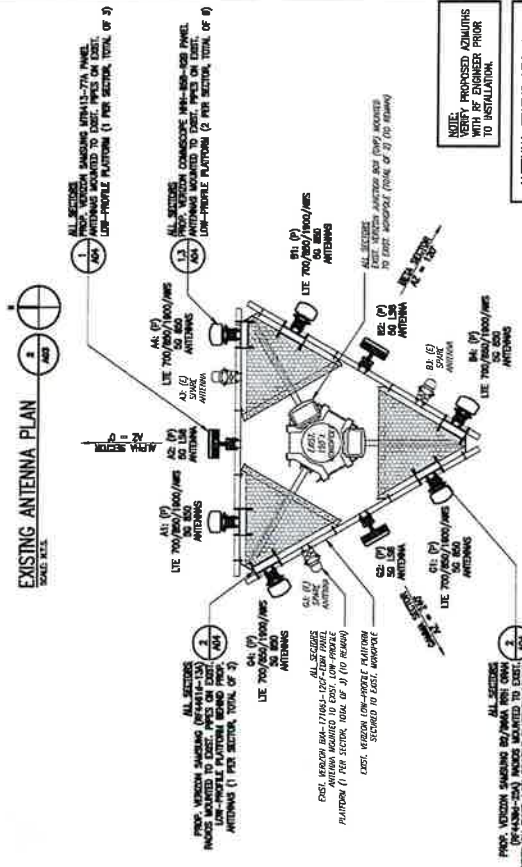
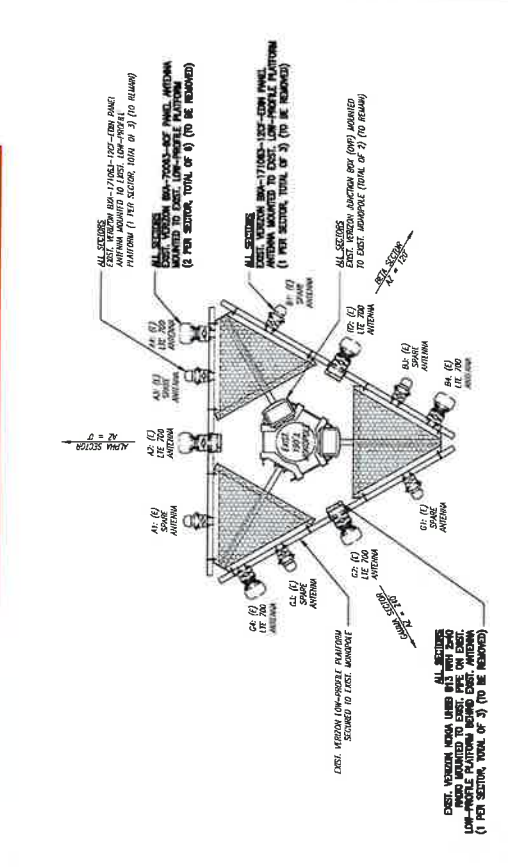
**WYASSUP LAKE CT**  
 3888 CORSAUCK HILL ROAD  
 NORTH STONINGTON, CT 06259

PROJECT NAME & ADDRESS  
 SHEET NO.  
 TOWER ELEVATION & ANTENNA PLANS

SHEET NAME  
 TOWER ELEVATION & ANTENNA PLANS  
 SHEET NUMBER  
**A03**

**SPECIAL USE - CONSTRUCTION WORK ONLY:** THIS DRAWING PROVIDES GENERAL INFORMATION FOR THE DESIGN OF TOWER-RELATED EQUIPMENT PER RECOMMENDATIONS FROM THE VERIZON CONTRACTOR. THE CONTRACTOR SHALL VERIFY THE STRUCTURAL ANALYSIS FOR ANY SPECIAL REQUIREMENTS FOR RELOCATION, SPECIAL SHIELDING OF TOWER TOP EQUIPMENT AND FOR ANY SPECIAL REQUIREMENTS FOR RELOCATION.

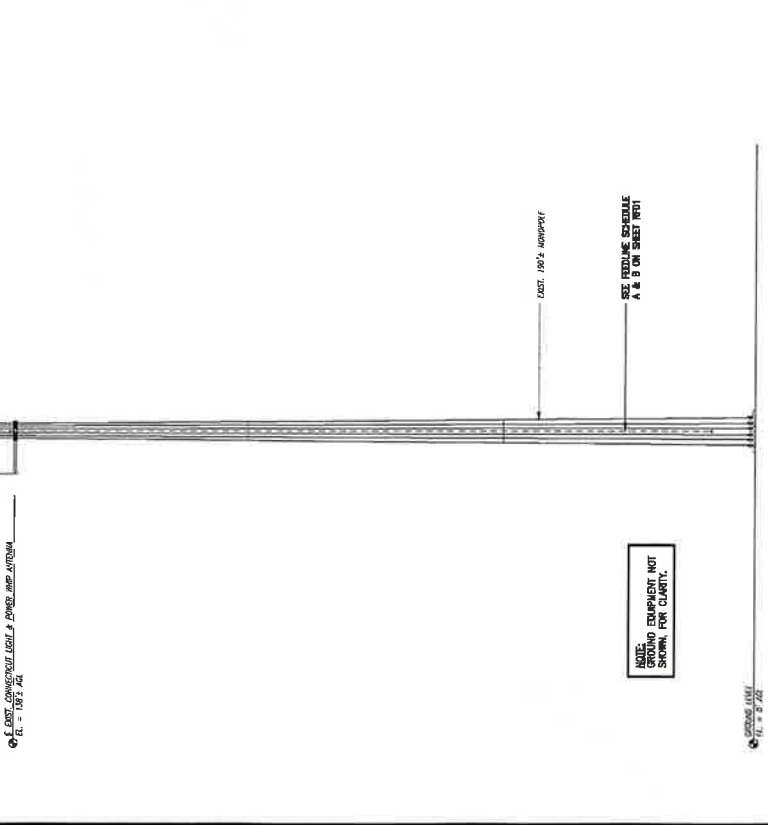
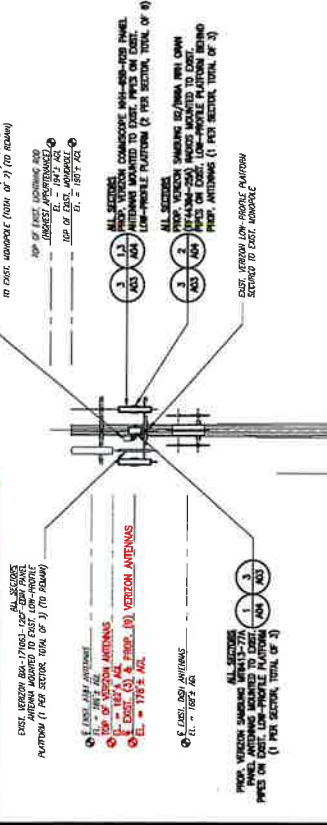
**SPECIAL CONSTRUCTION NOTE:** SBA-PROVIDED ANTENNA MOUNTS, STRUCTURAL INSTALLATION EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE VERIZON CONTRACTOR'S RECOMMENDATIONS. THE CONTRACTOR SHALL VERIFY THE STRUCTURAL ANALYSIS FOR ANY SPECIAL REQUIREMENTS FOR RELOCATION, SPECIAL SHIELDING OF TOWER TOP EQUIPMENT AND FOR ANY SPECIAL REQUIREMENTS FOR RELOCATION.



NOTE: VERIFY PROPOSED ANTENNAS WITH RF ENGINEER PRIOR TO INSTALLATION.

**ANTENNA STATUS LEGEND:**  
 EMPTY - EMPTY PPE  
 (E) - EXISTING  
 (P) - INSTALL  
 (?) - FUTURE

**BASE CENTER NOTE:** VERIZON ANTENNA AND MOUNT RAD CENTER SHOWN IN ELEVATION ARE ACCORDING TO STRUCTURAL ANALYSIS DONE BY OTHERS AND MAY DIFFER FROM RAD CENTER ON PDS PROVIDED BY VERIZON.



NOTE: VERIFY PROPOSED ANTENNAS WITH RF ENGINEER PRIOR TO INSTALLATION.

**ANTENNA STATUS LEGEND:**  
 EMPTY - EMPTY PPE  
 (E) - EXISTING  
 (P) - INSTALL  
 (?) - FUTURE



20 ALBANY RD, 2ND FLOOR  
WALLINGFORD, CT 06492  
(860) 941-2336



800 COMMUNICATIONS CORP.  
125 NEWBURY STREET, SUITE 125  
LYNN, MASSACHUSETTS 01901  
(860) 351-0720



CHINNELL  
ENGINEERING  
ASSOCIATES, LLC  
24 EIGHTH AVENUE  
2ND FLOOR WEST SUITE 101  
WALLINGFORD, CT 06492  
(860) 941-2336  
www.chinnell-engineering.com



CHECKED BY: JMT  
APPROVED BY: JMT

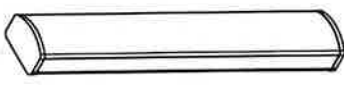
NO.	DATE	DESCRIPTION	BY
1	6/24/24	ISSUED FOR CONSTRUCTION	JMT
2	12/12/23	ISSUED FOR REVIEW	JMT

PROJECT NAME & ADDRESS  
**WYASSUP LAKE CT**  
348B COSSADLUCK HILL ROAD  
NORTH STONINGTON, CT 06399

VIEW LOCATION CODE: 001978  
SBO LOCATION ID: 000004112  
PDE PROJECT ID: 10000000

SHEET TITLE  
**SITE DETAILS**

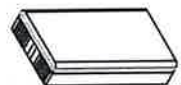
SHEET NUMBER  
**A04**



**DOWNSCOPE WEL-600-600 ANTENNA**  
DIMENSIONS: 18.0" H x 4.0" W x 7.1" D  
WEIGHT: 4.37 lbs  
QUANTITY: 2 PER SECTOR, TOTAL OF 6  
SECTORS ALPHA, BETA, GAMMA

**ANTENNA DETAILS**  
SCALE: N.T.S.

1  
100'



**SAMSUNG MTR411-77A ANTENNA**  
DIMENSIONS: 18.0" H x 4.0" W x 7.1" D  
WEIGHT: 4.37 lbs  
QUANTITY: 1 PER SECTOR, TOTAL OF 3  
SECTORS ALPHA, BETA, GAMMA

**ANTENNA DETAILS**  
SCALE: N.T.S.

1  
100'



**SAMSUNG R244814-13A RB/713 RADIO**  
DIMENSIONS: 14.0" H x 10.0" W x 7.1" D  
WEIGHT: 7.1 lbs  
QUANTITY: 1 PER SECTOR, TOTAL OF 3  
SECTORS ALPHA, BETA, GAMMA

**RADIO DETAIL**  
SCALE: N.T.S.

2  
100'



**SAMSUNG R244814-20A RB/706A RADIO**  
DIMENSIONS: 14.0" H x 10.0" W x 7.1" D  
WEIGHT: 7.1 lbs  
QUANTITY: 1 PER SECTOR, TOTAL OF 3  
SECTORS ALPHA, BETA, GAMMA

**RADIO DETAIL**  
SCALE: N.T.S.

2  
100'



20 ALABAMA DRIVE, 2ND FLOOR  
ANN ARBOR, MI 48106  
(248) 961-7326



300 COMMERCIAL CORP.  
130 FARMERS MARK BLDG. 100  
ANN ARBOR, MI 48106  
(248) 961-4070



M.E. ELECTRIC CORP.  
1000 W. WATSON BLVD., SUITE 101  
ANN ARBOR, MI 48106  
(248) 981-7400  
www.meelectrical.com



DATE: 11/13/23  
APPROVED BY: [Signature]

REV	DATE	DESCRIPTION
1	11/13/23	ISSUED FOR CONSTRUCTION
2	11/13/23	ISSUED FOR PERMITS

**WYASSUP LAKE CT**  
388 COSSADUCK HILL ROAD  
NORTH STONINGTON, CT 06359

PROJECT NAME & NUMBER  
PROJECT CODE: 007070  
MPO LOCATION ID: 00004477  
FEED PROJECT ID: 00700000

RF DATA  
RF DATA  
RF DATA

### EXISTING EQUIPMENT CONFIGURATION

SECTOR	EQUIPMENT MAKE & MODEL	QTY	AZIMUTH (TRUE NORTH)	ANTENNA RAD	BAND	MECHANICAL DOWNTILT	ELECTRICAL DOWNTILT	EQUIPMENT STATUS	H (IN)	W (IN)	D (IN)	WEIGHT (LBS)	HYBRID CABLE SIZE & QTY
ALPHA	AMPEROL 804-171061-1207-100V ANTENNA	1	0°	170° S. AXL	SWR6	0°	0°	NEW	25.5	6.1	4.1	60.8	
	AMPEROL 804-20063-1627-100V ANTENNA	1	0°	170° S. AXL	L1E 700	0°	0°	NEW	21.0	11.2	4.5	17.4	
	AMPEROL 804-171061-1207-100V ANTENNA	1	0°	170° S. AXL	SWR6	0°	0°	NEW	25.5	6.1	4.1	60.8	
	AMPEROL 804-20063-1627-100V ANTENNA	1	0°	170° S. AXL	L1E 700	0°	0°	NEW	21.0	11.2	4.5	17.4	
BETA	AMPEROL 804-171061-1207-100V ANTENNA	1	150°	170° S. AXL	SWR6	0°	0°	NEW	25.5	6.1	4.1	60.8	
	AMPEROL 804-20063-1627-100V ANTENNA	1	150°	170° S. AXL	L1E 700	0°	0°	NEW	21.0	11.2	4.5	17.4	
	AMPEROL 804-171061-1207-100V ANTENNA	1	150°	170° S. AXL	SWR6	0°	0°	NEW	25.5	6.1	4.1	60.8	
	AMPEROL 804-20063-1627-100V ANTENNA	1	150°	170° S. AXL	L1E 700	0°	0°	NEW	21.0	11.2	4.5	17.4	
GAMMA	AMPEROL 804-171061-1207-100V ANTENNA	1	240°	170° S. AXL	SWR6	0°	0°	NEW	25.5	6.1	4.1	60.8	
	AMPEROL 804-20063-1627-100V ANTENNA	1	240°	170° S. AXL	L1E 700	0°	0°	NEW	21.0	11.2	4.5	17.4	
	AMPEROL 804-171061-1207-100V ANTENNA	1	240°	170° S. AXL	SWR6	0°	0°	NEW	25.5	6.1	4.1	60.8	
	AMPEROL 804-20063-1627-100V ANTENNA	1	240°	170° S. AXL	L1E 700	0°	0°	NEW	21.0	11.2	4.5	17.4	
ALL	NOTE: SEE THE 2ND AND 3RD SHEETS	3	-	-	-	-	-	CR	25.6	16.5	15.6	32.6	

NOTE: (1) 6x15 HYBRID CABLE

### FINAL EQUIPMENT CONFIGURATION

SECTOR	EQUIPMENT MAKE & MODEL	QTY	AZIMUTH (TRUE NORTH)	ANTENNA RAD	BAND	MECHANICAL DOWNTILT	ELECTRICAL DOWNTILT	EQUIPMENT STATUS	H (IN)	W (IN)	D (IN)	WEIGHT (LBS)	HYBRID CABLE SIZE & QTY
ALPHA	COMSCOPE 804-171061-1207-100V ANTENNA	1	0°	170° S. AXL	L1E 700/850/1000/1000/1000/1000	0°/0°/0°/0°	2°/2°/0°/0°	NEW	26.0	11.9	7.1	60.8	
	COMSCOPE 804-20063-1627-100V ANTENNA	1	0°	170° S. AXL	SWR6	0°	0°	NEW	25.5	6.1	4.1	60.8	
	COMSCOPE 804-171061-1207-100V ANTENNA	1	0°	170° S. AXL	L1E 700/850/1000/1000/1000/1000	0°/0°/0°/0°	2°/2°/0°/0°	NEW	26.0	11.9	7.1	60.8	
	COMSCOPE 804-20063-1627-100V ANTENNA	1	0°	170° S. AXL	SWR6	0°	0°	NEW	25.5	6.1	4.1	60.8	
BETA	COMSCOPE 804-171061-1207-100V ANTENNA	1	150°	170° S. AXL	L1E 700/850/1000/1000/1000/1000	0°/0°/0°/0°	2°/2°/0°/0°	NEW	26.0	11.9	7.1	60.8	
	COMSCOPE 804-20063-1627-100V ANTENNA	1	150°	170° S. AXL	SWR6	0°	0°	NEW	25.5	6.1	4.1	60.8	
	COMSCOPE 804-171061-1207-100V ANTENNA	1	150°	170° S. AXL	L1E 700/850/1000/1000/1000/1000	0°/0°/0°/0°	2°/2°/0°/0°	NEW	26.0	11.9	7.1	60.8	
	COMSCOPE 804-20063-1627-100V ANTENNA	1	150°	170° S. AXL	SWR6	0°	0°	NEW	25.5	6.1	4.1	60.8	
GAMMA	COMSCOPE 804-171061-1207-100V ANTENNA	1	240°	170° S. AXL	L1E 700/850/1000/1000/1000/1000	0°/0°/0°/0°	2°/2°/0°/0°	NEW	26.0	11.9	7.1	60.8	
	COMSCOPE 804-20063-1627-100V ANTENNA	1	240°	170° S. AXL	SWR6	0°	0°	NEW	25.5	6.1	4.1	60.8	
	COMSCOPE 804-171061-1207-100V ANTENNA	1	240°	170° S. AXL	L1E 700/850/1000/1000/1000/1000	0°/0°/0°/0°	2°/2°/0°/0°	NEW	26.0	11.9	7.1	60.8	
	COMSCOPE 804-20063-1627-100V ANTENNA	1	240°	170° S. AXL	SWR6	0°	0°	NEW	25.5	6.1	4.1	60.8	
ALL	NOTE: SEE THE 2ND AND 3RD SHEETS	3	-	-	-	-	-	CR	25.6	16.5	15.6	32.6	

NOTE: (1) 6x15 HYBRID CABLE

### FEEDLINE SCHEDULE

SCHEDULE	FEEDLINES	LOCATION
A	<p>EXISTING TO REMAIN</p> <p>(1) 6x15 HYBRID CABLE PER PDS ANTENNA</p> <p>(2) 6x15 HYBRID CABLES</p> <p><b>ADDITION TO BE SUPPLIED: NONE</b></p>	ROUTED PER STRUCTURAL PRACTICES
B	<p>PROPOSED:</p> <p>NONE</p>	

NOTES:  
 1. "RF" POINTS EXISTING TO REMAIN.  
 2. "RF" POINTS EXISTING TO BE REMOVED.  
 3. "RF" POINTS LISTED AS "NONE" MEANS NO POINTS TO BE REMOVED.  
 4. INFORMATION IS BASED ON PDS DATED 11/10/23.



20 LUSCOMBE DRIVE AND FLOOR  
WALLINGFORD, CT 06492  
(860) 741-7338



SBA CONSULTANTS CORP.  
124 STAMFORD ROAD, SUITE 105  
STAMFORD, CT 06901  
(860) 351-8750



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ENGINEERING  
ASSOCIATES, LLC  
P.O. BOX 100  
WALLINGFORD, CT 06492  
(860) 481-7400  
www.chappelleng.com



CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS	
NO.	DESCRIPTION
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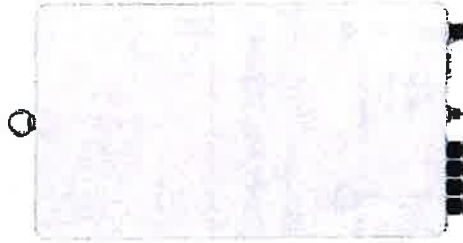


# C-band 64T64R

## Gen 2

SAMSUNG

Gen 2 : Higher conducted power ratio with reduced size/volume/weight vs Gen 1 and also SOC embedded for flexibility to support new features



※ Preliminary Design: External appearance and mechanical design can be subject to change

Gen 2. 64T64R C-band MMU Dimensions	
Size (WxHxD)	400 x 734 x 140 mm (15.75 x 28.90 x 5.51 inch)
Weight	26kg (57.3 lb)

Item	Gen 2. 64T64R (MT6413-77A)
Air Technology	NR-n77/FDD
Frequency	3700 - 3980 MHz
IBW	200 MHz
OBW	200 MHz
Carrier Bandwidth	20MHz (ready)/40/60/80/100 MHz
# of Carriers	2 carriers
Layer	DL : 16L, UL : 16RX (BL)
RF Chain	64T64R
Antenna Configuration	4V16H with 192 AE
ERP	80.5 dBm @320W (55 dBm + 25.5 dB)
Conductive Power	320W
Spectrum Analyzer	TX/RX support
RX Sensitivity	Typical -97.8dBm @ (1Rx, 18.36MHz with 30kHz, 51RBs)
Modulation	DL 256QAM support, (DL 1024QAM with 1~2dB power back-off)
Function Split	DL/UL option 7-2x
Input Power	-48 VDC (-38 VDC to -57 VDC)
Power Consumption	1,287W (100% load, room temp.)
Size (WHD)	400 x 734 x 140 mm (15.75 x 28.90 x 5.51 inch)
Volume	41.1L
Weight	26kg (57.3 lb)
Operating Temperature	-40°C - 55°C (w/o solar load)
Cooling	Natural convection 3GPP 38.104
Unwanted Emission	FCC 47 CFR 27.53 : < -13dBm/MHz < -40 dBm/MHz @ above 4 GHz < -50 dBm /MHz @ 4,040 ~ 4,050 MHz < -60 dBm /MHz @ above 4,050 MHz
Optic Interface	15km, 4 ports (25Gbps x 4), SFP28, single mode, Bi-di. (Option: Duplex)
Mounting Options	Pole, wall
NB-IoT	Not support
External Alarm	4RX
Fronthaul Interface	eCPRI

**SAMSUNG**

# AWS/PCS MACRO RADIO

DUAL-BAND AND HIGH POWER  
FOR MACRO COVERAGE

Samsung's future proof dual-band radio is designed to help effectively increase the coverage areas in wireless networks. This AWS/PCS 4T4R dual-band radio has 4Tx/4Rx to 2Tx/2Rx RF chains options and a total output power of 320W, making it ideal for macro sites.

Model Code RF4439d-25A



Homepage  
[samsungnetworks.com](http://samsungnetworks.com)

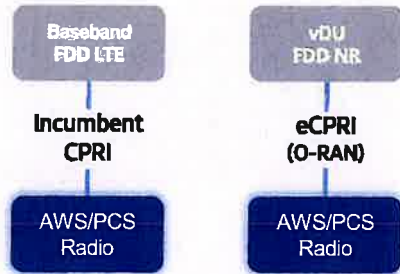


Youtube  
[www.youtube.com/samsung5g](http://www.youtube.com/samsung5g)

# Points of Differentiation

## Continuous Migration

Samsung's AWS/PCS macro radio can support each incumbent CPRI interface as well as advanced eCPRI interfaces. This feature provides installable options for both legacy LTE networks and added NR networks.



## O-RAN Compliant

A standardized O-RAN radio can help in implementing cost-effective networks, which are capable of sending more data without compromising additional investments.

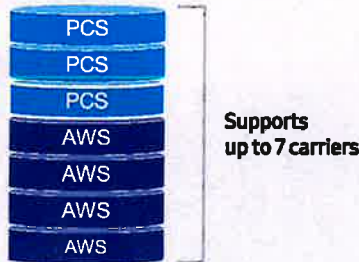
Samsung's state-of-the-art O-RAN technology will help accelerate the effort toward constructing a solid O-RAN ecosystem.



## Optimum Spectrum Utilization

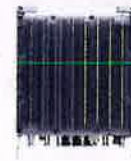
The number of required carriers varies according to site (region). Supporting many carriers is essential for using all frequencies that the operator has available.

The new AWS/PCS dual-band radio can support up to 3 carriers in the PCS (1.9GHz) band and 4 carriers in the AWS (2.1GHz) band, respectively.



## Brand New Features in a Compact Size

Samsung's AWS/PCS macro radio offers several features, such as dual connectivity for baseband for both CDU and vDU, O-RAN capability, more carriers and an enlarged PCS spectrum, combined into an incumbent radio volume of 36.8L.



- 2 FH connectivity
- O-RAN capability
- More carriers and spectrum

Same as an incumbent radio volume

# Technical Specifications

Item	Specification
Tech	LTE / NR
Brand	B25(PCS), B66(AWS)
Frequency Band	DL: 1930 – 1995MHz, UL: 1850 – 1915MHz DL: 2110 – 2200MHz, UL: 1710 – 1780MHz
RF Power	(B25) 4 × 40W or 2 × 60W (B66) 4 × 60W or 2 × 80W
IBW/OBW	(B25) 65MHz / 30MHz (B66) DL 90MHz, UL 70MHz / 60MHz
Installation	Pole, Wall
Size/Weight	14.96 x 14.96 x 10.04inch (36.8L) / 74.7lb

# 700/850 4T4R Macro 320W ORU - New Filter (RF4461d-13A)

SAMSUNG

## Specifications



Item	Specification
Air Interface Band	LTE, NR(HW resource ready) Band13 (700MHz) DL: 869-894MHz UL: 824-849MHz 25MHz 25MHz LTE 5/10MHz NR 5/10/15/20MHz 3C
Frequency	Band13 (700MHz) DL: 746-756MHz UL: 777-787MHz 10MHz 10MHz
IBW	10MHz
OBW	10MHz
Carrier Bandwidth	LTE/NR 5*/10MHz
# of carriers	2C*
Total # of carriers	4C + B13 (SDU 1C 4T4R/2T4R/2T2R/1T2R 2T2R-2T2R bi-sector Total : 320W
RF Chain	4 x 40W or 2 x 60W
RF Output Power	4 x 40W or 2 x 60W
Spectrum Analyzer	TX/RX Support
RX Sensitivity	Typ. -104.5dBm @1RX (25RBs 5MHz)
Modulation	256QAM support, (1024QAM with 1~2dB power back-off)
Input Power	-48VDC (-38VDC to -57VDC)
Power Consumption	1.165 Watt @ 100% RF load, room temperature
Size (WHD)	380 x 380 x 260 mm (14.96 x 14.96 x 10.23 inch)
Volume	37.5 L
Weight (w/o Solar Shield & finger guard)	35.9 kg (79.1 lb)
Operating Temperature	-40°C (-40°F) ~ 55°C (131°F) (Without solar load)
Cooling	Natural convection
Unwanted Emission	3GPP 36.104 FCC 47 CFR 27.53 (c), f)
CPRI Cascade	3GPP 36.104 FCC 47 CFR 22.917
Optic Interface	-69 dBm/100 KHz per path @ 896 ~901MHz
RET & TMA Interface	Not supported
Bias-T	AISG 3.0
Mounting Options	4 ports (2 ports per band) pole, wall
PIM Cancellation	25A-26B or 41B
# of antenna port	Support 4
External Alarm	25A-26B or 26B+21B or 46B
Fronthaul Interface	Opt. 8 CPRI / Opt. 7-2x selectable (not simultaneous support)
CPRI compression	Not Support

\* 5MHz supporting in B13(700MHz) depends on 3GPP std. and UE capability.  
External filters in interferer and victim sides for Mexican boarder to support 5MHz service need to be considered  
\*\* Finger guard is not needed.

# **ATTACHMENT 3**



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---

## Calculated Radio Frequency Emissions Report

**verizon**<sup>v</sup>

Wyassup Lake CT

350B Cossaduck Hill Road, North Stonington, CT 06359

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January 8, 2024

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## 1. Introduction

The purpose of this report is to investigate compliance with applicable FCC regulations for the proposed modification of Verizon's antenna arrays to be mounted at 178' on an existing monopole tower located at 350B Cossaduck Hill Road in North Stonington, CT. The coordinates of the tower are 41° 29' 57.24" N, 71° 53' 22.28" W.

Verizon is proposing the following:

- 1) Install six (6) multi-band antennas, two (2) per sector to support its commercial LTE network.
- 2) Install three (3) C-Band antenna, one (1) per sector.

This report considers the planned antenna configuration for Verizon<sup>1</sup> as well as existing<sup>2</sup> antenna configuration for AT&T, and DISH to derive the resulting % MPE of its proposed modification.

## 2. FCC Guidelines for Evaluating RF Radiation Exposure Limits

In 1985, the FCC established rules to regulate radio frequency (RF) exposure from FCC licensed antenna facilities. In 1996, the FCC updated these rules, which were further amended in August 1997 by OET Bulletin 65 Edition 97-01. These new rules include Maximum Permissible Exposure (MPE) limits for transmitters operating between 300 kHz and 100 GHz. The FCC MPE limits are based upon those recommended by the National Council on Radiation Protection and Measurements (NCRP), developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI).

The FCC general population/uncontrolled limits set the maximum exposure to which most people may be subjected. General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

Public exposure to radio frequencies is regulated and enforced in units of milliwatts per square centimeter (mW/cm<sup>2</sup>). The general population exposure limits for the various frequency ranges are defined in the attached "FCC Limits for Maximum Permissible Exposure (MPE)" in Attachment C of this report.

Higher exposure limits are permitted under the occupational/controlled exposure category, but only for persons who are exposed as a consequence of their employment and who have been made fully aware of the potential for exposure, and they must be able to exercise control over their exposure. General population/uncontrolled limits are five times more stringent than the levels that are acceptable for occupational, or radio frequency trained individuals. Attachment C contains excerpts from OET Bulletin 65 and defines the Maximum Exposure Limit.

Finally, it should be noted that the MPE limits adopted by the FCC for both general population/uncontrolled exposure and for occupational/controlled exposure incorporate a substantial margin of safety and have been established to be well below levels generally accepted as having the potential to cause adverse health effects.

---

<sup>1</sup> As referenced to Verizon's Radio Frequency Design Sheet updated 11/10/2023.

<sup>2</sup> As referenced to DISH's Connecticut Siting Council Notice of Tower Share Application -350B Cossaduck Hill Road, North Stonington, Connecticut, dated 2/06/2023



### 3. RF Exposure Prediction Methods

The emission field calculation results displayed in the following figures were generated using the following formula as outlined in FCC bulletin OET 65:

$$\text{Power Density} = \left( \frac{\text{GRF}^2 \times 1.64 \times \text{ERP}}{4\pi \times R^2} \right) \times \text{Off Beam Loss}$$

Where:

EIRP = Effective Isotropic Radiated Power

R = Radial Distance =  $\sqrt{(H^2 + V^2)}$

H = Horizontal Distance from antenna in meters

V = Vertical Distance from radiation center of antenna in meters

Off Beam Loss is determined by the selected antenna patterns

Ground reflection factor (GRF) of 1.6

These calculations assume that the antennas are operating at 100 percent capacity, that all antenna channels are transmitting simultaneously, and that the radio transmitters are operating at full power. Obstructions (trees, buildings, etc.) that would normally attenuate the signal are not taken into account. The calculations assume even terrain in the area of study and do not take into account actual terrain elevations which could attenuate the signal. As a result, the predicted signal levels reported below are much higher than the actual signal levels will be from the final installations.

#### 4. Antenna Inventory

Table 1 below outlines Verizon’s proposed antenna configuration for the site. The associated data sheets and antenna patterns for these specific antenna models are included in Attachments C.

Operator	Sector / Call Sign	TX Freq (MHz)	Power at Antenna (Watts)	Ant Gain (dBi)	Power EIRP (Watts)	Antenna Model	Beam Width	Mech. Tilt	Length (ft)	Antenna Centerline Height (ft)
Verizon	Alpha / 0°	700	160	14.9	4944	NHH-65B-R2B	65	0	5.99	178
		850	160	15.0	5060		60			
		1900	160	17.9	9866		69			
		2100	240	18.4	16604		64			
		3700	320	25.5	113540	MT6413-77A	-	0	2.46	178
	Beta / 120°	700	160	14.9	4944	NHH-65B-R2B	65	0	5.99	178
		850	160	15.0	5060		60			
		1900	160	17.9	9866		69			
		2100	240	18.4	16604		64			
		3700	320	25.5	113540	MT6413-77A	-	0	2.46	178
	Gamma / 240°	700	160	14.9	4944	NHH-65B-R2B	65	0	5.99	178
		850	160	15.0	5060		60			
		1900	160	17.9	9866		69			
		2100	240	18.4	16604		64			
		3700	320	25.5	113540	MT6413-77A	-	0	2.46	178

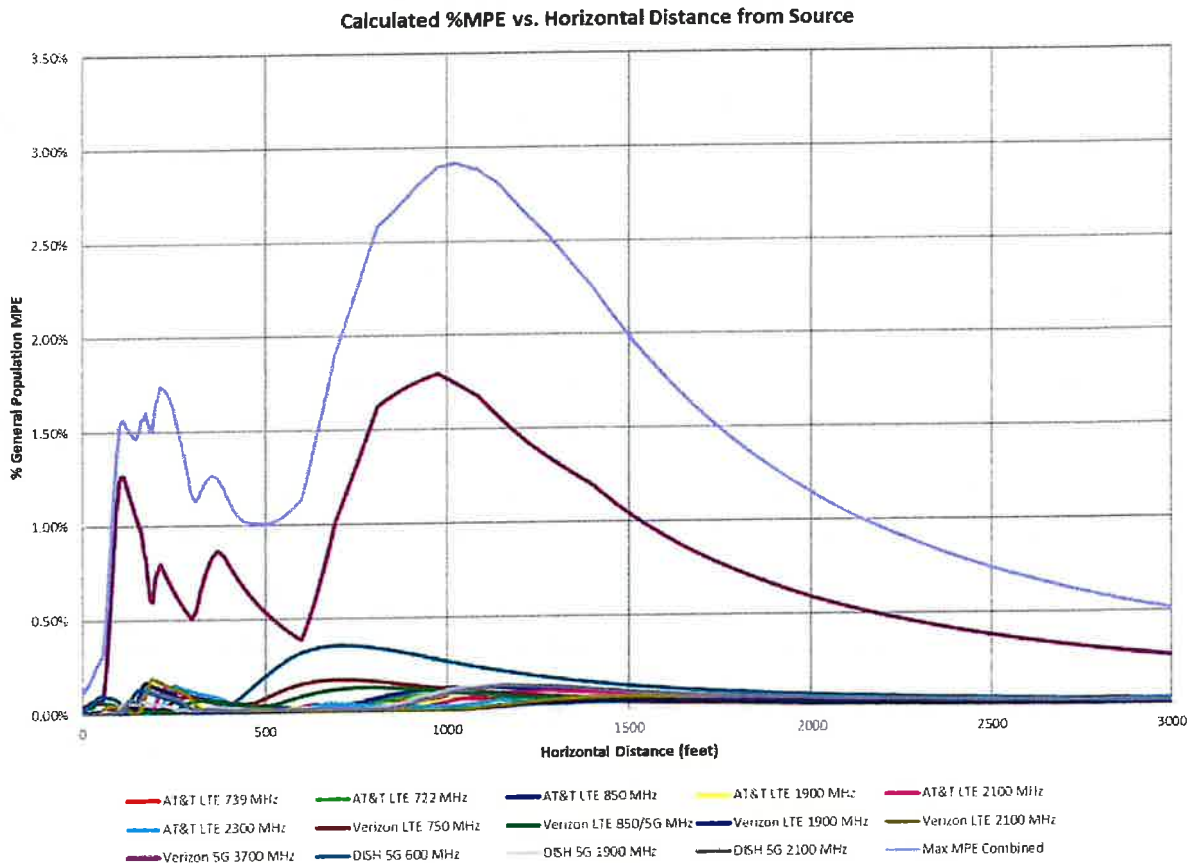
**Table 1: Proposed Antenna Inventory<sup>34</sup>**

<sup>3</sup> Antenna heights are in reference to Verizon’s Radio Frequency Design Sheet updated 11/10/2023.

<sup>4</sup> Transmit power assumes 0 dB of cable loss.

## 5. Calculation Results

The calculated power density results are shown in Figure 1 below. For completeness, the calculations for this analysis range from 0 feet horizontal distance (directly below the antennas) to a value of 3,000 feet horizontal distance from the site. In addition to the other worst-case scenario considerations that were previously mentioned, the power density calculations to each horizontal distance point away from the antennas was completed using a local maximum off beam antenna gain (within  $\pm 5$  degrees of the true mathematical angle) to incorporate a realistic worst-case scenario.



**Figure 1: Graph of General Population % MPE vs. Distance**

The highest percent of MPE (2.92% of the General Population limit) is calculated to occur at a horizontal distance of 1022 feet from antennas. Please note that the percent of MPE calculations close to the site take into account off beam loss, which is determined from the vertical pattern of the antennas used. Therefore, RF power density levels may increase as the distance from the site increases. At distances of approximately 1000 feet and beyond, one would now be in the main beam of the antenna pattern and off beam loss is no longer considered. Beyond this point, RF levels become calculated solely on distance from the site and the percent of MPE decreases significantly as distance from the site increases.

Table 2 below lists percent of MPE values as well as the associated parameters that were included in the calculations. The highest percent of MPE value was calculated to occur at a horizontal distance of 1022 feet from the site (reference Figure 1).

As stated in Section 3, all calculations assume that the antennas are operating at 100 percent capacity, that all antenna channels are transmitting simultaneously, and that the radio transmitters are operating at full power. Obstructions (trees, buildings etc.) that would normally attenuate the signal are not taken into account. In addition, a six foot height offset was considered in this analysis to account for average human height. As a result, the predicted signal levels are significantly higher than the actual signal levels will be from the final configuration. The results presented in Figure 1 and Table 2 assume level ground elevation from the base of the tower out to the horizontal distances calculated.

Carrier	Number of Transmitters	Power out of Base Station Per Transmitter (Watts)	Antenna Height (Feet)	Distance to the Base of Antennas (Feet)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	% MPE
AT&T LTE 1900 MHz	1	160.0	186.0	1022	0.000705	1.000	0.07%
AT&T LTE 2100 MHz	1	160.0	186.0	1022	0.000611	1.000	0.06%
AT&T LTE 2300 MHz	1	100.0	186.0	1022	0.000277	1.000	0.03%
AT&T LTE 722 MHz	1	80.0	186.0	1022	0.000480	0.481	0.10%
AT&T LTE 739 MHz	1	60.0	186.0	1022	0.000332	0.493	0.07%
AT&T LTE 850 MHz	2	60.0	186.0	1022	0.000719	0.567	0.13%
DISH 5G 1900 MHz	4	40.0	168.0	1022	0.001228	1.000	0.12%
DISH 5G 2100 MHz	4	40.0	168.0	1022	0.001042	1.000	0.10%
DISH 5G 600 MHz	4	61.5	168.0	1022	0.001033	0.400	0.26%
Verizon 5G 3700 MHz	1	320.0	178.0	1022	0.017455	1.000	1.75%
Verizon LTE 1900 MHz	1	160.0	178.0	1022	0.000074	1.000	0.01%
Verizon LTE 2100 MHz	1	240.0	178.0	1022	0.000094	1.000	0.01%
Verizon LTE 750 MHz	1	160.0	178.0	1022	0.000569	0.500	0.11%
Verizon LTE 850/5G MHz	1	160.0	178.0	1022	0.000582	0.567	0.10%
						<b>Total</b>	<b>2.92%</b>

**Table 2: Maximum Percent of General Population Exposure Values<sup>5</sup>**

<sup>5</sup> In the case where antenna pattern data was unavailable from the manufacturer, generic antenna pattern was used based on the frequency, bandwidth and gain of the antenna



### **Attachment A: References**

OET Bulletin 65 - Edition 97-01 - August 1997 Federal Communications Commission Office of Engineering & Technology

IEEE C95.1-2005, IEEE Standard Safety Levels With Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz IEEE-SA Standards Board

IEEE C95.3-2002 (R2008), IEEE Recommended Practice for Measurements and Computations of Radio Frequency Electromagnetic Fields With Respect to Human Exposure to Such Fields, 100 kHz-300 GHz IEEE-SA Standards Board

**Attachment B: FCC Limits for Maximum Permissible Exposure (MPE)**

**(A) Limits for Occupational/Controlled Exposure<sup>6</sup>**

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f <sup>2</sup> )*	6
30-300	61.4	0.163	1.0	6
300-1500	-	-	f/300	6
1500-100,000	-	-	5	6

**(B) Limits for General Population/Uncontrolled Exposure<sup>7</sup>**

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f <sup>2</sup> )*	30
30-300	27.5	0.073	0.2	30
300-1500	-	-	f/1500	30
1500-100,000	-	-	1.0	30

f = frequency in MHz \* Plane-wave equivalent power density

**Table 3: FCC Limits for Maximum Permissible Exposure**

<sup>6</sup> Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

<sup>7</sup> General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

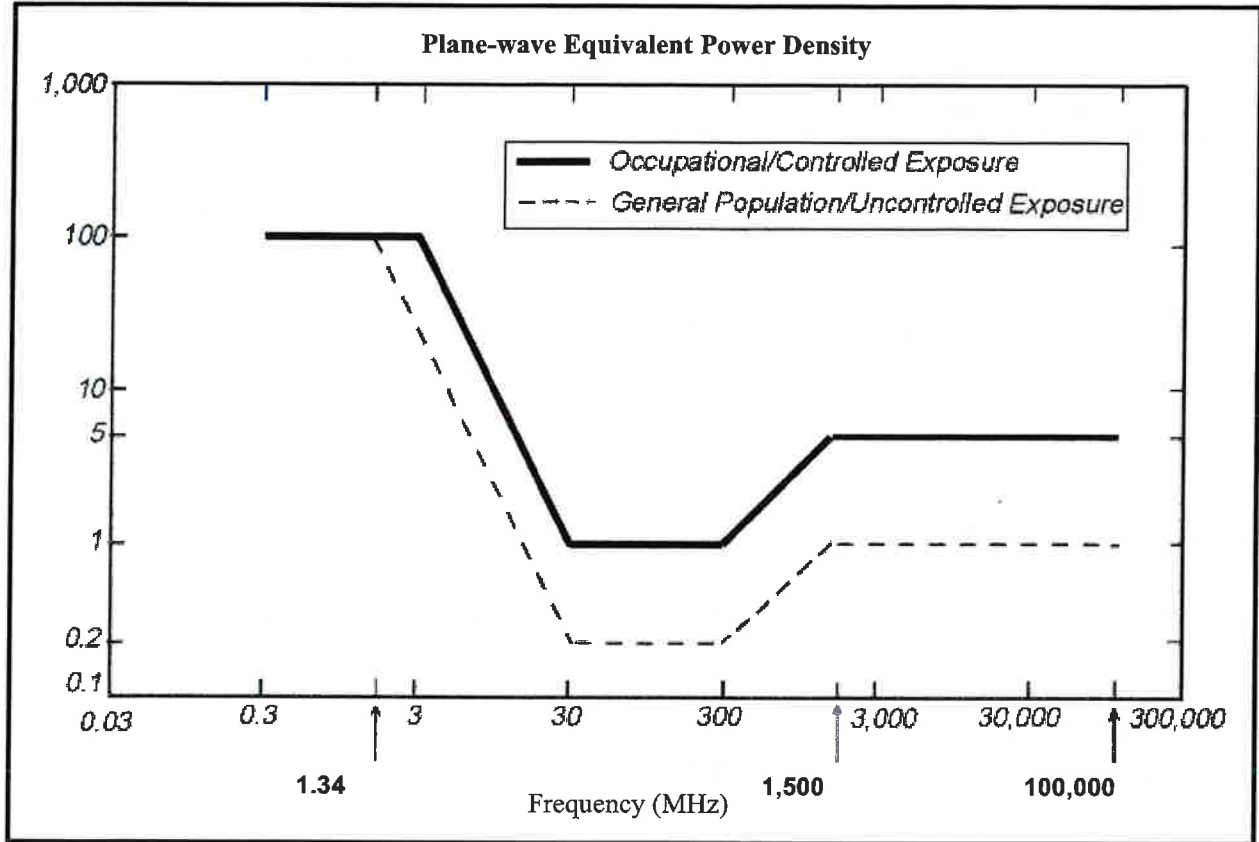
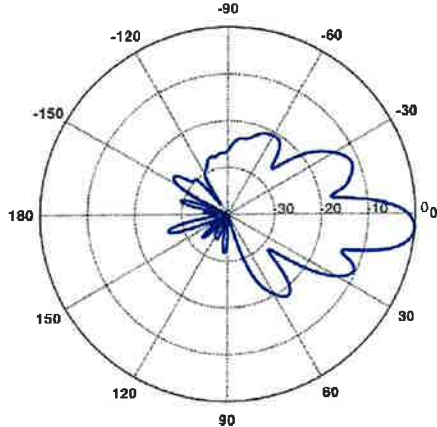
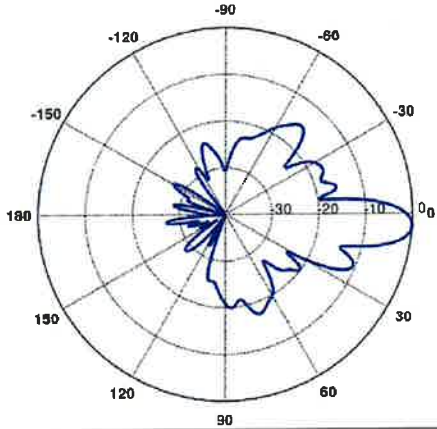
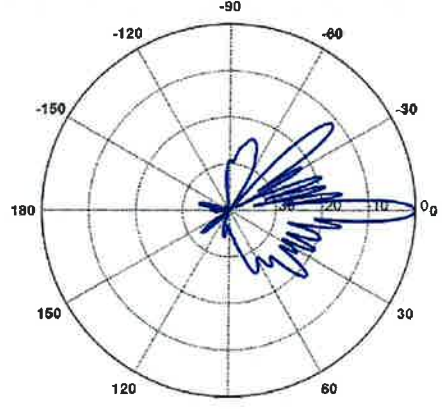
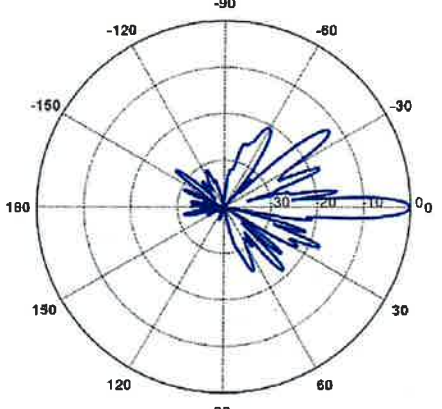


Figure 2: Graph of FCC Limits for Maximum Permissible Exposure (MPE)



**Attachment C: Verizon Antenna Model Data Sheets and Electrical Patterns**

<p><b>750 MHz</b></p> <p>Manufacturer: COMMSCOPE          Model #: NHH-65B-R2B          Frequency Band: 698-806 MHz          Gain: 14.9 dBi          Vertical Beamwidth: 12.4°          Horizontal Beamwidth: 65°          Polarization: ±45°          Dimensions (L x W x D): 71.97" x 11.85" x 7.09"</p>	 <p>A polar plot showing the radiation pattern for the 750 MHz antenna. The plot is circular with concentric dashed lines representing gain levels at 10, 20, and 30 dB. Radial lines indicate angles from 0 to 180 degrees in 30-degree increments. The main lobe is centered at 0 degrees, extending to approximately 30 dB. There are side lobes extending to about 150 and 210 degrees, and a smaller lobe at 135 degrees.</p>
<p><b>885 MHz</b></p> <p>Manufacturer: COMMSCOPE          Model #: NHH-65B-R2B          Frequency Band: 806-896 MHz          Gain: 15.0 dBi          Vertical Beamwidth: 11.2°          Horizontal Beamwidth: 60°          Polarization: ±45°          Dimensions (L x W x D): 71.97" x 11.85" x 7.09"</p>	 <p>A polar plot showing the radiation pattern for the 885 MHz antenna. The plot is circular with concentric dashed lines representing gain levels at 10, 20, and 30 dB. Radial lines indicate angles from 0 to 180 degrees in 30-degree increments. The main lobe is centered at 0 degrees, extending to approximately 30 dB. There are side lobes extending to about 150 and 210 degrees, and a smaller lobe at 135 degrees.</p>

<p><b>1900 MHz</b></p> <p>Manufacturer: COMMSCOPE          Model #: NHH-65B-R2B          Frequency Band: 1850-1990 MHz          Gain: 17.9 dBi          Vertical Beamwidth: 5.2°          Horizontal Beamwidth: 69°          Polarization: ±45°          Dimensions (L x W x D): 71.97" x 11.85" x 7.09"</p>	
<p><b>2100 MHz</b></p> <p>Manufacturer: COMMSCOPE          Model #: NHH-65B-R2B          Frequency Band: 1920-2200 MHz          Gain: 18.4 dBi          Vertical Beamwidth: 4.9°          Horizontal Beamwidth: 64°          Polarization: ±45°          Dimensions (L x W x D): 71.97" x 11.85" x 7.09"</p>	

# **ATTACHMENT 4**



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## Structural Analysis Report

### Client: Verizon

Client Site ID / Name: 5000244417 / Wyassup Lake CT  
Application #: 241851, v2

SBA Site ID / Name: CT11796-S / North Stonington 3

190 ft Monopole

350b Cossaduck Hill Road  
North Stonington, Connecticut 06359  
Lat: 41.4992, Long: -71.8895

Project number: CT11796-VZW-121823

### Analysis Results

Tower	78.4%	Pass
Foundation	74.0%	Pass

Change in tower stress due to mount modification / replacement	N/A
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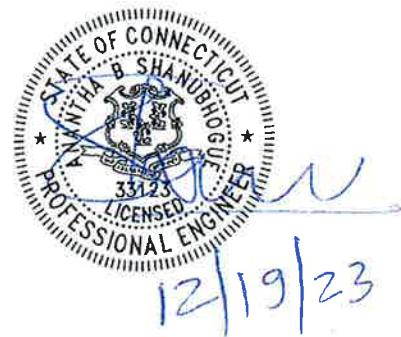
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December 19, 2023



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## Introduction

The purpose of this report is to summarize the analysis results on the 190 ft Monopole to support the proposed antennas and transmissions lines in addition to those currently installed.

Table 1 List of Documents Used

Item	Document
<b>Tower design/drawings</b>	Sabre, Job No. 57617, dated 4/9/2012
<b>Foundation drawings</b>	Sabre, Job No. 57617, dated 4/9/2012
<b>Geotechnical report</b>	TEP, Project No. 121203.10, dated 3/9/2012
<b>Modification drawings</b>	N/A
<b>Mount Analysis</b>	Colliers Engineering & Design, Project No. 10215049, dated 12/5/2023
<b>Latest SA</b>	TES, Project No. 138138, dated 1/26/2023

## Analysis Criteria

Table 2 Code Related Data

<b>Jurisdiction (State/County/City)</b>	Connecticut/New London/North Stonington
<b>Governing Codes</b>	ANSI/TIA/EIA 222-H, 2021 IBC, 2022 Connecticut Building Code
<b>Ultimate Wind Speed (3-Sec gust)</b>	126.0 mph
<b>Wind Speed with Ice (3-Sec gust)</b>	50 mph
<b>Service Wind Speed (3-Sec gust)</b>	60 mph
<b>Ice Thickness</b>	1.00"
<b>Risk Category</b>	II
<b>Exposure Category</b>	C
<b>Topographic Category</b>	1
<b>Crest Height</b>	0 ft
<b>Ground Elevation</b>	446.91 ft.
<b>Seismic Parameter <math>S_s</math></b>	0.188
<b>Seismic Parameter <math>S_1</math></b>	0.053

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



## Appurtenance Loading

### Existing Loading:

Table 3 Existing Appurtenances

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	186.0	12	Cci HPA-65R-BUU-H8 - Panel	Low Profile Platform	(8) 3/8" DC (3) 3/8" RET (2) 5/8" fiber	AT&T
2		9	Ericsson RRUS-11			
3		3	Ericsson RRUS-E2			
4		3	Ericsson RRUS-32			
5		6	Ericsson A2			
6		4	Raycap DC6-48-60-18-8F			
7		6	Ericsson RRUS-12 -			
-	178.0	6	Alcatel Lucent RRH2x40-07U	Low Profile Platform	(2) 1-5/8" Hybrid	Verizon
-		3	Alcatel Lucent RRH2x40-AWS			
-		1	RFS DB-T1-6ZX-8AB-OZ			
-		6	Amphenol BXA-171063-12CF-EDIN			
-		6	Antel BXA-70063-6CF-EDIN-6- Panel			
14	168.0	3	TA08025-B605	Low Profile Platform w/ Handrails	(1) 1.75" Hybrid*	Dish Wireless
15		3	TA08025-B604			
16		1	RDIDC-9181-OF-48			
17		3	Commscope FFVV-65B-R2 - Panel			
18	145.0	1	DS2C00-F-36-B - Omni	Side Arm @ 138.0'	(2) 7/8"	Connecticut Light & Power

\*Coaxes to be distributed outside of the pole shafts.

Note: AT&T loading includes FirstNET equipment

### Proposed Loading:

Information pertaining to proposed antennas and transmission lines were based upon the Application #: 241851, v2 from Verizon and is listed in Table 4.

Table 4 Proposed Appurtenances

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
8	178.0	6	Commscope NHH-65B-R2B - Panel	Low Profile Platform [Valmont RMQP-463]	(2) 1-5/8" Hybrid	Verizon
9		3	Amphenol BXA-171063-12CF-EDIN - Panel			
10		3	Samsung MT6413 77A - Panel			
11		3	Samsung B2/B66A RRH ORAN (RF4439d-25A)			
12		3	Samsung B5/B13 RRH ORAN (RF44619-13A)			
13		2	Raycap RRFDC-3315-PF-48			

## Analysis Results

### Tower

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

*Table 5 Tower Analysis Summary*

	<b>Pole shafts</b>	<b>Anchor Bolts</b>	<b>Base Plate</b>
<b>Max. Usage:</b>	78.4%	71.0%	77.0%
<b>Pass/Fail</b>	Pass	Pass	Pass

### Foundation

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

*Table 6 Foundation Analysis Summary*

<b>Structural Component</b>	<b>Max Usage (%)</b>	<b>Analysis Result</b>
<b>Foundation</b>	74.0%	Pass

## Conclusions

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

## Installation Requirements

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

## Assumptions and Limitations

### Assumptions

This analysis was completed based on the following assumptions:

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

### Limitations

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

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

## Appendix

## Usage Diagram - Max Ratio 78.44% at 142.5ft

**Structure:** CT11796-S  
**Site Name:** North Stonington 3  
**Height:** 189.00 (ft)  
**Base Elev:** 1.000 (ft)

**Code:** EIA/TIA-222-H  
**Exposure:** C  
**Gh:** 1.1

12/19/2023

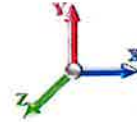


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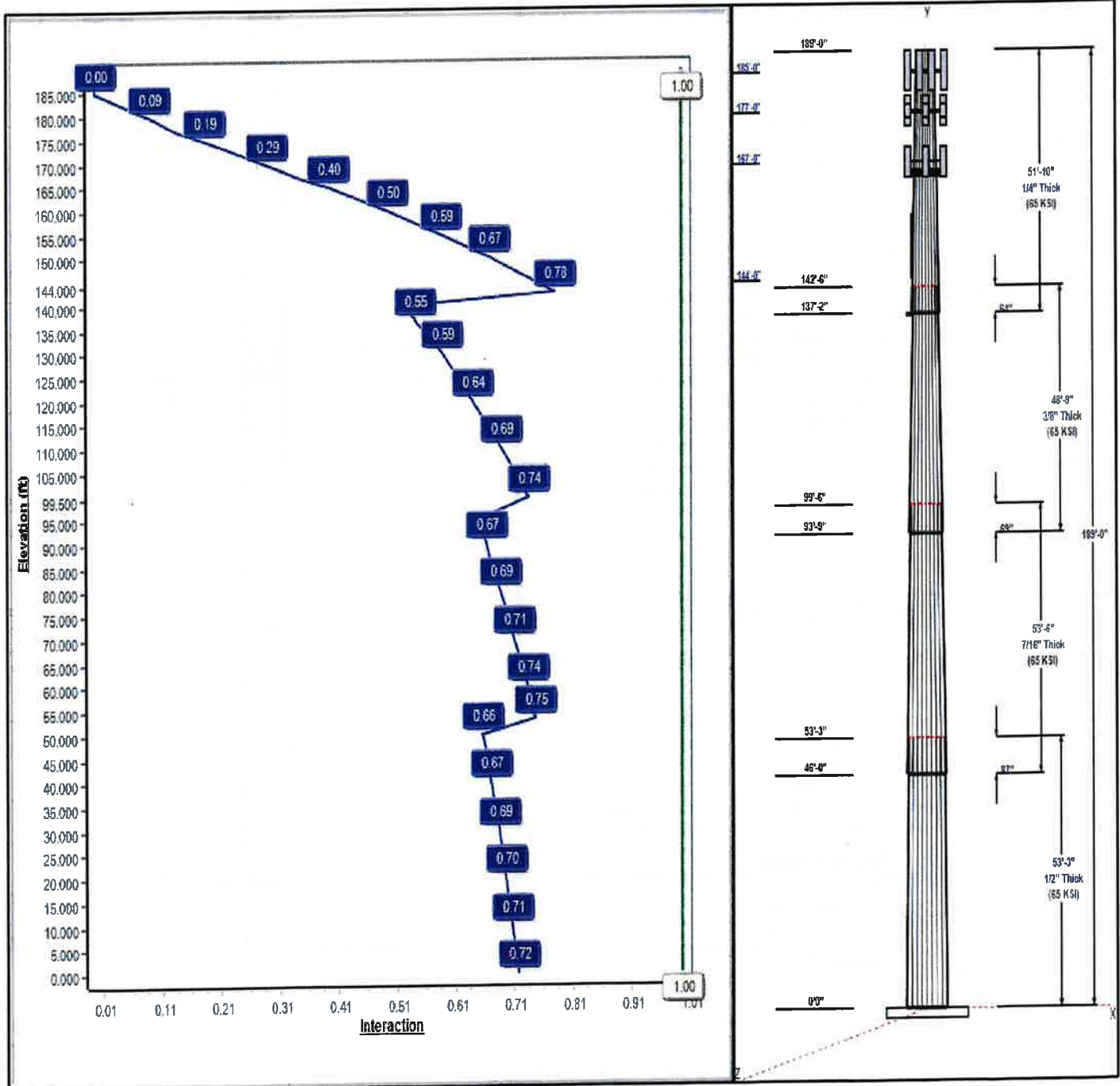
**Dead Load Factor:** 1.20  
**Wind Load Factor:** 1.00

**Iterations:** 27

**Load Case : 1.2D + 1.0W 126 mph Wind**



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**Structure: CT11796-S**

**Type:** Tapered

**Base Shape:** 18 Sided

12/19/2023

**Site Name:** North Stonington 3

**Taper:** 0.21674

**Height:** 189.00 (ft)

**Base Elev:** 1.00 (ft)

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**Shaft Properties**

Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	53.25	49.13	60.67	0.500		0.21674	65
2	53.50	39.98	51.58	0.438	Slip	0.21674	65
3	48.75	31.41	41.98	0.375	Slip	0.21674	65
4	51.83	21.83	33.07	0.250	Slip	0.21674	65

**Discrete Appurtenances**

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
185.00	185.00	12	Cci HPA-65R-BUU-H8	AT&T
185.00	185.00	9	Ericsson RRUS-11	AT&T
185.00	185.00	3	Ericsson RRUS-E2	AT&T
185.00	185.00	3	Ericsson RRUS-32	AT&T
185.00	185.00	6	Ericsson A2	AT&T
185.00	185.00	4	Raycap DC6-48-60-18-8F	AT&T
185.00	185.00	1	Low Profile Platform	AT&T
185.00	185.00	6	Ericsson RRUS-12	AT&T
185.00	185.00	12	Mount Pipes	AT&T
177.00	177.00	6	Commscope	Verizon
177.00	177.00	3	Amphenol	Verizon
177.00	177.00	3	Samsung MT6413 77A	Verizon
177.00	177.00	3	Samsung B2/B66A RRH	Verizon
177.00	177.00	3	Samsung B5/B13 RRH	Verizon
177.00	177.00	2	Raycap	Verizon
177.00	177.00	1	Platform w/ Mount Pipes	Verizon
167.00	167.00	3	TA08025-B605	Dish Wireless
167.00	167.00	3	TA08025-B604	Dish Wireless
167.00	167.00	1	RDIDC-9181-OF-48	Dish Wireless
167.00	167.00	1	MC-PK8-DSH w/ Mount	Dish Wireless
167.00	167.00	3	Commscope	Dish Wireless
144.00	150.30	1	DS2C00-F-36-B	Connecticut Light &
137.00	137.00	1	Side Arm (SV197-48)	Connecticut Light &
137.00	137.00	1	Ring Mount	Connecticut Light &

**Linear Appurtenances**

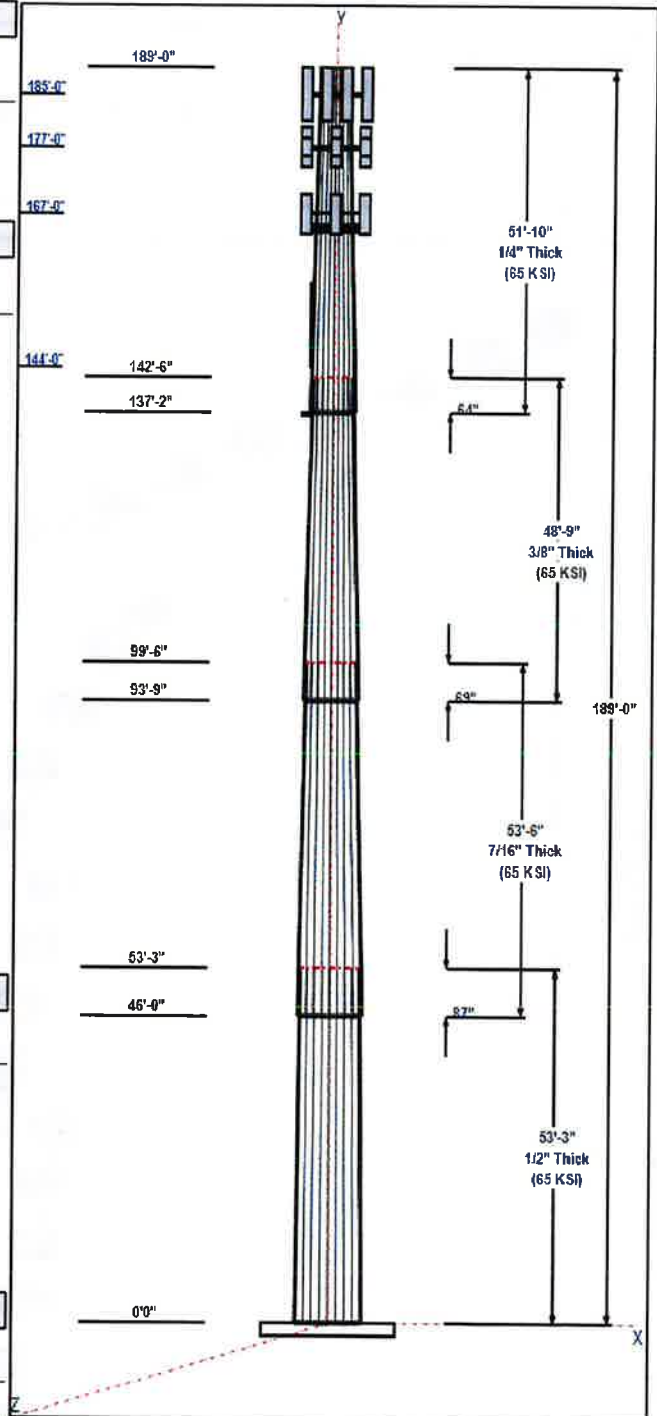
Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	189.00	Outside	Safety Cable	
0.00	189.00	Outside	Step bolts (ladder)	
0.00	185.00	Inside	3/8" DC	AT&T
0.00	185.00	Inside	3/8" RET	AT&T
0.00	185.00	Inside	5/8" fiber	AT&T
0.00	177.00	Inside	1 5/8" Hybrid	Verizon
0.00	167.00	Outside	1.75" Hybrid	Dish Wireless
0.00	144.00	Inside	7/8" Coax	Connecticut Light &

**Anchor Bolts**

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

**Base Plate**

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry



**Structure: CT11796-S**

**Type:** Tapered

**Base Shape:** 18 Sided

12/19/2023

**Site Name:** North Stonington 3

**Taper:** 0.21674



**Height:** 189.00 (ft)

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**Base Elev:** 1.00 (ft)

3.0000      69.8      50.0      Clipped

**Reactions**

Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.0W 126 mph Wind	5897.3	43.5	58.2
0.9D + 1.0W 126 mph Wind	5824.4	43.4	43.6
1.2D + 1.0Di + 1.0Wi 50 mph Wind	1407.7	10.5	79.6
1.2D + 1.0Ev + 1.0Eh	142.5	0.8	60.3
0.9D + 1.0Ev + 1.0Eh	140.7	0.8	45.7
1.0D + 1.0W 60 mph Wind	1190.0	8.8	48.6

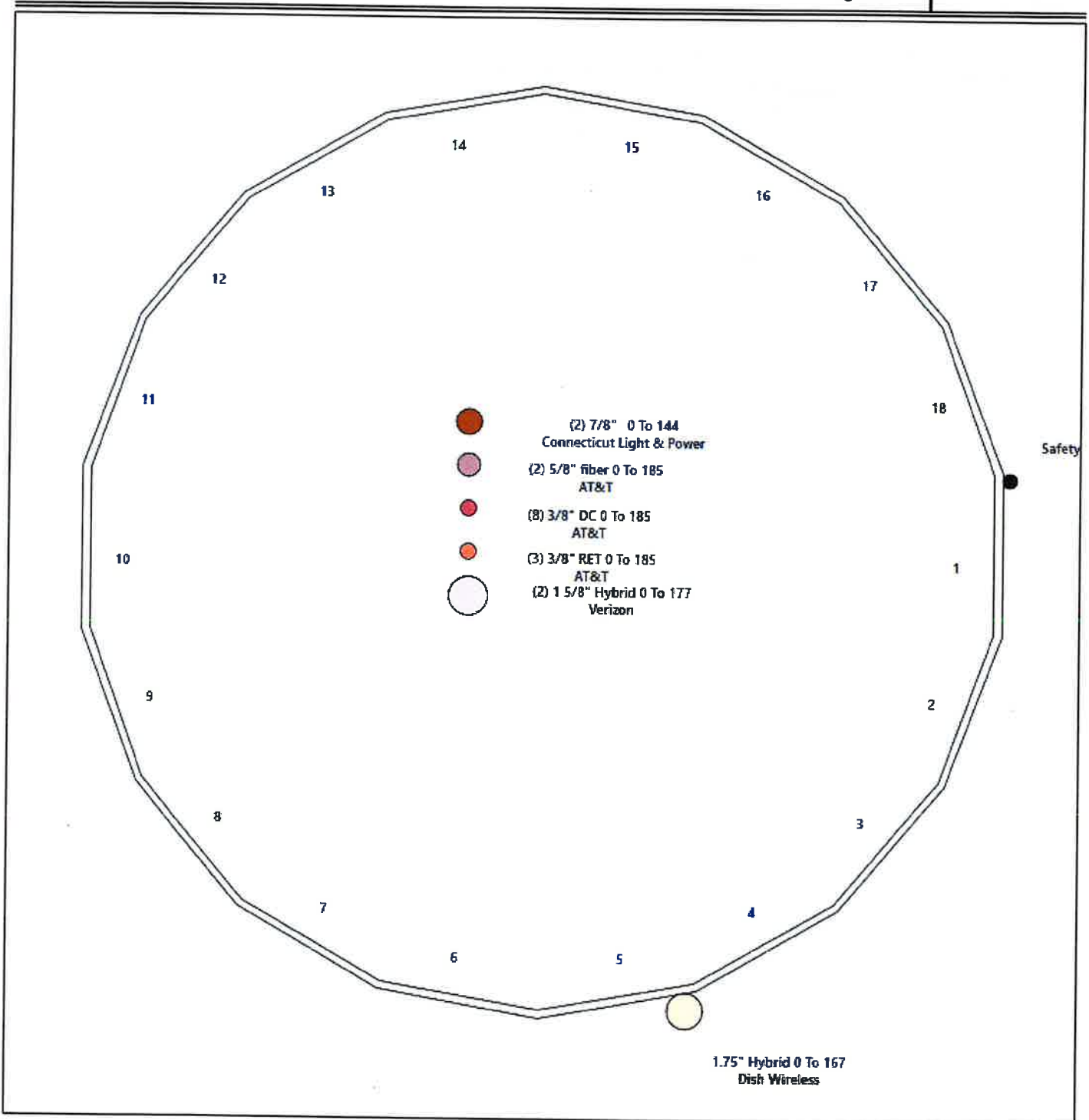
Structure: CT11796-S - Coax Line Placement

Type: Monopole  
Site Name: North Stonington 3  
Height: 189.00 (ft)

12/19/2023



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## Shaft Properties

<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	53.250	0.5000	65		0.00	15,643
2	18	53.500	0.4375	65	Slip	87.00	11,461
3	18	48.750	0.3750	65	Slip	69.00	7,171
4	18	51.833	0.2500	65	Slip	64.00	3,806
<b>Total Shaft Weight:</b>							<b>38,081</b>

### 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	60.67	0.00	95.49	43677.16	19.98	121.34	49.13	53.25	77.17	23056.4	15.91	98.26	0.216739
2	51.58	46.00	71.01	23460.73	19.38	117.89	39.98	99.50	54.91	10846.7	14.70	91.38	0.216739
3	41.98	93.75	49.51	10826.29	18.33	111.94	31.41	142.50	36.94	4494.91	13.36	83.76	0.216739
4	33.07	137.1	26.04	3542.66	21.91	132.26	21.83	189.00	17.12	1007.68	13.99	87.33	0.216739

## Load Summary

<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



### Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice			Ice			Hor. Ecc. (ft)	Vert Ecc (ft)
				Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor		
1	185.00	Cci HPA-65R-BUU-H8	12	68.00	12.98	0.79	255.92	14.057	0.79	0.00	0.00
2	185.00	Ericsson RRUS-11	9	50.70	2.52	0.69	107.18	2.951	0.70	0.00	0.00
3	185.00	Ericsson RRUS-E2	3	58.00	3.15	0.75	118.49	3.622	0.76	0.00	0.00
4	185.00	Ericsson RRUS-32	3	77.00	3.87	0.80	149.35	3.841	0.81	0.00	0.00
5	185.00	Ericsson A2	6	21.20	1.86	0.67	45.80	2.523	0.67	0.00	0.00
6	185.00	Raycap DC6-48-60-18-8F	4	31.80	0.92	1.00	73.91	1.218	1.00	0.00	0.00
7	185.00	Low Profile Platform	1	1250.00	14.89	1.00	2367.45	23.422	1.00	0.00	0.00
8	185.00	Ericsson RRUS-12	6	80.00	2.70	0.67	147.48	3.433	0.67	0.00	0.00
9	185.00	Mount Pipes	12	60.00	0.99	1.00	111.36	1.578	1.00	0.00	0.00
10	177.00	Commscope NHH-65B-R2B	6	43.65	8.05	0.83	172.12	8.900	0.84	0.00	0.00
11	177.00	Amphenol BXA-171063-12CF-EDIN	3	15.00	4.79	0.88	87.85	5.588	0.89	0.00	0.00
12	177.00	Samsung MT6413 77A	3	57.32	3.79	0.69	118.92	4.327	0.71	0.00	0.00
13	177.00	Samsung B2/B66A RRH ORAN	3	74.70	1.87	0.84	108.97	2.238	0.85	0.00	0.00
14	177.00	Samsung B5/B13 RRH ORAN	3	79.10	1.87	0.84	118.61	2.238	0.85	0.00	0.00
15	177.00	Raycap RRFDC-3315-PF-48	2	32.00	3.02	0.82	86.90	3.489	0.84	0.00	0.00
16	177.00	Platform w/ Mount Pipes	1	1544.00	36.10	1.00	2859.74	57.463	1.00	0.00	0.00
17	167.00	TA08025-B605	3	75.00	1.96	0.67	110.27	2.338	0.67	0.00	0.00
18	167.00	TA08025-B604	3	63.90	1.96	0.67	98.04	2.338	0.67	0.00	0.00
19	167.00	RDIDC-9181-OF-48	1	21.90	2.01	1.00	57.80	2.393	1.00	0.00	0.00
20	167.00	MC-PK8-DSH w/ Mount Pipes	1	1200.00	34.24	1.00	1990.77	63.250	1.00	0.00	0.00
21	167.00	Commscope FFVV-65B-R2	3	70.80	12.27	0.73	470.70	14.869	0.76	0.00	0.00
22	144.00	DS2C00-F-36-B	1	40.00	5.78	1.00	108.55	10.367	1.00	0.00	6.30
23	137.00	Side Arm (SV197-48)	1	120.00	4.50	1.00	189.23	7.968	1.00	0.00	0.00
24	137.00	Ring Mount	1	220.00	2.50	1.00	423.07	4.231	1.00	0.00	0.00
<b>Totals:</b>			<b>91</b>	<b>9,160.96</b>			<b>20,174.00</b>			<b>0.00</b>	<b>0.00</b>

### Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	189.00	(1) Safety Cable	0.38	Outside
0.00	189.00	(1) Step bolts (ladder)	0.63	Outside
0.00	185.00	(8) 3/8" DC	0.00	Inside
0.00	185.00	(3) 3/8" RET	0.00	Inside
0.00	185.00	(2) 5/8" fiber	0.00	Inside
0.00	177.00	(2) 1 5/8" Hybrid	0.00	Inside
0.00	167.00	(1) 1.75" Hybrid	1.75	Outside
0.00	144.00	(2) 7/8" Coax	0.00	Inside

## Shaft Section Properties

<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Increment Length:** 5 (ft)

Elev (ft)	Description	Thick (in)	Dia (in)	Area (in <sup>2</sup> )	Ix (in <sup>4</sup> )	W/t Ratio	D/t Ratio	Fpy (ksi)	S (in <sup>3</sup> )	Weight (lb)
0.00		0.5000	60.670	95.486	43677.2	19.98	121.34	77.9	1418.	0.0
5.00		0.5000	59.586	93.767	41359.5	19.60	119.17	78.3	1367.	1610.0
10.00		0.5000	58.503	92.047	39125.2	19.22	117.01	78.8	1317.	1580.7
15.00		0.5000	57.419	90.327	36973.0	18.84	114.84	79.2	1268.	1551.4
20.00		0.5000	56.335	88.607	34901.1	18.46	112.67	79.7	1220.	1522.2
25.00		0.5000	55.252	86.888	32908.1	18.07	110.50	80.1	1173.	1492.9
30.00		0.5000	54.168	85.168	30992.5	17.69	108.34	80.6	1126.	1463.7
35.00		0.5000	53.084	83.448	29152.7	17.31	106.17	81.0	1081.	1434.4
40.00		0.5000	52.000	81.728	27387.2	16.93	104.00	81.5	1037.	1405.1
45.00		0.5000	50.917	80.009	25694.4	16.55	101.83	81.9	993.9	1375.9
46.00	Bot - Section 2	0.5000	50.700	79.665	25364.5	16.47	101.40	82.0	985.4	271.7
50.00		0.5000	49.833	78.289	24072.9	16.16	99.67	82.4	951.5	2033.3
53.25	Top - Section 1	0.4375	50.004	68.826	21363.8	18.74	114.29	0.0	0.0	1626.2
55.00		0.4375	49.624	68.300	20877.1	18.59	113.43	79.5	828.6	408.3
60.00		0.4375	48.541	66.795	19527.4	18.15	110.95	80.0	792.4	1149.2
65.00		0.4375	47.457	65.290	18237.1	17.72	108.47	80.6	756.9	1123.6
70.00		0.4375	46.373	63.785	17005.0	17.28	106.00	81.1	722.3	1098.0
75.00		0.4375	45.290	62.281	15829.6	16.84	103.52	81.6	688.4	1072.4
80.00		0.4375	44.206	60.776	14709.7	16.41	101.04	82.1	655.4	1046.8
85.00		0.4375	43.122	59.271	13643.9	15.97	98.57	82.5	623.2	1021.2
90.00		0.4375	42.039	57.766	12630.9	15.53	96.09	82.5	591.8	995.6
93.75	Bot - Section 3	0.4375	41.226	56.638	11905.0	15.20	94.23	82.5	568.8	729.9
95.00		0.4375	40.955	56.261	11669.3	15.10	93.61	82.5	561.2	450.0
99.50	Top - Section 2	0.3750	40.730	48.030	9882.2	17.74	108.61	0.0	0.0	1595.5
100.00		0.3750	40.621	47.901	9802.8	17.69	108.32	80.6	475.3	81.6
105.00		0.3750	39.537	46.611	9032.0	17.18	105.43	81.2	449.9	804.0
110.00		0.3750	38.454	45.322	8302.8	16.67	102.54	81.8	425.3	782.1
115.00		0.3750	37.370	44.032	7613.9	16.16	99.65	82.4	401.3	760.1
120.00		0.3750	36.286	42.742	6964.2	15.65	96.76	82.5	378.0	738.2
125.00		0.3750	35.203	41.452	6352.6	15.14	93.87	82.5	355.4	716.2
130.00		0.3750	34.119	40.162	5777.8	14.63	90.98	82.5	333.5	694.3
135.00		0.3750	33.035	38.873	5238.9	14.12	88.09	82.5	312.3	672.3
137.00		0.3750	32.602	38.357	5033.0	13.92	86.94	82.5	304.1	262.8
137.17	Bot - Section 4	0.3750	32.566	38.314	5016.1	13.90	86.84	82.5	303.4	21.7
140.00		0.3750	31.952	37.583	4734.5	13.61	85.20	82.5	291.9	614.6
142.50	Top - Section 3	0.2500	31.910	25.121	3181.3	21.10	127.64	0.0	0.0	532.5
144.00		0.2500	31.585	24.863	3084.3	20.87	126.34	76.9	192.3	127.6
145.00		0.2500	31.368	24.691	3020.8	20.71	125.47	77.0	189.7	84.3
150.00		0.2500	30.284	23.831	2716.0	19.95	121.14	77.9	176.6	412.8
155.00		0.2500	29.201	22.971	2432.5	19.18	116.80	78.8	164.1	398.1
160.00		0.2500	28.117	22.112	2169.4	18.42	112.47	79.7	152.0	383.5
165.00		0.2500	27.033	21.252	1926.1	17.66	108.13	80.6	140.3	368.9
167.00		0.2500	26.600	20.908	1834.0	17.35	106.40	81.0	135.8	143.5
170.00		0.2500	25.949	20.392	1701.6	16.89	103.80	81.5	129.2	210.8
175.00		0.2500	24.866	19.532	1495.3	16.13	99.46	82.4	118.4	339.6
177.00		0.2500	24.432	19.188	1417.7	15.82	97.73	82.5	114.3	131.8
180.00		0.2500	23.782	18.672	1306.4	15.36	95.13	82.5	108.2	193.2
185.00		0.2500	22.698	17.812	1134.1	14.60	90.79	82.5	98.4	310.4
189.00		0.2500	21.831	17.124	1007.7	13.99	87.33	82.5	90.9	237.8



Increment Length: 5 (ft)

Elev (ft)	Description	Thick (in)	Dia (in)	Area (in <sup>2</sup> )	Ix (in <sup>4</sup> )	W/t Ratio	D/t Ratio	Fpy (ksi)	S (in <sup>3</sup> )	Weight (lb)
										38080.9

## Wind Loading - Shaft

**Structure:** CT11796-S  
**Site Name:** North Stonington 3  
**Height:** 189.00 (ft)  
**Base Elev:** 1.000 (ft)  
**Gh:** 1.1

**Code:** TIA-222-H  
**Exposure:** C  
**Crest Height:** 0.00  
**Site Class:** D - Stiff Soil  
**Struct Class:** II

12/19/2023

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**Topography:** 1

**Load Case:** 1.2D + 1.0W 126 mph Wind

**Dead Load Factor** 1.20  
**Wind Load Factor** 1.00



**Iterations** 27

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	32.493	35.74	593.41	0.730	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	32.493	35.74	582.81	0.730	0.000	5.00	25.440	18.57	663.8	0.0	1932.0
10.00		1.00	0.85	32.493	35.74	572.21	0.730	0.000	5.00	24.981	18.24	651.8	0.0	1896.8
15.00		1.00	0.86	32.894	36.18	565.07	0.730	0.000	5.00	24.523	17.90	647.8	0.0	1861.7
20.00		1.00	0.91	34.832	38.32	570.50	0.730	0.000	5.00	24.064	17.57	673.1	0.0	1826.6
25.00		1.00	0.95	36.434	40.08	572.25	0.730	0.000	5.00	23.606	17.23	690.6	0.0	1791.5
30.00		1.00	0.99	37.809	41.59	571.51	0.730	0.000	5.00	23.147	16.90	702.8	0.0	1756.4
35.00		1.00	1.02	39.018	42.92	568.96	0.730	0.000	5.00	22.689	16.56	710.9	0.0	1721.3
40.00		1.00	1.05	40.101	44.11	565.03	0.730	0.000	5.00	22.230	16.23	715.8	0.0	1686.2
45.00		1.00	1.07	41.084	45.19	560.00	0.730	0.000	5.00	21.772	15.89	718.3	0.0	1651.1
46.00	Bot - Section 2	1.00	1.08	41.271	45.40	558.88	0.730	0.000	1.00	4.299	3.14	142.5	0.0	326.0
50.00		1.00	1.10	41.987	46.19	554.06	0.730	0.000	4.00	17.310	12.64	583.6	0.0	2439.9
53.25	Top - Section 1	1.00	1.11	42.536	46.79	549.79	0.730	0.000	3.25	13.848	10.11	473.0	0.0	1951.4
55.00		1.00	1.12	42.822	47.10	547.20	0.730	0.000	1.75	7.377	5.38	253.6	0.0	489.9
60.00		1.00	1.14	43.599	47.96	549.96	0.730	0.000	5.00	20.767	15.16	727.0	0.0	1379.1
65.00		1.00	1.16	44.329	48.76	542.16	0.730	0.000	5.00	20.308	14.82	722.9	0.0	1348.4
70.00		1.00	1.18	45.015	49.52	533.87	0.730	0.000	5.00	19.850	14.49	717.5	0.0	1317.6
75.00		1.00	1.19	45.665	50.23	525.14	0.730	0.000	5.00	19.391	14.16	711.0	0.0	1286.9
80.00		1.00	1.21	46.282	50.91	516.02	0.730	0.000	5.00	18.933	13.82	703.6	0.0	1256.2
85.00		1.00	1.23	46.869	51.56	506.56	0.730	0.000	5.00	18.474	13.49	695.3	0.0	1225.5
90.00		1.00	1.24	47.430	52.17	496.77	0.730	0.000	5.00	18.016	13.15	686.1	0.0	1194.8
93.75	Bot - Section 3	1.00	1.25	47.835	52.62	489.25	0.730	0.000	3.75	13.211	9.64	507.4	0.0	875.9
95.00		1.00	1.25	47.967	52.76	486.70	0.730	0.000	1.25	4.426	3.23	170.5	0.0	540.0
99.50	Top - Section 2	1.00	1.27	48.432	53.28	477.41	0.730	0.000	4.50	15.695	11.46	610.4	0.0	1914.6
100.00		1.00	1.27	48.482	53.33	485.32	0.730	0.000	0.50	1.721	1.26	67.0	0.0	97.9
105.00		1.00	1.28	48.978	53.88	474.78	0.730	0.000	5.00	16.957	12.38	666.9	0.0	964.8
110.00		1.00	1.29	49.456	54.40	464.02	0.730	0.000	5.00	16.499	12.04	655.2	0.0	938.5
115.00		1.00	1.31	49.917	54.91	453.04	0.730	0.000	5.00	16.040	11.71	642.9	0.0	912.1
120.00		1.00	1.32	50.362	55.40	441.86	0.730	0.000	5.00	15.582	11.37	630.1	0.0	885.8
125.00		1.00	1.33	50.793	55.87	430.49	0.730	0.000	5.00	15.123	11.04	616.8	0.0	859.5
130.00		1.00	1.34	51.211	56.33	418.95	0.730	0.000	5.00	14.665	10.71	603.1	0.0	833.1
135.00		1.00	1.35	51.617	56.78	407.25	0.730	0.000	5.00	14.206	10.37	588.8	0.0	806.8
137.00	Appurtenance(s)	1.00	1.35	51.775	56.95	402.52	0.730	0.000	2.00	5.554	4.05	230.9	0.0	315.4
137.17	Bot - Section 4	1.00	1.35	51.789	56.97	402.13	0.730	0.000	0.17	0.460	0.34	19.1	0.0	26.1
140.00		1.00	1.36	52.010	57.21	395.39	0.730	0.000	2.83	7.854	5.73	328.0	0.0	737.5
142.50	Top - Section 3	1.00	1.37	52.203	57.42	389.40	0.730	0.000	2.50	6.808	4.97	285.4	0.0	639.0
144.00	Appurtenance(s)	1.00	1.37	52.318	57.55	392.00	0.730	0.000	1.50	4.030	2.94	169.3	0.0	153.1
145.00		1.00	1.37	52.393	57.63	389.59	0.730	0.000	1.00	2.663	1.94	112.1	0.0	101.2
150.00		1.00	1.38	52.766	58.04	377.47	0.730	0.000	5.00	13.042	9.52	552.6	0.0	495.3
155.00		1.00	1.39	53.129	58.44	365.21	0.730	0.000	5.00	12.584	9.19	536.9	0.0	477.8
160.00		1.00	1.40	53.483	58.83	352.83	0.730	0.000	5.00	12.125	8.85	520.7	0.0	460.2
165.00		1.00	1.41	53.829	59.21	340.32	0.730	0.000	5.00	11.667	8.52	504.3	0.0	442.7
167.00	Appurtenance(s)	1.00	1.41	53.965	59.36	335.29	0.733 *	0.000	2.00	4.538	3.33	197.5	0.0	172.2
170.00		1.00	1.42	54.166	59.58	327.70	0.730	0.000	3.00	6.670	4.87	290.1	0.0	253.0
175.00		1.00	1.43	54.496	59.95	314.97	0.730	0.000	5.00	10.750	7.85	470.4	0.0	407.6
177.00	Appurtenance(s)	1.00	1.43	54.625	60.09	309.85	0.730	0.000	2.00	4.172	3.05	183.0	0.0	158.1
180.00		1.00	1.43	54.818	60.30	302.13	0.730	0.000	3.00	6.120	4.47	269.4	0.0	231.9

## Wind Loading - Shaft

<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	Page: 10
<b>Struct Class:</b> II		



185.00 Appurtenance(s)	1.00	1.44	55.133	60.65	289.19	0.730	0.000	5.00	9.833	7.18	435.3	0.0	372.4	
189.00	1.00	1.45	55.381	60.92	278.77	0.730	0.000	4.00	7.536	5.50	335.1	0.0	285.3	
* Cf Adjusted by Linear Load Ra Effect														
<b>Totals:</b>												<b>189.00</b>	<b>23,790.4</b>	<b>45,697.1</b>

## Discrete Appurtenance Forces

<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 1.2D + 1.0W 126 mph Wind

**Dead Load Factor** 1.20  
**Wind Load Factor** 1.00



**Iterations** 27

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	185.00	Ericsson RRUS-32	3	55.133	60.647	0.64	0.80	7.43	277.20	0.000	0.000	450.63	0.00	0.00
2	185.00	Cci HPA-65R-BUU-H8	12	55.133	60.647	0.63	0.80	98.44	979.20	0.000	0.000	5970.08	0.00	0.00
3	185.00	Ericsson RRUS-11	9	55.133	60.647	0.55	0.80	12.52	547.56	0.000	0.000	759.26	0.00	0.00
4	185.00	Ericsson RRUS-E2	3	55.133	60.647	0.60	0.80	5.67	208.80	0.000	0.000	343.87	0.00	0.00
5	185.00	Mount Pipes	12	55.133	60.647	0.80	0.80	9.50	864.00	0.000	0.000	576.39	0.00	0.00
6	185.00	Ericsson A2	6	55.133	60.647	0.54	0.80	5.98	152.64	0.000	0.000	362.77	0.00	0.00
7	185.00	Raycap DC6-48-60-18-8F	4	55.133	60.647	0.80	0.80	2.94	152.64	0.000	0.000	178.54	0.00	0.00
8	185.00	Low Profile Platform	1	55.133	60.647	1.00	1.00	14.69	1500.00	0.000	0.000	890.90	0.00	0.00
9	185.00	Ericsson RRUS-12	6	55.133	60.647	0.54	0.80	8.68	576.00	0.000	0.000	526.61	0.00	0.00
10	177.00	Platform w/ Mount Pipes	1	54.625	60.088	1.00	1.00	36.10	1852.80	0.000	0.000	2169.18	0.00	0.00
11	177.00	Raycap	2	54.625	60.088	0.66	0.80	3.96	76.80	0.000	0.000	238.08	0.00	0.00
12	177.00	Samsung B5/B13 RRH	3	54.625	60.088	0.67	0.80	3.77	284.76	0.000	0.000	226.53	0.00	0.00
13	177.00	Samsung B2/B66A RRH	3	54.625	60.088	0.67	0.80	3.77	268.92	0.000	0.000	226.53	0.00	0.00
14	177.00	Samsung MT6413 77A	3	54.625	60.088	0.55	0.80	6.28	206.35	0.000	0.000	377.13	0.00	0.00
15	177.00	Amphenol	3	54.625	60.088	0.70	0.80	10.12	54.00	0.000	0.000	607.88	0.00	0.00
16	177.00	Commscope	6	54.625	60.088	0.66	0.80	32.07	314.28	0.000	0.000	1927.09	0.00	0.00
17	167.00	TA08025-B605	3	53.965	59.361	0.50	0.75	2.95	270.00	0.000	0.000	175.39	0.00	0.00
18	167.00	TA08025-B604	3	53.965	59.361	0.50	0.75	2.95	230.04	0.000	0.000	175.39	0.00	0.00
19	167.00	RDIDC-9181-OF-48	1	53.965	59.361	0.75	0.75	1.51	26.28	0.000	0.000	89.49	0.00	0.00
20	167.00	MC-PK8-DSH w/ Mount	1	53.965	59.361	0.67	0.67	22.94	1440.00	0.000	0.000	1361.79	0.00	0.00
21	167.00	Commscope	3	53.965	59.361	0.55	0.75	20.26	254.88	0.000	0.000	1202.89	0.00	0.00
22	144.00	DS2C00-F-36-B	1	52.788	58.067	1.00	1.00	5.78	48.00	0.000	6.300	335.63	0.00	2114.45
23	137.00	Ring Mount	1	51.775	56.953	1.00	1.00	2.50	264.00	0.000	0.000	142.38	0.00	0.00
24	137.00	Side Arm (SV197-48)	1	51.775	56.953	1.00	1.00	4.50	144.00	0.000	0.000	256.29	0.00	0.00
<b>Totals:</b>									<b>10,993.15</b>			<b>19,570.71</b>		

## Total Applied Force Summary

<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



**Load Case:** 1.2D + 1.0W 126 mph Wind

**Dead Load Factor** 1.20  
**Wind Load Factor** 1.00



**Iterations** 27

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		663.78	1978.30	0.00	0.00
10.00		651.81	1943.19	0.00	0.00
15.00		647.75	1908.08	0.00	0.00
20.00		673.09	1872.97	0.00	0.00
25.00		690.63	1837.85	0.00	0.00
30.00		702.77	1802.74	0.00	0.00
35.00		710.88	1767.63	0.00	0.00
40.00		715.84	1732.52	0.00	0.00
45.00		718.27	1697.41	0.00	0.00
46.00		142.48	335.27	0.00	0.00
50.00		583.62	2477.00	0.00	0.00
53.25		473.02	1981.54	0.00	0.00
55.00		253.65	506.16	0.00	0.00
60.00		727.04	1425.43	0.00	0.00
65.00		722.88	1394.71	0.00	0.00
70.00		717.51	1363.99	0.00	0.00
75.00		711.05	1333.27	0.00	0.00
80.00		703.61	1302.54	0.00	0.00
85.00		695.28	1271.82	0.00	0.00
90.00		686.14	1241.10	0.00	0.00
93.75		507.44	910.66	0.00	0.00
95.00		170.46	551.62	0.00	0.00
99.50		610.39	1956.29	0.00	0.00
100.00		67.00	102.56	0.00	0.00
105.00		666.92	1011.16	0.00	0.00
110.00		655.22	984.83	0.00	0.00
115.00		642.95	958.49	0.00	0.00
120.00		630.14	932.16	0.00	0.00
125.00		616.83	905.83	0.00	0.00
130.00		603.05	879.49	0.00	0.00
135.00		588.82	853.16	0.00	0.00
137.00	(2) attachments	629.59	741.89	0.00	0.00
137.17		19.11	27.63	0.00	0.00
140.00		328.02	763.73	0.00	0.00
142.50		285.37	662.18	0.00	0.00
144.00	(1) attachments	504.92	214.98	0.00	2114.45
145.00		112.06	109.19	0.00	0.00
150.00		552.62	535.44	0.00	0.00
155.00		536.86	517.88	0.00	0.00
160.00		520.75	500.33	0.00	0.00
165.00		504.29	482.77	0.00	0.00
167.00	(11) attachments	3202.41	2409.39	0.00	0.00
170.00		290.11	269.85	0.00	0.00
175.00		470.41	435.71	0.00	0.00
177.00	(21) attachments	5955.40	3227.28	0.00	0.00
180.00		269.39	240.87	0.00	0.00

## Total Applied Force Summary

<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	Page: 13
<b>Struct Class:</b> II		



185.00	(56) attachments	10494.37	5645.44	0.00	0.00
189.00		335.14	291.62	0.00	0.00
	<b>Totals:</b>	<b>43,361.15</b>	<b>58,295.94</b>	<b>0.00</b>	<b>2,114.45</b>



## Linear Appurtenance Segment Forces (Factored)

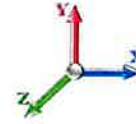
<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II
		<b>Page:</b> 14



**Load Case:** 1.2D + 1.0W 126 mph Wind

**Dead Load Factor** 1.20

**Wind Load Factor** 1.00



**Iterations** 27

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.045	0.000	32.493	0.00	1.64
5.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.045	0.000	32.493	0.00	6.24
5.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.045	0.000	32.493	0.00	11.95
10.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.046	0.000	32.493	0.00	1.64
10.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.046	0.000	32.493	0.00	6.24
10.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.046	0.000	32.493	0.00	11.95
15.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.047	0.000	32.894	0.00	1.64
15.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.047	0.000	32.894	0.00	6.24
15.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.047	0.000	32.894	0.00	11.95
20.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.048	0.000	34.832	0.00	1.64
20.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.048	0.000	34.832	0.00	6.24
20.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.048	0.000	34.832	0.00	11.95
25.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.049	0.000	36.434	0.00	1.64
25.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.049	0.000	36.434	0.00	6.24
25.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.049	0.000	36.434	0.00	11.95
30.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.050	0.000	37.809	0.00	1.64
30.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.050	0.000	37.809	0.00	6.24
30.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.050	0.000	37.809	0.00	11.95
35.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.051	0.000	39.018	0.00	1.64
35.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.051	0.000	39.018	0.00	6.24
35.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.051	0.000	39.018	0.00	11.95
40.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.052	0.000	40.101	0.00	1.64
40.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.052	0.000	40.101	0.00	6.24
40.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.052	0.000	40.101	0.00	11.95
45.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.053	0.000	41.084	0.00	1.64
45.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.053	0.000	41.084	0.00	6.24
45.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.053	0.000	41.084	0.00	11.95
46.00	Safety Cable	Yes	1.00	0.000	0.38	0.03	0.00	0.053	0.000	41.271	0.00	0.33
46.00	Step bolts (ladder)	Yes	1.00	0.000	0.63	0.05	0.00	0.053	0.000	41.271	0.00	1.25
46.00	1.75" Hybrid	Yes	1.00	0.000	1.75	0.15	0.00	0.053	0.000	41.271	0.00	2.39
50.00	Safety Cable	Yes	4.00	0.000	0.38	0.13	0.00	0.054	0.000	41.987	0.00	1.31
50.00	Step bolts (ladder)	Yes	4.00	0.000	0.63	0.21	0.00	0.054	0.000	41.987	0.00	4.99
50.00	1.75" Hybrid	Yes	4.00	0.000	1.75	0.58	0.00	0.054	0.000	41.987	0.00	9.56
53.25	Safety Cable	Yes	3.25	0.000	0.38	0.10	0.00	0.055	0.000	42.536	0.00	1.06
53.25	Step bolts (ladder)	Yes	3.25	0.000	0.63	0.17	0.00	0.055	0.000	42.536	0.00	4.06
53.25	1.75" Hybrid	Yes	3.25	0.000	1.75	0.47	0.00	0.055	0.000	42.536	0.00	7.76
55.00	Safety Cable	Yes	1.75	0.000	0.38	0.06	0.00	0.055	0.000	42.822	0.00	0.57
55.00	Step bolts (ladder)	Yes	1.75	0.000	0.63	0.09	0.00	0.055	0.000	42.822	0.00	2.18
55.00	1.75" Hybrid	Yes	1.75	0.000	1.75	0.26	0.00	0.055	0.000	42.822	0.00	4.18
60.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.055	0.000	43.599	0.00	1.64
60.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.055	0.000	43.599	0.00	6.24
60.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.055	0.000	43.599	0.00	11.95
65.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.057	0.000	44.329	0.00	1.64
65.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.057	0.000	44.329	0.00	6.24
65.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.057	0.000	44.329	0.00	11.95
70.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.058	0.000	45.015	0.00	1.64
70.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.058	0.000	45.015	0.00	6.24

## Linear Appurtenance Segment Forces (Factored)

**Structure:** CT11796-S  
**Site Name:** North Stonington 3  
**Height:** 189.00 (ft)  
**Base Elev:** 1.000 (ft)  
**Gh:** 1.1

**Code:** TIA-222-H  
**Exposure:** C  
**Crest Height:** 0.00  
**Site Class:** D - Stiff Soil  
**Struct Class:** II

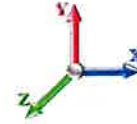
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**Load Case:** 1.2D + 1.0W 126 mph Wind

**Dead Load Factor** 1.20  
**Wind Load Factor** 1.00



Iterations 27

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
70.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.058	0.000	45.015	0.00	11.95
75.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.059	0.000	45.665	0.00	1.64
75.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.059	0.000	45.665	0.00	6.24
75.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.059	0.000	45.665	0.00	11.95
80.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.061	0.000	46.282	0.00	1.64
80.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.061	0.000	46.282	0.00	6.24
80.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.061	0.000	46.282	0.00	11.95
85.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.062	0.000	46.869	0.00	1.64
85.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.062	0.000	46.869	0.00	6.24
85.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.062	0.000	46.869	0.00	11.95
90.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.064	0.000	47.430	0.00	1.64
90.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.064	0.000	47.430	0.00	6.24
90.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.064	0.000	47.430	0.00	11.95
93.75	Safety Cable	Yes	3.75	0.000	0.38	0.12	0.00	0.065	0.000	47.835	0.00	1.23
93.75	Step bolts (ladder)	Yes	3.75	0.000	0.63	0.20	0.00	0.065	0.000	47.835	0.00	4.68
93.75	1.75" Hybrid	Yes	3.75	0.000	1.75	0.55	0.00	0.065	0.000	47.835	0.00	8.96
95.00	Safety Cable	Yes	1.25	0.000	0.38	0.04	0.00	0.066	0.000	47.967	0.00	0.41
95.00	Step bolts (ladder)	Yes	1.25	0.000	0.63	0.07	0.00	0.066	0.000	47.967	0.00	1.56
95.00	1.75" Hybrid	Yes	1.25	0.000	1.75	0.18	0.00	0.066	0.000	47.967	0.00	2.99
99.50	Safety Cable	Yes	4.50	0.000	0.38	0.14	0.00	0.067	0.000	48.432	0.00	1.47
99.50	Step bolts (ladder)	Yes	4.50	0.000	0.63	0.24	0.00	0.067	0.000	48.432	0.00	5.62
99.50	1.75" Hybrid	Yes	4.50	0.000	1.75	0.66	0.00	0.067	0.000	48.432	0.00	10.75
100.00	Safety Cable	Yes	0.50	0.000	0.38	0.02	0.00	0.067	0.000	48.482	0.00	0.16
100.00	Step bolts (ladder)	Yes	0.50	0.000	0.63	0.03	0.00	0.067	0.000	48.482	0.00	0.62
100.00	1.75" Hybrid	Yes	0.50	0.000	1.75	0.07	0.00	0.067	0.000	48.482	0.00	1.19
105.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.068	0.000	48.978	0.00	1.64
105.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.068	0.000	48.978	0.00	6.24
105.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.068	0.000	48.978	0.00	11.95
110.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.070	0.000	49.456	0.00	1.64
110.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.070	0.000	49.456	0.00	6.24
110.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.070	0.000	49.456	0.00	11.95
115.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.072	0.000	49.917	0.00	1.64
115.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.072	0.000	49.917	0.00	6.24
115.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.072	0.000	49.917	0.00	11.95
120.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.074	0.000	50.362	0.00	1.64
120.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.074	0.000	50.362	0.00	6.24
120.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.074	0.000	50.362	0.00	11.95
125.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.076	0.000	50.793	0.00	1.64
125.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.076	0.000	50.793	0.00	6.24
125.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.076	0.000	50.793	0.00	11.95
130.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.078	0.000	51.211	0.00	1.64
130.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.078	0.000	51.211	0.00	6.24
130.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.078	0.000	51.211	0.00	11.95
135.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.081	0.000	51.617	0.00	1.64
135.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.081	0.000	51.617	0.00	6.24
135.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.081	0.000	51.617	0.00	11.95
137.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.083	0.000	51.775	0.00	0.66

## Linear Appurtenance Segment Forces (Factored)

<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II

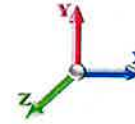


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**Load Case:** 1.2D + 1.0W 126 mph Wind

**Dead Load Factor** 1.20

**Wind Load Factor** 1.00



**Iterations** 27

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
137.00	Step bolts (ladder)	Yes	2.00	0.000	0.63	0.10	0.00	0.083	0.000	51.775	0.00	2.50
137.00	1.75" Hybrid	Yes	2.00	0.000	1.75	0.29	0.00	0.083	0.000	51.775	0.00	4.78
137.17	Safety Cable	Yes	0.17	0.000	0.38	0.01	0.00	0.083	0.000	51.789	0.00	0.05
137.17	Step bolts (ladder)	Yes	0.17	0.000	0.63	0.01	0.00	0.083	0.000	51.789	0.00	0.21
137.17	1.75" Hybrid	Yes	0.17	0.000	1.75	0.02	0.00	0.083	0.000	51.789	0.00	0.40
140.00	Safety Cable	Yes	2.83	0.000	0.38	0.09	0.00	0.084	0.000	52.010	0.00	0.93
140.00	Step bolts (ladder)	Yes	2.83	0.000	0.63	0.15	0.00	0.084	0.000	52.010	0.00	3.54
140.00	1.75" Hybrid	Yes	2.83	0.000	1.75	0.41	0.00	0.084	0.000	52.010	0.00	6.77
142.50	Safety Cable	Yes	2.50	0.000	0.38	0.08	0.00	0.086	0.000	52.203	0.00	0.82
142.50	Step bolts (ladder)	Yes	2.50	0.000	0.63	0.13	0.00	0.086	0.000	52.203	0.00	3.12
142.50	1.75" Hybrid	Yes	2.50	0.000	1.75	0.36	0.00	0.086	0.000	52.203	0.00	5.97
144.00	Safety Cable	Yes	1.50	0.000	0.38	0.05	0.00	0.086	0.000	52.318	0.00	0.49
144.00	Step bolts (ladder)	Yes	1.50	0.000	0.63	0.08	0.00	0.086	0.000	52.318	0.00	1.87
144.00	1.75" Hybrid	Yes	1.50	0.000	1.75	0.22	0.00	0.086	0.000	52.318	0.00	3.58
145.00	Safety Cable	Yes	1.00	0.000	0.38	0.03	0.00	0.086	0.000	52.393	0.00	0.33
145.00	Step bolts (ladder)	Yes	1.00	0.000	0.63	0.05	0.00	0.086	0.000	52.393	0.00	1.25
145.00	1.75" Hybrid	Yes	1.00	0.000	1.75	0.15	0.00	0.086	0.000	52.393	0.00	2.39
150.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.088	0.000	52.766	0.00	1.64
150.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.088	0.000	52.766	0.00	6.24
150.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.088	0.000	52.766	0.00	11.95
155.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.091	0.000	53.129	0.00	1.64
155.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.091	0.000	53.129	0.00	6.24
155.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.091	0.000	53.129	0.00	11.95
160.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.095	0.000	53.483	0.00	1.64
160.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.095	0.000	53.483	0.00	6.24
160.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.095	0.000	53.483	0.00	11.95
165.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.099	0.000	53.829	0.00	1.64
165.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.099	0.000	53.829	0.00	6.24
165.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.099	0.000	53.829	0.00	11.95
167.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.101	1.004	53.965	0.00	0.66
167.00	Step bolts (ladder)	Yes	2.00	0.000	0.63	0.10	0.00	0.101	1.004	53.965	0.00	2.50
167.00	1.75" Hybrid	Yes	2.00	0.000	1.75	0.29	0.00	0.101	1.004	53.965	0.00	4.78
170.00	Safety Cable	Yes	3.00	0.000	0.38	0.10	0.00	0.038	0.000	54.166	0.00	0.98
170.00	Step bolts (ladder)	Yes	3.00	0.000	0.63	0.16	0.00	0.038	0.000	54.166	0.00	3.74
175.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.039	0.000	54.496	0.00	1.64
175.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.039	0.000	54.496	0.00	6.24
177.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.040	0.000	54.625	0.00	0.66
177.00	Step bolts (ladder)	Yes	2.00	0.000	0.63	0.10	0.00	0.040	0.000	54.625	0.00	2.50
180.00	Safety Cable	Yes	3.00	0.000	0.38	0.10	0.00	0.041	0.000	54.818	0.00	0.98
180.00	Step bolts (ladder)	Yes	3.00	0.000	0.63	0.16	0.00	0.041	0.000	54.818	0.00	3.74
185.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.043	0.000	55.133	0.00	1.64
185.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.043	0.000	55.133	0.00	6.24
189.00	Safety Cable	Yes	4.00	0.000	0.38	0.13	0.00	0.045	0.000	55.381	0.00	1.31
189.00	Step bolts (ladder)	Yes	4.00	0.000	0.63	0.21	0.00	0.045	0.000	55.381	0.00	4.99
<b>Totals:</b>											<b>0.0</b>	<b>696.8</b>



## Calculated Forces

**Structure:** CT11796-S  
**Site Name:** North Stonington 3  
**Height:** 189.00 (ft)  
**Base Elev:** 1.000 (ft)  
**Gh:** 1.1

**Code:** TIA-222-H  
**Exposure:** C  
**Crest Height:** 0.00  
**Site Class:** D - Stiff Soil  
**Struct Class:** II

12/19/2023  
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**Load Case:** 1.2D + 1.0W 126 mph Wind

**Dead Load Factor** 1.20  
**Wind Load Factor** 1.00



**Iterations** 27

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	-58.22	-43.46	0.00	-5897.2	0.00	5897.29	6694.10	1675.79	8365.91	8283.84	0.00	0.000	0.000	0.721
5.00	-56.10	-42.98	0.00	-5680.0	0.00	5680.00	6611.47	1645.60	8067.27	8033.01	0.10	-0.189	0.000	0.716
10.00	-54.02	-42.50	0.00	-5465.1	0.00	5465.11	6527.45	1615.42	7774.06	7784.25	0.40	-0.380	0.000	0.711
15.00	-51.97	-42.01	0.00	-5252.6	0.00	5252.62	6442.03	1585.24	7486.28	7537.62	0.90	-0.575	0.000	0.706
20.00	-49.96	-41.49	0.00	-5042.5	0.00	5042.56	6355.23	1555.06	7203.93	7293.25	1.61	-0.773	0.000	0.700
25.00	-47.99	-40.94	0.00	-4835.0	0.00	4835.09	6267.03	1524.88	6927.01	7051.20	2.53	-0.974	0.000	0.694
30.00	-46.06	-40.37	0.00	-4630.3	0.00	4630.37	6177.44	1494.69	6655.51	6811.59	3.66	-1.179	0.000	0.688
35.00	-44.16	-39.79	0.00	-4428.5	0.00	4428.50	6086.46	1464.51	6389.44	6574.50	5.01	-1.387	0.000	0.682
40.00	-42.30	-39.18	0.00	-4229.5	0.00	4229.58	5994.09	1434.33	6128.80	6340.03	6.57	-1.598	0.000	0.675
45.00	-40.54	-38.51	0.00	-4033.6	0.00	4033.67	5900.32	1404.15	5873.58	6108.27	8.36	-1.813	0.000	0.668
46.00	-40.14	-38.43	0.00	-3995.1	0.00	3995.16	5881.40	1398.11	5823.19	6062.25	8.75	-1.857	0.000	0.667
50.00	-37.58	-37.87	0.00	-3841.4	0.00	3841.45	5805.17	1373.97	5623.79	5879.32	10.38	-2.033	0.000	0.661
53.25	-35.54	-37.39	0.00	-3718.3	0.00	3718.38	4915.61	1207.90	4967.43	5008.40	11.81	-2.178	0.000	0.751
55.00	-34.94	-37.22	0.00	-3652.9	0.00	3652.95	4889.04	1198.66	4891.70	4942.89	12.62	-2.258	0.000	0.747
60.00	-33.39	-36.57	0.00	-3466.8	0.00	3466.86	4812.21	1172.25	4678.52	4757.07	15.12	-2.500	0.000	0.737
65.00	-31.87	-35.93	0.00	-3283.9	0.00	3283.99	4733.98	1145.84	4470.10	4573.36	17.87	-2.746	0.000	0.726
70.00	-30.39	-35.28	0.00	-3104.3	0.00	3104.36	4654.36	1119.43	4266.42	4391.86	20.88	-2.995	0.000	0.714
75.00	-28.95	-34.62	0.00	-2927.9	0.00	2927.99	4573.36	1093.02	4067.49	4212.65	24.15	-3.248	0.000	0.702
80.00	-27.54	-33.97	0.00	-2754.8	0.00	2754.89	4490.96	1066.61	3873.31	4035.83	27.68	-3.503	0.000	0.690
85.00	-26.16	-33.31	0.00	-2585.0	0.00	2585.06	4403.53	1040.20	3683.88	3858.32	31.49	-3.761	0.000	0.677
90.00	-24.84	-32.64	0.00	-2418.5	0.00	2418.51	4291.74	1013.80	3499.20	3663.93	35.56	-4.022	0.000	0.667
93.75	-23.89	-32.12	0.00	-2296.1	0.00	2296.11	4207.89	993.99	3363.81	3521.43	38.80	-4.221	0.000	0.659
95.00	-23.27	-31.98	0.00	-2255.9	0.00	2255.96	4179.94	987.39	3319.27	3474.56	39.91	-4.289	0.000	0.656
99.50	-21.29	-31.27	0.00	-2112.0	0.00	2112.06	3481.28	842.93	2822.27	2886.47	44.07	-4.529	0.000	0.739
100.00	-21.11	-31.25	0.00	-2096.4	0.00	2096.43	3474.51	840.67	2807.13	2873.05	44.54	-4.556	0.000	0.737
105.00	-20.00	-30.61	0.00	-1940.1	0.00	1940.17	3406.10	818.03	2657.99	2739.94	49.47	-4.849	0.000	0.715
110.00	-18.92	-29.97	0.00	-1787.1	0.00	1787.14	3336.29	795.39	2512.93	2608.82	54.70	-5.143	0.000	0.692
115.00	-17.88	-29.33	0.00	-1637.3	0.00	1637.31	3265.09	772.76	2371.93	2479.78	60.23	-5.436	0.000	0.667
120.00	-16.86	-28.70	0.00	-1490.6	0.00	1490.67	3175.51	750.12	2235.00	2340.39	66.07	-5.728	0.000	0.644
125.00	-15.89	-28.07	0.00	-1347.1	0.00	1347.18	3079.69	727.49	2102.15	2200.56	72.22	-6.018	0.000	0.619
130.00	-14.94	-27.45	0.00	-1206.8	0.00	1206.83	2983.86	704.85	1973.36	2065.04	78.66	-6.304	0.000	0.591
135.00	-14.07	-26.82	0.00	-1069.5	0.00	1069.57	2888.03	682.21	1848.65	1933.83	85.40	-6.584	0.000	0.560
137.00	-13.38	-26.12	0.00	-1015.9	0.00	1015.94	2849.70	673.16	1799.90	1882.55	88.18	-6.698	0.000	0.546
137.17	-13.31	-26.12	0.00	-1011.5	0.00	1011.58	2846.51	672.40	1795.87	1878.31	88.41	-6.707	0.000	0.545
140.00	-12.53	-25.73	0.00	-937.58	0.00	937.58	2792.21	659.58	1728.01	1806.92	92.43	-6.864	0.000	0.525
142.50	-11.86	-25.39	0.00	-873.25	0.00	873.25	1731.59	440.88	1158.08	1127.95	96.06	-7.000	0.000	0.784
144.00	-11.67	-24.88	0.00	-833.04	0.00	833.04	1719.84	436.35	1134.42	1108.70	98.26	-7.081	0.000	0.761
145.00	-11.48	-24.80	0.00	-808.16	0.00	808.16	1711.94	433.33	1118.78	1095.92	99.75	-7.157	0.000	0.747
150.00	-10.88	-24.25	0.00	-684.15	0.00	684.15	1671.60	418.24	1042.21	1032.53	107.42	-7.508	0.000	0.672
155.00	-10.31	-23.71	0.00	-562.90	0.00	562.90	1629.88	403.15	968.36	970.13	115.44	-7.834	0.000	0.590
160.00	-9.77	-23.17	0.00	-444.38	0.00	444.38	1586.75	388.06	897.22	908.81	123.78	-8.129	0.000	0.499
165.00	-9.30	-22.63	0.00	-328.54	0.00	328.54	1542.24	372.97	828.79	848.66	132.40	-8.382	0.000	0.397
167.00	-7.35	-19.12	0.00	-283.29	0.00	283.29	1524.05	366.93	802.18	824.95	135.92	-8.473	0.000	0.351
170.00	-7.08	-18.81	0.00	-225.94	0.00	225.94	1496.34	357.88	763.08	789.77	141.27	-8.591	0.000	0.294
175.00	-6.70	-18.29	0.00	-131.89	0.00	131.89	1449.04	342.78	700.08	732.25	150.32	-8.741	0.000	0.188
177.00	-4.40	-11.91	0.00	-95.32	0.00	95.32	1425.57	336.75	675.64	707.57	153.98	-8.784	0.000	0.139
180.00	-4.20	-11.61	0.00	-59.58	0.00	59.58	1387.24	327.69	639.80	669.85	159.49	-8.831	0.000	0.093
185.00	-0.24	-0.38	0.00	-1.50	0.00	1.50	1323.35	312.60	582.23	609.26	168.73	-8.864	0.000	0.003

### Calculated Forces

<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II
		Page: 18



189.00	0.00	-0.34	0.00	0.00	0.00	0.00	1272.25	300.53	538.12	562.86	176.13	-8.865	0.000	0.000
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## Wind Loading - Shaft

**Structure:** CT11796-S  
**Site Name:** North Stonington 3  
**Height:** 189.00 (ft)  
**Base Elev:** 1.000 (ft)  
**Gh:** 1.1

**Topography:** 1

**Code:** TIA-222-H  
**Exposure:** C  
**Crest Height:** 0.00  
**Site Class:** D - Stiff Soil  
**Struct Class:** II

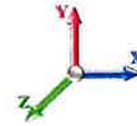
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**Load Case:** 0.9D + 1.0W 126 mph Wind

**Dead Load Factor** 0.90  
**Wind Load Factor** 1.00



**Iterations** 27

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	32.493	35.74	593.41	0.730	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	32.493	35.74	582.81	0.730	0.000	5.00	25.440	18.57	663.8	0.0	1449.0
10.00		1.00	0.85	32.493	35.74	572.21	0.730	0.000	5.00	24.981	18.24	651.8	0.0	1422.6
15.00		1.00	0.86	32.894	36.18	565.07	0.730	0.000	5.00	24.523	17.90	647.8	0.0	1396.3
20.00		1.00	0.91	34.832	38.32	570.50	0.730	0.000	5.00	24.064	17.57	673.1	0.0	1370.0
25.00		1.00	0.95	36.434	40.08	572.25	0.730	0.000	5.00	23.606	17.23	690.6	0.0	1343.6
30.00		1.00	0.99	37.809	41.59	571.51	0.730	0.000	5.00	23.147	16.90	702.8	0.0	1317.3
35.00		1.00	1.02	39.018	42.92	568.96	0.730	0.000	5.00	22.689	16.56	710.9	0.0	1291.0
40.00		1.00	1.05	40.101	44.11	565.03	0.730	0.000	5.00	22.230	16.23	715.8	0.0	1264.6
45.00		1.00	1.07	41.084	45.19	560.00	0.730	0.000	5.00	21.772	15.89	718.3	0.0	1238.3
46.00	Bot - Section 2	1.00	1.08	41.271	45.40	558.88	0.730	0.000	1.00	4.299	3.14	142.5	0.0	244.5
50.00		1.00	1.10	41.987	46.19	554.06	0.730	0.000	4.00	17.310	12.64	583.6	0.0	1829.9
53.25	Top - Section 1	1.00	1.11	42.536	46.79	549.79	0.730	0.000	3.25	13.848	10.11	473.0	0.0	1463.6
55.00		1.00	1.12	42.822	47.10	557.20	0.730	0.000	1.75	7.377	5.38	253.6	0.0	367.5
60.00		1.00	1.14	43.599	47.96	549.96	0.730	0.000	5.00	20.767	15.16	727.0	0.0	1034.3
65.00		1.00	1.16	44.329	48.76	542.16	0.730	0.000	5.00	20.308	14.82	722.9	0.0	1011.3
70.00		1.00	1.18	45.015	49.52	533.87	0.730	0.000	5.00	19.850	14.49	717.5	0.0	988.2
75.00		1.00	1.19	45.665	50.23	525.14	0.730	0.000	5.00	19.391	14.16	711.0	0.0	965.2
80.00		1.00	1.21	46.282	50.91	516.02	0.730	0.000	5.00	18.933	13.82	703.6	0.0	942.1
85.00		1.00	1.23	46.869	51.56	506.56	0.730	0.000	5.00	18.474	13.49	695.3	0.0	919.1
90.00		1.00	1.24	47.430	52.17	496.77	0.730	0.000	5.00	18.016	13.15	686.1	0.0	896.1
93.75	Bot - Section 3	1.00	1.25	47.835	52.62	489.25	0.730	0.000	3.75	13.211	9.64	507.4	0.0	656.9
95.00		1.00	1.25	47.967	52.76	486.70	0.730	0.000	1.25	4.426	3.23	170.5	0.0	405.0
99.50	Top - Section 2	1.00	1.27	48.432	53.28	477.41	0.730	0.000	4.50	15.695	11.46	610.4	0.0	1435.9
100.00		1.00	1.27	48.482	53.33	485.32	0.730	0.000	0.50	1.721	1.26	67.0	0.0	73.4
105.00		1.00	1.28	48.978	53.88	474.78	0.730	0.000	5.00	16.957	12.38	666.9	0.0	723.6
110.00		1.00	1.29	49.456	54.40	464.02	0.730	0.000	5.00	16.499	12.04	655.2	0.0	703.9
115.00		1.00	1.31	49.917	54.91	453.04	0.730	0.000	5.00	16.040	11.71	642.9	0.0	684.1
120.00		1.00	1.32	50.362	55.40	441.86	0.730	0.000	5.00	15.582	11.37	630.1	0.0	664.4
125.00		1.00	1.33	50.793	55.87	430.49	0.730	0.000	5.00	15.123	11.04	616.8	0.0	644.6
130.00		1.00	1.34	51.211	56.33	418.95	0.730	0.000	5.00	14.665	10.71	603.1	0.0	624.9
135.00		1.00	1.35	51.617	56.78	407.25	0.730	0.000	5.00	14.206	10.37	588.8	0.0	605.1
137.00	Appurtenance(s)	1.00	1.35	51.775	56.95	402.52	0.730	0.000	2.00	5.554	4.05	230.9	0.0	236.5
137.17	Bot - Section 4	1.00	1.35	51.789	56.97	402.13	0.730	0.000	0.17	0.460	0.34	19.1	0.0	19.6
140.00		1.00	1.36	52.010	57.21	395.39	0.730	0.000	2.83	7.854	5.73	328.0	0.0	553.1
142.50	Top - Section 3	1.00	1.37	52.203	57.42	389.40	0.730	0.000	2.50	6.808	4.97	285.4	0.0	479.3
144.00	Appurtenance(s)	1.00	1.37	52.318	57.55	392.00	0.730	0.000	1.50	4.030	2.94	169.3	0.0	114.8
145.00		1.00	1.37	52.393	57.63	389.59	0.730	0.000	1.00	2.663	1.94	112.1	0.0	75.9
150.00		1.00	1.38	52.766	58.04	377.47	0.730	0.000	5.00	13.042	9.52	552.6	0.0	371.5
155.00		1.00	1.39	53.129	58.44	365.21	0.730	0.000	5.00	12.584	9.19	536.9	0.0	358.3
160.00		1.00	1.40	53.483	58.83	352.83	0.730	0.000	5.00	12.125	8.85	520.7	0.0	345.2
165.00		1.00	1.41	53.829	59.21	340.32	0.730	0.000	5.00	11.667	8.52	504.3	0.0	332.0
167.00	Appurtenance(s)	1.00	1.41	53.965	59.36	335.29	0.733 *	0.000	2.00	4.538	3.33	197.5	0.0	129.1
170.00		1.00	1.42	54.166	59.58	327.70	0.730	0.000	3.00	6.670	4.87	290.1	0.0	189.7
175.00		1.00	1.43	54.496	59.95	314.97	0.730	0.000	5.00	10.750	7.85	470.4	0.0	305.7
177.00	Appurtenance(s)	1.00	1.43	54.625	60.09	309.85	0.730	0.000	2.00	4.172	3.05	183.0	0.0	118.6
180.00		1.00	1.43	54.818	60.30	302.13	0.730	0.000	3.00	6.120	4.47	269.4	0.0	173.9



## Wind Loading - Shaft

<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II
		<b>Page:</b> 20



185.00 Appurtenance(s)	1.00	1.44	55.133	60.65	289.19	0.730	0.000	5.00	9.833	7.18	435.3	0.0	279.3
189.00	1.00	1.45	55.381	60.92	278.77	0.730	0.000	4.00	7.536	5.50	335.1	0.0	214.0
								<b>Totals:</b>	<b>189.00</b>		<b>23,790.4</b>		<b>34,272.8</b>

\* Cf Adjusted by Linear Load Ra Effect

## Discrete Appurtenance Forces

<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



<b>Load Case:</b> 0.9D + 1.0W 126 mph Wind		<b>Iterations</b> 27
<b>Dead Load Factor</b> 0.90		
<b>Wind Load Factor</b> 1.00		

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	185.00	Ericsson RRUS-32	3	55.133	60.647	0.64	0.80	7.43	207.90	0.000	0.000	450.63	0.00	0.00
2	185.00	Cci HPA-65R-BUU-H8	12	55.133	60.647	0.63	0.80	98.44	734.40	0.000	0.000	5970.08	0.00	0.00
3	185.00	Ericsson RRUS-11	9	55.133	60.647	0.55	0.80	12.52	410.67	0.000	0.000	759.26	0.00	0.00
4	185.00	Ericsson RRUS-E2	3	55.133	60.647	0.60	0.80	5.67	156.60	0.000	0.000	343.87	0.00	0.00
5	185.00	Mount Pipes	12	55.133	60.647	0.80	0.80	9.50	648.00	0.000	0.000	576.39	0.00	0.00
6	185.00	Ericsson A2	6	55.133	60.647	0.54	0.80	5.98	114.48	0.000	0.000	362.77	0.00	0.00
7	185.00	Raycap DC6-48-60-18-8F	4	55.133	60.647	0.80	0.80	2.94	114.48	0.000	0.000	178.54	0.00	0.00
8	185.00	Low Profile Platform	1	55.133	60.647	1.00	1.00	14.69	1125.00	0.000	0.000	890.90	0.00	0.00
9	185.00	Ericsson RRUS-12	6	55.133	60.647	0.54	0.80	8.68	432.00	0.000	0.000	526.61	0.00	0.00
10	177.00	Platform w/ Mount Pipes	1	54.625	60.088	1.00	1.00	36.10	1389.60	0.000	0.000	2169.18	0.00	0.00
11	177.00	Raycap	2	54.625	60.088	0.66	0.80	3.96	57.60	0.000	0.000	238.08	0.00	0.00
12	177.00	Samsung B5/B13 RRH	3	54.625	60.088	0.67	0.80	3.77	213.57	0.000	0.000	226.53	0.00	0.00
13	177.00	Samsung B2/B66A RRH	3	54.625	60.088	0.67	0.80	3.77	201.69	0.000	0.000	226.53	0.00	0.00
14	177.00	Samsung MT6413 77A	3	54.625	60.088	0.55	0.80	6.28	154.76	0.000	0.000	377.13	0.00	0.00
15	177.00	Amphenol	3	54.625	60.088	0.70	0.80	10.12	40.50	0.000	0.000	607.88	0.00	0.00
16	177.00	Commscope	6	54.625	60.088	0.66	0.80	32.07	235.71	0.000	0.000	1927.09	0.00	0.00
17	167.00	TA08025-B605	3	53.965	59.361	0.50	0.75	2.95	202.50	0.000	0.000	175.39	0.00	0.00
18	167.00	TA08025-B604	3	53.965	59.361	0.50	0.75	2.95	172.53	0.000	0.000	175.39	0.00	0.00
19	167.00	RDIDC-9181-OF-48	1	53.965	59.361	0.75	0.75	1.51	19.71	0.000	0.000	89.49	0.00	0.00
20	167.00	MC-PK8-DSH w/ Mount	1	53.965	59.361	0.67	0.67	22.94	1080.00	0.000	0.000	1361.79	0.00	0.00
21	167.00	Commscope	3	53.965	59.361	0.55	0.75	20.26	191.16	0.000	0.000	1202.89	0.00	0.00
22	144.00	DS2C00-F-36-B	1	52.788	58.067	1.00	1.00	5.78	36.00	0.000	6.300	335.63	0.00	2114.45
23	137.00	Ring Mount	1	51.775	56.953	1.00	1.00	2.50	198.00	0.000	0.000	142.38	0.00	0.00
24	137.00	Side Arm (SV197-48)	1	51.775	56.953	1.00	1.00	4.50	108.00	0.000	0.000	256.29	0.00	0.00
<b>Totals:</b>									<b>8,244.86</b>			<b>19,570.71</b>		

## Total Applied Force Summary

<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II

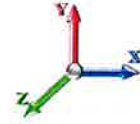


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**Load Case:** 0.9D + 1.0W 126 mph Wind

**Dead Load Factor** 0.90

**Wind Load Factor** 1.00



**Iterations** 27

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		663.78	1483.73	0.00	0.00
10.00		651.81	1457.39	0.00	0.00
15.00		647.75	1431.06	0.00	0.00
20.00		673.09	1404.72	0.00	0.00
25.00		690.63	1378.39	0.00	0.00
30.00		702.77	1352.06	0.00	0.00
35.00		710.88	1325.72	0.00	0.00
40.00		715.84	1299.39	0.00	0.00
45.00		718.27	1273.06	0.00	0.00
46.00		142.48	251.45	0.00	0.00
50.00		583.62	1857.75	0.00	0.00
53.25		473.02	1486.15	0.00	0.00
55.00		253.65	379.62	0.00	0.00
60.00		727.04	1069.08	0.00	0.00
65.00		722.88	1046.03	0.00	0.00
70.00		717.51	1022.99	0.00	0.00
75.00		711.05	999.95	0.00	0.00
80.00		703.61	976.91	0.00	0.00
85.00		695.28	953.87	0.00	0.00
90.00		686.14	930.82	0.00	0.00
93.75		507.44	683.00	0.00	0.00
95.00		170.46	413.71	0.00	0.00
99.50		610.39	1467.22	0.00	0.00
100.00		67.00	76.92	0.00	0.00
105.00		666.92	758.37	0.00	0.00
110.00		655.22	738.62	0.00	0.00
115.00		642.95	718.87	0.00	0.00
120.00		630.14	699.12	0.00	0.00
125.00		616.83	679.37	0.00	0.00
130.00		603.05	659.62	0.00	0.00
135.00		588.82	639.87	0.00	0.00
137.00	(2) attachments	629.59	556.42	0.00	0.00
137.17		19.11	20.73	0.00	0.00
140.00		328.02	572.80	0.00	0.00
142.50		285.37	496.63	0.00	0.00
144.00	(1) attachments	504.92	161.24	0.00	2114.45
145.00		112.06	81.90	0.00	0.00
150.00		552.62	401.58	0.00	0.00
155.00		536.86	388.41	0.00	0.00
160.00		520.75	375.24	0.00	0.00
165.00		504.29	362.08	0.00	0.00
167.00	(11) attachments	3202.41	1807.04	0.00	0.00
170.00		290.11	202.39	0.00	0.00
175.00		470.41	326.78	0.00	0.00
177.00	(21) attachments	5955.40	2420.46	0.00	0.00
180.00		269.39	180.65	0.00	0.00

## Total Applied Force Summary

<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II
		Page: 23



185.00	(56) attachments	10494.37	4234.08	0.00	0.00
189.00		335.14	218.71	0.00	0.00
	<b>Totals:</b>	<b>43,361.15</b>	<b>43,721.96</b>	<b>0.00</b>	<b>2,114.45</b>

## Linear Appurtenance Segment Forces (Factored)

<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II

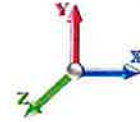


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**Load Case:** 0.9D + 1.0W 126 mph Wind

**Dead Load Factor** 0.90

**Wind Load Factor** 1.00



**Iterations** 27

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.045	0.000	32.493	0.00	1.23
5.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.045	0.000	32.493	0.00	4.68
5.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.045	0.000	32.493	0.00	8.96
10.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.046	0.000	32.493	0.00	1.23
10.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.046	0.000	32.493	0.00	4.68
10.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.046	0.000	32.493	0.00	8.96
15.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.047	0.000	32.894	0.00	1.23
15.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.047	0.000	32.894	0.00	4.68
15.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.047	0.000	32.894	0.00	8.96
20.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.048	0.000	34.832	0.00	1.23
20.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.048	0.000	34.832	0.00	4.68
20.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.048	0.000	34.832	0.00	8.96
25.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.049	0.000	36.434	0.00	1.23
25.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.049	0.000	36.434	0.00	4.68
25.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.049	0.000	36.434	0.00	8.96
30.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.050	0.000	37.809	0.00	1.23
30.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.050	0.000	37.809	0.00	4.68
30.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.050	0.000	37.809	0.00	8.96
35.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.051	0.000	39.018	0.00	1.23
35.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.051	0.000	39.018	0.00	4.68
35.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.051	0.000	39.018	0.00	8.96
40.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.052	0.000	40.101	0.00	1.23
40.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.052	0.000	40.101	0.00	4.68
40.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.052	0.000	40.101	0.00	8.96
45.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.053	0.000	41.084	0.00	1.23
45.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.053	0.000	41.084	0.00	4.68
45.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.053	0.000	41.084	0.00	8.96
46.00	Safety Cable	Yes	1.00	0.000	0.38	0.03	0.00	0.053	0.000	41.271	0.00	0.25
46.00	Step bolts (ladder)	Yes	1.00	0.000	0.63	0.05	0.00	0.053	0.000	41.271	0.00	0.94
46.00	1.75" Hybrid	Yes	1.00	0.000	1.75	0.15	0.00	0.053	0.000	41.271	0.00	1.79
50.00	Safety Cable	Yes	4.00	0.000	0.38	0.13	0.00	0.054	0.000	41.987	0.00	0.98
50.00	Step bolts (ladder)	Yes	4.00	0.000	0.63	0.21	0.00	0.054	0.000	41.987	0.00	3.74
50.00	1.75" Hybrid	Yes	4.00	0.000	1.75	0.58	0.00	0.054	0.000	41.987	0.00	7.17
53.25	Safety Cable	Yes	3.25	0.000	0.38	0.10	0.00	0.055	0.000	42.536	0.00	0.80
53.25	Step bolts (ladder)	Yes	3.25	0.000	0.63	0.17	0.00	0.055	0.000	42.536	0.00	3.04
53.25	1.75" Hybrid	Yes	3.25	0.000	1.75	0.47	0.00	0.055	0.000	42.536	0.00	5.82
55.00	Safety Cable	Yes	1.75	0.000	0.38	0.06	0.00	0.055	0.000	42.822	0.00	0.43
55.00	Step bolts (ladder)	Yes	1.75	0.000	0.63	0.09	0.00	0.055	0.000	42.822	0.00	1.64
55.00	1.75" Hybrid	Yes	1.75	0.000	1.75	0.26	0.00	0.055	0.000	42.822	0.00	3.14
60.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.055	0.000	43.599	0.00	1.23
60.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.055	0.000	43.599	0.00	4.68
60.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.055	0.000	43.599	0.00	8.96
65.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.057	0.000	44.329	0.00	1.23
65.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.057	0.000	44.329	0.00	4.68
65.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.057	0.000	44.329	0.00	8.96
70.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.058	0.000	45.015	0.00	1.23
70.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.058	0.000	45.015	0.00	4.68

## Linear Appurtenance Segment Forces (Factored)

**Structure:** CT11796-S  
**Site Name:** North Stonington 3  
**Height:** 189.00 (ft)  
**Base Elev:** 1.000 (ft)  
**Gh:** 1.1

**Code:** TIA-222-H  
**Exposure:** C  
**Crest Height:** 0.00  
**Site Class:** D - Stiff Soil  
**Struct Class:** II

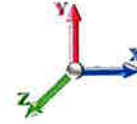
12/19/2023



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**Load Case:** 0.9D + 1.0W 126 mph Wind

**Dead Load Factor** 0.90  
**Wind Load Factor** 1.00



Iterations 27

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
70.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.058	0.000	45.015	0.00	8.96
75.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.059	0.000	45.665	0.00	1.23
75.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.059	0.000	45.665	0.00	4.68
75.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.059	0.000	45.665	0.00	8.96
80.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.061	0.000	46.282	0.00	1.23
80.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.061	0.000	46.282	0.00	4.68
80.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.061	0.000	46.282	0.00	8.96
85.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.062	0.000	46.869	0.00	1.23
85.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.062	0.000	46.869	0.00	4.68
85.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.062	0.000	46.869	0.00	8.96
90.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.064	0.000	47.430	0.00	1.23
90.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.064	0.000	47.430	0.00	4.68
90.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.064	0.000	47.430	0.00	8.96
93.75	Safety Cable	Yes	3.75	0.000	0.38	0.12	0.00	0.065	0.000	47.835	0.00	0.92
93.75	Step bolts (ladder)	Yes	3.75	0.000	0.63	0.20	0.00	0.065	0.000	47.835	0.00	3.51
93.75	1.75" Hybrid	Yes	3.75	0.000	1.75	0.55	0.00	0.065	0.000	47.835	0.00	6.72
95.00	Safety Cable	Yes	1.25	0.000	0.38	0.04	0.00	0.066	0.000	47.967	0.00	0.31
95.00	Step bolts (ladder)	Yes	1.25	0.000	0.63	0.07	0.00	0.066	0.000	47.967	0.00	1.17
95.00	1.75" Hybrid	Yes	1.25	0.000	1.75	0.18	0.00	0.066	0.000	47.967	0.00	2.24
99.50	Safety Cable	Yes	4.50	0.000	0.38	0.14	0.00	0.067	0.000	48.432	0.00	1.11
99.50	Step bolts (ladder)	Yes	4.50	0.000	0.63	0.24	0.00	0.067	0.000	48.432	0.00	4.21
99.50	1.75" Hybrid	Yes	4.50	0.000	1.75	0.66	0.00	0.067	0.000	48.432	0.00	8.06
100.00	Safety Cable	Yes	0.50	0.000	0.38	0.02	0.00	0.067	0.000	48.482	0.00	0.12
100.00	Step bolts (ladder)	Yes	0.50	0.000	0.63	0.03	0.00	0.067	0.000	48.482	0.00	0.47
100.00	1.75" Hybrid	Yes	0.50	0.000	1.75	0.07	0.00	0.067	0.000	48.482	0.00	0.90
105.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.068	0.000	48.978	0.00	1.23
105.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.068	0.000	48.978	0.00	4.68
105.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.068	0.000	48.978	0.00	8.96
110.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.070	0.000	49.456	0.00	1.23
110.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.070	0.000	49.456	0.00	4.68
110.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.070	0.000	49.456	0.00	8.96
115.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.072	0.000	49.917	0.00	1.23
115.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.072	0.000	49.917	0.00	4.68
115.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.072	0.000	49.917	0.00	8.96
120.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.074	0.000	50.362	0.00	1.23
120.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.074	0.000	50.362	0.00	4.68
120.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.074	0.000	50.362	0.00	8.96
125.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.076	0.000	50.793	0.00	1.23
125.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.076	0.000	50.793	0.00	4.68
125.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.076	0.000	50.793	0.00	8.96
130.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.078	0.000	51.211	0.00	1.23
130.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.078	0.000	51.211	0.00	4.68
130.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.078	0.000	51.211	0.00	8.96
135.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.081	0.000	51.617	0.00	1.23
135.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.081	0.000	51.617	0.00	4.68
135.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.081	0.000	51.617	0.00	8.96
137.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.083	0.000	51.775	0.00	0.49



## Linear Appurtenance Segment Forces (Factored)

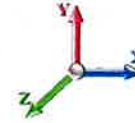
<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 0.9D + 1.0W 126 mph Wind

**Dead Load Factor** 0.90  
**Wind Load Factor** 1.00



**Iterations** 27

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
137.00	Step bolts (ladder)	Yes	2.00	0.000	0.63	0.10	0.00	0.083	0.000	51.775	0.00	1.87
137.00	1.75" Hybrid	Yes	2.00	0.000	1.75	0.29	0.00	0.083	0.000	51.775	0.00	3.58
137.17	Safety Cable	Yes	0.17	0.000	0.38	0.01	0.00	0.083	0.000	51.789	0.00	0.04
137.17	Step bolts (ladder)	Yes	0.17	0.000	0.63	0.01	0.00	0.083	0.000	51.789	0.00	0.16
137.17	1.75" Hybrid	Yes	0.17	0.000	1.75	0.02	0.00	0.083	0.000	51.789	0.00	0.30
140.00	Safety Cable	Yes	2.83	0.000	0.38	0.09	0.00	0.084	0.000	52.010	0.00	0.70
140.00	Step bolts (ladder)	Yes	2.83	0.000	0.63	0.15	0.00	0.084	0.000	52.010	0.00	2.65
140.00	1.75" Hybrid	Yes	2.83	0.000	1.75	0.41	0.00	0.084	0.000	52.010	0.00	5.08
142.50	Safety Cable	Yes	2.50	0.000	0.38	0.08	0.00	0.086	0.000	52.203	0.00	0.61
142.50	Step bolts (ladder)	Yes	2.50	0.000	0.63	0.13	0.00	0.086	0.000	52.203	0.00	2.34
142.50	1.75" Hybrid	Yes	2.50	0.000	1.75	0.36	0.00	0.086	0.000	52.203	0.00	4.48
144.00	Safety Cable	Yes	1.50	0.000	0.38	0.05	0.00	0.086	0.000	52.318	0.00	0.37
144.00	Step bolts (ladder)	Yes	1.50	0.000	0.63	0.08	0.00	0.086	0.000	52.318	0.00	1.40
144.00	1.75" Hybrid	Yes	1.50	0.000	1.75	0.22	0.00	0.086	0.000	52.318	0.00	2.69
145.00	Safety Cable	Yes	1.00	0.000	0.38	0.03	0.00	0.086	0.000	52.393	0.00	0.25
145.00	Step bolts (ladder)	Yes	1.00	0.000	0.63	0.05	0.00	0.086	0.000	52.393	0.00	0.94
145.00	1.75" Hybrid	Yes	1.00	0.000	1.75	0.15	0.00	0.086	0.000	52.393	0.00	1.79
150.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.088	0.000	52.766	0.00	1.23
150.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.088	0.000	52.766	0.00	4.68
150.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.088	0.000	52.766	0.00	8.96
155.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.091	0.000	53.129	0.00	1.23
155.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.091	0.000	53.129	0.00	4.68
155.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.091	0.000	53.129	0.00	8.96
160.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.095	0.000	53.483	0.00	1.23
160.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.095	0.000	53.483	0.00	4.68
160.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.095	0.000	53.483	0.00	8.96
165.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.099	0.000	53.829	0.00	1.23
165.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.099	0.000	53.829	0.00	4.68
165.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.099	0.000	53.829	0.00	8.96
167.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.101	1.004	53.965	0.00	0.49
167.00	Step bolts (ladder)	Yes	2.00	0.000	0.63	0.10	0.00	0.101	1.004	53.965	0.00	1.87
167.00	1.75" Hybrid	Yes	2.00	0.000	1.75	0.29	0.00	0.101	1.004	53.965	0.00	3.58
170.00	Safety Cable	Yes	3.00	0.000	0.38	0.10	0.00	0.038	0.000	54.166	0.00	0.74
170.00	Step bolts (ladder)	Yes	3.00	0.000	0.63	0.16	0.00	0.038	0.000	54.166	0.00	2.81
175.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.039	0.000	54.496	0.00	1.23
175.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.039	0.000	54.496	0.00	4.68
177.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.040	0.000	54.625	0.00	0.49
177.00	Step bolts (ladder)	Yes	2.00	0.000	0.63	0.10	0.00	0.040	0.000	54.625	0.00	1.87
180.00	Safety Cable	Yes	3.00	0.000	0.38	0.10	0.00	0.041	0.000	54.818	0.00	0.74
180.00	Step bolts (ladder)	Yes	3.00	0.000	0.63	0.16	0.00	0.041	0.000	54.818	0.00	2.81
185.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.043	0.000	55.133	0.00	1.23
185.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.043	0.000	55.133	0.00	4.68
189.00	Safety Cable	Yes	4.00	0.000	0.38	0.13	0.00	0.045	0.000	55.381	0.00	0.98
189.00	Step bolts (ladder)	Yes	4.00	0.000	0.63	0.21	0.00	0.045	0.000	55.381	0.00	3.74
<b>Totals:</b>											<b>0.0</b>	<b>522.6</b>

## Calculated Forces

**Structure:** CT11796-S  
**Site Name:** North Stonington 3  
**Height:** 189.00 (ft)  
**Base Elev:** 1.000 (ft)  
**Gh:** 1.1

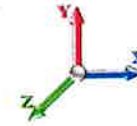
**Code:** TIA-222-H  
**Exposure:** C  
**Crest Height:** 0.00  
**Site Class:** D - Stiff Soil  
**Struct Class:** II

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**Load Case:** 0.9D + 1.0W 126 mph Wind

**Dead Load Factor** 0.90  
**Wind Load Factor** 1.00



**Iterations** 27

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	-43.65	-43.43	0.00	-5824.4	0.00	5824.43	6694.10	1675.79	8365.91	8283.84	0.00	0.000	0.000	0.710
5.00	-42.03	-42.91	0.00	-5607.2	0.00	5607.27	6611.47	1645.60	8067.27	8033.01	0.10	-0.186	0.000	0.705
10.00	-40.43	-42.38	0.00	-5392.7	0.00	5392.74	6527.45	1615.42	7774.06	7784.25	0.40	-0.375	0.000	0.700
15.00	-38.86	-41.85	0.00	-5180.8	0.00	5180.84	6442.03	1585.24	7486.28	7537.62	0.89	-0.568	0.000	0.694
20.00	-37.33	-41.29	0.00	-4971.5	0.00	4971.58	6355.23	1555.06	7203.93	7293.25	1.59	-0.763	0.000	0.688
25.00	-35.82	-40.71	0.00	-4765.1	0.00	4765.12	6267.03	1524.88	6927.01	7051.20	2.50	-0.961	0.000	0.682
30.00	-34.34	-40.10	0.00	-4561.5	0.00	4561.59	6177.44	1494.69	6655.51	6811.59	3.61	-1.163	0.000	0.676
35.00	-32.88	-39.48	0.00	-4361.0	0.00	4361.09	6086.46	1464.51	6389.44	6574.50	4.94	-1.368	0.000	0.669
40.00	-31.46	-38.85	0.00	-4163.7	0.00	4163.70	5994.09	1434.33	6128.80	6340.03	6.48	-1.576	0.000	0.663
45.00	-30.13	-38.16	0.00	-3969.4	0.00	3969.47	5900.32	1404.15	5873.58	6108.27	8.25	-1.787	0.000	0.656
46.00	-29.81	-38.06	0.00	-3931.3	0.00	3931.32	5881.40	1398.11	5823.19	6062.25	8.63	-1.831	0.000	0.654
50.00	-27.87	-37.49	0.00	-3779.0	0.00	3779.06	5805.17	1373.97	5623.79	5879.32	10.23	-2.004	0.000	0.648
53.25	-26.33	-37.02	0.00	-3657.2	0.00	3657.21	4915.61	1207.90	4967.43	5008.40	11.65	-2.146	0.000	0.737
55.00	-25.86	-36.82	0.00	-3592.4	0.00	3592.43	4889.04	1198.66	4891.70	4942.89	12.45	-2.225	0.000	0.733
60.00	-24.67	-36.16	0.00	-3408.3	0.00	3408.31	4812.21	1172.25	4678.52	4757.07	14.91	-2.463	0.000	0.723
65.00	-23.50	-35.49	0.00	-3227.5	0.00	3227.53	4733.98	1145.84	4470.10	4573.36	17.61	-2.705	0.000	0.712
70.00	-22.37	-34.82	0.00	-3050.1	0.00	3050.10	4654.36	1119.43	4266.42	4391.86	20.58	-2.950	0.000	0.700
75.00	-21.26	-34.15	0.00	-2876.0	0.00	2876.02	4573.36	1093.02	4067.49	4212.65	23.80	-3.198	0.000	0.688
80.00	-20.18	-33.48	0.00	-2705.2	0.00	2705.29	4490.96	1066.61	3873.31	4035.83	27.28	-3.448	0.000	0.676
85.00	-19.12	-32.81	0.00	-2537.9	0.00	2537.92	4403.53	1040.20	3683.88	3858.32	31.02	-3.702	0.000	0.663
90.00	-18.11	-32.13	0.00	-2373.8	0.00	2373.88	4291.74	1013.80	3499.20	3663.93	35.04	-3.958	0.000	0.653
93.75	-17.40	-31.62	0.00	-2253.3	0.00	2253.38	4207.89	993.99	3363.81	3521.43	38.22	-4.153	0.000	0.645
95.00	-16.91	-31.46	0.00	-2213.8	0.00	2213.86	4179.94	987.39	3319.27	3474.56	39.32	-4.220	0.000	0.642
99.50	-15.43	-30.78	0.00	-2072.2	0.00	2072.28	3481.28	842.93	2822.27	2886.47	43.40	-4.455	0.000	0.724
100.00	-15.27	-30.75	0.00	-2056.8	0.00	2056.89	3474.51	840.67	2807.13	2873.05	43.87	-4.482	0.000	0.722
105.00	-14.42	-30.09	0.00	-1903.1	0.00	1903.16	3406.10	818.03	2657.99	2739.94	48.71	-4.770	0.000	0.700
110.00	-13.59	-29.45	0.00	-1752.6	0.00	1752.69	3336.29	795.39	2512.93	2608.82	53.86	-5.057	0.000	0.677
115.00	-12.79	-28.81	0.00	-1605.4	0.00	1605.46	3265.09	772.76	2371.93	2479.78	59.30	-5.345	0.000	0.653
120.00	-12.01	-28.17	0.00	-1461.4	0.00	1461.43	3175.51	750.12	2235.00	2340.39	65.05	-5.632	0.000	0.630
125.00	-11.26	-27.55	0.00	-1320.5	0.00	1320.57	3079.69	727.49	2102.15	2200.56	71.09	-5.916	0.000	0.605
130.00	-10.54	-26.93	0.00	-1182.8	0.00	1182.85	2983.86	704.85	1973.36	2065.04	77.42	-6.196	0.000	0.578
135.00	-9.88	-26.30	0.00	-1048.2	0.00	1048.21	2888.03	682.21	1848.65	1933.83	84.05	-6.471	0.000	0.547
137.00	-9.37	-25.63	0.00	-995.60	0.00	995.60	2849.70	673.16	1799.90	1882.55	86.78	-6.582	0.000	0.534
137.17	-9.32	-25.62	0.00	-991.33	0.00	991.33	2846.51	672.40	1795.87	1878.31	87.01	-6.591	0.000	0.533
140.00	-8.72	-25.25	0.00	-918.75	0.00	918.75	2792.21	659.58	1728.01	1806.92	90.96	-6.745	0.000	0.513
142.50	-8.22	-24.92	0.00	-855.63	0.00	855.63	1731.59	440.88	1158.08	1127.95	94.52	-6.878	0.000	0.767
144.00	-8.09	-24.41	0.00	-816.14	0.00	816.14	1719.84	436.35	1134.42	1108.70	96.68	-6.957	0.000	0.744
145.00	-7.93	-24.32	0.00	-791.73	0.00	791.73	1711.94	433.33	1118.78	1095.92	98.15	-7.031	0.000	0.730
150.00	-7.46	-23.76	0.00	-670.13	0.00	670.13	1671.60	418.24	1042.21	1032.53	105.68	-7.376	0.000	0.657
155.00	-7.02	-23.22	0.00	-551.31	0.00	551.31	1629.88	403.15	968.36	970.13	113.56	-7.695	0.000	0.576
160.00	-6.62	-22.68	0.00	-435.22	0.00	435.22	1586.75	388.06	897.22	908.81	121.75	-7.984	0.000	0.486
165.00	-6.26	-22.15	0.00	-321.81	0.00	321.81	1542.24	372.97	828.79	848.66	130.22	-8.232	0.000	0.387
167.00	-4.90	-18.73	0.00	-277.50	0.00	277.50	1524.05	366.93	802.18	824.95	133.68	-8.321	0.000	0.342
170.00	-4.70	-18.42	0.00	-221.32	0.00	221.32	1496.34	357.88	763.08	789.77	138.93	-8.437	0.000	0.286
175.00	-4.42	-17.92	0.00	-129.19	0.00	129.19	1449.04	342.78	700.08	732.25	147.82	-8.583	0.000	0.182
177.00	-2.91	-11.67	0.00	-93.36	0.00	93.36	1425.57	336.75	675.64	707.57	151.41	-8.626	0.000	0.135
180.00	-2.76	-11.38	0.00	-58.35	0.00	58.35	1387.24	327.69	639.80	669.85	156.83	-8.671	0.000	0.090
185.00	-0.17	-0.36	0.00	-1.46	0.00	1.46	1323.35	312.60	582.23	609.26	165.90	-8.704	0.000	0.003

### Calculated Forces

<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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189.00 0.00 -0.34 0.00 0.00 0.00 0.00 0.00 1272.25 300.53 538.12 562.86 173.16 -8.705 0.000 0.000

## Wind Loading - Shaft

**Structure:** CT11796-S  
**Site Name:** North Stonington 3  
**Height:** 189.00 (ft)  
**Base Elev:** 1.000 (ft)  
**Gh:** 1.1

**Topography:** 1

**Code:** TIA-222-H  
**Exposure:** C  
**Crest Height:** 0.00  
**Site Class:** D - Stiff Soil  
**Struct Class:** II

12/19/2023

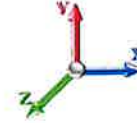
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**Load Case:** 1.2D + 1.0Di + 1.0Wi 50 mph Wind

**Iterations** 25

**Dead Load Factor** 1.20  
**Wind Load Factor** 1.00



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	5.117	5.63	0.00	1.200	0.705	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	5.117	5.63	0.00	1.200	0.843	5.00	26.143	31.37	176.6	319.3	2251.2
10.00		1.00	0.85	5.117	5.63	0.00	1.200	0.896	5.00	25.728	30.87	173.8	333.4	2230.3
15.00		1.00	0.86	5.180	5.70	0.00	1.200	0.930	5.00	25.298	30.36	173.0	340.0	2201.8
20.00		1.00	0.91	5.485	6.03	0.00	1.200	0.956	5.00	24.861	29.83	180.0	343.1	2169.7
25.00		1.00	0.95	5.737	6.31	0.00	1.200	0.976	5.00	24.420	29.30	184.9	344.0	2135.5
30.00		1.00	0.99	5.954	6.55	0.00	1.200	0.994	5.00	23.976	28.77	188.4	343.4	2099.8
35.00		1.00	1.02	6.144	6.76	0.00	1.200	1.009	5.00	23.529	28.24	190.8	341.8	2063.1
40.00		1.00	1.05	6.315	6.95	0.00	1.200	1.022	5.00	23.082	27.70	192.4	339.5	2025.6
45.00		1.00	1.07	6.470	7.12	0.00	1.200	1.034	5.00	22.633	27.16	193.3	336.4	1987.5
46.00	Bot - Section 2	1.00	1.08	6.499	7.15	0.00	1.200	1.036	1.00	4.472	5.37	38.4	67.2	393.2
50.00		1.00	1.10	6.612	7.27	0.00	1.200	1.044	4.00	18.006	21.61	157.1	270.9	2710.8
53.25	Top - Section 1	1.00	1.11	6.698	7.37	0.00	1.200	1.051	3.25	14.418	17.30	127.5	218.5	2169.9
55.00		1.00	1.12	6.743	7.42	0.00	1.200	1.054	1.75	7.684	9.22	68.4	117.2	607.1
60.00		1.00	1.14	6.866	7.55	0.00	1.200	1.063	5.00	21.653	25.98	196.2	330.4	1709.5
65.00		1.00	1.16	6.980	7.68	0.00	1.200	1.072	5.00	21.201	25.44	195.4	325.8	1674.2
70.00		1.00	1.18	7.089	7.80	0.00	1.200	1.080	5.00	20.749	24.90	194.1	320.9	1638.6
75.00		1.00	1.19	7.191	7.91	0.00	1.200	1.087	5.00	20.297	24.36	192.7	315.8	1602.7
80.00		1.00	1.21	7.288	8.02	0.00	1.200	1.094	5.00	19.844	23.81	190.9	310.4	1566.6
85.00		1.00	1.23	7.380	8.12	0.00	1.200	1.101	5.00	19.391	23.27	188.9	304.9	1530.3
90.00		1.00	1.24	7.469	8.22	0.00	1.200	1.107	5.00	18.938	22.73	186.7	299.1	1493.9
93.75	Bot - Section 3	1.00	1.25	7.533	8.29	0.00	1.200	1.111	3.75	13.905	16.69	138.3	221.0	1096.9
95.00		1.00	1.25	7.553	8.31	0.00	1.200	1.113	1.25	4.657	5.59	46.4	74.6	614.6
99.50	Top - Section 2	1.00	1.27	7.627	8.39	0.00	1.200	1.118	4.50	16.533	19.84	166.4	263.7	2178.3
100.00		1.00	1.27	7.635	8.40	0.00	1.200	1.118	0.50	1.814	2.18	18.3	29.2	127.2
105.00		1.00	1.28	7.713	8.48	0.00	1.200	1.124	5.00	17.894	21.47	182.2	286.2	1251.0
110.00		1.00	1.29	7.788	8.57	0.00	1.200	1.129	5.00	17.440	20.93	179.3	279.9	1218.4
115.00		1.00	1.31	7.860	8.65	0.00	1.200	1.134	5.00	16.985	20.38	176.2	273.5	1185.6
120.00		1.00	1.32	7.931	8.72	0.00	1.200	1.139	5.00	16.531	19.84	173.0	266.9	1152.8
125.00		1.00	1.33	7.998	8.80	0.00	1.200	1.143	5.00	16.076	19.29	169.7	260.3	1119.8
130.00		1.00	1.34	8.064	8.87	0.00	1.200	1.148	5.00	15.621	18.75	166.3	253.5	1086.7
135.00		1.00	1.35	8.128	8.94	0.00	1.200	1.152	5.00	15.166	18.20	162.7	246.7	1053.5
137.00	Appurtenance(s)	1.00	1.35	8.153	8.97	0.00	1.200	1.154	2.00	5.939	7.13	63.9	97.6	412.9
137.17	Bot - Section 4	1.00	1.35	8.155	8.97	0.00	1.200	1.154	0.17	0.492	0.59	5.3	8.1	34.2
140.00		1.00	1.36	8.190	9.01	0.00	1.200	1.156	2.83	8.400	10.08	90.8	137.9	875.4
142.50	Top - Section 3	1.00	1.37	8.220	9.04	0.00	1.200	1.158	2.50	7.290	8.75	79.1	120.0	759.0
144.00	Appurtenance(s)	1.00	1.37	8.238	9.06	0.00	1.200	1.160	1.50	4.320	5.18	47.0	71.3	224.4
145.00		1.00	1.37	8.250	9.08	0.00	1.200	1.160	1.00	2.857	3.43	31.1	47.3	148.5
150.00		1.00	1.38	8.309	9.14	0.00	1.200	1.164	5.00	14.013	16.82	153.7	229.3	724.7
155.00		1.00	1.39	8.366	9.20	0.00	1.200	1.168	5.00	13.557	16.27	149.7	222.2	699.9
160.00		1.00	1.40	8.422	9.26	0.00	1.200	1.172	5.00	13.102	15.72	145.7	214.9	675.2
165.00		1.00	1.41	8.476	9.32	0.00	1.200	1.175	5.00	12.646	15.18	141.5	207.6	650.3
167.00	Appurtenance(s)	1.00	1.41	8.498	9.35	0.00	1.205 *	1.177	2.00	4.931	5.94	55.5	81.9	254.0
170.00		1.00	1.42	8.530	9.38	0.00	1.200	1.179	3.00	7.259	8.71	81.7	120.2	373.1
175.00		1.00	1.43	8.581	9.44	0.00	1.200	1.182	5.00	11.735	14.08	132.9	192.8	600.4
177.00	Appurtenance(s)	1.00	1.43	8.602	9.46	0.00	1.200	1.184	2.00	4.566	5.48	51.8	75.9	234.0
180.00		1.00	1.43	8.632	9.50	0.00	1.200	1.186	3.00	6.713	8.06	76.5	111.2	343.1

## Wind Loading - Shaft

<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II
		<b>Page:</b> 30



185.00 Appurtenance(s)	1.00	1.44	8.682	9.55	0.00	1.200	1.189	5.00	10.823	12.99	124.0	177.8	550.3	
189.00	1.00	1.45	8.721	9.59	0.00	1.200	1.191	4.00	8.330	10.00	95.9	137.4	422.7	
												<b>Totals:</b>		
												<b>189.00</b>	<b>6,494.6</b>	<b>56,328.4</b>

\* Cf Adjusted by Linear Load Ra Effect



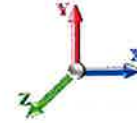
## Discrete Appurtenance Forces

<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II
		Page: 31



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

**Dead Load Factor** 1.20  
**Wind Load Factor** 1.00



**Iterations** 25

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	185.00	Ericsson RRUS-32	3	8.682	9.550	0.65	0.80	7.47	494.26	0.000	0.000	71.30	0.00	0.00
2	185.00	Cci HPA-65R-BUU-H8	12	8.682	9.550	0.63	0.80	106.61	3234.23	0.000	0.000	1018.14	0.00	0.00
3	185.00	Ericsson RRUS-11	9	8.682	9.550	0.56	0.80	14.87	1055.88	0.000	0.000	142.06	0.00	0.00
4	185.00	Ericsson RRUS-E2	3	8.682	9.550	0.61	0.80	6.61	390.28	0.000	0.000	63.09	0.00	0.00
5	185.00	Mount Pipes	12	8.682	9.550	0.80	0.80	15.15	2200.26	0.000	0.000	144.71	0.00	0.00
6	185.00	Ericsson A2	6	8.682	9.550	0.54	0.80	8.12	239.02	0.000	0.000	77.50	0.00	0.00
7	185.00	Raycap DC6-48-60-18-8F	4	8.682	9.550	0.80	0.80	3.90	250.29	0.000	0.000	37.23	0.00	0.00
8	185.00	Low Profile Platform	1	8.682	9.550	1.00	1.00	23.42	1667.45	0.000	0.000	223.68	0.00	0.00
9	185.00	Ericsson RRUS-12	6	8.682	9.550	0.54	0.80	11.04	973.71	0.000	0.000	105.44	0.00	0.00
10	177.00	Platform w/ Mount Pipes	1	8.602	9.462	1.00	1.00	57.46	4712.54	0.000	0.000	543.72	0.00	0.00
11	177.00	Raycap	2	8.602	9.462	0.67	0.80	4.69	93.84	0.000	0.000	44.37	0.00	0.00
12	177.00	Samsung B5/B13 RRH	3	8.602	9.462	0.68	0.80	4.57	640.58	0.000	0.000	43.20	0.00	0.00
13	177.00	Samsung B2/B66A RRH	3	8.602	9.462	0.68	0.80	4.57	284.85	0.000	0.000	43.20	0.00	0.00
14	177.00	Samsung MT6413 77A	3	8.602	9.462	0.57	0.80	7.37	235.03	0.000	0.000	69.76	0.00	0.00
15	177.00	Amphenol	3	8.602	9.462	0.71	0.80	11.94	87.89	0.000	0.000	112.94	0.00	0.00
16	177.00	Commscope	6	8.602	9.462	0.67	0.80	35.88	433.76	0.000	0.000	339.54	0.00	0.00
17	167.00	TA08025-B605	3	8.498	9.348	0.50	0.75	3.52	338.00	0.000	0.000	32.95	0.00	0.00
18	167.00	TA08025-B604	3	8.498	9.348	0.50	0.75	3.52	296.15	0.000	0.000	32.95	0.00	0.00
19	167.00	RDIDC-9181-OF-48	1	8.498	9.348	0.75	0.75	1.79	49.48	0.000	0.000	16.78	0.00	0.00
20	167.00	MC-PK8-DSH w/ Mount	1	8.498	9.348	0.67	0.67	42.38	1330.77	0.000	0.000	396.13	0.00	0.00
21	167.00	Commscope	3	8.498	9.348	0.57	0.75	25.46	787.99	0.000	0.000	237.98	0.00	0.00
22	144.00	DS2C00-F-36-B	1	8.313	9.144	1.00	1.00	10.37	92.25	0.000	6.300	94.79	0.00	597.20
23	137.00	Ring Mount	1	8.153	8.968	1.00	1.00	4.23	370.07	0.000	0.000	37.94	0.00	0.00
24	137.00	Side Arm (SV197-48)	1	8.153	8.968	1.00	1.00	7.97	183.23	0.000	0.000	71.46	0.00	0.00
<b>Totals:</b>								<b>20,441.82</b>				<b>4,000.89</b>		



## Total Applied Force Summary

<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II

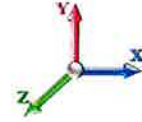


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**Load Case:** 1.2D + 1.0Di + 1.0Wi 50 mph Wind

**Dead Load Factor** 1.20

**Wind Load Factor** 1.00



**Iterations** 25

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		176.57	2321.12	0.00	0.00
10.00		173.77	2302.41	0.00	0.00
15.00		172.97	2275.42	0.00	0.00
20.00		180.00	2244.50	0.00	0.00
25.00		184.94	2211.24	0.00	0.00
30.00		188.42	2176.40	0.00	0.00
35.00		190.83	2140.41	0.00	0.00
40.00		192.40	2103.55	0.00	0.00
45.00		193.28	2066.00	0.00	0.00
46.00		38.36	408.87	0.00	0.00
50.00		157.15	2774.04	0.00	0.00
53.25		127.48	2221.47	0.00	0.00
55.00		68.40	634.92	0.00	0.00
60.00		196.23	1789.47	0.00	0.00
65.00		195.35	1754.55	0.00	0.00
70.00		194.15	1719.33	0.00	0.00
75.00		192.66	1683.84	0.00	0.00
80.00		190.90	1648.11	0.00	0.00
85.00		188.91	1612.16	0.00	0.00
90.00		186.70	1576.01	0.00	0.00
93.75		138.26	1158.70	0.00	0.00
95.00		46.44	635.25	0.00	0.00
99.50		166.44	2252.72	0.00	0.00
100.00		18.28	135.44	0.00	0.00
105.00		182.17	1334.05	0.00	0.00
110.00		179.28	1301.68	0.00	0.00
115.00		176.23	1269.17	0.00	0.00
120.00		173.05	1236.55	0.00	0.00
125.00		169.73	1203.81	0.00	0.00
130.00		166.29	1170.96	0.00	0.00
135.00		162.72	1138.01	0.00	0.00
137.00	(2) attachments	173.32	1000.06	0.00	0.00
137.17		5.29	37.03	0.00	0.00
140.00		90.81	923.40	0.00	0.00
142.50		79.11	801.37	0.00	0.00
144.00	(1) attachments	141.77	342.14	0.00	597.20
145.00		31.11	164.19	0.00	0.00
150.00		153.69	803.55	0.00	0.00
155.00		149.72	779.04	0.00	0.00
160.00		145.65	754.45	0.00	0.00
165.00		141.50	729.79	0.00	0.00
167.00	(11) attachments	772.32	3088.25	0.00	0.00
170.00		81.73	403.09	0.00	0.00
175.00		132.93	650.45	0.00	0.00
177.00	(21) attachments	1248.59	6742.59	0.00	0.00
180.00		76.49	365.29	0.00	0.00

## Total Applied Force Summary

<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	Page: 33
<b>Struct Class:</b> II		



185.00	(56) attachments	2007.20	11092.71	0.00	0.00
189.00		95.89	446.76	0.00	0.00
	<b>Totals:</b>	<b>10,495.49</b>	<b>79,624.29</b>	<b>0.00</b>	<b>597.20</b>

## Linear Appurtenance Segment Forces (Factored)

<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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

**Dead Load Factor** 1.20

**Wind Load Factor** 1.00



**Iterations** 25

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	Safety Cable	Yes	5.00	0.000	0.38	0.86	0.00	0.045	0.000	5.117	0.00	7.27
5.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.97	0.00	0.045	0.000	5.117	0.00	12.80
5.00	1.75" Hybrid	Yes	5.00	0.000	1.75	1.43	0.00	0.045	0.000	5.117	0.00	23.31
10.00	Safety Cable	Yes	5.00	0.000	0.38	0.90	0.00	0.046	0.000	5.117	0.00	7.91
10.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.01	0.00	0.046	0.000	5.117	0.00	13.48
10.00	1.75" Hybrid	Yes	5.00	0.000	1.75	1.48	0.00	0.046	0.000	5.117	0.00	24.23
15.00	Safety Cable	Yes	5.00	0.000	0.38	0.93	0.00	0.047	0.000	5.180	0.00	8.34
15.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.04	0.00	0.047	0.000	5.180	0.00	13.95
15.00	1.75" Hybrid	Yes	5.00	0.000	1.75	1.50	0.00	0.047	0.000	5.180	0.00	24.84
20.00	Safety Cable	Yes	5.00	0.000	0.38	0.95	0.00	0.048	0.000	5.485	0.00	8.67
20.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.06	0.00	0.048	0.000	5.485	0.00	14.31
20.00	1.75" Hybrid	Yes	5.00	0.000	1.75	1.53	0.00	0.048	0.000	5.485	0.00	25.31
25.00	Safety Cable	Yes	5.00	0.000	0.38	0.97	0.00	0.049	0.000	5.737	0.00	8.94
25.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.08	0.00	0.049	0.000	5.737	0.00	14.60
25.00	1.75" Hybrid	Yes	5.00	0.000	1.75	1.54	0.00	0.049	0.000	5.737	0.00	25.69
30.00	Safety Cable	Yes	5.00	0.000	0.38	0.99	0.00	0.050	0.000	5.954	0.00	9.18
30.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.09	0.00	0.050	0.000	5.954	0.00	14.85
30.00	1.75" Hybrid	Yes	5.00	0.000	1.75	1.56	0.00	0.050	0.000	5.954	0.00	26.02
35.00	Safety Cable	Yes	5.00	0.000	0.38	1.00	0.00	0.051	0.000	6.144	0.00	9.38
35.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.10	0.00	0.051	0.000	6.144	0.00	15.07
35.00	1.75" Hybrid	Yes	5.00	0.000	1.75	1.57	0.00	0.051	0.000	6.144	0.00	26.30
40.00	Safety Cable	Yes	5.00	0.000	0.38	1.01	0.00	0.052	0.000	6.315	0.00	9.57
40.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.11	0.00	0.052	0.000	6.315	0.00	15.27
40.00	1.75" Hybrid	Yes	5.00	0.000	1.75	1.58	0.00	0.052	0.000	6.315	0.00	26.56
45.00	Safety Cable	Yes	5.00	0.000	0.38	1.02	0.00	0.053	0.000	6.470	0.00	9.73
45.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.12	0.00	0.053	0.000	6.470	0.00	15.44
45.00	1.75" Hybrid	Yes	5.00	0.000	1.75	1.59	0.00	0.053	0.000	6.470	0.00	26.79
46.00	Safety Cable	Yes	1.00	0.000	0.38	0.20	0.00	0.053	0.000	6.499	0.00	1.95
46.00	Step bolts (ladder)	Yes	1.00	0.000	0.63	0.23	0.00	0.053	0.000	6.499	0.00	3.10
46.00	1.75" Hybrid	Yes	1.00	0.000	1.75	0.32	0.00	0.053	0.000	6.499	0.00	5.37
50.00	Safety Cable	Yes	4.00	0.000	0.38	0.82	0.00	0.054	0.000	6.612	0.00	7.91
50.00	Step bolts (ladder)	Yes	4.00	0.000	0.63	0.91	0.00	0.054	0.000	6.612	0.00	12.48
50.00	1.75" Hybrid	Yes	4.00	0.000	1.75	1.28	0.00	0.054	0.000	6.612	0.00	21.60
53.25	Safety Cable	Yes	3.25	0.000	0.38	0.67	0.00	0.055	0.000	6.698	0.00	6.48
53.25	Step bolts (ladder)	Yes	3.25	0.000	0.63	0.74	0.00	0.055	0.000	6.698	0.00	10.21
53.25	1.75" Hybrid	Yes	3.25	0.000	1.75	1.04	0.00	0.055	0.000	6.698	0.00	17.63
55.00	Safety Cable	Yes	1.75	0.000	0.38	0.36	0.00	0.055	0.000	6.743	0.00	3.51
55.00	Step bolts (ladder)	Yes	1.75	0.000	0.63	0.40	0.00	0.055	0.000	6.743	0.00	5.51
55.00	1.75" Hybrid	Yes	1.75	0.000	1.75	0.56	0.00	0.055	0.000	6.743	0.00	9.52
60.00	Safety Cable	Yes	5.00	0.000	0.38	1.04	0.00	0.055	0.000	6.866	0.00	10.15
60.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.15	0.00	0.055	0.000	6.866	0.00	15.89
60.00	1.75" Hybrid	Yes	5.00	0.000	1.75	1.62	0.00	0.055	0.000	6.866	0.00	27.37
65.00	Safety Cable	Yes	5.00	0.000	0.38	1.05	0.00	0.057	0.000	6.980	0.00	10.28
65.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.16	0.00	0.057	0.000	6.980	0.00	16.03
65.00	1.75" Hybrid	Yes	5.00	0.000	1.75	1.62	0.00	0.057	0.000	6.980	0.00	27.53
70.00	Safety Cable	Yes	5.00	0.000	0.38	1.06	0.00	0.058	0.000	7.089	0.00	10.39
70.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.16	0.00	0.058	0.000	7.089	0.00	16.15

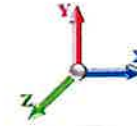
## Linear Appurtenance Segment Forces (Factored)

<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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

**Dead Load Factor** 1.20  
**Wind Load Factor** 1.00



**Iterations** 25

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
70.00	1.75" Hybrid	Yes	5.00	0.000	1.75	1.63	0.00	0.058	0.000	7.089	0.00	27.69
75.00	Safety Cable	Yes	5.00	0.000	0.38	1.06	0.00	0.059	0.000	7.191	0.00	10.50
75.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.17	0.00	0.059	0.000	7.191	0.00	16.26
75.00	1.75" Hybrid	Yes	5.00	0.000	1.75	1.64	0.00	0.059	0.000	7.191	0.00	27.84
80.00	Safety Cable	Yes	5.00	0.000	0.38	1.07	0.00	0.061	0.000	7.288	0.00	10.60
80.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.17	0.00	0.061	0.000	7.288	0.00	16.37
80.00	1.75" Hybrid	Yes	5.00	0.000	1.75	1.64	0.00	0.061	0.000	7.288	0.00	27.98
85.00	Safety Cable	Yes	5.00	0.000	0.38	1.08	0.00	0.062	0.000	7.380	0.00	10.70
85.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.18	0.00	0.062	0.000	7.380	0.00	16.48
85.00	1.75" Hybrid	Yes	5.00	0.000	1.75	1.65	0.00	0.062	0.000	7.380	0.00	28.11
90.00	Safety Cable	Yes	5.00	0.000	0.38	1.08	0.00	0.064	0.000	7.469	0.00	10.79
90.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.18	0.00	0.064	0.000	7.469	0.00	16.58
90.00	1.75" Hybrid	Yes	5.00	0.000	1.75	1.65	0.00	0.064	0.000	7.469	0.00	28.24
93.75	Safety Cable	Yes	3.75	0.000	0.38	0.81	0.00	0.065	0.000	7.533	0.00	8.15
93.75	Step bolts (ladder)	Yes	3.75	0.000	0.63	0.89	0.00	0.065	0.000	7.533	0.00	12.49
93.75	1.75" Hybrid	Yes	3.75	0.000	1.75	1.24	0.00	0.065	0.000	7.533	0.00	21.25
95.00	Safety Cable	Yes	1.25	0.000	0.38	0.27	0.00	0.066	0.000	7.553	0.00	2.72
95.00	Step bolts (ladder)	Yes	1.25	0.000	0.63	0.30	0.00	0.066	0.000	7.553	0.00	4.17
95.00	1.75" Hybrid	Yes	1.25	0.000	1.75	0.41	0.00	0.066	0.000	7.553	0.00	7.09
99.50	Safety Cable	Yes	4.50	0.000	0.38	0.98	0.00	0.067	0.000	7.627	0.00	9.86
99.50	Step bolts (ladder)	Yes	4.50	0.000	0.63	1.07	0.00	0.067	0.000	7.627	0.00	15.08
99.50	1.75" Hybrid	Yes	4.50	0.000	1.75	1.49	0.00	0.067	0.000	7.627	0.00	25.62
100.00	Safety Cable	Yes	0.50	0.000	0.38	0.11	0.00	0.067	0.000	7.635	0.00	1.10
100.00	Step bolts (ladder)	Yes	0.50	0.000	0.63	0.12	0.00	0.067	0.000	7.635	0.00	1.68
100.00	1.75" Hybrid	Yes	0.50	0.000	1.75	0.17	0.00	0.067	0.000	7.635	0.00	2.85
105.00	Safety Cable	Yes	5.00	0.000	0.38	1.09	0.00	0.068	0.000	7.713	0.00	11.05
105.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.20	0.00	0.068	0.000	7.713	0.00	16.85
105.00	1.75" Hybrid	Yes	5.00	0.000	1.75	1.67	0.00	0.068	0.000	7.713	0.00	28.59
110.00	Safety Cable	Yes	5.00	0.000	0.38	1.10	0.00	0.070	0.000	7.788	0.00	11.13
110.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.20	0.00	0.070	0.000	7.788	0.00	16.93
110.00	1.75" Hybrid	Yes	5.00	0.000	1.75	1.67	0.00	0.070	0.000	7.788	0.00	28.69
115.00	Safety Cable	Yes	5.00	0.000	0.38	1.10	0.00	0.072	0.000	7.860	0.00	11.21
115.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.21	0.00	0.072	0.000	7.860	0.00	17.01
115.00	1.75" Hybrid	Yes	5.00	0.000	1.75	1.67	0.00	0.072	0.000	7.860	0.00	28.80
120.00	Safety Cable	Yes	5.00	0.000	0.38	1.11	0.00	0.074	0.000	7.931	0.00	11.28
120.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.21	0.00	0.074	0.000	7.931	0.00	17.09
120.00	1.75" Hybrid	Yes	5.00	0.000	1.75	1.68	0.00	0.074	0.000	7.931	0.00	28.90
125.00	Safety Cable	Yes	5.00	0.000	0.38	1.11	0.00	0.076	0.000	7.998	0.00	11.35
125.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.22	0.00	0.076	0.000	7.998	0.00	17.17
125.00	1.75" Hybrid	Yes	5.00	0.000	1.75	1.68	0.00	0.076	0.000	7.998	0.00	28.99
130.00	Safety Cable	Yes	5.00	0.000	0.38	1.11	0.00	0.078	0.000	8.064	0.00	11.42
130.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.22	0.00	0.078	0.000	8.064	0.00	17.24
130.00	1.75" Hybrid	Yes	5.00	0.000	1.75	1.69	0.00	0.078	0.000	8.064	0.00	29.08
135.00	Safety Cable	Yes	5.00	0.000	0.38	1.12	0.00	0.081	0.000	8.128	0.00	11.49
135.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.22	0.00	0.081	0.000	8.128	0.00	17.31
135.00	1.75" Hybrid	Yes	5.00	0.000	1.75	1.69	0.00	0.081	0.000	8.128	0.00	29.17
137.00	Safety Cable	Yes	2.00	0.000	0.38	0.45	0.00	0.083	0.000	8.153	0.00	4.60

## Linear Appurtenance Segment Forces (Factored)

<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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

**Dead Load Factor** 1.20  
**Wind Load Factor** 1.00



**Iterations** 25

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
137.00	Step bolts (ladder)	Yes	2.00	0.000	0.63	0.49	0.00	0.083	0.000	8.153	0.00	6.94
137.00	1.75" Hybrid	Yes	2.00	0.000	1.75	0.68	0.00	0.083	0.000	8.153	0.00	11.68
137.17	Safety Cable	Yes	0.17	0.000	0.38	0.04	0.00	0.083	0.000	8.155	0.00	0.38
137.17	Step bolts (ladder)	Yes	0.17	0.000	0.63	0.04	0.00	0.083	0.000	8.155	0.00	0.58
137.17	1.75" Hybrid	Yes	0.17	0.000	1.75	0.06	0.00	0.083	0.000	8.155	0.00	0.97
140.00	Safety Cable	Yes	2.83	0.000	0.38	0.64	0.00	0.084	0.000	8.190	0.00	6.55
140.00	Step bolts (ladder)	Yes	2.83	0.000	0.63	0.69	0.00	0.084	0.000	8.190	0.00	9.85
140.00	1.75" Hybrid	Yes	2.83	0.000	1.75	0.96	0.00	0.084	0.000	8.190	0.00	16.58
142.50	Safety Cable	Yes	2.50	0.000	0.38	0.56	0.00	0.086	0.000	8.220	0.00	5.79
142.50	Step bolts (ladder)	Yes	2.50	0.000	0.63	0.61	0.00	0.086	0.000	8.220	0.00	8.71
142.50	1.75" Hybrid	Yes	2.50	0.000	1.75	0.85	0.00	0.086	0.000	8.220	0.00	14.65
144.00	Safety Cable	Yes	1.50	0.000	0.38	0.34	0.00	0.086	0.000	8.238	0.00	3.48
144.00	Step bolts (ladder)	Yes	1.50	0.000	0.63	0.37	0.00	0.086	0.000	8.238	0.00	5.23
144.00	1.75" Hybrid	Yes	1.50	0.000	1.75	0.51	0.00	0.086	0.000	8.238	0.00	8.80
145.00	Safety Cable	Yes	1.00	0.000	0.38	0.23	0.00	0.086	0.000	8.250	0.00	2.32
145.00	Step bolts (ladder)	Yes	1.00	0.000	0.63	0.25	0.00	0.086	0.000	8.250	0.00	3.49
145.00	1.75" Hybrid	Yes	1.00	0.000	1.75	0.34	0.00	0.086	0.000	8.250	0.00	5.87
150.00	Safety Cable	Yes	5.00	0.000	0.38	1.13	0.00	0.088	0.000	8.309	0.00	11.67
150.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.23	0.00	0.088	0.000	8.309	0.00	17.51
150.00	1.75" Hybrid	Yes	5.00	0.000	1.75	1.70	0.00	0.088	0.000	8.309	0.00	29.43
155.00	Safety Cable	Yes	5.00	0.000	0.38	1.13	0.00	0.091	0.000	8.366	0.00	11.73
155.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.24	0.00	0.091	0.000	8.366	0.00	17.58
155.00	1.75" Hybrid	Yes	5.00	0.000	1.75	1.70	0.00	0.091	0.000	8.366	0.00	29.51
160.00	Safety Cable	Yes	5.00	0.000	0.38	1.13	0.00	0.095	0.000	8.422	0.00	11.79
160.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.24	0.00	0.095	0.000	8.422	0.00	17.64
160.00	1.75" Hybrid	Yes	5.00	0.000	1.75	1.71	0.00	0.095	0.000	8.422	0.00	29.59
165.00	Safety Cable	Yes	5.00	0.000	0.38	1.14	0.00	0.099	0.000	8.476	0.00	11.85
165.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.24	0.00	0.099	0.000	8.476	0.00	17.70
165.00	1.75" Hybrid	Yes	5.00	0.000	1.75	1.71	0.00	0.099	0.000	8.476	0.00	29.66
167.00	Safety Cable	Yes	2.00	0.000	0.38	0.46	0.00	0.101	1.004	8.498	0.00	4.75
167.00	Step bolts (ladder)	Yes	2.00	0.000	0.63	0.50	0.00	0.101	1.004	8.498	0.00	7.09
167.00	1.75" Hybrid	Yes	2.00	0.000	1.75	0.68	0.00	0.101	1.004	8.498	0.00	11.88
170.00	Safety Cable	Yes	3.00	0.000	0.38	0.68	0.00	0.038	0.000	8.530	0.00	7.14
170.00	Step bolts (ladder)	Yes	3.00	0.000	0.63	0.75	0.00	0.038	0.000	8.530	0.00	10.65
175.00	Safety Cable	Yes	5.00	0.000	0.38	1.14	0.00	0.039	0.000	8.581	0.00	11.96
175.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.25	0.00	0.039	0.000	8.581	0.00	17.81
177.00	Safety Cable	Yes	2.00	0.000	0.38	0.46	0.00	0.040	0.000	8.602	0.00	4.79
177.00	Step bolts (ladder)	Yes	2.00	0.000	0.63	0.50	0.00	0.040	0.000	8.602	0.00	7.13
180.00	Safety Cable	Yes	3.00	0.000	0.38	0.69	0.00	0.041	0.000	8.632	0.00	7.21
180.00	Step bolts (ladder)	Yes	3.00	0.000	0.63	0.75	0.00	0.041	0.000	8.632	0.00	10.72
185.00	Safety Cable	Yes	5.00	0.000	0.38	1.15	0.00	0.043	0.000	8.682	0.00	12.06
185.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	1.25	0.00	0.043	0.000	8.682	0.00	17.93
189.00	Safety Cable	Yes	4.00	0.000	0.38	0.92	0.00	0.045	0.000	8.721	0.00	9.68
189.00	Step bolts (ladder)	Yes	4.00	0.000	0.63	1.00	0.00	0.045	0.000	8.721	0.00	14.37
<b>Totals:</b>											<b>0.0</b>	<b>1,945.1</b>



## Calculated Forces

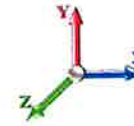
<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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

**Dead Load Factor** 1.20  
**Wind Load Factor** 1.00



**Iterations** 25

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	-79.62	-10.53	0.00	-1407.6	0.00	1407.69	6694.10	1675.79	8365.91	8283.84	0.00	0.000	0.000	0.182
5.00	-77.29	-10.41	0.00	-1355.0	0.00	1355.06	6611.47	1645.60	8067.27	8033.01	0.02	-0.045	0.000	0.180
10.00	-74.98	-10.29	0.00	-1303.0	0.00	1303.01	6527.45	1615.42	7774.06	7784.25	0.10	-0.091	0.000	0.179
15.00	-72.70	-10.18	0.00	-1251.5	0.00	1251.54	6442.03	1585.24	7486.28	7537.62	0.22	-0.137	0.000	0.177
20.00	-70.44	-10.05	0.00	-1200.6	0.00	1200.66	6355.23	1555.06	7203.93	7293.25	0.38	-0.184	0.000	0.176
25.00	-68.23	-9.91	0.00	-1150.4	0.00	1150.42	6267.03	1524.88	6927.01	7051.20	0.60	-0.232	0.000	0.174
30.00	-66.04	-9.77	0.00	-1100.8	0.00	1100.86	6177.44	1494.69	6655.51	6811.59	0.87	-0.281	0.000	0.172
35.00	-63.89	-9.62	0.00	-1052.0	0.00	1052.01	6086.46	1464.51	6389.44	6574.50	1.19	-0.330	0.000	0.171
40.00	-61.78	-9.47	0.00	-1003.8	0.00	1003.89	5994.09	1434.33	6128.80	6340.03	1.57	-0.380	0.000	0.169
45.00	-59.71	-9.30	0.00	-956.53	0.00	956.53	5900.32	1404.15	5873.58	6108.27	1.99	-0.431	0.000	0.167
46.00	-59.30	-9.28	0.00	-947.23	0.00	947.23	5881.40	1398.11	5823.19	6062.25	2.08	-0.442	0.000	0.166
50.00	-56.52	-9.14	0.00	-910.10	0.00	910.10	5805.17	1373.97	5623.79	5879.32	2.47	-0.484	0.000	0.165
53.25	-54.30	-9.02	0.00	-880.40	0.00	880.40	4915.61	1207.90	4967.43	5008.40	2.81	-0.518	0.000	0.187
55.00	-53.66	-8.98	0.00	-864.61	0.00	864.61	4889.04	1198.66	4891.70	4942.89	3.01	-0.537	0.000	0.186
60.00	-51.86	-8.82	0.00	-819.71	0.00	819.71	4812.21	1172.25	4678.52	4757.07	3.60	-0.594	0.000	0.183
65.00	-50.10	-8.66	0.00	-775.62	0.00	775.62	4733.98	1145.84	4470.10	4573.36	4.25	-0.652	0.000	0.180
70.00	-48.37	-8.49	0.00	-732.34	0.00	732.34	4654.36	1119.43	4266.42	4391.86	4.97	-0.711	0.000	0.177
75.00	-46.68	-8.33	0.00	-689.89	0.00	689.89	4573.36	1093.02	4067.49	4212.65	5.74	-0.771	0.000	0.174
80.00	-45.03	-8.16	0.00	-648.26	0.00	648.26	4490.96	1066.61	3873.31	4035.83	6.58	-0.831	0.000	0.171
85.00	-43.41	-7.99	0.00	-607.47	0.00	607.47	4403.53	1040.20	3683.88	3858.32	7.49	-0.891	0.000	0.167
90.00	-41.83	-7.82	0.00	-567.51	0.00	567.51	4291.74	1013.80	3499.20	3663.93	8.45	-0.953	0.000	0.165
93.75	-40.67	-7.68	0.00	-538.19	0.00	538.19	4207.89	993.99	3363.81	3521.43	9.22	-0.999	0.000	0.163
95.00	-40.03	-7.65	0.00	-528.59	0.00	528.59	4179.94	987.39	3319.27	3474.56	9.48	-1.015	0.000	0.162
99.50	-37.78	-7.46	0.00	-494.16	0.00	494.16	3481.28	842.93	2822.27	2886.47	10.47	-1.071	0.000	0.182
100.00	-37.64	-7.47	0.00	-490.43	0.00	490.43	3474.51	840.67	2807.13	2873.05	10.58	-1.078	0.000	0.182
105.00	-36.30	-7.30	0.00	-453.09	0.00	453.09	3406.10	818.03	2657.99	2739.94	11.75	-1.146	0.000	0.176
110.00	-35.00	-7.14	0.00	-416.57	0.00	416.57	3336.29	795.39	2512.93	2608.82	12.98	-1.215	0.000	0.170
115.00	-33.72	-6.98	0.00	-380.87	0.00	380.87	3265.09	772.76	2371.93	2479.78	14.29	-1.283	0.000	0.164
120.00	-32.48	-6.81	0.00	-346.00	0.00	346.00	3175.51	750.12	2235.00	2340.39	15.67	-1.351	0.000	0.158
125.00	-31.27	-6.65	0.00	-311.94	0.00	311.94	3079.69	727.49	2102.15	2200.56	17.12	-1.418	0.000	0.152
130.00	-30.10	-6.49	0.00	-278.69	0.00	278.69	2983.86	704.85	1973.36	2065.04	18.64	-1.484	0.000	0.145
135.00	-28.96	-6.32	0.00	-246.24	0.00	246.24	2888.03	682.21	1848.65	1933.83	20.23	-1.549	0.000	0.137
137.00	-27.97	-6.12	0.00	-233.61	0.00	233.61	2849.70	673.16	1799.90	1882.55	20.89	-1.575	0.000	0.134
137.17	-27.93	-6.13	0.00	-232.59	0.00	232.59	2846.51	672.40	1795.87	1878.31	20.94	-1.577	0.000	0.134
140.00	-27.00	-6.03	0.00	-215.22	0.00	215.22	2792.21	659.58	1728.01	1806.92	21.89	-1.613	0.000	0.129
142.50	-26.20	-5.94	0.00	-200.16	0.00	200.16	1731.59	440.88	1158.08	1127.95	22.74	-1.644	0.000	0.193
144.00	-25.86	-5.79	0.00	-190.65	0.00	190.65	1719.84	436.35	1134.42	1108.70	23.26	-1.663	0.000	0.187
145.00	-25.69	-5.78	0.00	-184.86	0.00	184.86	1711.94	433.33	1118.78	1095.92	23.61	-1.680	0.000	0.184
150.00	-24.89	-5.64	0.00	-155.96	0.00	155.96	1671.60	418.24	1042.21	1032.53	25.42	-1.761	0.000	0.166
155.00	-24.11	-5.49	0.00	-127.78	0.00	127.78	1629.88	403.15	968.36	970.13	27.30	-1.835	0.000	0.147
160.00	-23.35	-5.35	0.00	-100.33	0.00	100.33	1586.75	388.06	897.22	908.81	29.26	-1.902	0.000	0.125
165.00	-22.62	-5.20	0.00	-73.59	0.00	73.59	1542.24	372.97	828.79	848.66	31.28	-1.959	0.000	0.102
167.00	-19.56	-4.33	0.00	-63.20	0.00	63.20	1524.05	366.93	802.18	824.95	32.11	-1.979	0.000	0.090
170.00	-19.16	-4.24	0.00	-50.23	0.00	50.23	1496.34	357.88	763.08	789.77	33.36	-2.005	0.000	0.077
175.00	-18.51	-4.09	0.00	-29.03	0.00	29.03	1449.04	342.78	700.08	732.25	35.48	-2.038	0.000	0.053
177.00	-11.82	-2.60	0.00	-20.85	0.00	20.85	1425.57	336.75	675.64	707.57	36.33	-2.048	0.000	0.038
180.00	-11.46	-2.52	0.00	-13.03	0.00	13.03	1387.24	327.69	639.80	669.85	37.62	-2.058	0.000	0.028
185.00	-0.44	-0.11	0.00	-0.45	0.00	0.45	1323.35	312.60	582.23	609.26	39.79	-2.065	0.000	0.001



### Calculated Forces

<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II
		Page: 38



189.00	0.00	-0.10	0.00	0.00	0.00	0.00	0.00	1272.25	300.53	538.12	562.86	41.52	-2.066	0.000	0.000
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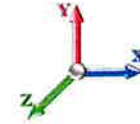
## Seismic Segment Forces (Factored)

<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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<b>Load Case:</b> 1.2D + 1.0Ev + 1.0Eh					<b>Iterations</b> 23
<b>Gust Response Factor</b>	1.10		<b>Sds</b>	0.20	<b>Ss</b> 0.19
<b>Dead Load Factor</b>	1.20	<b>Seismic Load Factor</b>	1.00	<b>Sd1</b> 0.08	<b>S1</b> 0.05
<b>Wind Load Factor</b>	0.00	<b>Structure Frequency (f1)</b>	0.30	<b>SA</b> 0.03	<b>Seismic Importance Factor</b> 1.00



Top Elev (ft)	Description	Wz (lb)	Hz (lb)	Vertical Ev (lb)	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	
5.00		1656.3	2.50	66.43	0.01	
10.00		1627.0	7.50	65.26	0.09	
15.00		1597.7	12.50	64.08	0.25	
20.00		1568.5	17.50	62.91	0.47	
25.00		1539.2	22.50	61.73	0.74	
30.00		1510.0	27.50	60.56	1.07	
35.00		1480.7	32.50	59.39	1.44	
40.00		1451.4	37.50	58.21	1.84	
45.00		1422.2	42.50	57.04	2.27	
46.00	Bot - Section 2	280.93	45.50	11.27	0.10	
50.00		2070.3	48.00	83.03	6.12	
53.25	Top - Section 1	1656.3	51.63	66.43	4.53	
55.00		424.50	54.13	17.03	0.33	
60.00		1195.5	57.50	47.95	2.93	
65.00		1169.9	62.50	46.92	3.32	
70.00		1144.3	67.50	45.90	3.70	
75.00		1118.7	72.50	44.87	4.08	
80.00		1093.1	77.50	43.84	4.45	
85.00		1067.5	82.50	42.82	4.81	
90.00		1041.9	87.50	41.79	5.15	
93.75	Bot - Section 3	764.68	91.88	30.67	3.06	
95.00		461.61	94.38	18.51	1.18	
99.50	Top - Section 2	1637.1	97.25	65.66	15.72	
100.00		86.24	99.75	3.46	0.05	
105.00		850.36	102.50	34.11	4.71	
110.00		828.41	107.50	33.22	4.92	
115.00		806.47	112.50	32.34	5.10	
120.00		784.52	117.50	31.46	5.27	
125.00		762.58	122.50	30.58	5.41	
130.00		740.63	127.50	29.70	5.53	
135.00		718.69	132.50	28.82	5.62	
137.00	Appurtenance(s)	621.33	136.00	24.92	4.43	
137.17	Bot - Section 4	23.29	137.08	0.93	0.01	
140.00		640.82	138.58	25.70	4.89	
142.50	Top - Section 3	555.68	141.25	22.29	3.82	
144.00	Appurtenance(s)	181.47	143.25	7.28	0.42	
145.00		92.33	144.50	3.70	0.11	
150.00		452.88	147.50	18.16	2.77	
155.00		438.25	152.50	17.58	2.77	
160.00		423.62	157.50	16.99	2.76	
165.00		408.99	162.50	16.40	2.74	
167.00	Appurtenance(s)	2010.5	166.00	80.63	69.07	
170.00		227.69	168.50	9.13	0.91	
175.00		367.79	172.50	14.75	2.50	
177.00	Appurtenance(s)	2691.2	176.00	107.94	139.13	

## Seismic Segment Forces (Factored)

<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Struct Class:</b> II	Page: 40



180.00	202.22	178.50	8.11	0.81	
185.00 Appurtenance(s)	4707.0	182.50	188.78	457.60	
189.00	244.06	187.00	9.79	1.29	
<b>Totals:</b>	<b>48,847.6</b>	<b>1,959.1</b>	<b>800.3</b>		<b>Total Wind: 43,361.1</b>

## Calculated Forces

**Structure:** CT11796-S

**Code:** TIA-222-H

12/19/2023

**Site Name:** North Stonington 3

**Exposure:** C

**Height:** 189.00 (ft)

**Crest Height:** 0.00

**Base Elev:** 1.000 (ft)

**Site Class:** D - Stiff Soil

**Gh:** 1.1

**Topography:** 1

**Struct Class:** II

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**Load Case:** 1.2D + 1.0Ev + 1.0Eh

**Iterations** 23

**Gust Response Factor** 1.10

**Sds** 0.20

**Ss** 0.19

**Dead Load Factor** 1.20

**Seismic Load Factor** 1.00

**Sd1** 0.08

**S1** 0.05

**Wind Load Factor** 0.00

**Structure Frequency (f1)** 0.30

**SA** 0.03

**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	-60.26	-0.80	0.00	-142.55	0.00	142.55	6694.10	1675.79	8365.91	8283.84		0.00	0.00	0.026
5.00	-58.21	-0.81	0.00	-138.54	0.00	138.54	6611.47	1645.60	8067.27	8033.01		0.00	0.00	0.026
10.00	-56.20	-0.81	0.00	-134.51	0.00	134.51	6527.45	1615.42	7774.06	7784.25		0.01	-0.01	0.026
15.00	-54.23	-0.81	0.00	-130.45	0.00	130.45	6442.03	1585.24	7486.28	7537.62		0.02	-0.01	0.026
20.00	-52.29	-0.82	0.00	-126.38	0.00	126.38	6355.23	1555.06	7203.93	7293.25		0.04	-0.02	0.026
25.00	-50.39	-0.82	0.00	-122.29	0.00	122.29	6267.03	1524.88	6927.01	7051.20		0.06	-0.02	0.025
30.00	-48.53	-0.82	0.00	-118.18	0.00	118.18	6177.44	1494.69	6655.51	6811.59		0.09	-0.03	0.025
35.00	-46.70	-0.83	0.00	-114.06	0.00	114.06	6086.46	1464.51	6389.44	6574.50		0.12	-0.03	0.025
40.00	-44.91	-0.83	0.00	-109.94	0.00	109.94	5994.09	1434.33	6128.80	6340.03		0.16	-0.04	0.025
45.00	-43.16	-0.83	0.00	-105.80	0.00	105.80	5900.32	1404.15	5873.58	6108.27		0.21	-0.05	0.025
46.00	-42.81	-0.83	0.00	-104.97	0.00	104.97	5881.40	1398.11	5823.19	6062.25		0.22	-0.05	0.025
50.00	-40.25	-0.82	0.00	-101.66	0.00	101.66	5805.17	1373.97	5623.79	5879.32		0.26	-0.05	0.024
53.25	-38.20	-0.82	0.00	-98.99	0.00	98.99	4915.61	1207.90	4967.43	5008.40		0.30	-0.06	0.028
55.00	-37.68	-0.82	0.00	-97.56	0.00	97.56	4889.04	1198.66	4891.70	4942.89		0.32	-0.06	0.027
60.00	-36.21	-0.82	0.00	-93.46	0.00	93.46	4812.21	1172.25	4678.52	4757.07		0.38	-0.06	0.027
65.00	-34.76	-0.82	0.00	-89.36	0.00	89.36	4733.98	1145.84	4470.10	4573.36		0.45	-0.07	0.027
70.00	-33.36	-0.82	0.00	-85.26	0.00	85.26	4654.36	1119.43	4266.42	4391.86		0.53	-0.08	0.027
75.00	-31.98	-0.82	0.00	-81.18	0.00	81.18	4573.36	1093.02	4067.49	4212.65		0.61	-0.08	0.026
80.00	-30.63	-0.81	0.00	-77.10	0.00	77.10	4490.96	1066.61	3873.31	4035.83		0.70	-0.09	0.026
85.00	-29.32	-0.81	0.00	-73.04	0.00	73.04	4403.53	1040.20	3683.88	3858.32		0.80	-0.10	0.026
90.00	-28.03	-0.81	0.00	-68.99	0.00	68.99	4291.74	1013.80	3499.20	3663.93		0.91	-0.11	0.025
93.75	-27.09	-0.80	0.00	-65.97	0.00	65.97	4207.89	993.99	3363.81	3521.43		1.00	-0.11	0.025
95.00	-26.52	-0.80	0.00	-64.97	0.00	64.97	4179.94	987.39	3319.27	3474.56		1.03	-0.11	0.025
99.50	-24.50	-0.78	0.00	-61.36	0.00	61.36	3481.28	842.93	2822.27	2886.47		1.14	-0.12	0.028
100.00	-24.39	-0.79	0.00	-60.97	0.00	60.97	3474.51	840.67	2807.13	2873.05		1.15	-0.12	0.028
105.00	-23.35	-0.78	0.00	-57.04	0.00	57.04	3406.10	818.03	2657.99	2739.94		1.28	-0.13	0.028
110.00	-22.33	-0.78	0.00	-53.13	0.00	53.13	3336.29	795.39	2512.93	2608.82		1.42	-0.14	0.027
115.00	-21.34	-0.77	0.00	-49.24	0.00	49.24	3265.09	772.76	2371.93	2479.78		1.57	-0.15	0.026
120.00	-20.37	-0.77	0.00	-45.38	0.00	45.38	3175.51	750.12	2235.00	2340.39		1.73	-0.16	0.026
125.00	-19.44	-0.76	0.00	-41.53	0.00	41.53	3079.69	727.49	2102.15	2200.56		1.90	-0.17	0.025
130.00	-18.53	-0.76	0.00	-37.71	0.00	37.71	2983.86	704.85	1973.36	2065.04		2.08	-0.17	0.024
135.00	-17.65	-0.75	0.00	-33.92	0.00	33.92	2888.03	682.21	1848.65	1933.83		2.27	-0.18	0.024
137.00	-16.88	-0.75	0.00	-32.41	0.00	32.41	2849.70	673.16	1799.90	1882.55		2.34	-0.19	0.023
137.17	-16.85	-0.75	0.00	-32.29	0.00	32.29	2846.51	672.40	1795.87	1878.31		2.35	-0.19	0.023
140.00	-16.06	-0.74	0.00	-30.17	0.00	30.17	2792.21	659.58	1728.01	1806.92		2.46	-0.19	0.022
142.50	-15.38	-0.74	0.00	-28.32	0.00	28.32	1731.59	440.88	1158.08	1127.95		2.56	-0.20	0.034
144.00	-15.16	-0.73	0.00	-27.22	0.00	27.22	1719.84	436.35	1134.42	1108.70		2.63	-0.20	0.033
145.00	-15.04	-0.74	0.00	-26.48	0.00	26.48	1711.94	433.33	1118.78	1095.92		2.67	-0.20	0.033
150.00	-14.49	-0.73	0.00	-22.80	0.00	22.80	1671.60	418.24	1042.21	1032.53		2.89	-0.21	0.031
155.00	-13.95	-0.73	0.00	-19.13	0.00	19.13	1629.88	403.15	968.36	970.13		3.11	-0.22	0.028
160.00	-13.44	-0.73	0.00	-15.47	0.00	15.47	1586.75	388.06	897.22	908.81		3.36	-0.23	0.025
165.00	-12.94	-0.73	0.00	-11.82	0.00	11.82	1542.24	372.97	828.79	848.66		3.61	-0.24	0.022
167.00	-10.45	-0.65	0.00	-10.37	0.00	10.37	1524.05	366.93	802.18	824.95		3.71	-0.25	0.019
170.00	-10.17	-0.65	0.00	-8.42	0.00	8.42	1496.34	357.88	763.08	789.77		3.86	-0.25	0.017
175.00	-9.72	-0.64	0.00	-5.19	0.00	5.19	1449.04	342.78	700.08	732.25		4.13	-0.26	0.014
177.00	-6.38	-0.49	0.00	-3.91	0.00	3.91	1425.57	336.75	675.64	707.57		4.24	-0.26	0.010
180.00	-6.13	-0.49	0.00	-2.44	0.00	2.44	1387.24	327.69	639.80	669.85		4.40	-0.26	0.008

## Calculated Forces

<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	Page: 42
<b>Struct Class:</b> II		



185.00	-0.30	0.00	0.00	-0.01	0.00	0.01	1323.35	312.60	582.23	609.26	4.67	-0.26	0.000
189.00	0.00	0.00	0.00	0.00	0.00	0.00	1272.25	300.53	538.12	562.86	4.89	-0.26	0.000

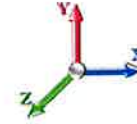
## Seismic Segment Forces (Factored)

<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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<b>Load Case:</b> 0.9D + 1.0Ev + 1.0Eh				<b>Iterations</b> 23
<b>Gust Response Factor</b>	1.10	<b>Sds</b>	0.20	<b>Ss</b> 0.19
<b>Dead Load Factor</b>	0.90	<b>Seismic Load Factor</b>	1.00	<b>S1</b> 0.05
<b>Wind Load Factor</b>	0.00	<b>Structure Frequency (f1)</b>	0.30	<b>SA</b> 0.03
				<b>Seismic Importance Factor</b> 1.00



Top Elev (ft)	Description	Wz (lb)	Hz (lb)	Vertical Ev (lb)	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	
5.00		1644.7	2.50	65.96	0.01	
10.00		1615.4	7.50	64.79	0.09	
15.00		1586.2	12.50	63.62	0.25	
20.00		1556.9	17.50	62.44	0.46	
25.00		1527.6	22.50	61.27	0.74	
30.00		1498.4	27.50	60.10	1.06	
35.00		1469.1	32.50	58.92	1.42	
40.00		1439.9	37.50	57.75	1.82	
45.00		1410.6	42.50	56.58	2.24	
46.00	Bot - Section 2	278.62	45.50	11.17	0.10	
50.00		2061.0	48.00	82.66	6.10	
53.25	Top - Section 1	1648.7	51.63	66.13	4.52	
55.00		420.45	54.13	16.86	0.32	
60.00		1184.0	57.50	47.49	2.89	
65.00		1158.4	62.50	46.46	3.27	
70.00		1132.8	67.50	45.43	3.65	
75.00		1107.1	72.50	44.41	4.02	
80.00		1081.5	77.50	43.38	4.38	
85.00		1055.9	82.50	42.35	4.73	
90.00		1030.3	87.50	41.33	5.07	
93.75	Bot - Section 3	755.99	91.88	30.32	3.01	
95.00		458.71	94.38	18.40	1.17	
99.50	Top - Section 2	1626.7	97.25	65.24	15.61	
100.00		85.08	99.75	3.41	0.04	
105.00		838.77	102.50	33.64	4.61	
110.00		816.83	107.50	32.76	4.81	
115.00		794.88	112.50	31.88	4.99	
120.00		772.94	117.50	31.00	5.14	
125.00		750.99	122.50	30.12	5.28	
130.00		729.05	127.50	29.24	5.39	
135.00		707.10	132.50	28.36	5.47	
137.00	Appurtenance(s)	616.70	136.00	24.73	4.39	
137.17	Bot - Section 4	22.90	137.08	0.92	0.01	
140.00		634.25	138.58	25.44	4.82	
142.50	Top - Section 3	549.88	141.25	22.05	3.76	
144.00	Appurtenance(s)	177.99	143.25	7.14	0.41	
145.00		90.33	144.50	3.62	0.11	
150.00		442.86	147.50	17.76	2.66	
155.00		428.23	152.50	17.17	2.66	
160.00		413.60	157.50	16.59	2.65	
165.00		398.97	162.50	16.00	2.62	
167.00	Appurtenance(s)	2006.4	166.00	80.47	69.18	
170.00		223.47	168.50	8.96	0.88	
175.00		360.75	172.50	14.47	2.41	
177.00	Appurtenance(s)	2688.4	176.00	107.83	139.60	



## Seismic Segment Forces (Factored)

<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	Page: 44
<b>Struct Class:</b> II		



180.00	199.97	178.50	8.02	0.79	
185.00 Appurtenance(s)	4703.2	182.50	188.63	459.40	
189.00	242.49	187.00	9.73	1.28	
<b>Totals:</b>	<b>48,446.1</b>		<b>1,943.0</b>	<b>800.3</b>	<b>Total Wind: 43,361.1</b>

## Calculated Forces

**Structure:** CT11796-S  
**Site Name:** North Stonington 3  
**Height:** 189.00 (ft)  
**Base Elev:** 1.000 (ft)  
**Gh:** 1.1

**Code:** TIA-222-H  
**Exposure:** C  
**Crest Height:** 0.00  
**Site Class:** D - Stiff Soil  
**Struct Class:** II

12/19/2023

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<b>Load Case:</b> 0.9D + 1.0Ev + 1.0Eh						<b>Iterations</b> 23
<b>Gust Response Factor</b>	1.10	<b>Sds</b>	0.20	<b>Ss</b>	0.19	
<b>Dead Load Factor</b>	0.90	<b>Seismic Load Factor</b>	1.00	<b>Sd1</b>	0.05	
<b>Wind Load Factor</b>	0.00	<b>Structure Frequency (f1)</b>	0.30	<b>SA</b>	0.03	
<b>Seismic Importance Factor</b> 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	-45.66	-0.80	0.00	-140.73	0.00	140.73	6694.10	1675.79	8365.91	8283.84		0.00	0.00	0.024
5.00	-44.12	-0.80	0.00	-136.72	0.00	136.72	6611.47	1645.60	8067.27	8033.01		0.00	0.00	0.024
10.00	-42.59	-0.81	0.00	-132.70	0.00	132.70	6527.45	1615.42	7774.06	7784.25		0.01	-0.01	0.024
15.00	-41.10	-0.81	0.00	-128.66	0.00	128.66	6442.03	1585.24	7486.28	7537.62		0.02	-0.01	0.023
20.00	-39.63	-0.81	0.00	-124.61	0.00	124.61	6355.23	1555.06	7203.93	7293.25		0.04	-0.02	0.023
25.00	-38.19	-0.82	0.00	-120.54	0.00	120.54	6267.03	1524.88	6927.01	7051.20		0.06	-0.02	0.023
30.00	-36.78	-0.82	0.00	-116.46	0.00	116.46	6177.44	1494.69	6655.51	6811.59		0.09	-0.03	0.023
35.00	-35.39	-0.82	0.00	-112.38	0.00	112.38	6086.46	1464.51	6389.44	6574.50		0.12	-0.03	0.023
40.00	-34.04	-0.82	0.00	-108.29	0.00	108.29	5994.09	1434.33	6128.80	6340.03		0.16	-0.04	0.023
45.00	-32.71	-0.82	0.00	-104.19	0.00	104.19	5900.32	1404.15	5873.58	6108.27		0.20	-0.05	0.023
46.00	-32.44	-0.82	0.00	-103.38	0.00	103.38	5881.40	1398.11	5823.19	6062.25		0.21	-0.05	0.023
50.00	-30.50	-0.81	0.00	-100.10	0.00	100.10	5805.17	1373.97	5623.79	5879.32		0.26	-0.05	0.022
53.25	-28.95	-0.81	0.00	-97.46	0.00	97.46	4915.61	1207.90	4967.43	5008.40		0.29	-0.05	0.025
55.00	-28.56	-0.81	0.00	-96.04	0.00	96.04	4889.04	1198.66	4891.70	4942.89		0.31	-0.06	0.025
60.00	-27.44	-0.81	0.00	-91.99	0.00	91.99	4812.21	1172.25	4678.52	4757.07		0.37	-0.06	0.025
65.00	-26.35	-0.81	0.00	-87.95	0.00	87.95	4733.98	1145.84	4470.10	4573.36		0.44	-0.07	0.025
70.00	-25.28	-0.81	0.00	-83.91	0.00	83.91	4654.36	1119.43	4266.42	4391.86		0.52	-0.08	0.025
75.00	-24.23	-0.80	0.00	-79.88	0.00	79.88	4573.36	1093.02	4067.49	4212.65		0.60	-0.08	0.024
80.00	-23.21	-0.80	0.00	-75.86	0.00	75.86	4490.96	1066.61	3873.31	4035.83		0.69	-0.09	0.024
85.00	-22.22	-0.80	0.00	-71.86	0.00	71.86	4403.53	1040.20	3683.88	3858.32		0.79	-0.10	0.024
90.00	-21.24	-0.79	0.00	-67.88	0.00	67.88	4291.74	1013.80	3499.20	3663.93		0.90	-0.10	0.023
93.75	-20.53	-0.79	0.00	-64.91	0.00	64.91	4207.89	993.99	3363.81	3521.43		0.98	-0.11	0.023
95.00	-20.10	-0.79	0.00	-63.92	0.00	63.92	4179.94	987.39	3319.27	3474.56		1.01	-0.11	0.023
99.50	-18.57	-0.77	0.00	-60.37	0.00	60.37	3481.28	842.93	2822.27	2886.47		1.12	-0.12	0.026
100.00	-18.49	-0.77	0.00	-59.99	0.00	59.99	3474.51	840.67	2807.13	2873.05		1.13	-0.12	0.026
105.00	-17.69	-0.77	0.00	-56.12	0.00	56.12	3406.10	818.03	2657.99	2739.94		1.26	-0.13	0.026
110.00	-16.92	-0.76	0.00	-52.28	0.00	52.28	3336.29	795.39	2512.93	2608.82		1.40	-0.14	0.025
115.00	-16.17	-0.76	0.00	-48.46	0.00	48.46	3265.09	772.76	2371.93	2479.78		1.55	-0.15	0.024
120.00	-15.44	-0.76	0.00	-44.65	0.00	44.65	3175.51	750.12	2235.00	2340.39		1.71	-0.15	0.024
125.00	-14.73	-0.75	0.00	-40.87	0.00	40.87	3079.69	727.49	2102.15	2200.56		1.87	-0.16	0.023
130.00	-14.04	-0.75	0.00	-37.12	0.00	37.12	2983.86	704.85	1973.36	2065.04		2.05	-0.17	0.023
135.00	-13.37	-0.74	0.00	-33.39	0.00	33.39	2888.03	682.21	1848.65	1933.83		2.23	-0.18	0.022
137.00	-12.79	-0.73	0.00	-31.91	0.00	31.91	2849.70	673.16	1799.90	1882.55		2.31	-0.18	0.021
137.17	-12.77	-0.73	0.00	-31.79	0.00	31.79	2846.51	672.40	1795.87	1878.31		2.31	-0.18	0.021
140.00	-12.17	-0.73	0.00	-29.71	0.00	29.71	2792.21	659.58	1728.01	1806.92		2.43	-0.19	0.021
142.50	-11.65	-0.72	0.00	-27.89	0.00	27.89	1731.59	440.88	1158.08	1127.95		2.53	-0.19	0.031
144.00	-11.49	-0.72	0.00	-26.80	0.00	26.80	1719.84	436.35	1134.42	1108.70		2.59	-0.20	0.031
145.00	-11.40	-0.72	0.00	-26.08	0.00	26.08	1711.94	433.33	1118.78	1095.92		2.63	-0.20	0.030
150.00	-10.98	-0.72	0.00	-22.46	0.00	22.46	1671.60	418.24	1042.21	1032.53		2.84	-0.21	0.028
155.00	-10.58	-0.72	0.00	-18.85	0.00	18.85	1629.88	403.15	968.36	970.13		3.07	-0.22	0.026
160.00	-10.18	-0.72	0.00	-15.25	0.00	15.25	1586.75	388.06	897.22	908.81		3.30	-0.23	0.023
165.00	-9.81	-0.71	0.00	-11.66	0.00	11.66	1542.24	372.97	828.79	848.66		3.55	-0.24	0.020
167.00	-7.92	-0.64	0.00	-10.23	0.00	10.23	1524.05	366.93	802.18	824.95		3.65	-0.24	0.018
170.00	-7.71	-0.64	0.00	-8.32	0.00	8.32	1496.34	357.88	763.08	789.77		3.81	-0.25	0.016
175.00	-7.37	-0.63	0.00	-5.13	0.00	5.13	1449.04	342.78	700.08	732.25		4.07	-0.25	0.012
177.00	-4.84	-0.48	0.00	-3.86	0.00	3.86	1425.57	336.75	675.64	707.57		4.17	-0.25	0.009
180.00	-4.65	-0.48	0.00	-2.42	0.00	2.42	1387.24	327.69	639.80	669.85		4.33	-0.26	0.007

## Calculated Forces

<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	Page: 46
<b>Struct Class:</b> II		



185.00	-0.23	0.00	0.00	-0.01	0.00	0.01	1323.35	312.60	582.23	609.26	4.60	-0.26	0.000
189.00	0.00	0.00	0.00	0.00	0.00	0.00	1272.25	300.53	538.12	562.86	4.82	-0.26	0.000

## Wind Loading - Shaft

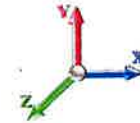
<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 1.0D + 1.0W 60 mph Wind

**Dead Load Factor**    1.00  
**Wind Load Factor**    1.00



**Iterations**    25

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	6.592	7.25	282.58	0.730	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	6.592	7.25	277.53	0.730	0.000	5.00	25.440	18.57	134.7	0.0	1610.0
10.00		1.00	0.85	6.592	7.25	272.48	0.730	0.000	5.00	24.981	18.24	132.2	0.0	1580.7
15.00		1.00	0.86	6.674	7.34	269.08	0.730	0.000	5.00	24.523	17.90	131.4	0.0	1551.4
20.00		1.00	0.91	7.067	7.77	271.67	0.730	0.000	5.00	24.064	17.57	136.6	0.0	1522.2
25.00		1.00	0.95	7.392	8.13	272.50	0.730	0.000	5.00	23.606	17.23	140.1	0.0	1492.9
30.00		1.00	0.99	7.671	8.44	272.15	0.730	0.000	5.00	23.147	16.90	142.6	0.0	1463.7
35.00		1.00	1.02	7.916	8.71	270.93	0.730	0.000	5.00	22.689	16.56	144.2	0.0	1434.4
40.00		1.00	1.05	8.136	8.95	269.06	0.730	0.000	5.00	22.230	16.23	145.2	0.0	1405.1
45.00		1.00	1.07	8.336	9.17	266.66	0.730	0.000	5.00	21.772	15.89	145.7	0.0	1375.9
46.00	Bot - Section 2	1.00	1.08	8.373	9.21	266.13	0.730	0.000	1.00	4.299	3.14	28.9	0.0	271.7
50.00		1.00	1.10	8.519	9.37	263.84	0.730	0.000	4.00	17.310	12.64	118.4	0.0	2033.3
53.25	Top - Section 1	1.00	1.11	8.630	9.49	261.81	0.730	0.000	3.25	13.848	10.11	96.0	0.0	1626.2
55.00		1.00	1.12	8.688	9.56	265.33	0.730	0.000	1.75	7.377	5.38	51.5	0.0	408.3
60.00		1.00	1.14	8.846	9.73	261.89	0.730	0.000	5.00	20.767	15.16	147.5	0.0	1149.2
65.00		1.00	1.16	8.994	9.89	258.17	0.730	0.000	5.00	20.308	14.82	146.7	0.0	1123.6
70.00		1.00	1.18	9.133	10.05	254.22	0.730	0.000	5.00	19.850	14.49	145.6	0.0	1098.0
75.00		1.00	1.19	9.265	10.19	250.07	0.730	0.000	5.00	19.391	14.16	144.3	0.0	1072.4
80.00		1.00	1.21	9.390	10.33	245.73	0.730	0.000	5.00	18.933	13.82	142.8	0.0	1046.8
85.00		1.00	1.23	9.509	10.46	241.22	0.730	0.000	5.00	18.474	13.49	141.1	0.0	1021.2
90.00		1.00	1.24	9.623	10.59	236.56	0.730	0.000	5.00	18.016	13.15	139.2	0.0	995.6
93.75	Bot - Section 3	1.00	1.25	9.705	10.68	232.97	0.730	0.000	3.75	13.211	9.64	103.0	0.0	729.9
95.00		1.00	1.25	9.732	10.71	231.76	0.730	0.000	1.25	4.426	3.23	34.6	0.0	450.0
99.50	Top - Section 2	1.00	1.27	9.826	10.81	227.34	0.730	0.000	4.50	15.695	11.46	123.8	0.0	1595.5
100.00		1.00	1.27	9.837	10.82	231.11	0.730	0.000	0.50	1.721	1.26	13.6	0.0	81.6
105.00		1.00	1.28	9.937	10.93	226.09	0.730	0.000	5.00	16.957	12.38	135.3	0.0	804.0
110.00		1.00	1.29	10.034	11.04	220.96	0.730	0.000	5.00	16.499	12.04	132.9	0.0	782.1
115.00		1.00	1.31	10.127	11.14	215.73	0.730	0.000	5.00	16.040	11.71	130.4	0.0	760.1
120.00		1.00	1.32	10.218	11.24	210.41	0.730	0.000	5.00	15.582	11.37	127.8	0.0	738.2
125.00		1.00	1.33	10.305	11.34	205.00	0.730	0.000	5.00	15.123	11.04	125.1	0.0	716.2
130.00		1.00	1.34	10.390	11.43	199.50	0.730	0.000	5.00	14.665	10.71	122.4	0.0	694.3
135.00		1.00	1.35	10.472	11.52	193.93	0.730	0.000	5.00	14.206	10.37	119.5	0.0	672.3
137.00	Appurtenance(s)	1.00	1.35	10.505	11.56	191.68	0.730	0.000	2.00	5.554	4.05	46.9	0.0	262.8
137.17	Bot - Section 4	1.00	1.35	10.507	11.56	191.49	0.730	0.000	0.17	0.460	0.34	3.9	0.0	21.7
140.00		1.00	1.36	10.552	11.61	188.28	0.730	0.000	2.83	7.854	5.73	66.6	0.0	614.6
142.50	Top - Section 3	1.00	1.37	10.591	11.65	185.43	0.730	0.000	2.50	6.808	4.97	57.9	0.0	532.5
144.00	Appurtenance(s)	1.00	1.37	10.615	11.68	186.67	0.730	0.000	1.50	4.030	2.94	34.3	0.0	127.6
145.00		1.00	1.37	10.630	11.69	185.52	0.730	0.000	1.00	2.663	1.94	22.7	0.0	84.3
150.00		1.00	1.38	10.706	11.78	179.75	0.730	0.000	5.00	13.042	9.52	112.1	0.0	412.8
155.00		1.00	1.39	10.779	11.86	173.91	0.730	0.000	5.00	12.584	9.19	108.9	0.0	398.1
160.00		1.00	1.40	10.851	11.94	168.01	0.730	0.000	5.00	12.125	8.85	105.7	0.0	383.5
165.00		1.00	1.41	10.921	12.01	162.06	0.730	0.000	5.00	11.667	8.52	102.3	0.0	368.9
167.00	Appurtenance(s)	1.00	1.41	10.949	12.04	159.66	0.733 *	0.000	2.00	4.538	3.33	40.1	0.0	143.5
170.00		1.00	1.42	10.990	12.09	156.05	0.730	0.000	3.00	6.670	4.87	58.9	0.0	210.8
175.00		1.00	1.43	11.057	12.16	149.99	0.730	0.000	5.00	10.750	7.85	95.4	0.0	339.6
177.00	Appurtenance(s)	1.00	1.43	11.083	12.19	147.55	0.730	0.000	2.00	4.172	3.05	37.1	0.0	131.8
180.00		1.00	1.43	11.122	12.23	143.87	0.730	0.000	3.00	6.120	4.47	54.7	0.0	193.2

## Wind Loading - Shaft

<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II
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185.00 Appurtenance(s)	1.00	1.44	11.186	12.30	137.71	0.730	0.000	5.00	9.833	7.18	88.3	0.0	310.4	
189.00	1.00	1.45	11.236	12.36	132.75	0.730	0.000	4.00	7.536	5.50	68.0	0.0	237.8	
* Cf Adjusted by Linear Load Ra Effect														
<b>Totals:</b>												<b>189.00</b>	<b>4,826.8</b>	<b>38,080.9</b>

## Discrete Appurtenance Forces

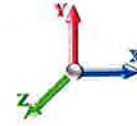
<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 1.0D + 1.0W 60 mph Wind

**Dead Load Factor** 1.00  
**Wind Load Factor** 1.00



**Iterations** 25

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	185.00	Ericsson RRUS-32	3	11.186	12.305	0.64	0.80	7.43	231.00	0.000	0.000	91.43	0.00	0.00
2	185.00	Cci HPA-65R-BUU-H8	12	11.186	12.305	0.63	0.80	98.44	816.00	0.000	0.000	1211.26	0.00	0.00
3	185.00	Ericsson RRUS-11	9	11.186	12.305	0.55	0.80	12.52	456.30	0.000	0.000	154.04	0.00	0.00
4	185.00	Ericsson RRUS-E2	3	11.186	12.305	0.60	0.80	5.67	174.00	0.000	0.000	69.77	0.00	0.00
5	185.00	Mount Pipes	12	11.186	12.305	0.80	0.80	9.50	720.00	0.000	0.000	116.94	0.00	0.00
6	185.00	Ericsson A2	6	11.186	12.305	0.54	0.80	5.98	127.20	0.000	0.000	73.60	0.00	0.00
7	185.00	Raycap DC6-48-60-18-8F	4	11.186	12.305	0.80	0.80	2.94	127.20	0.000	0.000	36.22	0.00	0.00
8	185.00	Low Profile Platform	1	11.186	12.305	1.00	1.00	14.69	1250.00	0.000	0.000	180.75	0.00	0.00
9	185.00	Ericsson RRUS-12	6	11.186	12.305	0.54	0.80	8.68	480.00	0.000	0.000	106.84	0.00	0.00
10	177.00	Platform w/ Mount Pipes	1	11.083	12.191	1.00	1.00	36.10	1544.00	0.000	0.000	440.10	0.00	0.00
11	177.00	Raycap	2	11.083	12.191	0.66	0.80	3.96	64.00	0.000	0.000	48.30	0.00	0.00
12	177.00	Samsung B5/B13 RRH	3	11.083	12.191	0.67	0.80	3.77	237.30	0.000	0.000	45.96	0.00	0.00
13	177.00	Samsung B2/B66A RRH	3	11.083	12.191	0.67	0.80	3.77	224.10	0.000	0.000	45.96	0.00	0.00
14	177.00	Samsung MT6413 77A	3	11.083	12.191	0.55	0.80	6.28	171.96	0.000	0.000	76.51	0.00	0.00
15	177.00	Amphenol	3	11.083	12.191	0.70	0.80	10.12	45.00	0.000	0.000	123.33	0.00	0.00
16	177.00	Commscope	6	11.083	12.191	0.66	0.80	32.07	261.90	0.000	0.000	390.98	0.00	0.00
17	167.00	TA08025-B605	3	10.949	12.044	0.50	0.75	2.95	225.00	0.000	0.000	35.59	0.00	0.00
18	167.00	TA08025-B604	3	10.949	12.044	0.50	0.75	2.95	191.70	0.000	0.000	35.59	0.00	0.00
19	167.00	RDIDC-9181-OF-48	1	10.949	12.044	0.75	0.75	1.51	21.90	0.000	0.000	18.16	0.00	0.00
20	167.00	MC-PK8-DSH w/ Mount	1	10.949	12.044	0.67	0.67	22.94	1200.00	0.000	0.000	276.29	0.00	0.00
21	167.00	Commscope	3	10.949	12.044	0.55	0.75	20.26	212.40	0.000	0.000	244.05	0.00	0.00
22	144.00	DS2C00-F-36-B	1	10.710	11.781	1.00	1.00	5.78	40.00	0.000	6.300	68.09	0.00	429.00
23	137.00	Ring Mount	1	10.505	11.555	1.00	1.00	2.50	220.00	0.000	0.000	28.89	0.00	0.00
24	137.00	Side Arm (SV197-48)	1	10.505	11.555	1.00	1.00	4.50	120.00	0.000	0.000	52.00	0.00	0.00
<b>Totals:</b>									<b>9,160.96</b>			<b>3,970.67</b>		



## Total Applied Force Summary

<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II

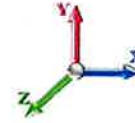


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**Load Case:** 1.0D + 1.0W 60 mph Wind

**Dead Load Factor** 1.00

**Wind Load Factor** 1.00



**Iterations** 25

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		134.67	1648.58	0.00	0.00
10.00		132.25	1619.32	0.00	0.00
15.00		131.42	1590.06	0.00	0.00
20.00		136.56	1560.80	0.00	0.00
25.00		140.12	1531.55	0.00	0.00
30.00		142.58	1502.29	0.00	0.00
35.00		144.23	1473.03	0.00	0.00
40.00		145.24	1443.77	0.00	0.00
45.00		145.73	1414.51	0.00	0.00
46.00		28.91	279.39	0.00	0.00
50.00		118.41	2064.17	0.00	0.00
53.25		95.97	1651.28	0.00	0.00
55.00		51.46	421.80	0.00	0.00
60.00		147.51	1187.86	0.00	0.00
65.00		146.66	1162.26	0.00	0.00
70.00		145.57	1136.66	0.00	0.00
75.00		144.26	1111.05	0.00	0.00
80.00		142.75	1085.45	0.00	0.00
85.00		141.06	1059.85	0.00	0.00
90.00		139.21	1034.25	0.00	0.00
93.75		102.95	758.88	0.00	0.00
95.00		34.58	459.68	0.00	0.00
99.50		123.84	1630.24	0.00	0.00
100.00		13.59	85.47	0.00	0.00
105.00		135.31	842.63	0.00	0.00
110.00		132.94	820.69	0.00	0.00
115.00		130.45	798.74	0.00	0.00
120.00		127.85	776.80	0.00	0.00
125.00		125.15	754.85	0.00	0.00
130.00		122.35	732.91	0.00	0.00
135.00		119.47	710.97	0.00	0.00
137.00	(2) attachments	127.74	618.24	0.00	0.00
137.17		3.88	23.03	0.00	0.00
140.00		66.55	636.44	0.00	0.00
142.50		57.90	551.81	0.00	0.00
144.00	(1) attachments	102.44	179.15	0.00	429.00
145.00		22.74	91.00	0.00	0.00
150.00		112.12	446.20	0.00	0.00
155.00		108.92	431.57	0.00	0.00
160.00		105.65	416.94	0.00	0.00
165.00		102.31	402.31	0.00	0.00
167.00	(11) attachments	649.73	2007.83	0.00	0.00
170.00		58.86	224.88	0.00	0.00
175.00		95.44	363.09	0.00	0.00
177.00	(21) attachments	1208.28	2689.40	0.00	0.00
180.00		54.66	200.72	0.00	0.00

## Total Applied Force Summary

<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	Page: 51
<b>Struct Class:</b> II		



185.00	(56) attachments	2129.18	4704.53	0.00	0.00
189.00		68.00	243.01	0.00	0.00
	<b>Totals:</b>	<b>8,797.46</b>	<b>48,579.95</b>	<b>0.00</b>	<b>429.00</b>

## Linear Appurtenance Segment Forces (Factored)

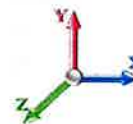
<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



**Load Case:** 1.0D + 1.0W 60 mph Wind

**Dead Load Factor** 1.00

**Wind Load Factor** 1.00



**Iterations** 25

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.045	0.000	6.592	0.00	1.37
5.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.045	0.000	6.592	0.00	5.20
5.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.045	0.000	6.592	0.00	9.96
10.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.046	0.000	6.592	0.00	1.37
10.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.046	0.000	6.592	0.00	5.20
10.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.046	0.000	6.592	0.00	9.96
15.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.047	0.000	6.674	0.00	1.37
15.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.047	0.000	6.674	0.00	5.20
15.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.047	0.000	6.674	0.00	9.96
20.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.048	0.000	7.067	0.00	1.37
20.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.048	0.000	7.067	0.00	5.20
20.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.048	0.000	7.067	0.00	9.96
25.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.049	0.000	7.392	0.00	1.37
25.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.049	0.000	7.392	0.00	5.20
25.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.049	0.000	7.392	0.00	9.96
30.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.050	0.000	7.671	0.00	1.37
30.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.050	0.000	7.671	0.00	5.20
30.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.050	0.000	7.671	0.00	9.96
35.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.051	0.000	7.916	0.00	1.37
35.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.051	0.000	7.916	0.00	5.20
35.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.051	0.000	7.916	0.00	9.96
40.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.052	0.000	8.136	0.00	1.37
40.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.052	0.000	8.136	0.00	5.20
40.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.052	0.000	8.136	0.00	9.96
45.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.053	0.000	8.336	0.00	1.37
45.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.053	0.000	8.336	0.00	5.20
45.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.053	0.000	8.336	0.00	9.96
46.00	Safety Cable	Yes	1.00	0.000	0.38	0.03	0.00	0.053	0.000	8.373	0.00	0.27
46.00	Step bolts (ladder)	Yes	1.00	0.000	0.63	0.05	0.00	0.053	0.000	8.373	0.00	1.04
46.00	1.75" Hybrid	Yes	1.00	0.000	1.75	0.15	0.00	0.053	0.000	8.373	0.00	1.99
50.00	Safety Cable	Yes	4.00	0.000	0.38	0.13	0.00	0.054	0.000	8.519	0.00	1.09
50.00	Step bolts (ladder)	Yes	4.00	0.000	0.63	0.21	0.00	0.054	0.000	8.519	0.00	4.16
50.00	1.75" Hybrid	Yes	4.00	0.000	1.75	0.58	0.00	0.054	0.000	8.519	0.00	7.96
53.25	Safety Cable	Yes	3.25	0.000	0.38	0.10	0.00	0.055	0.000	8.630	0.00	0.89
53.25	Step bolts (ladder)	Yes	3.25	0.000	0.63	0.17	0.00	0.055	0.000	8.630	0.00	3.38
53.25	1.75" Hybrid	Yes	3.25	0.000	1.75	0.47	0.00	0.055	0.000	8.630	0.00	6.47
55.00	Safety Cable	Yes	1.75	0.000	0.38	0.06	0.00	0.055	0.000	8.688	0.00	0.48
55.00	Step bolts (ladder)	Yes	1.75	0.000	0.63	0.09	0.00	0.055	0.000	8.688	0.00	1.82
55.00	1.75" Hybrid	Yes	1.75	0.000	1.75	0.26	0.00	0.055	0.000	8.688	0.00	3.48
60.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.055	0.000	8.846	0.00	1.37
60.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.055	0.000	8.846	0.00	5.20
60.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.055	0.000	8.846	0.00	9.96
65.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.057	0.000	8.994	0.00	1.37
65.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.057	0.000	8.994	0.00	5.20
65.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.057	0.000	8.994	0.00	9.96
70.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.058	0.000	9.133	0.00	1.37
70.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.058	0.000	9.133	0.00	5.20

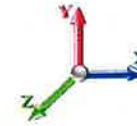
## Linear Appurtenance Segment Forces (Factored)

<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	<b>12/19/2023</b>
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



**Load Case:** 1.0D + 1.0W 60 mph Wind

**Dead Load Factor** 1.00  
**Wind Load Factor** 1.00



**Iterations** 25

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
70.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.058	0.000	9.133	0.00	9.96
75.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.059	0.000	9.265	0.00	1.37
75.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.059	0.000	9.265	0.00	5.20
75.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.059	0.000	9.265	0.00	9.96
80.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.061	0.000	9.390	0.00	1.37
80.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.061	0.000	9.390	0.00	5.20
80.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.061	0.000	9.390	0.00	9.96
85.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.062	0.000	9.509	0.00	1.37
85.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.062	0.000	9.509	0.00	5.20
85.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.062	0.000	9.509	0.00	9.96
90.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.064	0.000	9.623	0.00	1.37
90.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.064	0.000	9.623	0.00	5.20
90.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.064	0.000	9.623	0.00	9.96
93.75	Safety Cable	Yes	3.75	0.000	0.38	0.12	0.00	0.065	0.000	9.705	0.00	1.02
93.75	Step bolts (ladder)	Yes	3.75	0.000	0.63	0.20	0.00	0.065	0.000	9.705	0.00	3.90
93.75	1.75" Hybrid	Yes	3.75	0.000	1.75	0.55	0.00	0.065	0.000	9.705	0.00	7.47
95.00	Safety Cable	Yes	1.25	0.000	0.38	0.04	0.00	0.066	0.000	9.732	0.00	0.34
95.00	Step bolts (ladder)	Yes	1.25	0.000	0.63	0.07	0.00	0.066	0.000	9.732	0.00	1.30
95.00	1.75" Hybrid	Yes	1.25	0.000	1.75	0.18	0.00	0.066	0.000	9.732	0.00	2.49
99.50	Safety Cable	Yes	4.50	0.000	0.38	0.14	0.00	0.067	0.000	9.826	0.00	1.23
99.50	Step bolts (ladder)	Yes	4.50	0.000	0.63	0.24	0.00	0.067	0.000	9.826	0.00	4.68
99.50	1.75" Hybrid	Yes	4.50	0.000	1.75	0.66	0.00	0.067	0.000	9.826	0.00	8.96
100.00	Safety Cable	Yes	0.50	0.000	0.38	0.02	0.00	0.067	0.000	9.837	0.00	0.14
100.00	Step bolts (ladder)	Yes	0.50	0.000	0.63	0.03	0.00	0.067	0.000	9.837	0.00	0.52
100.00	1.75" Hybrid	Yes	0.50	0.000	1.75	0.07	0.00	0.067	0.000	9.837	0.00	1.00
105.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.068	0.000	9.937	0.00	1.37
105.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.068	0.000	9.937	0.00	5.20
105.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.068	0.000	9.937	0.00	9.96
110.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.070	0.000	10.034	0.00	1.37
110.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.070	0.000	10.034	0.00	5.20
110.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.070	0.000	10.034	0.00	9.96
115.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.072	0.000	10.127	0.00	1.37
115.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.072	0.000	10.127	0.00	5.20
115.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.072	0.000	10.127	0.00	9.96
120.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.074	0.000	10.218	0.00	1.37
120.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.074	0.000	10.218	0.00	5.20
120.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.074	0.000	10.218	0.00	9.96
125.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.076	0.000	10.305	0.00	1.37
125.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.076	0.000	10.305	0.00	5.20
125.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.076	0.000	10.305	0.00	9.96
130.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.078	0.000	10.390	0.00	1.37
130.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.078	0.000	10.390	0.00	5.20
130.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.078	0.000	10.390	0.00	9.96
135.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.081	0.000	10.472	0.00	1.37
135.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.081	0.000	10.472	0.00	5.20
135.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.081	0.000	10.472	0.00	9.96
137.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.083	0.000	10.505	0.00	0.55

## Linear Appurtenance Segment Forces (Factored)

<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II

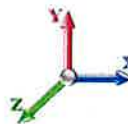


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**Load Case:** 1.0D + 1.0W 60 mph Wind

**Dead Load Factor** 1.00

**Wind Load Factor** 1.00



**Iterations** 25

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
137.00	Step bolts (ladder)	Yes	2.00	0.000	0.63	0.10	0.00	0.083	0.000	10.505	0.00	2.08
137.00	1.75" Hybrid	Yes	2.00	0.000	1.75	0.29	0.00	0.083	0.000	10.505	0.00	3.98
137.17	Safety Cable	Yes	0.17	0.000	0.38	0.01	0.00	0.083	0.000	10.507	0.00	0.05
137.17	Step bolts (ladder)	Yes	0.17	0.000	0.63	0.01	0.00	0.083	0.000	10.507	0.00	0.17
137.17	1.75" Hybrid	Yes	0.17	0.000	1.75	0.02	0.00	0.083	0.000	10.507	0.00	0.33
140.00	Safety Cable	Yes	2.83	0.000	0.38	0.09	0.00	0.084	0.000	10.552	0.00	0.77
140.00	Step bolts (ladder)	Yes	2.83	0.000	0.63	0.15	0.00	0.084	0.000	10.552	0.00	2.95
140.00	1.75" Hybrid	Yes	2.83	0.000	1.75	0.41	0.00	0.084	0.000	10.552	0.00	5.64
142.50	Safety Cable	Yes	2.50	0.000	0.38	0.08	0.00	0.086	0.000	10.591	0.00	0.68
142.50	Step bolts (ladder)	Yes	2.50	0.000	0.63	0.13	0.00	0.086	0.000	10.591	0.00	2.60
142.50	1.75" Hybrid	Yes	2.50	0.000	1.75	0.36	0.00	0.086	0.000	10.591	0.00	4.98
144.00	Safety Cable	Yes	1.50	0.000	0.38	0.05	0.00	0.086	0.000	10.615	0.00	0.41
144.00	Step bolts (ladder)	Yes	1.50	0.000	0.63	0.08	0.00	0.086	0.000	10.615	0.00	1.56
144.00	1.75" Hybrid	Yes	1.50	0.000	1.75	0.22	0.00	0.086	0.000	10.615	0.00	2.99
145.00	Safety Cable	Yes	1.00	0.000	0.38	0.03	0.00	0.086	0.000	10.630	0.00	0.27
145.00	Step bolts (ladder)	Yes	1.00	0.000	0.63	0.05	0.00	0.086	0.000	10.630	0.00	1.04
145.00	1.75" Hybrid	Yes	1.00	0.000	1.75	0.15	0.00	0.086	0.000	10.630	0.00	1.99
150.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.088	0.000	10.706	0.00	1.37
150.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.088	0.000	10.706	0.00	5.20
150.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.088	0.000	10.706	0.00	9.96
155.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.091	0.000	10.779	0.00	1.37
155.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.091	0.000	10.779	0.00	5.20
155.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.091	0.000	10.779	0.00	9.96
160.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.095	0.000	10.851	0.00	1.37
160.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.095	0.000	10.851	0.00	5.20
160.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.095	0.000	10.851	0.00	9.96
165.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.099	0.000	10.921	0.00	1.37
165.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.099	0.000	10.921	0.00	5.20
165.00	1.75" Hybrid	Yes	5.00	0.000	1.75	0.73	0.00	0.099	0.000	10.921	0.00	9.96
167.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.101	1.004	10.949	0.00	0.55
167.00	Step bolts (ladder)	Yes	2.00	0.000	0.63	0.10	0.00	0.101	1.004	10.949	0.00	2.08
167.00	1.75" Hybrid	Yes	2.00	0.000	1.75	0.29	0.00	0.101	1.004	10.949	0.00	3.98
170.00	Safety Cable	Yes	3.00	0.000	0.38	0.10	0.00	0.038	0.000	10.990	0.00	0.82
170.00	Step bolts (ladder)	Yes	3.00	0.000	0.63	0.16	0.00	0.038	0.000	10.990	0.00	3.12
175.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.039	0.000	11.057	0.00	1.37
175.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.039	0.000	11.057	0.00	5.20
177.00	Safety Cable	Yes	2.00	0.000	0.38	0.06	0.00	0.040	0.000	11.083	0.00	0.55
177.00	Step bolts (ladder)	Yes	2.00	0.000	0.63	0.10	0.00	0.040	0.000	11.083	0.00	2.08
180.00	Safety Cable	Yes	3.00	0.000	0.38	0.10	0.00	0.041	0.000	11.122	0.00	0.82
180.00	Step bolts (ladder)	Yes	3.00	0.000	0.63	0.16	0.00	0.041	0.000	11.122	0.00	3.12
185.00	Safety Cable	Yes	5.00	0.000	0.38	0.16	0.00	0.043	0.000	11.186	0.00	1.37
185.00	Step bolts (ladder)	Yes	5.00	0.000	0.63	0.26	0.00	0.043	0.000	11.186	0.00	5.20
189.00	Safety Cable	Yes	4.00	0.000	0.38	0.13	0.00	0.045	0.000	11.236	0.00	1.09
189.00	Step bolts (ladder)	Yes	4.00	0.000	0.63	0.21	0.00	0.045	0.000	11.236	0.00	4.16
<b>Totals:</b>											<b>0.0</b>	<b>580.7</b>



## Calculated Forces

**Structure:** CT11796-S  
**Site Name:** North Stonington 3  
**Height:** 189.00 (ft)  
**Base Elev:** 1.000 (ft)  
**Gh:** 1.1

**Code:** TIA-222-H  
**Exposure:** C  
**Crest Height:** 0.00  
**Site Class:** D - Stiff Soil  
**Struct Class:** II

12/19/2023

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**Load Case:** 1.0D + 1.0W 60 mph Wind

**Dead Load Factor** 1.00  
**Wind Load Factor** 1.00



**Iterations** 25

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	-48.58	-8.81	0.00	-1190.0	0.00	1190.03	6694.10	1675.79	8365.91	8283.84	0.00	0.000	0.000	0.151
5.00	-46.92	-8.71	0.00	-1145.9	0.00	1145.96	6611.47	1645.60	8067.27	8033.01	0.02	-0.038	0.000	0.150
10.00	-45.30	-8.61	0.00	-1102.4	0.00	1102.41	6527.45	1615.42	7774.06	7784.25	0.08	-0.077	0.000	0.149
15.00	-43.70	-8.50	0.00	-1059.3	0.00	1059.38	6442.03	1585.24	7486.28	7537.62	0.18	-0.116	0.000	0.147
20.00	-42.14	-8.39	0.00	-1016.8	0.00	1016.87	6355.23	1555.06	7203.93	7293.25	0.33	-0.156	0.000	0.146
25.00	-40.60	-8.28	0.00	-974.91	0.00	974.91	6267.03	1524.88	6927.01	7051.20	0.51	-0.197	0.000	0.145
30.00	-39.09	-8.16	0.00	-933.53	0.00	933.53	6177.44	1494.69	6655.51	6811.59	0.74	-0.238	0.000	0.143
35.00	-37.61	-8.03	0.00	-892.75	0.00	892.75	6086.46	1464.51	6389.44	6574.50	1.01	-0.280	0.000	0.142
40.00	-36.16	-7.91	0.00	-852.59	0.00	852.59	5994.09	1434.33	6128.80	6340.03	1.33	-0.322	0.000	0.141
45.00	-34.75	-7.77	0.00	-813.05	0.00	813.05	5900.32	1404.15	5873.58	6108.27	1.69	-0.366	0.000	0.139
46.00	-34.46	-7.75	0.00	-805.29	0.00	805.29	5881.40	1398.11	5823.19	6062.25	1.76	-0.374	0.000	0.139
50.00	-32.40	-7.64	0.00	-774.28	0.00	774.28	5805.17	1373.97	5623.79	5879.32	2.09	-0.410	0.000	0.137
53.25	-30.74	-7.54	0.00	-749.46	0.00	749.46	4915.61	1207.90	4967.43	5008.40	2.38	-0.439	0.000	0.156
55.00	-30.32	-7.50	0.00	-736.26	0.00	736.26	4889.04	1198.66	4891.70	4942.89	2.55	-0.455	0.000	0.155
60.00	-29.12	-7.37	0.00	-698.75	0.00	698.75	4812.21	1172.25	4678.52	4757.07	3.05	-0.504	0.000	0.153
65.00	-27.96	-7.24	0.00	-661.89	0.00	661.89	4733.98	1145.84	4470.10	4573.36	3.60	-0.554	0.000	0.151
70.00	-26.82	-7.10	0.00	-625.70	0.00	625.70	4654.36	1119.43	4266.42	4391.86	4.21	-0.604	0.000	0.148
75.00	-25.70	-6.97	0.00	-590.18	0.00	590.18	4573.36	1093.02	4067.49	4212.65	4.87	-0.655	0.000	0.146
80.00	-24.61	-6.84	0.00	-555.32	0.00	555.32	4490.96	1066.61	3873.31	4035.83	5.58	-0.706	0.000	0.143
85.00	-23.55	-6.70	0.00	-521.13	0.00	521.13	4403.53	1040.20	3683.88	3858.32	6.35	-0.758	0.000	0.140
90.00	-22.51	-6.57	0.00	-487.61	0.00	487.61	4291.74	1013.80	3499.20	3663.93	7.17	-0.811	0.000	0.138
93.75	-21.75	-6.47	0.00	-462.98	0.00	462.98	4207.89	993.99	3363.81	3521.43	7.83	-0.851	0.000	0.137
95.00	-21.29	-6.44	0.00	-454.89	0.00	454.89	4179.94	987.39	3319.27	3474.56	8.05	-0.865	0.000	0.136
99.50	-19.66	-6.30	0.00	-425.93	0.00	425.93	3481.28	842.93	2822.27	2886.47	8.89	-0.913	0.000	0.153
100.00	-19.57	-6.29	0.00	-422.78	0.00	422.78	3474.51	840.67	2807.13	2873.05	8.99	-0.919	0.000	0.153
105.00	-18.72	-6.16	0.00	-391.32	0.00	391.32	3406.10	818.03	2657.99	2739.94	9.98	-0.978	0.000	0.148
110.00	-17.90	-6.03	0.00	-360.51	0.00	360.51	3336.29	795.39	2512.93	2608.82	11.04	-1.037	0.000	0.144
115.00	-17.09	-5.91	0.00	-330.35	0.00	330.35	3265.09	772.76	2371.93	2479.78	12.15	-1.096	0.000	0.139
120.00	-16.31	-5.78	0.00	-300.82	0.00	300.82	3175.51	750.12	2235.00	2340.39	13.33	-1.155	0.000	0.134
125.00	-15.55	-5.65	0.00	-271.92	0.00	271.92	3079.69	727.49	2102.15	2200.56	14.57	-1.214	0.000	0.129
130.00	-14.82	-5.53	0.00	-243.65	0.00	243.65	2983.86	704.85	1973.36	2065.04	15.88	-1.271	0.000	0.123
135.00	-14.11	-5.41	0.00	-215.99	0.00	215.99	2888.03	682.21	1848.65	1933.83	17.24	-1.328	0.000	0.117
137.00	-13.49	-5.27	0.00	-205.18	0.00	205.18	2849.70	673.16	1799.90	1882.55	17.80	-1.351	0.000	0.114
137.17	-13.47	-5.27	0.00	-204.30	0.00	204.30	2846.51	672.40	1795.87	1878.31	17.85	-1.353	0.000	0.114
140.00	-12.83	-5.19	0.00	-189.38	0.00	189.38	2792.21	659.58	1728.01	1806.92	18.66	-1.384	0.000	0.109
142.50	-12.28	-5.12	0.00	-176.41	0.00	176.41	1731.59	440.88	1158.08	1127.95	19.39	-1.412	0.000	0.164
144.00	-12.10	-5.02	0.00	-168.29	0.00	168.29	1719.84	436.35	1134.42	1108.70	19.84	-1.428	0.000	0.159
145.00	-12.01	-5.00	0.00	-163.27	0.00	163.27	1711.94	433.33	1118.78	1095.92	20.14	-1.443	0.000	0.156
150.00	-11.56	-4.89	0.00	-138.25	0.00	138.25	1671.60	418.24	1042.21	1032.53	21.69	-1.514	0.000	0.141
155.00	-11.12	-4.79	0.00	-113.78	0.00	113.78	1629.88	403.15	968.36	970.13	23.31	-1.580	0.000	0.124
160.00	-10.70	-4.68	0.00	-89.84	0.00	89.84	1586.75	388.06	897.22	908.81	25.00	-1.640	0.000	0.106
165.00	-10.30	-4.57	0.00	-66.45	0.00	66.45	1542.24	372.97	828.79	848.66	26.74	-1.691	0.000	0.085
167.00	-8.31	-3.87	0.00	-57.30	0.00	57.30	1524.05	366.93	802.18	824.95	27.46	-1.709	0.000	0.075
170.00	-8.09	-3.80	0.00	-45.71	0.00	45.71	1496.34	357.88	763.08	789.77	28.54	-1.733	0.000	0.063
175.00	-7.73	-3.70	0.00	-26.68	0.00	26.68	1449.04	342.78	700.08	732.25	30.37	-1.764	0.000	0.042
177.00	-5.08	-2.41	0.00	-19.28	0.00	19.28	1425.57	336.75	675.64	707.57	31.11	-1.772	0.000	0.031
180.00	-4.88	-2.35	0.00	-12.05	0.00	12.05	1387.24	327.69	639.80	669.85	32.23	-1.782	0.000	0.022
185.00	-0.24	-0.08	0.00	-0.30	0.00	0.30	1323.35	312.60	582.23	609.26	34.10	-1.789	0.000	0.001



### Calculated Forces

<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II
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189.00	0.00	-0.07	0.00	0.00	0.00	0.00	0.00	1272.25	300.53	538.12	562.86	35.60	-1.789	0.000	0.000
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## Final Analysis Summary

<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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### Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
1.2D + 1.0W 126 mph Wind	43.5	0.00	58.22	0.00	0.00	5897.29
0.9D + 1.0W 126 mph Wind	43.4	0.00	43.65	0.00	0.00	5824.43
1.2D + 1.0Di + 1.0Wi 50 mph Wind	10.5	0.00	79.62	0.00	0.00	1407.69
1.2D + 1.0Ev + 1.0Eh	0.8	0.00	60.26	0.00	0.00	142.55
0.9D + 1.0Ev + 1.0Eh	0.8	0.00	45.66	0.00	0.00	140.73
1.0D + 1.0W 60 mph Wind	8.8	0.00	48.58	0.00	0.00	1190.03

### Max Stresses

Load Case	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Elev (ft)	Stress Ratio
1.2D + 1.0W 126 mph Wind	-11.86	-25.39	0.00	-873.25	0.00	-873.25	1731.59	440.88	1158.08	1127.95	142.50	0.784
0.9D + 1.0W 126 mph Wind	-8.22	-24.92	0.00	-855.63	0.00	-855.63	1731.59	440.88	1158.08	1127.95	142.50	0.767
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-26.20	-5.94	0.00	-200.16	0.00	-200.16	1731.59	440.88	1158.08	1127.95	142.50	0.193
1.2D + 1.0Ev + 1.0Eh	-15.38	-0.74	0.00	-28.32	0.00	-28.32	1731.59	440.88	1158.08	1127.95	142.50	0.034
0.9D + 1.0Ev + 1.0Eh	-11.65	-0.72	0.00	-27.89	0.00	-27.89	1731.59	440.88	1158.08	1127.95	142.50	0.031
1.0D + 1.0W 60 mph Wind	-12.28	-5.12	0.00	-176.41	0.00	-176.41	1731.59	440.88	1158.08	1127.95	142.50	0.164


## Base Plate Summary

<b>Structure:</b> CT11796-S	<b>Code:</b> TIA-222-H	12/19/2023
<b>Site Name:</b> North Stonington 3	<b>Exposure:</b> C	
<b>Height:</b> 189.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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Reactions	Base Plate	Anchor Bolts
Original Design	<b>Yield (ksi):</b> 50.00	<b>Bolt Circle:</b> 67.50
<b>Moment (kip-ft):</b> 7779.00	<b>Width (in):</b> 69.75	<b>Number Bolts:</b> 24.00
<b>Axial (kip):</b> 78.70	<b>Style:</b> Clipped	<b>Bolt Type:</b> 2.25" 18J
<b>Shear (kip):</b> 60.40	<b>Polygon Sides:</b> 4.00	<b>Bolt Diameter (in):</b> 2.25
Analysis (1.2D + 1.0W)	<b>Clip Length (in):</b> 15.00	<b>Yield (ksi):</b> 75.00
<b>Moment (kip-ft):</b> 5897.29	<b>Effective Len (in):</b> 7.80	<b>Ultimate (ksi):</b> 100.00
<b>Axial (kip):</b> 58.22	<b>Moment (kip-in):</b> 605.00	<b>Arrangement:</b> Clustered
<b>Shear (kip):</b> 43.46	<b>Allow Stress (ksi):</b> 67.50	<b>Cluster Dist (in):</b> 6.00
	<b>Applied Stress (ksi):</b> 51.98	<b>Start Angle (deg):</b> 45.00
	<b>Stress Ratio:</b> 0.77	<b>Compression</b>
		<b>Force (kip):</b> 177.16
		<b>Allowable (kip):</b> 268.39
		<b>Ratio:</b> 0.66
		<b>Tension</b>
		<b>Force (kip):</b> 172.31
		<b>Allowable (kip):</b> 243.75
		<b>Ratio:</b> 0.71

	<b>Monopole Mat Foundation Design</b>		Date	
			12/18/2023	
	Customer Name:	Verizon	TIA Standard:	TIA-222-H
	Site Name:		Structure Height (Ft.):	190
	Site Number:	CT11796-S	Engineer Name:	SBA Engineer
Engr. Number:		Engineer Login ID:		

**Foundation Info Obtained from:**

**Structure Type:**

**Analysis or Design?**

**Base Reactions (Factored):**

Axial Load (Kips):	58.2	Shear Force (Kips):	43.5
Uplift Force (Kips):	0.0	Moment (Kips-ft):	5897.3

**Foundation Geometries:**

		Mod's required -Yes/No ?:	No
Diameter of Pier (ft.):	8.0	Depth of Base BG (ft.):	6.0
Pier Height A. G. (ft.):	0.50	Thickness of Pad (ft.):	2.00
Length of Pad (ft.):	29	Width of Pad (ft.):	29
Final Length of pad (ft)	29.0	Final width of pad (ft):	29.0

**Material Properties and Rebar Info:**

Concrete Strength (psi):	4000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	60	
Vertical Rebar Size #:	10	Tie / Stirrup Size #:	5	
Qty. of Vertical Rebars:	40	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):	57	Qty. of Rebar in Pad (W):	57	
Rebar at the top of the concrete pad:				
Qty. of Rebar in Pad (L):	57	Qty. of Rebar in Pad (W):	57	

**Soil Design Parameters:**

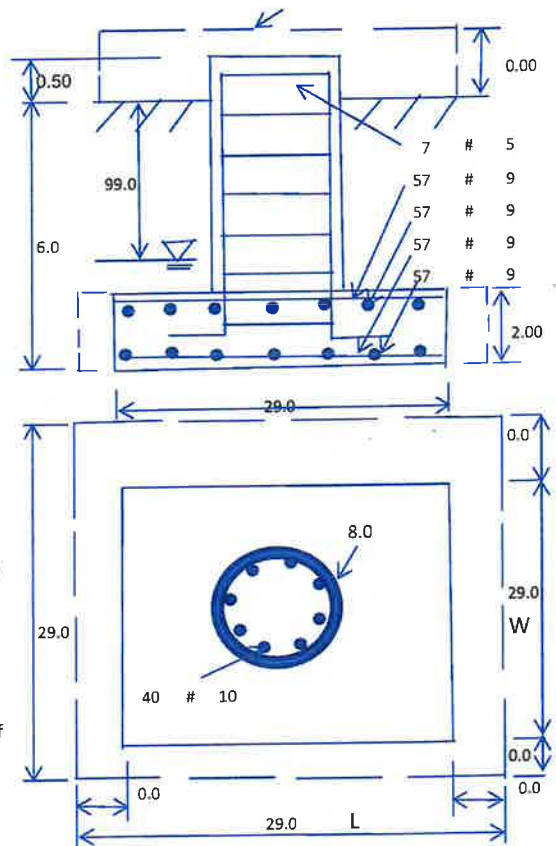
Soil Unit Weight (pcf):	123.0	Soil Buoyant Weight:	60.6	pcf	
Water Table B.G.S. (ft):	99.0	Unit Weight of Water:	62.4	pcf	Angle from Top of Pad: 30
Ultimate Bearing Pressure (psf):	34700	Ultimate Skin Friction:	0	psf	Angle from Bottm of Pad: 25
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	No		Angle from Bottm of Pad: 25
Consider soil hor. resist. for OTM.:	No	Reduction factor on the maximum soil bearing pressure:	1.00		

**Foundation Analysis and Design:**

Uplift Strength Reduction Factor:	0.75	Compression Strength Reduction Factor:	0.75
Total Dry Soil Volume (cu. Ft.):	3162.94	Total Dry Soil Weight (Kips):	389.04
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	389.04	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	1908.19	Total Dry Concrete Weight (Kips):	286.23
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	286.23	Total Vertical Load on Base (Kips):	733.49

**Check Soil Capacities:**

Calculated Maxium Net Soil Pressure under the base (psf):	2759	<	Allowable Factored Soil Bearing (psf):	26025	0.11	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	9656.5	>	Design Factored Momont (kips-ft):	6180	0.64	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	1.56	OK!				



**Check the capacities of Reinforcing Concrete:**

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

**(1) Concrete Pier:**

Vertical Steel Rebar Area (sq. in./each):	1.27	Tie / Stirrup Area (sq. in./each):	0.31		
Calculated Moment Capacity (Mn,Kips-Ft):	9673.7	>	Design Factored Moment (Mu, Kips-Ft)	6093.0	0.63 OK!
Calculated Shear Capacity (Kips):	924.8	>	Design Factored Shear (Kips):	43.5	0.05 OK!
Calculated Tension Capacity (Tn, Kips):	2743.2	>	Design Factored Tension (Tu Kips):	0.0	0.00 OK!
Calculated Compression Capacity (Pn, Kips):	12707.4	>	Design Factored Axial Load (Pu Kips):	58.2	0.00 OK!
Moment & Axial Strength Combination:	0.63	OK!	Check Tie Spacing (Design/Required):	1	OK!
Pier Reinforcement Ratio:	0.007		Reinforcement Ratio is satisfied per ACI		

**(2) Concrete Pad:**

One-Way Design Shear Capacity (L-Direction, Kips):	674.7	>	One-Way Factored Shear (L-D, Kips):	346.7	0.51 OK!
One-Way Design Shear Capacity (W-Direction, Kips):	674.7	>	One-Way Factored Shear (W-D., Kips)	346.7	0.51 OK!
One-Way Design Shear Capacity (Corner-Corner, Kips):	688.8	>	One-Way Factored Shear (C-C, Kips):	354.0	0.51 OK!
Lower Steel Pad Reinforcement Ratio (L-Direct. ):	0.0080	OK!	Lower Steel Pad Reinf. Ratio (W-Direc	0.0080	
Lower Steel Pad Moment Capacity (L-Direction, Kips-ft):	4871.5	>	Moment at Bottom ( L-Dir. K-Ft):	1967.8	0.40 OK!
Lower Steel Pad Moment Capacity (W-Direction, Kips-ft):	4871.5	>	Moment at Bottom ( W-Dir. K-Ft):	1967.8	0.40 OK!
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	6762.3	>	Moment at Bottom ( C-C Dir. K-Ft):	2782.9	0.41 OK!
Upper Steel Pad Reinforcement Ratio (L-Direct. ):	0.0080	OK!	Upper Steel Reinf. Ratio (W-Dir. ):	0.0080	
Upper Steel Pad Moment Capacity (L-Direc. Kips-ft):	4871.5	>	Moment at the top (L-Dir K-Ft):	972.4	0.20 OK!
Upper Steel Pad Moment Capacity (W-Direc. Kips-ft):	4871.5	>	Moment at the top (W-Dir K-Ft):	972.4	0.20 OK!
Upper Steel Pad Moment Capacity (Corner-Corner, K-ft):	6762.3	>	Moment at the top (C-C Dir. K-Ft):	911.8	0.13 OK!

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

Moment transferred by punching shear:	2358.9	k-ft.	Max. factored shear stress $v_{u,CP}$ :	5.1	Psi
Max. factored shear stress $v_{u,AB}$ :	18.4	Psi	Factored shear Strength $\phi v_n$ :	189.7	Psi
Max. factored shear stress $v_u$ :	18.4	Psi	Check Usage of Punching Shear Capacity:	0.10	OK!

**(4) Check Bending Capacity of the Pad Within the Effective Slab Width:**

Overturning moment to be transferred by flexure:	1769.2	k-ft.	Effective Width for resisting OT moment:	14.0	ft.
Calculated number of Rebar in Effective width:	28		Actual number of Rebar in Effective width:	28	
Steel Pad Moment Capacity ( L-Direc. Kips-ft):	2389.8	k-ft.	Check Usage of the Flexure Capacity:	0.74	OK!



Colliers Engineering & Design, Architecture,  
Landscape Architecture, Surveying, CT P.C.  
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Stamford, CT 06901  
203.324.0800  
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## Antenna Mount Analysis Report and PMI Requirements

Mount ReAnalysis-VZW

SMART Tool Project #: 10215049  
Colliers Engineering & Design Project #: 21777339 (Rev. 1)

December 5, 2023

### Site Information

Site ID: 5000244417-VZW / WYASSUP LAKE CT  
Site Name: WYASSUP LAKE CT  
Carrier Name: Verizon Wireless  
Address: 350B Cossaduck Hill Rd  
North Stonington, Connecticut 06359  
New London County  
Latitude: 41.49923333°  
Longitude: -71.88952222°

### Structure Information

Tower Type: 190-Ft Monopole  
Mount Type: 12.50-Ft Platform

FUZE ID # 16272098

### Analysis Results

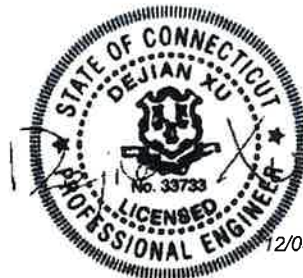
Platform: 94.3% Pass\*

**\*Antennas and equipment to be installed in compliance with PMI Requirements of this mount analysis.**

### \*\*\*Contractor PMI Requirements:

Included at the end of this MA report  
Available & Submitted via portal at <https://pmi.vzwsmart.com>  
For additional questions and support, please reach out to:  
[pmisupport@colliersengineering.com](mailto:pmisupport@colliersengineering.com)

Report Prepared By: Andy Hanes



12/05/2023



### **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
<i>Radio Frequency Data Sheet (RFDS)</i>	<i>Verizon RFDS, Site ID: 1651629, dated November 10, 2023</i>
<i>Mount Mapping Report</i>	<i>RKS Design &amp; Engineering, LLC, Site ID: SBA: CT11796, dated March 23, 2021</i>

### **Analysis Criteria:**

Codes and Standards:	ANSI/TIA-222-H 2022 Connecticut State Building Code (CSBC), Effective October 1, 2022
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), $V_{ULT}$ : 130 mph Ice Wind Speed (3-sec. Gust): 50 mph Design Ice Thickness: 1.00 in Risk Category: II Exposure Category: B Topographic Category: 1 Topographic Feature Considered: N/A Topographic Method: N/A Ground Elevation Factor, $K_e$ : 0.984
Seismic Parameters:	$S_s$ : 0.186 g $S_1$ : 0.052 g
Maintenance Parameters:	Wind Speed (3-sec. Gust): 30 mph Maintenance Load, $L_v$ : 250 lbs. Maintenance Load, $L_m$ : 500 lbs.
Analysis Software:	RISA-3D (V17)

**Final Loading Configuration:**

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

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
177.00	178.00	6	Commscope	NHH-65B-R2B	Added
		3	Samsung	MT6413-77A	
		3	Samsung	RF4439d-25A	
		3	Samsung	RF4461d-13A	
		3	Amphenol Antel	BXA-171063-12CF-EDIN	Retained
		2	Raycap	RRFDC-3315-PF-48*	

\* Equipment is mounted directly to the Monopole tower. They are not mounted on the platform mounts and are not included in this mount analysis.

The recent mount mapping reported existing OVP units. 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 Colliers Engineering & Design and used in this analysis is current and correct. The existing equipment loading has been applied at locations determined from the supplied documentation. Any deviation from the loading locations specified in this report shall be communicated to Colliers Engineering & Design 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 in accordance with the NSTD-446 Standard, 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. Colliers Engineering & Design 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:
  - o Channel, Solid Round, Angle, Plate      ASTM A36 (Gr. 36)
  - o HSS (Rectangular)                            ASTM 500 (Gr. B-46)
  - o Pipe    ASTM A53 (Gr. B-35)
  - o Threaded Rod                                  F1554 (Gr. 36)
  - o Bolts    ASTM A325

Discrepancies between in-field conditions and the assumptions listed above may render this analysis invalid unless explicitly approved by Colliers Engineering & Design.

**Analysis Results:**

Component	Utilization %	Pass/Fail
Connection Check	37.3 %	Pass
Face Horizontal	16.3 %	Pass
Standoff Horizontal	34.0 %	Pass
Platform Crossmember	13.3 %	Pass
Mount Pipe	37.4 %	Pass
Corner Plate	94.3 %	Pass
Grating Support	14.2 %	Pass
Cross Arm Plate	69.7 %	Pass
Equipment Pipe	1.4 %	Pass

<b>Structure Rating – (Controlling Utilization of all Components)</b>	<b>94.3%</b>
---	--------------

**Mount Connection Envelope Reactions:**

Connection Description	Elev. AGL (Ft)	Node Label	Envelope Wind Reactions				Envelope Wind + Ice Reactions			
			Axial (Lbs)	Lateral (Lbs)	Moment (K-Ft)	Torsion (K-Ft)	Axial (Lbs)	Lateral (Lbs)	Moment (K-Ft)	Torsion (K-Ft)
Mount Connection to Tower	177	N3	1267	1705	3.596	1.830	1988	565	5.339	0.420
Mount Connection to Tower	177	N40B	1255	1681	3.563	1.813	1960	558	5.311	0.415
Mount Connection to Tower	177	N69	1256	1681	3.564	1.815	1961	558	5.312	0.415

Notes:

- Axial loads act along the axis of the tower leg
- Lateral reactions act perpendicular to the tower leg
- Moment loads introduce bending moment to the tower leg
- Torsion loads introduce twisting moment to the tower leg
- Batch solutions by individual load cases are included at the end of this document

**BASELINE mount weight per SBA agreement: 1544 lbs**

**Increase in mount weight due to Verizon loading change per SBA agreement: No Change**

**The weights listed above include 3 sector(s).**

**Mount Steel (EPA)a per ANSI/TIA-222-H Section 2.6.11.2:**

Ice Thickness (In)	Mount Pipes Excluded		Mount Pipes Included	
	Front (EPA)a (Sq. Ft.)	Side (EPA)a (Sq. Ft.)	Front (EPA)a (Sq. Ft.)	Side (EPA)a (Sq. Ft.)
0	17.9	17.9	36.1	36.1
0.5	23.3	23.3	49.2	49.2
1	28.1	28.1	61.7	61.7

**Notes:**

- (EPA)a values listed above may be used in the absence of more precise information
- (EPA)a values in the table above include 3 sector(s).
- Ka factors included in (EPA)a calculations

**Requirements:**

The existing mount is **SUFFICIENT** for the final loading configuration shown in attachment 2 and do not require modifications. Additional requirements are noted below.

Contractor shall inspect climbing facilities and safety climb and ensure they are in good condition. Contractor shall install safety climb wire rope guides in locations where wire rope is contacting the mount or mount-to-tower connection steel. Wire brush clean any observed corrosion and protect with two (2) coats of cold galvanization (Zinga or Zinc Kote). Contractor shall provide photos of wire rope guide installation as part of PMI documents. Contact EOR if additional guidance is required.

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

**Attachments:**

1. **Contractor Required Post Installation Inspection (PMI) Report Deliverables**
2. Antenna Placement Diagrams
3. Mount Photos
4. Mount Mapping Report (for reference only)
5. Analysis Calculations

## Mount Desktop – Post Modification Inspection (PMI) Report Requirements

### Documents & Photos Required from Contractor – Passing Mount Analysis

Passing Mount Analysis requires a PMI due to a modification in loading.

Electronic pdf version of this can be downloaded at <https://pmi.vzwsmart.com>.

For additional questions and support, please reach out to [pmisupport@colliersengineering.com](mailto:pmisupport@colliersengineering.com)

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MDG #: 5000244417

SMART Project #: 10215049

Fuze Project ID: 16272098

**Purpose** – to provide SMART Tool structural vendor 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:**

- If installation will cause damage to the structure, the climbing facility, or safety climb if present or any installed system, SMART Tool vendor to be notified prior to install. Any special photos outside of the standard requirements will be indicated on the drawings.
- Provide “as built mount drawings” showing contractor’s name, contact information, preparer’s signature, and date. Any deviations from the drawings (Proposed modification) shall be shown. NOTE: If loading is different than what is conveyed in the passing mount analysis (MA) contact the SMART Tool vendor immediately.
- Each photo should be time and date stamped
- Photos should be high resolution.
- 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. If there is conflict, contact the SMART Tool engineer for recommendations.
- The PMI can be accessed at the following portal: <https://pmi.vzwsmart.com>

### **Photo Requirements:**

- Photos taken at ground level
  - Photo of Gate Signs showing the tower owner, site name, and number.
  - Overall tower structure after installation.
  - Photos of the mount after installation; if the mounts are at different rad elevations, pictures must be provided for all elevations that equipment was installed.
- Photos taken at Mount Elevation
  - Photos showing the safety climb wire rope above and below the mount prior to installation.
  - Photos showing the climbing facility and safety climb if present.
  - Photos showing each individual sector after installation. Each entire sector shall be in one photo to show the interconnection of members.

- These photos shall also certify that the placement and geometry of the equipment on the mount is as depicted in the antenna placement diagram in this form.
- Photos that show the model number of each antenna and piece of equipment installed per sector.

**Antenna & equipment placement and Geometry Confirmation:**

- The contractor shall certify that the antenna & equipment placement and geometry is in accordance with the sketch and table as included in the mount analysis and noted below.
  - The contractor certifies that the photos support and the equipment on the mount is as depicted on the sketch and table included in this form and with the mount analysis provided.

OR

- The contractor notes that the equipment on the mount is not in accordance with the sketch and has noted the differences below and provided photo documentation of any alterations.

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

**Issue:**

Contractor shall inspect climbing facilities and safety climb and ensure they are in good condition. Contractor shall install safety climb wire rope guides in locations where wire rope is contacting the mount or mount-to-tower connection steel. Wire brush clean any observed corrosion and protect with two (2) coats of cold galvanization (Zinga or Zinc Kote). Contractor shall provide photos of wire rope guide installation as part of PMI documents. Contact EOR if additional guidance is required.

**Response:**

**Special Instruction Confirmation:**

- The contractor has read and acknowledges the above special instructions.
- All hardware listed in the Special Instructions above (if applicable) has been properly installed, and the existing hardware was inspected.
- The material utilized was as specified in the SMART Tool engineering vendor Special Instructions above (if applicable) and included in the material certification folder is a packing list or invoice for these materials.

OR



The material utilized was approved by a SMART Tool engineering vendor as an "equivalent" and this approval is included as part of the contractor submission.

**Comments:**

--

**Contractor certifies that the climbing facility / safety climb was not damaged prior to starting work:**

Yes       No

**Contractor certifies no new damage created during the current installation:**

Yes       No

**Contractor to certify the condition of the safety climb and verify no damage when leaving the site:**

Safety Climb in Good Condition       Safety Climb Damaged

**Certifying Individual:**

Company:	
Employee Name:	
Contact Phone:	
Email:	
Date:	

Structure: 5000244417-VZW - WYASSUP LAKE CT

12/5/2023

Sector: A

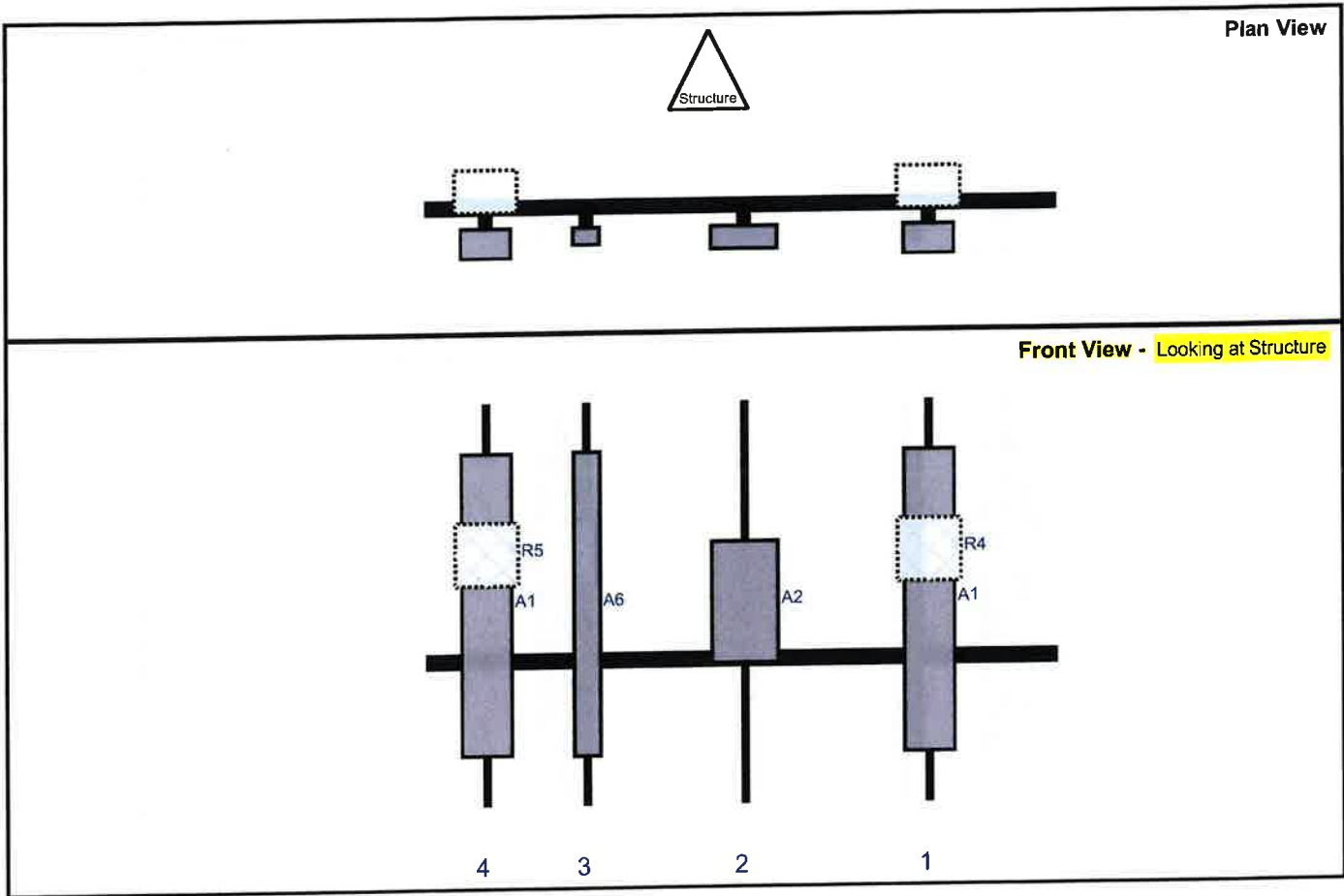
Structure Type: Monopole

10215049



Mount Elev: 177.00

Page: 1



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	NHH-65B-R2B	72	11.9	119.5	1	a	Front	48	0	Added	
R4	RF4439d-25A	15	15	119.5	1	a	Behind	36	0	Added	
A2	MT6413-77A	28.9	15.8	75.75	2	a	Front	48	0	Added	
A6	BXA-171063-12CF-EDIN	72.4	6.1	38.25	3	a	Front	48	0	Retained	03/23/2021
A1	NHH-65B-R2B	72	11.9	14.5	4	a	Front	48	0	Added	
R5	RF4461d-13A	15	15	14.5	4	a	Behind	36	0	Added	

Structure: 5000244417-VZW - WYASSUP LAKE CT

Sector: **B**

12/5/2023

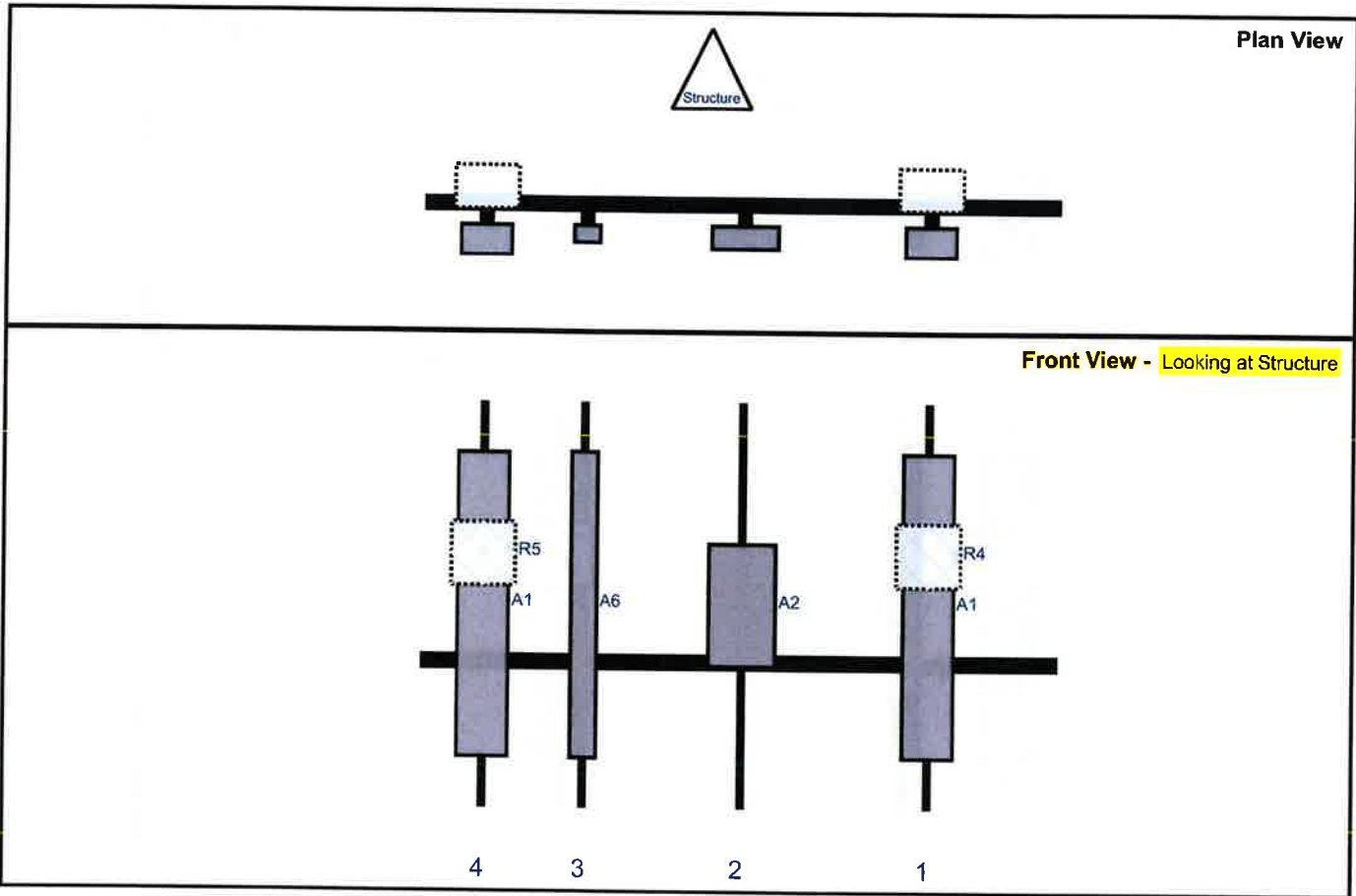
Structure Type: Monopole

10215049



Mount Elev: 177.00

Page: 2



Ref#	Model	Height (in)	Width (in)	H Dist Fm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Fm T.	Ant H Off	Status	Validation
A1	NHH-65B-R2B	72	11.9	119.5	1	a	Front	48	0	Added	
R4	RF4439d-25A	15	15	119.5	1	a	Behind	36	0	Added	
A2	MT6413-77A	28.9	15.8	75.75	2	a	Front	48	0	Added	
A6	BXA-171063-12CF-EDIN	72.4	6.1	38.25	3	a	Front	48	0	Retained	03/23/2021
A1	NHH-65B-R2B	72	11.9	14.5	4	a	Front	48	0	Added	
R5	RF4461d-13A	15	15	14.5	4	a	Behind	36	0	Added	

Structure: 500244417-VZW - WYASSUP LAKE CT

12/5/2023

Sector: C

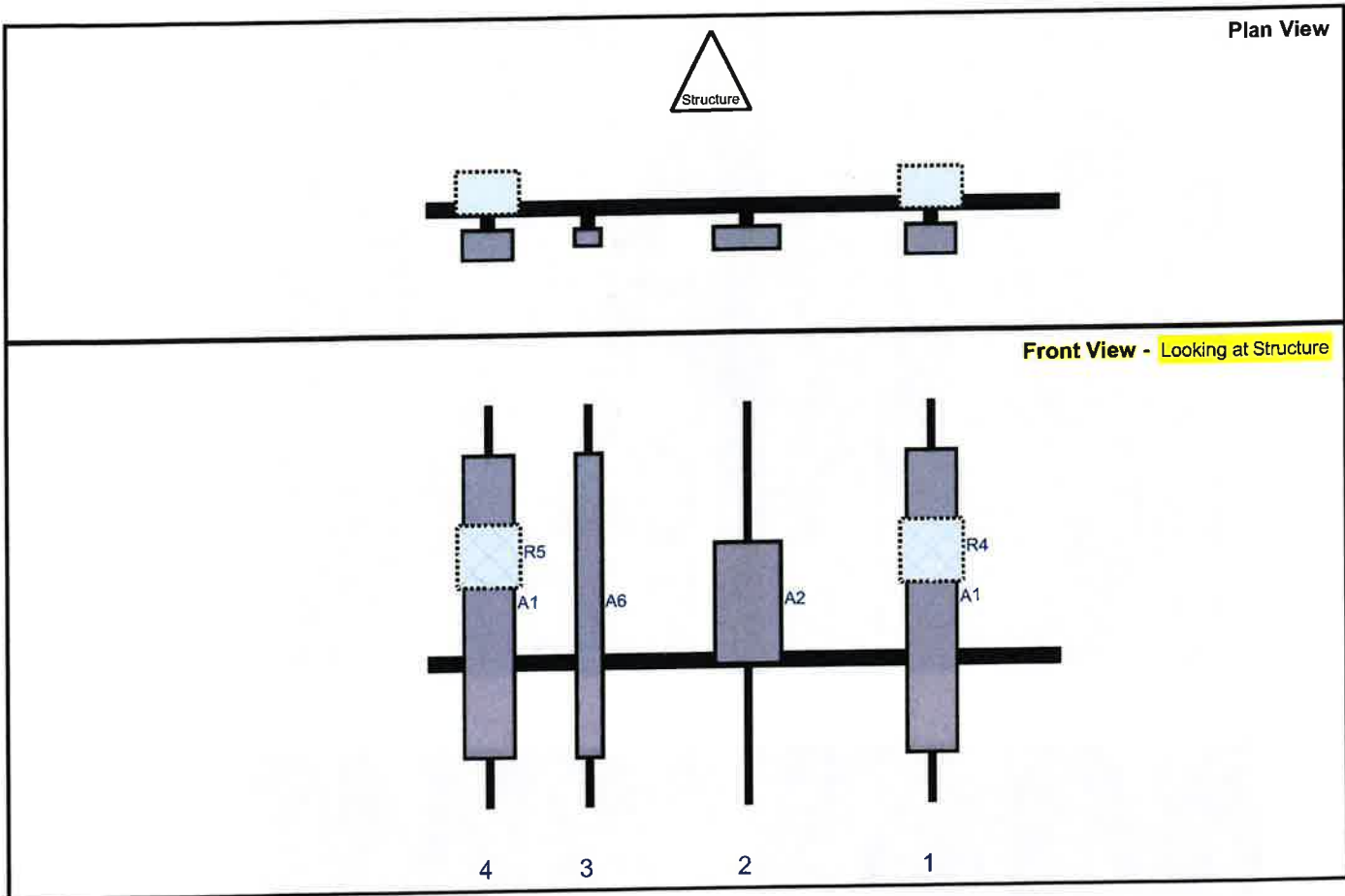
Structure Type: Monopole

10215049



Mount Elev: 177.00

Page: 3



Ref#	Model	Height (in)	Width (in)	H Dist Fm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A1	NHH-65B-R2B	72	11.9	119.5	1	a	Front	48	0	Added	
R4	RF4439d-25A	15	15	119.5	1	a	Behind	36	0	Added	
A2	MT6413-77A	28.9	15.8	75.75	2	a	Front	48	0	Added	
A6	BXA-171063-12CF-EDIN	72.4	6.1	38.25	3	a	Front	48	0	Retained	03/23/2021
A1	NHH-65B-R2B	72	11.9	14.5	4	a	Front	48	0	Added	
R5	RF4461d-13A	15	15	14.5	4	a	Behind	36	0	Added	

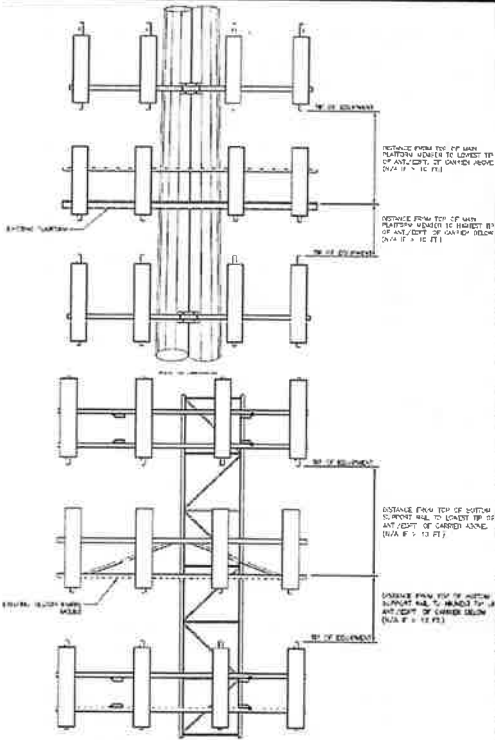








Mount Azimuth (Degree) for Each Sector				Tower Leg Azimuth (Degree) for Each Sector				Sector B														
Sector A:	10.00	Deg	Leg A:		Deg	Ant <sub>1a</sub>																
Sector B:	130.00	Deg	Leg B:		Deg	Ant <sub>1b</sub>	BXA-171063-12CF-ED	6.10	4.10	72.40		175.729	49.25	8.00	10.00	33,172						
Sector C:	250.00	Deg	Leg C:		Deg	Ant <sub>1c</sub>																
Sector D:		Deg	Leg D:		Deg	Ant <sub>2a</sub>	KS24822L1	11.80	5.30	13.80		177.625	27.75	10.00		33,172						
<b>Climbing Facility Information</b>						Ant <sub>2b</sub>	BXA-70063-6CF-EDIN	11.20	5.20	71.00		176.229	44.50	8.75	10.00	33,172						
Location:	190.00	Deg	N/A		Deg	Ant <sub>2c</sub>																
Climbing Facility	Corrosion Type:	N/A				Ant <sub>3a</sub>																
	Access:	Climbing path was unobstructed.				Ant <sub>3b</sub>	BXA-171063-12CF-ED	6.10	4.10	72.40		175.875	48.00	8.00	10.00	33,173						
	Condition:	Good condition.				Ant <sub>3c</sub>																
						Ant <sub>3d</sub>																
						Ant <sub>4a</sub>	BXA-70063-6CF-EDIN	11.20	5.20	71.00		175.958	45.50	9.00	10.00	33,173						
						Ant <sub>4b</sub>																
						Ant <sub>4c</sub>																
						Ant <sub>4d</sub>																
						Ant on Standoff																
						Ant on Standoff																
						Ant on Tower																
						Ant on Tower																
						<b>Sector C</b>																
						Ant <sub>1a</sub>																
						Ant <sub>1b</sub>	BXA-171063-12CF-ED	6.10	4.10	72.40		175.729	49.25	8.00	10.00	40,175						
						Ant <sub>1c</sub>																
						Ant <sub>2a</sub>	KS24822L1	11.80	5.30	13.80		177.625	27.75	10.00		40,177						
						Ant <sub>2b</sub>	BXA-70063-6CF-EDIN	11.20	5.20	71.00		176.229	44.50	8.75	10.00	40,177						
						Ant <sub>2c</sub>																
						Ant <sub>3a</sub>																
						Ant <sub>3b</sub>	BXA-171063-12CF-ED	6.10	4.10	72.40		175.875	48.00	8.00	10.00	40,177						
						Ant <sub>3c</sub>																
						Ant <sub>4a</sub>																
						Ant <sub>4b</sub>	BXA-70063-6CF-EDIN	11.20	5.20	71.00		175.958	45.50	9.00	10.00	40,177						
						Ant <sub>4c</sub>																
						Ant <sub>4d</sub>																
						Ant on Standoff																
						Ant on Standoff																
						Ant on Tower	RRFDC-3315-PF-48	15.75	10.25	25.66			57.75								304	
						Ant on Tower																
						<b>Sector D</b>																
						Ant <sub>1a</sub>																
						Ant <sub>1b</sub>																
						Ant <sub>1c</sub>																
						Ant <sub>2a</sub>																
						Ant <sub>2b</sub>																
						Ant <sub>2c</sub>																
						Ant <sub>3a</sub>																
						Ant <sub>3b</sub>																
						Ant <sub>3c</sub>																
						Ant <sub>4a</sub>																
						Ant <sub>4b</sub>																
						Ant <sub>4c</sub>																
						Ant <sub>5a</sub>																
						Ant <sub>5b</sub>																
						Ant <sub>5c</sub>																
						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 #

1	COAX TOTAL (2) 1.5" Ø HYBRID	
2		
3		
4		
5		
6		
7		
8		

**Mapping Notes**

1. Please report any visible structural or safety issues observed on the antenna mounts (Damaged members, loose connections, tilting mounts, safety climb issues, etc.)
2. If the thickness of the existing pipes or tubing can't be obtained from a general tool (such as Caliper), please use an ultrasonic measurement tool (thickness gauge) to measure the thickness.
3. Please create all required detail sketches of the mounts and insert them into the "Sketches" tab.
4. Please measure and enter the bolt sizes and types under the Members Box in the spreadsheet of the mount type.
5. Take and label the photos of the tower, mounts, connections, antennas and all measurements. Minimum 50 photos are required.
6. Please measure and report the size and length of all existing antenna mounting pipes.
7. Please measure and report the antenna information for all sectors.
8. Don't delete or rearrange any sheet or contents of any sheet from this mapping form.

**Standard Conditions**

1. Obvious safety and structural issues/deficiencies noticed at the time of the mount mapping are to be reported in this mapping. However, this mount mapping is not a condition assessment of the mount.



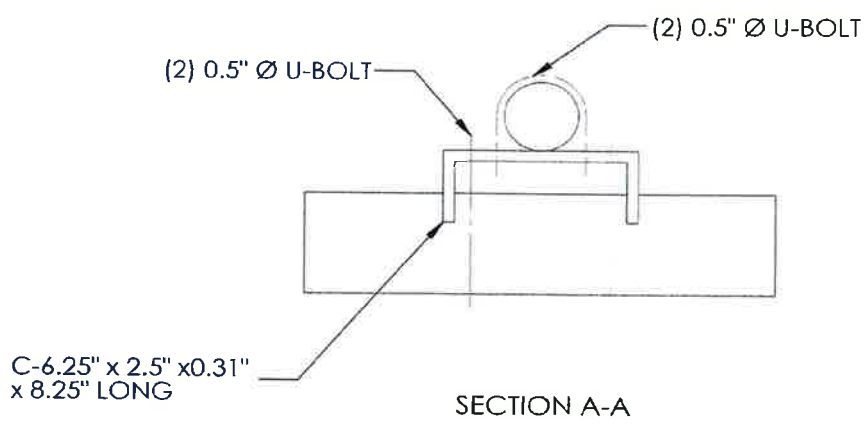
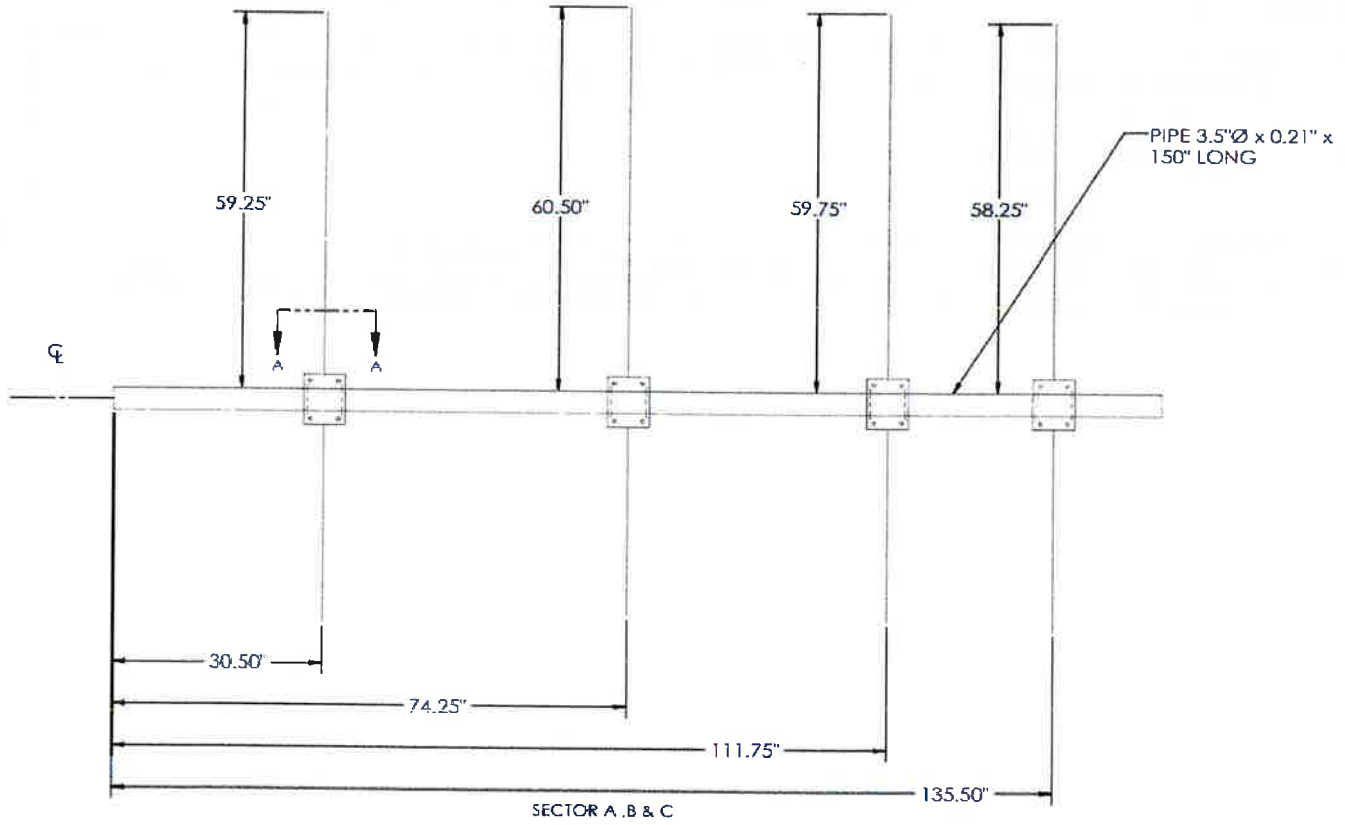
### Antenna Mount Mapping Form (PATENT PENDING)

FCC #  
UNKNOWN

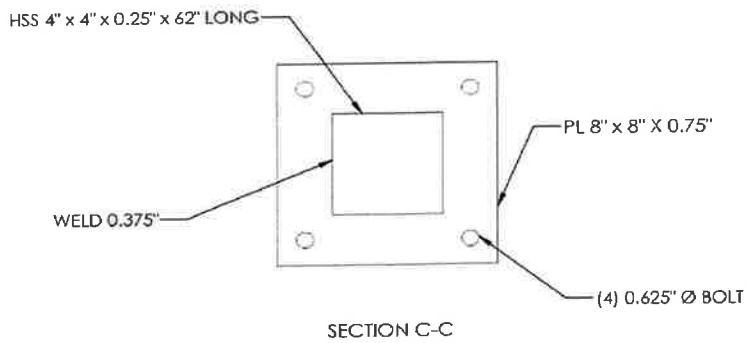
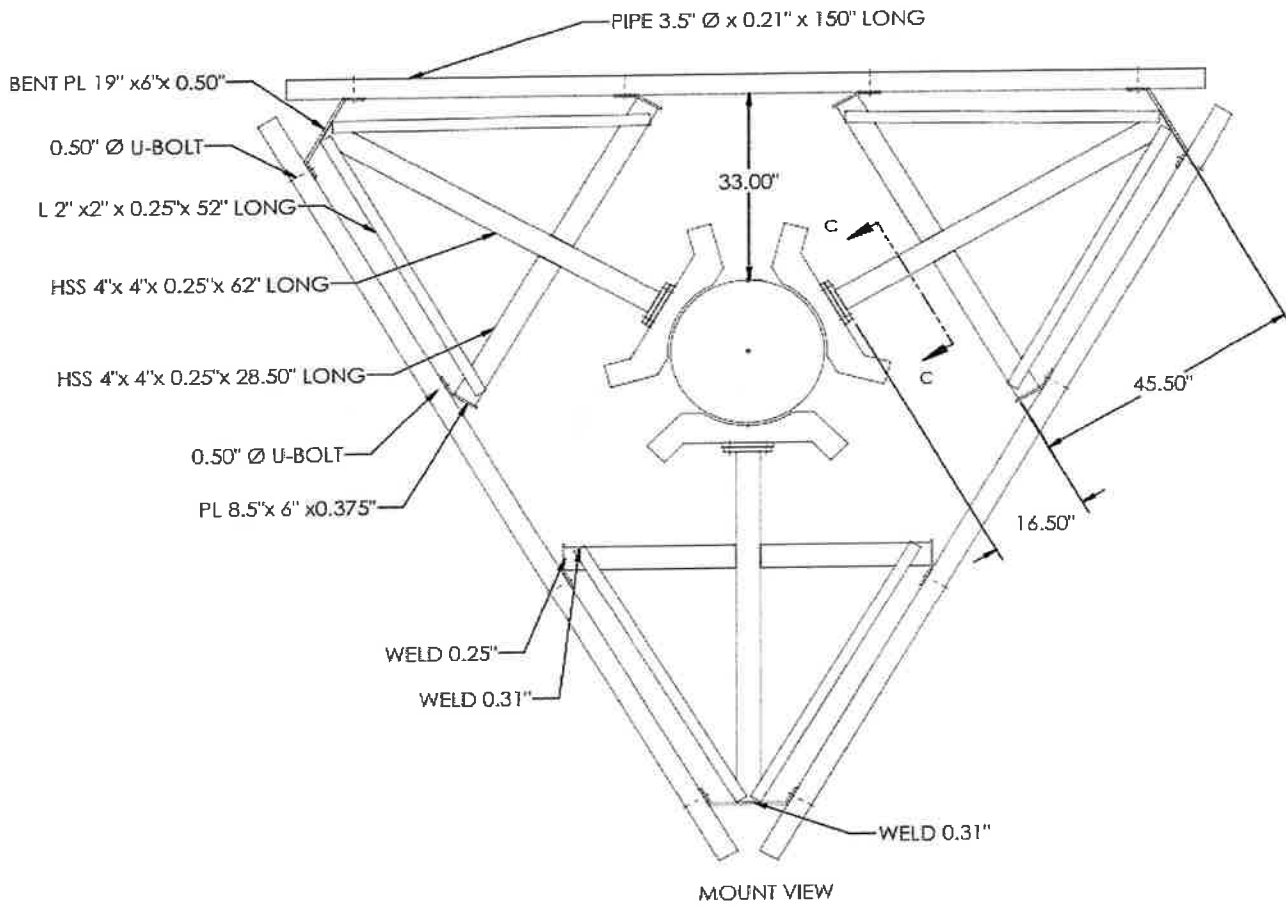
Tower Owner:	SBA	Mapping Date:	3/23/2021
Site Name:	VZW: WYASSUP LAKE CT.	Tower Type:	MONOPOLE
Site Number or ID:	SBA: CT11796	Tower Height (FT):	190
Mapping Contractor:	RKS DESIGN AND ENGINEERING LLC	Mount Elevation (FT):	174.75

This antenna mapping form is the property of TES and under PATENT PENDING. The formation contained herein is considered confidential in nature and is to be used only for the specific customer it was intended for. Reproduction, transmission, publication, modification or disclosure by any method is prohibited except by express written permission of TES. All means and methods are the responsibility of the contractor and the work shall be compliant with ANSI/ASSE A 10.48, OSHA, FCC, FAA and other safety requirements that may apply. TES is not warranting the usability of the safety climb as it must be assessed prior to each use in compliance with OSHA requirements.

Please Insert Sketches of the Antenna Mount

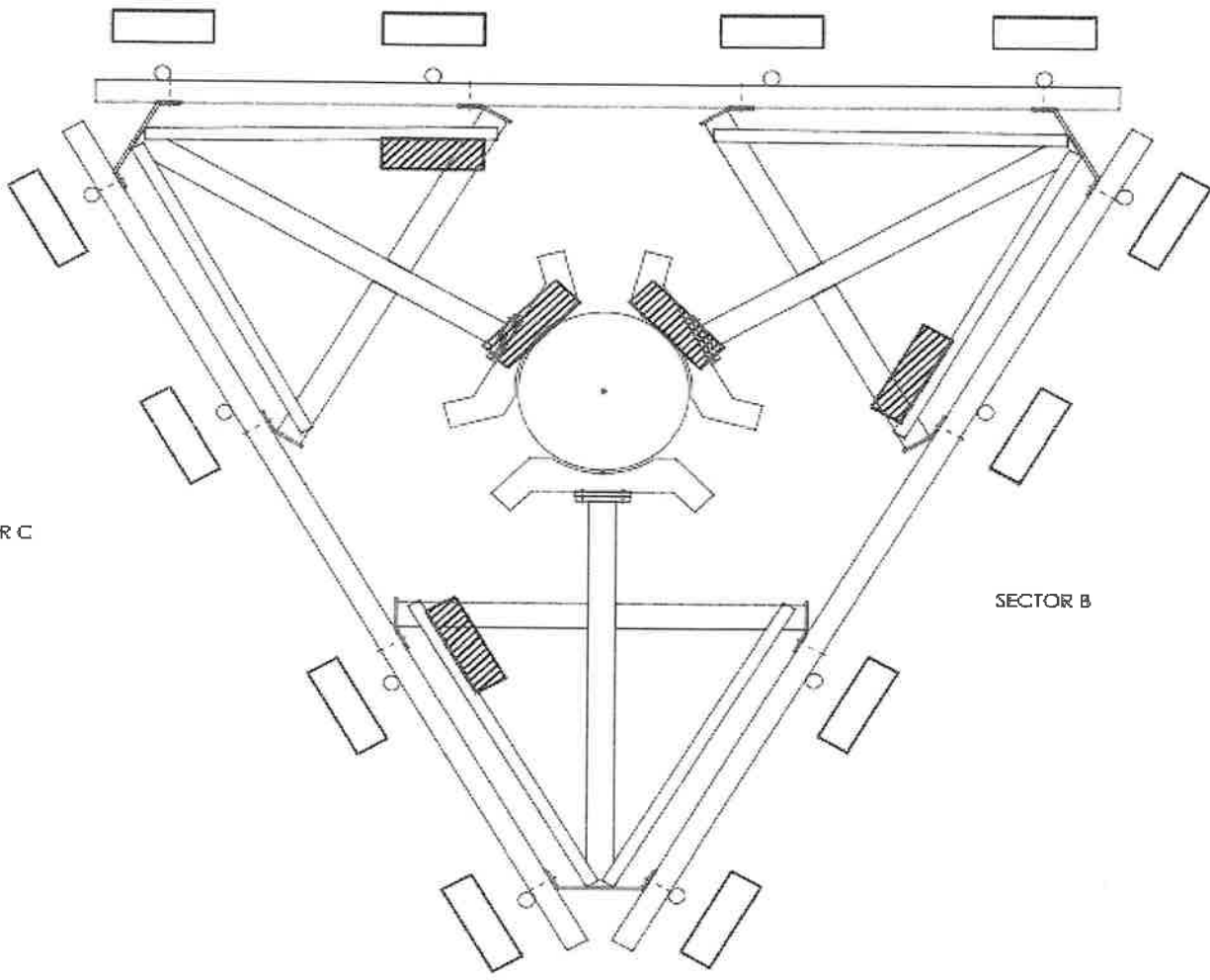


Please Insert Sketches of the Antenna Mount, cont'd



Please Insert Sketches of the Antenna Mount, cont'd

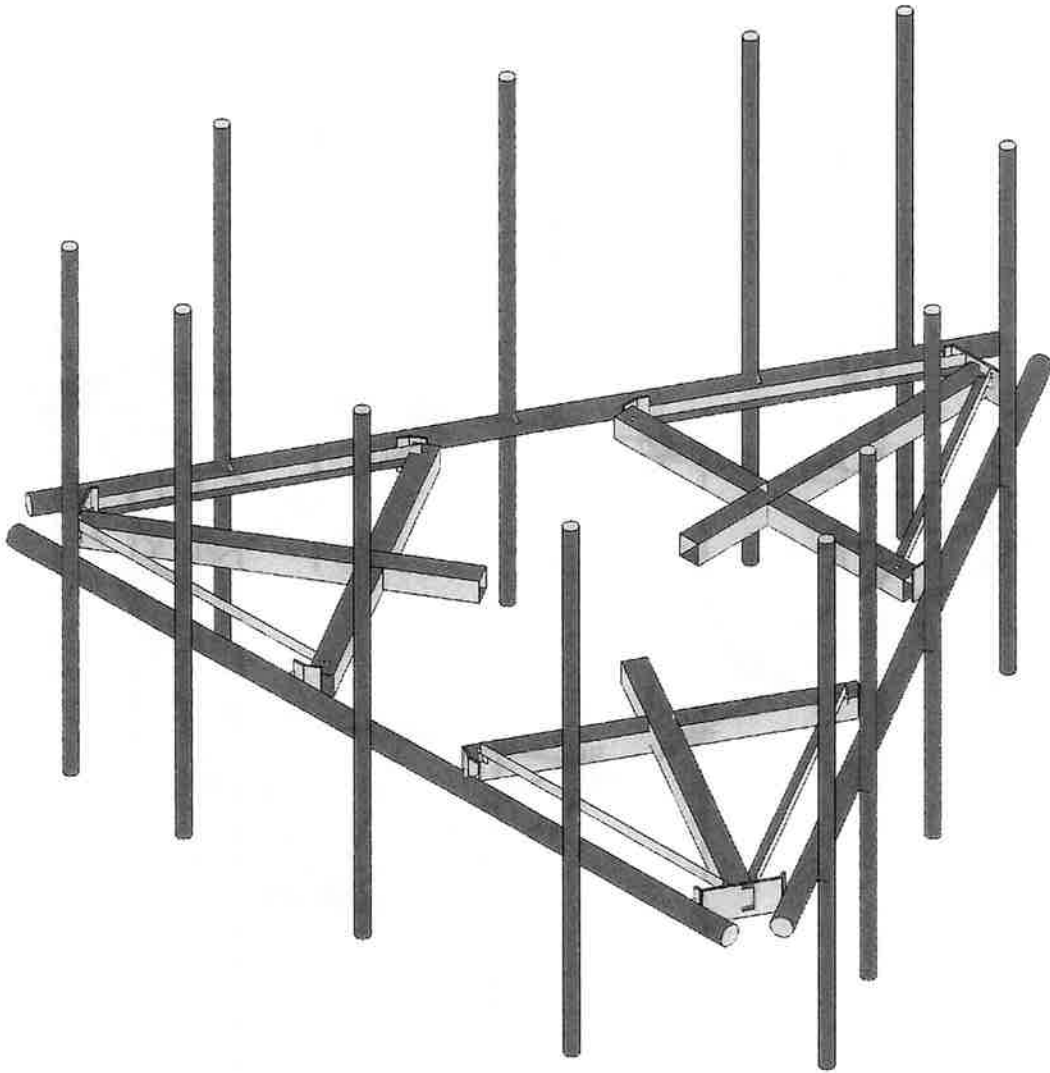
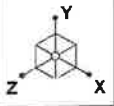
SECTOR A



SECTOR C

SECTOR B

ANTENNA VIEW

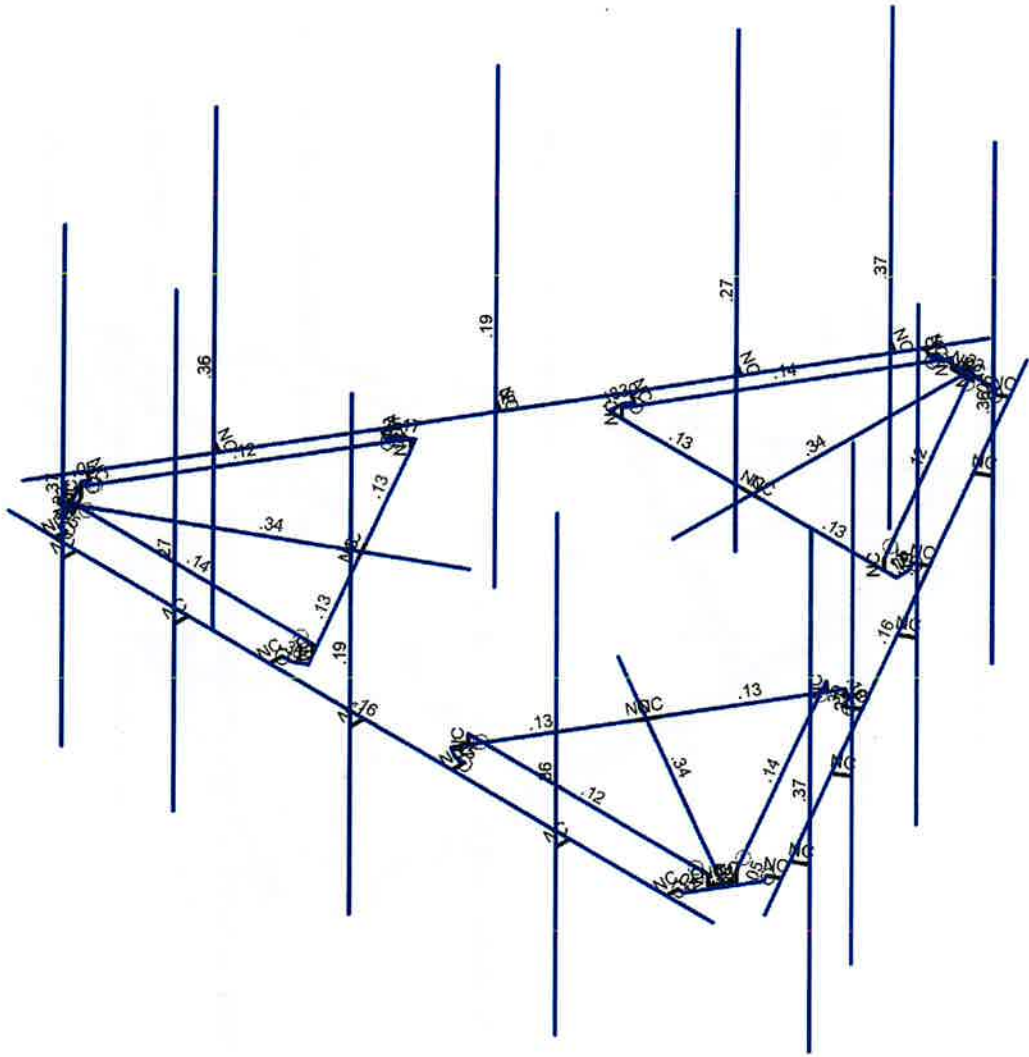
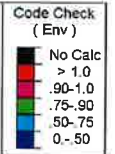
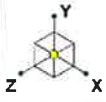



SK - 1

Dec 5, 2023 at 4:26 PM

5000244417-VZW\_MT\_LO\_H.r3d



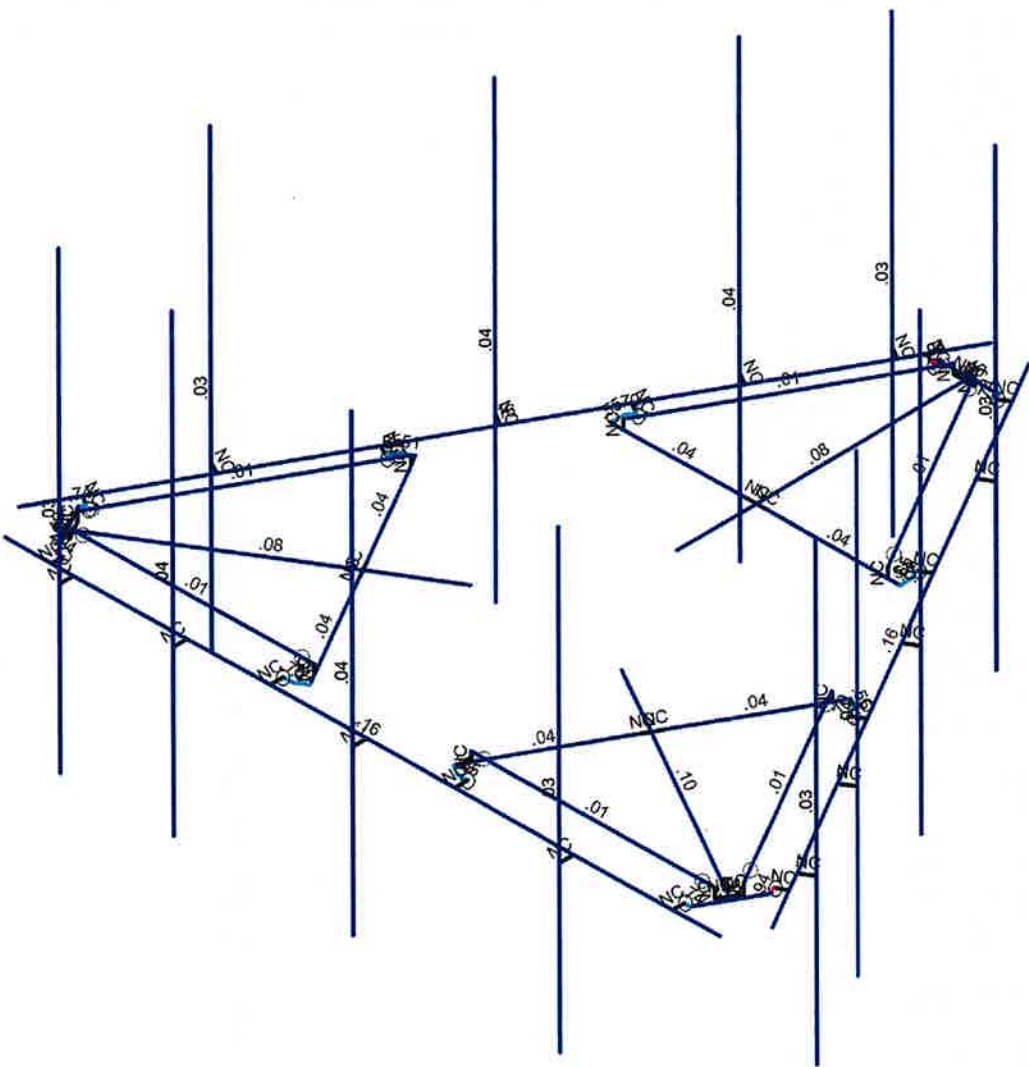
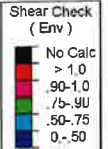
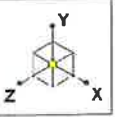


Member Code Checks Displayed (Enveloped)  
Envelope Only Solution

SK - 2

Dec 5, 2023 at 4:28 PM

5000244417-VZW\_MT\_LO\_H.r3d



Member Shear Checks Displayed (Enveloped)  
Envelope Only Solution

	SK - 3
	Dec 5, 2023 at 4:28 PM
	5000244417-VZW_MT_LO_H.r3d



Company :  
 Designer :  
 Job Number :  
 Model Name :

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 Checked By: \_\_\_\_\_

**Basic Load Cases**

BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed Area(Me...)	Surface(P...
1 Antenna D	None					90		
2 Antenna Di	None					90		
3 Antenna Wo (0 Deg)	None					90		
4 Antenna Wo (30 Deg)	None					90		
5 Antenna Wo (60 Deg)	None					90		
6 Antenna Wo (90 Deg)	None					90		
7 Antenna Wo (120 Deg)	None					90		
8 Antenna Wo (150 Deg)	None					90		
9 Antenna Wo (180 Deg)	None					90		
10 Antenna Wo (210 Deg)	None					90		
11 Antenna Wo (240 Deg)	None					90		
12 Antenna Wo (270 Deg)	None					90		
13 Antenna Wo (300 Deg)	None					90		
14 Antenna Wo (330 Deg)	None					90		
15 Antenna Wi (0 Deg)	None					90		
16 Antenna Wi (30 Deg)	None					90		
17 Antenna Wi (60 Deg)	None					90		
18 Antenna Wi (90 Deg)	None					90		
19 Antenna Wi (120 Deg)	None					90		
20 Antenna Wi (150 Deg)	None					90		
21 Antenna Wi (180 Deg)	None					90		
22 Antenna Wi (210 Deg)	None					90		
23 Antenna Wi (240 Deg)	None					90		
24 Antenna Wi (270 Deg)	None					90		
25 Antenna Wi (300 Deg)	None					90		
26 Antenna Wi (330 Deg)	None					90		
27 Antenna Wm (0 Deg)	None					90		
28 Antenna Wm (30 Deg)	None					90		
29 Antenna Wm (60 Deg)	None					90		
30 Antenna Wm (90 Deg)	None					90		
31 Antenna Wm (120 Deg)	None					90		
32 Antenna Wm (150 Deg)	None					90		
33 Antenna Wm (180 Deg)	None					90		
34 Antenna Wm (210 Deg)	None					90		
35 Antenna Wm (240 Deg)	None					90		
36 Antenna Wm (270 Deg)	None					90		
37 Antenna Wm (300 Deg)	None					90		
38 Antenna Wm (330 Deg)	None					90		
39 Structure D	None		-1					3
40 Structure Di	None						51	3
41 Structure Wo (0 Deg)	None						102	
42 Structure Wo (30 Deg)	None						102	
43 Structure Wo (60 Deg)	None						102	
44 Structure Wo (90 Deg)	None						102	
45 Structure Wo (120 D...	None						102	
46 Structure Wo (150 D...	None						102	
47 Structure Wo (180 D...	None						102	
48 Structure Wo (210 D...	None						102	
49 Structure Wo (240 D...	None						102	
50 Structure Wo (270 D...	None						102	
51 Structure Wo (300 D...	None						102	
52 Structure Wo (330 D...	None						102	
53 Structure Wi (0 Deg)	None						102	





Company :  
 Designer :  
 Job Number :  
 Model Name :

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**Basic Load Cases (Continued)**

BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed Area(Me...)	Surface(P...
54 Structure Wi (30 Deg)	None						102	
55 Structure Wi (60 Deg)	None						102	
56 Structure Wi (90 Deg)	None						102	
57 Structure Wi (120 De..)	None						102	
58 Structure Wi (150 De..)	None						102	
59 Structure Wi (180 De..)	None						102	
60 Structure Wi (210 De..)	None						102	
61 Structure Wi (240 De..)	None						102	
62 Structure Wi (270 De..)	None						102	
63 Structure Wi (300 De..)	None						102	
64 Structure Wi (330 De..)	None						102	
65 Structure Wm (0 Deg)	None						102	
66 Structure Wm (30 De..)	None						102	
67 Structure Wm (60 De..)	None						102	
68 Structure Wm (90 De..)	None						102	
69 Structure Wm (120 D..)	None						102	
70 Structure Wm (150 D..)	None						102	
71 Structure Wm (180 D..)	None						102	
72 Structure Wm (210 D..)	None						102	
73 Structure Wm (240 D..)	None						102	
74 Structure Wm (270 D..)	None						102	
75 Structure Wm (300 D..)	None						102	
76 Structure Wm (330 D..)	None						102	
77 Lm1	None					1		
78 Lm2	None					1		
79 Lv1	None					1		
80 Lv2	None					1		
81 Antenna Ev	None					90		
82 Antenna Eh (0 Deg)	None					60		
83 Antenna Eh (90 Deg)	None					60		
84 Structure Ev	ELY							3
85 Structure Eh (0 Deg)	ELZ			-03				3
86 Structure Eh (90 Deg)	ELX	.03						3
87 BLC 39 Transient Are..	None						30	
88 BLC 40 Transient Are..	None						30	
89 BLC 84 Transient Are..	None							
90 BLC 85 Transient Are..	None						30	
91 BLC 86 Transient Are..	None						30	

**Load Combinations**

Description	Sol..	P...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	
1 1.2D+1.0Wo (0 Deg)	Yes	Y		1	1.2	39	1.2	3	1	41	1											
2 1.2D+1.0Wo (30 Deg)	Yes	Y		1	1.2	39	1.2	4	1	42	1											
3 1.2D+1.0Wo (60 Deg)	Yes	Y		1	1.2	39	1.2	5	1	43	1											
4 1.2D+1.0Wo (90 Deg)	Yes	Y		1	1.2	39	1.2	6	1	44	1											
5 1.2D+1.0Wo (120 Deg)	Yes	Y		1	1.2	39	1.2	7	1	45	1											
6 1.2D+1.0Wo (150 Deg)	Yes	Y		1	1.2	39	1.2	8	1	46	1											
7 1.2D+1.0Wo (180 Deg)	Yes	Y		1	1.2	39	1.2	9	1	47	1											
8 1.2D+1.0Wo (210 Deg)	Yes	Y		1	1.2	39	1.2	10	1	48	1											
9 1.2D+1.0Wo (240 Deg)	Yes	Y		1	1.2	39	1.2	11	1	49	1											
10 1.2D+1.0Wo (270 Deg)	Yes	Y		1	1.2	39	1.2	12	1	50	1											
11 1.2D+1.0Wo (300 Deg)	Yes	Y		1	1.2	39	1.2	13	1	51	1											
12 1.2D+1.0Wo (330 Deg)	Yes	Y		1	1.2	39	1.2	14	1	52	1											
13 1.2D + 1.0Di + 1.0Wi (0 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	15	1	53	1							
14 1.2D + 1.0Di + 1.0Wi (30 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	16	1	54	1							





Company :  
 Designer :  
 Job Number :  
 Model Name :

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**Load Combinations (Continued)**

	Description	Sol	P	S	B	Fa	B	Fa	B	Fa	B	Fa	B	Fa	B	Fa	B	Fa	B	Fa	B	Fa	
15	1.2D + 1.0Di + 1.0Wi (60 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	17	1	55	1							
16	1.2D + 1.0Di + 1.0Wi (90 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	18	1	56	1							
17	1.2D + 1.0Di + 1.0Wi (120 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	19	1	57	1							
18	1.2D + 1.0Di + 1.0Wi (150 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	20	1	58	1							
19	1.2D + 1.0Di + 1.0Wi (180 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	21	1	59	1							
20	1.2D + 1.0Di + 1.0Wi (210 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	22	1	60	1							
21	1.2D + 1.0Di + 1.0Wi (240 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	23	1	61	1							
22	1.2D + 1.0Di + 1.0Wi (270 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	24	1	62	1							
23	1.2D + 1.0Di + 1.0Wi (300 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	25	1	63	1							
24	1.2D + 1.0Di + 1.0Wi (330 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	26	1	64	1							
25	1.2D + 1.5Lm1 + 1.0Wm (0 Deg)	Yes	Y		1	1.2	39	1.2	77	1.5	27	1	65	1									
26	1.2D + 1.5Lm1 + 1.0Wm (30 Deg)	Yes	Y		1	1.2	39	1.2	77	1.5	28	1	66	1									
27	1.2D + 1.5Lm1 + 1.0Wm (60 Deg)	Yes	Y		1	1.2	39	1.2	77	1.5	29	1	67	1									
28	1.2D + 1.5Lm1 + 1.0Wm (90 Deg)	Yes	Y		1	1.2	39	1.2	77	1.5	30	1	68	1									
29	1.2D + 1.5Lm1 + 1.0Wm (120 D..)	Yes	Y		1	1.2	39	1.2	77	1.5	31	1	69	1									
30	1.2D + 1.5Lm1 + 1.0Wm (150 D..)	Yes	Y		1	1.2	39	1.2	77	1.5	32	1	70	1									
31	1.2D + 1.5Lm1 + 1.0Wm (180 D..)	Yes	Y		1	1.2	39	1.2	77	1.5	33	1	71	1									
32	1.2D + 1.5Lm1 + 1.0Wm (210 D..)	Yes	Y		1	1.2	39	1.2	77	1.5	34	1	72	1									
33	1.2D + 1.5Lm1 + 1.0Wm (240 D..)	Yes	Y		1	1.2	39	1.2	77	1.5	35	1	73	1									
34	1.2D + 1.5Lm1 + 1.0Wm (270 D..)	Yes	Y		1	1.2	39	1.2	77	1.5	36	1	74	1									
35	1.2D + 1.5Lm1 + 1.0Wm (300 D..)	Yes	Y		1	1.2	39	1.2	77	1.5	37	1	75	1									
36	1.2D + 1.5Lm1 + 1.0Wm (330 D..)	Yes	Y		1	1.2	39	1.2	77	1.5	38	1	76	1									
37	1.2D + 1.5Lm2 + 1.0Wm (0 Deg)	Yes	Y		1	1.2	39	1.2	78	1.5	27	1	65	1									
38	1.2D + 1.5Lm2 + 1.0Wm (30 Deg)	Yes	Y		1	1.2	39	1.2	78	1.5	28	1	66	1									
39	1.2D + 1.5Lm2 + 1.0Wm (60 Deg)	Yes	Y		1	1.2	39	1.2	78	1.5	29	1	67	1									
40	1.2D + 1.5Lm2 + 1.0Wm (90 Deg)	Yes	Y		1	1.2	39	1.2	78	1.5	30	1	68	1									
41	1.2D + 1.5Lm2 + 1.0Wm (120 D..)	Yes	Y		1	1.2	39	1.2	78	1.5	31	1	69	1									
42	1.2D + 1.5Lm2 + 1.0Wm (150 D..)	Yes	Y		1	1.2	39	1.2	78	1.5	32	1	70	1									
43	1.2D + 1.5Lm2 + 1.0Wm (180 D..)	Yes	Y		1	1.2	39	1.2	78	1.5	33	1	71	1									
44	1.2D + 1.5Lm2 + 1.0Wm (210 D..)	Yes	Y		1	1.2	39	1.2	78	1.5	34	1	72	1									
45	1.2D + 1.5Lm2 + 1.0Wm (240 D..)	Yes	Y		1	1.2	39	1.2	78	1.5	35	1	73	1									
46	1.2D + 1.5Lm2 + 1.0Wm (270 D..)	Yes	Y		1	1.2	39	1.2	78	1.5	36	1	74	1									
47	1.2D + 1.5Lm2 + 1.0Wm (300 D..)	Yes	Y		1	1.2	39	1.2	78	1.5	37	1	75	1									
48	1.2D + 1.5Lm2 + 1.0Wm (330 D..)	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	1.2D + 1.0Ev + 1.0Eh (0 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	1	83	E...	1	E...					
53	1.2D + 1.0Ev + 1.0Eh (30 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	.866	83	.5	E...	.866	E...	.5			
54	1.2D + 1.0Ev + 1.0Eh (60 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	.5	83	.866	E...	.5	E...	.866			
55	1.2D + 1.0Ev + 1.0Eh (90 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82		83	1	E...		E...	1			
56	1.2D + 1.0Ev + 1.0Eh (120 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-.5	83	.866	E...	-.5	E...	.866			
57	1.2D + 1.0Ev + 1.0Eh (150 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-.8	83	.5	E...	-.8	E...	.5			
58	1.2D + 1.0Ev + 1.0Eh (180 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-1	83		E...	-1	E...				
59	1.2D + 1.0Ev + 1.0Eh (210 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-.8	83	-.5	E...	-.8	E...	-.5			
60	1.2D + 1.0Ev + 1.0Eh (240 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-.5	83	-.8	E...	-.5	E...	-.8			
61	1.2D + 1.0Ev + 1.0Eh (270 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82		83	-1	E...		E...	-1			
62	1.2D + 1.0Ev + 1.0Eh (300 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	.5	83	-.8	E...	.5	E...	-.8			
63	1.2D + 1.0Ev + 1.0Eh (330 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	.866	83	-.5	E...	.866	E...	-.5			
64	0.9D - 1.0Ev + 1.0Eh (0 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	1	83		E...	1	E...				
65	0.9D - 1.0Ev + 1.0Eh (30 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	.866	83	.5	E...	.866	E...	.5			
66	0.9D - 1.0Ev + 1.0Eh (60 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	.5	83	.866	E...	.5	E...	.866			
67	0.9D - 1.0Ev + 1.0Eh (90 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82		83	1	E...		E...	1			
68	0.9D - 1.0Ev + 1.0Eh (120 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-.5	83	.866	E...	-.5	E...	.866			
69	0.9D - 1.0Ev + 1.0Eh (150 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-.8	83	.5	E...	-.8	E...	.5			
70	0.9D - 1.0Ev + 1.0Eh (180 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-1	83		E...	-1	E...				
71	0.9D - 1.0Ev + 1.0Eh (210 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-.8	83	-.5	E...	-.8	E...	-.5			





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### Load Combinations (Continued)

	Description	Sol.	P...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...		
72	0.9D - 1.0Ev + 1.0Eh (240 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-5	83	-8	E...	-5	E...	-8																					
73	0.9D - 1.0Ev + 1.0Eh (270 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82		83	-1	E...		E...	-1																					
74	0.9D - 1.0Ev + 1.0Eh (300 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	.5	83	-8	E...	.5	E...	-8																					
75	0.9D - 1.0Ev + 1.0Eh (330 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	.866	83	-5	E...	.866	E...	-5																					

### Hot Rolled Steel Section Sets

Label	Shape	Type	Design List	Material	Design R...	A [in2]	Iy [in4]	Izz [in4]	J [in4]
1	Face Horizontal	Beam	Pipe	A53 Gr.B	Typical	2.07	2.85	2.85	5.69
2	Standoff Horizontal	Beam	SquareTube	A500 Gr.B Rect	Typical	3.37	7.8	7.8	12.8
3	Corner Plate	Beam	BAR	A36 Gr.36	Typical	3	.063	9	.237
4	Platform Crossmem...	Beam	SquareTube	A500 Gr.B Rect	Typical	3.37	7.8	7.8	12.8
5	Grating Support	Beam	Single Angle	A36 Gr.36	Typical	.944	.346	.346	.021
6	Mount Pipe	Column	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
7	Cross Arm Plate	Column	RECT	A36 Gr.36	Typical	2.25	.026	6.75	.101
8	Equipment Pipe	Column	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25

### Hot Rolled Steel Properties

Label	E [ksi]	G [ksi]	Nu	Therm (/1...	Density[k/ft^3]	Yield[ksi]	Ry	Fu[ksi]	Rt	
1	A992	29000	11154	.3	.65	.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	.3	.65	.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	.3	.65	.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	.3	.65	.527	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	.3	.65	.527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	.3	.65	.49	35	1.6	60	1.2
7	A1085	29000	11154	.3	.65	.49	50	1.4	65	1.3
8	Q235	29000	11154	.3	.65	.49	35	1.5	58	1.2

### Member Primary Data

Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N1	N2		Face Horizontal	Beam	Pipe	A53 Gr.B	Typical
2	M4	N3	N27		Standoff Horiz...	Beam	SquareTube	A500 Gr.B...	Typical
3	M10	N101	N103A		Platform Cross...	Beam	SquareTube	A500 Gr.B...	Typical
4	M19	N8	N9		RIGID	None	None	RIGID	Typical
5	MP1A	N23	N22		Mount Pipe	Column	Pipe	A53 Gr.B	Typical
6	M43	N102	N5		Platform Cross...	Beam	SquareTube	A500 Gr.B...	Typical
7	M46	N86C	N87A		Corner Plate	Beam	BAR	A36 Gr.36	Typical
8	M51B	N55	N40		Grating Support	Beam	Single Angle	A36 Gr.36	Typical
9	M52B	N41	N54A		Grating Support	Beam	Single Angle	A36 Gr.36	Typical
10	M58	N102	N24		RIGID	None	None	RIGID	Typical
11	M59	N24	N103A		RIGID	None	None	RIGID	Typical
12	M76	N101	N105		Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
13	M77	N105	N131		Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
14	M79	N131	N86A		RIGID	None	None	RIGID	Typical
15	M80	N87A	N135		Corner Plate	Beam	BAR	A36 Gr.36	Typical
16	M83	N135	N86D		RIGID	None	None	RIGID	Typical
17	M84	N5	N104A		Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
18	M85	N104A	N144		Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
19	M88	N144	N86B		RIGID	None	None	RIGID	Typical
20	M91	N86C	N148		Corner Plate	Beam	BAR	A36 Gr.36	Typical
21	M92	N148	N86E		RIGID	None	None	RIGID	Typical
22	M50	N88C	N88A		RIGID	None	None	RIGID	Typical
23	M51	N88A	N86G		RIGID	None	None	RIGID	Typical





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**Member Primary Data (Continued)**

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
24	M37A	N54A	N88C			RIGID	None	None	RIGID	Typical
25	M37B	N55	N86G			RIGID	None	None	RIGID	Typical
26	M30	N41	N43			RIGID	None	None	RIGID	Typical
27	M30A	N40	N42			RIGID	None	None	RIGID	Typical
28	M28	N36	N37			Face Horizontal	Beam	Pipe	A53 Gr.B	Typical
29	M29	N39	N40A			Face Horizontal	Beam	Pipe	A53 Gr.B	Typical
30	M30B	N40B	N43A			Standoff Horiz...	Beam	SquareTube	A500 Gr.B..	Typical
31	M31	N44	N46			Platform Cross...	Beam	SquareTube	A500 Gr.B..	Typical
32	M32	N45	N41A			Platform Cross...	Beam	SquareTube	A500 Gr.B..	Typical
33	M33	N55A	N56			Corner Plate	Beam	BAR	A36 Gr.36	Typical
34	M34	N63	N64			Grating Support	Beam	Single Angle	A36 Gr.36	Typical
35	M35	N65	N62			Grating Support	Beam	Single Angle	A36 Gr.36	Typical
36	M36	N45	N42A			RIGID	None	None	RIGID	Typical
37	M37	N42A	N46			RIGID	None	None	RIGID	Typical
38	M38	N44	N48			Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
39	M39	N48	N49			Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
40	M40	N49	N53			RIGID	None	None	RIGID	Typical
41	M41	N56	N50			Corner Plate	Beam	BAR	A36 Gr.36	Typical
42	M42	N50	N57			RIGID	None	None	RIGID	Typical
43	M43A	N41A	N47			Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
44	M44	N47	N51			Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
45	M45	N51	N54			RIGID	None	None	RIGID	Typical
46	M46A	N55A	N52			Corner Plate	Beam	BAR	A36 Gr.36	Typical
47	M47	N52	N58			RIGID	None	None	RIGID	Typical
48	M48	N61	N59			RIGID	None	None	RIGID	Typical
49	M49	N59	N60			RIGID	None	None	RIGID	Typical
50	M50A	N62	N61			RIGID	None	None	RIGID	Typical
51	M51A	N63	N60			RIGID	None	None	RIGID	Typical
52	M52	N65	N66			RIGID	None	None	RIGID	Typical
53	M53	N64	N67			RIGID	None	None	RIGID	Typical
54	M54	N69	N72			Standoff Horiz...	Beam	SquareTube	A500 Gr.B..	Typical
55	M55	N73	N75			Platform Cross...	Beam	SquareTube	A500 Gr.B..	Typical
56	M56	N74	N70			Platform Cross...	Beam	SquareTube	A500 Gr.B..	Typical
57	M57	N84	N85			Corner Plate	Beam	BAR	A36 Gr.36	Typical
58	M58A	N92	N93			Grating Support	Beam	Single Angle	A36 Gr.36	Typical
59	M59A	N94	N91			Grating Support	Beam	Single Angle	A36 Gr.36	Typical
60	M60	N74	N71			RIGID	None	None	RIGID	Typical
61	M61	N71	N75			RIGID	None	None	RIGID	Typical
62	M62	N73	N77			Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
63	M63	N77	N78			Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
64	M64	N78	N82			RIGID	None	None	RIGID	Typical
65	M65	N85	N79			Corner Plate	Beam	BAR	A36 Gr.36	Typical
66	M66	N79	N86			RIGID	None	None	RIGID	Typical
67	M67	N70	N76			Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
68	M68	N76	N80			Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
69	M69	N80	N83			RIGID	None	None	RIGID	Typical
70	M70	N84	N81			Corner Plate	Beam	BAR	A36 Gr.36	Typical
71	M71	N81	N87			RIGID	None	None	RIGID	Typical
72	M72	N90	N88			RIGID	None	None	RIGID	Typical
73	M73	N88	N89			RIGID	None	None	RIGID	Typical
74	M74	N91	N90			RIGID	None	None	RIGID	Typical
75	M75	N92	N89			RIGID	None	None	RIGID	Typical
76	M76A	N94	N95			RIGID	None	None	RIGID	Typical
77	M77A	N93	N96			RIGID	None	None	RIGID	Typical
78	M78	N96A	N97			RIGID	None	None	RIGID	Typical
79	MP2A	N99	N98			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
80	M80A	N100	N101A			RIGID	None	None	RIGID	Typical





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**Member Primary Data (Continued)**

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
81	MP3A	N103	N102A			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
82	M82	N104	N105A			RIGID	None	None	RIGID	Typical
83	MP4A	N107	N106			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
84	M84A	N108	N109			RIGID	None	None	RIGID	Typical
85	MP1C	N111	N110			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
86	M86	N113	N114			RIGID	None	None	RIGID	Typical
87	MP2C	N116	N115			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
88	M88A	N117	N118			RIGID	None	None	RIGID	Typical
89	MP3C	N120	N119			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
90	M90	N121	N122			RIGID	None	None	RIGID	Typical
91	MP4C	N124	N123			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
92	M92A	N125	N126			RIGID	None	None	RIGID	Typical
93	MP1B	N128	N127			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
94	M94	N130	N131A			RIGID	None	None	RIGID	Typical
95	MP2B	N133	N132			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
96	M96	N134	N135A			RIGID	None	None	RIGID	Typical
97	MP3B	N137	N136			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
98	M98	N138	N139			RIGID	None	None	RIGID	Typical
99	MP4B	N141	N140			Mount Pipe	Column	Pipe	A53 Gr.B	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	Default			None
2	M4						Yes	Default			None
3	M10						Yes	Default			None
4	M19						Yes	** NA **			None
5	MP1A						Yes	** NA **			None
6	M43						Yes	Default			None
7	M46						Yes	Default			None
8	M51B	OOOOOX	OOOOOX				Yes	Default			None
9	M52B	OOOOOX	OOOOOX				Yes	Default			None
10	M58						Yes	** NA **			None
11	M59						Yes	** NA **			None
12	M76						Yes	** NA **			None
13	M77						Yes	** NA **			None
14	M79		OOOXOO				Yes	** NA **			None
15	M80						Yes				None
16	M83		OOOXOO				Yes	** NA **			None
17	M84						Yes	** NA **			None
18	M85						Yes	** NA **			None
19	M88		OOOXOO				Yes	** NA **			None
20	M91						Yes				None
21	M92		OOOXOO				Yes	** NA **			None
22	M50						Yes	** NA **			None
23	M51						Yes	** NA **			None
24	M37A						Yes	** NA **			None
25	M37B						Yes	** NA **			None
26	M30						Yes	** NA **			None
27	M30A						Yes	** NA **			None
28	M28						Yes	Default			None
29	M29						Yes	Default			None
30	M30B						Yes	Default			None
31	M31						Yes	Default			None
32	M32						Yes	Default			None
33	M33						Yes	Default			None



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**Member Advanced Data (Continued)**

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
34	M34	00000X	00000X				Yes	Default			None
35	M35	00000X	00000X				Yes	Default			None
36	M36						Yes	** NA **			None
37	M37						Yes	** NA **			None
38	M38						Yes	** NA **			None
39	M39						Yes	** NA **			None
40	M40		000X00				Yes	** NA **			None
41	M41						Yes	** NA **			None
42	M42		000X00				Yes	** NA **			None
43	M43A						Yes	** NA **			None
44	M44						Yes	** NA **			None
45	M45		000X00				Yes	** NA **			None
46	M46A						Yes	** NA **			None
47	M47		000X00				Yes	** NA **			None
48	M48						Yes	** NA **			None
49	M49						Yes	** NA **			None
50	M50A						Yes	** NA **			None
51	M51A						Yes	** NA **			None
52	M52						Yes	** NA **			None
53	M53						Yes	** NA **			None
54	M54						Yes	Default			None
55	M55						Yes	Default			None
56	M56						Yes	Default			None
57	M57						Yes	Default			None
58	M58A	00000X	00000X				Yes	Default			None
59	M59A	00000X	00000X				Yes	Default			None
60	M60						Yes	** NA **			None
61	M61						Yes	** NA **			None
62	M62						Yes	** NA **			None
63	M63						Yes	** NA **			None
64	M64		000X00				Yes	** NA **			None
65	M65						Yes	** NA **			None
66	M66		000X00				Yes	** NA **			None
67	M67						Yes	** NA **			None
68	M68						Yes	** NA **			None
69	M69		000X00				Yes	** NA **			None
70	M70						Yes	** NA **			None
71	M71		000X00				Yes	** NA **			None
72	M72						Yes	** NA **			None
73	M73						Yes	** NA **			None
74	M74						Yes	** NA **			None
75	M75						Yes	** NA **			None
76	M76A						Yes	** NA **			None
77	M77A						Yes	** NA **			None
78	M78						Yes	** NA **			None
79	MP2A						Yes	** NA **			None
80	M80A						Yes	** NA **			None
81	MP3A						Yes	** NA **			None
82	M82						Yes	** NA **			None
83	MP4A						Yes	** NA **			None
84	M84A						Yes	** NA **			None
85	MP1C						Yes	** NA **			None
86	M86						Yes	** NA **			None
87	MP2C						Yes	** NA **			None
88	M88A						Yes	** NA **			None
89	MP3C						Yes	** NA **			None
90	M90						Yes	** NA **			None





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**Member Advanced Data (Continued)**

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
91	MP4C						Yes	** NA **			None
92	M92A						Yes	** NA **			None
93	MP1B						Yes	** NA **			None
94	M94						Yes	** NA **			None
95	MP2B						Yes	** NA **			None
96	M96						Yes	** NA **			None
97	MP3B						Yes	** NA **			None
98	M98						Yes	** NA **			None
99	MP4B						Yes	** NA **			None

**Member Point Loads (BLC 1 : Antenna D)**

	Member Label	Direction	Magnitude[lb, k-ft]	Location[ft, %]
1	MP1A	Y	-21.85	2
2	MP1A	My	-.011	2
3	MP1A	Mz	0	2
4	MP1A	Y	-21.85	6
5	MP1A	My	-.011	6
6	MP1A	Mz	0	6
7	MP1B	Y	-21.85	2
8	MP1B	My	.005	2
9	MP1B	Mz	-.009	2
10	MP1B	Y	-21.85	6
11	MP1B	My	.005	6
12	MP1B	Mz	-.009	6
13	MP1C	Y	-21.85	2
14	MP1C	My	.005	2
15	MP1C	Mz	.009	2
16	MP1C	Y	-21.85	6
17	MP1C	My	.005	6
18	MP1C	Mz	.009	6
19	MP4A	Y	-21.85	2
20	MP4A	My	-.011	2
21	MP4A	Mz	0	2
22	MP4A	Y	-21.85	6
23	MP4A	My	-.011	6
24	MP4A	Mz	0	6
25	MP4B	Y	-21.85	2
26	MP4B	My	.005	2
27	MP4B	Mz	-.009	2
28	MP4B	Y	-21.85	6
29	MP4B	My	.005	6
30	MP4B	Mz	-.009	6
31	MP4C	Y	-21.85	2
32	MP4C	My	.005	2
33	MP4C	Mz	.009	2
34	MP4C	Y	-21.85	6
35	MP4C	My	.005	6
36	MP4C	Mz	.009	6
37	MP2A	Y	-28.65	3.25
38	MP2A	My	-.014	3.25
39	MP2A	Mz	0	3.25
40	MP2A	Y	-28.65	4.75
41	MP2A	My	-.014	4.75
42	MP2A	Mz	0	4.75
43	MP2B	Y	-28.65	3.25



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**Member Point Loads (BLC 1 : Antenna D) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
44	MP2B	My	.007	3.25
45	MP2B	Mz	-.012	3.25
46	MP2B	Y	-28.65	4.75
47	MP2B	My	.007	4.75
48	MP2B	Mz	-.012	4.75
49	MP2C	Y	-28.65	3.25
50	MP2C	My	.007	3.25
51	MP2C	Mz	.012	3.25
52	MP2C	Y	-28.65	4.75
53	MP2C	Mv	.007	4.75
54	MP2C	Mz	.012	4.75
55	MP1A	Y	-74.7	3
56	MP1A	My	.037	3
57	MP1A	Mz	0	3
58	MP1B	Y	-74.7	3
59	MP1B	My	-.019	3
60	MP1B	Mz	.032	3
61	MP1C	Y	-74.7	3
62	MP1C	My	-.019	3
63	MP1C	Mz	-.032	3
64	MP4A	Y	-79.1	3
65	MP4A	My	.04	3
66	MP4A	Mz	0	3
67	MP4B	Y	-79.1	3
68	MP4B	My	-.02	3
69	MP4B	Mz	.034	3
70	MP4C	Y	-79.1	3
71	MP4C	My	-.02	3
72	MP4C	Mz	-.034	3
73	MP3A	Y	-7.5	1.5
74	MP3A	My	-.004	1.5
75	MP3A	Mz	0	1.5
76	MP3A	Y	-7.5	6.5
77	MP3A	My	-.004	6.5
78	MP3A	Mz	0	6.5
79	MP3B	Y	-7.5	1.5
80	MP3B	My	.002	1.5
81	MP3B	Mz	-.003	1.5
82	MP3B	Y	-7.5	6.5
83	MP3B	My	.002	6.5
84	MP3B	Mz	-.003	6.5
85	MP3C	Y	-7.5	1.5
86	MP3C	My	.002	1.5
87	MP3C	Mz	.003	1.5
88	MP3C	Y	-7.5	6.5
89	MP3C	My	.002	6.5
90	MP3C	Mz	.003	6.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP1A	Y	-62.275	2
2	MP1A	My	-.031	2
3	MP1A	Mz	0	2
4	MP1A	Y	-62.275	6
5	MP1A	My	-.031	6
6	MP1A	Mz	0	6





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
7	MP1B	Y	-62.275	2
8	MP1B	My	.016	2
9	MP1B	Mz	-.027	2
10	MP1B	Y	-62.275	6
11	MP1B	My	.016	6
12	MP1B	Mz	-.027	6
13	MP1C	Y	-62.275	2
14	MP1C	My	.016	2
15	MP1C	Mz	.027	2
16	MP1C	Y	-62.275	6
17	MP1C	My	.016	6
18	MP1C	Mz	.027	6
19	MP4A	Y	-62.275	2
20	MP4A	My	-.031	2
21	MP4A	Mz	0	2
22	MP4A	Y	-62.275	6
23	MP4A	My	-.031	6
24	MP4A	Mz	0	6
25	MP4B	Y	-62.275	2
26	MP4B	My	.016	2
27	MP4B	Mz	-.027	2
28	MP4B	Y	-62.275	6
29	MP4B	My	.016	6
30	MP4B	Mz	-.027	6
31	MP4C	Y	-62.275	2
32	MP4C	My	.016	2
33	MP4C	Mz	.027	2
34	MP4C	Y	-62.275	6
35	MP4C	My	.016	6
36	MP4C	Mz	.027	6
37	MP2A	Y	-30.617	3.25
38	MP2A	My	-.015	3.25
39	MP2A	Mz	0	3.25
40	MP2A	Y	-30.617	4.75
41	MP2A	My	-.015	4.75
42	MP2A	Mz	0	4.75
43	MP2B	Y	-30.617	3.25
44	MP2B	My	.008	3.25
45	MP2B	Mz	-.013	3.25
46	MP2B	Y	-30.617	4.75
47	MP2B	My	.008	4.75
48	MP2B	Mz	-.013	4.75
49	MP2C	Y	-30.617	3.25
50	MP2C	My	.008	3.25
51	MP2C	Mz	.013	3.25
52	MP2C	Y	-30.617	4.75
53	MP2C	My	.008	4.75
54	MP2C	Mz	.013	4.75
55	MP1A	Y	-46.174	3
56	MP1A	My	.023	3
57	MP1A	Mz	0	3
58	MP1B	Y	-46.174	3
59	MP1B	My	-.012	3
60	MP1B	Mz	.02	3
61	MP1C	Y	-46.174	3
62	MP1C	My	-.012	3
63	MP1C	Mz	-.02	3



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
64	MP4A	Y	-46.663	3
65	MP4A	My	.023	3
66	MP4A	Mz	0	3
67	MP4B	Y	-46.663	3
68	MP4B	My	-.012	3
69	MP4B	Mz	.02	3
70	MP4C	Y	-46.663	3
71	MP4C	My	-.012	3
72	MP4C	Mz	-.02	3
73	MP3A	Y	-35.264	1.5
74	MP3A	My	-.018	1.5
75	MP3A	Mz	0	1.5
76	MP3A	Y	-35.264	6.5
77	MP3A	My	-.018	6.5
78	MP3A	Mz	0	6.5
79	MP3B	Y	-35.264	1.5
80	MP3B	My	.009	1.5
81	MP3B	Mz	-.015	1.5
82	MP3B	Y	-35.264	6.5
83	MP3B	My	.009	6.5
84	MP3B	Mz	-.015	6.5
85	MP3C	Y	-35.264	1.5
86	MP3C	My	.009	1.5
87	MP3C	Mz	.015	1.5
88	MP3C	Y	-35.264	6.5
89	MP3C	My	.009	6.5
90	MP3C	Mz	.015	6.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP1A	X	0	2
2	MP1A	Z	-114.975	2
3	MP1A	Mx	0	2
4	MP1A	X	0	6
5	MP1A	Z	-114.975	6
6	MP1A	Mx	0	6
7	MP1B	X	0	2
8	MP1B	Z	-65.746	2
9	MP1B	Mx	.028	2
10	MP1B	X	0	6
11	MP1B	Z	-65.746	6
12	MP1B	Mx	.028	6
13	MP1C	X	0	2
14	MP1C	Z	-65.746	2
15	MP1C	Mx	-.028	2
16	MP1C	X	0	6
17	MP1C	Z	-65.746	6
18	MP1C	Mx	-.028	6
19	MP4A	X	0	2
20	MP4A	Z	-114.975	2
21	MP4A	Mx	0	2
22	MP4A	X	0	6
23	MP4A	Z	-114.975	6
24	MP4A	Mx	0	6
25	MP4B	X	0	2
26	MP4B	Z	-65.746	2





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
27	MP4B	Mx	.028	2
28	MP4B	X	0	6
29	MP4B	Z	-65.746	6
30	MP4B	Mx	.028	6
31	MP4C	X	0	2
32	MP4C	Z	-65.746	2
33	MP4C	Mx	-.028	2
34	MP4C	X	0	6
35	MP4C	Z	-65.746	6
36	MP4C	Mx	-.028	6
37	MP2A	X	0	3.25
38	MP2A	Z	-80.25	3.25
39	MP2A	Mx	0	3.25
40	MP2A	X	0	4.75
41	MP2A	Z	-80.25	4.75
42	MP2A	Mx	0	4.75
43	MP2B	X	0	3.25
44	MP2B	Z	-43.244	3.25
45	MP2B	Mx	.019	3.25
46	MP2B	X	0	4.75
47	MP2B	Z	-43.244	4.75
48	MP2B	Mx	.019	4.75
49	MP2C	X	0	3.25
50	MP2C	Z	-43.244	3.25
51	MP2C	Mx	-.019	3.25
52	MP2C	X	0	4.75
53	MP2C	Z	-43.244	4.75
54	MP2C	Mx	-.019	4.75
55	MP1A	X	0	3
56	MP1A	Z	-65.64	3
57	MP1A	Mx	0	3
58	MP1B	X	0	3
59	MP1B	Z	-49.442	3
60	MP1B	Mx	-.021	3
61	MP1C	X	0	3
62	MP1C	Z	-49.442	3
63	MP1C	Mx	.021	3
64	MP4A	X	0	3
65	MP4A	Z	-79.191	3
66	MP4A	Mx	0	3
67	MP4B	X	0	3
68	MP4B	Z	-60.293	3
69	MP4B	Mx	-.026	3
70	MP4C	X	0	3
71	MP4C	Z	-60.293	3
72	MP4C	Mx	.026	3
73	MP3A	X	0	1.5
74	MP3A	Z	-101.212	1.5
75	MP3A	Mx	0	1.5
76	MP3A	X	0	6.5
77	MP3A	Z	-101.212	6.5
78	MP3A	Mx	0	6.5
79	MP3B	X	0	1.5
80	MP3B	Z	-82.764	1.5
81	MP3B	Mx	.036	1.5
82	MP3B	X	0	6.5
83	MP3B	Z	-82.764	6.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
84	MP3B	Mx	.036	6.5
85	MP3C	X	0	1.5
86	MP3C	Z	-82.764	1.5
87	MP3C	Mx	-.036	1.5
88	MP3C	X	0	6.5
89	MP3C	Z	-82.764	6.5
90	MP3C	Mx	-.036	6.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP1A	X	49.283	2
2	MP1A	Z	-85.36	2
3	MP1A	Mx	-.025	2
4	MP1A	X	49.283	6
5	MP1A	Z	-85.36	6
6	MP1A	Mx	-.025	6
7	MP1B	X	24.668	2
8	MP1B	Z	-42.726	2
9	MP1B	Mx	.025	2
10	MP1B	X	24.668	6
11	MP1B	Z	-42.726	6
12	MP1B	Mx	.025	6
13	MP1C	X	49.283	2
14	MP1C	Z	-85.36	2
15	MP1C	Mx	-.025	2
16	MP1C	X	49.283	6
17	MP1C	Z	-85.36	6
18	MP1C	Mx	-.025	6
19	MP4A	X	49.283	2
20	MP4A	Z	-85.36	2
21	MP4A	Mx	-.025	2
22	MP4A	X	49.283	6
23	MP4A	Z	-85.36	6
24	MP4A	Mx	-.025	6
25	MP4B	X	24.668	2
26	MP4B	Z	-42.726	2
27	MP4B	Mx	.025	2
28	MP4B	X	24.668	6
29	MP4B	Z	-42.726	6
30	MP4B	Mx	.025	6
31	MP4C	X	49.283	2
32	MP4C	Z	-85.36	2
33	MP4C	Mx	-.025	2
34	MP4C	X	49.283	6
35	MP4C	Z	-85.36	6
36	MP4C	Mx	-.025	6
37	MP2A	X	33.957	3.25
38	MP2A	Z	-58.816	3.25
39	MP2A	Mx	-.017	3.25
40	MP2A	X	33.957	4.75
41	MP2A	Z	-58.816	4.75
42	MP2A	Mx	-.017	4.75
43	MP2B	X	15.454	3.25
44	MP2B	Z	-26.767	3.25
45	MP2B	Mx	.015	3.25
46	MP2B	X	15.454	4.75





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
47	MP2B	Z	-26.767	4.75
48	MP2B	Mx	.015	4.75
49	MP2C	X	33.957	3.25
50	MP2C	Z	-58.816	3.25
51	MP2C	Mx	-.017	3.25
52	MP2C	X	33.957	4.75
53	MP2C	Z	-58.816	4.75
54	MP2C	Mx	-.017	4.75
55	MP1A	X	30.12	3
56	MP1A	Z	-52.17	3
57	MP1A	Mx	.015	3
58	MP1B	X	22.021	3
59	MP1B	Z	-38.142	3
60	MP1B	Mx	-.022	3
61	MP1C	X	30.12	3
62	MP1C	Z	-52.17	3
63	MP1C	Mx	.015	3
64	MP4A	X	36.446	3
65	MP4A	Z	-63.126	3
66	MP4A	Mx	.018	3
67	MP4B	X	26.997	3
68	MP4B	Z	-46.76	3
69	MP4B	Mx	-.027	3
70	MP4C	X	36.446	3
71	MP4C	Z	-63.126	3
72	MP4C	Mx	.018	3
73	MP3A	X	47.531	1.5
74	MP3A	Z	-82.327	1.5
75	MP3A	Mx	-.024	1.5
76	MP3A	X	47.531	6.5
77	MP3A	Z	-82.327	6.5
78	MP3A	Mx	-.024	6.5
79	MP3B	X	38.307	1.5
80	MP3B	Z	-66.35	1.5
81	MP3B	Mx	.038	1.5
82	MP3B	X	38.307	6.5
83	MP3B	Z	-66.35	6.5
84	MP3B	Mx	.038	6.5
85	MP3C	X	47.531	1.5
86	MP3C	Z	-82.327	1.5
87	MP3C	Mx	-.024	1.5
88	MP3C	X	47.531	6.5
89	MP3C	Z	-82.327	6.5
90	MP3C	Mx	-.024	6.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	56.937	2
2	MP1A	Z	-32.873	2
3	MP1A	Mx	-.028	2
4	MP1A	X	56.937	6
5	MP1A	Z	-32.873	6
6	MP1A	Mx	-.028	6
7	MP1B	X	56.937	2
8	MP1B	Z	-32.873	2
9	MP1B	Mx	.028	2





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
10	MP1B	X	56.937	6
11	MP1B	Z	-32.873	6
12	MP1B	Mx	.028	6
13	MP1C	X	99.572	2
14	MP1C	Z	-57.488	2
15	MP1C	Mx	0	2
16	MP1C	X	99.572	6
17	MP1C	Z	-57.488	6
18	MP1C	Mx	0	6
19	MP4A	X	56.937	2
20	MP4A	Z	-32.873	2
21	MP4A	Mx	-.028	2
22	MP4A	X	56.937	6
23	MP4A	Z	-32.873	6
24	MP4A	Mx	-.028	6
25	MP4B	X	56.937	2
26	MP4B	Z	-32.873	2
27	MP4B	Mx	.028	2
28	MP4B	X	56.937	6
29	MP4B	Z	-32.873	6
30	MP4B	Mx	.028	6
31	MP4C	X	99.572	2
32	MP4C	Z	-57.488	2
33	MP4C	Mx	0	2
34	MP4C	X	99.572	6
35	MP4C	Z	-57.488	6
36	MP4C	Mx	0	6
37	MP2A	X	37.45	3.25
38	MP2A	Z	-21.622	3.25
39	MP2A	Mx	-.019	3.25
40	MP2A	X	37.45	4.75
41	MP2A	Z	-21.622	4.75
42	MP2A	Mx	-.019	4.75
43	MP2B	X	37.45	3.25
44	MP2B	Z	-21.622	3.25
45	MP2B	Mx	.019	3.25
46	MP2B	X	37.45	4.75
47	MP2B	Z	-21.622	4.75
48	MP2B	Mx	.019	4.75
49	MP2C	X	69.498	3.25
50	MP2C	Z	-40.125	3.25
51	MP2C	Mx	0	3.25
52	MP2C	X	69.498	4.75
53	MP2C	Z	-40.125	4.75
54	MP2C	Mx	0	4.75
55	MP1A	X	42.818	3
56	MP1A	Z	-24.721	3
57	MP1A	Mx	.021	3
58	MP1B	X	42.818	3
59	MP1B	Z	-24.721	3
60	MP1B	Mx	-.021	3
61	MP1C	X	56.846	3
62	MP1C	Z	-32.82	3
63	MP1C	Mx	0	3
64	MP4A	X	52.216	3
65	MP4A	Z	-30.147	3
66	MP4A	Mx	.026	3



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
67	MP4B	X	52.216	3
68	MP4B	Z	-30.147	3
69	MP4B	Mx	-.026	3
70	MP4C	X	68.582	3
71	MP4C	Z	-39.596	3
72	MP4C	Mx	0	3
73	MP3A	X	71.676	1.5
74	MP3A	Z	-41.382	1.5
75	MP3A	Mx	-.036	1.5
76	MP3A	X	71.676	6.5
77	MP3A	Z	-41.382	6.5
78	MP3A	Mx	-.036	6.5
79	MP3B	X	71.676	1.5
80	MP3B	Z	-41.382	1.5
81	MP3B	Mx	.036	1.5
82	MP3B	X	71.676	6.5
83	MP3B	Z	-41.382	6.5
84	MP3B	Mx	.036	6.5
85	MP3C	X	87.652	1.5
86	MP3C	Z	-50.606	1.5
87	MP3C	Mx	0	1.5
88	MP3C	X	87.652	6.5
89	MP3C	Z	-50.606	6.5
90	MP3C	Mx	0	6.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	49.336	2
2	MP1A	Z	0	2
3	MP1A	Mx	-.025	2
4	MP1A	X	49.336	6
5	MP1A	Z	0	6
6	MP1A	Mx	-.025	6
7	MP1B	X	98.566	2
8	MP1B	Z	0	2
9	MP1B	Mx	.025	2
10	MP1B	X	98.566	6
11	MP1B	Z	0	6
12	MP1B	Mx	.025	6
13	MP1C	X	98.566	2
14	MP1C	Z	0	2
15	MP1C	Mx	.025	2
16	MP1C	X	98.566	6
17	MP1C	Z	0	6
18	MP1C	Mx	.025	6
19	MP4A	X	49.336	2
20	MP4A	Z	0	2
21	MP4A	Mx	-.025	2
22	MP4A	X	49.336	6
23	MP4A	Z	0	6
24	MP4A	Mx	-.025	6
25	MP4B	X	98.566	2
26	MP4B	Z	0	2
27	MP4B	Mx	.025	2
28	MP4B	X	98.566	6
29	MP4B	Z	0	6





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
30	MP4B	Mx	.025	6
31	MP4C	X	98.566	2
32	MP4C	Z	0	2
33	MP4C	Mx	.025	2
34	MP4C	X	98.566	6
35	MP4C	Z	0	6
36	MP4C	Mx	.025	6
37	MP2A	X	30.908	3.25
38	MP2A	Z	0	3.25
39	MP2A	Mx	-.015	3.25
40	MP2A	X	30.908	4.75
41	MP2A	Z	0	4.75
42	MP2A	Mx	-.015	4.75
43	MP2B	X	67.915	3.25
44	MP2B	Z	0	3.25
45	MP2B	Mx	.017	3.25
46	MP2B	X	67.915	4.75
47	MP2B	Z	0	4.75
48	MP2B	Mx	.017	4.75
49	MP2C	X	67.915	3.25
50	MP2C	Z	0	3.25
51	MP2C	Mx	.017	3.25
52	MP2C	X	67.915	4.75
53	MP2C	Z	0	4.75
54	MP2C	Mx	.017	4.75
55	MP1A	X	44.042	3
56	MP1A	Z	0	3
57	MP1A	Mx	.022	3
58	MP1B	X	60.24	3
59	MP1B	Z	0	3
60	MP1B	Mx	-.015	3
61	MP1C	X	60.24	3
62	MP1C	Z	0	3
63	MP1C	Mx	-.015	3
64	MP4A	X	53.994	3
65	MP4A	Z	0	3
66	MP4A	Mx	.027	3
67	MP4B	X	72.892	3
68	MP4B	Z	0	3
69	MP4B	Mx	-.018	3
70	MP4C	X	72.892	3
71	MP4C	Z	0	3
72	MP4C	Mx	-.018	3
73	MP3A	X	76.615	1.5
74	MP3A	Z	0	1.5
75	MP3A	Mx	-.038	1.5
76	MP3A	X	76.615	6.5
77	MP3A	Z	0	6.5
78	MP3A	Mx	-.038	6.5
79	MP3B	X	95.063	1.5
80	MP3B	Z	0	1.5
81	MP3B	Mx	.024	1.5
82	MP3B	X	95.063	6.5
83	MP3B	Z	0	6.5
84	MP3B	Mx	.024	6.5
85	MP3C	X	95.063	1.5
86	MP3C	Z	0	1.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
87	MP3C	Mx	.024	1.5
88	MP3C	X	95.063	6.5
89	MP3C	Z	0	6.5
90	MP3C	Mx	.024	6.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	56.937	2
2	MP1A	Z	32.873	2
3	MP1A	Mx	-.028	2
4	MP1A	X	56.937	6
5	MP1A	Z	32.873	6
6	MP1A	Mx	-.028	6
7	MP1B	X	99.572	2
8	MP1B	Z	57.488	2
9	MP1B	Mx	0	2
10	MP1B	X	99.572	6
11	MP1B	Z	57.488	6
12	MP1B	Mx	0	6
13	MP1C	X	56.937	2
14	MP1C	Z	32.873	2
15	MP1C	Mx	.028	2
16	MP1C	X	56.937	6
17	MP1C	Z	32.873	6
18	MP1C	Mx	.028	6
19	MP4A	X	56.937	2
20	MP4A	Z	32.873	2
21	MP4A	Mx	-.028	2
22	MP4A	X	56.937	6
23	MP4A	Z	32.873	6
24	MP4A	Mx	-.028	6
25	MP4B	X	99.572	2
26	MP4B	Z	57.488	2
27	MP4B	Mx	0	2
28	MP4B	X	99.572	6
29	MP4B	Z	57.488	6
30	MP4B	Mx	0	6
31	MP4C	X	56.937	2
32	MP4C	Z	32.873	2
33	MP4C	Mx	.028	2
34	MP4C	X	56.937	6
35	MP4C	Z	32.873	6
36	MP4C	Mx	.028	6
37	MP2A	X	37.45	3.25
38	MP2A	Z	21.622	3.25
39	MP2A	Mx	-.019	3.25
40	MP2A	X	37.45	4.75
41	MP2A	Z	21.622	4.75
42	MP2A	Mx	-.019	4.75
43	MP2B	X	69.498	3.25
44	MP2B	Z	40.125	3.25
45	MP2B	Mx	0	3.25
46	MP2B	X	69.498	4.75
47	MP2B	Z	40.125	4.75
48	MP2B	Mx	0	4.75
49	MP2C	X	37.45	3.25





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
50	MP2C	Z	21.622	3.25
51	MP2C	Mx	.019	3.25
52	MP2C	X	37.45	4.75
53	MP2C	Z	21.622	4.75
54	MP2C	Mx	.019	4.75
55	MP1A	X	42.818	3
56	MP1A	Z	24.721	3
57	MP1A	Mx	.021	3
58	MP1B	X	56.846	3
59	MP1B	Z	32.82	3
60	MP1B	Mx	0	3
61	MP1C	X	42.818	3
62	MP1C	Z	24.721	3
63	MP1C	Mx	-.021	3
64	MP4A	X	52.216	3
65	MP4A	Z	30.147	3
66	MP4A	Mx	.026	3
67	MP4B	X	68.582	3
68	MP4B	Z	39.596	3
69	MP4B	Mx	0	3
70	MP4C	X	52.216	3
71	MP4C	Z	30.147	3
72	MP4C	Mx	-.026	3
73	MP3A	X	71.676	1.5
74	MP3A	Z	41.382	1.5
75	MP3A	Mx	-.036	1.5
76	MP3A	X	71.676	6.5
77	MP3A	Z	41.382	6.5
78	MP3A	Mx	-.036	6.5
79	MP3B	X	87.652	1.5
80	MP3B	Z	50.606	1.5
81	MP3B	Mx	0	1.5
82	MP3B	X	87.652	6.5
83	MP3B	Z	50.606	6.5
84	MP3B	Mx	0	6.5
85	MP3C	X	71.676	1.5
86	MP3C	Z	41.382	1.5
87	MP3C	Mx	.036	1.5
88	MP3C	X	71.676	6.5
89	MP3C	Z	41.382	6.5
90	MP3C	Mx	.036	6.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP1A	X	49.283	2
2	MP1A	Z	85.36	2
3	MP1A	Mx	-.025	2
4	MP1A	X	49.283	6
5	MP1A	Z	85.36	6
6	MP1A	Mx	-.025	6
7	MP1B	X	49.283	2
8	MP1B	Z	85.36	2
9	MP1B	Mx	-.025	2
10	MP1B	X	49.283	6
11	MP1B	Z	85.36	6
12	MP1B	Mx	-.025	6





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
13	MP1C	X	24.668	2
14	MP1C	Z	42.726	2
15	MP1C	Mx	.025	2
16	MP1C	X	24.668	6
17	MP1C	Z	42.726	6
18	MP1C	Mx	.025	6
19	MP4A	X	49.283	2
20	MP4A	Z	85.36	2
21	MP4A	Mx	-.025	2
22	MP4A	X	49.283	6
23	MP4A	Z	85.36	6
24	MP4A	Mx	-.025	6
25	MP4B	X	49.283	2
26	MP4B	Z	85.36	2
27	MP4B	Mx	-.025	2
28	MP4B	X	49.283	6
29	MP4B	Z	85.36	6
30	MP4B	Mx	-.025	6
31	MP4C	X	24.668	2
32	MP4C	Z	42.726	2
33	MP4C	Mx	.025	2
34	MP4C	X	24.668	6
35	MP4C	Z	42.726	6
36	MP4C	Mx	.025	6
37	MP2A	X	33.957	3.25
38	MP2A	Z	58.816	3.25
39	MP2A	Mx	-.017	3.25
40	MP2A	X	33.957	4.75
41	MP2A	Z	58.816	4.75
42	MP2A	Mx	-.017	4.75
43	MP2B	X	33.957	3.25
44	MP2B	Z	58.816	3.25
45	MP2B	Mx	-.017	3.25
46	MP2B	X	33.957	4.75
47	MP2B	Z	58.816	4.75
48	MP2B	Mx	-.017	4.75
49	MP2C	X	15.454	3.25
50	MP2C	Z	26.767	3.25
51	MP2C	Mx	.015	3.25
52	MP2C	X	15.454	4.75
53	MP2C	Z	26.767	4.75
54	MP2C	Mx	.015	4.75
55	MP1A	X	30.12	3
56	MP1A	Z	52.17	3
57	MP1A	Mx	.015	3
58	MP1B	X	30.12	3
59	MP1B	Z	52.17	3
60	MP1B	Mx	.015	3
61	MP1C	X	22.021	3
62	MP1C	Z	38.142	3
63	MP1C	Mx	-.022	3
64	MP4A	X	36.446	3
65	MP4A	Z	63.126	3
66	MP4A	Mx	.018	3
67	MP4B	X	36.446	3
68	MP4B	Z	63.126	3
69	MP4B	Mx	.018	3



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
70	MP4C	X	26.997	3
71	MP4C	Z	46.76	3
72	MP4C	Mx	-.027	3
73	MP3A	X	47.531	1.5
74	MP3A	Z	82.327	1.5
75	MP3A	Mx	-.024	1.5
76	MP3A	X	47.531	6.5
77	MP3A	Z	82.327	6.5
78	MP3A	Mx	-.024	6.5
79	MP3B	X	47.531	1.5
80	MP3B	Z	82.327	1.5
81	MP3B	Mx	-.024	1.5
82	MP3B	X	47.531	6.5
83	MP3B	Z	82.327	6.5
84	MP3B	Mx	-.024	6.5
85	MP3C	X	38.307	1.5
86	MP3C	Z	66.35	1.5
87	MP3C	Mx	.038	1.5
88	MP3C	X	38.307	6.5
89	MP3C	Z	66.35	6.5
90	MP3C	Mx	.038	6.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP1A	X	0	2
2	MP1A	Z	114.975	2
3	MP1A	Mx	0	2
4	MP1A	X	0	6
5	MP1A	Z	114.975	6
6	MP1A	Mx	0	6
7	MP1B	X	0	2
8	MP1B	Z	65.746	2
9	MP1B	Mx	-.028	2
10	MP1B	X	0	6
11	MP1B	Z	65.746	6
12	MP1B	Mx	-.028	6
13	MP1C	X	0	2
14	MP1C	Z	65.746	2
15	MP1C	Mx	.028	2
16	MP1C	X	0	6
17	MP1C	Z	65.746	6
18	MP1C	Mx	.028	6
19	MP4A	X	0	2
20	MP4A	Z	114.975	2
21	MP4A	Mx	0	2
22	MP4A	X	0	6
23	MP4A	Z	114.975	6
24	MP4A	Mx	0	6
25	MP4B	X	0	2
26	MP4B	Z	65.746	2
27	MP4B	Mx	-.028	2
28	MP4B	X	0	6
29	MP4B	Z	65.746	6
30	MP4B	Mx	-.028	6
31	MP4C	X	0	2
32	MP4C	Z	65.746	2





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
33	MP4C	Mx	.028	2
34	MP4C	X	0	6
35	MP4C	Z	65.746	6
36	MP4C	Mx	.028	6
37	MP2A	X	0	3.25
38	MP2A	Z	80.25	3.25
39	MP2A	Mx	0	3.25
40	MP2A	X	0	4.75
41	MP2A	Z	80.25	4.75
42	MP2A	Mx	0	4.75
43	MP2B	X	0	3.25
44	MP2B	Z	43.244	3.25
45	MP2B	Mx	-.019	3.25
46	MP2B	X	0	4.75
47	MP2B	Z	43.244	4.75
48	MP2B	Mx	-.019	4.75
49	MP2C	X	0	3.25
50	MP2C	Z	43.244	3.25
51	MP2C	Mx	.019	3.25
52	MP2C	X	0	4.75
53	MP2C	Z	43.244	4.75
54	MP2C	Mx	.019	4.75
55	MP1A	X	0	3
56	MP1A	Z	65.64	3
57	MP1A	Mx	0	3
58	MP1B	X	0	3
59	MP1B	Z	49.442	3
60	MP1B	Mx	.021	3
61	MP1C	X	0	3
62	MP1C	Z	49.442	3
63	MP1C	Mx	-.021	3
64	MP4A	X	0	3
65	MP4A	Z	79.191	3
66	MP4A	Mx	0	3
67	MP4B	X	0	3
68	MP4B	Z	60.293	3
69	MP4B	Mx	.026	3
70	MP4C	X	0	3
71	MP4C	Z	60.293	3
72	MP4C	Mx	-.026	3
73	MP3A	X	0	1.5
74	MP3A	Z	101.212	1.5
75	MP3A	Mx	0	1.5
76	MP3A	X	0	6.5
77	MP3A	Z	101.212	6.5
78	MP3A	Mx	0	6.5
79	MP3B	X	0	1.5
80	MP3B	Z	82.764	1.5
81	MP3B	Mx	-.036	1.5
82	MP3B	X	0	6.5
83	MP3B	Z	82.764	6.5
84	MP3B	Mx	-.036	6.5
85	MP3C	X	0	1.5
86	MP3C	Z	82.764	1.5
87	MP3C	Mx	.036	1.5
88	MP3C	X	0	6.5
89	MP3C	Z	82.764	6.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
90	MP3C	Mx	.036	6.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-49.283	2
2	MP1A	Z	85.36	2
3	MP1A	Mx	.025	2
4	MP1A	X	-49.283	6
5	MP1A	Z	85.36	6
6	MP1A	Mx	.025	6
7	MP1B	X	-24.668	2
8	MP1B	Z	42.726	2
9	MP1B	Mx	-.025	2
10	MP1B	X	-24.668	6
11	MP1B	Z	42.726	6
12	MP1B	Mx	-.025	6
13	MP1C	X	-49.283	2
14	MP1C	Z	85.36	2
15	MP1C	Mx	.025	2
16	MP1C	X	-49.283	6
17	MP1C	Z	85.36	6
18	MP1C	Mx	.025	6
19	MP4A	X	-49.283	2
20	MP4A	Z	85.36	2
21	MP4A	Mx	.025	2
22	MP4A	X	-49.283	6
23	MP4A	Z	85.36	6
24	MP4A	Mx	.025	6
25	MP4B	X	-24.668	2
26	MP4B	Z	42.726	2
27	MP4B	Mx	-.025	2
28	MP4B	X	-24.668	6
29	MP4B	Z	42.726	6
30	MP4B	Mx	-.025	6
31	MP4C	X	-49.283	2
32	MP4C	Z	85.36	2
33	MP4C	Mx	.025	2
34	MP4C	X	-49.283	6
35	MP4C	Z	85.36	6
36	MP4C	Mx	.025	6
37	MP2A	X	-33.957	3.25
38	MP2A	Z	58.816	3.25
39	MP2A	Mx	.017	3.25
40	MP2A	X	-33.957	4.75
41	MP2A	Z	58.816	4.75
42	MP2A	Mx	.017	4.75
43	MP2B	X	-15.454	3.25
44	MP2B	Z	26.767	3.25
45	MP2B	Mx	-.015	3.25
46	MP2B	X	-15.454	4.75
47	MP2B	Z	26.767	4.75
48	MP2B	Mx	-.015	4.75
49	MP2C	X	-33.957	3.25
50	MP2C	Z	58.816	3.25
51	MP2C	Mx	.017	3.25
52	MP2C	X	-33.957	4.75





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
53	MP2C	Z	58.816	4.75
54	MP2C	Mx	.017	4.75
55	MP1A	X	-30.12	3
56	MP1A	Z	52.17	3
57	MP1A	Mx	-.015	3
58	MP1B	X	-22.021	3
59	MP1B	Z	38.142	3
60	MP1B	Mx	.022	3
61	MP1C	X	-30.12	3
62	MP1C	Z	52.17	3
63	MP1C	Mx	-.015	3
64	MP4A	X	-36.446	3
65	MP4A	Z	63.126	3
66	MP4A	Mx	-.018	3
67	MP4B	X	-26.997	3
68	MP4B	Z	46.76	3
69	MP4B	Mx	.027	3
70	MP4C	X	-36.446	3
71	MP4C	Z	63.126	3
72	MP4C	Mx	-.018	3
73	MP3A	X	-47.531	1.5
74	MP3A	Z	82.327	1.5
75	MP3A	Mx	.024	1.5
76	MP3A	X	-47.531	6.5
77	MP3A	Z	82.327	6.5
78	MP3A	Mx	.024	6.5
79	MP3B	X	-38.307	1.5
80	MP3B	Z	66.35	1.5
81	MP3B	Mx	-.038	1.5
82	MP3B	X	-38.307	6.5
83	MP3B	Z	66.35	6.5
84	MP3B	Mx	-.038	6.5
85	MP3C	X	-47.531	1.5
86	MP3C	Z	82.327	1.5
87	MP3C	Mx	.024	1.5
88	MP3C	X	-47.531	6.5
89	MP3C	Z	82.327	6.5
90	MP3C	Mx	.024	6.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-56.937	2
2	MP1A	Z	32.873	2
3	MP1A	Mx	.028	2
4	MP1A	X	-56.937	6
5	MP1A	Z	32.873	6
6	MP1A	Mx	.028	6
7	MP1B	X	-56.937	2
8	MP1B	Z	32.873	2
9	MP1B	Mx	-.028	2
10	MP1B	X	-56.937	6
11	MP1B	Z	32.873	6
12	MP1B	Mx	-.028	6
13	MP1C	X	-99.572	2
14	MP1C	Z	57.488	2
15	MP1C	Mx	0	2





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
16	MP1C	X	-99.572	6
17	MP1C	Z	57.488	6
18	MP1C	Mx	0	6
19	MP4A	X	-56.937	2
20	MP4A	Z	32.873	2
21	MP4A	Mx	.028	2
22	MP4A	X	-56.937	6
23	MP4A	Z	32.873	6
24	MP4A	Mx	.028	6
25	MP4B	X	-56.937	2
26	MP4B	Z	32.873	2
27	MP4B	Mx	-.028	2
28	MP4B	X	-56.937	6
29	MP4B	Z	32.873	6
30	MP4B	Mx	-.028	6
31	MP4C	X	-99.572	2
32	MP4C	Z	57.488	2
33	MP4C	Mx	0	2
34	MP4C	X	-99.572	6
35	MP4C	Z	57.488	6
36	MP4C	Mx	0	6
37	MP2A	X	-37.45	3.25
38	MP2A	Z	21.622	3.25
39	MP2A	Mx	.019	3.25
40	MP2A	X	-37.45	4.75
41	MP2A	Z	21.622	4.75
42	MP2A	Mx	.019	4.75
43	MP2B	X	-37.45	3.25
44	MP2B	Z	21.622	3.25
45	MP2B	Mx	-.019	3.25
46	MP2B	X	-37.45	4.75
47	MP2B	Z	21.622	4.75
48	MP2B	Mx	-.019	4.75
49	MP2C	X	-69.498	3.25
50	MP2C	Z	40.125	3.25
51	MP2C	Mx	0	3.25
52	MP2C	X	-69.498	4.75
53	MP2C	Z	40.125	4.75
54	MP2C	Mx	0	4.75
55	MP1A	X	-42.818	3
56	MP1A	Z	24.721	3
57	MP1A	Mx	-.021	3
58	MP1B	X	-42.818	3
59	MP1B	Z	24.721	3
60	MP1B	Mx	.021	3
61	MP1C	X	-56.846	3
62	MP1C	Z	32.82	3
63	MP1C	Mx	0	3
64	MP4A	X	-52.216	3
65	MP4A	Z	30.147	3
66	MP4A	Mx	-.026	3
67	MP4B	X	-52.216	3
68	MP4B	Z	30.147	3
69	MP4B	Mx	.026	3
70	MP4C	X	-68.582	3
71	MP4C	Z	39.596	3
72	MP4C	Mx	0	3



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
73	MP3A	X	-71.676	1.5
74	MP3A	Z	41.382	1.5
75	MP3A	Mx	.036	1.5
76	MP3A	X	-71.676	6.5
77	MP3A	Z	41.382	6.5
78	MP3A	Mx	.036	6.5
79	MP3B	X	-71.676	1.5
80	MP3B	Z	41.382	1.5
81	MP3B	Mx	-.036	1.5
82	MP3B	X	-71.676	6.5
83	MP3B	Z	41.382	6.5
84	MP3B	Mx	-.036	6.5
85	MP3C	X	-87.652	1.5
86	MP3C	Z	50.606	1.5
87	MP3C	Mx	0	1.5
88	MP3C	X	-87.652	6.5
89	MP3C	Z	50.606	6.5
90	MP3C	Mx	0	6.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-49.336	2
2	MP1A	Z	0	2
3	MP1A	Mx	.025	2
4	MP1A	X	-49.336	6
5	MP1A	Z	0	6
6	MP1A	Mx	.025	6
7	MP1B	X	-98.566	2
8	MP1B	Z	0	2
9	MP1B	Mx	-.025	2
10	MP1B	X	-98.566	6
11	MP1B	Z	0	6
12	MP1B	Mx	-.025	6
13	MP1C	X	-98.566	2
14	MP1C	Z	0	2
15	MP1C	Mx	-.025	2
16	MP1C	X	-98.566	6
17	MP1C	Z	0	6
18	MP1C	Mx	-.025	6
19	MP4A	X	-49.336	2
20	MP4A	Z	0	2
21	MP4A	Mx	.025	2
22	MP4A	X	-49.336	6
23	MP4A	Z	0	6
24	MP4A	Mx	.025	6
25	MP4B	X	-98.566	2
26	MP4B	Z	0	2
27	MP4B	Mx	-.025	2
28	MP4B	X	-98.566	6
29	MP4B	Z	0	6
30	MP4B	Mx	-.025	6
31	MP4C	X	-98.566	2
32	MP4C	Z	0	2
33	MP4C	Mx	-.025	2
34	MP4C	X	-98.566	6
35	MP4C	Z	0	6





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
36	MP4C	Mx	-.025	6
37	MP2A	X	-30.908	3.25
38	MP2A	Z	0	3.25
39	MP2A	Mx	.015	3.25
40	MP2A	X	-30.908	4.75
41	MP2A	Z	0	4.75
42	MP2A	Mx	.015	4.75
43	MP2B	X	-67.915	3.25
44	MP2B	Z	0	3.25
45	MP2B	Mx	-.017	3.25
46	MP2B	X	-67.915	4.75
47	MP2B	Z	0	4.75
48	MP2B	Mx	-.017	4.75
49	MP2C	X	-67.915	3.25
50	MP2C	Z	0	3.25
51	MP2C	Mx	-.017	3.25
52	MP2C	X	-67.915	4.75
53	MP2C	Z	0	4.75
54	MP2C	Mx	-.017	4.75
55	MP1A	X	-44.042	3
56	MP1A	Z	0	3
57	MP1A	Mx	-.022	3
58	MP1B	X	-60.24	3
59	MP1B	Z	0	3
60	MP1B	Mx	.015	3
61	MP1C	X	-60.24	3
62	MP1C	Z	0	3
63	MP1C	Mx	.015	3
64	MP4A	X	-53.994	3
65	MP4A	Z	0	3
66	MP4A	Mx	-.027	3
67	MP4B	X	-72.892	3
68	MP4B	Z	0	3
69	MP4B	Mx	.018	3
70	MP4C	X	-72.892	3
71	MP4C	Z	0	3
72	MP4C	Mx	.018	3
73	MP3A	X	-76.615	1.5
74	MP3A	Z	0	1.5
75	MP3A	Mx	.038	1.5
76	MP3A	X	-76.615	6.5
77	MP3A	Z	0	6.5
78	MP3A	Mx	.038	6.5
79	MP3B	X	-95.063	1.5
80	MP3B	Z	0	1.5
81	MP3B	Mx	-.024	1.5
82	MP3B	X	-95.063	6.5
83	MP3B	Z	0	6.5
84	MP3B	Mx	-.024	6.5
85	MP3C	X	-95.063	1.5
86	MP3C	Z	0	1.5
87	MP3C	Mx	-.024	1.5
88	MP3C	X	-95.063	6.5
89	MP3C	Z	0	6.5
90	MP3C	Mx	-.024	6.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-56.937	2
2	MP1A	Z	-32.873	2
3	MP1A	Mx	.028	2
4	MP1A	X	-56.937	6
5	MP1A	Z	-32.873	6
6	MP1A	Mx	.028	6
7	MP1B	X	-99.572	2
8	MP1B	Z	-57.488	2
9	MP1B	Mx	0	2
10	MP1B	X	-99.572	6
11	MP1B	Z	-57.488	6
12	MP1B	Mx	0	6
13	MP1C	X	-56.937	2
14	MP1C	Z	-32.873	2
15	MP1C	Mx	-.028	2
16	MP1C	X	-56.937	6
17	MP1C	Z	-32.873	6
18	MP1C	Mx	-.028	6
19	MP4A	X	-56.937	2
20	MP4A	Z	-32.873	2
21	MP4A	Mx	.028	2
22	MP4A	X	-56.937	6
23	MP4A	Z	-32.873	6
24	MP4A	Mx	.028	6
25	MP4B	X	-99.572	2
26	MP4B	Z	-57.488	2
27	MP4B	Mx	0	2
28	MP4B	X	-99.572	6
29	MP4B	Z	-57.488	6
30	MP4B	Mx	0	6
31	MP4C	X	-56.937	2
32	MP4C	Z	-32.873	2
33	MP4C	Mx	-.028	2
34	MP4C	X	-56.937	6
35	MP4C	Z	-32.873	6
36	MP4C	Mx	-.028	6
37	MP2A	X	-37.45	3.25
38	MP2A	Z	-21.622	3.25
39	MP2A	Mx	.019	3.25
40	MP2A	X	-37.45	4.75
41	MP2A	Z	-21.622	4.75
42	MP2A	Mx	.019	4.75
43	MP2B	X	-69.498	3.25
44	MP2B	Z	-40.125	3.25
45	MP2B	Mx	0	3.25
46	MP2B	X	-69.498	4.75
47	MP2B	Z	-40.125	4.75
48	MP2B	Mx	0	4.75
49	MP2C	X	-37.45	3.25
50	MP2C	Z	-21.622	3.25
51	MP2C	Mx	-.019	3.25
52	MP2C	X	-37.45	4.75
53	MP2C	Z	-21.622	4.75
54	MP2C	Mx	-.019	4.75
55	MP1A	X	-42.818	3
56	MP1A	Z	-24.721	3
57	MP1A	Mx	-.021	3





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
58	MP1B	X	-56.846	3
59	MP1B	Z	-32.82	3
60	MP1B	Mx	0	3
61	MP1C	X	-42.818	3
62	MP1C	Z	-24.721	3
63	MP1C	Mx	.021	3
64	MP4A	X	-52.216	3
65	MP4A	Z	-30.147	3
66	MP4A	Mx	-.026	3
67	MP4B	X	-68.582	3
68	MP4B	Z	-39.596	3
69	MP4B	Mx	0	3
70	MP4C	X	-52.216	3
71	MP4C	Z	-30.147	3
72	MP4C	Mx	.026	3
73	MP3A	X	-71.676	1.5
74	MP3A	Z	-41.382	1.5
75	MP3A	Mx	.036	1.5
76	MP3A	X	-71.676	6.5
77	MP3A	Z	-41.382	6.5
78	MP3A	Mx	.036	6.5
79	MP3B	X	-87.652	1.5
80	MP3B	Z	-50.606	1.5
81	MP3B	Mx	0	1.5
82	MP3B	X	-87.652	6.5
83	MP3B	Z	-50.606	6.5
84	MP3B	Mx	0	6.5
85	MP3C	X	-71.676	1.5
86	MP3C	Z	-41.382	1.5
87	MP3C	Mx	-.036	1.5
88	MP3C	X	-71.676	6.5
89	MP3C	Z	-41.382	6.5
90	MP3C	Mx	-.036	6.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-49.283	2
2	MP1A	Z	-85.36	2
3	MP1A	Mx	.025	2
4	MP1A	X	-49.283	6
5	MP1A	Z	-85.36	6
6	MP1A	Mx	.025	6
7	MP1B	X	-49.283	2
8	MP1B	Z	-85.36	2
9	MP1B	Mx	.025	2
10	MP1B	X	-49.283	6
11	MP1B	Z	-85.36	6
12	MP1B	Mx	.025	6
13	MP1C	X	-24.668	2
14	MP1C	Z	-42.726	2
15	MP1C	Mx	-.025	2
16	MP1C	X	-24.668	6
17	MP1C	Z	-42.726	6
18	MP1C	Mx	-.025	6
19	MP4A	X	-49.283	2
20	MP4A	Z	-85.36	2



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
21	MP4A	Mx	.025	2
22	MP4A	X	-49.283	6
23	MP4A	Z	-85.36	6
24	MP4A	Mx	.025	6
25	MP4B	X	-49.283	2
26	MP4B	Z	-85.36	2
27	MP4B	Mx	.025	2
28	MP4B	X	-49.283	6
29	MP4B	Z	-85.36	6
30	MP4B	Mx	.025	6
31	MP4C	X	-24.668	2
32	MP4C	Z	-42.726	2
33	MP4C	Mx	-.025	2
34	MP4C	X	-24.668	6
35	MP4C	Z	-42.726	6
36	MP4C	Mx	-.025	6
37	MP2A	X	-33.957	3.25
38	MP2A	Z	-58.816	3.25
39	MP2A	Mx	.017	3.25
40	MP2A	X	-33.957	4.75
41	MP2A	Z	-58.816	4.75
42	MP2A	Mx	.017	4.75
43	MP2B	X	-33.957	3.25
44	MP2B	Z	-58.816	3.25
45	MP2B	Mx	.017	3.25
46	MP2B	X	-33.957	4.75
47	MP2B	Z	-58.816	4.75
48	MP2B	Mx	.017	4.75
49	MP2C	X	-15.454	3.25
50	MP2C	Z	-26.767	3.25
51	MP2C	Mx	-.015	3.25
52	MP2C	X	-15.454	4.75
53	MP2C	Z	-26.767	4.75
54	MP2C	Mx	-.015	4.75
55	MP1A	X	-30.12	3
56	MP1A	Z	-52.17	3
57	MP1A	Mx	-.015	3
58	MP1B	X	-30.12	3
59	MP1B	Z	-52.17	3
60	MP1B	Mx	-.015	3
61	MP1C	X	-22.021	3
62	MP1C	Z	-38.142	3
63	MP1C	Mx	.022	3
64	MP4A	X	-36.446	3
65	MP4A	Z	-63.126	3
66	MP4A	Mx	-.018	3
67	MP4B	X	-36.446	3
68	MP4B	Z	-63.126	3
69	MP4B	Mx	-.018	3
70	MP4C	X	-26.997	3
71	MP4C	Z	-46.76	3
72	MP4C	Mx	.027	3
73	MP3A	X	-47.531	1.5
74	MP3A	Z	-82.327	1.5
75	MP3A	Mx	.024	1.5
76	MP3A	X	-47.531	6.5
77	MP3A	Z	-82.327	6.5





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
78	MP3A	Mx	.024	6.5
79	MP3B	X	-47.531	1.5
80	MP3B	Z	-82.327	1.5
81	MP3B	Mx	.024	1.5
82	MP3B	X	-47.531	6.5
83	MP3B	Z	-82.327	6.5
84	MP3B	Mx	.024	6.5
85	MP3C	X	-38.307	1.5
86	MP3C	Z	-66.35	1.5
87	MP3C	Mx	-.038	1.5
88	MP3C	X	-38.307	6.5
89	MP3C	Z	-66.35	6.5
90	MP3C	Mx	-.038	6.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	0	2
2	MP1A	Z	-27.987	2
3	MP1A	Mx	0	2
4	MP1A	X	0	6
5	MP1A	Z	-27.987	6
6	MP1A	Mx	0	6
7	MP1B	X	0	2
8	MP1B	Z	-21.485	2
9	MP1B	Mx	.009	2
10	MP1B	X	0	6
11	MP1B	Z	-21.485	6
12	MP1B	Mx	.009	6
13	MP1C	X	0	2
14	MP1C	Z	-21.485	2
15	MP1C	Mx	-.009	2
16	MP1C	X	0	6
17	MP1C	Z	-21.485	6
18	MP1C	Mx	-.009	6
19	MP4A	X	0	2
20	MP4A	Z	-27.987	2
21	MP4A	Mx	0	2
22	MP4A	X	0	6
23	MP4A	Z	-27.987	6
24	MP4A	Mx	0	6
25	MP4B	X	0	2
26	MP4B	Z	-21.485	2
27	MP4B	Mx	.009	2
28	MP4B	X	0	6
29	MP4B	Z	-21.485	6
30	MP4B	Mx	.009	6
31	MP4C	X	0	2
32	MP4C	Z	-21.485	2
33	MP4C	Mx	-.009	2
34	MP4C	X	0	6
35	MP4C	Z	-21.485	6
36	MP4C	Mx	-.009	6
37	MP2A	X	0	3.25
38	MP2A	Z	-13.614	3.25
39	MP2A	Mx	0	3.25
40	MP2A	X	0	4.75



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
41	MP2A	Z	-13.614	4.75
42	MP2A	Mx	0	4.75
43	MP2B	X	0	3.25
44	MP2B	Z	-7.725	3.25
45	MP2B	Mx	.003	3.25
46	MP2B	X	0	4.75
47	MP2B	Z	-7.725	4.75
48	MP2B	Mx	.003	4.75
49	MP2C	X	0	3.25
50	MP2C	Z	-7.725	3.25
51	MP2C	Mx	-.003	3.25
52	MP2C	X	0	4.75
53	MP2C	Z	-7.725	4.75
54	MP2C	Mx	-.003	4.75
55	MP1A	X	0	3
56	MP1A	Z	-14.078	3
57	MP1A	Mx	0	3
58	MP1B	X	0	3
59	MP1B	Z	-10.871	3
60	MP1B	Mx	-.005	3
61	MP1C	X	0	3
62	MP1C	Z	-10.871	3
63	MP1C	Mx	.005	3
64	MP4A	X	0	3
65	MP4A	Z	-14.078	3
66	MP4A	Mx	0	3
67	MP4B	X	0	3
68	MP4B	Z	-10.999	3
69	MP4B	Mx	-.005	3
70	MP4C	X	0	3
71	MP4C	Z	-10.999	3
72	MP4C	Mx	.005	3
73	MP3A	X	0	1.5
74	MP3A	Z	-17.534	1.5
75	MP3A	Mx	0	1.5
76	MP3A	X	0	6.5
77	MP3A	Z	-17.534	6.5
78	MP3A	Mx	0	6.5
79	MP3B	X	0	1.5
80	MP3B	Z	-14.644	1.5
81	MP3B	Mx	.006	1.5
82	MP3B	X	0	6.5
83	MP3B	Z	-14.644	6.5
84	MP3B	Mx	.006	6.5
85	MP3C	X	0	1.5
86	MP3C	Z	-14.644	1.5
87	MP3C	Mx	-.006	1.5
88	MP3C	X	0	6.5
89	MP3C	Z	-14.644	6.5
90	MP3C	Mx	-.006	6.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	12.91	2
2	MP1A	Z	-22.36	2
3	MP1A	Mx	-.006	2





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

	Member Label	Direction	Magnitude(lb.k-ft)	Location(ft.%)
4	MP1A	X	12.91	6
5	MP1A	Z	-22.36	6
6	MP1A	Mx	-.006	6
7	MP1B	X	9.659	2
8	MP1B	Z	-16.73	2
9	MP1B	Mx	.01	2
10	MP1B	X	9.659	6
11	MP1B	Z	-16.73	6
12	MP1B	Mx	.01	6
13	MP1C	X	12.91	2
14	MP1C	Z	-22.36	2
15	MP1C	Mx	-.006	2
16	MP1C	X	12.91	6
17	MP1C	Z	-22.36	6
18	MP1C	Mx	-.006	6
19	MP4A	X	12.91	2
20	MP4A	Z	-22.36	2
21	MP4A	Mx	-.006	2
22	MP4A	X	12.91	6
23	MP4A	Z	-22.36	6
24	MP4A	Mx	-.006	6
25	MP4B	X	9.659	2
26	MP4B	Z	-16.73	2
27	MP4B	Mx	.01	2
28	MP4B	X	9.659	6
29	MP4B	Z	-16.73	6
30	MP4B	Mx	.01	6
31	MP4C	X	12.91	2
32	MP4C	Z	-22.36	2
33	MP4C	Mx	-.006	2
34	MP4C	X	12.91	6
35	MP4C	Z	-22.36	6
36	MP4C	Mx	-.006	6
37	MP2A	X	5.826	3.25
38	MP2A	Z	-10.09	3.25
39	MP2A	Mx	-.003	3.25
40	MP2A	X	5.826	4.75
41	MP2A	Z	-10.09	4.75
42	MP2A	Mx	-.003	4.75
43	MP2B	X	2.881	3.25
44	MP2B	Z	-4.99	3.25
45	MP2B	Mx	.003	3.25
46	MP2B	X	2.881	4.75
47	MP2B	Z	-4.99	4.75
48	MP2B	Mx	.003	4.75
49	MP2C	X	5.826	3.25
50	MP2C	Z	-10.09	3.25
51	MP2C	Mx	-.003	3.25
52	MP2C	X	5.826	4.75
53	MP2C	Z	-10.09	4.75
54	MP2C	Mx	-.003	4.75
55	MP1A	X	6.504	3
56	MP1A	Z	-11.266	3
57	MP1A	Mx	.003	3
58	MP1B	X	4.901	3
59	MP1B	Z	-8.489	3
60	MP1B	Mx	-.005	3



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
61	MP1C	X	6.504	3
62	MP1C	Z	-11.266	3
63	MP1C	Mx	.003	3
64	MP4A	X	6.526	3
65	MP4A	Z	-11.303	3
66	MP4A	Mx	.003	3
67	MP4B	X	4.987	3
68	MP4B	Z	-8.637	3
69	MP4B	Mx	-.005	3
70	MP4C	X	6.526	3
71	MP4C	Z	-11.303	3
72	MP4C	Mx	.003	3
73	MP3A	X	8.285	1.5
74	MP3A	Z	-14.351	1.5
75	MP3A	Mx	-.004	1.5
76	MP3A	X	8.285	6.5
77	MP3A	Z	-14.351	6.5
78	MP3A	Mx	-.004	6.5
79	MP3B	X	6.84	1.5
80	MP3B	Z	-11.847	1.5
81	MP3B	Mx	.007	1.5
82	MP3B	X	6.84	6.5
83	MP3B	Z	-11.847	6.5
84	MP3B	Mx	.007	6.5
85	MP3C	X	8.285	1.5
86	MP3C	Z	-14.351	1.5
87	MP3C	Mx	-.004	1.5
88	MP3C	X	8.285	6.5
89	MP3C	Z	-14.351	6.5
90	MP3C	Mx	-.004	6.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP1A	X	18.607	2
2	MP1A	Z	-10.743	2
3	MP1A	Mx	-.009	2
4	MP1A	X	18.607	6
5	MP1A	Z	-10.743	6
6	MP1A	Mx	-.009	6
7	MP1B	X	18.607	2
8	MP1B	Z	-10.743	2
9	MP1B	Mx	.009	2
10	MP1B	X	18.607	6
11	MP1B	Z	-10.743	6
12	MP1B	Mx	.009	6
13	MP1C	X	24.237	2
14	MP1C	Z	-13.993	2
15	MP1C	Mx	0	2
16	MP1C	X	24.237	6
17	MP1C	Z	-13.993	6
18	MP1C	Mx	0	6
19	MP4A	X	18.607	2
20	MP4A	Z	-10.743	2
21	MP4A	Mx	-.009	2
22	MP4A	X	18.607	6
23	MP4A	Z	-10.743	6





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
24	MP4A	Mx	-0.009	6
25	MP4B	X	18.607	2
26	MP4B	Z	-10.743	2
27	MP4B	Mx	.009	2
28	MP4B	X	18.607	6
29	MP4B	Z	-10.743	6
30	MP4B	Mx	.009	6
31	MP4C	X	24.237	2
32	MP4C	Z	-13.993	2
33	MP4C	Mx	0	2
34	MP4C	X	24.237	6
35	MP4C	Z	-13.993	6
36	MP4C	Mx	0	6
37	MP2A	X	6.69	3.25
38	MP2A	Z	-3.863	3.25
39	MP2A	Mx	-0.003	3.25
40	MP2A	X	6.69	4.75
41	MP2A	Z	-3.863	4.75
42	MP2A	Mx	-0.003	4.75
43	MP2B	X	6.69	3.25
44	MP2B	Z	-3.863	3.25
45	MP2B	Mx	.003	3.25
46	MP2B	X	6.69	4.75
47	MP2B	Z	-3.863	4.75
48	MP2B	Mx	.003	4.75
49	MP2C	X	11.79	3.25
50	MP2C	Z	-6.807	3.25
51	MP2C	Mx	0	3.25
52	MP2C	X	11.79	4.75
53	MP2C	Z	-6.807	4.75
54	MP2C	Mx	0	4.75
55	MP1A	X	9.415	3
56	MP1A	Z	-5.436	3
57	MP1A	Mx	.005	3
58	MP1B	X	9.415	3
59	MP1B	Z	-5.436	3
60	MP1B	Mx	-.005	3
61	MP1C	X	12.192	3
62	MP1C	Z	-7.039	3
63	MP1C	Mx	0	3
64	MP4A	X	9.526	3
65	MP4A	Z	-5.5	3
66	MP4A	Mx	.005	3
67	MP4B	X	9.526	3
68	MP4B	Z	-5.5	3
69	MP4B	Mx	-.005	3
70	MP4C	X	12.192	3
71	MP4C	Z	-7.039	3
72	MP4C	Mx	0	3
73	MP3A	X	12.682	1.5
74	MP3A	Z	-7.322	1.5
75	MP3A	Mx	-.006	1.5
76	MP3A	X	12.682	6.5
77	MP3A	Z	-7.322	6.5
78	MP3A	Mx	-.006	6.5
79	MP3B	X	12.682	1.5
80	MP3B	Z	-7.322	1.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
81	MP3B	Mx	.006	1.5
82	MP3B	X	12.682	6.5
83	MP3B	Z	-7.322	6.5
84	MP3B	Mx	.006	6.5
85	MP3C	X	15.185	1.5
86	MP3C	Z	-8.767	1.5
87	MP3C	Mx	0	1.5
88	MP3C	X	15.185	6.5
89	MP3C	Z	-8.767	6.5
90	MP3C	Mx	0	6.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	19.318	2
2	MP1A	Z	0	2
3	MP1A	Mx	-.01	2
4	MP1A	X	19.318	6
5	MP1A	Z	0	6
6	MP1A	Mx	-.01	6
7	MP1B	X	25.82	2
8	MP1B	Z	0	2
9	MP1B	Mx	.006	2
10	MP1B	X	25.82	6
11	MP1B	Z	0	6
12	MP1B	Mx	.006	6
13	MP1C	X	25.82	2
14	MP1C	Z	0	2
15	MP1C	Mx	.006	2
16	MP1C	X	25.82	6
17	MP1C	Z	0	6
18	MP1C	Mx	.006	6
19	MP4A	X	19.318	2
20	MP4A	Z	0	2
21	MP4A	Mx	-.01	2
22	MP4A	X	19.318	6
23	MP4A	Z	0	6
24	MP4A	Mx	-.01	6
25	MP4B	X	25.82	2
26	MP4B	Z	0	2
27	MP4B	Mx	.006	2
28	MP4B	X	25.82	6
29	MP4B	Z	0	6
30	MP4B	Mx	.006	6
31	MP4C	X	25.82	2
32	MP4C	Z	0	2
33	MP4C	Mx	.006	2
34	MP4C	X	25.82	6
35	MP4C	Z	0	6
36	MP4C	Mx	.006	6
37	MP2A	X	5.762	3.25
38	MP2A	Z	0	3.25
39	MP2A	Mx	-.003	3.25
40	MP2A	X	5.762	4.75
41	MP2A	Z	0	4.75
42	MP2A	Mx	-.003	4.75
43	MP2B	X	11.651	3.25





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
44	MP2B	Z	0	3.25
45	MP2B	Mx	.003	3.25
46	MP2B	X	11.651	4.75
47	MP2B	Z	0	4.75
48	MP2B	Mx	.003	4.75
49	MP2C	X	11.651	3.25
50	MP2C	Z	0	3.25
51	MP2C	Mx	.003	3.25
52	MP2C	X	11.651	4.75
53	MP2C	Z	0	4.75
54	MP2C	Mx	.003	4.75
55	MP1A	X	9.802	3
56	MP1A	Z	0	3
57	MP1A	Mx	.005	3
58	MP1B	X	13.009	3
59	MP1B	Z	0	3
60	MP1B	Mx	-.003	3
61	MP1C	X	13.009	3
62	MP1C	Z	0	3
63	MP1C	Mx	-.003	3
64	MP4A	X	9.973	3
65	MP4A	Z	0	3
66	MP4A	Mx	.005	3
67	MP4B	X	13.052	3
68	MP4B	Z	0	3
69	MP4B	Mx	-.003	3
70	MP4C	X	13.052	3
71	MP4C	Z	0	3
72	MP4C	Mx	-.003	3
73	MP3A	X	13.68	1.5
74	MP3A	Z	0	1.5
75	MP3A	Mx	-.007	1.5
76	MP3A	X	13.68	6.5
77	MP3A	Z	0	6.5
78	MP3A	Mx	-.007	6.5
79	MP3B	X	16.571	1.5
80	MP3B	Z	0	1.5
81	MP3B	Mx	.004	1.5
82	MP3B	X	16.571	6.5
83	MP3B	Z	0	6.5
84	MP3B	Mx	.004	6.5
85	MP3C	X	16.571	1.5
86	MP3C	Z	0	1.5
87	MP3C	Mx	.004	1.5
88	MP3C	X	16.571	6.5
89	MP3C	Z	0	6.5
90	MP3C	Mx	.004	6.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	18.607	2
2	MP1A	Z	10.743	2
3	MP1A	Mx	-.009	2
4	MP1A	X	18.607	6
5	MP1A	Z	10.743	6
6	MP1A	Mx	-.009	6



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
7	MP1B	X	24.237	2
8	MP1B	Z	13.993	2
9	MP1B	Mx	0	2
10	MP1B	X	24.237	6
11	MP1B	Z	13.993	6
12	MP1B	Mx	0	6
13	MP1C	X	18.607	2
14	MP1C	Z	10.743	2
15	MP1C	Mx	.009	2
16	MP1C	X	18.607	6
17	MP1C	Z	10.743	6
18	MP1C	Mx	.009	6
19	MP4A	X	18.607	2
20	MP4A	Z	10.743	2
21	MP4A	Mx	-.009	2
22	MP4A	X	18.607	6
23	MP4A	Z	10.743	6
24	MP4A	Mx	-.009	6
25	MP4B	X	24.237	2
26	MP4B	Z	13.993	2
27	MP4B	Mx	0	2
28	MP4B	X	24.237	6
29	MP4B	Z	13.993	6
30	MP4B	Mx	0	6
31	MP4C	X	18.607	2
32	MP4C	Z	10.743	2
33	MP4C	Mx	.009	2
34	MP4C	X	18.607	6
35	MP4C	Z	10.743	6
36	MP4C	Mx	.009	6
37	MP2A	X	6.69	3.25
38	MP2A	Z	3.863	3.25
39	MP2A	Mx	-.003	3.25
40	MP2A	X	6.69	4.75
41	MP2A	Z	3.863	4.75
42	MP2A	Mx	-.003	4.75
43	MP2B	X	11.79	3.25
44	MP2B	Z	6.807	3.25
45	MP2B	Mx	0	3.25
46	MP2B	X	11.79	4.75
47	MP2B	Z	6.807	4.75
48	MP2B	Mx	0	4.75
49	MP2C	X	6.69	3.25
50	MP2C	Z	3.863	3.25
51	MP2C	Mx	.003	3.25
52	MP2C	X	6.69	4.75
53	MP2C	Z	3.863	4.75
54	MP2C	Mx	.003	4.75
55	MP1A	X	9.415	3
56	MP1A	Z	5.436	3
57	MP1A	Mx	.005	3
58	MP1B	X	12.192	3
59	MP1B	Z	7.039	3
60	MP1B	Mx	0	3
61	MP1C	X	9.415	3
62	MP1C	Z	5.436	3
63	MP1C	Mx	-.005	3





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
64	MP4A	X	9.526	3
65	MP4A	Z	5.5	3
66	MP4A	Mx	.005	3
67	MP4B	X	12.192	3
68	MP4B	Z	7.039	3
69	MP4B	Mx	0	3
70	MP4C	X	9.526	3
71	MP4C	Z	5.5	3
72	MP4C	Mx	-.005	3
73	MP3A	X	12.682	1.5
74	MP3A	Z	7.322	1.5
75	MP3A	Mx	-.006	1.5
76	MP3A	X	12.682	6.5
77	MP3A	Z	7.322	6.5
78	MP3A	Mx	-.006	6.5
79	MP3B	X	15.185	1.5
80	MP3B	Z	8.767	1.5
81	MP3B	Mx	0	1.5
82	MP3B	X	15.185	6.5
83	MP3B	Z	8.767	6.5
84	MP3B	Mx	0	6.5
85	MP3C	X	12.682	1.5
86	MP3C	Z	7.322	1.5
87	MP3C	Mx	.006	1.5
88	MP3C	X	12.682	6.5
89	MP3C	Z	7.322	6.5
90	MP3C	Mx	.006	6.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP1A	X	12.91	2
2	MP1A	Z	22.36	2
3	MP1A	Mx	-.006	2
4	MP1A	X	12.91	6
5	MP1A	Z	22.36	6
6	MP1A	Mx	-.006	6
7	MP1B	X	12.91	2
8	MP1B	Z	22.36	2
9	MP1B	Mx	-.006	2
10	MP1B	X	12.91	6
11	MP1B	Z	22.36	6
12	MP1B	Mx	-.006	6
13	MP1C	X	9.659	2
14	MP1C	Z	16.73	2
15	MP1C	Mx	.01	2
16	MP1C	X	9.659	6
17	MP1C	Z	16.73	6
18	MP1C	Mx	.01	6
19	MP4A	X	12.91	2
20	MP4A	Z	22.36	2
21	MP4A	Mx	-.006	2
22	MP4A	X	12.91	6
23	MP4A	Z	22.36	6
24	MP4A	Mx	-.006	6
25	MP4B	X	12.91	2
26	MP4B	Z	22.36	2



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
27	MP4B	Mx	-.006	2
28	MP4B	X	12.91	6
29	MP4B	Z	22.36	6
30	MP4B	Mx	-.006	6
31	MP4C	X	9.659	2
32	MP4C	Z	16.73	2
33	MP4C	Mx	.01	2
34	MP4C	X	9.659	6
35	MP4C	Z	16.73	6
36	MP4C	Mx	.01	6
37	MP2A	X	5.826	3.25
38	MP2A	Z	10.09	3.25
39	MP2A	Mx	-.003	3.25
40	MP2A	X	5.826	4.75
41	MP2A	Z	10.09	4.75
42	MP2A	Mx	-.003	4.75
43	MP2B	X	5.826	3.25
44	MP2B	Z	10.09	3.25
45	MP2B	Mx	-.003	3.25
46	MP2B	X	5.826	4.75
47	MP2B	Z	10.09	4.75
48	MP2B	Mx	-.003	4.75
49	MP2C	X	2.881	3.25
50	MP2C	Z	4.99	3.25
51	MP2C	Mx	.003	3.25
52	MP2C	X	2.881	4.75
53	MP2C	Z	4.99	4.75
54	MP2C	Mx	.003	4.75
55	MP1A	X	6.504	3
56	MP1A	Z	11.266	3
57	MP1A	Mx	.003	3
58	MP1B	X	6.504	3
59	MP1B	Z	11.266	3
60	MP1B	Mx	.003	3
61	MP1C	X	4.901	3
62	MP1C	Z	8.489	3
63	MP1C	Mx	-.005	3
64	MP4A	X	6.526	3
65	MP4A	Z	11.303	3
66	MP4A	Mx	.003	3
67	MP4B	X	6.526	3
68	MP4B	Z	11.303	3
69	MP4B	Mx	.003	3
70	MP4C	X	4.987	3
71	MP4C	Z	8.637	3
72	MP4C	Mx	-.005	3
73	MP3A	X	8.285	1.5
74	MP3A	Z	14.351	1.5
75	MP3A	Mx	-.004	1.5
76	MP3A	X	8.285	6.5
77	MP3A	Z	14.351	6.5
78	MP3A	Mx	-.004	6.5
79	MP3B	X	8.285	1.5
80	MP3B	Z	14.351	1.5
81	MP3B	Mx	-.004	1.5
82	MP3B	X	8.285	6.5
83	MP3B	Z	14.351	6.5





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
84	MP3B	Mx	-.004	6.5
85	MP3C	X	6.84	1.5
86	MP3C	Z	11.847	1.5
87	MP3C	Mx	.007	1.5
88	MP3C	X	6.84	6.5
89	MP3C	Z	11.847	6.5
90	MP3C	Mx	.007	6.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	0	2
2	MP1A	Z	27.987	2
3	MP1A	Mx	0	2
4	MP1A	X	0	6
5	MP1A	Z	27.987	6
6	MP1A	Mx	0	6
7	MP1B	X	0	2
8	MP1B	Z	21.485	2
9	MP1B	Mx	-.009	2
10	MP1B	X	0	6
11	MP1B	Z	21.485	6
12	MP1B	Mx	-.009	6
13	MP1C	X	0	2
14	MP1C	Z	21.485	2
15	MP1C	Mx	.009	2
16	MP1C	X	0	6
17	MP1C	Z	21.485	6
18	MP1C	Mx	.009	6
19	MP4A	X	0	2
20	MP4A	Z	27.987	2
21	MP4A	Mx	0	2
22	MP4A	X	0	6
23	MP4A	Z	27.987	6
24	MP4A	Mx	0	6
25	MP4B	X	0	2
26	MP4B	Z	21.485	2
27	MP4B	Mx	-.009	2
28	MP4B	X	0	6
29	MP4B	Z	21.485	6
30	MP4B	Mx	-.009	6
31	MP4C	X	0	2
32	MP4C	Z	21.485	2
33	MP4C	Mx	.009	2
34	MP4C	X	0	6
35	MP4C	Z	21.485	6
36	MP4C	Mx	.009	6
37	MP2A	X	0	3.25
38	MP2A	Z	13.614	3.25
39	MP2A	Mx	0	3.25
40	MP2A	X	0	4.75
41	MP2A	Z	13.614	4.75
42	MP2A	Mx	0	4.75
43	MP2B	X	0	3.25
44	MP2B	Z	7.725	3.25
45	MP2B	Mx	-.003	3.25
46	MP2B	X	0	4.75



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
47	MP2B	Z	7.725	4.75
48	MP2B	Mx	-.003	4.75
49	MP2C	X	0	3.25
50	MP2C	Z	7.725	3.25
51	MP2C	Mx	.003	3.25
52	MP2C	X	0	4.75
53	MP2C	Z	7.725	4.75
54	MP2C	Mx	.003	4.75
55	MP1A	X	0	3
56	MP1A	Z	14.078	3
57	MP1A	Mx	0	3
58	MP1B	X	0	3
59	MP1B	Z	10.871	3
60	MP1B	Mx	.005	3
61	MP1C	X	0	3
62	MP1C	Z	10.871	3
63	MP1C	Mx	-.005	3
64	MP4A	X	0	3
65	MP4A	Z	14.078	3
66	MP4A	Mx	0	3
67	MP4B	X	0	3
68	MP4B	Z	10.999	3
69	MP4B	Mx	.005	3
70	MP4C	X	0	3
71	MP4C	Z	10.999	3
72	MP4C	Mx	-.005	3
73	MP3A	X	0	1.5
74	MP3A	Z	17.534	1.5
75	MP3A	Mx	0	1.5
76	MP3A	X	0	6.5
77	MP3A	Z	17.534	6.5
78	MP3A	Mx	0	6.5
79	MP3B	X	0	1.5
80	MP3B	Z	14.644	1.5
81	MP3B	Mx	-.006	1.5
82	MP3B	X	0	6.5
83	MP3B	Z	14.644	6.5
84	MP3B	Mx	-.006	6.5
85	MP3C	X	0	1.5
86	MP3C	Z	14.644	1.5
87	MP3C	Mx	.006	1.5
88	MP3C	X	0	6.5
89	MP3C	Z	14.644	6.5
90	MP3C	Mx	.006	6.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-12.91	2
2	MP1A	Z	22.36	2
3	MP1A	Mx	.006	2
4	MP1A	X	-12.91	6
5	MP1A	Z	22.36	6
6	MP1A	Mx	.006	6
7	MP1B	X	-9.659	2
8	MP1B	Z	16.73	2
9	MP1B	Mx	-.01	2





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
10	MP1B	X	-9.659	6
11	MP1B	Z	16.73	6
12	MP1B	Mx	-.01	6
13	MP1C	X	-12.91	2
14	MP1C	Z	22.36	2
15	MP1C	Mx	.006	2
16	MP1C	X	-12.91	6
17	MP1C	Z	22.36	6
18	MP1C	Mx	.006	6
19	MP4A	X	-12.91	2
20	MP4A	Z	22.36	2
21	MP4A	Mx	.006	2
22	MP4A	X	-12.91	6
23	MP4A	Z	22.36	6
24	MP4A	Mx	.006	6
25	MP4B	X	-9.659	2
26	MP4B	Z	16.73	2
27	MP4B	Mx	-.01	2
28	MP4B	X	-9.659	6
29	MP4B	Z	16.73	6
30	MP4B	Mx	-.01	6
31	MP4C	X	-12.91	2
32	MP4C	Z	22.36	2
33	MP4C	Mx	.006	2
34	MP4C	X	-12.91	6
35	MP4C	Z	22.36	6
36	MP4C	Mx	.006	6
37	MP2A	X	-5.826	3.25
38	MP2A	Z	10.09	3.25
39	MP2A	Mx	.003	3.25
40	MP2A	X	-5.826	4.75
41	MP2A	Z	10.09	4.75
42	MP2A	Mx	.003	4.75
43	MP2B	X	-2.881	3.25
44	MP2B	Z	4.99	3.25
45	MP2B	Mx	-.003	3.25
46	MP2B	X	-2.881	4.75
47	MP2B	Z	4.99	4.75
48	MP2B	Mx	-.003	4.75
49	MP2C	X	-5.826	3.25
50	MP2C	Z	10.09	3.25
51	MP2C	Mx	.003	3.25
52	MP2C	X	-5.826	4.75
53	MP2C	Z	10.09	4.75
54	MP2C	Mx	.003	4.75
55	MP1A	X	-6.504	3
56	MP1A	Z	11.266	3
57	MP1A	Mx	-.003	3
58	MP1B	X	-4.901	3
59	MP1B	Z	8.489	3
60	MP1B	Mx	.005	3
61	MP1C	X	-6.504	3
62	MP1C	Z	11.266	3
63	MP1C	Mx	-.003	3
64	MP4A	X	-6.526	3
65	MP4A	Z	11.303	3
66	MP4A	Mx	-.003	3



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
67	MP4B	X	-4.987	3
68	MP4B	Z	8.637	3
69	MP4B	Mx	.005	3
70	MP4C	X	-6.526	3
71	MP4C	Z	11.303	3
72	MP4C	Mx	-.003	3
73	MP3A	X	-8.285	1.5
74	MP3A	Z	14.351	1.5
75	MP3A	Mx	.004	1.5
76	MP3A	X	-8.285	6.5
77	MP3A	Z	14.351	6.5
78	MP3A	Mx	.004	6.5
79	MP3B	X	-6.84	1.5
80	MP3B	Z	11.847	1.5
81	MP3B	Mx	-.007	1.5
82	MP3B	X	-6.84	6.5
83	MP3B	Z	11.847	6.5
84	MP3B	Mx	-.007	6.5
85	MP3C	X	-8.285	1.5
86	MP3C	Z	14.351	1.5
87	MP3C	Mx	.004	1.5
88	MP3C	X	-8.285	6.5
89	MP3C	Z	14.351	6.5
90	MP3C	Mx	.004	6.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-18.607	2
2	MP1A	Z	10.743	2
3	MP1A	Mx	.009	2
4	MP1A	X	-18.607	6
5	MP1A	Z	10.743	6
6	MP1A	Mx	.009	6
7	MP1B	X	-18.607	2
8	MP1B	Z	10.743	2
9	MP1B	Mx	-.009	2
10	MP1B	X	-18.607	6
11	MP1B	Z	10.743	6
12	MP1B	Mx	-.009	6
13	MP1C	X	-24.237	2
14	MP1C	Z	13.993	2
15	MP1C	Mx	0	2
16	MP1C	X	-24.237	6
17	MP1C	Z	13.993	6
18	MP1C	Mx	0	6
19	MP4A	X	-18.607	2
20	MP4A	Z	10.743	2
21	MP4A	Mx	.009	2
22	MP4A	X	-18.607	6
23	MP4A	Z	10.743	6
24	MP4A	Mx	.009	6
25	MP4B	X	-18.607	2
26	MP4B	Z	10.743	2
27	MP4B	Mx	-.009	2
28	MP4B	X	-18.607	6
29	MP4B	Z	10.743	6





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

	Member Label	Direction	Magnitude(lb.k-ft)	Location(ft.%)
30	MP4B	Mx	-.009	6
31	MP4C	X	-24.237	2
32	MP4C	Z	13.993	2
33	MP4C	Mx	0	2
34	MP4C	X	-24.237	6
35	MP4C	Z	13.993	6
36	MP4C	Mx	0	6
37	MP2A	X	-6.69	3.25
38	MP2A	Z	3.863	3.25
39	MP2A	Mx	.003	3.25
40	MP2A	X	-6.69	4.75
41	MP2A	Z	3.863	4.75
42	MP2A	Mx	.003	4.75
43	MP2B	X	-6.69	3.25
44	MP2B	Z	3.863	3.25
45	MP2B	Mx	-.003	3.25
46	MP2B	X	-6.69	4.75
47	MP2B	Z	3.863	4.75
48	MP2B	Mx	-.003	4.75
49	MP2C	X	-11.79	3.25
50	MP2C	Z	6.807	3.25
51	MP2C	Mx	0	3.25
52	MP2C	X	-11.79	4.75
53	MP2C	Z	6.807	4.75
54	MP2C	Mx	0	4.75
55	MP1A	X	-9.415	3
56	MP1A	Z	5.436	3
57	MP1A	Mx	-.005	3
58	MP1B	X	-9.415	3
59	MP1B	Z	5.436	3
60	MP1B	Mx	.005	3
61	MP1C	X	-12.192	3
62	MP1C	Z	7.039	3
63	MP1C	Mx	0	3
64	MP4A	X	-9.526	3
65	MP4A	Z	5.5	3
66	MP4A	Mx	-.005	3
67	MP4B	X	-9.526	3
68	MP4B	Z	5.5	3
69	MP4B	Mx	.005	3
70	MP4C	X	-12.192	3
71	MP4C	Z	7.039	3
72	MP4C	Mx	0	3
73	MP3A	X	-12.682	1.5
74	MP3A	Z	7.322	1.5
75	MP3A	Mx	.006	1.5
76	MP3A	X	-12.682	6.5
77	MP3A	Z	7.322	6.5
78	MP3A	Mx	.006	6.5
79	MP3B	X	-12.682	1.5
80	MP3B	Z	7.322	1.5
81	MP3B	Mx	-.006	1.5
82	MP3B	X	-12.682	6.5
83	MP3B	Z	7.322	6.5
84	MP3B	Mx	-.006	6.5
85	MP3C	X	-15.185	1.5
86	MP3C	Z	8.767	1.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
87	MP3C	Mx	0	1.5
88	MP3C	X	-15.185	6.5
89	MP3C	Z	8.767	6.5
90	MP3C	Mx	0	6.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-19.318	2
2	MP1A	Z	0	2
3	MP1A	Mx	.01	2
4	MP1A	X	-19.318	6
5	MP1A	Z	0	6
6	MP1A	Mx	.01	6
7	MP1B	X	-25.82	2
8	MP1B	Z	0	2
9	MP1B	Mx	-.006	2
10	MP1B	X	-25.82	6
11	MP1B	Z	0	6
12	MP1B	Mx	-.006	6
13	MP1C	X	-25.82	2
14	MP1C	Z	0	2
15	MP1C	Mx	-.006	2
16	MP1C	X	-25.82	6
17	MP1C	Z	0	6
18	MP1C	Mx	-.006	6
19	MP4A	X	-19.318	2
20	MP4A	Z	0	2
21	MP4A	Mx	.01	2
22	MP4A	X	-19.318	6
23	MP4A	Z	0	6
24	MP4A	Mx	.01	6
25	MP4B	X	-25.82	2
26	MP4B	Z	0	2
27	MP4B	Mx	-.006	2
28	MP4B	X	-25.82	6
29	MP4B	Z	0	6
30	MP4B	Mx	-.006	6
31	MP4C	X	-25.82	2
32	MP4C	Z	0	2
33	MP4C	Mx	-.006	2
34	MP4C	X	-25.82	6
35	MP4C	Z	0	6
36	MP4C	Mx	-.006	6
37	MP2A	X	-5.762	3.25
38	MP2A	Z	0	3.25
39	MP2A	Mx	.003	3.25
40	MP2A	X	-5.762	4.75
41	MP2A	Z	0	4.75
42	MP2A	Mx	.003	4.75
43	MP2B	X	-11.651	3.25
44	MP2B	Z	0	3.25
45	MP2B	Mx	-.003	3.25
46	MP2B	X	-11.651	4.75
47	MP2B	Z	0	4.75
48	MP2B	Mx	-.003	4.75
49	MP2C	X	-11.651	3.25





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
50	MP2C	Z	0	3.25
51	MP2C	Mx	-.003	3.25
52	MP2C	X	-11.651	4.75
53	MP2C	Z	0	4.75
54	MP2C	Mx	-.003	4.75
55	MP1A	X	-9.802	3
56	MP1A	Z	0	3
57	MP1A	Mx	-.005	3
58	MP1B	X	-13.009	3
59	MP1B	Z	0	3
60	MP1B	Mx	.003	3
61	MP1C	X	-13.009	3
62	MP1C	Z	0	3
63	MP1C	Mx	.003	3
64	MP4A	X	-9.973	3
65	MP4A	Z	0	3
66	MP4A	Mx	-.005	3
67	MP4B	X	-13.052	3
68	MP4B	Z	0	3
69	MP4B	Mx	.003	3
70	MP4C	X	-13.052	3
71	MP4C	Z	0	3
72	MP4C	Mx	.003	3
73	MP3A	X	-13.68	1.5
74	MP3A	Z	0	1.5
75	MP3A	Mx	.007	1.5
76	MP3A	X	-13.68	6.5
77	MP3A	Z	0	6.5
78	MP3A	Mx	.007	6.5
79	MP3B	X	-16.571	1.5
80	MP3B	Z	0	1.5
81	MP3B	Mx	-.004	1.5
82	MP3B	X	-16.571	6.5
83	MP3B	Z	0	6.5
84	MP3B	Mx	-.004	6.5
85	MP3C	X	-16.571	1.5
86	MP3C	Z	0	1.5
87	MP3C	Mx	-.004	1.5
88	MP3C	X	-16.571	6.5
89	MP3C	Z	0	6.5
90	MP3C	Mx	-.004	6.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP1A	X	-18.607	2
2	MP1A	Z	-10.743	2
3	MP1A	Mx	.009	2
4	MP1A	X	-18.607	6
5	MP1A	Z	-10.743	6
6	MP1A	Mx	.009	6
7	MP1B	X	-24.237	2
8	MP1B	Z	-13.993	2
9	MP1B	Mx	0	2
10	MP1B	X	-24.237	6
11	MP1B	Z	-13.993	6
12	MP1B	Mx	0	6



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
13	MP1C	X	-18.607	2
14	MP1C	Z	-10.743	2
15	MP1C	Mx	-.009	2
16	MP1C	X	-18.607	6
17	MP1C	Z	-10.743	6
18	MP1C	Mx	-.009	6
19	MP4A	X	-18.607	2
20	MP4A	Z	-10.743	2
21	MP4A	Mx	.009	2
22	MP4A	X	-18.607	6
23	MP4A	Z	-10.743	6
24	MP4A	Mx	.009	6
25	MP4B	X	-24.237	2
26	MP4B	Z	-13.993	2
27	MP4B	Mx	0	2
28	MP4B	X	-24.237	6
29	MP4B	Z	-13.993	6
30	MP4B	Mx	0	6
31	MP4C	X	-18.607	2
32	MP4C	Z	-10.743	2
33	MP4C	Mx	-.009	2
34	MP4C	X	-18.607	6
35	MP4C	Z	-10.743	6
36	MP4C	Mx	-.009	6
37	MP2A	X	-6.69	3.25
38	MP2A	Z	-3.863	3.25
39	MP2A	Mx	.003	3.25
40	MP2A	X	-6.69	4.75
41	MP2A	Z	-3.863	4.75
42	MP2A	Mx	.003	4.75
43	MP2B	X	-11.79	3.25
44	MP2B	Z	-6.807	3.25
45	MP2B	Mx	0	3.25
46	MP2B	X	-11.79	4.75
47	MP2B	Z	-6.807	4.75
48	MP2B	Mx	0	4.75
49	MP2C	X	-6.69	3.25
50	MP2C	Z	-3.863	3.25
51	MP2C	Mx	-.003	3.25
52	MP2C	X	-6.69	4.75
53	MP2C	Z	-3.863	4.75
54	MP2C	Mx	-.003	4.75
55	MP1A	X	-9.415	3
56	MP1A	Z	-5.436	3
57	MP1A	Mx	-.005	3
58	MP1B	X	-12.192	3
59	MP1B	Z	-7.039	3
60	MP1B	Mx	0	3
61	MP1C	X	-9.415	3
62	MP1C	Z	-5.436	3
63	MP1C	Mx	.005	3
64	MP4A	X	-9.526	3
65	MP4A	Z	-5.5	3
66	MP4A	Mx	-.005	3
67	MP4B	X	-12.192	3
68	MP4B	Z	-7.039	3
69	MP4B	Mx	0	3





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
70	MP4C	X	-9.526	3
71	MP4C	Z	-5.5	3
72	MP4C	Mx	.005	3
73	MP3A	X	-12.682	1.5
74	MP3A	Z	-7.322	1.5
75	MP3A	Mx	.006	1.5
76	MP3A	X	-12.682	6.5
77	MP3A	Z	-7.322	6.5
78	MP3A	Mx	.006	6.5
79	MP3B	X	-15.185	1.5
80	MP3B	Z	-8.767	1.5
81	MP3B	Mx	0	1.5
82	MP3B	X	-15.185	6.5
83	MP3B	Z	-8.767	6.5
84	MP3B	Mx	0	6.5
85	MP3C	X	-12.682	1.5
86	MP3C	Z	-7.322	1.5
87	MP3C	Mx	-.006	1.5
88	MP3C	X	-12.682	6.5
89	MP3C	Z	-7.322	6.5
90	MP3C	Mx	-.006	6.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-12.91	2
2	MP1A	Z	-22.36	2
3	MP1A	Mx	.006	2
4	MP1A	X	-12.91	6
5	MP1A	Z	-22.36	6
6	MP1A	Mx	.006	6
7	MP1B	X	-12.91	2
8	MP1B	Z	-22.36	2
9	MP1B	Mx	.006	2
10	MP1B	X	-12.91	6
11	MP1B	Z	-22.36	6
12	MP1B	Mx	.006	6
13	MP1C	X	-9.659	2
14	MP1C	Z	-16.73	2
15	MP1C	Mx	-.01	2
16	MP1C	X	-9.659	6
17	MP1C	Z	-16.73	6
18	MP1C	Mx	-.01	6
19	MP4A	X	-12.91	2
20	MP4A	Z	-22.36	2
21	MP4A	Mx	.006	2
22	MP4A	X	-12.91	6
23	MP4A	Z	-22.36	6
24	MP4A	Mx	.006	6
25	MP4B	X	-12.91	2
26	MP4B	Z	-22.36	2
27	MP4B	Mx	.006	2
28	MP4B	X	-12.91	6
29	MP4B	Z	-22.36	6
30	MP4B	Mx	.006	6
31	MP4C	X	-9.659	2
32	MP4C	Z	-16.73	2



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
33	MP4C	Mx	-.01	2
34	MP4C	X	-9.659	6
35	MP4C	Z	-16.73	6
36	MP4C	Mx	-.01	6
37	MP2A	X	-5.826	3.25
38	MP2A	Z	-10.09	3.25
39	MP2A	Mx	.003	3.25
40	MP2A	X	-5.826	4.75
41	MP2A	Z	-10.09	4.75
42	MP2A	Mx	.003	4.75
43	MP2B	X	-5.826	3.25
44	MP2B	Z	-10.09	3.25
45	MP2B	Mx	.003	3.25
46	MP2B	X	-5.826	4.75
47	MP2B	Z	-10.09	4.75
48	MP2B	Mx	.003	4.75
49	MP2C	X	-2.881	3.25
50	MP2C	Z	-4.99	3.25
51	MP2C	Mx	-.003	3.25
52	MP2C	X	-2.881	4.75
53	MP2C	Z	-4.99	4.75
54	MP2C	Mx	-.003	4.75
55	MP1A	X	-6.504	3
56	MP1A	Z	-11.266	3
57	MP1A	Mx	-.003	3
58	MP1B	X	-6.504	3
59	MP1B	Z	-11.266	3
60	MP1B	Mx	-.003	3
61	MP1C	X	-4.901	3
62	MP1C	Z	-8.489	3
63	MP1C	Mx	.005	3
64	MP4A	X	-6.526	3
65	MP4A	Z	-11.303	3
66	MP4A	Mx	-.003	3
67	MP4B	X	-6.526	3
68	MP4B	Z	-11.303	3
69	MP4B	Mx	-.003	3
70	MP4C	X	-4.987	3
71	MP4C	Z	-8.637	3
72	MP4C	Mx	.005	3
73	MP3A	X	-8.285	1.5
74	MP3A	Z	-14.351	1.5
75	MP3A	Mx	.004	1.5
76	MP3A	X	-8.285	6.5
77	MP3A	Z	-14.351	6.5
78	MP3A	Mx	.004	6.5
79	MP3B	X	-8.285	1.5
80	MP3B	Z	-14.351	1.5
81	MP3B	Mx	.004	1.5
82	MP3B	X	-8.285	6.5
83	MP3B	Z	-14.351	6.5
84	MP3B	Mx	.004	6.5
85	MP3C	X	-6.84	1.5
86	MP3C	Z	-11.847	1.5
87	MP3C	Mx	-.007	1.5
88	MP3C	X	-6.84	6.5
89	MP3C	Z	-11.847	6.5





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
90	MP3C	Mx	- .007	6.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP1A	X	0	2
2	MP1A	Z	-6.123	2
3	MP1A	Mx	0	2
4	MP1A	X	0	6
5	MP1A	Z	-6.123	6
6	MP1A	Mx	0	6
7	MP1B	X	0	2
8	MP1B	Z	-3.501	2
9	MP1B	Mx	.002	2
10	MP1B	X	0	6
11	MP1B	Z	-3.501	6
12	MP1B	Mx	.002	6
13	MP1C	X	0	2
14	MP1C	Z	-3.501	2
15	MP1C	Mx	-.002	2
16	MP1C	X	0	6
17	MP1C	Z	-3.501	6
18	MP1C	Mx	-.002	6
19	MP4A	X	0	2
20	MP4A	Z	-6.123	2
21	MP4A	Mx	0	2
22	MP4A	X	0	6
23	MP4A	Z	-6.123	6
24	MP4A	Mx	0	6
25	MP4B	X	0	2
26	MP4B	Z	-3.501	2
27	MP4B	Mx	.002	2
28	MP4B	X	0	6
29	MP4B	Z	-3.501	6
30	MP4B	Mx	.002	6
31	MP4C	X	0	2
32	MP4C	Z	-3.501	2
33	MP4C	Mx	-.002	2
34	MP4C	X	0	6
35	MP4C	Z	-3.501	6
36	MP4C	Mx	-.002	6
37	MP2A	X	0	3.25
38	MP2A	Z	-4.274	3.25
39	MP2A	Mx	0	3.25
40	MP2A	X	0	4.75
41	MP2A	Z	-4.274	4.75
42	MP2A	Mx	0	4.75
43	MP2B	X	0	3.25
44	MP2B	Z	-2.303	3.25
45	MP2B	Mx	.000997	3.25
46	MP2B	X	0	4.75
47	MP2B	Z	-2.303	4.75
48	MP2B	Mx	.000997	4.75
49	MP2C	X	0	3.25
50	MP2C	Z	-2.303	3.25
51	MP2C	Mx	-.000997	3.25
52	MP2C	X	0	4.75



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
53	MP2C	Z	-2.303	4.75
54	MP2C	Mx	-.000997	4.75
55	MP1A	X	0	3
56	MP1A	Z	-3.496	3
57	MP1A	Mx	0	3
58	MP1B	X	0	3
59	MP1B	Z	-2.633	3
60	MP1B	Mx	-.001	3
61	MP1C	X	0	3
62	MP1C	Z	-2.633	3
63	MP1C	Mx	.001	3
64	MP4A	X	0	3
65	MP4A	Z	-4.217	3
66	MP4A	Mx	0	3
67	MP4B	X	0	3
68	MP4B	Z	-3.211	3
69	MP4B	Mx	-.001	3
70	MP4C	X	0	3
71	MP4C	Z	-3.211	3
72	MP4C	Mx	.001	3
73	MP3A	X	0	1.5
74	MP3A	Z	-5.39	1.5
75	MP3A	Mx	0	1.5
76	MP3A	X	0	6.5
77	MP3A	Z	-5.39	6.5
78	MP3A	Mx	0	6.5
79	MP3B	X	0	1.5
80	MP3B	Z	-4.408	1.5
81	MP3B	Mx	.002	1.5
82	MP3B	X	0	6.5
83	MP3B	Z	-4.408	6.5
84	MP3B	Mx	.002	6.5
85	MP3C	X	0	1.5
86	MP3C	Z	-4.408	1.5
87	MP3C	Mx	-.002	1.5
88	MP3C	X	0	6.5
89	MP3C	Z	-4.408	6.5
90	MP3C	Mx	-.002	6.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP1A	X	2.625	2
2	MP1A	Z	-4.546	2
3	MP1A	Mx	-.001	2
4	MP1A	X	2.625	6
5	MP1A	Z	-4.546	6
6	MP1A	Mx	-.001	6
7	MP1B	X	1.314	2
8	MP1B	Z	-2.275	2
9	MP1B	Mx	.001	2
10	MP1B	X	1.314	6
11	MP1B	Z	-2.275	6
12	MP1B	Mx	.001	6
13	MP1C	X	2.625	2
14	MP1C	Z	-4.546	2
15	MP1C	Mx	-.001	2





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
16	MP1C	X	2.625	6
17	MP1C	Z	-4.546	6
18	MP1C	Mx	-.001	6
19	MP4A	X	2.625	2
20	MP4A	Z	-4.546	2
21	MP4A	Mx	-.001	2
22	MP4A	X	2.625	6
23	MP4A	Z	-4.546	6
24	MP4A	Mx	-.001	6
25	MP4B	X	1.314	2
26	MP4B	Z	-2.275	2
27	MP4B	Mx	.001	2
28	MP4B	X	1.314	6
29	MP4B	Z	-2.275	6
30	MP4B	Mx	.001	6
31	MP4C	X	2.625	2
32	MP4C	Z	-4.546	2
33	MP4C	Mx	-.001	2
34	MP4C	X	2.625	6
35	MP4C	Z	-4.546	6
36	MP4C	Mx	-.001	6
37	MP2A	X	1.808	3.25
38	MP2A	Z	-3.132	3.25
39	MP2A	Mx	-.000904	3.25
40	MP2A	X	1.808	4.75
41	MP2A	Z	-3.132	4.75
42	MP2A	Mx	-.000904	4.75
43	MP2B	X	.823	3.25
44	MP2B	Z	-1.425	3.25
45	MP2B	Mx	.000823	3.25
46	MP2B	X	.823	4.75
47	MP2B	Z	-1.425	4.75
48	MP2B	Mx	.000823	4.75
49	MP2C	X	1.808	3.25
50	MP2C	Z	-3.132	3.25
51	MP2C	Mx	-.000904	3.25
52	MP2C	X	1.808	4.75
53	MP2C	Z	-3.132	4.75
54	MP2C	Mx	-.000904	4.75
55	MP1A	X	1.604	3
56	MP1A	Z	-2.778	3
57	MP1A	Mx	.000802	3
58	MP1B	X	1.173	3
59	MP1B	Z	-2.031	3
60	MP1B	Mx	-.001	3
61	MP1C	X	1.604	3
62	MP1C	Z	-2.778	3
63	MP1C	Mx	.000802	3
64	MP4A	X	1.941	3
65	MP4A	Z	-3.362	3
66	MP4A	Mx	.000971	3
67	MP4B	X	1.438	3
68	MP4B	Z	-2.49	3
69	MP4B	Mx	-.001	3
70	MP4C	X	1.941	3
71	MP4C	Z	-3.362	3
72	MP4C	Mx	.000971	3



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
73	MP3A	X	2.531	1.5
74	MP3A	Z	-4.384	1.5
75	MP3A	Mx	-.001	1.5
76	MP3A	X	2.531	6.5
77	MP3A	Z	-4.384	6.5
78	MP3A	Mx	-.001	6.5
79	MP3B	X	2.04	1.5
80	MP3B	Z	-3.533	1.5
81	MP3B	Mx	.002	1.5
82	MP3B	X	2.04	6.5
83	MP3B	Z	-3.533	6.5
84	MP3B	Mx	.002	6.5
85	MP3C	X	2.531	1.5
86	MP3C	Z	-4.384	1.5
87	MP3C	Mx	-.001	1.5
88	MP3C	X	2.531	6.5
89	MP3C	Z	-4.384	6.5
90	MP3C	Mx	-.001	6.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP1A	X	3.032	2
2	MP1A	Z	-1.751	2
3	MP1A	Mx	-.002	2
4	MP1A	X	3.032	6
5	MP1A	Z	-1.751	6
6	MP1A	Mx	-.002	6
7	MP1B	X	3.032	2
8	MP1B	Z	-1.751	2
9	MP1B	Mx	.002	2
10	MP1B	X	3.032	6
11	MP1B	Z	-1.751	6
12	MP1B	Mx	.002	6
13	MP1C	X	5.303	2
14	MP1C	Z	-3.061	2
15	MP1C	Mx	0	2
16	MP1C	X	5.303	6
17	MP1C	Z	-3.061	6
18	MP1C	Mx	0	6
19	MP4A	X	3.032	2
20	MP4A	Z	-1.751	2
21	MP4A	Mx	-.002	2
22	MP4A	X	3.032	6
23	MP4A	Z	-1.751	6
24	MP4A	Mx	-.002	6
25	MP4B	X	3.032	2
26	MP4B	Z	-1.751	2
27	MP4B	Mx	.002	2
28	MP4B	X	3.032	6
29	MP4B	Z	-1.751	6
30	MP4B	Mx	.002	6
31	MP4C	X	5.303	2
32	MP4C	Z	-3.061	2
33	MP4C	Mx	0	2
34	MP4C	X	5.303	6
35	MP4C	Z	-3.061	6





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
36	MP4C	Mx	0	6
37	MP2A	X	1.994	3.25
38	MP2A	Z	-1.151	3.25
39	MP2A	Mx	-0.00997	3.25
40	MP2A	X	1.994	4.75
41	MP2A	Z	-1.151	4.75
42	MP2A	Mx	-0.00997	4.75
43	MP2B	X	1.994	3.25
44	MP2B	Z	-1.151	3.25
45	MP2B	Mx	.000997	3.25
46	MP2B	X	1.994	4.75
47	MP2B	Z	-1.151	4.75
48	MP2B	Mx	.000997	4.75
49	MP2C	X	3.701	3.25
50	MP2C	Z	-2.137	3.25
51	MP2C	Mx	0	3.25
52	MP2C	X	3.701	4.75
53	MP2C	Z	-2.137	4.75
54	MP2C	Mx	0	4.75
55	MP1A	X	2.28	3
56	MP1A	Z	-1.316	3
57	MP1A	Mx	.001	3
58	MP1B	X	2.28	3
59	MP1B	Z	-1.316	3
60	MP1B	Mx	-.001	3
61	MP1C	X	3.027	3
62	MP1C	Z	-1.748	3
63	MP1C	Mx	0	3
64	MP4A	X	2.781	3
65	MP4A	Z	-1.605	3
66	MP4A	Mx	.001	3
67	MP4B	X	2.781	3
68	MP4B	Z	-1.605	3
69	MP4B	Mx	-.001	3
70	MP4C	X	3.652	3
71	MP4C	Z	-2.109	3
72	MP4C	Mx	0	3
73	MP3A	X	3.817	1.5
74	MP3A	Z	-2.204	1.5
75	MP3A	Mx	-.002	1.5
76	MP3A	X	3.817	6.5
77	MP3A	Z	-2.204	6.5
78	MP3A	Mx	-.002	6.5
79	MP3B	X	3.817	1.5
80	MP3B	Z	-2.204	1.5
81	MP3B	Mx	.002	1.5
82	MP3B	X	3.817	6.5
83	MP3B	Z	-2.204	6.5
84	MP3B	Mx	.002	6.5
85	MP3C	X	4.668	1.5
86	MP3C	Z	-2.695	1.5
87	MP3C	Mx	0	1.5
88	MP3C	X	4.668	6.5
89	MP3C	Z	-2.695	6.5
90	MP3C	Mx	0	6.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	2.627	2
2	MP1A	Z	0	2
3	MP1A	Mx	-.001	2
4	MP1A	X	2.627	6
5	MP1A	Z	0	6
6	MP1A	Mx	-.001	6
7	MP1B	X	5.249	2
8	MP1B	Z	0	2
9	MP1B	Mx	.001	2
10	MP1B	X	5.249	6
11	MP1B	Z	0	6
12	MP1B	Mx	.001	6
13	MP1C	X	5.249	2
14	MP1C	Z	0	2
15	MP1C	Mx	.001	2
16	MP1C	X	5.249	6
17	MP1C	Z	0	6
18	MP1C	Mx	.001	6
19	MP4A	X	2.627	2
20	MP4A	Z	0	2
21	MP4A	Mx	-.001	2
22	MP4A	X	2.627	6
23	MP4A	Z	0	6
24	MP4A	Mx	-.001	6
25	MP4B	X	5.249	2
26	MP4B	Z	0	2
27	MP4B	Mx	.001	2
28	MP4B	X	5.249	6
29	MP4B	Z	0	6
30	MP4B	Mx	.001	6
31	MP4C	X	5.249	2
32	MP4C	Z	0	2
33	MP4C	Mx	.001	2
34	MP4C	X	5.249	6
35	MP4C	Z	0	6
36	MP4C	Mx	.001	6
37	MP2A	X	1.646	3.25
38	MP2A	Z	0	3.25
39	MP2A	Mx	-.000823	3.25
40	MP2A	X	1.646	4.75
41	MP2A	Z	0	4.75
42	MP2A	Mx	-.000823	4.75
43	MP2B	X	3.617	3.25
44	MP2B	Z	0	3.25
45	MP2B	Mx	.000904	3.25
46	MP2B	X	3.617	4.75
47	MP2B	Z	0	4.75
48	MP2B	Mx	.000904	4.75
49	MP2C	X	3.617	3.25
50	MP2C	Z	0	3.25
51	MP2C	Mx	.000904	3.25
52	MP2C	X	3.617	4.75
53	MP2C	Z	0	4.75
54	MP2C	Mx	.000904	4.75
55	MP1A	X	2.345	3
56	MP1A	Z	0	3
57	MP1A	Mx	.001	3



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
58	MP1B	X	3.208	3
59	MP1B	Z	0	3
60	MP1B	Mx	-.000802	3
61	MP1C	X	3.208	3
62	MP1C	Z	0	3
63	MP1C	Mx	-.000802	3
64	MP4A	X	2.875	3
65	MP4A	Z	0	3
66	MP4A	Mx	.001	3
67	MP4B	X	3.882	3
68	MP4B	Z	0	3
69	MP4B	Mx	-.000971	3
70	MP4C	X	3.882	3
71	MP4C	Z	0	3
72	MP4C	Mx	-.000971	3
73	MP3A	X	4.08	1.5
74	MP3A	Z	0	1.5
75	MP3A	Mx	-.002	1.5
76	MP3A	X	4.08	6.5
77	MP3A	Z	0	6.5
78	MP3A	Mx	-.002	6.5
79	MP3B	X	5.063	1.5
80	MP3B	Z	0	1.5
81	MP3B	Mx	.001	1.5
82	MP3B	X	5.063	6.5
83	MP3B	Z	0	6.5
84	MP3B	Mx	.001	6.5
85	MP3C	X	5.063	1.5
86	MP3C	Z	0	1.5
87	MP3C	Mx	.001	1.5
88	MP3C	X	5.063	6.5
89	MP3C	Z	0	6.5
90	MP3C	Mx	.001	6.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP1A	X	3.032	2
2	MP1A	Z	1.751	2
3	MP1A	Mx	-.002	2
4	MP1A	X	3.032	6
5	MP1A	Z	1.751	6
6	MP1A	Mx	-.002	6
7	MP1B	X	5.303	2
8	MP1B	Z	3.061	2
9	MP1B	Mx	0	2
10	MP1B	X	5.303	6
11	MP1B	Z	3.061	6
12	MP1B	Mx	0	6
13	MP1C	X	3.032	2
14	MP1C	Z	1.751	2
15	MP1C	Mx	.002	2
16	MP1C	X	3.032	6
17	MP1C	Z	1.751	6
18	MP1C	Mx	.002	6
19	MP4A	X	3.032	2
20	MP4A	Z	1.751	2



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

	Member Label	Direction	Magnitude[lb. k-ft]	Location[ft. %]
21	MP4A	Mx	-.002	2
22	MP4A	X	3.032	6
23	MP4A	Z	1.751	6
24	MP4A	Mx	-.002	6
25	MP4B	X	5.303	2
26	MP4B	Z	3.061	2
27	MP4B	Mx	0	2
28	MP4B	X	5.303	6
29	MP4B	Z	3.061	6
30	MP4B	Mx	0	6
31	MP4C	X	3.032	2
32	MP4C	Z	1.751	2
33	MP4C	Mx	.002	2
34	MP4C	X	3.032	6
35	MP4C	Z	1.751	6
36	MP4C	Mx	.002	6
37	MP2A	X	1.994	3.25
38	MP2A	Z	1.151	3.25
39	MP2A	Mx	-.000997	3.25
40	MP2A	X	1.994	4.75
41	MP2A	Z	1.151	4.75
42	MP2A	Mx	-.000997	4.75
43	MP2B	X	3.701	3.25
44	MP2B	Z	2.137	3.25
45	MP2B	Mx	0	3.25
46	MP2B	X	3.701	4.75
47	MP2B	Z	2.137	4.75
48	MP2B	Mx	0	4.75
49	MP2C	X	1.994	3.25
50	MP2C	Z	1.151	3.25
51	MP2C	Mx	.000997	3.25
52	MP2C	X	1.994	4.75
53	MP2C	Z	1.151	4.75
54	MP2C	Mx	.000997	4.75
55	MP1A	X	2.28	3
56	MP1A	Z	1.316	3
57	MP1A	Mx	.001	3
58	MP1B	X	3.027	3
59	MP1B	Z	1.748	3
60	MP1B	Mx	0	3
61	MP1C	X	2.28	3
62	MP1C	Z	1.316	3
63	MP1C	Mx	-.001	3
64	MP4A	X	2.781	3
65	MP4A	Z	1.605	3
66	MP4A	Mx	.001	3
67	MP4B	X	3.652	3
68	MP4B	Z	2.109	3
69	MP4B	Mx	0	3
70	MP4C	X	2.781	3
71	MP4C	Z	1.605	3
72	MP4C	Mx	-.001	3
73	MP3A	X	3.817	1.5
74	MP3A	Z	2.204	1.5
75	MP3A	Mx	-.002	1.5
76	MP3A	X	3.817	6.5
77	MP3A	Z	2.204	6.5





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
78	MP3A	Mx	-.002	6.5
79	MP3B	X	4.668	1.5
80	MP3B	Z	2.695	1.5
81	MP3B	Mx	0	1.5
82	MP3B	X	4.668	6.5
83	MP3B	Z	2.695	6.5
84	MP3B	Mx	0	6.5
85	MP3C	X	3.817	1.5
86	MP3C	Z	2.204	1.5
87	MP3C	Mx	.002	1.5
88	MP3C	X	3.817	6.5
89	MP3C	Z	2.204	6.5
90	MP3C	Mx	.002	6.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	2.625	2
2	MP1A	Z	4.546	2
3	MP1A	Mx	-.001	2
4	MP1A	X	2.625	6
5	MP1A	Z	4.546	6
6	MP1A	Mx	-.001	6
7	MP1B	X	2.625	2
8	MP1B	Z	4.546	2
9	MP1B	Mx	-.001	2
10	MP1B	X	2.625	6
11	MP1B	Z	4.546	6
12	MP1B	Mx	-.001	6
13	MP1C	X	1.314	2
14	MP1C	Z	2.275	2
15	MP1C	Mx	.001	2
16	MP1C	X	1.314	6
17	MP1C	Z	2.275	6
18	MP1C	Mx	.001	6
19	MP4A	X	2.625	2
20	MP4A	Z	4.546	2
21	MP4A	Mx	-.001	2
22	MP4A	X	2.625	6
23	MP4A	Z	4.546	6
24	MP4A	Mx	-.001	6
25	MP4B	X	2.625	2
26	MP4B	Z	4.546	2
27	MP4B	Mx	-.001	2
28	MP4B	X	2.625	6
29	MP4B	Z	4.546	6
30	MP4B	Mx	-.001	6
31	MP4C	X	1.314	2
32	MP4C	Z	2.275	2
33	MP4C	Mx	.001	2
34	MP4C	X	1.314	6
35	MP4C	Z	2.275	6
36	MP4C	Mx	.001	6
37	MP2A	X	1.808	3.25
38	MP2A	Z	3.132	3.25
39	MP2A	Mx	-.000904	3.25
40	MP2A	X	1.808	4.75



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
41	MP2A	Z	3.132	4.75
42	MP2A	Mx	-.000904	4.75
43	MP2B	X	1.808	3.25
44	MP2B	Z	3.132	3.25
45	MP2B	Mx	-.000904	3.25
46	MP2B	X	1.808	4.75
47	MP2B	Z	3.132	4.75
48	MP2B	Mx	-.000904	4.75
49	MP2C	X	.823	3.25
50	MP2C	Z	1.425	3.25
51	MP2C	Mx	.000823	3.25
52	MP2C	X	.823	4.75
53	MP2C	Z	1.425	4.75
54	MP2C	Mx	.000823	4.75
55	MP1A	X	1.604	3
56	MP1A	Z	2.778	3
57	MP1A	Mx	.000802	3
58	MP1B	X	1.604	3
59	MP1B	Z	2.778	3
60	MP1B	Mx	.000802	3
61	MP1C	X	1.173	3
62	MP1C	Z	2.031	3
63	MP1C	Mx	-.001	3
64	MP4A	X	1.941	3
65	MP4A	Z	3.362	3
66	MP4A	Mx	.000971	3
67	MP4B	X	1.941	3
68	MP4B	Z	3.362	3
69	MP4B	Mx	.000971	3
70	MP4C	X	1.438	3
71	MP4C	Z	2.49	3
72	MP4C	Mx	-.001	3
73	MP3A	X	2.531	1.5
74	MP3A	Z	4.384	1.5
75	MP3A	Mx	-.001	1.5
76	MP3A	X	2.531	6.5
77	MP3A	Z	4.384	6.5
78	MP3A	Mx	-.001	6.5
79	MP3B	X	2.531	1.5
80	MP3B	Z	4.384	1.5
81	MP3B	Mx	-.001	1.5
82	MP3B	X	2.531	6.5
83	MP3B	Z	4.384	6.5
84	MP3B	Mx	-.001	6.5
85	MP3C	X	2.04	1.5
86	MP3C	Z	3.533	1.5
87	MP3C	Mx	.002	1.5
88	MP3C	X	2.04	6.5
89	MP3C	Z	3.533	6.5
90	MP3C	Mx	.002	6.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	0	2
2	MP1A	Z	6.123	2
3	MP1A	Mx	0	2





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft, %]
4	MP1A	X	0	6
5	MP1A	Z	6.123	6
6	MP1A	Mx	0	6
7	MP1B	X	0	2
8	MP1B	Z	3.501	2
9	MP1B	Mx	-.002	2
10	MP1B	X	0	6
11	MP1B	Z	3.501	6
12	MP1B	Mx	-.002	6
13	MP1C	X	0	2
14	MP1C	Z	3.501	2
15	MP1C	Mx	.002	2
16	MP1C	X	0	6
17	MP1C	Z	3.501	6
18	MP1C	Mx	.002	6
19	MP4A	X	0	2
20	MP4A	Z	6.123	2
21	MP4A	Mx	0	2
22	MP4A	X	0	6
23	MP4A	Z	6.123	6
24	MP4A	Mx	0	6
25	MP4B	X	0	2
26	MP4B	Z	3.501	2
27	MP4B	Mx	-.002	2
28	MP4B	X	0	6
29	MP4B	Z	3.501	6
30	MP4B	Mx	-.002	6
31	MP4C	X	0	2
32	MP4C	Z	3.501	2
33	MP4C	Mx	.002	2
34	MP4C	X	0	6
35	MP4C	Z	3.501	6
36	MP4C	Mx	.002	6
37	MP2A	X	0	3.25
38	MP2A	Z	4.274	3.25
39	MP2A	Mx	0	3.25
40	MP2A	X	0	4.75
41	MP2A	Z	4.274	4.75
42	MP2A	Mx	0	4.75
43	MP2B	X	0	3.25
44	MP2B	Z	2.303	3.25
45	MP2B	Mx	-.000997	3.25
46	MP2B	X	0	4.75
47	MP2B	Z	2.303	4.75
48	MP2B	Mx	-.000997	4.75
49	MP2C	X	0	3.25
50	MP2C	Z	2.303	3.25
51	MP2C	Mx	.000997	3.25
52	MP2C	X	0	4.75
53	MP2C	Z	2.303	4.75
54	MP2C	Mx	.000997	4.75
55	MP1A	X	0	3
56	MP1A	Z	3.496	3
57	MP1A	Mx	0	3
58	MP1B	X	0	3
59	MP1B	Z	2.633	3
60	MP1B	Mx	.001	3



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
61	MP1C	X	0	3
62	MP1C	Z	2.633	3
63	MP1C	Mx	-.001	3
64	MP4A	X	0	3
65	MP4A	Z	4.217	3
66	MP4A	Mx	0	3
67	MP4B	X	0	3
68	MP4B	Z	3.211	3
69	MP4B	Mx	.001	3
70	MP4C	X	0	3
71	MP4C	Z	3.211	3
72	MP4C	Mx	-.001	3
73	MP3A	X	0	1.5
74	MP3A	Z	5.39	1.5
75	MP3A	Mx	0	1.5
76	MP3A	X	0	6.5
77	MP3A	Z	5.39	6.5
78	MP3A	Mx	0	6.5
79	MP3B	X	0	1.5
80	MP3B	Z	4.408	1.5
81	MP3B	Mx	-.002	1.5
82	MP3B	X	0	6.5
83	MP3B	Z	4.408	6.5
84	MP3B	Mx	-.002	6.5
85	MP3C	X	0	1.5
86	MP3C	Z	4.408	1.5
87	MP3C	Mx	.002	1.5
88	MP3C	X	0	6.5
89	MP3C	Z	4.408	6.5
90	MP3C	Mx	.002	6.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-2.625	2
2	MP1A	Z	4.546	2
3	MP1A	Mx	.001	2
4	MP1A	X	-2.625	6
5	MP1A	Z	4.546	6
6	MP1A	Mx	.001	6
7	MP1B	X	-1.314	2
8	MP1B	Z	2.275	2
9	MP1B	Mx	-.001	2
10	MP1B	X	-1.314	6
11	MP1B	Z	2.275	6
12	MP1B	Mx	-.001	6
13	MP1C	X	-2.625	2
14	MP1C	Z	4.546	2
15	MP1C	Mx	.001	2
16	MP1C	X	-2.625	6
17	MP1C	Z	4.546	6
18	MP1C	Mx	.001	6
19	MP4A	X	-2.625	2
20	MP4A	Z	4.546	2
21	MP4A	Mx	.001	2
22	MP4A	X	-2.625	6
23	MP4A	Z	4.546	6





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
24	MP4A	Mx	.001	6
25	MP4B	X	-1.314	2
26	MP4B	Z	2.275	2
27	MP4B	Mx	-.001	2
28	MP4B	X	-1.314	6
29	MP4B	Z	2.275	6
30	MP4B	Mx	-.001	6
31	MP4C	X	-2.625	2
32	MP4C	Z	4.546	2
33	MP4C	Mx	.001	2
34	MP4C	X	-2.625	6
35	MP4C	Z	4.546	6
36	MP4C	Mx	.001	6
37	MP2A	X	-1.808	3.25
38	MP2A	Z	3.132	3.25
39	MP2A	Mx	.000904	3.25
40	MP2A	X	-1.808	4.75
41	MP2A	Z	3.132	4.75
42	MP2A	Mx	.000904	4.75
43	MP2B	X	-.823	3.25
44	MP2B	Z	1.425	3.25
45	MP2B	Mx	-.000823	3.25
46	MP2B	X	-.823	4.75
47	MP2B	Z	1.425	4.75
48	MP2B	Mx	-.000823	4.75
49	MP2C	X	-1.808	3.25
50	MP2C	Z	3.132	3.25
51	MP2C	Mx	.000904	3.25
52	MP2C	X	-1.808	4.75
53	MP2C	Z	3.132	4.75
54	MP2C	Mx	.000904	4.75
55	MP1A	X	-1.604	3
56	MP1A	Z	2.778	3
57	MP1A	Mx	-.000802	3
58	MP1B	X	-1.173	3
59	MP1B	Z	2.031	3
60	MP1B	Mx	.001	3
61	MP1C	X	-1.604	3
62	MP1C	Z	2.778	3
63	MP1C	Mx	-.000802	3
64	MP4A	X	-1.941	3
65	MP4A	Z	3.362	3
66	MP4A	Mx	-.000971	3
67	MP4B	X	-1.438	3
68	MP4B	Z	2.49	3
69	MP4B	Mx	.001	3
70	MP4C	X	-1.941	3
71	MP4C	Z	3.362	3
72	MP4C	Mx	-.000971	3
73	MP3A	X	-2.531	1.5
74	MP3A	Z	4.384	1.5
75	MP3A	Mx	.001	1.5
76	MP3A	X	-2.531	6.5
77	MP3A	Z	4.384	6.5
78	MP3A	Mx	.001	6.5
79	MP3B	X	-2.04	1.5
80	MP3B	Z	3.533	1.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
81	MP3B	Mx	-.002	1.5
82	MP3B	X	-2.04	6.5
83	MP3B	Z	3.533	6.5
84	MP3B	Mx	-.002	6.5
85	MP3C	X	-2.531	1.5
86	MP3C	Z	4.384	1.5
87	MP3C	Mx	.001	1.5
88	MP3C	X	-2.531	6.5
89	MP3C	Z	4.384	6.5
90	MP3C	Mx	.001	6.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	X	-3.032	2
2	MP1A	Z	1.751	2
3	MP1A	Mx	.002	2
4	MP1A	X	-3.032	6
5	MP1A	Z	1.751	6
6	MP1A	Mx	.002	6
7	MP1B	X	-3.032	2
8	MP1B	Z	1.751	2
9	MP1B	Mx	-.002	2
10	MP1B	X	-3.032	6
11	MP1B	Z	1.751	6
12	MP1B	Mx	-.002	6
13	MP1C	X	-5.303	2
14	MP1C	Z	3.061	2
15	MP1C	Mx	0	2
16	MP1C	X	-5.303	6
17	MP1C	Z	3.061	6
18	MP1C	Mx	0	6
19	MP4A	X	-3.032	2
20	MP4A	Z	1.751	2
21	MP4A	Mx	.002	2
22	MP4A	X	-3.032	6
23	MP4A	Z	1.751	6
24	MP4A	Mx	.002	6
25	MP4B	X	-3.032	2
26	MP4B	Z	1.751	2
27	MP4B	Mx	-.002	2
28	MP4B	X	-3.032	6
29	MP4B	Z	1.751	6
30	MP4B	Mx	-.002	6
31	MP4C	X	-5.303	2
32	MP4C	Z	3.061	2
33	MP4C	Mx	0	2
34	MP4C	X	-5.303	6
35	MP4C	Z	3.061	6
36	MP4C	Mx	0	6
37	MP2A	X	-1.994	3.25
38	MP2A	Z	1.151	3.25
39	MP2A	Mx	.000997	3.25
40	MP2A	X	-1.994	4.75
41	MP2A	Z	1.151	4.75
42	MP2A	Mx	.000997	4.75
43	MP2B	X	-1.994	3.25





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
44	MP2B	Z	1.151	3.25
45	MP2B	Mx	-0.00997	3.25
46	MP2B	X	-1.994	4.75
47	MP2B	Z	1.151	4.75
48	MP2B	Mx	-0.00997	4.75
49	MP2C	X	-3.701	3.25
50	MP2C	Z	2.137	3.25
51	MP2C	Mx	0	3.25
52	MP2C	X	-3.701	4.75
53	MP2C	Z	2.137	4.75
54	MP2C	Mx	0	4.75
55	MP1A	X	-2.28	3
56	MP1A	Z	1.316	3
57	MP1A	Mx	-0.001	3
58	MP1B	X	-2.28	3
59	MP1B	Z	1.316	3
60	MP1B	Mx	.001	3
61	MP1C	X	-3.027	3
62	MP1C	Z	1.748	3
63	MP1C	Mx	0	3
64	MP4A	X	-2.781	3
65	MP4A	Z	1.605	3
66	MP4A	Mx	-0.001	3
67	MP4B	X	-2.781	3
68	MP4B	Z	1.605	3
69	MP4B	Mx	.001	3
70	MP4C	X	-3.652	3
71	MP4C	Z	2.109	3
72	MP4C	Mx	0	3
73	MP3A	X	-3.817	1.5
74	MP3A	Z	2.204	1.5
75	MP3A	Mx	.002	1.5
76	MP3A	X	-3.817	6.5
77	MP3A	Z	2.204	6.5
78	MP3A	Mx	.002	6.5
79	MP3B	X	-3.817	1.5
80	MP3B	Z	2.204	1.5
81	MP3B	Mx	-.002	1.5
82	MP3B	X	-3.817	6.5
83	MP3B	Z	2.204	6.5
84	MP3B	Mx	-.002	6.5
85	MP3C	X	-4.668	1.5
86	MP3C	Z	2.695	1.5
87	MP3C	Mx	0	1.5
88	MP3C	X	-4.668	6.5
89	MP3C	Z	2.695	6.5
90	MP3C	Mx	0	6.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP1A	X	-2.627	2
2	MP1A	Z	0	2
3	MP1A	Mx	.001	2
4	MP1A	X	-2.627	6
5	MP1A	Z	0	6
6	MP1A	Mx	.001	6



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
7	MP1B	X	-5.249	2
8	MP1B	Z	0	2
9	MP1B	Mx	-.001	2
10	MP1B	X	-5.249	6
11	MP1B	Z	0	6
12	MP1B	Mx	-.001	6
13	MP1C	X	-5.249	2
14	MP1C	Z	0	2
15	MP1C	Mx	-.001	2
16	MP1C	X	-5.249	6
17	MP1C	Z	0	6
18	MP1C	Mx	-.001	6
19	MP4A	X	-2.627	2
20	MP4A	Z	0	2
21	MP4A	Mx	.001	2
22	MP4A	X	-2.627	6
23	MP4A	Z	0	6
24	MP4A	Mx	.001	6
25	MP4B	X	-5.249	2
26	MP4B	Z	0	2
27	MP4B	Mx	-.001	2
28	MP4B	X	-5.249	6
29	MP4B	Z	0	6
30	MP4B	Mx	-.001	6
31	MP4C	X	-5.249	2
32	MP4C	Z	0	2
33	MP4C	Mx	-.001	2
34	MP4C	X	-5.249	6
35	MP4C	Z	0	6
36	MP4C	Mx	-.001	6
37	MP2A	X	-1.646	3.25
38	MP2A	Z	0	3.25
39	MP2A	Mx	.000823	3.25
40	MP2A	X	-1.646	4.75
41	MP2A	Z	0	4.75
42	MP2A	Mx	.000823	4.75
43	MP2B	X	-3.617	3.25
44	MP2B	Z	0	3.25
45	MP2B	Mx	-.000904	3.25
46	MP2B	X	-3.617	4.75
47	MP2B	Z	0	4.75
48	MP2B	Mx	-.000904	4.75
49	MP2C	X	-3.617	3.25
50	MP2C	Z	0	3.25
51	MP2C	Mx	-.000904	3.25
52	MP2C	X	-3.617	4.75
53	MP2C	Z	0	4.75
54	MP2C	Mx	-.000904	4.75
55	MP1A	X	-2.345	3
56	MP1A	Z	0	3
57	MP1A	Mx	-.001	3
58	MP1B	X	-3.208	3
59	MP1B	Z	0	3
60	MP1B	Mx	.000802	3
61	MP1C	X	-3.208	3
62	MP1C	Z	0	3
63	MP1C	Mx	.000802	3





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
64	MP4A	X	-2.875	3
65	MP4A	Z	0	3
66	MP4A	Mx	-.001	3
67	MP4B	X	-3.882	3
68	MP4B	Z	0	3
69	MP4B	Mx	.000971	3
70	MP4C	X	-3.882	3
71	MP4C	Z	0	3
72	MP4C	Mx	.000971	3
73	MP3A	X	-4.08	1.5
74	MP3A	Z	0	1.5
75	MP3A	Mx	.002	1.5
76	MP3A	X	-4.08	6.5
77	MP3A	Z	0	6.5
78	MP3A	Mx	.002	6.5
79	MP3B	X	-5.063	1.5
80	MP3B	Z	0	1.5
81	MP3B	Mx	-.001	1.5
82	MP3B	X	-5.063	6.5
83	MP3B	Z	0	6.5
84	MP3B	Mx	-.001	6.5
85	MP3C	X	-5.063	1.5
86	MP3C	Z	0	1.5
87	MP3C	Mx	-.001	1.5
88	MP3C	X	-5.063	6.5
89	MP3C	Z	0	6.5
90	MP3C	Mx	-.001	6.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP1A	X	-3.032	2
2	MP1A	Z	-1.751	2
3	MP1A	Mx	.002	2
4	MP1A	X	-3.032	6
5	MP1A	Z	-1.751	6
6	MP1A	Mx	.002	6
7	MP1B	X	-5.303	2
8	MP1B	Z	-3.061	2
9	MP1B	Mx	0	2
10	MP1B	X	-5.303	6
11	MP1B	Z	-3.061	6
12	MP1B	Mx	0	6
13	MP1C	X	-3.032	2
14	MP1C	Z	-1.751	2
15	MP1C	Mx	-.002	2
16	MP1C	X	-3.032	6
17	MP1C	Z	-1.751	6
18	MP1C	Mx	-.002	6
19	MP4A	X	-3.032	2
20	MP4A	Z	-1.751	2
21	MP4A	Mx	.002	2
22	MP4A	X	-3.032	6
23	MP4A	Z	-1.751	6
24	MP4A	Mx	.002	6
25	MP4B	X	-5.303	2
26	MP4B	Z	-3.061	2



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
27	MP4B	Mx	0	2
28	MP4B	X	-5.303	6
29	MP4B	Z	-3.061	6
30	MP4B	Mx	0	6
31	MP4C	X	-3.032	2
32	MP4C	Z	-1.751	2
33	MP4C	Mx	-.002	2
34	MP4C	X	-3.032	6
35	MP4C	Z	-1.751	6
36	MP4C	Mx	-.002	6
37	MP2A	X	-1.994	3.25
38	MP2A	Z	-1.151	3.25
39	MP2A	Mx	.000997	3.25
40	MP2A	X	-1.994	4.75
41	MP2A	Z	-1.151	4.75
42	MP2A	Mx	.000997	4.75
43	MP2B	X	-3.701	3.25
44	MP2B	Z	-2.137	3.25
45	MP2B	Mx	0	3.25
46	MP2B	X	-3.701	4.75
47	MP2B	Z	-2.137	4.75
48	MP2B	Mx	0	4.75
49	MP2C	X	-1.994	3.25
50	MP2C	Z	-1.151	3.25
51	MP2C	Mx	-.000997	3.25
52	MP2C	X	-1.994	4.75
53	MP2C	Z	-1.151	4.75
54	MP2C	Mx	-.000997	4.75
55	MP1A	X	-2.28	3
56	MP1A	Z	-1.316	3
57	MP1A	Mx	-.001	3
58	MP1B	X	-3.027	3
59	MP1B	Z	-1.748	3
60	MP1B	Mx	0	3
61	MP1C	X	-2.28	3
62	MP1C	Z	-1.316	3
63	MP1C	Mx	.001	3
64	MP4A	X	-2.781	3
65	MP4A	Z	-1.605	3
66	MP4A	Mx	-.001	3
67	MP4B	X	-3.652	3
68	MP4B	Z	-2.109	3
69	MP4B	Mx	0	3
70	MP4C	X	-2.781	3
71	MP4C	Z	-1.605	3
72	MP4C	Mx	.001	3
73	MP3A	X	-3.817	1.5
74	MP3A	Z	-2.204	1.5
75	MP3A	Mx	.002	1.5
76	MP3A	X	-3.817	6.5
77	MP3A	Z	-2.204	6.5
78	MP3A	Mx	.002	6.5
79	MP3B	X	-4.668	1.5
80	MP3B	Z	-2.695	1.5
81	MP3B	Mx	0	1.5
82	MP3B	X	-4.668	6.5
83	MP3B	Z	-2.695	6.5





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
84	MP3B	Mx	0	6.5
85	MP3C	X	-3.817	1.5
86	MP3C	Z	-2.204	1.5
87	MP3C	Mx	-.002	1.5
88	MP3C	X	-3.817	6.5
89	MP3C	Z	-2.204	6.5
90	MP3C	Mx	-.002	6.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP1A	X	-2.625	2
2	MP1A	Z	-4.546	2
3	MP1A	Mx	.001	2
4	MP1A	X	-2.625	6
5	MP1A	Z	-4.546	6
6	MP1A	Mx	.001	6
7	MP1B	X	-2.625	2
8	MP1B	Z	-4.546	2
9	MP1B	Mx	.001	2
10	MP1B	X	-2.625	6
11	MP1B	Z	-4.546	6
12	MP1B	Mx	.001	6
13	MP1C	X	-1.314	2
14	MP1C	Z	-2.275	2
15	MP1C	Mx	-.001	2
16	MP1C	X	-1.314	6
17	MP1C	Z	-2.275	6
18	MP1C	Mx	-.001	6
19	MP4A	X	-2.625	2
20	MP4A	Z	-4.546	2
21	MP4A	Mx	.001	2
22	MP4A	X	-2.625	6
23	MP4A	Z	-4.546	6
24	MP4A	Mx	.001	6
25	MP4B	X	-2.625	2
26	MP4B	Z	-4.546	2
27	MP4B	Mx	.001	2
28	MP4B	X	-2.625	6
29	MP4B	Z	-4.546	6
30	MP4B	Mx	.001	6
31	MP4C	X	-1.314	2
32	MP4C	Z	-2.275	2
33	MP4C	Mx	-.001	2
34	MP4C	X	-1.314	6
35	MP4C	Z	-2.275	6
36	MP4C	Mx	-.001	6
37	MP2A	X	-1.808	3.25
38	MP2A	Z	-3.132	3.25
39	MP2A	Mx	.000904	3.25
40	MP2A	X	-1.808	4.75
41	MP2A	Z	-3.132	4.75
42	MP2A	Mx	.000904	4.75
43	MP2B	X	-1.808	3.25
44	MP2B	Z	-3.132	3.25
45	MP2B	Mx	.000904	3.25
46	MP2B	X	-1.808	4.75



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
47	MP2B	Z	-3.132	4.75
48	MP2B	Mx	.000904	4.75
49	MP2C	X	-.823	3.25
50	MP2C	Z	-1.425	3.25
51	MP2C	Mx	-.000823	3.25
52	MP2C	X	-.823	4.75
53	MP2C	Z	-1.425	4.75
54	MP2C	Mx	-.000823	4.75
55	MP1A	X	-1.604	3
56	MP1A	Z	-2.778	3
57	MP1A	Mx	-.000802	3
58	MP1B	X	-1.604	3
59	MP1B	Z	-2.778	3
60	MP1B	Mx	-.000802	3
61	MP1C	X	-1.173	3
62	MP1C	Z	-2.031	3
63	MP1C	Mx	.001	3
64	MP4A	X	-1.941	3
65	MP4A	Z	-3.362	3
66	MP4A	Mx	-.000971	3
67	MP4B	X	-1.941	3
68	MP4B	Z	-3.362	3
69	MP4B	Mx	-.000971	3
70	MP4C	X	-1.438	3
71	MP4C	Z	-2.49	3
72	MP4C	Mx	.001	3
73	MP3A	X	-2.531	1.5
74	MP3A	Z	-4.384	1.5
75	MP3A	Mx	.001	1.5
76	MP3A	X	-2.531	6.5
77	MP3A	Z	-4.384	6.5
78	MP3A	Mx	.001	6.5
79	MP3B	X	-2.531	1.5
80	MP3B	Z	-4.384	1.5
81	MP3B	Mx	.001	1.5
82	MP3B	X	-2.531	6.5
83	MP3B	Z	-4.384	6.5
84	MP3B	Mx	.001	6.5
85	MP3C	X	-2.04	1.5
86	MP3C	Z	-3.533	1.5
87	MP3C	Mx	-.002	1.5
88	MP3C	X	-2.04	6.5
89	MP3C	Z	-3.533	6.5
90	MP3C	Mx	-.002	6.5

**Member Point Loads (BLC 77 : Lm1)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	M82	Y	-500	0

**Member Point Loads (BLC 78 : Lm2)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	M19	Y	-500	0

**Member Point Loads (BLC 79 : Lv1)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
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**Member Point Loads (BLC 79 : Lv1) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	M1	Y	-250	0

**Member Point Loads (BLC 80 : Lv2)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	M1	Y	-250	%50

**Member Point Loads (BLC 81 : Antenna Ev)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP1A	Y	0	2
2	MP1A	My	0	2
3	MP1A	Mz	0	2
4	MP1A	Y	0	6
5	MP1A	My	0	6
6	MP1A	Mz	0	6
7	MP1B	Y	0	2
8	MP1B	My	0	2
9	MP1B	Mz	0	2
10	MP1B	Y	0	6
11	MP1B	My	0	6
12	MP1B	Mz	0	6
13	MP1C	Y	0	2
14	MP1C	My	0	2
15	MP1C	Mz	0	2
16	MP1C	Y	0	6
17	MP1C	My	0	6
18	MP1C	Mz	0	6
19	MP4A	Y	0	2
20	MP4A	My	0	2
21	MP4A	Mz	0	2
22	MP4A	Y	0	6
23	MP4A	My	0	6
24	MP4A	Mz	0	6
25	MP4B	Y	0	2
26	MP4B	My	0	2
27	MP4B	Mz	0	2
28	MP4B	Y	0	6
29	MP4B	My	0	6
30	MP4B	Mz	0	6
31	MP4C	Y	0	2
32	MP4C	My	0	2
33	MP4C	Mz	0	2
34	MP4C	Y	0	6
35	MP4C	My	0	6
36	MP4C	Mz	0	6
37	MP2A	Y	0	3.25
38	MP2A	My	0	3.25
39	MP2A	Mz	0	3.25
40	MP2A	Y	0	4.75
41	MP2A	My	0	4.75
42	MP2A	Mz	0	4.75
43	MP2B	Y	0	3.25
44	MP2B	My	0	3.25
45	MP2B	Mz	0	3.25
46	MP2B	Y	0	4.75
47	MP2B	My	0	4.75
48	MP2B	Mz	0	4.75



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**Member Point Loads (BLC 81 : Antenna Ev) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
49	MP2C	Y	0	3.25
50	MP2C	My	0	3.25
51	MP2C	Mz	0	3.25
52	MP2C	Y	0	4.75
53	MP2C	My	0	4.75
54	MP2C	Mz	0	4.75
55	MP1A	Y	0	3
56	MP1A	My	0	3
57	MP1A	Mz	0	3
58	MP1B	Y	0	3
59	MP1B	My	0	3
60	MP1B	Mz	0	3
61	MP1C	Y	0	3
62	MP1C	My	0	3
63	MP1C	Mz	0	3
64	MP4A	Y	0	3
65	MP4A	My	0	3
66	MP4A	Mz	0	3
67	MP4B	Y	0	3
68	MP4B	My	0	3
69	MP4B	Mz	0	3
70	MP4C	Y	0	3
71	MP4C	My	0	3
72	MP4C	Mz	0	3
73	MP3A	Y	0	1.5
74	MP3A	My	0	1.5
75	MP3A	Mz	0	1.5
76	MP3A	Y	0	6.5
77	MP3A	My	0	6.5
78	MP3A	Mz	0	6.5
79	MP3B	Y	0	1.5
80	MP3B	My	0	1.5
81	MP3B	Mz	0	1.5
82	MP3B	Y	0	6.5
83	MP3B	My	0	6.5
84	MP3B	Mz	0	6.5
85	MP3C	Y	0	1.5
86	MP3C	My	0	1.5
87	MP3C	Mz	0	1.5
88	MP3C	Y	0	6.5
89	MP3C	My	0	6.5
90	MP3C	Mz	0	6.5

**Member Point Loads (BLC 82 : Antenna Eh (0 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP1A	Z	-.655	2
2	MP1A	Mx	0	2
3	MP1A	Z	-.655	6
4	MP1A	Mx	0	6
5	MP1B	Z	-.655	2
6	MP1B	Mx	.000284	2
7	MP1B	Z	-.655	6
8	MP1B	Mx	.000284	6
9	MP1C	Z	-.655	2
10	MP1C	Mx	-.000284	2
11	MP1C	Z	-.655	6





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**Member Point Loads (BLC 82 : Antenna Eh (0 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft, %]
12	MP1C	Mx	-.000284	6
13	MP4A	Z	-.655	2
14	MP4A	Mx	0	2
15	MP4A	Z	-.655	6
16	MP4A	Mx	0	6
17	MP4B	Z	-.655	2
18	MP4B	Mx	.000284	2
19	MP4B	Z	-.655	6
20	MP4B	Mx	.000284	6
21	MP4C	Z	-.655	2
22	MP4C	Mx	-.000284	2
23	MP4C	Z	-.655	6
24	MP4C	Mx	-.000284	6
25	MP2A	Z	-.86	3.25
26	MP2A	Mx	0	3.25
27	MP2A	Z	-.86	4.75
28	MP2A	Mx	0	4.75
29	MP2B	Z	-.86	3.25
30	MP2B	Mx	.000372	3.25
31	MP2B	Z	-.86	4.75
32	MP2B	Mx	.000372	4.75
33	MP2C	Z	-.86	3.25
34	MP2C	Mx	-.000372	3.25
35	MP2C	Z	-.86	4.75
36	MP2C	Mx	-.000372	4.75
37	MP1A	Z	-2.241	3
38	MP1A	Mx	0	3
39	MP1B	Z	-2.241	3
40	MP1B	Mx	-.00097	3
41	MP1C	Z	-2.241	3
42	MP1C	Mx	.00097	3
43	MP4A	Z	-2.373	3
44	MP4A	Mx	0	3
45	MP4B	Z	-2.373	3
46	MP4B	Mx	-.001	3
47	MP4C	Z	-2.373	3
48	MP4C	Mx	.001	3
49	MP3A	Z	-.225	1.5
50	MP3A	Mx	0	1.5
51	MP3A	Z	-.225	6.5
52	MP3A	Mx	0	6.5
53	MP3B	Z	-.225	1.5
54	MP3B	Mx	9.7e-5	1.5
55	MP3B	Z	-.225	6.5
56	MP3B	Mx	9.7e-5	6.5
57	MP3C	Z	-.225	1.5
58	MP3C	Mx	-9.7e-5	1.5
59	MP3C	Z	-.225	6.5
60	MP3C	Mx	-9.7e-5	6.5

**Member Point Loads (BLC 83 : Antenna Eh (90 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft, %]
1	MP1A	X	.655	2
2	MP1A	Mx	-.000328	2
3	MP1A	X	.655	6
4	MP1A	Mx	-.000328	6



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**Member Point Loads (BLC 83 : Antenna Eh (90 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
5	MP1B	X	.655	2
6	MP1B	Mx	.000164	2
7	MP1B	X	.655	6
8	MP1B	Mx	.000164	6
9	MP1C	X	.655	2
10	MP1C	Mx	.000164	2
11	MP1C	X	.655	6
12	MP1C	Mx	.000164	6
13	MP4A	X	.655	2
14	MP4A	Mx	-.000328	2
15	MP4A	X	.655	6
16	MP4A	Mx	-.000328	6
17	MP4B	X	.655	2
18	MP4B	Mx	.000164	2
19	MP4B	X	.655	6
20	MP4B	Mx	.000164	6
21	MP4C	X	.655	2
22	MP4C	Mx	.000164	2
23	MP4C	X	.655	6
24	MP4C	Mx	.000164	6
25	MP2A	X	.86	3.25
26	MP2A	Mx	-.00043	3.25
27	MP2A	X	.86	4.75
28	MP2A	Mx	-.00043	4.75
29	MP2B	X	.86	3.25
30	MP2B	Mx	.000215	3.25
31	MP2B	X	.86	4.75
32	MP2B	Mx	.000215	4.75
33	MP2C	X	.86	3.25
34	MP2C	Mx	.000215	3.25
35	MP2C	X	.86	4.75
36	MP2C	Mx	.000215	4.75
37	MP1A	X	2.241	3
38	MP1A	Mx	.001	3
39	MP1B	X	2.241	3
40	MP1B	Mx	-.00056	3
41	MP1C	X	2.241	3
42	MP1C	Mx	-.00056	3
43	MP4A	X	2.373	3
44	MP4A	Mx	.001	3
45	MP4B	X	2.373	3
46	MP4B	Mx	-.000593	3
47	MP4C	X	2.373	3
48	MP4C	Mx	-.000593	3
49	MP3A	X	.225	1.5
50	MP3A	Mx	-.000113	1.5
51	MP3A	X	.225	6.5
52	MP3A	Mx	-.000113	6.5
53	MP3B	X	.225	1.5
54	MP3B	Mx	5.6e-5	1.5
55	MP3B	X	.225	6.5
56	MP3B	Mx	5.6e-5	6.5
57	MP3C	X	.225	1.5
58	MP3C	Mx	5.6e-5	1.5
59	MP3C	X	.225	6.5
60	MP3C	Mx	5.6e-5	6.5





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**Member Area Loads (BLC 39 : Structure D)**

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N41	N40	N55	N54A	Y	Two Way	-.005
2	N65	N64	N63	N62	Y	Two Way	-.005
3	N94	N93	N92	N91	Y	Two Way	-.005

**Member Area Loads (BLC 40 : Structure Di)**

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N41	N40	N55	N54A	Y	Two Way	-.011
2	N65	N64	N63	N62	Y	Two Way	-.011
3	N94	N93	N92	N91	Y	Two Way	-.011

**Member Area Loads (BLC 84 : Structure Ev)**

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N41	N40	N55	N54A	Y	Two Way	0
2	N65	N64	N63	N62	Y	Two Way	0
3	N94	N93	N92	N91	Y	Two Way	0

**Member Area Loads (BLC 85 : Structure Eh (0 Deg))**

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N41	N40	N55	N54A	Z	Two Way	-.000156
2	N65	N64	N63	N62	Z	Two Way	-.000156
3	N94	N93	N92	N91	Z	Two Way	-.000156

**Member Area Loads (BLC 86 : Structure Eh (90 Deg))**

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N41	N40	N55	N54A	X	Two Way	.000156
2	N65	N64	N63	N62	X	Two Way	.000156
3	N94	N93	N92	N91	X	Two Way	.000156

**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	N3	max 1054.996	10	1960.563	13	1561.443	1	5.311	13	1.812	4	.751	4
2		min -1054.89	4	497.472	7	-1678.871	7	.987	7	-1.815	10	-.739	10
3	N40B	max 1314.921	9	1960.004	21	1279.87	1	-.258	1	1.812	12	-.749	4
4		min -1416.455	3	497.257	3	-1220.958	7	-3.115	31	-1.815	6	-4.608	22
5	N69	max 1567.989	10	1960.335	17	1074.458	1	-.181	1	1.812	8	4.617	16
6		min -1464.373	4	497.377	11	-1015.938	7	-3.013	43	-1.815	2	.817	10
7	Totals:	max 3915.774	10	5604.069	18	3915.77	1						
8		min -3915.773	4	1968.598	75	-3915.766	7						

**Joint Reactions (By Combination)**

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
1	1	N3	74.634	1254.746	1561.443	3.562	-.035	.061
2	1	N40B	-542.496	682.729	1279.87	-.258	1.187	-1.7
3	1	N69	467.864	687.297	1074.458	-.181	-.978	1.633
4	1	Totals:	.002	2624.772	3915.77			
5	1	COG (ft):	X: 0	Y: .883	Z: 0			
6	2	N3	-185.895	1201.964	1385.459	3.45	-.025	.411
7	2	N40B	-1210.684	545.953	1111.565	-.283	.14	-1.142
8	2	N69	-561.297	876.864	894.127	-.462	-1.815	2.281
9	2	Totals:	-1957.876	2624.782	3391.151			
10	2	COG (ft):	X: 0	Y: .883	Z: 0			





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**Joint Reactions (By Combination) (Continued)**

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
11	3	N3	-694.599	1061.496	828.802	3.043	.973	.665
12	3	N40B	-1416.455	497.257	904.362	-.536	.035	-.83
13	3	N69	-1280.094	1066.042	224.723	-.945	-1.183	2.855
14	3	Totals:	-3391.148	2624.794	1957.887			
15	3	COG (ft):	X: 0	Y: .883	Z: 0			
16	4	N3	-1054.89	871.717	-149.47	2.342	1.812	.751
17	4	N40B	-1396.509	548.553	587.509	-.898	.022	-.749
18	4	N69	-1464.373	1204.538	-438.04	-1.439	-.136	3.114
19	4	Totals:	-3915.773	2624.808	0			
20	4	COG (ft):	X: 0	Y: .883	Z: 0			
21	5	N3	-837.153	682.951	-1109.758	1.602	1.187	.627
22	5	N40B	-1164.438	687.184	-132.045	-1.323	-.978	-.973
23	5	N69	-1389.559	1254.686	-716.087	-1.833	-.035	3.055
24	5	Totals:	-3391.15	2624.821	-1957.89			
25	5	COG (ft):	X: 0	Y: .883	Z: 0			
26	6	N3	-357.296	546.175	-1604.271	1.131	.14	.326
27	6	N40B	-493.69	876.752	-933.162	-1.743	-1.815	-1.541
28	6	N69	-1106.893	1201.9	-853.721	-2.08	-.025	2.783
29	6	Totals:	-1957.878	2624.827	-3391.154			
30	6	COG (ft):	X: 0	Y: .883	Z: 0			
31	7	N3	-74.964	497.472	-1678.871	.987	.035	-.049
32	7	N40B	445.429	1065.928	-1220.958	-1.999	-1.183	-2.247
33	7	N69	-370.465	1061.424	-1015.938	-2.096	.973	2.303
34	7	Totals:	0	2624.824	-3915.766			
35	7	COG (ft):	X: 0	Y: .883	Z: 0			
36	8	N3	189.463	548.761	-1503.16	1.098	.022	-.404
37	8	N40B	1111.531	1204.419	-1049.167	-1.976	-.136	-2.804
38	8	N69	656.883	871.635	-838.82	-1.821	1.812	1.653
39	8	Totals:	1957.877	2624.814	-3391.148			
40	8	COG (ft):	X: 0	Y: .883	Z: 0			
41	9	N3	696.581	687.381	-942.408	1.504	-.978	-.659
42	9	N40B	1314.921	1254.563	-845.359	-1.728	-.035	-3.115
43	9	N69	1379.647	682.858	-170.117	-1.343	1.187	1.074
44	9	Totals:	3391.15	2624.802	-1957.883			
45	9	COG (ft):	X: 0	Y: .883	Z: 0			
46	10	N3	1054.996	876.937	39.041	2.206	-1.815	-.739
47	10	N40B	1292.79	1201.774	-531.745	-1.369	-.025	-3.193
48	10	N69	1567.989	546.077	492.709	-.847	.14	.817
49	10	Totals:	3915.774	2624.788	.004			
50	10	COG (ft):	X: 0	Y: .883	Z: 0			
51	11	N3	834.669	1066.105	996.243	2.945	-1.183	-.608
52	11	N40B	1065.059	1061.294	187.135	-.946	.973	-2.967
53	11	N69	1491.425	497.377	774.515	-.45	.035	.88
54	11	Totals:	3391.152	2624.775	1957.893			
55	11	COG (ft):	X: 0	Y: .883	Z: 0			
56	12	N3	352.835	1204.596	1487.207	3.416	-.136	-.309
57	12	N40B	397.999	871.504	988.288	-.52	1.812	-2.404
58	12	N69	1207.046	548.67	915.662	-.199	.022	1.153
59	12	Totals:	1957.88	2624.769	3391.157			
60	12	COG (ft):	X: 0	Y: .883	Z: 0			
61	13	N3	15.31	1960.563	277.049	5.311	-.011	-.013
62	13	N40B	-246.29	1820.977	365.267	-2.304	.287	-4.24
63	13	N69	230.982	1822.516	328.149	-2.242	-.251	4.253
64	13	Totals:	.002	5604.056	970.465			
65	13	COG (ft):	X: 0	Y: .861	Z: 0			
66	14	N3	-56.33	1947.82	229.777	5.279	.034	.073
67	14	N40B	-414.003	1787.529	341.069	-2.305	.068	-4.102





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**Joint Reactions (By Combination) (Continued)**

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
68	14	N69	-14.897	1868.709	269.599	-2.31	-.415	4.41
69	14	Totals:	-485.23	5604.058	840.445			
70	14	COG (ft):	X: 0	Y: .861	Z: 0			
71	15	N3	-168.599	1913.76	84.174	5.171	.251	.134
72	15	N40B	-474.904	1775.56	291.924	-2.362	.012	-4.021
73	15	N69	-196.942	1914.741	109.142	-2.424	-.287	4.548
74	15	Totals:	-840.445	5604.061	485.24			
75	15	COG (ft):	X: 0	Y: .861	Z: 0			
76	16	N3	-240.969	1867.546	-157.87	5.001	.415	.154
77	16	N40B	-469.877	1788.227	206.044	-2.452	-.034	-4.006
78	16	N69	-259.618	1948.292	-48.171	-2.544	-.068	4.617
79	16	Totals:	-970.464	5604.065	.003			
80	16	COG (ft):	X: 0	Y: .861	Z: 0			
81	17	N3	-193.184	1821.546	-395.926	4.824	.287	.125
82	17	N40B	-399.677	1822.187	35.963	-2.56	-.251	-4.069
83	17	N69	-247.584	1960.335	-125.27	-2.642	-.011	4.608
84	17	Totals:	-840.445	5604.068	-485.233			
85	17	COG (ft):	X: 0	Y: .861	Z: 0			
86	18	N3	-88.371	1788.098	-529.067	4.705	.068	.055
87	18	N40B	-226.036	1868.379	-147.7	-2.662	-.415	-4.207
88	18	N69	-170.823	1947.592	-163.671	-2.7	.034	4.537
89	18	Totals:	-485.23	5604.069	-840.438			
90	18	COG (ft):	X: 0	Y: .861	Z: 0			
91	19	N3	-15.356	1776.129	-557.231	4.664	.012	-.035
92	19	N40B	3.949	1914.411	-225.129	-2.724	-.287	-4.374
93	19	N69	11.409	1913.528	-188.096	-2.699	.251	4.413
94	19	Totals:	.001	5604.068	-970.457			
95	19	COG (ft):	X: 0	Y: .861	Z: 0			
96	20	N3	56.503	1788.794	-509.94	4.696	-.034	-.121
97	20	N40B	171.522	1947.961	-200.752	-2.724	-.068	-4.513
98	20	N69	257.208	1867.311	-129.745	-2.631	.415	4.255
99	20	Totals:	485.233	5604.066	-840.437			
100	20	COG (ft):	X: 0	Y: .861	Z: 0			
101	21	N3	168.697	1822.749	-364.107	4.804	-.251	-.182
102	21	N40B	232.274	1960.004	-151.785	-2.667	-.011	-4.593
103	21	N69	439.477	1821.31	30.661	-2.518	.287	4.117
104	21	Totals:	840.448	5604.063	-485.232			
105	21	COG (ft):	X: 0	Y: .861	Z: 0			
106	22	N3	240.935	1868.939	-121.895	4.974	-.415	-.202
107	22	N40B	227.154	1947.26	-66.105	-2.576	.034	-4.608
108	22	N69	502.378	1787.86	188.004	-2.397	.068	4.048
109	22	Totals:	970.467	5604.06	.005			
110	22	COG (ft):	X: 0	Y: .861	Z: 0			
111	23	N3	192.994	1914.971	115.994	5.151	-.287	-.172
112	23	N40B	157.191	1913.195	103.926	-2.469	.251	-4.545
113	23	N69	490.263	1775.89	265.322	-2.299	.012	4.058
114	23	Totals:	840.448	5604.057	485.242			
115	23	COG (ft):	X: 0	Y: .861	Z: 0			
116	24	N3	88.095	1948.519	248.924	5.27	-.068	-.102
117	24	N40B	-16.238	1866.979	287.619	-2.367	.415	-4.407
118	24	N69	413.377	1788.557	303.903	-2.241	-.034	4.129
119	24	Totals:	485.233	5604.055	840.446			
120	24	COG (ft):	X: 0	Y: .861	Z: 0			
121	25	N3	16.028	765.993	.548	2.094	-.023	.138
122	25	N40B	-118.569	1785.102	119.929	-3.023	.06	-4.437
123	25	N69	102.541	823.712	88.059	-1.036	-.027	1.79
124	25	Totals:	0	3374.807	208.536			





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**Joint Reactions (By Combination) (Continued)**

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
125	25	COG (ft):	X: -1.12	Y: .687	Z: .888			
126	26	N3	2.054	763.251	-8.815	2.088	-.022	.156
127	26	N40B	-154.099	1777.774	110.875	-3.024	.004	-4.407
128	26	N69	47.776	833.783	78.533	-1.051	-.072	1.825
129	26	Totals:	-104.269	3374.808	180.593			
130	26	COG (ft):	X: -1.12	Y: .687	Z: .888			
131	27	N3	-24.996	755.851	-38.553	2.066	.031	.17
132	27	N40B	-164.992	1775.145	99.921	-3.037	-.002	-4.391
133	27	N69	9.397	843.812	42.899	-1.076	-.038	1.855
134	27	Totals:	-180.592	3374.808	104.268			
135	27	COG (ft):	X: -1.12	Y: .687	Z: .888			
136	28	N3	-44.139	745.777	-90.725	2.029	.076	.174
137	28	N40B	-163.874	1777.922	83.123	-3.056	-.002	-4.387
138	28	N69	-.52	851.11	7.604	-1.102	.017	1.869
139	28	Totals:	-208.532	3374.809	.003			
140	28	COG (ft):	X: -1.12	Y: .687	Z: .888			
141	29	N3	-32.477	735.734	-141.789	1.99	.042	.167
142	29	N40B	-151.624	1785.365	44.823	-3.079	-.056	-4.398
143	29	N69	3.509	853.711	-7.296	-1.123	.023	1.866
144	29	Totals:	-180.592	3374.81	-104.263			
145	29	COG (ft):	X: -1.12	Y: .687	Z: .888			
146	30	N3	-6.872	728.417	-168.04	1.965	-.014	.152
147	30	N40B	-116	1795.473	2.163	-3.101	-.1	-4.428
148	30	N69	18.602	850.92	-14.71	-1.137	.023	1.851
149	30	Totals:	-104.269	3374.81	-180.587			
150	30	COG (ft):	X: -1.12	Y: .687	Z: .888			
151	31	N3	8.059	725.776	-172.012	1.957	-.019	.132
152	31	N40B	-65.953	1805.538	-13.257	-3.115	-.067	-4.466
153	31	N69	57.894	843.496	-23.262	-1.137	.077	1.826
154	31	Totals:	0	3374.81	-208.53			
155	31	COG (ft):	X: -1.12	Y: .687	Z: .888			
156	32	N3	22.044	728.514	-162.65	1.963	-.02	.113
157	32	N40B	-30.429	1812.87	-4.192	-3.114	-.011	-4.495
158	32	N69	112.653	833.425	-13.745	-1.123	.121	1.791
159	32	Totals:	104.269	3374.809	-180.587			
160	32	COG (ft):	X: -1.12	Y: .687	Z: .888			
161	33	N3	49.09	735.908	-132.901	1.985	-.073	.099
162	33	N40B	-19.543	1815.504	6.752	-3.1	-.005	-4.512
163	33	N69	151.044	823.397	21.887	-1.097	.088	1.761
164	33	Totals:	180.592	3374.809	-104.262			
165	33	COG (ft):	X: -1.12	Y: .687	Z: .888			
166	34	N3	68.228	745.982	-80.72	2.022	-.118	.095
167	34	N40B	-20.667	1812.723	23.54	-3.081	-.005	-4.516
168	34	N69	160.972	816.103	57.182	-1.071	.032	1.747
169	34	Totals:	208.532	3374.808	.003			
170	34	COG (ft):	X: -1.12	Y: .687	Z: .888			
171	35	N3	56.558	756.026	-29.664	2.061	-.084	.102
172	35	N40B	-32.905	1805.275	61.839	-3.059	.048	-4.504
173	35	N69	156.938	813.507	72.093	-1.05	.027	1.75
174	35	Totals:	180.592	3374.807	104.268			
175	35	COG (ft):	X: -1.12	Y: .687	Z: .888			
176	36	N3	30.948	763.347	-3.423	2.086	-.028	.118
177	36	N40B	-68.519	1795.166	104.499	-3.036	.093	-4.474
178	36	N69	141.84	816.294	79.517	-1.037	.026	1.765
179	36	Totals:	104.269	3374.807	180.593			
180	36	COG (ft):	X: -1.12	Y: .687	Z: .888			
181	37	N3	-3.691	756.163	10.692	2.128	.012	-.14





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**Joint Reactions (By Combination) (Continued)**

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
182	37	N40B	-94.326	890.533	97.726	-1.158	.048	-1.816
183	37	N69	98.019	1728.109	100.118	-2.912	-.051	3.63
184	37	Totals:	0	3374.805	208.536			
185	37	COG (ft):	X: .824	Y: .687	Z: .888			
186	38	N3	-17.666	753.384	1.32	2.122	.012	-.121
187	38	N40B	-129.86	883.205	88.676	-1.16	-.007	-1.787
188	38	N69	43.258	1738.216	90.596	-2.927	-.095	3.664
189	38	Totals:	-104.268	3374.805	180.592			
190	38	COG (ft):	X: .824	Y: .687	Z: .888			
191	39	N3	-44.716	745.962	-28.429	2.101	.065	-.108
192	39	N40B	-140.754	880.557	77.73	-1.173	-.013	-1.77
193	39	N69	4.879	1748.288	54.966	-2.952	-.062	3.695
194	39	Totals:	-180.591	3374.806	104.268			
195	39	COG (ft):	X: .824	Y: .687	Z: .888			
196	40	N3	-63.857	735.878	-80.608	2.063	.11	-.103
197	40	N40B	-139.636	883.298	60.939	-1.192	-.013	-1.766
198	40	N69	-5.038	1755.631	19.672	-2.978	-.006	3.708
199	40	Totals:	-208.531	3374.807	.003			
200	40	COG (ft):	X: .824	Y: .687	Z: .888			
201	41	N3	-52.195	725.833	-131.667	2.024	.077	-.11
202	41	N40B	-127.389	890.701	22.637	-1.214	-.067	-1.778
203	41	N69	-1.008	1758.274	4.767	-2.999	0	3.705
204	41	Totals:	-180.591	3374.807	-104.263			
205	41	COG (ft):	X: .824	Y: .687	Z: .888			
206	42	N3	-26.59	718.527	-157.906	1.999	.021	-.126
207	42	N40B	-91.764	900.778	-20.029	-1.237	-.111	-1.808
208	42	N69	14.086	1755.503	-2.652	-3.012	0	3.691
209	42	Totals:	-104.268	3374.808	-180.587			
210	42	COG (ft):	X: .824	Y: .687	Z: .888			
211	43	N3	-11.66	715.916	-161.869	1.991	.015	-.146
212	43	N40B	-41.713	910.826	-35.453	-1.251	-.078	-1.845
213	43	N69	53.374	1748.065	-11.209	-3.013	.053	3.665
214	43	Totals:	0	3374.808	-208.531			
215	43	COG (ft):	X: .824	Y: .687	Z: .888			
216	44	N3	2.326	718.691	-152.498	1.997	.015	-.165
217	44	N40B	-6.186	918.158	-26.393	-1.249	-.022	-1.875
218	44	N69	108.129	1737.958	-1.696	-2.999	.098	3.631
219	44	Totals:	104.27	3374.807	-180.587			
220	44	COG (ft):	X: .824	Y: .687	Z: .888			
221	45	N3	29.372	726.109	-122.738	2.019	-.039	-.178
222	45	N40B	4.702	920.811	-15.457	-1.236	-.017	-1.892
223	45	N69	146.519	1727.887	33.932	-2.973	.064	3.6
224	45	Totals:	180.593	3374.806	-104.262			
225	45	COG (ft):	X: .824	Y: .687	Z: .888			
226	46	N3	48.508	736.192	-70.55	2.056	-.083	-.183
227	46	N40B	3.578	918.066	1.326	-1.217	-.016	-1.896
228	46	N69	156.448	1720.548	69.227	-2.947	.009	3.587
229	46	Totals:	208.533	3374.806	.003			
230	46	COG (ft):	X: .824	Y: .687	Z: .888			
231	47	N3	36.838	746.238	-19.5	2.096	-.05	-.176
232	47	N40B	-8.658	910.658	39.626	-1.195	.037	-1.884
233	47	N69	152.413	1717.91	84.142	-2.926	.003	3.59
234	47	Totals:	180.593	3374.805	104.268			
235	47	COG (ft):	X: .824	Y: .687	Z: .888			
236	48	N3	11.228	753.548	6.73	2.121	.006	-.16
237	48	N40B	-44.272	900.58	82.291	-1.172	.082	-1.854
238	48	N69	137.314	1720.676	91.571	-2.913	.002	3.604





Company :  
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**Joint Reactions (By Combination) (Continued)**

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
239	48	Totals:	104.27	3374.805	180.593			
240	48	COG (ft):	X: .824	Y: .687	Z: .888			
241	49	N3	-8.089	815.108	-78.112	2.135	.014	-.046
242	49	N40B	-72.247	827.738	32.042	-1.057	-.017	-1.891
243	49	N69	80.337	1356.96	46.072	-2.154	.003	3.582
244	49	Totals:	0	2999.806	.002			
245	49	COG (ft):	X: .782	Y: .773	Z: .499			
246	50	N3	-.003	798.421	-60.888	2.194	0	.006
247	50	N40B	-51.89	1100.609	30.45	-1.61	0	-2.076
248	50	N69	51.894	1100.772	30.441	-1.62	0	2.071
249	50	Totals:	0	2999.802	.002			
250	50	COG (ft):	X: 0	Y: .773	Z: .499			
251	51	N3	-.005	1020.863	-71.033	2.658	0	.007
252	51	N40B	-61.515	1020.63	35.522	-1.323	0	-2.305
253	51	N69	61.521	1020.772	35.512	-1.334	0	2.299
254	51	Totals:	0	3062.264	.002			
255	51	COG (ft):	X: 0	Y: .883	Z: 0			
256	52	N3	.28	880.452	-30.938	2.298	0	.006
257	52	N40B	-59.819	872.062	48.528	-1.121	.018	-1.971
258	52	N69	59.539	872.284	48.032	-1.13	-.017	1.966
259	52	Totals:	0	2624.798	65.622			
260	52	COG (ft):	X: 0	Y: .883	Z: 0			
261	53	N3	-6.672	879.695	-35.09	2.296	.009	.011
262	53	N40B	-71.69	870.097	49.66	-1.121	.011	-1.963
263	53	N69	45.553	875.005	42.259	-1.134	-.02	1.975
264	53	Totals:	-32.809	2624.798	56.829			
265	53	COG (ft):	X: 0	Y: .883	Z: 0			
266	54	N3	-11.838	877.688	-46.146	2.288	.017	.015
267	54	N40B	-78.475	869.399	45.641	-1.124	0	-1.958
268	54	N69	33.486	877.711	33.317	-1.141	-.018	1.983
269	54	Totals:	-56.826	2624.798	32.812			
270	54	COG (ft):	X: 0	Y: .883	Z: 0			
271	55	N3	-13.833	874.967	-61.145	2.278	.02	.016
272	55	N40B	-78.355	870.155	37.547	-1.13	-.009	-1.958
273	55	N69	26.569	879.676	23.6	-1.148	-.011	1.988
274	55	Totals:	-65.619	2624.798	.002			
275	55	COG (ft):	X: 0	Y: .883	Z: 0			
276	56	N3	-12.122	872.261	-76.069	2.268	.018	.015
277	56	N40B	-71.362	872.163	27.547	-1.136	-.017	-1.962
278	56	N69	26.658	880.374	15.713	-1.154	0	1.988
279	56	Totals:	-56.826	2624.798	-32.808			
280	56	COG (ft):	X: 0	Y: .883	Z: 0			
281	57	N3	-7.165	870.296	-86.917	2.261	.011	.011
282	57	N40B	-59.371	874.884	18.323	-1.142	-.02	-1.97
283	57	N69	33.727	879.618	11.769	-1.157	.009	1.983
284	57	Totals:	-32.809	2624.798	-56.825			
285	57	COG (ft):	X: 0	Y: .883	Z: 0			
286	58	N3	-.288	869.599	-90.784	2.258	0	.006
287	58	N40B	-45.594	877.59	12.343	-1.146	-.018	-1.98
288	58	N69	45.883	877.61	12.823	-1.156	.017	1.975
289	58	Totals:	0	2624.798	-65.618			
290	58	COG (ft):	X: 0	Y: .883	Z: 0			
291	59	N3	6.665	870.355	-86.632	2.26	-.009	0
292	59	N40B	-33.723	879.555	11.211	-1.147	-.011	-1.988
293	59	N69	59.869	874.889	18.595	-1.152	.02	1.966
294	59	Totals:	32.811	2624.798	-56.825			
295	59	COG (ft):	X: 0	Y: .883	Z: 0			





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**Joint Reactions (By Combination) (Continued)**

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
296	60	N3	11.83	872.362	-75.575	2.268	-.017	-.003
297	60	N40B	-26.939	880.253	15.23	-1.144	0	-1.993
298	60	N69	71.936	872.183	27.537	-1.146	.018	1.958
299	60	Totals:	56.828	2624.798	-32.808			
300	60	COG (ft):	X: 0	Y: .883	Z: 0			
301	61	N3	13.825	875.083	-60.576	2.278	-.02	-.004
302	61	N40B	-27.058	879.496	23.323	-1.138	.009	-1.994
303	61	N69	78.854	870.218	37.254	-1.139	.011	1.953
304	61	Totals:	65.621	2624.798	.002			
305	61	COG (ft):	X: 0	Y: .883	Z: 0			
306	62	N3	12.114	877.789	-45.652	2.288	-.018	-.003
307	62	N40B	-34.051	877.488	33.323	-1.131	.017	-1.989
308	62	N69	78.765	869.52	45.142	-1.133	0	1.953
309	62	Totals:	56.828	2624.798	32.812			
310	62	COG (ft):	X: 0	Y: .883	Z: 0			
311	63	N3	7.156	879.754	-34.805	2.295	-.011	.001
312	63	N40B	-46.041	874.767	42.548	-1.125	.02	-1.981
313	63	N69	71.696	870.277	49.086	-1.13	-.009	1.958
314	63	Totals:	32.811	2624.798	56.829			
315	63	COG (ft):	X: 0	Y: .883	Z: 0			
316	64	N3	.281	661.692	-15.696	1.728	0	.005
317	64	N40B	-46.619	653.357	40.906	-.838	.018	-1.477
318	64	N69	46.339	653.549	40.412	-.844	-.017	1.473
319	64	Totals:	0	1968.598	65.621			
320	64	COG (ft):	X: 0	Y: .883	Z: 0			
321	65	N3	-6.671	660.936	-19.848	1.726	.009	.01
322	65	N40B	-58.491	651.394	42.038	-.837	.011	-1.469
323	65	N69	32.353	656.269	34.639	-.848	-.02	1.482
324	65	Totals:	-32.809	1968.598	56.828			
325	65	COG (ft):	X: 0	Y: .883	Z: 0			
326	66	N3	-11.836	658.93	-30.904	1.719	.017	.013
327	66	N40B	-65.275	650.696	38.019	-.84	0	-1.464
328	66	N69	20.285	658.972	25.697	-.855	-.018	1.49
329	66	Totals:	-56.826	1968.598	32.811			
330	66	COG (ft):	X: 0	Y: .883	Z: 0			
331	67	N3	-13.832	656.21	-45.904	1.708	.02	.015
332	67	N40B	-65.156	651.452	29.925	-.846	-.009	-1.463
333	67	N69	13.368	660.936	15.98	-.862	-.011	1.495
334	67	Totals:	-65.619	1968.599	.001			
335	67	COG (ft):	X: 0	Y: .883	Z: 0			
336	68	N3	-12.121	653.507	-60.827	1.698	.018	.013
337	68	N40B	-58.163	653.458	19.926	-.853	-.017	-1.468
338	68	N69	13.457	661.634	8.093	-.868	0	1.495
339	68	Totals:	-56.826	1968.599	-32.809			
340	68	COG (ft):	X: 0	Y: .883	Z: 0			
341	69	N3	-7.163	651.543	-71.675	1.691	.011	.009
342	69	N40B	-46.172	656.178	10.701	-.859	-.02	-1.476
343	69	N69	20.526	660.878	4.149	-.871	.009	1.49
344	69	Totals:	-32.809	1968.599	-56.826			
345	69	COG (ft):	X: 0	Y: .883	Z: 0			
346	70	N3	-.287	650.846	-75.542	1.688	0	.004
347	70	N40B	-32.394	658.882	4.72	-.863	-.018	-1.486
348	70	N69	32.682	658.871	5.203	-.87	.017	1.482
349	70	Totals:	0	1968.599	-65.619			
350	70	COG (ft):	X: 0	Y: .883	Z: 0			
351	71	N3	6.666	651.602	-71.39	1.69	-.009	0
352	71	N40B	-20.523	660.845	3.589	-.863	-.011	-1.494





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**Joint Reactions (By Combination) (Continued)**

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
353	71	N69	46.668	656.152	10.975	-.866	.02	1.473
354	71	Totals:	32.811	1968.599	-56.826			
355	71	COG (ft):	X: 0	Y: .883	Z: 0			
356	72	N3	11.831	653.608	-60.334	1.698	-.017	-.004
357	72	N40B	-13.739	661.543	7.608	-.86	0	-1.499
358	72	N69	58.735	653.448	19.917	-.86	.018	1.465
359	72	Totals:	56.827	1968.599	-32.809			
360	72	COG (ft):	X: 0	Y: .883	Z: 0			
361	73	N3	13.826	656.327	-45.334	1.708	-.02	-.006
362	73	N40B	-13.859	660.787	15.701	-.854	.009	-1.499
363	73	N69	65.653	651.485	29.634	-.853	.011	1.46
364	73	Totals:	65.621	1968.598	.001			
365	73	COG (ft):	X: 0	Y: .883	Z: 0			
366	74	N3	12.115	659.031	-30.411	1.718	-.018	-.004
367	74	N40B	-20.851	658.78	25.7	-.848	.017	-1.495
368	74	N69	65.564	650.787	37.522	-.847	0	1.46
369	74	Totals:	56.827	1968.598	32.811			
370	74	COG (ft):	X: 0	Y: .883	Z: 0			
371	75	N3	7.157	660.994	-19.563	1.725	-.011	0
372	75	N40B	-32.842	656.061	34.925	-.842	.02	-1.487
373	75	N69	58.495	651.543	41.466	-.844	-.009	1.465
374	75	Totals:	32.811	1968.598	56.828			
375	75	COG (ft):	X: 0	Y: .883	Z: 0			

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

Member	Shape	Code Check	Loc[ft]	LC Shear	Loc[ft]	Dir	LC	phi*Pnc	phi*Pnt	phi*Mn y	phi*Mn z	Cb	Eqn		
1	M1	PIPE 3.0	.163	4.688	17	.158	11.589	7	28250.5...	65205	5.749	5.749	1...	H1-1b	
2	M4	HSS4X4X4	.336	0	23	.082	0	z	4	124770....	139518	16.181	16.181	2...	H1-1b
3	M10	HSS4X4X4	.133	2.375	14	.043	2.375	y	13	136263....	139518	16.181	16.181	1...	H1-1b
4	MP1A	PIPE 2.0	.357	5.083	1	.028	2.917		6	14916.0...	32130	1.872	1.872	1...	H1-1b
5	M43	HSS4X4X4	.125	0	24	.040	0	y	24	136263....	139518	16.181	16.181	1...	H1-1b
6	M46	PL1/2x6	.227	.516	12	.463	.516	y	11	66009.2...	97200	1.012	12.15	1...	H1-1b
7	M51B	L2x2x4	.121	4.264	3	.009	0	y	22	12185.7...	30585.6	.691	1.448	1...	H2-1
8	M52B	L2x2x4	.141	0	11	.009	0	y	23	12185.7...	30585.6	.691	1.457	1...	H2-1
9	M76	PL3/8x6	.171	0	8	.514	0	y	3	70677.9...	72900	.57	9.113	1...	H1-1b
10	M77	PL3/8x6	.252	.167	8	.654	0	y	3	71601.7...	72900	.57	9.113	1...	H1-1b
11	M80	PL1/2x6	.050	0	2	.743	.112	y	3	96757.5...	97200	1.012	12.15	1...	H1-1b
12	M84	PL3/8x6	.181	.219	6	.555	0	y	11	70677.9...	72900	.57	9.113	1...	H1-1b
13	M85	PL3/8x6	.297	.167	6	.697	0	y	11	71601.7...	72900	.57	9.113	1...	H1-1b
14	M91	PL1/2x6	.055	0	12	.943	0	y	11	96757.5...	97200	1.012	12.15	1...	H1-1b
15	M28	PIPE 3.0	.163	4.687	13	.158	11.589		3	28250.5...	65205	5.749	5.749	1...	H1-1b
16	M29	PIPE 3.0	.163	4.687	21	.158	11.589		11	28250.5...	65205	5.749	5.749	1...	H1-1b
17	M30B	HSS4X4X4	.340	0	31	.082	0	z	12	124770....	139518	16.181	16.181	2...	H1-1b
18	M31	HSS4X4X4	.133	2.375	22	.043	2.375	y	21	136263....	139518	16.181	16.181	1...	H1-1b
19	M32	HSS4X4X4	.125	0	20	.040	0	y	20	136263....	139518	16.181	16.181	1...	H1-1b
20	M33	PL1/2x6	.227	.516	8	.463	.516	y	7	66009.2...	97200	1.012	12.15	1...	H1-1b
21	M34	L2x2x4	.121	4.264	11	.009	0	y	18	12185.7...	30585.6	.691	1.448	1...	H2-1
22	M35	L2x2x4	.141	0	7	.009	0	y	19	12185.7...	30585.6	.691	1.457	1...	H2-1
23	M38	PL3/8x6	.171	0	4	.514	0	y	11	70677.9...	72900	.57	9.113	1...	H1-1b
24	M39	PL3/8x6	.252	.167	4	.654	0	y	11	71601.7...	72900	.57	9.113	1...	H1-1b
25	M41	PL1/2x6	.050	0	10	.743	.112	y	11	96757.5...	97200	1.012	12.15	1...	H1-1b
26	M43A	PL3/8x6	.181	.219	2	.555	0	y	7	70677.9...	72900	.57	9.113	1...	H1-1b
27	M44	PL3/8x6	.297	.167	2	.697	0	y	7	71601.7...	72900	.57	9.113	1...	H1-1b
28	M46A	PL1/2x6	.055	0	8	.943	0	y	7	96757.5...	97200	1.012	12.15	1...	H1-1b
29	M54	HSS4X4X4	.336	0	15	.103	0	y	44	124770....	139518	16.181	16.181	2...	H1-1b



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

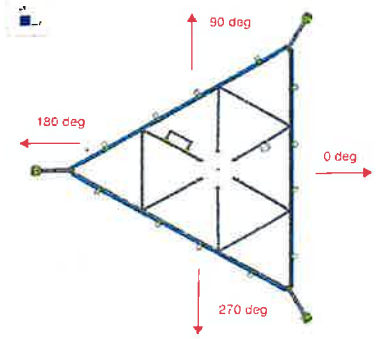
Member	Shape	Code Check	Locfl	LC Shear	Locfl	Dir	LC	phi*Pnc	phi*Pnt	phi*Mn y	phi*Mn z	Cb	Eqn	
30	M55	HSS4X4X4	.133	2.375	18 .043	2.375	y	17	136263...	139518	16.181	16.181	1...	H1-1b
31	M56	HSS4X4X4	.125	0	16 .040	0	y	16	136263...	139518	16.181	16.181	1...	H1-1b
32	M57	PL1/2x6	.227	.516	4 .463	.516	y	3	66009.2...	97200	1.012	12.15	1...	H1-1b
33	M58A	L2x2x4	.121	4.264	7 .009	4.264	y	14	12185.7...	30585.6	.691	1.457	1...	H2-1
34	M59A	L2x2x4	.142	0	3 .009	0	y	15	12185.7...	30585.6	.691	1.448	1...	H2-1
35	M62	PL3/8x6	.171	0	12 .514	0	v	7	70677.9...	72900	.57	9.113	1...	H1-1b
36	M63	PL3/8x6	.252	.167	12 .654	0	y	7	71601.7...	72900	.57	9.113	1...	H1-1b
37	M65	PL1/2x6	.050	0	6 .743	.112	v	7	96757.5...	97200	1.012	12.15	1...	H1-1b
38	M67	PL3/8x6	.181	.219	10 .555	0	y	3	70677.9...	72900	.57	9.113	1...	H1-1b
39	M68	PL3/8x6	.297	.167	10 .697	0	v	3	71601.7...	72900	.57	9.113	1...	H1-1b
40	M70	PL1/2x6	.055	0	4 .943	0	y	3	96757.5...	97200	1.012	12.15	1...	H1-1b
41	MP2A	PIPE 2.0	.186	5.083	7 .040	5.083		6	14916.0...	32130	1.872	1.872	1...	H1-1b
42	MP3A	PIPE 2.0	.268	5.083	7 .036	5.083		10	14916.0...	32130	1.872	1.872	1...	H1-1b
43	MP4A	PIPE 2.0	.374	5.083	1 .028	2.917		8	14916.0...	32130	1.872	1.872	1...	H1-1b
44	MP1C	PIPE 2.0	.357	5.083	9 .028	2.917		2	14916.0...	32130	1.872	1.872	2...	H1-1b
45	MP2C	PIPE 2.0	.186	5.083	3 .040	5.083		2	14916.0...	32130	1.872	1.872	2...	H1-1b
46	MP3C	PIPE 2.0	.268	5.083	3 .036	5.083		6	14916.0...	32130	1.872	1.872	2...	H1-1b
47	MP4C	PIPE 2.0	.374	5.083	9 .028	2.917		4	14916.0...	32130	1.872	1.872	2...	H1-1b
48	MP1B	PIPE 2.0	.357	5.083	5 .028	2.917		10	14916.0...	32130	1.872	1.872	2...	H1-1b
49	MP2B	PIPE 2.0	.186	5.083	11 .040	5.083		10	14916.0...	32130	1.872	1.872	2...	H1-1b
50	MP3B	PIPE 2.0	.268	5.083	11 .036	5.083		2	14916.0...	32130	1.872	1.872	2...	H1-1b
51	MP4B	PIPE 2.0	.374	5.083	5 .028	2.917		12	14916.0...	32130	1.872	1.872	2...	H1-1b



**I. Mount-to-Tower Connection Check**

Custom Orientation Required  Yes

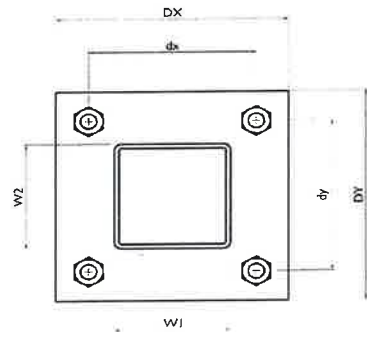
Nodes (labeled per Risa)	Orientation (per graphic of typical platform)
N40B	300
N3	180
N69	60



Tower Connection Bolt Checks  Yes

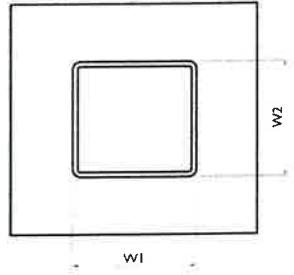
Bolt Orientation  Parallel

Bolt Quantity per Reaction:	4
$d_x$ (in) (Delta X of typ. bolt config. sketch):	6
$d_y$ (in) (Delta Y of typ. bolt config. sketch):	6
Bolt Type:	A325N
Bolt Diameter (in):	0.625
Required Tensile Strength / bolt (kips):	5.5
Required Shear Strength / bolt (kips):	0.7
Tensile Capacity / bolt (kips):	20.7
Shear Capacity / bolt (kips):	12.4
Bolt Overall Utilization:	26.5%



Tower Connection Baseplate Checks  Yes

Connecting Standoff Member Shape:	Rect Tube
Weld Stiffener Configuration:	No Stiffeners
Plate Width, $D_x$ (in):	8
Plate Height, $D_y$ (in):	8
$W1$ (in):	4
$W2$ (in):	4
Member Thickness (in):	0.25
Stiffener location $a_1$ (in):	
Stiffener location $b_1$ (in):	
Stiffener location $a_2$ (in):	
Stiffener location $b_2$ (in):	
$F_y$ (ksi, plate):	36
Plate Thickness (in):	0.75
Length of Yield Line, $L_y$ (in):	5.85
Bolt Eccentricity, $e$ (in):	1.65
$M_u$ (kip-in):	9.05
$\Phi * M_n$ (kip-in):	26.65
Plate Bending Utilization:	34.0%





**VzW**  
**SMART Tool**<sup>®</sup>  
**Vendor**

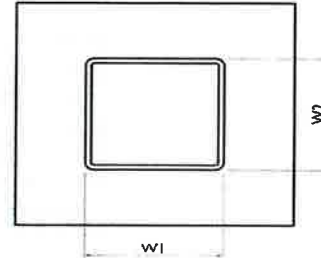
Client: Verizon Wireless Date: 12/5/2023  
 Site Name: WYASSUP LAKE CT  
 PSLC #: 5000244417  
 Fuze ID #: 16272098 Page: 2

Version 2.00

Tower Connection Weld Checks

Weld Shape:  
 Weld Stiffener Configuration:  
 Stiffener Notch Length, n (in):  
 Weld Size (1/16 in):  
 W1 (in):  
 W2 (in):  
 Weld Total Length (in):  
 $Z_x$  (in<sup>3</sup>/in):  
 $Z_y$  (in<sup>3</sup>/in):  
 $J_p$  (in<sup>4</sup>/in):  
 $c_x$  (in)  
 $c_y$  (in)  
 Required combined strength (kip/in):  
 Weld Capacity (kip/in):  
 Weld Utilization:

Yes
Rectangle
None
4
4
4
16.00
21.33
21.33
85.33
2.25
2.25
2.07
5.57
<b>37.3%</b>



# **ATTACHMENT 5**

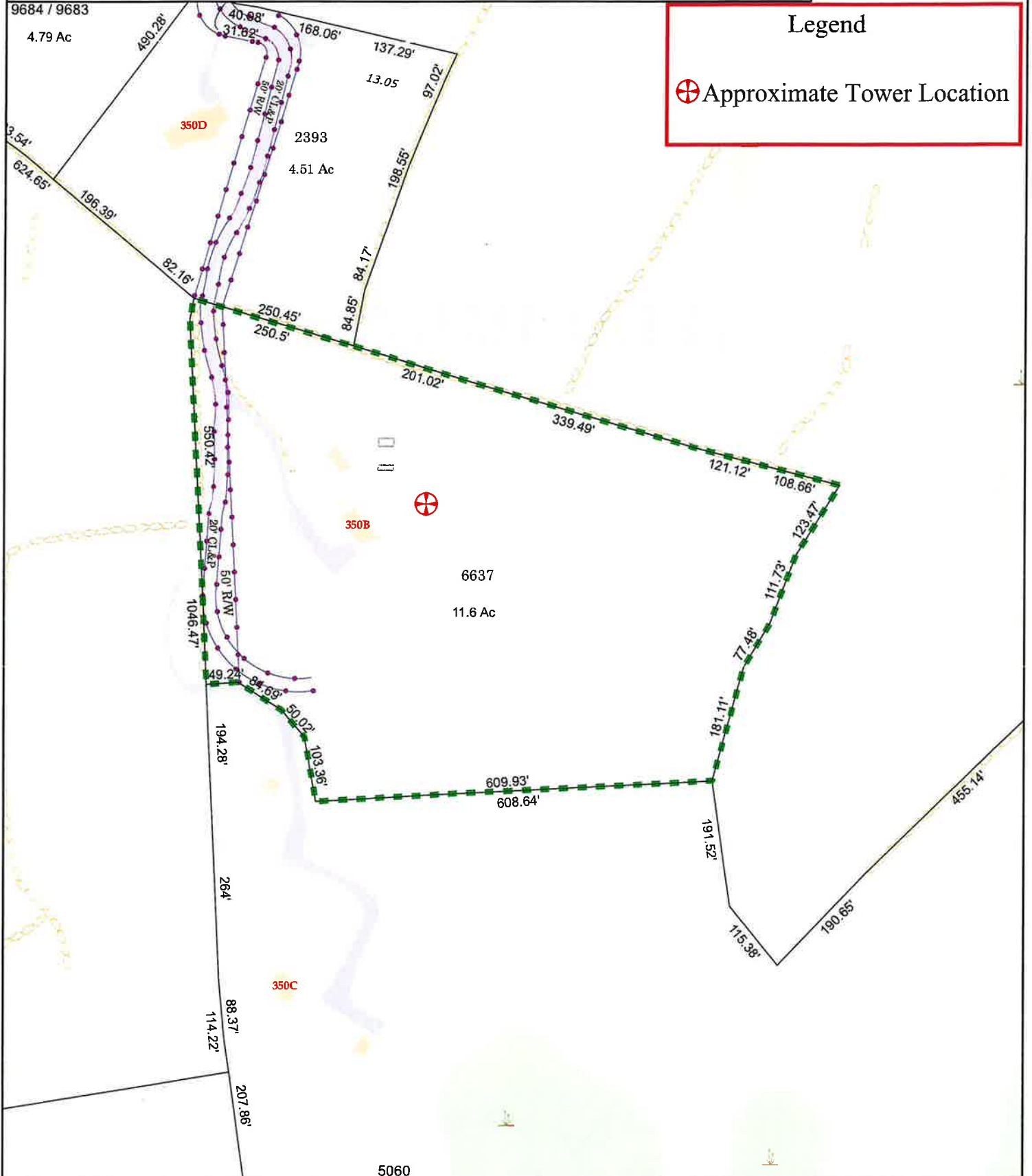
Town of North Stonington, Connecticut - Assessment Parcel Map

Parcel: 57-6637

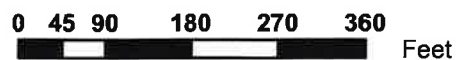
Address: 350B COSSADUCK HL

Legend

⊕ Approximate Tower Location



Approximate Scale: 1:2,400



Map Produced November 2019

Disclaimer: This map is for informational purposes only. All information is subject to verification by any user. The Town of North Stonington and its mapping contractors assume no legal responsibility for the information contained herein.





# Town of North Stonington, CT

Property Listing Report

Map Block Lot

57-6637

Account

B1909000

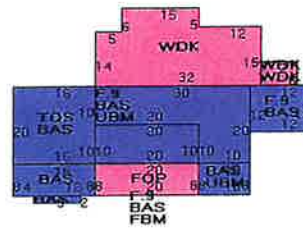
## Property Information

Property Location	350B COSSADUCK HL
Owner	BUEHLER PAUL R
Co-Owner	
Mailing Address	350B COSSADUCK HILL NORTH STONINGTON CT 06359
Land Use	0101 SINGLE FAM
Land Class	R
Zoning Code	R80
Census Tract	7071
Sub Lot	
Neighborhood	0500
Acreage	11.66
Utilities	Well,Septic
Lot Setting/Desc	Rural Rolling
Survey Map	
Additional Info	

## Photo



## Sketch



## Primary Construction Details

Year Built	1979
Stories	1.9
Building Style	Log Home
Building Use	Residential
Building Condition	Average +20
Floors	Hardwood
Total Rooms	7 Rooms

Bedrooms	3 Bedrooms
Full Bathrooms	3
Half Bathrooms	0
Bath Style	Average
Kitchen Style	Average
Roof Style	Gambrel
Roof Cover	Asphalt Shingl

Exterior Walls	Logs
Interior Walls	Drywall/Sheet
Heating Type	Hot Water
Heating Fuel	Oil
AC Type	None
Gross Bldg Area	3828
Total Living Area	2184

# **ATTACHMENT 6**



**Certificate of Mailing — Firm**

Name and Address of Sender

Kenneth C. Baldwin, Esq.  
Robinson & Cole LLP  
280 Trumbull Street  
Hartford, CT 06103

TOTAL NO.  
of Pieces Listed by Sender

TOTAL NO.  
of Pieces Received at Post Office™

Affix Stamp Here

Postmark with Date of Receipt.

Postmaster, per (name of receiving employee)

neopost  
01/10/2024  
US POSTAGE \$003.19<sup>00</sup>

USPS® Tracking Number  
Firm-specific Identifier

Address  
(Name, Street, City, State, and ZIP Code™)

Parcel Airlift

Special Handling

Fee

Postage

1.

Robert Carlson, First Selectman  
Town of North Stonington  
40 Main Street  
North Stonington, CT 06359

2.

Cheryl Konsavitch, Land Use Assistant  
Town of North Stonington  
40 Main Street  
North Stonington, CT 06359

3.

Paul Buehler  
350B Cossaduck Hill  
North Stonington, CT 06359

4.

5.

6.

