

KENNETH C. BALDWIN

280 Trumbull Street
Hartford, CT 06103-3597
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Direct (860) 275-8345

Also admitted in Massachusetts
and New York

July 13, 2021

Via Electronic Mail

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

Re: **Notice of Exempt Modification – Facility Modification
393 Jackson Hill Road, Middlefield, Connecticut**

Dear Attorney Bachman:

Cellco Partnership d/b/a Verizon Wireless (“Cellco”) currently maintains an existing wireless telecommunications facility at the above-referenced property address (the “Property”). The facility consists of antennas and remote radio heads attached to a tower and related equipment on the ground, near the base of the tower. The tower was approved by the Town of Middlefield (“Town”) in February 1999. Cellco’s shared use of the tower was approved by the Council in August 2007 (EM-VER-082-070627). A copy of the Town’s approval and Cellco’s EM approval are included in [Attachment 1](#).

Cellco now intends to modify its facility by replacing nine (9) existing antennas with three (3) new Samsung MT6407-77A antennas, six (6) JAHH-65B-R3B antennas and replacing six (6) remote radio heads (“RRHs”) with six (6) new RRHs all on Cellco’s existing antenna platform. A set of project plans showing Cellco’s proposed facility modifications and new antennas and RRHs specifications are included in [Attachment 2](#).

Please accept this letter as notification pursuant to R.C.S.A. § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Middlefield’s Chief Elected Official and Land Use Officer. Please note, the Town of Middlefield is the owner of the Property.

Melanie A. Bachman, Esq.
July 13, 2021
Page 2

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2).

1. The proposed modifications will not result in an increase in the height of the existing tower. Cellco's replacement antennas will be installed on Cellco's existing antenna platform.
2. The proposed modifications will not involve any change to ground-mounted equipment and, therefore, will not require the extension of the site boundary.
3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The installation of Cellco's new antennas will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. A cumulative power density table for Cellco's modified facility are included in Attachment 3. The modified facility will be capable of providing Cellco's 5G wireless service.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. According to the attached Structural Analysis ("SA") and Mount Analysis ("MA"), the existing tower, tower foundation and antenna platform, with certain modifications, can support Cellco's proposed modifications. Copies of the SA and MA are included in Attachment 4.

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

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

Melanie A. Bachman, Esq.
July 13, 2021
Page 3

Sincerely,

A handwritten signature in black ink, appearing to read "Kenneth C. Baldwin". The signature is fluid and cursive, with a long horizontal stroke at the end.

Kenneth C. Baldwin

Enclosures

Copy to:

Edward S. Bailey, First Selectman for the Town of Middlefield
Robin Newton, AICP, Middlefield Town Planner
Aleksy Tyurin

ATTACHMENT 1

TOWN OF MIDDLEFIELD**PLANNING AND ZONING COMMISSION
MIDDLEFIELD, CONNECTICUT**

February 17, 1999

David Bass, Esq.
Cuddy & Feder & Worby
90 Maple Ave.
White Plains, NY 10601

Re: Nextel Communications

Dear Mr. Bass:


This is to inform you that at its regular meeting on February 10, 1999 the Middlefield Planning and Zoning Commission voted to approve, with conditions, your application for a special permit to install wireless communication towers, antennas and facilities at 393 Jackson Hill Road. A legal notice to that effect will be published in the Middletown Press on February 18, 1999.

This approval was conditional upon the following:

1. provided that within 90 days of approval the applicant meets with the various town agencies, including its 911 service, to determine their communications needs as related to the tower and that the applicant uses its best efforts to reserve a location which will meet such needs.

If you have any questions or comments please free feel to contact me at 347-7214.

Very truly yours,


Geoffrey L. Colegrove
Middlefield Town Planner

GLC/jes

August 7, 2007

Kenneth C. Baldwin, Esq.
Robinson & Cole LLP
280 Trumbull Street
Hartford, CT 06103-3597

RE: **EM-VER-082-070627** - Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 393 Jackson Hill Road, Middlefield, Connecticut.

Dear Attorney Baldwin:

At a public meeting held on July 26, 2007, the Connecticut Siting Council (Council) acknowledged your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies.

The proposed modifications are to be implemented as specified here and in your notice dated June 27, 2007, including the placement of all necessary equipment and shelters within the tower compound. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. This facility has also 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.

This decision is under the exclusive jurisdiction of the Council. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include 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. 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.

Thank you for your attention and cooperation.

Very truly yours,

Daniel F. Caruso
Chairman
DFC/MP/laf

c: The Honorable Jon A. Brayshaw, First Selectman, Town of Middlefield
Geoffrey Colegrove, Town Planner, Town of Middlefield
Thomas J. Regan, Esq., Brown Rudnick Berlack Israels LLP
Michele G. Briggs, New Cingular Wireless PCS, LLC
Christopher B. Fisher, Esq., Cuddy & Feder LLP

ATTACHMENT 2

verizon

MIDDLEFIELD_SOUTH_CT

393 JACKSON HILL ROAD
 MIDDLEFIELD, CT 06455
 SBA SITE I.D.#: CT46135-A
 LOCATION CODE (PSLC): 467144
 FUZE ID: 16244625
 EQUIPMENT UPGRADE PROJECT
 RFDS DATE: 06/09/21

GENERAL NOTES

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

STRUCTURAL NOTES

GLOBAL TOWER STRUCTURAL ANALYSIS REPORT:
 PASSING REPORT - NO MODIFICATIONS REQUIRED BY TOWER ENGINEERING SOLUTIONS DATED 06/03/21.

LOCAL ANTENNA MOUNT ANALYSIS REPORT:
 MOUNT MODIFICATIONS REQUIRED - PER PASSING REPORT & MODIFICATION DRAWINGS BY MASER CONSULTING DATED 04/30/21.

CONTRACTOR MOUNT POST MODIFICATION INSPECTION (PMI) REPORT REQUIREMENTS

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

SMART TOOL VENDOR PROJECT NUMBER: 10056763

VZW LOCATION CODE (PSLC): 467144

*** PMI AND REQUIREMENTS ALSO EMBEDDED IN ANTENNA MOUNT ANALYSIS REPORT BY MASER CONSULTING DATED 04/30/21.

MOUNT MODIFICATIONS REQUIRED (Y/N): **YES**

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

PROJECT SUMMARY

SCOPE OF WORK: EXISTING TELECOMMUNICATIONS FACILITY EQUIPMENT ALTERATION

SITE NAME: MIDDLEFIELD_SOUTH_CT

LOCATION CODE (PSLC): 467144

FUZE PROJECT ID: 16244625

SITE ADDRESS: 393 JACKSON HILL ROAD
MIDDLEFIELD, CT 06455

LATITUDE: 41.517378 N (RFDS)

LONGITUDE: -72.714314 W (RFDS)

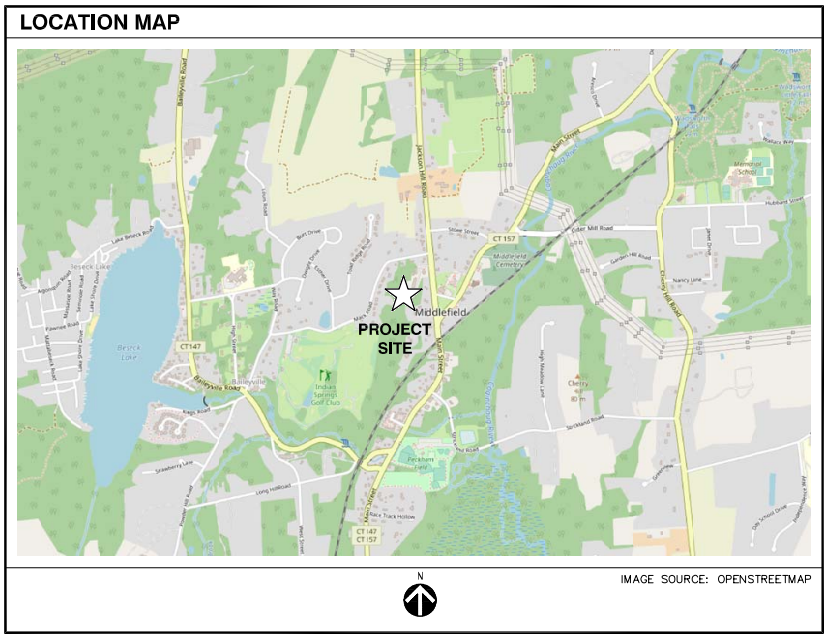
FACILITY: SBA MONOPOLE
SITE I.D.#: CT46135-A

APPLICANT, LESSEE/LICENSEE, PROJECT OWNER: CELCO PARTNERSHIP
dba VERIZON WIRELESS
118 FLANDERS ROAD
THIRD FLOOR
WESTBOROUGH, MA 01581

SITE ENGINEER: PROTERRA DESIGN GROUP, LLC
4 BAY ROAD
BUILDING A, SUITE 200
HADLEY, MA 01035

SHEET INDEX

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



verizon
 118 FLANDERS ROAD
 THIRD FLOOR
 WESTBOROUGH, MA 01581

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

REVISIONS

REV.	DATE	DESCRIPTION	BY	CHK APP'D
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1	07/08/21	PER RFDS DATED 06/09/21	TBO	JWS / JAM

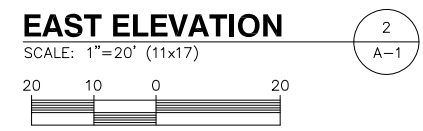
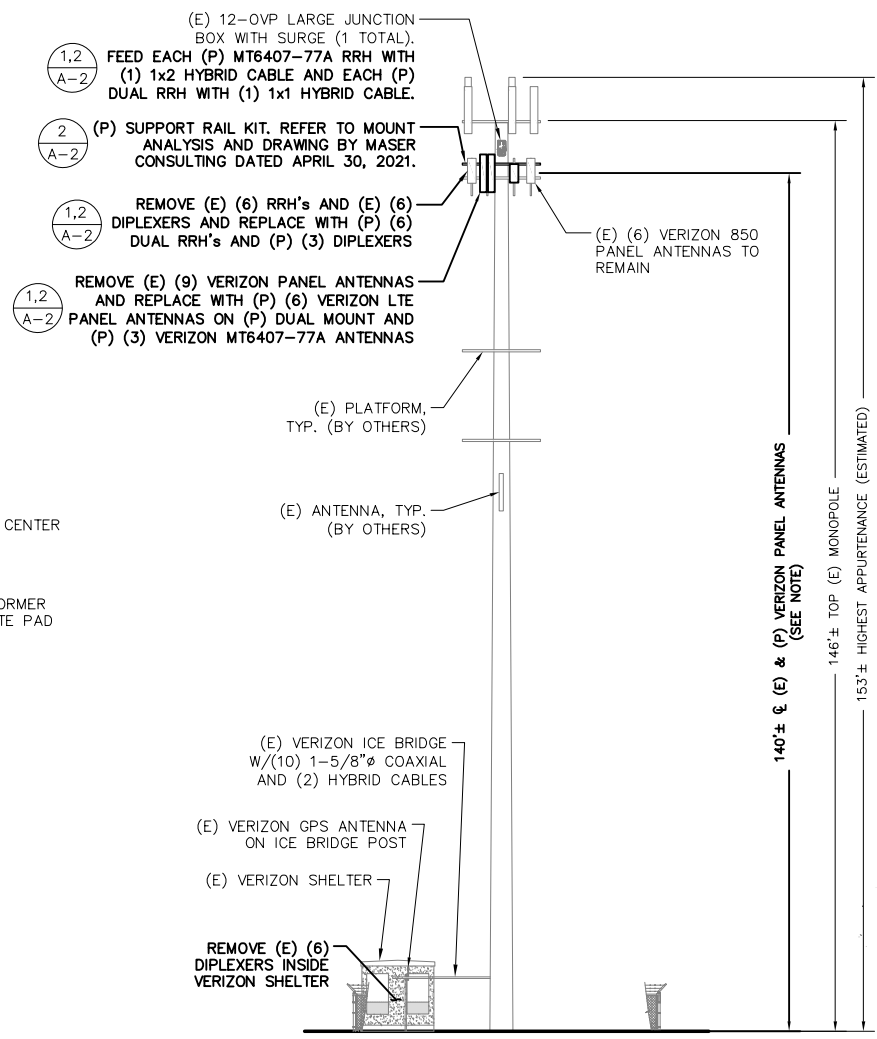
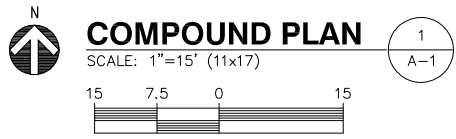
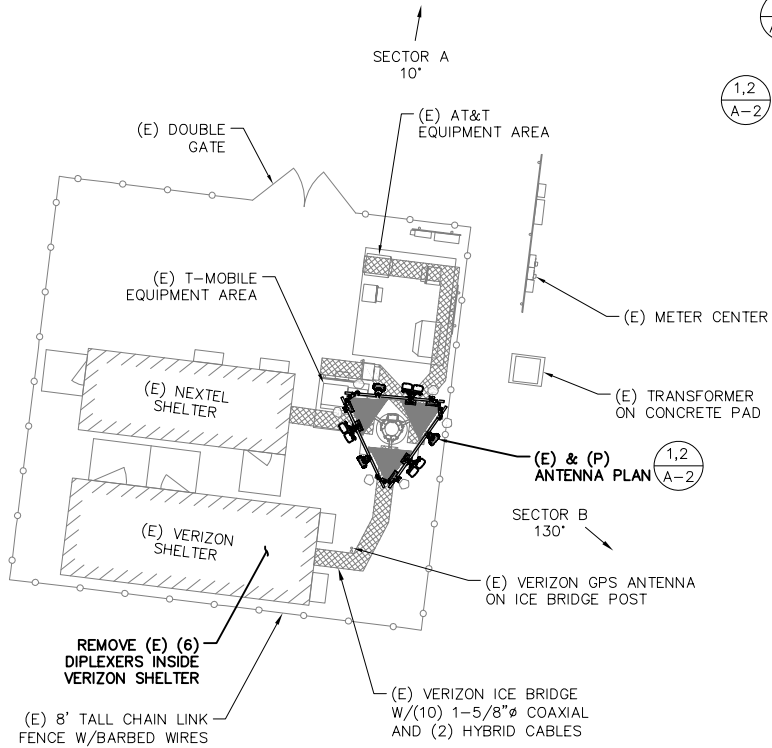
STATE OF CONNECTICUT
 JESSE M. MORENO
 No. 24389
 PROFESSIONAL ENGINEER
 1-10-2021

MIDDLEFIELD_SOUTH_CT
 393 JACKSON HILL ROAD
 MIDDLEFIELD, CT 06455
 FUZE PROJECT ID: 16244625
 SBA SITE I.D.#: CT46135A

T-1

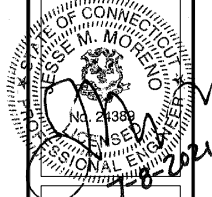
Digitally signed by Jesse Moreno, PE
 Date: 2021.07.08 18:14:37 -0400

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



PREPARED BY:
ProTerra
 DESIGN GROUP, LLC
 4 Bay Road, Bldg A
 Suite 200
 Haverhill, MA 01835
 Ph: (413)320-4918

REV.	DATE	DESCRIPTION	BY	CHK	APP'D
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1	07/08/21	PER RFDS DATED 06/09/21	TBD	JWS	JMK



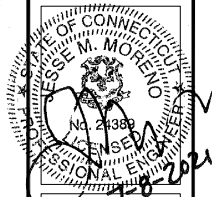
MIDDLEFIELD, SOUTH CT
 393 JACKSON HILL ROAD
 MIDDLEFIELD, CT 06455
 FLZE PROJECT ID: 1024425
 SBA SITE I.D.#: CT461354

A-1

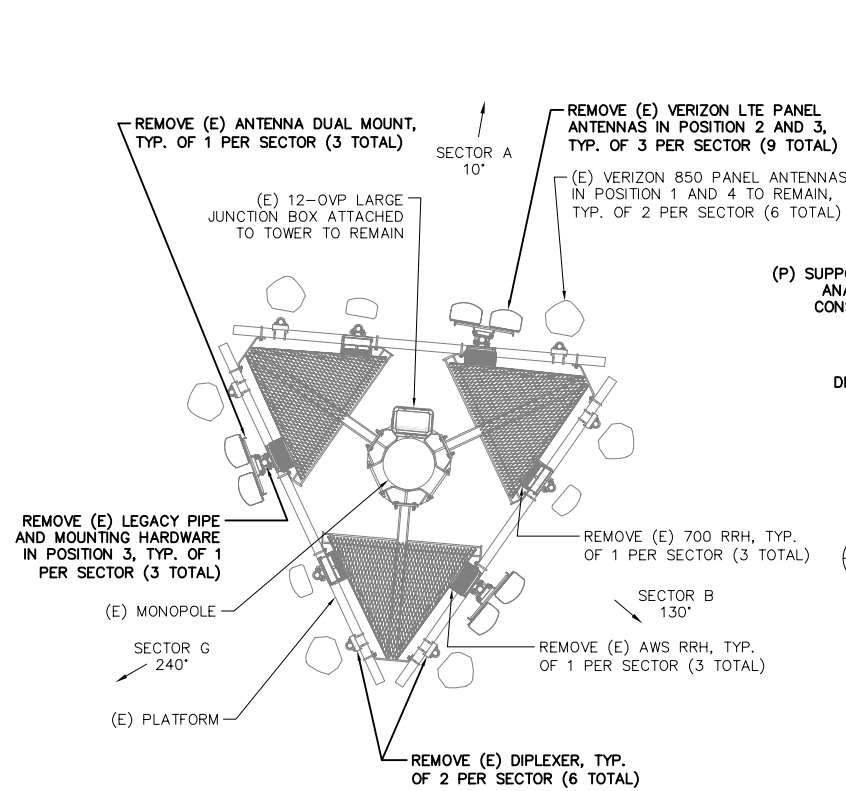
PREPARED BY:

REV.	DATE	DESCRIPTION	BY	CHK APP'D
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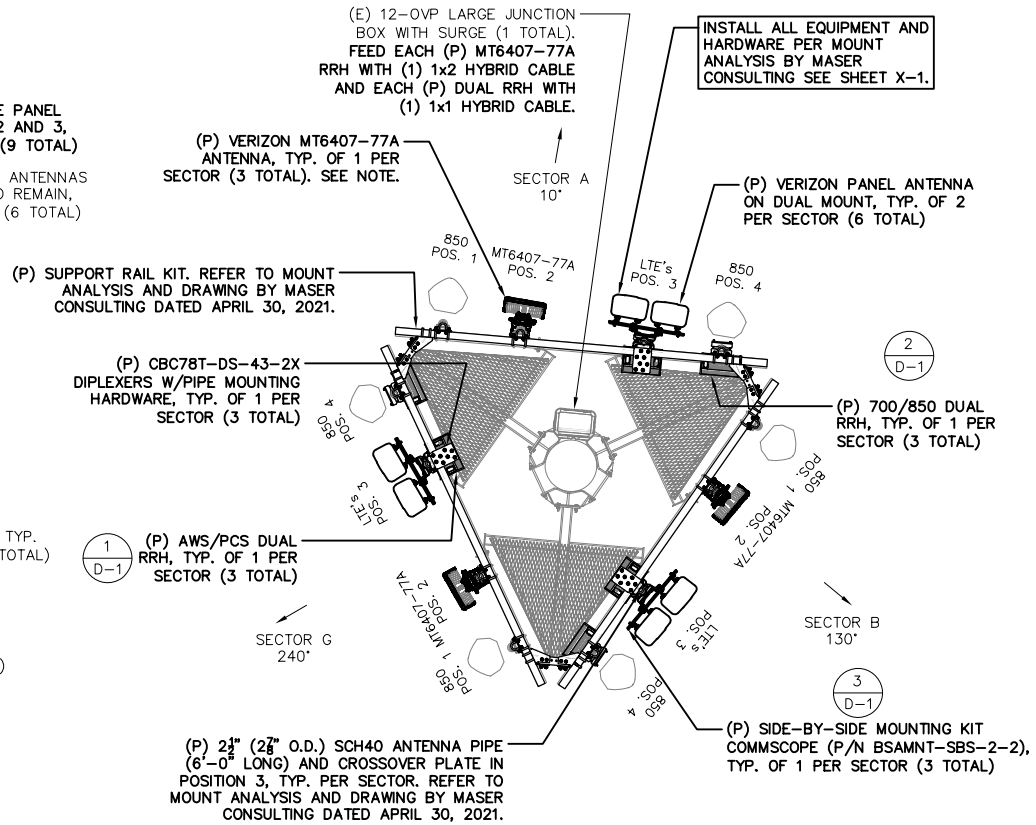
REVISIONS



MIDDLEFIELD, SOUTH CT
393 JACKSON HILL ROAD
MIDDLEFIELD, CT 06455
FLUZE PROJECT ID: 1024625
SBA SITE I.D.#: CT461354A

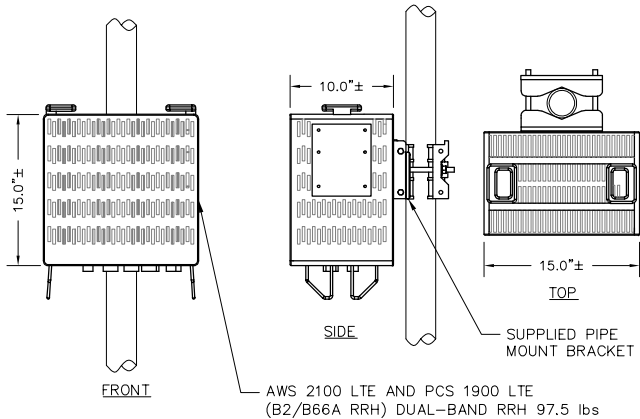


(E) ANTENNA PLAN
SCALE: 1"=4'
1
A-2



(P) ANTENNA PLAN
SCALE: 1"=4'
2
A-2

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

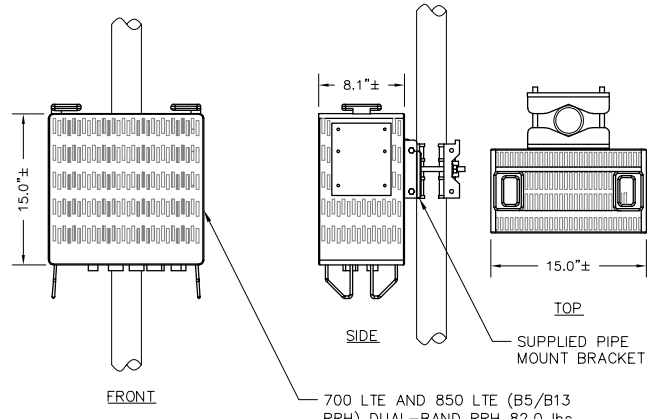


AWS 2100 LTE AND PCS 1900 LTE (B2/B66A RRH) DUAL-BAND RRH 97.5 lbs

(P) AWS/PCS RRH MOUNTING DETAIL

SCALE: NONE

1
D-1

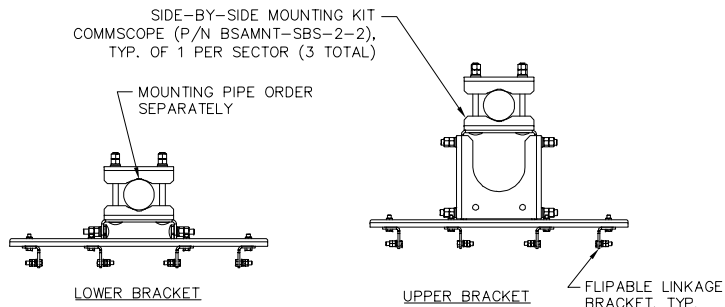


700 LTE AND 850 LTE (B5/B13 RRH) DUAL-BAND RRH 82.0 lbs

(P) 700/850 RRH MOUNTING DETAIL

SCALE: NONE

2
D-1



(P) DUAL ANTENNA MOUNTING DETAIL

SCALE: NONE

3
D-1

INSTALLATION NOTES:

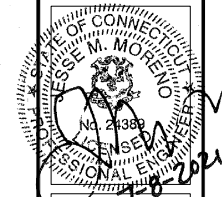
1. INSTALL ALL EQUIPMENT, MOUNTING BRACKETS, AND HARDWARE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
2. GROUND DISTRIBUTION BOXES, MOUNTING PIPES, AND RRHS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
3. INSTALL EQUIPMENT AND MOUNTING BRACKETS TO PRESERVE CLIMBING ACCESS ON TOWER.
4. EQUIPMENT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



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

REVISIONS

REV.	DATE	DESCRIPTION	BY	CHK APP'D
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1	07/08/21	PER RFDS DATED 06/09/21	TBD JWS .JMK	

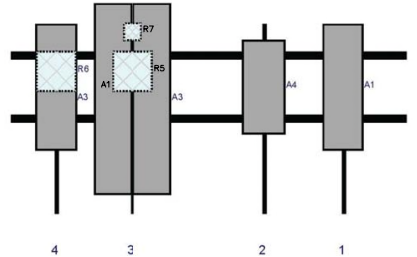
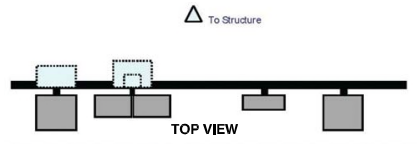


MIDDLEFIELD, SOUTH CT
393 JACKSON HILL ROAD
MIDDLEFIELD, CT 06455
FLZE PROJECT ID: 1024625
SBA SITE ID#: CT461354

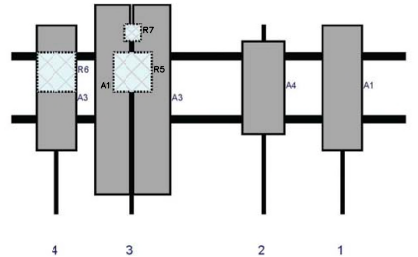
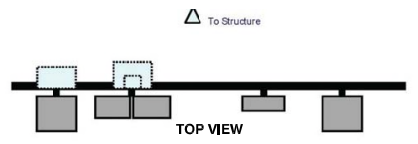
D-1

ANTENNA LAYOUT SCHEMATIC RENDERINGS SHOWN HEREON PROVIDED BY OTHERS

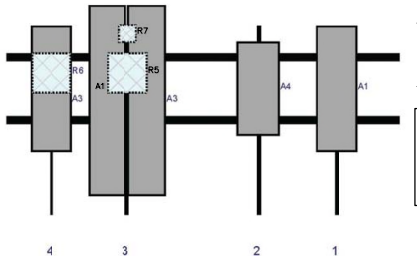
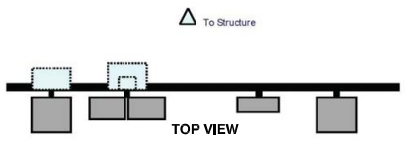
REFER TO ANTENNA MOUNT ANALYSIS REPORT BY MASER CONSULTING DATED 04/30/21 AND MODIFICATION DRAWINGS DATED 04/30/21 FOR ADDITIONAL DETAIL



ALPHA



BETA



GAMMA

TOP ANTENNA PIPE WORK POINT, TYP. ↑
C.Ant. Frm.T* ↓
EQUIPMENT, TYP. ↓

*NOTE: SEE TABLE BELOW AND IN MOUNT ANALYSIS FOR DISTANCE REQUIRED. COORDINATE EQUIPMENT LOCATIONS AND ANY MOUNTING CONFLICTS WITH MASER CONSULTING.

TOP ANTENNA PIPE WORK POINT, TYP. ↑
C.Ant. Frm.T* ↓
EQUIPMENT, TYP. ↓

*NOTE: SEE TABLE BELOW AND IN MOUNT ANALYSIS FOR DISTANCE REQUIRED. COORDINATE EQUIPMENT LOCATIONS AND ANY MOUNTING CONFLICTS WITH MASER CONSULTING.

TOP ANTENNA PIPE WORK POINT, TYP. ↑
C.Ant. Frm.T* ↓
EQUIPMENT, TYP. ↓

*NOTE: SEE TABLE BELOW AND IN MOUNT ANALYSIS FOR DISTANCE REQUIRED. COORDINATE EQUIPMENT LOCATIONS AND ANY MOUNTING CONFLICTS WITH MASER CONSULTING.

ALPHA

Ref#	Model	Height (in)	Width (in)	H Dist Frm L	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T	Ant H Off	Status	Validation
A1	LPA-800834CF	47.4	15.2	126	1	a	Front	24	0	Retained	02/20/2021
A4	MT6407-77A	35.2	16.06	96	2	a	Front	24	0	Added	
A3	JAHH-65B-R3B	72	13.8	46	3	a	Front	28.5	7.5	Added	
A3	JAHH-65B-R3B	72	13.8	46	3	b	Front	28.5	-7.5	Added	
R5	B2/B66A RRH-BR049	15	15	46	3	a	Behind	18	0	Added	
R7	CBC78T-DS-43-2X	6.4	6.9	46	3	a	Behind	3	0	Added	
A1	LPA-800834CF	47.4	15.2	17	4	a	Front	24	0	Retained	02/20/2021
R6	B5/B13 RRH-BR04C	15	15	17	4	a	Behind	18	0	Added	

BETA

Ref#	Model	Height (in)	Width (in)	H Dist Frm L	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T	Ant H Off	Status	Validation
A1	LPA-800834CF	47.4	15.2	126	1	a	Front	24	0	Retained	02/20/2021
A4	MT6407-77A	35.2	16.06	96	2	a	Front	24	0	Added	
A3	JAHH-65B-R3B	72	13.8	46	3	a	Front	28.5	7.5	Added	
A3	JAHH-65B-R3B	72	13.8	46	3	b	Front	28.5	-7.5	Added	
R5	B2/B66A RRH-BR049	15	15	46	3	a	Behind	18	0	Added	
R7	CBC78T-DS-43-2X	6.4	6.9	46	3	a	Behind	3	0	Added	
A1	LPA-800834CF	47.4	15.2	17	4	a	Front	24	0	Retained	02/20/2021
R6	B5/B13 RRH-BR04C	15	15	17	4	a	Behind	18	0	Added	

GAMMA

Ref#	Model	Height (in)	Width (in)	H Dist Frm L	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T	Ant H Off	Status	Validation
A1	LPA-800834CF	47.4	15.2	126	1	a	Front	24	0	Retained	02/20/2021
A4	MT6407-77A	35.2	16.06	96	2	a	Front	24	0	Added	
A3	JAHH-65B-R3B	72	13.8	46	3	a	Front	28.5	7.5	Added	
A3	JAHH-65B-R3B	72	13.8	46	3	b	Front	28.5	-7.5	Added	
R5	B2/B66A RRH-BR049	15	15	46	3	a	Behind	18	0	Added	
R7	CBC78T-DS-43-2X	6.4	6.9	46	3	a	Behind	3	0	Added	
A1	LPA-800834CF	47.4	15.2	17	4	a	Front	24	0	Retained	02/20/2021
R6	B5/B13 RRH-BR04C	15	15	17	4	a	Behind	18	0	Added	

CONTRACTOR MOUNT POST MODIFICATION INSPECTION (PMI) REPORT REQUIREMENTS

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

SMART TOOL VENDOR PROJECT NUMBER: 10056763

V2W LOCATION CODE (PSLC): 467144

*** PMI AND REQUIREMENTS ALSO EMBEDDED IN ANTENNA MOUNT ANALYSIS REPORT BY MASER CONSULTING DATED 04/30/21.

MOUNT MODIFICATIONS REQUIRED (Y/N): **YES**

V2W APPROVED SMART KIT VENDORS
REFER TO MOUNT MODIFICATION DRAWINGS PAGE FOR V2W SMART KIT APPROVED VENDORS



PREPARED BY: ProTerra DESIGN GROUP, LLC
4 Bay Road, Bldg A Suite 200 Haverhill, MA 01830 Ph: (413)320-4918

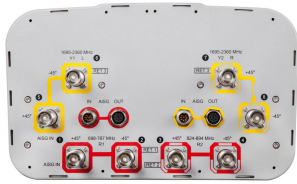
REV.	DATE	DESCRIPTION	BY	CHK APP'D
0	05/14/21	PER REFS DATED 03/03/21	TBD	JWS /JMK
1	07/08/21	PER REFS DATED 06/09/21	TBD	JWS /JMK

RENDERINGS BY: MASER CONSULTING
MT, LAUREL OFFICE
2000 MIDLAND DRIVE - SUITE 100
MOUNT LAUREL, NJ 08054
Phone: 8562797412

MIDDLEFIELD, SOUTH CT
383 JACKSON HILL ROAD
MIDDLEFIELD, CT 06455
FLZE PROJECT#: 1624625
SBA SITE ID#: CT461354

X-1

JAHH-65B-R3B



8-port sector antenna, 2x 698–787, 2x 824–894 and 4x 1695–2360 MHz, 65° HPBW, 3x RET and low bands have diplexers. Internal SBT's on first LB(Port 1) and first HB(Port 5).

- Internal SBT on low and high band allow remote RET control from the radio over the RF jumper cable
- One RET for 700MHz, one RET for 850MHz, and one RET for both high bands to ensure same tilt level for 4x Rx or 4x MIMO
- Internal filter on low band and interleaved dipole technology providing for attractive, low wind load mechanical package
- Separate RS-485 RET input/output for low and high band

General Specifications

Antenna Type	Sector
Band	Multiband
Color	Light gray
Effective Projective Area (EPA), frontal	0.28 m ² 3.014 ft ²
Effective Projective Area (EPA), lateral	0.24 m ² 2.583 ft ²
Grounding Type	RF connector body grounded to reflector and mounting bracket
Performance Note	Outdoor usage Wind loading figures are validated by wind tunnel measurements described in white paper WP-112534-EN
Radome Material	Fiberglass, UV resistant
Radiator Material	Aluminum Low loss circuit board
Reflector Material	Aluminum
RF Connector Interface	4.3-10 Female
RF Connector Location	Bottom
RF Connector Quantity, high band	4
RF Connector Quantity, low band	4
RF Connector Quantity, total	8

Remote Electrical Tilt (RET) Information, General

RET Interface	8-pin DIN Female 8-pin DIN Male
RET Interface, quantity	2 female 2 male

Dimensions

Width	350 mm 13.78 in
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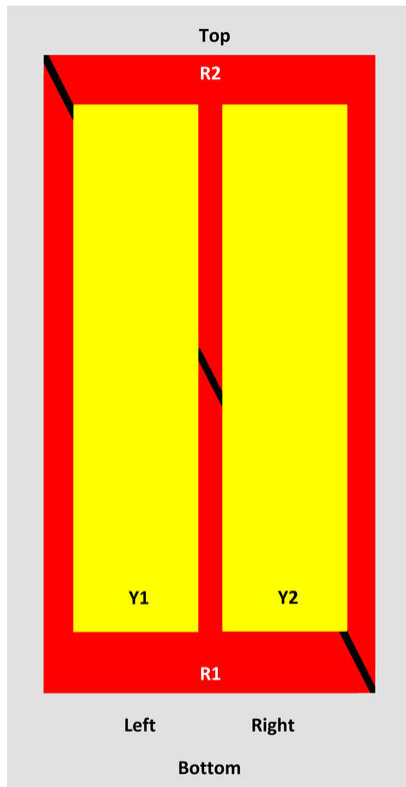
JAHH-65B-R3B

Length 1828 mm | 71.969 in

Depth 208 mm | 8.189 in

Array Layout

JAHH-65A-R3B JAHH-65B-R3B JAHH-65C-R3B



Array	Freq (MHz)	Conns	RET (SRET)	AISG RET UID
R1	698-798	1-2	1	ANXXXXXXXXXXXXXXXXX1
R2	824-894	3-4	2	ANXXXXXXXXXXXXXXXXX2
Y1	1695-2360	5-6	3	ANXXXXXXXXXXXXXXXXX3
Y2	1695-2360	7-8		

View from the front of the antenna

(Sizes of colored boxes are not true depictions of array sizes)

Electrical Specifications

Impedance 50 ohm

Operating Frequency Band 1695 – 2360 MHz | 698 – 787 MHz | 824 – 894 MHz

Polarization ±45°

Remote Electrical Tilt (RET) Information, Electrical

Protocol 3GPP/AISG 2.0 (Single RET)

Power Consumption, idle state, maximum 2 W

JAHH-65B-R3B

Power Consumption, normal conditions, maximum	13 W
Input Voltage	10–30 Vdc
Internal Bias Tee	Port 1 Port 5
Internal RET	High band (1) Low band (2)

Electrical Specifications

Frequency Band, MHz	698–787	824–894	1695–1880	1850–1990	1920–2200	2300–2360
Gain, dBi	14.5	15.8	18	18.4	18.5	18.8
Beamwidth, Horizontal, degrees	67	65	63	63	65	68
Beamwidth, Vertical, degrees	12.4	10.5	5.7	5.2	4.9	4.4
Beam Tilt, degrees	2–14	2–14	0–10	0–10	0–10	0–10
USLS (First Lobe), dB	18	18	20	20	21	23
Front-to-Back Ratio at 180°, dB	32	34	31	35	36	38
Isolation, Cross Polarization, dB	25	25	25	25	25	25
Isolation, Inter-band, dB	30	30	30	30	30	30
VSWR Return loss, dB	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153	-153	-153	-153	-153
Input Power per Port at 50° C, maximum, watts	200	200	300	300	300	250

Electrical Specifications, BASTA

Frequency Band, MHz	698–787	824–894	1695–1880	1850–1990	1920–2200	2300–2360
Gain by all Beam Tilts, average, dBi	14.3	14.9	17.6	18.1	18.2	18.5
Gain by all Beam Tilts Tolerance, dB	±0.3	±0.5	±0.6	±0.4	±0.5	±0.6
Gain by Beam Tilt, average, dBi	2° 14.3 8° 14.3 14° 14.3	2° 15.0 8° 14.9 14° 15.4	0° 17.2 5° 17.6 10° 17.6	0° 17.6 5° 18.2 10° 18.2	0° 17.7 5° 18.3 10° 18.3	0° 17.9 5° 18.7 10° 18.7
Beamwidth, Horizontal Tolerance, degrees	±1.2	±1.4	±4	±2.4	±2.9	±2.7
Beamwidth, Vertical Tolerance, degrees	±0.9	±0.5	±0.3	±0.2	±0.3	±0.1
USLS, beampeak to 20° above beampeak, dB	18	17	17	18	19	18
Front-to-Back Total Power at 180° ± 30°, dB	25	24	26	29	27	29
CPR at Boresight, dB	22	23	20	21	21	24

JAHH-65B-R3B

CPR at Sector, dB	11	12	11	11	11	8
--------------------------	----	----	----	----	----	---

Mechanical Specifications

Wind Loading at Velocity, frontal	301.0 N @ 150 km/h 67.7 lbf @ 150 km/h
Wind Loading at Velocity, lateral	254.0 N @ 150 km/h 57.1 lbf @ 150 km/h
Wind Loading at Velocity, maximum	143.4 lbf @ 150 km/h 638.0 N @ 150 km/h
Wind Speed, maximum	241 km/h 149.75 mph

Packaging and Weights

Width, packed	456 mm 17.953 in
Depth, packed	357 mm 14.055 in
Length, packed	1975 mm 77.756 in
Net Weight, without mounting kit	29.2 kg 64.375 lb
Weight, gross	42.5 kg 93.696 lb

Regulatory Compliance/Certifications

Agency	Classification
CHINA-ROHS	Above maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
ROHS	Compliant/Exempted



Included Products

BSAMNT-3 — Wide Profile Antenna Downtilt Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members. Kit contains one scissor top bracket set and one bottom bracket set.

* Footnotes

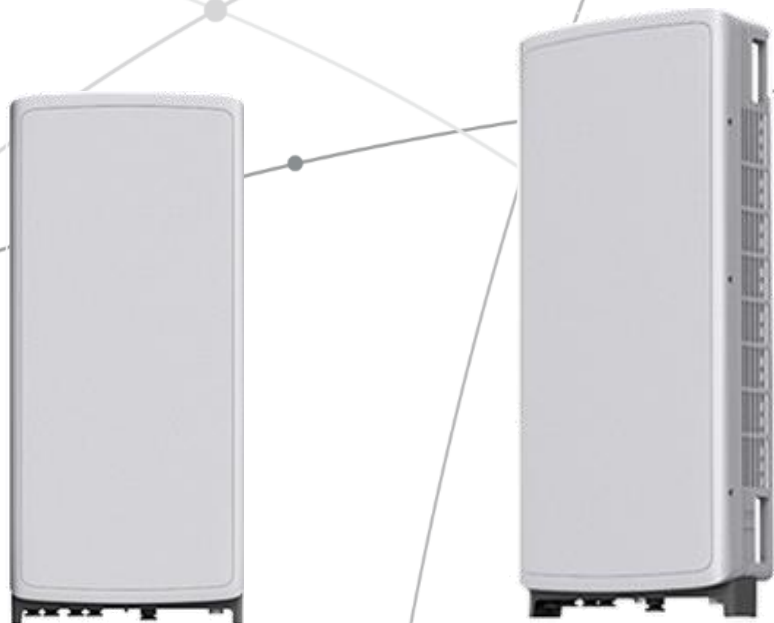
Performance Note Severe environmental conditions may degrade optimum performance

SAMSUNG C-Band 64T64R Massive MIMO Radio

for High Capacity and Wide Coverage

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

Model Code : MT6407-77A



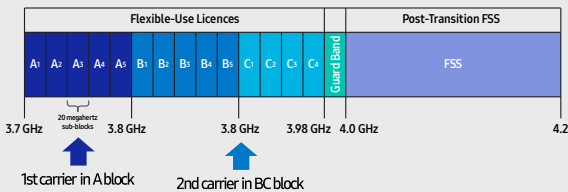
Points of Differentiation

Wide Bandwidth

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

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

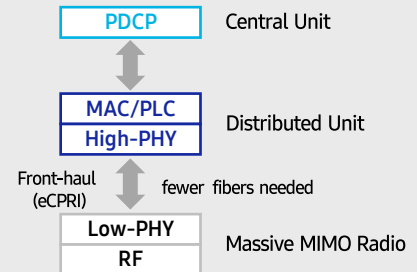
C-Band spectrum supported by Massive MIMO Radio



Future Proof Product

Samsung C-Band 64T64R Massive MIMO radio supports not only CPRI but also eCPRI as front-haul interface.

It enables operators can cut down on OPEX/CAPEX by reducing front-haul bandwidth through low layer split and using ethernet based higher efficient line.

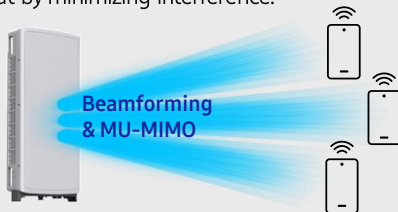


Enhanced Performance

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

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

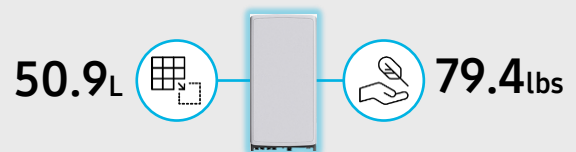
Furthermore, as C-Band massive MIMO Radio supports MU-MIMO (Multi-user MIMO), it enables to increase user throughput by minimizing interference.



Well Matched Design

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

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



Technical Specifications

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



SAMSUNG



About Samsung Electronics Co., Ltd.

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

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

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SAMSUNG

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

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



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

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

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

Features and Benefits

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

Key Technical Specifications

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

SAMSUNG

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

RFV01U-D1A

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



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

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

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

Features and Benefits

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

Key Technical Specifications

Duplex Type: FDD

Operating Frequencies:

B66: DL(2,110-2,180MHz)/UL(1,710-1,780MHz)

B2: DL(1,930-1,990MHz)/UL(1,850-1,910MHz)

Instantaneous Bandwidth:

70MHz(B66) + 60MHz(B2)

RF Chain: 4T4R/2T4R/2T2R

Output Power: Total 320W

DU-RU Interface: CPRI (10Gbps)

Dimensions: 380 x 380 x 255mm (36.8L)

Weight: 38.3kg

Input Power: -48V DC

Operating Temp.: -40 - 55°(w/o solar load)

Cooling: Natural convection

ATTACHMENT 3

	General	Power	Density					
Site Name: Middlefield S								
Tower Height: Verizon @ 140ft								
CARRIER	# OF CHAN.	WATTS ERP	HEIGHT	CALC. POWER DENS	FREQ.	MAX. PERMISS. EXP.	FRACTION MPE	Total
*AT&T	2	2234	146	1900	0.0820	1.0000	0.82%	
*AT&T	1	1285	146	880	0.0236	0.5867	0.40%	
*AT&T	1	1476	146	1900	0.0271	1.0000	0.27%	
*AT&T	1	3664	146	734	0.0672	0.4893	1.37%	
*T-Mobile	4	1538	88	1900	0.3290	1.0000	3.29%	
*T-Mobile	2	2308	88	2100	0.2469	1.0000	2.47%	
*T-Mobile	2	789	88	600	0.0844	0.4000	2.11%	
*T-Mobile	2	433	88	700	0.0463	0.4667	0.99%	
*T-Mobile	1	1069	88	2100	0.0572	1.0000	0.57%	
*Nextel	9	100	148	851	0.0161	0.5673		
*Town of M'field	1	400	108	45.88	0.0138	0.2000	0.69%	
VZW 700	4	628	140	0.0046	751	0.5007	0.92%	
VZW Cellular	4	725	140	0.0053	874	0.5827	0.91%	
VZW PCS	4	1525	140	0.0112	1975	1.0000	1.12%	
VZW AWS	4	1530	140	0.0112	2120	1.0000	1.12%	
VZW CBAND	4	6531	140	0.0479	3730.08	1.0000	4.79%	
								21.85%
* Source: Siting Council								

ATTACHMENT 4



Tower Engineering Solutions

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

Structural Analysis Report

Existing 146 ft EEI Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT46135-A

Customer Site Name: Middlefield-jacson Hill Rd

Carrier Name: Verizon (App#: 153377, v1)

Carrier Site ID / Name: 467144 / Middlefield S, CT

Site Location: 393 Jackson Hill Road

Middlefield, Connecticut

Middlesex County

Latitude: 41.517360

Longitude: -72.714167

Analysis Result:

Max Structural Usage: 96.2% [Pass]

Max Foundation Usage: 99.8% [Pass]

Additional Usage Caused by Mount Modification: +1.70%

Report Prepared By: Walter Velez





Tower Engineering Solutions

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1320 Greenway Drive, Suite 600, Irving, Texas 75038

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Analysis Result:

Max Structural Usage: 96.2% [Pass]

Max Foundation Usage: 99.8% [Pass]

Additional Usage Caused by Mount Modification:

Report Prepared By: Walter Velez

Introduction

The purpose of this report is to summarize the analysis results on the 146 ft EEI Monopole to support the proposed antennas and transmission lines in addition to those currently installed. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

Sources of Information

Tower Drawings	Original structural design report & design drawings prepared by Engineered Endeavors Incorporated, Inc. Dated 05-28-1999. Drawing No GS51482. Job No 5072. Previous structural report prepared by Tower Engineering Solutions. Dated 06-03-2021. TES Project No 109419.
Foundation Drawing	Original foundation design & drawings prepared by Engineered Endeavors Incorporated, Inc. Dated 05-28-1999. Drawing No 5072SPRD. Job No 5072.
Geotechnical Report	Geotechnical report prepared by Tectonic Engineering Consultants, P.C. Dated 05-20-1999. Project No W.O.1170.C942.
Modification Drawings	
Mount Analysis	Post-Mod antenna mount analysis report and PMI requirements prepared by Master Consulting Connecticut. Dated 04-30-2021. Project No 21777099A.

Analysis Criteria

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

Wind Speed Used in the Analysis:	Ultimate Design Wind Speed $V_{ult} = 125.0$ mph (3-Sec. Gust)
(Based on IBC 2015)	Nominal Design Wind Speed $V_{asd} = 97.0$ mph (3-Sec. Gust)
Wind Speed with Ice:	50 mph (3-Sec. Gust) with 3/4" radial ice concurrent
Operational Wind Speed:	60 mph + 0" Radial ice
Standard/Codes:	TIA-222-G-2, 2015 IBC & 2018 Connecticut State Building Code
Exposure Category:	
Structure Class:	
Topographic Category:	
Crest Height:	0 ft
Seismic Parameters:	

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

Existing Antennas, Mounts and Transmission Lines

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

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
			Cci Antennas HPA-65R-BUU-H8-Panel	Platform w/ Hand Rails	Coax; (2) 1/2" RET Line; (4) 3" DC Power; (1) 3" Fiber	
			Powerwave LGP21401 TMA's			
			Powerwave LGP219003 Diplexer			
			Powerwave 7020.00 RET's			
			Ericsson RRUS-11 RRU's			
			Ericsson RRUS-32 RRU's			
			Ericsson RRUS 32 B2 RRU's			
			Raycap DC-6-48-60-18-8F Surge			
			Commscope SBNHH-1D65B - Panel	Low Profile Platform	Hybriflex	Verizon
			Antel LPA-80063/4CF - Panel			
			4R RRU's			
			ALU B25 RRH4x30-4R RRU's			
			ALU B66 RRH4x45 RRU's			
			Raycap RC2DC-3315-PF-48 Surge			
			dbSpectra DS4C06F36D-N Omni	Pipe Mount		Town of Middlefield
			Telewave ANT450F6 Omni	Pipe Mount		
			Celwave PD1142-66 Omni			
		1	Airmux 400/ODU/F49F/100M - Dish	(1) Pipe Mount (Airmux) (3) Standard Existing Antenna Pipe Mount (au_andrew)		
			JMA Wireless MX08FRO665-21 - Panel	Platform w/HRK (Sitepro1 SNP8HR-3XX)	(1) 1.6" Hybrid	Dish Wireless
			Fujitsu TA08025-B605 RRU's			
			Fujitsu TA08025-B604 RRU's			
			Raycap RDIDC-9181-PF-48 OVP			
			Panel	Platform w/ Handrail (SitePro RMQP-4096-HK)	Coax; (3) 1 5/8" Fiber	T-Mobile
			Ericsson Air 32 KRD901146-1_B66A_B2A - Panel			
			Ericsson KRY 112 144/1 TMA's			
		3	Ericsson Radio 4449 B71+B12 RRU's			

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

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

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
			Andrew JAHH-65B-R3B - Panel	Low Profile Platform w/ Modifications & (3) Commscope	Coax; Hybrid	Verizon
			Antel LPA-80063/4CF - Panel			
			Samsung MT6407-77A - Panel			
			Commscope CBC78T-DS-43-2X Diplexers			
			Samsung B2/B66A RRH-BR049 (RFV01U-D1A) RRU's			
			Samsung B5/B13 RRH-BR04C (RFV01U-D2A) RRU's			
			Raycap RC2DC-3315-PF-48 OVP's			

Please see the attached coax layout for the line placement considered in the analysis.

Analysis Results

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

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

Foundations

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

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

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

Operational Condition (Rigidity):

Operational characteristics of the tower are found to be within the limits prescribed by TIA-222 for the installed antennas. The maximum twist/sway at the elevation of the proposed equipment is 2.4906 degrees under the operational wind speed as specified in the Analysis Criteria.

Conclusions

Based on the analysis results, the existing structure and its foundation were found to be adequate to safely support the existing and proposed equipment and meet the minimum requirements per the ANSI/TIA-222-G standards, the 2015 IBC and the 2018 Connecticut State Building Code under the design basic wind speed specified in the Analysis Criteria.

Standard Conditions

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

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

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

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

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

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

Usage Diagram - Max Ratio 96.22% at 48.7ft

Structure: CT46135-A-SBA
Site Name: Middlefield-jacson Hill Rd
Height: 146.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-G
Exposure: C
Gh: 1.1

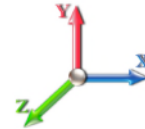
6/3/2021



Page: 1

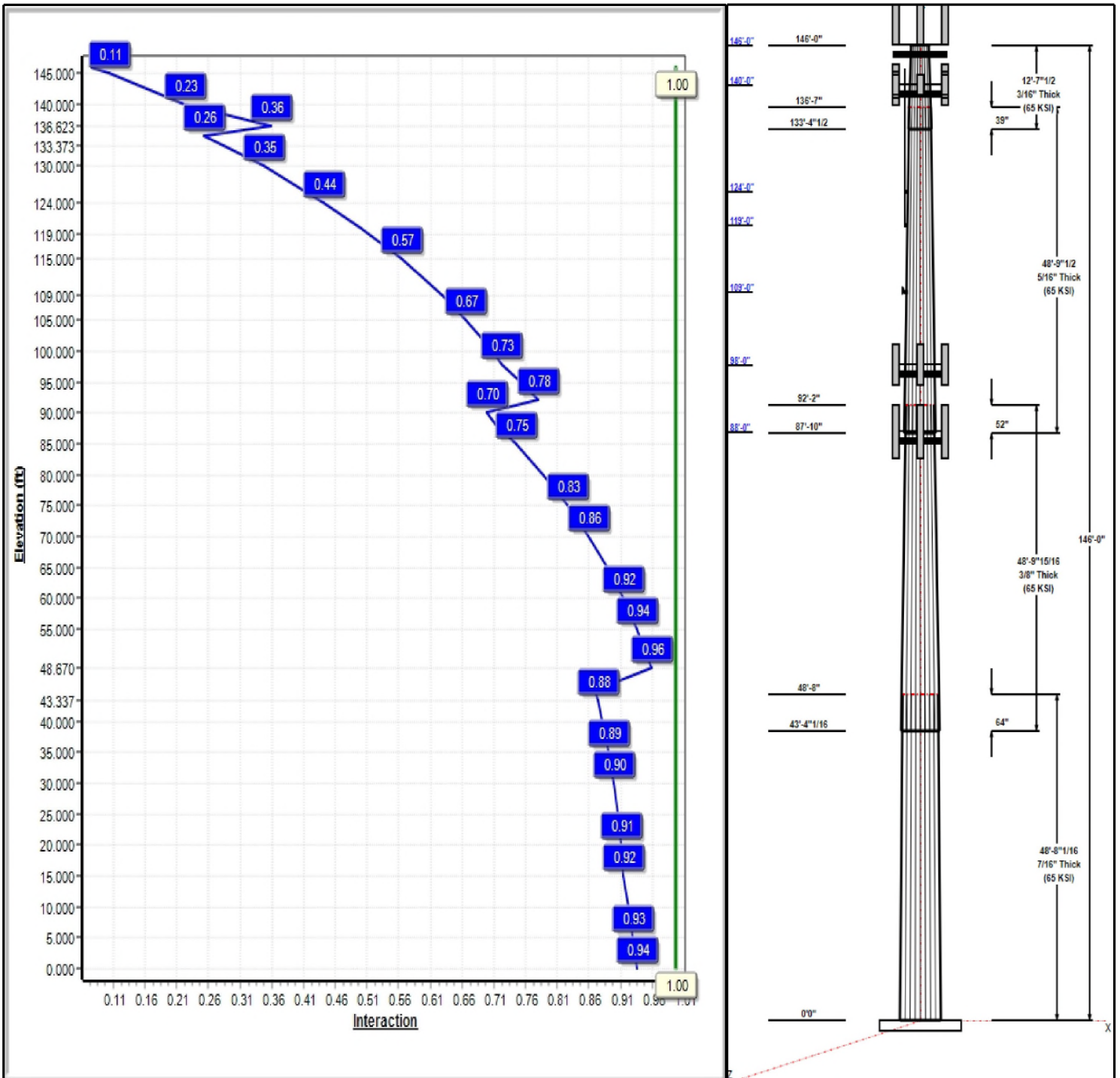
Dead Load Factor: 1.20
Wind Load Factor: 1.60

Load Case : 1.2D + 1.6W 97 mph Wind



Iterations: 27

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Structure: CT46135-A-SBA

Type: Tapered

Base Shape: 18 Sided

6/3/2021

Site Name: Middlefield-jacson Hill Rd

Taper: 0.19692

Height: 146.00 (ft)

Base Elev: 0.00 (ft)

Page: 2



Shaft Properties

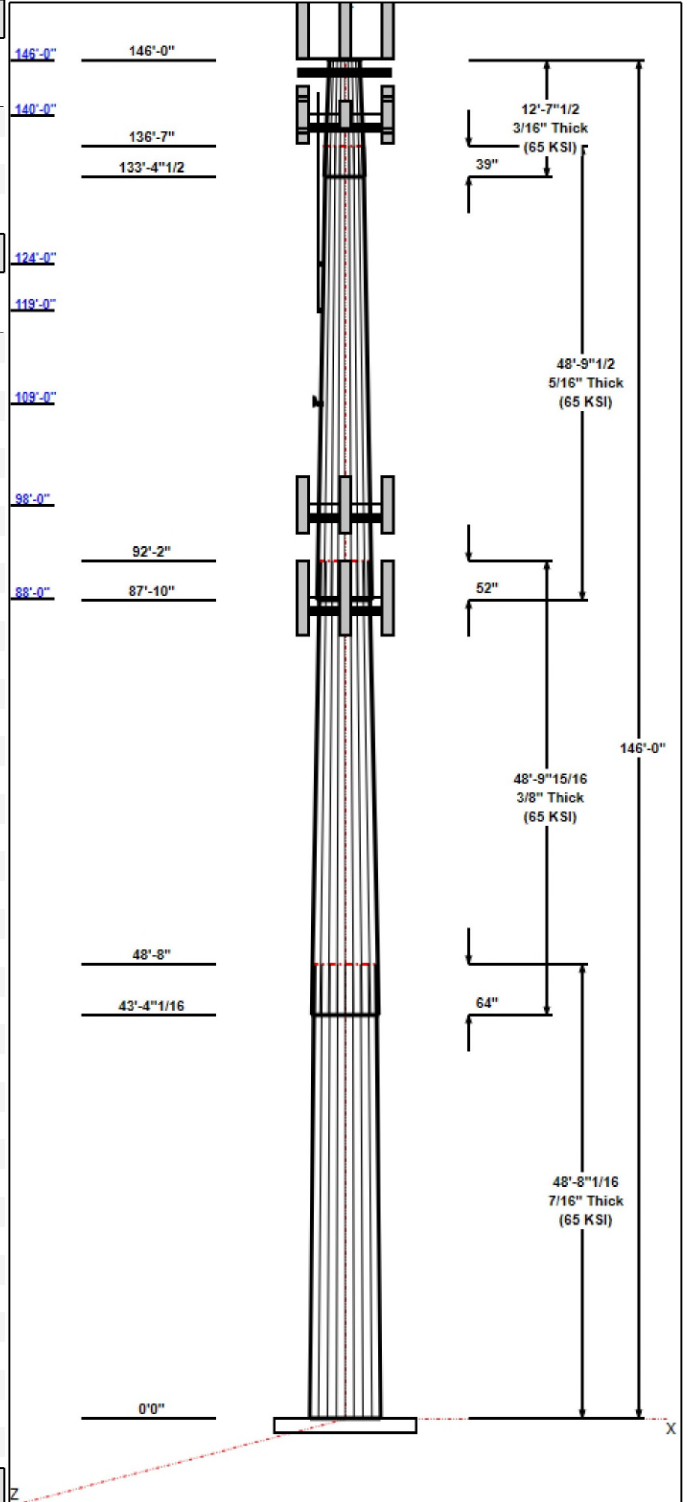
Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	48.67	36.42	46.00	0.438		0.19692	65
2	48.83	28.60	38.22	0.375	Slip	0.19692	65
3	48.79	20.47	30.08	0.313	Slip	0.19692	65
4	12.63	19.00	21.49	0.188	Slip	0.19692	65

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
146.00	146.00	1	Beacon	---
146.00	149.50	1	Lightning Rod	---
146.00	150.00	9	Cci HPA-65R-BUU-H8	AT&T
146.00	150.00	6	Powerwave LGP21401	AT&T
146.00	150.00	6	Powerwave LGP219003	AT&T
146.00	150.00	6	Powerwave 7020.00 RET's	AT&T
146.00	150.00	3	Ericsson RRUS-11 RRU's	AT&T
146.00	150.00	3	Ericsson RRUS-32 RRU's	AT&T
146.00	150.00	3	Ericsson RRUS 32 B2	AT&T
146.00	150.00	2	Raycap DC-6-48-60-18-8F	AT&T
146.00	146.00	1	Platform w/ Hand Rails	AT&T
140.00	140.00	6	Andrew JAHH-65B-R3B	Verizon
140.00	140.00	6	Antel LPA-80063/4CF	Verizon
140.00	140.00	3	Samsung MT6407-77A	Verizon
140.00	140.00	3	Commscope	Verizon
140.00	140.00	3	Samsung B2/B66A	Verizon
140.00	140.00	3	Samsung B5/B13	Verizon
140.00	140.00	2	Raycap	Verizon
140.00	140.00	3	Commscope	Verizon
140.00	140.00	1	Low Profile Platform	Verizon
140.00	142.25	1	Support Rail Kit (SitePro1	Verizon
124.00	133.17	1	dbSpectra DS4C06F36D-N	Town of Middlefield CT
124.00	124.00	1	Pipe Mount	Town of Middlefield CT
119.00	119.00	1	Pipe Mount	Town of Middlefield CT
119.00	122.92	1	Telewave ANT450F6 Omni	Town of Middlefield CT
119.00	128.40	1	Celwave PD1142-66	Town of Middlefield CT
109.00	109.00	1	Airmux	Town of Middlefield CT
109.00	109.00	3	Pipe Mount (au_andrew)	Town of Middlefield CT
109.00	109.00	1	Airmux	Town of Middlefield CT
98.00	98.00	3	JMA Wireless	Dish Wireless
98.00	98.00	3	Fujitsu TA08025-B605	Dish Wireless
98.00	98.00	3	Fujitsu TA08025-B604	Dish Wireless
98.00	98.00	1	Raycap	Dish Wireless
98.00	98.00	1	Platform w/HRK (Sitepro1	Dish Wireless
88.00	88.00	3	RFS	T-Mobile
88.00	88.00	3	Ericsson Air 32	T-Mobile
88.00	88.00	3	Ericsson KRY 112 144/1	T-Mobile
88.00	88.00	3	Ericsson Radio 4449	T-Mobile
88.00	88.00	1	Platform w/ Handrail	T-Mobile

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
3.00	146.00	Inside	1 5/8" Coax	AT&T
3.00	146.00	Inside	1/2" RET Line	AT&T
3.00	146.00	Inside	3" DC Power	AT&T



Structure: CT46135-A-SBA

Type: Tapered	Base Shape: 18 Sided	6/3/2021
Site Name: Middlefield-jacson Hill Rd	Taper: 0.19692	
Height: 146.00 (ft)		
Base Elev: 0.00 (ft)		Page: 3



3.00	146.00	Inside	3" Fiber	AT&T
3.00	140.00	Inside	1 5/8" Coax	Verizon
3.00	140.00	Inside	1 5/8" Hybrid	Verizon
3.00	119.00	Inside	7/8" Coax	Town of Middlefield
3.00	109.00	Inside	1/2"	Town of Middlefield
3.00	98.00	Inside	1.6" Hybrid	Dish Wireless
3.00	88.00	Inside	1 5/8" Coax	T-Mobile
3.00	88.00	Inside	1 5/8" Fiber	T-Mobile

Anchor Bolts

Qty	Specifications	Grade (ksi)	Arrangement
20	2.25" 18J	75.0	Radial

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
2.2500	61.0	60.0	Round

Reactions

Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W 97 mph Wind	4020.0	35.4	46.1
0.9D + 1.6W 97 mph Wind	3952.7	35.4	34.5
1.2D + 1.0Di + 1.0Wi 50 mph Wind	1135.3	9.8	74.0
1.2D + 1.0E	253.2	2.0	46.2
0.9D + 1.0E	248.5	2.0	34.7
1.0D + 1.0W 60 mph Wind	954.7	8.5	38.5

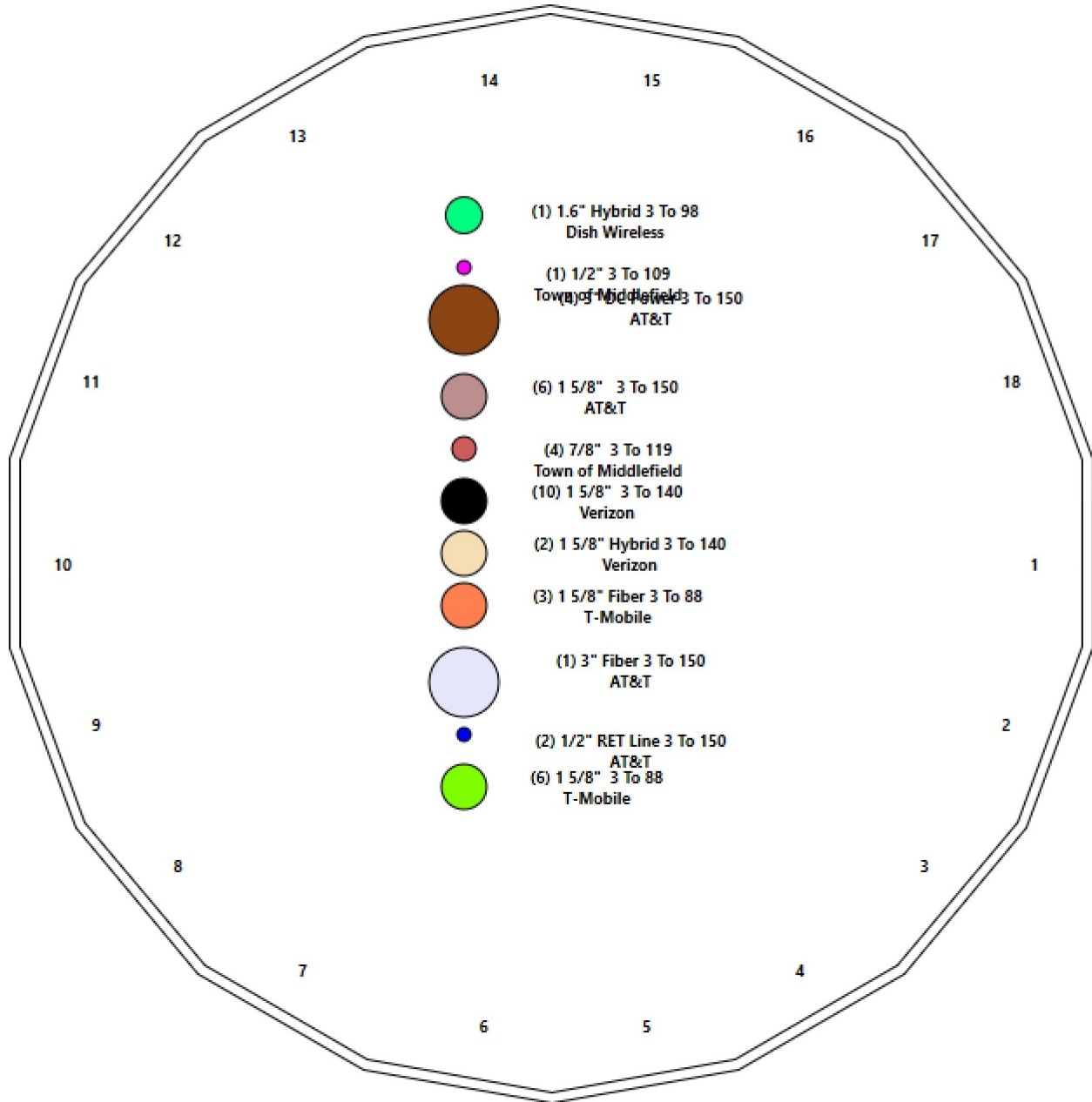
Structure: CT46135-A-SBA - Coax Line Placement

Type: Monopole
Site Name: Middlefield-jacson Hill Rd
Height: 146.00 (ft)

6/3/2021



Page: 4



Shaft Properties

Structure: CT46135-A-SBA	Code: EIA/TIA-222-G	6/3/2021
Site Name: Middlefield-jacson Hill Rd	Exposure: C	
Height: 146.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 5

Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	48.670	0.4375	65		0.00	9,376
2	18	48.830	0.3750	65	Slip	64.00	6,533
3	18	48.790	0.3125	65	Slip	52.00	4,111
4	18	12.627	0.1875	65	Slip	39.00	513
Total Shaft Weight:							20,532

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	46.00	0.00	63.27	16593.77	17.13	105.14	36.42	48.67	49.96	8170.56	13.27	83.24	0.196918
2	38.22	43.34	45.04	8148.39	16.56	101.91	28.60	92.17	33.59	3381.52	12.04	76.27	0.196918
3	30.08	87.83	29.52	3305.07	15.56	96.25	20.47	136.62	19.99	1026.59	10.14	65.51	0.196918
4	21.49	133.3	12.68	726.47	18.80	114.59	19.00	146.00	11.20	500.59	16.46	101.3	0.196918

Load Summary

Structure: CT46135-A-SBA	Code: EIA/TIA-222-G	6/3/2021
Site Name: Middlefield-jacson Hill Rd	Exposure: C	
Height: 146.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 6

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	146.00	Beacon	1	15.00	2.40	1.00	32.41	2.400	1.00	0.00	0.00
2	146.00	Lightning Rod	1	35.00	1.05	1.00	66.33	3.417	1.00	0.00	3.50
3	146.00	Cci HPA-65R-BUU-H8	9	68.00	12.98	0.79	358.13	14.591	0.79	0.00	4.00
4	146.00	Powerwave LGP21401 TMA's	6	19.00	1.08	0.60	52.36	1.535	0.60	0.00	4.00
5	146.00	Powerwave LGP219003 Diplexer	6	6.50	0.37	0.60	18.12	0.863	0.60	0.00	4.00
6	146.00	Powerwave 7020.00 RET's	6	1.16	0.14	0.60	6.54	0.309	0.60	0.00	4.00
7	146.00	Ericsson RRUS-11 RRU's	3	50.00	2.57	0.67	131.23	3.219	0.67	0.00	4.00
8	146.00	Ericsson RRUS-32 RRU's	3	77.00	3.31	0.67	190.22	4.104	0.67	0.00	4.00
9	146.00	Ericsson RRUS 32 B2 RRU's	3	53.00	2.74	0.67	140.71	3.467	0.67	0.00	4.00
10	146.00	Raycap DC-6-48-60-18-8F Surge	2	20.00	1.90	0.67	58.78	2.802	0.67	0.00	4.00
11	146.00	Platform w/ Hand Rails	1	1600.00	32.00	1.00	3694.18	59.848	1.00	0.00	0.00
12	140.00	Andrew JAHH-65B-R3B	6	64.37	9.10	0.83	292.48	10.429	0.83	0.00	0.00
13	140.00	Antel LPA-80063/4CF	6	20.00	6.14	0.94	224.63	7.175	0.94	0.00	0.00
14	140.00	Samsung MT6407-77A	3	79.40	4.69	0.70	197.70	5.612	0.70	0.00	0.00
15	140.00	Commscope CBC78T-DS-43-2X	3	5.95	0.53	0.60	27.19	0.861	0.60	0.00	0.00
16	140.00	Samsung B2/B66A RRH-BR049	3	97.00	1.88	0.67	172.90	2.439	0.67	0.00	0.00
17	140.00	Samsung B5/B13 RRH-BR04C	3	70.31	1.88	0.67	139.07	2.439	0.67	0.00	0.00
18	140.00	Raycap RC2DC-3315-PF-48 OVP's	2	42.00	2.52	0.67	152.04	3.830	0.67	0.00	0.00
19	140.00	Commscope BSAMNT-SBS-2-2	3	67.40	0.09	0.50	114.13	0.152	0.50	0.00	0.00
20	140.00	Low Profile Platform	1	1500.00	22.00	1.00	2799.91	39.540	1.00	0.00	0.00
21	140.00	Support Rail Kit (SitePro1	1	261.72	6.75	1.00	570.18	13.302	1.00	0.00	2.25
22	124.00	dbSpectra DS4C06F36D-N	1	70.00	5.50	1.00	205.64	11.893	1.00	0.10	9.17
23	124.00	Pipe Mount	1	87.00	4.31	1.00	218.09	9.594	1.00	0.00	0.00
24	119.00	Pipe Mount	1	87.00	4.31	1.00	217.56	9.572	1.00	0.00	0.00
25	119.00	Telewave ANT450F6 Omni	1	21.00	1.86	1.00	68.91	4.627	1.00	0.00	3.92
26	119.00	Celwave PD1142-66	1	16.00	1.57	1.00	152.35	4.834	1.00	0.00	9.40
27	109.00	Airmux 400/ODU/F49F/100M	1	35.00	1.80	1.00	55.92	2.365	1.00	0.00	0.00
28	109.00	Pipe Mount (au_andrew)	3	20.00	1.60	0.75	108.40	5.416	0.75	0.00	0.00
29	109.00	Airmux 400/ODU/F49F/100M	1	7.00	1.83	1.00	55.92	2.365	1.00	0.00	0.00
30	98.00	JMA Wireless MX08FRO665-21	3	64.50	12.49	0.74	343.25	13.894	0.74	0.00	0.00
31	98.00	Fujitsu TA08025-B605 RRU's	3	74.95	1.96	0.67	125.04	2.498	0.67	0.00	0.00
32	98.00	Fujitsu TA08025-B604 RRU's	3	63.93	1.96	0.67	112.47	2.498	0.67	0.00	0.00
33	98.00	Raycap RDIDC-9181-PF-48 OVP	1	21.85	2.01	0.67	72.76	2.555	0.67	0.00	0.00
34	98.00	Platform w/HRK (Sitepro1	1	1876.00	39.73	1.00	3758.55	87.561	1.00	0.00	0.00
35	88.00	RFS APXVAARR24_43-U-NA20	3	128.00	20.24	0.72	533.51	22.038	0.72	0.00	0.00
36	88.00	Ericsson Air 32	3	132.20	6.51	0.86	304.27	7.570	0.86	0.00	0.00
37	88.00	Ericsson KRY 112 144/1 TMA's	3	11.02	0.35	0.60	21.26	0.735	0.60	0.00	0.00
38	88.00	Ericsson Radio 4449 B71+B12	3	74.00	1.63	0.67	136.93	2.130	0.67	0.00	0.00
39	88.00	Platform w/ Handrail (SitePro	1	2645.00	51.70	1.00	5270.82	87.970	1.00	0.00	0.00
Totals:			106	12,885.73			32,843.96				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
3.00	146.00	(6) 1 5/8" Coax	0.00	Inside
3.00	146.00	(2) 1/2" RET Line	0.00	Inside

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		
3.00	146.00	(4) 3" DC Power		0.00		Inside					
3.00	146.00	(1) 3" Fiber		0.00		Inside					
3.00	140.00	(10) 1 5/8" Coax		0.00		Inside					
3.00	140.00	(2) 1 5/8" Hybrid		0.00		Inside					
3.00	119.00	(4) 7/8" Coax		0.00		Inside					
3.00	109.00	(1) 1/2"		0.00		Inside					
3.00	98.00	(1) 1.6" Hybrid		0.00		Inside					
3.00	88.00	(6) 1 5/8" Coax		0.00		Inside					
3.00	88.00	(3) 1 5/8" Fiber		0.00		Inside					

Shaft Section Properties

Structure: CT46135-A-SBA	Code: EIA/TIA-222-G	6/3/2021
Site Name: Middlefield-jacson Hill Rd	Exposure: C	
Height: 146.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 8

Increment Length: 5 (ft)

Elev (ft)	Description	Thick (in)	Dia (in)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	Fpy (ksi)	S (in ³)	Weight (lb)
0.00		0.4375	46.000	63.267	16593.8	17.13	105.14	81.3	710.5	0.0
5.00		0.4375	45.015	61.900	15541.1	16.73	102.89	81.7	680.0	1064.8
10.00		0.4375	44.031	60.533	14533.9	16.34	100.64	82.2	650.1	1041.5
15.00		0.4375	43.046	59.165	13571.2	15.94	98.39	82.5	621.0	1018.3
20.00		0.4375	42.062	57.798	12652.0	15.54	96.14	82.5	592.5	995.0
25.00		0.4375	41.077	56.431	11775.2	15.14	93.89	82.5	564.6	971.7
30.00		0.4375	40.092	55.064	10939.9	14.75	91.64	82.5	537.4	948.5
35.00		0.4375	39.108	53.697	10145.1	14.35	89.39	82.5	510.9	925.2
40.00		0.4375	38.123	52.330	9389.8	13.95	87.14	82.5	485.1	902.0
43.34	Bot - Section 2	0.4375	37.466	51.417	8907.2	13.69	85.64	82.5	468.3	589.0
45.00		0.4375	37.139	50.962	8672.9	13.56	84.89	82.5	460.0	543.5
48.67	Top - Section 1	0.3750	37.166	43.789	7488.6	16.07	99.11	0.0	0.0	1182.4
50.00		0.3750	36.904	43.477	7329.8	15.94	98.41	82.5	391.2	197.5
55.00		0.3750	35.920	42.305	6753.0	15.48	95.79	82.5	370.3	729.7
60.00		0.3750	34.935	41.133	6207.2	15.02	93.16	82.5	350.0	709.8
65.00		0.3750	33.950	39.962	5691.6	14.55	90.53	82.5	330.2	689.9
70.00		0.3750	32.966	38.790	5205.5	14.09	87.91	82.5	311.0	669.9
75.00		0.3750	31.981	37.618	4747.8	13.63	85.28	82.5	292.4	650.0
80.00		0.3750	30.997	36.446	4317.8	13.16	82.66	82.5	274.4	630.1
85.00		0.3750	30.012	35.274	3914.5	12.70	80.03	82.5	256.9	610.1
87.83	Bot - Section 3	0.3750	29.454	34.610	3697.6	12.44	78.54	82.5	247.3	336.9
88.00		0.3750	29.421	34.571	3685.1	12.42	78.46	82.5	246.7	36.4
90.00		0.3750	29.027	34.102	3537.2	12.24	77.41	82.5	240.0	433.1
92.17	Top - Section 2	0.3125	29.226	28.677	3028.9	15.08	93.52	0.0	0.0	462.5
95.00		0.3125	28.668	28.124	2856.9	14.77	91.74	82.5	196.3	273.8
98.00		0.3125	28.077	27.538	2682.0	14.43	89.85	82.5	188.1	284.1
100.00		0.3125	27.683	27.147	2569.5	14.21	88.59	82.5	182.8	186.1
105.00		0.3125	26.699	26.171	2302.1	13.65	85.44	82.5	169.8	453.6
109.00		0.3125	25.911	25.390	2102.0	13.21	82.92	82.5	159.8	350.9
110.00		0.3125	25.714	25.194	2053.9	13.10	82.28	82.5	157.3	86.1
115.00		0.3125	24.729	24.218	1824.2	12.54	79.13	82.5	145.3	420.3
119.00		0.3125	23.942	23.436	1653.3	12.10	76.61	82.5	136.0	324.3
120.00		0.3125	23.745	23.241	1612.3	11.99	75.98	82.5	133.7	79.4
124.00		0.3125	22.957	22.460	1455.1	11.54	73.46	82.5	124.8	311.0
125.00		0.3125	22.760	22.265	1417.5	11.43	72.83	82.5	122.7	76.1
130.00		0.3125	21.776	21.288	1239.0	10.88	69.68	82.5	112.1	370.5
133.37	Bot - Section 4	0.3125	21.111	20.629	1127.5	10.50	67.56	82.5	105.2	240.6
135.00		0.3125	20.791	20.311	1076.2	10.32	66.53	82.5	102.0	182.9
136.62	Top - Section 3	0.1875	20.846	12.294	662.9	18.19	111.18	0.0	0.0	179.8
140.00		0.1875	20.182	11.899	601.0	17.57	107.63	80.7	58.7	139.0
145.00		0.1875	19.197	11.313	516.5	16.64	102.38	81.8	53.0	197.5
146.00		0.1875	19.000	11.195	500.6	16.46	101.33	82.0	51.9	38.3

20532.0

Wind Loading - Shaft

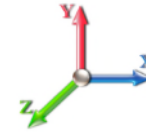
Structure: CT46135-A-SBA	Code: EIA/TIA-222-G	6/3/2021
Site Name: Middlefield-jacson Hill Rd	Exposure: C	
Height: 146.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 9

Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



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	19.450	21.40	348.10	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	19.450	21.40	340.65	0.650	0.000	5.00	19.254	12.52	428.4	0.0	1277.7
10.00		1.00	0.85	19.450	21.40	333.20	0.650	0.000	5.00	18.837	12.24	419.2	0.0	1249.8
15.00		1.00	0.85	19.450	21.40	325.75	0.650	0.000	5.00	18.421	11.97	409.9	0.0	1221.9
20.00		1.00	0.90	20.638	22.70	327.87	0.650	0.000	5.00	18.004	11.70	425.1	0.0	1194.0
25.00		1.00	0.95	21.630	23.79	327.80	0.650	0.000	5.00	17.588	11.43	435.2	0.0	1166.1
30.00		1.00	0.98	22.477	24.72	326.15	0.650	0.000	5.00	17.171	11.16	441.5	0.0	1138.2
35.00		1.00	1.01	23.218	25.54	323.34	0.650	0.000	5.00	16.755	10.89	445.0	0.0	1110.3
40.00		1.00	1.04	23.880	26.27	319.66	0.650	0.000	5.00	16.338	10.62	446.3	0.0	1082.4
43.34	Bot - Section 2	1.00	1.06	24.286	26.71	316.81	0.650	0.000	3.34	10.671	6.94	296.5	0.0	706.8
45.00		1.00	1.07	24.479	26.93	315.29	0.650	0.000	1.66	5.356	3.48	150.0	0.0	652.3
48.67	Top - Section 1	1.00	1.09	24.887	27.38	311.72	0.650	0.000	3.67	11.654	7.58	331.8	0.0	1418.9
50.00		1.00	1.09	25.029	27.53	316.79	0.650	0.000	1.33	4.168	2.71	119.3	0.0	237.0
55.00		1.00	1.12	25.536	28.09	311.45	0.650	0.000	5.00	15.406	10.01	450.0	0.0	875.7
60.00		1.00	1.14	26.008	28.61	305.70	0.650	0.000	5.00	14.989	9.74	446.0	0.0	851.8
65.00		1.00	1.16	26.450	29.09	299.60	0.650	0.000	5.00	14.572	9.47	440.9	0.0	827.8
70.00		1.00	1.17	26.866	29.55	293.19	0.650	0.000	5.00	14.156	9.20	435.1	0.0	803.9
75.00		1.00	1.19	27.259	29.98	286.51	0.650	0.000	5.00	13.739	8.93	428.4	0.0	780.0
80.00		1.00	1.21	27.632	30.39	279.58	0.650	0.000	5.00	13.323	8.66	421.1	0.0	756.1
85.00		1.00	1.22	27.987	30.79	272.43	0.650	0.000	5.00	12.906	8.39	413.2	0.0	732.1
87.83	Bot - Section 3	1.00	1.23	28.181	31.00	268.29	0.650	0.000	2.83	7.129	4.63	229.8	0.0	404.3
88.00	Appurtenance(s)	1.00	1.23	28.192	31.01	268.04	0.650	0.000	0.17	0.424	0.28	13.7	0.0	43.6
90.00		1.00	1.24	28.325	31.16	265.08	0.650	0.000	2.00	5.052	3.28	163.7	0.0	519.7
92.17	Top - Section 2	1.00	1.24	28.468	31.31	261.84	0.650	0.000	2.17	5.397	3.51	175.8	0.0	555.1
95.00		1.00	1.25	28.650	31.51	263.29	0.650	0.000	2.83	6.940	4.51	227.5	0.0	328.6
98.00	Appurtenance(s)	1.00	1.26	28.838	31.72	258.71	0.650	0.000	3.00	7.203	4.68	237.6	0.0	340.9
100.00		1.00	1.27	28.961	31.86	255.63	0.650	0.000	2.00	4.718	3.07	156.3	0.0	223.3
105.00		1.00	1.28	29.260	32.19	247.80	0.650	0.000	5.00	11.504	7.48	385.1	0.0	544.3
109.00	Appurtenance(s)	1.00	1.29	29.491	32.44	241.44	0.650	0.000	4.00	8.904	5.79	300.4	0.0	421.1
110.00		1.00	1.29	29.548	32.50	239.84	0.650	0.000	1.00	2.184	1.42	73.8	0.0	103.3
115.00		1.00	1.30	29.826	32.81	231.74	0.650	0.000	5.00	10.671	6.94	364.1	0.0	504.4
119.00	Appurtenance(s)	1.00	1.31	30.041	33.05	225.16	0.650	0.000	4.00	8.237	5.35	283.1	0.0	389.2
120.00		1.00	1.32	30.094	33.10	223.51	0.650	0.000	1.00	2.018	1.31	69.5	0.0	95.3
124.00	Appurtenance(s)	1.00	1.32	30.302	33.33	216.84	0.650	0.000	4.00	7.904	5.14	274.0	0.0	373.2
125.00		1.00	1.33	30.354	33.39	215.16	0.650	0.000	1.00	1.934	1.26	67.2	0.0	91.3
130.00		1.00	1.34	30.605	33.67	206.71	0.650	0.000	5.00	9.421	6.12	329.9	0.0	444.6
133.37	Bot - Section 4	1.00	1.34	30.771	33.85	200.94	0.650	0.000	3.37	6.121	3.98	215.5	0.0	288.7
135.00		1.00	1.35	30.850	33.93	198.15	0.650	0.000	1.63	2.935	1.91	103.6	0.0	219.5
136.62	Top - Section 3	1.00	1.35	30.927	34.02	195.35	0.650	0.000	1.62	2.886	1.88	102.1	0.0	215.7
140.00	Appurtenance(s)	1.00	1.36	31.087	34.20	193.07	0.650	0.000	3.38	5.861	3.81	208.5	0.0	166.8
145.00		1.00	1.37	31.317	34.45	184.34	0.650	0.000	5.00	8.330	5.41	298.5	0.0	236.9
146.00	Appurtenance(s)	1.00	1.37	31.362	34.50	182.58	0.650	0.000	1.00	1.616	1.05	58.0	0.0	46.0
Totals:									146.00			11,720.5		24,638.3

Discrete Appurtenance Forces

Structure: CT46135-A-SBA	Code: EIA/TIA-222-G	6/3/2021
Site Name: Middlefield-jacson Hill Rd	Exposure: C	
Height: 146.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

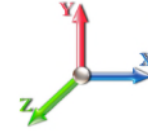


Page: 10

Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



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	146.00	Powerwave LGP219003	6	31.541	34.696	0.45	0.75	1.00	46.80	0.000	4.000	55.46	0.00	221.83	
2	146.00	Beacon	1	31.362	34.499	1.00	1.00	2.40	18.00	0.000	0.000	132.48	0.00	0.00	
3	146.00	Lightning Rod	1	31.519	34.671	1.00	1.00	1.05	42.00	0.000	3.500	58.25	0.00	203.87	
4	146.00	Cci HPA-65R-BUU-H8	9	31.541	34.696	0.79	1.00	92.29	734.40	0.000	4.000	5123.17	0.00	20492.68	
5	146.00	Powerwave LGP21401	6	31.541	34.696	0.45	0.75	2.92	136.80	0.000	4.000	161.88	0.00	647.50	
6	146.00	Platform w/ Hand Rails	1	31.362	34.499	1.00	1.00	32.00	1920.00	0.000	0.000	1766.34	0.00	0.00	
7	146.00	Ericsson RRUS-11 RRU's	3	31.541	34.696	0.50	0.75	3.87	180.00	0.000	4.000	215.07	0.00	860.29	
8	146.00	Ericsson RRUS-32 RRU's	3	31.541	34.696	0.50	0.75	4.99	277.20	0.000	4.000	277.00	0.00	1108.00	
9	146.00	Ericsson RRUS 32 B2	3	31.541	34.696	0.50	0.75	4.13	190.80	0.000	4.000	229.30	0.00	917.20	
10	146.00	Raycap DC-6-48-60-18-8F	2	31.541	34.696	0.50	0.75	1.91	48.00	0.000	4.000	106.00	0.00	424.01	
11	146.00	Powerwave 7020.00	6	31.541	34.696	0.45	0.75	0.38	8.35	0.000	4.000	20.98	0.00	83.94	
12	140.00	Samsung B5/B13	3	31.087	34.195	0.50	0.75	2.83	253.12	0.000	0.000	155.06	0.00	0.00	
13	140.00	Samsung MT6407-77A	3	31.087	34.195	0.52	0.75	7.39	285.84	0.000	0.000	404.15	0.00	0.00	
14	140.00	Commscope	3	31.087	34.195	0.45	0.75	0.72	21.42	0.000	0.000	39.15	0.00	0.00	
15	140.00	Samsung B2/B66A	3	31.087	34.195	0.50	0.75	2.83	349.20	0.000	0.000	155.06	0.00	0.00	
16	140.00	Low Profile Platform	1	31.087	34.195	1.00	1.00	22.00	1800.00	0.000	0.000	1203.67	0.00	0.00	
17	140.00	Raycap	2	31.087	34.195	0.50	0.75	2.53	100.80	0.000	0.000	138.56	0.00	0.00	
18	140.00	Commscope	3	31.087	34.195	0.38	0.75	0.10	242.64	0.000	0.000	5.54	0.00	0.00	
19	140.00	Support Rail Kit (SitePro1	1	31.191	34.310	1.00	1.00	6.75	314.06	0.000	2.250	370.55	0.00	833.74	
20	140.00	Antel LPA-80063/4CF	6	31.087	34.195	0.70	0.75	25.97	144.00	0.000	0.000	1421.00	0.00	0.00	
21	140.00	Andrew JAHH-65B-R3B	6	31.087	34.195	0.62	0.75	33.99	463.46	0.000	0.000	1859.60	0.00	0.00	
22	124.00	Pipe Mount	1	30.302	33.333	1.00	1.00	4.31	104.40	0.000	0.000	229.86	0.00	0.00	
23	124.00	dbSpectra	1	30.761	33.837	1.00	1.00	5.50	84.00	1.071	9.170	297.77	199.37	2730.52	
24	119.00	Celwave PD1142-66	1	30.526	33.578	1.00	1.00	1.57	19.20	0.000	9.400	84.35	0.00	792.88	
25	119.00	Telewave ANT450F6	1	30.247	33.271	1.00	1.00	1.86	25.20	0.000	3.917	99.01	0.00	387.81	
26	119.00	Pipe Mount	1	30.041	33.045	1.00	1.00	4.31	104.40	0.000	0.000	227.88	0.00	0.00	
27	109.00	Airmux	1	29.491	32.440	1.00	1.00	1.83	8.40	0.000	0.000	94.98	0.00	0.00	
28	109.00	Pipe Mount (au_andrew)	3	29.491	32.440	0.56	0.75	2.70	72.00	0.000	0.000	140.14	0.00	0.00	
29	109.00	Airmux	1	29.491	32.440	1.00	1.00	1.80	42.00	0.000	0.000	93.43	0.00	0.00	
30	98.00	JMA Wireless	3	28.838	31.722	0.55	0.75	20.80	232.20	0.000	0.000	1055.49	0.00	0.00	
31	98.00	Fujitsu TA08025-B605	3	28.838	31.722	0.54	0.80	3.15	269.82	0.000	0.000	159.96	0.00	0.00	
32	98.00	Platform w/HRK (Sitepro1	1	28.838	31.722	1.00	1.00	39.73	2251.20	0.000	0.000	2016.23	0.00	0.00	
33	98.00	Fujitsu TA08025-B604	3	28.838	31.722	0.54	0.80	3.15	230.15	0.000	0.000	159.96	0.00	0.00	
34	98.00	Raycap	1	28.838	31.722	0.54	0.80	1.08	26.22	0.000	0.000	54.68	0.00	0.00	
35	88.00	Platform w/ Handrail	1	28.192	31.011	1.00	1.00	51.70	3174.00	0.000	0.000	2565.22	0.00	0.00	
36	88.00	Ericsson Radio 4449	3	28.192	31.011	0.50	0.75	2.46	266.40	0.000	0.000	121.92	0.00	0.00	
37	88.00	Ericsson KRY 112 144/1	3	28.192	31.011	0.45	0.75	0.47	39.67	0.000	0.000	23.44	0.00	0.00	
38	88.00	Ericsson Air 32	3	28.192	31.011	0.65	0.75	12.60	475.92	0.000	0.000	625.02	0.00	0.00	
39	88.00	RFS	3	28.192	31.011	0.54	0.75	32.79	460.80	0.000	0.000	1626.90	0.00	0.00	
Totals:									15,462.88						23,574.52

Total Applied Force Summary

Structure: CT46135-A-SBA	Code: EIA/TIA-222-G	6/3/2021
Site Name: Middlefield-jacson Hill Rd	Exposure: C	
Height: 146.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

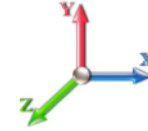


Page: 11

Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



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		428.42	1375.33	0.00	0.00
10.00		419.16	1493.79	0.00	0.00
15.00		409.89	1465.88	0.00	0.00
20.00		425.07	1437.96	0.00	0.00
25.00		435.21	1410.05	0.00	0.00
30.00		441.53	1382.14	0.00	0.00
35.00		445.03	1354.22	0.00	0.00
40.00		446.33	1326.31	0.00	0.00
43.34		296.48	869.56	0.00	0.00
45.00		149.99	733.41	0.00	0.00
48.67		331.80	1597.92	0.00	0.00
50.00		119.34	301.86	0.00	0.00
55.00		450.04	1119.66	0.00	0.00
60.00		445.97	1095.73	0.00	0.00
65.00		440.94	1071.81	0.00	0.00
70.00		435.07	1047.88	0.00	0.00
75.00		428.45	1023.95	0.00	0.00
80.00		421.14	1000.03	0.00	0.00
85.00		413.21	976.10	0.00	0.00
87.83		229.82	542.50	0.00	0.00
88.00	(13) attachments	4976.19	4468.55	0.00	0.00
90.00		163.69	594.78	0.00	0.00
92.17		175.78	636.43	0.00	0.00
95.00		227.46	435.00	0.00	0.00
98.00	(11) attachments	3683.93	3463.20	0.00	0.00
100.00		156.32	296.02	0.00	0.00
105.00		385.09	726.09	0.00	0.00
109.00	(5) attachments	628.94	688.92	0.00	0.00
110.00		73.83	139.44	0.00	0.00
115.00		364.11	685.25	0.00	0.00
119.00	(3) attachments	694.32	682.65	0.00	1180.69
120.00		69.46	128.97	0.00	0.00
124.00	(2) attachments	801.62	696.31	199.37	2730.52
125.00		67.17	124.98	0.00	0.00
130.00		329.87	612.96	0.00	0.00
133.37		215.47	402.28	0.00	0.00
135.00		103.60	274.30	0.00	0.00
136.62		102.09	270.37	0.00	0.00
140.00	(31) attachments	5960.80	4255.03	0.00	833.74
145.00		298.45	329.71	0.00	0.00
146.00	(41) attachments	8203.90	3666.86	0.00	24959.31
	Totals:	35,294.98	46,204.20	199.37	29,704.25

Calculated Forces

Structure: CT46135-A-SBA	Code: EIA/TIA-222-G	6/3/2021
Site Name: Middlefield-jacson Hill Rd	Exposure: C	
Height: 146.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.2D + 1.6W 97 mph Wind	Iterations 27
Dead Load Factor 1.20	
Wind Load Factor 1.60	

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	-46.10	-35.43	-0.19	-4019.9	-0.01	4019.98	4626.62	2313.31	8646.87	4329.86	0.00	0.000	0.000	0.939
5.00	-44.52	-35.27	-0.19	-3842.8	-0.01	3842.82	4552.64	2276.32	8322.99	4167.68	0.18	-0.337	0.000	0.932
10.00	-42.81	-35.09	-0.19	-3666.5	-0.01	3666.50	4477.51	2238.76	8003.10	4007.50	0.72	-0.681	0.000	0.925
15.00	-41.14	-34.92	-0.19	-3491.0	-0.01	3491.04	4395.69	2197.85	7677.64	3844.53	1.62	-1.031	0.000	0.918
20.00	-39.49	-34.71	-0.19	-3316.4	-0.01	3316.46	4294.12	2147.06	7325.16	3668.02	2.89	-1.388	0.000	0.914
25.00	-37.88	-34.48	-0.19	-3142.9	-0.01	3142.92	4192.55	2096.27	6980.95	3495.66	4.53	-1.751	0.000	0.908
30.00	-36.29	-34.23	-0.19	-2970.5	-0.01	2970.53	4090.97	2045.49	6645.03	3327.46	6.57	-2.120	0.000	0.902
35.00	-34.73	-33.96	-0.19	-2799.4	-0.01	2799.40	3989.40	1994.70	6317.40	3163.39	8.99	-2.495	0.000	0.894
40.00	-33.24	-33.64	-0.19	-2629.6	-0.01	2629.62	3887.82	1943.91	5998.04	3003.48	11.80	-2.876	0.000	0.884
43.34	-32.27	-33.40	-0.19	-2517.3	-0.01	2517.39	3820.04	1910.02	5789.54	2899.07	13.90	-3.136	0.000	0.877
45.00	-31.43	-33.33	-0.19	-2461.8	-0.01	2461.83	3786.25	1893.12	5686.97	2847.71	15.02	-3.268	0.000	0.873
48.67	-29.74	-33.01	-0.19	-2339.5	-0.01	2339.52	3251.53	1625.77	4904.15	2455.72	17.64	-3.557	0.000	0.962
50.00	-29.29	-33.01	-0.19	-2295.6	-0.01	2295.62	3230.14	1615.07	4836.85	2422.02	18.65	-3.665	0.000	0.957
55.00	-27.96	-32.69	-0.19	-2130.5	-0.01	2130.59	3143.08	1571.54	4578.34	2292.57	22.72	-4.094	0.000	0.939
60.00	-26.65	-32.37	-0.19	-1967.1	-0.01	1967.14	3056.01	1528.01	4326.92	2166.68	27.23	-4.526	0.000	0.917
65.00	-25.38	-32.03	-0.19	-1805.3	-0.01	1805.30	2968.95	1484.47	4082.61	2044.34	32.20	-4.958	0.000	0.892
70.00	-24.14	-31.69	-0.19	-1645.1	-0.01	1645.15	2881.88	1440.94	3845.39	1925.55	37.61	-5.389	0.000	0.863
75.00	-22.93	-31.33	-0.19	-1486.7	-0.01	1486.72	2794.82	1397.41	3615.28	1810.32	43.48	-5.817	0.000	0.830
80.00	-21.75	-30.97	-0.19	-1330.0	-0.02	1330.08	2707.76	1353.88	3392.26	1698.65	49.79	-6.239	-0.001	0.792
85.00	-20.66	-30.56	-0.19	-1175.2	-0.02	1175.25	2620.69	1310.35	3176.35	1590.53	56.53	-6.652	-0.001	0.747
87.83	-20.08	-30.31	-0.19	-1088.6	-0.02	1088.66	2571.36	1285.68	3057.15	1530.84	60.54	-6.885	-0.001	0.720
88.00	-16.21	-24.86	-0.19	-1083.6	-0.02	1083.61	2568.45	1284.23	3050.20	1527.37	60.78	-6.899	-0.001	0.716
90.00	-15.56	-24.67	-0.19	-1033.8	-0.02	1033.89	2533.63	1266.81	2967.53	1485.97	63.70	-7.062	-0.001	0.702
92.17	-14.87	-24.47	-0.19	-980.44	-0.02	980.44	2130.58	1065.29	2523.85	1263.80	66.94	-7.238	-0.001	0.783
95.00	-14.36	-24.25	-0.19	-911.10	-0.02	911.10	2089.47	1044.73	2426.88	1215.24	71.29	-7.463	-0.001	0.757
98.00	-11.34	-20.18	-0.20	-838.35	-0.02	838.35	2045.93	1022.97	2326.27	1164.86	76.05	-7.725	-0.001	0.726
100.00	-10.96	-20.05	-0.20	-797.99	-0.02	797.99	2016.91	1008.46	2260.38	1131.87	79.31	-7.898	-0.001	0.711
105.00	-10.17	-19.63	-0.20	-697.76	-0.02	697.76	1944.36	972.18	2099.80	1051.46	87.78	-8.312	-0.001	0.669
109.00	-9.52	-18.94	-0.20	-619.24	-0.02	619.24	1886.32	943.16	1975.59	989.26	94.86	-8.638	-0.001	0.631
110.00	-9.31	-18.88	-0.20	-600.30	-0.02	600.30	1871.81	935.90	1945.13	974.01	96.67	-8.720	-0.001	0.622
115.00	-8.59	-18.47	-0.20	-505.89	-0.02	505.89	1799.25	899.63	1796.38	899.53	105.98	-9.103	-0.001	0.568
119.00	-7.97	-17.70	-0.20	-430.84	-0.02	430.84	1741.21	870.61	1681.64	842.07	113.70	-9.396	-0.001	0.517
120.00	-7.80	-17.63	-0.20	-413.14	-0.02	413.14	1726.70	863.35	1653.55	828.00	115.66	-9.469	-0.001	0.504
124.00	-7.20	-16.75	0.00	-339.88	0.01	339.88	1668.66	834.33	1543.55	772.92	123.68	-9.735	-0.002	0.444
125.00	-7.03	-16.68	0.00	-323.14	0.01	323.14	1654.15	827.07	1516.64	759.45	125.71	-9.800	-0.002	0.430
130.00	-6.43	-16.27	0.00	-239.74	0.01	239.74	1581.59	790.80	1385.64	693.85	136.08	-10.083	-0.001	0.350
133.37	-6.04	-16.00	0.00	-184.84	0.00	184.84	1532.65	766.32	1300.60	651.27	143.23	-10.247	-0.001	0.288
135.00	-5.77	-15.86	0.00	-158.81	0.00	158.81	1509.04	754.52	1260.56	631.22	146.71	-10.318	-0.001	0.256
136.62	-5.50	-15.72	0.00	-133.06	0.00	133.06	885.20	442.60	750.52	375.82	150.22	-10.380	-0.001	0.362
140.00	-2.37	-9.09	0.00	-79.15	0.00	79.15	864.59	432.29	709.24	355.15	157.56	-10.480	-0.001	0.226
145.00	-2.09	-8.74	0.00	-33.70	0.00	33.70	833.10	416.55	649.44	325.20	168.55	-10.613	-0.001	0.107
146.00	0.00	-8.20	0.00	-24.96	0.00	24.96	826.66	413.33	637.68	319.32	170.76	-10.630	-0.001	0.079

Wind Loading - Shaft

Structure: CT46135-A-SBA	Code: EIA/TIA-222-G	6/3/2021
Site Name: Middlefield-jacson Hill Rd	Exposure: C	
Height: 146.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 13

Load Case: 0.9D + 1.6W 97 mph Wind	Iterations 27
Dead Load Factor 0.90	
Wind Load Factor 1.60	

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	19.450	21.40	348.10	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	19.450	21.40	340.65	0.650	0.000	5.00	19.254	12.52	428.4	0.0	958.3
10.00		1.00	0.85	19.450	21.40	333.20	0.650	0.000	5.00	18.837	12.24	419.2	0.0	937.4
15.00		1.00	0.85	19.450	21.40	325.75	0.650	0.000	5.00	18.421	11.97	409.9	0.0	916.4
20.00		1.00	0.90	20.638	22.70	327.87	0.650	0.000	5.00	18.004	11.70	425.1	0.0	895.5
25.00		1.00	0.95	21.630	23.79	327.80	0.650	0.000	5.00	17.588	11.43	435.2	0.0	874.6
30.00		1.00	0.98	22.477	24.72	326.15	0.650	0.000	5.00	17.171	11.16	441.5	0.0	853.6
35.00		1.00	1.01	23.218	25.54	323.34	0.650	0.000	5.00	16.755	10.89	445.0	0.0	832.7
40.00		1.00	1.04	23.880	26.27	319.66	0.650	0.000	5.00	16.338	10.62	446.3	0.0	811.8
43.34	Bot - Section 2	1.00	1.06	24.286	26.71	316.81	0.650	0.000	3.34	10.671	6.94	296.5	0.0	530.1
45.00		1.00	1.07	24.479	26.93	315.29	0.650	0.000	1.66	5.356	3.48	150.0	0.0	489.2
48.67	Top - Section 1	1.00	1.09	24.887	27.38	311.72	0.650	0.000	3.67	11.654	7.58	331.8	0.0	1064.1
50.00		1.00	1.09	25.029	27.53	316.79	0.650	0.000	1.33	4.168	2.71	119.3	0.0	177.7
55.00		1.00	1.12	25.536	28.09	311.45	0.650	0.000	5.00	15.406	10.01	450.0	0.0	656.8
60.00		1.00	1.14	26.008	28.61	305.70	0.650	0.000	5.00	14.989	9.74	446.0	0.0	638.8
65.00		1.00	1.16	26.450	29.09	299.60	0.650	0.000	5.00	14.572	9.47	440.9	0.0	620.9
70.00		1.00	1.17	26.866	29.55	293.19	0.650	0.000	5.00	14.156	9.20	435.1	0.0	602.9
75.00		1.00	1.19	27.259	29.98	286.51	0.650	0.000	5.00	13.739	8.93	428.4	0.0	585.0
80.00		1.00	1.21	27.632	30.39	279.58	0.650	0.000	5.00	13.323	8.66	421.1	0.0	567.1
85.00		1.00	1.22	27.987	30.79	272.43	0.650	0.000	5.00	12.906	8.39	413.2	0.0	549.1
87.83	Bot - Section 3	1.00	1.23	28.181	31.00	268.29	0.650	0.000	2.83	7.129	4.63	229.8	0.0	303.2
88.00	Appurtenance(s)	1.00	1.23	28.192	31.01	268.04	0.650	0.000	0.17	0.424	0.28	13.7	0.0	32.7
90.00		1.00	1.24	28.325	31.16	265.08	0.650	0.000	2.00	5.052	3.28	163.7	0.0	389.7
92.17	Top - Section 2	1.00	1.24	28.468	31.31	261.84	0.650	0.000	2.17	5.397	3.51	175.8	0.0	416.3
95.00		1.00	1.25	28.650	31.51	263.29	0.650	0.000	2.83	6.940	4.51	227.5	0.0	246.4
98.00	Appurtenance(s)	1.00	1.26	28.838	31.72	258.71	0.650	0.000	3.00	7.203	4.68	237.6	0.0	255.7
100.00		1.00	1.27	28.961	31.86	255.63	0.650	0.000	2.00	4.718	3.07	156.3	0.0	167.5
105.00		1.00	1.28	29.260	32.19	247.80	0.650	0.000	5.00	11.504	7.48	385.1	0.0	408.2
109.00	Appurtenance(s)	1.00	1.29	29.491	32.44	241.44	0.650	0.000	4.00	8.904	5.79	300.4	0.0	315.8
110.00		1.00	1.29	29.548	32.50	239.84	0.650	0.000	1.00	2.184	1.42	73.8	0.0	77.5
115.00		1.00	1.30	29.826	32.81	231.74	0.650	0.000	5.00	10.671	6.94	364.1	0.0	378.3
119.00	Appurtenance(s)	1.00	1.31	30.041	33.05	225.16	0.650	0.000	4.00	8.237	5.35	283.1	0.0	291.9
120.00		1.00	1.32	30.094	33.10	223.51	0.650	0.000	1.00	2.018	1.31	69.5	0.0	71.5
124.00	Appurtenance(s)	1.00	1.32	30.302	33.33	216.84	0.650	0.000	4.00	7.904	5.14	274.0	0.0	279.9
125.00		1.00	1.33	30.354	33.39	215.16	0.650	0.000	1.00	1.934	1.26	67.2	0.0	68.5
130.00		1.00	1.34	30.605	33.67	206.71	0.650	0.000	5.00	9.421	6.12	329.9	0.0	333.4
133.37	Bot - Section 4	1.00	1.34	30.771	33.85	200.94	0.650	0.000	3.37	6.121	3.98	215.5	0.0	216.5
135.00		1.00	1.35	30.850	33.93	198.15	0.650	0.000	1.63	2.935	1.91	103.6	0.0	164.6
136.62	Top - Section 3	1.00	1.35	30.927	34.02	195.35	0.650	0.000	1.62	2.886	1.88	102.1	0.0	161.8
140.00	Appurtenance(s)	1.00	1.36	31.087	34.20	193.07	0.650	0.000	3.38	5.861	3.81	208.5	0.0	125.1
145.00		1.00	1.37	31.317	34.45	184.34	0.650	0.000	5.00	8.330	5.41	298.5	0.0	177.7
146.00	Appurtenance(s)	1.00	1.37	31.362	34.50	182.58	0.650	0.000	1.00	1.616	1.05	58.0	0.0	34.5
Totals:									146.00			11,720.5		18,478.8

Discrete Appurtenance Forces

Structure: CT46135-A-SBA	Code: EIA/TIA-222-G	6/3/2021
Site Name: Middlefield-jacson Hill Rd	Exposure: C	
Height: 146.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

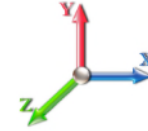


Page: 14

Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



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	146.00	Powerwave LGP219003	6	31.541	34.696	0.45	0.75	1.00	35.10	0.000	4.000	55.46	0.00	221.83	
2	146.00	Beacon	1	31.362	34.499	1.00	1.00	2.40	13.50	0.000	0.000	132.48	0.00	0.00	
3	146.00	Lightning Rod	1	31.519	34.671	1.00	1.00	1.05	31.50	0.000	3.500	58.25	0.00	203.87	
4	146.00	Cci HPA-65R-BUU-H8	9	31.541	34.696	0.79	1.00	92.29	550.80	0.000	4.000	5123.17	0.00	20492.68	
5	146.00	Powerwave LGP21401	6	31.541	34.696	0.45	0.75	2.92	102.60	0.000	4.000	161.88	0.00	647.50	
6	146.00	Platform w/ Hand Rails	1	31.362	34.499	1.00	1.00	32.00	1440.00	0.000	0.000	1766.34	0.00	0.00	
7	146.00	Ericsson RRUS-11 RRU's	3	31.541	34.696	0.50	0.75	3.87	135.00	0.000	4.000	215.07	0.00	860.29	
8	146.00	Ericsson RRUS-32 RRU's	3	31.541	34.696	0.50	0.75	4.99	207.90	0.000	4.000	277.00	0.00	1108.00	
9	146.00	Ericsson RRUS 32 B2	3	31.541	34.696	0.50	0.75	4.13	143.10	0.000	4.000	229.30	0.00	917.20	
10	146.00	Raycap DC-6-48-60-18-8F	2	31.541	34.696	0.50	0.75	1.91	36.00	0.000	4.000	106.00	0.00	424.01	
11	146.00	Powerwave 7020.00	6	31.541	34.696	0.45	0.75	0.38	6.26	0.000	4.000	20.98	0.00	83.94	
12	140.00	Samsung B5/B13	3	31.087	34.195	0.50	0.75	2.83	189.84	0.000	0.000	155.06	0.00	0.00	
13	140.00	Samsung MT6407-77A	3	31.087	34.195	0.52	0.75	7.39	214.38	0.000	0.000	404.15	0.00	0.00	
14	140.00	Commscope	3	31.087	34.195	0.45	0.75	0.72	16.07	0.000	0.000	39.15	0.00	0.00	
15	140.00	Samsung B2/B66A	3	31.087	34.195	0.50	0.75	2.83	261.90	0.000	0.000	155.06	0.00	0.00	
16	140.00	Low Profile Platform	1	31.087	34.195	1.00	1.00	22.00	1350.00	0.000	0.000	1203.67	0.00	0.00	
17	140.00	Raycap	2	31.087	34.195	0.50	0.75	2.53	75.60	0.000	0.000	138.56	0.00	0.00	
18	140.00	Commscope	3	31.087	34.195	0.38	0.75	0.10	181.98	0.000	0.000	5.54	0.00	0.00	
19	140.00	Support Rail Kit (SitePro1	1	31.191	34.310	1.00	1.00	6.75	235.55	0.000	2.250	370.55	0.00	833.74	
20	140.00	Antel LPA-80063/4CF__	6	31.087	34.195	0.70	0.75	25.97	108.00	0.000	0.000	1421.00	0.00	0.00	
21	140.00	Andrew JAHH-65B-R3B	6	31.087	34.195	0.62	0.75	33.99	347.60	0.000	0.000	1859.60	0.00	0.00	
22	124.00	Pipe Mount	1	30.302	33.333	1.00	1.00	4.31	78.30	0.000	0.000	229.86	0.00	0.00	
23	124.00	dbSpectra	1	30.761	33.837	1.00	1.00	5.50	63.00	1.071	9.170	297.77	199.37	2730.52	
24	119.00	Celwave PD1142-66	1	30.526	33.578	1.00	1.00	1.57	14.40	0.000	9.400	84.35	0.00	792.88	
25	119.00	Telewave ANT450F6	1	30.247	33.271	1.00	1.00	1.86	18.90	0.000	3.917	99.01	0.00	387.81	
26	119.00	Pipe Mount	1	30.041	33.045	1.00	1.00	4.31	78.30	0.000	0.000	227.88	0.00	0.00	
27	109.00	Airmux	1	29.491	32.440	1.00	1.00	1.83	6.30	0.000	0.000	94.98	0.00	0.00	
28	109.00	Pipe Mount (au_andrew)	3	29.491	32.440	0.56	0.75	2.70	54.00	0.000	0.000	140.14	0.00	0.00	
29	109.00	Airmux	1	29.491	32.440	1.00	1.00	1.80	31.50	0.000	0.000	93.43	0.00	0.00	
30	98.00	JMA Wireless	3	28.838	31.722	0.55	0.75	20.80	174.15	0.000	0.000	1055.49	0.00	0.00	
31	98.00	Fujitsu TA08025-B605	3	28.838	31.722	0.54	0.80	3.15	202.37	0.000	0.000	159.96	0.00	0.00	
32	98.00	Platform w/HRK (Sitepro1	1	28.838	31.722	1.00	1.00	39.73	1688.40	0.000	0.000	2016.23	0.00	0.00	
33	98.00	Fujitsu TA08025-B604	3	28.838	31.722	0.54	0.80	3.15	172.61	0.000	0.000	159.96	0.00	0.00	
34	98.00	Raycap	1	28.838	31.722	0.54	0.80	1.08	19.67	0.000	0.000	54.68	0.00	0.00	
35	88.00	Platform w/ Handrail	1	28.192	31.011	1.00	1.00	51.70	2380.50	0.000	0.000	2565.22	0.00	0.00	
36	88.00	Ericsson Radio 4449	3	28.192	31.011	0.50	0.75	2.46	199.80	0.000	0.000	121.92	0.00	0.00	
37	88.00	Ericsson KRY 112 144/1	3	28.192	31.011	0.45	0.75	0.47	29.75	0.000	0.000	23.44	0.00	0.00	
38	88.00	Ericsson Air 32	3	28.192	31.011	0.65	0.75	12.60	356.94	0.000	0.000	625.02	0.00	0.00	
39	88.00	RFS	3	28.192	31.011	0.54	0.75	32.79	345.60	0.000	0.000	1626.90	0.00	0.00	
Totals:									11,597.16						23,574.52

Total Applied Force Summary

Structure: CT46135-A-SBA	Code: EIA/TIA-222-G	6/3/2021
Site Name: Middlefield-jacson Hill Rd	Exposure: C	
Height: 146.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

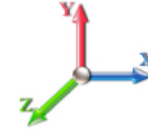


Page: 15

Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



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		428.42	1031.50	0.00	0.00
10.00		419.16	1120.34	0.00	0.00
15.00		409.89	1099.41	0.00	0.00
20.00		425.07	1078.47	0.00	0.00
25.00		435.21	1057.54	0.00	0.00
30.00		441.53	1036.60	0.00	0.00
35.00		445.03	1015.67	0.00	0.00
40.00		446.33	994.73	0.00	0.00
43.34		296.48	652.17	0.00	0.00
45.00		149.99	550.06	0.00	0.00
48.67		331.80	1198.44	0.00	0.00
50.00		119.34	226.39	0.00	0.00
55.00		450.04	839.74	0.00	0.00
60.00		445.97	821.80	0.00	0.00
65.00		440.94	803.85	0.00	0.00
70.00		435.07	785.91	0.00	0.00
75.00		428.45	767.97	0.00	0.00
80.00		421.14	750.02	0.00	0.00
85.00		413.21	732.08	0.00	0.00
87.83		229.82	406.88	0.00	0.00
88.00	(13) attachments	4976.19	3351.41	0.00	0.00
90.00		163.69	446.09	0.00	0.00
92.17		175.78	477.32	0.00	0.00
95.00		227.46	326.25	0.00	0.00
98.00	(11) attachments	3683.93	2597.40	0.00	0.00
100.00		156.32	222.01	0.00	0.00
105.00		385.09	544.57	0.00	0.00
109.00	(5) attachments	628.94	516.69	0.00	0.00
110.00		73.83	104.58	0.00	0.00
115.00		364.11	513.94	0.00	0.00
119.00	(3) attachments	694.32	511.99	0.00	1180.69
120.00		69.46	96.73	0.00	0.00
124.00	(2) attachments	801.62	522.23	199.37	2730.52
125.00		67.17	93.74	0.00	0.00
130.00		329.87	459.72	0.00	0.00
133.37		215.47	301.71	0.00	0.00
135.00		103.60	205.72	0.00	0.00
136.62		102.09	202.78	0.00	0.00
140.00	(31) attachments	5960.80	3191.27	0.00	833.74
145.00		298.45	247.28	0.00	0.00
146.00	(41) attachments	8203.90	2750.14	0.00	24959.31
	Totals:	35,294.98	34,653.15	199.37	29,704.25

Calculated Forces

Structure: CT46135-A-SBA	Code: EIA/TIA-222-G	6/3/2021
Site Name: Middlefield-jacson Hill Rd	Exposure: C	
Height: 146.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 16

Load Case: 0.9D + 1.6W 97 mph Wind

Iterations 27

Dead Load Factor 0.90

Wind Load Factor 1.60



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	-34.55	-35.40	-0.19	-3952.7	-0.01	3952.72	4626.62	2313.31	8646.87	4329.86	0.00	0.000	0.000	0.921
5.00	-33.31	-35.16	-0.19	-3775.7	-0.01	3775.74	4552.64	2276.32	8322.99	4167.68	0.18	-0.331	0.000	0.914
10.00	-31.99	-34.92	-0.19	-3599.9	-0.01	3599.95	4477.51	2238.76	8003.10	4007.50	0.70	-0.669	0.000	0.906
15.00	-30.69	-34.68	-0.19	-3425.3	-0.01	3425.34	4395.69	2197.85	7677.64	3844.53	1.59	-1.013	0.000	0.898
20.00	-29.41	-34.42	-0.19	-3251.9	-0.01	3251.93	4294.12	2147.06	7325.16	3668.02	2.84	-1.363	0.000	0.894
25.00	-28.15	-34.13	-0.19	-3079.8	-0.01	3079.85	4192.55	2096.27	6980.95	3495.66	4.45	-1.719	0.000	0.888
30.00	-26.91	-33.83	-0.19	-2909.2	-0.01	2909.20	4090.97	2045.49	6645.03	3327.46	6.45	-2.080	0.000	0.881
35.00	-25.70	-33.51	-0.19	-2740.0	-0.01	2740.07	3989.40	1994.70	6317.40	3163.39	8.82	-2.448	0.000	0.873
40.00	-24.54	-33.15	-0.19	-2572.5	-0.01	2572.53	3887.82	1943.91	5998.04	3003.48	11.58	-2.820	0.000	0.863
43.34	-23.80	-32.90	-0.19	-2461.9	-0.01	2461.91	3820.04	1910.02	5789.54	2899.07	13.64	-3.075	0.000	0.856
45.00	-23.14	-32.81	-0.19	-2407.1	-0.01	2407.19	3786.25	1893.12	5686.97	2847.71	14.74	-3.204	0.000	0.852
48.67	-21.85	-32.48	-0.19	-2286.8	-0.01	2286.80	3251.53	1625.77	4904.15	2455.72	17.31	-3.486	0.000	0.938
50.00	-21.49	-32.44	-0.19	-2243.6	-0.01	2243.60	3230.14	1615.07	4836.85	2422.02	18.30	-3.591	0.000	0.933
55.00	-20.44	-32.09	-0.19	-2081.3	-0.01	2081.38	3143.08	1571.54	4578.34	2292.57	22.28	-4.011	0.000	0.915
60.00	-19.42	-31.73	-0.19	-1920.9	-0.01	1920.93	3056.01	1528.01	4326.92	2166.68	26.70	-4.433	0.000	0.893
65.00	-18.43	-31.36	-0.19	-1762.2	-0.01	1762.29	2968.95	1484.47	4082.61	2044.34	31.57	-4.855	0.000	0.869
70.00	-17.46	-30.99	-0.19	-1605.4	-0.01	1605.49	2881.88	1440.94	3845.39	1925.55	36.87	-5.275	0.000	0.840
75.00	-16.51	-30.61	-0.19	-1450.5	-0.01	1450.56	2794.82	1397.41	3615.28	1810.32	42.61	-5.693	0.000	0.808
80.00	-15.59	-30.22	-0.19	-1297.5	-0.01	1297.53	2707.76	1353.88	3392.26	1698.65	48.78	-6.105	-0.001	0.770
85.00	-14.75	-29.81	-0.19	-1146.4	-0.01	1146.42	2620.69	1310.35	3176.35	1590.53	55.38	-6.507	-0.001	0.727
87.83	-14.31	-29.57	-0.19	-1061.9	-0.01	1061.95	2571.36	1285.68	3057.15	1530.84	59.31	-6.735	-0.001	0.700
88.00	-11.53	-24.25	-0.19	-1057.0	-0.01	1057.02	2568.45	1284.23	3050.20	1527.37	59.54	-6.748	-0.001	0.697
90.00	-11.04	-24.07	-0.19	-1008.5	-0.02	1008.52	2533.63	1266.81	2967.53	1485.97	62.40	-6.908	-0.001	0.683
92.17	-10.50	-23.87	-0.19	-956.38	-0.02	956.38	2130.58	1065.29	2523.85	1263.80	65.56	-7.079	-0.001	0.762
95.00	-10.11	-23.64	-0.20	-888.75	-0.02	888.75	2089.47	1044.73	2426.88	1215.24	69.82	-7.299	-0.001	0.737
98.00	-7.94	-19.69	-0.20	-817.82	-0.02	817.82	2045.93	1022.97	2326.27	1164.86	74.48	-7.554	-0.001	0.706
100.00	-7.64	-19.54	-0.20	-778.45	-0.02	778.45	2016.91	1008.46	2260.38	1131.87	77.67	-7.723	-0.001	0.692
105.00	-7.03	-19.13	-0.20	-680.75	-0.02	680.75	1944.36	972.18	2099.80	1051.46	85.95	-8.127	-0.001	0.651
109.00	-6.55	-18.45	-0.20	-604.24	-0.02	604.24	1886.32	943.16	1975.59	989.26	92.87	-8.445	-0.001	0.615
110.00	-6.38	-18.39	-0.20	-585.79	-0.02	585.79	1871.81	935.90	1945.13	974.01	94.64	-8.525	-0.001	0.605
115.00	-5.83	-17.99	-0.20	-493.84	-0.02	493.84	1799.25	899.63	1796.38	899.53	103.74	-8.899	-0.001	0.553
119.00	-5.38	-17.24	-0.20	-420.71	-0.02	420.71	1741.21	870.61	1681.64	842.07	111.29	-9.185	-0.001	0.503
120.00	-5.24	-17.17	-0.20	-403.47	-0.02	403.47	1726.70	863.35	1653.55	828.00	113.21	-9.256	-0.001	0.491
124.00	-4.81	-16.31	0.00	-332.07	0.01	332.07	1668.66	834.33	1543.55	772.92	121.04	-9.516	-0.002	0.433
125.00	-4.68	-16.24	0.00	-315.77	0.01	315.77	1654.15	827.07	1516.64	759.45	123.03	-9.579	-0.002	0.419
130.00	-4.23	-15.85	0.00	-234.57	0.01	234.57	1581.59	790.80	1385.64	693.85	133.17	-9.856	-0.002	0.341
133.37	-3.93	-15.60	0.00	-181.10	0.00	181.10	1532.65	766.32	1300.60	651.27	140.16	-10.017	-0.001	0.281
135.00	-3.73	-15.46	0.00	-155.73	0.00	155.73	1509.04	754.52	1260.56	631.22	143.57	-10.086	-0.001	0.250
136.62	-3.53	-15.33	0.00	-130.63	0.00	130.63	885.20	442.60	750.52	375.82	146.99	-10.147	-0.001	0.353
140.00	-1.43	-8.90	0.00	-78.03	0.00	78.03	864.59	432.29	709.24	355.15	154.17	-10.245	-0.001	0.222
145.00	-1.23	-8.57	0.00	-33.52	0.00	33.52	833.10	416.55	649.44	325.20	164.92	-10.377	-0.001	0.105
146.00	0.00	-8.20	0.00	-24.96	0.00	24.96	826.66	413.33	637.68	319.32	167.09	-10.393	-0.001	0.079

Wind Loading - Shaft

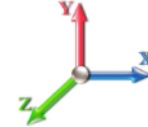
Structure: CT46135-A-SBA	Code: EIA/TIA-222-G	6/3/2021
Site Name: Middlefield-jacson Hill Rd	Exposure: C	
Height: 146.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 17

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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 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	5.168	5.68	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0	
5.00		1.00	0.85	5.168	5.68	0.00	1.200	1.242	5.00	20.289	24.35	138.4	359.9	1637.6	
10.00		1.00	0.85	5.168	5.68	0.00	1.200	1.331	5.00	19.947	23.94	136.1	378.2	1628.1	
15.00		1.00	0.85	5.168	5.68	0.00	1.200	1.386	5.00	19.576	23.49	133.5	385.8	1607.7	
20.00		1.00	0.90	5.483	6.03	0.00	1.200	1.427	5.00	19.193	23.03	138.9	388.6	1582.6	
25.00		1.00	0.95	5.747	6.32	0.00	1.200	1.459	5.00	18.804	22.56	142.6	388.7	1554.8	
30.00		1.00	0.98	5.972	6.57	0.00	1.200	1.486	5.00	18.409	22.09	145.1	386.9	1525.1	
35.00		1.00	1.01	6.169	6.79	0.00	1.200	1.509	5.00	18.012	21.61	146.7	383.8	1494.1	
40.00		1.00	1.04	6.345	6.98	0.00	1.200	1.529	5.00	17.612	21.13	147.5	379.7	1462.1	
43.34	Bot - Section 2	1.00	1.06	6.453	7.10	0.00	1.200	1.541	3.34	11.528	13.83	98.2	251.3	958.1	
45.00		1.00	1.07	6.504	7.15	0.00	1.200	1.547	1.66	5.785	6.94	49.7	127.1	779.4	
48.67	Top - Section 1	1.00	1.09	6.613	7.27	0.00	1.200	1.559	3.67	12.608	15.13	110.0	277.6	1696.5	
50.00		1.00	1.09	6.650	7.32	0.00	1.200	1.564	1.33	4.515	5.42	39.6	100.2	337.2	
55.00		1.00	1.12	6.785	7.46	0.00	1.200	1.579	5.00	16.721	20.07	149.8	370.7	1246.4	
60.00		1.00	1.14	6.910	7.60	0.00	1.200	1.592	5.00	16.316	19.58	148.8	364.3	1216.0	
65.00		1.00	1.16	7.028	7.73	0.00	1.200	1.605	5.00	15.910	19.09	147.6	357.4	1185.3	
70.00		1.00	1.17	7.138	7.85	0.00	1.200	1.617	5.00	15.504	18.60	146.1	350.2	1154.1	
75.00		1.00	1.19	7.243	7.97	0.00	1.200	1.628	5.00	15.096	18.12	144.3	342.7	1122.7	
80.00		1.00	1.21	7.342	8.08	0.00	1.200	1.639	5.00	14.689	17.63	142.3	334.9	1091.0	
85.00		1.00	1.22	7.436	8.18	0.00	1.200	1.649	5.00	14.280	17.14	140.2	326.9	1059.0	
87.83	Bot - Section 3	1.00	1.23	7.488	8.24	0.00	1.200	1.654	2.83	7.910	9.49	78.2	182.6	586.9	
88.00	Appurtenance(s)	1.00	1.23	7.491	8.24	0.00	1.200	1.655	0.17	0.470	0.56	4.6	10.9	54.6	
90.00		1.00	1.24	7.526	8.28	0.00	1.200	1.658	2.00	5.604	6.73	55.7	130.0	649.7	
92.17	Top - Section 2	1.00	1.24	7.564	8.32	0.00	1.200	1.662	2.17	5.998	7.20	59.9	139.3	694.4	
95.00		1.00	1.25	7.612	8.37	0.00	1.200	1.667	2.83	7.727	9.27	77.6	179.5	508.0	
98.00	Appurtenance(s)	1.00	1.26	7.662	8.43	0.00	1.200	1.672	3.00	8.039	9.65	81.3	186.9	527.9	
100.00		1.00	1.27	7.695	8.46	0.00	1.200	1.676	2.00	5.277	6.33	53.6	123.2	346.5	
105.00		1.00	1.28	7.774	8.55	0.00	1.200	1.684	5.00	12.908	15.49	132.5	299.3	843.6	
109.00	Appurtenance(s)	1.00	1.29	7.836	8.62	0.00	1.200	1.690	4.00	10.030	12.04	103.7	233.7	654.8	
110.00		1.00	1.29	7.851	8.64	0.00	1.200	1.692	1.00	2.466	2.96	25.6	58.1	161.3	
115.00		1.00	1.30	7.925	8.72	0.00	1.200	1.699	5.00	12.087	14.50	126.4	281.2	785.6	
119.00	Appurtenance(s)	1.00	1.31	7.982	8.78	0.00	1.200	1.705	4.00	9.374	11.25	98.8	219.0	608.2	
120.00		1.00	1.32	7.996	8.80	0.00	1.200	1.707	1.00	2.302	2.76	24.3	54.4	149.7	
124.00	Appurtenance(s)	1.00	1.32	8.051	8.86	0.00	1.200	1.712	4.00	9.045	10.85	96.1	211.5	584.8	
125.00		1.00	1.33	8.065	8.87	0.00	1.200	1.714	1.00	2.220	2.66	23.6	52.5	143.8	
130.00		1.00	1.34	8.132	8.95	0.00	1.200	1.720	5.00	10.855	13.03	116.5	253.0	697.6	
133.37	Bot - Section 4	1.00	1.34	8.176	8.99	0.00	1.200	1.725	3.37	7.091	8.51	76.5	166.3	455.0	
135.00		1.00	1.35	8.197	9.02	0.00	1.200	1.727	1.63	3.404	4.08	36.8	80.5	300.0	
136.62	Top - Section 3	1.00	1.35	8.217	9.04	0.00	1.200	1.729	1.62	3.353	4.02	36.4	79.3	295.0	
140.00	Appurtenance(s)	1.00	1.36	8.260	9.09	0.00	1.200	1.733	3.38	6.837	8.20	74.5	160.6	327.3	
145.00		1.00	1.37	8.321	9.15	0.00	1.200	1.739	5.00	9.780	11.74	107.4	227.9	464.9	
146.00	Appurtenance(s)	1.00	1.37	8.333	9.17	0.00	1.200	1.741	1.00	1.906	2.29	21.0	45.2	91.1	
Totals:									146.00				3,956.7	34,268.5	

Discrete Appurtenance Forces

Structure: CT46135-A-SBA	Code: EIA/TIA-222-G	6/3/2021
Site Name: Middlefield-jacson Hill Rd	Exposure: C	
Height: 146.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

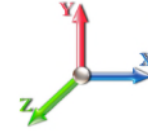


Page: 18

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 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	146.00	Powerwave LGP219003	6	8.381	9.219	0.45	0.75	2.33	107.50	0.000	4.000	21.48	0.00	85.90
2	146.00	Beacon	1	8.333	9.166	1.00	1.00	2.40	30.41	0.000	0.000	22.00	0.00	0.00
3	146.00	Lightning Rod	1	8.375	9.212	1.00	1.00	3.42	64.33	0.000	3.500	31.48	0.00	110.18
4	146.00	Cci HPA-65R-BUU-H8	9	8.381	9.219	0.79	1.00	103.74	3345.58	0.000	4.000	956.34	0.00	3825.38
5	146.00	Powerwave LGP21401	6	8.381	9.219	0.45	0.75	4.14	336.98	0.000	4.000	38.20	0.00	152.82
6	146.00	Platform w/ Hand Rails	1	8.333	9.166	1.00	1.00	59.85	3414.18	0.000	0.000	548.59	0.00	0.00
7	146.00	Ericsson RRUS-11 RRU's	3	8.381	9.219	0.50	0.75	4.85	423.68	0.000	4.000	44.74	0.00	178.94
8	146.00	Ericsson RRUS-32 RRU's	3	8.381	9.219	0.50	0.75	6.19	616.86	0.000	4.000	57.03	0.00	228.13
9	146.00	Ericsson RRUS 32 B2	3	8.381	9.219	0.50	0.75	5.23	453.93	0.000	4.000	48.18	0.00	192.70
10	146.00	Raycap DC-6-48-60-18-8F	2	8.381	9.219	0.50	0.75	2.82	66.56	0.000	4.000	25.96	0.00	103.85
11	146.00	Powerwave 7020.00	6	8.381	9.219	0.45	0.75	0.83	17.01	0.000	4.000	7.69	0.00	30.76
12	140.00	Samsung B5/B13	3	8.260	9.086	0.50	0.75	3.68	459.40	0.000	0.000	33.41	0.00	0.00
13	140.00	Samsung MT6407-77A	3	8.260	9.086	0.52	0.75	8.84	640.73	0.000	0.000	80.31	0.00	0.00
14	140.00	Commscope	3	8.260	9.086	0.45	0.75	1.16	85.14	0.000	0.000	10.56	0.00	0.00
15	140.00	Samsung B2/B66A	3	8.260	9.086	0.50	0.75	3.68	576.91	0.000	0.000	33.41	0.00	0.00
16	140.00	Low Profile Platform	1	8.260	9.086	1.00	1.00	39.54	2799.91	0.000	0.000	359.25	0.00	0.00
17	140.00	Raycap	2	8.260	9.086	0.50	0.75	3.85	334.67	0.000	0.000	34.98	0.00	0.00
18	140.00	Commscope	3	8.260	9.086	0.38	0.75	0.17	330.02	0.000	0.000	1.56	0.00	0.00
19	140.00	Support Rail Kit (SitePro1	1	8.288	9.116	1.00	1.00	13.30	884.24	0.000	2.250	121.26	0.00	272.84
20	140.00	Antel LPA-80063/4CF___	6	8.260	9.086	0.70	0.75	30.35	1371.79	0.000	0.000	275.77	0.00	0.00
21	140.00	Andrew JAHH-65B-R3B	6	8.260	9.086	0.62	0.75	38.95	1832.11	0.000	0.000	353.93	0.00	0.00
22	124.00	Pipe Mount	1	8.051	8.857	1.00	1.00	9.59	204.49	0.000	0.000	84.97	0.00	0.00
23	124.00	dbSpectra	1	8.173	8.991	1.00	1.00	11.89	180.04	1.071	9.170	106.92	114.55	980.49
24	119.00	Celwave PD1142-66	1	8.111	8.922	1.00	1.00	4.83	136.65	0.000	9.400	43.13	0.00	405.42
25	119.00	Telewave ANT450F6	1	8.037	8.840	1.00	1.00	4.63	59.11	0.000	3.917	40.90	0.00	160.21
26	119.00	Pipe Mount	1	7.982	8.780	1.00	1.00	9.57	203.96	0.000	0.000	84.05	0.00	0.00
27	109.00	Airmux	1	7.836	8.619	1.00	1.00	2.36	30.52	0.000	0.000	20.38	0.00	0.00
28	109.00	Pipe Mount (au_andrew)	3	7.836	8.619	0.56	0.75	9.14	382.20	0.000	0.000	78.77	0.00	0.00
29	109.00	Airmux	1	7.836	8.619	1.00	1.00	2.33	287.80	0.000	0.000	20.05	0.00	0.00
30	98.00	JMA Wireless	3	7.662	8.429	0.55	0.75	23.13	866.85	0.000	0.000	194.98	0.00	0.00
31	98.00	Fujitsu TA08025-B605	3	7.662	8.429	0.54	0.80	4.02	382.14	0.000	0.000	33.85	0.00	0.00
32	98.00	Platform w/HRK (Sitepro1	1	7.662	8.429	1.00	1.00	87.56	4061.75	0.000	0.000	738.01	0.00	0.00
33	98.00	Fujitsu TA08025-B604	3	7.662	8.429	0.54	0.80	4.02	339.57	0.000	0.000	33.85	0.00	0.00
34	98.00	Raycap	1	7.662	8.429	0.54	0.80	1.37	64.38	0.000	0.000	11.54	0.00	0.00
35	88.00	Platform w/ Handrail	1	7.491	8.240	1.00	1.00	87.97	5044.82	0.000	0.000	724.84	0.00	0.00
36	88.00	Ericsson Radio 4449	3	7.491	8.240	0.50	0.75	3.21	455.20	0.000	0.000	26.46	0.00	0.00
37	88.00	Ericsson KRY 112 144/1	3	7.491	8.240	0.45	0.75	0.99	61.15	0.000	0.000	8.17	0.00	0.00
38	88.00	Ericsson Air 32	3	7.491	8.240	0.65	0.75	14.65	992.13	0.000	0.000	120.69	0.00	0.00
39	88.00	RFS	3	7.491	8.240	0.54	0.75	35.70	1677.32	0.000	0.000	294.17	0.00	0.00

Totals: 33,622.02

5,771.86

Total Applied Force Summary

Structure: CT46135-A-SBA	Code: EIA/TIA-222-G	6/3/2021
Site Name: Middlefield-jacson Hill Rd	Exposure: C	
Height: 146.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 19

Load Case: 1.2D + 1.0Di + 1.0Wi 50 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		138.41	1735.22	0.00	0.00
10.00		136.07	1872.04	0.00	0.00
15.00		133.54	1851.69	0.00	0.00
20.00		138.92	1826.59	0.00	0.00
25.00		142.65	1798.74	0.00	0.00
30.00		145.12	1769.05	0.00	0.00
35.00		146.68	1738.06	0.00	0.00
40.00		147.51	1706.06	0.00	0.00
43.34		98.20	1120.86	0.00	0.00
45.00		49.67	860.54	0.00	0.00
48.67		110.05	1875.52	0.00	0.00
50.00		39.63	402.06	0.00	0.00
55.00		149.76	1490.37	0.00	0.00
60.00		148.83	1460.00	0.00	0.00
65.00		147.59	1429.22	0.00	0.00
70.00		146.08	1398.10	0.00	0.00
75.00		144.33	1366.66	0.00	0.00
80.00		142.35	1334.95	0.00	0.00
85.00		140.17	1302.99	0.00	0.00
87.83		78.18	725.10	0.00	0.00
88.00	(13) attachments	1178.98	8293.32	0.00	0.00
90.00		55.68	724.83	0.00	0.00
92.17		59.88	775.74	0.00	0.00
95.00		77.65	614.46	0.00	0.00
98.00	(11) attachments	1093.54	6355.22	0.00	0.00
100.00		53.60	419.24	0.00	0.00
105.00		132.46	1025.35	0.00	0.00
109.00	(5) attachments	222.95	1500.73	0.00	0.00
110.00		25.56	197.50	0.00	0.00
115.00		126.44	966.44	0.00	0.00
119.00	(3) attachments	266.85	1152.60	0.00	565.63
120.00		24.30	183.36	0.00	0.00
124.00	(2) attachments	288.03	1103.99	114.55	980.49
125.00		23.63	177.49	0.00	0.00
130.00		116.52	866.00	0.00	0.00
133.37		76.52	568.62	0.00	0.00
135.00		36.83	354.81	0.00	0.00
136.62		36.37	349.69	0.00	0.00
140.00	(31) attachments	1378.97	9755.97	0.00	272.84
145.00		107.42	557.62	0.00	0.00
146.00	(41) attachments	1822.66	8986.70	0.00	4908.65
	Totals:	9,728.57	73,993.53	114.55	6,727.60

Calculated Forces

Structure: CT46135-A-SBA	Code: EIA/TIA-222-G	6/3/2021
Site Name: Middlefield-jacson Hill Rd	Exposure: C	
Height: 146.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 20

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind **Iterations** 27

Dead Load Factor 1.20

Wind Load Factor 1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-73.99	-9.79	-0.11	-1135.2	0.00	1135.26	4626.62	2313.31	8646.87	4329.86	0.00	0.000	0.000	0.278
5.00	-72.23	-9.77	-0.11	-1086.3	0.00	1086.30	4552.64	2276.32	8322.99	4167.68	0.05	-0.095	0.000	0.277
10.00	-70.35	-9.75	-0.11	-1037.4	0.00	1037.44	4477.51	2238.76	8003.10	4007.50	0.20	-0.192	0.000	0.275
15.00	-68.48	-9.73	-0.11	-988.68	0.00	988.68	4395.69	2197.85	7677.64	3844.53	0.46	-0.292	0.000	0.273
20.00	-66.63	-9.70	-0.11	-940.03	0.00	940.03	4294.12	2147.06	7325.16	3668.02	0.82	-0.393	0.000	0.272
25.00	-64.82	-9.66	-0.11	-891.54	0.00	891.54	4192.55	2096.27	6980.95	3495.66	1.28	-0.496	0.000	0.271
30.00	-63.03	-9.61	-0.11	-843.24	0.00	843.24	4090.97	2045.49	6645.03	3327.46	1.86	-0.600	0.000	0.269
35.00	-61.28	-9.56	-0.11	-795.17	0.00	795.17	3989.40	1994.70	6317.40	3163.39	2.54	-0.707	0.000	0.267
40.00	-59.56	-9.49	-0.11	-747.35	0.00	747.35	3887.82	1943.91	5998.04	3003.48	3.34	-0.815	0.000	0.264
43.34	-58.43	-9.43	-0.11	-715.70	0.00	715.70	3820.04	1910.02	5789.54	2899.07	3.94	-0.889	0.000	0.262
45.00	-57.56	-9.43	-0.11	-700.02	0.00	700.02	3786.25	1893.12	5686.97	2847.71	4.25	-0.927	0.000	0.261
48.67	-55.68	-9.34	-0.11	-665.42	0.00	665.42	3251.53	1625.77	4904.15	2455.72	5.00	-1.009	0.000	0.288
50.00	-55.27	-9.37	-0.11	-653.00	0.00	653.00	3230.14	1615.07	4836.85	2422.02	5.28	-1.039	0.000	0.287
55.00	-53.76	-9.30	-0.11	-606.17	0.00	606.17	3143.08	1571.54	4578.34	2292.57	6.44	-1.162	0.000	0.282
60.00	-52.28	-9.24	-0.11	-559.66	0.00	559.66	3056.01	1528.01	4326.92	2166.68	7.72	-1.284	0.000	0.275
65.00	-50.84	-9.16	-0.11	-513.48	0.00	513.48	2968.95	1484.47	4082.61	2044.34	9.13	-1.407	0.000	0.268
70.00	-49.43	-9.09	-0.11	-467.67	0.00	467.67	2881.88	1440.94	3845.39	1925.55	10.67	-1.530	0.000	0.260
75.00	-48.04	-9.01	-0.11	-422.24	0.00	422.24	2794.82	1397.41	3615.28	1810.32	12.34	-1.652	0.000	0.250
80.00	-46.70	-8.92	-0.11	-377.21	0.00	377.21	2707.76	1353.88	3392.26	1698.65	14.13	-1.771	0.000	0.239
85.00	-45.38	-8.81	-0.11	-332.61	0.00	332.61	2620.69	1310.35	3176.35	1590.53	16.05	-1.888	0.000	0.226
87.83	-44.66	-8.73	-0.11	-307.65	0.00	307.65	2571.36	1285.68	3057.15	1530.84	17.19	-1.954	0.000	0.218
88.00	-36.41	-7.29	-0.11	-306.19	0.00	306.19	2568.45	1284.23	3050.20	1527.37	17.26	-1.958	0.000	0.215
90.00	-35.68	-7.24	-0.11	-291.61	0.00	291.61	2533.63	1266.81	2967.53	1485.97	18.09	-2.004	0.000	0.210
92.17	-34.90	-7.19	-0.11	-275.93	0.00	275.93	2130.58	1065.29	2523.85	1263.80	19.01	-2.054	0.000	0.235
95.00	-34.28	-7.13	-0.11	-255.57	0.00	255.57	2089.47	1044.73	2426.88	1215.24	20.25	-2.117	0.000	0.227
98.00	-27.96	-5.82	-0.11	-234.20	0.00	234.20	2045.93	1022.97	2326.27	1164.86	21.60	-2.190	0.000	0.215
100.00	-27.54	-5.79	-0.11	-222.55	0.00	222.55	2016.91	1008.46	2260.38	1131.87	22.53	-2.239	0.000	0.210
105.00	-26.51	-5.67	-0.11	-193.58	0.00	193.58	1944.36	972.18	2099.80	1051.46	24.94	-2.354	-0.001	0.198
109.00	-25.01	-5.41	-0.11	-170.91	0.00	170.91	1886.32	943.16	1975.59	989.26	26.95	-2.444	-0.001	0.186
110.00	-24.81	-5.40	-0.11	-165.50	0.00	165.50	1871.81	935.90	1945.13	974.01	27.46	-2.467	-0.001	0.183
115.00	-23.84	-5.27	-0.11	-138.49	0.00	138.49	1799.25	899.63	1796.38	899.53	30.10	-2.572	-0.001	0.167
119.00	-22.70	-4.97	-0.11	-116.85	0.00	116.85	1741.21	870.61	1681.64	842.07	32.29	-2.652	-0.001	0.152
120.00	-22.51	-4.96	-0.11	-111.88	0.00	111.88	1726.70	863.35	1653.55	828.00	32.85	-2.671	-0.001	0.148
124.00	-21.42	-4.63	0.00	-91.07	0.00	91.07	1668.66	834.33	1543.55	772.92	35.12	-2.743	-0.001	0.131
125.00	-21.24	-4.62	0.00	-86.44	0.00	86.44	1654.15	827.07	1516.64	759.45	35.69	-2.761	-0.001	0.127
130.00	-20.38	-4.48	0.00	-63.34	0.00	63.34	1581.59	790.80	1385.64	693.85	38.62	-2.836	-0.001	0.104
133.37	-19.81	-4.39	0.00	-48.23	0.00	48.23	1532.65	766.32	1300.60	651.27	40.64	-2.879	-0.001	0.087
135.00	-19.46	-4.34	0.00	-41.10	0.00	41.10	1509.04	754.52	1260.56	631.22	41.63	-2.897	-0.001	0.078
136.62	-19.11	-4.29	0.00	-34.05	0.00	34.05	885.20	442.60	750.52	375.82	42.62	-2.914	-0.001	0.112
140.00	-9.43	-2.42	0.00	-19.29	0.00	19.29	864.59	432.29	709.24	355.15	44.68	-2.939	-0.001	0.065
145.00	-8.88	-2.29	0.00	-7.19	0.00	7.19	833.10	416.55	649.44	325.20	47.78	-2.970	-0.001	0.033
146.00	0.00	-1.82	0.00	-4.91	0.00	4.91	826.66	413.33	637.68	319.32	48.40	-2.973	-0.001	0.015

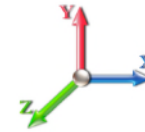
Seismic Segment Forces (Factored)

Structure: CT46135-A-SBA	Code: EIA/TIA-222-G	6/3/2021
Site Name: Middlefield-jacson Hill Rd	Exposure: C	
Height: 146.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 21

Load Case: 1.2D + 1.0E				Iterations 24
Gust Response Factor	1.10	Sds	0.19	Ss 0.18
Dead Load Factor	1.20	Seismic Load Factor	1.00	S1 0.06
Wind Load Factor	0.00	Structure Frequency (f1)	0.30	SA 0.03
				Seismic Importance Factor 1.00



Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		1064.7	0.00	0.03	0.02	22.03	
10.00		1041.5	0.01	0.05	0.03	30.44	
15.00		1018.2	0.02	0.06	0.04	33.85	
20.00		995.00	0.04	0.07	0.04	35.07	
25.00		971.74	0.06	0.07	0.04	35.40	
30.00		948.48	0.08	0.07	0.04	35.44	
35.00		925.22	0.11	0.07	0.04	35.44	
40.00		901.96	0.14	0.07	0.03	35.37	
43.34	Bot - Section 2	588.97	0.17	0.07	0.03	23.37	
45.00		543.55	0.18	0.07	0.03	21.65	
48.67	Top - Section 1	1182.3	0.21	0.06	0.02	47.05	
50.00		197.47	0.22	0.06	0.02	7.82	
55.00		729.75	0.27	0.05	0.02	27.57	
60.00		709.81	0.32	0.04	0.01	23.65	
65.00		689.87	0.37	0.03	0.01	17.38	
70.00		669.93	0.43	0.01	0.01	8.67	
75.00		650.00	0.50	-0.02	0.01	-1.61	
80.00		630.06	0.57	-0.04	0.01	-11.59	
85.00		610.12	0.64	-0.07	0.02	-19.27	
87.83	Bot - Section 3	336.88	0.68	-0.08	0.03	-12.45	
88.00	Appurtenance(s)	3717.0	0.69	-0.08	0.03	-138.30	
90.00		433.05	0.72	-0.09	0.03	-17.26	
92.17	Top - Section 2	462.54	0.75	-0.10	0.04	-19.27	
95.00		273.82	0.80	-0.11	0.05	-11.61	
98.00	Appurtenance(s)	2792.1	0.85	-0.12	0.07	-115.04	
100.00		186.08	0.89	-0.12	0.08	-7.31	
105.00		453.57	0.98	-0.11	0.12	-13.91	
109.00	Appurtenance(s)	452.90	1.05	-0.09	0.16	-9.04	
110.00		86.06	1.07	-0.08	0.17	-1.44	
115.00		420.34	1.17	-0.02	0.23	0.98	
119.00	Appurtenance(s)	448.31	1.26	0.06	0.30	9.59	
120.00		79.42	1.28	0.09	0.32	2.12	
124.00	Appurtenance(s)	468.02	1.36	0.22	0.39	23.39	
125.00		76.09	1.39	0.26	0.42	4.29	
130.00		370.50	1.50	0.50	0.54	33.87	
133.37	Bot - Section 4	240.58	1.58	0.71	0.64	28.44	
135.00		182.94	1.62	0.83	0.69	24.16	
136.62	Top - Section 3	179.76	1.66	0.96	0.75	26.33	
140.00	Appurtenance(s)	3451.1	1.74	1.27	0.87	615.58	
145.00		197.46	1.86	1.85	1.09	45.52	
146.00	Appurtenance(s)	3040.2	1.89	1.98	1.14	734.81	
Totals:		<u>33,417.7</u>				<u>1,611.2</u>	Total Wind: 35,295.0

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

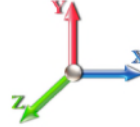
Calculated Forces

Structure: CT46135-A-SBA	Code: EIA/TIA-222-G	6/3/2021
Site Name: Middlefield-jacson Hill Rd	Exposure: C	
Height: 146.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 22

Load Case: 1.2D + 1.0E							Iterations 24
Gust Response Factor	1.10				Sds	0.19	Ss 0.18
Dead Load Factor	1.20	Seismic Load Factor	1.00	Sd1	0.10		S1 0.06
Wind Load Factor	0.00	Structure Frequency (f1)	0.30	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	-46.20	-2.00	0.00	-253.20	0.00	253.20	4626.62	2313.31	8646.87	4329.86	0.00	0.00	0.00	0.068
5.00	-44.83	-1.99	0.00	-243.22	0.00	243.22	4552.64	2276.32	8322.99	4167.68	0.01	-0.02	0.068	
10.00	-43.33	-1.98	0.00	-233.26	0.00	233.26	4477.51	2238.76	8003.10	4007.50	0.05	-0.04	0.068	
15.00	-41.87	-1.96	0.00	-223.38	0.00	223.38	4395.69	2197.85	7677.64	3844.53	0.10	-0.07	0.068	
20.00	-40.43	-1.94	0.00	-213.59	0.00	213.59	4294.12	2147.06	7325.16	3668.02	0.18	-0.09	0.068	
25.00	-39.02	-1.92	0.00	-203.90	0.00	203.90	4192.55	2096.27	6980.95	3495.66	0.29	-0.11	0.068	
30.00	-37.63	-1.89	0.00	-194.32	0.00	194.32	4090.97	2045.49	6645.03	3327.46	0.42	-0.14	0.068	
35.00	-36.28	-1.87	0.00	-184.86	0.00	184.86	3989.40	1994.70	6317.40	3163.39	0.57	-0.16	0.068	
40.00	-34.95	-1.84	0.00	-175.50	0.00	175.50	3887.82	1943.91	5998.04	3003.48	0.75	-0.19	0.067	
43.34	-34.08	-1.83	0.00	-169.35	0.00	169.35	3820.04	1910.02	5789.54	2899.07	0.89	-0.20	0.067	
45.00	-33.35	-1.81	0.00	-166.32	0.00	166.32	3786.25	1893.12	5686.97	2847.71	0.96	-0.21	0.067	
48.67	-31.75	-1.76	0.00	-159.68	0.00	159.68	3251.53	1625.77	4904.15	2455.72	1.13	-0.23	0.075	
50.00	-31.45	-1.76	0.00	-157.33	0.00	157.33	3230.14	1615.07	4836.85	2422.02	1.20	-0.24	0.075	
55.00	-30.33	-1.75	0.00	-148.51	0.00	148.51	3143.08	1571.54	4578.34	2292.57	1.47	-0.27	0.074	
60.00	-29.23	-1.73	0.00	-139.77	0.00	139.77	3056.01	1528.01	4326.92	2166.68	1.76	-0.30	0.074	
65.00	-28.16	-1.73	0.00	-131.09	0.00	131.09	2968.95	1484.47	4082.61	2044.34	2.09	-0.33	0.074	
70.00	-27.11	-1.73	0.00	-122.46	0.00	122.46	2881.88	1440.94	3845.39	1925.55	2.46	-0.36	0.073	
75.00	-26.08	-1.74	0.00	-113.83	0.00	113.83	2794.82	1397.41	3615.28	1810.32	2.85	-0.39	0.072	
80.00	-25.08	-1.74	0.00	-105.15	0.00	105.15	2707.76	1353.88	3392.26	1698.65	3.28	-0.43	0.071	
85.00	-24.11	-1.75	0.00	-96.44	0.00	96.44	2620.69	1310.35	3176.35	1590.53	3.75	-0.46	0.070	
87.83	-23.56	-1.75	0.00	-91.49	0.00	91.49	2571.36	1285.68	3057.15	1530.84	4.03	-0.48	0.069	
88.00	-19.10	-1.71	0.00	-91.20	0.00	91.20	2568.45	1284.23	3050.20	1527.37	4.04	-0.48	0.067	
90.00	-18.50	-1.71	0.00	-87.78	0.00	87.78	2533.63	1266.81	2967.53	1485.97	4.25	-0.49	0.066	
92.17	-17.86	-1.71	0.00	-84.07	0.00	84.07	2130.58	1065.29	2523.85	1263.80	4.48	-0.51	0.075	
95.00	-17.43	-1.71	0.00	-79.23	0.00	79.23	2089.47	1044.73	2426.88	1215.24	4.78	-0.53	0.074	
98.00	-13.96	-1.68	0.00	-74.09	0.00	74.09	2045.93	1022.97	2326.27	1164.86	5.12	-0.55	0.070	
100.00	-13.67	-1.69	0.00	-70.72	0.00	70.72	2016.91	1008.46	2260.38	1131.87	5.36	-0.57	0.069	
105.00	-12.94	-1.69	0.00	-62.28	0.00	62.28	1944.36	972.18	2099.80	1051.46	5.97	-0.60	0.066	
109.00	-12.25	-1.68	0.00	-55.53	0.00	55.53	1886.32	943.16	1975.59	989.26	6.49	-0.63	0.063	
110.00	-12.11	-1.69	0.00	-53.84	0.00	53.84	1871.81	935.90	1945.13	974.01	6.62	-0.64	0.062	
115.00	-11.42	-1.68	0.00	-45.40	0.00	45.40	1799.25	899.63	1796.38	899.53	7.31	-0.67	0.057	
119.00	-10.74	-1.67	0.00	-38.66	0.00	38.66	1741.21	870.61	1681.64	842.07	7.89	-0.70	0.052	
120.00	-10.61	-1.67	0.00	-36.99	0.00	36.99	1726.70	863.35	1653.55	828.00	8.04	-0.71	0.051	
124.00	-9.92	-1.64	0.00	-30.32	0.00	30.32	1668.66	834.33	1543.55	772.92	8.64	-0.73	0.045	
125.00	-9.79	-1.64	0.00	-28.68	0.00	28.68	1654.15	827.07	1516.64	759.45	8.80	-0.74	0.044	
130.00	-9.18	-1.60	0.00	-20.49	0.00	20.49	1581.59	790.80	1385.64	693.85	9.58	-0.76	0.035	
133.37	-8.78	-1.57	0.00	-15.11	0.00	15.11	1532.65	766.32	1300.60	651.27	10.12	-0.78	0.029	
135.00	-8.50	-1.54	0.00	-12.56	0.00	12.56	1509.04	754.52	1260.56	631.22	10.39	-0.78	0.026	
136.62	-8.23	-1.51	0.00	-10.06	0.00	10.06	885.20	442.60	750.52	375.82	10.66	-0.79	0.036	
140.00	-3.99	-0.84	0.00	-4.96	0.00	4.96	864.59	432.29	709.24	355.15	11.22	-0.79	0.019	
145.00	-3.66	-0.79	0.00	-0.79	0.00	0.79	833.10	416.55	649.44	325.20	12.05	-0.80	0.007	
146.00	0.00	-0.73	0.00	0.00	0.00	0.00	826.66	413.33	637.68	319.32	12.22	-0.80	0.000	

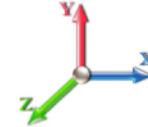
Seismic Segment Forces (Factored)

Structure: CT46135-A-SBA	Code: EIA/TIA-222-G	6/3/2021
Site Name: Middlefield-jacson Hill Rd	Exposure: C	
Height: 146.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 23

Load Case: 0.9D + 1.0E				Iterations 24
Gust Response Factor	1.10	Sds	0.19	Ss 0.18
Dead Load Factor	0.90	Seismic Load Factor	1.00	S1 0.06
Wind Load Factor	0.00	Structure Frequency (f1)	0.30	SA 0.03
				Seismic Importance Factor 1.00



Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		1064.7	0.00	0.03	0.02	22.03	
10.00		1041.5	0.01	0.05	0.03	30.44	
15.00		1018.2	0.02	0.06	0.04	33.85	
20.00		995.00	0.04	0.07	0.04	35.07	
25.00		971.74	0.06	0.07	0.04	35.40	
30.00		948.48	0.08	0.07	0.04	35.44	
35.00		925.22	0.11	0.07	0.04	35.44	
40.00		901.96	0.14	0.07	0.03	35.37	
43.34	Bot - Section 2	588.97	0.17	0.07	0.03	23.37	
45.00		543.55	0.18	0.07	0.03	21.65	
48.67	Top - Section 1	1182.3	0.21	0.06	0.02	47.05	
50.00		197.47	0.22	0.06	0.02	7.82	
55.00		729.75	0.27	0.05	0.02	27.57	
60.00		709.81	0.32	0.04	0.01	23.65	
65.00		689.87	0.37	0.03	0.01	17.38	
70.00		669.93	0.43	0.01	0.01	8.67	
75.00		650.00	0.50	-0.02	0.01	-1.61	
80.00		630.06	0.57	-0.04	0.01	-11.59	
85.00		610.12	0.64	-0.07	0.02	-19.27	
87.83	Bot - Section 3	336.88	0.68	-0.08	0.03	-12.45	
88.00	Appurtenance(s)	3717.0	0.69	-0.08	0.03	-138.30	
90.00		433.05	0.72	-0.09	0.03	-17.26	
92.17	Top - Section 2	462.54	0.75	-0.10	0.04	-19.27	
95.00		273.82	0.80	-0.11	0.05	-11.61	
98.00	Appurtenance(s)	2792.1	0.85	-0.12	0.07	-115.04	
100.00		186.08	0.89	-0.12	0.08	-7.31	
105.00		453.57	0.98	-0.11	0.12	-13.91	
109.00	Appurtenance(s)	452.90	1.05	-0.09	0.16	-9.04	
110.00		86.06	1.07	-0.08	0.17	-1.44	
115.00		420.34	1.17	-0.02	0.23	0.98	
119.00	Appurtenance(s)	448.31	1.26	0.06	0.30	9.59	
120.00		79.42	1.28	0.09	0.32	2.12	
124.00	Appurtenance(s)	468.02	1.36	0.22	0.39	23.39	
125.00		76.09	1.39	0.26	0.42	4.29	
130.00		370.50	1.50	0.50	0.54	33.87	
133.37	Bot - Section 4	240.58	1.58	0.71	0.64	28.44	
135.00		182.94	1.62	0.83	0.69	24.16	
136.62	Top - Section 3	179.76	1.66	0.96	0.75	26.33	
140.00	Appurtenance(s)	3451.1	1.74	1.27	0.87	615.58	
145.00		197.46	1.86	1.85	1.09	45.52	
146.00	Appurtenance(s)	3040.2	1.89	1.98	1.14	734.81	
Totals:		<u>33,417.7</u>				<u>1,611.2</u>	Total Wind: 35,295.0

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

Calculated Forces

Structure: CT46135-A-SBA	Code: EIA/TIA-222-G	6/3/2021
Site Name: Middlefield-jacson Hill Rd	Exposure: C	
Height: 146.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 0.9D + 1.0E						Iterations 24	
Gust Response Factor	1.10	Sds	0.19	Ss	0.18		
Dead Load Factor	0.90	Seismic Load Factor	1.00	Sd1	0.10		S1 0.06
Wind Load Factor	0.00	Structure Frequency (f1)	0.30	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	-34.65	-1.99	0.00	-248.50	0.00	248.50	4626.62	2313.31	8646.87	4329.86	0.00	0.00	0.00	0.065
5.00	-33.62	-1.98	0.00	-238.53	0.00	238.53	4552.64	2276.32	8322.99	4167.68	0.01	-0.02	0.065	
10.00	-32.50	-1.97	0.00	-228.60	0.00	228.60	4477.51	2238.76	8003.10	4007.50	0.04	-0.04	0.064	
15.00	-31.40	-1.94	0.00	-218.77	0.00	218.77	4395.69	2197.85	7677.64	3844.53	0.10	-0.06	0.064	
20.00	-30.32	-1.92	0.00	-209.06	0.00	209.06	4294.12	2147.06	7325.16	3668.02	0.18	-0.09	0.064	
25.00	-29.26	-1.89	0.00	-199.46	0.00	199.46	4192.55	2096.27	6980.95	3495.66	0.28	-0.11	0.064	
30.00	-28.22	-1.87	0.00	-189.99	0.00	189.99	4090.97	2045.49	6645.03	3327.46	0.41	-0.13	0.064	
35.00	-27.21	-1.84	0.00	-180.66	0.00	180.66	3989.40	1994.70	6317.40	3163.39	0.56	-0.16	0.064	
40.00	-26.21	-1.81	0.00	-171.45	0.00	171.45	3887.82	1943.91	5998.04	3003.48	0.74	-0.18	0.064	
43.34	-25.56	-1.79	0.00	-165.40	0.00	165.40	3820.04	1910.02	5789.54	2899.07	0.87	-0.20	0.064	
45.00	-25.01	-1.78	0.00	-162.42	0.00	162.42	3786.25	1893.12	5686.97	2847.71	0.94	-0.21	0.064	
48.67	-23.81	-1.73	0.00	-155.91	0.00	155.91	3251.53	1625.77	4904.15	2455.72	1.11	-0.23	0.071	
50.00	-23.58	-1.73	0.00	-153.61	0.00	153.61	3230.14	1615.07	4836.85	2422.02	1.17	-0.23	0.071	
55.00	-22.74	-1.71	0.00	-144.97	0.00	144.97	3143.08	1571.54	4578.34	2292.57	1.44	-0.26	0.070	
60.00	-21.92	-1.69	0.00	-136.43	0.00	136.43	3056.01	1528.01	4326.92	2166.68	1.73	-0.29	0.070	
65.00	-21.12	-1.68	0.00	-127.97	0.00	127.97	2968.95	1484.47	4082.61	2044.34	2.05	-0.32	0.070	
70.00	-20.33	-1.68	0.00	-119.56	0.00	119.56	2881.88	1440.94	3845.39	1925.55	2.40	-0.35	0.069	
75.00	-19.56	-1.69	0.00	-111.16	0.00	111.16	2794.82	1397.41	3615.28	1810.32	2.79	-0.39	0.068	
80.00	-18.81	-1.69	0.00	-102.74	0.00	102.74	2707.76	1353.88	3392.26	1698.65	3.21	-0.42	0.067	
85.00	-18.08	-1.69	0.00	-94.29	0.00	94.29	2620.69	1310.35	3176.35	1590.53	3.67	-0.45	0.066	
87.83	-17.67	-1.69	0.00	-89.49	0.00	89.49	2571.36	1285.68	3057.15	1530.84	3.94	-0.47	0.065	
88.00	-14.32	-1.67	0.00	-89.21	0.00	89.21	2568.45	1284.23	3050.20	1527.37	3.95	-0.47	0.064	
90.00	-13.87	-1.67	0.00	-85.87	0.00	85.87	2533.63	1266.81	2967.53	1485.97	4.15	-0.48	0.063	
92.17	-13.39	-1.67	0.00	-82.26	0.00	82.26	2130.58	1065.29	2523.85	1263.80	4.38	-0.50	0.071	
95.00	-13.07	-1.67	0.00	-77.54	0.00	77.54	2089.47	1044.73	2426.88	1215.24	4.68	-0.52	0.070	
98.00	-10.47	-1.65	0.00	-72.53	0.00	72.53	2045.93	1022.97	2326.27	1164.86	5.01	-0.54	0.067	
100.00	-10.25	-1.65	0.00	-69.23	0.00	69.23	2016.91	1008.46	2260.38	1131.87	5.24	-0.55	0.066	
105.00	-9.70	-1.65	0.00	-60.98	0.00	60.98	1944.36	972.18	2099.80	1051.46	5.84	-0.59	0.063	
109.00	-9.18	-1.65	0.00	-54.37	0.00	54.37	1886.32	943.16	1975.59	989.26	6.35	-0.62	0.060	
110.00	-9.08	-1.65	0.00	-52.73	0.00	52.73	1871.81	935.90	1945.13	974.01	6.48	-0.63	0.059	
115.00	-8.56	-1.65	0.00	-44.47	0.00	44.47	1799.25	899.63	1796.38	899.53	7.15	-0.66	0.054	
119.00	-8.05	-1.63	0.00	-37.88	0.00	37.88	1741.21	870.61	1681.64	842.07	7.72	-0.69	0.050	
120.00	-7.96	-1.63	0.00	-36.25	0.00	36.25	1726.70	863.35	1653.55	828.00	7.86	-0.69	0.048	
124.00	-7.43	-1.61	0.00	-29.71	0.00	29.71	1668.66	834.33	1543.55	772.92	8.45	-0.72	0.043	
125.00	-7.34	-1.60	0.00	-28.10	0.00	28.10	1654.15	827.07	1516.64	759.45	8.60	-0.72	0.041	
130.00	-6.88	-1.56	0.00	-20.09	0.00	20.09	1581.59	790.80	1385.64	693.85	9.37	-0.75	0.033	
133.37	-6.58	-1.53	0.00	-14.81	0.00	14.81	1532.65	766.32	1300.60	651.27	9.90	-0.76	0.027	
135.00	-6.37	-1.51	0.00	-12.32	0.00	12.32	1509.04	754.52	1260.56	631.22	10.16	-0.76	0.024	
136.62	-6.17	-1.48	0.00	-9.87	0.00	9.87	885.20	442.60	750.52	375.82	10.42	-0.77	0.033	
140.00	-2.99	-0.82	0.00	-4.88	0.00	4.88	864.59	432.29	709.24	355.15	10.97	-0.78	0.017	
145.00	-2.74	-0.77	0.00	-0.77	0.00	0.77	833.10	416.55	649.44	325.20	11.79	-0.78	0.006	
146.00	0.00	-0.73	0.00	0.00	0.00	0.00	826.66	413.33	637.68	319.32	11.95	-0.78	0.000	

Wind Loading - Shaft

Structure: CT46135-A-SBA	Code: EIA/TIA-222-G	6/3/2021
Site Name: Middlefield-jacson Hill Rd	Exposure: C	
Height: 146.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 25

Load Case: 1.0D + 1.0W 60 mph Wind	Iterations 25
Dead Load Factor 1.00	
Wind Load Factor 1.00	

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	7.442	8.19	215.32	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	7.442	8.19	210.71	0.650	0.000	5.00	19.254	12.52	102.5	0.0	1064.8
10.00		1.00	0.85	7.442	8.19	206.10	0.650	0.000	5.00	18.837	12.24	100.2	0.0	1041.5
15.00		1.00	0.85	7.442	8.19	201.49	0.650	0.000	5.00	18.421	11.97	98.0	0.0	1018.3
20.00		1.00	0.90	7.896	8.69	202.81	0.650	0.000	5.00	18.004	11.70	101.6	0.0	995.0
25.00		1.00	0.95	8.276	9.10	202.77	0.650	0.000	5.00	17.588	11.43	104.1	0.0	971.7
30.00		1.00	0.98	8.600	9.46	201.74	0.650	0.000	5.00	17.171	11.16	105.6	0.0	948.5
35.00		1.00	1.01	8.883	9.77	200.01	0.650	0.000	5.00	16.755	10.89	106.4	0.0	925.2
40.00		1.00	1.04	9.137	10.05	197.73	0.650	0.000	5.00	16.338	10.62	106.7	0.0	902.0
43.34	Bot - Section 2	1.00	1.06	9.292	10.22	195.97	0.650	0.000	3.34	10.671	6.94	70.9	0.0	589.0
45.00		1.00	1.07	9.366	10.30	195.03	0.650	0.000	1.66	5.356	3.48	35.9	0.0	543.5
48.67	Top - Section 1	1.00	1.09	9.522	10.47	192.82	0.650	0.000	3.67	11.654	7.58	79.3	0.0	1182.4
50.00		1.00	1.09	9.576	10.53	195.96	0.650	0.000	1.33	4.168	2.71	28.5	0.0	197.5
55.00		1.00	1.12	9.770	10.75	192.65	0.650	0.000	5.00	15.406	10.01	107.6	0.0	729.7
60.00		1.00	1.14	9.951	10.95	189.09	0.650	0.000	5.00	14.989	9.74	106.6	0.0	709.8
65.00		1.00	1.16	10.120	11.13	185.32	0.650	0.000	5.00	14.572	9.47	105.4	0.0	689.9
70.00		1.00	1.17	10.279	11.31	181.35	0.650	0.000	5.00	14.156	9.20	104.0	0.0	669.9
75.00		1.00	1.19	10.430	11.47	177.22	0.650	0.000	5.00	13.739	8.93	102.5	0.0	650.0
80.00		1.00	1.21	10.572	11.63	172.93	0.650	0.000	5.00	13.323	8.66	100.7	0.0	630.1
85.00		1.00	1.22	10.708	11.78	168.51	0.650	0.000	5.00	12.906	8.39	98.8	0.0	610.1
87.83	Bot - Section 3	1.00	1.23	10.782	11.86	165.95	0.650	0.000	2.83	7.129	4.63	55.0	0.0	336.9
88.00	Appurtenance(s)	1.00	1.23	10.787	11.87	165.80	0.650	0.000	0.17	0.424	0.28	3.3	0.0	36.4
90.00		1.00	1.24	10.838	11.92	163.97	0.650	0.000	2.00	5.052	3.28	39.1	0.0	433.1
92.17	Top - Section 2	1.00	1.24	10.892	11.98	161.96	0.650	0.000	2.17	5.397	3.51	42.0	0.0	462.5
95.00		1.00	1.25	10.962	12.06	162.86	0.650	0.000	2.83	6.940	4.51	54.4	0.0	273.8
98.00	Appurtenance(s)	1.00	1.26	11.034	12.14	160.03	0.650	0.000	3.00	7.203	4.68	56.8	0.0	284.1
100.00		1.00	1.27	11.081	12.19	158.12	0.650	0.000	2.00	4.718	3.07	37.4	0.0	186.1
105.00		1.00	1.28	11.195	12.31	153.28	0.650	0.000	5.00	11.504	7.48	92.1	0.0	453.6
109.00	Appurtenance(s)	1.00	1.29	11.284	12.41	149.35	0.650	0.000	4.00	8.904	5.79	71.8	0.0	350.9
110.00		1.00	1.29	11.305	12.44	148.35	0.650	0.000	1.00	2.184	1.42	17.7	0.0	86.1
115.00		1.00	1.30	11.412	12.55	143.34	0.650	0.000	5.00	10.671	6.94	87.1	0.0	420.3
119.00	Appurtenance(s)	1.00	1.31	11.494	12.64	139.28	0.650	0.000	4.00	8.237	5.35	67.7	0.0	324.3
120.00		1.00	1.32	11.514	12.67	138.25	0.650	0.000	1.00	2.018	1.31	16.6	0.0	79.4
124.00	Appurtenance(s)	1.00	1.32	11.594	12.75	134.13	0.650	0.000	4.00	7.904	5.14	65.5	0.0	311.0
125.00		1.00	1.33	11.614	12.78	133.09	0.650	0.000	1.00	1.934	1.26	16.1	0.0	76.1
130.00		1.00	1.34	11.710	12.88	127.86	0.650	0.000	5.00	9.421	6.12	78.9	0.0	370.5
133.37	Bot - Section 4	1.00	1.34	11.773	12.95	124.29	0.650	0.000	3.37	6.121	3.98	51.5	0.0	240.6
135.00		1.00	1.35	11.803	12.98	122.57	0.650	0.000	1.63	2.935	1.91	24.8	0.0	182.9
136.62	Top - Section 3	1.00	1.35	11.833	13.02	120.83	0.650	0.000	1.62	2.886	1.88	24.4	0.0	179.8
140.00	Appurtenance(s)	1.00	1.36	11.894	13.08	119.43	0.650	0.000	3.38	5.861	3.81	49.8	0.0	139.0
145.00		1.00	1.37	11.982	13.18	114.02	0.650	0.000	5.00	8.330	5.41	71.4	0.0	197.5
146.00	Appurtenance(s)	1.00	1.37	12.000	13.20	112.93	0.650	0.000	1.00	1.616	1.05	13.9	0.0	38.3
Totals:									146.00			2,802.7		20,532.0

Discrete Appurtenance Forces

Structure: CT46135-A-SBA	Code: EIA/TIA-222-G	6/3/2021
Site Name: Middlefield-jacson Hill Rd	Exposure: C	
Height: 146.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

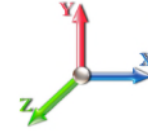


Page: 26

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 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	146.00	Powerwave LGP219003	6	12.068	13.275	0.45	0.75	1.00	39.00	0.000	4.000	13.26	0.00	53.05	
2	146.00	Beacon	1	12.000	13.200	1.00	1.00	2.40	15.00	0.000	0.000	31.68	0.00	0.00	
3	146.00	Lightning Rod	1	12.060	13.266	1.00	1.00	1.05	35.00	0.000	3.500	13.93	0.00	48.75	
4	146.00	Cci HPA-65R-BUU-H8	9	12.068	13.275	0.79	1.00	92.29	612.00	0.000	4.000	1225.12	0.00	4900.47	
5	146.00	Powerwave LGP21401	6	12.068	13.275	0.45	0.75	2.92	114.00	0.000	4.000	38.71	0.00	154.84	
6	146.00	Platform w/ Hand Rails	1	12.000	13.200	1.00	1.00	32.00	1600.00	0.000	0.000	422.39	0.00	0.00	
7	146.00	Ericsson RRUS-11 RRU's	3	12.068	13.275	0.50	0.75	3.87	150.00	0.000	4.000	51.43	0.00	205.72	
8	146.00	Ericsson RRUS-32 RRU's	3	12.068	13.275	0.50	0.75	4.99	231.00	0.000	4.000	66.24	0.00	264.96	
9	146.00	Ericsson RRUS 32 B2	3	12.068	13.275	0.50	0.75	4.13	159.00	0.000	4.000	54.83	0.00	219.33	
10	146.00	Raycap DC-6-48-60-18-8F	2	12.068	13.275	0.50	0.75	1.91	40.00	0.000	4.000	25.35	0.00	101.39	
11	146.00	Powerwave 7020.00	6	12.068	13.275	0.45	0.75	0.38	6.96	0.000	4.000	5.02	0.00	20.07	
12	140.00	Samsung B5/B13	3	11.894	13.084	0.50	0.75	2.83	210.93	0.000	0.000	37.08	0.00	0.00	
13	140.00	Samsung MT6407-77A	3	11.894	13.084	0.52	0.75	7.39	238.20	0.000	0.000	96.64	0.00	0.00	
14	140.00	Commscope	3	11.894	13.084	0.45	0.75	0.72	17.85	0.000	0.000	9.36	0.00	0.00	
15	140.00	Samsung B2/B66A	3	11.894	13.084	0.50	0.75	2.83	291.00	0.000	0.000	37.08	0.00	0.00	
16	140.00	Low Profile Platform	1	11.894	13.084	1.00	1.00	22.00	1500.00	0.000	0.000	287.84	0.00	0.00	
17	140.00	Raycap	2	11.894	13.084	0.50	0.75	2.53	84.00	0.000	0.000	33.14	0.00	0.00	
18	140.00	Commscope	3	11.894	13.084	0.38	0.75	0.10	202.20	0.000	0.000	1.32	0.00	0.00	
19	140.00	Support Rail Kit (SitePro1	1	11.934	13.128	1.00	1.00	6.75	261.72	0.000	2.250	88.61	0.00	199.37	
20	140.00	Antel LPA-80063/4CF___	6	11.894	13.084	0.70	0.75	25.97	120.00	0.000	0.000	339.81	0.00	0.00	
21	140.00	Andrew JAHH-65B-R3B	6	11.894	13.084	0.62	0.75	33.99	386.22	0.000	0.000	444.69	0.00	0.00	
22	124.00	Pipe Mount	1	11.594	12.753	1.00	1.00	4.31	87.00	0.000	0.000	54.97	0.00	0.00	
23	124.00	dbSpectra	1	11.770	12.947	1.00	1.00	5.50	70.00	1.071	9.170	71.21	76.28	652.96	
24	119.00	Celwave PD1142-66	1	11.680	12.847	1.00	1.00	1.57	16.00	0.000	9.400	20.17	0.00	189.60	
25	119.00	Telewave ANT450F6	1	11.573	12.730	1.00	1.00	1.86	21.00	0.000	3.917	23.68	0.00	92.74	
26	119.00	Pipe Mount	1	11.494	12.643	1.00	1.00	4.31	87.00	0.000	0.000	54.49	0.00	0.00	
27	109.00	Airmux	1	11.284	12.412	1.00	1.00	1.83	7.00	0.000	0.000	22.71	0.00	0.00	
28	109.00	Pipe Mount (au_andrew)	3	11.284	12.412	0.56	0.75	2.70	60.00	0.000	0.000	33.51	0.00	0.00	
29	109.00	Airmux	1	11.284	12.412	1.00	1.00	1.80	35.00	0.000	0.000	22.34	0.00	0.00	
30	98.00	JMA Wireless	3	11.034	12.137	0.55	0.75	20.80	193.50	0.000	0.000	252.40	0.00	0.00	
31	98.00	Fujitsu TA08025-B605	3	11.034	12.137	0.54	0.80	3.15	224.85	0.000	0.000	38.25	0.00	0.00	
32	98.00	Platform w/HRK (Sitepro1	1	11.034	12.137	1.00	1.00	39.73	1876.00	0.000	0.000	482.15	0.00	0.00	
33	98.00	Fujitsu TA08025-B604	3	11.034	12.137	0.54	0.80	3.15	191.79	0.000	0.000	38.25	0.00	0.00	
34	98.00	Raycap	1	11.034	12.137	0.54	0.80	1.08	21.85	0.000	0.000	13.08	0.00	0.00	
35	88.00	Platform w/ Handrail	1	10.787	11.865	1.00	1.00	51.70	2645.00	0.000	0.000	613.43	0.00	0.00	
36	88.00	Ericsson Radio 4449	3	10.787	11.865	0.50	0.75	2.46	222.00	0.000	0.000	29.16	0.00	0.00	
37	88.00	Ericsson KRY 112 144/1	3	10.787	11.865	0.45	0.75	0.47	33.06	0.000	0.000	5.61	0.00	0.00	
38	88.00	Ericsson Air 32	3	10.787	11.865	0.65	0.75	12.60	396.60	0.000	0.000	149.46	0.00	0.00	
39	88.00	RFS	3	10.787	11.865	0.54	0.75	32.79	384.00	0.000	0.000	389.04	0.00	0.00	
Totals:									12,885.73						5,637.44

Total Applied Force Summary

Structure: CT46135-A-SBA	Code: EIA/TIA-222-G	6/3/2021
Site Name: Middlefield-jacson Hill Rd	Exposure: C	
Height: 146.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

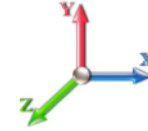


Page: 27

Load Case: 1.0D + 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		102.45	1146.11	0.00	0.00
10.00		100.23	1244.83	0.00	0.00
15.00		98.02	1221.56	0.00	0.00
20.00		101.65	1198.30	0.00	0.00
25.00		104.07	1175.04	0.00	0.00
30.00		105.58	1151.78	0.00	0.00
35.00		106.42	1128.52	0.00	0.00
40.00		106.73	1105.26	0.00	0.00
43.34		70.90	724.64	0.00	0.00
45.00		35.87	611.18	0.00	0.00
48.67		79.34	1331.60	0.00	0.00
50.00		28.54	251.55	0.00	0.00
55.00		107.62	933.05	0.00	0.00
60.00		106.65	913.11	0.00	0.00
65.00		105.44	893.17	0.00	0.00
70.00		104.04	873.23	0.00	0.00
75.00		102.46	853.30	0.00	0.00
80.00		100.71	833.36	0.00	0.00
85.00		98.81	813.42	0.00	0.00
87.83		54.96	452.09	0.00	0.00
88.00	(13) attachments	1189.97	3723.79	0.00	0.00
90.00		39.14	495.65	0.00	0.00
92.17		42.03	530.36	0.00	0.00
95.00		54.39	362.50	0.00	0.00
98.00	(11) attachments	880.95	2886.00	0.00	0.00
100.00		37.38	246.68	0.00	0.00
105.00		92.09	605.07	0.00	0.00
109.00	(5) attachments	150.40	574.10	0.00	0.00
110.00		17.66	116.20	0.00	0.00
115.00		87.07	571.04	0.00	0.00
119.00	(3) attachments	166.04	568.87	0.00	282.34
120.00		16.61	107.48	0.00	0.00
124.00	(2) attachments	191.69	580.26	76.28	652.96
125.00		16.06	104.15	0.00	0.00
130.00		78.88	510.80	0.00	0.00
133.37		51.53	335.23	0.00	0.00
135.00		24.77	228.58	0.00	0.00
136.62		24.41	225.31	0.00	0.00
140.00	(31) attachments	1425.42	3545.86	0.00	199.37
145.00		71.37	274.76	0.00	0.00
146.00	(41) attachments	1961.82	3055.71	0.00	5968.59
	Totals:	8,440.19	38,503.50	76.28	7,103.26

Calculated Forces

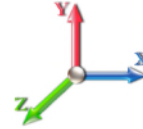
Structure: CT46135-A-SBA **Code:** EIA/TIA-222-G 6/3/2021
Site Name: Middlefield-jacson Hill Rd **Exposure:** C
Height: 146.00 (ft) **Crest Height:** 0.00
Base Elev: 0.000 (ft) **Site Class:** D - Stiff Soil
Gh: 1.1 **Topography:** 1 **Struct Class:** II Page: 28



Load Case: 1.0D + 1.0W 60 mph Wind

Iterations 25

Dead Load Factor 1.00
Wind Load Factor 1.00



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-38.50	-8.47	-0.08	-954.68	0.00	954.68	4626.62	2313.31	8646.87	4329.86	0.00	0.000	0.000	0.229
5.00	-37.34	-8.42	-0.08	-912.35	0.00	912.35	4552.64	2276.32	8322.99	4167.68	0.04	-0.080	0.000	0.227
10.00	-36.08	-8.36	-0.08	-870.27	0.00	870.27	4477.51	2238.76	8003.10	4007.50	0.17	-0.162	0.000	0.225
15.00	-34.85	-8.31	-0.08	-828.45	0.00	828.45	4395.69	2197.85	7677.64	3844.53	0.38	-0.245	0.000	0.223
20.00	-33.64	-8.26	-0.08	-786.88	0.00	786.88	4294.12	2147.06	7325.16	3668.02	0.69	-0.329	0.000	0.222
25.00	-32.45	-8.19	-0.08	-745.60	0.00	745.60	4192.55	2096.27	6980.95	3495.66	1.08	-0.416	0.000	0.221
30.00	-31.29	-8.13	-0.08	-704.64	0.00	704.64	4090.97	2045.49	6645.03	3327.46	1.56	-0.503	0.000	0.219
35.00	-30.15	-8.06	-0.08	-664.00	0.00	664.00	3989.40	1994.70	6317.40	3163.39	2.13	-0.592	0.000	0.217
40.00	-29.03	-7.98	-0.08	-623.72	0.00	623.72	3887.82	1943.91	5998.04	3003.48	2.80	-0.682	0.000	0.215
43.34	-28.30	-7.92	-0.08	-597.11	0.00	597.11	3820.04	1910.02	5789.54	2899.07	3.30	-0.744	0.000	0.213
45.00	-27.69	-7.90	-0.08	-583.94	0.00	583.94	3786.25	1893.12	5686.97	2847.71	3.57	-0.775	0.000	0.212
48.67	-26.35	-7.82	-0.08	-554.95	0.00	554.95	3251.53	1625.77	4904.15	2455.72	4.19	-0.844	0.000	0.234
50.00	-26.09	-7.82	-0.08	-544.54	0.00	544.54	3230.14	1615.07	4836.85	2422.02	4.43	-0.870	0.000	0.233
55.00	-25.15	-7.74	-0.08	-505.44	0.00	505.44	3143.08	1571.54	4578.34	2292.57	5.39	-0.971	0.000	0.228
60.00	-24.22	-7.66	-0.08	-466.73	0.00	466.73	3056.01	1528.01	4326.92	2166.68	6.46	-1.074	0.000	0.223
65.00	-23.32	-7.58	-0.08	-428.42	0.00	428.42	2968.95	1484.47	4082.61	2044.34	7.64	-1.176	0.000	0.217
70.00	-22.43	-7.50	-0.08	-390.52	0.00	390.52	2881.88	1440.94	3845.39	1925.55	8.93	-1.279	0.000	0.211
75.00	-21.57	-7.41	-0.08	-353.02	0.00	353.02	2794.82	1397.41	3615.28	1810.32	10.33	-1.380	0.000	0.203
80.00	-20.73	-7.33	-0.08	-315.95	0.00	315.95	2707.76	1353.88	3392.26	1698.65	11.82	-1.481	0.000	0.194
85.00	-19.91	-7.23	-0.08	-279.31	0.00	279.31	2620.69	1310.35	3176.35	1590.53	13.43	-1.579	0.000	0.183
87.83	-19.45	-7.18	-0.08	-258.81	0.00	258.81	2571.36	1285.68	3057.15	1530.84	14.38	-1.634	0.000	0.177
88.00	-15.76	-5.89	-0.08	-257.62	0.00	257.62	2568.45	1284.23	3050.20	1527.37	14.44	-1.637	0.000	0.175
90.00	-15.26	-5.84	-0.08	-245.84	0.00	245.84	2533.63	1266.81	2967.53	1485.97	15.13	-1.676	0.000	0.171
92.17	-14.73	-5.80	-0.08	-233.18	0.00	233.18	2130.58	1065.29	2523.85	1263.80	15.90	-1.718	0.000	0.191
95.00	-14.36	-5.75	-0.08	-216.75	0.00	216.75	2089.47	1044.73	2426.88	1215.24	16.94	-1.772	0.000	0.185
98.00	-11.50	-4.79	-0.08	-199.51	0.00	199.51	2045.93	1022.97	2326.27	1164.86	18.07	-1.834	0.000	0.177
100.00	-11.25	-4.76	-0.08	-189.93	0.00	189.93	2016.91	1008.46	2260.38	1131.87	18.85	-1.875	0.000	0.173
105.00	-10.64	-4.66	-0.08	-166.15	0.00	166.15	1944.36	972.18	2099.80	1051.46	20.87	-1.974	0.000	0.164
109.00	-10.07	-4.50	-0.08	-147.51	0.00	147.51	1886.32	943.16	1975.59	989.26	22.55	-2.051	0.000	0.154
110.00	-9.95	-4.49	-0.08	-143.02	0.00	143.02	1871.81	935.90	1945.13	974.01	22.98	-2.071	0.000	0.152
115.00	-9.38	-4.39	-0.08	-120.59	0.00	120.59	1799.25	899.63	1796.38	899.53	25.20	-2.162	0.000	0.139
119.00	-8.81	-4.21	-0.08	-102.74	0.00	102.74	1741.21	870.61	1681.64	842.07	27.04	-2.232	-0.001	0.127
120.00	-8.70	-4.20	-0.08	-98.53	0.00	98.53	1726.70	863.35	1653.55	828.00	27.51	-2.249	-0.001	0.124
124.00	-8.13	-3.99	0.00	-81.10	0.00	81.10	1668.66	834.33	1543.55	772.92	29.42	-2.313	-0.001	0.110
125.00	-8.02	-3.97	0.00	-77.11	0.00	77.11	1654.15	827.07	1516.64	759.45	29.91	-2.328	-0.001	0.106
130.00	-7.51	-3.88	0.00	-57.26	0.00	57.26	1581.59	790.80	1385.64	693.85	32.39	-2.396	-0.001	0.087
133.37	-7.17	-3.82	0.00	-44.17	0.00	44.17	1532.65	766.32	1300.60	651.27	34.09	-2.435	-0.001	0.073
135.00	-6.95	-3.78	0.00	-37.96	0.00	37.96	1509.04	754.52	1260.56	631.22	34.93	-2.452	-0.001	0.065
136.62	-6.72	-3.75	0.00	-31.82	0.00	31.82	885.20	442.60	750.52	375.82	35.76	-2.467	-0.001	0.092
140.00	-3.24	-2.18	0.00	-18.95	0.00	18.95	864.59	432.29	709.24	355.15	37.52	-2.491	-0.001	0.057
145.00	-2.97	-2.09	0.00	-8.06	0.00	8.06	833.10	416.55	649.44	325.20	40.14	-2.523	-0.001	0.028
146.00	0.00	-1.96	0.00	-5.97	0.00	5.97	826.66	413.33	637.68	319.32	40.67	-2.526	-0.001	0.019

Final Analysis Summary

Structure: CT46135-A-SBA	Code: EIA/TIA-222-G	6/3/2021
Site Name: Middlefield-jacson Hill Rd	Exposure: C	
Height: 146.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 29



Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
1.2D + 1.6W 97 mph Wind	35.4	0.00	46.10	0.01	0.19	4019.98
0.9D + 1.6W 97 mph Wind	35.4	0.00	34.55	0.01	0.19	3952.72
1.2D + 1.0Di + 1.0Wi 50 mph Wind	9.8	0.00	73.99	0.00	0.11	1135.26
1.2D + 1.0E	2.0	0.00	46.20	0.00	0.00	253.20
0.9D + 1.0E	2.0	0.00	34.65	0.00	0.00	248.50
1.0D + 1.0W 60 mph Wind	8.5	0.00	38.50	0.00	0.08	954.68

Max Stresses

Load Case	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Elev (ft)	Stress Ratio
1.2D + 1.6W 97 mph Wind	-29.74	-33.01	-0.19	-2339.5	-0.01	-2339.5	3251.53	1625.7	4904.15	2455.72	48.67	0.962
0.9D + 1.6W 97 mph Wind	-21.85	-32.48	-0.19	-2286.8	-0.01	-2286.8	3251.53	1625.7	4904.15	2455.72	48.67	0.938
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-55.68	-9.34	-0.11	-665.42	0.00	-665.42	3251.53	1625.7	4904.15	2455.72	48.67	0.288
1.2D + 1.0E	-17.86	-1.71	0.00	-84.07	0.00	-84.07	2130.58	1065.2	2523.85	1263.80	92.17	0.075
0.9D + 1.0E	-13.39	-1.67	0.00	-82.26	0.00	-82.26	2130.58	1065.2	2523.85	1263.80	92.17	0.071
1.0D + 1.0W 60 mph Wind	-26.35	-7.82	-0.08	-554.95	0.00	-554.95	3251.53	1625.7	4904.15	2455.72	48.67	0.234

Base Plate Summary

Structure: CT46135-A-SB	Code: EIA/TIA-222-G	6/3/2021
Site Name: Middlefield-jacson Hill Rd	Exposure: C	
Height: 146.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 30

Reactions	Base Plate	Anchor Bolts
Original Design	Yield (ksi): 60.00	Bolt Circle: 55.00
Moment (kip-ft): 2626.95	Width (in): 61.00	Number Bolts: 20.00
Axial (kip): 29.58	Style: Round	Bolt Type: 2.25" 18J
Shear (kip): 23.10	Polygon Sides: 0.00	Bolt Diameter (in): 2.25
Analysis (1.2D + 1.6W)	Clip Length (in): 0.00	Yield (ksi): 75.00
Moment (kip-ft): 4019.98	Effective Len (in): 12.52	Ultimate (ksi): 100.00
Axial (kip): 46.10	Moment (kip-in): 806.02	Arrangement: Radial
Shear (kip): 35.43	Allow Stress (ksi): 81.00	Cluster Dist (in): 0.00
	Applied Stress (ksi): 76.14	Start Angle (deg): 0.00
	Stress Ratio: 0.94	Compression
		Force (kip): 179.12
		Allowable (kip): 260.00
		Ratio: 0.70
		Tension
		Force (kip): 171.72
		Allowable (kip): 260.00
		Ratio: 0.67



Monopole Mat Foundation Design

Date

6/3/2021

Customer Name:	Verizon	EIA/TIA Standard:	EIA-222-G
Site Name:	Middlefield-jacson Hill Rd	Structure Height (Ft.):	146
Site Number:	CT46135-A-SBA	Engineer Name:	W. Velez
Engr. Number:	109178	Engineer Login ID:	

Foundation Info Obtained from:

Drawings/Calculations
Monopole
Analysis

Structure Type:

Analysis or Design?

Base Reactions (Factored):

Axial Load (Kips):	46.1	Shear Force (Kips):	35.4
Uplift Force (Kips):	0.0	Moment (Kips-ft):	4020.0

Allowable overstress %: 5.0%

Foundation Geometries:

Diameter of Pier (ft.):	7.0	Depth of Base BG (ft.):	6.0
Pier Height A. G. (ft.):	1.00	Thickness of Pad (ft.):	3.00
Length of Pad (ft.):	21.5	Width of Pad (ft.):	21.5

Final Length of pad (ft)	21.5	Final width of pad (ft):	21.5
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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 #:	8	Tie / Stirrup Size #:	4	
Qty. of Vertical Rebars:	39	Tie Spacing (in):	10.5	
Pad Rebar Yield (Ksi):	60	Pad Steel Rebar Size (#):	8	
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):	25	Qty. of Rebar in Pad (W):	25
Rebar at the top of the concrete pad:			
Qty. of Rebar in Pad (L):	20	Qty. of Rebar in Pad (W):	20

Apply 1.35 factor for e/w Per G: 1.35

Soil Design Parameters:

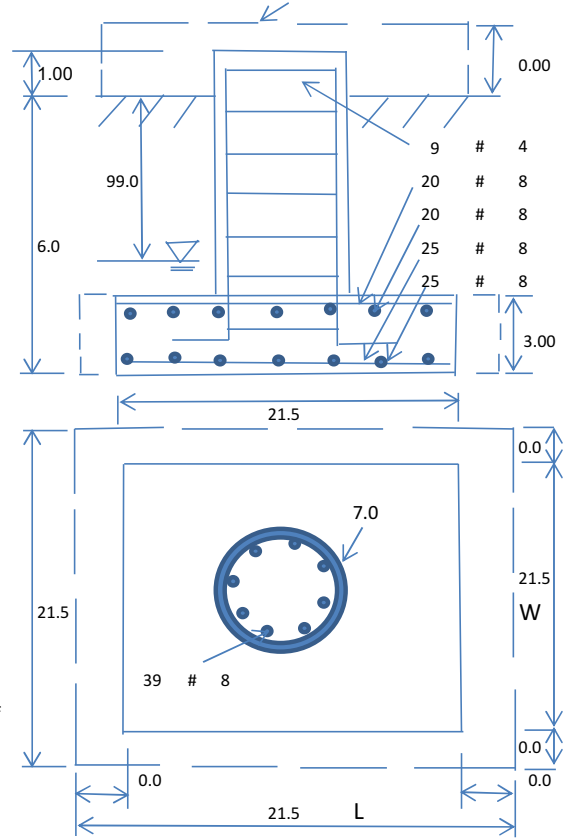
Soil Unit Weight (pcf):	115.0	Soil Buoyant Weight:	52.6	Pcf
Water Table B.G.S. (ft):	99.0	Unit Weight of Water:	62.4	pcf
Ultimate Bearing Pressure (psf):	40000	Ultimate Skin Friction:		Psf
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	No	
Consider soil hor. resist. for OTM.:	Yes	Reduction factor on the maximum soil bearing pressure:	1.00	
		Angle from Top of Pad:	30	
		Angle from Bottm of Pad:	25	
		Angle from Bottm of Pad:	25	

Foundation Analysis and Design:

Uplift Strength Reduction Factor:	0.75	Compression Strength Reduction Factor:	0.75
Total Dry Soil Volume (cu. Ft.):	1271.30	Total Dry Soil Weight (Kips):	146.20
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	146.20	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	1540.69	Total Dry Concrete Weight (Kips):	231.10
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	231.10	Total Vertical Load on Base (Kips):	423.40

Check Soil Capacities:

Calculated Maxium Net Soil Pressure under the base (psf):	5913	< Allowable Factored Soil Bearing (psf):	30000	0.20	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	4146.0	> Design Factored Momont (kips-ft):	4140	1.00	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	1.00				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):	0.79	Tie / Stirrup Area (sq. in./each):	0.20		
Calculated Moment Capacity (Mn,Kips-Ft):	5049.6	> Design Factored Moment (Mu, Kips-Ft)	4161.6	0.82	OK!
Calculated Shear Capacity (Kips):	679.3	> Design Factored Shear (Kips):	35.4	0.05	OK!
Calculated Tension Capacity (Tn, Kips):	1663.7	> Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	9743.4	> Design Factored Axial Load (Pu Kips):	46.1	0.00	OK!
Moment & Axial Strength Combination:	0.82	OK! Check Tie Spacing (Design/Required):		0.875	OK!
Pier Reinforcement Ratio:	0.006	Reinforcement Ratio is satisfied per ACI			

(2).Concrete Pad:

One-Way Design Shear Capacity (L-Direction, Kips):	795.5	> One-Way Factored Shear (L-D. Kips):	280.6	0.35	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	795.5	> One-Way Factored Shear (W-D., Kips)	280.6	0.35	OK!
One-Way Design Shear Capacity (Corner-Corner. Kips):	665.6	> One-Way Factored Shear (C-C, Kips):	279.8	0.42	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0024	OK! Lower Steel Pad Reinf. Ratio (W-Direc	0.0024		
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	2828.4	> Moment at Bottom (L-Dir. K-Ft):	1220.7	0.43	OK!
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	2828.4	> Moment at Bottom (W-Dir. K-Ft):	1220.7	0.43	OK!
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	3974.6	> Moment at Bottom (C-C Dir. K-Ft):	1726.4	0.43	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct.):	0.0019	OK! Upper Steel Reinf. Ratio (W-Dir.):	0.0019		
Upper Steel Pad Moment Capacity (L-Direc. Kips-ft):	2272.3	> Moment at the top (L-Dir K-Ft):	538.2	0.24	OK!
Upper Steel Pad Moment Capacity (W-Direc. Kips-ft):	2272.3	> Moment at the top (W-Dir K-Ft):	538.2	0.24	OK!
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	3197.3	> Moment at the top (C-C Dir. K-Ft):	508.9	0.16	OK!

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

Moment transferred by punching shear:	1608.0	k-ft.	Max. factored shear stress v_{u_CD} :	4.7	Psi
Max. factored shear stress v_{u_AB} :	10.8	Psi	Factored shear Strength ϕv_n :	189.7	Psi
Max. factored shear stress v_u :	10.8	Psi	Check Usage of Punching Shear Capacity:	0.06	OK!



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Post-Mod Antenna Mount Analysis Report and PMI Requirements

Mount Fix

SMART Tool Project #: 10056763
Maser Consulting Connecticut Project #: 21777099A

April 30, 2021

Site Information

Site ID: 467144-VZW / MIDDLEFIELD SOUTH CT
Site Name: MIDDLEFIELD SOUTH CT
Carrier Name: Verizon Wireless
Address: 393 Jackson Hill Road
Middlefield, Connecticut 06455
Middlesex County
Latitude: 41.517378°
Longitude: -72.714314°

Structure Information

Tower Type: Monopole
Mount Type: 12.50-Ft Platform

FUZE ID # 16244625

Analysis Results

Platform: 74.6% Pass

***Contractor PMI Requirements:

Included at the end of this MA report

Available & Submitted via portal at <https://pmi.vzwsmart.com>

Contractor - Please Review Specific Site PMI Requirements Upon Award

Requirements also Noted on Mount Modification Drawings

Requirements may also be Noted on A & E drawings

Report Prepared By: Selene Chen



Digitally signed by Justin Linette
Date: 2021.04.30 14:04:01-04'00'

Executive Summary:

The objective of this report is to summarize the analysis results of the antenna support mount including the proposed modifications at the subject facility for the final wireless telecommunications configuration, per the applicable codes and standards.

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: 674965, dated 3/3/2021</i>
<i>Mount Mapping Report</i>	<i>Level-Up Towers Site ID: CT46135, dated 2/20/2021</i>
<i>Mount Analysis Report</i>	<i>Maser Consulting Connecticut, Project #: 21777099A, dated March 19, 2021</i>
<i>Mount Modification Drawings</i>	<i>Maser Consulting Connecticut, Project #: 21777099A, dated April 30, 2021</i>

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), V_{ULT} : 119 mph Ice Wind Speed (3-sec. Gust): 50 mph Design Ice Thickness: 1.00 in Risk Category: II Exposure Category: C Topographic Category: 1 Topographic Feature Considered: N/A Topographic Method: N/A Ground Elevation Factor, K_e : 0.991
Seismic Parameters:	S_s : 0.209 S_1 : 0.055
Maintenance Parameters:	Wind Speed (3-sec. Gust): 30 mph Maintenance Live Load, L_v : 250 lbs. Maintenance Live 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
138.50	140.00	6	Antel	LPA-80063/4CF	Retained
		1	Raycap	RRFDC-6627-PF-48*	
		6	Commscope	JAHH-65B-R3B	Added
		3	Samsung	MT6407-77A	
		3	Samsung	B2/B66A RRH-BR049	
		3	Samsung	B5/B13 RRH-BR04C	
		3	Commscope	CBC78T-DS-43-2X	

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

Standard Conditions:

1. All engineering services are performed on the basis that the information provided to Maser Consulting Connecticut and used in this analysis is current and correct. The existing equipment loading has been applied at locations determined from the supplied documentation. Any deviation from the loading locations specified in this report shall be communicated to Maser Consulting Connecticut to verify deviation will not adversely impact the analysis.
2. Mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer’s specifications.

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

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

3. For mount analyses completed from other data sources (including new replacement mounts) and not specifically mapped by Maser Consulting Connecticut, the mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer’s specifications.
4. All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected member unless otherwise specified in this report.
5. The mount was checked up to, and including, the bolts that fasten it to the mount collar/attachment and threaded rod connections in collar members if applicable. Local deformation and interaction between the mount collar/attachment and the supporting tower structure are outside the scope of this analysis.
6. All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. Maser Consulting Connecticut is not responsible for the conclusion, opinions, and recommendations made by others based on the information supplied.

7. Structural Steel Grades have been assumed as follows, if applicable, unless otherwise noted in this analysis:
- Channel, Solid Round, Angle, Plate ASTM A36 (Gr. 36)
 - HSS (Rectangular) ASTM 500 (Gr. B-46)
 - Pipe ASTM A53 (Gr. B-35)
 - Threaded Rod F1554 (Gr. 36)
 - Bolts ASTM A325
8. Any mount modifications listed under Sources of Information are assumed to have been installed per the design specifications.

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

Analysis Results:

Component	Utilization %	Pass/Fail
<i>Mount Pipe</i>	32.2%	<i>Pass</i>
<i>Face Horizontal</i>	12.6%	<i>Pass</i>
<i>Corner Plate</i>	19.3%	<i>Pass</i>
<i>Cross Arm Plate</i>	36.5%	<i>Pass</i>
<i>Grating Support</i>	18.5%	<i>Pass</i>
<i>Platform Crossmember</i>	17.7%	<i>Pass</i>
<i>Standoff Horizontal</i>	30.1%	<i>Pass</i>
<i>Support Rail</i>	16.6%	<i>Pass</i>
<i>Support Rail Angle</i>	40.2%	<i>Pass</i>
<i>Mount Connection</i>	74.6%	<i>Pass</i>

Structure Rating – (Controlling Utilization of all Components)	74.6%
---	--------------

Recommendation:

The existing mount will be **SUFFICIENT** for the final loading after the proposed modifications are successfully completed.

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

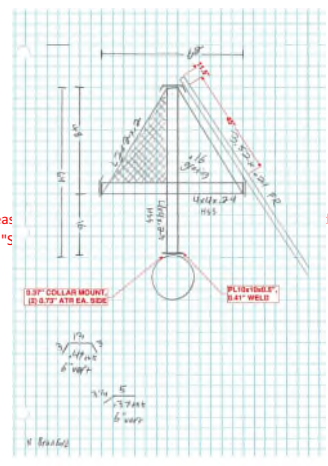
Attachments:

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



	Antenna Mount Mapping Form (PATENT PENDING)		FCC #
	Tower Owner:	SBA	Mapping Date:
Site Name:	MIDDLEFIELD SOUTH CT	Tower Type:	Monopole
Site Number or ID:	CT46135	Tower Height (Ft.):	
Mapping Contractor:	LEVEL-UP TOWERS	Mount Elevation (Ft.):	133

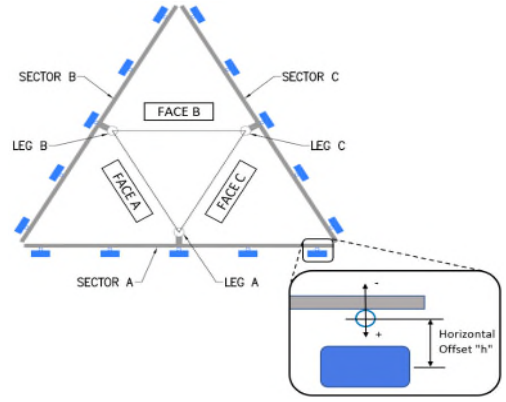
This antenna mapping form is the property of TES and under **PATENT PENDING**. The formation contained herein is considered confidential in nature and is to be used only for the specific customer it was intended for. Reproduction, transmission, publication, modification or disclosure by any method is 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.



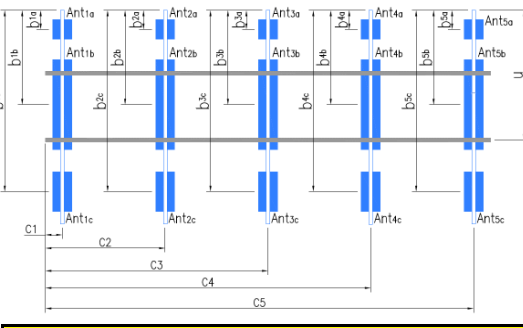
Mount Pipe Configuration and Geometries [Unit = Inches]							
Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "U"	Horizontal Offset "C1, C2, C3, etc."	Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "U"	Horizontal Offset "C1, C2, C3, etc."
A1	72x2.38x.18	36.00	20.00	C1	72x2.38x.18	36.00	20.00
A2	72x2.38x.18	36.00	54.00	C2	72x2.38x.18	36.00	54.00
A3	72x2.38x.18	36.00	104.00	C3	72x2.38x.18	36.00	104.00
A4	72x2.38x.18	36.00	133.00	C4	72x2.38x.18	36.00	133.00
A5				C5			
A6				C6			
B1	72x2.38x.18	36.00	20.00	D1			
B2	72x2.38x.18	36.00	54.00	D2			
B3	72x2.38x.18	36.00	104.00	D3			
B4	72x2.38x.18	36.00	133.00	D4			
B5				D5			
B6				D6			

Distance between bottom rail and mount CL elevation (dim d). Unit is inches. See 'Mount Elev Ref' tab for details. :
 Distance from top of bottom support rail to lowest tip of ant./eqpt. of Carrier above. (N/A if > 10 ft.) :
 Distance from top of bottom support rail to highest tip of ant./eqpt. of Carrier below. (N/A if > 10 ft.) : 42
 Please enter additional information or comments below.

Tower Face Width at Mount Elev. (ft.):	Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.):	24.2
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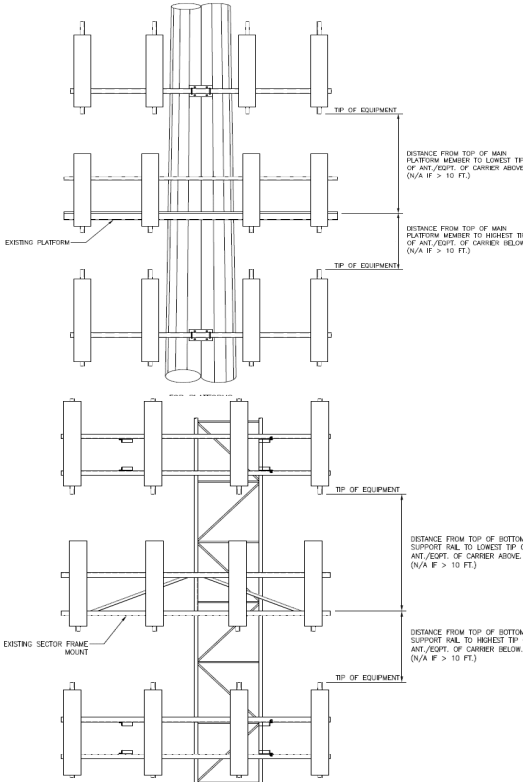


Ants. Items	Enter antenna model. If not labeled, enter "Unknown".					Mounting Locations [Units are inches and degrees]			Photos of antennas	
	Antenna Models if Known	Width (in.)	Depth (in.)	Height (in.)	Coax Size and Qty	Antenna Center-line (Ft.)	Vertical Distances "b _{1a} , b _{2a} , b _{3a} , b _{1b} ,..." (Inches)	Horiz. Offset "h" (Use "-" if Ant. is behind)	Antenna Azimuth (Degrees)	Photo Numbers
Sector A										
Ant _{1a}	DIPLEXER	6.50	0.75	5.00	(2) 1 5/8	134.917	13.00	-3.00		105-110
Ant _{1b}	LPA-80063-4CG-EDIN	15.00	14.00	48.00	(1) 1/2	133.667	28.00	14.00	30.00	105-110
Ant _{1c}										
Ant _{2a}	B13 RRH 4X30	12.00	8.00	21.00	FIBER	134.917	13.00	-7.00		111-115
Ant _{2b}	BXA-70063-4CF-EDIN	11.00	4.00	71.00	(2) 1/2	133.083	35.00	10.00	30.00	111-115
Ant _{2c}										
Ant _{3a}	B66 RRH 4X45	12.00	7.00	25.00	FIBER	135.167	10.00	-6.00		116-120
Ant _{3b}	SBNHH-1D65B	12.00	8.00	73.00	(2) 1/2	133.583	29.00	10.00	30.00	116-120
Ant _{3c}	SBNHH-1D65B	12.00	8.00	73.00	(6) 1/2	133.583	29.00	10.00	30.00	116-120
Ant _{4a}	DIPLEXER	6.50	0.75	5.00	(2) 1 5/8	134.917	13.00	-3.00		121-123
Ant _{4b}	LPA-80063-4CG-EDIN	15.00	14.00	48.00	(1) 1/2	133.917	25.00	16.00	30.00	121-123
Ant _{4c}										
Ant _{5a}										
Ant _{5b}										
Ant _{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										



Antenna Layout (Looking Out From Tower)

Mount Azimuth (Degree) for Each Sector				Tower Leg Azimuth (Degree) for Each Sector				Sector B									
Sector A:	30.00	Deg	Leg A:		Deg	Ant _{1a}	DIPLEXER	6.50	0.75	5.00	(2) 1 5/8	134.917	13.00	-3.00		63	
Sector B:	150.00	Deg	Leg B:		Deg	Ant _{1b}	LPA-80063-4CG-EDIN	15.00	14.00	48.00	(1) 1/2	133.667	28.00	14.00	150.00	64	
Sector C:	270.00	Deg	Leg C:		Deg	Ant _{1c}											
Sector D:		Deg	Leg D:		Deg	Ant _{2a}	B13 RRH 4X30	12.00	8.00	21.00	FIBER	134.917	13.00	-7.00		65	
Climbing Facility Information							Ant _{2b}	BXA-70063-4CF-EDIN	11.00	4.00	71.00	(2) 1/2	133.083	35.00	10.00	150.00	70
Location:	FACE	Deg	Sector B				Ant _{2c}										
Climbing Facility	Corrosion Type:	Good condition.					Ant _{3a}	B66 RRH 4X45	12.00	7.00	25.00	FIBER	135.167	10.00	-6.00		71
	Access:	Climbing path was unobstructed.					Ant _{3b}	SBNHH-1D65B	12.00	8.00	73.00	(2) 1/2	133.583	29.00	10.00	150.00	71
	Condition:	Good condition.					Ant _{3c}	SBNHH-1D65B	12.00	8.00	73.00	(6) 1/2	133.583	29.00	10.00	150.00	71
						Ant _{4a}	DIPLEXER	6.50	0.75	5.00	(2) 1 5/8	134.917	13.00	-3.00		84	
						Ant _{4b}	LPA-80063-4CG-EDIN	15.00	14.00	48.00	(1) 1/2	133.917	25.00	16.00	150.00	84	
						Ant _{4c}											
						Ant _{5a}											
						Ant _{5b}											
						Ant _{5c}											
						Ant on Standoff											
						Ant on Standoff											
						Ant on Tower											
						Ant on Tower											
Sector C							Ant _{1a}	DIPLEXER	6.50	0.75	5.00	(2) 1 5/8	134.917	13.00	-3.00		85
						Ant _{1b}	LPA-80063-4CG-EDIN	15.00	14.00	48.00	(1) 1/2	133.667	28.00	14.00	270.00	85	
						Ant _{1c}											
						Ant _{2a}	B13 RRH 4X30	12.00	8.00	21.00	FIBER	134.917	13.00	-7.00		90	
						Ant _{2b}	BXA-70063-4CF-EDIN	11.00	4.00	71.00	(2) 1/2	133.083	35.00	10.00	270.00	90	
						Ant _{2c}											
						Ant _{3a}	B66 RRH 4X45	12.00	7.00	25.00	FIBER	135.167	10.00	-6.00		94	
						Ant _{3b}	SBNHH-1D65B	12.00	8.00	73.00	(2) 1/2	133.583	29.00	10.00	270.00	94	
						Ant _{3c}	SBNHH-1D65B	12.00	8.00	73.00	(6) 1/2	133.583	29.00	10.00	270.00	94	
						Ant _{4a}	DIPLEXER	6.50	0.75	5.00	(2) 1 5/8	134.917	13.00	-3.00		99	
						Ant _{4b}	LPA-80063-4CG-EDIN	15.00	14.00	48.00	(1) 1/2	133.917	25.00	16.00	270.00	99	
						Ant _{4c}											
						Ant _{5a}											
						Ant _{5b}											
						Ant _{5c}											
						Ant on Standoff											
						Ant on Standoff											
						Ant on Tower											
						Ant on Tower											
Sector D							Ant _{1a}										
						Ant _{1b}											
						Ant _{1c}											
						Ant _{2a}											
						Ant _{2b}											
						Ant _{2c}											
						Ant _{3a}											
						Ant _{3b}											
						Ant _{3c}											
						Ant _{4a}											
						Ant _{4b}											
						Ant _{4c}											
						Ant _{5a}											
						Ant _{5b}											
						Ant _{5c}											
						Ant on Standoff											
						Ant on Standoff											
						Ant on Tower											
						Ant on Tower											



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

1		
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.



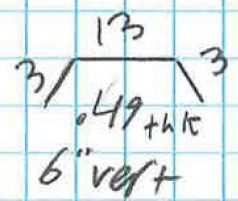
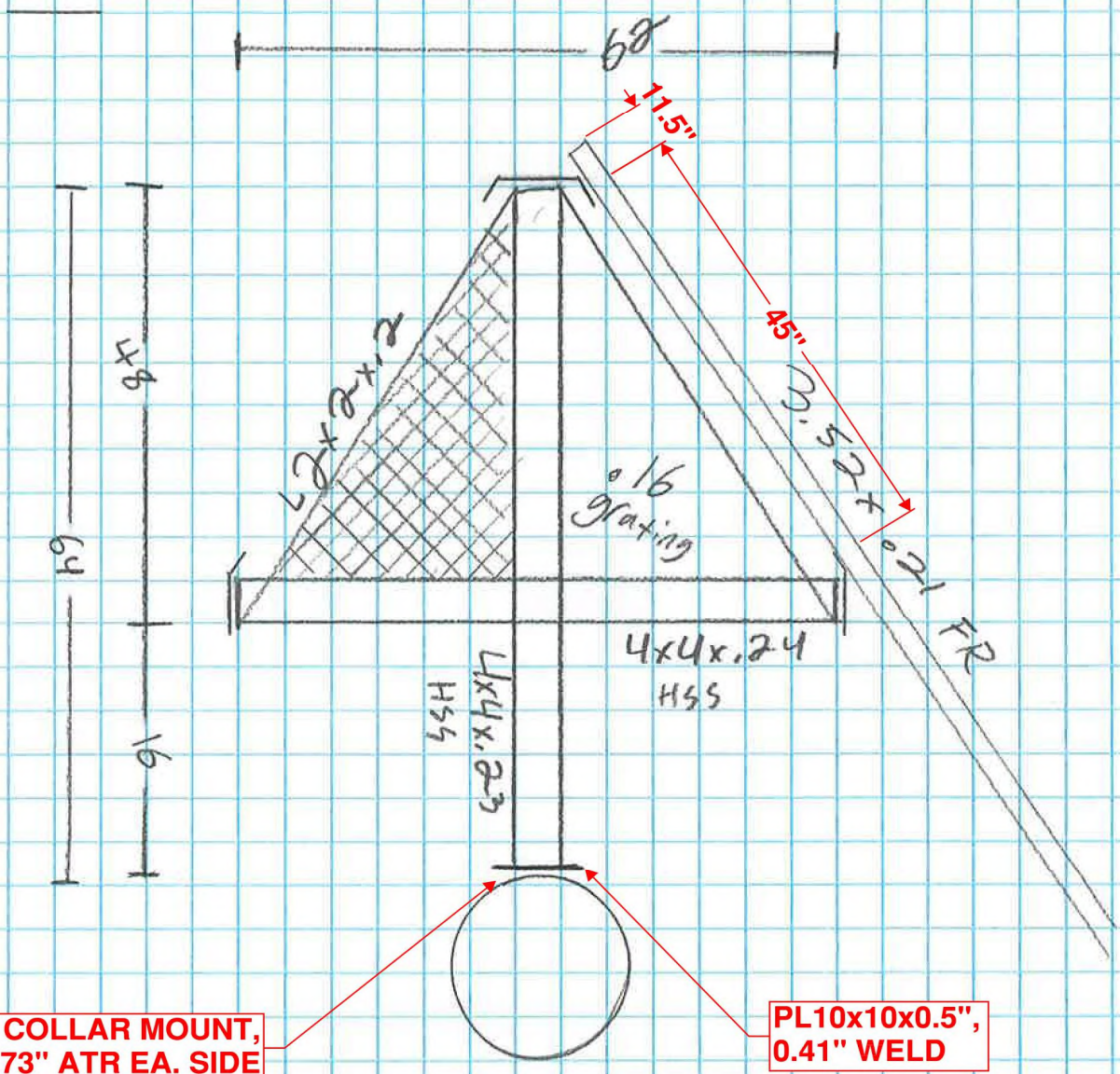
Antenna Mount Mapping Form (PATENT PENDING)

FCC #

Tower Owner:	SBA	Mapping Date:	2.20.21
Site Name:	MIDDLEFIELD SOUTH CT	Tower Type:	Monopole
Site Number or ID:	CT46135	Tower Height (Ft.):	
Mapping Contractor:	LEVEL-UP TOWERS	Mount Elevation (Ft.):	133

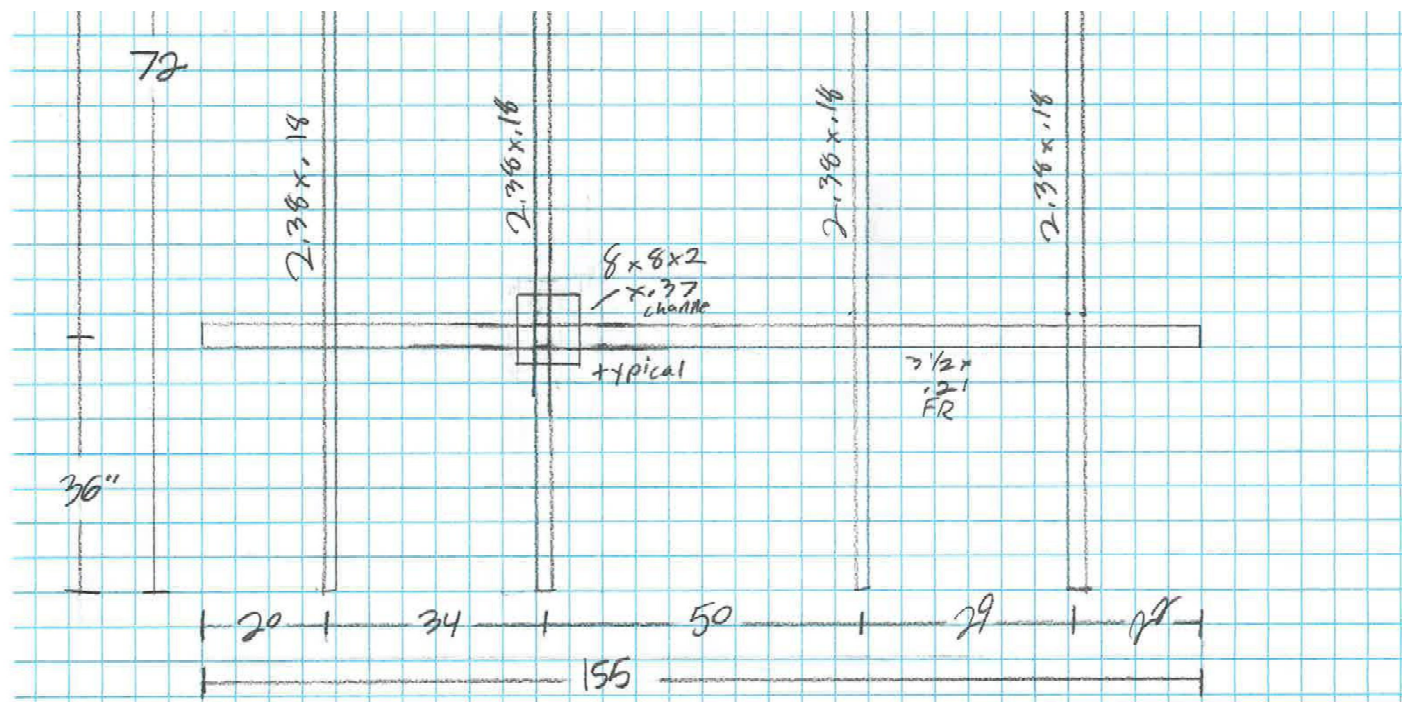
This antenna mapping form is the property of TES and under PATENT PENDING. The formation contained herein is considered confidential in nature and is to be used only for the specific customer it was intended for. Reproduction, transmission, publication, modification or disclosure by any method is prohibited 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.

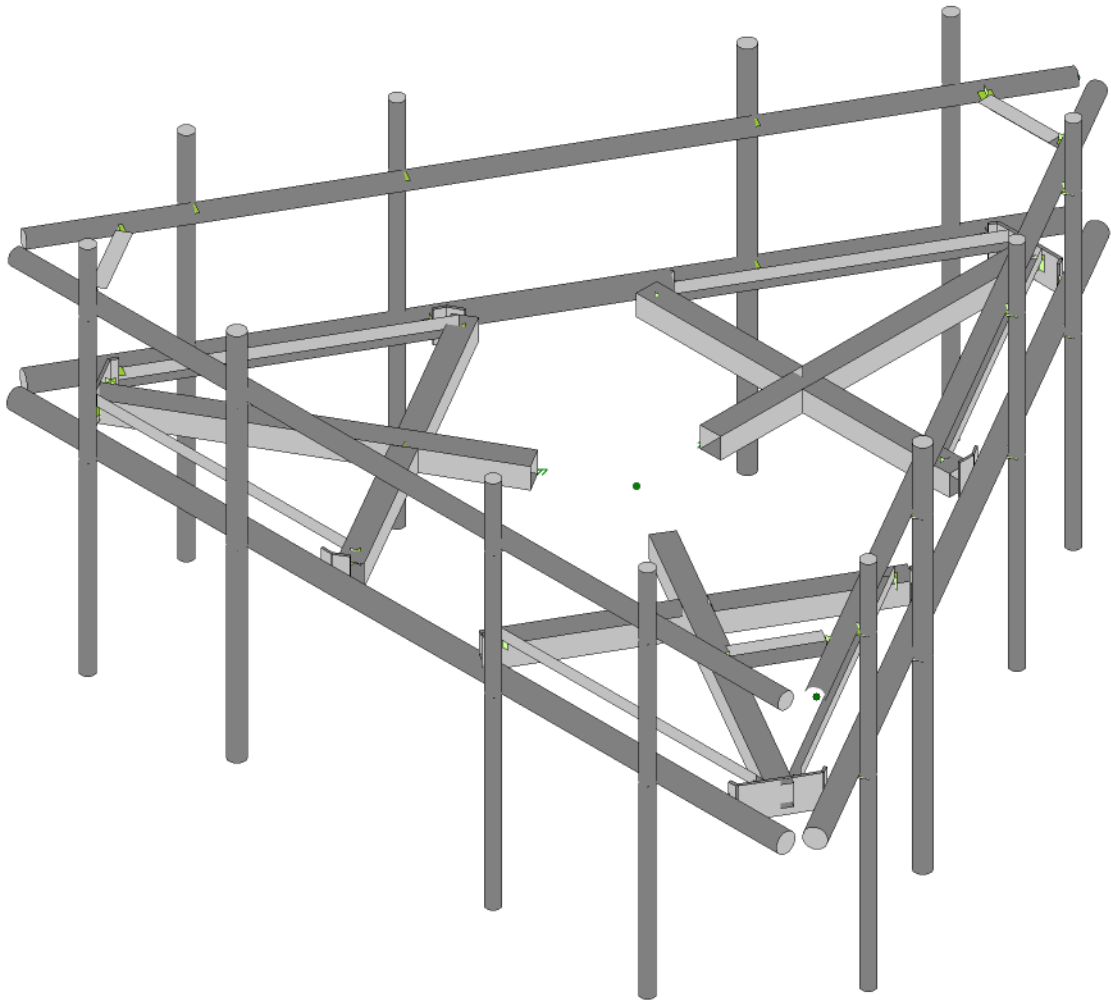
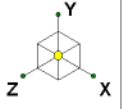
Please Insert Sketches of the Antenna Mount



$$\begin{array}{r} 3\frac{1}{4} \quad 5 \\ \hline .37 \text{thk} \\ 6" \text{ vert} \end{array}$$

N Branford





Envelope Only Solution

Tower Engineering Solutio...

NL

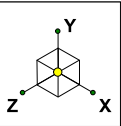
Project No. 10037784

467144-VZW_MT_LO_H

SK - 1

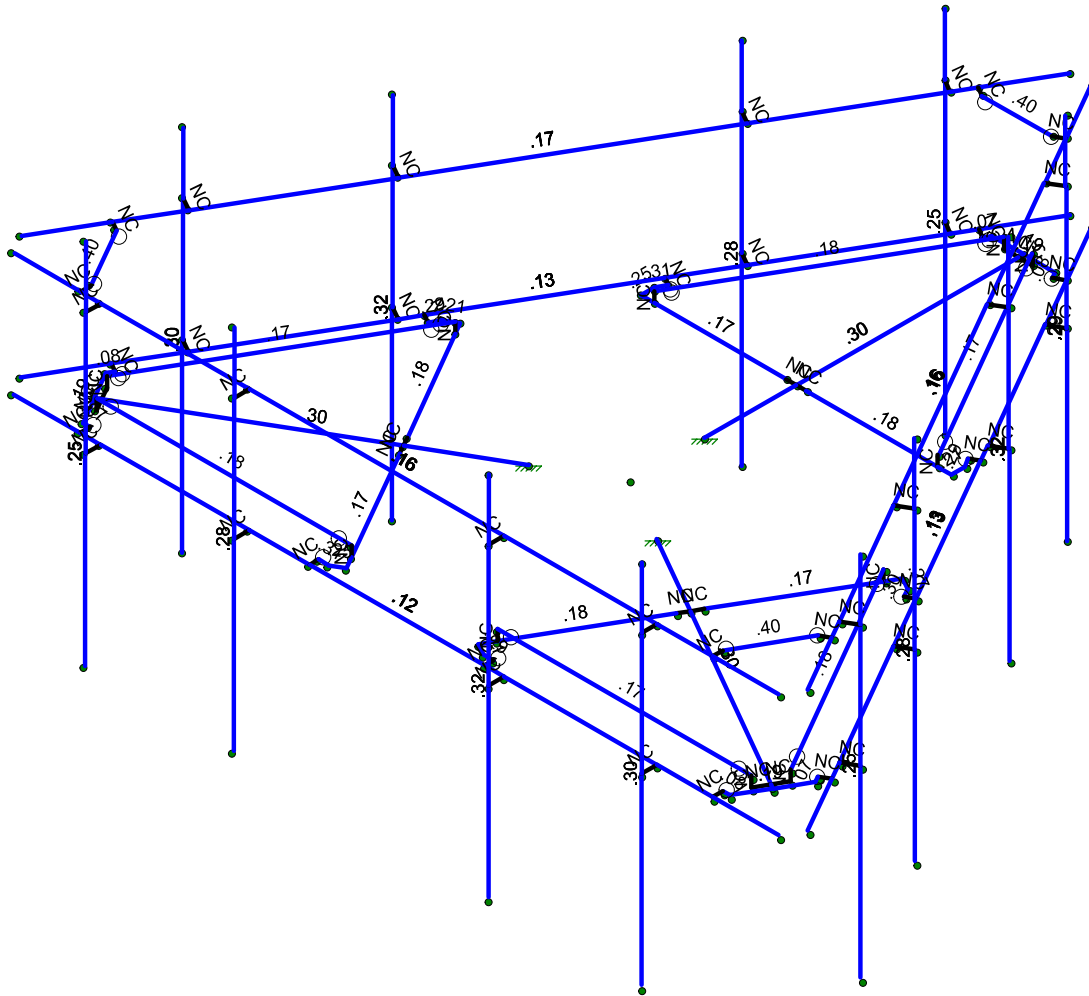
Apr 27, 2021 at 3:56 PM

MOD_467144-VZW_MT_LO_H.r3d



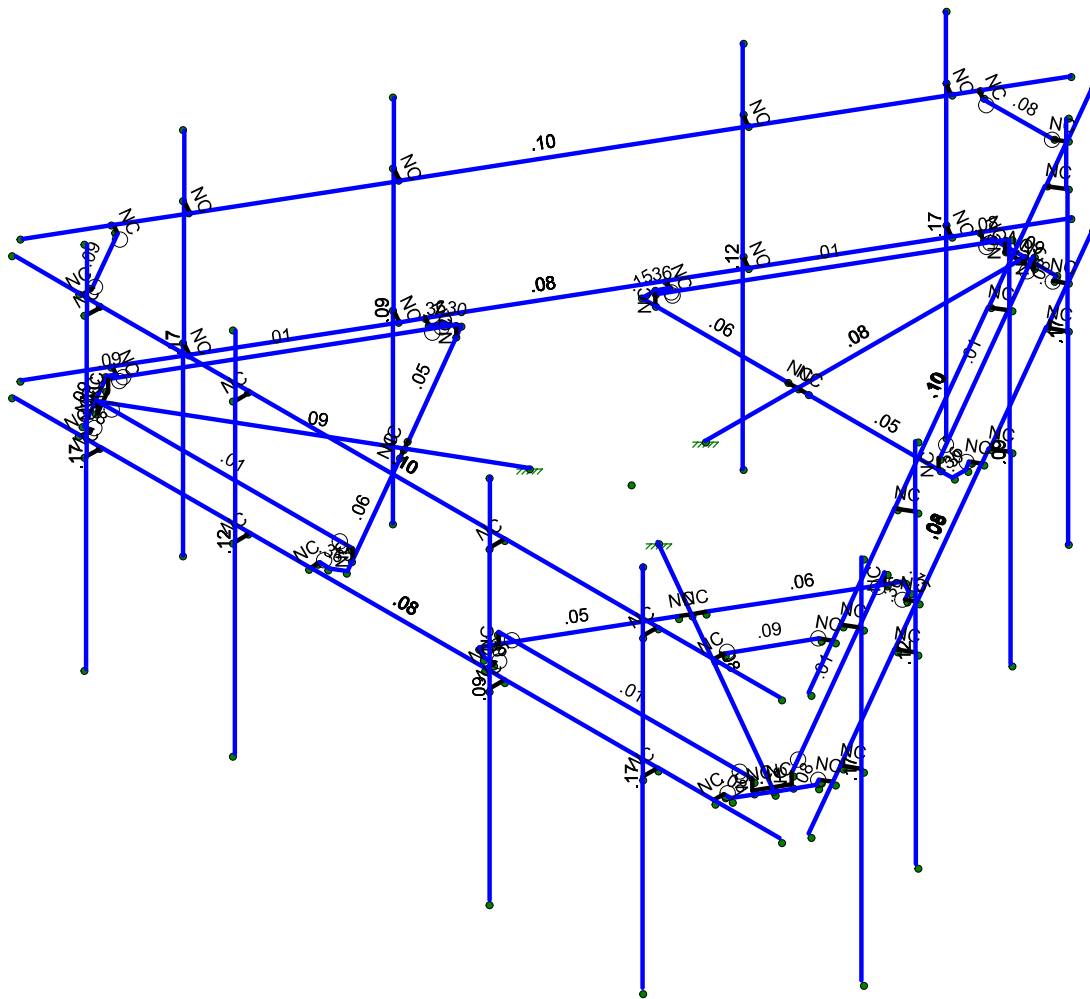
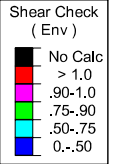
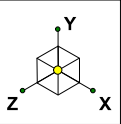
Code Check (Env)

- No Calc
- > 1.0
- .90-1.0
- .75-.90
- .50-.75
- 0.-.50



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

Tower Engineering Solutio...	467144-VZW_MT_LO_H	SK - 2
NL		Apr 27, 2021 at 3:57 PM
Project No. 10037784		MOD_467144-VZW_MT_LO_H.r3d



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

Tower Engineering Solutio...	467144-VZW_MT_LO_H	SK - 3
NL		Apr 27, 2021 at 3:57 PM
Project No. 10037784		MOD_467144-VZW_MT_LO_H.r3d



Company : Tower Engineering Solutions, LLC
 Designer : NL
 Job Number : Project No. 10037784
 Model Name : 467144-VZW_MT_LO_H

Apr 27, 2021
 3:57 PM
 Checked By: DX

Basic Load Cases

BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed Area(Me...	Surface(P...
1	Antenna D	None				117		
2	Antenna Di	None				117		
3	Antenna Wo (0 Deg)	None				117		
4	Antenna Wo (30 Deg)	None				117		
5	Antenna Wo (60 Deg)	None				117		
6	Antenna Wo (90 Deg)	None				117		
7	Antenna Wo (120 Deg)	None				117		
8	Antenna Wo (150 Deg)	None				117		
9	Antenna Wo (180 Deg)	None				117		
10	Antenna Wo (210 Deg)	None				117		
11	Antenna Wo (240 Deg)	None				117		
12	Antenna Wo (270 Deg)	None				117		
13	Antenna Wo (300 Deg)	None				117		
14	Antenna Wo (330 Deg)	None				117		
15	Antenna Wi (0 Deg)	None				117		
16	Antenna Wi (30 Deg)	None				117		
17	Antenna Wi (60 Deg)	None				117		
18	Antenna Wi (90 Deg)	None				117		
19	Antenna Wi (120 Deg)	None				117		
20	Antenna Wi (150 Deg)	None				117		
21	Antenna Wi (180 Deg)	None				117		
22	Antenna Wi (210 Deg)	None				117		
23	Antenna Wi (240 Deg)	None				117		
24	Antenna Wi (270 Deg)	None				117		
25	Antenna Wi (300 Deg)	None				117		
26	Antenna Wi (330 Deg)	None				117		
27	Antenna Wm (0 Deg)	None				117		
28	Antenna Wm (30 Deg)	None				117		
29	Antenna Wm (60 Deg)	None				117		
30	Antenna Wm (90 Deg)	None				117		
31	Antenna Wm (120 De...	None				117		
32	Antenna Wm (150 De...	None				117		
33	Antenna Wm (180 De...	None				117		
34	Antenna Wm (210 De...	None				117		
35	Antenna Wm (240 De...	None				117		
36	Antenna Wm (270 De...	None				117		
37	Antenna Wm (300 De...	None				117		
38	Antenna Wm (330 De...	None				117		
39	Structure D	None	-1				3	
40	Structure Di	None					57	3
41	Structure Wo (0 Deg)	None					114	
42	Structure Wo (30 Deg)	None					114	
43	Structure Wo (60 Deg)	None					114	
44	Structure Wo (90 Deg)	None					114	
45	Structure Wo (120 D...	None					114	
46	Structure Wo (150 D...	None					114	
47	Structure Wo (180 D...	None					114	
48	Structure Wo (210 D...	None					114	
49	Structure Wo (240 D...	None					114	
50	Structure Wo (270 D...	None					114	
51	Structure Wo (300 D...	None					114	

Load Combinations (Continued)

	Description	Solve	PDelta	S...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...
17	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	19	1	57	1
18	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	20	1	58	1
19	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	21	1	59	1
20	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	22	1	60	1
21	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	23	1	61	1
22	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	24	1	62	1
23	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	25	1	63	1
24	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	26	1	64	1
25	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	27	1	65	1		
26	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	28	1	66	1		
27	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	29	1	67	1		
28	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	30	1	68	1		
29	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	31	1	69	1		
30	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	32	1	70	1		
31	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	33	1	71	1		
32	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	34	1	72	1		
33	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	35	1	73	1		
34	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	36	1	74	1		
35	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	37	1	75	1		
36	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	38	1	76	1		
37	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	27	1	65	1		
38	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	28	1	66	1		
39	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	29	1	67	1		
40	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	30	1	68	1		
41	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	31	1	69	1		
42	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	32	1	70	1		
43	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	33	1	71	1		
44	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	34	1	72	1		
45	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	35	1	73	1		
46	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	36	1	74	1		
47	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	37	1	75	1		
48	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	38	1	76	1		
49	1.2D + 1.5Lv1	Yes	Y		1	1.2	39	1.2	79	1.5						
50	1.2D + 1.5Lv2	Yes	Y		1	1.2	39	1.2	80	1.5						
51	1.4D	Yes	Y		1	1.4	39	1.4								
52	Seismic Mass		Y		1	1	39	1								
53	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX		SY	1	SZ	-1		
54	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	.5	SY	1	SZ	-.866		
55	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	.866	SY	1	SZ	-.5		
56	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	1	SY	1	SZ			
57	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	.866	SY	1	SZ	.5		
58	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	.5	SY	1	SZ	.866		
59	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX		SY	1	SZ	1		
60	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	-.5	SY	1	SZ	.866		
61	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	-.866	SY	1	SZ	.5		
62	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	-1	SY	1	SZ			
63	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	-.866	SY	1	SZ	-.5		
64	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	-.5	SY	1	SZ	-.866		



Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
52	N91	-2.345485	0	1.354167	0	
53	N92	-5.538954	0	3.197917	0	
54	N93	-3.503038	0	-0.650772	0	
55	N94	-1.187933	0	3.359106	0	
56	N95	-3.616319	0	-0.846981	0	
57	N96	-2.262152	0	1.498504	0	
58	N97	-2.428819	0	1.209829	0	
59	N98	-1.264095	0	3.66469	0	
60	N99	-3.805762	0	-0.737606	0	
61	N100	-3.889095	0	-0.593269	0	
62	N101A	-5.740777	0	2.654396	0	
63	N102A	-1.430762	0	3.66469	0	
64	N103	-5.169162	0	3.644461	0	
65	N104	-4.015391	0	-0.666185	0	
66	N105A	-1.430762	0	3.810523	0	
67	N106	-5.281142	0	3.644461	0	
68	N107	-5.796767	0	2.751372	0	
69	N108	-5.884591	0	2.571364	0	
70	N109	-5.169162	0	3.810523	0	
71	N110	-5.466785	0	3.15625	0	
72	N111	-5.583904	0.166667	2.953394	0	
73	N112	-5.583904	0	2.953394	0	
74	N113	-5.349667	0.166667	3.359106	0	
75	N114	-5.349667	0	3.359106	0	
76	N115	1.046447	0	0.604167	0	
77	N116	3.616319	0	-0.846981	0	
78	N117	1.187933	0.166667	3.359106	0	
79	N118	3.503038	0.166667	-0.650772	0	
80	N119	2.345485	0	1.354167	0	
81	N120	5.538954	0	3.197917	0	
82	N121	1.187933	0	3.359106	0	
83	N122	3.503038	0	-0.650772	0	
84	N123	1.074652	0	3.555315	0	
85	N124	2.428819	0	1.209829	0	
86	N125	2.262152	0	1.498504	0	
87	N126	3.805762	0	-0.737606	0	
88	N127	1.264095	0	3.66469	0	
89	N128	1.430762	0	3.66469	0	
90	N129	5.169162	0	3.644461	0	
91	N130	3.889095	0	-0.593269	0	
92	N131A	5.740777	0	2.654396	0	
93	N132	1.430762	0	3.810523	0	
94	N133	4.015391	0	-0.666186	0	
95	N134	5.796767	0	2.751372	0	
96	N135A	5.281142	0	3.644461	0	
97	N136	5.169162	0	3.810523	0	
98	N137	5.884591	0	2.571364	0	
99	N138	5.466785	0	3.15625	0	
100	N139	5.349667	0.166667	3.359106	0	
101	N140	5.349667	0	3.359106	0	
102	N141	5.583904	0.166667	2.953394	0	
103	N142	5.583904	0	2.953394	0	



Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
104	N104B	0.17501	0	-7.31792	0	
105	N105B	6.42501	0	3.507397	0	
106	N124A	-6.42501	0	3.507397	0	
107	N125A	-0.17501	0	-7.31792	0	
108	N108A	1.17501	0	-5.58587	0	
109	N109A	1.391516	0	-5.71087	0	
110	N110A	5.716677	0	2.280528	0	
111	N111A	5.933183	0	2.155528	0	
112	N112A	2.42501	0	-3.420806	0	
113	N113A	2.641516	0	-3.545806	0	
114	N114A	4.508343	0	0.187633	0	
115	N115A	4.72485	0	0.062633	0	
116	N116A	4.72485	-3	0.062633	0	
117	N117A	4.72485	3	0.062633	0	
118	N118A	5.933183	-3	2.155528	0	
119	N119A	5.933183	3	2.155528	0	
120	N120A	2.641516	-3	-3.545806	0	
121	N121A	2.641516	3	-3.545806	0	
122	N122A	1.391516	-3	-5.71087	0	
123	N123A	1.391516	3	-5.71087	0	
124	N124B	-5.42501	0	1.775346	0	
125	N125B	-5.641516	0	1.650346	0	
126	N126A	-0.883343	0	-6.091051	0	
127	N127A	-1.09985	0	-6.216051	0	
128	N128A	-4.17501	0	-0.389717	0	
129	N129A	-4.391516	0	-0.514717	0	
130	N130A	-2.091677	0	-3.998156	0	
131	N131B	-2.308183	0	-4.123156	0	
132	N132A	-2.308183	-3	-4.123156	0	
133	N133A	-2.308183	3	-4.123156	0	
134	N134A	-1.09985	-3	-6.216051	0	
135	N135B	-1.09985	3	-6.216051	0	
136	N136A	-4.391516	-3	-0.514717	0	
137	N137A	-4.391516	3	-0.514717	0	
138	N138A	-5.641516	-3	1.650346	0	
139	N139A	-5.641516	3	1.650346	0	
140	N140A	6.25	2	3.810523	0	
141	N141A	-6.25	2	3.810523	0	
142	N142A	4.25	2	3.810523	0	
143	N143	4.25	2	4.060523	0	
144	N144A	-4.833333	2	3.810523	0	
145	N145	-4.833333	2	4.060523	0	
146	N146	1.75	2	3.810523	0	
147	N147	1.75	2	4.060523	0	
148	N148A	-2.416667	2	3.810523	0	
149	N149	-2.416667	2	4.060523	0	
150	N150	-5.166667	2	3.810523	0	
151	N151	-5.166667	2	3.643857	0	
152	N152	5.166667	2	3.810523	0	
153	N153	5.166667	2	3.643857	0	
154	N154	0.17501	2	-7.31792	0	
155	N155	6.42501	2	3.507397	0	



Company : Tower Engineering Solutions, LLC
 Designer : NL
 Job Number : Project No. 10037784
 Model Name : 467144-VZW_MT_LO_H

Apr 27, 2021
 3:57 PM
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Hot Rolled Steel Properties (Continued)

	Label	E [ksi]	G [ksi]	Nu	Therm (/1E...Density[k/ft...	Yield[ksi]	Ry	Fu[ksi]	Rt	
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	M20	N10	N11			RIGID	None	None	RIGID	Typical
6	M21	N12	N13			RIGID	None	None	RIGID	Typical
7	M22	N14	N15			RIGID	None	None	RIGID	Typical
8	MP3A	N17	N16			Proposed Mou...	Column	Pipe	A53 Gr.B	Typical
9	MP4A	N19	N18			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
10	MP2A	N21	N20			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
11	MP1A	N23	N22			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
12	M43	N102	N5			Platform Cross...	Beam	SquareTube	A500 Gr.B...	Typical
13	M46	N86C	N87A			Corner Plate	Beam	BAR	A36 Gr.36	Typical
14	M35A	N7	N30			RIGID	None	None	RIGID	Typical
15	M36A	N6	N29			RIGID	None	None	RIGID	Typical
16	M51B	N87C	N6			Grating Support	Beam	Single Angle	A36 Gr.36	Typical
17	M52B	N7	N87B			Grating Support	Beam	Single Angle	A36 Gr.36	Typical
18	M52	N87B	N88C			RIGID	None	None	RIGID	Typical
19	M58	N102	N24			RIGID	None	None	RIGID	Typical
20	M59	N24	N103A			RIGID	None	None	RIGID	Typical
21	M76	N101	N105			Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
22	M77	N105	N131			Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
23	M79	N131	N86A			RIGID	None	None	RIGID	Typical
24	M80	N87A	N135			Corner Plate	Beam	BAR	A36 Gr.36	Typical
25	M83	N135	N86D			RIGID	None	None	RIGID	Typical
26	M84	N5	N104A			Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
27	M85	N104A	N144			Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
28	M88	N144	N86B			RIGID	None	None	RIGID	Typical
29	M91	N86C	N148			Corner Plate	Beam	BAR	A36 Gr.36	Typical
30	M92	N148	N86E			RIGID	None	None	RIGID	Typical
31	M50	N88C	N88A			RIGID	None	None	RIGID	Typical
32	M51	N88A	N86G			RIGID	None	None	RIGID	Typical
33	M51A	N87C	N86G			RIGID	None	None	RIGID	Typical
34	M52A	N87D	N92			Standoff Horiz...	Beam	SquareTube	A500 Gr.B...	Typical
35	M53	N95	N97			Platform Cross...	Beam	SquareTube	A500 Gr.B...	Typical
36	M54	N96	N88B			Platform Cross...	Beam	SquareTube	A500 Gr.B...	Typical
37	M55	N106	N107			Corner Plate	Beam	BAR	A36 Gr.36	Typical
38	M56	N90	N94			RIGID	None	None	RIGID	Typical
39	M57	N89	N93			RIGID	None	None	RIGID	Typical
40	M58A	N111	N89			Grating Support	Beam	Single Angle	A36 Gr.36	Typical
41	M59A	N90	N113			Grating Support	Beam	Single Angle	A36 Gr.36	Typical
42	M60	N113	N114			RIGID	None	None	RIGID	Typical
43	M61	N96	N91			RIGID	None	None	RIGID	Typical
44	M62	N91	N97			RIGID	None	None	RIGID	Typical
45	M63	N95	N99			Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
46	M64	N99	N100			Cross Arm Plate	Column	RECT	A36 Gr.36	Typical



Company : Tower Engineering Solutions, LLC
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 Model Name : 467144-VZW_MT_LO_H

Apr 27, 2021
 3:57 PM
 Checked By: DX

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
47	M65	N100	N104			RIGID	None	None	RIGID	Typical
48	M66	N107	N101A			Corner Plate	Beam	BAR	A36 Gr.36	Typical
49	M67	N101A	N108			RIGID	None	None	RIGID	Typical
50	M68	N88B	N98			Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
51	M69	N98	N102A			Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
52	M70	N102A	N105A			RIGID	None	None	RIGID	Typical
53	M71	N106	N103			Corner Plate	Beam	BAR	A36 Gr.36	Typical
54	M72	N103	N109			RIGID	None	None	RIGID	Typical
55	M73	N114	N110			RIGID	None	None	RIGID	Typical
56	M74	N110	N112			RIGID	None	None	RIGID	Typical
57	M75	N111	N112			RIGID	None	None	RIGID	Typical
58	M76A	N115	N120			Standoff Horiz...	Beam	SquareTube	A500 Gr.B...	Typical
59	M77A	N123	N125			Platform Cross...	Beam	SquareTube	A500 Gr.B...	Typical
60	M78	N124	N116			Platform Cross...	Beam	SquareTube	A500 Gr.B...	Typical
61	M79A	N134	N135A			Corner Plate	Beam	BAR	A36 Gr.36	Typical
62	M80A	N118	N122			RIGID	None	None	RIGID	Typical
63	M81	N117	N121			RIGID	None	None	RIGID	Typical
64	M82	N139	N117			Grating Support	Beam	Single Angle	A36 Gr.36	Typical
65	M83A	N118	N141			Grating Support	Beam	Single Angle	A36 Gr.36	Typical
66	M84A	N141	N142			RIGID	None	None	RIGID	Typical
67	M85A	N124	N119			RIGID	None	None	RIGID	Typical
68	M86	N119	N125			RIGID	None	None	RIGID	Typical
69	M87	N123	N127			Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
70	M88A	N127	N128			Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
71	M89	N128	N132			RIGID	None	None	RIGID	Typical
72	M90	N135A	N129			Corner Plate	Beam	BAR	A36 Gr.36	Typical
73	M91A	N129	N136			RIGID	None	None	RIGID	Typical
74	M92A	N116	N126			Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
75	M93	N126	N130			Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
76	M94	N130	N133			RIGID	None	None	RIGID	Typical
77	M95	N134	N131A			Corner Plate	Beam	BAR	A36 Gr.36	Typical
78	M96	N131A	N137			RIGID	None	None	RIGID	Typical
79	M97	N142	N138			RIGID	None	None	RIGID	Typical
80	M98	N138	N140			RIGID	None	None	RIGID	Typical
81	M99	N139	N140			RIGID	None	None	RIGID	Typical
82	M82A	N104B	N105B			Face Horizontal	Beam	Pipe	A53 Gr.B	Typical
83	M91B	N124A	N125A			Face Horizontal	Beam	Pipe	A53 Gr.B	Typical
84	M84B	N108A	N109A			RIGID	None	None	RIGID	Typical
85	M85B	N110A	N111A			RIGID	None	None	RIGID	Typical
86	M86A	N112A	N113A			RIGID	None	None	RIGID	Typical
87	M87A	N114A	N115A			RIGID	None	None	RIGID	Typical
88	MP3C	N117A	N116A			Proposed Mou...	Column	Pipe	A53 Gr.B	Typical
89	MP4C	N119A	N118A			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
90	MP2C	N121A	N120A			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
91	MP1C	N123A	N122A			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
92	M92B	N124B	N125B			RIGID	None	None	RIGID	Typical
93	M93A	N126A	N127A			RIGID	None	None	RIGID	Typical
94	M94A	N128A	N129A			RIGID	None	None	RIGID	Typical
95	M95A	N130A	N131B			RIGID	None	None	RIGID	Typical
96	MP3B	N133A	N132A			Proposed Mou...	Column	Pipe	A53 Gr.B	Typical
97	MP4B	N135B	N134A			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
98	MP2B	N137A	N136A			Mount Pipe	Column	Pipe	A53 Gr.B	Typical



Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
99	MP1B	N139A	N138A			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
100	M100	N140A	N141A			Support Rail	Beam	Pipe	A53 Gr.B	Typical
101	M101	N142A	N143			RIGID	None	None	RIGID	Typical
102	M102	N144A	N145			RIGID	None	None	RIGID	Typical
103	M103	N146	N147			RIGID	None	None	RIGID	Typical
104	M104	N148A	N149			RIGID	None	None	RIGID	Typical
105	M105	N150	N151			RIGID	None	None	RIGID	Typical
106	M106	N152	N153			RIGID	None	None	RIGID	Typical
107	M107	N154	N155			Support Rail	Beam	Pipe	A53 Gr.B	Typical
108	M108	N156	N157			RIGID	None	None	RIGID	Typical
109	M109	N158	N159			RIGID	None	None	RIGID	Typical
110	M110	N160	N161			RIGID	None	None	RIGID	Typical
111	M111	N162	N163			RIGID	None	None	RIGID	Typical
112	M112	N164	N165			RIGID	None	None	RIGID	Typical
113	M113	N166	N167			RIGID	None	None	RIGID	Typical
114	M114	N168	N169			Support Rail	Beam	Pipe	A53 Gr.B	Typical
115	M115	N170	N171			RIGID	None	None	RIGID	Typical
116	M116	N172	N173			RIGID	None	None	RIGID	Typical
117	M117	N174	N175			RIGID	None	None	RIGID	Typical
118	M118	N176	N177			RIGID	None	None	RIGID	Typical
119	M119	N178	N179			RIGID	None	None	RIGID	Typical
120	M120	N180	N181			RIGID	None	None	RIGID	Typical
121	M121	N151	N181		90	Support Rail C...	Beam	Single Angle	A36 Gr.36	Typical
122	M122	N179	N167		90	Support Rail C...	Beam	Single Angle	A36 Gr.36	Typical
123	M123	N165	N153		90	Support Rail C...	Beam	Single Angle	A36 Gr.36	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				None
3	M10						Yes	Default			None
4	M19						Yes	** NA **			None
5	M20						Yes	** NA **			None
6	M21						Yes	** NA **			None
7	M22						Yes	** NA **			None
8	MP3A						Yes	** NA **			None
9	MP4A						Yes	** NA **			None
10	MP2A						Yes	** NA **			None
11	MP1A						Yes	** NA **			None
12	M43						Yes	Default			None
13	M46						Yes	Default			None
14	M35A						Yes	** NA **			None
15	M36A						Yes	** NA **			None
16	M51B	O O O O O X	O O O O O X				Yes	Default			None
17	M52B	O O O O O X	O O O O O X				Yes	Default			None
18	M52						Yes	** NA **			None
19	M58						Yes	** NA **			None
20	M59						Yes	** NA **			None
21	M76						Yes	** NA **			None
22	M77						Yes	** NA **			None



Company : Tower Engineering Solutions, LLC
 Designer : NL
 Job Number : Project No. 10037784
 Model Name : 467144-VZW_MT_LO_H

Apr 27, 2021
 3:57 PM
 Checked By: DX

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
23	M79		BenPIN				Yes	** NA **			None
24	M80						Yes				None
25	M83		BenPIN				Yes	** NA **			None
26	M84						Yes	** NA **			None
27	M85						Yes	** NA **			None
28	M88		BenPIN				Yes	** NA **			None
29	M91						Yes				None
30	M92		BenPIN				Yes	** NA **			None
31	M50						Yes	** NA **			None
32	M51						Yes	** NA **			None
33	M51A						Yes	** NA **			None
34	M52A						Yes				None
35	M53						Yes	Default			None
36	M54						Yes	Default			None
37	M55						Yes	Default			None
38	M56						Yes	** NA **			None
39	M57						Yes	** NA **			None
40	M58A	OOOOOX	OOOOOX				Yes	Default			None
41	M59A	OOOOOX	OOOOOX				Yes	Default			None
42	M60						Yes	** NA **			None
43	M61						Yes	** NA **			None
44	M62						Yes	** NA **			None
45	M63						Yes	** NA **			None
46	M64						Yes	** NA **			None
47	M65		BenPIN				Yes	** NA **			None
48	M66						Yes				None
49	M67		BenPIN				Yes	** NA **			None
50	M68						Yes	** NA **			None
51	M69						Yes	** NA **			None
52	M70		BenPIN				Yes	** NA **			None
53	M71						Yes				None
54	M72		BenPIN				Yes	** NA **			None
55	M73						Yes	** NA **			None
56	M74						Yes	** NA **			None
57	M75						Yes	** NA **			None
58	M76A						Yes				None
59	M77A						Yes	Default			None
60	M78						Yes	Default			None
61	M79A						Yes	Default			None
62	M80A						Yes	** NA **			None
63	M81						Yes	** NA **			None
64	M82	OOOOOX	OOOOOX				Yes	Default			None
65	M83A	OOOOOX	OOOOOX				Yes	Default			None
66	M84A						Yes	** NA **			None
67	M85A						Yes	** NA **			None
68	M86						Yes	** NA **			None
69	M87						Yes	** NA **			None
70	M88A						Yes	** NA **			None
71	M89		BenPIN				Yes	** NA **			None
72	M90						Yes				None
73	M91A		BenPIN				Yes	** NA **			None
74	M92A						Yes	** NA **			None



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
52	MP3C	Y	-31.65	4.29
53	MP3C	My	.025	4.29
54	MP3C	Mz	-.000592	4.29
55	MP3A	Y	-31.65	.46
56	MP3A	My	-.016	.46
57	MP3A	Mz	-.02	.46
58	MP3A	Y	-31.65	4.29
59	MP3A	My	-.016	4.29
60	MP3A	Mz	-.02	4.29
61	MP3B	Y	-31.65	.46
62	MP3B	My	.025	.46
63	MP3B	Mz	-.004	.46
64	MP3B	Y	-31.65	4.29
65	MP3B	My	.025	4.29
66	MP3B	Mz	-.004	4.29
67	MP3C	Y	-31.65	.46
68	MP3C	My	-.005	.46
69	MP3C	Mz	.025	.46
70	MP3C	Y	-31.65	4.29
71	MP3C	My	-.005	4.29
72	MP3C	Mz	.025	4.29
73	MP2A	Y	-43.55	1
74	MP2A	My	-.022	1
75	MP2A	Mz	0	1
76	MP2A	Y	-43.55	3
77	MP2A	My	-.022	3
78	MP2A	Mz	0	3
79	MP2B	Y	-43.55	1
80	MP2B	My	.011	1
81	MP2B	Mz	-.019	1
82	MP2B	Y	-43.55	3
83	MP2B	My	.011	3
84	MP2B	Mz	-.019	3
85	MP2C	Y	-43.55	1
86	MP2C	My	.014	1
87	MP2C	Mz	.017	1
88	MP2C	Y	-43.55	3
89	MP2C	My	.014	3
90	MP2C	Mz	.017	3
91	MP3A	Y	-84.4	1.5
92	MP3A	My	.028	1.5
93	MP3A	Mz	0	1.5
94	MP3B	Y	-84.4	1.5
95	MP3B	My	-.014	1.5
96	MP3B	Mz	.024	1.5
97	MP3C	Y	-84.4	1.5
98	MP3C	My	-.014	1.5
99	MP3C	Mz	-.024	1.5
100	MP4A	Y	-70.3	1.5
101	MP4A	My	.023	1.5
102	MP4A	Mz	0	1.5
103	MP4B	Y	-70.3	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
104	MP4B	My	-.012	1.5
105	MP4B	Mz	.02	1.5
106	MP4C	Y	-70.3	1.5
107	MP4C	My	-.012	1.5
108	MP4C	Mz	-.02	1.5
109	MP3A	Y	-10.4	.25
110	MP3A	My	.002	.25
111	MP3A	Mz	0	.25
112	MP3B	Y	-10.4	.25
113	MP3B	My	-.000867	.25
114	MP3B	Mz	.002	.25
115	MP3C	Y	-10.4	.25
116	MP3C	My	-.000867	.25
117	MP3C	Mz	-.002	.25

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	Y	-63.104	.25
2	MP1A	My	-.032	.25
3	MP1A	Mz	0	.25
4	MP1A	Y	-63.104	3.75
5	MP1A	My	-.032	3.75
6	MP1A	Mz	0	3.75
7	MP1B	Y	-63.104	.25
8	MP1B	My	.016	.25
9	MP1B	Mz	-.027	.25
10	MP1B	Y	-63.104	3.75
11	MP1B	My	.016	3.75
12	MP1B	Mz	-.027	3.75
13	MP1C	Y	-63.104	.25
14	MP1C	My	.02	.25
15	MP1C	Mz	.024	.25
16	MP1C	Y	-63.104	3.75
17	MP1C	My	.02	3.75
18	MP1C	Mz	.024	3.75
19	MP4A	Y	-63.104	.25
20	MP4A	My	-.032	.25
21	MP4A	Mz	0	.25
22	MP4A	Y	-63.104	3.75
23	MP4A	My	-.032	3.75
24	MP4A	Mz	0	3.75
25	MP4B	Y	-63.104	.25
26	MP4B	My	.016	.25
27	MP4B	Mz	-.027	.25
28	MP4B	Y	-63.104	3.75
29	MP4B	My	.016	3.75
30	MP4B	Mz	-.027	3.75
31	MP4C	Y	-63.104	.25
32	MP4C	My	.02	.25
33	MP4C	Mz	.024	.25
34	MP4C	Y	-63.104	3.75



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
35	MP4C	My	.02	3.75
36	MP4C	Mz	.024	3.75
37	MP3A	Y	-69.963	.46
38	MP3A	My	-.035	.46
39	MP3A	Mz	.044	.46
40	MP3A	Y	-69.963	4.29
41	MP3A	My	-.035	4.29
42	MP3A	Mz	.044	4.29
43	MP3B	Y	-69.963	.46
44	MP3B	My	-.02	.46
45	MP3B	Mz	-.052	.46
46	MP3B	Y	-69.963	4.29
47	MP3B	My	-.02	4.29
48	MP3B	Mz	-.052	4.29
49	MP3C	Y	-69.963	.46
50	MP3C	My	.056	.46
51	MP3C	Mz	-.001	.46
52	MP3C	Y	-69.963	4.29
53	MP3C	My	.056	4.29
54	MP3C	Mz	-.001	4.29
55	MP3A	Y	-69.963	.46
56	MP3A	My	-.035	.46
57	MP3A	Mz	-.044	.46
58	MP3A	Y	-69.963	4.29
59	MP3A	My	-.035	4.29
60	MP3A	Mz	-.044	4.29
61	MP3B	Y	-69.963	.46
62	MP3B	My	.055	.46
63	MP3B	Mz	-.008	.46
64	MP3B	Y	-69.963	4.29
65	MP3B	My	.055	4.29
66	MP3B	Mz	-.008	4.29
67	MP3C	Y	-69.963	.46
68	MP3C	My	-.011	.46
69	MP3C	Mz	.055	.46
70	MP3C	Y	-69.963	4.29
71	MP3C	My	-.011	4.29
72	MP3C	Mz	.055	4.29
73	MP2A	Y	-35.645	1
74	MP2A	My	-.018	1
75	MP2A	Mz	0	1
76	MP2A	Y	-35.645	3
77	MP2A	My	-.018	3
78	MP2A	Mz	0	3
79	MP2B	Y	-35.645	1
80	MP2B	My	.009	1
81	MP2B	Mz	-.015	1
82	MP2B	Y	-35.645	3
83	MP2B	My	.009	3
84	MP2B	Mz	-.015	3
85	MP2C	Y	-35.645	1
86	MP2C	My	.011	1



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
87	MP2C	Mz	.014	1
88	MP2C	Y	-35.645	3
89	MP2C	My	.011	3
90	MP2C	Mz	.014	3
91	MP3A	Y	-44.91	1.5
92	MP3A	My	.015	1.5
93	MP3A	Mz	0	1.5
94	MP3B	Y	-44.91	1.5
95	MP3B	My	-.007	1.5
96	MP3B	Mz	.013	1.5
97	MP3C	Y	-44.91	1.5
98	MP3C	My	-.007	1.5
99	MP3C	Mz	-.013	1.5
100	MP4A	Y	-40.388	1.5
101	MP4A	My	.013	1.5
102	MP4A	Mz	0	1.5
103	MP4B	Y	-40.388	1.5
104	MP4B	My	-.007	1.5
105	MP4B	Mz	.012	1.5
106	MP4C	Y	-40.388	1.5
107	MP4C	My	-.007	1.5
108	MP4C	Mz	-.012	1.5
109	MP3A	Y	-10.743	.25
110	MP3A	My	.002	.25
111	MP3A	Mz	0	.25
112	MP3B	Y	-10.743	.25
113	MP3B	My	-.000895	.25
114	MP3B	Mz	.002	.25
115	MP3C	Y	-10.743	.25
116	MP3C	My	-.000895	.25
117	MP3C	Mz	-.002	.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	0	.25
2	MP1A	Z	-128.059	.25
3	MP1A	Mx	0	.25
4	MP1A	X	0	3.75
5	MP1A	Z	-128.059	3.75
6	MP1A	Mx	0	3.75
7	MP1B	X	0	.25
8	MP1B	Z	-116.731	.25
9	MP1B	Mx	.051	.25
10	MP1B	X	0	3.75
11	MP1B	Z	-116.731	3.75
12	MP1B	Mx	.051	3.75
13	MP1C	X	0	.25
14	MP1C	Z	-119.196	.25
15	MP1C	Mx	-.046	.25
16	MP1C	X	0	3.75
17	MP1C	Z	-119.196	3.75



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	62.141	.25
2	MP1A	Z	-107.632	.25
3	MP1A	Mx	-.031	.25
4	MP1A	X	62.141	3.75
5	MP1A	Z	-107.632	3.75
6	MP1A	Mx	-.031	3.75
7	MP1B	X	56.478	.25
8	MP1B	Z	-97.822	.25
9	MP1B	Mx	.056	.25
10	MP1B	X	56.478	3.75
11	MP1B	Z	-97.822	3.75
12	MP1B	Mx	.056	3.75
13	MP1C	X	63.146	.25
14	MP1C	Z	-109.372	.25
15	MP1C	Mx	-.022	.25
16	MP1C	X	63.146	3.75
17	MP1C	Z	-109.372	3.75
18	MP1C	Mx	-.022	3.75
19	MP4A	X	62.141	.25
20	MP4A	Z	-107.632	.25
21	MP4A	Mx	-.031	.25
22	MP4A	X	62.141	3.75
23	MP4A	Z	-107.632	3.75
24	MP4A	Mx	-.031	3.75
25	MP4B	X	56.478	.25
26	MP4B	Z	-97.822	.25
27	MP4B	Mx	.056	.25
28	MP4B	X	56.478	3.75
29	MP4B	Z	-97.822	3.75
30	MP4B	Mx	.056	3.75
31	MP4C	X	63.146	.25
32	MP4C	Z	-109.372	.25
33	MP4C	Mx	-.022	.25
34	MP4C	X	63.146	3.75
35	MP4C	Z	-109.372	3.75
36	MP4C	Mx	-.022	3.75
37	MP3A	X	86.709	.46
38	MP3A	Z	-150.184	.46
39	MP3A	Mx	-.137	.46
40	MP3A	X	86.709	4.29
41	MP3A	Z	-150.184	4.29
42	MP3A	Mx	-.137	4.29
43	MP3B	X	62.294	.46
44	MP3B	Z	-107.897	.46
45	MP3B	Mx	.062	.46
46	MP3B	X	62.294	4.29
47	MP3B	Z	-107.897	4.29
48	MP3B	Mx	.062	4.29
49	MP3C	X	91.039	.46
50	MP3C	Z	-157.684	.46
51	MP3C	Mx	.076	.46
52	MP3C	X	91.039	4.29



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
53	MP3C	Z	-157.684	4.29
54	MP3C	Mx	.076	4.29
55	MP3A	X	86.709	.46
56	MP3A	Z	-150.184	.46
57	MP3A	Mx	.051	.46
58	MP3A	X	86.709	4.29
59	MP3A	Z	-150.184	4.29
60	MP3A	Mx	.051	4.29
61	MP3B	X	62.294	.46
62	MP3B	Z	-107.897	.46
63	MP3B	Mx	.062	.46
64	MP3B	X	62.294	4.29
65	MP3B	Z	-107.897	4.29
66	MP3B	Mx	.062	4.29
67	MP3C	X	91.039	.46
68	MP3C	Z	-157.684	.46
69	MP3C	Mx	-.138	.46
70	MP3C	X	91.039	4.29
71	MP3C	Z	-157.684	4.29
72	MP3C	Mx	-.138	4.29
73	MP2A	X	41.584	1
74	MP2A	Z	-72.025	1
75	MP2A	Mx	-.021	1
76	MP2A	X	41.584	3
77	MP2A	Z	-72.025	3
78	MP2A	Mx	-.021	3
79	MP2B	X	19.223	1
80	MP2B	Z	-33.295	1
81	MP2B	Mx	.019	1
82	MP2B	X	19.223	3
83	MP2B	Z	-33.295	3
84	MP2B	Mx	.019	3
85	MP2C	X	45.55	1
86	MP2C	Z	-78.894	1
87	MP2C	Mx	-.016	1
88	MP2C	X	45.55	3
89	MP2C	Z	-78.894	3
90	MP2C	Mx	-.016	3
91	MP3A	X	35.711	1.5
92	MP3A	Z	-61.853	1.5
93	MP3A	Mx	.012	1.5
94	MP3B	X	26.028	1.5
95	MP3B	Z	-45.082	1.5
96	MP3B	Mx	-.017	1.5
97	MP3C	X	35.711	1.5
98	MP3C	Z	-61.853	1.5
99	MP3C	Mx	.012	1.5
100	MP4A	X	34.474	1.5
101	MP4A	Z	-59.711	1.5
102	MP4A	Mx	.011	1.5
103	MP4B	X	21.083	1.5
104	MP4B	Z	-36.517	1.5



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
105	MP4B	Mx	-.014	1.5
106	MP4C	X	34.474	1.5
107	MP4C	Z	-59.711	1.5
108	MP4C	Mx	.011	1.5
109	MP3A	X	7.111	.25
110	MP3A	Z	-12.316	.25
111	MP3A	Mx	.001	.25
112	MP3B	X	5.331	.25
113	MP3B	Z	-9.233	.25
114	MP3B	Mx	-.002	.25
115	MP3C	X	7.111	.25
116	MP3C	Z	-12.316	.25
117	MP3C	Mx	.001	.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	101.092	.25
2	MP1A	Z	-58.366	.25
3	MP1A	Mx	-.051	.25
4	MP1A	X	101.092	3.75
5	MP1A	Z	-58.366	3.75
6	MP1A	Mx	-.051	3.75
7	MP1B	X	101.092	.25
8	MP1B	Z	-58.366	.25
9	MP1B	Mx	.051	.25
10	MP1B	X	101.092	3.75
11	MP1B	Z	-58.366	3.75
12	MP1B	Mx	.051	3.75
13	MP1C	X	110.508	.25
14	MP1C	Z	-63.802	.25
15	MP1C	Mx	.011	.25
16	MP1C	X	110.508	3.75
17	MP1C	Z	-63.802	3.75
18	MP1C	Mx	.011	3.75
19	MP4A	X	101.092	.25
20	MP4A	Z	-58.366	.25
21	MP4A	Mx	-.051	.25
22	MP4A	X	101.092	3.75
23	MP4A	Z	-58.366	3.75
24	MP4A	Mx	-.051	3.75
25	MP4B	X	101.092	.25
26	MP4B	Z	-58.366	.25
27	MP4B	Mx	.051	.25
28	MP4B	X	101.092	3.75
29	MP4B	Z	-58.366	3.75
30	MP4B	Mx	.051	3.75
31	MP4C	X	110.508	.25
32	MP4C	Z	-63.802	.25
33	MP4C	Mx	.011	.25
34	MP4C	X	110.508	3.75
35	MP4C	Z	-63.802	3.75



Company : Tower Engineering Solutions, LLC
 Designer : NL
 Job Number : Project No. 10037784
 Model Name : 467144-VZW_MT_LO_H

Apr 27, 2021
 3:57 PM
 Checked By: DX

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
36	MP4C	Mx	.011	3.75
37	MP3A	X	121.992	.46
38	MP3A	Z	-70.432	.46
39	MP3A	Mx	-.105	.46
40	MP3A	X	121.992	4.29
41	MP3A	Z	-70.432	4.29
42	MP3A	Mx	-.105	4.29
43	MP3B	X	121.992	.46
44	MP3B	Z	-70.432	.46
45	MP3B	Mx	.017	.46
46	MP3B	X	121.992	4.29
47	MP3B	Z	-70.432	4.29
48	MP3B	Mx	.017	4.29
49	MP3C	X	162.579	.46
50	MP3C	Z	-93.865	.46
51	MP3C	Mx	.132	.46
52	MP3C	X	162.579	4.29
53	MP3C	Z	-93.865	4.29
54	MP3C	Mx	.132	4.29
55	MP3A	X	121.992	.46
56	MP3A	Z	-70.432	.46
57	MP3A	Mx	-.017	.46
58	MP3A	X	121.992	4.29
59	MP3A	Z	-70.432	4.29
60	MP3A	Mx	-.017	4.29
61	MP3B	X	121.992	.46
62	MP3B	Z	-70.432	.46
63	MP3B	Mx	.105	.46
64	MP3B	X	121.992	4.29
65	MP3B	Z	-70.432	4.29
66	MP3B	Mx	.105	4.29
67	MP3C	X	162.579	.46
68	MP3C	Z	-93.865	.46
69	MP3C	Mx	-.099	.46
70	MP3C	X	162.579	4.29
71	MP3C	Z	-93.865	4.29
72	MP3C	Mx	-.099	4.29
73	MP2A	X	46.205	1
74	MP2A	Z	-26.677	1
75	MP2A	Mx	-.023	1
76	MP2A	X	46.205	3
77	MP2A	Z	-26.677	3
78	MP2A	Mx	-.023	3
79	MP2B	X	46.205	1
80	MP2B	Z	-26.677	1
81	MP2B	Mx	.023	1
82	MP2B	X	46.205	3
83	MP2B	Z	-26.677	3
84	MP2B	Mx	.023	3
85	MP2C	X	83.378	1
86	MP2C	Z	-48.138	1
87	MP2C	Mx	.008	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
71	MP3C	Z	0	4.29
72	MP3C	Mx	-.026	4.29
73	MP2A	X	38.446	1
74	MP2A	Z	0	1
75	MP2A	Mx	-.019	1
76	MP2A	X	38.446	3
77	MP2A	Z	0	3
78	MP2A	Mx	-.019	3
79	MP2B	X	83.167	1
80	MP2B	Z	0	1
81	MP2B	Mx	.021	1
82	MP2B	X	83.167	3
83	MP2B	Z	0	3
84	MP2B	Mx	.021	3
85	MP2C	X	73.437	1
86	MP2C	Z	0	1
87	MP2C	Mx	.024	1
88	MP2C	X	73.437	3
89	MP2C	Z	0	3
90	MP2C	Mx	.024	3
91	MP3A	X	52.056	1.5
92	MP3A	Z	0	1.5
93	MP3A	Mx	.017	1.5
94	MP3B	X	71.421	1.5
95	MP3B	Z	0	1.5
96	MP3B	Mx	-.012	1.5
97	MP3C	X	71.421	1.5
98	MP3C	Z	0	1.5
99	MP3C	Mx	-.012	1.5
100	MP4A	X	42.166	1.5
101	MP4A	Z	0	1.5
102	MP4A	Mx	.014	1.5
103	MP4B	X	68.949	1.5
104	MP4B	Z	0	1.5
105	MP4B	Mx	-.011	1.5
106	MP4C	X	68.949	1.5
107	MP4C	Z	0	1.5
108	MP4C	Mx	-.011	1.5
109	MP3A	X	10.661	.25
110	MP3A	Z	0	.25
111	MP3A	Mx	.002	.25
112	MP3B	X	14.222	.25
113	MP3B	Z	0	.25
114	MP3B	Mx	-.001	.25
115	MP3C	X	14.222	.25
116	MP3C	Z	0	.25
117	MP3C	Mx	-.001	.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	101.092	.25



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
2	MP1A	Z	58.366	.25
3	MP1A	Mx	-.051	.25
4	MP1A	X	101.092	3.75
5	MP1A	Z	58.366	3.75
6	MP1A	Mx	-.051	3.75
7	MP1B	X	110.902	.25
8	MP1B	Z	64.029	.25
9	MP1B	Mx	0	.25
10	MP1B	X	110.902	3.75
11	MP1B	Z	64.029	3.75
12	MP1B	Mx	0	3.75
13	MP1C	X	99.352	.25
14	MP1C	Z	57.361	.25
15	MP1C	Mx	.054	.25
16	MP1C	X	99.352	3.75
17	MP1C	Z	57.361	3.75
18	MP1C	Mx	.054	3.75
19	MP4A	X	101.092	.25
20	MP4A	Z	58.366	.25
21	MP4A	Mx	-.051	.25
22	MP4A	X	101.092	3.75
23	MP4A	Z	58.366	3.75
24	MP4A	Mx	-.051	3.75
25	MP4B	X	110.902	.25
26	MP4B	Z	64.029	.25
27	MP4B	Mx	0	.25
28	MP4B	X	110.902	3.75
29	MP4B	Z	64.029	3.75
30	MP4B	Mx	0	3.75
31	MP4C	X	99.352	.25
32	MP4C	Z	57.361	.25
33	MP4C	Mx	.054	.25
34	MP4C	X	99.352	3.75
35	MP4C	Z	57.361	3.75
36	MP4C	Mx	.054	3.75
37	MP3A	X	121.992	.46
38	MP3A	Z	70.432	.46
39	MP3A	Mx	-.017	.46
40	MP3A	X	121.992	4.29
41	MP3A	Z	70.432	4.29
42	MP3A	Mx	-.017	4.29
43	MP3B	X	164.279	.46
44	MP3B	Z	94.847	.46
45	MP3B	Mx	-.119	.46
46	MP3B	X	164.279	4.29
47	MP3B	Z	94.847	4.29
48	MP3B	Mx	-.119	4.29
49	MP3C	X	114.492	.46
50	MP3C	Z	66.102	.46
51	MP3C	Mx	.09	.46
52	MP3C	X	114.492	4.29
53	MP3C	Z	66.102	4.29



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
106	MP4C	X	44.248	1.5
107	MP4C	Z	25.547	1.5
108	MP4C	Mx	-.015	1.5
109	MP3A	X	10.261	.25
110	MP3A	Z	5.924	.25
111	MP3A	Mx	.002	.25
112	MP3B	X	13.344	.25
113	MP3B	Z	7.704	.25
114	MP3B	Mx	0	.25
115	MP3C	X	10.261	.25
116	MP3C	Z	5.924	.25
117	MP3C	Mx	-.002	.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	62.141	.25
2	MP1A	Z	107.632	.25
3	MP1A	Mx	-.031	.25
4	MP1A	X	62.141	3.75
5	MP1A	Z	107.632	3.75
6	MP1A	Mx	-.031	3.75
7	MP1B	X	62.141	.25
8	MP1B	Z	107.632	.25
9	MP1B	Mx	-.031	.25
10	MP1B	X	62.141	3.75
11	MP1B	Z	107.632	3.75
12	MP1B	Mx	-.031	3.75
13	MP1C	X	56.705	.25
14	MP1C	Z	98.217	.25
15	MP1C	Mx	.056	.25
16	MP1C	X	56.705	3.75
17	MP1C	Z	98.217	3.75
18	MP1C	Mx	.056	3.75
19	MP4A	X	62.141	.25
20	MP4A	Z	107.632	.25
21	MP4A	Mx	-.031	.25
22	MP4A	X	62.141	3.75
23	MP4A	Z	107.632	3.75
24	MP4A	Mx	-.031	3.75
25	MP4B	X	62.141	.25
26	MP4B	Z	107.632	.25
27	MP4B	Mx	-.031	.25
28	MP4B	X	62.141	3.75
29	MP4B	Z	107.632	3.75
30	MP4B	Mx	-.031	3.75
31	MP4C	X	56.705	.25
32	MP4C	Z	98.217	.25
33	MP4C	Mx	.056	.25
34	MP4C	X	56.705	3.75
35	MP4C	Z	98.217	3.75
36	MP4C	Mx	.056	3.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft, %]
89	MP2C	Z	34.852	3
90	MP2C	Mx	.02	3
91	MP3A	X	35.711	1.5
92	MP3A	Z	61.853	1.5
93	MP3A	Mx	.012	1.5
94	MP3B	X	35.711	1.5
95	MP3B	Z	61.853	1.5
96	MP3B	Mx	.012	1.5
97	MP3C	X	26.028	1.5
98	MP3C	Z	45.082	1.5
99	MP3C	Mx	-.017	1.5
100	MP4A	X	34.474	1.5
101	MP4A	Z	59.711	1.5
102	MP4A	Mx	.011	1.5
103	MP4B	X	34.474	1.5
104	MP4B	Z	59.711	1.5
105	MP4B	Mx	.011	1.5
106	MP4C	X	21.083	1.5
107	MP4C	Z	36.517	1.5
108	MP4C	Mx	-.014	1.5
109	MP3A	X	7.111	.25
110	MP3A	Z	12.316	.25
111	MP3A	Mx	.001	.25
112	MP3B	X	7.111	.25
113	MP3B	Z	12.316	.25
114	MP3B	Mx	.001	.25
115	MP3C	X	5.331	.25
116	MP3C	Z	9.233	.25
117	MP3C	Mx	-.002	.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft, %]
1	MP1A	X	0	.25
2	MP1A	Z	128.059	.25
3	MP1A	Mx	0	.25
4	MP1A	X	0	3.75
5	MP1A	Z	128.059	3.75
6	MP1A	Mx	0	3.75
7	MP1B	X	0	.25
8	MP1B	Z	116.731	.25
9	MP1B	Mx	-.051	.25
10	MP1B	X	0	3.75
11	MP1B	Z	116.731	3.75
12	MP1B	Mx	-.051	3.75
13	MP1C	X	0	.25
14	MP1C	Z	119.196	.25
15	MP1C	Mx	.046	.25
16	MP1C	X	0	3.75
17	MP1C	Z	119.196	3.75
18	MP1C	Mx	.046	3.75
19	MP4A	X	0	.25



Company : Tower Engineering Solutions, LLC
 Designer : NL
 Job Number : Project No. 10037784
 Model Name : 467144-VZW_MT_LO_H

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft, %]
72	MP3C	Mx	.119	4.29
73	MP2A	X	0	1
74	MP2A	Z	98.074	1
75	MP2A	Mx	0	1
76	MP2A	X	0	3
77	MP2A	Z	98.074	3
78	MP2A	Mx	0	3
79	MP2B	X	0	1
80	MP2B	Z	53.353	1
81	MP2B	Mx	-.023	1
82	MP2B	X	0	3
83	MP2B	Z	53.353	3
84	MP2B	Mx	-.023	3
85	MP2C	X	0	1
86	MP2C	Z	63.083	1
87	MP2C	Mx	.024	1
88	MP2C	X	0	3
89	MP2C	Z	63.083	3
90	MP2C	Mx	.024	3
91	MP3A	X	0	1.5
92	MP3A	Z	77.876	1.5
93	MP3A	Mx	0	1.5
94	MP3B	X	0	1.5
95	MP3B	Z	58.511	1.5
96	MP3B	Mx	.017	1.5
97	MP3C	X	0	1.5
98	MP3C	Z	58.511	1.5
99	MP3C	Mx	-.017	1.5
100	MP4A	X	0	1.5
101	MP4A	Z	77.876	1.5
102	MP4A	Mx	0	1.5
103	MP4B	X	0	1.5
104	MP4B	Z	51.093	1.5
105	MP4B	Mx	.015	1.5
106	MP4C	X	0	1.5
107	MP4C	Z	51.093	1.5
108	MP4C	Mx	-.015	1.5
109	MP3A	X	0	.25
110	MP3A	Z	15.409	.25
111	MP3A	Mx	0	.25
112	MP3B	X	0	.25
113	MP3B	Z	11.848	.25
114	MP3B	Mx	.002	.25
115	MP3C	X	0	.25
116	MP3C	Z	11.848	.25
117	MP3C	Mx	-.002	.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft, %]
1	MP1A	X	-62.141	.25
2	MP1A	Z	107.632	.25



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
3	MP1A	Mx	.031	.25
4	MP1A	X	-62.141	3.75
5	MP1A	Z	107.632	3.75
6	MP1A	Mx	.031	3.75
7	MP1B	X	-56.478	.25
8	MP1B	Z	97.822	.25
9	MP1B	Mx	-.056	.25
10	MP1B	X	-56.478	3.75
11	MP1B	Z	97.822	3.75
12	MP1B	Mx	-.056	3.75
13	MP1C	X	-63.146	.25
14	MP1C	Z	109.372	.25
15	MP1C	Mx	.022	.25
16	MP1C	X	-63.146	3.75
17	MP1C	Z	109.372	3.75
18	MP1C	Mx	.022	3.75
19	MP4A	X	-62.141	.25
20	MP4A	Z	107.632	.25
21	MP4A	Mx	.031	.25
22	MP4A	X	-62.141	3.75
23	MP4A	Z	107.632	3.75
24	MP4A	Mx	.031	3.75
25	MP4B	X	-56.478	.25
26	MP4B	Z	97.822	.25
27	MP4B	Mx	-.056	.25
28	MP4B	X	-56.478	3.75
29	MP4B	Z	97.822	3.75
30	MP4B	Mx	-.056	3.75
31	MP4C	X	-63.146	.25
32	MP4C	Z	109.372	.25
33	MP4C	Mx	.022	.25
34	MP4C	X	-63.146	3.75
35	MP4C	Z	109.372	3.75
36	MP4C	Mx	.022	3.75
37	MP3A	X	-86.709	.46
38	MP3A	Z	150.184	.46
39	MP3A	Mx	.137	.46
40	MP3A	X	-86.709	4.29
41	MP3A	Z	150.184	4.29
42	MP3A	Mx	.137	4.29
43	MP3B	X	-62.294	.46
44	MP3B	Z	107.897	.46
45	MP3B	Mx	-.062	.46
46	MP3B	X	-62.294	4.29
47	MP3B	Z	107.897	4.29
48	MP3B	Mx	-.062	4.29
49	MP3C	X	-91.039	.46
50	MP3C	Z	157.684	.46
51	MP3C	Mx	-.076	.46
52	MP3C	X	-91.039	4.29
53	MP3C	Z	157.684	4.29
54	MP3C	Mx	-.076	4.29



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
55	MP3A	X	-86.709	.46
56	MP3A	Z	150.184	.46
57	MP3A	Mx	-.051	.46
58	MP3A	X	-86.709	4.29
59	MP3A	Z	150.184	4.29
60	MP3A	Mx	-.051	4.29
61	MP3B	X	-62.294	.46
62	MP3B	Z	107.897	.46
63	MP3B	Mx	-.062	.46
64	MP3B	X	-62.294	4.29
65	MP3B	Z	107.897	4.29
66	MP3B	Mx	-.062	4.29
67	MP3C	X	-91.039	.46
68	MP3C	Z	157.684	.46
69	MP3C	Mx	.138	.46
70	MP3C	X	-91.039	4.29
71	MP3C	Z	157.684	4.29
72	MP3C	Mx	.138	4.29
73	MP2A	X	-41.584	1
74	MP2A	Z	72.025	1
75	MP2A	Mx	.021	1
76	MP2A	X	-41.584	3
77	MP2A	Z	72.025	3
78	MP2A	Mx	.021	3
79	MP2B	X	-19.223	1
80	MP2B	Z	33.295	1
81	MP2B	Mx	-.019	1
82	MP2B	X	-19.223	3
83	MP2B	Z	33.295	3
84	MP2B	Mx	-.019	3
85	MP2C	X	-45.55	1
86	MP2C	Z	78.894	1
87	MP2C	Mx	.016	1
88	MP2C	X	-45.55	3
89	MP2C	Z	78.894	3
90	MP2C	Mx	.016	3
91	MP3A	X	-35.711	1.5
92	MP3A	Z	61.853	1.5
93	MP3A	Mx	-.012	1.5
94	MP3B	X	-26.028	1.5
95	MP3B	Z	45.082	1.5
96	MP3B	Mx	.017	1.5
97	MP3C	X	-35.711	1.5
98	MP3C	Z	61.853	1.5
99	MP3C	Mx	-.012	1.5
100	MP4A	X	-34.474	1.5
101	MP4A	Z	59.711	1.5
102	MP4A	Mx	-.011	1.5
103	MP4B	X	-21.083	1.5
104	MP4B	Z	36.517	1.5
105	MP4B	Mx	.014	1.5
106	MP4C	X	-34.474	1.5



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
107	MP4C	Z	59.711	1.5
108	MP4C	Mx	-.011	1.5
109	MP3A	X	-7.111	.25
110	MP3A	Z	12.316	.25
111	MP3A	Mx	-.001	.25
112	MP3B	X	-5.331	.25
113	MP3B	Z	9.233	.25
114	MP3B	Mx	.002	.25
115	MP3C	X	-7.111	.25
116	MP3C	Z	12.316	.25
117	MP3C	Mx	-.001	.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-101.092	.25
2	MP1A	Z	58.366	.25
3	MP1A	Mx	.051	.25
4	MP1A	X	-101.092	3.75
5	MP1A	Z	58.366	3.75
6	MP1A	Mx	.051	3.75
7	MP1B	X	-101.092	.25
8	MP1B	Z	58.366	.25
9	MP1B	Mx	-.051	.25
10	MP1B	X	-101.092	3.75
11	MP1B	Z	58.366	3.75
12	MP1B	Mx	-.051	3.75
13	MP1C	X	-110.508	.25
14	MP1C	Z	63.802	.25
15	MP1C	Mx	-.011	.25
16	MP1C	X	-110.508	3.75
17	MP1C	Z	63.802	3.75
18	MP1C	Mx	-.011	3.75
19	MP4A	X	-101.092	.25
20	MP4A	Z	58.366	.25
21	MP4A	Mx	.051	.25
22	MP4A	X	-101.092	3.75
23	MP4A	Z	58.366	3.75
24	MP4A	Mx	.051	3.75
25	MP4B	X	-101.092	.25
26	MP4B	Z	58.366	.25
27	MP4B	Mx	-.051	.25
28	MP4B	X	-101.092	3.75
29	MP4B	Z	58.366	3.75
30	MP4B	Mx	-.051	3.75
31	MP4C	X	-110.508	.25
32	MP4C	Z	63.802	.25
33	MP4C	Mx	-.011	.25
34	MP4C	X	-110.508	3.75
35	MP4C	Z	63.802	3.75
36	MP4C	Mx	-.011	3.75
37	MP3A	X	-121.992	.46



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
21	MP4A	Mx	.056	.25
22	MP4A	X	-112.955	3.75
23	MP4A	Z	0	3.75
24	MP4A	Mx	.056	3.75
25	MP4B	X	-124.283	.25
26	MP4B	Z	0	.25
27	MP4B	Mx	-.031	.25
28	MP4B	X	-124.283	3.75
29	MP4B	Z	0	3.75
30	MP4B	Mx	-.031	3.75
31	MP4C	X	-121.818	.25
32	MP4C	Z	0	.25
33	MP4C	Mx	-.039	.25
34	MP4C	X	-121.818	3.75
35	MP4C	Z	0	3.75
36	MP4C	Mx	-.039	3.75
37	MP3A	X	-124.588	.46
38	MP3A	Z	0	.46
39	MP3A	Mx	.062	.46
40	MP3A	X	-124.588	4.29
41	MP3A	Z	0	4.29
42	MP3A	Mx	.062	4.29
43	MP3B	X	-173.417	.46
44	MP3B	Z	0	.46
45	MP3B	Mx	.051	.46
46	MP3B	X	-173.417	4.29
47	MP3B	Z	0	4.29
48	MP3B	Mx	.051	4.29
49	MP3C	X	-162.794	.46
50	MP3C	Z	0	.46
51	MP3C	Mx	-.13	.46
52	MP3C	X	-162.794	4.29
53	MP3C	Z	0	4.29
54	MP3C	Mx	-.13	4.29
55	MP3A	X	-124.588	.46
56	MP3A	Z	0	.46
57	MP3A	Mx	.062	.46
58	MP3A	X	-124.588	4.29
59	MP3A	Z	0	4.29
60	MP3A	Mx	.062	4.29
61	MP3B	X	-173.417	.46
62	MP3B	Z	0	.46
63	MP3B	Mx	-.137	.46
64	MP3B	X	-173.417	4.29
65	MP3B	Z	0	4.29
66	MP3B	Mx	-.137	4.29
67	MP3C	X	-162.794	.46
68	MP3C	Z	0	.46
69	MP3C	Mx	.026	.46
70	MP3C	X	-162.794	4.29
71	MP3C	Z	0	4.29
72	MP3C	Mx	.026	4.29

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
73	MP2A	X	-38.446	1
74	MP2A	Z	0	1
75	MP2A	Mx	.019	1
76	MP2A	X	-38.446	3
77	MP2A	Z	0	3
78	MP2A	Mx	.019	3
79	MP2B	X	-83.167	1
80	MP2B	Z	0	1
81	MP2B	Mx	-.021	1
82	MP2B	X	-83.167	3
83	MP2B	Z	0	3
84	MP2B	Mx	-.021	3
85	MP2C	X	-73.437	1
86	MP2C	Z	0	1
87	MP2C	Mx	-.024	1
88	MP2C	X	-73.437	3
89	MP2C	Z	0	3
90	MP2C	Mx	-.024	3
91	MP3A	X	-52.056	1.5
92	MP3A	Z	0	1.5
93	MP3A	Mx	-.017	1.5
94	MP3B	X	-71.421	1.5
95	MP3B	Z	0	1.5
96	MP3B	Mx	.012	1.5
97	MP3C	X	-71.421	1.5
98	MP3C	Z	0	1.5
99	MP3C	Mx	.012	1.5
100	MP4A	X	-42.166	1.5
101	MP4A	Z	0	1.5
102	MP4A	Mx	-.014	1.5
103	MP4B	X	-68.949	1.5
104	MP4B	Z	0	1.5
105	MP4B	Mx	.011	1.5
106	MP4C	X	-68.949	1.5
107	MP4C	Z	0	1.5
108	MP4C	Mx	.011	1.5
109	MP3A	X	-10.661	.25
110	MP3A	Z	0	.25
111	MP3A	Mx	-.002	.25
112	MP3B	X	-14.222	.25
113	MP3B	Z	0	.25
114	MP3B	Mx	.001	.25
115	MP3C	X	-14.222	.25
116	MP3C	Z	0	.25
117	MP3C	Mx	.001	.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-101.092	.25
2	MP1A	Z	-58.366	.25
3	MP1A	Mx	.051	.25



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
4	MP1A	X	-101.092	3.75
5	MP1A	Z	-58.366	3.75
6	MP1A	Mx	.051	3.75
7	MP1B	X	-110.902	.25
8	MP1B	Z	-64.029	.25
9	MP1B	Mx	0	.25
10	MP1B	X	-110.902	3.75
11	MP1B	Z	-64.029	3.75
12	MP1B	Mx	0	3.75
13	MP1C	X	-99.352	.25
14	MP1C	Z	-57.361	.25
15	MP1C	Mx	-.054	.25
16	MP1C	X	-99.352	3.75
17	MP1C	Z	-57.361	3.75
18	MP1C	Mx	-.054	3.75
19	MP4A	X	-101.092	.25
20	MP4A	Z	-58.366	.25
21	MP4A	Mx	.051	.25
22	MP4A	X	-101.092	3.75
23	MP4A	Z	-58.366	3.75
24	MP4A	Mx	.051	3.75
25	MP4B	X	-110.902	.25
26	MP4B	Z	-64.029	.25
27	MP4B	Mx	0	.25
28	MP4B	X	-110.902	3.75
29	MP4B	Z	-64.029	3.75
30	MP4B	Mx	0	3.75
31	MP4C	X	-99.352	.25
32	MP4C	Z	-57.361	.25
33	MP4C	Mx	-.054	.25
34	MP4C	X	-99.352	3.75
35	MP4C	Z	-57.361	3.75
36	MP4C	Mx	-.054	3.75
37	MP3A	X	-121.992	.46
38	MP3A	Z	-70.432	.46
39	MP3A	Mx	.017	.46
40	MP3A	X	-121.992	4.29
41	MP3A	Z	-70.432	4.29
42	MP3A	Mx	.017	4.29
43	MP3B	X	-164.279	.46
44	MP3B	Z	-94.847	.46
45	MP3B	Mx	.119	.46
46	MP3B	X	-164.279	4.29
47	MP3B	Z	-94.847	4.29
48	MP3B	Mx	.119	4.29
49	MP3C	X	-114.492	.46
50	MP3C	Z	-66.102	.46
51	MP3C	Mx	-.09	.46
52	MP3C	X	-114.492	4.29
53	MP3C	Z	-66.102	4.29
54	MP3C	Mx	-.09	4.29
55	MP3A	X	-121.992	.46



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
56	MP3A	Z	-70.432	.46
57	MP3A	Mx	.105	.46
58	MP3A	X	-121.992	4.29
59	MP3A	Z	-70.432	4.29
60	MP3A	Mx	.105	4.29
61	MP3B	X	-164.279	.46
62	MP3B	Z	-94.847	.46
63	MP3B	Mx	-.119	.46
64	MP3B	X	-164.279	4.29
65	MP3B	Z	-94.847	4.29
66	MP3B	Mx	-.119	4.29
67	MP3C	X	-114.492	.46
68	MP3C	Z	-66.102	.46
69	MP3C	Mx	-.034	.46
70	MP3C	X	-114.492	4.29
71	MP3C	Z	-66.102	4.29
72	MP3C	Mx	-.034	4.29
73	MP2A	X	-46.205	1
74	MP2A	Z	-26.677	1
75	MP2A	Mx	.023	1
76	MP2A	X	-46.205	3
77	MP2A	Z	-26.677	3
78	MP2A	Mx	.023	3
79	MP2B	X	-84.935	1
80	MP2B	Z	-49.037	1
81	MP2B	Mx	0	1
82	MP2B	X	-84.935	3
83	MP2B	Z	-49.037	3
84	MP2B	Mx	0	3
85	MP2C	X	-39.336	1
86	MP2C	Z	-22.711	1
87	MP2C	Mx	-.021	1
88	MP2C	X	-39.336	3
89	MP2C	Z	-22.711	3
90	MP2C	Mx	-.021	3
91	MP3A	X	-50.672	1.5
92	MP3A	Z	-29.256	1.5
93	MP3A	Mx	-.017	1.5
94	MP3B	X	-67.443	1.5
95	MP3B	Z	-38.938	1.5
96	MP3B	Mx	0	1.5
97	MP3C	X	-50.672	1.5
98	MP3C	Z	-29.256	1.5
99	MP3C	Mx	.017	1.5
100	MP4A	X	-44.248	1.5
101	MP4A	Z	-25.547	1.5
102	MP4A	Mx	-.015	1.5
103	MP4B	X	-67.443	1.5
104	MP4B	Z	-38.938	1.5
105	MP4B	Mx	0	1.5
106	MP4C	X	-44.248	1.5
107	MP4C	Z	-25.547	1.5



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
22	MP4A	X	0	3.75
23	MP4A	Z	-25.055	3.75
24	MP4A	Mx	0	3.75
25	MP4B	X	0	.25
26	MP4B	Z	-23.004	.25
27	MP4B	Mx	.01	.25
28	MP4B	X	0	3.75
29	MP4B	Z	-23.004	3.75
30	MP4B	Mx	.01	3.75
31	MP4C	X	0	.25
32	MP4C	Z	-23.45	.25
33	MP4C	Mx	-.009	.25
34	MP4C	X	0	3.75
35	MP4C	Z	-23.45	3.75
36	MP4C	Mx	-.009	3.75
37	MP3A	X	0	.46
38	MP3A	Z	-36.698	.46
39	MP3A	Mx	-.023	.46
40	MP3A	X	0	4.29
41	MP3A	Z	-36.698	4.29
42	MP3A	Mx	-.023	4.29
43	MP3B	X	0	.46
44	MP3B	Z	-27.95	.46
45	MP3B	Mx	.021	.46
46	MP3B	X	0	4.29
47	MP3B	Z	-27.95	4.29
48	MP3B	Mx	.021	4.29
49	MP3C	X	0	.46
50	MP3C	Z	-29.853	.46
51	MP3C	Mx	.000559	.46
52	MP3C	X	0	4.29
53	MP3C	Z	-29.853	4.29
54	MP3C	Mx	.000559	4.29
55	MP3A	X	0	.46
56	MP3A	Z	-36.698	.46
57	MP3A	Mx	.023	.46
58	MP3A	X	0	4.29
59	MP3A	Z	-36.698	4.29
60	MP3A	Mx	.023	4.29
61	MP3B	X	0	.46
62	MP3B	Z	-27.95	.46
63	MP3B	Mx	.003	.46
64	MP3B	X	0	4.29
65	MP3B	Z	-27.95	4.29
66	MP3B	Mx	.003	4.29
67	MP3C	X	0	.46
68	MP3C	Z	-29.853	.46
69	MP3C	Mx	-.023	.46
70	MP3C	X	0	4.29
71	MP3C	Z	-29.853	4.29
72	MP3C	Mx	-.023	4.29
73	MP2A	X	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
5	MP1A	Z	-21.106	3.75
6	MP1A	Mx	-.006	3.75
7	MP1B	X	11.16	.25
8	MP1B	Z	-19.33	.25
9	MP1B	Mx	.011	.25
10	MP1B	X	11.16	3.75
11	MP1B	Z	-19.33	3.75
12	MP1B	Mx	.011	3.75
13	MP1C	X	12.367	.25
14	MP1C	Z	-21.421	.25
15	MP1C	Mx	-.004	.25
16	MP1C	X	12.367	3.75
17	MP1C	Z	-21.421	3.75
18	MP1C	Mx	-.004	3.75
19	MP4A	X	12.186	.25
20	MP4A	Z	-21.106	.25
21	MP4A	Mx	-.006	.25
22	MP4A	X	12.186	3.75
23	MP4A	Z	-21.106	3.75
24	MP4A	Mx	-.006	3.75
25	MP4B	X	11.16	.25
26	MP4B	Z	-19.33	.25
27	MP4B	Mx	.011	.25
28	MP4B	X	11.16	3.75
29	MP4B	Z	-19.33	3.75
30	MP4B	Mx	.011	3.75
31	MP4C	X	12.367	.25
32	MP4C	Z	-21.421	.25
33	MP4C	Mx	-.004	.25
34	MP4C	X	12.367	3.75
35	MP4C	Z	-21.421	3.75
36	MP4C	Mx	-.004	3.75
37	MP3A	X	16.891	.46
38	MP3A	Z	-29.256	.46
39	MP3A	Mx	-.027	.46
40	MP3A	X	16.891	4.29
41	MP3A	Z	-29.256	4.29
42	MP3A	Mx	-.027	4.29
43	MP3B	X	12.517	.46
44	MP3B	Z	-21.68	.46
45	MP3B	Mx	.013	.46
46	MP3B	X	12.517	4.29
47	MP3B	Z	-21.68	4.29
48	MP3B	Mx	.013	4.29
49	MP3C	X	17.667	.46
50	MP3C	Z	-30.6	.46
51	MP3C	Mx	.015	.46
52	MP3C	X	17.667	4.29
53	MP3C	Z	-30.6	4.29
54	MP3C	Mx	.015	4.29
55	MP3A	X	16.891	.46
56	MP3A	Z	-29.256	.46



Company : Tower Engineering Solutions, LLC
 Designer : NL
 Job Number : Project No. 10037784
 Model Name : 467144-VZW_MT_LO_H

Apr 27, 2021
 3:57 PM
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Member Point Loads (BLC 16 : Antenna Wi (30 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
57	MP3A	Mx	.01	.46
58	MP3A	X	16.891	4.29
59	MP3A	Z	-29.256	4.29
60	MP3A	Mx	.01	4.29
61	MP3B	X	12.517	.46
62	MP3B	Z	-21.68	.46
63	MP3B	Mx	.013	.46
64	MP3B	X	12.517	4.29
65	MP3B	Z	-21.68	4.29
66	MP3B	Mx	.013	4.29
67	MP3C	X	17.667	.46
68	MP3C	Z	-30.6	.46
69	MP3C	Mx	-.027	.46
70	MP3C	X	17.667	4.29
71	MP3C	Z	-30.6	4.29
72	MP3C	Mx	-.027	4.29
73	MP2A	X	8.365	1
74	MP2A	Z	-14.489	1
75	MP2A	Mx	-.004	1
76	MP2A	X	8.365	3
77	MP2A	Z	-14.489	3
78	MP2A	Mx	-.004	3
79	MP2B	X	4.17	1
80	MP2B	Z	-7.223	1
81	MP2B	Mx	.004	1
82	MP2B	X	4.17	3
83	MP2B	Z	-7.223	3
84	MP2B	Mx	.004	3
85	MP2C	X	9.109	1
86	MP2C	Z	-15.778	1
87	MP2C	Mx	-.003	1
88	MP2C	X	9.109	3
89	MP2C	Z	-15.778	3
90	MP2C	Mx	-.003	3
91	MP3A	X	7.599	1.5
92	MP3A	Z	-13.163	1.5
93	MP3A	Mx	.003	1.5
94	MP3B	X	5.722	1.5
95	MP3B	Z	-9.91	1.5
96	MP3B	Mx	-.004	1.5
97	MP3C	X	7.599	1.5
98	MP3C	Z	-13.163	1.5
99	MP3C	Mx	.003	1.5
100	MP4A	X	7.362	1.5
101	MP4A	Z	-12.751	1.5
102	MP4A	Mx	.002	1.5
103	MP4B	X	4.77	1.5
104	MP4B	Z	-8.262	1.5
105	MP4B	Mx	-.003	1.5
106	MP4C	X	7.362	1.5
107	MP4C	Z	-12.751	1.5
108	MP4C	Mx	.002	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
109	MP3A	X	1.872	.25
110	MP3A	Z	-3.243	.25
111	MP3A	Mx	.000312	.25
112	MP3B	X	1.498	.25
113	MP3B	Z	-2.595	.25
114	MP3B	Mx	-.000499	.25
115	MP3C	X	1.872	.25
116	MP3C	Z	-3.243	.25
117	MP3C	Mx	.000312	.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	19.922	.25
2	MP1A	Z	-11.502	.25
3	MP1A	Mx	-.01	.25
4	MP1A	X	19.922	3.75
5	MP1A	Z	-11.502	3.75
6	MP1A	Mx	-.01	3.75
7	MP1B	X	19.922	.25
8	MP1B	Z	-11.502	.25
9	MP1B	Mx	.01	.25
10	MP1B	X	19.922	3.75
11	MP1B	Z	-11.502	3.75
12	MP1B	Mx	.01	3.75
13	MP1C	X	21.626	.25
14	MP1C	Z	-12.486	.25
15	MP1C	Mx	.002	.25
16	MP1C	X	21.626	3.75
17	MP1C	Z	-12.486	3.75
18	MP1C	Mx	.002	3.75
19	MP4A	X	19.922	.25
20	MP4A	Z	-11.502	.25
21	MP4A	Mx	-.01	.25
22	MP4A	X	19.922	3.75
23	MP4A	Z	-11.502	3.75
24	MP4A	Mx	-.01	3.75
25	MP4B	X	19.922	.25
26	MP4B	Z	-11.502	.25
27	MP4B	Mx	.01	.25
28	MP4B	X	19.922	3.75
29	MP4B	Z	-11.502	3.75
30	MP4B	Mx	.01	3.75
31	MP4C	X	21.626	.25
32	MP4C	Z	-12.486	.25
33	MP4C	Mx	.002	.25
34	MP4C	X	21.626	3.75
35	MP4C	Z	-12.486	3.75
36	MP4C	Mx	.002	3.75
37	MP3A	X	24.205	.46
38	MP3A	Z	-13.975	.46
39	MP3A	Mx	-.021	.46



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
40	MP3A	X	24.205	4.29
41	MP3A	Z	-13.975	4.29
42	MP3A	Mx	-.021	4.29
43	MP3B	X	24.205	.46
44	MP3B	Z	-13.975	.46
45	MP3B	Mx	.003	.46
46	MP3B	X	24.205	4.29
47	MP3B	Z	-13.975	4.29
48	MP3B	Mx	.003	4.29
49	MP3C	X	31.477	.46
50	MP3C	Z	-18.173	.46
51	MP3C	Mx	.026	.46
52	MP3C	X	31.477	4.29
53	MP3C	Z	-18.173	4.29
54	MP3C	Mx	.026	4.29
55	MP3A	X	24.205	.46
56	MP3A	Z	-13.975	.46
57	MP3A	Mx	-.003	.46
58	MP3A	X	24.205	4.29
59	MP3A	Z	-13.975	4.29
60	MP3A	Mx	-.003	4.29
61	MP3B	X	24.205	.46
62	MP3B	Z	-13.975	.46
63	MP3B	Mx	.021	.46
64	MP3B	X	24.205	4.29
65	MP3B	Z	-13.975	4.29
66	MP3B	Mx	.021	4.29
67	MP3C	X	31.477	.46
68	MP3C	Z	-18.173	.46
69	MP3C	Mx	-.019	.46
70	MP3C	X	31.477	4.29
71	MP3C	Z	-18.173	4.29
72	MP3C	Mx	-.019	4.29
73	MP2A	X	9.645	1
74	MP2A	Z	-5.569	1
75	MP2A	Mx	-.005	1
76	MP2A	X	9.645	3
77	MP2A	Z	-5.569	3
78	MP2A	Mx	-.005	3
79	MP2B	X	9.645	1
80	MP2B	Z	-5.569	1
81	MP2B	Mx	.005	1
82	MP2B	X	9.645	3
83	MP2B	Z	-5.569	3
84	MP2B	Mx	.005	3
85	MP2C	X	16.619	1
86	MP2C	Z	-9.595	1
87	MP2C	Mx	.002	1
88	MP2C	X	16.619	3
89	MP2C	Z	-9.595	3
90	MP2C	Mx	.002	3
91	MP3A	X	10.994	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
92	MP3A	Z	-6.348	1.5
93	MP3A	Mx	.004	1.5
94	MP3B	X	10.994	1.5
95	MP3B	Z	-6.348	1.5
96	MP3B	Mx	-.004	1.5
97	MP3C	X	14.247	1.5
98	MP3C	Z	-8.225	1.5
99	MP3C	Mx	0	1.5
100	MP4A	X	9.758	1.5
101	MP4A	Z	-5.634	1.5
102	MP4A	Mx	.003	1.5
103	MP4B	X	9.758	1.5
104	MP4B	Z	-5.634	1.5
105	MP4B	Mx	-.003	1.5
106	MP4C	X	14.247	1.5
107	MP4C	Z	-8.225	1.5
108	MP4C	Mx	0	1.5
109	MP3A	X	2.811	.25
110	MP3A	Z	-1.623	.25
111	MP3A	Mx	.000468	.25
112	MP3B	X	2.811	.25
113	MP3B	Z	-1.623	.25
114	MP3B	Mx	-.000469	.25
115	MP3C	X	3.458	.25
116	MP3C	Z	-1.997	.25
117	MP3C	Mx	0	.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	22.321	.25
2	MP1A	Z	0	.25
3	MP1A	Mx	-.011	.25
4	MP1A	X	22.321	3.75
5	MP1A	Z	0	3.75
6	MP1A	Mx	-.011	3.75
7	MP1B	X	24.371	.25
8	MP1B	Z	0	.25
9	MP1B	Mx	.006	.25
10	MP1B	X	24.371	3.75
11	MP1B	Z	0	3.75
12	MP1B	Mx	.006	3.75
13	MP1C	X	23.925	.25
14	MP1C	Z	0	.25
15	MP1C	Mx	.008	.25
16	MP1C	X	23.925	3.75
17	MP1C	Z	0	3.75
18	MP1C	Mx	.008	3.75
19	MP4A	X	22.321	.25
20	MP4A	Z	0	.25
21	MP4A	Mx	-.011	.25
22	MP4A	X	22.321	3.75



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
6	MP1A	Mx	-.01	3.75
7	MP1B	X	21.698	.25
8	MP1B	Z	12.527	.25
9	MP1B	Mx	0	.25
10	MP1B	X	21.698	3.75
11	MP1B	Z	12.527	3.75
12	MP1B	Mx	0	3.75
13	MP1C	X	19.607	.25
14	MP1C	Z	11.32	.25
15	MP1C	Mx	.011	.25
16	MP1C	X	19.607	3.75
17	MP1C	Z	11.32	3.75
18	MP1C	Mx	.011	3.75
19	MP4A	X	19.922	.25
20	MP4A	Z	11.502	.25
21	MP4A	Mx	-.01	.25
22	MP4A	X	19.922	3.75
23	MP4A	Z	11.502	3.75
24	MP4A	Mx	-.01	3.75
25	MP4B	X	21.698	.25
26	MP4B	Z	12.527	.25
27	MP4B	Mx	0	.25
28	MP4B	X	21.698	3.75
29	MP4B	Z	12.527	3.75
30	MP4B	Mx	0	3.75
31	MP4C	X	19.607	.25
32	MP4C	Z	11.32	.25
33	MP4C	Mx	.011	.25
34	MP4C	X	19.607	3.75
35	MP4C	Z	11.32	3.75
36	MP4C	Mx	.011	3.75
37	MP3A	X	24.205	.46
38	MP3A	Z	13.975	.46
39	MP3A	Mx	-.003	.46
40	MP3A	X	24.205	4.29
41	MP3A	Z	13.975	4.29
42	MP3A	Mx	-.003	4.29
43	MP3B	X	31.781	.46
44	MP3B	Z	18.349	.46
45	MP3B	Mx	-.023	.46
46	MP3B	X	31.781	4.29
47	MP3B	Z	18.349	4.29
48	MP3B	Mx	-.023	4.29
49	MP3C	X	22.862	.46
50	MP3C	Z	13.199	.46
51	MP3C	Mx	.018	.46
52	MP3C	X	22.862	4.29
53	MP3C	Z	13.199	4.29
54	MP3C	Mx	.018	4.29
55	MP3A	X	24.205	.46
56	MP3A	Z	13.975	.46
57	MP3A	Mx	-.021	.46



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP3A	X	24.205	4.29
59	MP3A	Z	13.975	4.29
60	MP3A	Mx	-.021	4.29
61	MP3B	X	31.781	.46
62	MP3B	Z	18.349	.46
63	MP3B	Mx	.023	.46
64	MP3B	X	31.781	4.29
65	MP3B	Z	18.349	4.29
66	MP3B	Mx	.023	4.29
67	MP3C	X	22.862	.46
68	MP3C	Z	13.199	.46
69	MP3C	Mx	.007	.46
70	MP3C	X	22.862	4.29
71	MP3C	Z	13.199	4.29
72	MP3C	Mx	.007	4.29
73	MP2A	X	9.645	1
74	MP2A	Z	5.569	1
75	MP2A	Mx	-.005	1
76	MP2A	X	9.645	3
77	MP2A	Z	5.569	3
78	MP2A	Mx	-.005	3
79	MP2B	X	16.911	1
80	MP2B	Z	9.764	1
81	MP2B	Mx	0	1
82	MP2B	X	16.911	3
83	MP2B	Z	9.764	3
84	MP2B	Mx	0	3
85	MP2C	X	8.356	1
86	MP2C	Z	4.825	1
87	MP2C	Mx	.005	1
88	MP2C	X	8.356	3
89	MP2C	Z	4.825	3
90	MP2C	Mx	.005	3
91	MP3A	X	10.994	1.5
92	MP3A	Z	6.348	1.5
93	MP3A	Mx	.004	1.5
94	MP3B	X	14.247	1.5
95	MP3B	Z	8.225	1.5
96	MP3B	Mx	0	1.5
97	MP3C	X	10.994	1.5
98	MP3C	Z	6.348	1.5
99	MP3C	Mx	-.004	1.5
100	MP4A	X	9.758	1.5
101	MP4A	Z	5.634	1.5
102	MP4A	Mx	.003	1.5
103	MP4B	X	14.247	1.5
104	MP4B	Z	8.225	1.5
105	MP4B	Mx	0	1.5
106	MP4C	X	9.758	1.5
107	MP4C	Z	5.634	1.5
108	MP4C	Mx	-.003	1.5
109	MP3A	X	2.811	.25



Company : Tower Engineering Solutions, LLC
Designer : NL
Job Number : Project No. 10037784
Model Name : 467144-VZW_MT_LO_H

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
24	MP4A	Mx	0	3.75
25	MP4B	X	0	.25
26	MP4B	Z	23.004	.25
27	MP4B	Mx	-.01	.25
28	MP4B	X	0	3.75
29	MP4B	Z	23.004	3.75
30	MP4B	Mx	-.01	3.75
31	MP4C	X	0	.25
32	MP4C	Z	23.45	.25
33	MP4C	Mx	.009	.25
34	MP4C	X	0	3.75
35	MP4C	Z	23.45	3.75
36	MP4C	Mx	.009	3.75
37	MP3A	X	0	.46
38	MP3A	Z	36.698	.46
39	MP3A	Mx	.023	.46
40	MP3A	X	0	4.29
41	MP3A	Z	36.698	4.29
42	MP3A	Mx	.023	4.29
43	MP3B	X	0	.46
44	MP3B	Z	27.95	.46
45	MP3B	Mx	-.021	.46
46	MP3B	X	0	4.29
47	MP3B	Z	27.95	4.29
48	MP3B	Mx	-.021	4.29
49	MP3C	X	0	.46
50	MP3C	Z	29.853	.46
51	MP3C	Mx	-.000559	.46
52	MP3C	X	0	4.29
53	MP3C	Z	29.853	4.29
54	MP3C	Mx	-.000559	4.29
55	MP3A	X	0	.46
56	MP3A	Z	36.698	.46
57	MP3A	Mx	-.023	.46
58	MP3A	X	0	4.29
59	MP3A	Z	36.698	4.29
60	MP3A	Mx	-.023	4.29
61	MP3B	X	0	.46
62	MP3B	Z	27.95	.46
63	MP3B	Mx	-.003	.46
64	MP3B	X	0	4.29
65	MP3B	Z	27.95	4.29
66	MP3B	Mx	-.003	4.29
67	MP3C	X	0	.46
68	MP3C	Z	29.853	.46
69	MP3C	Mx	.023	.46
70	MP3C	X	0	4.29
71	MP3C	Z	29.853	4.29
72	MP3C	Mx	.023	4.29
73	MP2A	X	0	1
74	MP2A	Z	19.527	1
75	MP2A	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
76	MP2A	X	0	3
77	MP2A	Z	19.527	3
78	MP2A	Mx	0	3
79	MP2B	X	0	1
80	MP2B	Z	11.137	1
81	MP2B	Mx	-.005	1
82	MP2B	X	0	3
83	MP2B	Z	11.137	3
84	MP2B	Mx	-.005	3
85	MP2C	X	0	1
86	MP2C	Z	12.963	1
87	MP2C	Mx	.005	1
88	MP2C	X	0	3
89	MP2C	Z	12.963	3
90	MP2C	Mx	.005	3
91	MP3A	X	0	1.5
92	MP3A	Z	16.451	1.5
93	MP3A	Mx	0	1.5
94	MP3B	X	0	1.5
95	MP3B	Z	12.695	1.5
96	MP3B	Mx	.004	1.5
97	MP3C	X	0	1.5
98	MP3C	Z	12.695	1.5
99	MP3C	Mx	-.004	1.5
100	MP4A	X	0	1.5
101	MP4A	Z	16.451	1.5
102	MP4A	Mx	0	1.5
103	MP4B	X	0	1.5
104	MP4B	Z	11.268	1.5
105	MP4B	Mx	.003	1.5
106	MP4C	X	0	1.5
107	MP4C	Z	11.268	1.5
108	MP4C	Mx	-.003	1.5
109	MP3A	X	0	.25
110	MP3A	Z	3.993	.25
111	MP3A	Mx	0	.25
112	MP3B	X	0	.25
113	MP3B	Z	3.246	.25
114	MP3B	Mx	.000469	.25
115	MP3C	X	0	.25
116	MP3C	Z	3.246	.25
117	MP3C	Mx	-.000469	.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-12.186	.25
2	MP1A	Z	21.106	.25
3	MP1A	Mx	.006	.25
4	MP1A	X	-12.186	3.75
5	MP1A	Z	21.106	3.75
6	MP1A	Mx	.006	3.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
7	MP1B	X	-11.16	.25
8	MP1B	Z	19.33	.25
9	MP1B	Mx	-.011	.25
10	MP1B	X	-11.16	3.75
11	MP1B	Z	19.33	3.75
12	MP1B	Mx	-.011	3.75
13	MP1C	X	-12.367	.25
14	MP1C	Z	21.421	.25
15	MP1C	Mx	.004	.25
16	MP1C	X	-12.367	3.75
17	MP1C	Z	21.421	3.75
18	MP1C	Mx	.004	3.75
19	MP4A	X	-12.186	.25
20	MP4A	Z	21.106	.25
21	MP4A	Mx	.006	.25
22	MP4A	X	-12.186	3.75
23	MP4A	Z	21.106	3.75
24	MP4A	Mx	.006	3.75
25	MP4B	X	-11.16	.25
26	MP4B	Z	19.33	.25
27	MP4B	Mx	-.011	.25
28	MP4B	X	-11.16	3.75
29	MP4B	Z	19.33	3.75
30	MP4B	Mx	-.011	3.75
31	MP4C	X	-12.367	.25
32	MP4C	Z	21.421	.25
33	MP4C	Mx	.004	.25
34	MP4C	X	-12.367	3.75
35	MP4C	Z	21.421	3.75
36	MP4C	Mx	.004	3.75
37	MP3A	X	-16.891	.46
38	MP3A	Z	29.256	.46
39	MP3A	Mx	.027	.46
40	MP3A	X	-16.891	4.29
41	MP3A	Z	29.256	4.29
42	MP3A	Mx	.027	4.29
43	MP3B	X	-12.517	.46
44	MP3B	Z	21.68	.46
45	MP3B	Mx	-.013	.46
46	MP3B	X	-12.517	4.29
47	MP3B	Z	21.68	4.29
48	MP3B	Mx	-.013	4.29
49	MP3C	X	-17.667	.46
50	MP3C	Z	30.6	.46
51	MP3C	Mx	-.015	.46
52	MP3C	X	-17.667	4.29
53	MP3C	Z	30.6	4.29
54	MP3C	Mx	-.015	4.29
55	MP3A	X	-16.891	.46
56	MP3A	Z	29.256	.46
57	MP3A	Mx	-.01	.46
58	MP3A	X	-16.891	4.29



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
59	MP3A	Z	29.256	4.29
60	MP3A	Mx	-.01	4.29
61	MP3B	X	-12.517	.46
62	MP3B	Z	21.68	.46
63	MP3B	Mx	-.013	.46
64	MP3B	X	-12.517	4.29
65	MP3B	Z	21.68	4.29
66	MP3B	Mx	-.013	4.29
67	MP3C	X	-17.667	.46
68	MP3C	Z	30.6	.46
69	MP3C	Mx	.027	.46
70	MP3C	X	-17.667	4.29
71	MP3C	Z	30.6	4.29
72	MP3C	Mx	.027	4.29
73	MP2A	X	-8.365	1
74	MP2A	Z	14.489	1
75	MP2A	Mx	.004	1
76	MP2A	X	-8.365	3
77	MP2A	Z	14.489	3
78	MP2A	Mx	.004	3
79	MP2B	X	-4.17	1
80	MP2B	Z	7.223	1
81	MP2B	Mx	-.004	1
82	MP2B	X	-4.17	3
83	MP2B	Z	7.223	3
84	MP2B	Mx	-.004	3
85	MP2C	X	-9.109	1
86	MP2C	Z	15.778	1
87	MP2C	Mx	.003	1
88	MP2C	X	-9.109	3
89	MP2C	Z	15.778	3
90	MP2C	Mx	.003	3
91	MP3A	X	-7.599	1.5
92	MP3A	Z	13.163	1.5
93	MP3A	Mx	-.003	1.5
94	MP3B	X	-5.722	1.5
95	MP3B	Z	9.91	1.5
96	MP3B	Mx	.004	1.5
97	MP3C	X	-7.599	1.5
98	MP3C	Z	13.163	1.5
99	MP3C	Mx	-.003	1.5
100	MP4A	X	-7.362	1.5
101	MP4A	Z	12.751	1.5
102	MP4A	Mx	-.002	1.5
103	MP4B	X	-4.77	1.5
104	MP4B	Z	8.262	1.5
105	MP4B	Mx	.003	1.5
106	MP4C	X	-7.362	1.5
107	MP4C	Z	12.751	1.5
108	MP4C	Mx	-.002	1.5
109	MP3A	X	-1.872	.25
110	MP3A	Z	3.243	.25



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
111	MP3A	Mx	-.000312	.25
112	MP3B	X	-1.498	.25
113	MP3B	Z	2.595	.25
114	MP3B	Mx	.000499	.25
115	MP3C	X	-1.872	.25
116	MP3C	Z	3.243	.25
117	MP3C	Mx	-.000312	.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-19.922	.25
2	MP1A	Z	11.502	.25
3	MP1A	Mx	.01	.25
4	MP1A	X	-19.922	3.75
5	MP1A	Z	11.502	3.75
6	MP1A	Mx	.01	3.75
7	MP1B	X	-19.922	.25
8	MP1B	Z	11.502	.25
9	MP1B	Mx	-.01	.25
10	MP1B	X	-19.922	3.75
11	MP1B	Z	11.502	3.75
12	MP1B	Mx	-.01	3.75
13	MP1C	X	-21.626	.25
14	MP1C	Z	12.486	.25
15	MP1C	Mx	-.002	.25
16	MP1C	X	-21.626	3.75
17	MP1C	Z	12.486	3.75
18	MP1C	Mx	-.002	3.75
19	MP4A	X	-19.922	.25
20	MP4A	Z	11.502	.25
21	MP4A	Mx	.01	.25
22	MP4A	X	-19.922	3.75
23	MP4A	Z	11.502	3.75
24	MP4A	Mx	.01	3.75
25	MP4B	X	-19.922	.25
26	MP4B	Z	11.502	.25
27	MP4B	Mx	-.01	.25
28	MP4B	X	-19.922	3.75
29	MP4B	Z	11.502	3.75
30	MP4B	Mx	-.01	3.75
31	MP4C	X	-21.626	.25
32	MP4C	Z	12.486	.25
33	MP4C	Mx	-.002	.25
34	MP4C	X	-21.626	3.75
35	MP4C	Z	12.486	3.75
36	MP4C	Mx	-.002	3.75
37	MP3A	X	-24.205	.46
38	MP3A	Z	13.975	.46
39	MP3A	Mx	.021	.46
40	MP3A	X	-24.205	4.29
41	MP3A	Z	13.975	4.29



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
42	MP3A	Mx	.021	4.29
43	MP3B	X	-24.205	.46
44	MP3B	Z	13.975	.46
45	MP3B	Mx	-.003	.46
46	MP3B	X	-24.205	4.29
47	MP3B	Z	13.975	4.29
48	MP3B	Mx	-.003	4.29
49	MP3C	X	-31.477	.46
50	MP3C	Z	18.173	.46
51	MP3C	Mx	-.026	.46
52	MP3C	X	-31.477	4.29
53	MP3C	Z	18.173	4.29
54	MP3C	Mx	-.026	4.29
55	MP3A	X	-24.205	.46
56	MP3A	Z	13.975	.46
57	MP3A	Mx	.003	.46
58	MP3A	X	-24.205	4.29
59	MP3A	Z	13.975	4.29
60	MP3A	Mx	.003	4.29
61	MP3B	X	-24.205	.46
62	MP3B	Z	13.975	.46
63	MP3B	Mx	-.021	.46
64	MP3B	X	-24.205	4.29
65	MP3B	Z	13.975	4.29
66	MP3B	Mx	-.021	4.29
67	MP3C	X	-31.477	.46
68	MP3C	Z	18.173	.46
69	MP3C	Mx	.019	.46
70	MP3C	X	-31.477	4.29
71	MP3C	Z	18.173	4.29
72	MP3C	Mx	.019	4.29
73	MP2A	X	-9.645	1
74	MP2A	Z	5.569	1
75	MP2A	Mx	.005	1
76	MP2A	X	-9.645	3
77	MP2A	Z	5.569	3
78	MP2A	Mx	.005	3
79	MP2B	X	-9.645	1
80	MP2B	Z	5.569	1
81	MP2B	Mx	-.005	1
82	MP2B	X	-9.645	3
83	MP2B	Z	5.569	3
84	MP2B	Mx	-.005	3
85	MP2C	X	-16.619	1
86	MP2C	Z	9.595	1
87	MP2C	Mx	-.002	1
88	MP2C	X	-16.619	3
89	MP2C	Z	9.595	3
90	MP2C	Mx	-.002	3
91	MP3A	X	-10.994	1.5
92	MP3A	Z	6.348	1.5
93	MP3A	Mx	-.004	1.5



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
94	MP3B	X	-10.994	1.5
95	MP3B	Z	6.348	1.5
96	MP3B	Mx	.004	1.5
97	MP3C	X	-14.247	1.5
98	MP3C	Z	8.225	1.5
99	MP3C	Mx	0	1.5
100	MP4A	X	-9.758	1.5
101	MP4A	Z	5.634	1.5
102	MP4A	Mx	-.003	1.5
103	MP4B	X	-9.758	1.5
104	MP4B	Z	5.634	1.5
105	MP4B	Mx	.003	1.5
106	MP4C	X	-14.247	1.5
107	MP4C	Z	8.225	1.5
108	MP4C	Mx	0	1.5
109	MP3A	X	-2.811	.25
110	MP3A	Z	1.623	.25
111	MP3A	Mx	-.000468	.25
112	MP3B	X	-2.811	.25
113	MP3B	Z	1.623	.25
114	MP3B	Mx	.000469	.25
115	MP3C	X	-3.458	.25
116	MP3C	Z	1.997	.25
117	MP3C	Mx	0	.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-22.321	.25
2	MP1A	Z	0	.25
3	MP1A	Mx	.011	.25
4	MP1A	X	-22.321	3.75
5	MP1A	Z	0	3.75
6	MP1A	Mx	.011	3.75
7	MP1B	X	-24.371	.25
8	MP1B	Z	0	.25
9	MP1B	Mx	-.006	.25
10	MP1B	X	-24.371	3.75
11	MP1B	Z	0	3.75
12	MP1B	Mx	-.006	3.75
13	MP1C	X	-23.925	.25
14	MP1C	Z	0	.25
15	MP1C	Mx	-.008	.25
16	MP1C	X	-23.925	3.75
17	MP1C	Z	0	3.75
18	MP1C	Mx	-.008	3.75
19	MP4A	X	-22.321	.25
20	MP4A	Z	0	.25
21	MP4A	Mx	.011	.25
22	MP4A	X	-22.321	3.75
23	MP4A	Z	0	3.75
24	MP4A	Mx	.011	3.75



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
25	MP4B	X	-24.371	.25
26	MP4B	Z	0	.25
27	MP4B	Mx	-.006	.25
28	MP4B	X	-24.371	3.75
29	MP4B	Z	0	3.75
30	MP4B	Mx	-.006	3.75
31	MP4C	X	-23.925	.25
32	MP4C	Z	0	.25
33	MP4C	Mx	-.008	.25
34	MP4C	X	-23.925	3.75
35	MP4C	Z	0	3.75
36	MP4C	Mx	-.008	3.75
37	MP3A	X	-25.034	.46
38	MP3A	Z	0	.46
39	MP3A	Mx	.013	.46
40	MP3A	X	-25.034	4.29
41	MP3A	Z	0	4.29
42	MP3A	Mx	.013	4.29
43	MP3B	X	-33.782	.46
44	MP3B	Z	0	.46
45	MP3B	Mx	.01	.46
46	MP3B	X	-33.782	4.29
47	MP3B	Z	0	4.29
48	MP3B	Mx	.01	4.29
49	MP3C	X	-31.879	.46
50	MP3C	Z	0	.46
51	MP3C	Mx	-.026	.46
52	MP3C	X	-31.879	4.29
53	MP3C	Z	0	4.29
54	MP3C	Mx	-.026	4.29
55	MP3A	X	-25.034	.46
56	MP3A	Z	0	.46
57	MP3A	Mx	.013	.46
58	MP3A	X	-25.034	4.29
59	MP3A	Z	0	4.29
60	MP3A	Mx	.013	4.29
61	MP3B	X	-33.782	.46
62	MP3B	Z	0	.46
63	MP3B	Mx	-.027	.46
64	MP3B	X	-33.782	4.29
65	MP3B	Z	0	4.29
66	MP3B	Mx	-.027	4.29
67	MP3C	X	-31.879	.46
68	MP3C	Z	0	.46
69	MP3C	Mx	.005	.46
70	MP3C	X	-31.879	4.29
71	MP3C	Z	0	4.29
72	MP3C	Mx	.005	4.29
73	MP2A	X	-8.341	1
74	MP2A	Z	0	1
75	MP2A	Mx	.004	1
76	MP2A	X	-8.341	3

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

Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]	
77	MP2A	Z	0	3
78	MP2A	Mx	.004	3
79	MP2B	X	-16.731	1
80	MP2B	Z	0	1
81	MP2B	Mx	-.004	1
82	MP2B	X	-16.731	3
83	MP2B	Z	0	3
84	MP2B	Mx	-.004	3
85	MP2C	X	-14.905	1
86	MP2C	Z	0	1
87	MP2C	Mx	-.005	1
88	MP2C	X	-14.905	3
89	MP2C	Z	0	3
90	MP2C	Mx	-.005	3
91	MP3A	X	-11.443	1.5
92	MP3A	Z	0	1.5
93	MP3A	Mx	-.004	1.5
94	MP3B	X	-15.199	1.5
95	MP3B	Z	0	1.5
96	MP3B	Mx	.003	1.5
97	MP3C	X	-15.199	1.5
98	MP3C	Z	0	1.5
99	MP3C	Mx	.003	1.5
100	MP4A	X	-9.54	1.5
101	MP4A	Z	0	1.5
102	MP4A	Mx	-.003	1.5
103	MP4B	X	-14.723	1.5
104	MP4B	Z	0	1.5
105	MP4B	Mx	.002	1.5
106	MP4C	X	-14.723	1.5
107	MP4C	Z	0	1.5
108	MP4C	Mx	.002	1.5
109	MP3A	X	-2.997	.25
110	MP3A	Z	0	.25
111	MP3A	Mx	-.000499	.25
112	MP3B	X	-3.744	.25
113	MP3B	Z	0	.25
114	MP3B	Mx	.000312	.25
115	MP3C	X	-3.744	.25
116	MP3C	Z	0	.25
117	MP3C	Mx	.000312	.25

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

Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]	
1	MP1A	X	-19.922	.25
2	MP1A	Z	-11.502	.25
3	MP1A	Mx	.01	.25
4	MP1A	X	-19.922	3.75
5	MP1A	Z	-11.502	3.75
6	MP1A	Mx	.01	3.75
7	MP1B	X	-21.698	.25



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
8	MP1B	Z	-12.527	.25
9	MP1B	Mx	0	.25
10	MP1B	X	-21.698	3.75
11	MP1B	Z	-12.527	3.75
12	MP1B	Mx	0	3.75
13	MP1C	X	-19.607	.25
14	MP1C	Z	-11.32	.25
15	MP1C	Mx	-.011	.25
16	MP1C	X	-19.607	3.75
17	MP1C	Z	-11.32	3.75
18	MP1C	Mx	-.011	3.75
19	MP4A	X	-19.922	.25
20	MP4A	Z	-11.502	.25
21	MP4A	Mx	.01	.25
22	MP4A	X	-19.922	3.75
23	MP4A	Z	-11.502	3.75
24	MP4A	Mx	.01	3.75
25	MP4B	X	-21.698	.25
26	MP4B	Z	-12.527	.25
27	MP4B	Mx	0	.25
28	MP4B	X	-21.698	3.75
29	MP4B	Z	-12.527	3.75
30	MP4B	Mx	0	3.75
31	MP4C	X	-19.607	.25
32	MP4C	Z	-11.32	.25
33	MP4C	Mx	-.011	.25
34	MP4C	X	-19.607	3.75
35	MP4C	Z	-11.32	3.75
36	MP4C	Mx	-.011	3.75
37	MP3A	X	-24.205	.46
38	MP3A	Z	-13.975	.46
39	MP3A	Mx	.003	.46
40	MP3A	X	-24.205	4.29
41	MP3A	Z	-13.975	4.29
42	MP3A	Mx	.003	4.29
43	MP3B	X	-31.781	.46
44	MP3B	Z	-18.349	.46
45	MP3B	Mx	.023	.46
46	MP3B	X	-31.781	4.29
47	MP3B	Z	-18.349	4.29
48	MP3B	Mx	.023	4.29
49	MP3C	X	-22.862	.46
50	MP3C	Z	-13.199	.46
51	MP3C	Mx	-.018	.46
52	MP3C	X	-22.862	4.29
53	MP3C	Z	-13.199	4.29
54	MP3C	Mx	-.018	4.29
55	MP3A	X	-24.205	.46
56	MP3A	Z	-13.975	.46
57	MP3A	Mx	.021	.46
58	MP3A	X	-24.205	4.29
59	MP3A	Z	-13.975	4.29



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
60	MP3A	Mx	.021	4.29
61	MP3B	X	-31.781	.46
62	MP3B	Z	-18.349	.46
63	MP3B	Mx	-.023	.46
64	MP3B	X	-31.781	4.29
65	MP3B	Z	-18.349	4.29
66	MP3B	Mx	-.023	4.29
67	MP3C	X	-22.862	.46
68	MP3C	Z	-13.199	.46
69	MP3C	Mx	-.007	.46
70	MP3C	X	-22.862	4.29
71	MP3C	Z	-13.199	4.29
72	MP3C	Mx	-.007	4.29
73	MP2A	X	-9.645	1
74	MP2A	Z	-5.569	1
75	MP2A	Mx	.005	1
76	MP2A	X	-9.645	3
77	MP2A	Z	-5.569	3
78	MP2A	Mx	.005	3
79	MP2B	X	-16.911	1
80	MP2B	Z	-9.764	1
81	MP2B	Mx	0	1
82	MP2B	X	-16.911	3
83	MP2B	Z	-9.764	3
84	MP2B	Mx	0	3
85	MP2C	X	-8.356	1
86	MP2C	Z	-4.825	1
87	MP2C	Mx	-.005	1
88	MP2C	X	-8.356	3
89	MP2C	Z	-4.825	3
90	MP2C	Mx	-.005	3
91	MP3A	X	-10.994	1.5
92	MP3A	Z	-6.348	1.5
93	MP3A	Mx	-.004	1.5
94	MP3B	X	-14.247	1.5
95	MP3B	Z	-8.225	1.5
96	MP3B	Mx	0	1.5
97	MP3C	X	-10.994	1.5
98	MP3C	Z	-6.348	1.5
99	MP3C	Mx	.004	1.5
100	MP4A	X	-9.758	1.5
101	MP4A	Z	-5.634	1.5
102	MP4A	Mx	-.003	1.5
103	MP4B	X	-14.247	1.5
104	MP4B	Z	-8.225	1.5
105	MP4B	Mx	0	1.5
106	MP4C	X	-9.758	1.5
107	MP4C	Z	-5.634	1.5
108	MP4C	Mx	.003	1.5
109	MP3A	X	-2.811	.25
110	MP3A	Z	-1.623	.25
111	MP3A	Mx	-.000468	.25



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
112	MP3B	X	-3.458	.25
113	MP3B	Z	-1.997	.25
114	MP3B	Mx	0	.25
115	MP3C	X	-2.811	.25
116	MP3C	Z	-1.623	.25
117	MP3C	Mx	.000469	.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-12.186	.25
2	MP1A	Z	-21.106	.25
3	MP1A	Mx	.006	.25
4	MP1A	X	-12.186	3.75
5	MP1A	Z	-21.106	3.75
6	MP1A	Mx	.006	3.75
7	MP1B	X	-12.186	.25
8	MP1B	Z	-21.106	.25
9	MP1B	Mx	.006	.25
10	MP1B	X	-12.186	3.75
11	MP1B	Z	-21.106	3.75
12	MP1B	Mx	.006	3.75
13	MP1C	X	-11.202	.25
14	MP1C	Z	-19.402	.25
15	MP1C	Mx	-.011	.25
16	MP1C	X	-11.202	3.75
17	MP1C	Z	-19.402	3.75
18	MP1C	Mx	-.011	3.75
19	MP4A	X	-12.186	.25
20	MP4A	Z	-21.106	.25
21	MP4A	Mx	.006	.25
22	MP4A	X	-12.186	3.75
23	MP4A	Z	-21.106	3.75
24	MP4A	Mx	.006	3.75
25	MP4B	X	-12.186	.25
26	MP4B	Z	-21.106	.25
27	MP4B	Mx	.006	.25
28	MP4B	X	-12.186	3.75
29	MP4B	Z	-21.106	3.75
30	MP4B	Mx	.006	3.75
31	MP4C	X	-11.202	.25
32	MP4C	Z	-19.402	.25
33	MP4C	Mx	-.011	.25
34	MP4C	X	-11.202	3.75
35	MP4C	Z	-19.402	3.75
36	MP4C	Mx	-.011	3.75
37	MP3A	X	-16.891	.46
38	MP3A	Z	-29.256	.46
39	MP3A	Mx	-.01	.46
40	MP3A	X	-16.891	4.29
41	MP3A	Z	-29.256	4.29
42	MP3A	Mx	-.01	4.29



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
43	MP3B	X	-16.891	.46
44	MP3B	Z	-29.256	.46
45	MP3B	Mx	.027	.46
46	MP3B	X	-16.891	4.29
47	MP3B	Z	-29.256	4.29
48	MP3B	Mx	.027	4.29
49	MP3C	X	-12.693	.46
50	MP3C	Z	-21.985	.46
51	MP3C	Mx	-.01	.46
52	MP3C	X	-12.693	4.29
53	MP3C	Z	-21.985	4.29
54	MP3C	Mx	-.01	4.29
55	MP3A	X	-16.891	.46
56	MP3A	Z	-29.256	.46
57	MP3A	Mx	.027	.46
58	MP3A	X	-16.891	4.29
59	MP3A	Z	-29.256	4.29
60	MP3A	Mx	.027	4.29
61	MP3B	X	-16.891	.46
62	MP3B	Z	-29.256	.46
63	MP3B	Mx	-.01	.46
64	MP3B	X	-16.891	4.29
65	MP3B	Z	-29.256	4.29
66	MP3B	Mx	-.01	4.29
67	MP3C	X	-12.693	.46
68	MP3C	Z	-21.985	.46
69	MP3C	Mx	-.015	.46
70	MP3C	X	-12.693	4.29
71	MP3C	Z	-21.985	4.29
72	MP3C	Mx	-.015	4.29
73	MP2A	X	-8.365	1
74	MP2A	Z	-14.489	1
75	MP2A	Mx	.004	1
76	MP2A	X	-8.365	3
77	MP2A	Z	-14.489	3
78	MP2A	Mx	.004	3
79	MP2B	X	-8.365	1
80	MP2B	Z	-14.489	1
81	MP2B	Mx	.004	1
82	MP2B	X	-8.365	3
83	MP2B	Z	-14.489	3
84	MP2B	Mx	.004	3
85	MP2C	X	-4.339	1
86	MP2C	Z	-7.515	1
87	MP2C	Mx	-.004	1
88	MP2C	X	-4.339	3
89	MP2C	Z	-7.515	3
90	MP2C	Mx	-.004	3
91	MP3A	X	-7.599	1.5
92	MP3A	Z	-13.163	1.5
93	MP3A	Mx	-.003	1.5
94	MP3B	X	-7.599	1.5



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
95	MP3B	Z	-13.163	1.5
96	MP3B	Mx	-.003	1.5
97	MP3C	X	-5.722	1.5
98	MP3C	Z	-9.91	1.5
99	MP3C	Mx	.004	1.5
100	MP4A	X	-7.362	1.5
101	MP4A	Z	-12.751	1.5
102	MP4A	Mx	-.002	1.5
103	MP4B	X	-7.362	1.5
104	MP4B	Z	-12.751	1.5
105	MP4B	Mx	-.002	1.5
106	MP4C	X	-4.77	1.5
107	MP4C	Z	-8.262	1.5
108	MP4C	Mx	.003	1.5
109	MP3A	X	-1.872	.25
110	MP3A	Z	-3.243	.25
111	MP3A	Mx	-.000312	.25
112	MP3B	X	-1.872	.25
113	MP3B	Z	-3.243	.25
114	MP3B	Mx	-.000312	.25
115	MP3C	X	-1.498	.25
116	MP3C	Z	-2.595	.25
117	MP3C	Mx	.000499	.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	0	.25
2	MP1A	Z	-8.139	.25
3	MP1A	Mx	0	.25
4	MP1A	X	0	3.75
5	MP1A	Z	-8.139	3.75
6	MP1A	Mx	0	3.75
7	MP1B	X	0	.25
8	MP1B	Z	-7.419	.25
9	MP1B	Mx	.003	.25
10	MP1B	X	0	3.75
11	MP1B	Z	-7.419	3.75
12	MP1B	Mx	.003	3.75
13	MP1C	X	0	.25
14	MP1C	Z	-7.575	.25
15	MP1C	Mx	-.003	.25
16	MP1C	X	0	3.75
17	MP1C	Z	-7.575	3.75
18	MP1C	Mx	-.003	3.75
19	MP4A	X	0	.25
20	MP4A	Z	-8.139	.25
21	MP4A	Mx	0	.25
22	MP4A	X	0	3.75
23	MP4A	Z	-8.139	3.75
24	MP4A	Mx	0	3.75
25	MP4B	X	0	.25



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
113	MP3B	Z	-.587	.25
114	MP3B	Mx	-.000113	.25
115	MP3C	X	.452	.25
116	MP3C	Z	-.783	.25
117	MP3C	Mx	7.5e-5	.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	6.425	.25
2	MP1A	Z	-3.709	.25
3	MP1A	Mx	-.003	.25
4	MP1A	X	6.425	3.75
5	MP1A	Z	-3.709	3.75
6	MP1A	Mx	-.003	3.75
7	MP1B	X	6.425	.25
8	MP1B	Z	-3.709	.25
9	MP1B	Mx	.003	.25
10	MP1B	X	6.425	3.75
11	MP1B	Z	-3.709	3.75
12	MP1B	Mx	.003	3.75
13	MP1C	X	7.023	.25
14	MP1C	Z	-4.055	.25
15	MP1C	Mx	.000704	.25
16	MP1C	X	7.023	3.75
17	MP1C	Z	-4.055	3.75
18	MP1C	Mx	.000704	3.75
19	MP4A	X	6.425	.25
20	MP4A	Z	-3.709	.25
21	MP4A	Mx	-.003	.25
22	MP4A	X	6.425	3.75
23	MP4A	Z	-3.709	3.75
24	MP4A	Mx	-.003	3.75
25	MP4B	X	6.425	.25
26	MP4B	Z	-3.709	.25
27	MP4B	Mx	.003	.25
28	MP4B	X	6.425	3.75
29	MP4B	Z	-3.709	3.75
30	MP4B	Mx	.003	3.75
31	MP4C	X	7.023	.25
32	MP4C	Z	-4.055	.25
33	MP4C	Mx	.000704	.25
34	MP4C	X	7.023	3.75
35	MP4C	Z	-4.055	3.75
36	MP4C	Mx	.000704	3.75
37	MP3A	X	7.753	.46
38	MP3A	Z	-4.476	.46
39	MP3A	Mx	-.007	.46
40	MP3A	X	7.753	4.29
41	MP3A	Z	-4.476	4.29
42	MP3A	Mx	-.007	4.29
43	MP3B	X	7.753	.46



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
44	MP3B	Z	-4.476	.46
45	MP3B	Mx	.001	.46
46	MP3B	X	7.753	4.29
47	MP3B	Z	-4.476	4.29
48	MP3B	Mx	.001	4.29
49	MP3C	X	10.333	.46
50	MP3C	Z	-5.966	.46
51	MP3C	Mx	.008	.46
52	MP3C	X	10.333	4.29
53	MP3C	Z	-5.966	4.29
54	MP3C	Mx	.008	4.29
55	MP3A	X	7.753	.46
56	MP3A	Z	-4.476	.46
57	MP3A	Mx	-.001	.46
58	MP3A	X	7.753	4.29
59	MP3A	Z	-4.476	4.29
60	MP3A	Mx	-.001	4.29
61	MP3B	X	7.753	.46
62	MP3B	Z	-4.476	.46
63	MP3B	Mx	.007	.46
64	MP3B	X	7.753	4.29
65	MP3B	Z	-4.476	4.29
66	MP3B	Mx	.007	4.29
67	MP3C	X	10.333	.46
68	MP3C	Z	-5.966	.46
69	MP3C	Mx	-.006	.46
70	MP3C	X	10.333	4.29
71	MP3C	Z	-5.966	4.29
72	MP3C	Mx	-.006	4.29
73	MP2A	X	2.937	1
74	MP2A	Z	-1.695	1
75	MP2A	Mx	-.001	1
76	MP2A	X	2.937	3
77	MP2A	Z	-1.695	3
78	MP2A	Mx	-.001	3
79	MP2B	X	2.937	1
80	MP2B	Z	-1.695	1
81	MP2B	Mx	.001	1
82	MP2B	X	2.937	3
83	MP2B	Z	-1.695	3
84	MP2B	Mx	.001	3
85	MP2C	X	5.299	1
86	MP2C	Z	-3.059	1
87	MP2C	Mx	.000531	1
88	MP2C	X	5.299	3
89	MP2C	Z	-3.059	3
90	MP2C	Mx	.000531	3
91	MP3A	X	3.22	1.5
92	MP3A	Z	-1.859	1.5
93	MP3A	Mx	.001	1.5
94	MP3B	X	3.22	1.5
95	MP3B	Z	-1.859	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
96	MP3B	Mx	-.001	1.5
97	MP3C	X	4.286	1.5
98	MP3C	Z	-2.475	1.5
99	MP3C	Mx	0	1.5
100	MP4A	X	2.812	1.5
101	MP4A	Z	-1.624	1.5
102	MP4A	Mx	.000937	1.5
103	MP4B	X	2.812	1.5
104	MP4B	Z	-1.624	1.5
105	MP4B	Mx	-.000937	1.5
106	MP4C	X	4.286	1.5
107	MP4C	Z	-2.475	1.5
108	MP4C	Mx	0	1.5
109	MP3A	X	.652	.25
110	MP3A	Z	-.376	.25
111	MP3A	Mx	.000109	.25
112	MP3B	X	.652	.25
113	MP3B	Z	-.376	.25
114	MP3B	Mx	-.000109	.25
115	MP3C	X	.848	.25
116	MP3C	Z	-.49	.25
117	MP3C	Mx	0	.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	7.179	.25
2	MP1A	Z	0	.25
3	MP1A	Mx	-.004	.25
4	MP1A	X	7.179	3.75
5	MP1A	Z	0	3.75
6	MP1A	Mx	-.004	3.75
7	MP1B	X	7.899	.25
8	MP1B	Z	0	.25
9	MP1B	Mx	.002	.25
10	MP1B	X	7.899	3.75
11	MP1B	Z	0	3.75
12	MP1B	Mx	.002	3.75
13	MP1C	X	7.742	.25
14	MP1C	Z	0	.25
15	MP1C	Mx	.002	.25
16	MP1C	X	7.742	3.75
17	MP1C	Z	0	3.75
18	MP1C	Mx	.002	3.75
19	MP4A	X	7.179	.25
20	MP4A	Z	0	.25
21	MP4A	Mx	-.004	.25
22	MP4A	X	7.179	3.75
23	MP4A	Z	0	3.75
24	MP4A	Mx	-.004	3.75
25	MP4B	X	7.899	.25
26	MP4B	Z	0	.25



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
62	MP3B	Z	6.028	.46
63	MP3B	Mx	.008	.46
64	MP3B	X	10.441	4.29
65	MP3B	Z	6.028	4.29
66	MP3B	Mx	.008	4.29
67	MP3C	X	7.277	.46
68	MP3C	Z	4.201	.46
69	MP3C	Mx	.002	.46
70	MP3C	X	7.277	4.29
71	MP3C	Z	4.201	4.29
72	MP3C	Mx	.002	4.29
73	MP2A	X	2.937	1
74	MP2A	Z	1.695	1
75	MP2A	Mx	-.001	1
76	MP2A	X	2.937	3
77	MP2A	Z	1.695	3
78	MP2A	Mx	-.001	3
79	MP2B	X	5.398	1
80	MP2B	Z	3.117	1
81	MP2B	Mx	0	1
82	MP2B	X	5.398	3
83	MP2B	Z	3.117	3
84	MP2B	Mx	0	3
85	MP2C	X	2.5	1
86	MP2C	Z	1.443	1
87	MP2C	Mx	.001	1
88	MP2C	X	2.5	3
89	MP2C	Z	1.443	3
90	MP2C	Mx	.001	3
91	MP3A	X	3.22	1.5
92	MP3A	Z	1.859	1.5
93	MP3A	Mx	.001	1.5
94	MP3B	X	4.286	1.5
95	MP3B	Z	2.475	1.5
96	MP3B	Mx	0	1.5
97	MP3C	X	3.22	1.5
98	MP3C	Z	1.859	1.5
99	MP3C	Mx	-.001	1.5
100	MP4A	X	2.812	1.5
101	MP4A	Z	1.624	1.5
102	MP4A	Mx	.000937	1.5
103	MP4B	X	4.286	1.5
104	MP4B	Z	2.475	1.5
105	MP4B	Mx	0	1.5
106	MP4C	X	2.812	1.5
107	MP4C	Z	1.624	1.5
108	MP4C	Mx	-.000937	1.5
109	MP3A	X	.652	.25
110	MP3A	Z	.376	.25
111	MP3A	Mx	.000109	.25
112	MP3B	X	.848	.25
113	MP3B	Z	.49	.25



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
114	MP3B	Mx	0	.25
115	MP3C	X	.652	.25
116	MP3C	Z	.376	.25
117	MP3C	Mx	-.000109	.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	3.949	.25
2	MP1A	Z	6.841	.25
3	MP1A	Mx	-.002	.25
4	MP1A	X	3.949	3.75
5	MP1A	Z	6.841	3.75
6	MP1A	Mx	-.002	3.75
7	MP1B	X	3.949	.25
8	MP1B	Z	6.841	.25
9	MP1B	Mx	-.002	.25
10	MP1B	X	3.949	3.75
11	MP1B	Z	6.841	3.75
12	MP1B	Mx	-.002	3.75
13	MP1C	X	3.604	.25
14	MP1C	Z	6.242	.25
15	MP1C	Mx	.004	.25
16	MP1C	X	3.604	3.75
17	MP1C	Z	6.242	3.75
18	MP1C	Mx	.004	3.75
19	MP4A	X	3.949	.25
20	MP4A	Z	6.841	.25
21	MP4A	Mx	-.002	.25
22	MP4A	X	3.949	3.75
23	MP4A	Z	6.841	3.75
24	MP4A	Mx	-.002	3.75
25	MP4B	X	3.949	.25
26	MP4B	Z	6.841	.25
27	MP4B	Mx	-.002	.25
28	MP4B	X	3.949	3.75
29	MP4B	Z	6.841	3.75
30	MP4B	Mx	-.002	3.75
31	MP4C	X	3.604	.25
32	MP4C	Z	6.242	.25
33	MP4C	Mx	.004	.25
34	MP4C	X	3.604	3.75
35	MP4C	Z	6.242	3.75
36	MP4C	Mx	.004	3.75
37	MP3A	X	5.511	.46
38	MP3A	Z	9.545	.46
39	MP3A	Mx	.003	.46
40	MP3A	X	5.511	4.29
41	MP3A	Z	9.545	4.29
42	MP3A	Mx	.003	4.29
43	MP3B	X	5.511	.46
44	MP3B	Z	9.545	.46



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
45	MP3B	Mx	-.009	.46
46	MP3B	X	5.511	4.29
47	MP3B	Z	9.545	4.29
48	MP3B	Mx	-.009	4.29
49	MP3C	X	4.021	.46
50	MP3C	Z	6.965	.46
51	MP3C	Mx	.003	.46
52	MP3C	X	4.021	4.29
53	MP3C	Z	6.965	4.29
54	MP3C	Mx	.003	4.29
55	MP3A	X	5.511	.46
56	MP3A	Z	9.545	.46
57	MP3A	Mx	-.009	.46
58	MP3A	X	5.511	4.29
59	MP3A	Z	9.545	4.29
60	MP3A	Mx	-.009	4.29
61	MP3B	X	5.511	.46
62	MP3B	Z	9.545	.46
63	MP3B	Mx	.003	.46
64	MP3B	X	5.511	4.29
65	MP3B	Z	9.545	4.29
66	MP3B	Mx	.003	4.29
67	MP3C	X	4.021	.46
68	MP3C	Z	6.965	.46
69	MP3C	Mx	.005	.46
70	MP3C	X	4.021	4.29
71	MP3C	Z	6.965	4.29
72	MP3C	Mx	.005	4.29
73	MP2A	X	2.643	1
74	MP2A	Z	4.578	1
75	MP2A	Mx	-.001	1
76	MP2A	X	2.643	3
77	MP2A	Z	4.578	3
78	MP2A	Mx	-.001	3
79	MP2B	X	2.643	1
80	MP2B	Z	4.578	1
81	MP2B	Mx	-.001	1
82	MP2B	X	2.643	3
83	MP2B	Z	4.578	3
84	MP2B	Mx	-.001	3
85	MP2C	X	1.279	1
86	MP2C	Z	2.215	1
87	MP2C	Mx	.001	1
88	MP2C	X	1.279	3
89	MP2C	Z	2.215	3
90	MP2C	Mx	.001	3
91	MP3A	X	2.27	1.5
92	MP3A	Z	3.931	1.5
93	MP3A	Mx	.000757	1.5
94	MP3B	X	2.27	1.5
95	MP3B	Z	3.931	1.5
96	MP3B	Mx	.000756	1.5



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
97	MP3C	X	1.654	1.5
98	MP3C	Z	2.865	1.5
99	MP3C	Mx	-.001	1.5
100	MP4A	X	2.191	1.5
101	MP4A	Z	3.795	1.5
102	MP4A	Mx	.00073	1.5
103	MP4B	X	2.191	1.5
104	MP4B	Z	3.795	1.5
105	MP4B	Mx	.00073	1.5
106	MP4C	X	1.34	1.5
107	MP4C	Z	2.321	1.5
108	MP4C	Mx	-.000893	1.5
109	MP3A	X	.452	.25
110	MP3A	Z	.783	.25
111	MP3A	Mx	7.5e-5	.25
112	MP3B	X	.452	.25
113	MP3B	Z	.783	.25
114	MP3B	Mx	7.5e-5	.25
115	MP3C	X	.339	.25
116	MP3C	Z	.587	.25
117	MP3C	Mx	-.000113	.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	0	.25
2	MP1A	Z	8.139	.25
3	MP1A	Mx	0	.25
4	MP1A	X	0	3.75
5	MP1A	Z	8.139	3.75
6	MP1A	Mx	0	3.75
7	MP1B	X	0	.25
8	MP1B	Z	7.419	.25
9	MP1B	Mx	-.003	.25
10	MP1B	X	0	3.75
11	MP1B	Z	7.419	3.75
12	MP1B	Mx	-.003	3.75
13	MP1C	X	0	.25
14	MP1C	Z	7.575	.25
15	MP1C	Mx	.003	.25
16	MP1C	X	0	3.75
17	MP1C	Z	7.575	3.75
18	MP1C	Mx	.003	3.75
19	MP4A	X	0	.25
20	MP4A	Z	8.139	.25
21	MP4A	Mx	0	.25
22	MP4A	X	0	3.75
23	MP4A	Z	8.139	3.75
24	MP4A	Mx	0	3.75
25	MP4B	X	0	.25
26	MP4B	Z	7.419	.25
27	MP4B	Mx	-.003	.25



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
80	MP2B	Z	3.391	1
81	MP2B	Mx	-.001	1
82	MP2B	X	0	3
83	MP2B	Z	3.391	3
84	MP2B	Mx	-.001	3
85	MP2C	X	0	1
86	MP2C	Z	4.009	1
87	MP2C	Mx	.002	1
88	MP2C	X	0	3
89	MP2C	Z	4.009	3
90	MP2C	Mx	.002	3
91	MP3A	X	0	1.5
92	MP3A	Z	4.949	1.5
93	MP3A	Mx	0	1.5
94	MP3B	X	0	1.5
95	MP3B	Z	3.719	1.5
96	MP3B	Mx	.001	1.5
97	MP3C	X	0	1.5
98	MP3C	Z	3.719	1.5
99	MP3C	Mx	-.001	1.5
100	MP4A	X	0	1.5
101	MP4A	Z	4.949	1.5
102	MP4A	Mx	0	1.5
103	MP4B	X	0	1.5
104	MP4B	Z	3.247	1.5
105	MP4B	Mx	.000937	1.5
106	MP4C	X	0	1.5
107	MP4C	Z	3.247	1.5
108	MP4C	Mx	-.000937	1.5
109	MP3A	X	0	.25
110	MP3A	Z	.979	.25
111	MP3A	Mx	0	.25
112	MP3B	X	0	.25
113	MP3B	Z	.753	.25
114	MP3B	Mx	.000109	.25
115	MP3C	X	0	.25
116	MP3C	Z	.753	.25
117	MP3C	Mx	-.000109	.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-3.949	.25
2	MP1A	Z	6.841	.25
3	MP1A	Mx	.002	.25
4	MP1A	X	-3.949	3.75
5	MP1A	Z	6.841	3.75
6	MP1A	Mx	.002	3.75
7	MP1B	X	-3.589	.25
8	MP1B	Z	6.217	.25
9	MP1B	Mx	-.004	.25
10	MP1B	X	-3.589	3.75



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
63	MP3B	Mx	-.004	.46
64	MP3B	X	-3.959	4.29
65	MP3B	Z	6.857	4.29
66	MP3B	Mx	-.004	4.29
67	MP3C	X	-5.786	.46
68	MP3C	Z	10.022	.46
69	MP3C	Mx	.009	.46
70	MP3C	X	-5.786	4.29
71	MP3C	Z	10.022	4.29
72	MP3C	Mx	.009	4.29
73	MP2A	X	-2.643	1
74	MP2A	Z	4.578	1
75	MP2A	Mx	.001	1
76	MP2A	X	-2.643	3
77	MP2A	Z	4.578	3
78	MP2A	Mx	.001	3
79	MP2B	X	-1.222	1
80	MP2B	Z	2.116	1
81	MP2B	Mx	-.001	1
82	MP2B	X	-1.222	3
83	MP2B	Z	2.116	3
84	MP2B	Mx	-.001	3
85	MP2C	X	-2.895	1
86	MP2C	Z	5.014	1
87	MP2C	Mx	.00099	1
88	MP2C	X	-2.895	3
89	MP2C	Z	5.014	3
90	MP2C	Mx	.00099	3
91	MP3A	X	-2.27	1.5
92	MP3A	Z	3.931	1.5
93	MP3A	Mx	-.000757	1.5
94	MP3B	X	-1.654	1.5
95	MP3B	Z	2.865	1.5
96	MP3B	Mx	.001	1.5
97	MP3C	X	-2.27	1.5
98	MP3C	Z	3.931	1.5
99	MP3C	Mx	-.000756	1.5
100	MP4A	X	-2.191	1.5
101	MP4A	Z	3.795	1.5
102	MP4A	Mx	-.00073	1.5
103	MP4B	X	-1.34	1.5
104	MP4B	Z	2.321	1.5
105	MP4B	Mx	.000893	1.5
106	MP4C	X	-2.191	1.5
107	MP4C	Z	3.795	1.5
108	MP4C	Mx	-.00073	1.5
109	MP3A	X	-.452	.25
110	MP3A	Z	.783	.25
111	MP3A	Mx	-7.5e-5	.25
112	MP3B	X	-.339	.25
113	MP3B	Z	.587	.25
114	MP3B	Mx	.000113	.25



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
115	MP3C	X	-6.452	.25
116	MP3C	Z	.783	.25
117	MP3C	Mx	-7.5e-5	.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-6.425	.25
2	MP1A	Z	3.709	.25
3	MP1A	Mx	.003	.25
4	MP1A	X	-6.425	3.75
5	MP1A	Z	3.709	3.75
6	MP1A	Mx	.003	3.75
7	MP1B	X	-6.425	.25
8	MP1B	Z	3.709	.25
9	MP1B	Mx	-.003	.25
10	MP1B	X	-6.425	3.75
11	MP1B	Z	3.709	3.75
12	MP1B	Mx	-.003	3.75
13	MP1C	X	-7.023	.25
14	MP1C	Z	4.055	.25
15	MP1C	Mx	-.000704	.25
16	MP1C	X	-7.023	3.75
17	MP1C	Z	4.055	3.75
18	MP1C	Mx	-.000704	3.75
19	MP4A	X	-6.425	.25
20	MP4A	Z	3.709	.25
21	MP4A	Mx	.003	.25
22	MP4A	X	-6.425	3.75
23	MP4A	Z	3.709	3.75
24	MP4A	Mx	.003	3.75
25	MP4B	X	-6.425	.25
26	MP4B	Z	3.709	.25
27	MP4B	Mx	-.003	.25
28	MP4B	X	-6.425	3.75
29	MP4B	Z	3.709	3.75
30	MP4B	Mx	-.003	3.75
31	MP4C	X	-7.023	.25
32	MP4C	Z	4.055	.25
33	MP4C	Mx	-.000704	.25
34	MP4C	X	-7.023	3.75
35	MP4C	Z	4.055	3.75
36	MP4C	Mx	-.000704	3.75
37	MP3A	X	-7.753	.46
38	MP3A	Z	4.476	.46
39	MP3A	Mx	.007	.46
40	MP3A	X	-7.753	4.29
41	MP3A	Z	4.476	4.29
42	MP3A	Mx	.007	4.29
43	MP3B	X	-7.753	.46
44	MP3B	Z	4.476	.46
45	MP3B	Mx	-.001	.46



Company : Tower Engineering Solutions, LLC
 Designer : NL
 Job Number : Project No. 10037784
 Model Name : 467144-VZW_MT_LO_H

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 Checked By: DX

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
46	MP3B	X	-7.753	4.29
47	MP3B	Z	4.476	4.29
48	MP3B	Mx	-.001	4.29
49	MP3C	X	-10.333	.46
50	MP3C	Z	5.966	.46
51	MP3C	Mx	-.008	.46
52	MP3C	X	-10.333	4.29
53	MP3C	Z	5.966	4.29
54	MP3C	Mx	-.008	4.29
55	MP3A	X	-7.753	.46
56	MP3A	Z	4.476	.46
57	MP3A	Mx	.001	.46
58	MP3A	X	-7.753	4.29
59	MP3A	Z	4.476	4.29
60	MP3A	Mx	.001	4.29
61	MP3B	X	-7.753	.46
62	MP3B	Z	4.476	.46
63	MP3B	Mx	-.007	.46
64	MP3B	X	-7.753	4.29
65	MP3B	Z	4.476	4.29
66	MP3B	Mx	-.007	4.29
67	MP3C	X	-10.333	.46
68	MP3C	Z	5.966	.46
69	MP3C	Mx	.006	.46
70	MP3C	X	-10.333	4.29
71	MP3C	Z	5.966	4.29
72	MP3C	Mx	.006	4.29
73	MP2A	X	-2.937	1
74	MP2A	Z	1.695	1
75	MP2A	Mx	.001	1
76	MP2A	X	-2.937	3
77	MP2A	Z	1.695	3
78	MP2A	Mx	.001	3
79	MP2B	X	-2.937	1
80	MP2B	Z	1.695	1
81	MP2B	Mx	-.001	1
82	MP2B	X	-2.937	3
83	MP2B	Z	1.695	3
84	MP2B	Mx	-.001	3
85	MP2C	X	-5.299	1
86	MP2C	Z	3.059	1
87	MP2C	Mx	-.000531	1
88	MP2C	X	-5.299	3
89	MP2C	Z	3.059	3
90	MP2C	Mx	-.000531	3
91	MP3A	X	-3.22	1.5
92	MP3A	Z	1.859	1.5
93	MP3A	Mx	-.001	1.5
94	MP3B	X	-3.22	1.5
95	MP3B	Z	1.859	1.5
96	MP3B	Mx	.001	1.5
97	MP3C	X	-4.286	1.5



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
29	MP4B	Z	0	3.75
30	MP4B	Mx	-.002	3.75
31	MP4C	X	-7.742	.25
32	MP4C	Z	0	.25
33	MP4C	Mx	-.002	.25
34	MP4C	X	-7.742	3.75
35	MP4C	Z	0	3.75
36	MP4C	Mx	-.002	3.75
37	MP3A	X	-7.918	.46
38	MP3A	Z	0	.46
39	MP3A	Mx	.004	.46
40	MP3A	X	-7.918	4.29
41	MP3A	Z	0	4.29
42	MP3A	Mx	.004	4.29
43	MP3B	X	-11.022	.46
44	MP3B	Z	0	.46
45	MP3B	Mx	.003	.46
46	MP3B	X	-11.022	4.29
47	MP3B	Z	0	4.29
48	MP3B	Mx	.003	4.29
49	MP3C	X	-10.346	.46
50	MP3C	Z	0	.46
51	MP3C	Mx	-.008	.46
52	MP3C	X	-10.346	4.29
53	MP3C	Z	0	4.29
54	MP3C	Mx	-.008	4.29
55	MP3A	X	-7.918	.46
56	MP3A	Z	0	.46
57	MP3A	Mx	.004	.46
58	MP3A	X	-7.918	4.29
59	MP3A	Z	0	4.29
60	MP3A	Mx	.004	4.29
61	MP3B	X	-11.022	.46
62	MP3B	Z	0	.46
63	MP3B	Mx	-.009	.46
64	MP3B	X	-11.022	4.29
65	MP3B	Z	0	4.29
66	MP3B	Mx	-.009	4.29
67	MP3C	X	-10.346	.46
68	MP3C	Z	0	.46
69	MP3C	Mx	.002	.46
70	MP3C	X	-10.346	4.29
71	MP3C	Z	0	4.29
72	MP3C	Mx	.002	4.29
73	MP2A	X	-2.443	1
74	MP2A	Z	0	1
75	MP2A	Mx	.001	1
76	MP2A	X	-2.443	3
77	MP2A	Z	0	3
78	MP2A	Mx	.001	3
79	MP2B	X	-5.286	1
80	MP2B	Z	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
81	MP2B	Mx	-.001	1
82	MP2B	X	-5.286	3
83	MP2B	Z	0	3
84	MP2B	Mx	-.001	3
85	MP2C	X	-4.667	1
86	MP2C	Z	0	1
87	MP2C	Mx	-.002	1
88	MP2C	X	-4.667	3
89	MP2C	Z	0	3
90	MP2C	Mx	-.002	3
91	MP3A	X	-3.308	1.5
92	MP3A	Z	0	1.5
93	MP3A	Mx	-.001	1.5
94	MP3B	X	-4.539	1.5
95	MP3B	Z	0	1.5
96	MP3B	Mx	.000756	1.5
97	MP3C	X	-4.539	1.5
98	MP3C	Z	0	1.5
99	MP3C	Mx	.000756	1.5
100	MP4A	X	-2.68	1.5
101	MP4A	Z	0	1.5
102	MP4A	Mx	-.000893	1.5
103	MP4B	X	-4.382	1.5
104	MP4B	Z	0	1.5
105	MP4B	Mx	.00073	1.5
106	MP4C	X	-4.382	1.5
107	MP4C	Z	0	1.5
108	MP4C	Mx	.00073	1.5
109	MP3A	X	-.678	.25
110	MP3A	Z	0	.25
111	MP3A	Mx	-.000113	.25
112	MP3B	X	-.904	.25
113	MP3B	Z	0	.25
114	MP3B	Mx	7.5e-5	.25
115	MP3C	X	-.904	.25
116	MP3C	Z	0	.25
117	MP3C	Mx	7.5e-5	.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-6.425	.25
2	MP1A	Z	-3.709	.25
3	MP1A	Mx	.003	.25
4	MP1A	X	-6.425	3.75
5	MP1A	Z	-3.709	3.75
6	MP1A	Mx	.003	3.75
7	MP1B	X	-7.048	.25
8	MP1B	Z	-4.069	.25
9	MP1B	Mx	0	.25
10	MP1B	X	-7.048	3.75
11	MP1B	Z	-4.069	3.75



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
12	MP1B	Mx	0	3.75
13	MP1C	X	-6.314	.25
14	MP1C	Z	-3.646	.25
15	MP1C	Mx	-.003	.25
16	MP1C	X	-6.314	3.75
17	MP1C	Z	-3.646	3.75
18	MP1C	Mx	-.003	3.75
19	MP4A	X	-6.425	.25
20	MP4A	Z	-3.709	.25
21	MP4A	Mx	.003	.25
22	MP4A	X	-6.425	3.75
23	MP4A	Z	-3.709	3.75
24	MP4A	Mx	.003	3.75
25	MP4B	X	-7.048	.25
26	MP4B	Z	-4.069	.25
27	MP4B	Mx	0	.25
28	MP4B	X	-7.048	3.75
29	MP4B	Z	-4.069	3.75
30	MP4B	Mx	0	3.75
31	MP4C	X	-6.314	.25
32	MP4C	Z	-3.646	.25
33	MP4C	Mx	-.003	.25
34	MP4C	X	-6.314	3.75
35	MP4C	Z	-3.646	3.75
36	MP4C	Mx	-.003	3.75
37	MP3A	X	-7.753	.46
38	MP3A	Z	-4.476	.46
39	MP3A	Mx	.001	.46
40	MP3A	X	-7.753	4.29
41	MP3A	Z	-4.476	4.29
42	MP3A	Mx	.001	4.29
43	MP3B	X	-10.441	.46
44	MP3B	Z	-6.028	.46
45	MP3B	Mx	.008	.46
46	MP3B	X	-10.441	4.29
47	MP3B	Z	-6.028	4.29
48	MP3B	Mx	.008	4.29
49	MP3C	X	-7.277	.46
50	MP3C	Z	-4.201	.46
51	MP3C	Mx	-.006	.46
52	MP3C	X	-7.277	4.29
53	MP3C	Z	-4.201	4.29
54	MP3C	Mx	-.006	4.29
55	MP3A	X	-7.753	.46
56	MP3A	Z	-4.476	.46
57	MP3A	Mx	.007	.46
58	MP3A	X	-7.753	4.29
59	MP3A	Z	-4.476	4.29
60	MP3A	Mx	.007	4.29
61	MP3B	X	-10.441	.46
62	MP3B	Z	-6.028	.46
63	MP3B	Mx	-.008	.46



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
64	MP3B	X	-10.441	4.29
65	MP3B	Z	-6.028	4.29
66	MP3B	Mx	-.008	4.29
67	MP3C	X	-7.277	.46
68	MP3C	Z	-4.201	.46
69	MP3C	Mx	-.002	.46
70	MP3C	X	-7.277	4.29
71	MP3C	Z	-4.201	4.29
72	MP3C	Mx	-.002	4.29
73	MP2A	X	-2.937	1
74	MP2A	Z	-1.695	1
75	MP2A	Mx	.001	1
76	MP2A	X	-2.937	3
77	MP2A	Z	-1.695	3
78	MP2A	Mx	.001	3
79	MP2B	X	-5.398	1
80	MP2B	Z	-3.117	1
81	MP2B	Mx	0	1
82	MP2B	X	-5.398	3
83	MP2B	Z	-3.117	3
84	MP2B	Mx	0	3
85	MP2C	X	-2.5	1
86	MP2C	Z	-1.443	1
87	MP2C	Mx	-.001	1
88	MP2C	X	-2.5	3
89	MP2C	Z	-1.443	3
90	MP2C	Mx	-.001	3
91	MP3A	X	-3.22	1.5
92	MP3A	Z	-1.859	1.5
93	MP3A	Mx	-.001	1.5
94	MP3B	X	-4.286	1.5
95	MP3B	Z	-2.475	1.5
96	MP3B	Mx	0	1.5
97	MP3C	X	-3.22	1.5
98	MP3C	Z	-1.859	1.5
99	MP3C	Mx	.001	1.5
100	MP4A	X	-2.812	1.5
101	MP4A	Z	-1.624	1.5
102	MP4A	Mx	-.000937	1.5
103	MP4B	X	-4.286	1.5
104	MP4B	Z	-2.475	1.5
105	MP4B	Mx	0	1.5
106	MP4C	X	-2.812	1.5
107	MP4C	Z	-1.624	1.5
108	MP4C	Mx	.000937	1.5
109	MP3A	X	-.652	.25
110	MP3A	Z	-.376	.25
111	MP3A	Mx	-.000109	.25
112	MP3B	X	-.848	.25
113	MP3B	Z	-.49	.25
114	MP3B	Mx	0	.25
115	MP3C	X	-.652	.25



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
116	MP3C	Z	-.376	.25
117	MP3C	Mx	.000109	.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-3.949	.25
2	MP1A	Z	-6.841	.25
3	MP1A	Mx	.002	.25
4	MP1A	X	-3.949	3.75
5	MP1A	Z	-6.841	3.75
6	MP1A	Mx	.002	3.75
7	MP1B	X	-3.949	.25
8	MP1B	Z	-6.841	.25
9	MP1B	Mx	.002	.25
10	MP1B	X	-3.949	3.75
11	MP1B	Z	-6.841	3.75
12	MP1B	Mx	.002	3.75
13	MP1C	X	-3.604	.25
14	MP1C	Z	-6.242	.25
15	MP1C	Mx	-.004	.25
16	MP1C	X	-3.604	3.75
17	MP1C	Z	-6.242	3.75
18	MP1C	Mx	-.004	3.75
19	MP4A	X	-3.949	.25
20	MP4A	Z	-6.841	.25
21	MP4A	Mx	.002	.25
22	MP4A	X	-3.949	3.75
23	MP4A	Z	-6.841	3.75
24	MP4A	Mx	.002	3.75
25	MP4B	X	-3.949	.25
26	MP4B	Z	-6.841	.25
27	MP4B	Mx	.002	.25
28	MP4B	X	-3.949	3.75
29	MP4B	Z	-6.841	3.75
30	MP4B	Mx	.002	3.75
31	MP4C	X	-3.604	.25
32	MP4C	Z	-6.242	.25
33	MP4C	Mx	-.004	.25
34	MP4C	X	-3.604	3.75
35	MP4C	Z	-6.242	3.75
36	MP4C	Mx	-.004	3.75
37	MP3A	X	-5.511	.46
38	MP3A	Z	-9.545	.46
39	MP3A	Mx	-.003	.46
40	MP3A	X	-5.511	4.29
41	MP3A	Z	-9.545	4.29
42	MP3A	Mx	-.003	4.29
43	MP3B	X	-5.511	.46
44	MP3B	Z	-9.545	.46
45	MP3B	Mx	.009	.46
46	MP3B	X	-5.511	4.29



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
47	MP3B	Z	-9.545	4.29
48	MP3B	Mx	.009	4.29
49	MP3C	X	-4.021	.46
50	MP3C	Z	-6.965	.46
51	MP3C	Mx	-.003	.46
52	MP3C	X	-4.021	4.29
53	MP3C	Z	-6.965	4.29
54	MP3C	Mx	-.003	4.29
55	MP3A	X	-5.511	.46
56	MP3A	Z	-9.545	.46
57	MP3A	Mx	.009	.46
58	MP3A	X	-5.511	4.29
59	MP3A	Z	-9.545	4.29
60	MP3A	Mx	.009	4.29
61	MP3B	X	-5.511	.46
62	MP3B	Z	-9.545	.46
63	MP3B	Mx	-.003	.46
64	MP3B	X	-5.511	4.29
65	MP3B	Z	-9.545	4.29
66	MP3B	Mx	-.003	4.29
67	MP3C	X	-4.021	.46
68	MP3C	Z	-6.965	.46
69	MP3C	Mx	-.005	.46
70	MP3C	X	-4.021	4.29
71	MP3C	Z	-6.965	4.29
72	MP3C	Mx	-.005	4.29
73	MP2A	X	-2.643	1
74	MP2A	Z	-4.578	1
75	MP2A	Mx	.001	1
76	MP2A	X	-2.643	3
77	MP2A	Z	-4.578	3
78	MP2A	Mx	.001	3
79	MP2B	X	-2.643	1
80	MP2B	Z	-4.578	1
81	MP2B	Mx	.001	1
82	MP2B	X	-2.643	3
83	MP2B	Z	-4.578	3
84	MP2B	Mx	.001	3
85	MP2C	X	-1.279	1
86	MP2C	Z	-2.215	1
87	MP2C	Mx	-.001	1
88	MP2C	X	-1.279	3
89	MP2C	Z	-2.215	3
90	MP2C	Mx	-.001	3
91	MP3A	X	-2.27	1.5
92	MP3A	Z	-3.931	1.5
93	MP3A	Mx	-.000757	1.5
94	MP3B	X	-2.27	1.5
95	MP3B	Z	-3.931	1.5
96	MP3B	Mx	-.000756	1.5
97	MP3C	X	-1.654	1.5
98	MP3C	Z	-2.865	1.5



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft, %]
99	MP3C	Mx	.001	1.5
100	MP4A	X	-2.191	1.5
101	MP4A	Z	-3.795	1.5
102	MP4A	Mx	-.00073	1.5
103	MP4B	X	-2.191	1.5
104	MP4B	Z	-3.795	1.5
105	MP4B	Mx	-.00073	1.5
106	MP4C	X	-1.34	1.5
107	MP4C	Z	-2.321	1.5
108	MP4C	Mx	.000893	1.5
109	MP3A	X	-.452	.25
110	MP3A	Z	-.783	.25
111	MP3A	Mx	-7.5e-5	.25
112	MP3B	X	-.452	.25
113	MP3B	Z	-.783	.25
114	MP3B	Mx	-7.5e-5	.25
115	MP3C	X	-.339	.25
116	MP3C	Z	-.587	.25
117	MP3C	Mx	.000113	.25

Member Point Loads (BLC 77 : Lm1)

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

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft, %]
1	M22	Y	-500	0

Member Point Loads (BLC 79 : Lv1)

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

Member Point Loads (BLC 80 : Lv2)

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

Member Distributed Loads (BLC 40 : Structure Di)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	Y	-6.563	-6.563	0	%100
2	M4	Y	-9.605	-9.605	0	%100
3	M10	Y	-9.605	-9.605	0	%100
4	MP3A	Y	-4.977	-4.977	0	%100
5	MP4A	Y	-4.977	-4.977	0	%100
6	MP2A	Y	-4.977	-4.977	0	%100
7	MP1A	Y	-4.977	-4.977	0	%100
8	M43	Y	-9.605	-9.605	0	%100
9	M46	Y	-10.118	-10.118	0	%100
10	M51B	Y	-5.616	-5.616	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
2	M1	Z	-14.13	-14.13	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	0	0	0	%100
5	M10	X	0	0	0	%100
6	M10	Z	-12.527	-12.527	0	%100
7	MP3A	X	0	0	0	%100
8	MP3A	Z	-9.891	-9.891	0	%100
9	MP4A	X	0	0	0	%100
10	MP4A	Z	-9.891	-9.891	0	%100
11	MP2A	X	0	0	0	%100
12	MP2A	Z	-9.891	-9.891	0	%100
13	MP1A	X	0	0	0	%100
14	MP1A	Z	-9.891	-9.891	0	%100
15	M43	X	0	0	0	%100
16	M43	Z	-12.527	-12.527	0	%100
17	M46	X	0	0	0	%100
18	M46	Z	-24.987	-24.987	0	%100
19	M51B	X	0	0	0	%100
20	M51B	Z	-3.469	-3.469	0	%100
21	M52B	X	0	0	0	%100
22	M52B	Z	-3.469	-3.469	0	%100
23	M76	X	0	0	0	%100
24	M76	Z	0	0	0	%100
25	M77	X	0	0	0	%100
26	M77	Z	-6.362	-6.362	0	%100
27	M80	X	0	0	0	%100
28	M80	Z	-6.701	-6.701	0	%100
29	M84	X	0	0	0	%100
30	M84	Z	0	0	0	%100
31	M85	X	0	0	0	%100
32	M85	Z	-6.362	-6.362	0	%100
33	M91	X	0	0	0	%100
34	M91	Z	-6.701	-6.701	0	%100
35	M52A	X	0	0	0	%100
36	M52A	Z	-11.104	-11.104	0	%100
37	M53	X	0	0	0	%100
38	M53	Z	-3.132	-3.132	0	%100
39	M54	X	0	0	0	%100
40	M54	Z	-3.132	-3.132	0	%100
41	M55	X	0	0	0	%100
42	M55	Z	-6.247	-6.247	0	%100
43	M58A	X	0	0	0	%100
44	M58A	Z	-3.469	-3.469	0	%100
45	M59A	X	0	0	0	%100
46	M59A	Z	-13.875	-13.875	0	%100
47	M63	X	0	0	0	%100
48	M63	Z	-18.74	-18.74	0	%100
49	M64	X	0	0	0	%100
50	M64	Z	-6.362	-6.362	0	%100
51	M66	X	0	0	0	%100
52	M66	Z	-6.701	-6.701	0	%100
53	M68	X	0	0	0	%100



Company : Tower Engineering Solutions, LLC
Designer : NL
Job Number : Project No. 10037784
Model Name : 467144-VZW_MT_LO_H

Apr 27, 2021
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Checked By: DX

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

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
54	M68	Z	-18.74	-18.74	0 %100
55	M69	X	0	0	0 %100
56	M69	Z	-25.45	-25.45	0 %100
57	M71	X	0	0	0 %100
58	M71	Z	-26.806	-26.806	0 %100
59	M76A	X	0	0	0 %100
60	M76A	Z	-11.104	-11.104	0 %100
61	M77A	X	0	0	0 %100
62	M77A	Z	-3.132	-3.132	0 %100
63	M78	X	0	0	0 %100
64	M78	Z	-3.132	-3.132	0 %100
65	M79A	X	0	0	0 %100
66	M79A	Z	-6.247	-6.247	0 %100
67	M82	X	0	0	0 %100
68	M82	Z	-13.875	-13.875	0 %100
69	M83A	X	0	0	0 %100
70	M83A	Z	-3.469	-3.469	0 %100
71	M87	X	0	0	0 %100
72	M87	Z	-18.74	-18.74	0 %100
73	M88A	X	0	0	0 %100
74	M88A	Z	-25.45	-25.45	0 %100
75	M90	X	0	0	0 %100
76	M90	Z	-26.806	-26.806	0 %100
77	M92A	X	0	0	0 %100
78	M92A	Z	-18.74	-18.74	0 %100
79	M93	X	0	0	0 %100
80	M93	Z	-6.362	-6.362	0 %100
81	M95	X	0	0	0 %100
82	M95	Z	-6.701	-6.701	0 %100
83	M82A	X	0	0	0 %100
84	M82A	Z	-3.532	-3.532	0 %100
85	M91B	X	0	0	0 %100
86	M91B	Z	-3.532	-3.532	0 %100
87	MP3C	X	0	0	0 %100
88	MP3C	Z	-9.891	-9.891	0 %100
89	MP4C	X	0	0	0 %100
90	MP4C	Z	-9.891	-9.891	0 %100
91	MP2C	X	0	0	0 %100
92	MP2C	Z	-9.891	-9.891	0 %100
93	MP1C	X	0	0	0 %100
94	MP1C	Z	-9.891	-9.891	0 %100
95	MP3B	X	0	0	0 %100
96	MP3B	Z	-9.891	-9.891	0 %100
97	MP4B	X	0	0	0 %100
98	MP4B	Z	-9.891	-9.891	0 %100
99	MP2B	X	0	0	0 %100
100	MP2B	Z	-9.891	-9.891	0 %100
101	MP1B	X	0	0	0 %100
102	MP1B	Z	-9.891	-9.891	0 %100
103	M100	X	0	0	0 %100
104	M100	Z	-11.973	-11.973	0 %100
105	M107	X	0	0	0 %100



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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
92	MP2C	Z	-8.566	-8.566	0	%100
93	MP1C	X	4.945	4.945	0	%100
94	MP1C	Z	-8.566	-8.566	0	%100
95	MP3B	X	4.945	4.945	0	%100
96	MP3B	Z	-8.566	-8.566	0	%100
97	MP4B	X	4.945	4.945	0	%100
98	MP4B	Z	-8.566	-8.566	0	%100
99	MP2B	X	4.945	4.945	0	%100
100	MP2B	Z	-8.566	-8.566	0	%100
101	MP1B	X	4.945	4.945	0	%100
102	MP1B	Z	-8.566	-8.566	0	%100
103	M100	X	4.49	4.49	0	%100
104	M100	Z	-7.777	-7.777	0	%100
105	M107	X	4.49	4.49	0	%100
106	M107	Z	-7.777	-7.777	0	%100
107	M114	X	0	0	0	%100
108	M114	Z	0	0	0	%100
109	M121	X	4.337	4.337	0	%100
110	M121	Z	-7.512	-7.512	0	%100
111	M122	X	4.337	4.337	0	%100
112	M122	Z	-7.512	-7.512	0	%100
113	M123	X	0	0	0	%100
114	M123	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	3.059	3.059	0	%100
2	M1	Z	-1.766	-1.766	0	%100
3	M4	X	9.616	9.616	0	%100
4	M4	Z	-5.552	-5.552	0	%100
5	M10	X	2.712	2.712	0	%100
6	M10	Z	-1.566	-1.566	0	%100
7	MP3A	X	8.566	8.566	0	%100
8	MP3A	Z	-4.945	-4.945	0	%100
9	MP4A	X	8.566	8.566	0	%100
10	MP4A	Z	-4.945	-4.945	0	%100
11	MP2A	X	8.566	8.566	0	%100
12	MP2A	Z	-4.945	-4.945	0	%100
13	MP1A	X	8.566	8.566	0	%100
14	MP1A	Z	-4.945	-4.945	0	%100
15	M43	X	2.712	2.712	0	%100
16	M43	Z	-1.566	-1.566	0	%100
17	M46	X	5.41	5.41	0	%100
18	M46	Z	-3.123	-3.123	0	%100
19	M51B	X	12.016	12.016	0	%100
20	M51B	Z	-6.937	-6.937	0	%100
21	M52B	X	3.004	3.004	0	%100
22	M52B	Z	-1.734	-1.734	0	%100
23	M76	X	16.23	16.23	0	%100
24	M76	Z	-9.37	-9.37	0	%100
25	M77	X	22.04	22.04	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
26	M77	Z	-12.725	-12.725	0	%100
27	M80	X	23.214	23.214	0	%100
28	M80	Z	-13.403	-13.403	0	%100
29	M84	X	16.23	16.23	0	%100
30	M84	Z	-9.37	-9.37	0	%100
31	M85	X	5.51	5.51	0	%100
32	M85	Z	-3.181	-3.181	0	%100
33	M91	X	5.804	5.804	0	%100
34	M91	Z	-3.351	-3.351	0	%100
35	M52A	X	0	0	0	%100
36	M52A	Z	0	0	0	%100
37	M53	X	10.849	10.849	0	%100
38	M53	Z	-6.264	-6.264	0	%100
39	M54	X	10.849	10.849	0	%100
40	M54	Z	-6.264	-6.264	0	%100
41	M55	X	21.639	21.639	0	%100
42	M55	Z	-12.494	-12.494	0	%100
43	M58A	X	3.004	3.004	0	%100
44	M58A	Z	-1.734	-1.734	0	%100
45	M59A	X	3.004	3.004	0	%100
46	M59A	Z	-1.734	-1.734	0	%100
47	M63	X	0	0	0	%100
48	M63	Z	0	0	0	%100
49	M64	X	5.51	5.51	0	%100
50	M64	Z	-3.181	-3.181	0	%100
51	M66	X	5.804	5.804	0	%100
52	M66	Z	-3.351	-3.351	0	%100
53	M68	X	0	0	0	%100
54	M68	Z	0	0	0	%100
55	M69	X	5.51	5.51	0	%100
56	M69	Z	-3.181	-3.181	0	%100
57	M71	X	5.804	5.804	0	%100
58	M71	Z	-3.351	-3.351	0	%100
59	M76A	X	9.616	9.616	0	%100
60	M76A	Z	-5.552	-5.552	0	%100
61	M77A	X	2.712	2.712	0	%100
62	M77A	Z	-1.566	-1.566	0	%100
63	M78	X	2.712	2.712	0	%100
64	M78	Z	-1.566	-1.566	0	%100
65	M79A	X	5.41	5.41	0	%100
66	M79A	Z	-3.123	-3.123	0	%100
67	M82	X	3.004	3.004	0	%100
68	M82	Z	-1.734	-1.734	0	%100
69	M83A	X	12.016	12.016	0	%100
70	M83A	Z	-6.937	-6.937	0	%100
71	M87	X	16.23	16.23	0	%100
72	M87	Z	-9.37	-9.37	0	%100
73	M88A	X	5.51	5.51	0	%100
74	M88A	Z	-3.181	-3.181	0	%100
75	M90	X	5.804	5.804	0	%100
76	M90	Z	-3.351	-3.351	0	%100
77	M92A	X	16.23	16.23	0	%100



Company : Tower Engineering Solutions, LLC
Designer : NL
Job Number : Project No. 10037784
Model Name : 467144-VZW_MT_LO_H

Apr 27, 2021
3:57 PM
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Member Distributed Loads (BLC 43 : Structure Wo (60 Deg)) (Continued)

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
78	M92A	Z	-9.37	-9.37	0 %100
79	M93	X	22.04	22.04	0 %100
80	M93	Z	-12.725	-12.725	0 %100
81	M95	X	23.214	23.214	0 %100
82	M95	Z	-13.403	-13.403	0 %100
83	M82A	X	12.237	12.237	0 %100
84	M82A	Z	-7.065	-7.065	0 %100
85	M91B	X	3.059	3.059	0 %100
86	M91B	Z	-1.766	-1.766	0 %100
87	MP3C	X	8.566	8.566	0 %100
88	MP3C	Z	-4.945	-4.945	0 %100
89	MP4C	X	8.566	8.566	0 %100
90	MP4C	Z	-4.945	-4.945	0 %100
91	MP2C	X	8.566	8.566	0 %100
92	MP2C	Z	-4.945	-4.945	0 %100
93	MP1C	X	8.566	8.566	0 %100
94	MP1C	Z	-4.945	-4.945	0 %100
95	MP3B	X	8.566	8.566	0 %100
96	MP3B	Z	-4.945	-4.945	0 %100
97	MP4B	X	8.566	8.566	0 %100
98	MP4B	Z	-4.945	-4.945	0 %100
99	MP2B	X	8.566	8.566	0 %100
100	MP2B	Z	-4.945	-4.945	0 %100
101	MP1B	X	8.566	8.566	0 %100
102	MP1B	Z	-4.945	-4.945	0 %100
103	M100	X	2.592	2.592	0 %100
104	M100	Z	-1.497	-1.497	0 %100
105	M107	X	10.369	10.369	0 %100
106	M107	Z	-5.986	-5.986	0 %100
107	M114	X	2.592	2.592	0 %100
108	M114	Z	-1.497	-1.497	0 %100
109	M121	X	10.016	10.016	0 %100
110	M121	Z	-5.783	-5.783	0 %100
111	M122	X	2.504	2.504	0 %100
112	M122	Z	-1.446	-1.446	0 %100
113	M123	X	2.504	2.504	0 %100
114	M123	Z	-1.446	-1.446	0 %100

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

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0 %100
2	M1	Z	0	0	0 %100
3	M4	X	14.805	14.805	0 %100
4	M4	Z	0	0	0 %100
5	M10	X	0	0	0 %100
6	M10	Z	0	0	0 %100
7	MP3A	X	9.891	9.891	0 %100
8	MP3A	Z	0	0	0 %100
9	MP4A	X	9.891	9.891	0 %100
10	MP4A	Z	0	0	0 %100
11	MP2A	X	9.891	9.891	0 %100



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

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]	
12	MP2A	Z	0	0	0	%100
13	MP1A	X	9.891	9.891	0	%100
14	MP1A	Z	0	0	0	%100
15	M43	X	0	0	0	%100
16	M43	Z	0	0	0	%100
17	M46	X	0	0	0	%100
18	M46	Z	0	0	0	%100
19	M51B	X	10.406	10.406	0	%100
20	M51B	Z	0	0	0	%100
21	M52B	X	10.406	10.406	0	%100
22	M52B	Z	0	0	0	%100
23	M76	X	24.987	24.987	0	%100
24	M76	Z	0	0	0	%100
25	M77	X	19.087	19.087	0	%100
26	M77	Z	0	0	0	%100
27	M80	X	20.104	20.104	0	%100
28	M80	Z	0	0	0	%100
29	M84	X	24.987	24.987	0	%100
30	M84	Z	0	0	0	%100
31	M85	X	19.087	19.087	0	%100
32	M85	Z	0	0	0	%100
33	M91	X	20.104	20.104	0	%100
34	M91	Z	0	0	0	%100
35	M52A	X	3.701	3.701	0	%100
36	M52A	Z	0	0	0	%100
37	M53	X	9.395	9.395	0	%100
38	M53	Z	0	0	0	%100
39	M54	X	9.395	9.395	0	%100
40	M54	Z	0	0	0	%100
41	M55	X	18.74	18.74	0	%100
42	M55	Z	0	0	0	%100
43	M58A	X	10.406	10.406	0	%100
44	M58A	Z	0	0	0	%100
45	M59A	X	0	0	0	%100
46	M59A	Z	0	0	0	%100
47	M63	X	6.247	6.247	0	%100
48	M63	Z	0	0	0	%100
49	M64	X	19.087	19.087	0	%100
50	M64	Z	0	0	0	%100
51	M66	X	20.104	20.104	0	%100
52	M66	Z	0	0	0	%100
53	M68	X	6.247	6.247	0	%100
54	M68	Z	0	0	0	%100
55	M69	X	0	0	0	%100
56	M69	Z	0	0	0	%100
57	M71	X	0	0	0	%100
58	M71	Z	0	0	0	%100
59	M76A	X	3.701	3.701	0	%100
60	M76A	Z	0	0	0	%100
61	M77A	X	9.395	9.395	0	%100
62	M77A	Z	0	0	0	%100
63	M78	X	9.395	9.395	0	%100



Company : Tower Engineering Solutions, LLC
 Designer : NL
 Job Number : Project No. 10037784
 Model Name : 467144-VZW_MT_LO_H

Apr 27, 2021
 3:57 PM
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Member Distributed Loads (BLC 44 : Structure Wo (90 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
64	M78	Z	0	0	0	%100
65	M79A	X	18.74	18.74	0	%100
66	M79A	Z	0	0	0	%100
67	M82	X	0	0	0	%100
68	M82	Z	0	0	0	%100
69	M83A	X	10.406	10.406	0	%100
70	M83A	Z	0	0	0	%100
71	M87	X	6.247	6.247	0	%100
72	M87	Z	0	0	0	%100
73	M88A	X	0	0	0	%100
74	M88A	Z	0	0	0	%100
75	M90	X	0	0	0	%100
76	M90	Z	0	0	0	%100
77	M92A	X	6.247	6.247	0	%100
78	M92A	Z	0	0	0	%100
79	M93	X	19.087	19.087	0	%100
80	M93	Z	0	0	0	%100
81	M95	X	20.104	20.104	0	%100
82	M95	Z	0	0	0	%100
83	M82A	X	10.597	10.597	0	%100
84	M82A	Z	0	0	0	%100
85	M91B	X	10.597	10.597	0	%100
86	M91B	Z	0	0	0	%100
87	MP3C	X	9.891	9.891	0	%100
88	MP3C	Z	0	0	0	%100
89	MP4C	X	9.891	9.891	0	%100
90	MP4C	Z	0	0	0	%100
91	MP2C	X	9.891	9.891	0	%100
92	MP2C	Z	0	0	0	%100
93	MP1C	X	9.891	9.891	0	%100
94	MP1C	Z	0	0	0	%100
95	MP3B	X	9.891	9.891	0	%100
96	MP3B	Z	0	0	0	%100
97	MP4B	X	9.891	9.891	0	%100
98	MP4B	Z	0	0	0	%100
99	MP2B	X	9.891	9.891	0	%100
100	MP2B	Z	0	0	0	%100
101	MP1B	X	9.891	9.891	0	%100
102	MP1B	Z	0	0	0	%100
103	M100	X	0	0	0	%100
104	M100	Z	0	0	0	%100
105	M107	X	8.98	8.98	0	%100
106	M107	Z	0	0	0	%100
107	M114	X	8.98	8.98	0	%100
108	M114	Z	0	0	0	%100
109	M121	X	8.674	8.674	0	%100
110	M121	Z	0	0	0	%100
111	M122	X	0	0	0	%100
112	M122	Z	0	0	0	%100
113	M123	X	8.674	8.674	0	%100
114	M123	Z	0	0	0	%100



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

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]	
39	M54	X	0	0	0	%100
40	M54	Z	0	0	0	%100
41	M55	X	0	0	0	%100
42	M55	Z	0	0	0	%100
43	M58A	X	5.203	5.203	0	%100
44	M58A	Z	9.012	9.012	0	%100
45	M59A	X	5.203	5.203	0	%100
46	M59A	Z	9.012	9.012	0	%100
47	M63	X	12.494	12.494	0	%100
48	M63	Z	21.639	21.639	0	%100
49	M64	X	9.544	9.544	0	%100
50	M64	Z	16.53	16.53	0	%100
51	M66	X	10.052	10.052	0	%100
52	M66	Z	17.411	17.411	0	%100
53	M68	X	12.494	12.494	0	%100
54	M68	Z	21.639	21.639	0	%100
55	M69	X	9.544	9.544	0	%100
56	M69	Z	16.53	16.53	0	%100
57	M71	X	10.052	10.052	0	%100
58	M71	Z	17.411	17.411	0	%100
59	M76A	X	1.851	1.851	0	%100
60	M76A	Z	3.205	3.205	0	%100
61	M77A	X	4.698	4.698	0	%100
62	M77A	Z	8.137	8.137	0	%100
63	M78	X	4.698	4.698	0	%100
64	M78	Z	8.137	8.137	0	%100
65	M79A	X	9.37	9.37	0	%100
66	M79A	Z	16.23	16.23	0	%100
67	M82	X	5.203	5.203	0	%100
68	M82	Z	9.012	9.012	0	%100
69	M83A	X	0	0	0	%100
70	M83A	Z	0	0	0	%100
71	M87	X	3.123	3.123	0	%100
72	M87	Z	5.41	5.41	0	%100
73	M88A	X	9.544	9.544	0	%100
74	M88A	Z	16.53	16.53	0	%100
75	M90	X	10.052	10.052	0	%100
76	M90	Z	17.411	17.411	0	%100
77	M92A	X	3.123	3.123	0	%100
78	M92A	Z	5.41	5.41	0	%100
79	M93	X	0	0	0	%100
80	M93	Z	0	0	0	%100
81	M95	X	0	0	0	%100
82	M95	Z	0	0	0	%100
83	M82A	X	0	0	0	%100
84	M82A	Z	0	0	0	%100
85	M91B	X	5.299	5.299	0	%100
86	M91B	Z	9.177	9.177	0	%100
87	MP3C	X	4.945	4.945	0	%100
88	MP3C	Z	8.566	8.566	0	%100
89	MP4C	X	4.945	4.945	0	%100
90	MP4C	Z	8.566	8.566	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
25	M77	X	0	0	0	%100
26	M77	Z	6.362	6.362	0	%100
27	M80	X	0	0	0	%100
28	M80	Z	6.701	6.701	0	%100
29	M84	X	0	0	0	%100
30	M84	Z	0	0	0	%100
31	M85	X	0	0	0	%100
32	M85	Z	6.362	6.362	0	%100
33	M91	X	0	0	0	%100
34	M91	Z	6.701	6.701	0	%100
35	M52A	X	0	0	0	%100
36	M52A	Z	11.104	11.104	0	%100
37	M53	X	0	0	0	%100
38	M53	Z	3.132	3.132	0	%100
39	M54	X	0	0	0	%100
40	M54	Z	3.132	3.132	0	%100
41	M55	X	0	0	0	%100
42	M55	Z	6.247	6.247	0	%100
43	M58A	X	0	0	0	%100
44	M58A	Z	3.469	3.469	0	%100
45	M59A	X	0	0	0	%100
46	M59A	Z	13.875	13.875	0	%100
47	M63	X	0	0	0	%100
48	M63	Z	18.74	18.74	0	%100
49	M64	X	0	0	0	%100
50	M64	Z	6.362	6.362	0	%100
51	M66	X	0	0	0	%100
52	M66	Z	6.701	6.701	0	%100
53	M68	X	0	0	0	%100
54	M68	Z	18.74	18.74	0	%100
55	M69	X	0	0	0	%100
56	M69	Z	25.45	25.45	0	%100
57	M71	X	0	0	0	%100
58	M71	Z	26.806	26.806	0	%100
59	M76A	X	0	0	0	%100
60	M76A	Z	11.104	11.104	0	%100
61	M77A	X	0	0	0	%100
62	M77A	Z	3.132	3.132	0	%100
63	M78	X	0	0	0	%100
64	M78	Z	3.132	3.132	0	%100
65	M79A	X	0	0	0	%100
66	M79A	Z	6.247	6.247	0	%100
67	M82	X	0	0	0	%100
68	M82	Z	13.875	13.875	0	%100
69	M83A	X	0	0	0	%100
70	M83A	Z	3.469	3.469	0	%100
71	M87	X	0	0	0	%100
72	M87	Z	18.74	18.74	0	%100
73	M88A	X	0	0	0	%100
74	M88A	Z	25.45	25.45	0	%100
75	M90	X	0	0	0	%100
76	M90	Z	26.806	26.806	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
77	M92A	X	0	0	0	%100
78	M92A	Z	18.74	18.74	0	%100
79	M93	X	0	0	0	%100
80	M93	Z	6.362	6.362	0	%100
81	M95	X	0	0	0	%100
82	M95	Z	6.701	6.701	0	%100
83	M82A	X	0	0	0	%100
84	M82A	Z	3.532	3.532	0	%100
85	M91B	X	0	0	0	%100
86	M91B	Z	3.532	3.532	0	%100
87	MP3C	X	0	0	0	%100
88	MP3C	Z	9.891	9.891	0	%100
89	MP4C	X	0	0	0	%100
90	MP4C	Z	9.891	9.891	0	%100
91	MP2C	X	0	0	0	%100
92	MP2C	Z	9.891	9.891	0	%100
93	MP1C	X	0	0	0	%100
94	MP1C	Z	9.891	9.891	0	%100
95	MP3B	X	0	0	0	%100
96	MP3B	Z	9.891	9.891	0	%100
97	MP4B	X	0	0	0	%100
98	MP4B	Z	9.891	9.891	0	%100
99	MP2B	X	0	0	0	%100
100	MP2B	Z	9.891	9.891	0	%100
101	MP1B	X	0	0	0	%100
102	MP1B	Z	9.891	9.891	0	%100
103	M100	X	0	0	0	%100
104	M100	Z	11.973	11.973	0	%100
105	M107	X	0	0	0	%100
106	M107	Z	2.993	2.993	0	%100
107	M114	X	0	0	0	%100
108	M114	Z	2.993	2.993	0	%100
109	M121	X	0	0	0	%100
110	M121	Z	2.891	2.891	0	%100
111	M122	X	0	0	0	%100
112	M122	Z	11.566	11.566	0	%100
113	M123	X	0	0	0	%100
114	M123	Z	2.891	2.891	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-5.299	-5.299	0	%100
2	M1	Z	9.177	9.177	0	%100
3	M4	X	-1.851	-1.851	0	%100
4	M4	Z	3.205	3.205	0	%100
5	M10	X	-4.698	-4.698	0	%100
6	M10	Z	8.137	8.137	0	%100
7	MP3A	X	-4.945	-4.945	0	%100
8	MP3A	Z	8.566	8.566	0	%100
9	MP4A	X	-4.945	-4.945	0	%100
10	MP4A	Z	8.566	8.566	0	%100



Company : Tower Engineering Solutions, LLC
Designer : NL
Job Number : Project No. 10037784
Model Name : 467144-VZW_MT_LO_H

Apr 27, 2021
3:57 PM
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Member Distributed Loads (BLC 48 : Structure Wo (210 Deg)) (Continued)

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
11	MP2A	X	-4.945	-4.945	0 %100
12	MP2A	Z	8.566	8.566	0 %100
13	MP1A	X	-4.945	-4.945	0 %100
14	MP1A	Z	8.566	8.566	0 %100
15	M43	X	-4.698	-4.698	0 %100
16	M43	Z	8.137	8.137	0 %100
17	M46	X	-9.37	-9.37	0 %100
18	M46	Z	16.23	16.23	0 %100
19	M51B	X	-5.203	-5.203	0 %100
20	M51B	Z	9.012	9.012	0 %100
21	M52B	X	0	0	0 %100
22	M52B	Z	0	0	0 %100
23	M76	X	-3.123	-3.123	0 %100
24	M76	Z	5.41	5.41	0 %100
25	M77	X	-9.544	-9.544	0 %100
26	M77	Z	16.53	16.53	0 %100
27	M80	X	-10.052	-10.052	0 %100
28	M80	Z	17.411	17.411	0 %100
29	M84	X	-3.123	-3.123	0 %100
30	M84	Z	5.41	5.41	0 %100
31	M85	X	0	0	0 %100
32	M85	Z	0	0	0 %100
33	M91	X	0	0	0 %100
34	M91	Z	0	0	0 %100
35	M52A	X	-1.851	-1.851	0 %100
36	M52A	Z	3.205	3.205	0 %100
37	M53	X	-4.698	-4.698	0 %100
38	M53	Z	8.137	8.137	0 %100
39	M54	X	-4.698	-4.698	0 %100
40	M54	Z	8.137	8.137	0 %100
41	M55	X	-9.37	-9.37	0 %100
42	M55	Z	16.23	16.23	0 %100
43	M58A	X	0	0	0 %100
44	M58A	Z	0	0	0 %100
45	M59A	X	-5.203	-5.203	0 %100
46	M59A	Z	9.012	9.012	0 %100
47	M63	X	-3.123	-3.123	0 %100
48	M63	Z	5.41	5.41	0 %100
49	M64	X	0	0	0 %100
50	M64	Z	0	0	0 %100
51	M66	X	0	0	0 %100
52	M66	Z	0	0	0 %100
53	M68	X	-3.123	-3.123	0 %100
54	M68	Z	5.41	5.41	0 %100
55	M69	X	-9.544	-9.544	0 %100
56	M69	Z	16.53	16.53	0 %100
57	M71	X	-10.052	-10.052	0 %100
58	M71	Z	17.411	17.411	0 %100
59	M76A	X	-7.402	-7.402	0 %100
60	M76A	Z	12.821	12.821	0 %100
61	M77A	X	0	0	0 %100
62	M77A	Z	0	0	0 %100



Company : Tower Engineering Solutions, LLC
 Designer : NL
 Job Number : Project No. 10037784
 Model Name : 467144-VZW_MT_LO_H

Apr 27, 2021
 3:57 PM
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Member Distributed Loads (BLC 48 : Structure Wo (210 Deg)) (Continued)

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
63	M78	X	0	0	0 %100
64	M78	Z	0	0	0 %100
65	M79A	X	0	0	0 %100
66	M79A	Z	0	0	0 %100
67	M82	X	-5.203	-5.203	0 %100
68	M82	Z	9.012	9.012	0 %100
69	M83A	X	-5.203	-5.203	0 %100
70	M83A	Z	9.012	9.012	0 %100
71	M87	X	-12.494	-12.494	0 %100
72	M87	Z	21.639	21.639	0 %100
73	M88A	X	-9.544	-9.544	0 %100
74	M88A	Z	16.53	16.53	0 %100
75	M90	X	-10.052	-10.052	0 %100
76	M90	Z	17.411	17.411	0 %100
77	M92A	X	-12.494	-12.494	0 %100
78	M92A	Z	21.639	21.639	0 %100
79	M93	X	-9.544	-9.544	0 %100
80	M93	Z	16.53	16.53	0 %100
81	M95	X	-10.052	-10.052	0 %100
82	M95	Z	17.411	17.411	0 %100
83	M82A	X	-5.299	-5.299	0 %100
84	M82A	Z	9.177	9.177	0 %100
85	M91B	X	0	0	0 %100
86	M91B	Z	0	0	0 %100
87	MP3C	X	-4.945	-4.945	0 %100
88	MP3C	Z	8.566	8.566	0 %100
89	MP4C	X	-4.945	-4.945	0 %100
90	MP4C	Z	8.566	8.566	0 %100
91	MP2C	X	-4.945	-4.945	0 %100
92	MP2C	Z	8.566	8.566	0 %100
93	MP1C	X	-4.945	-4.945	0 %100
94	MP1C	Z	8.566	8.566	0 %100
95	MP3B	X	-4.945	-4.945	0 %100
96	MP3B	Z	8.566	8.566	0 %100
97	MP4B	X	-4.945	-4.945	0 %100
98	MP4B	Z	8.566	8.566	0 %100
99	MP2B	X	-4.945	-4.945	0 %100
100	MP2B	Z	8.566	8.566	0 %100
101	MP1B	X	-4.945	-4.945	0 %100
102	MP1B	Z	8.566	8.566	0 %100
103	M100	X	-4.49	-4.49	0 %100
104	M100	Z	7.777	7.777	0 %100
105	M107	X	-4.49	-4.49	0 %100
106	M107	Z	7.777	7.777	0 %100
107	M114	X	0	0	0 %100
108	M114	Z	0	0	0 %100
109	M121	X	-4.337	-4.337	0 %100
110	M121	Z	7.512	7.512	0 %100
111	M122	X	-4.337	-4.337	0 %100
112	M122	Z	7.512	7.512	0 %100
113	M123	X	0	0	0 %100
114	M123	Z	0	0	0 %100



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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
105	M107	X	-10.369	-10.369	0	%100
106	M107	Z	5.986	5.986	0	%100
107	M114	X	-2.592	-2.592	0	%100
108	M114	Z	1.497	1.497	0	%100
109	M121	X	-10.016	-10.016	0	%100
110	M121	Z	5.783	5.783	0	%100
111	M122	X	-2.504	-2.504	0	%100
112	M122	Z	1.446	1.446	0	%100
113	M123	X	-2.504	-2.504	0	%100
114	M123	Z	1.446	1.446	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M4	X	-14.805	-14.805	0	%100
4	M4	Z	0	0	0	%100
5	M10	X	0	0	0	%100
6	M10	Z	0	0	0	%100
7	MP3A	X	-9.891	-9.891	0	%100
8	MP3A	Z	0	0	0	%100
9	MP4A	X	-9.891	-9.891	0	%100
10	MP4A	Z	0	0	0	%100
11	MP2A	X	-9.891	-9.891	0	%100
12	MP2A	Z	0	0	0	%100
13	MP1A	X	-9.891	-9.891	0	%100
14	MP1A	Z	0	0	0	%100
15	M43	X	0	0	0	%100
16	M43	Z	0	0	0	%100
17	M46	X	0	0	0	%100
18	M46	Z	0	0	0	%100
19	M51B	X	-10.406	-10.406	0	%100
20	M51B	Z	0	0	0	%100
21	M52B	X	-10.406	-10.406	0	%100
22	M52B	Z	0	0	0	%100
23	M76	X	-24.987	-24.987	0	%100
24	M76	Z	0	0	0	%100
25	M77	X	-19.087	-19.087	0	%100
26	M77	Z	0	0	0	%100
27	M80	X	-20.104	-20.104	0	%100
28	M80	Z	0	0	0	%100
29	M84	X	-24.987	-24.987	0	%100
30	M84	Z	0	0	0	%100
31	M85	X	-19.087	-19.087	0	%100
32	M85	Z	0	0	0	%100
33	M91	X	-20.104	-20.104	0	%100
34	M91	Z	0	0	0	%100
35	M52A	X	-3.701	-3.701	0	%100
36	M52A	Z	0	0	0	%100
37	M53	X	-9.395	-9.395	0	%100
38	M53	Z	0	0	0	%100



Company : Tower Engineering Solutions, LLC
 Designer : NL
 Job Number : Project No. 10037784
 Model Name : 467144-VZW_MT_LO_H

Apr 27, 2021
 3:57 PM
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Member Distributed Loads (BLC 50 : Structure Wo (270 Deg)) (Continued)

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
39	M54	X	-9.395	-9.395	0 % 100
40	M54	Z	0	0	0 % 100
41	M55	X	-18.74	-18.74	0 % 100
42	M55	Z	0	0	0 % 100
43	M58A	X	-10.406	-10.406	0 % 100
44	M58A	Z	0	0	0 % 100
45	M59A	X	0	0	0 % 100
46	M59A	Z	0	0	0 % 100
47	M63	X	-6.247	-6.247	0 % 100
48	M63	Z	0	0	0 % 100
49	M64	X	-19.087	-19.087	0 % 100
50	M64	Z	0	0	0 % 100
51	M66	X	-20.104	-20.104	0 % 100
52	M66	Z	0	0	0 % 100
53	M68	X	-6.247	-6.247	0 % 100
54	M68	Z	0	0	0 % 100
55	M69	X	0	0	0 % 100
56	M69	Z	0	0	0 % 100
57	M71	X	0	0	0 % 100
58	M71	Z	0	0	0 % 100
59	M76A	X	-3.701	-3.701	0 % 100
60	M76A	Z	0	0	0 % 100
61	M77A	X	-9.395	-9.395	0 % 100
62	M77A	Z	0	0	0 % 100
63	M78	X	-9.395	-9.395	0 % 100
64	M78	Z	0	0	0 % 100
65	M79A	X	-18.74	-18.74	0 % 100
66	M79A	Z	0	0	0 % 100
67	M82	X	0	0	0 % 100
68	M82	Z	0	0	0 % 100
69	M83A	X	-10.406	-10.406	0 % 100
70	M83A	Z	0	0	0 % 100
71	M87	X	-6.247	-6.247	0 % 100
72	M87	Z	0	0	0 % 100
73	M88A	X	0	0	0 % 100
74	M88A	Z	0	0	0 % 100
75	M90	X	0	0	0 % 100
76	M90	Z	0	0	0 % 100
77	M92A	X	-6.247	-6.247	0 % 100
78	M92A	Z	0	0	0 % 100
79	M93	X	-19.087	-19.087	0 % 100
80	M93	Z	0	0	0 % 100
81	M95	X	-20.104	-20.104	0 % 100
82	M95	Z	0	0	0 % 100
83	M82A	X	-10.597	-10.597	0 % 100
84	M82A	Z	0	0	0 % 100
85	M91B	X	-10.597	-10.597	0 % 100
86	M91B	Z	0	0	0 % 100
87	MP3C	X	-9.891	-9.891	0 % 100
88	MP3C	Z	0	0	0 % 100
89	MP4C	X	-9.891	-9.891	0 % 100
90	MP4C	Z	0	0	0 % 100



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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
91	MP2C	X	-9.891	-9.891	0	%100
92	MP2C	Z	0	0	0	%100
93	MP1C	X	-9.891	-9.891	0	%100
94	MP1C	Z	0	0	0	%100
95	MP3B	X	-9.891	-9.891	0	%100
96	MP3B	Z	0	0	0	%100
97	MP4B	X	-9.891	-9.891	0	%100
98	MP4B	Z	0	0	0	%100
99	MP2B	X	-9.891	-9.891	0	%100
100	MP2B	Z	0	0	0	%100
101	MP1B	X	-9.891	-9.891	0	%100
102	MP1B	Z	0	0	0	%100
103	M100	X	0	0	0	%100
104	M100	Z	0	0	0	%100
105	M107	X	-8.98	-8.98	0	%100
106	M107	Z	0	0	0	%100
107	M114	X	-8.98	-8.98	0	%100
108	M114	Z	0	0	0	%100
109	M121	X	-8.674	-8.674	0	%100
110	M121	Z	0	0	0	%100
111	M122	X	0	0	0	%100
112	M122	Z	0	0	0	%100
113	M123	X	-8.674	-8.674	0	%100
114	M123	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-3.059	-3.059	0	%100
2	M1	Z	-1.766	-1.766	0	%100
3	M4	X	-9.616	-9.616	0	%100
4	M4	Z	-5.552	-5.552	0	%100
5	M10	X	-2.712	-2.712	0	%100
6	M10	Z	-1.566	-1.566	0	%100
7	MP3A	X	-8.566	-8.566	0	%100
8	MP3A	Z	-4.945	-4.945	0	%100
9	MP4A	X	-8.566	-8.566	0	%100
10	MP4A	Z	-4.945	-4.945	0	%100
11	MP2A	X	-8.566	-8.566	0	%100
12	MP2A	Z	-4.945	-4.945	0	%100
13	MP1A	X	-8.566	-8.566	0	%100
14	MP1A	Z	-4.945	-4.945	0	%100
15	M43	X	-2.712	-2.712	0	%100
16	M43	Z	-1.566	-1.566	0	%100
17	M46	X	-5.41	-5.41	0	%100
18	M46	Z	-3.123	-3.123	0	%100
19	M51B	X	-3.004	-3.004	0	%100
20	M51B	Z	-1.734	-1.734	0	%100
21	M52B	X	-12.016	-12.016	0	%100
22	M52B	Z	-6.937	-6.937	0	%100
23	M76	X	-16.23	-16.23	0	%100
24	M76	Z	-9.37	-9.37	0	%100



Company : Tower Engineering Solutions, LLC
 Designer : NL
 Job Number : Project No. 10037784
 Model Name : 467144-VZW_MT_LO_H

Apr 27, 2021
 3:57 PM
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Member Distributed Loads (BLC 51 : Structure Wo (300 Deg)) (Continued)

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]	
77	M92A	X	0	0	0	%100
78	M92A	Z	0	0	0	%100
79	M93	X	-5.51	-5.51	0	%100
80	M93	Z	-3.181	-3.181	0	%100
81	M95	X	-5.804	-5.804	0	%100
82	M95	Z	-3.351	-3.351	0	%100
83	M82A	X	-3.059	-3.059	0	%100
84	M82A	Z	-1.766	-1.766	0	%100
85	M91B	X	-12.237	-12.237	0	%100
86	M91B	Z	-7.065	-7.065	0	%100
87	MP3C	X	-8.566	-8.566	0	%100
88	MP3C	Z	-4.945	-4.945	0	%100
89	MP4C	X	-8.566	-8.566	0	%100
90	MP4C	Z	-4.945	-4.945	0	%100
91	MP2C	X	-8.566	-8.566	0	%100
92	MP2C	Z	-4.945	-4.945	0	%100
93	MP1C	X	-8.566	-8.566	0	%100
94	MP1C	Z	-4.945	-4.945	0	%100
95	MP3B	X	-8.566	-8.566	0	%100
96	MP3B	Z	-4.945	-4.945	0	%100
97	MP4B	X	-8.566	-8.566	0	%100
98	MP4B	Z	-4.945	-4.945	0	%100
99	MP2B	X	-8.566	-8.566	0	%100
100	MP2B	Z	-4.945	-4.945	0	%100
101	MP1B	X	-8.566	-8.566	0	%100
102	MP1B	Z	-4.945	-4.945	0	%100
103	M100	X	-2.592	-2.592	0	%100
104	M100	Z	-1.497	-1.497	0	%100
105	M107	X	-2.592	-2.592	0	%100
106	M107	Z	-1.497	-1.497	0	%100
107	M114	X	-10.369	-10.369	0	%100
108	M114	Z	-5.986	-5.986	0	%100
109	M121	X	-2.504	-2.504	0	%100
110	M121	Z	-1.446	-1.446	0	%100
111	M122	X	-2.504	-2.504	0	%100
112	M122	Z	-1.446	-1.446	0	%100
113	M123	X	-10.016	-10.016	0	%100
114	M123	Z	-5.783	-5.783	0	%100

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

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]	
1	M1	X	-5.299	-5.299	0	%100
2	M1	Z	-9.177	-9.177	0	%100
3	M4	X	-1.851	-1.851	0	%100
4	M4	Z	-3.205	-3.205	0	%100
5	M10	X	-4.698	-4.698	0	%100
6	M10	Z	-8.137	-8.137	0	%100
7	MP3A	X	-4.945	-4.945	0	%100
8	MP3A	Z	-8.566	-8.566	0	%100
9	MP4A	X	-4.945	-4.945	0	%100
10	MP4A	Z	-8.566	-8.566	0	%100



Company : Tower Engineering Solutions, LLC
 Designer : NL
 Job Number : Project No. 10037784
 Model Name : 467144-VZW_MT_LO_H

Apr 27, 2021
 3:57 PM
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Member Distributed Loads (BLC 52 : Structure Wo (330 Deg)) (Continued)

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
11	MP2A	X	-4.945	-4.945	0 %100
12	MP2A	Z	-8.566	-8.566	0 %100
13	MP1A	X	-4.945	-4.945	0 %100
14	MP1A	Z	-8.566	-8.566	0 %100
15	M43	X	-4.698	-4.698	0 %100
16	M43	Z	-8.137	-8.137	0 %100
17	M46	X	-9.37	-9.37	0 %100
18	M46	Z	-16.23	-16.23	0 %100
19	M51B	X	0	0	0 %100
20	M51B	Z	0	0	0 %100
21	M52B	X	-5.203	-5.203	0 %100
22	M52B	Z	-9.012	-9.012	0 %100
23	M76	X	-3.123	-3.123	0 %100
24	M76	Z	-5.41	-5.41	0 %100
25	M77	X	0	0	0 %100
26	M77	Z	0	0	0 %100
27	M80	X	0	0	0 %100
28	M80	Z	0	0	0 %100
29	M84	X	-3.123	-3.123	0 %100
30	M84	Z	-5.41	-5.41	0 %100
31	M85	X	-9.544	-9.544	0 %100
32	M85	Z	-16.53	-16.53	0 %100
33	M91	X	-10.052	-10.052	0 %100
34	M91	Z	-17.411	-17.411	0 %100
35	M52A	X	-7.402	-7.402	0 %100
36	M52A	Z	-12.821	-12.821	0 %100
37	M53	X	0	0	0 %100
38	M53	Z	0	0	0 %100
39	M54	X	0	0	0 %100
40	M54	Z	0	0	0 %100
41	M55	X	0	0	0 %100
42	M55	Z	0	0	0 %100
43	M58A	X	-5.203	-5.203	0 %100
44	M58A	Z	-9.012	-9.012	0 %100
45	M59A	X	-5.203	-5.203	0 %100
46	M59A	Z	-9.012	-9.012	0 %100
47	M63	X	-12.494	-12.494	0 %100
48	M63	Z	-21.639	-21.639	0 %100
49	M64	X	-9.544	-9.544	0 %100
50	M64	Z	-16.53	-16.53	0 %100
51	M66	X	-10.052	-10.052	0 %100
52	M66	Z	-17.411	-17.411	0 %100
53	M68	X	-12.494	-12.494	0 %100
54	M68	Z	-21.639	-21.639	0 %100
55	M69	X	-9.544	-9.544	0 %100
56	M69	Z	-16.53	-16.53	0 %100
57	M71	X	-10.052	-10.052	0 %100
58	M71	Z	-17.411	-17.411	0 %100
59	M76A	X	-1.851	-1.851	0 %100
60	M76A	Z	-3.205	-3.205	0 %100
61	M77A	X	-4.698	-4.698	0 %100
62	M77A	Z	-8.137	-8.137	0 %100



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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
63	M78	X	-4.698	-4.698	0	%100
64	M78	Z	-8.137	-8.137	0	%100
65	M79A	X	-9.37	-9.37	0	%100
66	M79A	Z	-16.23	-16.23	0	%100
67	M82	X	-5.203	-5.203	0	%100
68	M82	Z	-9.012	-9.012	0	%100
69	M83A	X	0	0	0	%100
70	M83A	Z	0	0	0	%100
71	M87	X	-3.123	-3.123	0	%100
72	M87	Z	-5.41	-5.41	0	%100
73	M88A	X	-9.544	-9.544	0	%100
74	M88A	Z	-16.53	-16.53	0	%100
75	M90	X	-10.052	-10.052	0	%100
76	M90	Z	-17.411	-17.411	0	%100
77	M92A	X	-3.123	-3.123	0	%100
78	M92A	Z	-5.41	-5.41	0	%100
79	M93	X	0	0	0	%100
80	M93	Z	0	0	0	%100
81	M95	X	0	0	0	%100
82	M95	Z	0	0	0	%100
83	M82A	X	0	0	0	%100
84	M82A	Z	0	0	0	%100
85	M91B	X	-5.299	-5.299	0	%100
86	M91B	Z	-9.177	-9.177	0	%100
87	MP3C	X	-4.945	-4.945	0	%100
88	MP3C	Z	-8.566	-8.566	0	%100
89	MP4C	X	-4.945	-4.945	0	%100
90	MP4C	Z	-8.566	-8.566	0	%100
91	MP2C	X	-4.945	-4.945	0	%100
92	MP2C	Z	-8.566	-8.566	0	%100
93	MP1C	X	-4.945	-4.945	0	%100
94	MP1C	Z	-8.566	-8.566	0	%100
95	MP3B	X	-4.945	-4.945	0	%100
96	MP3B	Z	-8.566	-8.566	0	%100
97	MP4B	X	-4.945	-4.945	0	%100
98	MP4B	Z	-8.566	-8.566	0	%100
99	MP2B	X	-4.945	-4.945	0	%100
100	MP2B	Z	-8.566	-8.566	0	%100
101	MP1B	X	-4.945	-4.945	0	%100
102	MP1B	Z	-8.566	-8.566	0	%100
103	M100	X	-4.49	-4.49	0	%100
104	M100	Z	-7.777	-7.777	0	%100
105	M107	X	0	0	0	%100
106	M107	Z	0	0	0	%100
107	M114	X	-4.49	-4.49	0	%100
108	M114	Z	-7.777	-7.777	0	%100
109	M121	X	0	0	0	%100
110	M121	Z	0	0	0	%100
111	M122	X	-4.337	-4.337	0	%100
112	M122	Z	-7.512	-7.512	0	%100
113	M123	X	-4.337	-4.337	0	%100
114	M123	Z	-7.512	-7.512	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
53	M68	X	0	0	0	%100
54	M68	Z	-4.051	-4.051	0	%100
55	M69	X	0	0	0	%100
56	M69	Z	-5.483	-5.483	0	%100
57	M71	X	0	0	0	%100
58	M71	Z	-5.722	-5.722	0	%100
59	M76A	X	0	0	0	%100
60	M76A	Z	-3.233	-3.233	0	%100
61	M77A	X	0	0	0	%100
62	M77A	Z	-.878	-.878	0	%100
63	M78	X	0	0	0	%100
64	M78	Z	-.878	-.878	0	%100
65	M79A	X	0	0	0	%100
66	M79A	Z	-1.373	-1.373	0	%100
67	M82	X	0	0	0	%100
68	M82	Z	-4.041	-4.041	0	%100
69	M83A	X	0	0	0	%100
70	M83A	Z	-1.01	-1.01	0	%100
71	M87	X	0	0	0	%100
72	M87	Z	-4.051	-4.051	0	%100
73	M88A	X	0	0	0	%100
74	M88A	Z	-5.483	-5.483	0	%100
75	M90	X	0	0	0	%100
76	M90	Z	-5.722	-5.722	0	%100
77	M92A	X	0	0	0	%100
78	M92A	Z	-4.051	-4.051	0	%100
79	M93	X	0	0	0	%100
80	M93	Z	-1.371	-1.371	0	%100
81	M95	X	0	0	0	%100
82	M95	Z	-1.431	-1.431	0	%100
83	M82A	X	0	0	0	%100
84	M82A	Z	-1.068	-1.068	0	%100
85	M91B	X	0	0	0	%100
86	M91B	Z	-1.068	-1.068	0	%100
87	MP3C	X	0	0	0	%100
88	MP3C	Z	-3.443	-3.443	0	%100
89	MP4C	X	0	0	0	%100
90	MP4C	Z	-3.443	-3.443	0	%100
91	MP2C	X	0	0	0	%100
92	MP2C	Z	-3.443	-3.443	0	%100
93	MP1C	X	0	0	0	%100
94	MP1C	Z	-3.443	-3.443	0	%100
95	MP3B	X	0	0	0	%100
96	MP3B	Z	-3.443	-3.443	0	%100
97	MP4B	X	0	0	0	%100
98	MP4B	Z	-3.443	-3.443	0	%100
99	MP2B	X	0	0	0	%100
100	MP2B	Z	-3.443	-3.443	0	%100
101	MP1B	X	0	0	0	%100
102	MP1B	Z	-3.443	-3.443	0	%100
103	M100	X	0	0	0	%100
104	M100	Z	-3.811	-3.811	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
77	M92A	X	3.508	3.508	0	%100
78	M92A	Z	-2.025	-2.025	0	%100
79	M93	X	4.748	4.748	0	%100
80	M93	Z	-2.741	-2.741	0	%100
81	M95	X	4.956	4.956	0	%100
82	M95	Z	-2.861	-2.861	0	%100
83	M82A	X	3.698	3.698	0	%100
84	M82A	Z	-2.135	-2.135	0	%100
85	M91B	X	.925	.925	0	%100
86	M91B	Z	-.534	-.534	0	%100
87	MP3C	X	2.982	2.982	0	%100
88	MP3C	Z	-1.722	-1.722	0	%100
89	MP4C	X	2.982	2.982	0	%100
90	MP4C	Z	-1.722	-1.722	0	%100
91	MP2C	X	2.982	2.982	0	%100
92	MP2C	Z	-1.722	-1.722	0	%100
93	MP1C	X	2.982	2.982	0	%100
94	MP1C	Z	-1.722	-1.722	0	%100
95	MP3B	X	2.982	2.982	0	%100
96	MP3B	Z	-1.722	-1.722	0	%100
97	MP4B	X	2.982	2.982	0	%100
98	MP4B	Z	-1.722	-1.722	0	%100
99	MP2B	X	2.982	2.982	0	%100
100	MP2B	Z	-1.722	-1.722	0	%100
101	MP1B	X	2.982	2.982	0	%100
102	MP1B	Z	-1.722	-1.722	0	%100
103	M100	X	.825	.825	0	%100
104	M100	Z	-.476	-.476	0	%100
105	M107	X	3.3	3.3	0	%100
106	M107	Z	-1.905	-1.905	0	%100
107	M114	X	.825	.825	0	%100
108	M114	Z	-.476	-.476	0	%100
109	M121	X	2.72	2.72	0	%100
110	M121	Z	-1.57	-1.57	0	%100
111	M122	X	.68	.68	0	%100
112	M122	Z	-.393	-.393	0	%100
113	M123	X	.68	.68	0	%100
114	M123	Z	-.393	-.393	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M4	X	4.311	4.311	0	%100
4	M4	Z	0	0	0	%100
5	M10	X	0	0	0	%100
6	M10	Z	0	0	0	%100
7	MP3A	X	3.443	3.443	0	%100
8	MP3A	Z	0	0	0	%100
9	MP4A	X	3.443	3.443	0	%100
10	MP4A	Z	0	0	0	%100



Company : Tower Engineering Solutions, LLC
 Designer : NL
 Job Number : Project No. 10037784
 Model Name : 467144-VZW_MT_LO_H

Apr 27, 2021
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Member Distributed Loads (BLC 56 : Structure Wi (90 Deg)) (Continued)

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
11	MP2A	X	3.443	3.443	0 %100
12	MP2A	Z	0	0	0 %100
13	MP1A	X	3.443	3.443	0 %100
14	MP1A	Z	0	0	0 %100
15	M43	X	0	0	0 %100
16	M43	Z	0	0	0 %100
17	M46	X	0	0	0 %100
18	M46	Z	0	0	0 %100
19	M51B	X	3.031	3.031	0 %100
20	M51B	Z	0	0	0 %100
21	M52B	X	3.031	3.031	0 %100
22	M52B	Z	0	0	0 %100
23	M76	X	5.401	5.401	0 %100
24	M76	Z	0	0	0 %100
25	M77	X	4.112	4.112	0 %100
26	M77	Z	0	0	0 %100
27	M80	X	4.292	4.292	0 %100
28	M80	Z	0	0	0 %100
29	M84	X	5.401	5.401	0 %100
30	M84	Z	0	0	0 %100
31	M85	X	4.112	4.112	0 %100
32	M85	Z	0	0	0 %100
33	M91	X	4.292	4.292	0 %100
34	M91	Z	0	0	0 %100
35	M52A	X	1.078	1.078	0 %100
36	M52A	Z	0	0	0 %100
37	M53	X	2.633	2.633	0 %100
38	M53	Z	0	0	0 %100
39	M54	X	2.633	2.633	0 %100
40	M54	Z	0	0	0 %100
41	M55	X	4.118	4.118	0 %100
42	M55	Z	0	0	0 %100
43	M58A	X	3.031	3.031	0 %100
44	M58A	Z	0	0	0 %100
45	M59A	X	0	0	0 %100
46	M59A	Z	0	0	0 %100
47	M63	X	1.35	1.35	0 %100
48	M63	Z	0	0	0 %100
49	M64	X	4.112	4.112	0 %100
50	M64	Z	0	0	0 %100
51	M66	X	4.292	4.292	0 %100
52	M66	Z	0	0	0 %100
53	M68	X	1.35	1.35	0 %100
54	M68	Z	0	0	0 %100
55	M69	X	0	0	0 %100
56	M69	Z	0	0	0 %100
57	M71	X	0	0	0 %100
58	M71	Z	0	0	0 %100
59	M76A	X	1.078	1.078	0 %100
60	M76A	Z	0	0	0 %100
61	M77A	X	2.633	2.633	0 %100
62	M77A	Z	0	0	0 %100



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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.925	.925	0	%100
2	M1	Z	.534	.534	0	%100
3	M4	X	2.8	2.8	0	%100
4	M4	Z	1.617	1.617	0	%100
5	M10	X	.76	.76	0	%100
6	M10	Z	.439	.439	0	%100
7	MP3A	X	2.982	2.982	0	%100
8	MP3A	Z	1.722	1.722	0	%100
9	MP4A	X	2.982	2.982	0	%100
10	MP4A	Z	1.722	1.722	0	%100
11	MP2A	X	2.982	2.982	0	%100
12	MP2A	Z	1.722	1.722	0	%100
13	MP1A	X	2.982	2.982	0	%100
14	MP1A	Z	1.722	1.722	0	%100
15	M43	X	.76	.76	0	%100
16	M43	Z	.439	.439	0	%100
17	M46	X	1.189	1.189	0	%100
18	M46	Z	.686	.686	0	%100
19	M51B	X	.875	.875	0	%100
20	M51B	Z	.505	.505	0	%100
21	M52B	X	3.5	3.5	0	%100
22	M52B	Z	2.02	2.02	0	%100
23	M76	X	3.508	3.508	0	%100
24	M76	Z	2.025	2.025	0	%100
25	M77	X	1.187	1.187	0	%100
26	M77	Z	.685	.685	0	%100
27	M80	X	1.239	1.239	0	%100
28	M80	Z	.715	.715	0	%100
29	M84	X	3.508	3.508	0	%100
30	M84	Z	2.025	2.025	0	%100
31	M85	X	4.748	4.748	0	%100
32	M85	Z	2.741	2.741	0	%100
33	M91	X	4.956	4.956	0	%100
34	M91	Z	2.861	2.861	0	%100
35	M52A	X	2.8	2.8	0	%100
36	M52A	Z	1.617	1.617	0	%100
37	M53	X	.76	.76	0	%100
38	M53	Z	.439	.439	0	%100
39	M54	X	.76	.76	0	%100
40	M54	Z	.439	.439	0	%100
41	M55	X	1.189	1.189	0	%100
42	M55	Z	.686	.686	0	%100
43	M58A	X	3.5	3.5	0	%100
44	M58A	Z	2.02	2.02	0	%100
45	M59A	X	.875	.875	0	%100
46	M59A	Z	.505	.505	0	%100
47	M63	X	3.508	3.508	0	%100
48	M63	Z	2.025	2.025	0	%100
49	M64	X	4.748	4.748	0	%100
50	M64	Z	2.741	2.741	0	%100
51	M66	X	4.956	4.956	0	%100
52	M66	Z	2.861	2.861	0	%100



Company : Tower Engineering Solutions, LLC
Designer : NL
Job Number : Project No. 10037784
Model Name : 467144-VZW_MT_LO_H

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

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
53	M68	X	3.508	3.508	0 %100
54	M68	Z	2.025	2.025	0 %100
55	M69	X	1.187	1.187	0 %100
56	M69	Z	.685	.685	0 %100
57	M71	X	1.239	1.239	0 %100
58	M71	Z	.715	.715	0 %100
59	M76A	X	0	0	0 %100
60	M76A	Z	0	0	0 %100
61	M77A	X	3.041	3.041	0 %100
62	M77A	Z	1.756	1.756	0 %100
63	M78	X	3.041	3.041	0 %100
64	M78	Z	1.756	1.756	0 %100
65	M79A	X	4.756	4.756	0 %100
66	M79A	Z	2.746	2.746	0 %100
67	M82	X	.875	.875	0 %100
68	M82	Z	.505	.505	0 %100
69	M83A	X	.875	.875	0 %100
70	M83A	Z	.505	.505	0 %100
71	M87	X	0	0	0 %100
72	M87	Z	0	0	0 %100
73	M88A	X	1.187	1.187	0 %100
74	M88A	Z	.685	.685	0 %100
75	M90	X	1.239	1.239	0 %100
76	M90	Z	.715	.715	0 %100
77	M92A	X	0	0	0 %100
78	M92A	Z	0	0	0 %100
79	M93	X	1.187	1.187	0 %100
80	M93	Z	.685	.685	0 %100
81	M95	X	1.239	1.239	0 %100
82	M95	Z	.715	.715	0 %100
83	M82A	X	.925	.925	0 %100
84	M82A	Z	.534	.534	0 %100
85	M91B	X	3.698	3.698	0 %100
86	M91B	Z	2.135	2.135	0 %100
87	MP3C	X	2.982	2.982	0 %100
88	MP3C	Z	1.722	1.722	0 %100
89	MP4C	X	2.982	2.982	0 %100
90	MP4C	Z	1.722	1.722	0 %100
91	MP2C	X	2.982	2.982	0 %100
92	MP2C	Z	1.722	1.722	0 %100
93	MP1C	X	2.982	2.982	0 %100
94	MP1C	Z	1.722	1.722	0 %100
95	MP3B	X	2.982	2.982	0 %100
96	MP3B	Z	1.722	1.722	0 %100
97	MP4B	X	2.982	2.982	0 %100
98	MP4B	Z	1.722	1.722	0 %100
99	MP2B	X	2.982	2.982	0 %100
100	MP2B	Z	1.722	1.722	0 %100
101	MP1B	X	2.982	2.982	0 %100
102	MP1B	Z	1.722	1.722	0 %100
103	M100	X	.825	.825	0 %100
104	M100	Z	.476	.476	0 %100



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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
105	M107	X	.825	.825	0	%100
106	M107	Z	.476	.476	0	%100
107	M114	X	3.3	3.3	0	%100
108	M114	Z	1.905	1.905	0	%100
109	M121	X	.68	.68	0	%100
110	M121	Z	.393	.393	0	%100
111	M122	X	.68	.68	0	%100
112	M122	Z	.393	.393	0	%100
113	M123	X	2.72	2.72	0	%100
114	M123	Z	1.57	1.57	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	1.601	1.601	0	%100
2	M1	Z	2.774	2.774	0	%100
3	M4	X	.539	.539	0	%100
4	M4	Z	.933	.933	0	%100
5	M10	X	1.317	1.317	0	%100
6	M10	Z	2.281	2.281	0	%100
7	MP3A	X	1.722	1.722	0	%100
8	MP3A	Z	2.982	2.982	0	%100
9	MP4A	X	1.722	1.722	0	%100
10	MP4A	Z	2.982	2.982	0	%100
11	MP2A	X	1.722	1.722	0	%100
12	MP2A	Z	2.982	2.982	0	%100
13	MP1A	X	1.722	1.722	0	%100
14	MP1A	Z	2.982	2.982	0	%100
15	M43	X	1.317	1.317	0	%100
16	M43	Z	2.281	2.281	0	%100
17	M46	X	2.059	2.059	0	%100
18	M46	Z	3.567	3.567	0	%100
19	M51B	X	0	0	0	%100
20	M51B	Z	0	0	0	%100
21	M52B	X	1.515	1.515	0	%100
22	M52B	Z	2.625	2.625	0	%100
23	M76	X	.675	.675	0	%100
24	M76	Z	1.169	1.169	0	%100
25	M77	X	0	0	0	%100
26	M77	Z	0	0	0	%100
27	M80	X	0	0	0	%100
28	M80	Z	0	0	0	%100
29	M84	X	.675	.675	0	%100
30	M84	Z	1.169	1.169	0	%100
31	M85	X	2.056	2.056	0	%100
32	M85	Z	3.561	3.561	0	%100
33	M91	X	2.146	2.146	0	%100
34	M91	Z	3.717	3.717	0	%100
35	M52A	X	2.155	2.155	0	%100
36	M52A	Z	3.733	3.733	0	%100
37	M53	X	0	0	0	%100
38	M53	Z	0	0	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
91	MP2C	X	1.722	1.722	0	%100
92	MP2C	Z	2.982	2.982	0	%100
93	MP1C	X	1.722	1.722	0	%100
94	MP1C	Z	2.982	2.982	0	%100
95	MP3B	X	1.722	1.722	0	%100
96	MP3B	Z	2.982	2.982	0	%100
97	MP4B	X	1.722	1.722	0	%100
98	MP4B	Z	2.982	2.982	0	%100
99	MP2B	X	1.722	1.722	0	%100
100	MP2B	Z	2.982	2.982	0	%100
101	MP1B	X	1.722	1.722	0	%100
102	MP1B	Z	2.982	2.982	0	%100
103	M100	X	1.429	1.429	0	%100
104	M100	Z	2.475	2.475	0	%100
105	M107	X	0	0	0	%100
106	M107	Z	0	0	0	%100
107	M114	X	1.429	1.429	0	%100
108	M114	Z	2.475	2.475	0	%100
109	M121	X	0	0	0	%100
110	M121	Z	0	0	0	%100
111	M122	X	1.178	1.178	0	%100
112	M122	Z	2.04	2.04	0	%100
113	M123	X	1.178	1.178	0	%100
114	M123	Z	2.04	2.04	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	4.27	4.27	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	0	0	0	%100
5	M10	X	0	0	0	%100
6	M10	Z	3.511	3.511	0	%100
7	MP3A	X	0	0	0	%100
8	MP3A	Z	3.443	3.443	0	%100
9	MP4A	X	0	0	0	%100
10	MP4A	Z	3.443	3.443	0	%100
11	MP2A	X	0	0	0	%100
12	MP2A	Z	3.443	3.443	0	%100
13	MP1A	X	0	0	0	%100
14	MP1A	Z	3.443	3.443	0	%100
15	M43	X	0	0	0	%100
16	M43	Z	3.511	3.511	0	%100
17	M46	X	0	0	0	%100
18	M46	Z	5.491	5.491	0	%100
19	M51B	X	0	0	0	%100
20	M51B	Z	1.01	1.01	0	%100
21	M52B	X	0	0	0	%100
22	M52B	Z	1.01	1.01	0	%100
23	M76	X	0	0	0	%100
24	M76	Z	0	0	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
77	M92A	X	0	0	0	%100
78	M92A	Z	4.051	4.051	0	%100
79	M93	X	0	0	0	%100
80	M93	Z	1.371	1.371	0	%100
81	M95	X	0	0	0	%100
82	M95	Z	1.431	1.431	0	%100
83	M82A	X	0	0	0	%100
84	M82A	Z	1.068	1.068	0	%100
85	M91B	X	0	0	0	%100
86	M91B	Z	1.068	1.068	0	%100
87	MP3C	X	0	0	0	%100
88	MP3C	Z	3.443	3.443	0	%100
89	MP4C	X	0	0	0	%100
90	MP4C	Z	3.443	3.443	0	%100
91	MP2C	X	0	0	0	%100
92	MP2C	Z	3.443	3.443	0	%100
93	MP1C	X	0	0	0	%100
94	MP1C	Z	3.443	3.443	0	%100
95	MP3B	X	0	0	0	%100
96	MP3B	Z	3.443	3.443	0	%100
97	MP4B	X	0	0	0	%100
98	MP4B	Z	3.443	3.443	0	%100
99	MP2B	X	0	0	0	%100
100	MP2B	Z	3.443	3.443	0	%100
101	MP1B	X	0	0	0	%100
102	MP1B	Z	3.443	3.443	0	%100
103	M100	X	0	0	0	%100
104	M100	Z	3.811	3.811	0	%100
105	M107	X	0	0	0	%100
106	M107	Z	.953	.953	0	%100
107	M114	X	0	0	0	%100
108	M114	Z	.953	.953	0	%100
109	M121	X	0	0	0	%100
110	M121	Z	.785	.785	0	%100
111	M122	X	0	0	0	%100
112	M122	Z	3.14	3.14	0	%100
113	M123	X	0	0	0	%100
114	M123	Z	.785	.785	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-1.601	-1.601	0	%100
2	M1	Z	2.774	2.774	0	%100
3	M4	X	-.539	-.539	0	%100
4	M4	Z	.933	.933	0	%100
5	M10	X	-1.317	-1.317	0	%100
6	M10	Z	2.281	2.281	0	%100
7	MP3A	X	-1.722	-1.722	0	%100
8	MP3A	Z	2.982	2.982	0	%100
9	MP4A	X	-1.722	-1.722	0	%100
10	MP4A	Z	2.982	2.982	0	%100



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

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
11	MP2A	X	-1.722	-1.722	0 %100
12	MP2A	Z	2.982	2.982	0 %100
13	MP1A	X	-1.722	-1.722	0 %100
14	MP1A	Z	2.982	2.982	0 %100
15	M43	X	-1.317	-1.317	0 %100
16	M43	Z	2.281	2.281	0 %100
17	M46	X	-2.059	-2.059	0 %100
18	M46	Z	3.567	3.567	0 %100
19	M51B	X	-1.515	-1.515	0 %100
20	M51B	Z	2.625	2.625	0 %100
21	M52B	X	0	0	0 %100
22	M52B	Z	0	0	0 %100
23	M76	X	-.675	-.675	0 %100
24	M76	Z	1.169	1.169	0 %100
25	M77	X	-2.056	-2.056	0 %100
26	M77	Z	3.561	3.561	0 %100
27	M80	X	-2.146	-2.146	0 %100
28	M80	Z	3.717	3.717	0 %100
29	M84	X	-.675	-.675	0 %100
30	M84	Z	1.169	1.169	0 %100
31	M85	X	0	0	0 %100
32	M85	Z	0	0	0 %100
33	M91	X	0	0	0 %100
34	M91	Z	0	0	0 %100
35	M52A	X	-.539	-.539	0 %100
36	M52A	Z	.933	.933	0 %100
37	M53	X	-1.317	-1.317	0 %100
38	M53	Z	2.281	2.281	0 %100
39	M54	X	-1.317	-1.317	0 %100
40	M54	Z	2.281	2.281	0 %100
41	M55	X	-2.059	-2.059	0 %100
42	M55	Z	3.567	3.567	0 %100
43	M58A	X	0	0	0 %100
44	M58A	Z	0	0	0 %100
45	M59A	X	-1.515	-1.515	0 %100
46	M59A	Z	2.625	2.625	0 %100
47	M63	X	-.675	-.675	0 %100
48	M63	Z	1.169	1.169	0 %100
49	M64	X	0	0	0 %100
50	M64	Z	0	0	0 %100
51	M66	X	0	0	0 %100
52	M66	Z	0	0	0 %100
53	M68	X	-.675	-.675	0 %100
54	M68	Z	1.169	1.169	0 %100
55	M69	X	-2.056	-2.056	0 %100
56	M69	Z	3.561	3.561	0 %100
57	M71	X	-2.146	-2.146	0 %100
58	M71	Z	3.717	3.717	0 %100
59	M76A	X	-2.155	-2.155	0 %100
60	M76A	Z	3.733	3.733	0 %100
61	M77A	X	0	0	0 %100
62	M77A	Z	0	0	0 %100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
63	M78	X	0	0	0	%100
64	M78	Z	0	0	0	%100
65	M79A	X	0	0	0	%100
66	M79A	Z	0	0	0	%100
67	M82	X	-1.515	-1.515	0	%100
68	M82	Z	2.625	2.625	0	%100
69	M83A	X	-1.515	-1.515	0	%100
70	M83A	Z	2.625	2.625	0	%100
71	M87	X	-2.701	-2.701	0	%100
72	M87	Z	4.678	4.678	0	%100
73	M88A	X	-2.056	-2.056	0	%100
74	M88A	Z	3.561	3.561	0	%100
75	M90	X	-2.146	-2.146	0	%100
76	M90	Z	3.717	3.717	0	%100
77	M92A	X	-2.701	-2.701	0	%100
78	M92A	Z	4.678	4.678	0	%100
79	M93	X	-2.056	-2.056	0	%100
80	M93	Z	3.561	3.561	0	%100
81	M95	X	-2.146	-2.146	0	%100
82	M95	Z	3.717	3.717	0	%100
83	M82A	X	-1.601	-1.601	0	%100
84	M82A	Z	2.774	2.774	0	%100
85	M91B	X	0	0	0	%100
86	M91B	Z	0	0	0	%100
87	MP3C	X	-1.722	-1.722	0	%100
88	MP3C	Z	2.982	2.982	0	%100
89	MP4C	X	-1.722	-1.722	0	%100
90	MP4C	Z	2.982	2.982	0	%100
91	MP2C	X	-1.722	-1.722	0	%100
92	MP2C	Z	2.982	2.982	0	%100
93	MP1C	X	-1.722	-1.722	0	%100
94	MP1C	Z	2.982	2.982	0	%100
95	MP3B	X	-1.722	-1.722	0	%100
96	MP3B	Z	2.982	2.982	0	%100
97	MP4B	X	-1.722	-1.722	0	%100
98	MP4B	Z	2.982	2.982	0	%100
99	MP2B	X	-1.722	-1.722	0	%100
100	MP2B	Z	2.982	2.982	0	%100
101	MP1B	X	-1.722	-1.722	0	%100
102	MP1B	Z	2.982	2.982	0	%100
103	M100	X	-1.429	-1.429	0	%100
104	M100	Z	2.475	2.475	0	%100
105	M107	X	-1.429	-1.429	0	%100
106	M107	Z	2.475	2.475	0	%100
107	M114	X	0	0	0	%100
108	M114	Z	0	0	0	%100
109	M121	X	-1.178	-1.178	0	%100
110	M121	Z	2.04	2.04	0	%100
111	M122	X	-1.178	-1.178	0	%100
112	M122	Z	2.04	2.04	0	%100
113	M123	X	0	0	0	%100
114	M123	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
39	M54	X	-2.633	-2.633	0	%100
40	M54	Z	0	0	0	%100
41	M55	X	-4.118	-4.118	0	%100
42	M55	Z	0	0	0	%100
43	M58A	X	-3.031	-3.031	0	%100
44	M58A	Z	0	0	0	%100
45	M59A	X	0	0	0	%100
46	M59A	Z	0	0	0	%100
47	M63	X	-1.35	-1.35	0	%100
48	M63	Z	0	0	0	%100
49	M64	X	-4.112	-4.112	0	%100
50	M64	Z	0	0	0	%100
51	M66	X	-4.292	-4.292	0	%100
52	M66	Z	0	0	0	%100
53	M68	X	-1.35	-1.35	0	%100
54	M68	Z	0	0	0	%100
55	M69	X	0	0	0	%100
56	M69	Z	0	0	0	%100
57	M71	X	0	0	0	%100
58	M71	Z	0	0	0	%100
59	M76A	X	-1.078	-1.078	0	%100
60	M76A	Z	0	0	0	%100
61	M77A	X	-2.633	-2.633	0	%100
62	M77A	Z	0	0	0	%100
63	M78	X	-2.633	-2.633	0	%100
64	M78	Z	0	0	0	%100
65	M79A	X	-4.118	-4.118	0	%100
66	M79A	Z	0	0	0	%100
67	M82	X	0	0	0	%100
68	M82	Z	0	0	0	%100
69	M83A	X	-3.031	-3.031	0	%100
70	M83A	Z	0	0	0	%100
71	M87	X	-1.35	-1.35	0	%100
72	M87	Z	0	0	0	%100
73	M88A	X	0	0	0	%100
74	M88A	Z	0	0	0	%100
75	M90	X	0	0	0	%100
76	M90	Z	0	0	0	%100
77	M92A	X	-1.35	-1.35	0	%100
78	M92A	Z	0	0	0	%100
79	M93	X	-4.112	-4.112	0	%100
80	M93	Z	0	0	0	%100
81	M95	X	-4.292	-4.292	0	%100
82	M95	Z	0	0	0	%100
83	M82A	X	-3.203	-3.203	0	%100
84	M82A	Z	0	0	0	%100
85	M91B	X	-3.203	-3.203	0	%100
86	M91B	Z	0	0	0	%100
87	MP3C	X	-3.443	-3.443	0	%100
88	MP3C	Z	0	0	0	%100
89	MP4C	X	-3.443	-3.443	0	%100
90	MP4C	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
91	MP2C	X	-3.443	-3.443	0	% 100
92	MP2C	Z	0	0	0	% 100
93	MP1C	X	-3.443	-3.443	0	% 100
94	MP1C	Z	0	0	0	% 100
95	MP3B	X	-3.443	-3.443	0	% 100
96	MP3B	Z	0	0	0	% 100
97	MP4B	X	-3.443	-3.443	0	% 100
98	MP4B	Z	0	0	0	% 100
99	MP2B	X	-3.443	-3.443	0	% 100
100	MP2B	Z	0	0	0	% 100
101	MP1B	X	-3.443	-3.443	0	% 100
102	MP1B	Z	0	0	0	% 100
103	M100	X	0	0	0	% 100
104	M100	Z	0	0	0	% 100
105	M107	X	-2.858	-2.858	0	% 100
106	M107	Z	0	0	0	% 100
107	M114	X	-2.858	-2.858	0	% 100
108	M114	Z	0	0	0	% 100
109	M121	X	-2.355	-2.355	0	% 100
110	M121	Z	0	0	0	% 100
111	M122	X	0	0	0	% 100
112	M122	Z	0	0	0	% 100
113	M123	X	-2.355	-2.355	0	% 100
114	M123	Z	0	0	0	% 100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.925	-.925	0	% 100
2	M1	Z	-.534	-.534	0	% 100
3	M4	X	-2.8	-2.8	0	% 100
4	M4	Z	-1.617	-1.617	0	% 100
5	M10	X	-.76	-.76	0	% 100
6	M10	Z	-.439	-.439	0	% 100
7	MP3A	X	-2.982	-2.982	0	% 100
8	MP3A	Z	-1.722	-1.722	0	% 100
9	MP4A	X	-2.982	-2.982	0	% 100
10	MP4A	Z	-1.722	-1.722	0	% 100
11	MP2A	X	-2.982	-2.982	0	% 100
12	MP2A	Z	-1.722	-1.722	0	% 100
13	MP1A	X	-2.982	-2.982	0	% 100
14	MP1A	Z	-1.722	-1.722	0	% 100
15	M43	X	-.76	-.76	0	% 100
16	M43	Z	-.439	-.439	0	% 100
17	M46	X	-1.189	-1.189	0	% 100
18	M46	Z	-.686	-.686	0	% 100
19	M51B	X	-.875	-.875	0	% 100
20	M51B	Z	-.505	-.505	0	% 100
21	M52B	X	-3.5	-3.5	0	% 100
22	M52B	Z	-2.02	-2.02	0	% 100
23	M76	X	-3.508	-3.508	0	% 100
24	M76	Z	-2.025	-2.025	0	% 100



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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
25	M77	X	-1.187	-1.187	0	% 100
26	M77	Z	-.685	-.685	0	% 100
27	M80	X	-1.239	-1.239	0	% 100
28	M80	Z	-.715	-.715	0	% 100
29	M84	X	-3.508	-3.508	0	% 100
30	M84	Z	-2.025	-2.025	0	% 100
31	M85	X	-4.748	-4.748	0	% 100
32	M85	Z	-2.741	-2.741	0	% 100
33	M91	X	-4.956	-4.956	0	% 100
34	M91	Z	-2.861	-2.861	0	% 100
35	M52A	X	-2.8	-2.8	0	% 100
36	M52A	Z	-1.617	-1.617	0	% 100
37	M53	X	-.76	-.76	0	% 100
38	M53	Z	-.439	-.439	0	% 100
39	M54	X	-.76	-.76	0	% 100
40	M54	Z	-.439	-.439	0	% 100
41	M55	X	-1.189	-1.189	0	% 100
42	M55	Z	-.686	-.686	0	% 100
43	M58A	X	-3.5	-3.5	0	% 100
44	M58A	Z	-2.02	-2.02	0	% 100
45	M59A	X	-.875	-.875	0	% 100
46	M59A	Z	-.505	-.505	0	% 100
47	M63	X	-3.508	-3.508	0	% 100
48	M63	Z	-2.025	-2.025	0	% 100
49	M64	X	-4.748	-4.748	0	% 100
50	M64	Z	-2.741	-2.741	0	% 100
51	M66	X	-4.956	-4.956	0	% 100
52	M66	Z	-2.861	-2.861	0	% 100
53	M68	X	-3.508	-3.508	0	% 100
54	M68	Z	-2.025	-2.025	0	% 100
55	M69	X	-1.187	-1.187	0	% 100
56	M69	Z	-.685	-.685	0	% 100
57	M71	X	-1.239	-1.239	0	% 100
58	M71	Z	-.715	-.715	0	% 100
59	M76A	X	0	0	0	% 100
60	M76A	Z	0	0	0	% 100
61	M77A	X	-3.041	-3.041	0	% 100
62	M77A	Z	-1.756	-1.756	0	% 100
63	M78	X	-3.041	-3.041	0	% 100
64	M78	Z	-1.756	-1.756	0	% 100
65	M79A	X	-4.756	-4.756	0	% 100
66	M79A	Z	-2.746	-2.746	0	% 100
67	M82	X	-.875	-.875	0	% 100
68	M82	Z	-.505	-.505	0	% 100
69	M83A	X	-.875	-.875	0	% 100
70	M83A	Z	-.505	-.505	0	% 100
71	M87	X	0	0	0	% 100
72	M87	Z	0	0	0	% 100
73	M88A	X	-1.187	-1.187	0	% 100
74	M88A	Z	-.685	-.685	0	% 100
75	M90	X	-1.239	-1.239	0	% 100
76	M90	Z	-.715	-.715	0	% 100



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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
77	M92A	X	0	0	0	%100
78	M92A	Z	0	0	0	%100
79	M93	X	-1.187	-1.187	0	%100
80	M93	Z	-.685	-.685	0	%100
81	M95	X	-1.239	-1.239	0	%100
82	M95	Z	-.715	-.715	0	%100
83	M82A	X	-.925	-.925	0	%100
84	M82A	Z	-.534	-.534	0	%100
85	M91B	X	-3.698	-3.698	0	%100
86	M91B	Z	-2.135	-2.135	0	%100
87	MP3C	X	-2.982	-2.982	0	%100
88	MP3C	Z	-1.722	-1.722	0	%100
89	MP4C	X	-2.982	-2.982	0	%100
90	MP4C	Z	-1.722	-1.722	0	%100
91	MP2C	X	-2.982	-2.982	0	%100
92	MP2C	Z	-1.722	-1.722	0	%100
93	MP1C	X	-2.982	-2.982	0	%100
94	MP1C	Z	-1.722	-1.722	0	%100
95	MP3B	X	-2.982	-2.982	0	%100
96	MP3B	Z	-1.722	-1.722	0	%100
97	MP4B	X	-2.982	-2.982	0	%100
98	MP4B	Z	-1.722	-1.722	0	%100
99	MP2B	X	-2.982	-2.982	0	%100
100	MP2B	Z	-1.722	-1.722	0	%100
101	MP1B	X	-2.982	-2.982	0	%100
102	MP1B	Z	-1.722	-1.722	0	%100
103	M100	X	-.825	-.825	0	%100
104	M100	Z	-.476	-.476	0	%100
105	M107	X	-.825	-.825	0	%100
106	M107	Z	-.476	-.476	0	%100
107	M114	X	-3.3	-3.3	0	%100
108	M114	Z	-1.905	-1.905	0	%100
109	M121	X	-.68	-.68	0	%100
110	M121	Z	-.393	-.393	0	%100
111	M122	X	-.68	-.68	0	%100
112	M122	Z	-.393	-.393	0	%100
113	M123	X	-2.72	-2.72	0	%100
114	M123	Z	-1.57	-1.57	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	-1.601	-1.601	0	%100
2	M1	Z	-2.774	-2.774	0	%100
3	M4	X	-.539	-.539	0	%100
4	M4	Z	-.933	-.933	0	%100
5	M10	X	-1.317	-1.317	0	%100
6	M10	Z	-2.281	-2.281	0	%100
7	MP3A	X	-1.722	-1.722	0	%100
8	MP3A	Z	-2.982	-2.982	0	%100
9	MP4A	X	-1.722	-1.722	0	%100
10	MP4A	Z	-2.982	-2.982	0	%100



Member Distributed Loads (BLC 64 : Structure W_i (330 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
63	M78	X	-1.317	-1.317	0	%100
64	M78	Z	-2.281	-2.281	0	%100
65	M79A	X	-2.059	-2.059	0	%100
66	M79A	Z	-3.567	-3.567	0	%100
67	M82	X	-1.515	-1.515	0	%100
68	M82	Z	-2.625	-2.625	0	%100
69	M83A	X	0	0	0	%100
70	M83A	Z	0	0	0	%100
71	M87	X	-.675	-.675	0	%100
72	M87	Z	-1.169	-1.169	0	%100
73	M88A	X	-2.056	-2.056	0	%100
74	M88A	Z	-3.561	-3.561	0	%100
75	M90	X	-2.146	-2.146	0	%100
76	M90	Z	-3.717	-3.717	0	%100
77	M92A	X	-.675	-.675	0	%100
78	M92A	Z	-1.169	-1.169	0	%100
79	M93	X	0	0	0	%100
80	M93	Z	0	0	0	%100
81	M95	X	0	0	0	%100
82	M95	Z	0	0	0	%100
83	M82A	X	0	0	0	%100
84	M82A	Z	0	0	0	%100
85	M91B	X	-1.601	-1.601	0	%100
86	M91B	Z	-2.774	-2.774	0	%100
87	MP3C	X	-1.722	-1.722	0	%100
88	MP3C	Z	-2.982	-2.982	0	%100
89	MP4C	X	-1.722	-1.722	0	%100
90	MP4C	Z	-2.982	-2.982	0	%100
91	MP2C	X	-1.722	-1.722	0	%100
92	MP2C	Z	-2.982	-2.982	0	%100
93	MP1C	X	-1.722	-1.722	0	%100
94	MP1C	Z	-2.982	-2.982	0	%100
95	MP3B	X	-1.722	-1.722	0	%100
96	MP3B	Z	-2.982	-2.982	0	%100
97	MP4B	X	-1.722	-1.722	0	%100
98	MP4B	Z	-2.982	-2.982	0	%100
99	MP2B	X	-1.722	-1.722	0	%100
100	MP2B	Z	-2.982	-2.982	0	%100
101	MP1B	X	-1.722	-1.722	0	%100
102	MP1B	Z	-2.982	-2.982	0	%100
103	M100	X	-1.429	-1.429	0	%100
104	M100	Z	-2.475	-2.475	0	%100
105	M107	X	0	0	0	%100
106	M107	Z	0	0	0	%100
107	M114	X	-1.429	-1.429	0	%100
108	M114	Z	-2.475	-2.475	0	%100
109	M121	X	0	0	0	%100
110	M121	Z	0	0	0	%100
111	M122	X	-1.178	-1.178	0	%100
112	M122	Z	-2.04	-2.04	0	%100
113	M123	X	-1.178	-1.178	0	%100
114	M123	Z	-2.04	-2.04	0	%100



Company : Tower Engineering Solutions, LLC
 Designer : NL
 Job Number : Project No. 10037784
 Model Name : 467144-VZW_MT_LO_H

Apr 27, 2021
 3:57 PM
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Member Distributed Loads (BLC 65 : Structure Wm (0 Deg)) (Continued)

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
53	M68	X	0	0	0 %100
54	M68	Z	-1.191	-1.191	0 %100
55	M69	X	0	0	0 %100
56	M69	Z	-1.617	-1.617	0 %100
57	M71	X	0	0	0 %100
58	M71	Z	-1.704	-1.704	0 %100
59	M76A	X	0	0	0 %100
60	M76A	Z	-.706	-.706	0 %100
61	M77A	X	0	0	0 %100
62	M77A	Z	-.199	-.199	0 %100
63	M78	X	0	0	0 %100
64	M78	Z	-.199	-.199	0 %100
65	M79A	X	0	0	0 %100
66	M79A	Z	-.397	-.397	0 %100
67	M82	X	0	0	0 %100
68	M82	Z	-.882	-.882	0 %100
69	M83A	X	0	0	0 %100
70	M83A	Z	-.22	-.22	0 %100
71	M87	X	0	0	0 %100
72	M87	Z	-1.191	-1.191	0 %100
73	M88A	X	0	0	0 %100
74	M88A	Z	-1.617	-1.617	0 %100
75	M90	X	0	0	0 %100
76	M90	Z	-1.704	-1.704	0 %100
77	M92A	X	0	0	0 %100
78	M92A	Z	-1.191	-1.191	0 %100
79	M93	X	0	0	0 %100
80	M93	Z	-.404	-.404	0 %100
81	M95	X	0	0	0 %100
82	M95	Z	-.426	-.426	0 %100
83	M82A	X	0	0	0 %100
84	M82A	Z	-.225	-.225	0 %100
85	M91B	X	0	0	0 %100
86	M91B	Z	-.225	-.225	0 %100
87	MP3C	X	0	0	0 %100
88	MP3C	Z	-.629	-.629	0 %100
89	MP4C	X	0	0	0 %100
90	MP4C	Z	-.629	-.629	0 %100
91	MP2C	X	0	0	0 %100
92	MP2C	Z	-.629	-.629	0 %100
93	MP1C	X	0	0	0 %100
94	MP1C	Z	-.629	-.629	0 %100
95	MP3B	X	0	0	0 %100
96	MP3B	Z	-.629	-.629	0 %100
97	MP4B	X	0	0	0 %100
98	MP4B	Z	-.629	-.629	0 %100
99	MP2B	X	0	0	0 %100
100	MP2B	Z	-.629	-.629	0 %100
101	MP1B	X	0	0	0 %100
102	MP1B	Z	-.629	-.629	0 %100
103	M100	X	0	0	0 %100
104	M100	Z	-.761	-.761	0 %100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
91	MP2C	X	.314	.314	0	%100
92	MP2C	Z	-.544	-.544	0	%100
93	MP1C	X	.314	.314	0	%100
94	MP1C	Z	-.544	-.544	0	%100
95	MP3B	X	.314	.314	0	%100
96	MP3B	Z	-.544	-.544	0	%100
97	MP4B	X	.314	.314	0	%100
98	MP4B	Z	-.544	-.544	0	%100
99	MP2B	X	.314	.314	0	%100
100	MP2B	Z	-.544	-.544	0	%100
101	MP1B	X	.314	.314	0	%100
102	MP1B	Z	-.544	-.544	0	%100
103	M100	X	.285	.285	0	%100
104	M100	Z	-.494	-.494	0	%100
105	M107	X	.285	.285	0	%100
106	M107	Z	-.494	-.494	0	%100
107	M114	X	0	0	0	%100
108	M114	Z	0	0	0	%100
109	M121	X	.276	.276	0	%100
110	M121	Z	-.477	-.477	0	%100
111	M122	X	.276	.276	0	%100
112	M122	Z	-.477	-.477	0	%100
113	M123	X	0	0	0	%100
114	M123	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.194	.194	0	%100
2	M1	Z	-.112	-.112	0	%100
3	M4	X	.611	.611	0	%100
4	M4	Z	-.353	-.353	0	%100
5	M10	X	.172	.172	0	%100
6	M10	Z	-.1	-.1	0	%100
7	MP3A	X	.544	.544	0	%100
8	MP3A	Z	-.314	-.314	0	%100
9	MP4A	X	.544	.544	0	%100
10	MP4A	Z	-.314	-.314	0	%100
11	MP2A	X	.544	.544	0	%100
12	MP2A	Z	-.314	-.314	0	%100
13	MP1A	X	.544	.544	0	%100
14	MP1A	Z	-.314	-.314	0	%100
15	M43	X	.172	.172	0	%100
16	M43	Z	-.1	-.1	0	%100
17	M46	X	.344	.344	0	%100
18	M46	Z	-.199	-.199	0	%100
19	M51B	X	.764	.764	0	%100
20	M51B	Z	-.441	-.441	0	%100
21	M52B	X	.191	.191	0	%100
22	M52B	Z	-.11	-.11	0	%100
23	M76	X	1.031	1.031	0	%100
24	M76	Z	-.596	-.596	0	%100



Company : Tower Engineering Solutions, LLC
 Designer : NL
 Job Number : Project No. 10037784
 Model Name : 467144-VZW_MT_LO_H

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 3:57 PM
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Member Distributed Loads (BLC 67 : Structure Wm (60 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
25	M77	X	1.401	1.401	0	%100
26	M77	Z	-.809	-.809	0	%100
27	M80	X	1.475	1.475	0	%100
28	M80	Z	-.852	-.852	0	%100
29	M84	X	1.031	1.031	0	%100
30	M84	Z	-.596	-.596	0	%100
31	M85	X	.35	.35	0	%100
32	M85	Z	-.202	-.202	0	%100
33	M91	X	.369	.369	0	%100
34	M91	Z	-.213	-.213	0	%100
35	M52A	X	0	0	0	%100
36	M52A	Z	0	0	0	%100
37	M53	X	.69	.69	0	%100
38	M53	Z	-.398	-.398	0	%100
39	M54	X	.69	.69	0	%100
40	M54	Z	-.398	-.398	0	%100
41	M55	X	1.375	1.375	0	%100
42	M55	Z	-.794	-.794	0	%100
43	M58A	X	.191	.191	0	%100
44	M58A	Z	-.11	-.11	0	%100
45	M59A	X	.191	.191	0	%100
46	M59A	Z	-.11	-.11	0	%100
47	M63	X	0	0	0	%100
48	M63	Z	0	0	0	%100
49	M64	X	.35	.35	0	%100
50	M64	Z	-.202	-.202	0	%100
51	M66	X	.369	.369	0	%100
52	M66	Z	-.213	-.213	0	%100
53	M68	X	0	0	0	%100
54	M68	Z	0	0	0	%100
55	M69	X	.35	.35	0	%100
56	M69	Z	-.202	-.202	0	%100
57	M71	X	.369	.369	0	%100
58	M71	Z	-.213	-.213	0	%100
59	M76A	X	.611	.611	0	%100
60	M76A	Z	-.353	-.353	0	%100
61	M77A	X	.172	.172	0	%100
62	M77A	Z	-.1	-.1	0	%100
63	M78	X	.172	.172	0	%100
64	M78	Z	-.1	-.1	0	%100
65	M79A	X	.344	.344	0	%100
66	M79A	Z	-.199	-.199	0	%100
67	M82	X	.191	.191	0	%100
68	M82	Z	-.11	-.11	0	%100
69	M83A	X	.764	.764	0	%100
70	M83A	Z	-.441	-.441	0	%100
71	M87	X	1.031	1.031	0	%100
72	M87	Z	-.596	-.596	0	%100
73	M88A	X	.35	.35	0	%100
74	M88A	Z	-.202	-.202	0	%100
75	M90	X	.369	.369	0	%100
76	M90	Z	-.213	-.213	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
77	M92A	X	1.031	1.031	0	%100
78	M92A	Z	-.596	-.596	0	%100
79	M93	X	1.401	1.401	0	%100
80	M93	Z	-.809	-.809	0	%100
81	M95	X	1.475	1.475	0	%100
82	M95	Z	-.852	-.852	0	%100
83	M82A	X	.778	.778	0	%100
84	M82A	Z	-.449	-.449	0	%100
85	M91B	X	.194	.194	0	%100
86	M91B	Z	-.112	-.112	0	%100
87	MP3C	X	.544	.544	0	%100
88	MP3C	Z	-.314	-.314	0	%100
89	MP4C	X	.544	.544	0	%100
90	MP4C	Z	-.314	-.314	0	%100
91	MP2C	X	.544	.544	0	%100
92	MP2C	Z	-.314	-.314	0	%100
93	MP1C	X	.544	.544	0	%100
94	MP1C	Z	-.314	-.314	0	%100
95	MP3B	X	.544	.544	0	%100
96	MP3B	Z	-.314	-.314	0	%100
97	MP4B	X	.544	.544	0	%100
98	MP4B	Z	-.314	-.314	0	%100
99	MP2B	X	.544	.544	0	%100
100	MP2B	Z	-.314	-.314	0	%100
101	MP1B	X	.544	.544	0	%100
102	MP1B	Z	-.314	-.314	0	%100
103	M100	X	.165	.165	0	%100
104	M100	Z	-.095	-.095	0	%100
105	M107	X	.659	.659	0	%100
106	M107	Z	-.38	-.38	0	%100
107	M114	X	.165	.165	0	%100
108	M114	Z	-.095	-.095	0	%100
109	M121	X	.637	.637	0	%100
110	M121	Z	-.368	-.368	0	%100
111	M122	X	.159	.159	0	%100
112	M122	Z	-.092	-.092	0	%100
113	M123	X	.159	.159	0	%100
114	M123	Z	-.092	-.092	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M4	X	.941	.941	0	%100
4	M4	Z	0	0	0	%100
5	M10	X	0	0	0	%100
6	M10	Z	0	0	0	%100
7	MP3A	X	.629	.629	0	%100
8	MP3A	Z	0	0	0	%100
9	MP4A	X	.629	.629	0	%100
10	MP4A	Z	0	0	0	%100



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

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
11	MP2A	X	.629	.629	0 %100
12	MP2A	Z	0	0	0 %100
13	MP1A	X	.629	.629	0 %100
14	MP1A	Z	0	0	0 %100
15	M43	X	0	0	0 %100
16	M43	Z	0	0	0 %100
17	M46	X	0	0	0 %100
18	M46	Z	0	0	0 %100
19	M51B	X	.661	.661	0 %100
20	M51B	Z	0	0	0 %100
21	M52B	X	.661	.661	0 %100
22	M52B	Z	0	0	0 %100
23	M76	X	1.588	1.588	0 %100
24	M76	Z	0	0	0 %100
25	M77	X	1.213	1.213	0 %100
26	M77	Z	0	0	0 %100
27	M80	X	1.278	1.278	0 %100
28	M80	Z	0	0	0 %100
29	M84	X	1.588	1.588	0 %100
30	M84	Z	0	0	0 %100
31	M85	X	1.213	1.213	0 %100
32	M85	Z	0	0	0 %100
33	M91	X	1.278	1.278	0 %100
34	M91	Z	0	0	0 %100
35	M52A	X	.235	.235	0 %100
36	M52A	Z	0	0	0 %100
37	M53	X	.597	.597	0 %100
38	M53	Z	0	0	0 %100
39	M54	X	.597	.597	0 %100
40	M54	Z	0	0	0 %100
41	M55	X	1.191	1.191	0 %100
42	M55	Z	0	0	0 %100
43	M58A	X	.661	.661	0 %100
44	M58A	Z	0	0	0 %100
45	M59A	X	0	0	0 %100
46	M59A	Z	0	0	0 %100
47	M63	X	.397	.397	0 %100
48	M63	Z	0	0	0 %100
49	M64	X	1.213	1.213	0 %100
50	M64	Z	0	0	0 %100
51	M66	X	1.278	1.278	0 %100
52	M66	Z	0	0	0 %100
53	M68	X	.397	.397	0 %100
54	M68	Z	0	0	0 %100
55	M69	X	0	0	0 %100
56	M69	Z	0	0	0 %100
57	M71	X	0	0	0 %100
58	M71	Z	0	0	0 %100
59	M76A	X	.235	.235	0 %100
60	M76A	Z	0	0	0 %100
61	M77A	X	.597	.597	0 %100
62	M77A	Z	0	0	0 %100



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

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
63	M78	X	.597	.597	0 %100
64	M78	Z	0	0	0 %100
65	M79A	X	1.191	1.191	0 %100
66	M79A	Z	0	0	0 %100
67	M82	X	0	0	0 %100
68	M82	Z	0	0	0 %100
69	M83A	X	.661	.661	0 %100
70	M83A	Z	0	0	0 %100
71	M87	X	.397	.397	0 %100
72	M87	Z	0	0	0 %100
73	M88A	X	0	0	0 %100
74	M88A	Z	0	0	0 %100
75	M90	X	0	0	0 %100
76	M90	Z	0	0	0 %100
77	M92A	X	.397	.397	0 %100
78	M92A	Z	0	0	0 %100
79	M93	X	1.213	1.213	0 %100
80	M93	Z	0	0	0 %100
81	M95	X	1.278	1.278	0 %100
82	M95	Z	0	0	0 %100
83	M82A	X	.674	.674	0 %100
84	M82A	Z	0	0	0 %100
85	M91B	X	.674	.674	0 %100
86	M91B	Z	0	0	0 %100
87	MP3C	X	.629	.629	0 %100
88	MP3C	Z	0	0	0 %100
89	MP4C	X	.629	.629	0 %100
90	MP4C	Z	0	0	0 %100
91	MP2C	X	.629	.629	0 %100
92	MP2C	Z	0	0	0 %100
93	MP1C	X	.629	.629	0 %100
94	MP1C	Z	0	0	0 %100
95	MP3B	X	.629	.629	0 %100
96	MP3B	Z	0	0	0 %100
97	MP4B	X	.629	.629	0 %100
98	MP4B	Z	0	0	0 %100
99	MP2B	X	.629	.629	0 %100
100	MP2B	Z	0	0	0 %100
101	MP1B	X	.629	.629	0 %100
102	MP1B	Z	0	0	0 %100
103	M100	X	0	0	0 %100
104	M100	Z	0	0	0 %100
105	M107	X	.571	.571	0 %100
106	M107	Z	0	0	0 %100
107	M114	X	.571	.571	0 %100
108	M114	Z	0	0	0 %100
109	M121	X	.551	.551	0 %100
110	M121	Z	0	0	0 %100
111	M122	X	0	0	0 %100
112	M122	Z	0	0	0 %100
113	M123	X	.551	.551	0 %100
114	M123	Z	0	0	0 %100



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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.194	.194	0	%100
2	M1	Z	.112	.112	0	%100
3	M4	X	.611	.611	0	%100
4	M4	Z	.353	.353	0	%100
5	M10	X	.172	.172	0	%100
6	M10	Z	.1	.1	0	%100
7	MP3A	X	.544	.544	0	%100
8	MP3A	Z	.314	.314	0	%100
9	MP4A	X	.544	.544	0	%100
10	MP4A	Z	.314	.314	0	%100
11	MP2A	X	.544	.544	0	%100
12	MP2A	Z	.314	.314	0	%100
13	MP1A	X	.544	.544	0	%100
14	MP1A	Z	.314	.314	0	%100
15	M43	X	.172	.172	0	%100
16	M43	Z	.1	.1	0	%100
17	M46	X	.344	.344	0	%100
18	M46	Z	.199	.199	0	%100
19	M51B	X	.191	.191	0	%100
20	M51B	Z	.11	.11	0	%100
21	M52B	X	.764	.764	0	%100
22	M52B	Z	.441	.441	0	%100
23	M76	X	1.031	1.031	0	%100
24	M76	Z	.596	.596	0	%100
25	M77	X	.35	.35	0	%100
26	M77	Z	.202	.202	0	%100
27	M80	X	.369	.369	0	%100
28	M80	Z	.213	.213	0	%100
29	M84	X	1.031	1.031	0	%100
30	M84	Z	.596	.596	0	%100
31	M85	X	1.401	1.401	0	%100
32	M85	Z	.809	.809	0	%100
33	M91	X	1.475	1.475	0	%100
34	M91	Z	.852	.852	0	%100
35	M52A	X	.611	.611	0	%100
36	M52A	Z	.353	.353	0	%100
37	M53	X	.172	.172	0	%100
38	M53	Z	.1	.1	0	%100
39	M54	X	.172	.172	0	%100
40	M54	Z	.1	.1	0	%100
41	M55	X	.344	.344	0	%100
42	M55	Z	.199	.199	0	%100
43	M58A	X	.764	.764	0	%100
44	M58A	Z	.441	.441	0	%100
45	M59A	X	.191	.191	0	%100
46	M59A	Z	.11	.11	0	%100
47	M63	X	1.031	1.031	0	%100
48	M63	Z	.596	.596	0	%100
49	M64	X	1.401	1.401	0	%100
50	M64	Z	.809	.809	0	%100
51	M66	X	1.475	1.475	0	%100
52	M66	Z	.852	.852	0	%100



Company : Tower Engineering Solutions, LLC
 Designer : NL
 Job Number : Project No. 10037784
 Model Name : 467144-VZW_MT_LO_H

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
53	M68	X	1.031	1.031	0	%100
54	M68	Z	.596	.596	0	%100
55	M69	X	.35	.35	0	%100
56	M69	Z	.202	.202	0	%100
57	M71	X	.369	.369	0	%100
58	M71	Z	.213	.213	0	%100
59	M76A	X	0	0	0	%100
60	M76A	Z	0	0	0	%100
61	M77A	X	.69	.69	0	%100
62	M77A	Z	.398	.398	0	%100
63	M78	X	.69	.69	0	%100
64	M78	Z	.398	.398	0	%100
65	M79A	X	1.375	1.375	0	%100
66	M79A	Z	.794	.794	0	%100
67	M82	X	.191	.191	0	%100
68	M82	Z	.11	.11	0	%100
69	M83A	X	.191	.191	0	%100
70	M83A	Z	.11	.11	0	%100
71	M87	X	0	0	0	%100
72	M87	Z	0	0	0	%100
73	M88A	X	.35	.35	0	%100
74	M88A	Z	.202	.202	0	%100
75	M90	X	.369	.369	0	%100
76	M90	Z	.213	.213	0	%100
77	M92A	X	0	0	0	%100
78	M92A	Z	0	0	0	%100
79	M93	X	.35	.35	0	%100
80	M93	Z	.202	.202	0	%100
81	M95	X	.369	.369	0	%100
82	M95	Z	.213	.213	0	%100
83	M82A	X	.194	.194	0	%100
84	M82A	Z	.112	.112	0	%100
85	M91B	X	.778	.778	0	%100
86	M91B	Z	.449	.449	0	%100
87	MP3C	X	.544	.544	0	%100
88	MP3C	Z	.314	.314	0	%100
89	MP4C	X	.544	.544	0	%100
90	MP4C	Z	.314	.314	0	%100
91	MP2C	X	.544	.544	0	%100
92	MP2C	Z	.314	.314	0	%100
93	MP1C	X	.544	.544	0	%100
94	MP1C	Z	.314	.314	0	%100
95	MP3B	X	.544	.544	0	%100
96	MP3B	Z	.314	.314	0	%100
97	MP4B	X	.544	.544	0	%100
98	MP4B	Z	.314	.314	0	%100
99	MP2B	X	.544	.544	0	%100
100	MP2B	Z	.314	.314	0	%100
101	MP1B	X	.544	.544	0	%100
102	MP1B	Z	.314	.314	0	%100
103	M100	X	.165	.165	0	%100
104	M100	Z	.095	.095	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
105	M107	X	.165	.165	0	%100
106	M107	Z	.095	.095	0	%100
107	M114	X	.659	.659	0	%100
108	M114	Z	.38	.38	0	%100
109	M121	X	.159	.159	0	%100
110	M121	Z	.092	.092	0	%100
111	M122	X	.159	.159	0	%100
112	M122	Z	.092	.092	0	%100
113	M123	X	.637	.637	0	%100
114	M123	Z	.368	.368	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	.337	.337	0	%100
2	M1	Z	.583	.583	0	%100
3	M4	X	.118	.118	0	%100
4	M4	Z	.204	.204	0	%100
5	M10	X	.299	.299	0	%100
6	M10	Z	.517	.517	0	%100
7	MP3A	X	.314	.314	0	%100
8	MP3A	Z	.544	.544	0	%100
9	MP4A	X	.314	.314	0	%100
10	MP4A	Z	.544	.544	0	%100
11	MP2A	X	.314	.314	0	%100
12	MP2A	Z	.544	.544	0	%100
13	MP1A	X	.314	.314	0	%100
14	MP1A	Z	.544	.544	0	%100
15	M43	X	.299	.299	0	%100
16	M43	Z	.517	.517	0	%100
17	M46	X	.596	.596	0	%100
18	M46	Z	1.031	1.031	0	%100
19	M51B	X	0	0	0	%100
20	M51B	Z	0	0	0	%100
21	M52B	X	.331	.331	0	%100
22	M52B	Z	.573	.573	0	%100
23	M76	X	.199	.199	0	%100
24	M76	Z	.344	.344	0	%100
25	M77	X	0	0	0	%100
26	M77	Z	0	0	0	%100
27	M80	X	0	0	0	%100
28	M80	Z	0	0	0	%100
29	M84	X	.199	.199	0	%100
30	M84	Z	.344	.344	0	%100
31	M85	X	.607	.607	0	%100
32	M85	Z	1.051	1.051	0	%100
33	M91	X	.639	.639	0	%100
34	M91	Z	1.107	1.107	0	%100
35	M52A	X	.47	.47	0	%100
36	M52A	Z	.815	.815	0	%100
37	M53	X	0	0	0	%100
38	M53	Z	0	0	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
39	M54	X	0	0	0	%100
40	M54	Z	0	0	0	%100
41	M55	X	0	0	0	%100
42	M55	Z	0	0	0	%100
43	M58A	X	.331	.331	0	%100
44	M58A	Z	.573	.573	0	%100
45	M59A	X	.331	.331	0	%100
46	M59A	Z	.573	.573	0	%100
47	M63	X	.794	.794	0	%100
48	M63	Z	1.375	1.375	0	%100
49	M64	X	.607	.607	0	%100
50	M64	Z	1.051	1.051	0	%100
51	M66	X	.639	.639	0	%100
52	M66	Z	1.107	1.107	0	%100
53	M68	X	.794	.794	0	%100
54	M68	Z	1.375	1.375	0	%100
55	M69	X	.607	.607	0	%100
56	M69	Z	1.051	1.051	0	%100
57	M71	X	.639	.639	0	%100
58	M71	Z	1.107	1.107	0	%100
59	M76A	X	.118	.118	0	%100
60	M76A	Z	.204	.204	0	%100
61	M77A	X	.299	.299	0	%100
62	M77A	Z	.517	.517	0	%100
63	M78	X	.299	.299	0	%100
64	M78	Z	.517	.517	0	%100
65	M79A	X	.596	.596	0	%100
66	M79A	Z	1.031	1.031	0	%100
67	M82	X	.331	.331	0	%100
68	M82	Z	.573	.573	0	%100
69	M83A	X	0	0	0	%100
70	M83A	Z	0	0	0	%100
71	M87	X	.199	.199	0	%100
72	M87	Z	.344	.344	0	%100
73	M88A	X	.607	.607	0	%100
74	M88A	Z	1.051	1.051	0	%100
75	M90	X	.639	.639	0	%100
76	M90	Z	1.107	1.107	0	%100
77	M92A	X	.199	.199	0	%100
78	M92A	Z	.344	.344	0	%100
79	M93	X	0	0	0	%100
80	M93	Z	0	0	0	%100
81	M95	X	0	0	0	%100
82	M95	Z	0	0	0	%100
83	M82A	X	0	0	0	%100
84	M82A	Z	0	0	0	%100
85	M91B	X	.337	.337	0	%100
86	M91B	Z	.583	.583	0	%100
87	MP3C	X	.314	.314	0	%100
88	MP3C	Z	.544	.544	0	%100
89	MP4C	X	.314	.314	0	%100
90	MP4C	Z	.544	.544	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
91	MP2C	X	.314	.314	0	% 100
92	MP2C	Z	.544	.544	0	% 100
93	MP1C	X	.314	.314	0	% 100
94	MP1C	Z	.544	.544	0	% 100
95	MP3B	X	.314	.314	0	% 100
96	MP3B	Z	.544	.544	0	% 100
97	MP4B	X	.314	.314	0	% 100
98	MP4B	Z	.544	.544	0	% 100
99	MP2B	X	.314	.314	0	% 100
100	MP2B	Z	.544	.544	0	% 100
101	MP1B	X	.314	.314	0	% 100
102	MP1B	Z	.544	.544	0	% 100
103	M100	X	.285	.285	0	% 100
104	M100	Z	.494	.494	0	% 100
105	M107	X	0	0	0	% 100
106	M107	Z	0	0	0	% 100
107	M114	X	.285	.285	0	% 100
108	M114	Z	.494	.494	0	% 100
109	M121	X	0	0	0	% 100
110	M121	Z	0	0	0	% 100
111	M122	X	.276	.276	0	% 100
112	M122	Z	.477	.477	0	% 100
113	M123	X	.276	.276	0	% 100
114	M123	Z	.477	.477	0	% 100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	0	0	0	% 100
2	M1	Z	.898	.898	0	% 100
3	M4	X	0	0	0	% 100
4	M4	Z	0	0	0	% 100
5	M10	X	0	0	0	% 100
6	M10	Z	.796	.796	0	% 100
7	MP3A	X	0	0	0	% 100
8	MP3A	Z	.629	.629	0	% 100
9	MP4A	X	0	0	0	% 100
10	MP4A	Z	.629	.629	0	% 100
11	MP2A	X	0	0	0	% 100
12	MP2A	Z	.629	.629	0	% 100
13	MP1A	X	0	0	0	% 100
14	MP1A	Z	.629	.629	0	% 100
15	M43	X	0	0	0	% 100
16	M43	Z	.796	.796	0	% 100
17	M46	X	0	0	0	% 100
18	M46	Z	1.588	1.588	0	% 100
19	M51B	X	0	0	0	% 100
20	M51B	Z	.22	.22	0	% 100
21	M52B	X	0	0	0	% 100
22	M52B	Z	.22	.22	0	% 100
23	M76	X	0	0	0	% 100
24	M76	Z	0	0	0	% 100



Company : Tower Engineering Solutions, LLC
 Designer : NL
 Job Number : Project No. 10037784
 Model Name : 467144-VZW_MT_LO_H

Apr 27, 2021
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Member Distributed Loads (BLC 71 : Structure Wm (180 Deg)) (Continued)

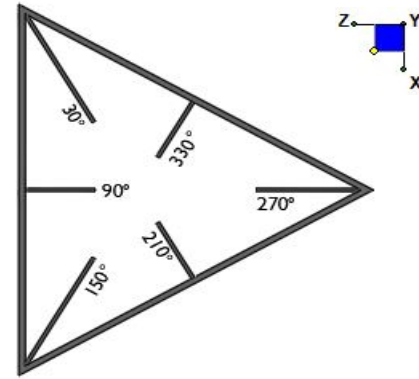
	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
25	M77	X	0	0	0	%100
26	M77	Z	.404	.404	0	%100
27	M80	X	0	0	0	%100
28	M80	Z	.426	.426	0	%100
29	M84	X	0	0	0	%100
30	M84	Z	0	0	0	%100
31	M85	X	0	0	0	%100
32	M85	Z	.404	.404	0	%100
33	M91	X	0	0	0	%100
34	M91	Z	.426	.426	0	%100
35	M52A	X	0	0	0	%100
36	M52A	Z	.706	.706	0	%100
37	M53	X	0	0	0	%100
38	M53	Z	.199	.199	0	%100
39	M54	X	0	0	0	%100
40	M54	Z	.199	.199	0	%100
41	M55	X	0	0	0	%100
42	M55	Z	.397	.397	0	%100
43	M58A	X	0	0	0	%100
44	M58A	Z	.22	.22	0	%100
45	M59A	X	0	0	0	%100
46	M59A	Z	.882	.882	0	%100
47	M63	X	0	0	0	%100
48	M63	Z	1.191	1.191	0	%100
49	M64	X	0	0	0	%100
50	M64	Z	.404	.404	0	%100
51	M66	X	0	0	0	%100
52	M66	Z	.426	.426	0	%100
53	M68	X	0	0	0	%100
54	M68	Z	1.191	1.191	0	%100
55	M69	X	0	0	0	%100
56	M69	Z	1.617	1.617	0	%100
57	M71	X	0	0	0	%100
58	M71	Z	1.704	1.704	0	%100
59	M76A	X	0	0	0	%100
60	M76A	Z	.706	.706	0	%100
61	M77A	X	0	0	0	%100
62	M77A	Z	.199	.199	0	%100
63	M78	X	0	0	0	%100
64	M78	Z	.199	.199	0	%100
65	M79A	X	0	0	0	%100
66	M79A	Z	.397	.397	0	%100
67	M82	X	0	0	0	%100
68	M82	Z	.882	.882	0	%100
69	M83A	X	0	0	0	%100
70	M83A	Z	.22	.22	0	%100
71	M87	X	0	0	0	%100
72	M87	Z	1.191	1.191	0	%100
73	M88A	X	0	0	0	%100
74	M88A	Z	1.617	1.617	0	%100
75	M90	X	0	0	0	%100
76	M90	Z	1.704	1.704	0	%100



I. Mount-to-Tower Connection Check

RISA Model Data

Nodes (labeled per RISA)	Orientation (per graphic of typical platform)
N87D	30
N115	150
N3	270



TYPICAL PLATFORM

Tower Connection Bolt Checks

Any moment resistance?:

Bolt Quantity per Reaction:

d_x (in) (Delta X of typ. bolt config. sketch):

d_y (in) (Delta Y of typ. bolt config. sketch):

Bolt Type:

Bolt Diameter (in):

Required Tensile Strength (kips):

Required Shear Strength (kips):

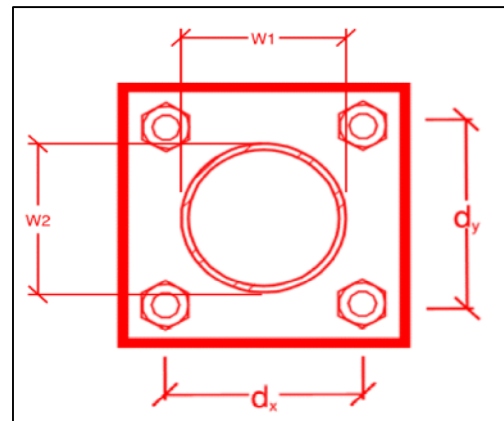
Tensile Strength / bolt (kips):

Shear Strength / bolt (kips):

Tensile Capacity Overall:

Shear Capacity Overall:

yes
4
8
8
A325N
0.625
15.0
3.7
20.7
12.4
18.1%*
7.5%



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

Tower Connection Plate and Weld Check

Connecting Standoff Member Shape:

Plate Width (in):

Plate Height (in):

W1 (in):

W2 (in):

Fy (ksi, plate):

t_{plate} (in):

Weld Size (1/16 in):

$\Phi * R_n$ (kip/in):

Required Weld Strength (kip/in):

Plate Bending Capacity:

Weld Capacity:

Rect
10
10
4
4
36
0.5
3
4.18
2.77
74.6%
66.4%

Max Plate Bending Strengths

Mu_{xx} (kip-in):	15.0
$\Phi * Mn_{xx}$ (kip-in):	20.3
Mu_{yy} (kip-in):	0.1
$\Phi * Mn_{yy}$ (kip-in):	20.3

Mount Desktop – Post Modification Inspection (PMI) Report Requirements

Documents & Photos Required from Contractor – Mount Modification

Purpose – to provide Maser Consulting Connecticut 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 modification was completed in accordance with the modification drawings.
- Contractor shall relay any data that can impact the performance of the mount or the mount modification, this includes safety issues.

Base Requirements:

- Any special photos outside of the standard requirements will be indicated on the drawings
- Provide “as built drawings” showing contractor’s name, preparer’s signature, and date. Any deviations from the drawings (proposed modification) must be shown.
- Notation that all hardware was properly installed, and the existing hardware was inspected for any issues.
- Verification that loading is as communicated in the modification drawings. NOTE If loading is different than what is conveyed in the modification drawing contact Maser Consulting Connecticut immediately.
- Each photo should be time and date stamped
- Photos should be high resolution and submitted in a Zip File and should be organized in the file structure as depicted in Schedule A attached.
- Contractor shall ensure that the safety climb wire rope is supported and not adversely impacted by the install of the modification components. This may involve the install of wire rope guides, or other items to protect the wire rope.
- The photos in the file structure should be uploaded to <https://pmi.vzwsmart.com> as depicted on the drawings

Photo Requirements:

- **Base and “During Installation Photos”**
 - Base pictures include
 - Photo of Gate Signs showing the tower owner, site name, and number
 - Photo of carrier shelter showing the carrier site name and number if available
 - Photos of the galvanizing compound and/or paint used (if applicable), clearly showing the label and name
 - “During Installation Photos if provided - must be placed only in this folder
- **Photos taken at ground level**
 - Overall tower structure before and after installation of the modifications
 - Photos of the appropriate mount before and after installation of the modifications; if the mounts are at different rad elevations, pictures must be provided for all elevations that the modifications were installed

- Photos taken at Mount Elevation
 - Photos showing each individual sector before and also after installation of modifications. Each entire sector must be in one photo to show in the inter-connection of members.
 - These photos should also certify that the placement and geometry of the equipment on the mount is as depicted on the sketch and table in the mount analysis
 - Close-up photos of each installed modification per the modification drawings; pictures should also include connection hardware (U-bolts, bolts, nuts, all-threaded rods, etc.)
 - Photos showing the measurements of the installed modification member sizes (i.e. lengths, widths, depths, diameters, thicknesses)
 - Photos showing the elevation or distances of the installed modifications from the appropriate reference locations shown in the modification drawings
 - Photos showing the installed modifications onto the tower with tape drop measurements (if applicable) (i.e. ring/collar mounts, tie-backs, V-bracing kits, etc.); if the existing mount elevation needs to be changed according to the modification drawings, a tape drop measurement shall be provided before the elevation change
 - Photos showing the safety climb wire rope above and below the mount prior to modification.
 - Photos showing the climbing facility and safety climb if present.

Material Certification:

- Materials utilized must be as per specification on the drawings or the equivalent as validated by Maser Consulting Connecticut.
 - If the drawings are as specified on the drawings
 - The contractor should provide the packing list or the materials utilized to perform the mount modification
 - If an equivalent is utilized
 - It is required that the Maser Consulting Connecticut certification of such is included in the contractor submission package. There may be an additional charge for this certification if the equivalent submission doesn't meet specifications as prescribed in the drawings.
- The contractor must certify that the materials meet these specifications by one of these methods.

The Material utilized was as specified on the Maser Consulting Connecticut Mount Modification Drawings and included in the Material certification folder is a packing list or invoice for these materials

The material utilized was an "equivalent" and included as part of the contractor submission is the Maser Consulting Connecticut certification, invoices, or specifications validating accepted status

Certifying Individual: Company _____

Name _____

Signature _____

Antenna & equipment placement and Geometry Confirmation:

- The contractor must certify that the antenna & equipment placement and geometry is in accordance with the antenna placement diagrams as included in this mount analysis.
- The contractor certifies that the photos support and the equipment on the mount is as depicted on the antenna placement diagrams as included in this mount analysis.
- The contractor notes that the equipment on the mount is not in accordance with the antenna placement diagrams and has accordingly marked up the diagrams or provided a diagram outlining the differences.

Certifying Individual: Company _____

Name _____

Signature _____


















Special Instructions / Validation as required from the MA or Mod Drawings:

Issue:

Contractor shall install new safety climb wire rope guides to the threaded rods of the existing and proposed mount collar assemblies to prevent interference with mount connection.

Response:

Schedule A – Photo & Document File Structure

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

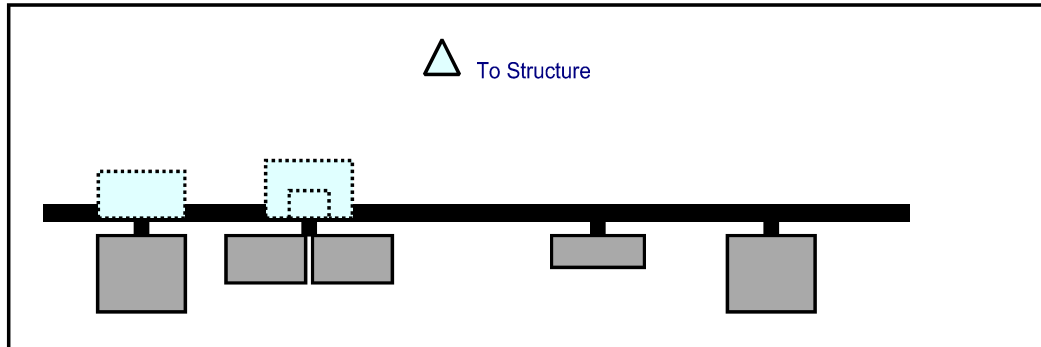
Sector: **A**
 Structure Type: Monopole
 Mount Elev: 138.50

4/27/2021

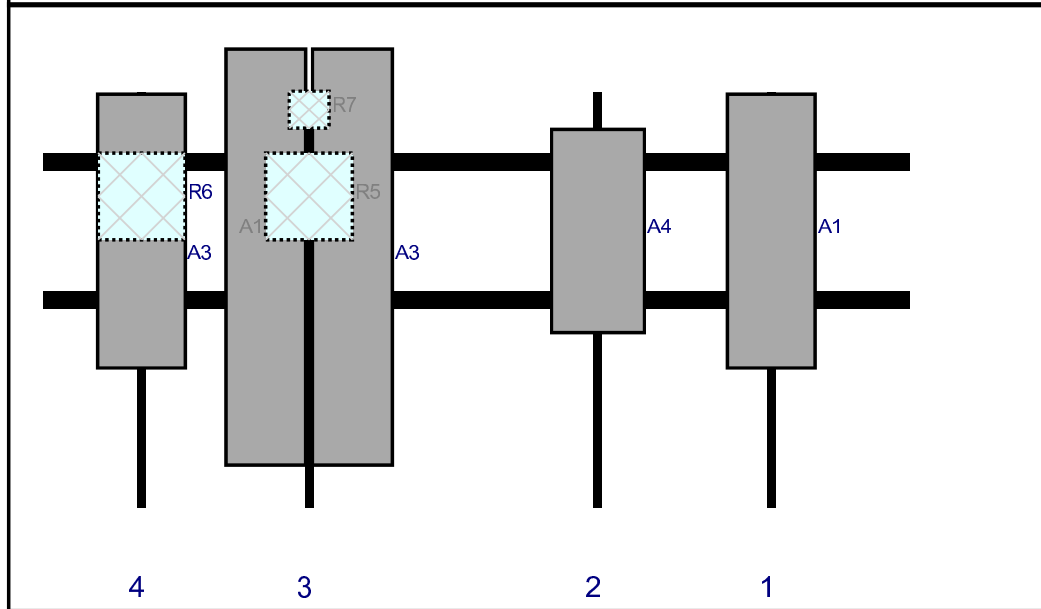


Page: 1

Plan View



Front View
Looking at Structure



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A1	LPA-80063/4CF	47.4	15.2	126	1	a	Front	24	0	Retained	02/20/2021
A4	MT6407-77A	35.2	16.06	96	2	a	Front	24	0	Added	
A3	JAHH-65B-R3B	72	13.8	46	3	a	Front	28.5	7.5	Added	
A3	JAHH-65B-R3B	72	13.8	46	3	b	Front	28.5	-7.5	Added	
R5	B2/B66A RRH-BR049	15	15	46	3	a	Behind	18	0	Added	
R7	CBC78T-DS-43-2X	6.4	6.9	46	3	a	Behind	3	0	Added	
A1	LPA-80063/4CF	47.4	15.2	17	4	a	Front	24	0	Retained	02/20/2021
R6	B5/B13 RRH-BR04C	15	15	17	4	a	Behind	18	0	Added	

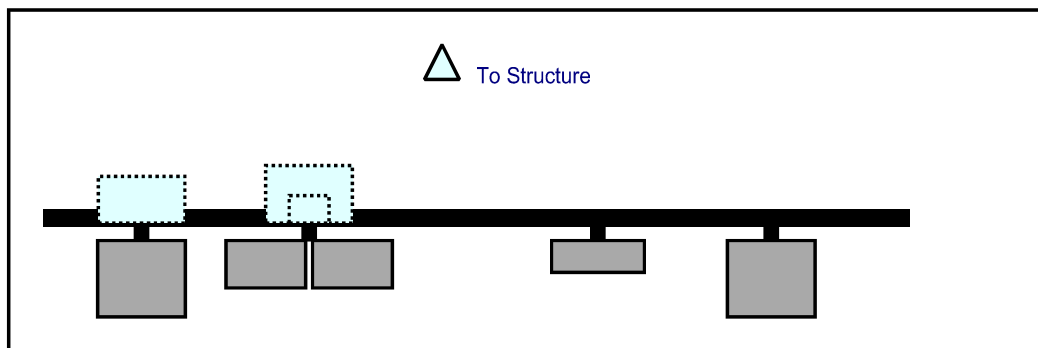
Sector: **B**
 Structure Type: Monopole
 Mount Elev: 138.50

4/27/2021

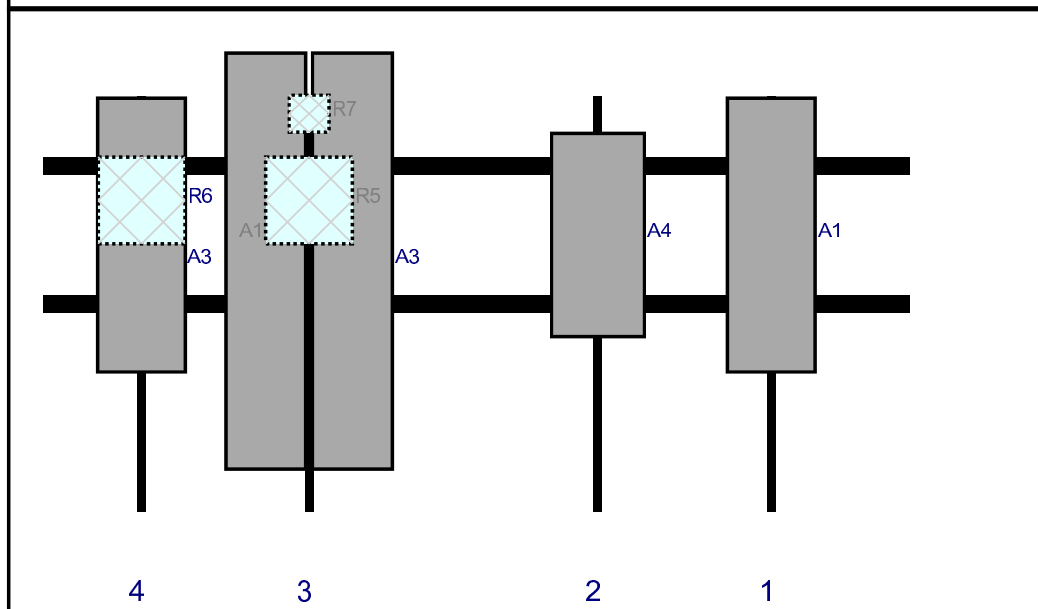


Page: 2

Plan View

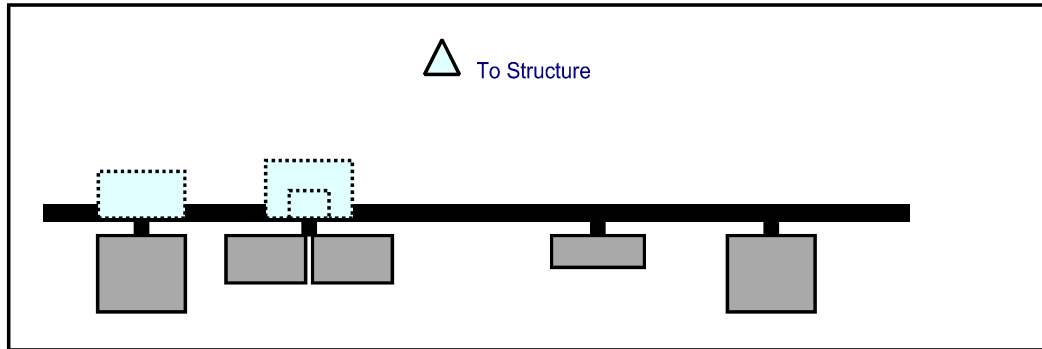


Front View
 Looking at Structure

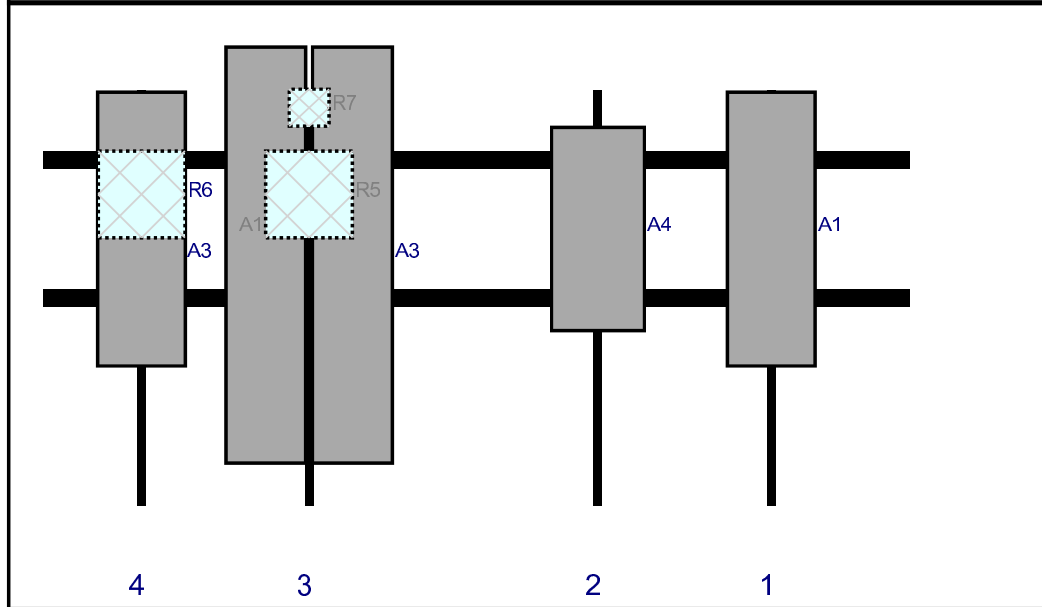


Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A1	LPA-80063/4CF	47.4	15.2	126	1	a	Front	24	0	Retained	02/20/2021
A4	MT6407-77A	35.2	16.06	96	2	a	Front	24	0	Added	
A3	JAHH-65B-R3B	72	13.8	46	3	a	Front	28.5	7.5	Added	
A3	JAHH-65B-R3B	72	13.8	46	3	b	Front	28.5	-7.5	Added	
R5	B2/B66A RRH-BR049	15	15	46	3	a	Behind	18	0	Added	
R7	CBC78T-DS-43-2X	6.4	6.9	46	3	a	Behind	3	0	Added	
A1	LPA-80063/4CF	47.4	15.2	17	4	a	Front	24	0	Retained	02/20/2021
R6	B5/B13 RRH-BR04C	15	15	17	4	a	Behind	18	0	Added	

Plan View



Front View
 Looking at Structure



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A1	LPA-80063/4CF	47.4	15.2	126	1	a	Front	24	0	Retained	02/20/2021
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A3	JAHH-65B-R3B	72	13.8	46	3	b	Front	28.5	-7.5	Added	
R5	B2/B66A RRH-BR049	15	15	46	3	a	Behind	18	0	Added	
R7	CBC78T-DS-43-2X	6.4	6.9	46	3	a	Behind	3	0	Added	
A1	LPA-80063/4CF	47.4	15.2	17	4	a	Front	24	0	Retained	02/20/2021
R6	B5/B13 RRH-BR04C	15	15	17	4	a	Behind	18	0	Added	

Maser Consulting Connecticut

Subject

TIA-222-H Usage

Site Information

Site ID: 467144-VZW / MIDDLEFIELD SOUTH CT

Site Name: MIDDLEFIELD SOUTH CT

Carrier Name: Verizon Wireless

Address: 393 Jackson Hill Road
Middlefield, Connecticut 06455
Middlesex County

Latitude: 41.517378°

Longitude: -72.714314°

Structure Information

Tower Type: Monopole

Mount Type: 12.50-Ft Platform

To Whom It May Concern,

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

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

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

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

Sincerely,



Digitally signed by Justin Linette
Date: 2021.04.30 14:04:39-04'00'

Justin Linette, PE
Sr. Technical Manager

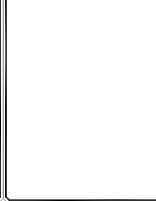
PROJECT NOTES

- SEE MODIFICATION NOTES
- THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, REGULATIONS AND ALL APPLICABLE STATE AND FEDERAL UTILITY COMPANIES OR OTHER PUBLIC-GOVERNING AUTHORITIES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS THAT MAY BE REQUIRED BY ANY FEDERAL, STATE, COUNTY OR MUNICIPAL AUTHORITIES.
- THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER, IN WRITING, OF ANY CONFLICTS, ERRORS OR OMISSIONS PRIOR TO THE SUBMISSION OF BIDS OR PERFORMANCE OF WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING SITE IMPROVEMENTS PRIOR TO COMMENCING ANY WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE AS A RESULT OF CONSTRUCTION OF THIS FACILITY AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
- THE SCOPE OF WORK FOR THIS PROJECT SHALL INCLUDE PROVIDING ALL MATERIALS, EQUIPMENT AND LABOR REQUIRED TO COMPLETE THIS PROJECT. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- THE CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO SUBMITTING THE BID TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND CONSTRUCTION DRAWINGS.
- THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THESE DRAWINGS MUST BE VERIFIED. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER IMMEDIATELY IN WRITING OF ANY ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
- SINCE THE CELL SITE MAY BE ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF RADIO FREQUENCY ENERGY. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT WORKERS FROM EXPOSURE TO HIGH LEVELS OF RADIO FREQUENCY ENERGY. ALL WORKERS SHALL BE TRAINED AND CERTIFIED IN PROTECTIVE PROCEDURES PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RE EXPOSURE MONITORS ARE REQUIRED TO BE WORN TO ALERT OF ANY POTENTIALLY DANGEROUS EXPOSURE LEVELS.
- NO NOISE, SMOKE, DUST OR ODOR WILL RESULT FROM THIS FACILITY AS TO CAUSE A NUISANCE.
- THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION (NO HANDICAP ACCESS IS REQUIRED).

MASER CONSULTING CONNECTICUT
 1000 Main Street, Suite 100
 Middletown, CT 06455
 Phone: 862.572.1202
 Fax: 862.572.1203

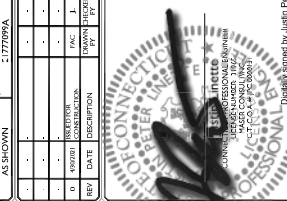
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REF	DATE	DESCRIPTION	ISSUED BY	DATE
0		ISSUE FOR CONSTRUCTION	JAC	J

DATE: AS SHOWN
 EXISTENCE: 2/17/2024



DATE: 2021/04/30 14:08
 Digitally signed by Justin Bell
 DN: cn=Justin Bell, o=MASER CONSULTING CONNECTICUT, email=jbell@maser.com

SITE NAME:
 MIDDLEFIELD SOUTH CT
 467144

393 JACKSON HILL ROAD
 MIDDLEFIELD, CT 06455
 MIDDLESEX COUNTY

TITLE SHEET

T-1



**MOUNT MODIFICATION DRAWINGS
 EXISTING 12.50' PLATFORM**

**SITE NAME: MIDDLEFIELD SOUTH CT
 SITE NUMBER: 467144**

**393 JACKSON HILL ROAD
 MIDDLEFIELD, CT 06455
 MIDDLESEX COUNTY**

PROJECT INFORMATION	
SITE INFORMATION	
LATITUDE:	41.51719° N
LONGITUDE:	72.74314° W
JURISDICTION:	MIDDLESEX COUNTY
APPLICANT/LESEE	
COMPANY:	VERIZON WIRELESS
CLIENT REPRESENTATIVE	
COMPANY:	VERIZON WIRELESS
CITY:	MIDDLEFIELD, CT
STATE:	CONNECTICUT
CITY, STATE, ZIP:	WESTBOROUGH, MA 01581
CONTACT:	ANDREW CANDELLO
EMAIL:	ANDREW.CANDELLO@VERIZONWIRELESS.COM
PROJECT MANAGER	
COMPANY:	MASER CONSULTING CONNECTICUT
CONTACT:	PETER ALBANO
PHONE:	(860) 797-9412
EMAIL:	PETER.ALBANO@COLLIERENGINEERING.COM

SHEET INDEX	
SHEET	DESCRIPTION
T-1	TITLE SHEET
S-1	BILL OF MATERIALS
S-2	MODIFICATION NOTES
S-3	MODIFICATION NOTES
S-4	MODIFICATION DETAILS
S-5	MODIFICATION DETAILS
S-6	MOUNT PHOTOS
	SPECIFICATION SHEETS

CONTRACTOR PMI REQUIREMENTS	
PMI LOCATION:	HTTPS://PMI.VZSMART.COM
SMART TOOL PROJECT #:	1005263
VZW LOCATION CODE (PLC):	467144
FUZE ID:	16244625

REFERENCED DOCUMENTS	
SMART TOOL PROJECT #:	1003784
MASER CONSULTING PROJECT #:	21777095A
ANALYSIS DATE:	3/19/2021

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BILL OF MATERIALS

VZWSMART KITS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES
1		VZWSMART-PKI1	SUPPORT RAIL KIT	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE STRUCTURAL STEEL NOTES ON SHEET S-2.
3		VZWSMART-MSK3	CROSSOVER PLATE	
	VZWSMART			

OTHER REQUIRED PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES
3	-	-	72" LONG, P2.5 STD GALVANIZED	

NOTE: ALL MATERIALS REQUIRED FOR THE DESIGNED MODIFICATIONS BUT NOT LISTED IN THIS SHEET ARE ASSUMED TO BE PROVIDED BY THE CONTRACTOR

VZWSMART KITS - APPROVED VENDORS

COMMSCOPE	
CONTACT	SALVADOR ANGUIANO
PHONE	(817) 306-7492
EMAIL	SALVADOR.ANGUIANO@COMMSCOPE.COM
WEBSITE	WWW.COMMSCOPE.COM
METROSITE FABRICATORS, LLC	
CONTACT	KENT RAMEY
PHONE	(766) 335-7645 (O), (766) 882-9788 (M)
EMAIL	KENT@METROSITELLC.COM
WEBSITE	METROSITEFABRICATORS.COM
PERFECTVISION	
CONTACT	WIRELESS SALES
PHONE	(841) 887-6723
EMAIL	WWW.PERFECT-VISION.COM
WEBSITE	WIRELESSALES@PERFECT-VISION.COM
SABRE INDUSTRIES, INC.	
CONTACT	ANGIE WELCH
PHONE	(866) 428-6937
EMAIL	AKWELCH@SABREINDUSTRIES.COM
WEBSITE	WWW.SABRESOLUTIONS.COM
SITE PRO 1	
CONTACT	PAULA BOSWELL
PHONE	(972) 236-9843
EMAIL	PAULA.BOSWELL@VALMONT.COM
WEBSITE	WWW.SITEPRO1.COM

NOTE: WHEN SPECIFIED, VZWSMART KITS SHALL BE REQUIRED AND WILL BE VERIFIED DURING THE DESKTOP PMI



REV	DATE	DESCRIPTION	BY	CHKD
0		ISSUE FOR CONSTRUCTION		
1				



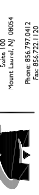
AS SHOWN	QUANTITY	UNIT



Digitally signed by Justin Pappalardo
Date: 2021.04.30 14:08:00 -0400

SITE NAME:
MIDDLEFIELD SOUTH CT
467144

393 JACKSON HILL ROAD
MIDDLEFIELD, CT 06455
MIDDLESEX COUNTY



BILL OF MATERIALS
S-1

MODIFICATION INSPECTION NOTES

MI CHECKLIST	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY EOR)	REPORT ITEM
X	PRE-CONSTRUCTION
X	MI CHECKLIST DRAWING
X	FOR APPROVED SHOP DRAWINGS
NA	FABRICATION INSPECTION
NA	FABRICATOR CERTIFIED WELD INSPECTION
X	MATERIAL TEST REPORT (MTR)
NA	FABRICATOR NDE INSPECTION
X	PACKING SLIPS
ADDITIONAL TESTING AND INSPECTIONS:	
CONSTRUCTION	
X	CONSTRUCTION INSPECTIONS
NA	CONTRACTOR'S CERTIFIED WELD INSPECTION AND NDE REPORTS
X	ON SITE COLD GALVANIZING VERIFICATION
X	GC AS-BUILT DOCUMENTS
ADDITIONAL TESTING AND INSPECTIONS:	
POST-CONSTRUCTION	
X	MI INSPECTOR REDLINE OR RECORD DRAWING(S)
X	VZV PMI DOCUMENTS
X	PHOTOGRAPHS
ADDITIONAL TESTING AND INSPECTIONS:	

NOTE: X DENOTES A DOCUMENT REQUIRED FOR THE MI REPORT
 NA DENOTES A DOCUMENT THAT IS NOT REQUIRED FOR THE MI REPORT

THE MODIFICATION INSPECTION (MI) IS A VISUAL INSPECTION OF MODIFICATIONS AND A REVIEW OF CONSTRUCTION INSPECTIONS AND OTHER REPORTS TO ENSURE THE INSTALLATION WAS COMPLETED AS SHOWN ON THE ORIGINAL DRAWINGS AND AS SHOWN ON THE MODIFICATION DRAWINGS, AS DESIGNED BY THE ENGINEER OF RECORD (EOR).

THE MI IS TO CONFIRM INSTALLATION CONFIGURATION AND WORKMANSHIP ONLY AND IS NOT A REVIEW OF THE MODIFICATION DESIGN. THE MI INSPECTOR TAKE A REVIEW OF THE MODIFICATION DESIGN, BUT DOES NOT TAKE RESPONSIBILITY FOR THE DESIGN. DESIGN EFFECTIVENESS AND INTEGRITY RESIDES WITH THE EOR AT ALL TIMES.

TO ENSURE THAT THE REQUIREMENTS OF THE MI ARE MET, IT IS VITAL THAT THE GENERAL CONTRACTOR (GC) AND THE MI INSPECTOR COORDINATE AND SCHEDULE THE MI TO BE COMPLETED AS SOON AS A PURCHASE ORDER (PO) IS RECEIVED. IT IS EXPECTED THAT EACH PARTY WILL BE PROACTIVE IN REACHING OUT TO THE OTHER PARTY.

MI INSPECTOR

THE MI INSPECTOR IS REQUIRED TO CONTACT THE GC AS SOON AS RECEIVING A PO FOR THE MI TO, AT A MINIMUM:

- REVIEW THE REQUIREMENTS OF THE MI CHECKLIST
- WORK WITH THE GC TO DEVELOP A SCHEDULE TO CONDUCT ON-SITE INSPECTIONS
- THE MI INSPECTOR IS RESPONSIBLE FOR COLLECTING ALL GC INSPECTION AND TEST REPORTS, REVIEWING THE DOCUMENTS FOR ADHERENCE TO THE CONTRACT DOCUMENTS, CONDUCTING THE IN-FIELD INSPECTIONS, AND SUBMITTING THE MI REPORT TO EOR.

GENERAL CONTRACTOR

THE GC IS REQUIRED TO CONTACT THE MI INSPECTOR AS SOON AS RECEIVING A PO FOR THE MODIFICATION INSTALLATION OR TURNKEY PROJECT TO, AT A MINIMUM:

- REVIEW THE REQUIREMENTS OF THE MI CHECKLIST
- WORK WITH THE MI INSPECTOR TO DEVELOP A SCHEDULE TO CONDUCT ON-SITE MI INSPECTIONS, INCLUDING FOUNDATION INSPECTIONS
- BETTER UNDERSTAND ALL INSPECTION AND TESTING REQUIREMENTS
- THE GC SHALL PERFORM AND RECORD THE TEST AND INSPECTION RESULTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE MI CHECKLIST.

RECOMMENDATIONS

THE FOLLOWING RECOMMENDATIONS AND SUGGESTIONS ARE OFFERED TO ENHANCE THE EFFICIENT AND EFFECTIVENESS OF DELIVERING AN MI REPORT:

- IT IS SUGGESTED THAT THE GC PROVIDE A MINIMUM OF 5 BUSINESS DAYS NOTICE, PREFERABLY 10, TO THE MI INSPECTOR AS TO WHEN THE SITE WILL BE READY FOR THE MI TO BE CONDUCTED.
- THE MI INSPECTOR COORDINATE CLOSELY THROUGHOUT THE ENTIRE PROJECT.
- WHEN POSSIBLE IT IS PREFERRED TO HAVE THE GC AND MI INSPECTOR ON-SITE SIMULTANEOUSLY FOR ANY GUY WIRE TENSIONING OR RE-TENSIONING OPERATIONS. IT MAY BE BENEFICIAL TO INSTALL ALL MODIFICATIONS PRIOR TO CONDUCTING THE INSPECTIONS.
- WHEN POSSIBLE IT IS PREFERRED TO ALLOW THE FOUNDATION AND MI INSPECTIONS TO COMMENCE WITH ON-SITE VISIT.
- WHEN POSSIBLE IT IS PREFERRED TO HAVE THE GC AND MI INSPECTOR ON-SITE DURING THE MI TO HAVE ANY DEFICIENCIES CORRECTED DURING THE INITIAL MI. THEREFORE, THE GC MUST CHOOSE TO COORDINATE THE MI CAREFULLY TO ENSURE ALL CONSTRUCTION FACILITIES ARE AT THEIR DISPOSAL WHEN THE MI INSPECTOR IS ON-SITE.

CORRECTION OF FAILING MIs

IF THE MODIFICATION INSTALLATION WOULD FAIL THE MI ("FAILED MI"), THE GC SHALL WORK WITH THE OWNER TO COORDINATE A REBID/REPAIR PLAN.

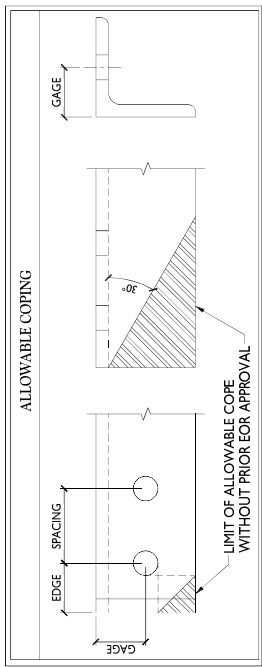
- CORRECT FAILING ISSUES TO COMPLY WITH THE SPECIFICATIONS CONTAINED IN THE ORIGINAL CONTRACT DOCUMENTS AND COORDINATE A SUPPLEMENT MI.

REQUIRED PHOTOS

BETWEEN THE GC AND THE MI INSPECTOR THE FOLLOWING PHOTOGRAPHS, AT A MINIMUM, ARE TO BE TAKEN AND INCLUDED IN THE MI REPORT:

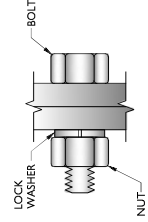
- PRE-CONSTRUCTION GENERAL SITE CONDITION
- PHOTOGRAPHS DURING THE REINFORCEMENT MODIFICATION CONSTRUCTION/ERECTION
- RAW MATERIALS
- PHOTOS OF ALL CRITICAL DETAILS
- FOUNDATION MODIFICATIONS
- FOUNDATION CONSTRUCTION
- BOLT INSTALLATION
- FINAL INSTALLED CONDITION
- SURFACE COATING REPAIR
- POST CONSTRUCTION PHOTOGRAPHS
- FINAL IN-FIELD CONDITION

PHOTOS OF ELEVATED MODIFICATIONS TAKEN ONLY FROM THE GROUND SHALL BE CONSIDERED INADEQUATE.



BOLT SCHEDULE (IN.)				
BOLT DIAMETER	STANDARD HOLE	SHORT SLOT	MIN EDGE DISTANCE	SPACING
1/2	9/16	9/16 x 1 1/16	7/8	1 1/2
5/8	1 1/16	1 1/16 x 7/8	1 1/8	1 7/8
3/4	1 3/16	1 3/16 x 1	1 1/4	2 1/4
7/8	1 5/16	1 5/16 x 1 1/8	1 1/2	2 5/8
1	1 1/16	1 1/16 x 1 5/16	1 3/4	3

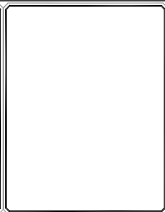
WORKABLE GAGES (IN.)		
LEG	GAGE	
4	2 1/2	
3 1/2	2	
3	1 3/4	
2 1/2	1 3/8	
2	1 1/8	



TYP. BOLT ASSEMBLY

- NOTES:**
- ALL DIMENSIONS REPRESENTED IN THE ABOVE TABLES ARE AS MINIMUM REQUIREMENTS. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND DISTANCES AND NOTIFY ENGINEER IF DISTANCES ARE LESS THAN THOSE PROVIDED.
 - THE DIMENSIONS PROVIDED ARE MINIMUMS. DIMENSIONS OF PROPOSED MEMBERS WITHIN THESE DRAWINGS MAY VARY FROM THE ASB MINIMUM REQUIREMENTS.
 - SHORT SLOT HOLES SHALL ONLY BE USED WHEN DEPICTED IN THE DRAWINGS.
 - MATCH EXISTING GAGES WHEN APPLICABLE. UNLESS MINIMUM EDGE DISTANCES ARE COMPROMISED.

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 ALL UTILITIES MUST BE LOCATED PRIOR TO ANY EXCAVATION WORK. CALL 811 AT LEAST 48 HOURS BEFORE YOU DIG.

NO.	AS SHOWN	REVISION	DATE	BY
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

PROTECT YOURSELF
 ALL UTILITIES MUST BE LOCATED PRIOR TO ANY EXCAVATION WORK. CALL 811 AT LEAST 48 HOURS BEFORE YOU DIG.

DATE: 2021.04.30 14:08:00
 Digitally signed by Justin Bell
 DN: cn=Justin Bell, o=MASER, ou=Engineering, email=jbell@maser.com

SITE NAME:
 MIDDLEFIELD SOUTH CT
 467144
 395 JACKSON HILL ROAD
 MIDDLEFIELD, CT 06455
 MIDDLESEX COUNTY

MIDDLESEX COUNTY
 100 STATE STREET
 MIDDLESEX COUNTY COURTHOUSE
 MIDDLEFIELD, CT 06455
 Phone: 862.977.8424
 Fax: 862.972.1202

MODIFICATION NOTES

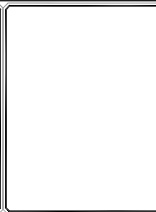
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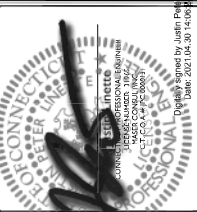


PROTECT YOURSELF
 ALL STATE REQUIREMENTS FOR THE PROTECTION OF THE PUBLIC MUST BE OBSERVED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPLICABLE AGENCIES.

811
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 Call before you dig
 1-800-4-A-DIG
 www.callbeforeyoudig.com

PROJECT: 217789A
 DATE: 01/11/2021

REV	DATE	DESCRIPTION	BY	CHKD
0		ISSUED FOR CONSTRUCTION	J.P.	J.P.
1		ISSUED FOR CONSTRUCTION	J.P.	J.P.



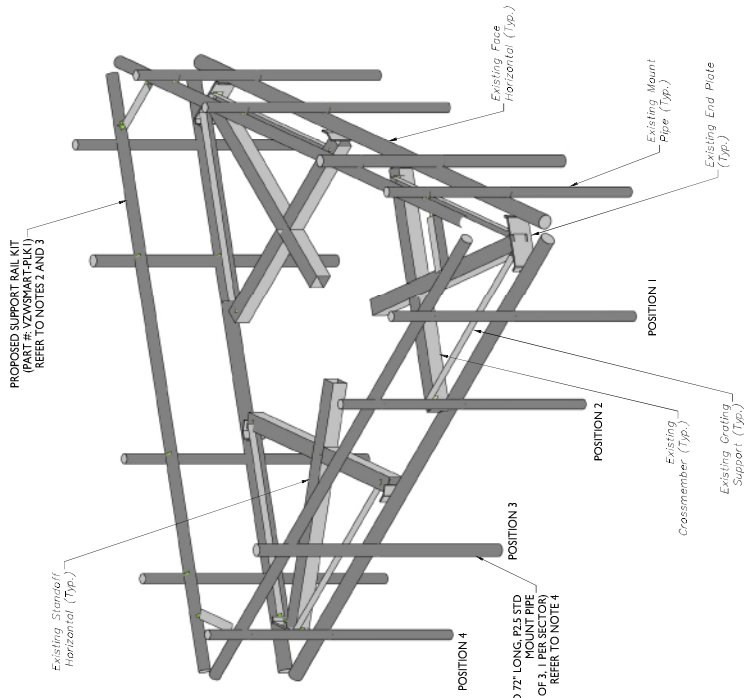
DATE: 2021.04.30 14:00:00
 Digitally signed by Justin Powell
 DN: cn=Justin Powell, o=MASER CONSULTING ENGINEERS, ou=MASER CONSULTING ENGINEERS, email=jpowell@maser.com

SITE NAME:
 MIDDLEFIELD SOUTH CT
 467144
 393 JACKSON HILL ROAD
 MIDDLEFIELD, CT 06455
 MIDDLESEX COUNTY



MODIFICATION DETAILS

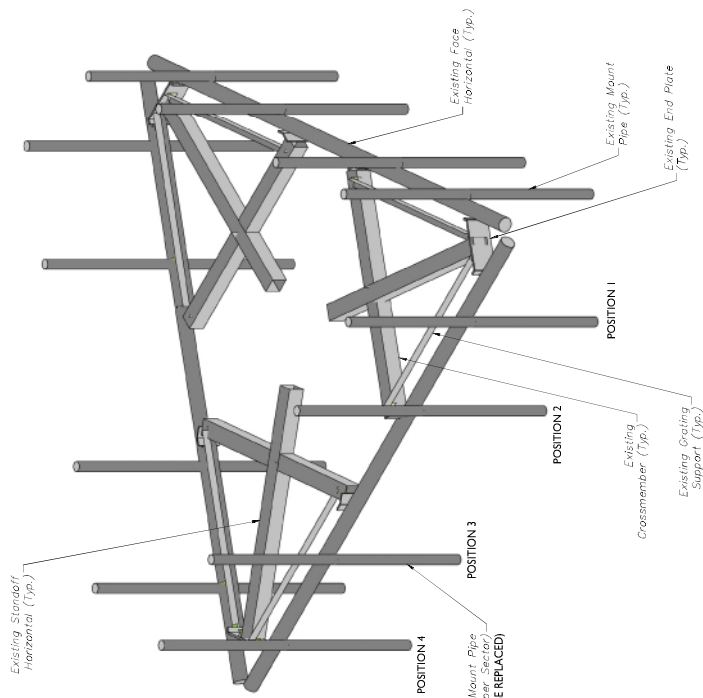
S-4



2 PROPOSED PLATFORM ISOMETRIC VIEW
 SCALE: N.T.S.

MODIFICATION NOTES:

1. MOUNT MEMBERS NOT SHOWN FOR CLARITY U.N.O.
2. CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET S-2.
3. RADIO AND/OR THE POSITIONS SHALL BE ADJUSTED VERTICALLY AS NEEDED IN ORDER TO ACHIEVE INSTALLATION OF HORIZONTAL AS SHOWN. EOR SHALL BE NOTIFIED IF EQUIPMENT NEEDS TO BE RELOCATED TO ANOTHER MOUNT PIPE.
4. CONNECT NEW MOUNT PIPE TO EXISTING FACE HORIZONTAL WITH CROSSOVER PLATES (PART #: VZWSMART-MSK2). CONNECT TO PROPOSED SUPPORT RAIL WITH CROSSOVER PLATES (PART #: VZWSMART-MSK1).



1 EXISTING PLATFORM ISOMETRIC VIEW
 SCALE: N.T.S.

STRUCTURAL NOTES:

1. PER THE MOUNT MAPPING COMPLETED BY LEVEL-UP TOWERS ON 2/20/2021, THE SAFETY CLIMB AND CLIMBING FACILITIES UP TO THE VERIZON MOUNT ELEVATION (138'-6") ARE IN GOOD CONDITION, HOWEVER THEY ARE OBSTRUCTED BEFORE ACCESSING VERIZON'S MOUNT. MASER DOES NOT WARRANT THIS INFORMATION.
2. INSTALL SHALL NOT CAUSE HARM TO THE STRUCTURE CLIMBING FACILITY. SAFETY CLIMB OR ANY SYSTEM INSTALLED ON THE STRUCTURE. TIMELY NOTICE AND DOCUMENTATION SHALL BE PROVIDED BY CONTRACTORS TO THE EOR (OF STRUCTURAL DESIGN) IF AN OBSTRUCTION WAS REQUIRED TO MEET THE RF SYSTEM DESIGN REQUIREMENTS AND PERFORMANCES.

MASER
 CONSULTING ENGINEERS ARCHITECTS
 1000 WEST 10TH AVENUE
 SUITE 1000 DENVER, CO 80202
 TEL: 303.733.8800 FAX: 303.733.8801
 WWW.MASER.COM

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FOR A LIST OF PARTICIPATING UTILITIES, VISIT www.callbeforeyoudig.com

CALL BEFORE YOU DIG

REV	DATE	DESCRIPTION	BY	CHKD	APP'D

Professional Seal of Justin Powell
 License No. 14000
 State of Connecticut
 Date: 2017.04.30 14:00:00

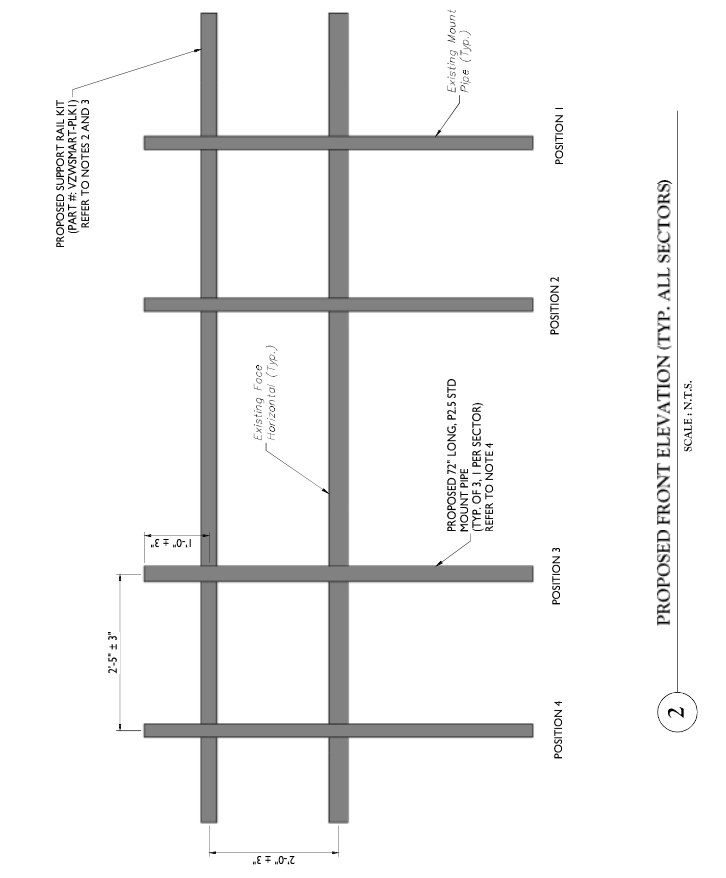
IF THE LOCATION OF UTILITIES HAS CHANGED, UNLESS THE AFFECTING UNDER THE DIRECTION OF THE ENGINEER, THE CONTRACTOR SHALL BE RESPONSIBLE TO UPDATE THIS DOCUMENT.

SITE NAME:
 MIDDLEFIELD SOUTH CT
 467144
 395 JACKSON HILL ROAD
 MIDDLEFIELD, CT 06455
 MIDDLESEX COUNTY

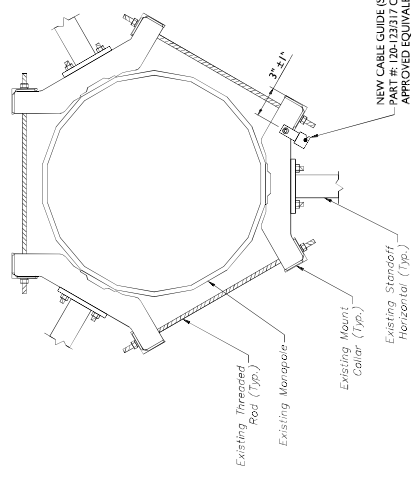
MASER
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 SUITE 1000 DENVER, CO 80202
 TEL: 303.733.8800 FAX: 303.733.8801
 WWW.MASER.COM

MODIFICATION DETAILS

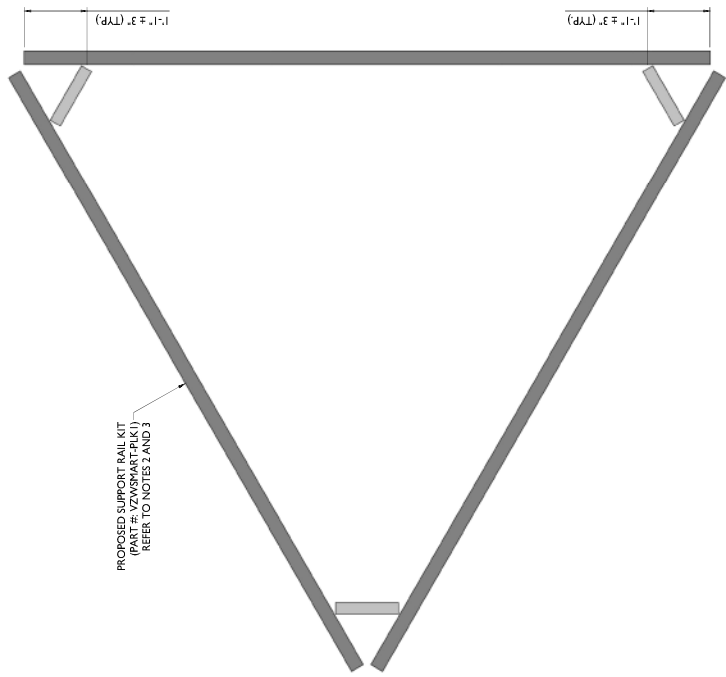
DATE: 11/27/2017
 SHEET: S-5



2 PROPOSED FRONT ELEVATION (TYP. ALL SECTORS)
 SCALE: N.T.S.



3 PROPOSED CABLE GUIDE THREADED ROD ATTACHMENT - PLAN VIEW
 SCALE: N.T.S.

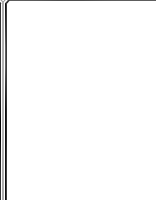


1 PROPOSED PLAN VIEW
 SCALE: N.T.S.

- MODIFICATION NOTES:**
1. MOUNT MEMBERS NOT SHOWN FOR CLARITY U.N.O.
 2. CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE STRUCTURAL STEEL NOTES ON SHEET S-2.
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 4. CONNECT NEW MOUNT PIPE TO EXISTING FACE HORIZONTAL WITH CROSSOVER PLATES (PART #: VZWSMART-MSK2). CONNECT TO PROPOSED SUPPORT RAIL WITH CROSSOVER PLATES (PART #: VZWSMART-MSK1).



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YOUR EXCAVATION PROJECT.

FOR A LIST OF STATES VISIT: WWW.CALLBEFOREYODIG.COM

PROJECT: **AS SHOWN** | ESTIMATE: **2177899A**

REV	DATE	DESCRIPTION	ISSUED BY	DATE
0	01/20/20	ISSUED FOR CONSTRUCTION	JAC	J



DATE: 2021.04.30 14:00:00-0400
Digitally signed by Justin Pelegrino
DN: cn=Justin Pelegrino, o=MASER, ou=Engineering, email=Justin.Pelegrino@maser.com, c=US

SITE NAME:
MIDDLEFIELD SOUTH CT
467144

395 JACKSON HILL ROAD
MIDDLEFIELD, CT 06455
MIDDLESEX COUNTY



MOUNT PHOTOS

S-6



MOUNT PHOTO 2



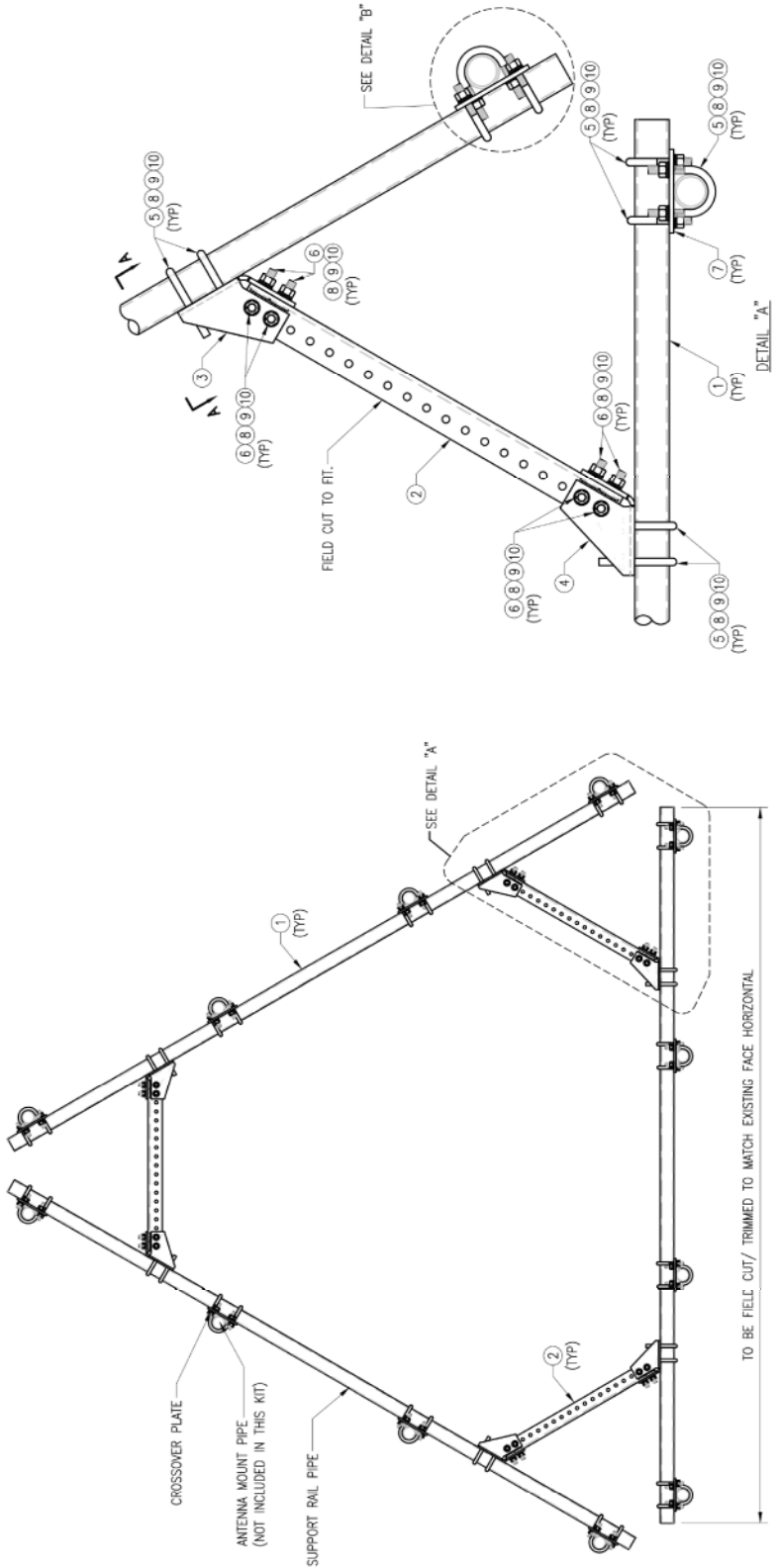
MOUNT PHOTO 4



MOUNT PHOTO 1



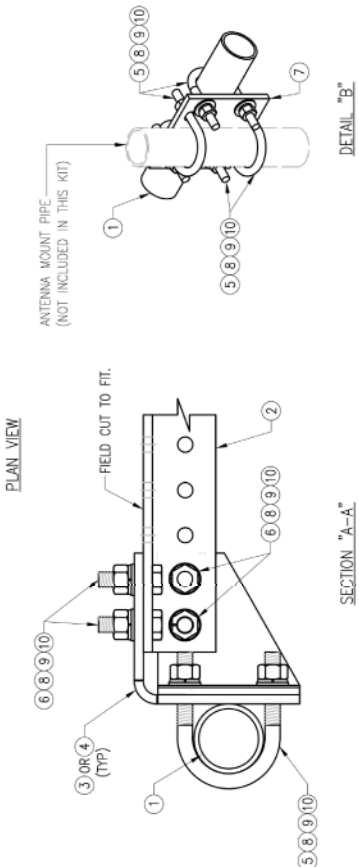
MOUNT PHOTO 3



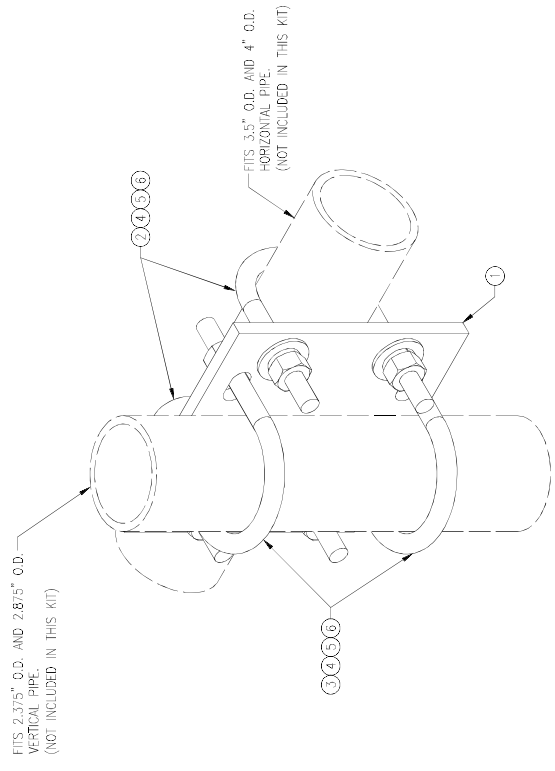
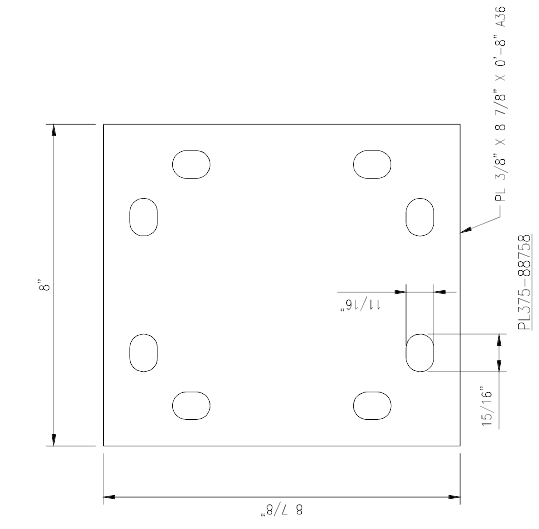
NOTES:
 1. HOT-DIPPED GALVANIZED PER ASTM A123.

VZW SMART-PLK1 (SUPPORT RAIL KIT)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	3	PS12875-12.5	2.5" PST (2.875" O.D. X 0.203" THK.) X 12'-6" A53 GR-B	PLK1-F1	292
2	3	L33375-3	L 3" X 3" X 3/8" X 3'-0" A36	PLK1-F1	66
3	3	CBP-L	CORNER BENT PLATE BRACKET	PLK1-F2	28
4	3	CBP-R	CORNER BENT PLATE BRACKET	PLK1-F2	28
5	60	MS02-625-300-500	RU-BOLT 5/8" X 3" 1.W. X 5" I.L. A36 (OR EQUIV.)	RBC-1	82
6	24	---	BOLT 5/8" X 2" A325	---	9
7	12	PL375-857	PL 3/8" X 1 1/2" X 7'-0" A36	PLK1-F3	77
8	144	FW-625	5/8" HDG USS FLAT WASHER	---	12
9	144	LW-625	5/8" HDG LOCK WASHER	---	3
10	144	NUT-625	5/8" HDG HEX NUT	---	17
				GALVANIZED WT	504



DRAWN BY: HLR	CHECKED BY: HMA
REV. DESCRIPTION	BY DATE
1 FIRST ISSUE	HLR 05/08/20
△	
△	
△	
△	
SHEET TITLE:	
VZWSMART-MSK2	
CROSSOVER PLATE	
SHEET NUMBER:	REV #
VZWSMART-MSK2	0



ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	PL375-88758	PL 3/8" X 8 3/4" X 0'-8" A36	MSK2-F1	8
2	2	MS02-625-4125-600	RU-BOLT 5/8" X 4 1/8" LW. X 6" LL. A36 (OR EQUIV.)	RBC-1	3
3	2	MS02-625-300-500	RU-BOLT 5/8" X 3" LW. X 5" LL. A36 (OR EQUIV.)	RBC-1	3
4	8	FW-625	5/8" HDG. USS. FLAT WASHER	---	1
5	8	LW-625	5/8" HDG. LOK. WASHER	---	0
6	8	NUT-625	5/8" HDG. HEX. NUT	---	1
				GALVANIZED WT	15

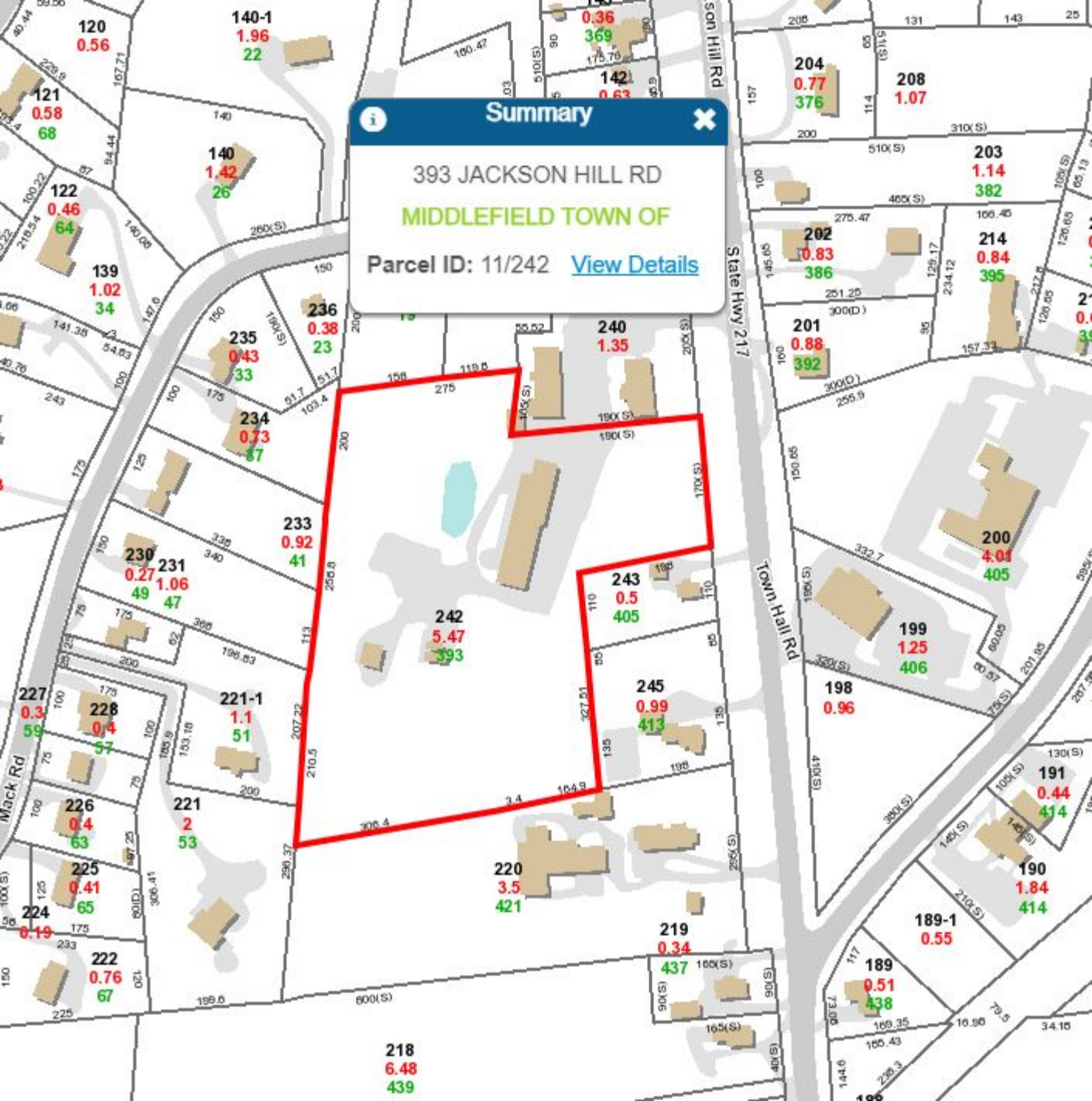
NOTES:
 1. HOT-DIPPED GALVANIZED PER ASTM A123.

ATTACHMENT 5

Summary ✕

393 JACKSON HILL RD
MIDDLEFIELD TOWN OF

Parcel ID: 11/242 [View Details](#)





MIDDLEFIELD, CT

393 JACKSON HILL RD

Location

393 JACKSON HILL RD

Mblu

11 / / 242 / /

Acct#

00069300

Owner

MIDDLEFIELD TOWN OF

Assessment

\$659,300

PID

676

Building Count

4

Current Value

Assessment

Valuation Year	Improvements	Land	Total
2016	\$472,000	\$187,300	\$659,300

Owner of Record

Owner MIDDLEFIELD TOWN OF

Co-Owner

Address 393 JACKSON HILL RD
MIDDLEFIELD, CT 06455

Sale Price \$0
Certificate
Book & Page 0000/0000
Sale Date 01/01/1900
Instrument UNKQ

Ownership History

Ownership History

Owner	Sale Price	Certificate	Book & Page	Instrument	Sale Date
MIDDLEFIELD TOWN OF	\$0		0000/0000	UNKQ	01/01/1900

Building Information

Building 1 : Section 1

Year Built: 1963
Living Area: 2,916
Replacement Cost: \$494,484
Building Percent Good: 72
Replacement Cost
Less Depreciation: \$356,000

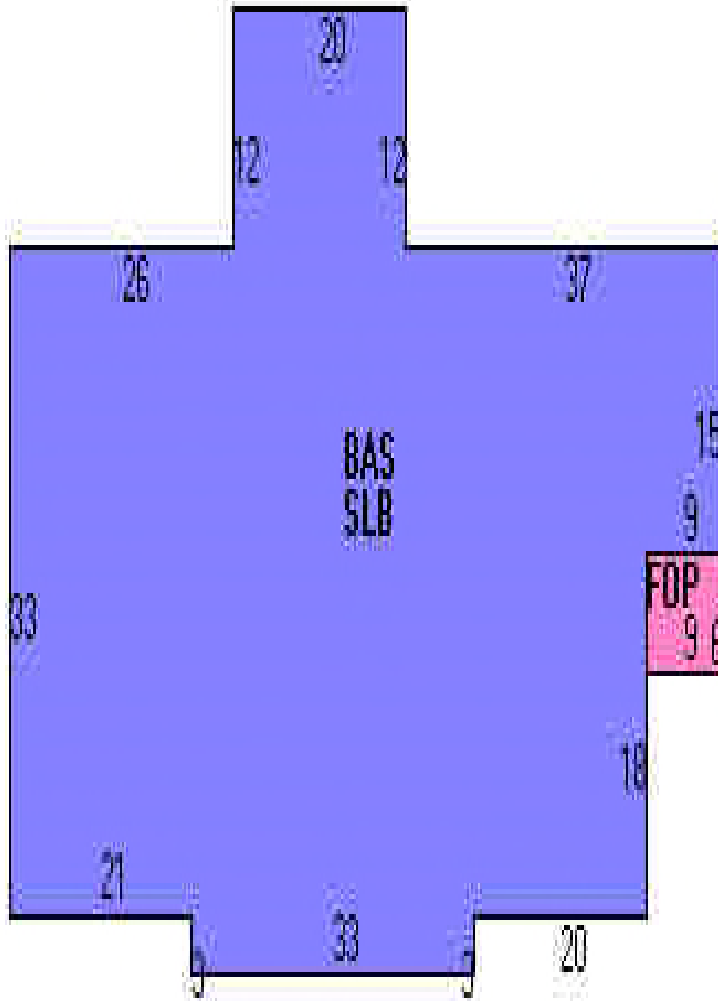
Building Attributes

Field	Description
Style:	City/Town Hall
Model	Comm/Ind
Grade	Average
Stories:	1
Occupancy	1.00
Exterior Wall 1	Brick
Exterior Wall 2	
Roof Structure	Gable/Hip
Roof Cover	Asphalt Shingl
Interior Wall 1	Drywall

Interior Wall 2	
Interior Floor 1	Carpet
Interior Floor 2	
Heating Fuel	Electric
Heating Type	Electr Basebrd
AC Type	Central
Struct Class	
Bldg Use	MUNICIPAL MDL-94
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	903C
Heat/AC	HEAT/AC SPLIT
Frame Type	WOOD FRAME
Baths/Plumbing	AVERAGE
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	AVERAGE
Wall Height	9.00
% Comn Wall	

Building Photo





Building Layout

Building Sub-Areas (sq ft) Legend

Code	Description	Gross Area	Living Area
------	-------------	------------	-------------

BAS	First Floor	2,916	2,916
FOP	Porch, Open	54	0
SLB	Slab	2,916	0
		5,886	2,916

Building 2 : Section 1

Year Built: 1978
Living Area: 4,000
Replacement Cost: \$168,916
Building Percent Good: 84
**Replacement Cost
Less Depreciation:** \$141,900

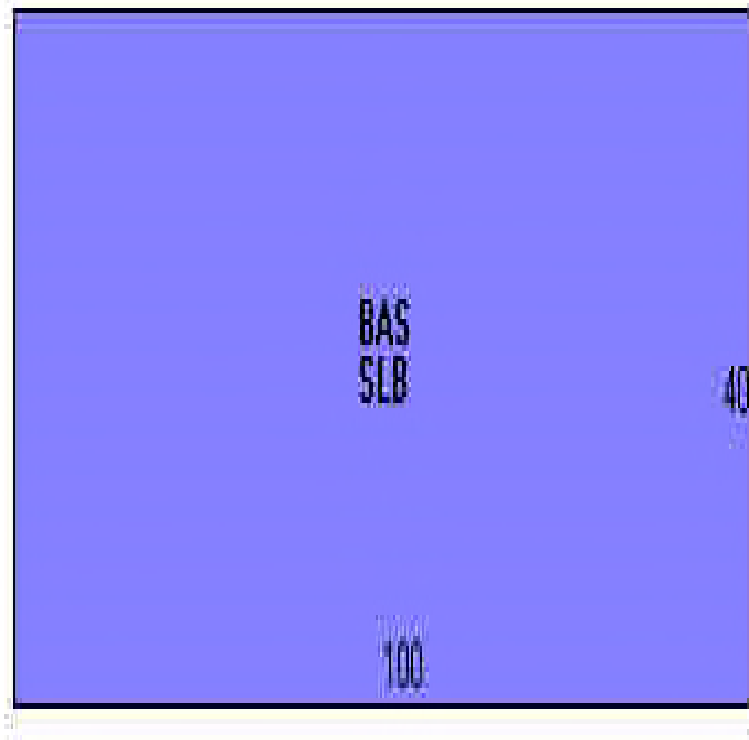
Building Attributes : Bldg 2 of 4

Field	Description
Style:	Service Shop
Model	Ind/Comm
Grade	Average +
Stories:	1
Occupancy	1.00
Exterior Wall 1	Concr/Cinder
Exterior Wall 2	Vinyl Siding
Roof Structure	Gable/Hip
Roof Cover	Asphalt Shingl
Interior Wall 1	Minimum
Interior Wall 2	
Interior Floor 1	Concr-Finished
Interior Floor 2	
Heating Fuel	Oil/Gas
Heating Type	Hot Air-no Duc
AC Type	None

Struct Class	
Bldg Use	MUNICIPAL MDL-96
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	9030
Heat/AC	NONE
Frame Type	MASONRY
Baths/Plumbing	NONE
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	LIGHT
Wall Height	15.00
% Comn Wall	

Building Photo





Building Layout

Building Sub-Areas (sq ft) Legend

Code	Description	Gross Area	Living Area
------	-------------	------------	-------------

BAS	First Floor	4,000	4,000
SLB	Slab	4,000	0
		8,000	4,000

Building 3 : Section 1

Year Built: 1941
Living Area: 3,527
Replacement Cost: \$181,842
Building Percent Good: 68
Replacement Cost Less Depreciation: \$123,700

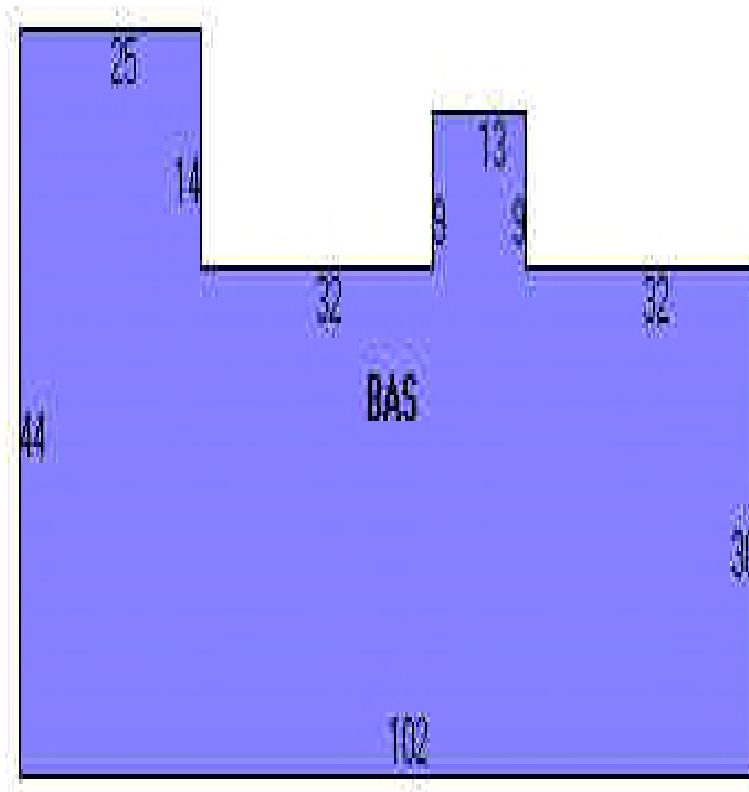
Building Attributes : Bldg 3 of 4

Field	Description
Style:	Service Shop
Model	Ind/Comm
Grade	Average +
Stories:	1
Occupancy	1.00
Exterior Wall 1	Concr/Cinder
Exterior Wall 2	Brick
Roof Structure	Gable/Hip
Roof Cover	Asphalt Shingl
Interior Wall 1	Minimum
Interior Wall 2	
Interior Floor 1	Concr-Finished
Interior Floor 2	
Heating Fuel	Oil/Gas
Heating Type	Forced Air-Duc
AC Type	None
Struct Class	

Bldg Use	MUNICIPAL MDL-96
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	9030
Heat/AC	NONE
Frame Type	MASONRY
Baths/Plumbing	AVERAGE
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	AVERAGE
Wall Height	18.00
% Comn Wall	

Building Photo





Building Layout

Building Sub-Areas (sq ft) Legend

Code	Description	Gross Area	Living Area
------	-------------	------------	-------------

BAS	First Floor	3,527	3,527
		3,527	3,527

Building 4 : Section 1

Year Built:	2000
Living Area:	374
Replacement Cost:	\$16,698
Building Percent Good:	88
Replacement Cost Less Depreciation:	\$14,700

Building Attributes : Bldg 4 of 4

Field	Description
Style:	Warehouse
Model	Ind/Comm
Grade	Average
Stories:	1
Occupancy	1.00
Exterior Wall 1	Concr/Cinder
Exterior Wall 2	
Roof Structure	Gable/Hip
Roof Cover	Asphalt Shingl
Interior Wall 1	Wall Brd/Wood
Interior Wall 2	
Interior Floor 1	Concr-Finished
Interior Floor 2	
Heating Fuel	Coal or Wood
Heating Type	None
AC Type	None
Struct Class	
Bldg Use	MUNICIPAL MDL-96

Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	9030
Heat/AC	NONE
Frame Type	WOOD FRAME
Baths/Plumbing	NONE
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	AVERAGE
Wall Height	9.00
% Comn Wall	

Building Photo





Building Layout

Building Sub-Areas (sq ft) Legend

Code	Description	Gross Area	Living Area
------	-------------	------------	-------------

BAS	First Floor	374	374
FOP	Porch, Open	264	0
UAT	Attic, Unfinished	374	0
		1,012	374

Extra Features

Extra Features Legend

No Data for Extra Features

Land

Land Use

Use Code 903C

Description MUNICIPAL MDL-94

Zone HD2

Neighborhood 0500

Alt Land Appr No

Category

Land Line Valuation

Size (Acres) 5.47

Frontage

Depth

Assessed Value \$187,300

Outbuildings

Outbuildings Legend

Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
KEN1	KENNEL-AVG			100.00 S.F.	\$600	1
FN3	FENCE-6' CHAIN			71.00 L.F.	\$500	1
BRN8	POLE BARN			2760.00 S.F.	\$14,500	1
BRN8	POLE BARN			648.00 S.F.	\$3,400	1
SHD7	COM MAS			140.00 S.F.	\$3,000	1

PAV1	PAVING- ASPHALT			30000.00 S.F.	\$15,800	1
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closecloseclose

ATTACHMENT 6



MIDDLEFIELD SOUTH
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 <div style="font-size: 2em; text-align: center;">2</div>	TOTAL NO. of Pieces Received at Post Office™ <div style="font-size: 2em; text-align: center;">2</div>	Affix Stamp Here <i>Postmark with Date of Receipt.</i> <div style="text-align: right; color: magenta;"> neopost[®] 07/13/2021 US POSTAGE \$002.89⁰ ZIP 06103 041L12203937 </div>
	Postmaster, per (name of receiving employee) <div style="font-size: 2em; text-align: center;">V.P</div>		

USPS® Tracking Number Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	Edward S. Bailey, First Selectman Town of Middlefield 393 Jackson Hill Road Middlefield, CT 06455				
2.	Robin Newton, Town Planner Town of Middlefield 393 Jackson Hill Road Middlefield, CT 06455				
3.					
4.					
5.					
6.					

