Robinson+Cole

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Also admitted in Massachusetts
and New York

February 16, 2022

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**
60 Commerce Street, East Haven, Connecticut

Dear Attorney Bachman:

Cellco Partnership d/b/a Verizon Wireless ("Cellco") currently maintains an existing wireless telecommunications facility at the above-referenced property address (the "Property"). The facility consists of antennas and remote radio heads attached to a tower and associated equipment on the ground near the base of the tower. The tower was approved by the Siting Council ("Council") in August of 2005 (Petition No. 730). Cellco's shared use of the tower was approved by the Council in December of 2009 (EM-VER-044-091112). A copy of the Council's Petition No. 730 Staff Report and EM-VER-044-091112 approval are included in Attachment 1.

Cellco now intends to modify its facility by removing nine (9) existing antennas and installing three (3) new Samsung MT6407-77A antennas and six (6) new JAHH-65B-R3B antennas on the existing T-Arm antenna mounts. Cellco also intends to replace six (6) remote radio heads ("RRHs') with six (6) new RRHs behind its antennas. A set of project plans showing Cellco's proposed facility modifications and the specifications for Cellco's new antennas and RRHs 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 East Haven's Chief Elected Official and Land Use Officer.

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 new antennas will be installed on its existing T-Arm antenna mounts.

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

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

4. The installation of Cellco's new antennas will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. Far Field Approximation tables 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 T-Arm antenna mounts, 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 and the property owner is included in Attachment 6.

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

Sincerely,

Kenneth C. Baldwin

Enclosures
Copy to:
Joseph Carfora, East Haven Mayor
Joseph Budrow, Zoning Enforcement Officer
Perrelli Associates LLC, Property Owner
Alex Tyurin, Verizon Wireless

ATTACHMENT 1

Petition No. 730
Nextel
East Haven, Connecticut
Staff Report
August 17, 2005

Nextel seeks to replace an existing lattice tower located at the back of building used by a fuel oil dealer. The height of the existing tower, including the whip antenna at the top of the tower, is 70 feet. Nextel's replacement tower would be located a few feet from the existing tower and would also be 70 feet tall. Nextel's antennas would be installed with a centerline of 67 feet and would not extend above 70 feet. Nextel would design the replacement tower to accommodate one additional carrier.

Council member Gerry Heffernan and staff person David Martin met with Nextel representative Tom Flynn at the site on August 17, 2005 to conduct a field review. The building behind which the existing tower is located is in an industrial park near the Tweed-New Haven Airport. There are no residences in sight from the area of the tower, and, given the distance to the nearest residences, it is unlikely that the closest neighbors could have a view of anything more than a few feet of the top of the tower. Even that is unlikely.

Nextel's proposed 800 square foot compound would be located behind the building. It would be completely screened from the industrial park's street by an existing row of 10 to 12-foot tall arbor vitae. Installation of the compound would, in all likelihood, result in a clean up of the back of the building. The compound would include a 12 by 20-foot equipment shelter.

At 70 feet, Nextel's proposed tower would be below any flight path of planes using the airport.

Based upon the conditions observed during the field review, it is unlikely that the scope of the improvements described in this petition would result in any significant adverse environmental impacts.

View of Existing Tower

View of Back of Building Where Compound Will Be Located

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051
Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@ct.gov
www.ct.gov/csc

December 14, 2009

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

RE: **EM-VER-044-091112** - Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 60 Commerce Street, East Haven, Connecticut.

Dear Attorney Baldwin:

The Connecticut Siting Council (Council) hereby acknowledges 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 November 12, 2009, 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,

S. Derek Phelps
Executive Director

SDP/MP/laf

c: The Honorable April Capone Almon, Mayor, Town of East Haven
George Mingione, Zoning Enforcement Officer, Town of East Haven
Thomas J. Regan, Esq., Brown Rudnick LLP

ATTACHMENT 2

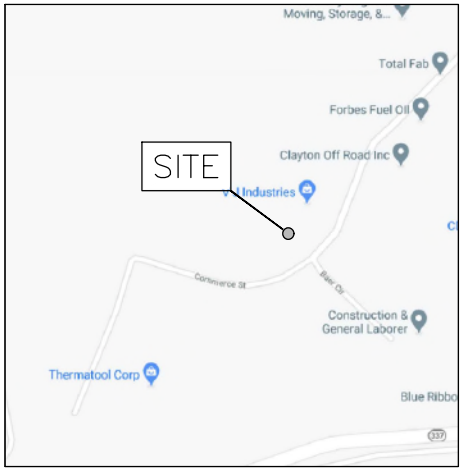
verizon

WIRELESS COMMUNICATIONS FACILITY

EAST HAVEN COSEY BEACH CT
60 COMMERCE ST
EAST HAVEN, CT 06512

PROJECT:
L-SUB6-CARRIER ADD

LOCATION MAP



SUPPORTING DOCUMENTS

RADIO FREQUENCY (RF) DESIGN: **05/10/21**
MOUNT MAPPING REPORT: **01/27/21 (BY HUDSON DESIGN GROUP, LLC)**
MOUNT ANALYSIS: **04/01/21 (BY MASER CONSULTING)**
STRUCTURAL ANALYSIS: **10/01/21 (BY SBA)**
MOUNT MODIFICATION DRAWINGS: **03/31/21 (BY MASER CONSULTING)**

PROJECT INFORMATION

SITE NAME:	EAST HAVEN COSEY BEACH CT
LOCATION CODE:	469123
SITE ADDRESS:	60 COMMERCE ST EAST HAVEN, CT 06512
LATITUDE:	41° 15' 04.44"N
LONGITUDE:	72° 52' 55.54"W

DRAWING INDEX

NO.	DESCRIPTION
T-1	TITLE SHEET
A-1	TOWER ELEVATION & COMPOUND PLAN
A-2	ANTENNA CONFIGURATION & SCOPE OF WORK
A-3	EQUIPMENT SPECIFICATIONS, BILL OF MATERIALS & PLUMBING DIAGRAM
SN-1	STRUCTURAL NOTES

RFDS PROJECT SCOPE

RFDS SOW: 850/ PCS/ L-SUB6 CARRIER ADDS, SAMSUNG DUAL BAND RRH SWAP, ANTENNA CHANGE

1 - RETAIN 700/ AWS CARRIERS AND ADD 850/ PCS/ L-SUB6 CARRIERS
2 - REPLACE (3) EXISTING ANTENNAS AT POSITIONS 2 WITH (3) SAMSUNG MT6407-77A ANTENNAS
3 - REPLACE ANTENNAS IN POSITIONS 2 & 3 WITH (6) NEW COMMSCOPE JAHH-65B-R3B ANTENNAS ON NEW BSAMNT-SBS-2-2
4 - REMOVE (6) EXISTING NOKIA RRHS AND ADD (3) NEW SAMSUNG B5/B13 RRHBR04C (RFV01U-D2A), (3) NEW SAMSUNG B2/B66A RRH-BR049 (RFV01U-D1A) TO TOWER
5 - ADD (3) COMMSCOPE C8C78-T-DS-43 DIPLEXERS ON TOWER
6 - PLUMB 700/ 850/ PCS/ AWS/ L-SUB6 ACCORDING TO THE PLUMBING DIAGRAM
7 - USE RF PORTS ON DUAL BAND RRHS TO COMMUNICATE WITH RETS VIA SMART BIAS-T BUILT INTO THE ANTENNA
8 - CAP AND WEATHERPROOF UNUSED PORTS/CONNECTORS

SUMMARY:

- ADDING 9, REMOVING 9, RETAINING 3 (FINAL ANTENNA COUNT: 12)
- ADDING 9 RRU'S, REMOVING 6, RETAINING 0 (FINAL RRU COUNT: 9)
- 6 SECTOR SITE WITH LTE CARRIERS (700,850,1900,AWS), CDMA CARRIERS (850), CARRIERS (L-SUB6)

BUILDING CODES

APPLICABLE BUILDING CODES: SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.

- BUILDING CODE: IBC 2015 & CONNECTICUT STATE BUILDING CODE 2018
- ELECTRICAL CODE: 2017 NATIONAL ELECTRICAL CODE
- LIGHTENING CODE: NFPA 70-2017
- TELECOMMUNICATIONS INDUSTRY ASSOCIATION ANSI (TIA) 222-H, STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES; REFER TO ELECTRICAL DRAWINGS FOR SPECIFIC ELECTRICAL STANDARDS.

CELLCO PARTNERSHIP d/b/a VERIZON WIRELESS
verizon
20 ALEXANDER DRIVE
WALLINGFORD, CT 06492

CENTERLINE ENGINEERING SERVICES, PA
750 W CENTER ST, SUITE 301
WEST BRIDGEWATER, MA 02379
PHONE: 781.713.4725

REVISIONS

NO.	DATE	DESCRIPTION
2	01/06/22	ISSUED FOR CONSTRUCTION
1	05/07/21	REVISED FOR REVIEW
0	02/01/21	ISSUED FOR REVIEW

DESIGNED BY:	APPROVED BY:
KL	DC

STATE OF CONNECTICUT
DEREK J. CREASER
No. 28561
LICENSED PROFESSIONAL ENGINEER

IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER TO ALTER THIS DOCUMENT. UNLESS EXPLICITLY AGREED TO BY THE ENGINEER IN WRITING, THE ENGINEER DISCLAIMS ALL LIABILITY ASSOCIATED WITH THE REUSE, ALTERATION OR MODIFICATION OF THE CONTENTS HEREIN.

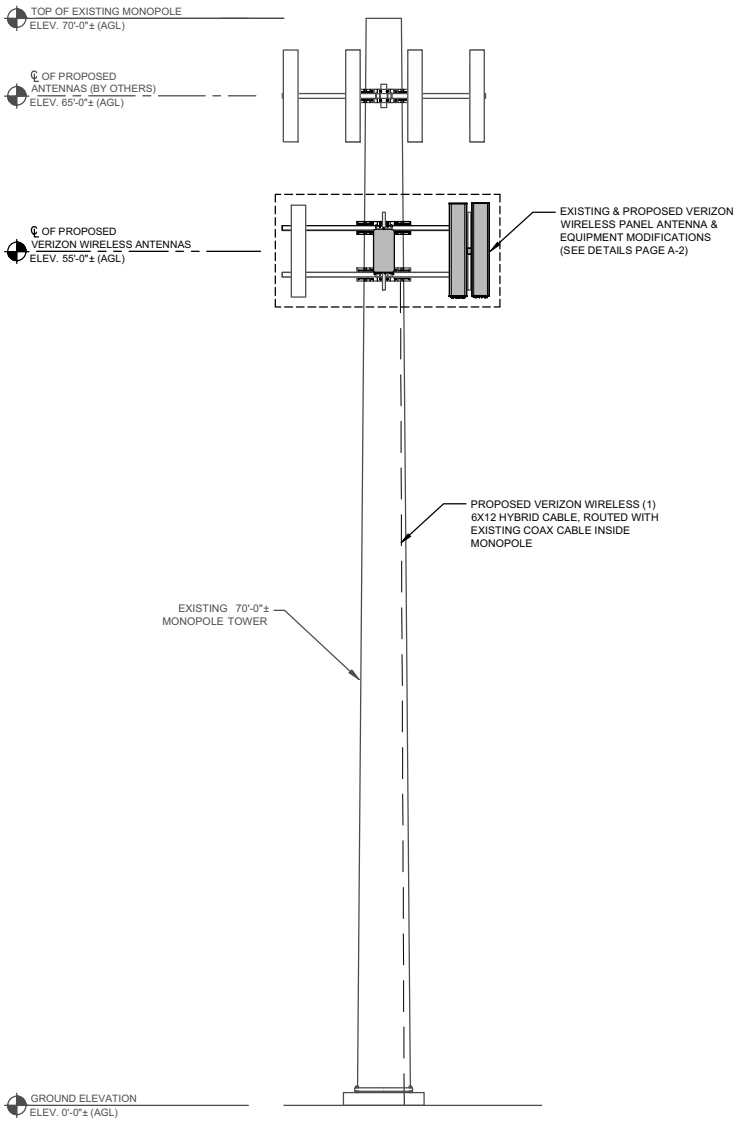
SITE NAME:
EAST HAVEN
COSEY BEACH CT

SITE ADDRESS:
60 COMMERCE ST
EAST HAVEN, CT 06512
NEW HAVEN

LOCATION CODE:
469123

SHEET TITLE:
TITLE SHEET

SHEET #:	REVISION:
T-1	2

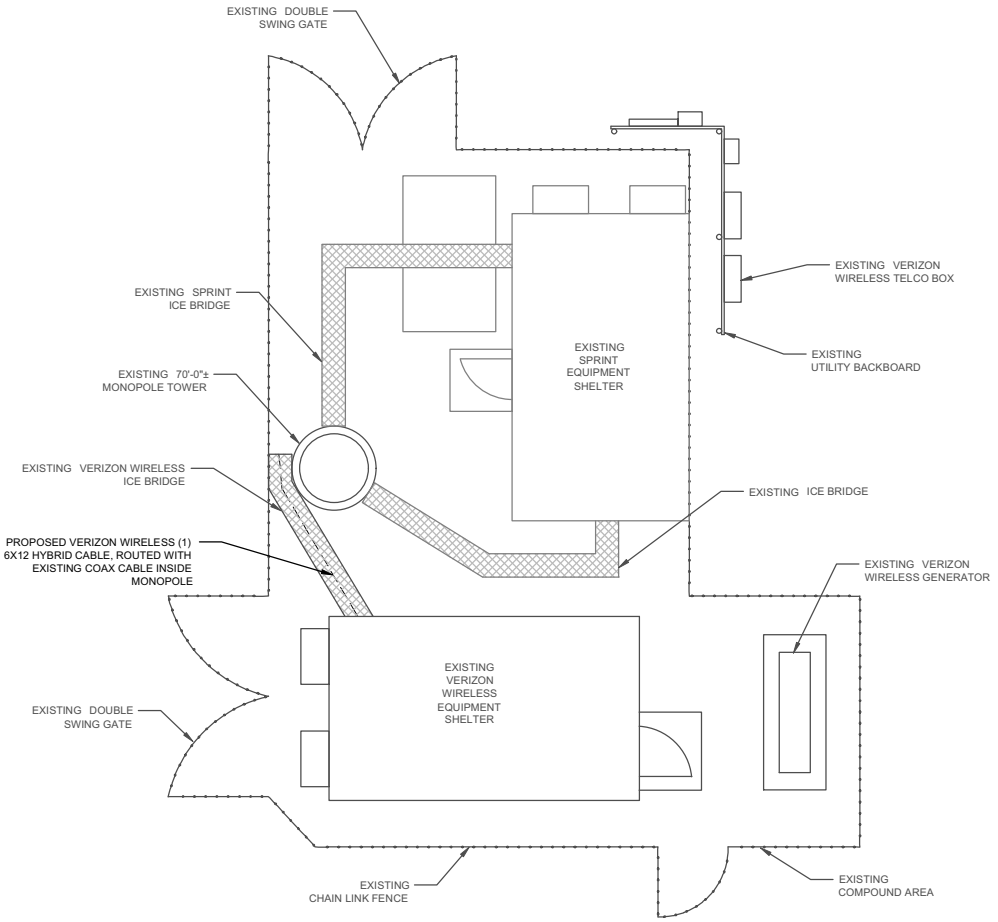


1 A-1 TOWER ELEVATION

SCALE: 1/4" = 1'-0" (22"X34")
1/8" = 1'-0" (11"X17")

GRAPHIC SCALE

4 0 2 4 8 16
(IN FEET)



2 A-1 COMPOUND PLAN

SCALE: 1/4" = 1'-0" (22"X34")
1/8" = 1'-0" (11"X17")

GRAPHIC SCALE

4 0 2 4 8 16
(IN FEET)

CELLCO PARTNERSHIP d/b/a VERIZON WIRELESS

verizon

20 ALEXANDER DRIVE
WALLINGFORD, CT 06492

CENTERLINE
ENGINEERING SERVICES, PA

750 W CENTER ST, SUITE 301
WEST BRIDGEWATER, MA 02379
PHONE: 781.713.4725

REVISIONS		
2	01/06/22	ISSUED FOR CONSTRUCTION
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0	02/01/21	ISSUED FOR REVIEW
NO.	DATE	DESCRIPTION

DESIGNED BY:	APPROVED BY:
KL	DC

STATE OF CONNECTICUT
DEREK J. CREASER
No. 28551
LICENSED
PROFESSIONAL ENGINEER

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SITE NAME:
EAST HAVEN
COSEY BEACH CT

SITE ADDRESS:
60 COMMERCE ST
EAST HAVEN, CT 06512
NEW HAVEN

LOCATION CODE:
469123

SHEET TITLE:
PARTIAL ROOF PLAN &
SOUTH ELEVATION

SHEET #: A-1 REVISION: 2

NOTES

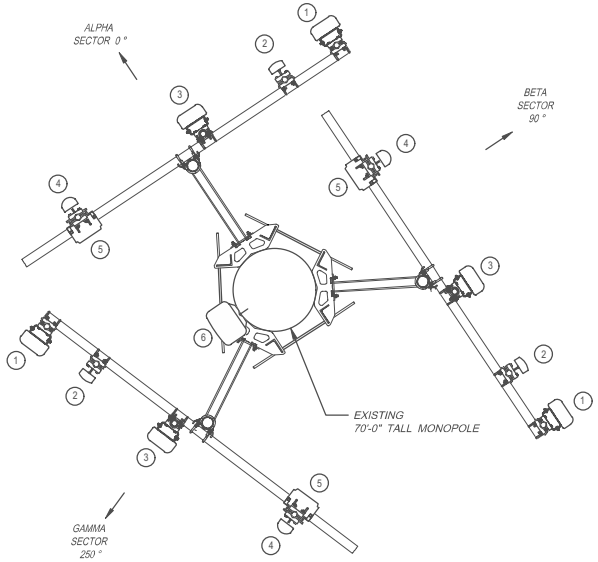
1. IF SHOWN, ANTENNA SPACING DIMENSIONS ARE TO THE CENTER OF THE EXIST. ANTENNA AND PROP. ANTENNA FACE.
2. REFER TO THE FINAL RFDS PROVIDED BY VERIZON FOR THE LATEST INFORMATION REGARDING EQUIPMENT MODELS, REQUIRED CABLING & DOWN-TILT INFORMATION.
3. REFER TO THE ASSEMBLY DRAWING AND MOUNT ANALYSIS BY MASER CONSULTING FOR ALL REQUIRED EQUIPMENT MODIFICATION INFORMATION.

GENERAL ABBREVIATION LIST

- ABP ABOVE BASE PLATE
- AGL ABOVE GRADE LEVEL
- AMSL ABOVE MEAN SEA LEVEL
- AWS ADVANCED WIRELESS SERVICE
- HDG HOT DIPPED GALVANIZED
- OVP OVER VOLTAGE PROTECTION
- RRH REMOTE RADIO HEAD
- V.I.F. VERIFY IN FIELD
- W.P. WORK POINT
- A.F.R. ABOVE FINISH ROOF

SCOPE OF WORK (ALL) SECTORS

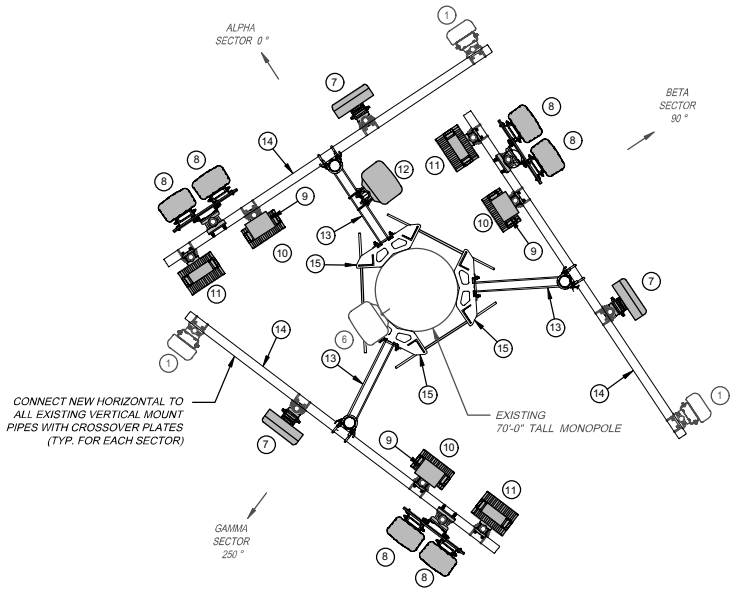
1. EXIST. ANTENNA (TO REMAIN) MODEL: AMPHENOL BXA-80063/6CF
2. EXIST. ANTENNA (TO BE REPLACED) MODEL: AMPHENOL BXA-185063
3. EXIST. ANTENNA (TO BE REPLACED) MODEL: ANTEL BXA-70063-6CF
4. EXIST. ANTENNA (TO BE REPLACED) MODEL: AMPHENOL BXA-171063-8BF
5. EXIST. RRH (TO BE REPLACED) MODEL: NOKIA UHID B4 RRH 2x40
6. EXIST. OVP BOX (TO REMAIN) MODEL: RAYCAP RRFDC-3315-PF-48
7. NEW ANTENNA MODEL: SAMSUNG MT6407-77A MOUNTED ON EXIST. PIPE MAST
8. NEW ANTENNA MOUNTED VIA NEW DUAL-MOUNT BRACKETS (COMMSCOPE BSAMNT-SBS-2-2) MODEL: COMMSCOPE JAHH-65B-R3B
9. NEW DIPLEXER MODEL: COMMSCOPE CBC78T-DS-43-2X
10. NEW DUAL BAND RRH MODEL: SAMSUNG B5/B13 RRH-BR04C (RFV01U-D2A)
11. NEW DUAL BAND RRH MODEL: SAMSUNG B2/B66A RRH-BR04 (RFV01U-D1A)
12. NEW OVP BOX MOUNTED VIA NEW CROSSOVER PLATE AND PIPE MAST MODEL: RAYCAP OVP6
13. PROPOSED T-ARM KIT PART #: VZWSMART-SFK4 REFER TO ASSEMBLY DRAWING & MOUNTING ANALYSIS BY MASER CONSULTING
14. PROPOSED 150" LONG, P3.0 STD REFER TO ASSEMBLY DRAWING & MOUNTING ANALYSIS BY MASER CONSULTING
15. PROP. MONOPOLE COLLAR MOUNT ASSEMBLY PART #: VZWSMART-PLK7 REFER TO ASSEMBLY DRAWING & MOUNTING ANALYSIS BY MASER CONSULTING



1 A-2 EXISTING ANTENNA PLAN

SCALE: 1/2" = 1'-0" (22"X34")
1/4" = 1'-0" (11"X17")

GRAPHIC SCALE
2 0 1 2 4 8
(IN FEET)



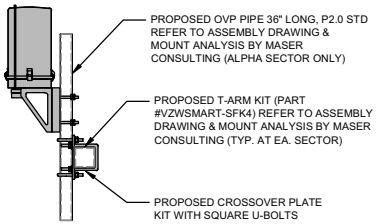
2 A-2 PROPOSED ANTENNA PLAN

SCALE: 1/2" = 1'-0" (22"X34")
1/4" = 1'-0" (11"X17")

GRAPHIC SCALE
2 0 1 2 4 8
(IN FEET)

3 A-2 DUAL ANTENNA BRACKET DETAIL

N.T.S.



4 A-2 OVP MOUNTING DETAIL

N.T.S.

CELLCO PARTNERSHIP d/b/a VERIZON WIRELESS
verizon
20 ALEXANDER DRIVE
WALLINGFORD, CT 06492

CENTERLINE ENGINEERING SERVICES, PA
750 W CENTER ST, SUITE 301
WEST BRIDGEWATER, MA 02379
PHONE: 781.713.4725

REVISIONS		
2	01/06/22	ISSUED FOR CONSTRUCTION
1	05/07/21	REVISED FOR REVIEW
0	02/01/21	ISSUED FOR REVIEW
NO.	DATE	DESCRIPTION

DESIGNED BY:	APPROVED BY:
KL	DC

STATE OF CONNECTICUT
DEREK J. CREASER
NO. 28551
LICENSED PROFESSIONAL ENGINEER

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SITE NAME:	EAST HAVEN COSEY BEACH CT
SITE ADDRESS:	60 COMMERCE ST EAST HAVEN, CT 06512 NEW HAVEN
LOCATION CODE:	469123
SHEET TITLE:	ANTENNA CONFIGURATION & SCOPE OF WORK
SHEET #: A-2	REVISION: 2

BILL OF MATERIALS

ITEM	DESCRIPTION	QTY.	LENGTH	COMMENTS
1	LSUB-6 ANTENNA	3	-	(SAMSUNG MT64707-77A) MOUNTED TO EXISTING ANTENNA PIPE
2	LTE 700/850/PCS/AWS ANTENNA	6	-	(JAHH-65B-R3B) MOUNTED TO EXIST. PIPE MAST VIA NEW DUAL MOUNT BRACKETS (BSAMNT-SCS-2-2)
3	1x2 LI HYBRID CABLE	3	15'	ROUTE FROM NEW UPPER OVP TO LSUB-6 ANTENNA
4	1/2" JUMPER CABLE	38	10'	ROUTE FROM NEW RRH TO ANTENNA
5	DIPLEXER	3	-	(COMMSCOPE CBC78T-DS-43) MOUNTED TO EXISTING FRAME
6	LTE 700/850 RRH	3	-	(SAMSUNG B5/B13 RRH-BR049 (RFV01U-D2A) MOUNTED TO EXISTING FRAME
7	LTE PCS/AWS RRH	3	-	(SAMSUNG B2/B66A RRH-BR04C (RFV01U-D1A) MOUNTED TO EXISTING FRAME
8	RRH CABLE(S)	6	15'	PROPRIETARY POWER & FIBER CABLES
9	UPPER OVP6	1	-	NEW UPPER OVP MOUNTED TO NEW* T ARM WITH PROPOSED CROSSOVER PLATE KIT
10	6x12 LI HYBRID CABLE	1	75'	ROUTE FROM LOWER OVP RACK TO UPPER OVP BOX
11	LOWER OVP 6	2	-	LOWER OVP RACK MOUNTED WITHIN EXISTING RACK IN EQUIPMENT AREA

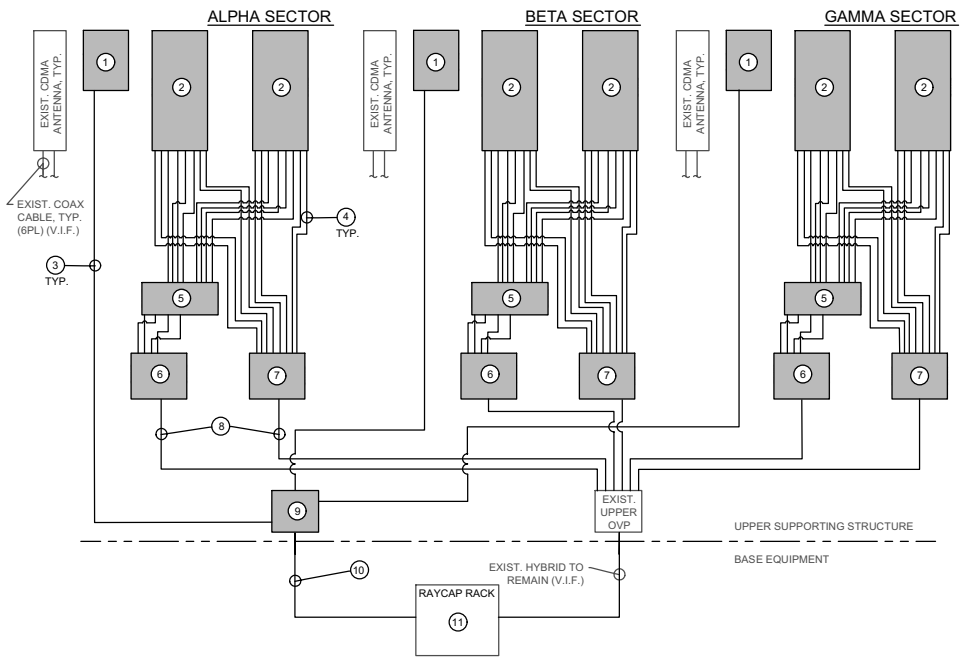
NOTES:
1. INFORMATION SHOWN HEREON IS FOR USE BY VERIZON EQUIPMENT OPERATIONS.
2. INFORMATION IS BASED ON RFDS DATED 05/10/21.
3. *REFER TO ASSEMBLY DRAWING & MOUNT ANALYSIS BY MASER CONSULTING (WHERE APPLICABLE)

EQUIPMENT DATA

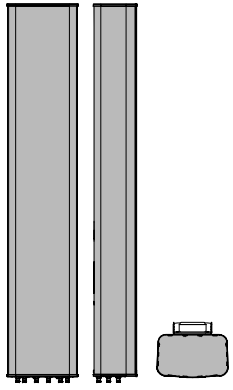
EQUIPMENT SPECIFICATIONS

SECTOR	ANTENNA MAKE/MODEL	QTY	AZIMUTH	EQUIPMENT STATUS	HEIGHT (IN)	WIDTH (IN)	DEPTH (IN)	WEIGHT (LBS)
ALPHA	CDMA ANTEL BXA-80063/6CF	1	0	ETR	71.0	11.2	5.2	17.0
	SAMSUNG MT6407-77A	1	0	NEW	35.1	16.1	5.5	87.1
	LTE 700/850/PCS/AWS JAHH-65B-R3B	1	0	NEW	72.0	13.8	8.2	64.4
	LTE 700/850/PCS/AWS JAHH-65B-R3B	1	0	NEW	72.0	13.8	8.2	64.4
BETA	CDMA ANTEL BXA-80063/6CF	1	90	ETR	71.0	11.2	5.2	17.0
	SAMSUNG MT6407-77A	1	90	NEW	35.1	16.1	5.5	87.1
	LTE 700/850/PCS/AWS JAHH-65B-R3B	1	90	NEW	72.0	13.8	8.2	64.4
	LTE 700/850/PCS/AWS JAHH-65B-R3B	1	90	NEW	72.0	13.8	8.2	64.4
GAMMA	CDMA ANTEL BXA-80063/6CF	1	250	ETR	71.0	11.2	5.2	17.0
	SAMSUNG MT6407-77A	1	250	NEW	35.1	16.1	5.5	87.1
	LTE 700/850/PCS/AWS JAHH-65B-R3B	1	250	NEW	72.0	13.8	8.2	64.4
	LTE 700/850/PCS/AWS JAHH-65B-R3B	1	250	NEW	72.0	13.8	8.2	64.4
ALL	APPURTENANCE MAKE/MODEL							
	SAMSUNG B2/B66A RRH-BR049 (RFV01U-D1A)	3	-	NEW	14.9	14.9	10.04	97.5
	SAMSUNG B5/B13 RRH-BR04C (RFV01U-D2A)	3	-	NEW	14.9	14.9	8.14	82.0
	SAMSUNG MT64707-77A	3	-	NEW				
	RAYCAP OVP6	2	-	NEW/ETR				
	DIPLEXER	3	-	NEW	6.4	6.93	4.8	10.4

NOTES:
1. "ETR" DENOTES EXISTING TO REMAIN.
2. WEIGHTS LISTED ARE WITHOUT MOUNTING BRACKET.
3. INFORMATION IS BASED ON RFDS DATED 05/10/21.

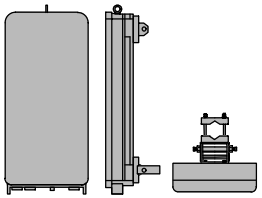


1 A-3 PLUMBING DIAGRAM N.T.S.



JAHH-65B-R3B

2 A-3 ANTENNA DETAIL N.T.S.

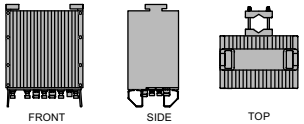


SAMSUNG MT6407-77A

3 A-3 ANTENNA DETAIL N.T.S.

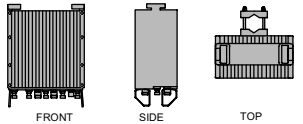
CBC78T-DS-43

4 A-3 DIPLEXER DETAIL N.T.S.



SAMSUNG B2/B66A
RRH-BR049 (RFV01U-D1A)

5 A-3 RRH DETAIL N.T.S.



SAMSUNG B5/B13
RRH-BR04C (RFV01U-D2A)

6 A-3 RRH DETAIL N.T.S.

CELLCO PARTNERSHIP d/b/a VERIZON WIRELESS

verizon

20 ALEXANDER DRIVE
WALLINGFORD, CT 06492

CENTERLINE
ENGINEERING SERVICES, PA

750 W CENTER ST, SUITE 301
WEST BRIDGEWATER, MA 02379
PHONE: 781.713.4725

REVISIONS		
2	01/06/22	ISSUED FOR CONSTRUCTION
1	05/07/21	REVISED FOR REVIEW
0	02/01/21	ISSUED FOR REVIEW
NO.	DATE	DESCRIPTION

DESIGNED BY:	APPROVED BY:
KL	DC

STATE OF CONNECTICUT
DEREK J. CREASER
No. 28551
LICENSED PROFESSIONAL ENGINEER

IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER TO ALTER THIS DOCUMENT. UNLESS EXPLICITLY AGREED TO BY THE ENGINEER IN WRITING, THE ENGINEER DISCLAIMS ALL LIABILITY ASSOCIATED WITH THE REUSE, ALTERATION OR MODIFICATION OF THE CONTENTS HEREIN.

SITE NAME:
EAST HAVEN
COSEY BEACH CT

SITE ADDRESS:
60 COMMERCE ST
EAST HAVEN, CT 06512
NEW HAVEN

LOCATION CODE:
469123

SHEET TITLE:
EQUIPMENT SPECIFICATIONS, BILL OF MATERIALS & PLUMBING DIAGRAM

SHEET #: A-3 REVISION: 2

STRUCTURAL NOTES:

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

SPECIAL INSPECTIONS (REFERENCE IBC CHAPTER 17):

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

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

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

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

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

NOTES:

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

CELLCO PARTNERSHIP d/b/a VERIZON WIRELESS

verizon

20 ALEXANDER DRIVE
WALLINGFORD, CT 06492

CENTERLINE
ENGINEERING SERVICES, PA

750 W CENTER ST, SUITE 301
WEST BRIDGEWATER, MA 02379
PHONE: 781.713.4725

REVISIONS		
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1	05/07/21	REVISED FOR REVIEW
0	02/01/21	ISSUED FOR REVIEW
NO.	DATE	DESCRIPTION

DESIGNED BY:	APPROVED BY:
KL	DC

STATE OF CONNECTICUT
DEREK J. CREASER
No. 28551
LICENSED
PROFESSIONAL ENGINEER

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SITE NAME:	EAST HAVEN COSEY BEACH CT
SITE ADDRESS:	60 COMMERCE ST EAST HAVEN, CT 06512 NEW HAVEN
LOCATION CODE:	469123
SHEET TITLE:	STRUCTURAL NOTES
SHEET #:	SN-1
REVISION:	2

SAMSUNG

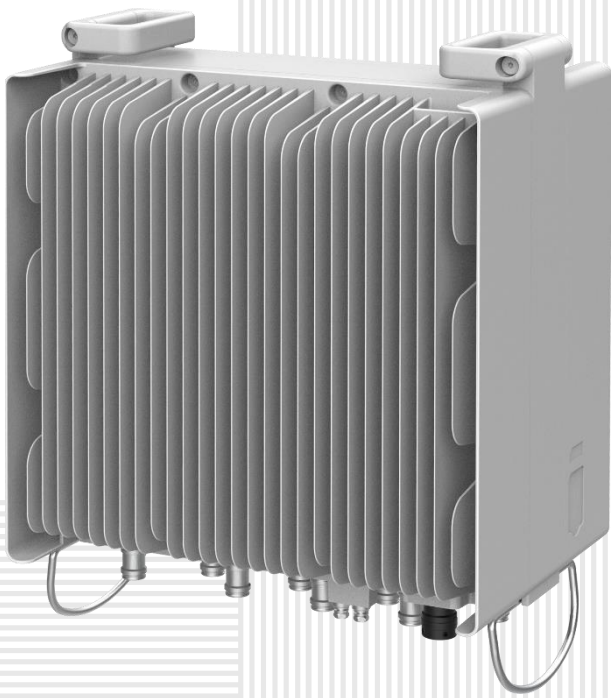
AWS/PCS MACRO RADIO

DUAL-BAND AND HIGH POWER FOR MACRO COVERAGE

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

57196

Model Code	RF4439d-25A



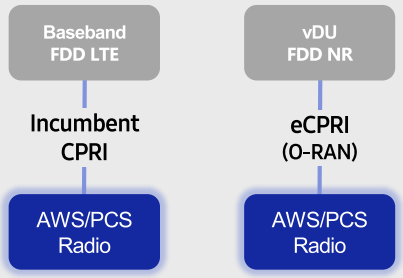
Homepage
samsungnetworks.com

Youtube
www.youtube.com/samsung5g

Points of Differentiation

Continuous Migration

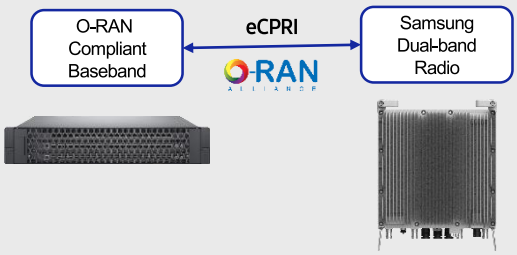
Samsung's AWS/PCS macro radio can support each incumbent CPRI interface as well as advanced eCPRI interfaces. This feature provides installable options for both legacy LTE networks and added NR networks.



O-RAN Compliant

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

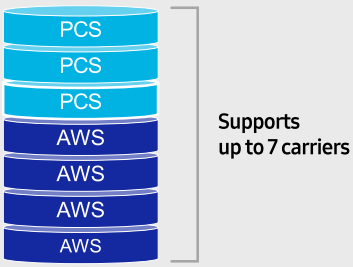
Samsung's state-of-the-art O-RAN technology will help accelerate the effort toward constructing a solid O-RAN ecosystem.



Optimum Spectrum Utilization

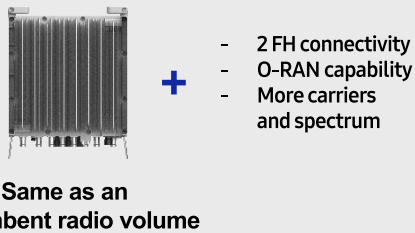
The number of required carriers varies according to site (region). Supporting many carriers is essential for using all frequencies that the operator has available.

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



Brand New Features in a Compact Size

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



Technical Specifications

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

SAMSUNG

700/850MHZ MACRO RADIO

DUAL-BAND AND HIGH POWER FOR MACRO COVERAGE

Samsung's future proof dual-band radio is designed to help effectively increase the coverage areas in wireless networks. This 700/850MHz 4T4R dual-band radio has 4Tx/4Rx to 2Tx/2Rx RF chains options and a total output power of 320W, making it ideal for macro sites.

57196

Model Code	RF4440d-13A

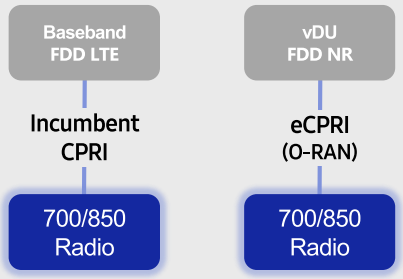
Homepage
samsungnetworks.com

Youtube
www.youtube.com/samsung5g

Points of Differentiation

Continuous Migration

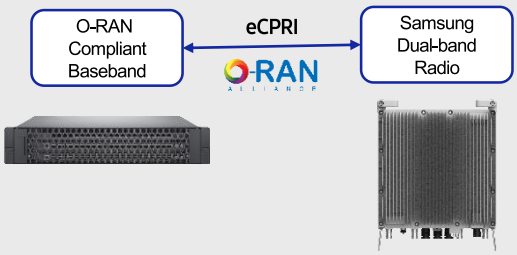
Samsung's 700/850MHz macro radio can support each incumbent CPRI interface as well as an advanced eCPRI interface. This feature provides installable options for both legacy LTE networks and added NR networks.



O-RAN Compliant

A standardized O-RAN radio can help when implementing cost-effective networks because it is capable of sending more data without compromising additional investments.

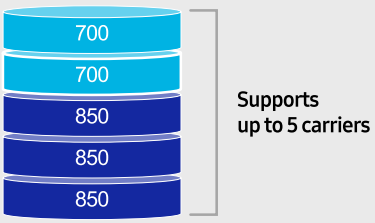
Samsung's state-of-the-art O-RAN technology will help accelerate the effort toward constructing a solid O-RAN ecosystem.



Optimum Spectrum Utilization

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

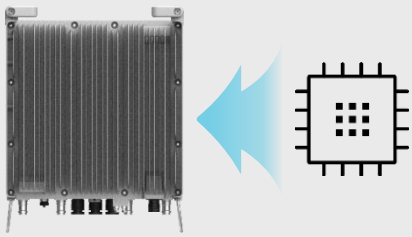
The new 700/850MHz dual-band radio can support up to 2 carriers in the B13 (700MHz) band and 3 carriers in the B5 (850MHz) band, respectively.



Secured Integrity

Access to sensitive data is allowed only to authorized software.

The Samsung radio's CPU can protect root of trust, which is credential information to verify SW integrity, and secure storage provides access control to sensitive data by using dedicated hardware (TPM).



Technical Specifications

Item	Specification
Tech	LTE / NR
Brand	B13(700MHz), B5(850MHz)
Frequency Band	DL: 746 – 756MHz, UL: 777 – 787MHz DL: 869 – 894MHz, UL: 824 – 849MHz
RF Power	(B13) 4 × 40W or 2 × 60W (B5) 4 × 40W or 2 × 60W
IBW/OBW	(B13) 10MHz / 10MHz (B5) 25MHz / 25MHz
Installation	Pole, Wall
Size/ Weight	14.96 x 14.96 x 9.05inch (33.2L) / 70.33 lb

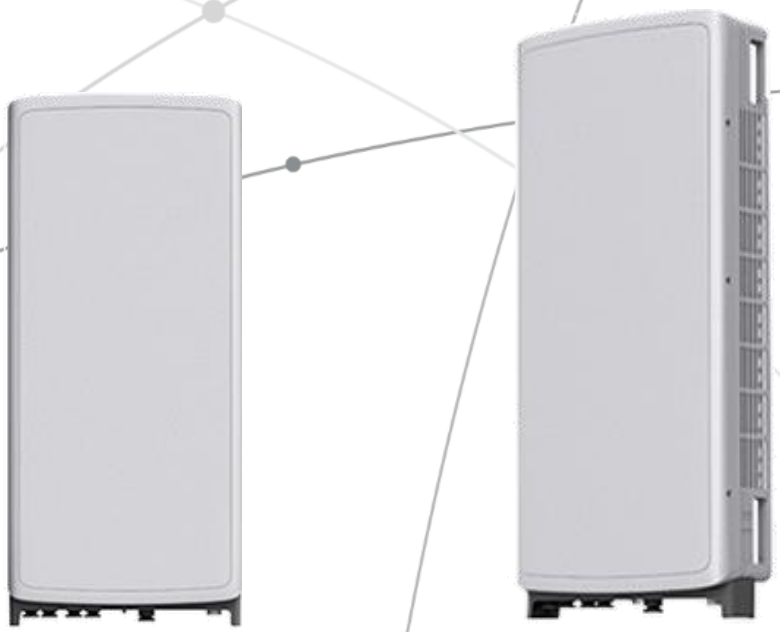
SAMSUNG

SAMSUNG C-Band 64T64R Massive MIMO Radio

for High Capacity and Wide Coverage

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

Model Code : MT6407-77A

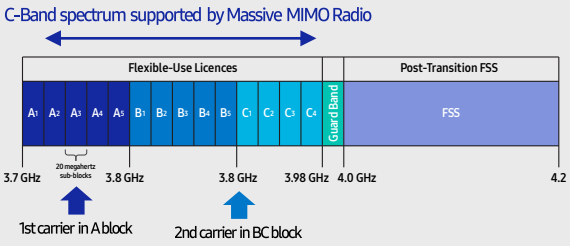


Points of Differentiation

Wide Bandwidth

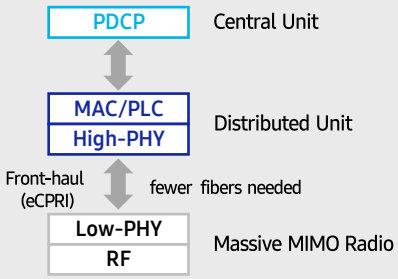
With capability to support up to 2 CC carrier configuration, Samsung C-Band massive MIMO Radio supports 200 MHz bandwidth in the C-Band spectrum.

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



Future Proof Product

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



Enhanced Performance

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

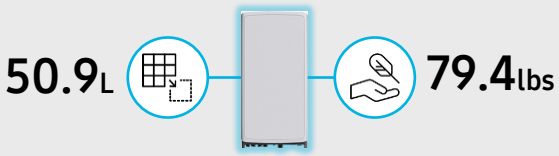
This helps operators reduce their CAPEX as they now need less products to cover the same area than before.

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

Well Matched Design

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

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



Technical Specifications

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

SAMSUNG

About Samsung Electronics Co., Ltd.

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

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

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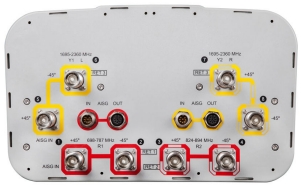
JAHH-65B-R3B



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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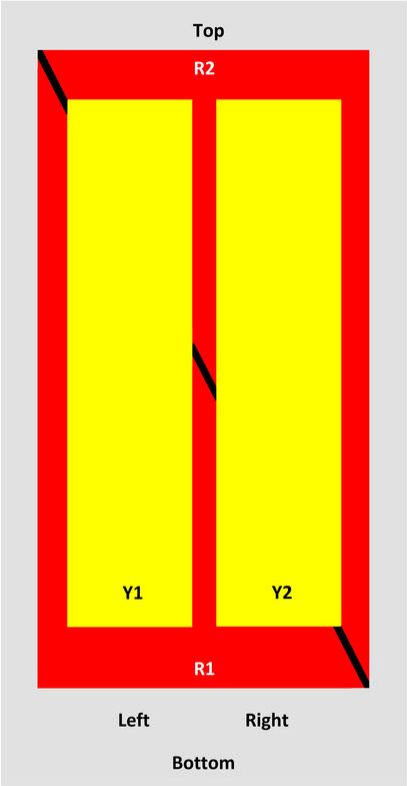
JAHH-65B-R3B

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	ANxxxxxxxxxxxxxxx1
R2	824-894	3-4	2	ANxxxxxxxxxxxxxxx2
Y1	1695-2360	5-6	3	ANxxxxxxxxxxxxxxx3
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

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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

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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

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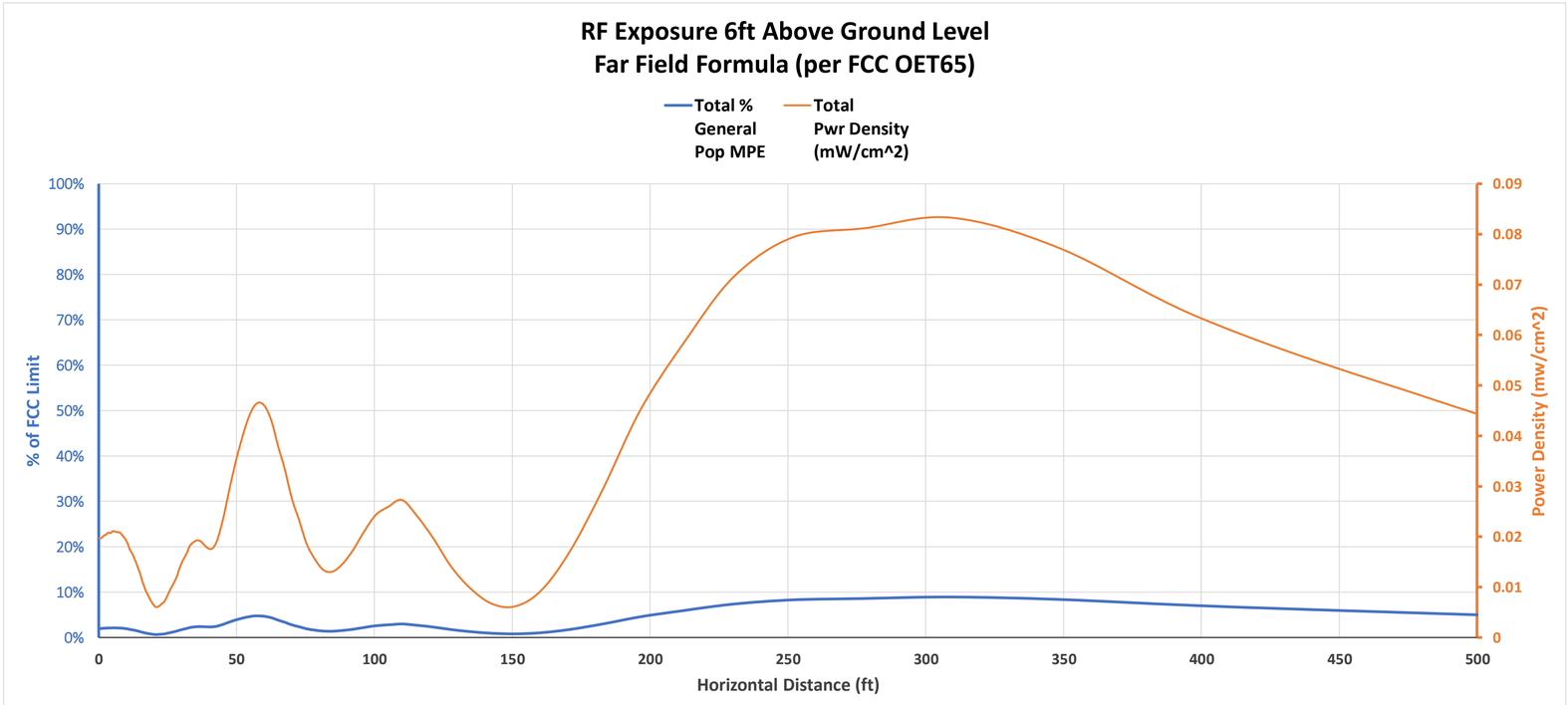
ATTACHMENT 3

Location	East Haven Cozey Beach CT					
Date	2/10/2022					
Band	C-Band	AWS	PCS	850-LTE	850-CDMA	700
Operating Frequency (MHz)	3,700	2,145	1,970	880	869	746
General Population MPE (mW/cm^2)	1	1	1	0.586666667	0.579333333	0.497333333
ERP Per Transmitter (Watts)	6,531	1,710	1,668	760	369	663
Number of Transmitters	4	4	4	4	2	4
Antenna Centerline (feet)	55	55	55	55	65	55
Total ERP (Watts)	26,124	6,842	6,672	3,039	738	2,654
Total ERP (dBm)	74	68	68	65	59	64
Maximum % of General Population Limit	8.9%					



Angle Below Horizon	Power Density (mW/cm^2)						Percent of General Population MPE									Distance	Total Pwr Density (mW/cm^2)	Total % General Pop MPE
	C-Band	AWS	PCS	850-LTE	850-CDMA	700 MHz	39GHz	28GHz	C-Band	CBRS	AWS	PCS	Cellular	CDMA	700 MHz			
90	0.019341553	5.44016E-06	1.70496E-06	0.000221367	7.62382E-06	0.000117304	0.00%	0.00%	1.93%	0.00%	0.00%	0.00%	0.04%	0.00%	0.02%	0	0.019694994	2.00%
89	0.019335662	9.82833E-06	2.96197E-07	0.000217261	7.62222E-06	0.00012	0.00%	0.00%	1.93%	0.00%	0.00%	0.00%	0.04%	0.00%	0.02%	0.855298181	0.01969067	2.00%
88	0.01976797	2.3339E-05	1.41966E-06	0.000211147	7.61741E-06	0.000114231	0.00%	0.00%	1.98%	0.00%	0.00%	0.00%	0.04%	0.00%	0.02%	1.711117705	0.020125724	2.04%
87	0.020012446	4.47117E-05	5.45157E-06	0.000200873	7.6094E-06	0.000102123	0.00%	0.00%	2.00%	0.00%	0.00%	0.00%	0.03%	0.00%	0.02%	2.567981185	0.020373214	2.06%
86	0.02043492	6.67565E-05	1.08042E-05	0.000185351	7.59819E-06	8.75377E-05	0.00%	0.00%	2.04%	0.00%	0.01%	0.00%	0.03%	0.00%	0.02%	3.426413785	0.020792967	2.10%
85	0.020378856	7.98547E-05	1.6573E-05	0.000165883	7.58378E-06	7.41313E-05	0.00%	0.00%	2.04%	0.00%	0.01%	0.00%	0.03%	0.00%	0.01%	4.286944513	0.020722882	2.09%
84	0.020783565	7.70621E-05	2.57005E-05	0.000145661	7.56617E-06	6.34661E-05	0.00%	0.00%	2.08%	0.00%	0.01%	0.00%	0.02%	0.00%	0.01%	5.150107528	0.021103021	2.13%
83	0.020701069	5.98568E-05	4.10407E-05	0.000128119	7.54536E-06	5.59519E-05	0.00%	0.00%	2.07%	0.00%	0.01%	0.00%	0.02%	0.00%	0.01%	6.016443484	0.020993583	2.11%
82	0.020606152	3.88255E-05	5.97336E-05	0.000116847	7.52135E-06	5.18584E-05	0.00%	0.00%	2.06%	0.00%	0.00%	0.01%	0.02%	0.00%	0.01%	6.8865009	0.020880938	2.10%
81	0.020498931	2.59329E-05	7.42938E-05	0.000114645	8.60444E-06	5.13515E-05	0.00%	0.00%	2.05%	0.00%	0.00%	0.01%	0.02%	0.00%	0.01%	7.760837576	0.020773758	2.09%
80	0.01991564	2.62008E-05	8.2303E-05	0.00012241	9.61519E-06	5.37052E-05	0.00%	0.00%	1.99%	0.00%	0.00%	0.01%	0.02%	0.00%	0.01%	8.640022055	0.020209874	2.04%
79	0.019336796	3.36128E-05	8.88395E-05	0.000141256	1.04954E-05	5.81041E-05	0.00%	0.00%	1.93%	0.00%	0.00%	0.01%	0.02%	0.00%	0.01%	9.524635148	0.019669103	1.98%
78	0.018335812	3.78809E-05	9.9431E-05	0.00017176	1.17178E-05	6.3551E-05	0.00%	0.00%	1.83%	0.00%	0.00%	0.01%	0.03%	0.00%	0.01%	10.41527152	0.018720153	1.89%
77	0.01698006	3.38891E-05	0.000115123	0.000214073	1.33811E-05	6.86691E-05	0.00%	0.00%	1.70%	0.00%	0.00%	0.01%	0.04%	0.00%	0.01%	11.31254137	0.017425195	1.77%
76	0.016080501	2.45708E-05	0.000137253	0.000266638	1.45861E-05	7.17995E-05	0.00%	0.00%	1.61%	0.00%	0.00%	0.01%	0.05%	0.00%	0.01%	12.21707214	0.016595349	1.69%
75	0.014872326	1.54703E-05	0.000176441	0.000325088	1.58921E-05	7.11543E-05	0.00%	0.00%	1.49%	0.00%	0.00%	0.02%	0.06%	0.00%	0.01%	13.12951043	0.015476373	1.58%
74	0.01343305	1.0053E-05	0.000250263	0.000381766	1.61516E-05	6.57653E-05	0.00%	0.00%	1.34%	0.00%	0.00%	0.03%	0.07%	0.00%	0.01%	14.0505239	0.014157048	1.45%
73	0.011849062	9.97251E-06	0.000371454	0.000428851	1.79903E-05	5.56552E-05	0.00%	0.00%	1.18%	0.00%	0.00%	0.04%	0.07%	0.00%	0.01%	14.98080339	0.012732986	1.31%
72	0.009974796	1.59965E-05	0.000535952	0.000459755	1.86916E-05	4.38254E-05	0.00%	0.00%	1.00%	0.00%	0.00%	0.05%	0.08%	0.00%	0.01%	15.92106512	0.011049016	1.14%
71	0.008295288	2.51161E-05	0.000731228	0.000469304	1.94104E-05	3.56988E-05	0.00%	0.00%	0.83%	0.00%	0.00%	0.07%	0.08%	0.00%	0.01%	16.87205305	0.009576046	1.00%

70	0.006973696	2.92808E-05	0.000941206	0.000459288	2.01465E-05	3.47764E-05	0.00%	0.00%	0.70%	0.00%	0.00%	0.09%	0.08%	0.00%	0.01%	17.83454148	0.008458393	0.88%
69	0.005725255	2.26942E-05	0.001153497	0.00043593	2.08995E-05	4.57738E-05	0.00%	0.00%	0.57%	0.00%	0.00%	0.12%	0.07%	0.00%	0.01%	18.80933772	0.00740405	0.78%
68	0.004697027	1.01378E-05	0.001342903	0.000405925	2.06936E-05	8.42646E-05	0.00%	0.00%	0.47%	0.00%	0.00%	0.13%	0.07%	0.00%	0.02%	19.79728507	0.006560951	0.69%
67	0.004004456	3.71248E-06	0.001468132	0.000376848	2.00124E-05	0.000163819	0.00%	0.00%	0.40%	0.00%	0.00%	0.15%	0.06%	0.00%	0.03%	20.79926599	0.00603698	0.65%
66	0.004036005	8.99647E-06	0.001500283	0.000349602	1.89024E-05	0.000278467	0.00%	0.00%	0.40%	0.00%	0.00%	0.15%	0.06%	0.00%	0.06%	21.81620558	0.006192256	0.67%
65	0.004457001	2.09973E-05	0.001413398	0.00032409	1.66526E-05	0.000428415	0.00%	0.00%	0.45%	0.00%	0.00%	0.14%	0.06%	0.00%	0.09%	22.84907525	0.006660554	0.73%
64	0.005032824	3.9078E-05	0.001199591	0.000300216	1.46619E-05	0.000618919	0.00%	0.00%	0.50%	0.00%	0.00%	0.12%	0.05%	0.00%	0.12%	23.89889684	0.00720529	0.81%
63	0.00621231	8.3248E-05	0.000886084	0.000274711	1.23206E-05	0.000851285	0.00%	0.00%	0.62%	0.00%	0.01%	0.09%	0.05%	0.00%	0.17%	24.96674703	0.008319958	0.94%
62	0.007505182	0.000189009	0.000521895	0.000244897	9.65616E-06	0.001130273	0.00%	0.00%	0.75%	0.00%	0.02%	0.05%	0.04%	0.00%	0.23%	26.05376215	0.009600911	1.09%
61	0.008455317	0.000379534	0.000199228	0.000210258	6.89755E-06	0.001458652	0.00%	0.00%	0.85%	0.00%	0.04%	0.02%	0.04%	0.00%	0.29%	27.16114352	0.010709887	1.23%
60	0.009322934	0.000645169	2.88253E-05	0.00017107	6.19866E-06	0.001829678	0.00%	0.00%	0.93%	0.00%	0.06%	0.00%	0.03%	0.00%	0.37%	28.29016319	0.012003875	1.40%
59	0.010486306	0.000954428	0.000116371	0.000130691	6.10384E-06	0.002241014	0.00%	0.00%	1.05%	0.00%	0.10%	0.01%	0.02%	0.00%	0.45%	29.44217033	0.013934913	1.63%
58	0.010748115	0.001274832	0.000534016	0.00010022	6.00623E-06	0.002673956	0.00%	0.00%	1.07%	0.00%	0.13%	0.05%	0.02%	0.00%	0.54%	30.61859824	0.015337145	1.81%
57	0.010487553	0.001566011	0.001305857	0.000103824	5.90588E-06	0.003108108	0.00%	0.00%	1.05%	0.00%	0.16%	0.13%	0.02%	0.00%	0.62%	31.82097207	0.016577258	1.98%
56	0.010248016	0.001777298	0.002398067	0.000174688	1.10571E-05	0.00351125	0.00%	0.00%	1.02%	0.00%	0.18%	0.24%	0.03%	0.00%	0.71%	33.05091733	0.018120376	2.18%
55	0.009124738	0.001816941	0.003710581	0.000337165	2.21646E-05	0.00385516	0.00%	0.00%	0.91%	0.00%	0.18%	0.37%	0.06%	0.00%	0.78%	34.31016937	0.01886675	2.30%
54	0.007805606	0.001594143	0.00508895	0.000605381	3.52638E-05	0.004123145	0.00%	0.00%	0.78%	0.00%	0.16%	0.51%	0.10%	0.01%	0.83%	35.60058387	0.019252489	2.39%
53	0.006326865	0.001109965	0.006373972	0.000979064	5.47819E-05	0.004265899	0.00%	0.00%	0.63%	0.00%	0.11%	0.64%	0.17%	0.01%	0.86%	36.92414846	0.019110547	2.42%
52	0.00462973	0.000518413	0.007426381	0.001442707	7.75481E-05	0.004279348	0.00%	0.00%	0.46%	0.00%	0.05%	0.74%	0.25%	0.01%	0.86%	38.2829957	0.018374127	2.38%
51	0.003115276	0.000152974	0.008217091	0.001959381	0.000102357	0.004162157	0.00%	0.00%	0.31%	0.00%	0.02%	0.82%	0.33%	0.02%	0.84%	39.67941763	0.017709237	2.34%
50	0.001823893	0.000412211	0.008855658	0.00248669	0.000125968	0.003906801	0.00%	0.00%	0.18%	0.00%	0.04%	0.89%	0.42%	0.02%	0.79%	41.11588193	0.017611221	2.34%
49	0.001116995	0.001570983	0.009424811	0.002969433	0.000147905	0.003538939	0.00%	0.00%	0.11%	0.00%	0.16%	0.94%	0.51%	0.03%	0.71%	42.59505015	0.018769066	2.45%
48	0.001010737	0.003603784	0.010089272	0.003351666	0.00016954	0.003086457	0.00%	0.00%	0.10%	0.00%	0.36%	1.01%	0.57%	0.03%	0.62%	44.11979817	0.021311457	2.69%
47	0.001516164	0.00616406	0.010888495	0.003584006	0.00018118	0.002579694	0.00%	0.00%	0.15%	0.00%	0.62%	1.09%	0.61%	0.03%	0.52%	45.69323922	0.024913598	3.02%
46	0.002638515	0.008679208	0.011900936	0.00363063	0.000189006	0.00205202	0.00%	0.00%	0.26%	0.00%	0.87%	1.19%	0.62%	0.03%	0.41%	47.31874997	0.029090313	3.39%
45	0.004231179	0.010655698	0.01314265	0.003484045	0.000188084	0.001535618	0.00%	0.00%	0.42%	0.00%	1.07%	1.31%	0.59%	0.03%	0.31%	49	0.033237274	3.74%
44	0.006281074	0.011834623	0.014529661	0.003145258	0.000178532	0.001066242	0.00%	0.00%	0.63%	0.00%	1.18%	1.45%	0.54%	0.03%	0.21%	50.74098538	0.03703539	4.05%
43	0.008751007	0.01227944	0.015969068	0.002658768	0.00015796	0.000704498	0.00%	0.00%	0.88%	0.00%	1.23%	1.60%	0.45%	0.03%	0.14%	52.54606679	0.040520741	4.32%
42	0.011601473	0.012320652	0.017011191	0.002075561	0.000133297	0.000521597	0.00%	0.00%	1.16%	0.00%	1.23%	1.70%	0.35%	0.02%	0.10%	54.42001323	0.043663771	4.58%
41	0.014367367	0.012288468	0.017163219	0.001475705	0.000104836	0.000453105	0.00%	0.00%	1.44%	0.00%	1.23%	1.72%	0.25%	0.02%	0.09%	56.36805195	0.0458527	4.74%
40	0.017006946	0.012466567	0.015734318	0.000916745	7.68403E-05	0.000385876	0.00%	0.00%	1.70%	0.00%	1.25%	1.57%	0.16%	0.01%	0.08%	58.39592604	0.046587294	4.77%
39	0.019374699	0.01280429	0.012631547	0.000450669	5.37068E-05	0.000331175	0.00%	0.00%	1.94%	0.00%	1.28%	1.26%	0.08%	0.01%	0.07%	60.50996067	0.045646085	4.63%
38	0.020997873	0.01307061	0.008286991	0.00021767	4.10959E-05	0.000285757	0.00%	0.00%	2.10%	0.00%	1.31%	0.83%	0.04%	0.01%	0.06%	62.71713998	0.042899997	4.34%
37	0.021009581	0.012721489	0.003932231	0.000162945	4.13869E-05	0.000222454	0.00%	0.00%	2.10%	0.00%	1.27%	0.39%	0.03%	0.01%	0.04%	65.02519626	0.038090086	3.85%
36	0.021131422	0.011195649	0.000916538	0.000106304	5.36028E-05	0.000121829	0.00%	0.00%	2.11%	0.00%	1.12%	0.09%	0.02%	0.01%	0.02%	67.4427141	0.033525344	3.38%
35	0.0190842	0.008332868	2.99844E-05	0.000105511	7.59856E-05	0.000108517	0.00%	0.00%	1.91%	0.00%	0.83%	0.00%	0.02%	0.01%	0.02%	69.97925233	0.027737065	2.80%
34	0.017203415	0.0046745	0.00098364	0.000141006	0.000110015	0.000256706	0.00%	0.00%	1.72%	0.00%	0.47%	0.10%	0.02%	0.02%	0.05%	72.64548746	0.023369283	2.38%
33	0.013858266	0.001523454	0.002540566	0.000169563	0.00014168	0.000333834	0.00%	0.00%	1.39%	0.00%	0.15%	0.25%	0.03%	0.02%	0.07%	75.45338323	0.018567363	1.91%
32	0.011426435	6.99892E-05	0.003319956	0.000164639	0.000173878	0.000388806	0.00%	0.00%	1.14%	0.00%	0.01%	0.33%	0.03%	0.03%	0.08%	78.41639192	0.015543704	1.62%
31	0.009271927	0.00061276	0.002737736	0.000126413	0.000189762	0.000436508	0.00%	0.00%	0.93%	0.00%	0.06%	0.27%	0.02%	0.03%	0.09%	81.54969464	0.013375107	1.40%
30	0.008738389	0.002231269	0.001341692	8.31867E-05	0.000197307	0.000485572	0.00%	0.00%	0.87%	0.00%	0.22%	0.13%	0.01%	0.03%	0.10%	84.87048957	0.013077415	1.38%
29	0.010037691	0.003457438	0.000249376	8.61502E-05	0.000186629	0.00054759	0.00%	0.00%	1.00%	0.00%	0.35%	0.02%	0.01%	0.03%	0.11%	88.39834001	0.014564875	1.53%
28	0.012668055	0.00341846	0.000185751	0.000177146	0.00015691	0.00063611	0.00%	0.00%	1.27%	0.00%	0.34%	0.02%	0.03%	0.03%	0.13%	92.1555968	0.017242431	1.81%
27	0.016352527	0.002419387	0.000907416	0.000356621	0.000117239	0.000771626	0.00%	0.00%	1.64%	0.00%	0.24%	0.09%	0.06%	0.02%	0.16%	96.16791477	0.020924817	2.20%
26	0.019641528	0.001453101	0.001521938	0.00062201	7.78328E-05	0.000968272	0.00%	0.00%	1.96%	0.00%	0.15%	0.15%	0.11%	0.01%	0.19%	100.4648882	0.024284682	2.58%
25	0.021202539	0.001144217	0.001363357	0.000986303	3.9978E-05	0.001213975	0.00%	0.00%	2.12%	0.00%	0.11%	0.14%	0.17%	0.01%	0.24%	105.0808391	0.025950369	2.79%
24	0.022496655	0.001230945	0.000627104	0.001447906	1.38337E-05	0.001455258	0.00%	0.00%	2.25%	0.00%	0.12%	0.06%	0.25%	0.00%	0.29%	110.0558019	0.027271701	2.98%
23	0.019375253	0.001062595	0.000131665	0.001944777	3.61739E-06	0.001622069	0.00%	0.00%	1.94%	0.00%	0.11%	0.01%	0.33%	0.00%	0.33%	115.4367659	0.024139976	2.72%
22	0.014778903	0.000499761	0.000453799	0.002383771	6.66887E-06	0.001661362	0.00%	0.00%	1.48%	0.00%	0.05%	0.05%	0.41%	0.00%	0.33%	121.2792558	0.019784265	2.31%
21	0.008533942	0.000148686	0.001319384	0.00266546	1.93978E-05	0.0015416	0.00%	0.00%	0.85%	0.00%	0.01%	0.13%	0.45%	0.00%	0.31%	127.6493642	0.014228469	1.77%
20	0.003377495	0.000602165	0.001857019	0.002711547	3.30611E-05	0.001271794	0.00%	0.00%	0.34%	0.00%	0.06%	0.19%	0.46%	0.01%	0.26%	134.6263936	0.00985308	1.31%
19	0.000283645	0.001595496	0.001485925	0.002479691	3.96772E-05	0.000898664	0.00%	0.00%	0.03%	0.00%	0.16%	0.15%	0.42%	0.01%	0.18%	142.306333	0.006783098	0.95%
18	0.000898372	0.002165592	0.000555492	0.002000223	3.59074E-05	0.000487841	0.00%	0.00%	0.09%	0.00%	0.22%	0.06%	0.34%	0.01%	0.10%	150.8064933	0.006143427	0.81%
17	0.005961589	0.00169232	3.91366E-06	0.001370833	2.28544E-05	0.000149343	0.00%	0.00%	0.60%	0.00%	0.17%	0.00%	0.23%	0.00%	0.03%	160.2717783	0.009200853	1.03%
16	0.015176356	0.000635752	0.000414371	0.00073247	7.57821E-06	5.75426E-05	0.00%	0.00%	1.52%	0.00%	0.06%	0.04%	0.12%	0.00%	0.01%	170.8833077	0.01702407	1.76%
15	0.027572987	2.69528E-05	0.00138901	0.000251829	2.22118E-06	0.000172308	0.00%	0.00%	2.76%	0.00%	0.00%	0.14%	0.04%	0.00%	0.03%	182.8704896	0.029415308	2.98%
14	0.042348858	0.000297826	0.001954624	6.98979E-05	1.90349E-05	0.000444287	0.00%	0.00%	4.23%	0.00%	0.03%	0.20%	0.01%	0.00%	0.09%	196.5282657	0.045134528	4.56%
13	0.054785726	0.000846814	0.001562748	0.000247337	7.04508E-05	0.000896374	0.00%	0.00%	5.48%	0.00%	0.08%	0.16%	0.04%	0.01%	0.18%	212.2423178	0.05840945	5.95%
12	0.067647098	0.000865705	0.000625851	0.000797759	0.00016251	0.001520797	0.00%	0.00%	6.76%	0.00%	0.09%	0.06%	0.14%	0.03%	0.31%	230.5268754	0.071619719	7.38%
11	0.074935747	0.000346585	5.33225E-05	0.001608094	0.000273922	0.0022157	0.00%	0.00%	7.49%	0.00%	0.03%	0.01%	0.27%	0.05%	0.45%	252.0831468	0.079433371	8.30%
10	0.075133187	2.70366E-06	0.000268567	0.002508732	0.000404552	0.002848746	0.00%	0.00%	7.51%	0.00%	0.00%	0.03%	0.43%	0.07%	0.57%	277.8928092	0.081166488	8.61%
9	0.075016403	0.000268706	0.000824855	0.003294418	0.00053382	0.003311145	0.00%	0.00%	7.50%	0.00%	0.03%	0.08%	0.56%	0.09%	0.67%	309.3738242	0.083249347	8.93%
8	0.067546361	0.000737433	0.000981349	0.003786382	0.000626365	0.003510944	0.00%	0.00%	6.75%	0.00%	0.07%	0.10%	0.65%	0.11%	0.71%	348.6531164	0.077188835	8.39%
7	0.054235081	0.000755789	0.000559116	0.003880634	0.000664327	0.003412733	0.00%	0.00%	5.42%	0.00%	0.08%	0.06%	0.66%	0.11%	0.69%	399.072975	0.06350768	7.02%
6	0.042752398	0.000322167	8.24484E-05	0.003552899	0.000645393	0.003039362	0.00%	0.00%	4.28%	0.00%	0.03%	0.01%	0.61%	0.11%	0.61%	466.2038583	0.050394668	5.64%
5	0.029382136	5.06062E-05	0.000120034	0.002902056	0.000552834	0.002448529	0.00%	0.00%	2.94%	0.00%	0.01%	0.01%	0.49%	0.10%	0.49%	560.0725628	0.035456197	4.04%
4	0.017974648	0.000307455	0.000616427	0.00207149	0.000416585	0.001743743	0.00%	0.00%	1.80%	0.00%	0.03%	0.06%	0.35%	0.07%	0.35%	700.7326466	0.023130348	2.67%
3	0.009377599	0.000716493	0.000982456	0.001235134	0.000269495	0.001054177	0.00%	0.00%	0.94%	0.00%	0.07%	0.10%	0.21%	0.05%	0.21%	934.9756977	0.013635355	1.58%
2	0.003541031	0.000698635	0.000796804	0.000554309	0.000128495	0.000484118	0.00%	0.00%	0.35%	0.00%	0.07%	0.08%	0.09%	0.02%	0.10%	1403.176411	0.006203391	0.72%
1	0.000719784	0.000266884	0.000275058	0.000133606	3.36617E-05	0.000120788	0.00%	0.00%	0.07%	0.00%	0.03%	0.03%	0.02%	0.01%	0.02%	2807.20812	0.00154978	0.18%

degree below horizon	AT1K02 (39GHz)	AT1K01 (28GHz)	MT6407-77A (3,730MHz)	XXDWMM-12.5-65 (3,550MHz)	AWS (2,155MHz)	PCS (1,962MHz)	850-LTE (880MHz)	850-CDMA (869MHz)	700-LTE (746MHz)
0	0.08	0.08	3.28	1.8	0	0	0.51	0	0.18
1	0.39	0.39	2.19	1.3	0.68	0.44	0.16	0	0.01
2	0.3	0.3	1.29	0.8	2.52	1.84	0	0.2	0
3	0	0	0.58	0.5	5.93	4.45	0.04	0.5	0.14
4	0.31	0.31	0.25	0.2	12.1	8.97	0.29	1.1	0.45
5	0.42	0.42	0.05	0.1	21.87	18.01	0.76	1.8	0.91
6	0.13	0.13	0	0	15.41	21.22	1.46	2.7	1.55
7	0.44	0.44	0.3	0	13.04	14.24	2.41	3.9	2.38
8	0.36	0.36	0.5	0.1	14.3	12.95	3.67	5.3	3.41
9	0.09	0.09	1.06	0.2	19.7	14.72	5.29	7	4.68
10	0.4	0.4	1.96	0.3	40.58	20.5	7.38	9.1	6.24
11	0.52	0.52	2.79	0.7	20.32	28.34	10.13	11.6	8.15
12	0.26	0.26	3.98	1	17.09	18.39	13.92	14.6	10.53
13	0.57	0.57	5.58	1.5	17.87	15.1	19.69	18.9	13.51
14	0.51	0.51	7.33	2	23.04	14.76	25.81	25.2	17.19
15	0.26	0.26	9.78	2.6	34.06	16.83	20.83	35.1	21.89
16	0.58	0.58	12.92	3.3	20.88	22.63	16.74	30.3	27.2
17	1.07	1.07	17.49	4.2	17.14	43.39	14.53	26	23.57
18	0.55	0.55	26.19	5.3	16.55	22.35	13.37	24.5	18.91
19	0.58	0.58	31.65	6.7	18.33	18.53	12.89	24.5	16.71
20	1.08	1.08	21.32	8.2	22.99	17.99	12.93	25.7	15.63
21	0.59	0.59	17.7	9.9	29.47	19.88	13.41	28.4	15.2
22	0.65	0.65	15.7	11.8	24.59	24.9	14.28	33.4	15.26
23	1.22	1.22	14.89	14.5	21.68	30.64	15.53	36.4	15.73
24	0.99	0.99	14.59	18.2	21.39	24.21	17.16	30.9	16.55
25	0.8	0.8	15.18	23.8	22.04	21.17	19.16	26.6	17.67
26	1.11	1.11	15.83	33.9	21.32	21.01	21.48	24	18.97
27	1.12	1.12	16.93	27.7	19.41	23.56	24.2	22.5	20.26
28	0.95	0.95	18.33	21.5	18.2	30.74	27.53	21.5	21.39

29	1.25	1.25	19.62	18	18.43	29.74	30.94	21	22.32
30	2.03	2.03	20.49	15.7	20.6	22.7	31.36	21	23.11
31	3.32	3.32	20.49	14.1	26.47	19.86	29.8	21.4	23.83
32	5.21	5.21	19.83	13	36.14	19.27	28.9	22	24.58
33	7.88	7.88	19.23	12.3	23	20.67	29.01	23.1	25.48
34	11.74	11.74	18.52	12.1	18.36	25.02	30.04	24.4	26.85
35	16.19	16.19	18.29	11.9	16.07	40.4	31.52	26.2	30.81
36	14.94	14.94	18.06	11.7	15	25.76	31.7	27.9	30.52
37	15.07	15.07	18.29	11.7	14.65	19.64	30.05	29.2	28.11
38	16.33	16.33	18.49	11.8	14.73	16.6	28.99	29.4	27.22
39	15.38	15.38	19.03	12	15.01	14.96	26.02	28.4	26.77
40	15.03	15.03	19.78	12.5	15.31	14.19	23.12	27	26.29
41	15.75	15.75	20.69	13.1	15.55	13.99	21.23	25.8	25.77
42	17.49	17.49	21.79	13.7	15.71	14.2	19.92	24.9	25.33
43	20.55	20.55	23.18	14.2	15.89	14.64	19.01	24.3	24.19
44	21.87	21.87	24.78	14.5	16.21	15.21	18.44	23.9	22.55
45	20.56	20.56	26.65	15.1	16.82	15.8	18.15	23.8	21.12
46	20.35	20.35	28.85	15.9	17.86	16.38	18.12	23.9	20.01
47	21.02	21.02	31.4	16.8	19.49	16.91	18.32	24.2	19.16
48	21.62	21.62	33.3	17.8	21.96	17.38	18.75	24.6	18.52
49	20.49	20.49	33	18.7	25.7	17.81	19.41	25.3	18.06
50	20.28	20.28	31	19.7	31.64	18.21	20.31	26.1	17.76
51	20.83	20.83	28.8	20.7	36.07	18.66	21.47	27.1	17.61
52	22.1	22.1	27.2	21.6	30.89	19.22	22.92	28.4	17.61
53	22.84	22.84	25.96	22.4	27.7	20	24.72	30	17.74
54	23.96	23.96	25.16	22.9	26.24	21.09	26.92	32	18
55	25.61	25.61	24.59	23.3	25.78	22.57	29.57	34.1	18.4
56	24.75	24.75	24.19	23.4	25.98	24.57	32.53	37.2	18.91
57	24.54	24.54	24.19	23.3	26.63	27.31	34.89	40	19.54
58	24.84	24.84	24.18	22.7	27.62	31.29	35.14	40	20.29
59	25.6	25.6	24.38	21.9	28.97	38	34.08	40	21.15
60	25.03	25.03	24.98	21.2	30.76	44.15	33	40	22.12

61	24.18	24.18	25.49	20.7	33.15	35.84	32.19	39.6	23.19
62	23.83	23.83	26.09	20.5	36.26	31.74	31.61	38.2	24.38
63	23.88	23.88	26.99	20.3	39.9	29.52	31.19	37.2	25.69
64	24.25	24.25	27.98	20.3	43.26	28.28	30.88	36.5	27.15
65	24.7	24.7	28.58	20.5	46.03	27.64	30.62	36	28.82
66	24.47	24.47	29.08	20.9	49.78	27.45	30.36	35.5	30.76
67	24.47	24.47	29.18	21.3	53.69	27.61	30.1	35.3	33.13
68	24.68	24.68	28.55	21.7	49.39	28.06	29.84	35.2	36.08
69	25.07	25.07	27.75	21.8	45.95	28.78	29.59	35.2	38.79
70	25.64	25.64	26.95	21.6	44.9	29.72	29.42	35.4	40.04
71	26.36	26.36	26.25	21.2	45.62	30.87	29.38	35.6	39.98
72	27.24	27.24	25.5	21	47.63	32.27	29.52	35.8	39.14
73	28.26	28.26	24.8	21	49.73	33.91	29.87	36	38.15
74	28.68	28.68	24.3	21.2	49.74	35.67	30.42	36.5	37.47
75	28.98	28.98	23.9	21.6	47.91	37.23	31.16	36.6	37.17
76	29.37	29.37	23.6	22.1	45.94	38.36	32.06	37	37.17
77	29.83	29.83	23.4	22.8	44.58	39.16	33.05	37.4	37.4
78	30.36	30.36	23.1	23.5	44.13	39.83	34.04	38	37.77
79	30.94	30.94	22.9	24.5	44.68	40.35	34.92	38.5	38.19
80	30.89	30.89	22.8	25.6	45.79	40.71	35.57	38.9	38.56
81	30.44	30.44	22.7	26.8	45.86	41.18	35.88	39.4	38.78
82	30.13	30.13	22.7	28.2	44.13	42.15	35.82	40	38.76
83	29.93	29.93	22.7	29.7	42.27	43.8	35.44	40	38.45
84	29.81	29.81	22.7	31.1	41.19	45.85	34.9	40	37.92
85	29.76	29.76	22.8	31.9	41.05	47.77	34.35	40	37.26
86	29.78	29.78	22.8	32.5	41.84	49.64	33.88	40	36.55
87	29.85	29.85	22.9	32.9	43.59	52.62	33.54	40	35.89
88	29.97	29.97	22.96	33.3	46.42	58.47	33.33	40	35.41
89	30.13	30.13	23.06	33.6	50.18	65.28	33.21	40	35.2
90	30.33	30.33	23.06	34.4	52.75	57.68	33.13	40	35.3

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 70 ft Valmont Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT46147-A

Customer Site Name: New Haven Tweed

Carrier Name: Verizon (App#: 159616, V1)

Carrier Site ID / Name: PSLC 469123 / East_Haven_Cosey_Beach_CT

Site Location: 60 Commerce Street

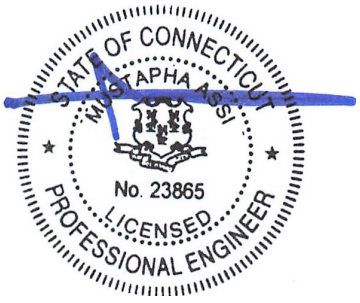
East Haven, Connecticut

NEW HAVEN County

Latitude: 41.251233

Longitude: -72.882094

Exp.10/31/2021



10/01/2021

Analysis Result:

Max Structural Usage: 93.8% [Pass]

Max Foundation Usage: 53.0% [Pass]

Additional Usage Caused by Mount Modification : +3.87%

Report Prepared By : Linfeng Chen

Tower Engineering Solutions
Phone (972) 483-0607, Fax (972) 975-9615
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Max Foundation Usage: 53.0% [Pass]

Additional Usage Caused by Mount Modification : +3.87%

Report Prepared By : Linfeng Chen

Introduction

The purpose of this report is to summarize the analysis results on the 70 ft Valmont 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	Valmont,Order No. 18927-06, Dated 02/09/06
Foundation Drawing	Valmont,Order No. 18927-06, Dated 02/09/06
Geotechnical Report	JGI Eastern, Inc. (Project No. 05557G) Geotechnical Evaluation dated September 27, 2005
Modification Drawings	N/A
Mount Analysis	Maser Consulting Connecticut, Post-mod MA, Project #: 20777634A, Dated 04/01/21 Maser Consulting, Mount Modification drawing, Project #: 20777634A Dated 03/31/21

Analysis Criteria

The rigorous analysis was performed in accordance with the requirements and stipulations of the TIA-222-G-2**.** In accordance with this standard, the structure was analyzed using **TESPoles,** a proprietary analysis software. The program considers the structure as an elastic 3-D model with second-order effects and temperature effects incorporated in the analysis. The analysis was performed using multiple wind directions.

Wind Speed Used in the Analysis:	Ultimate Design Wind Speed V_{ult} = 130.0 mph (3-Sec. Gust)/ Nominal Design Wind Speed V_{asd} = 101.0 mph (3-Sec. Gust)
Wind Speed with Ice:	50 mph (3-Sec. Gust) with 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:	C
Structure Class:	II
Topographic Category:	1
Crest Height:	0 ft
Seismic Parameters:	S_S = 0.182, S_1 = 0.062

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
1	67.0	3	RFS APX16DWV-16DWVS-E-A20 - Panel	Low Profile Platform w/ Handrail SitePro1 RMQP-4096-HK	(3) 1.99" Hybrid - 6x24	T-Mobile Sprint
2		3	RFS APXVAALL24_43-U-NA20 - Panel			
3		3	Ericsson AIR6449 B41 - Panel			
4		4	RFS ACU-A20-N			
5		3	Ericsson 4449 B71 + B85			
6		3	Ericsson 4424 B25			
7		3	Ericsson 4415 B66A			
8		3	ALU 800 MHz Filter			
-	55.0	6	RFS FD9R6004/2C-3L	(3) T-Arm	(12) 1 5/8" (1) 1 5/8" Hybrid	Verizon
-		3	ALU RRH-2X40AWS			
-		1	RFS DB-T1-6Z-8AB-0Z			
-		3	Antel BXA 70063/6CF - Panel			
-		3	Antel BXA-80063-6BF w/ Mount Pipe - Panel			
-		3	Antel BXA 171063/8BF - Panel			
-		3	Antel BXA 185063-8CF - Panel			

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
9	55.0	3	Antel BXA-80063-6BF w/ Mount Pipe - Panel	(3) Modified T-Arm (VZWSMART-PLK7 & SQCX4-K & VZWSMART-MSK2)	(12) 1 5/8" (2) 1 5/8" Hybrid	Verizon
10		1	RFS DB-T1-6Z-8AB-0Z			
11		6	Commscope JAHH-65B-R3B - Panel			
12		3	Samsung MT6407-77A - Panel			
13		3	Commscope CBC78T-DS-2X/W14F05P50			
14		3	Samsung LTE AWS/PCS RFV01U-D1A			
15		3	Samsung LTE 700/850 MHz RFV01U-D2A			
16		1	RFS DB-B1-6C-12AB-0Z			

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:	**93.8%**	**53.6%**	**37.3%**
Pass/Fail	**Pass**	**Pass**	**Pass**

Foundations

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Analysis Reactions	863.2	15.7	25.4

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

Operational Condition (Rigidity):

Operational characteristics of the tower are found to be within the limits prescribed by TIA-222 for the installed antennas. The maximum twist/sway at the elevation of the proposed equipment is 0.9339 degrees under the operational wind speed as specified in the Analysis Criteria.

Conclusions

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

Standard Conditions

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

2. 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.

3. 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 **TES**. 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, **TES** should be notified in writing and the applicable minimum values provided by the client.

4. The configuration of the existing mounts, antennas, coax and other appurtenances were supplied by the customer for the current structural analysis. **TES** 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, **TES** should be notified immediately to evaluate the effect of the discrepancy on the analysis results.

5. 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.

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

Usage Diagram - Max Ratio 93.77% at 0.0ft

Structure:	CT46147-A-SBA	**Code:**	EIA/TIA-222-G	9/30/2021
Site Name:	New Haven Tweed	**Exposure:**	C	
Height:	70.00 (ft)	**Gh:**	1.1	
Base Elev:	0.000 (ft)			Page: 1

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Dead Load Factor:	1.20
Wind Load Factor:	1.60

Load Case : 1.2D + 1.6W 101 mph Wind

Iterations: 19

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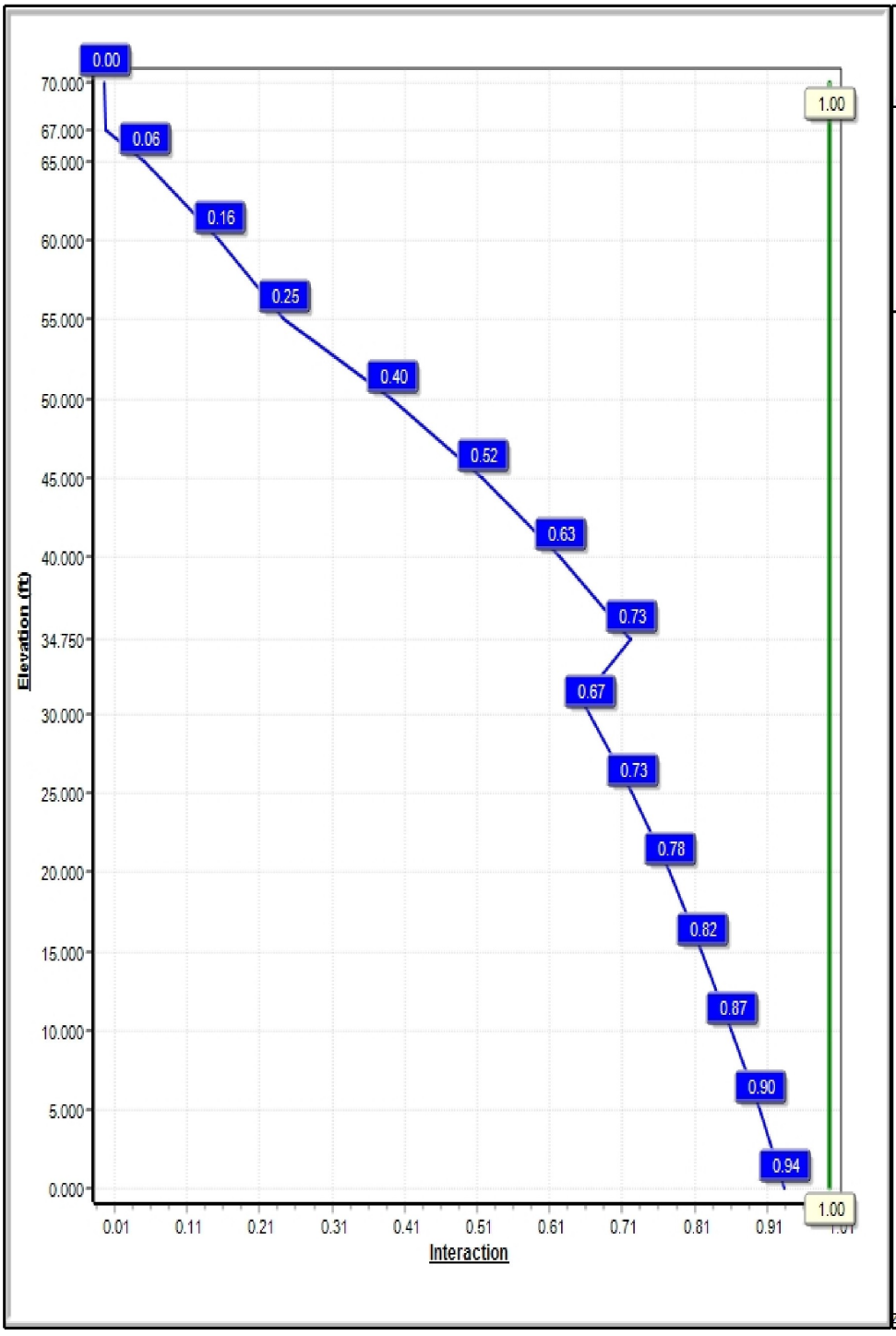
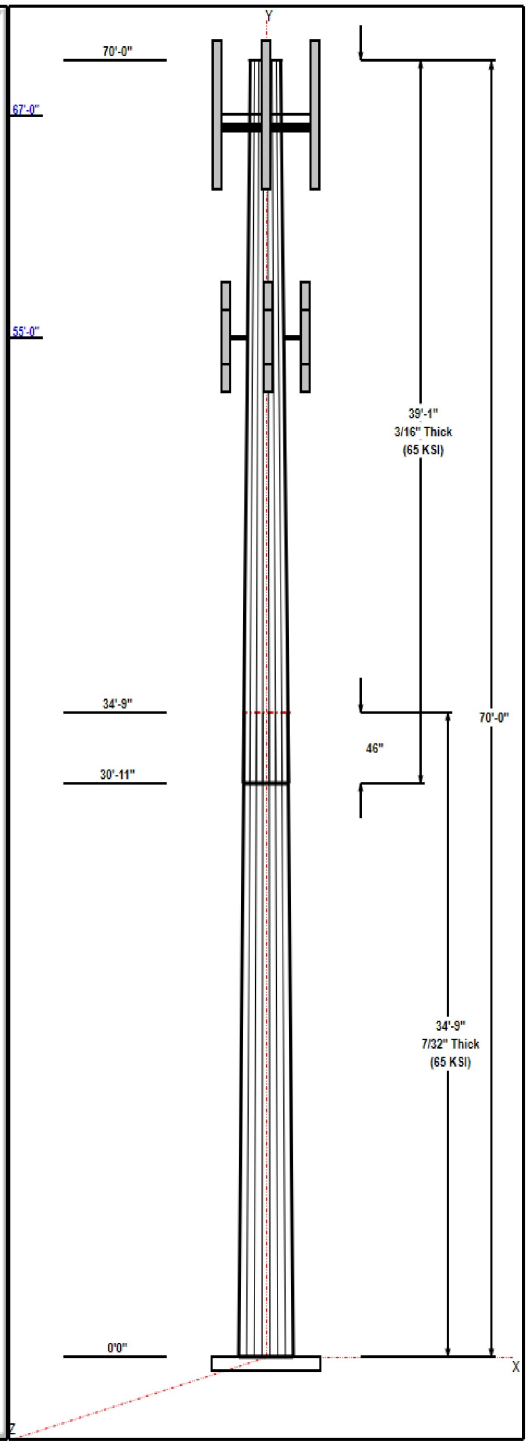




Structure: CT46147-A-SBA

Type: Tapered
Site Name: New Haven Tweed
Height: 70.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 16 Sided
Taper: 0.22994

9/30/2021

Tower Engineering Solutions

Shaft Properties

Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	34.75	24.01	32.00	0.219		0.22994	65
2	39.08	16.28	25.27	0.188	Slip	0.22994	65

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
67.00	67.00	1	SitePro1 RMQP-4096-HK	T-Mobile Sprint
67.00	67.00	4	RFS ACU-A20-N RET	T-Mobile Sprint
67.00	67.00	3	Ericsson 4449 B71 + B85	T-Mobile Sprint
67.00	67.00	3	Ericsson 4424 B25	T-Mobile Sprint
67.00	67.00	3	Ericsson 4415 B66A	T-Mobile Sprint
67.00	67.00	3	ALU 800 MHz Filter	T-Mobile Sprint
67.00	67.00	3	RFS	T-Mobile Sprint
67.00	67.00	3	RFS	T-Mobile Sprint
67.00	67.00	3	Ericsson AIR6449 B41	T-Mobile Sprint
55.00	55.00	1	MOD	Verizon
55.00	55.00	3	Antel BXA-80063-6BF w/	Verizon
55.00	55.00	1	RFS DB-T1-6Z-8AB-0Z	Verizon
55.00	55.00	3	T-Arm	Verizon
55.00	55.00	6	Commscope	Verizon
55.00	55.00	3	Samsung MT6407-77A	Verizon
55.00	55.00	3	Commscope	Verizon
55.00	55.00	3	Samsung LTE AWS/PCS	Verizon
55.00	55.00	3	Samsung LTE 700/850	Verizon
55.00	55.00	1	RFS DB-B1-6C-12AB-0Z	Verizon

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	70.00	Outside	Step bolts (ladder)	--
0.00	67.00	Inside	1.99" Hybrid - 6x24	T-Mobile Sprint
0.00	55.00	Inside	1 5/8" Coax	Verizon
0.00	55.00	Inside	1 5/8" Hybrid	Verizon

Anchor Bolts

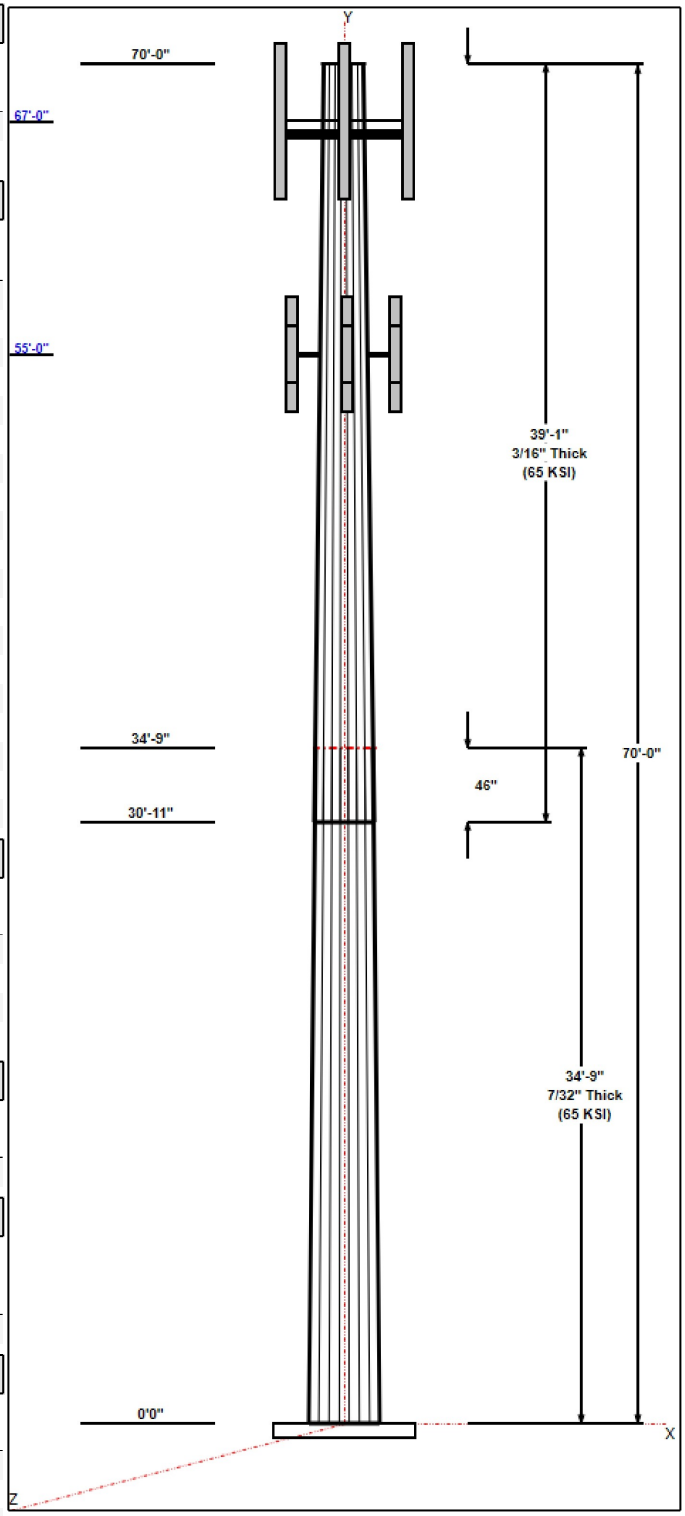
Qty	Specifications	Grade (ksi)	Arrangement
8	2.25" 18J	75.0	Radial

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
2.0000	45.1	60.0	Round

Reactions

Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W 101 mph Wind	863.2	15.7	14.4
0.9D + 1.6W 101 mph Wind	855.8	15.7	10.8
1.2D + 1.0Di + 1.0Wi 50 mph Wind	209.7	3.8	25.4
1.2D + 1.0E	61.6	0.9	14.5
0.9D + 1.0E	61.0	0.9	10.9
1.0D + 1.0W 60 mph Wind	189.5	3.5	12.1



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Structure: CT46147-A-SBA - Coax Line Placement

Type: Monopole
Site Name: New Haven Tweed
Height: 70.00 (ft)

9/30/2021

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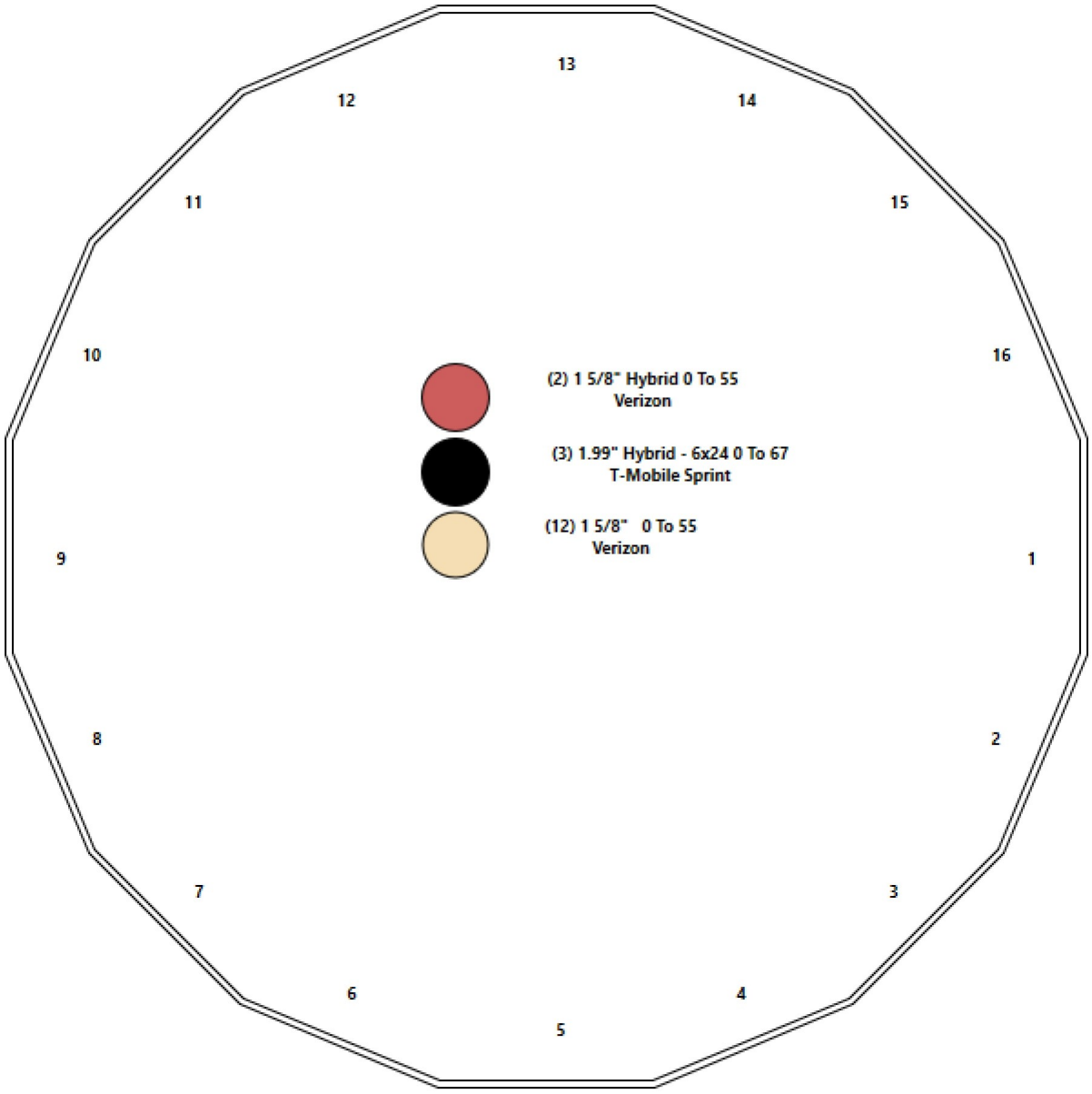

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Shaft Properties

Structure:	CT46147-A-SBA		**Code:**	EIA/TIA-222-G	9/30/2021
Site Name:	New Haven Tweed		**Exposure:**	C	
Height:	70.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 4

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Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	16	34.750	0.2190	65		0.00	2,295
2	16	39.083	0.1880	65	Slip	46.00	1,642
					Total Shaft Weight:		**3,937**

	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	32.00	0.00	22.20	2833.03	27.47	146.12	24.01	34.75	16.62	1188.39	20.22	109.6	0.229943
2	25.27	30.92	15.04	1195.06	25.14	134.40	16.28	70.00	9.65	315.71	15.63	86.60	0.229943

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Load Summary

Structure:	CT46147-A-SBA	**Code:**	EIA/TIA-222-G	9/30/2021	
Site Name:	New Haven Tweed	**Exposure:**	C		
Height:	70.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 5	

Tower Engineering Solutions

Discrete Appurtenances

				No Ice			Ice				
No.	**Elev (ft)**	**Description**	**Qty**	**Weight (lb)**	**CaAa (sf)**	**CaAa Factor**	**Weight (lb)**	**CaAa (sf)**	**CaAa Factor**	**Hor. Ecc. (ft)**	**Vert Ecc (ft)**
1	67.00	SitePro1 RMQP-4096-HK	1	2645.00	51.70	1.00	5200.20	86.994	1.00	0.00	0.00
2	67.00	RFS ACU-A20-N RET	4	1.00	0.14	0.50	4.96	0.414	0.60	0.00	0.00
3	67.00	Ericsson 4449 B71 + B85	3	73.20	1.97	0.67	126.47	2.495	0.70	0.00	0.00
4	67.00	Ericsson 4424 B25	3	88.00	2.05	0.67	166.31	2.595	0.70	0.00	0.00
5	67.00	Ericsson 4415 B66A	3	46.30	1.86	0.67	101.16	2.376	0.70	0.00	0.00
6	67.00	ALU 800 MHz Filter	3	8.80	0.78	0.67	25.08	1.377	0.70	0.00	0.00
7	67.00	RFS APX16DWV-16DWVS-E-A20	3	40.70	6.61	0.62	148.69	8.619	0.67	0.00	0.00
8	67.00	RFS APXVAALL24_43-U-NA20	3	128.00	20.24	0.70	509.78	21.988	0.75	0.00	0.00
9	67.00	Ericsson AIR6449 B41	3	103.00	5.65	0.71	229.50	6.527	0.75	0.00	0.00
10	55.00	MOD	1	500.00	16.50	1.00	1036.73	31.086	1.00	0.00	0.00
11	55.00	Antel BXA-80063-6BF w/ Mount Pipe	3	19.20	7.26	0.78	169.60	8.369	0.78	0.00	0.00
12	55.00	RFS DB-T1-6Z-8AB-0Z	1	18.90	4.80	1.00	128.42	5.709	1.00	0.00	0.00
13	55.00	T-Arm	3	400.00	10.00	0.75	652.58	17.893	0.75	0.00	0.00
14	55.00	Commscope JAHH-65B-R3B	6	63.30	9.11	0.83	268.34	10.322	0.85	0.00	0.00
15	55.00	Samsung MT6407-77A	3	79.40	4.69	0.70	185.37	5.543	0.72	0.00	0.00
16	55.00	Commscope	3	10.40	0.37	0.50	28.32	0.621	0.60	0.00	0.00
17	55.00	Samsung LTE AWS/PCS	3	84.40	1.87	0.67	152.06	2.384	0.70	0.00	0.00
18	55.00	Samsung LTE 700/850 MHz	3	70.30	1.87	0.67	131.51	2.384	0.70	0.00	0.00
19	55.00	RFS DB-B1-6C-12AB-0Z	1	21.40	4.10	1.00	128.69	4.825	1.00	0.00	0.00
		Totals:	**53**	**7,024.20**			**16,003.19**				

Linear Appurtenances

Bottom Elev. (ft)	**Top Elev. (ft)**	**Description**	**Exposed Width**	**Exposed**
0.00	70.00	(1) Step bolts (ladder)	1.00	Outside
0.00	67.00	(3) 1.99" Hybrid - 6x24	0.00	Inside
0.00	55.00	(12) 1 5/8" Coax	0.00	Inside
0.00	55.00	(2) 1 5/8" Hybrid	0.00	Inside

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Shaft Section Properties

Structure:	CT46147-A-SBA	**Code:**	EIA/TIA-222-G	9/30/2021	
Site Name:	New Haven Tweed	**Exposure:**	C		
Height:	70.00 (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	

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Increment Length: **5 (ft)**

Elev (ft)	Description	Thick (in)	Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fpy (ksi)	S (in^3)	Weight (lb)
0.00		0.2190	32.000	22.203	2833.0	27.47	146.12	71.5	173.7	0.0
5.00		0.2190	30.850	21.399	2536.6	26.43	140.87	72.7	161.3	370.9
10.00		0.2190	29.701	20.596	2261.5	25.39	135.62	73.8	149.4	357.3
15.00		0.2190	28.551	19.793	2007.1	24.34	130.37	75.0	137.9	343.6
20.00		0.2190	27.401	18.990	1772.6	23.30	125.12	76.2	126.9	329.9
25.00		0.2190	26.251	18.187	1557.0	22.25	119.87	77.4	116.3	316.3
30.00		0.2190	25.102	17.383	1359.7	21.21	114.62	78.6	106.3	302.6
30.92	Bot - Section 2	0.2190	24.891	17.236	1325.4	21.02	113.66	78.8	104.5	54.0
34.75	Top - Section 1	0.1880	24.385	14.512	1073.4	24.21	129.71	0.0	0.0	413.5
35.00		0.1880	24.328	14.477	1065.8	24.15	129.40	75.2	85.9	12.3
40.00		0.1880	23.178	13.788	920.7	22.93	123.29	76.6	77.9	240.4
45.00		0.1880	22.029	13.098	789.3	21.72	117.17	78.0	70.3	228.7
50.00		0.1880	20.879	12.409	671.1	20.50	111.06	79.4	63.1	217.0
55.00		0.1880	19.729	11.719	565.3	19.28	104.94	80.8	56.2	205.3
60.00		0.1880	18.579	11.030	471.3	18.07	98.83	82.1	49.8	193.5
65.00		0.1880	17.430	10.340	388.3	16.85	92.71	82.5	43.7	181.8
67.00		0.1880	16.970	10.064	358.1	16.36	90.27	82.5	41.4	69.4
70.00		0.1880	16.280	9.651	315.7	15.63	86.60	82.5	38.0	100.6
										3937.2

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Wind Loading - Shaft

Structure:	CT46147-A-SBA	**Code:**	EIA/TIA-222-G	9/30/2021	
Site Name:	New Haven Tweed	**Exposure:**	C		
Height:	70.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 7	

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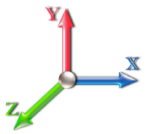
Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 19

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	21.088	23.20	253.18	0.750	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	21.088	23.20	244.08	0.750	0.000	5.00	13.350	10.01	371.6	0.0	445.1
10.00		1.00	0.85	21.088	23.20	234.99	0.750	0.000	5.00	12.862	9.65	358.0	0.0	428.7
15.00		1.00	0.85	21.088	23.20	225.89	0.750	0.000	5.00	12.373	9.28	344.4	0.0	412.3
20.00		1.00	0.90	22.375	24.61	223.31	0.750	0.000	5.00	11.885	8.91	351.0	0.0	395.9
25.00		1.00	0.95	23.451	25.80	219.03	0.750	0.000	5.00	11.397	8.55	352.8	0.0	379.5
30.00		1.00	0.98	24.369	26.81	213.49	0.750	0.000	5.00	10.908	8.18	350.9	0.0	363.1
30.92	Bot - Section 2	1.00	0.99	24.523	26.98	212.37	0.750	0.000	0.92	1.947	1.46	63.0	0.0	64.8
34.75	Top - Section 1	1.00	1.01	25.134	27.65	207.39	0.750	0.000	3.83	8.086	6.06	268.3	0.0	496.3
35.00		1.00	1.01	25.172	27.69	210.30	0.750	0.000	0.25	0.517	0.39	17.2	0.0	14.8
40.00		1.00	1.04	25.890	28.48	203.19	0.750	0.000	5.00	10.091	7.57	344.9	0.0	288.5
45.00		1.00	1.07	26.540	29.19	195.52	0.750	0.000	5.00	9.603	7.20	336.4	0.0	274.5
50.00		1.00	1.09	27.135	29.85	187.39	0.750	0.000	5.00	9.114	6.84	326.5	0.0	260.4
55.00	Appurtenance(s)	1.00	1.12	27.685	30.45	178.85	0.750	0.000	5.00	8.626	6.47	315.2	0.0	246.3
60.00		1.00	1.14	28.197	31.02	169.98	0.750	0.000	5.00	8.137	6.10	302.9	0.0	232.2
65.00		1.00	1.16	28.676	31.54	160.81	0.750	0.000	5.00	7.649	5.74	289.5	0.0	218.2
67.00	Appurtenance(s)	1.00	1.16	28.860	31.75	157.07	0.750	0.000	2.00	2.923	2.19	111.3	0.0	83.3
70.00		1.00	1.17	29.127	32.04	151.38	0.750	0.000	3.00	4.238	3.18	162.9	0.0	120.8
								Totals:	**70.00**			**4,666.8**		**4,724.6**

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Discrete Appurtenance Forces

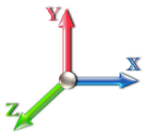
Structure:	CT46147-A-SBA	**Code:**	EIA/TIA-222-G	9/30/2021	
Site Name:	New Haven Tweed	**Exposure:**	C		
Height:	70.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 8	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 19

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	67.00	RFS	3	28.860	31.746	0.46	0.75	9.22	146.52	0.000	0.000	468.36	0.00	0.00
2	67.00	Ericsson 4415 B66A	3	28.860	31.746	0.50	0.75	2.80	166.68	0.000	0.000	142.42	0.00	0.00
3	67.00	Ericsson 4424 B25	3	28.860	31.746	0.50	0.75	3.09	316.80	0.000	0.000	156.97	0.00	0.00
4	67.00	Ericsson 4449 B71 + B85	3	28.860	31.746	0.50	0.75	2.97	263.52	0.000	0.000	150.84	0.00	0.00
5	67.00	RFS ACU-A20-N RET	4	28.860	31.746	0.38	0.75	0.21	4.80	0.000	0.000	10.67	0.00	0.00
6	67.00	SitePro1 RMQP-4096-HK	1	28.860	31.746	1.00	1.00	51.70	3174.00	0.000	0.000	2626.01	0.00	0.00
7	67.00	Ericsson AIR6449 B41	3	28.860	31.746	0.53	0.75	9.03	370.80	0.000	0.000	458.45	0.00	0.00
8	67.00	RFS	3	28.860	31.746	0.52	0.75	31.88	460.80	0.000	0.000	1619.19	0.00	0.00
9	67.00	ALU 800 MHz Filter	3	28.860	31.746	0.50	0.75	1.18	31.68	0.000	0.000	59.73	0.00	0.00
10	55.00	Antel BXA-80063-6BF w/	3	27.685	30.454	0.62	0.80	13.59	69.12	0.000	0.000	662.22	0.00	0.00
11	55.00	RFS DB-B1-6C-12AB-0Z	1	27.685	30.454	1.00	1.00	4.10	25.68	0.000	0.000	199.78	0.00	0.00
12	55.00	Samsung LTE 700/850	3	27.685	30.454	0.54	0.80	3.01	253.08	0.000	0.000	146.52	0.00	0.00
13	55.00	Samsung LTE AWS/PCS	3	27.685	30.454	0.54	0.80	3.01	303.84	0.000	0.000	146.52	0.00	0.00
14	55.00	Commscope	3	27.685	30.454	0.40	0.80	0.44	37.44	0.000	0.000	21.63	0.00	0.00
15	55.00	Samsung MT6407-77A	3	27.685	30.454	0.56	0.80	7.88	285.84	0.000	0.000	383.92	0.00	0.00
16	55.00	Commscope	6	27.685	30.454	0.66	0.80	36.29	455.76	0.000	0.000	1768.48	0.00	0.00
17	55.00	MOD	1	27.685	30.454	0.75	0.75	12.38	600.00	0.000	0.000	602.99	0.00	0.00
18	55.00	T-Arm	3	27.685	30.454	0.56	0.75	16.88	1440.00	0.000	0.000	822.25	0.00	0.00
19	55.00	RFS DB-T1-6Z-8AB-0Z	1	27.685	30.454	1.00	1.00	4.80	22.68	0.000	0.000	233.89	0.00	0.00
							Totals:		**8,429.04**			**10,680.83**		

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Total Applied Force Summary

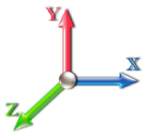
Structure:	CT46147-A-SBA		**Code:**	EIA/TIA-222-G	9/30/2021
Site Name:	New Haven Tweed		**Exposure:**	C	
Height:	70.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 9

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 19

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		390.17	559.22	0.00	0.00
10.00		376.57	542.82	0.00	0.00
15.00		362.98	526.42	0.00	0.00
20.00		370.71	510.03	0.00	0.00
25.00		373.42	493.63	0.00	0.00
30.00		372.32	477.23	0.00	0.00
30.92		66.98	85.71	0.00	0.00
34.75		285.23	583.75	0.00	0.00
35.00		18.30	20.50	0.00	0.00
40.00		367.64	402.66	0.00	0.00
45.00		359.76	388.58	0.00	0.00
50.00		350.34	374.50	0.00	0.00
55.00	(27) attachments	5327.78	3853.87	0.00	0.00
60.00		327.69	258.27	0.00	0.00
65.00		314.77	244.19	0.00	0.00
67.00	(26) attachments	5814.14	5029.33	0.00	0.00
70.00		178.31	124.50	0.00	0.00
	Totals:	**15,657.10**	**14,475.22**	**0.00**	**0.00**

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Linear Appurtenance Segment Forces (Factored)

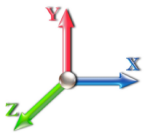
Structure:	CT46147-A-SBA	**Code:**	EIA/TIA-222-G	9/30/2021	
Site Name:	New Haven Tweed	**Exposure:**	C		
Height:	70.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 10	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 19

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	0.42	0.50	0.000	0.000	21.088	18.56	6.24
10.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	0.42	0.50	0.000	0.000	21.088	18.56	6.24
15.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	0.42	0.50	0.000	0.000	21.088	18.56	6.24
20.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	0.42	0.50	0.000	0.000	22.375	19.69	6.24
25.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	0.42	0.50	0.000	0.000	23.451	20.64	6.24
30.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	0.42	0.50	0.000	0.000	24.369	21.44	6.24
30.92	Step bolts (ladder)	Yes	0.92	1.200	1.00	0.08	0.09	0.000	0.000	24.523	3.96	1.14
34.75	Step bolts (ladder)	Yes	3.83	1.200	1.00	0.32	0.38	0.000	0.000	25.134	16.96	4.78
35.00	Step bolts (ladder)	Yes	0.25	1.200	1.00	0.02	0.02	0.000	0.000	25.172	1.11	0.31
40.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	0.42	0.50	0.000	0.000	25.890	22.78	6.24
45.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	0.42	0.50	0.000	0.000	26.540	23.36	6.24
50.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	0.42	0.50	0.000	0.000	27.135	23.88	6.24
55.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	0.42	0.50	0.000	0.000	27.685	24.36	6.24
60.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	0.42	0.50	0.000	0.000	28.197	24.81	6.24
65.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	0.42	0.50	0.000	0.000	28.676	25.24	6.24
67.00	Step bolts (ladder)	Yes	2.00	1.200	1.00	0.17	0.20	0.000	0.000	28.860	10.16	2.50
70.00	Step bolts (ladder)	Yes	3.00	1.200	1.00	0.25	0.30	0.000	0.000	29.127	15.38	3.74
									Totals:		**309.4**	**87.4**

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Calculated Forces

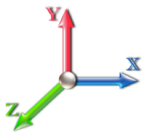
Structure:	CT46147-A-SBA	**Code:**	EIA/TIA-222-G	9/30/2021	
Site Name:	New Haven Tweed	**Exposure:**	C		
Height:	70.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 11	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 19

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	-14.42	-15.71	0.00	-863.25	0.00	863.25	1428.44	714.22	1875.49	931.07	0.00	0.000	0.000	0.938
5.00	-13.75	-15.42	0.00	-784.70	0.00	784.70	1399.52	699.76	1770.59	878.99	0.22	-0.414	0.000	0.903
10.00	-13.10	-15.13	0.00	-707.60	0.00	707.60	1368.89	684.44	1666.38	827.26	0.88	-0.832	0.000	0.865
15.00	-12.47	-14.85	0.00	-631.94	0.00	631.94	1336.55	668.28	1563.09	775.99	1.98	-1.253	0.000	0.824
20.00	-11.86	-14.56	0.00	-557.69	0.00	557.69	1302.51	651.25	1460.99	725.30	3.52	-1.675	0.000	0.779
25.00	-11.28	-14.25	0.00	-484.91	0.00	484.91	1266.75	633.38	1360.31	675.31	5.50	-2.093	0.000	0.727
30.00	-10.76	-13.90	0.00	-413.67	0.00	413.67	1229.29	614.65	1261.29	626.16	7.92	-2.504	0.000	0.670
30.92	-10.63	-13.87	0.00	-400.92	0.00	400.92	1222.24	611.12	1243.34	617.25	8.41	-2.582	0.000	0.659
34.75	-10.02	-13.58	0.00	-347.76	0.00	347.76	981.87	490.93	980.69	486.85	10.61	-2.890	0.000	0.725
35.00	-9.95	-13.60	0.00	-344.37	0.00	344.37	980.43	490.22	976.91	484.98	10.76	-2.911	0.000	0.721
40.00	-9.47	-13.28	0.00	-276.35	0.00	276.35	950.82	475.41	901.93	447.76	14.04	-3.325	0.000	0.628
45.00	-9.03	-12.95	0.00	-209.95	0.00	209.95	919.49	459.75	828.24	411.17	17.72	-3.701	0.000	0.521
50.00	-8.62	-12.62	0.00	-145.19	0.00	145.19	886.46	443.23	756.10	375.36	21.78	-4.021	0.000	0.397
55.00	-5.14	-7.04	0.00	-82.09	0.00	82.09	851.72	425.86	685.73	340.43	26.13	-4.262	0.000	0.247
60.00	-4.89	-6.71	0.00	-46.87	0.00	46.87	815.27	407.63	617.40	306.50	30.68	-4.424	0.000	0.159
65.00	-4.67	-6.38	0.00	-13.32	0.00	13.32	768.23	384.11	545.04	270.58	35.37	-4.515	0.000	0.056
67.00	-0.11	-0.19	0.00	-0.56	0.00	0.56	747.73	373.87	516.20	256.26	37.26	-4.525	0.000	0.002
70.00	0.00	-0.18	0.00	0.00	0.00	0.00	717.00	358.50	474.41	235.52	40.10	-4.525	0.000	0.000

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Wind Loading - Shaft

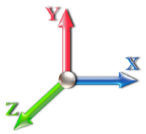
Structure:	CT46147-A-SBA	**Code:**	EIA/TIA-222-G	9/30/2021	
Site Name:	New Haven Tweed	**Exposure:**	C		
Height:	70.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 12	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 19

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	21.088	23.20	253.18	0.750	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	21.088	23.20	244.08	0.750	0.000	5.00	13.350	10.01	371.6	0.0	333.8
10.00		1.00	0.85	21.088	23.20	234.99	0.750	0.000	5.00	12.862	9.65	358.0	0.0	321.5
15.00		1.00	0.85	21.088	23.20	225.89	0.750	0.000	5.00	12.373	9.28	344.4	0.0	309.2
20.00		1.00	0.90	22.375	24.61	223.31	0.750	0.000	5.00	11.885	8.91	351.0	0.0	296.9
25.00		1.00	0.95	23.451	25.80	219.03	0.750	0.000	5.00	11.397	8.55	352.8	0.0	284.6
30.00		1.00	0.98	24.369	26.81	213.49	0.750	0.000	5.00	10.908	8.18	350.9	0.0	272.3
30.92	Bot - Section 2	1.00	0.99	24.523	26.98	212.37	0.750	0.000	0.92	1.947	1.46	63.0	0.0	48.6
34.75	Top - Section 1	1.00	1.01	25.134	27.65	207.39	0.750	0.000	3.83	8.086	6.06	268.3	0.0	372.2
35.00		1.00	1.01	25.172	27.69	210.30	0.750	0.000	0.25	0.517	0.39	17.2	0.0	11.1
40.00		1.00	1.04	25.890	28.48	203.19	0.750	0.000	5.00	10.091	7.57	344.9	0.0	216.4
45.00		1.00	1.07	26.540	29.19	195.52	0.750	0.000	5.00	9.603	7.20	336.4	0.0	205.8
50.00		1.00	1.09	27.135	29.85	187.39	0.750	0.000	5.00	9.114	6.84	326.5	0.0	195.3
55.00	Appurtenance(s)	1.00	1.12	27.685	30.45	178.85	0.750	0.000	5.00	8.626	6.47	315.2	0.0	184.7
60.00		1.00	1.14	28.197	31.02	169.98	0.750	0.000	5.00	8.137	6.10	302.9	0.0	174.2
65.00		1.00	1.16	28.676	31.54	160.81	0.750	0.000	5.00	7.649	5.74	289.5	0.0	163.6
67.00	Appurtenance(s)	1.00	1.16	28.860	31.75	157.07	0.750	0.000	2.00	2.923	2.19	111.3	0.0	62.5
70.00		1.00	1.17	29.127	32.04	151.38	0.750	0.000	3.00	4.238	3.18	162.9	0.0	90.6
								Totals:	**70.00**			**4,666.8**		**3,543.5**

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Discrete Appurtenance Forces

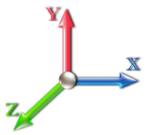
Structure:	CT46147-A-SBA	**Code:**	EIA/TIA-222-G	9/30/2021	
Site Name:	New Haven Tweed	**Exposure:**	C		
Height:	70.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 13	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 19

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	67.00	RFS	3	28.860	31.746	0.46	0.75	9.22	109.89	0.000	0.000	468.36	0.00	0.00
2	67.00	Ericsson 4415 B66A	3	28.860	31.746	0.50	0.75	2.80	125.01	0.000	0.000	142.42	0.00	0.00
3	67.00	Ericsson 4424 B25	3	28.860	31.746	0.50	0.75	3.09	237.60	0.000	0.000	156.97	0.00	0.00
4	67.00	Ericsson 4449 B71 + B85	3	28.860	31.746	0.50	0.75	2.97	197.64	0.000	0.000	150.84	0.00	0.00
5	67.00	RFS ACU-A20-N RET	4	28.860	31.746	0.38	0.75	0.21	3.60	0.000	0.000	10.67	0.00	0.00
6	67.00	SitePro1 RMQP-4096-HK	1	28.860	31.746	1.00	1.00	51.70	2380.50	0.000	0.000	2626.01	0.00	0.00
7	67.00	Ericsson AIR6449 B41	3	28.860	31.746	0.53	0.75	9.03	278.10	0.000	0.000	458.45	0.00	0.00
8	67.00	RFS	3	28.860	31.746	0.52	0.75	31.88	345.60	0.000	0.000	1619.19	0.00	0.00
9	67.00	ALU 800 MHz Filter	3	28.860	31.746	0.50	0.75	1.18	23.76	0.000	0.000	59.73	0.00	0.00
10	55.00	Antel BXA-80063-6BF w/	3	27.685	30.454	0.62	0.80	13.59	51.84	0.000	0.000	662.22	0.00	0.00
11	55.00	RFS DB-B1-6C-12AB-0Z	1	27.685	30.454	1.00	1.00	4.10	19.26	0.000	0.000	199.78	0.00	0.00
12	55.00	Samsung LTE 700/850	3	27.685	30.454	0.54	0.80	3.01	189.81	0.000	0.000	146.52	0.00	0.00
13	55.00	Samsung LTE AWS/PCS	3	27.685	30.454	0.54	0.80	3.01	227.88	0.000	0.000	146.52	0.00	0.00
14	55.00	Commscope	3	27.685	30.454	0.40	0.80	0.44	28.08	0.000	0.000	21.63	0.00	0.00
15	55.00	Samsung MT6407-77A	3	27.685	30.454	0.56	0.80	7.88	214.38	0.000	0.000	383.92	0.00	0.00
16	55.00	Commscope	6	27.685	30.454	0.66	0.80	36.29	341.82	0.000	0.000	1768.48	0.00	0.00
17	55.00	MOD	1	27.685	30.454	0.75	0.75	12.38	450.00	0.000	0.000	602.99	0.00	0.00
18	55.00	T-Arm	3	27.685	30.454	0.56	0.75	16.88	1080.00	0.000	0.000	822.25	0.00	0.00
19	55.00	RFS DB-T1-6Z-8AB-0Z	1	27.685	30.454	1.00	1.00	4.80	17.01	0.000	0.000	233.89	0.00	0.00
							Totals:		**6,321.78**			**10,680.83**		

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Total Applied Force Summary

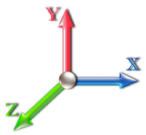
Structure:	CT46147-A-SBA		**Code:**	EIA/TIA-222-G	9/30/2021
Site Name:	New Haven Tweed		**Exposure:**	C	
Height:	70.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 14

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 19

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		390.17	419.42	0.00	0.00
10.00		376.57	407.12	0.00	0.00
15.00		362.98	394.82	0.00	0.00
20.00		370.71	382.52	0.00	0.00
25.00		373.42	370.22	0.00	0.00
30.00		372.32	357.92	0.00	0.00
30.92		66.98	64.28	0.00	0.00
34.75		285.23	437.81	0.00	0.00
35.00		18.30	15.38	0.00	0.00
40.00		367.64	301.99	0.00	0.00
45.00		359.76	291.44	0.00	0.00
50.00		350.34	280.88	0.00	0.00
55.00	(27) attachments	5327.78	2890.40	0.00	0.00
60.00		327.69	193.70	0.00	0.00
65.00		314.77	183.14	0.00	0.00
67.00	(26) attachments	5814.14	3772.00	0.00	0.00
70.00		178.31	93.37	0.00	0.00
	Totals:	**15,657.10**	**10,856.42**	**0.00**	**0.00**

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Linear Appurtenance Segment Forces (Factored)

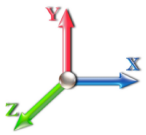
Structure:	CT46147-A-SBA	**Code:**	EIA/TIA-222-G	9/30/2021	
Site Name:	New Haven Tweed	**Exposure:**	C		
Height:	70.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 15	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 19

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	0.42	0.50	0.000	0.000	21.088	18.56	4.68
10.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	0.42	0.50	0.000	0.000	21.088	18.56	4.68
15.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	0.42	0.50	0.000	0.000	21.088	18.56	4.68
20.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	0.42	0.50	0.000	0.000	22.375	19.69	4.68
25.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	0.42	0.50	0.000	0.000	23.451	20.64	4.68
30.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	0.42	0.50	0.000	0.000	24.369	21.44	4.68
30.92	Step bolts (ladder)	Yes	0.92	1.200	1.00	0.08	0.09	0.000	0.000	24.523	3.96	0.86
34.75	Step bolts (ladder)	Yes	3.83	1.200	1.00	0.32	0.38	0.000	0.000	25.134	16.96	3.59
35.00	Step bolts (ladder)	Yes	0.25	1.200	1.00	0.02	0.02	0.000	0.000	25.172	1.11	0.23
40.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	0.42	0.50	0.000	0.000	25.890	22.78	4.68
45.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	0.42	0.50	0.000	0.000	26.540	23.36	4.68
50.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	0.42	0.50	0.000	0.000	27.135	23.88	4.68
55.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	0.42	0.50	0.000	0.000	27.685	24.36	4.68
60.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	0.42	0.50	0.000	0.000	28.197	24.81	4.68
65.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	0.42	0.50	0.000	0.000	28.676	25.24	4.68
67.00	Step bolts (ladder)	Yes	2.00	1.200	1.00	0.17	0.20	0.000	0.000	28.860	10.16	1.87
70.00	Step bolts (ladder)	Yes	3.00	1.200	1.00	0.25	0.30	0.000	0.000	29.127	15.38	2.81
									Totals:		**309.4**	**65.5**

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Calculated Forces

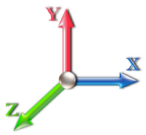
Structure:	CT46147-A-SBA	**Code:**	EIA/TIA-222-G	9/30/2021	
Site Name:	New Haven Tweed	**Exposure:**	C		
Height:	70.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 16	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 19

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	-10.80	-15.70	0.00	-855.79	0.00	855.79	1428.44	714.22	1875.49	931.07	0.00	0.000	0.000	0.927
5.00	-10.27	-15.38	0.00	-777.31	0.00	777.31	1399.52	699.76	1770.59	878.99	0.22	-0.410	0.000	0.892
10.00	-9.76	-15.07	0.00	-700.42	0.00	700.42	1368.89	684.44	1666.38	827.26	0.87	-0.824	0.000	0.854
15.00	-9.26	-14.77	0.00	-625.07	0.00	625.07	1336.55	668.28	1563.09	775.99	1.96	-1.241	0.000	0.813
20.00	-8.79	-14.45	0.00	-551.23	0.00	551.23	1302.51	651.25	1460.99	725.30	3.49	-1.658	0.000	0.767
25.00	-8.33	-14.13	0.00	-478.98	0.00	478.98	1266.75	633.38	1360.31	675.31	5.45	-2.071	0.000	0.716
30.00	-7.93	-13.77	0.00	-408.35	0.00	408.35	1229.29	614.65	1261.29	626.16	7.84	-2.477	0.000	0.659
30.92	-7.82	-13.73	0.00	-395.73	0.00	395.73	1222.24	611.12	1243.34	617.25	8.32	-2.554	0.000	0.648
34.75	-7.36	-13.44	0.00	-343.10	0.00	343.10	981.87	490.93	980.69	486.85	10.50	-2.858	0.000	0.713
35.00	-7.29	-13.45	0.00	-339.74	0.00	339.74	980.43	490.22	976.91	484.98	10.65	-2.878	0.000	0.709
40.00	-6.92	-13.12	0.00	-272.47	0.00	272.47	950.82	475.41	901.93	447.76	13.89	-3.287	0.000	0.617
45.00	-6.57	-12.78	0.00	-206.89	0.00	206.89	919.49	459.75	828.24	411.17	17.53	-3.657	0.000	0.511
50.00	-6.26	-12.44	0.00	-142.99	0.00	142.99	886.46	443.23	756.10	375.36	21.54	-3.972	0.000	0.389
55.00	-3.73	-6.93	0.00	-80.78	0.00	80.78	851.72	425.86	685.73	340.43	25.84	-4.210	0.000	0.242
60.00	-3.55	-6.60	0.00	-46.11	0.00	46.11	815.27	407.63	617.40	306.50	30.33	-4.369	0.000	0.155
65.00	-3.39	-6.28	0.00	-13.11	0.00	13.11	768.23	384.11	545.04	270.58	34.96	-4.459	0.000	0.053
67.00	-0.08	-0.18	0.00	-0.55	0.00	0.55	747.73	373.87	516.20	256.26	36.83	-4.469	0.000	0.002
70.00	0.00	-0.18	0.00	0.00	0.00	0.00	717.00	358.50	474.41	235.52	39.64	-4.469	0.000	0.000

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Wind Loading - Shaft

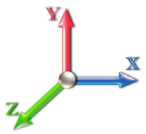
Structure:	CT46147-A-SBA	**Code:**	EIA/TIA-222-G	9/30/2021	
Site Name:	New Haven Tweed	**Exposure:**	C		
Height:	70.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 17	

Tower Engineering Solutions

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 18

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	14.385	17.26	98.1	251.9	697.0
10.00		1.00	0.85	5.168	5.68	0.00	1.200	1.331	5.00	13.971	16.77	95.3	261.0	689.7
15.00		1.00	0.85	5.168	5.68	0.00	1.200	1.386	5.00	13.529	16.23	92.3	262.2	674.5
20.00		1.00	0.90	5.483	6.03	0.00	1.200	1.427	5.00	13.074	15.69	94.6	259.9	655.8
25.00		1.00	0.95	5.747	6.32	0.00	1.200	1.459	5.00	12.612	15.13	95.7	255.4	634.9
30.00		1.00	0.98	5.972	6.57	0.00	1.200	1.486	5.00	12.146	14.58	95.8	249.6	612.7
30.92	Bot - Section 2	1.00	0.99	6.010	6.61	0.00	1.200	1.490	0.92	2.175	2.61	17.3	45.5	110.3
34.75	Top - Section 1	1.00	1.01	6.160	6.78	0.00	1.200	1.508	3.83	9.049	10.86	73.6	189.1	685.3
35.00		1.00	1.01	6.169	6.79	0.00	1.200	1.509	0.25	0.580	0.70	4.7	12.3	27.1
40.00		1.00	1.04	6.345	6.98	0.00	1.200	1.529	5.00	11.365	13.64	95.2	238.7	527.2
45.00		1.00	1.07	6.504	7.15	0.00	1.200	1.547	5.00	10.892	13.07	93.5	230.4	504.9
50.00		1.00	1.09	6.650	7.32	0.00	1.200	1.564	5.00	10.417	12.50	91.4	221.6	482.0
55.00	Appurtenance(s)	1.00	1.12	6.785	7.46	0.00	1.200	1.579	5.00	9.941	11.93	89.0	212.4	458.7
60.00		1.00	1.14	6.910	7.60	0.00	1.200	1.592	5.00	9.464	11.36	86.3	202.8	435.1
65.00		1.00	1.16	7.028	7.73	0.00	1.200	1.605	5.00	8.987	10.78	83.4	192.9	411.1
67.00	Appurtenance(s)	1.00	1.16	7.073	7.78	0.00	1.200	1.610	2.00	3.459	4.15	32.3	75.6	158.9
70.00		1.00	1.17	7.138	7.85	0.00	1.200	1.617	3.00	5.046	6.06	47.5	109.6	230.4
								Totals:	**70.00**			**1,286.1**		**7,995.6**

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Discrete Appurtenance Forces

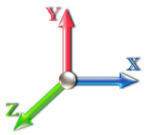
Structure:	CT46147-A-SBA	**Code:**	EIA/TIA-222-G	9/30/2021	
Site Name:	New Haven Tweed	**Exposure:**	C		
Height:	70.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 18	

Tower Engineering Solutions

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 18

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	67.00	RFS	3	7.073	7.780	0.50	0.75	12.99	370.00	0.000	0.000	101.09	0.00	0.00
2	67.00	Ericsson 4415 B66A	3	7.073	7.780	0.52	0.75	3.74	331.27	0.000	0.000	29.12	0.00	0.00
3	67.00	Ericsson 4424 B25	3	7.073	7.780	0.52	0.75	4.09	551.72	0.000	0.000	31.80	0.00	0.00
4	67.00	Ericsson 4449 B71 + B85	3	7.073	7.780	0.52	0.75	3.93	248.14	0.000	0.000	30.58	0.00	0.00
5	67.00	RFS ACU-A20-N RET	4	7.073	7.780	0.45	0.75	0.74	15.45	0.000	0.000	5.79	0.00	0.00
6	67.00	SitePro1 RMQP-4096-HK	1	7.073	7.780	1.00	1.00	86.99	4974.20	0.000	0.000	676.82	0.00	0.00
7	67.00	Ericsson AIR6449 B41	3	7.073	7.780	0.56	0.75	11.01	655.20	0.000	0.000	85.69	0.00	0.00
8	67.00	RFS	3	7.073	7.780	0.56	0.75	37.10	1606.14	0.000	0.000	288.68	0.00	0.00
9	67.00	ALU 800 MHz Filter	3	7.073	7.780	0.52	0.75	2.17	65.51	0.000	0.000	16.87	0.00	0.00
10	55.00	Antel BXA-80063-6BF w/	3	6.785	7.463	0.62	0.80	15.67	520.31	0.000	0.000	116.93	0.00	0.00
11	55.00	RFS DB-B1-6C-12AB-0Z	1	6.785	7.463	1.00	1.00	4.82	103.27	0.000	0.000	36.01	0.00	0.00
12	55.00	Samsung LTE 700/850	3	6.785	7.463	0.56	0.80	4.00	436.72	0.000	0.000	29.89	0.00	0.00
13	55.00	Samsung LTE AWS/PCS	3	6.785	7.463	0.56	0.80	4.00	506.81	0.000	0.000	29.89	0.00	0.00
14	55.00	Commscope	3	6.785	7.463	0.48	0.80	0.89	91.19	0.000	0.000	6.67	0.00	0.00
15	55.00	Samsung MT6407-77A	3	6.785	7.463	0.58	0.80	9.58	603.75	0.000	0.000	71.49	0.00	0.00
16	55.00	Commscope	6	6.785	7.463	0.68	0.80	42.11	1685.97	0.000	0.000	314.30	0.00	0.00
17	55.00	MOD	1	6.785	7.463	0.75	0.75	23.31	986.73	0.000	0.000	174.01	0.00	0.00
18	55.00	T-Arm	3	6.785	7.463	0.56	0.75	30.19	1957.74	0.000	0.000	225.36	0.00	0.00
19	55.00	RFS DB-T1-6Z-8AB-0Z	1	6.785	7.463	1.00	1.00	5.71	105.10	0.000	0.000	42.61	0.00	0.00
							Totals:		**15,815.23**			**2,313.60**		

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Total Applied Force Summary

Structure:	CT46147-A-SBA		**Code:**	EIA/TIA-222-G	9/30/2021
Site Name:	New Haven Tweed		**Exposure:**	C	
Height:	70.00 (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

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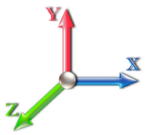
Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 18

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		108.04	823.73	0.00	0.00
10.00		105.72	818.08	0.00	0.00
15.00		103.01	803.93	0.00	0.00
20.00		106.25	785.96	0.00	0.00
25.00		108.07	765.75	0.00	0.00
30.00		108.80	744.05	0.00	0.00
30.92		19.66	134.43	0.00	0.00
34.75		84.01	786.42	0.00	0.00
35.00		5.41	33.70	0.00	0.00
40.00		109.35	659.48	0.00	0.00
45.00		108.16	637.53	0.00	0.00
50.00		106.54	615.04	0.00	0.00
55.00	(27) attachments	1151.71	7589.67	0.00	0.00
60.00		102.24	480.63	0.00	0.00
65.00		99.64	456.92	0.00	0.00
67.00	(26) attachments	1305.31	8994.88	0.00	0.00
70.00		57.52	246.17	0.00	0.00
	Totals:	**3,789.43**	**25,376.37**	**0.00**	**0.00**

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Linear Appurtenance Segment Forces (Factored)

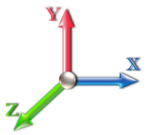
Structure:	CT46147-A-SBA	**Code:**	EIA/TIA-222-G	9/30/2021	
Site Name:	New Haven Tweed	**Exposure:**	C		
Height:	70.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 20	

Tower Engineering Solutions

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 18

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	1.45	1.74	0.000	0.000	5.168	9.90	18.85
10.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	1.53	1.83	0.000	0.000	5.168	10.41	20.46
15.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	1.57	1.89	0.000	0.000	5.168	10.72	21.51
20.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	1.61	1.93	0.000	0.000	5.483	11.62	22.31
25.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	1.63	1.96	0.000	0.000	5.747	12.38	22.95
30.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	1.65	1.99	0.000	0.000	5.972	13.05	23.50
30.92	Step bolts (ladder)	Yes	0.92	1.200	1.00	0.30	0.36	0.000	0.000	6.010	2.41	4.33
34.75	Step bolts (ladder)	Yes	3.83	1.200	1.00	1.28	1.54	0.000	0.000	6.160	10.43	18.37
35.00	Step bolts (ladder)	Yes	0.25	1.200	1.00	0.08	0.10	0.000	0.000	6.169	0.68	1.20
40.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	1.69	2.03	0.000	0.000	6.345	14.16	24.40
45.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	1.71	2.05	0.000	0.000	6.504	14.65	24.79
50.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	1.72	2.06	0.000	0.000	6.650	15.10	25.14
55.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	1.73	2.08	0.000	0.000	6.785	15.51	25.46
60.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	1.74	2.09	0.000	0.000	6.910	15.91	25.76
65.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	1.75	2.11	0.000	0.000	7.028	16.27	26.04
67.00	Step bolts (ladder)	Yes	2.00	1.200	1.00	0.70	0.84	0.000	0.000	7.073	6.57	10.46
70.00	Step bolts (ladder)	Yes	3.00	1.200	1.00	1.06	1.27	0.000	0.000	7.138	9.97	15.79
									Totals:		**189.8**	**331.3**

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Calculated Forces

Structure:	CT46147-A-SBA	**Code:**	EIA/TIA-222-G	9/30/2021	
Site Name:	New Haven Tweed	**Exposure:**	C		
Height:	70.00 (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	

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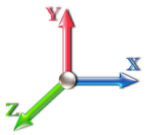
Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 18

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	-25.37	-3.81	0.00	-209.74	0.00	209.74	1428.44	714.22	1875.49	931.07	0.00	0.000	0.000	0.243
5.00	-24.54	-3.75	0.00	-190.68	0.00	190.68	1399.52	699.76	1770.59	878.99	0.05	-0.101	0.000	0.234
10.00	-23.72	-3.68	0.00	-171.95	0.00	171.95	1368.89	684.44	1666.38	827.26	0.21	-0.202	0.000	0.225
15.00	-22.91	-3.62	0.00	-153.54	0.00	153.54	1336.55	668.28	1563.09	775.99	0.48	-0.305	0.000	0.215
20.00	-22.12	-3.54	0.00	-135.47	0.00	135.47	1302.51	651.25	1460.99	725.30	0.86	-0.407	0.000	0.204
25.00	-21.35	-3.47	0.00	-117.75	0.00	117.75	1266.75	633.38	1360.31	675.31	1.34	-0.509	0.000	0.191
30.00	-20.60	-3.37	0.00	-100.42	0.00	100.42	1229.29	614.65	1261.29	626.16	1.92	-0.608	0.000	0.177
30.92	-20.46	-3.37	0.00	-97.33	0.00	97.33	1222.24	611.12	1243.34	617.25	2.04	-0.627	0.000	0.174
34.75	-19.68	-3.29	0.00	-84.42	0.00	84.42	981.87	490.93	980.69	486.85	2.58	-0.702	0.000	0.193
35.00	-19.64	-3.30	0.00	-83.60	0.00	83.60	980.43	490.22	976.91	484.98	2.61	-0.707	0.000	0.192
40.00	-18.97	-3.21	0.00	-67.09	0.00	67.09	950.82	475.41	901.93	447.76	3.41	-0.808	0.000	0.170
45.00	-18.33	-3.12	0.00	-51.02	0.00	51.02	919.49	459.75	828.24	411.17	4.31	-0.899	0.000	0.144
50.00	-17.72	-3.03	0.00	-35.40	0.00	35.40	886.46	443.23	756.10	375.36	5.29	-0.977	0.000	0.114
55.00	-10.15	-1.75	0.00	-20.26	0.00	20.26	851.72	425.86	685.73	340.43	6.35	-1.036	0.000	0.071
60.00	-9.67	-1.65	0.00	-11.50	0.00	11.50	815.27	407.63	617.40	306.50	7.46	-1.076	0.000	0.049
65.00	-9.21	-1.54	0.00	-3.27	0.00	3.27	768.23	384.11	545.04	270.58	8.60	-1.098	0.000	0.024
67.00	-0.25	-0.06	0.00	-0.19	0.00	0.19	747.73	373.87	516.20	256.26	9.06	-1.100	0.000	0.001
70.00	0.00	-0.06	0.00	0.00	0.00	0.00	717.00	358.50	474.41	235.52	9.75	-1.101	0.000	0.000

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Seismic Segment Forces (Factored)

Structure:	CT46147-A-SBA	**Code:**	EIA/TIA-222-G	9/30/2021	
Site Name:	New Haven Tweed	**Exposure:**	C		
Height:	70.00 (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	

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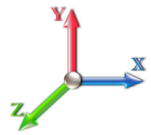
Load Case: 1.2D + 1.0E



Gust Response Factor	1.10			**Sds**	0.19	**Iterations**	17
Dead Load Factor	1.20	**Seismic Load Factor**	1.00	**Sd1**	0.10	**Ss**	0.18
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.53	**SA**	0.05	**S1**	0.06
						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		370.92	0.01	0.05	0.03	8.15	
10.00		357.25	0.04	0.07	0.04	9.91	
15.00		343.59	0.09	0.07	0.04	10.31	
20.00		329.92	0.15	0.07	0.03	10.49	
25.00		316.26	0.24	0.06	0.02	10.07	
30.00		302.59	0.35	0.03	0.01	8.06	
30.92	Bot - Section 2	53.99	0.37	0.03	0.01	1.34	
34.75	Top - Section 1	413.55	0.47	0.00	0.01	5.77	
35.00		12.33	0.47	-0.01	0.01	0.16	
40.00		240.45	0.62	-0.06	0.02	-1.41	
45.00		228.72	0.78	-0.11	0.05	-4.27	
50.00		216.99	0.96	-0.12	0.11	-2.97	
55.00	Appurtenance(s)	3116.4	1.17	-0.02	0.23	45.16	
60.00		193.52	1.39	0.26	0.42	13.01	
65.00		181.79	1.63	0.87	0.71	26.38	
67.00	Appurtenance(s)	4182.4	1.73	1.25	0.86	767.51	
70.00		100.63	1.89	1.98	1.14	25.05	
	Totals:	**10,961.4**				**932.7**	**Total Wind:** **15,657.1**

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

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Calculated Forces

Structure:	CT46147-A-SBA	**Code:**	EIA/TIA-222-G	9/30/2021	
Site Name:	New Haven Tweed	**Exposure:**	C		
Height:	70.00 (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	

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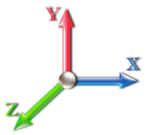
Load Case: 1.2D + 1.0E



Gust Response Factor	1.10			**Sds**	0.19			**Iterations**	17
Dead Load Factor	1.20	**Seismic Load Factor**	1.00	**Sd1**	0.10			**Ss**	0.18
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.53	**SA**	0.05			**S1**	0.06
								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	-14.47	-0.94	0.00	-61.63	0.00	61.63	1428.44	714.22	1875.49	931.07		0.00	0.00	0.076
5.00	-13.92	-0.94	0.00	-56.91	0.00	56.91	1399.52	699.76	1770.59	878.99		0.02	-0.03	0.075
10.00	-13.37	-0.94	0.00	-52.19	0.00	52.19	1368.89	684.44	1666.38	827.26		0.06	-0.06	0.073
15.00	-12.84	-0.94	0.00	-47.49	0.00	47.49	1336.55	668.28	1563.09	775.99		0.14	-0.09	0.071
20.00	-12.33	-0.93	0.00	-42.80	0.00	42.80	1302.51	651.25	1460.99	725.30		0.26	-0.12	0.068
25.00	-11.84	-0.93	0.00	-38.14	0.00	38.14	1266.75	633.38	1360.31	675.31		0.40	-0.16	0.066
30.00	-11.36	-0.92	0.00	-33.50	0.00	33.50	1229.29	614.65	1261.29	626.16		0.59	-0.19	0.063
30.92	-11.28	-0.92	0.00	-32.66	0.00	32.66	1222.24	611.12	1243.34	617.25		0.62	-0.20	0.062
34.75	-10.69	-0.92	0.00	-29.12	0.00	29.12	981.87	490.93	980.69	486.85		0.79	-0.22	0.071
35.00	-10.67	-0.92	0.00	-28.89	0.00	28.89	980.43	490.22	976.91	484.98		0.80	-0.22	0.070
40.00	-10.27	-0.93	0.00	-24.28	0.00	24.28	950.82	475.41	901.93	447.76		1.05	-0.26	0.065
45.00	-9.88	-0.93	0.00	-19.65	0.00	19.65	919.49	459.75	828.24	411.17		1.34	-0.29	0.059
50.00	-9.50	-0.93	0.00	-15.00	0.00	15.00	886.46	443.23	756.10	375.36		1.66	-0.32	0.051
55.00	-5.65	-0.87	0.00	-10.34	0.00	10.34	851.72	425.86	685.73	340.43		2.02	-0.35	0.037
60.00	-5.39	-0.85	0.00	-6.00	0.00	6.00	815.27	407.63	617.40	306.50		2.40	-0.37	0.026
65.00	-5.15	-0.83	0.00	-1.73	0.00	1.73	768.23	384.11	545.04	270.58		2.79	-0.38	0.013
67.00	-0.12	-0.03	0.00	-0.08	0.00	0.08	747.73	373.87	516.20	256.26		2.95	-0.38	0.000
70.00	0.00	-0.02	0.00	0.00	0.00	0.00	717.00	358.50	474.41	235.52		3.19	-0.38	0.000

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Seismic Segment Forces (Factored)

Structure:	CT46147-A-SBA	**Code:**	EIA/TIA-222-G	9/30/2021	
Site Name:	New Haven Tweed	**Exposure:**	C		
Height:	70.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 24	

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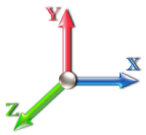
Load Case: 0.9D + 1.0E

Gust Response Factor	1.10			**Sds**	0.19	**Iterations**	17
Dead Load Factor	0.90	**Seismic Load Factor**	1.00	**Sd1**	0.10	**Ss**	0.18
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.53	**SA**	0.05	**S1**	0.06
						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		370.92	0.01	0.05	0.03	8.15	
10.00		357.25	0.04	0.07	0.04	9.91	
15.00		343.59	0.09	0.07	0.04	10.31	
20.00		329.92	0.15	0.07	0.03	10.49	
25.00		316.26	0.24	0.06	0.02	10.07	
30.00		302.59	0.35	0.03	0.01	8.06	
30.92	Bot - Section 2	53.99	0.37	0.03	0.01	1.34	
34.75	Top - Section 1	413.55	0.47	0.00	0.01	5.77	
35.00		12.33	0.47	-0.01	0.01	0.16	
40.00		240.45	0.62	-0.06	0.02	-1.41	
45.00		228.72	0.78	-0.11	0.05	-4.27	
50.00		216.99	0.96	-0.12	0.11	-2.97	
55.00	Appurtenance(s)	3116.4	1.17	-0.02	0.23	45.16	
60.00		193.52	1.39	0.26	0.42	13.01	
65.00		181.79	1.63	0.87	0.71	26.38	
67.00	Appurtenance(s)	4182.4	1.73	1.25	0.86	767.51	
70.00		100.63	1.89	1.98	1.14	25.05	
	Totals:	**10,961.4**				**932.7**	**Total Wind:** **15,657.1**

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

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Calculated Forces

Structure:	CT46147-A-SBA	**Code:**	EIA/TIA-222-G	9/30/2021	
Site Name:	New Haven Tweed	**Exposure:**	C		
Height:	70.00 (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	

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Load Case: 0.9D + 1.0E

Iterations 17

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)**	0.53	**SA**	0.05	**Seismic Importance Factor**			1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-10.86	-0.94	0.00	-61.05	0.00	61.05	1428.44	714.22	1875.49	931.07		0.00	0.00	0.073
5.00	-10.44	-0.94	0.00	-56.33	0.00	56.33	1399.52	699.76	1770.59	878.99		0.02	-0.03	0.072
10.00	-10.03	-0.94	0.00	-51.62	0.00	51.62	1368.89	684.44	1666.38	827.26		0.06	-0.06	0.070
15.00	-9.63	-0.93	0.00	-46.94	0.00	46.94	1336.55	668.28	1563.09	775.99		0.14	-0.09	0.068
20.00	-9.25	-0.92	0.00	-42.29	0.00	42.29	1302.51	651.25	1460.99	725.30		0.25	-0.12	0.065
25.00	-8.88	-0.92	0.00	-37.67	0.00	37.67	1266.75	633.38	1360.31	675.31		0.40	-0.15	0.063
30.00	-8.52	-0.91	0.00	-33.08	0.00	33.08	1229.29	614.65	1261.29	626.16		0.58	-0.19	0.060
30.92	-8.46	-0.91	0.00	-32.24	0.00	32.24	1222.24	611.12	1243.34	617.25		0.62	-0.19	0.059
34.75	-8.02	-0.91	0.00	-28.74	0.00	28.74	981.87	490.93	980.69	486.85		0.78	-0.22	0.067
35.00	-8.00	-0.91	0.00	-28.52	0.00	28.52	980.43	490.22	976.91	484.98		0.79	-0.22	0.067
40.00	-7.70	-0.91	0.00	-23.97	0.00	23.97	950.82	475.41	901.93	447.76		1.04	-0.25	0.062
45.00	-7.41	-0.92	0.00	-19.40	0.00	19.40	919.49	459.75	828.24	411.17		1.33	-0.29	0.055
50.00	-7.13	-0.92	0.00	-14.82	0.00	14.82	886.46	443.23	756.10	375.36		1.65	-0.32	0.048
55.00	-4.24	-0.86	0.00	-10.23	0.00	10.23	851.72	425.86	685.73	340.43		2.00	-0.35	0.035
60.00	-4.04	-0.85	0.00	-5.94	0.00	5.94	815.27	407.63	617.40	306.50		2.37	-0.37	0.024
65.00	-3.86	-0.82	0.00	-1.71	0.00	1.71	768.23	384.11	545.04	270.58		2.76	-0.38	0.011
67.00	-0.09	-0.03	0.00	-0.08	0.00	0.08	747.73	373.87	516.20	256.26		2.92	-0.38	0.000
70.00	0.00	-0.02	0.00	0.00	0.00	0.00	717.00	358.50	474.41	235.52		3.16	-0.38	0.000

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Wind Loading - Shaft

Structure:	CT46147-A-SBA	**Code:**	EIA/TIA-222-G	9/30/2021	
Site Name:	New Haven Tweed	**Exposure:**	C		
Height:	70.00 (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	

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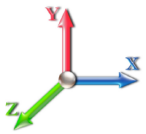
Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 18

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	150.40	0.750	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	7.442	8.19	145.00	0.750	0.000	5.00	13.350	10.01	82.0	0.0	370.9
10.00		1.00	0.85	7.442	8.19	139.60	0.750	0.000	5.00	12.862	9.65	79.0	0.0	357.3
15.00		1.00	0.85	7.442	8.19	134.19	0.750	0.000	5.00	12.373	9.28	76.0	0.0	343.6
20.00		1.00	0.90	7.896	8.69	132.66	0.750	0.000	5.00	11.885	8.91	77.4	0.0	329.9
25.00		1.00	0.95	8.276	9.10	130.11	0.750	0.000	5.00	11.397	8.55	77.8	0.0	316.3
30.00		1.00	0.98	8.600	9.46	126.83	0.750	0.000	5.00	10.908	8.18	77.4	0.0	302.6
30.92	Bot - Section 2	1.00	0.99	8.654	9.52	126.16	0.750	0.000	0.92	1.947	1.46	13.9	0.0	54.0
34.75	Top - Section 1	1.00	1.01	8.870	9.76	123.20	0.750	0.000	3.83	8.086	6.06	59.2	0.0	413.5
35.00		1.00	1.01	8.883	9.77	124.93	0.750	0.000	0.25	0.517	0.39	3.8	0.0	12.3
40.00		1.00	1.04	9.137	10.05	120.71	0.750	0.000	5.00	10.091	7.57	76.1	0.0	240.4
45.00		1.00	1.07	9.366	10.30	116.15	0.750	0.000	5.00	9.603	7.20	74.2	0.0	228.7
50.00		1.00	1.09	9.576	10.53	111.32	0.750	0.000	5.00	9.114	6.84	72.0	0.0	217.0
55.00	Appurtenance(s)	1.00	1.12	9.770	10.75	106.25	0.750	0.000	5.00	8.626	6.47	69.5	0.0	205.3
60.00		1.00	1.14	9.951	10.95	100.98	0.750	0.000	5.00	8.137	6.10	66.8	0.0	193.5
65.00		1.00	1.16	10.120	11.13	95.53	0.750	0.000	5.00	7.649	5.74	63.9	0.0	181.8
67.00	Appurtenance(s)	1.00	1.16	10.185	11.20	93.31	0.750	0.000	2.00	2.923	2.19	24.6	0.0	69.4
70.00		1.00	1.17	10.279	11.31	89.93	0.750	0.000	3.00	4.238	3.18	35.9	0.0	100.6
								Totals:	**70.00**			**1,029.3**		**3,937.2**

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Discrete Appurtenance Forces

Structure:	CT46147-A-SBA	**Code:**	EIA/TIA-222-G	9/30/2021	
Site Name:	New Haven Tweed	**Exposure:**	C		
Height:	70.00 (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	

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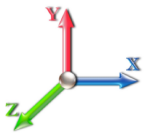
Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 18

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	67.00	RFS	3	10.185	11.203	0.46	0.75	9.22	122.10	0.000	0.000	103.31	0.00	0.00
2	67.00	Ericsson 4415 B66A	3	10.185	11.203	0.50	0.75	2.80	138.90	0.000	0.000	31.41	0.00	0.00
3	67.00	Ericsson 4424 B25	3	10.185	11.203	0.50	0.75	3.09	264.00	0.000	0.000	34.62	0.00	0.00
4	67.00	Ericsson 4449 B71 + B85	3	10.185	11.203	0.50	0.75	2.97	219.60	0.000	0.000	33.27	0.00	0.00
5	67.00	RFS ACU-A20-N RET	4	10.185	11.203	0.38	0.75	0.21	4.00	0.000	0.000	2.35	0.00	0.00
6	67.00	SitePro1 RMQP-4096-HK	1	10.185	11.203	1.00	1.00	51.70	2645.00	0.000	0.000	579.21	0.00	0.00
7	67.00	Ericsson AIR6449 B41	3	10.185	11.203	0.53	0.75	9.03	309.00	0.000	0.000	101.12	0.00	0.00
8	67.00	RFS	3	10.185	11.203	0.52	0.75	31.88	384.00	0.000	0.000	357.14	0.00	0.00
9	67.00	ALU 800 MHz Filter	3	10.185	11.203	0.50	0.75	1.18	26.40	0.000	0.000	13.17	0.00	0.00
10	55.00	Antel BXA-80063-6BF w/	3	9.770	10.747	0.62	0.80	13.59	57.60	0.000	0.000	146.06	0.00	0.00
11	55.00	RFS DB-B1-6C-12AB-0Z	1	9.770	10.747	1.00	1.00	4.10	21.40	0.000	0.000	44.06	0.00	0.00
12	55.00	Samsung LTE 700/850	3	9.770	10.747	0.54	0.80	3.01	210.90	0.000	0.000	32.32	0.00	0.00
13	55.00	Samsung LTE AWS/PCS	3	9.770	10.747	0.54	0.80	3.01	253.20	0.000	0.000	32.32	0.00	0.00
14	55.00	Commscope	3	9.770	10.747	0.40	0.80	0.44	31.20	0.000	0.000	4.77	0.00	0.00
15	55.00	Samsung MT6407-77A	3	9.770	10.747	0.56	0.80	7.88	238.20	0.000	0.000	84.68	0.00	0.00
16	55.00	Commscope	6	9.770	10.747	0.66	0.80	36.29	379.80	0.000	0.000	390.07	0.00	0.00
17	55.00	MOD	1	9.770	10.747	0.75	0.75	12.38	500.00	0.000	0.000	133.00	0.00	0.00
18	55.00	T-Arm	3	9.770	10.747	0.56	0.75	16.88	1200.00	0.000	0.000	181.36	0.00	0.00
19	55.00	RFS DB-T1-6Z-8AB-0Z	1	9.770	10.747	1.00	1.00	4.80	18.90	0.000	0.000	51.59	0.00	0.00
							Totals:		**7,024.20**			**2,355.83**		

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Total Applied Force Summary

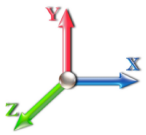
Structure:	CT46147-A-SBA		**Code:**	EIA/TIA-222-G	9/30/2021
Site Name:	New Haven Tweed		**Exposure:**	C	
Height:	70.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 28

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 18

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		86.06	466.02	0.00	0.00
10.00		83.06	452.35	0.00	0.00
15.00		80.06	438.69	0.00	0.00
20.00		81.77	425.02	0.00	0.00
25.00		82.36	411.36	0.00	0.00
30.00		82.12	397.69	0.00	0.00
30.92		14.77	71.43	0.00	0.00
34.75		62.91	486.46	0.00	0.00
35.00		4.04	17.09	0.00	0.00
40.00		81.09	335.55	0.00	0.00
45.00		79.35	323.82	0.00	0.00
50.00		77.27	312.09	0.00	0.00
55.00	(27) attachments	1175.13	3211.56	0.00	0.00
60.00		72.28	215.22	0.00	0.00
65.00		69.43	203.49	0.00	0.00
67.00	(26) attachments	1282.41	4191.11	0.00	0.00
70.00		39.33	103.75	0.00	0.00
	Totals:	**3,453.43**	**12,062.68**	**0.00**	**0.00**

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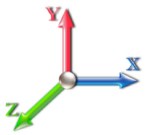
Linear Appurtenance Segment Forces (Factored)

Structure:	CT46147-A-SBA	**Code:**	EIA/TIA-222-G	9/30/2021	
Site Name:	New Haven Tweed	**Exposure:**	C		
Height:	70.00 (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	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 18

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	0.42	0.50	0.000	0.000	7.442	4.09	5.20
10.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	0.42	0.50	0.000	0.000	7.442	4.09	5.20
15.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	0.42	0.50	0.000	0.000	7.442	4.09	5.20
20.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	0.42	0.50	0.000	0.000	7.896	4.34	5.20
25.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	0.42	0.50	0.000	0.000	8.276	4.55	5.20
30.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	0.42	0.50	0.000	0.000	8.600	4.73	5.20
30.92	Step bolts (ladder)	Yes	0.92	1.200	1.00	0.08	0.09	0.000	0.000	8.654	0.87	0.95
34.75	Step bolts (ladder)	Yes	3.83	1.200	1.00	0.32	0.38	0.000	0.000	8.870	3.74	3.99
35.00	Step bolts (ladder)	Yes	0.25	1.200	1.00	0.02	0.02	0.000	0.000	8.883	0.24	0.26
40.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	0.42	0.50	0.000	0.000	9.137	5.03	5.20
45.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	0.42	0.50	0.000	0.000	9.366	5.15	5.20
50.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	0.42	0.50	0.000	0.000	9.576	5.27	5.20
55.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	0.42	0.50	0.000	0.000	9.770	5.37	5.20
60.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	0.42	0.50	0.000	0.000	9.951	5.47	5.20
65.00	Step bolts (ladder)	Yes	5.00	1.200	1.00	0.42	0.50	0.000	0.000	10.120	5.57	5.20
67.00	Step bolts (ladder)	Yes	2.00	1.200	1.00	0.17	0.20	0.000	0.000	10.185	2.24	2.08
70.00	Step bolts (ladder)	Yes	3.00	1.200	1.00	0.25	0.30	0.000	0.000	10.279	3.39	3.12
									Totals:		**68.2**	**72.8**

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Calculated Forces

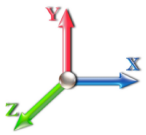
Structure:	CT46147-A-SBA	**Code:**	EIA/TIA-222-G	9/30/2021	
Site Name:	New Haven Tweed	**Exposure:**	C		
Height:	70.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 30	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 18

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	-12.06	-3.46	0.00	-189.50	0.00	189.50	1428.44	714.22	1875.49	931.07	0.00	0.000	0.000	0.212
5.00	-11.59	-3.39	0.00	-172.18	0.00	172.18	1399.52	699.76	1770.59	878.99	0.05	-0.091	0.000	0.204
10.00	-11.13	-3.33	0.00	-155.21	0.00	155.21	1368.89	684.44	1666.38	827.26	0.19	-0.183	0.000	0.196
15.00	-10.69	-3.26	0.00	-138.56	0.00	138.56	1336.55	668.28	1563.09	775.99	0.43	-0.275	0.000	0.187
20.00	-10.26	-3.20	0.00	-122.24	0.00	122.24	1302.51	651.25	1460.99	725.30	0.77	-0.367	0.000	0.176
25.00	-9.84	-3.13	0.00	-106.26	0.00	106.26	1266.75	633.38	1360.31	675.31	1.21	-0.459	0.000	0.165
30.00	-9.44	-3.05	0.00	-90.63	0.00	90.63	1229.29	614.65	1261.29	626.16	1.74	-0.549	0.000	0.152
30.92	-9.37	-3.04	0.00	-87.83	0.00	87.83	1222.24	611.12	1243.34	617.25	1.84	-0.566	0.000	0.150
34.75	-8.88	-2.98	0.00	-76.17	0.00	76.17	981.87	490.93	980.69	486.85	2.33	-0.634	0.000	0.166
35.00	-8.86	-2.98	0.00	-75.43	0.00	75.43	980.43	490.22	976.91	484.98	2.36	-0.638	0.000	0.165
40.00	-8.52	-2.91	0.00	-60.52	0.00	60.52	950.82	475.41	901.93	447.76	3.08	-0.729	0.000	0.144
45.00	-8.20	-2.84	0.00	-45.97	0.00	45.97	919.49	459.75	828.24	411.17	3.89	-0.811	0.000	0.121
50.00	-7.88	-2.76	0.00	-31.78	0.00	31.78	886.46	443.23	756.10	375.36	4.78	-0.881	0.000	0.094
55.00	-4.69	-1.54	0.00	-17.96	0.00	17.96	851.72	425.86	685.73	340.43	5.73	-0.934	0.000	0.058
60.00	-4.47	-1.47	0.00	-10.25	0.00	10.25	815.27	407.63	617.40	306.50	6.73	-0.969	0.000	0.039
65.00	-4.27	-1.40	0.00	-2.91	0.00	2.91	768.23	384.11	545.04	270.58	7.76	-0.989	0.000	0.016
67.00	-0.10	-0.04	0.00	-0.12	0.00	0.12	747.73	373.87	516.20	256.26	8.17	-0.992	0.000	0.001
70.00	0.00	-0.04	0.00	0.00	0.00	0.00	717.00	358.50	474.41	235.52	8.80	-0.992	0.000	0.000

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Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
1.2D + 1.6W 101 mph Wind	15.7	0.00	14.42	0.00	0.00	863.25
0.9D + 1.6W 101 mph Wind	15.7	0.00	10.80	0.00	0.00	855.79
1.2D + 1.0Di + 1.0Wi 50 mph Wind	3.8	0.00	25.37	0.00	0.00	209.74
1.2D + 1.0E	0.9	0.00	14.47	0.00	0.00	61.63
0.9D + 1.0E	0.9	0.00	10.86	0.00	0.00	61.05
1.0D + 1.0W 60 mph Wind	3.5	0.00	12.06	0.00	0.00	189.50

Max Stresses

Load Case	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Elev (ft)	Stress Ratio
1.2D + 1.6W 101 mph Wind	-14.42	-15.71	0.00	-863.25	0.00	-863.25	1428.44	714.22	1875.49	931.07	0.00	0.938
0.9D + 1.6W 101 mph Wind	-10.80	-15.70	0.00	-855.79	0.00	-855.79	1428.44	714.22	1875.49	931.07	0.00	0.927
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-25.37	-3.81	0.00	-209.74	0.00	-209.74	1428.44	714.22	1875.49	931.07	0.00	0.243
1.2D + 1.0E	-14.47	-0.94	0.00	-61.63	0.00	-61.63	1428.44	714.22	1875.49	931.07	0.00	0.076
0.9D + 1.0E	-10.86	-0.94	0.00	-61.05	0.00	-61.05	1428.44	714.22	1875.49	931.07	0.00	0.073
1.0D + 1.0W 60 mph Wind	-12.06	-3.46	0.00	-189.50	0.00	-189.50	1428.44	714.22	1875.49	931.07	0.00	0.212

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Base Plate Summary

Structure:	CT46147-A-SB		**Code:**	EIA/TIA-222-G	9/30/2021
Site Name:	New Haven Tweed		**Exposure:**	C	
Height:	70.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 32

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Reactions

Original Design

Moment (kip-ft):	723.00
Axial (kip):	10.29
Shear (kip):	12.98

Analysis (1.2D + 1.6W)

Moment (kip-ft):	863.25
Axial (kip):	14.42
Shear (kip):	15.71

Base Plate

Yield (ksi):	60.00
Width (in):	45.13
Style:	Round
Polygon Sides:	0.00
Clip Length (in):	0.00
Effective Len (in):	23.97
Moment (kip-in):	483.19
Allow Stress (ksi):	81.00
Applied Stress (ksi):	29.97
Stress Ratio:	0.37

Anchor Bolts

Bolt Circle:	39.13
Number Bolts:	8.00
Bolt Type:	2.25" 18J
Bolt Diameter (in):	2.25
Yield (ksi):	75.00
Ultimate (ksi):	100.00
Arrangement:	Radial
Cluster Dist (in):	0.00
Start Angle (deg):	0.00

Compression

Force (kip):	135.54
Allowable (kip):	260.00
Ratio:	0.54

Tension

Force (kip):	129.19
Allowable (kip):	260.00
Ratio:	0.51

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Pier Foundation Design For Monopole

				Date
				9/30/2021
Customer Name:	Verizon	**EIA/TIA Standard:**	EIA-222-G
Site Name:		**Structure Height (Ft.):**	70
Site Number:	CT46147-A-SBA	**Engineer Name:**	J. Chen
Engr. Number:	116900	**Engineer Login ID:**	

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Foundation Info Obtained from: Drawings/Calculations

Structure Type: Monopole

Analysis or Design? Analysis

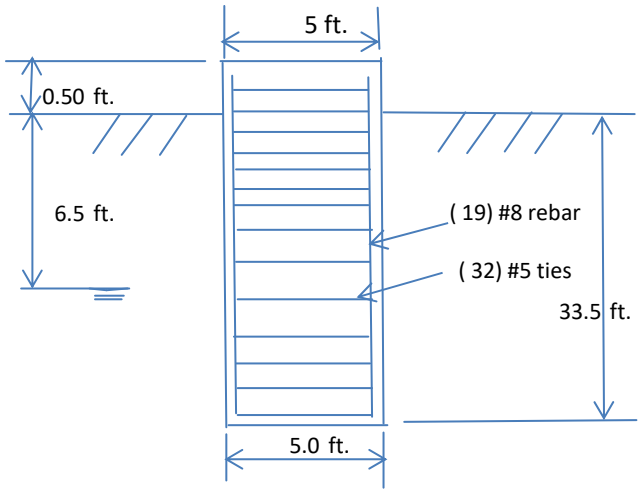
Acceptable overstress (5.0%

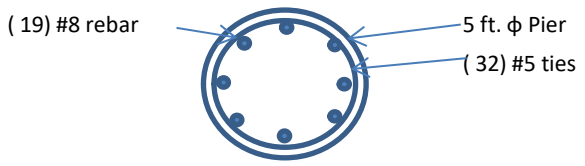
Base Reactions (Factored):

Axial Load (Kips):	14.4	Shear Force (Kips):	15.7
Uplift Force (Kips):	0.0	Moment (Kips-ft):	863.2

Foundation Geometries:

Diameter of Pier (ft.):	5.0	Depth of Base B. G. S. :	33.5	ft.
Pier Height A. G. (ft.):	0.50			





Monopole Pier Foundation

Material Properties and Reabr Info:

Concrete Strength (psi):	4000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield strength:	60	ksi
Vertical Rebar Size #:	8	Tie / Stirrup Size #:	5	
Qty. of Vertical Rebars:	19	Tie Spacing:	16.0	in.
Concrete Cover (in.):	4	Concrete unit weight:	150.0	pcf

Soil Design Parameters:

Water Table B.G.S. (ft):	6.5	Unit weight of water:	62.4	psf
Ratio of Uplift/Axial Skin Friction:	1.0	Pullout failure Angle:	30	(°)

Skin Frictions are to be obtained from: Soil Report

Depth of Layers (ft) Top	Bottom	γ_{soil} (pcf)	ϕ (°)	Cohesion (psf)	Ultimate Skin Friction (psf)	Ultimate Bearing (psf)	Soil Types
0.0	3.0	120	0				Sand
3.0	8.0	120	32	0	500		Sand
8.0	11.0	110	0	0	500		Silt
11.0	14.0	95	0	0	500		Silt
14.0	51.0	115	32	0	1500	8000	Sand
51.0	56.0						

Soil weight Increase Factor for bouyant soils (1.0 to 1.15): 1.1

Foundation Analysis and Design:

Uplift Strength Reduction Factor:	0.75	Soil Bearing Strength Reduction Factor:	0.75	
Total Dry Soil Volume from Conical Failure (cu. Ft.):	8026	Dry Soil Weight from Conical Failure:	963	Kips
Total Buoyant Soil Volume from Conical Failure (cu. Ft.):	10176	Buoyant Soil Weight from Conical Failure (K	559	Kips
Total Dry Concrete Volume (cu. Ft.):	137	Total Dry Concrete Weight:	20.6	Kips
Total Buoyant Concrete Volume (cu. Ft.):	530.1	Total Buoyant Concrete Weight:	46.44	Kips
Total Effective Concrete Weight (Kips):	67.1	Total Effective Soil Weight:	1522.0	Kips
Total Effective Vertical Load on Base (Kips):	37.0			

Check Soil Capacities:

					Usage	
Allowable Foundation Overturning Resistance (kips-ft.):	7793.1	>	Design Factored Moment (kips-ft):	1230	0.16	OK!
Factor of Safety of Passive Soil Resistance against Moment:	6.34	OK!				

Check the capacities of Reinforceing Concrete:

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

Reinforcing Concrete Pier:

					Usage	
Vertical Steel Rebar Area (sq. in./each):	0.79		Tie / Stirrup Area (sq. in./each):	0.31		
Calculated Moment Capacity (Mn,Kips-Ft):	1730.0	>	Design Factored Moment (Mu, K-Ft):	920.1	0.53	OK!
Calculated Shear Capacity (Kips):	441.5	>	Design Factored Shear (Kips):	78.6	0.18	OK!
Calculated Tension Capacity (Tn, Kips):	810.5	>	Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	4972	>	Design Factored Axial Load (Pu Kips):	14.4	0.00	OK!
Moment & Axial Strength Combination:	0.53	OK!	Max. Allowable Tie/Stirrup Spacing:	12.00	in.	
Pier Reinforcement Ratio:	0.005	Reinforcement Ratio is satisfied per ACI				

Maser Consulting Connecticut
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856.797.0412
greg.dulnik@colliersengineering.com

Post-Mod Antenna Mount Analysis Report and PMI Requirements

Mount Fix

SMART Tool Project #: 10045313
Maser Consulting Connecticut Project #: 20777634A

April 1, 2021

Site Information	*Site ID:*	*469123-VZW / East_Haven_Cosey_Beach_CT*
	Site Name:	*East_Haven_Cosey_Beach_CT*
	Carrier Name:	*Verizon Wireless*
	Address:	*60 Commerce Street* *East Haven, Connecticut 06512* *New Haven County*
	Latitude:	*41.251233°*
	Longitude:	*-72.882094°*
Structure Information	*Tower Type:*	*70-Ft Monopole*
	Mount Type:	*12.50-Ft T-Arm*

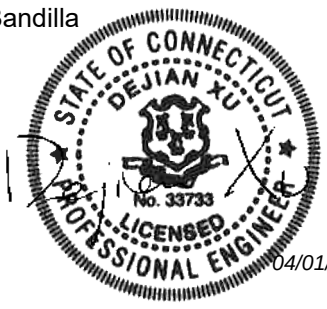
FUZE ID # 16227600

Analysis Results

T-Arm: **56.6% 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: Zachary Bandilla



04/01/2021

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
Radio Frequency Data Sheet (RFDS)	*Verizon RFDS Site ID: 628868, dated December 28, 2020*
Mount Mapping Report	*Hudson Design Group LLC., Site ID: 469123, dated January 27, 2021*
Construction Drawings	*Centerline Communications Site ID: 628868, dated February 1, 2021*
Previous Mount Analysis	*Maser Consulting Connecticut, Project #: 20777634, Dated February 10, 2021*
Mount Modification Drawings	*Maser Consulting Connecticut, Project #: 20777634, Dated March 31, 2021*

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H	
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), V_{ULT}:	121 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:	1.000
Seismic Parameters:	S_S:	0.199
	S_1:	0.053
Maintenance Parameters:	Wind Speed (3-sec. Gust):	30 mph
	Maintenance Live Load, Lv:	250 lbs.
	Maintenance Live Load, Lm:	500 lbs.
Analysis Software:	RISA-3D (V17)	

Final Loading Configuration:

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

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
53.00	55.00	6	Commscope	JAHH-65B-R3B	Added
		3	Samsung	MT6407-77A	
		3	Commscope	CBC78T-DS-43-2X	
		1	RFS	DB-B1-6C-12AB-0Z	
		3	Samsung	B2/B66A RRH-BR049	
		3	Samsung	B5/B13 RRH-BR04C	
		3	Amphenol	BXA-80063-6BF	Retained
		1	Raycap	RRFDC-3315-PF-48*	

* Equipment is flush mounted directly to the Monopole. They are not mounted on the T-Arm mounts 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
Antenna Pipe	*44.8%*	*Pass*
Face Horizontal	*30.6%*	*Pass*
Standoff	*33.9%*	*Pass*
MOD Face Horizontal	*22.1%*	*Pass*
MOD T-Arm	*43.9%*	*Pass*
Connection Check	*56.6%*	*Pass*

Structure Rating – *(Controlling Utilization of all Components)*	**56.6%**

Recommendation:

The existing mounts 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 Wind Speed Adoption and Usage Letter

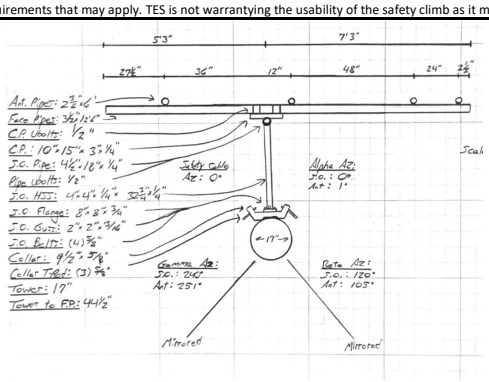
V3.0 Updated on 8-31-2020

Antenna Mount Mapping Form (PATENT PENDING)

FCC #

Tower Owner:	SBA	**Mapping Date:**	1/27/2021
Site Name:	East Haven Cosey Beach CT (VZW)	**Tower Type:**	Monopole
Site Number or ID:	469123	**Tower Height (Ft.):**	70' (est.)
Mapping Contractor:	HUDSON DESIGN GROUP LLC,	**Mount Elevation (Ft.):**	55.9

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 warrantying the usability of the safety climb as it must be assessed prior to each use in compliance with OSHA requirements.

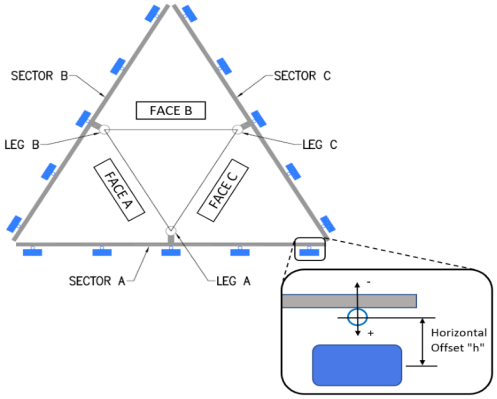


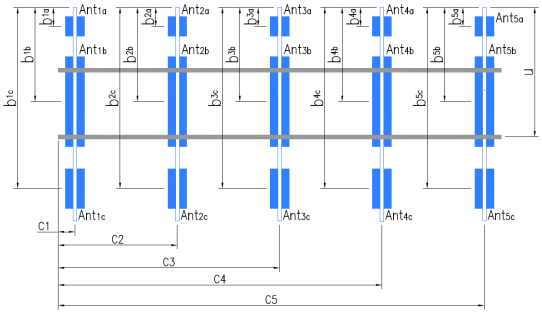
Mount Pipe Configuration and Geometries [Unit = Inches]

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	PIPE 2" STD X 0.154 X 72" LONG	48.00	27.50	C1	PIPE 2" STD X 0.154 X 72" LONG	48.00	27.50
A2	PIPE 2" STD X 0.154 X 72" LONG	48.00	48.00	C2	PIPE 2" STD X 0.154 X 72" LONG	48.00	48.00
A3	PIPE 2" STD X 0.154 X 72" LONG	48.00	48.00	C3	PIPE 2" STD X 0.154 X 72" LONG	48.00	48.00
A4	PIPE 2" STD X 0.154 X 72" LONG	48.00	24.00	C4	PIPE 2" STD X 0.154 X 72" LONG	48.00	24.00
A5				C5			
A6				C6			
B1	PIPE 2" STD X 0.154 X 72" LONG	48.00	27.50	D1			
B2	PIPE 2" STD X 0.154 X 72" LONG	48.00	48.00	D2			
B3	PIPE 2" STD X 0.154 X 72" LONG	48.00	48.00	D3			
B4	PIPE 2" STD X 0.154 X 72" LONG	48.00	24.00	D4			
B5				D5			
B6				D6			

Distance between bottom rail and mount CL elevation (dim d). Unit is inches. See 'Mount Elev Ref' tab for details. :	0.00
Distance from top of bottom support rail to lowest tip of ant./eqpt. of Carrier above. (N/A if > 10 ft.) :	8
Distance from top of bottom support rail to highest tip of ant./eqpt. of Carrier below. (N/A if > 10 ft.) :	
Please enter additional infomation or comments below.	

Tower Face Width at Mount Elev. (ft.):		Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.):	17



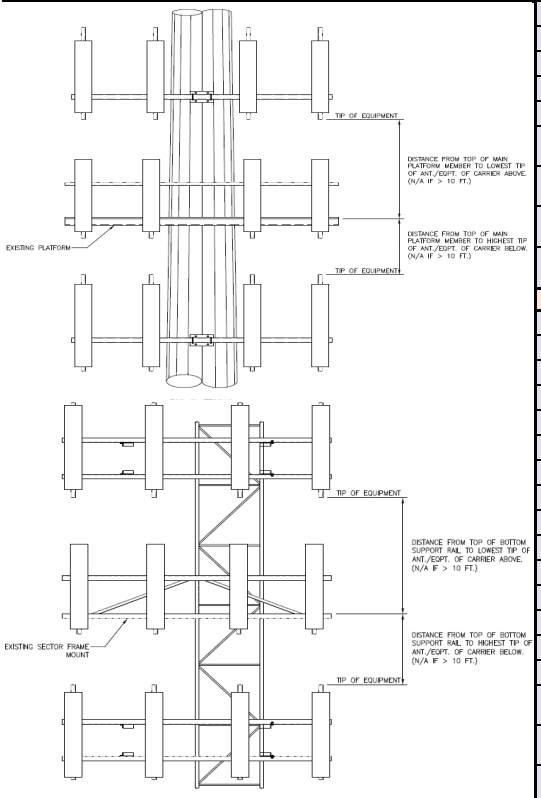


Antenna Layout (Looking Out From Tower)

Ants. Items	Enter antenna model. If not labeled, enter "Unknown". Antenna Models if Known	Width (in.)	Depth (in.)	Height (in.)	Coax Size and Qty	Antenna Center-line (Ft.)	Mounting Locations [Units are inches and degrees] Vertical Distances"b_{1a}, b_{2a}, b_{3a}, b_{1b}...." (Inches)	Horiz. Offset "h" (Use "-" if Ant. is behind)	Antenna Azimuth (Degrees)	Photos of antennas Photo Numbers
Sector A										
Ant_{1a}	9442 RRH2x40-AWS	12.00	8.00	25.00		57.4	30.00	8.00		5
Ant_{1b}	BXA 171063-8BF-EDIN	6.00	4.00	48.00		58.9	12.00	7.00	0.00	5
Ant_{1c}										
Ant_{2a}										
Ant_{2b}	BXA 70063/6CF-EDIN	11.00	5.00	71.00		56.9	36.00	10.50	0.00	6
Ant_{2c}										
Ant_{3a}	BXA 185063/8CF-EDIN	6.00	4.00	48.00		56.9	36.00	6.00	0.00	7
Ant_{3b}	RFS Diplexer	6.50	0.75	4.50		55.9	48.00			7
Ant_{3c}										
Ant_{4a}	BXA 80063-6BF-EDIN	11.50	5.00	72.00		56.9	36.00	9.00	0.00	8
Ant_{4b}	RFS Diplexer	6.50	0.75	4.50		55.9	48.00			7
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower	RRFDC-3315-PF-48	15.00	10.00	28.00	..5" Hybri	61		6.00		33
Ant on Tower										

Mount Azimuth (Degree) for Each Sector			Tower Leg Azimuth (Degree) for Each Sector	
Sector A:	0.00	Deg	Leg A:	Deg
Sector B:	120.00	Deg	Leg B:	Deg
Sector C:	240.00	Deg	Leg C:	Deg
Sector D:		Deg	Leg D:	Deg

Climbing Facility Information			
Location:	0 degrees	Deg	Other
Climbing Facility	Corrosion Type:		Good condition.
	Access:		Climbing path was unobstructed.
	Condition:		Good condition.



Sector B										
Ant_{1a}	9442 RRH2x40-AWS	12.00	8.00	25.00		57.4	30.00	8.00		17
Ant_{1b}	BXA 171063-8BF-EDIN	6.00	4.00	48.00		58.9	12.00	7.00	120.00	17
Ant_{1c}										
Ant_{2a}										
Ant_{2b}	BXA 70063/6CF-EDIN	11.00	5.00	71.00		56.9	36.00	10.50	120.00	18
Ant_{2c}										
Ant_{3a}	BXA 185063/8CF-EDIN	6.00	4.00	48.00		56.9	36.00	6.00	120.00	19
Ant_{3b}	RFS Diplexer	6.50	0.75	4.50		55.9	48.00			19
Ant_{3c}										
Ant_{4a}	BXA 80063-6BF-EDIN	11.50	5.00	72.00		56.9	36.00	9.00	105.00	20
Ant_{4b}	RFS Diplexer	6.50	0.75	4.50		55.9	48.00			19
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										
Sector C										
Ant_{1a}	9442 RRH2x40-AWS	12.00	8.00	25.00		57.4	30.00	8.00		29
Ant_{1b}	BXA 171063-8BF-EDIN	6.00	4.00	48.00		58.9	12.00	7.00	240.00	29
Ant_{1c}										
Ant_{2a}										
Ant_{2b}	BXA 70063/6CF-EDIN	11.00	5.00	71.00		56.9	36.00	10.50	240.00	30
Ant_{2c}										
Ant_{3a}	BXA 185063/8CF-EDIN	6.00	4.00	48.00		56.9	36.00	6.00	240.00	31
Ant_{3b}	RFS Diplexer	6.50	0.75	4.50		55.9	48.00			31
Ant_{3c}										
Ant_{4a}	BXA 80063-6BF-EDIN	11.50	5.00	72.00		56.9	36.00	9.00	240.00	32
Ant_{4b}	RFS Diplexer	6.50	0.75	4.50		55.9	48.00			31
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	(12) 1-5/8" COAX (1) 1-1/2" HYBRID	
2		
3	SAFETY CLIMB HAS EXCESSIVE SLACK	40
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)

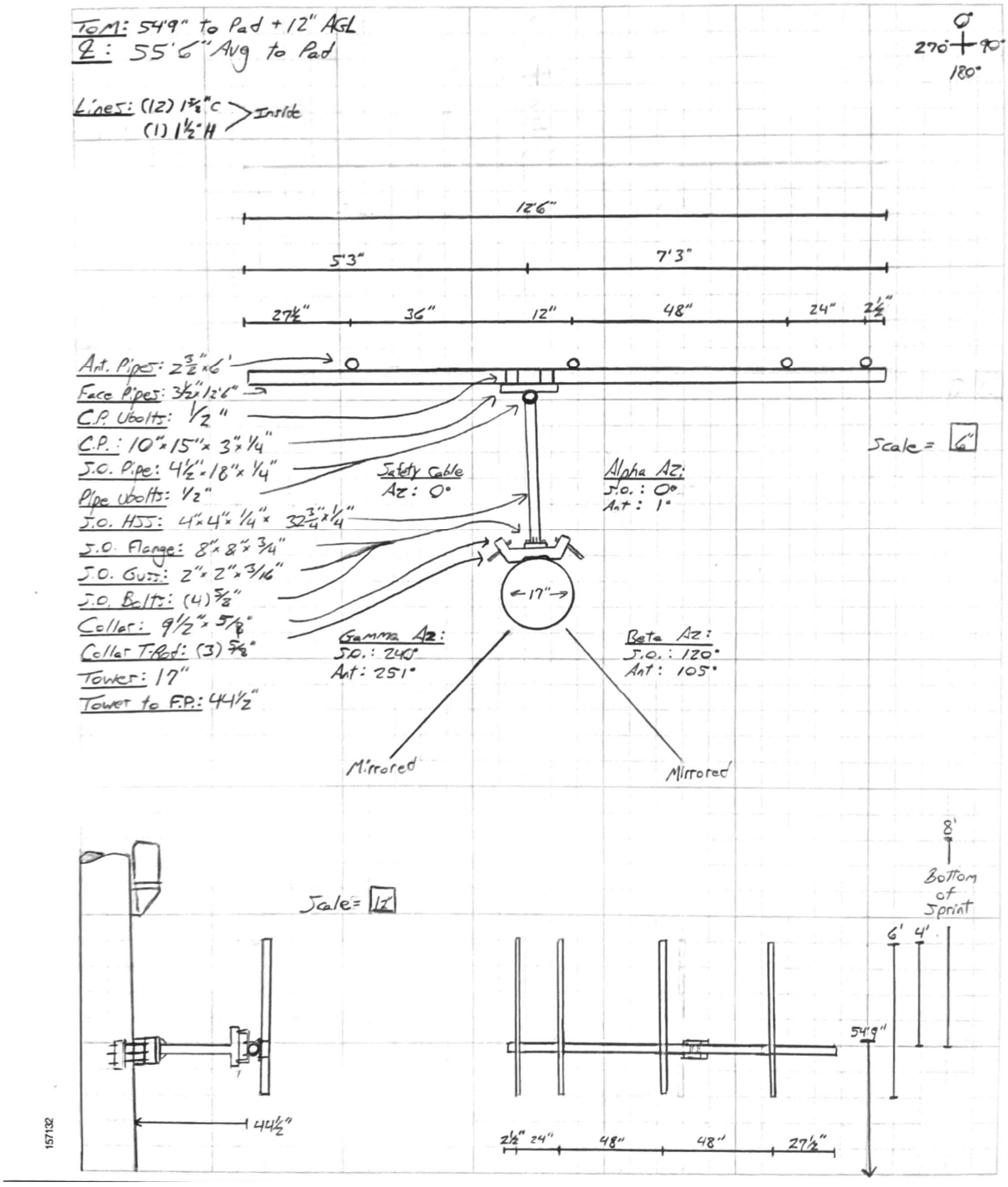
FCC #

Tower Owner:	SBA	**Mapping Date:**	1/27/2021
Site Name:	East Haven Cosey Beach CT (VZW)	**Tower Type:**	Monopole
Site Number or ID:	469123	**Tower Height (Ft.):**	70' (est.)
Mapping Contractor:	HUDSON DESIGN GROUP LLC,	**Mount Elevation (Ft.):**	55.9

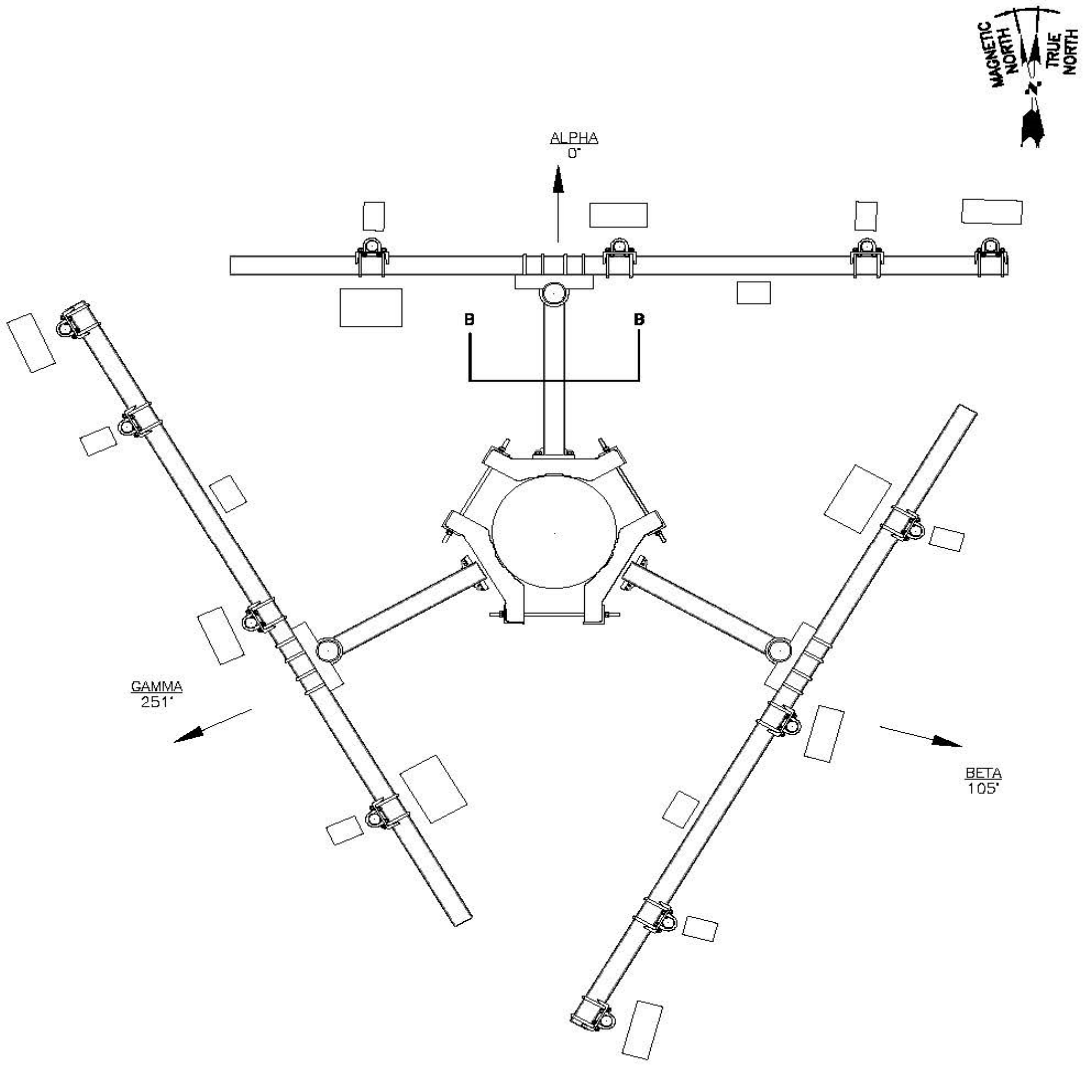
This antenna mapping form is the property of TES and under **PATENT PENDING.** The formation contained herein is considered confidential in nature and is to be used only for the specific customer it was intended for. Reproduction, transmission, publication, modification or disclosure by any method is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

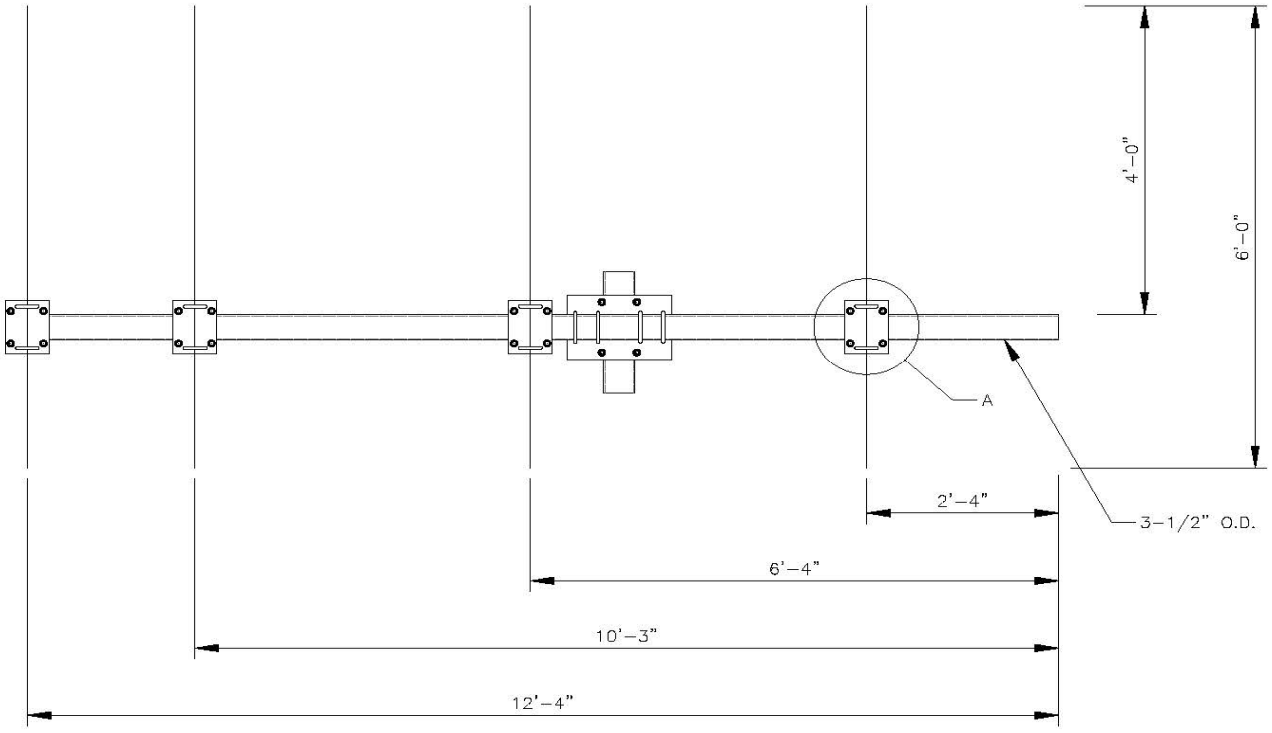
DATE: 1-27-21
Project Name: Maser Mappings
Project No.: East Haven Cosey Beach CT
Design By: Josh Chk'd By: _____ Page ____ of ____

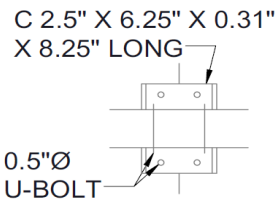


Please Insert Sketches of the Antenna Mount, cont'd

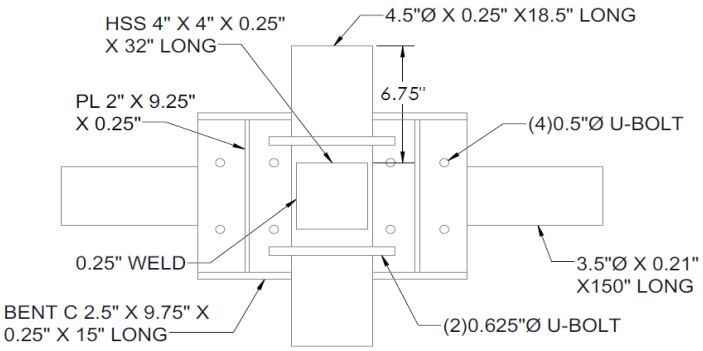


Please Insert Sketches of the Antenna Mount, cont'd

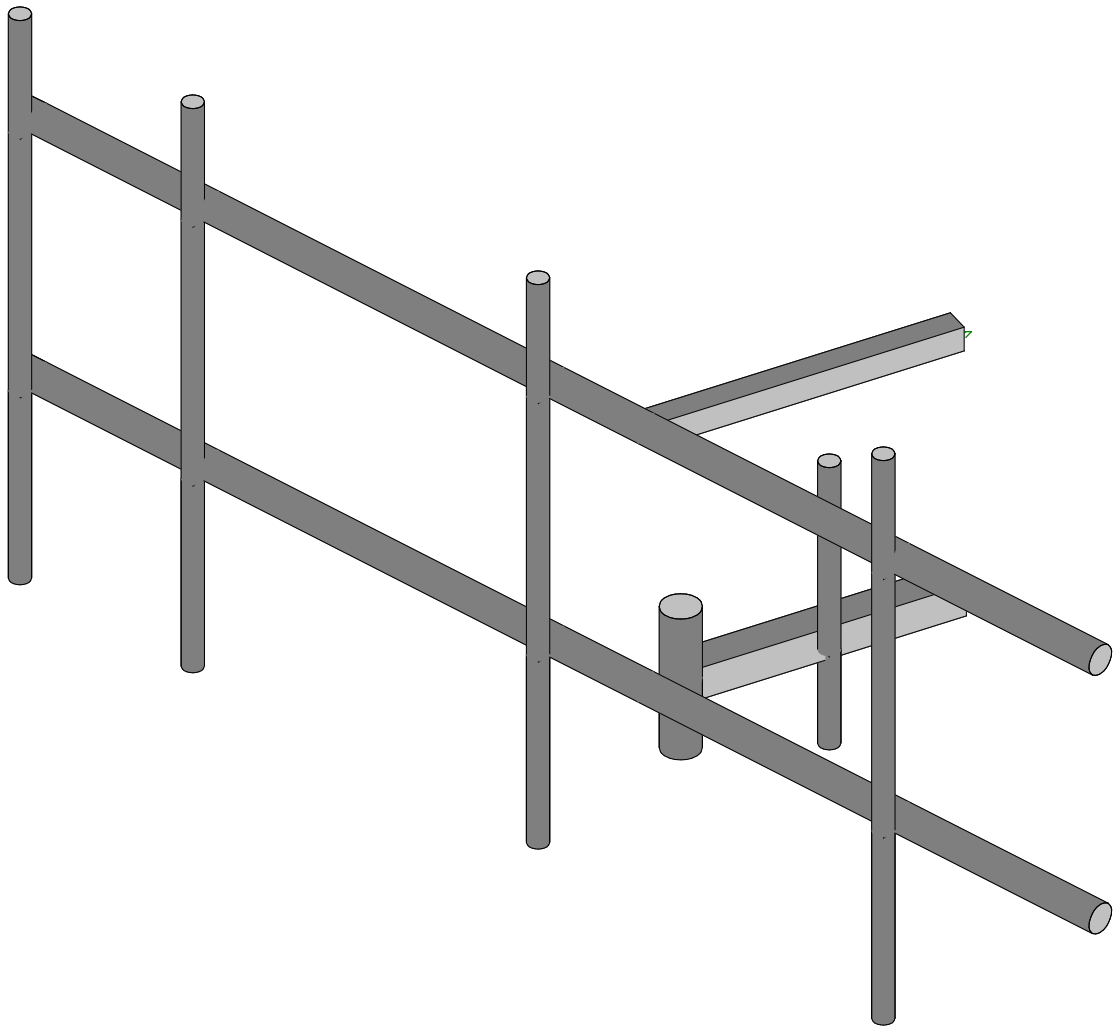




DETAIL A

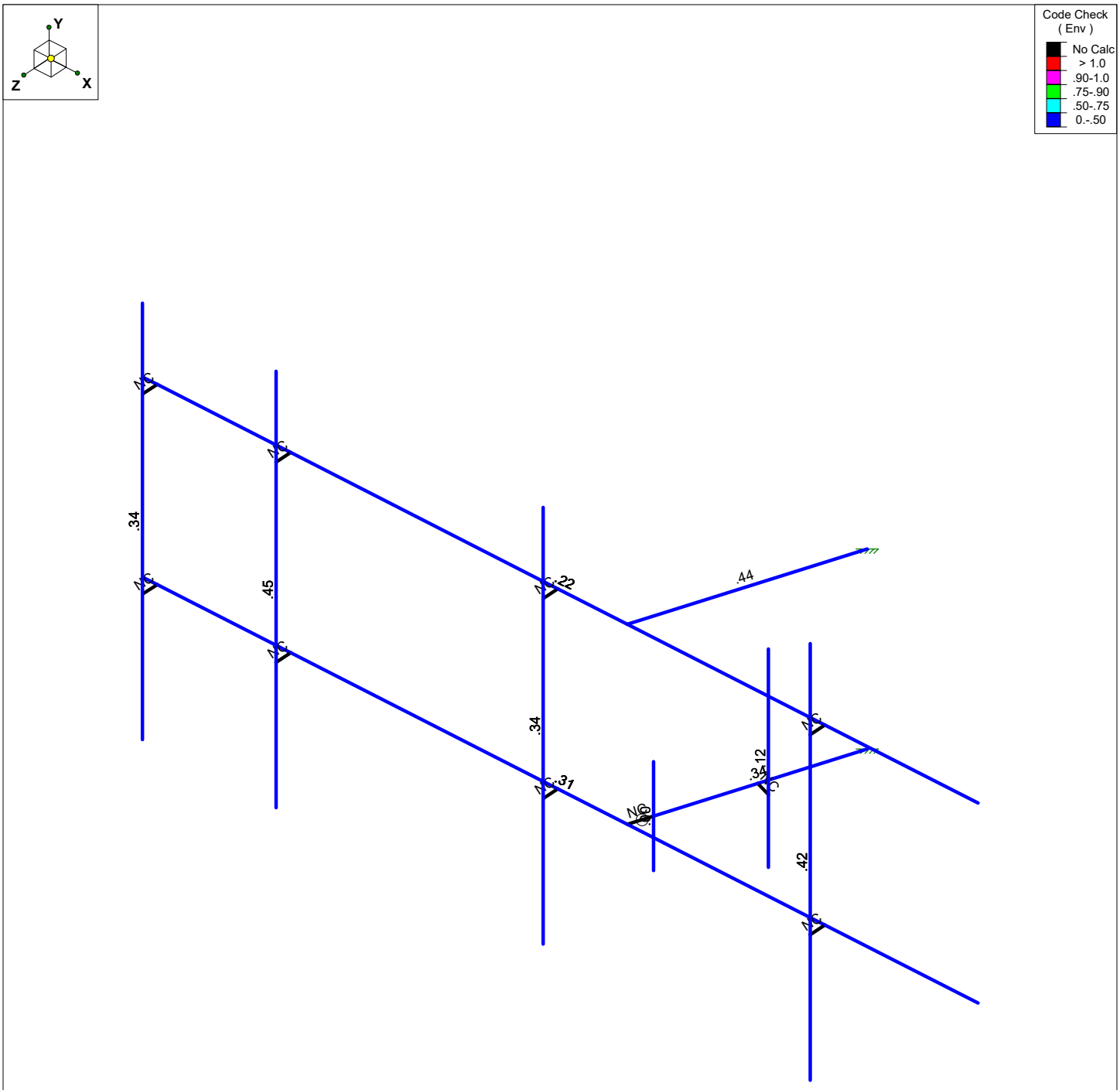


SECTION B-B



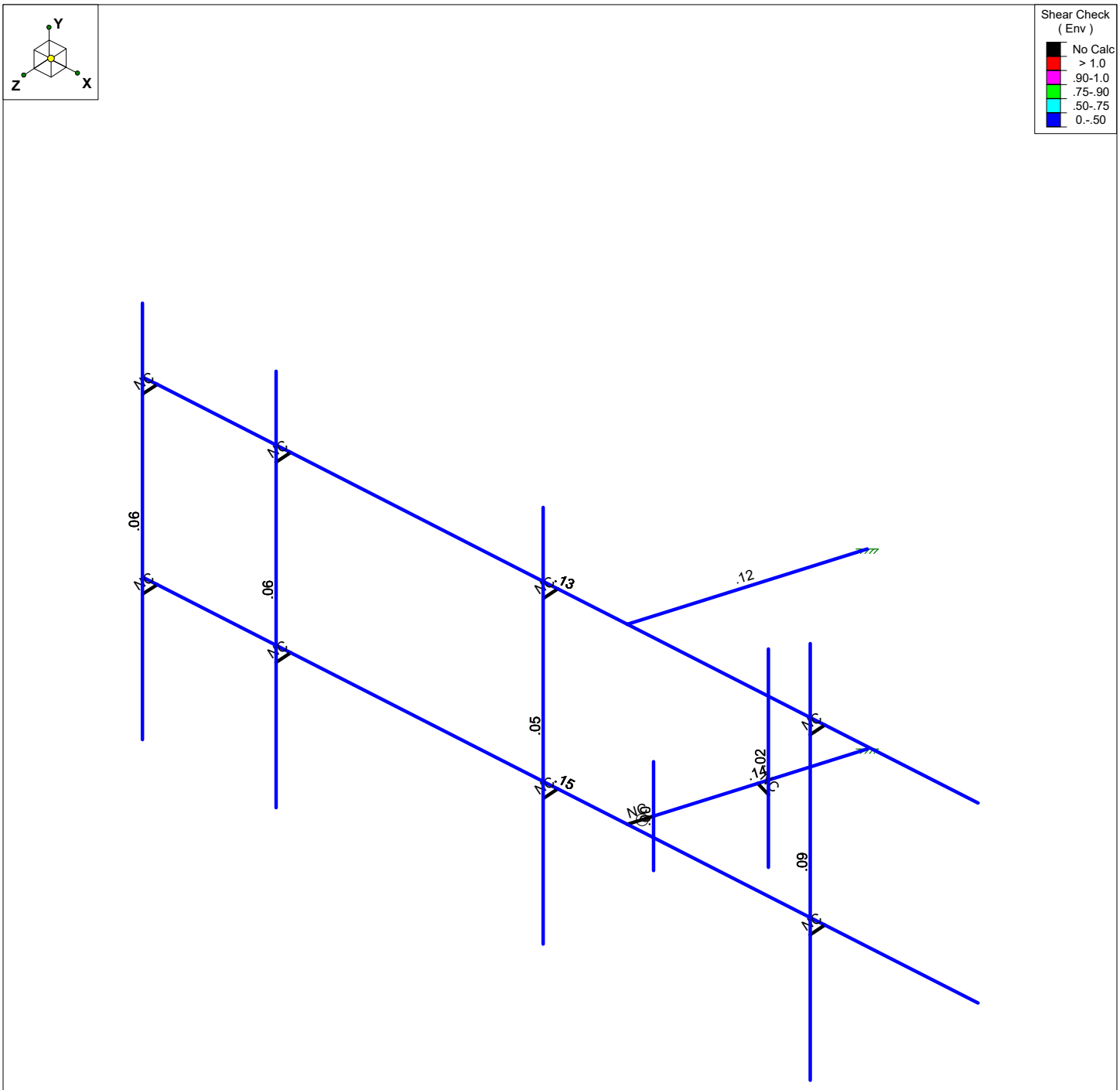
Envelope Only Solution

	468004-VZW_MT_LO_H	SK - 1
		Mar 29, 2021 at 11:47 AM
		MOD_469123-VZW_MT_LOT_B_...



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

	468004-VZW_MT_LO_H	SK - 2
		Mar 29, 2021 at 11:52 AM
		MOD_469123-VZW_MT_LOT_B_...



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

	468004-VZW_MT_LO_H	SK - 3
		Mar 29, 2021 at 11:53 AM
		MOD_469123-VZW_MT_LOT_B_...

Basic Load Cases

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

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
57	Structure Wi (120 De...	None						20		
58	Structure Wi (150 De...	None						20		
59	Structure Wi (180 De...	None						20		
60	Structure Wi (210 De...	None						20		
61	Structure Wi (240 De...	None						20		
62	Structure Wi (270 De...	None						20		
63	Structure Wi (300 De...	None						20		
64	Structure Wi (330 De...	None						20		
65	Structure Wm (0 Deg)	None						20		
66	Structure Wm (30 De...	None						20		
67	Structure Wm (60 De...	None						20		
68	Structure Wm (90 De...	None						20		
69	Structure Wm (120 D...	None						20		
70	Structure Wm (150 D...	None						20		
71	Structure Wm (180 D...	None						20		
72	Structure Wm (210 D...	None						20		
73	Structure Wm (240 D...	None						20		
74	Structure Wm (270 D...	None						20		
75	Structure Wm (300 D...	None						20		
76	Structure Wm (330 D...	None						20		
77	Lm1	None					1			
78	Lm2	None					1			
79	Lv1	None					1			
80	Lv2	None					1			

Load Combinations

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

Load Combinations (Continued)

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

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	N1	1.047437	0	0.080525	0	
2	N3	0.114007	0	2.645102	0	
3	N4	0	0	2.958333	0	
4	N5	0.114007	-.75	2.645102	0	
5	N6	0.114007	.75	2.645102	0	
6	N7	5.25	0	2.958333	0	
7	N8	-7.25	0	2.958333	0	
8	N9	-7.041667	0	2.958333	0	
9	N10	-5.041667	0	2.958333	0	
10	N11	2.958333	0	2.958333	0	
11	N12	-7.041667	0	3.208333	0	
12	N13	-5.041667	0	3.208333	0	
13	N14	2.958333	0	3.208333	0	
14	N15	-7.041667	4	3.208333	0	
15	N16	-5.041667	4	3.208333	0	
16	N17	2.958333	4	3.208333	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
17	N18	-7.041667	-2	3.208333	0	
18	N19	-5.041667	-2	3.208333	0	
19	N20	2.958333	-2	3.208333	0	
20	N20A	0.570034	0	1.392179	0	
21	N21	0.804957	0	1.477684	0	
22	N22	0.804957	2	1.477684	0	
23	N23	0.804957	-1	1.477684	0	
24	N24	-1.041667	0	2.958333	0	
25	N25	-1.041667	0	3.208333	0	
26	N26	-1.041667	4	3.208333	0	
27	N27	-1.041667	-2	3.208333	0	
28	N28	1.047437	2.75	0.080525	0	
29	N29	-0.	2.75	2.958333	0	
30	N30	5.25	2.75	2.958333	0	
31	N31	-7.25	2.75	2.958333	0	
32	N32	-7.041667	2.75	2.958333	0	
33	N33	-5.041667	2.75	2.958333	0	
34	N34	2.958333	2.75	2.958333	0	
35	N35	-7.041667	2.75	3.208333	0	
36	N36	-5.041667	2.75	3.208333	0	
37	N37	2.958333	2.75	3.208333	0	
38	N38	-1.041667	2.75	2.958333	0	
39	N39	-1.041667	2.75	3.208333	0	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design L...	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Antenna Pipe	PIPE_2.0	Column	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
2	Face Horizontal	PIPE_3.0	Beam	Pipe	A53 Gr. B	Typical	2.07	2.85	2.85	5.69
3	Mast Pipe	PIPE_4.0	Column	Pipe	A53 Gr. B	Typical	2.96	6.82	6.82	13.6
4	Standoff Horizontal	HSS4X4X4	Beam	SquareT...	A500 Gr. B 46	Typical	3.37	7.8	7.8	12.8
5	T-Arm Kit	HSS3X3X4	Beam	SquareT...	A500 Gr. B 46	Typical	2.44	3.02	3.02	5.08
6	Secondary Horizontal	PIPE_3.0	Beam	Pipe	A53 Gr. B	Typical	2.07	2.85	2.85	5.69

Hot Rolled Steel Design Parameters

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torqu...	Kyy	Kzz	Cb	Function
1	M3	Standoff Ho...	2.729			Lbyy						Lateral
2	M4	Mast Pipe	1.5			Lbyy						Lateral
3	FACE	Face Horizo...	12.5			Lbyy						Lateral
4	MP1A	Antenna Pipe	6			Lbyy						Lateral
5	MP3A	Antenna Pipe	6			Lbyy						Lateral
6	MP4A	Antenna Pipe	6			Lbyy						Lateral
7	OVP	Antenna Pipe	3			Lbyy						Lateral
8	MP2A	Antenna Pipe	6			Lbyy						Lateral
9	M15	T-Arm Kit	3.062			Lbyy						Lateral
10	M16	Secondary ...	12.5			Lbyy						Lateral

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N3	N4			RIGID	None	None	RIGID	Typical
2	M3	N1	N3			Standoff Horiz...	Beam	SquareTube	A500 Gr. ...	Typical
3	M4	N6	N5			Mast Pipe	Column	Pipe	A53 Gr. B	Typical
4	FACE	N8	N7			Face Horizontal	Beam	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
5	MP1A	N17	N20			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
6	MP3A	N16	N19			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
7	MP4A	N15	N18			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
8	LIVE2	N9	N12			RIGID	None	None	RIGID	Typical
9	M1000	N10	N13			RIGID	None	None	RIGID	Typical
10	LIVE1	N11	N14			RIGID	None	None	RIGID	Typical
11	M11A	N20A	N21			RIGID	None	None	RIGID	Typical
12	OVP	N22	N23			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
13	MP2A	N26	N27			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
14	M14	N24	N25			RIGID	None	None	RIGID	Typical
15	M15	N28	N29			T-Arm Kit	Beam	SquareTube	A500 Gr. ...	Typical
16	M16	N31	N30			Secondary Hor...	Beam	Pipe	A53 Gr. B	Typical
17	M17	N32	N35			RIGID	None	None	RIGID	Typical
18	M18	N33	N36			RIGID	None	None	RIGID	Typical
19	M19	N34	N37			RIGID	None	None	RIGID	Typical
20	M20	N38	N39			RIGID	None	None	RIGID	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	M1	OOOOXO					Yes	** NA **			None
2	M3						Yes	Default			None
3	M4						Yes	** NA **			None
4	FACE						Yes				None
5	MP1A						Yes	** NA **			None
6	MP3A						Yes	** NA **			None
7	MP4A						Yes	** NA **			None
8	LIVE2						Yes	** NA **			None
9	M1000						Yes	** NA **			None
10	LIVE1						Yes	** NA **			None
11	M11A						Yes	** NA **			None
12	OVP						Yes	** NA **			None
13	MP2A						Yes	** NA **			None
14	M14						Yes	** NA **			None
15	M15						Yes	Default			None
16	M16						Yes				None
17	M17						Yes	** NA **			None
18	M18						Yes	** NA **			None
19	M19						Yes	** NA **			None
20	M20						Yes	** NA **			None

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	Y	-31.65	1
2	MP1A	My	-.021	1
3	MP1A	Mz	.016	1
4	MP1A	Y	-31.65	5
5	MP1A	My	-.021	5
6	MP1A	Mz	.016	5
7	MP1A	Y	-31.65	1
8	MP1A	My	.021	1
9	MP1A	Mz	.016	1
10	MP1A	Y	-31.65	5
11	MP1A	My	.021	5
12	MP1A	Mz	.016	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
13	MP2A	Y	-43.55	2
14	MP2A	My	0	2
15	MP2A	Mz	.022	2
16	MP2A	Y	-43.55	4
17	MP2A	My	0	4
18	MP2A	Mz	.022	4
19	FACE	Y	-20.8	9.33
20	FACE	My	0	9.33
21	FACE	Mz	0	9.33
22	OVP	Y	-32	.5
23	OVP	My	0	.5
24	OVP	Mz	0	.5
25	FACE	Y	-84.4	12.17
26	FACE	My	0	12.17
27	FACE	Mz	0	12.17
28	FACE	Y	-70.3	9.33
29	FACE	My	0	9.33
30	FACE	Mz	0	9.33
31	MP4A	Y	-9.6	1
32	MP4A	My	0	1
33	MP4A	Mz	.005	1
34	MP4A	Y	-9.6	5
35	MP4A	My	0	5
36	MP4A	Mz	.005	5

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	Y	-63.008	1
2	MP1A	My	-.042	1
3	MP1A	Mz	.032	1
4	MP1A	Y	-63.008	5
5	MP1A	My	-.042	5
6	MP1A	Mz	.032	5
7	MP1A	Y	-63.008	1
8	MP1A	My	.042	1
9	MP1A	Mz	.032	1
10	MP1A	Y	-63.008	5
11	MP1A	My	.042	5
12	MP1A	Mz	.032	5
13	MP2A	Y	-32.022	2
14	MP2A	My	0	2
15	MP2A	Mz	.016	2
16	MP2A	Y	-32.022	4
17	MP2A	My	0	4
18	MP2A	Mz	.016	4
19	FACE	Y	-9.522	9.33
20	FACE	My	0	9.33
21	FACE	Mz	0	9.33
22	OVP	Y	-68.356	.5
23	OVP	My	0	.5
24	OVP	Mz	0	.5
25	FACE	Y	-40.312	12.17
26	FACE	My	0	12.17
27	FACE	Mz	0	12.17
28	FACE	Y	-36.226	9.33
29	FACE	My	0	9.33

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
30	FACE	Mz	0	9.33
31	MP4A	Y	-45.32	1
32	MP4A	My	0	1
33	MP4A	Mz	.023	1
34	MP4A	Y	-45.32	5
35	MP4A	My	0	5
36	MP4A	Mz	.023	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	0	1
2	MP1A	Z	-106.112	1
3	MP1A	Mx	-.053	1
4	MP1A	X	0	5
5	MP1A	Z	-106.112	5
6	MP1A	Mx	-.053	5
7	MP1A	X	0	1
8	MP1A	Z	-106.112	1
9	MP1A	Mx	-.053	1
10	MP1A	X	0	5
11	MP1A	Z	-106.112	5
12	MP1A	Mx	-.053	5
13	MP2A	X	0	2
14	MP2A	Z	-32.633	2
15	MP2A	Mx	-.016	2
16	MP2A	X	0	4
17	MP2A	Z	-32.633	4
18	MP2A	Mx	-.016	4
19	FACE	X	0	9.33
20	FACE	Z	-9.08	9.33
21	FACE	Mx	0	9.33
22	OVP	X	0	.5
23	OVP	Z	-88.981	.5
24	OVP	Mx	0	.5
25	FACE	X	0	12.17
26	FACE	Z	-44.337	12.17
27	FACE	Mx	0	12.17
28	FACE	X	0	9.33
29	FACE	Z	-35.913	9.33
30	FACE	Mx	0	9.33
31	MP4A	X	0	1
32	MP4A	Z	-71.56	1
33	MP4A	Mx	-.036	1
34	MP4A	X	0	5
35	MP4A	Z	-71.56	5
36	MP4A	Mx	-.036	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	59.987	1
2	MP1A	Z	-103.901	1
3	MP1A	Mx	-.092	1
4	MP1A	X	59.987	5
5	MP1A	Z	-103.901	5
6	MP1A	Mx	-.092	5
7	MP1A	X	59.987	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
8	MP1A	Z	-103.901	1
9	MP1A	Mx	-.012	1
10	MP1A	X	59.987	5
11	MP1A	Z	-103.901	5
12	MP1A	Mx	-.012	5
13	MP2A	X	22.656	2
14	MP2A	Z	-39.242	2
15	MP2A	Mx	-.02	2
16	MP2A	X	22.656	4
17	MP2A	Z	-39.242	4
18	MP2A	Mx	-.02	4
19	FACE	X	5.046	9.33
20	FACE	Z	-8.739	9.33
21	FACE	Mx	0	9.33
22	OVP	X	50.172	.5
23	OVP	Z	-86.9	.5
24	OVP	Mx	0	.5
25	FACE	X	24.917	12.17
26	FACE	Z	-43.158	12.17
27	FACE	Mx	0	12.17
28	FACE	X	21.758	9.33
29	FACE	Z	-37.686	9.33
30	FACE	Mx	0	9.33
31	MP4A	X	42.929	1
32	MP4A	Z	-74.355	1
33	MP4A	Mx	-.037	1
34	MP4A	X	42.929	5
35	MP4A	Z	-74.355	5
36	MP4A	Mx	-.037	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	127.912	1
2	MP1A	Z	-73.85	1
3	MP1A	Mx	-.122	1
4	MP1A	X	127.912	5
5	MP1A	Z	-73.85	5
6	MP1A	Mx	-.122	5
7	MP1A	X	127.912	1
8	MP1A	Z	-73.85	1
9	MP1A	Mx	.048	1
10	MP1A	X	127.912	5
11	MP1A	Z	-73.85	5
12	MP1A	Mx	.048	5
13	MP2A	X	61.204	2
14	MP2A	Z	-35.336	2
15	MP2A	Mx	-.018	2
16	MP2A	X	61.204	4
17	MP2A	Z	-35.336	4
18	MP2A	Mx	-.018	4
19	FACE	X	10.49	9.33
20	FACE	Z	-6.056	9.33
21	FACE	Mx	0	9.33
22	OVP	X	106.579	.5
23	OVP	Z	-61.533	.5
24	OVP	Mx	0	.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
25	FACE	X	52.68	12.17
26	FACE	Z	-30.415	12.17
27	FACE	Mx	0	12.17
28	FACE	X	50.856	9.33
29	FACE	Z	-29.362	9.33
30	FACE	Mx	0	9.33
31	MP4A	X	99.121	1
32	MP4A	Z	-57.228	1
33	MP4A	Mx	-.029	1
34	MP4A	X	99.121	5
35	MP4A	Z	-57.228	5
36	MP4A	Mx	-.029	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	161.563	1
2	MP1A	Z	0	1
3	MP1A	Mx	-.108	1
4	MP1A	X	161.563	5
5	MP1A	Z	0	5
6	MP1A	Mx	-.108	5
7	MP1A	X	161.563	1
8	MP1A	Z	0	1
9	MP1A	Mx	.108	1
10	MP1A	X	161.563	5
11	MP1A	Z	0	5
12	MP1A	Mx	.108	5
13	MP2A	X	83.353	2
14	MP2A	Z	0	2
15	MP2A	Mx	0	2
16	MP2A	X	83.353	4
17	MP2A	Z	0	4
18	MP2A	Mx	0	4
19	FACE	X	13.124	9.33
20	FACE	Z	0	9.33
21	FACE	Mx	0	9.33
22	OVP	X	134.429	.5
23	OVP	Z	0	.5
24	OVP	Mx	0	.5
25	FACE	X	66.328	12.17
26	FACE	Z	0	12.17
27	FACE	Mx	0	12.17
28	FACE	X	66.328	9.33
29	FACE	Z	0	9.33
30	FACE	Mx	0	9.33
31	MP4A	X	128.754	1
32	MP4A	Z	0	1
33	MP4A	Mx	0	1
34	MP4A	X	128.754	5
35	MP4A	Z	0	5
36	MP4A	Mx	0	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	127.912	1
2	MP1A	Z	73.85	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
3	MP1A	Mx	-.048	1
4	MP1A	X	127.912	5
5	MP1A	Z	73.85	5
6	MP1A	Mx	-.048	5
7	MP1A	X	127.912	1
8	MP1A	Z	73.85	1
9	MP1A	Mx	.122	1
10	MP1A	X	127.912	5
11	MP1A	Z	73.85	5
12	MP1A	Mx	.122	5
13	MP2A	X	61.204	2
14	MP2A	Z	35.336	2
15	MP2A	Mx	.018	2
16	MP2A	X	61.204	4
17	MP2A	Z	35.336	4
18	MP2A	Mx	.018	4
19	FACE	X	10.49	9.33
20	FACE	Z	6.056	9.33
21	FACE	Mx	0	9.33
22	OVP	X	106.579	.5
23	OVP	Z	61.533	.5
24	OVP	Mx	0	.5
25	FACE	X	52.68	12.17
26	FACE	Z	30.415	12.17
27	FACE	Mx	0	12.17
28	FACE	X	50.856	9.33
29	FACE	Z	29.362	9.33
30	FACE	Mx	0	9.33
31	MP4A	X	99.121	1
32	MP4A	Z	57.228	1
33	MP4A	Mx	.029	1
34	MP4A	X	99.121	5
35	MP4A	Z	57.228	5
36	MP4A	Mx	.029	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	59.987	1
2	MP1A	Z	103.901	1
3	MP1A	Mx	.012	1
4	MP1A	X	59.987	5
5	MP1A	Z	103.901	5
6	MP1A	Mx	.012	5
7	MP1A	X	59.987	1
8	MP1A	Z	103.901	1
9	MP1A	Mx	.092	1
10	MP1A	X	59.987	5
11	MP1A	Z	103.901	5
12	MP1A	Mx	.092	5
13	MP2A	X	22.656	2
14	MP2A	Z	39.242	2
15	MP2A	Mx	.02	2
16	MP2A	X	22.656	4
17	MP2A	Z	39.242	4
18	MP2A	Mx	.02	4
19	FACE	X	5.046	9.33

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
20	FACE	Z	8.739	9.33
21	FACE	Mx	0	9.33
22	OVP	X	50.172	.5
23	OVP	Z	86.9	.5
24	OVP	Mx	0	.5
25	FACE	X	24.917	12.17
26	FACE	Z	43.158	12.17
27	FACE	Mx	0	12.17
28	FACE	X	21.758	9.33
29	FACE	Z	37.686	9.33
30	FACE	Mx	0	9.33
31	MP4A	X	42.929	1
32	MP4A	Z	74.355	1
33	MP4A	Mx	.037	1
34	MP4A	X	42.929	5
35	MP4A	Z	74.355	5
36	MP4A	Mx	.037	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	0	1
2	MP1A	Z	106.112	1
3	MP1A	Mx	.053	1
4	MP1A	X	0	5
5	MP1A	Z	106.112	5
6	MP1A	Mx	.053	5
7	MP1A	X	0	1
8	MP1A	Z	106.112	1
9	MP1A	Mx	.053	1
10	MP1A	X	0	5
11	MP1A	Z	106.112	5
12	MP1A	Mx	.053	5
13	MP2A	X	0	2
14	MP2A	Z	32.633	2
15	MP2A	Mx	.016	2
16	MP2A	X	0	4
17	MP2A	Z	32.633	4
18	MP2A	Mx	.016	4
19	FACE	X	0	9.33
20	FACE	Z	9.08	9.33
21	FACE	Mx	0	9.33
22	OVP	X	0	.5
23	OVP	Z	88.981	.5
24	OVP	Mx	0	.5
25	FACE	X	0	12.17
26	FACE	Z	44.337	12.17
27	FACE	Mx	0	12.17
28	FACE	X	0	9.33
29	FACE	Z	35.913	9.33
30	FACE	Mx	0	9.33
31	MP4A	X	0	1
32	MP4A	Z	71.56	1
33	MP4A	Mx	.036	1
34	MP4A	X	0	5
35	MP4A	Z	71.56	5
36	MP4A	Mx	.036	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-59.987	1
2	MP1A	Z	103.901	1
3	MP1A	Mx	.092	1
4	MP1A	X	-59.987	5
5	MP1A	Z	103.901	5
6	MP1A	Mx	.092	5
7	MP1A	X	-59.987	1
8	MP1A	Z	103.901	1
9	MP1A	Mx	.012	1
10	MP1A	X	-59.987	5
11	MP1A	Z	103.901	5
12	MP1A	Mx	.012	5
13	MP2A	X	-22.656	2
14	MP2A	Z	39.242	2
15	MP2A	Mx	.02	2
16	MP2A	X	-22.656	4
17	MP2A	Z	39.242	4
18	MP2A	Mx	.02	4
19	FACE	X	-5.046	9.33
20	FACE	Z	8.739	9.33
21	FACE	Mx	0	9.33
22	OVP	X	-50.172	.5
23	OVP	Z	86.9	.5
24	OVP	Mx	0	.5
25	FACE	X	-24.917	12.17
26	FACE	Z	43.158	12.17
27	FACE	Mx	0	12.17
28	FACE	X	-21.758	9.33
29	FACE	Z	37.686	9.33
30	FACE	Mx	0	9.33
31	MP4A	X	-42.929	1
32	MP4A	Z	74.355	1
33	MP4A	Mx	.037	1
34	MP4A	X	-42.929	5
35	MP4A	Z	74.355	5
36	MP4A	Mx	.037	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-127.912	1
2	MP1A	Z	73.85	1
3	MP1A	Mx	.122	1
4	MP1A	X	-127.912	5
5	MP1A	Z	73.85	5
6	MP1A	Mx	.122	5
7	MP1A	X	-127.912	1
8	MP1A	Z	73.85	1
9	MP1A	Mx	-.048	1
10	MP1A	X	-127.912	5
11	MP1A	Z	73.85	5
12	MP1A	Mx	-.048	5
13	MP2A	X	-61.204	2
14	MP2A	Z	35.336	2
15	MP2A	Mx	.018	2
16	MP2A	X	-61.204	4
17	MP2A	Z	35.336	4

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
18	MP2A	Mx	.018	4
19	FACE	X	-10.49	9.33
20	FACE	Z	6.056	9.33
21	FACE	Mx	0	9.33
22	OVP	X	-106.579	.5
23	OVP	Z	61.533	.5
24	OVP	Mx	0	.5
25	FACE	X	-52.68	12.17
26	FACE	Z	30.415	12.17
27	FACE	Mx	0	12.17
28	FACE	X	-50.856	9.33
29	FACE	Z	29.362	9.33
30	FACE	Mx	0	9.33
31	MP4A	X	-99.121	1
32	MP4A	Z	57.228	1
33	MP4A	Mx	.029	1
34	MP4A	X	-99.121	5
35	MP4A	Z	57.228	5
36	MP4A	Mx	.029	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-161.563	1
2	MP1A	Z	0	1
3	MP1A	Mx	.108	1
4	MP1A	X	-161.563	5
5	MP1A	Z	0	5
6	MP1A	Mx	.108	5
7	MP1A	X	-161.563	1
8	MP1A	Z	0	1
9	MP1A	Mx	-.108	1
10	MP1A	X	-161.563	5
11	MP1A	Z	0	5
12	MP1A	Mx	-.108	5
13	MP2A	X	-83.353	2
14	MP2A	Z	0	2
15	MP2A	Mx	0	2
16	MP2A	X	-83.353	4
17	MP2A	Z	0	4
18	MP2A	Mx	0	4
19	FACE	X	-13.124	9.33
20	FACE	Z	0	9.33
21	FACE	Mx	0	9.33
22	OVP	X	-134.429	.5
23	OVP	Z	0	.5
24	OVP	Mx	0	.5
25	FACE	X	-66.328	12.17
26	FACE	Z	0	12.17
27	FACE	Mx	0	12.17
28	FACE	X	-66.328	9.33
29	FACE	Z	0	9.33
30	FACE	Mx	0	9.33
31	MP4A	X	-128.754	1
32	MP4A	Z	0	1
33	MP4A	Mx	0	1
34	MP4A	X	-128.754	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
35	MP4A	Z	0	5
36	MP4A	Mx	0	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-127.912	1
2	MP1A	Z	-73.85	1
3	MP1A	Mx	.048	1
4	MP1A	X	-127.912	5
5	MP1A	Z	-73.85	5
6	MP1A	Mx	.048	5
7	MP1A	X	-127.912	1
8	MP1A	Z	-73.85	1
9	MP1A	Mx	-.122	1
10	MP1A	X	-127.912	5
11	MP1A	Z	-73.85	5
12	MP1A	Mx	-.122	5
13	MP2A	X	-61.204	2
14	MP2A	Z	-35.336	2
15	MP2A	Mx	-.018	2
16	MP2A	X	-61.204	4
17	MP2A	Z	-35.336	4
18	MP2A	Mx	-.018	4
19	FACE	X	-10.49	9.33
20	FACE	Z	-6.056	9.33
21	FACE	Mx	0	9.33
22	OVP	X	-106.579	.5
23	OVP	Z	-61.533	.5
24	OVP	Mx	0	.5
25	FACE	X	-52.68	12.17
26	FACE	Z	-30.415	12.17
27	FACE	Mx	0	12.17
28	FACE	X	-50.856	9.33
29	FACE	Z	-29.362	9.33
30	FACE	Mx	0	9.33
31	MP4A	X	-99.121	1
32	MP4A	Z	-57.228	1
33	MP4A	Mx	-.029	1
34	MP4A	X	-99.121	5
35	MP4A	Z	-57.228	5
36	MP4A	Mx	-.029	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-59.987	1
2	MP1A	Z	-103.901	1
3	MP1A	Mx	-.012	1
4	MP1A	X	-59.987	5
5	MP1A	Z	-103.901	5
6	MP1A	Mx	-.012	5
7	MP1A	X	-59.987	1
8	MP1A	Z	-103.901	1
9	MP1A	Mx	-.092	1
10	MP1A	X	-59.987	5
11	MP1A	Z	-103.901	5
12	MP1A	Mx	-.092	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
13	MP2A	X	-22.656	2
14	MP2A	Z	-39.242	2
15	MP2A	Mx	-.02	2
16	MP2A	X	-22.656	4
17	MP2A	Z	-39.242	4
18	MP2A	Mx	-.02	4
19	FACE	X	-5.046	9.33
20	FACE	Z	-8.739	9.33
21	FACE	Mx	0	9.33
22	OVP	X	-50.172	.5
23	OVP	Z	-86.9	.5
24	OVP	Mx	0	.5
25	FACE	X	-24.917	12.17
26	FACE	Z	-43.158	12.17
27	FACE	Mx	0	12.17
28	FACE	X	-21.758	9.33
29	FACE	Z	-37.686	9.33
30	FACE	Mx	0	9.33
31	MP4A	X	-42.929	1
32	MP4A	Z	-74.355	1
33	MP4A	Mx	-.037	1
34	MP4A	X	-42.929	5
35	MP4A	Z	-74.355	5
36	MP4A	Mx	-.037	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	0	1
2	MP1A	Z	-20.382	1
3	MP1A	Mx	-.01	1
4	MP1A	X	0	5
5	MP1A	Z	-20.382	5
6	MP1A	Mx	-.01	5
7	MP1A	X	0	1
8	MP1A	Z	-20.382	1
9	MP1A	Mx	-.01	1
10	MP1A	X	0	5
11	MP1A	Z	-20.382	5
12	MP1A	Mx	-.01	5
13	MP2A	X	0	2
14	MP2A	Z	-6.722	2
15	MP2A	Mx	-.003	2
16	MP2A	X	0	4
17	MP2A	Z	-6.722	4
18	MP2A	Mx	-.003	4
19	FACE	X	0	9.33
20	FACE	Z	-2.371	9.33
21	FACE	Mx	0	9.33
22	OVP	X	0	.5
23	OVP	Z	-17.574	.5
24	OVP	Mx	0	.5
25	FACE	X	0	12.17
26	FACE	Z	-9.244	12.17
27	FACE	Mx	0	12.17
28	FACE	X	0	9.33
29	FACE	Z	-7.688	9.33

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
30	FACE	Mx	0	9.33
31	MP4A	X	0	1
32	MP4A	Z	-14.228	1
33	MP4A	Mx	-.007	1
34	MP4A	X	0	5
35	MP4A	Z	-14.228	5
36	MP4A	Mx	-.007	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	11.391	1
2	MP1A	Z	-19.73	1
3	MP1A	Mx	-.017	1
4	MP1A	X	11.391	5
5	MP1A	Z	-19.73	5
6	MP1A	Mx	-.017	5
7	MP1A	X	11.391	1
8	MP1A	Z	-19.73	1
9	MP1A	Mx	-.002	1
10	MP1A	X	11.391	5
11	MP1A	Z	-19.73	5
12	MP1A	Mx	-.002	5
13	MP2A	X	4.509	2
14	MP2A	Z	-7.81	2
15	MP2A	Mx	-.004	2
16	MP2A	X	4.509	4
17	MP2A	Z	-7.81	4
18	MP2A	Mx	-.004	4
19	FACE	X	1.287	9.33
20	FACE	Z	-2.229	9.33
21	FACE	Mx	0	9.33
22	OVP	X	9.813	.5
23	OVP	Z	-16.997	.5
24	OVP	Mx	0	.5
25	FACE	X	5.134	12.17
26	FACE	Z	-8.892	12.17
27	FACE	Mx	0	12.17
28	FACE	X	4.55	9.33
29	FACE	Z	-7.881	9.33
30	FACE	Mx	0	9.33
31	MP4A	X	8.356	1
32	MP4A	Z	-14.473	1
33	MP4A	Mx	-.007	1
34	MP4A	X	8.356	5
35	MP4A	Z	-14.473	5
36	MP4A	Mx	-.007	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	23.886	1
2	MP1A	Z	-13.79	1
3	MP1A	Mx	-.023	1
4	MP1A	X	23.886	5
5	MP1A	Z	-13.79	5
6	MP1A	Mx	-.023	5
7	MP1A	X	23.886	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
8	MP1A	Z	-13.79	1
9	MP1A	Mx	.009	1
10	MP1A	X	23.886	5
11	MP1A	Z	-13.79	5
12	MP1A	Mx	.009	5
13	MP2A	X	11.787	2
14	MP2A	Z	-6.805	2
15	MP2A	Mx	-.003	2
16	MP2A	X	11.787	4
17	MP2A	Z	-6.805	4
18	MP2A	Mx	-.003	4
19	FACE	X	2.579	9.33
20	FACE	Z	-1.489	9.33
21	FACE	Mx	0	9.33
22	OVP	X	20.551	.5
23	OVP	Z	-11.865	.5
24	OVP	Mx	0	.5
25	FACE	X	10.664	12.17
26	FACE	Z	-6.157	12.17
27	FACE	Mx	0	12.17
28	FACE	X	10.327	9.33
29	FACE	Z	-5.963	9.33
30	FACE	Mx	0	9.33
31	MP4A	X	18.777	1
32	MP4A	Z	-10.841	1
33	MP4A	Mx	-.005	1
34	MP4A	X	18.777	5
35	MP4A	Z	-10.841	5
36	MP4A	Mx	-.005	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	29.98	1
2	MP1A	Z	0	1
3	MP1A	Mx	-.02	1
4	MP1A	X	29.98	5
5	MP1A	Z	0	5
6	MP1A	Mx	-.02	5
7	MP1A	X	29.98	1
8	MP1A	Z	0	1
9	MP1A	Mx	.02	1
10	MP1A	X	29.98	5
11	MP1A	Z	0	5
12	MP1A	Mx	.02	5
13	MP2A	X	15.906	2
14	MP2A	Z	0	2
15	MP2A	Mx	0	2
16	MP2A	X	15.906	4
17	MP2A	Z	0	4
18	MP2A	Mx	0	4
19	FACE	X	3.179	9.33
20	FACE	Z	0	9.33
21	FACE	Mx	0	9.33
22	OVP	X	25.783	.5
23	OVP	Z	0	.5
24	OVP	Mx	0	.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
25	FACE	X	13.338	12.17
26	FACE	Z	0	12.17
27	FACE	Mx	0	12.17
28	FACE	X	13.338	9.33
29	FACE	Z	0	9.33
30	FACE	Mx	0	9.33
31	MP4A	X	24.166	1
32	MP4A	Z	0	1
33	MP4A	Mx	0	1
34	MP4A	X	24.166	5
35	MP4A	Z	0	5
36	MP4A	Mx	0	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	23.886	1
2	MP1A	Z	13.79	1
3	MP1A	Mx	-.009	1
4	MP1A	X	23.886	5
5	MP1A	Z	13.79	5
6	MP1A	Mx	-.009	5
7	MP1A	X	23.886	1
8	MP1A	Z	13.79	1
9	MP1A	Mx	.023	1
10	MP1A	X	23.886	5
11	MP1A	Z	13.79	5
12	MP1A	Mx	.023	5
13	MP2A	X	11.787	2
14	MP2A	Z	6.805	2
15	MP2A	Mx	.003	2
16	MP2A	X	11.787	4
17	MP2A	Z	6.805	4
18	MP2A	Mx	.003	4
19	FACE	X	2.579	9.33
20	FACE	Z	1.489	9.33
21	FACE	Mx	0	9.33
22	OVP	X	20.551	.5
23	OVP	Z	11.865	.5
24	OVP	Mx	0	.5
25	FACE	X	10.664	12.17
26	FACE	Z	6.157	12.17
27	FACE	Mx	0	12.17
28	FACE	X	10.327	9.33
29	FACE	Z	5.963	9.33
30	FACE	Mx	0	9.33
31	MP4A	X	18.777	1
32	MP4A	Z	10.841	1
33	MP4A	Mx	.005	1
34	MP4A	X	18.777	5
35	MP4A	Z	10.841	5
36	MP4A	Mx	.005	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	11.391	1
2	MP1A	Z	19.73	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
3	MP1A	Mx	.002	1
4	MP1A	X	11.391	5
5	MP1A	Z	19.73	5
6	MP1A	Mx	.002	5
7	MP1A	X	11.391	1
8	MP1A	Z	19.73	1
9	MP1A	Mx	.017	1
10	MP1A	X	11.391	5
11	MP1A	Z	19.73	5
12	MP1A	Mx	.017	5
13	MP2A	X	4.509	2
14	MP2A	Z	7.81	2
15	MP2A	Mx	.004	2
16	MP2A	X	4.509	4
17	MP2A	Z	7.81	4
18	MP2A	Mx	.004	4
19	FACE	X	1.287	9.33
20	FACE	Z	2.229	9.33
21	FACE	Mx	0	9.33
22	OVP	X	9.813	.5
23	OVP	Z	16.997	.5
24	OVP	Mx	0	.5
25	FACE	X	5.134	12.17
26	FACE	Z	8.892	12.17
27	FACE	Mx	0	12.17
28	FACE	X	4.55	9.33
29	FACE	Z	7.881	9.33
30	FACE	Mx	0	9.33
31	MP4A	X	8.356	1
32	MP4A	Z	14.473	1
33	MP4A	Mx	.007	1
34	MP4A	X	8.356	5
35	MP4A	Z	14.473	5
36	MP4A	Mx	.007	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	0	1
2	MP1A	Z	20.382	1
3	MP1A	Mx	.01	1
4	MP1A	X	0	5
5	MP1A	Z	20.382	5
6	MP1A	Mx	.01	5
7	MP1A	X	0	1
8	MP1A	Z	20.382	1
9	MP1A	Mx	.01	1
10	MP1A	X	0	5
11	MP1A	Z	20.382	5
12	MP1A	Mx	.01	5
13	MP2A	X	0	2
14	MP2A	Z	6.722	2
15	MP2A	Mx	.003	2
16	MP2A	X	0	4
17	MP2A	Z	6.722	4
18	MP2A	Mx	.003	4
19	FACE	X	0	9.33

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
20	FACE	Z	2.371	9.33
21	FACE	Mx	0	9.33
22	OVP	X	0	.5
23	OVP	Z	17.574	.5
24	OVP	Mx	0	.5
25	FACE	X	0	12.17
26	FACE	Z	9.244	12.17
27	FACE	Mx	0	12.17
28	FACE	X	0	9.33
29	FACE	Z	7.688	9.33
30	FACE	Mx	0	9.33
31	MP4A	X	0	1
32	MP4A	Z	14.228	1
33	MP4A	Mx	.007	1
34	MP4A	X	0	5
35	MP4A	Z	14.228	5
36	MP4A	Mx	.007	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-11.391	1
2	MP1A	Z	19.73	1
3	MP1A	Mx	.017	1
4	MP1A	X	-11.391	5
5	MP1A	Z	19.73	5
6	MP1A	Mx	.017	5
7	MP1A	X	-11.391	1
8	MP1A	Z	19.73	1
9	MP1A	Mx	.002	1
10	MP1A	X	-11.391	5
11	MP1A	Z	19.73	5
12	MP1A	Mx	.002	5
13	MP2A	X	-4.509	2
14	MP2A	Z	7.81	2
15	MP2A	Mx	.004	2
16	MP2A	X	-4.509	4
17	MP2A	Z	7.81	4
18	MP2A	Mx	.004	4
19	FACE	X	-1.287	9.33
20	FACE	Z	2.229	9.33
21	FACE	Mx	0	9.33
22	OVP	X	-9.813	.5
23	OVP	Z	16.997	.5
24	OVP	Mx	0	.5
25	FACE	X	-5.134	12.17
26	FACE	Z	8.892	12.17
27	FACE	Mx	0	12.17
28	FACE	X	-4.55	9.33
29	FACE	Z	7.881	9.33
30	FACE	Mx	0	9.33
31	MP4A	X	-8.356	1
32	MP4A	Z	14.473	1
33	MP4A	Mx	.007	1
34	MP4A	X	-8.356	5
35	MP4A	Z	14.473	5
36	MP4A	Mx	.007	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-23.886	1
2	MP1A	Z	13.79	1
3	MP1A	Mx	.023	1
4	MP1A	X	-23.886	5
5	MP1A	Z	13.79	5
6	MP1A	Mx	.023	5
7	MP1A	X	-23.886	1
8	MP1A	Z	13.79	1
9	MP1A	Mx	-.009	1
10	MP1A	X	-23.886	5
11	MP1A	Z	13.79	5
12	MP1A	Mx	-.009	5
13	MP2A	X	-11.787	2
14	MP2A	Z	6.805	2
15	MP2A	Mx	.003	2
16	MP2A	X	-11.787	4
17	MP2A	Z	6.805	4
18	MP2A	Mx	.003	4
19	FACE	X	-2.579	9.33
20	FACE	Z	1.489	9.33
21	FACE	Mx	0	9.33
22	OVP	X	-20.551	.5
23	OVP	Z	11.865	.5
24	OVP	Mx	0	.5
25	FACE	X	-10.664	12.17
26	FACE	Z	6.157	12.17
27	FACE	Mx	0	12.17
28	FACE	X	-10.327	9.33
29	FACE	Z	5.963	9.33
30	FACE	Mx	0	9.33
31	MP4A	X	-18.777	1
32	MP4A	Z	10.841	1
33	MP4A	Mx	.005	1
34	MP4A	X	-18.777	5
35	MP4A	Z	10.841	5
36	MP4A	Mx	.005	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-29.98	1
2	MP1A	Z	0	1
3	MP1A	Mx	.02	1
4	MP1A	X	-29.98	5
5	MP1A	Z	0	5
6	MP1A	Mx	.02	5
7	MP1A	X	-29.98	1
8	MP1A	Z	0	1
9	MP1A	Mx	-.02	1
10	MP1A	X	-29.98	5
11	MP1A	Z	0	5
12	MP1A	Mx	-.02	5
13	MP2A	X	-15.906	2
14	MP2A	Z	0	2
15	MP2A	Mx	0	2
16	MP2A	X	-15.906	4
17	MP2A	Z	0	4

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
18	MP2A	Mx	0	4
19	FACE	X	-3.179	9.33
20	FACE	Z	0	9.33
21	FACE	Mx	0	9.33
22	OVP	X	-25.783	.5
23	OVP	Z	0	.5
24	OVP	Mx	0	.5
25	FACE	X	-13.338	12.17
26	FACE	Z	0	12.17
27	FACE	Mx	0	12.17
28	FACE	X	-13.338	9.33
29	FACE	Z	0	9.33
30	FACE	Mx	0	9.33
31	MP4A	X	-24.166	1
32	MP4A	Z	0	1
33	MP4A	Mx	0	1
34	MP4A	X	-24.166	5
35	MP4A	Z	0	5
36	MP4A	Mx	0	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-23.886	1
2	MP1A	Z	-13.79	1
3	MP1A	Mx	.009	1
4	MP1A	X	-23.886	5
5	MP1A	Z	-13.79	5
6	MP1A	Mx	.009	5
7	MP1A	X	-23.886	1
8	MP1A	Z	-13.79	1
9	MP1A	Mx	-.023	1
10	MP1A	X	-23.886	5
11	MP1A	Z	-13.79	5
12	MP1A	Mx	-.023	5
13	MP2A	X	-11.787	2
14	MP2A	Z	-6.805	2
15	MP2A	Mx	-.003	2
16	MP2A	X	-11.787	4
17	MP2A	Z	-6.805	4
18	MP2A	Mx	-.003	4
19	FACE	X	-2.579	9.33
20	FACE	Z	-1.489	9.33
21	FACE	Mx	0	9.33
22	OVP	X	-20.551	.5
23	OVP	Z	-11.865	.5
24	OVP	Mx	0	.5
25	FACE	X	-10.664	12.17
26	FACE	Z	-6.157	12.17
27	FACE	Mx	0	12.17
28	FACE	X	-10.327	9.33
29	FACE	Z	-5.963	9.33
30	FACE	Mx	0	9.33
31	MP4A	X	-18.777	1
32	MP4A	Z	-10.841	1
33	MP4A	Mx	-.005	1
34	MP4A	X	-18.777	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
35	MP4A	Z	-10.841	5
36	MP4A	Mx	-.005	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-11.391	1
2	MP1A	Z	-19.73	1
3	MP1A	Mx	-.002	1
4	MP1A	X	-11.391	5
5	MP1A	Z	-19.73	5
6	MP1A	Mx	-.002	5
7	MP1A	X	-11.391	1
8	MP1A	Z	-19.73	1
9	MP1A	Mx	-.017	1
10	MP1A	X	-11.391	5
11	MP1A	Z	-19.73	5
12	MP1A	Mx	-.017	5
13	MP2A	X	-4.509	2
14	MP2A	Z	-7.81	2
15	MP2A	Mx	-.004	2
16	MP2A	X	-4.509	4
17	MP2A	Z	-7.81	4
18	MP2A	Mx	-.004	4
19	FACE	X	-1.287	9.33
20	FACE	Z	-2.229	9.33
21	FACE	Mx	0	9.33
22	OVP	X	-9.813	.5
23	OVP	Z	-16.997	.5
24	OVP	Mx	0	.5
25	FACE	X	-5.134	12.17
26	FACE	Z	-8.892	12.17
27	FACE	Mx	0	12.17
28	FACE	X	-4.55	9.33
29	FACE	Z	-7.881	9.33
30	FACE	Mx	0	9.33
31	MP4A	X	-8.356	1
32	MP4A	Z	-14.473	1
33	MP4A	Mx	-.007	1
34	MP4A	X	-8.356	5
35	MP4A	Z	-14.473	5
36	MP4A	Mx	-.007	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	0	1
2	MP1A	Z	-6.523	1
3	MP1A	Mx	-.003	1
4	MP1A	X	0	5
5	MP1A	Z	-6.523	5
6	MP1A	Mx	-.003	5
7	MP1A	X	0	1
8	MP1A	Z	-6.523	1
9	MP1A	Mx	-.003	1
10	MP1A	X	0	5
11	MP1A	Z	-6.523	5
12	MP1A	Mx	-.003	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
13	MP2A	X	0	2
14	MP2A	Z	-2.006	2
15	MP2A	Mx	-.001	2
16	MP2A	X	0	4
17	MP2A	Z	-2.006	4
18	MP2A	Mx	-.001	4
19	FACE	X	0	9.33
20	FACE	Z	-.558	9.33
21	FACE	Mx	0	9.33
22	OVP	X	0	.5
23	OVP	Z	-5.47	.5
24	OVP	Mx	0	.5
25	FACE	X	0	12.17
26	FACE	Z	-2.725	12.17
27	FACE	Mx	0	12.17
28	FACE	X	0	9.33
29	FACE	Z	-2.208	9.33
30	FACE	Mx	0	9.33
31	MP4A	X	0	1
32	MP4A	Z	-4.399	1
33	MP4A	Mx	-.002	1
34	MP4A	X	0	5
35	MP4A	Z	-4.399	5
36	MP4A	Mx	-.002	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	3.688	1
2	MP1A	Z	-6.387	1
3	MP1A	Mx	-.006	1
4	MP1A	X	3.688	5
5	MP1A	Z	-6.387	5
6	MP1A	Mx	-.006	5
7	MP1A	X	3.688	1
8	MP1A	Z	-6.387	1
9	MP1A	Mx	-.000735	1
10	MP1A	X	3.688	5
11	MP1A	Z	-6.387	5
12	MP1A	Mx	-.000735	5
13	MP2A	X	1.393	2
14	MP2A	Z	-2.412	2
15	MP2A	Mx	-.001	2
16	MP2A	X	1.393	4
17	MP2A	Z	-2.412	4
18	MP2A	Mx	-.001	4
19	FACE	X	.31	9.33
20	FACE	Z	-.537	9.33
21	FACE	Mx	0	9.33
22	OVP	X	3.084	.5
23	OVP	Z	-5.342	.5
24	OVP	Mx	0	.5
25	FACE	X	1.532	12.17
26	FACE	Z	-2.653	12.17
27	FACE	Mx	0	12.17
28	FACE	X	1.338	9.33
29	FACE	Z	-2.317	9.33

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
30	FACE	Mx	0	9.33
31	MP4A	X	2.639	1
32	MP4A	Z	-4.571	1
33	MP4A	Mx	-.002	1
34	MP4A	X	2.639	5
35	MP4A	Z	-4.571	5
36	MP4A	Mx	-.002	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	7.863	1
2	MP1A	Z	-4.54	1
3	MP1A	Mx	-.008	1
4	MP1A	X	7.863	5
5	MP1A	Z	-4.54	5
6	MP1A	Mx	-.008	5
7	MP1A	X	7.863	1
8	MP1A	Z	-4.54	1
9	MP1A	Mx	.003	1
10	MP1A	X	7.863	5
11	MP1A	Z	-4.54	5
12	MP1A	Mx	.003	5
13	MP2A	X	3.762	2
14	MP2A	Z	-2.172	2
15	MP2A	Mx	-.001	2
16	MP2A	X	3.762	4
17	MP2A	Z	-2.172	4
18	MP2A	Mx	-.001	4
19	FACE	X	.645	9.33
20	FACE	Z	-.372	9.33
21	FACE	Mx	0	9.33
22	OVP	X	6.552	.5
23	OVP	Z	-3.783	.5
24	OVP	Mx	0	.5
25	FACE	X	3.238	12.17
26	FACE	Z	-1.87	12.17
27	FACE	Mx	0	12.17
28	FACE	X	3.126	9.33
29	FACE	Z	-1.805	9.33
30	FACE	Mx	0	9.33
31	MP4A	X	6.093	1
32	MP4A	Z	-3.518	1
33	MP4A	Mx	-.002	1
34	MP4A	X	6.093	5
35	MP4A	Z	-3.518	5
36	MP4A	Mx	-.002	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	9.931	1
2	MP1A	Z	0	1
3	MP1A	Mx	-.007	1
4	MP1A	X	9.931	5
5	MP1A	Z	0	5
6	MP1A	Mx	-.007	5
7	MP1A	X	9.931	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
8	MP1A	Z	0	1
9	MP1A	Mx	.007	1
10	MP1A	X	9.931	5
11	MP1A	Z	0	5
12	MP1A	Mx	.007	5
13	MP2A	X	5.124	2
14	MP2A	Z	0	2
15	MP2A	Mx	0	2
16	MP2A	X	5.124	4
17	MP2A	Z	0	4
18	MP2A	Mx	0	4
19	FACE	X	.807	9.33
20	FACE	Z	0	9.33
21	FACE	Mx	0	9.33
22	OVP	X	8.263	.5
23	OVP	Z	0	.5
24	OVP	Mx	0	.5
25	FACE	X	4.077	12.17
26	FACE	Z	0	12.17
27	FACE	Mx	0	12.17
28	FACE	X	4.077	9.33
29	FACE	Z	0	9.33
30	FACE	Mx	0	9.33
31	MP4A	X	7.915	1
32	MP4A	Z	0	1
33	MP4A	Mx	0	1
34	MP4A	X	7.915	5
35	MP4A	Z	0	5
36	MP4A	Mx	0	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	7.863	1
2	MP1A	Z	4.54	1
3	MP1A	Mx	-.003	1
4	MP1A	X	7.863	5
5	MP1A	Z	4.54	5
6	MP1A	Mx	-.003	5
7	MP1A	X	7.863	1
8	MP1A	Z	4.54	1
9	MP1A	Mx	.008	1
10	MP1A	X	7.863	5
11	MP1A	Z	4.54	5
12	MP1A	Mx	.008	5
13	MP2A	X	3.762	2
14	MP2A	Z	2.172	2
15	MP2A	Mx	.001	2
16	MP2A	X	3.762	4
17	MP2A	Z	2.172	4
18	MP2A	Mx	.001	4
19	FACE	X	.645	9.33
20	FACE	Z	.372	9.33
21	FACE	Mx	0	9.33
22	OVP	X	6.552	.5
23	OVP	Z	3.783	.5
24	OVP	Mx	0	.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
25	FACE	X	3.238	12.17
26	FACE	Z	1.87	12.17
27	FACE	Mx	0	12.17
28	FACE	X	3.126	9.33
29	FACE	Z	1.805	9.33
30	FACE	Mx	0	9.33
31	MP4A	X	6.093	1
32	MP4A	Z	3.518	1
33	MP4A	Mx	.002	1
34	MP4A	X	6.093	5
35	MP4A	Z	3.518	5
36	MP4A	Mx	.002	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	3.688	1
2	MP1A	Z	6.387	1
3	MP1A	Mx	.000735	1
4	MP1A	X	3.688	5
5	MP1A	Z	6.387	5
6	MP1A	Mx	.000735	5
7	MP1A	X	3.688	1
8	MP1A	Z	6.387	1
9	MP1A	Mx	.006	1
10	MP1A	X	3.688	5
11	MP1A	Z	6.387	5
12	MP1A	Mx	.006	5
13	MP2A	X	1.393	2
14	MP2A	Z	2.412	2
15	MP2A	Mx	.001	2
16	MP2A	X	1.393	4
17	MP2A	Z	2.412	4
18	MP2A	Mx	.001	4
19	FACE	X	.31	9.33
20	FACE	Z	.537	9.33
21	FACE	Mx	0	9.33
22	OVP	X	3.084	.5
23	OVP	Z	5.342	.5
24	OVP	Mx	0	.5
25	FACE	X	1.532	12.17
26	FACE	Z	2.653	12.17
27	FACE	Mx	0	12.17
28	FACE	X	1.338	9.33
29	FACE	Z	2.317	9.33
30	FACE	Mx	0	9.33
31	MP4A	X	2.639	1
32	MP4A	Z	4.571	1
33	MP4A	Mx	.002	1
34	MP4A	X	2.639	5
35	MP4A	Z	4.571	5
36	MP4A	Mx	.002	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	0	1
2	MP1A	Z	6.523	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
3	MP1A	Mx	.003	1
4	MP1A	X	0	5
5	MP1A	Z	6.523	5
6	MP1A	Mx	.003	5
7	MP1A	X	0	1
8	MP1A	Z	6.523	1
9	MP1A	Mx	.003	1
10	MP1A	X	0	5
11	MP1A	Z	6.523	5
12	MP1A	Mx	.003	5
13	MP2A	X	0	2
14	MP2A	Z	2.006	2
15	MP2A	Mx	.001	2
16	MP2A	X	0	4
17	MP2A	Z	2.006	4
18	MP2A	Mx	.001	4
19	FACE	X	0	9.33
20	FACE	Z	.558	9.33
21	FACE	Mx	0	9.33
22	OVP	X	0	.5
23	OVP	Z	5.47	.5
24	OVP	Mx	0	.5
25	FACE	X	0	12.17
26	FACE	Z	2.725	12.17
27	FACE	Mx	0	12.17
28	FACE	X	0	9.33
29	FACE	Z	2.208	9.33
30	FACE	Mx	0	9.33
31	MP4A	X	0	1
32	MP4A	Z	4.399	1
33	MP4A	Mx	.002	1
34	MP4A	X	0	5
35	MP4A	Z	4.399	5
36	MP4A	Mx	.002	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-3.688	1
2	MP1A	Z	6.387	1
3	MP1A	Mx	.006	1
4	MP1A	X	-3.688	5
5	MP1A	Z	6.387	5
6	MP1A	Mx	.006	5
7	MP1A	X	-3.688	1
8	MP1A	Z	6.387	1
9	MP1A	Mx	.000735	1
10	MP1A	X	-3.688	5
11	MP1A	Z	6.387	5
12	MP1A	Mx	.000735	5
13	MP2A	X	-1.393	2
14	MP2A	Z	2.412	2
15	MP2A	Mx	.001	2
16	MP2A	X	-1.393	4
17	MP2A	Z	2.412	4
18	MP2A	Mx	.001	4
19	FACE	X	-.31	9.33

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
20	FACE	Z	.537	9.33
21	FACE	Mx	0	9.33
22	OVP	X	-3.084	.5
23	OVP	Z	5.342	.5
24	OVP	Mx	0	.5
25	FACE	X	-1.532	12.17
26	FACE	Z	2.653	12.17
27	FACE	Mx	0	12.17
28	FACE	X	-1.338	9.33
29	FACE	Z	2.317	9.33
30	FACE	Mx	0	9.33
31	MP4A	X	-2.639	1
32	MP4A	Z	4.571	1
33	MP4A	Mx	.002	1
34	MP4A	X	-2.639	5
35	MP4A	Z	4.571	5
36	MP4A	Mx	.002	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-7.863	1
2	MP1A	Z	4.54	1
3	MP1A	Mx	.008	1
4	MP1A	X	-7.863	5
5	MP1A	Z	4.54	5
6	MP1A	Mx	.008	5
7	MP1A	X	-7.863	1
8	MP1A	Z	4.54	1
9	MP1A	Mx	-.003	1
10	MP1A	X	-7.863	5
11	MP1A	Z	4.54	5
12	MP1A	Mx	-.003	5
13	MP2A	X	-3.762	2
14	MP2A	Z	2.172	2
15	MP2A	Mx	.001	2
16	MP2A	X	-3.762	4
17	MP2A	Z	2.172	4
18	MP2A	Mx	.001	4
19	FACE	X	-.645	9.33
20	FACE	Z	.372	9.33
21	FACE	Mx	0	9.33
22	OVP	X	-6.552	.5
23	OVP	Z	3.783	.5
24	OVP	Mx	0	.5
25	FACE	X	-3.238	12.17
26	FACE	Z	1.87	12.17
27	FACE	Mx	0	12.17
28	FACE	X	-3.126	9.33
29	FACE	Z	1.805	9.33
30	FACE	Mx	0	9.33
31	MP4A	X	-6.093	1
32	MP4A	Z	3.518	1
33	MP4A	Mx	.002	1
34	MP4A	X	-6.093	5
35	MP4A	Z	3.518	5
36	MP4A	Mx	.002	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-9.931	1
2	MP1A	Z	0	1
3	MP1A	Mx	.007	1
4	MP1A	X	-9.931	5
5	MP1A	Z	0	5
6	MP1A	Mx	.007	5
7	MP1A	X	-9.931	1
8	MP1A	Z	0	1
9	MP1A	Mx	-.007	1
10	MP1A	X	-9.931	5
11	MP1A	Z	0	5
12	MP1A	Mx	-.007	5
13	MP2A	X	-5.124	2
14	MP2A	Z	0	2
15	MP2A	Mx	0	2
16	MP2A	X	-5.124	4
17	MP2A	Z	0	4
18	MP2A	Mx	0	4
19	FACE	X	-.807	9.33
20	FACE	Z	0	9.33
21	FACE	Mx	0	9.33
22	OVP	X	-8.263	.5
23	OVP	Z	0	.5
24	OVP	Mx	0	.5
25	FACE	X	-4.077	12.17
26	FACE	Z	0	12.17
27	FACE	Mx	0	12.17
28	FACE	X	-4.077	9.33
29	FACE	Z	0	9.33
30	FACE	Mx	0	9.33
31	MP4A	X	-7.915	1
32	MP4A	Z	0	1
33	MP4A	Mx	0	1
34	MP4A	X	-7.915	5
35	MP4A	Z	0	5
36	MP4A	Mx	0	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-7.863	1
2	MP1A	Z	-4.54	1
3	MP1A	Mx	.003	1
4	MP1A	X	-7.863	5
5	MP1A	Z	-4.54	5
6	MP1A	Mx	.003	5
7	MP1A	X	-7.863	1
8	MP1A	Z	-4.54	1
9	MP1A	Mx	-.008	1
10	MP1A	X	-7.863	5
11	MP1A	Z	-4.54	5
12	MP1A	Mx	-.008	5
13	MP2A	X	-3.762	2
14	MP2A	Z	-2.172	2
15	MP2A	Mx	-.001	2
16	MP2A	X	-3.762	4
17	MP2A	Z	-2.172	4

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
18	MP2A	Mx	-.001	4
19	FACE	X	-.645	9.33
20	FACE	Z	-.372	9.33
21	FACE	Mx	0	9.33
22	OVP	X	-6.552	.5
23	OVP	Z	-3.783	.5
24	OVP	Mx	0	.5
25	FACE	X	-3.238	12.17
26	FACE	Z	-1.87	12.17
27	FACE	Mx	0	12.17
28	FACE	X	-3.126	9.33
29	FACE	Z	-1.805	9.33
30	FACE	Mx	0	9.33
31	MP4A	X	-6.093	1
32	MP4A	Z	-3.518	1
33	MP4A	Mx	-.002	1
34	MP4A	X	-6.093	5
35	MP4A	Z	-3.518	5
36	MP4A	Mx	-.002	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-3.688	1
2	MP1A	Z	-6.387	1
3	MP1A	Mx	-.000735	1
4	MP1A	X	-3.688	5
5	MP1A	Z	-6.387	5
6	MP1A	Mx	-.000735	5
7	MP1A	X	-3.688	1
8	MP1A	Z	-6.387	1
9	MP1A	Mx	-.006	1
10	MP1A	X	-3.688	5
11	MP1A	Z	-6.387	5
12	MP1A	Mx	-.006	5
13	MP2A	X	-1.393	2
14	MP2A	Z	-2.412	2
15	MP2A	Mx	-.001	2
16	MP2A	X	-1.393	4
17	MP2A	Z	-2.412	4
18	MP2A	Mx	-.001	4
19	FACE	X	-.31	9.33
20	FACE	Z	-.537	9.33
21	FACE	Mx	0	9.33
22	OVP	X	-3.084	.5
23	OVP	Z	-5.342	.5
24	OVP	Mx	0	.5
25	FACE	X	-1.532	12.17
26	FACE	Z	-2.653	12.17
27	FACE	Mx	0	12.17
28	FACE	X	-1.338	9.33
29	FACE	Z	-2.317	9.33
30	FACE	Mx	0	9.33
31	MP4A	X	-2.639	1
32	MP4A	Z	-4.571	1
33	MP4A	Mx	-.002	1
34	MP4A	X	-2.639	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
35	MP4A	Z	-4.571	5
36	MP4A	Mx	-.002	5

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	LIVE2	Y	-500	0

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	LIVE1	Y	-500	0

Member Point Loads (BLC 79 : Lv1)

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

Member Point Loads (BLC 80 : Lv2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	FACE	Y	-250	%100

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	M3	Y	-8.59	-8.59	0	%100
2	M4	Y	-7.108	-7.108	0	%100
3	FACE	Y	-5.827	-5.827	0	%100
4	MP1A	Y	-4.386	-4.386	0	%100
5	MP3A	Y	-4.386	-4.386	0	%100
6	MP4A	Y	-4.386	-4.386	0	%100
7	OVP	Y	-4.386	-4.386	0	%100
8	MP2A	Y	-4.386	-4.386	0	%100
9	M15	Y	-6.778	-6.778	0	%100
10	M16	Y	-5.827	-5.827	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	0	0	0	%100
2	M3	Z	-1.277	-1.277	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	-8.893	-8.893	0	%100
5	FACE	X	0	0	0	%100
6	FACE	Z	-12.414	-12.414	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	-8.424	-8.424	0	%100
9	MP3A	X	0	0	0	%100
10	MP3A	Z	-8.424	-8.424	0	%100
11	MP4A	X	0	0	0	%100
12	MP4A	Z	-8.424	-8.424	0	%100
13	OVP	X	0	0	0	%100
14	OVP	Z	-6.889	-6.889	0	%100
15	MP2A	X	0	0	0	%100
16	MP2A	Z	-8.424	-8.424	0	%100
17	M15	X	0	0	0	%100
18	M15	Z	-1.039	-1.039	0	%100
19	M16	X	0	0	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,%]
20	M16	Z	-12.414	-12.414	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	.165	.165	0	%100
2	M3	Z	-.285	-.285	0	%100
3	M4	X	4.446	4.446	0	%100
4	M4	Z	-7.701	-7.701	0	%100
5	FACE	X	4.655	4.655	0	%100
6	FACE	Z	-8.063	-8.063	0	%100
7	MP1A	X	4.212	4.212	0	%100
8	MP1A	Z	-7.295	-7.295	0	%100
9	MP3A	X	4.212	4.212	0	%100
10	MP3A	Z	-7.295	-7.295	0	%100
11	MP4A	X	4.212	4.212	0	%100
12	MP4A	Z	-7.295	-7.295	0	%100
13	OVP	X	3.444	3.444	0	%100
14	OVP	Z	-5.966	-5.966	0	%100
15	MP2A	X	4.212	4.212	0	%100
16	MP2A	Z	-7.295	-7.295	0	%100
17	M15	X	.134	.134	0	%100
18	M15	Z	-.232	-.232	0	%100
19	M16	X	4.655	4.655	0	%100
20	M16	Z	-8.063	-8.063	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	M3	X	3.905	3.905	0	%100
2	M3	Z	-2.255	-2.255	0	%100
3	M4	X	7.701	7.701	0	%100
4	M4	Z	-4.446	-4.446	0	%100
5	FACE	X	2.688	2.688	0	%100
6	FACE	Z	-1.552	-1.552	0	%100
7	MP1A	X	7.295	7.295	0	%100
8	MP1A	Z	-4.212	-4.212	0	%100
9	MP3A	X	7.295	7.295	0	%100
10	MP3A	Z	-4.212	-4.212	0	%100
11	MP4A	X	7.295	7.295	0	%100
12	MP4A	Z	-4.212	-4.212	0	%100
13	OVP	X	5.966	5.966	0	%100
14	OVP	Z	-3.444	-3.444	0	%100
15	MP2A	X	7.295	7.295	0	%100
16	MP2A	Z	-4.212	-4.212	0	%100
17	M15	X	3.18	3.18	0	%100
18	M15	Z	-1.836	-1.836	0	%100
19	M16	X	2.688	2.688	0	%100
20	M16	Z	-1.552	-1.552	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	M3	X	9.637	9.637	0	%100
2	M3	Z	0	0	0	%100
3	M4	X	8.893	8.893	0	%100
4	M4	Z	0	0	0	%100
5	FACE	X	0	0	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,%]
6	FACE	Z	0	0	0	%100
7	MP1A	X	8.424	8.424	0	%100
8	MP1A	Z	0	0	0	%100
9	MP3A	X	8.424	8.424	0	%100
10	MP3A	Z	0	0	0	%100
11	MP4A	X	8.424	8.424	0	%100
12	MP4A	Z	0	0	0	%100
13	OVP	X	6.889	6.889	0	%100
14	OVP	Z	0	0	0	%100
15	MP2A	X	8.424	8.424	0	%100
16	MP2A	Z	0	0	0	%100
17	M15	X	7.846	7.846	0	%100
18	M15	Z	0	0	0	%100
19	M16	X	0	0	0	%100
20	M16	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	9.167	9.167	0	%100
2	M3	Z	5.292	5.292	0	%100
3	M4	X	7.701	7.701	0	%100
4	M4	Z	4.446	4.446	0	%100
5	FACE	X	2.688	2.688	0	%100
6	FACE	Z	1.552	1.552	0	%100
7	MP1A	X	7.295	7.295	0	%100
8	MP1A	Z	4.212	4.212	0	%100
9	MP3A	X	7.295	7.295	0	%100
10	MP3A	Z	4.212	4.212	0	%100
11	MP4A	X	7.295	7.295	0	%100
12	MP4A	Z	4.212	4.212	0	%100
13	OVP	X	5.966	5.966	0	%100
14	OVP	Z	3.444	3.444	0	%100
15	MP2A	X	7.295	7.295	0	%100
16	MP2A	Z	4.212	4.212	0	%100
17	M15	X	7.463	7.463	0	%100
18	M15	Z	4.309	4.309	0	%100
19	M16	X	2.688	2.688	0	%100
20	M16	Z	1.552	1.552	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	3.202	3.202	0	%100
2	M3	Z	5.546	5.546	0	%100
3	M4	X	4.446	4.446	0	%100
4	M4	Z	7.701	7.701	0	%100
5	FACE	X	4.655	4.655	0	%100
6	FACE	Z	8.063	8.063	0	%100
7	MP1A	X	4.212	4.212	0	%100
8	MP1A	Z	7.295	7.295	0	%100
9	MP3A	X	4.212	4.212	0	%100
10	MP3A	Z	7.295	7.295	0	%100
11	MP4A	X	4.212	4.212	0	%100
12	MP4A	Z	7.295	7.295	0	%100
13	OVP	X	3.444	3.444	0	%100
14	OVP	Z	5.966	5.966	0	%100
15	MP2A	X	4.212	4.212	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,%]
16	MP2A	Z	7.295	7.295	0	%100
17	M15	X	2.607	2.607	0	%100
18	M15	Z	4.516	4.516	0	%100
19	M16	X	4.655	4.655	0	%100
20	M16	Z	8.063	8.063	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	0	0	0	%100
2	M3	Z	1.277	1.277	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	8.893	8.893	0	%100
5	FACE	X	0	0	0	%100
6	FACE	Z	12.414	12.414	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	8.424	8.424	0	%100
9	MP3A	X	0	0	0	%100
10	MP3A	Z	8.424	8.424	0	%100
11	MP4A	X	0	0	0	%100
12	MP4A	Z	8.424	8.424	0	%100
13	OVP	X	0	0	0	%100
14	OVP	Z	6.889	6.889	0	%100
15	MP2A	X	0	0	0	%100
16	MP2A	Z	8.424	8.424	0	%100
17	M15	X	0	0	0	%100
18	M15	Z	1.039	1.039	0	%100
19	M16	X	0	0	0	%100
20	M16	Z	12.414	12.414	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	M3	X	-.165	-.165	0	%100
2	M3	Z	.285	.285	0	%100
3	M4	X	-4.446	-4.446	0	%100
4	M4	Z	7.701	7.701	0	%100
5	FACE	X	-4.655	-4.655	0	%100
6	FACE	Z	8.063	8.063	0	%100
7	MP1A	X	-4.212	-4.212	0	%100
8	MP1A	Z	7.295	7.295	0	%100
9	MP3A	X	-4.212	-4.212	0	%100
10	MP3A	Z	7.295	7.295	0	%100
11	MP4A	X	-4.212	-4.212	0	%100
12	MP4A	Z	7.295	7.295	0	%100
13	OVP	X	-3.444	-3.444	0	%100
14	OVP	Z	5.966	5.966	0	%100
15	MP2A	X	-4.212	-4.212	0	%100
16	MP2A	Z	7.295	7.295	0	%100
17	M15	X	-.134	-.134	0	%100
18	M15	Z	.232	.232	0	%100
19	M16	X	-4.655	-4.655	0	%100
20	M16	Z	8.063	8.063	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	-3.905	-3.905	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,%]
2	M3	Z	2.255	2.255	0	%100
3	M4	X	-7.701	-7.701	0	%100
4	M4	Z	4.446	4.446	0	%100
5	FACE	X	-2.688	-2.688	0	%100
6	FACE	Z	1.552	1.552	0	%100
7	MP1A	X	-7.295	-7.295	0	%100
8	MP1A	Z	4.212	4.212	0	%100
9	MP3A	X	-7.295	-7.295	0	%100
10	MP3A	Z	4.212	4.212	0	%100
11	MP4A	X	-7.295	-7.295	0	%100
12	MP4A	Z	4.212	4.212	0	%100
13	OVP	X	-5.966	-5.966	0	%100
14	OVP	Z	3.444	3.444	0	%100
15	MP2A	X	-7.295	-7.295	0	%100
16	MP2A	Z	4.212	4.212	0	%100
17	M15	X	-3.18	-3.18	0	%100
18	M15	Z	1.836	1.836	0	%100
19	M16	X	-2.688	-2.688	0	%100
20	M16	Z	1.552	1.552	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	M3	X	-9.637	-9.637	0	%100
2	M3	Z	0	0	0	%100
3	M4	X	-8.893	-8.893	0	%100
4	M4	Z	0	0	0	%100
5	FACE	X	0	0	0	%100
6	FACE	Z	0	0	0	%100
7	MP1A	X	-8.424	-8.424	0	%100
8	MP1A	Z	0	0	0	%100
9	MP3A	X	-8.424	-8.424	0	%100
10	MP3A	Z	0	0	0	%100
11	MP4A	X	-8.424	-8.424	0	%100
12	MP4A	Z	0	0	0	%100
13	OVP	X	-6.889	-6.889	0	%100
14	OVP	Z	0	0	0	%100
15	MP2A	X	-8.424	-8.424	0	%100
16	MP2A	Z	0	0	0	%100
17	M15	X	-7.846	-7.846	0	%100
18	M15	Z	0	0	0	%100
19	M16	X	0	0	0	%100
20	M16	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	M3	X	-9.167	-9.167	0	%100
2	M3	Z	-5.292	-5.292	0	%100
3	M4	X	-7.701	-7.701	0	%100
4	M4	Z	-4.446	-4.446	0	%100
5	FACE	X	-2.688	-2.688	0	%100
6	FACE	Z	-1.552	-1.552	0	%100
7	MP1A	X	-7.295	-7.295	0	%100
8	MP1A	Z	-4.212	-4.212	0	%100
9	MP3A	X	-7.295	-7.295	0	%100
10	MP3A	Z	-4.212	-4.212	0	%100
11	MP4A	X	-7.295	-7.295	0	%100

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,%]
12	MP4A	Z	-4.212	-4.212	0	%100
13	OVP	X	-5.966	-5.966	0	%100
14	OVP	Z	-3.444	-3.444	0	%100
15	MP2A	X	-7.295	-7.295	0	%100
16	MP2A	Z	-4.212	-4.212	0	%100
17	M15	X	-7.463	-7.463	0	%100
18	M15	Z	-4.309	-4.309	0	%100
19	M16	X	-2.688	-2.688	0	%100
20	M16	Z	-1.552	-1.552	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	M3	X	-3.202	-3.202	0	%100
2	M3	Z	-5.546	-5.546	0	%100
3	M4	X	-4.446	-4.446	0	%100
4	M4	Z	-7.701	-7.701	0	%100
5	FACE	X	-4.655	-4.655	0	%100
6	FACE	Z	-8.063	-8.063	0	%100
7	MP1A	X	-4.212	-4.212	0	%100
8	MP1A	Z	-7.295	-7.295	0	%100
9	MP3A	X	-4.212	-4.212	0	%100
10	MP3A	Z	-7.295	-7.295	0	%100
11	MP4A	X	-4.212	-4.212	0	%100
12	MP4A	Z	-7.295	-7.295	0	%100
13	OVP	X	-3.444	-3.444	0	%100
14	OVP	Z	-5.966	-5.966	0	%100
15	MP2A	X	-4.212	-4.212	0	%100
16	MP2A	Z	-7.295	-7.295	0	%100
17	M15	X	-2.607	-2.607	0	%100
18	M15	Z	-4.516	-4.516	0	%100
19	M16	X	-4.655	-4.655	0	%100
20	M16	Z	-8.063	-8.063	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	0	0	0	%100
2	M3	Z	-.341	-.341	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	-2.549	-2.549	0	%100
5	FACE	X	0	0	0	%100
6	FACE	Z	-3.39	-3.39	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	-2.708	-2.708	0	%100
9	MP3A	X	0	0	0	%100
10	MP3A	Z	-2.708	-2.708	0	%100
11	MP4A	X	0	0	0	%100
12	MP4A	Z	-2.708	-2.708	0	%100
13	OVP	X	0	0	0	%100
14	OVP	Z	-2.262	-2.262	0	%100
15	MP2A	X	0	0	0	%100
16	MP2A	Z	-2.708	-2.708	0	%100
17	M15	X	0	0	0	%100
18	M15	Z	-.305	-.305	0	%100
19	M16	X	0	0	0	%100
20	M16	Z	-3.39	-3.39	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	.044	.044	0	%100
2	M3	Z	-.076	-.076	0	%100
3	M4	X	1.275	1.275	0	%100
4	M4	Z	-2.208	-2.208	0	%100
5	FACE	X	1.271	1.271	0	%100
6	FACE	Z	-2.202	-2.202	0	%100
7	MP1A	X	1.354	1.354	0	%100
8	MP1A	Z	-2.346	-2.346	0	%100
9	MP3A	X	1.354	1.354	0	%100
10	MP3A	Z	-2.346	-2.346	0	%100
11	MP4A	X	1.354	1.354	0	%100
12	MP4A	Z	-2.346	-2.346	0	%100
13	OVP	X	1.131	1.131	0	%100
14	OVP	Z	-1.959	-1.959	0	%100
15	MP2A	X	1.354	1.354	0	%100
16	MP2A	Z	-2.346	-2.346	0	%100
17	M15	X	.039	.039	0	%100
18	M15	Z	-.068	-.068	0	%100
19	M16	X	1.271	1.271	0	%100
20	M16	Z	-2.202	-2.202	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	1.042	1.042	0	%100
2	M3	Z	-.602	-.602	0	%100
3	M4	X	2.208	2.208	0	%100
4	M4	Z	-1.275	-1.275	0	%100
5	FACE	X	.734	.734	0	%100
6	FACE	Z	-.424	-.424	0	%100
7	MP1A	X	2.346	2.346	0	%100
8	MP1A	Z	-1.354	-1.354	0	%100
9	MP3A	X	2.346	2.346	0	%100
10	MP3A	Z	-1.354	-1.354	0	%100
11	MP4A	X	2.346	2.346	0	%100
12	MP4A	Z	-1.354	-1.354	0	%100
13	OVP	X	1.959	1.959	0	%100
14	OVP	Z	-1.131	-1.131	0	%100
15	MP2A	X	2.346	2.346	0	%100
16	MP2A	Z	-1.354	-1.354	0	%100
17	M15	X	.934	.934	0	%100
18	M15	Z	-.54	-.54	0	%100
19	M16	X	.734	.734	0	%100
20	M16	Z	-.424	-.424	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	M3	X	2.572	2.572	0	%100
2	M3	Z	0	0	0	%100
3	M4	X	2.549	2.549	0	%100
4	M4	Z	0	0	0	%100
5	FACE	X	0	0	0	%100
6	FACE	Z	0	0	0	%100
7	MP1A	X	2.708	2.708	0	%100
8	MP1A	Z	0	0	0	%100
9	MP3A	X	2.708	2.708	0	%100
10	MP3A	Z	0	0	0	%100

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	MP4A	X	2.708	2.708	0	%100
12	MP4A	Z	0	0	0	%100
13	OVP	X	2.262	2.262	0	%100
14	OVP	Z	0	0	0	%100
15	MP2A	X	2.708	2.708	0	%100
16	MP2A	Z	0	0	0	%100
17	M15	X	2.306	2.306	0	%100
18	M15	Z	0	0	0	%100
19	M16	X	0	0	0	%100
20	M16	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	M3	X	2.447	2.447	0	%100
2	M3	Z	1.413	1.413	0	%100
3	M4	X	2.208	2.208	0	%100
4	M4	Z	1.275	1.275	0	%100
5	FACE	X	.734	.734	0	%100
6	FACE	Z	.424	.424	0	%100
7	MP1A	X	2.346	2.346	0	%100
8	MP1A	Z	1.354	1.354	0	%100
9	MP3A	X	2.346	2.346	0	%100
10	MP3A	Z	1.354	1.354	0	%100
11	MP4A	X	2.346	2.346	0	%100
12	MP4A	Z	1.354	1.354	0	%100
13	OVP	X	1.959	1.959	0	%100
14	OVP	Z	1.131	1.131	0	%100
15	MP2A	X	2.346	2.346	0	%100
16	MP2A	Z	1.354	1.354	0	%100
17	M15	X	2.193	2.193	0	%100
18	M15	Z	1.266	1.266	0	%100
19	M16	X	.734	.734	0	%100
20	M16	Z	.424	.424	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	M3	X	.855	.855	0	%100
2	M3	Z	1.48	1.48	0	%100
3	M4	X	1.275	1.275	0	%100
4	M4	Z	2.208	2.208	0	%100
5	FACE	X	1.271	1.271	0	%100
6	FACE	Z	2.202	2.202	0	%100
7	MP1A	X	1.354	1.354	0	%100
8	MP1A	Z	2.346	2.346	0	%100
9	MP3A	X	1.354	1.354	0	%100
10	MP3A	Z	2.346	2.346	0	%100
11	MP4A	X	1.354	1.354	0	%100
12	MP4A	Z	2.346	2.346	0	%100
13	OVP	X	1.131	1.131	0	%100
14	OVP	Z	1.959	1.959	0	%100
15	MP2A	X	1.354	1.354	0	%100
16	MP2A	Z	2.346	2.346	0	%100
17	M15	X	.766	.766	0	%100
18	M15	Z	1.327	1.327	0	%100
19	M16	X	1.271	1.271	0	%100
20	M16	Z	2.202	2.202	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	M3	X	0	0	0	%100
2	M3	Z	.341	.341	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	2.549	2.549	0	%100
5	FACE	X	0	0	0	%100
6	FACE	Z	3.39	3.39	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	2.708	2.708	0	%100
9	MP3A	X	0	0	0	%100
10	MP3A	Z	2.708	2.708	0	%100
11	MP4A	X	0	0	0	%100
12	MP4A	Z	2.708	2.708	0	%100
13	OVP	X	0	0	0	%100
14	OVP	Z	2.262	2.262	0	%100
15	MP2A	X	0	0	0	%100
16	MP2A	Z	2.708	2.708	0	%100
17	M15	X	0	0	0	%100
18	M15	Z	.305	.305	0	%100
19	M16	X	0	0	0	%100
20	M16	Z	3.39	3.39	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	M3	X	-.044	-.044	0	%100
2	M3	Z	.076	.076	0	%100
3	M4	X	-1.275	-1.275	0	%100
4	M4	Z	2.208	2.208	0	%100
5	FACE	X	-1.271	-1.271	0	%100
6	FACE	Z	2.202	2.202	0	%100
7	MP1A	X	-1.354	-1.354	0	%100
8	MP1A	Z	2.346	2.346	0	%100
9	MP3A	X	-1.354	-1.354	0	%100
10	MP3A	Z	2.346	2.346	0	%100
11	MP4A	X	-1.354	-1.354	0	%100
12	MP4A	Z	2.346	2.346	0	%100
13	OVP	X	-1.131	-1.131	0	%100
14	OVP	Z	1.959	1.959	0	%100
15	MP2A	X	-1.354	-1.354	0	%100
16	MP2A	Z	2.346	2.346	0	%100
17	M15	X	-.039	-.039	0	%100
18	M15	Z	.068	.068	0	%100
19	M16	X	-1.271	-1.271	0	%100
20	M16	Z	2.202	2.202	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	-1.042	-1.042	0	%100
2	M3	Z	.602	.602	0	%100
3	M4	X	-2.208	-2.208	0	%100
4	M4	Z	1.275	1.275	0	%100
5	FACE	X	-.734	-.734	0	%100
6	FACE	Z	.424	.424	0	%100
7	MP1A	X	-2.346	-2.346	0	%100
8	MP1A	Z	1.354	1.354	0	%100
9	MP3A	X	-2.346	-2.346	0	%100
10	MP3A	Z	1.354	1.354	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
11	MP4A	X	-2.346	-2.346	0	%100
12	MP4A	Z	1.354	1.354	0	%100
13	OVP	X	-1.959	-1.959	0	%100
14	OVP	Z	1.131	1.131	0	%100
15	MP2A	X	-2.346	-2.346	0	%100
16	MP2A	Z	1.354	1.354	0	%100
17	M15	X	-.934	-.934	0	%100
18	M15	Z	.54	.54	0	%100
19	M16	X	-.734	-.734	0	%100
20	M16	Z	.424	.424	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	-2.572	-2.572	0	%100
2	M3	Z	0	0	0	%100
3	M4	X	-2.549	-2.549	0	%100
4	M4	Z	0	0	0	%100
5	FACE	X	0	0	0	%100
6	FACE	Z	0	0	0	%100
7	MP1A	X	-2.708	-2.708	0	%100
8	MP1A	Z	0	0	0	%100
9	MP3A	X	-2.708	-2.708	0	%100
10	MP3A	Z	0	0	0	%100
11	MP4A	X	-2.708	-2.708	0	%100
12	MP4A	Z	0	0	0	%100
13	OVP	X	-2.262	-2.262	0	%100
14	OVP	Z	0	0	0	%100
15	MP2A	X	-2.708	-2.708	0	%100
16	MP2A	Z	0	0	0	%100
17	M15	X	-2.306	-2.306	0	%100
18	M15	Z	0	0	0	%100
19	M16	X	0	0	0	%100
20	M16	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	M3	X	-2.447	-2.447	0	%100
2	M3	Z	-1.413	-1.413	0	%100
3	M4	X	-2.208	-2.208	0	%100
4	M4	Z	-1.275	-1.275	0	%100
5	FACE	X	-.734	-.734	0	%100
6	FACE	Z	-.424	-.424	0	%100
7	MP1A	X	-2.346	-2.346	0	%100
8	MP1A	Z	-1.354	-1.354	0	%100
9	MP3A	X	-2.346	-2.346	0	%100
10	MP3A	Z	-1.354	-1.354	0	%100
11	MP4A	X	-2.346	-2.346	0	%100
12	MP4A	Z	-1.354	-1.354	0	%100
13	OVP	X	-1.959	-1.959	0	%100
14	OVP	Z	-1.131	-1.131	0	%100
15	MP2A	X	-2.346	-2.346	0	%100
16	MP2A	Z	-1.354	-1.354	0	%100
17	M15	X	-2.193	-2.193	0	%100
18	M15	Z	-1.266	-1.266	0	%100
19	M16	X	-.734	-.734	0	%100
20	M16	Z	-.424	-.424	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	M3	X	-.855	-.855	0	%100
2	M3	Z	-1.48	-1.48	0	%100
3	M4	X	-1.275	-1.275	0	%100
4	M4	Z	-2.208	-2.208	0	%100
5	FACE	X	-1.271	-1.271	0	%100
6	FACE	Z	-2.202	-2.202	0	%100
7	MP1A	X	-1.354	-1.354	0	%100
8	MP1A	Z	-2.346	-2.346	0	%100
9	MP3A	X	-1.354	-1.354	0	%100
10	MP3A	Z	-2.346	-2.346	0	%100
11	MP4A	X	-1.354	-1.354	0	%100
12	MP4A	Z	-2.346	-2.346	0	%100
13	OVP	X	-1.131	-1.131	0	%100
14	OVP	Z	-1.959	-1.959	0	%100
15	MP2A	X	-1.354	-1.354	0	%100
16	MP2A	Z	-2.346	-2.346	0	%100
17	M15	X	-.766	-.766	0	%100
18	M15	Z	-1.327	-1.327	0	%100
19	M16	X	-1.271	-1.271	0	%100
20	M16	Z	-2.202	-2.202	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	0	0	0	%100
2	M3	Z	-.078	-.078	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	-.547	-.547	0	%100
5	FACE	X	0	0	0	%100
6	FACE	Z	-.763	-.763	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	-.518	-.518	0	%100
9	MP3A	X	0	0	0	%100
10	MP3A	Z	-.518	-.518	0	%100
11	MP4A	X	0	0	0	%100
12	MP4A	Z	-.518	-.518	0	%100
13	OVP	X	0	0	0	%100
14	OVP	Z	-.423	-.423	0	%100
15	MP2A	X	0	0	0	%100
16	MP2A	Z	-.518	-.518	0	%100
17	M15	X	0	0	0	%100
18	M15	Z	-.064	-.064	0	%100
19	M16	X	0	0	0	%100
20	M16	Z	-.763	-.763	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	.01	.01	0	%100
2	M3	Z	-.018	-.018	0	%100
3	M4	X	.273	.273	0	%100
4	M4	Z	-.473	-.473	0	%100
5	FACE	X	.286	.286	0	%100
6	FACE	Z	-.496	-.496	0	%100
7	MP1A	X	.259	.259	0	%100
8	MP1A	Z	-.448	-.448	0	%100
9	MP3A	X	.259	.259	0	%100
10	MP3A	Z	-.448	-.448	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,%]
11	MP4A	X	.259	.259	0	%100
12	MP4A	Z	-.448	-.448	0	%100
13	OVP	X	.212	.212	0	%100
14	OVP	Z	-.367	-.367	0	%100
15	MP2A	X	.259	.259	0	%100
16	MP2A	Z	-.448	-.448	0	%100
17	M15	X	.008	.008	0	%100
18	M15	Z	-.014	-.014	0	%100
19	M16	X	.286	.286	0	%100
20	M16	Z	-.496	-.496	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	M3	X	.24	.24	0	%100
2	M3	Z	-.139	-.139	0	%100
3	M4	X	.473	.473	0	%100
4	M4	Z	-.273	-.273	0	%100
5	FACE	X	.165	.165	0	%100
6	FACE	Z	-.095	-.095	0	%100
7	MP1A	X	.448	.448	0	%100
8	MP1A	Z	-.259	-.259	0	%100
9	MP3A	X	.448	.448	0	%100
10	MP3A	Z	-.259	-.259	0	%100
11	MP4A	X	.448	.448	0	%100
12	MP4A	Z	-.259	-.259	0	%100
13	OVP	X	.367	.367	0	%100
14	OVP	Z	-.212	-.212	0	%100
15	MP2A	X	.448	.448	0	%100
16	MP2A	Z	-.259	-.259	0	%100
17	M15	X	.195	.195	0	%100
18	M15	Z	-.113	-.113	0	%100
19	M16	X	.165	.165	0	%100
20	M16	Z	-.095	-.095	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	M3	X	.592	.592	0	%100
2	M3	Z	0	0	0	%100
3	M4	X	.547	.547	0	%100
4	M4	Z	0	0	0	%100
5	FACE	X	0	0	0	%100
6	FACE	Z	0	0	0	%100
7	MP1A	X	.518	.518	0	%100
8	MP1A	Z	0	0	0	%100
9	MP3A	X	.518	.518	0	%100
10	MP3A	Z	0	0	0	%100
11	MP4A	X	.518	.518	0	%100
12	MP4A	Z	0	0	0	%100
13	OVP	X	.423	.423	0	%100
14	OVP	Z	0	0	0	%100
15	MP2A	X	.518	.518	0	%100
16	MP2A	Z	0	0	0	%100
17	M15	X	.482	.482	0	%100
18	M15	Z	0	0	0	%100
19	M16	X	0	0	0	%100
20	M16	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	M3	X	.563	.563	0	%100
2	M3	Z	.325	.325	0	%100
3	M4	X	.473	.473	0	%100
4	M4	Z	.273	.273	0	%100
5	FACE	X	.165	.165	0	%100
6	FACE	Z	.095	.095	0	%100
7	MP1A	X	.448	.448	0	%100
8	MP1A	Z	.259	.259	0	%100
9	MP3A	X	.448	.448	0	%100
10	MP3A	Z	.259	.259	0	%100
11	MP4A	X	.448	.448	0	%100
12	MP4A	Z	.259	.259	0	%100
13	OVP	X	.367	.367	0	%100
14	OVP	Z	.212	.212	0	%100
15	MP2A	X	.448	.448	0	%100
16	MP2A	Z	.259	.259	0	%100
17	M15	X	.459	.459	0	%100
18	M15	Z	.265	.265	0	%100
19	M16	X	.165	.165	0	%100
20	M16	Z	.095	.095	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	M3	X	.197	.197	0	%100
2	M3	Z	.341	.341	0	%100
3	M4	X	.273	.273	0	%100
4	M4	Z	.473	.473	0	%100
5	FACE	X	.286	.286	0	%100
6	FACE	Z	.496	.496	0	%100
7	MP1A	X	.259	.259	0	%100
8	MP1A	Z	.448	.448	0	%100
9	MP3A	X	.259	.259	0	%100
10	MP3A	Z	.448	.448	0	%100
11	MP4A	X	.259	.259	0	%100
12	MP4A	Z	.448	.448	0	%100
13	OVP	X	.212	.212	0	%100
14	OVP	Z	.367	.367	0	%100
15	MP2A	X	.259	.259	0	%100
16	MP2A	Z	.448	.448	0	%100
17	M15	X	.16	.16	0	%100
18	M15	Z	.278	.278	0	%100
19	M16	X	.286	.286	0	%100
20	M16	Z	.496	.496	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	M3	X	0	0	0	%100
2	M3	Z	.078	.078	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	.547	.547	0	%100
5	FACE	X	0	0	0	%100
6	FACE	Z	.763	.763	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	.518	.518	0	%100
9	MP3A	X	0	0	0	%100
10	MP3A	Z	.518	.518	0	%100

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,%]
11	MP4A	X	0	0	0	%100
12	MP4A	Z	.518	.518	0	%100
13	OVP	X	0	0	0	%100
14	OVP	Z	.423	.423	0	%100
15	MP2A	X	0	0	0	%100
16	MP2A	Z	.518	.518	0	%100
17	M15	X	0	0	0	%100
18	M15	Z	.064	.064	0	%100
19	M16	X	0	0	0	%100
20	M16	Z	.763	.763	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	-.01	-.01	0	%100
2	M3	Z	.018	.018	0	%100
3	M4	X	-.273	-.273	0	%100
4	M4	Z	.473	.473	0	%100
5	FACE	X	-.286	-.286	0	%100
6	FACE	Z	.496	.496	0	%100
7	MP1A	X	-.259	-.259	0	%100
8	MP1A	Z	.448	.448	0	%100
9	MP3A	X	-.259	-.259	0	%100
10	MP3A	Z	.448	.448	0	%100
11	MP4A	X	-.259	-.259	0	%100
12	MP4A	Z	.448	.448	0	%100
13	OVP	X	-.212	-.212	0	%100
14	OVP	Z	.367	.367	0	%100
15	MP2A	X	-.259	-.259	0	%100
16	MP2A	Z	.448	.448	0	%100
17	M15	X	-.008	-.008	0	%100
18	M15	Z	.014	.014	0	%100
19	M16	X	-.286	-.286	0	%100
20	M16	Z	.496	.496	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	-.24	-.24	0	%100
2	M3	Z	.139	.139	0	%100
3	M4	X	-.473	-.473	0	%100
4	M4	Z	.273	.273	0	%100
5	FACE	X	-.165	-.165	0	%100
6	FACE	Z	.095	.095	0	%100
7	MP1A	X	-.448	-.448	0	%100
8	MP1A	Z	.259	.259	0	%100
9	MP3A	X	-.448	-.448	0	%100
10	MP3A	Z	.259	.259	0	%100
11	MP4A	X	-.448	-.448	0	%100
12	MP4A	Z	.259	.259	0	%100
13	OVP	X	-.367	-.367	0	%100
14	OVP	Z	.212	.212	0	%100
15	MP2A	X	-.448	-.448	0	%100
16	MP2A	Z	.259	.259	0	%100
17	M15	X	-.195	-.195	0	%100
18	M15	Z	.113	.113	0	%100
19	M16	X	-.165	-.165	0	%100
20	M16	Z	.095	.095	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	-.592	-.592	0	%100
2	M3	Z	0	0	0	%100
3	M4	X	-.547	-.547	0	%100
4	M4	Z	0	0	0	%100
5	FACE	X	0	0	0	%100
6	FACE	Z	0	0	0	%100
7	MP1A	X	-.518	-.518	0	%100
8	MP1A	Z	0	0	0	%100
9	MP3A	X	-.518	-.518	0	%100
10	MP3A	Z	0	0	0	%100
11	MP4A	X	-.518	-.518	0	%100
12	MP4A	Z	0	0	0	%100
13	OVP	X	-.423	-.423	0	%100
14	OVP	Z	0	0	0	%100
15	MP2A	X	-.518	-.518	0	%100
16	MP2A	Z	0	0	0	%100
17	M15	X	-.482	-.482	0	%100
18	M15	Z	0	0	0	%100
19	M16	X	0	0	0	%100
20	M16	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	-.563	-.563	0	%100
2	M3	Z	-.325	-.325	0	%100
3	M4	X	-.473	-.473	0	%100
4	M4	Z	-.273	-.273	0	%100
5	FACE	X	-.165	-.165	0	%100
6	FACE	Z	-.095	-.095	0	%100
7	MP1A	X	-.448	-.448	0	%100
8	MP1A	Z	-.259	-.259	0	%100
9	MP3A	X	-.448	-.448	0	%100
10	MP3A	Z	-.259	-.259	0	%100
11	MP4A	X	-.448	-.448	0	%100
12	MP4A	Z	-.259	-.259	0	%100
13	OVP	X	-.367	-.367	0	%100
14	OVP	Z	-.212	-.212	0	%100
15	MP2A	X	-.448	-.448	0	%100
16	MP2A	Z	-.259	-.259	0	%100
17	M15	X	-.459	-.459	0	%100
18	M15	Z	-.265	-.265	0	%100
19	M16	X	-.165	-.165	0	%100
20	M16	Z	-.095	-.095	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M3	X	-.197	-.197	0	%100
2	M3	Z	-.341	-.341	0	%100
3	M4	X	-.273	-.273	0	%100
4	M4	Z	-.473	-.473	0	%100
5	FACE	X	-.286	-.286	0	%100
6	FACE	Z	-.496	-.496	0	%100
7	MP1A	X	-.259	-.259	0	%100
8	MP1A	Z	-.448	-.448	0	%100
9	MP3A	X	-.259	-.259	0	%100
10	MP3A	Z	-.448	-.448	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
11	MP4A	X	-.259	-.259	0	%100
12	MP4A	Z	-.448	-.448	0	%100
13	OVP	X	-.212	-.212	0	%100
14	OVP	Z	-.367	-.367	0	%100
15	MP2A	X	-.259	-.259	0	%100
16	MP2A	Z	-.448	-.448	0	%100
17	M15	X	-.16	-.16	0	%100
18	M15	Z	-.278	-.278	0	%100
19	M16	X	-.286	-.286	0	%100
20	M16	Z	-.496	-.496	0	%100

Member Area Loads

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

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

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc.....		LC	phi*Pn...	phi*Pn...	phi*Mn...	phi*Mn...	...	Eqn
1	M3	HSS4X4X4	.339	0	28	.136	0	y	34	13523...	139518	16.181	16.181	1...	H1-1b
2	M4	PIPE_4.0	.000	.75	6	.000	.75		6	92571...	93240	10.631	10.631	1...	H1-1b
3	FACE	PIPE_3.0	.306	7.161	25	.155	7.161		27	28250...	65205	5.749	5.749	2...	H1-1b
4	MP1A	PIPE_2.0	.418	4	50	.091	4		12	20866...	32130	1.872	1.872	2...	H1-1b
5	MP3A	PIPE_2.0	.448	4	28	.065	4		27	20866...	32130	1.872	1.872	2...	H1-1b
6	MP4A	PIPE_2.0	.339	4	28	.057	4		29	20866...	32130	1.872	1.872	2...	H1-1b
7	OVP	PIPE_2.0	.116	2	10	.015	2		10	28843...	32130	1.872	1.872	2...	H1-1b
8	MP2A	PIPE_2.0	.338	4	27	.054	1.25		33	20866...	32130	1.872	1.872	2...	H1-1b
9	M15	HSS3X3X4	.439	0	34	.116	0	z	35	93866...	101016	8.556	8.556	2...	H1-1b
10	M16	PIPE_3.0	.221	7.292	8	.129	7.161		28	28250...	65205	5.749	5.749	2...	H1-1b

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N1	max	1234.408	10	1195.295	17	1047.254	1	-1.27	10	3.169	10	.288	50
2		min	-1237.21	4	578.93	11	-649.699	7	-2.709	16	-2.808	4	-2.398	34
3	N28	max	1106.523	34	634.985	23	317.013	1	-.634	5	2.383	34	.136	50
4		min	-399.968	4	298.487	5	-714.546	7	-1.289	23	-1.918	4	-1.038	34
5	Totals:	max	1637.179	10	1818.502	18	1364.267	1						
6		min	-1637.178	4	938.434	10	-1364.245	7						

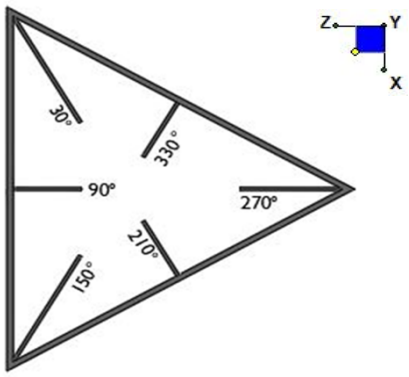
Client:	Verizon	Date:	3/29/2021
Site Name:	East Haven Cosey Beach CT		
Project No.	20777634A		
Title:	Mount Fix	Page:	1

Version 3.1

I. Mount-to-Tower Connection Check - Proposed

RISA Model Data

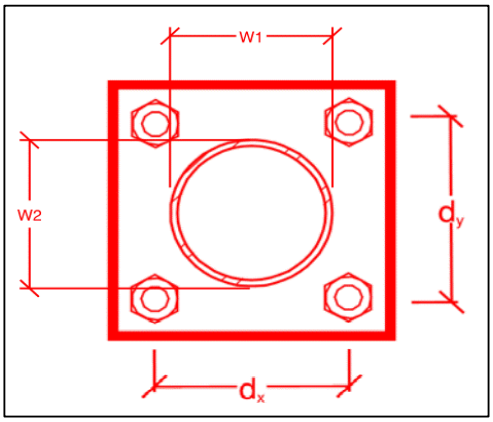
Nodes *(labeled per RISA)*	Orientation *(per graphic of typical platform)*
N28	60



TYPICAL PLATFORM

Tower Connection Bolt Checks

Any moment resistance?:	yes
Bolt Quantity per Reaction:	4
d_x (in) *(Delta X of typ. bolt config. sketch)* :	6
d_y (in) *(Delta Y of typ. bolt config. sketch)* :	6
Bolt Type:	A325N
Bolt Diameter (in):	0.625
Required Tensile Strength (kips):	12.1
Required Shear Strength (kips):	3.6
Tensile Strength / bolt (kips):	20.7
Shear Strength / bolt (kips):	12.4
Tensile Capacity Overall:	**14.6%***
Shear Capacity Overall:	**7.3%**



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

Tower Connection Plate and Weld Check

Connecting Standoff Member Shape:	Rect
Plate Width (in):	8.25
Plate Height (in):	8.25
W1 (in):	3
W2 (in):	3
Fy (ksi, plate):	36
t_{Plate} (in):	0.75
Weld Size (1/16 in):	5
Phi*Rn (kip/in):	6.96
Required Weld Strength (kip/in):	2.88
Plate Bending Capacity:	**32.4%**
Weld Capacity:	**41.4%**

Max Plate Bending Strengths

Mu_{xx} *(kip-in)* :	4.6
Phi*Mn_{xx} *(kip-in)* :	37.6
Mu_{yy} *(kip-in)* :	7.6
Phi*Mn_{yy} *(kip-in)* :	37.6

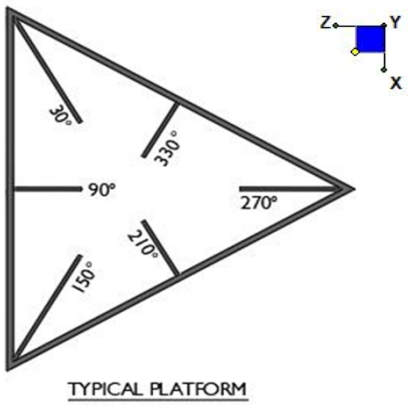
Client:	Verizon	Date:	3/29/2021
Site Name:	East Haven Cosey Beach CT		
Project No.	20777634A		
Title:	Mount Fix	Page:	1

Version 3.1

I. Mount-to-Tower Connection Check

RISA Model Data

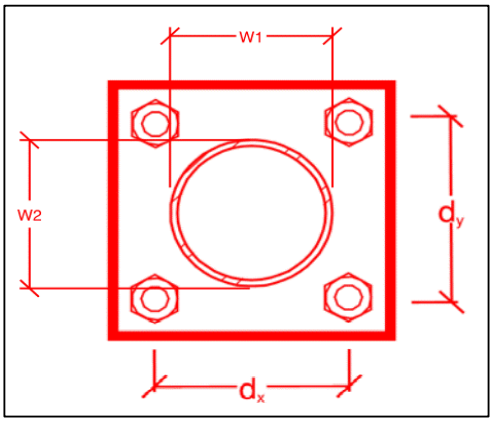
Nodes *(labeled per RISA)*	Orientation *(per graphic of typical platform)*
N1	60



TYPICAL PLATFORM

Tower Connection Bolt Checks

Any moment resistance?:	yes
Bolt Quantity per Reaction:	4
d_x (in) *(Delta X of typ. bolt config. sketch)* :	6
d_y (in) *(Delta Y of typ. bolt config. sketch)* :	6
Bolt Type:	A307
Bolt Diameter (in):	0.625
Required Tensile Strength (kips):	17.1
Required Shear Strength (kips):	7.4
Tensile Strength / bolt (kips):	10.0
Shear Strength / bolt (kips):	6.0
Tensile Capacity Overall:	**42.7%***
Shear Capacity Overall:	**30.6%**



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

Tower Connection Plate and Weld Check

Connecting Standoff Member Shape:	Rect
Plate Width (in):	8
Plate Height (in):	8
W1 (in):	4
W2 (in):	4
Fy (ksi, plate):	36
t_{Plate} (in):	0.75
Weld Size (1/16 in):	3
Phi*Rn (kip/in):	4.18
Required Weld Strength (kip/in):	2.36
Plate Bending Capacity:	**32.4%**
Weld Capacity:	**56.6%**

Max Plate Bending Strengths

Mu_{xx} *(kip-in)* :	6.6
$Phi*Mn_{xx}$ *(kip-in)* :	36.5
Mu_{yy} *(kip-in)* :	5.2
$Phi*Mn_{yy}$ *(kip-in)* :	36.5

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 to re-tension existing safety climb wire rope and install new safety climb wire clips on the existing and proposed collars as required. Proposed OVP to be installed to a new 3' long P2.0 STD mount pipe connected to the Alpha sector standoff arm. Connect the pipe to the standoff arm using Site Pro 1 SQCX4-K crossover plate or EOR approved equivalent.

Response:

Schedule A – Photo & Document File Structure

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

Structure: 469123-VZW - East_Haven_Cosey_Beach_CT

Sector: **A**

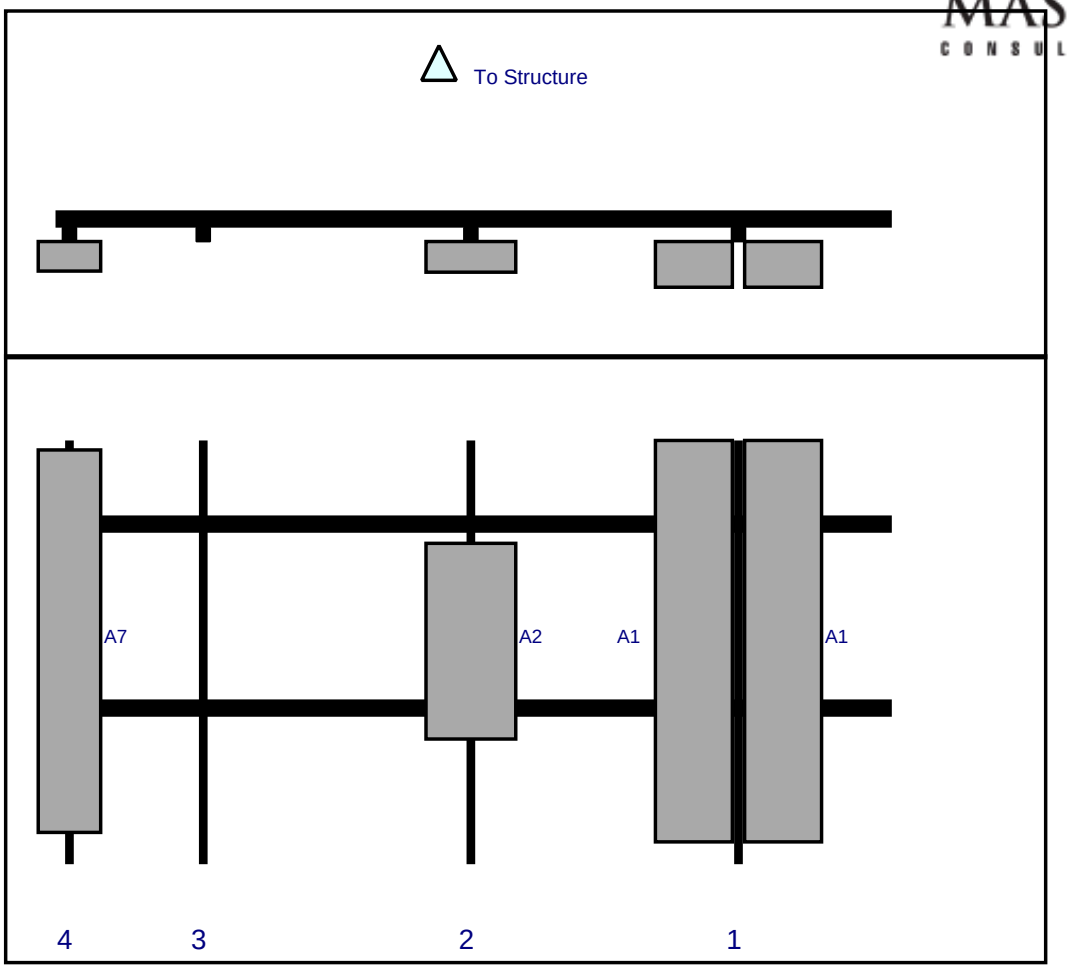
Structure Type: Monopole

Mount Elev: 53.00

3/29/2021

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	JAHH-65B-R3B	72	13.8	122.5	1	a	Front	36	-8	Added	
A1	JAHH-65B-R3B	72	13.8	122.5	1	b	Front	36	8	Added	
A2	MT6407-77A	35.1	16.1	74.5	2	a	Front	36	0	Added	
A7	BXA-80063-6BF	68.6	11.2	2.5	4	a	Front	36	0	Retained	01/27/2021

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Sector: **B**

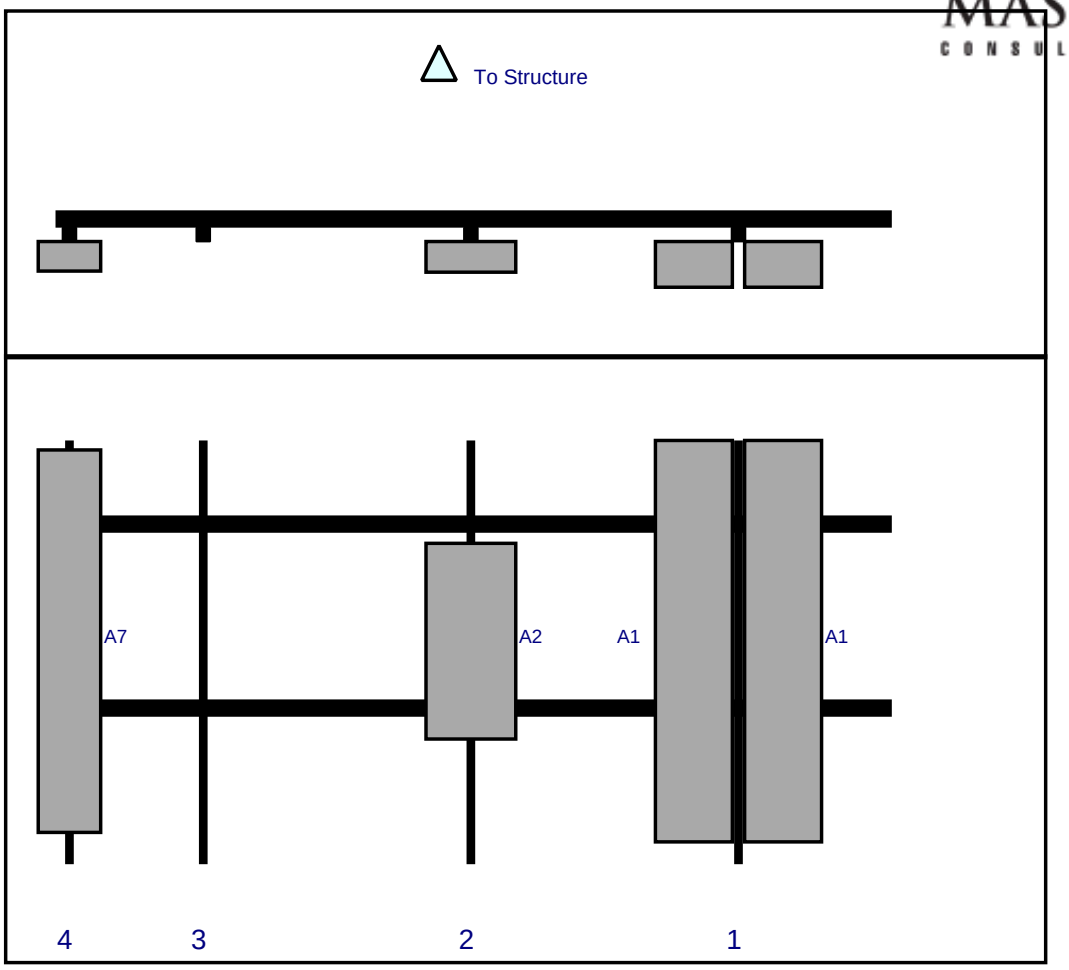
Structure Type: Monopole

Mount Elev: 53.00

3/29/2021

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	JAHH-65B-R3B	72	13.8	122.5	1	a	Front	36	-8	Added	
A1	JAHH-65B-R3B	72	13.8	122.5	1	b	Front	36	8	Added	
A2	MT6407-77A	35.1	16.1	74.5	2	a	Front	36	0	Added	
A7	BXA-80063-6BF	68.6	11.2	2.5	4	a	Front	36	0	Retained	01/27/2021

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Sector: **C**

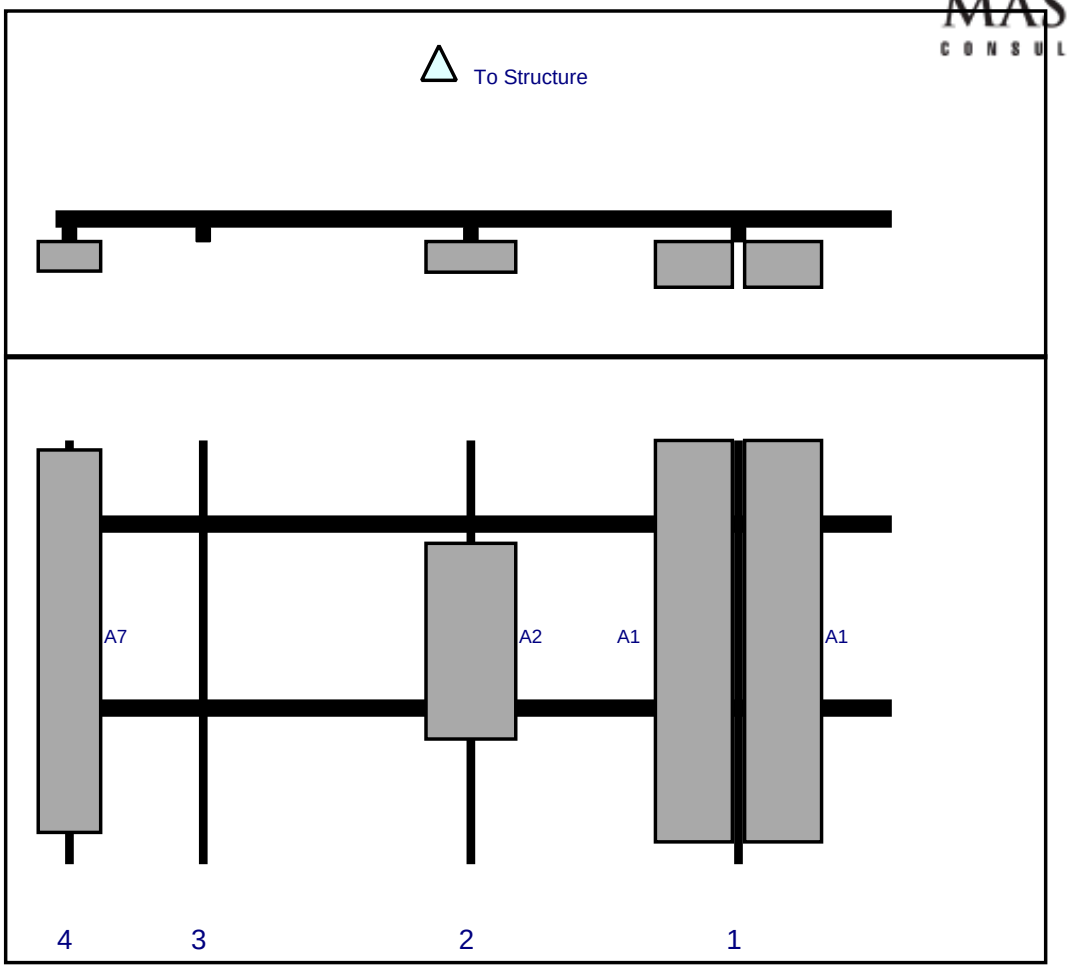
Structure Type: Monopole

Mount Elev: 53.00

3/29/2021

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	JAHH-65B-R3B	72	13.8	122.5	1	a	Front	36	-8	Added	
A1	JAHH-65B-R3B	72	13.8	122.5	1	b	Front	36	8	Added	
A2	MT6407-77A	35.1	16.1	74.5	2	a	Front	36	0	Added	
A7	BXA-80063-6BF	68.6	11.2	2.5	4	a	Front	36	0	Retained	01/27/2021

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Maser Consulting Connecticut

Subject	TIA-222-H Adoption and Wind Speed Usage
Site Information	Site ID: 469123-VZW / East_Haven_Cosey_Beach_CT Site Name: East_Haven_Cosey_Beach_CT Carrier Name: Verizon Wireless Address: 60 Commerce Street East Haven, Connecticut 06512 New Haven County Latitude: 41.251233° Longitude: -72.882094°
Structure Information	Tower Type: 70-Ft Monopole Mount Type: 12.50-Ft T-Arm

To Whom It May Concern,

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

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

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

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

Sincerely,

Dejian Xu

Dejian Xu, PE
Technical Specialist

PROJECT NOTES

1. SEE MODIFICATION NOTES
2. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, LAWS AND REGULATIONS OF ALL MUNICIPALITIES, UTILITY COMPANIES OR OTHER PUBLIC/GOVERNING AUTHORITIES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS THAT MAY BE REQUIRED BY ANY FEDERAL, STATE, COUNTY OR MUNICIPAL AUTHORITIES.
4. 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.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING SITE IMPROVEMENTS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL REPAIR ANY DAMAGE AS A RESULT OF CONSTRUCTION OF THIS FACILITY AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
6. 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.
7. 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.
8. 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 OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
9. SINCE THE CELL SITE MAY BE ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE REQUIRED TO BE WORN TO ALERT OF ANY POTENTIALLY DANGEROUS EXPOSURE LEVELS.
10. NO NOISE, SMOKE, DUST OR ODOR WILL RESULT FROM THIS FACILITY AS TO CAUSE A NUISANCE.
11. THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION (NO HANDICAP ACCESS IS REQUIRED).

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verizon

MOUNT MODIFICATION DRAWINGS
EXISTING 12.50' T-ARM

SITE NAME: EAST_HAVEN_COSEY_BEACH_CT
SITE NUMBER: 469123

60 COMMERCE STREET
EAST HAVEN, CT 06512
NEW HAVEN COUNTY

PROJECT INFORMATION

SITE INFORMATION

LATITUDE: 41.251233° N
LONGITUDE: 72.882094° W
JURISDICTION: NEW HAVEN COUNTY

APPLICANT/LESSEE

COMPANY: VERIZON WIRELESS

CLIENT REPRESENTATIVE

COMPANY: VERIZON WIRELESS
ADDRESS: 118 FLANDERS ROAD, THIRD FLOOR
CITY, STATE, ZIP: WESTBOROUGH, MA 01581
CONTACT: ANDREW CANDIELLO
EMAIL: ANDREW.CANDIELLO@VERIZONWIRELESS.COM

PROJECT MANAGER

COMPANY: MASER CONSULTING
CONTACT: GREG DULNIK
PHONE: (615) 686-2575
E-MAIL: GREG.DULNIK@COLLIERSENGINEERING.COM

SHEET INDEX

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S-6	MOUNT PHOTOS
	SPECIFICATION SHEETS

CONTRACTOR PMI REQUIREMENTS

PMI LOCATION: HTTPS://PMI.VZWSMART.COM
SMART TOOL PROJECT #: 10045313
VZW LOCATION CODE (PSLC): 469123
FUZE ID: 16227600

PMI REQUIREMENTS EMBEDDED WITHIN MOUNT MODIFICATION REPORT

CONTRACTOR PMI REQUIREMENTS

FAILING MOUNT ANALYSIS REPORT
SMART TOOL PROJECT #: 10032211
MASER CONSULTING PROJECT #: 20777634A
ANALYSIS DATE: 2/10/2021

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NEW HAVEN COUNTY

MT. LAUREL OFFICE
2000 Midlantic Drive
Suite 100
Mount Laurel, NJ 08054

Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE: TITLE SHEET

SHEET NUMBER: T-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

BILL OF MATERIALS

VZWSMART KITS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES
12	VZWSMART	VZWSMART-MSK2	CROSSOVER PLATE	
3		VZWSMART-SFK4	T-ARM KIT	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE "STRUCTURAL STEEL" NOTES ON SHEET S-2
1		VZWSMART-PLK7	MONOPOLE COLLAR MOUNT ASSEMBLY	

OTHER REQUIRED PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES
3	-	-	150" LONG, P3.0 STD	GALVANIZED
1	-	-	36" LONG, P2.0 STD	GALVANIZED
1	SITE PRO 1	SQCXK-4	CROSSOVER PLATE	OR EOR APPROVED EQUIVALENT

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) 304-7492
EMAIL	SALVADOR.ANGUIANO@COMMSCOPE.COM
WEBSITE	WWW.COMMSCOPE.COM
METROSITE FABRICATORS, LLC	
CONTACT	KENT RAMEY
PHONE	(706) 335-7045 (O), (706) 982-9788 (M)
EMAIL	KENT@METROSITELLC.COM
WEBSITE	METROSITEFABRICATORS.COM
PERFECTVISION	
CONTACT	WIRELESS SALES
PHONE	(844) 887-6723
EMAIL	WWW.PERFECT-VISION.COM
WEBSITE	WIRELESSSALES@PERFECT-VISION.COM
SABRE INDUSTRIES, INC.	
CONTACT	ANGIE WELCH
PHONE	(866) 428-6937
EMAIL	AKWELCH@SABREINDUSTRIES.COM
WEBSITE	WWW.SABRESITESOLUTIONS.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

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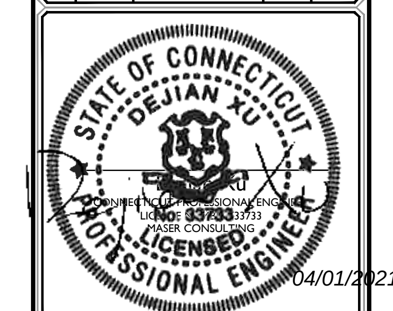

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SHEET TITLE :
BILL OF MATERIALS

SHEET NUMBER :
S-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

GENERAL NOTES

1. THESE MODIFICATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE GOVERNING PROVISIONS OF THE TELECOMMUNICATIONS INDUSTRY STANDARD TIA-222-H. MATERIALS AND SERVICES PROVIDED BY THE CONTRACTOR SHALL CONFORM TO THE ABOVE MENTIONED CODES.
2. CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT DAMAGE TO EXISTING STRUCTURES. ANY DAMAGE TO EXISTING STRUCTURES AS A RESULT OF THE CONTRACTOR'S WORK OR FROM DAMAGE DUE TO OTHER CAUSES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
3. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS BEFORE BEGINNING WORK, ORDERING MATERIAL, AND PREPARING OF SHOP DRAWINGS. ANY DISCREPANCIES BETWEEN FIELD CONDITIONS AND THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER. IF THE CONTRACTOR DISCOVERS ANY EXISTING CONDITIONS THAT ARE NOT REPRESENTED ON THESE DRAWINGS, OR ANY CONDITIONS THAT WOULD INTERFERE WITH THE INSTALLATION OF THE MODIFICATIONS, NOTIFY THE ENGINEER IMMEDIATELY.
4. IT IS ASSUMED THAT ANY STRUCTURAL MODIFICATION WORK SPECIFIED ON THESE PLANS WILL BE ACCOMPLISHED BY KNOWLEDGEABLE WORKMEN WITH TOWER CONSTRUCTION EXPERIENCE.
5. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION METHODS, MEANS, TECHNIQUES, SEQUENCES, AND PROCEDURES.
6. ALL CONSTRUCTION MEANS AND METHODS; INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS, AND RESCUE PLANS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN AND SHALL MEET ANSI/TIA-322 (LATEST EDITION), OSHA, AND GENERAL INDUSTRY STANDARDS. ALL RIGGING PLANS SHALL ADHERE TO ANSI/TIA-322 (LATEST EDITION) INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION.
7. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PROGRAMS IN ACCORDANCE WITH APPLICABLE SAFETY CODES.
8. WORK SHALL ONLY BE PERFORMED DURING CALM DRY DAYS (WINDS LESS THAN 30-MPH). THE STRUCTURE SHOWN ON THE DRAWINGS IS STRUCTURALLY SOUND ONLY IN THE COMPLETED FORM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STRENGTH AND STABILITY OF THE STRUCTURE DURING ERECTION. CONTRACTOR SHALL PROVIDE TEMPORARY SUPPORT, SHORING, BRACING AND ANY OTHER STRUCTURAL SYSTEMS AS REQUIRED TO RESIST ALL FORCES THAT MAY OCCUR DURING HANDLING AND ERECTION UNTIL THE STRUCTURE IS FULLY COMPLETED. TEMPORARY SUPPORTS, BRACING AND OTHER STRUCTURAL SYSTEMS REQUIRED DURING CONSTRUCTION SHALL REMAIN THE CONTRACTOR'S PROPERTY AFTER THEIR USE.
9. ALL INSTALLATIONS PERFORMED ON THIS STRUCTURE SHALL BE COMPLETED IN ACCORDANCE WITH THE GOVERNING PROVISIONS OF THE STANDARD FOR INSTALLATION, ALTERATION AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS, ANSI/TIA-322.
10. CONTRACTOR SHALL SECURE SITE BACK TO EXISTING CONDITION UNDER SUPERVISION OF OWNER. ALL FENCE, STONE, GEOFABRIC, GROUNDING, AND SURROUNDING GRADE SHALL BE REPLACED AND REPAIRED AS REQUIRED TO ACHIEVE OWNER APPROVAL. POSITIVE DRAINAGE AWAY FROM TOWER SITE SHALL BE MAINTAINED.
11. CONNECTIONS BETWEEN ITEMS SUPPORTED BY THE STRUCTURE AND THE STRUCTURE NOT SPECIFICALLY DETAILED IN THE CONTRACT DOCUMENTS ARE THE RESPONSIBILITY OF THE CONTRACTOR. SUCH CONNECTIONS SHALL BE DESIGNED, COORDINATED AND INSPECTED BY A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE OF THE PROJECT. SUBMIT SIGNED AND SEALED CALCULATIONS DURING SHOP DRAWING REVIEW.
12. DO NOT SCALE DRAWINGS.
13. DO NOT USE THESE DRAWINGS FOR ANY OTHER SITE.
14. ALL MATERIAL UTILIZED FOR THIS PROJECT MUST BE NEW AND FREE OF ANY DEFECTS. ANY MATERIAL SUBSTITUTIONS, INCLUDING BUT NOT LIMITED TO ALTERED SIZE AND/OR STRENGTHS, MUST BE APPROVED BY THE OWNER AND ENGINEER IN WRITING.
15. THE MOUNT UNDER NO CIRCUMSTANCES SHOULD BE USED AS A TIE OFF POINT.

DESIGN LOADS

WIND LOADS

a. BASIC WIND SPEED (3 SECOND GUST), V = 121 MPH

b. EXPOSURE CATEGORY C

c. TOPOGRAPHIC CATEGORY 1

d. MEAN BASE ELEVATION (AMSL) = 11.44'

ICE LOADS

a. ICE WIND SPEED (3 SECOND GUST), V = 50 MPH

b. ICE THICKNESS = 1.00 IN

SEISMIC LOADS

a. SEISMIC DESIGN CATEGORY B

b. SHORT TERM MCER GROUND MOTION, S_S = .199

c. LONG TERM MCER GROUND MOTION, S_1 = .053

STRUCTURAL STEEL

1. DESIGN, DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING PUBLICATIONS EXCEPT AS SPECIFICALLY INDICATED IN THE CONTRACT DOCUMENTS.
   a. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION (15TH EDITION)
   b. SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS
   c. AISC CODE OF STANDARD PRACTICE
2. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING UNLESS OTHERWISE SHOWN:

CHANNELS, ANGLES, PLATES, ETC.	ASTM A36 (GR 36)
STEEL PIPE	ASTM A53 (GR 35)
BOLTS	ASTM A325
NUTS	ASTM A563
LOCK WASHERS	LOCKING STRUCTURAL GRADE

3. ALL SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE APPROVED IN WRITING BY THE ENGINEER. CONTRACTOR SHALL PROVIDE DOCUMENTATION TO ENGINEER FOR VERIFYING THE SUBSTITUTE IS SUITABLE FOR USE AND MEETS ORIGINAL DESIGN CRITERIA. DIFFERENCES FROM THE ORIGINAL DESIGN, INCLUDING MAINTENANCE, REPAIR AND REPLACEMENT, SHALL BE NOTED. ESTIMATES OF COSTS/CREDITS ASSOCIATED WITH THE SUBSTITUTION (INCLUDING RE-DESIGN COSTS AND COSTS TO SUB-CONTRACTORS) SHALL BE PROVIDED TO THE ENGINEER. CONTRACTOR SHALL PROVIDE ADDITIONAL DOCUMENTATION AND/OR SPECIFICATIONS TO THE ENGINEER AS REQUESTED.
4. PROVIDE STRUCTURAL STEEL SHOP DRAWINGS TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
   a. SUBMIT SHOP DRAWINGS TO GREG.DULNIK@COLLIERSENGINEERING.COM
   b. PROVIDE MASER CONSULTING PROJECT # AND MASER CONSULTING PROJECT ENGINEER CONTACT IN THE BODY OF THE EMAIL.
5. DRILL NO HOLES IN ANY NEW OR EXISTING STRUCTURAL STEEL MEMBERS OTHER THAN THOSE SHOWN ON STRUCTURAL DRAWINGS WITHOUT THE APPROVAL OF THE ENGINEER OF RECORD.
6. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
7. ALL NEW STEEL SHALL BE HOT BE DIPPED GALVANIZED FOR FULL WEATHER PROTECTION. IN ADDITION ALL NEW STEEL SHALL BE PAINTED TO MATCH EXISTING STEEL. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.
8. ALL BOLT ASSEMBLIES FOR STRUCTURAL MEMBERS REPRESENTED IN THIS DRAWING REQUIRE LOCKING DEVICES TO BE INSTALLED IN ACCORDANCE WITH TIA-222-H SECTION 4.9.2 REQUIREMENTS.
9. WHERE CONNECTIONS ARE NOT FULLY DETAILED ON THESE DRAWINGS, FABRICATOR SHALL DESIGN CONNECTIONS TO RESIST LOADS AND FORCES WHERE SHOWN ON DRAWINGS AND AS OUTLINED IN SPECIFICATIONS.
10. FOR MEMBERS BEING REPLACED, PROVIDE NEW BOLTS AND MATCH EXISTING SIZE AND GRADE. MAINTAIN AISC REQUIREMENTS FOR MINIMUM BOLT DISTANCE AND SPACING.
11. ALL PROPOSED AND/OR REPLACED BOLTS SHALL BE OF SUFFICIENT LENGTH SUCH THAT THE END OF THE BOLT IS AT LEAST FLUSH WITH THE FACE OF THE NUT. IT IS NOT PERMITTED FOR THE BOLT END TO BE BELOW THE FACE OF THE NUT AFTER TIGHTENING IS COMPLETED.
12. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
13. ALL NEW STEEL SHALL BE HOT BE DIPPED GALVANIZED FOR FULL WEATHER PROTECTION. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.
14. ALL EXISTING PAINTED/GALVANIZED SURFACES DAMAGED DURING REHAB INCLUDING AREAS UNDER STIFFENER PLATES SHALL BE WIRE BRUSHED CLEAN, REPAIRED BY COLD GALVANIZING (ZINGA OR ZINC COTE), AND REPAINTED TO MATCH THE EXISTING FINISH (IF APPLICABLE).
15. ALL HOLES IN STEEL MEMBERS SHALL BE SIZED 1/16" LARGER THAN THE BOLT DIAMETER. STANDARD HOLES SHALL BE USED UNLESS NOTED OTHERWISE.

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2000 Midlantic Drive
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Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE : MODIFICATION NOTES

SHEET NUMBER : S-2

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

MODIFICATION INSPECTION NOTES

MI CHECKLIST	
CONSTRUCTION/ INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY EOR)	REPORT ITEM
PRE-CONSTRUCTION	
X	MI CHECKLIST DRAWING
X	EOR 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	VZW 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 CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, NAMELY 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 ITSELF, NOR DOES THE MI INSPECTOR TAKE OWNERSHIP OF THE MODIFICATION DESIGN. OWNERSHIP OF THE STRUCTURAL MODIFICATION 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 BEGIN COMMUNICATING AND COORDINATING 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 EFFICIENCY 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 GC AND 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 FOUNDATION INSPECTIONS TO ALLOW THE FOUNDATION AND MI INSPECTION(S) TO COMMENCE WITH ONE 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 MAY 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 MI'S

IF THE MODIFICATION INSTALLATION WOULD FAIL THE MI ("FAILED MI"), THE GC SHALL WORK WITH THE OWNER TO COORDINATE A REMEDIATION 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 AND INSPECTION
  - RAW MATERIALS
  - PHOTOS OF ALL CRITICAL DETAILS
  - FOUNDATION MODIFICATIONS
  - WELD PREPARATION
  - BOLT INSTALLATION
  - FINAL INSTALLED CONDITION
  - SURFACE COATING REPAIR
- POST CONSTRUCTION PHOTOGRAPHS
  - FINAL INFIELD CONDITION

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

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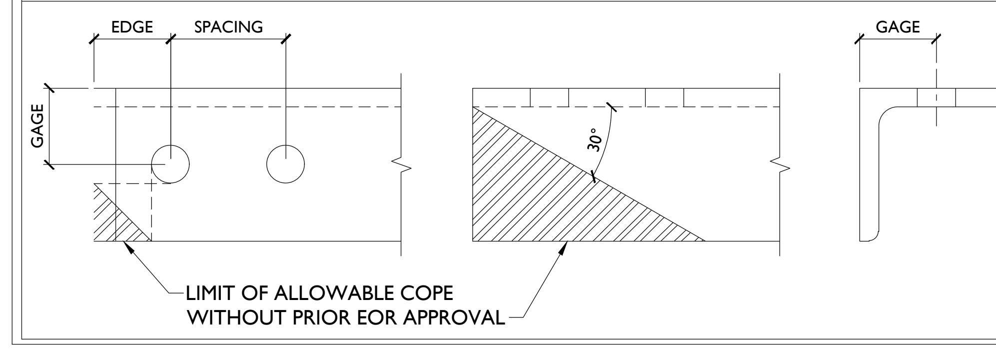
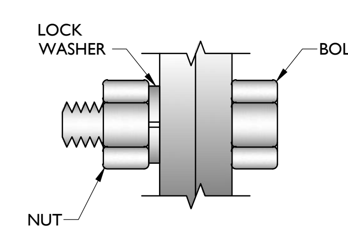


BOLT SCHEDULE (IN.)				
BOLT DIAMETER	STANDARD HOLE	SHORT SLOT	MIN. EDGE DISTANCE	SPACING
1/2	9/16	9/16 x 11/16	7/8	1 1/2
5/8	11/16	11/16 x 7/8	1 1/8	1 7/8
3/4	13/16	13/16 x 1	1 1/4	2 1/4
7/8	15/16	15/16 x 1 1/8	1 1/2	2 5/8
1	1 1/16	1 1/16 x 1 5/16	1 3/4	3

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:

1. ALL DIMENSIONS REPRESENTED IN THE ABOVE TABLES ARE AISC MINIMUM REQUIREMENTS. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS IN FIELD AND NOTIFY ENGINEER IF DISTANCES ARE LESS THAN THOSE PROVIDED.
2. THE DIMENSIONS PROVIDED ARE MINIMUM REQUIREMENTS. ACTUAL DIMENSIONS OF PROPOSED MEMBERS WITHIN THESE DRAWINGS MAY VARY FROM THE AISC MINIMUM REQUIREMENTS.
3. SHORT SLOT HOLES SHALL ONLY BE USED WHEN DEPICTED IN THE DRAWINGS
4. MATCH EXISTING GAGES WHEN APPLICABLE, UNLESS MINIMUM EDGE DISTANCES ARE COMPROMISED.

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REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
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STATE OF CONNECTICUT
DEJIAN XU
No. 33733
LICENSED PROFESSIONAL ENGINEER
04/01/2021

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF THE RESPONSIBLE LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SITE NAME:

EAST_HAVEN_COSEY_BEACH_CT
469123

60 COMMERCE STREET
EAST HAVEN, CT 06512
NEW HAVEN COUNTY

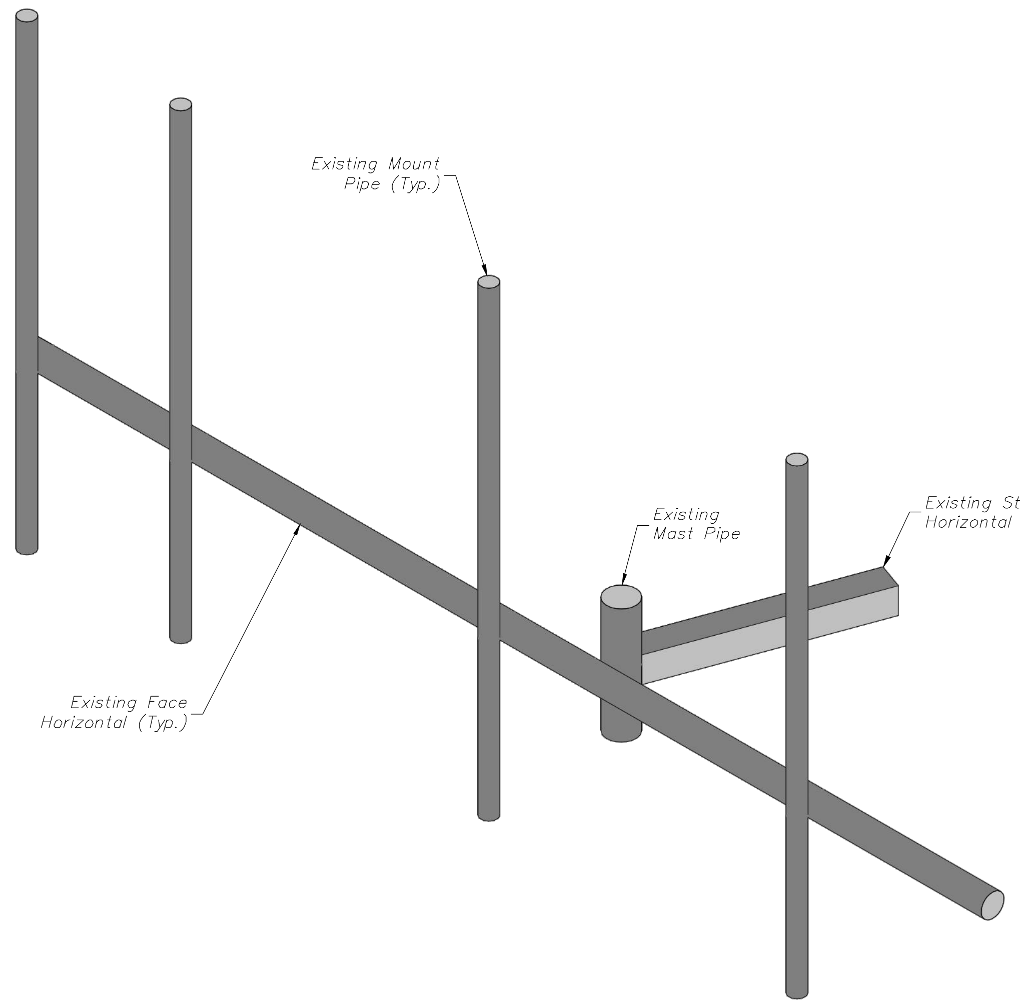
MT. LAUREL OFFICE
2000 Midlantic Drive
Suite 100
Mount Laurel, NJ 08054

Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE :
MODIFICATION NOTES

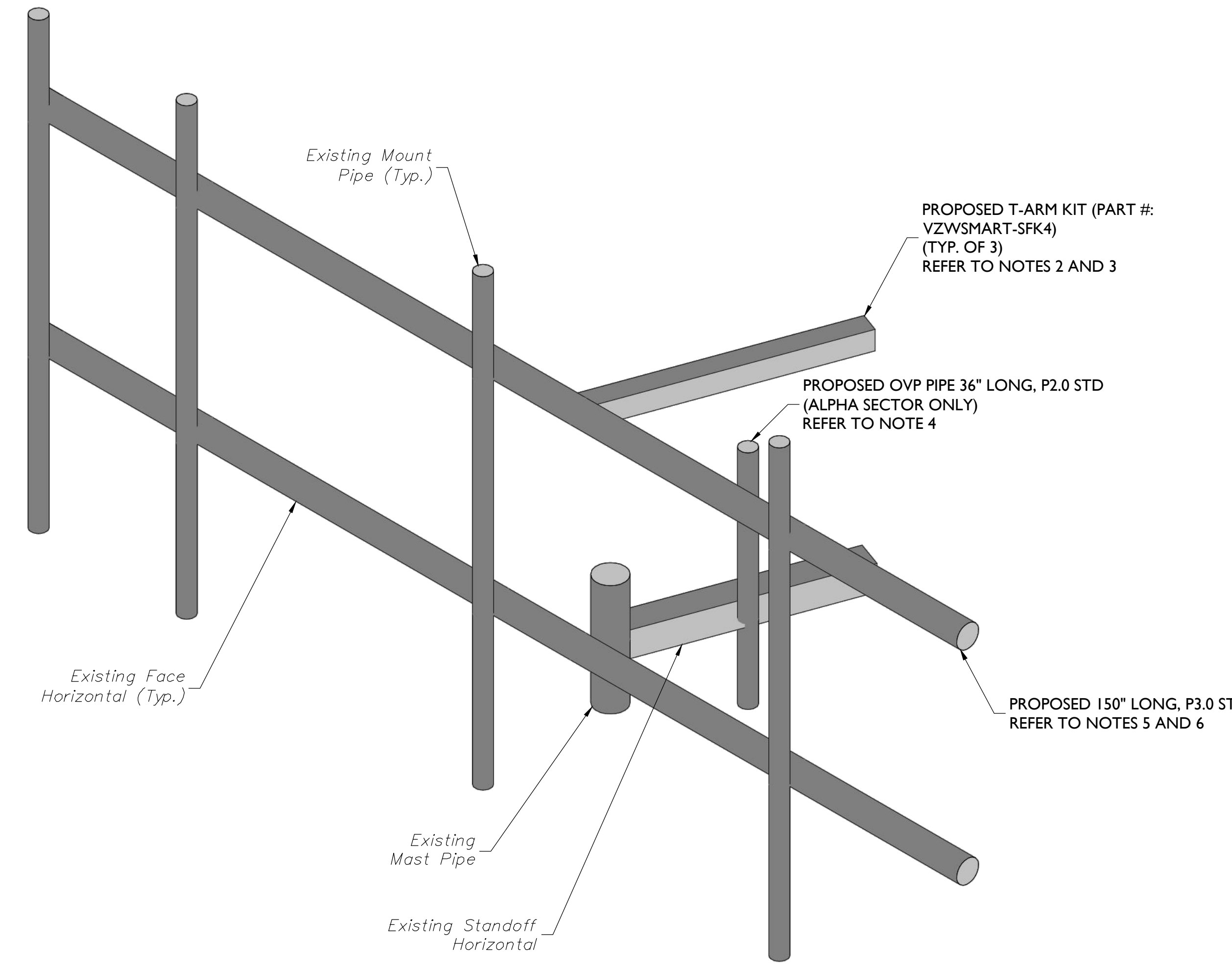
SHEET NUMBER :
S-3

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



1 EXISTING T-ARM ISOMETRIC VIEW (TYP. ALL SECTORS)

SCALE : N.T.S.



2 PROPOSED T-ARM ISOMETRIC VIEW (TYP. ALL SECTORS)

SCALE : N.T.S.

STRUCTURAL NOTES:

1. PER THE MOUNT MAPPING COMPLETED BY HUDSON DESIGN GROUP, LLC ON 1/27/2021, THE SAFETY CLIMB AND CLIMBING FACILITIES UP TO THE VERIZON MOUNT ELEVATION (53'-0") ARE IN GOOD CONDITION. 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.

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. CONNECT OTHER END OF T-ARM KIT TO MONOPOLE COLLAR MOUNT ASSEMBLY (PART #: VZWSMART-PLK7).

4. CONNECT NEW OVP PIPE TO EXISTING STANDOFf HORIZONTAL WITH CROSSOVER PLATES (SITE PRO 1 PART #: SQCX4-K).

5. RADIO AND/OR TME 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.

6. CONNECT NEW HORIZONTAL TO ALL EXISTING VERTICAL MOUNT PIPES WITH CROSSOVER PLATES (PART #: VZWSMART-MSK2).

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SHEET TITLE : MODIFICATION DETAILS

SHEET NUMBER : S-4

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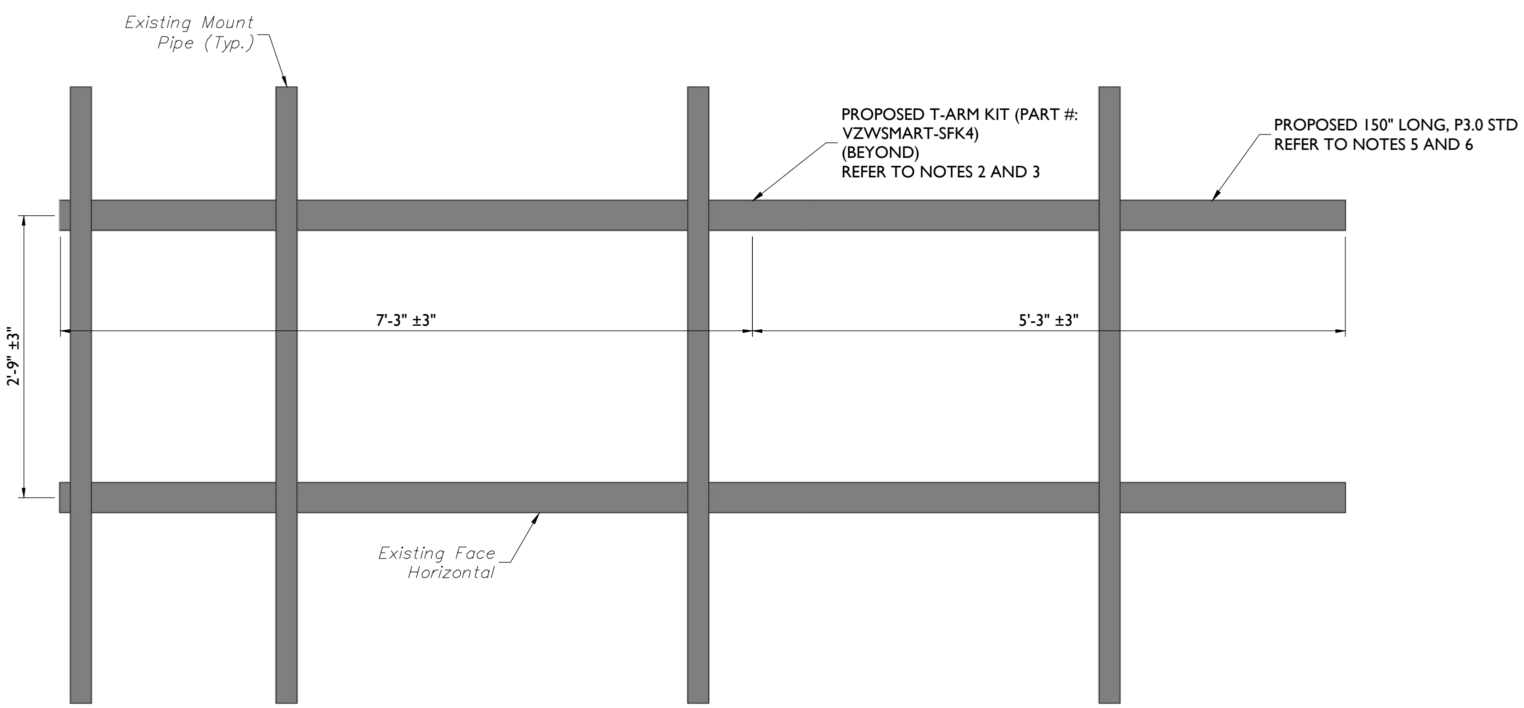
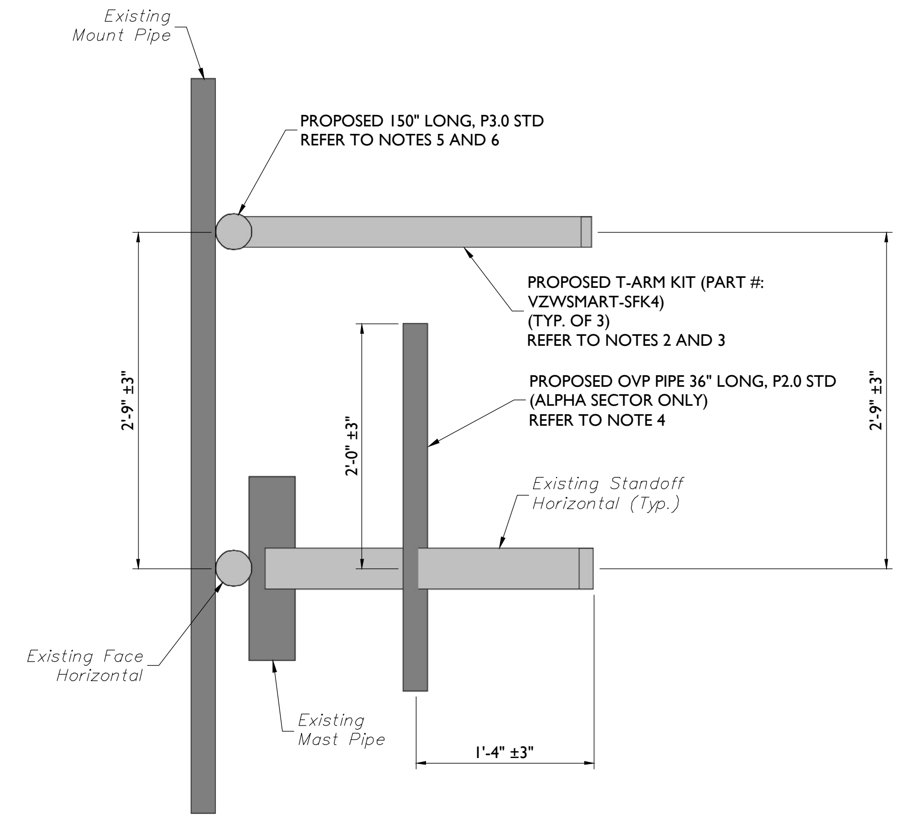


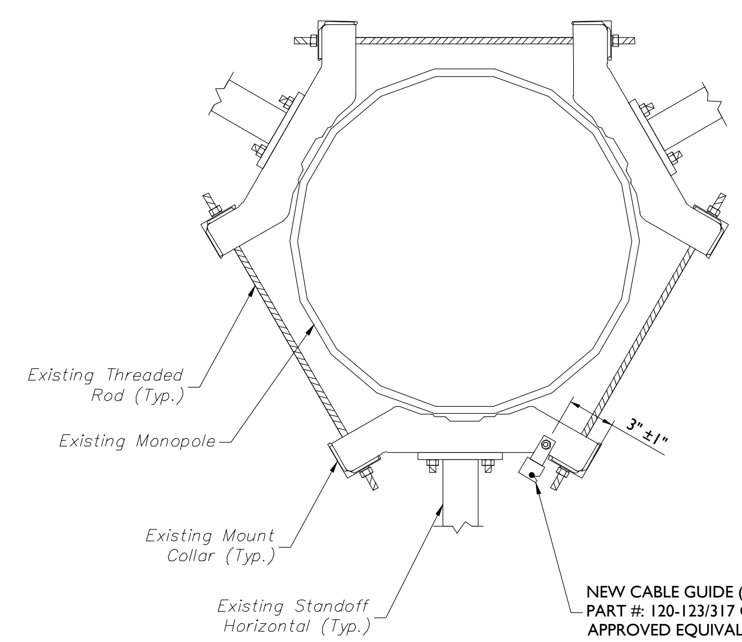
1 PROPOSED FRONT ELEVATION (TYP. ALL SECTORS)

SCALE : N.T.S.



2 PROPOSED SIDE ELEVATION (TYP. ALL SECTORS)

SCALE : N.T.S.



3 PROPOSED CABLE GUIDE COLLAR ATTACHMENT - 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.
3. CONNECT OTHER END OF T-ARM KIT TO MONOPOLE COLLAR MOUNT ASSEMBLY (PART #: VZWSMART-PLK7).
4. CONNECT NEW OVP PIPE TO EXISTING STANDOFf HORIZONTAL WITH CROSSOVER PLATES (SITE PRO 1 PART #: SQCX4-K).
5. RADIO AND/OR TME 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.
6. CONNECT NEW HORIZONTAL TO ALL EXISTING VERTICAL MOUNT PIPES WITH CROSSOVER PLATES (PART #: VZWSMART-MSK2).

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04/01/2021

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Fax: 856.722.1120

SHEET TITLE:
MODIFICATION DETAILS

SHEET NUMBER:
S-5

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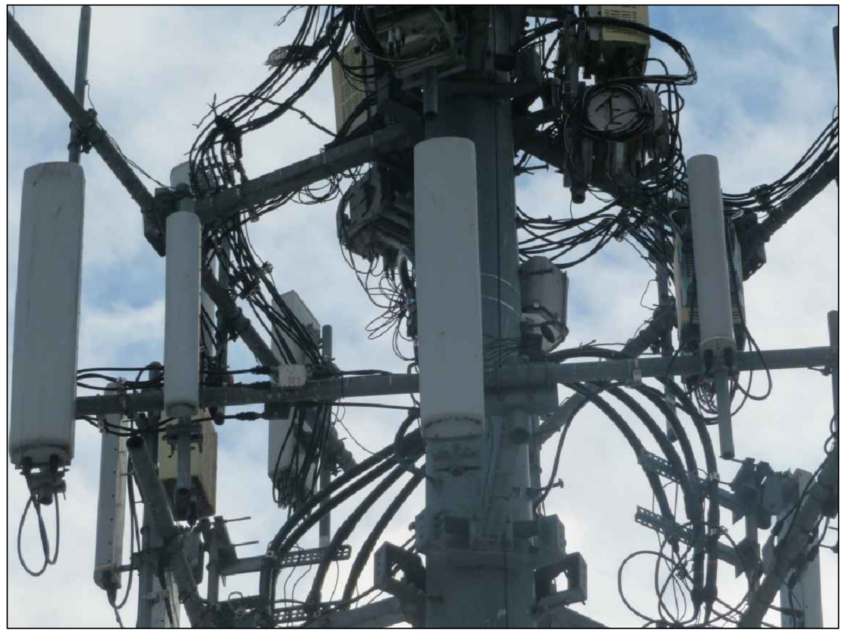

MOUNT PHOTO 1

MOUNT PHOTO 2

MOUNT PHOTO 3

MOUNT PHOTO 4

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SHEET TITLE : MOUNT PHOTOS

SHEET NUMBER : S-6

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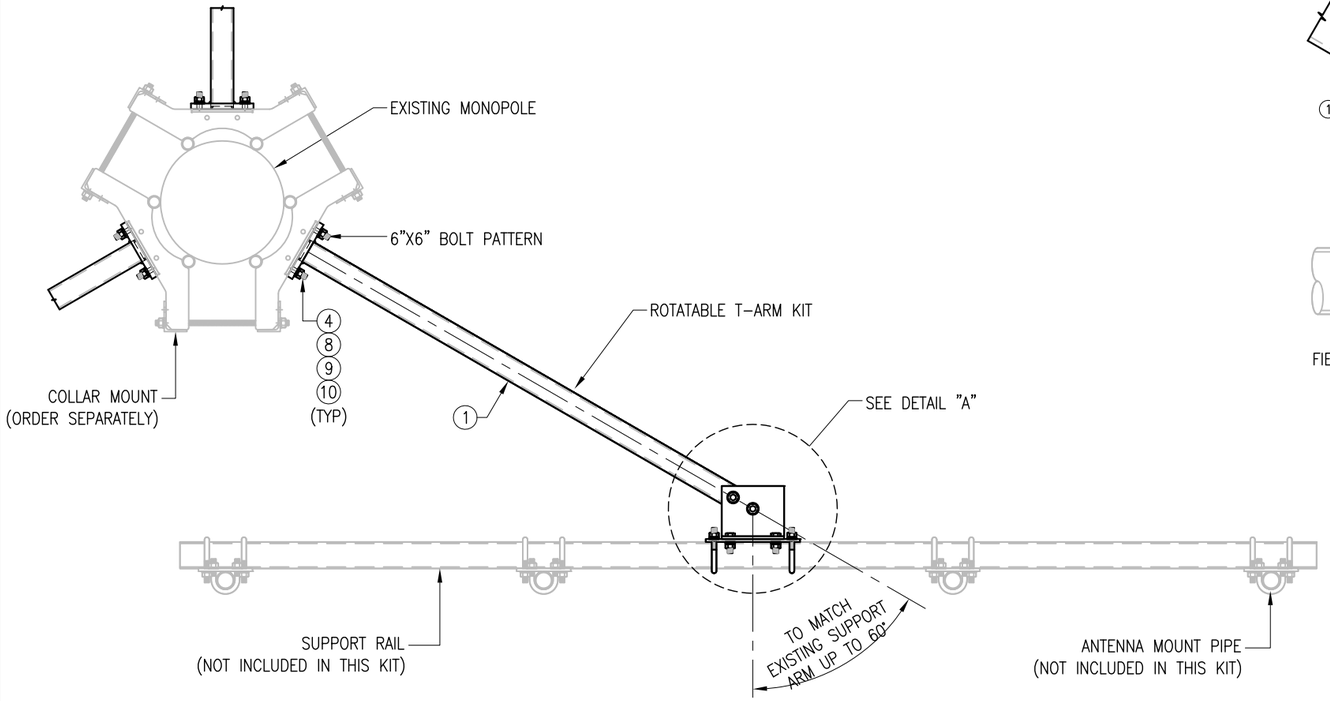
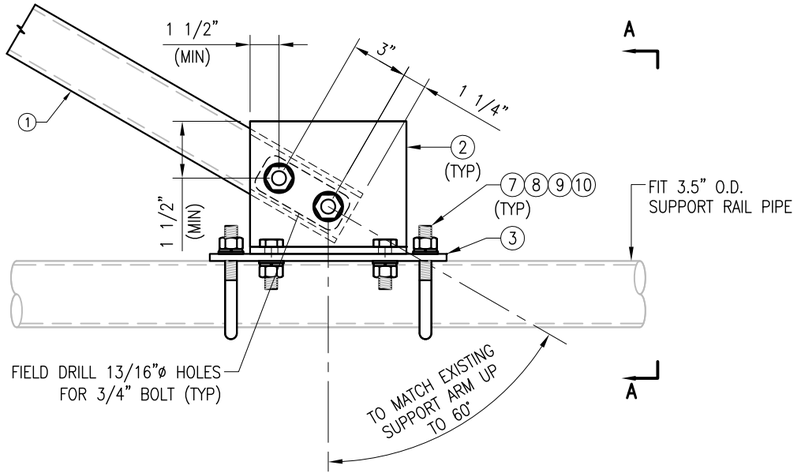
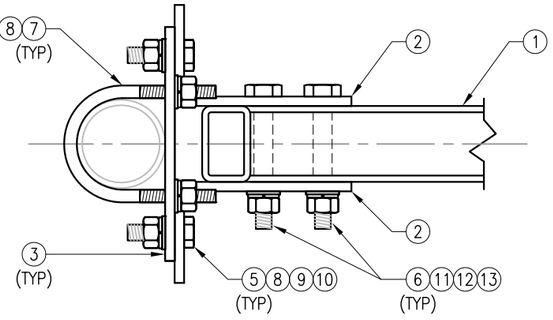


PLAN VIEW
T-ARM KIT



DETAIL "A"



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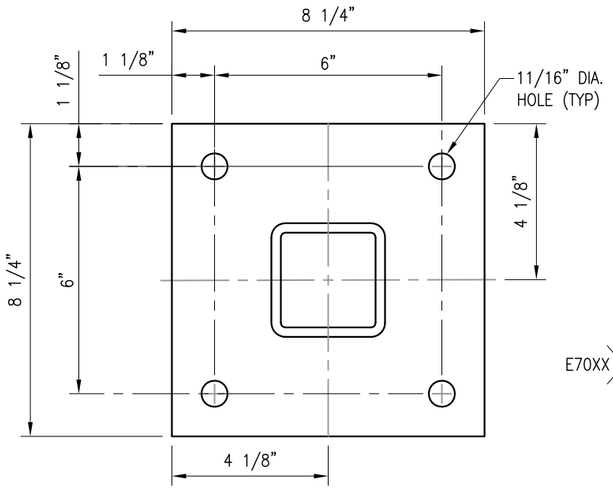
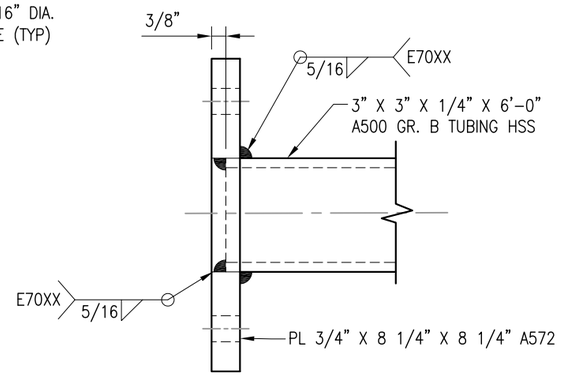


FRONT VIEW



SIDE VIEW

RO-TAW-6 WELDMENT

VZWSMART-SFK4 (T-ARM KIT)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	RO-TAW-6	T-ARM WELDMENT	SFK4-F1	71
2	2	BP825-94375	PL 3/8" X 8 1/4" X 9 7/16" A36 BEND PLATE	SFK4-F2	17
3	1	PL375-92512025	PL 3/8" X 9 1/4" X 1'-0 1/2" A36	SFK4-F3	12
4	4	---	BOLT 5/8" X 2 1/4" A325	---	0
5	4	---	BOLT 5/8" X 2" A325	---	0
6	2	---	BOLT 3/4" X 5 1/4" A325	---	0
7	2	MS02-625-3625-600	RU-BOLT 5/8" X 3 5/8" I.W. X 6" I.L. A36 (OR EQUIV.)	RBC-1	3
8	12	FW-625	5/8" HDG USS FLAT WASHER	---	1
9	12	LW-625	5/8" HDG LOCK WASHER	---	0
10	12	NUT-625	5/8" HDG HEX NUT	---	1
11	2	FW-75	3/4" HDG USS FLAT WASHER	---	0
12	2	LW-75	3/4" HDG LOCK WASHER	---	0
13	2	NUT-75	3/4" HDG HEX NUT	---	0
				GALVANIZED WT	106

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

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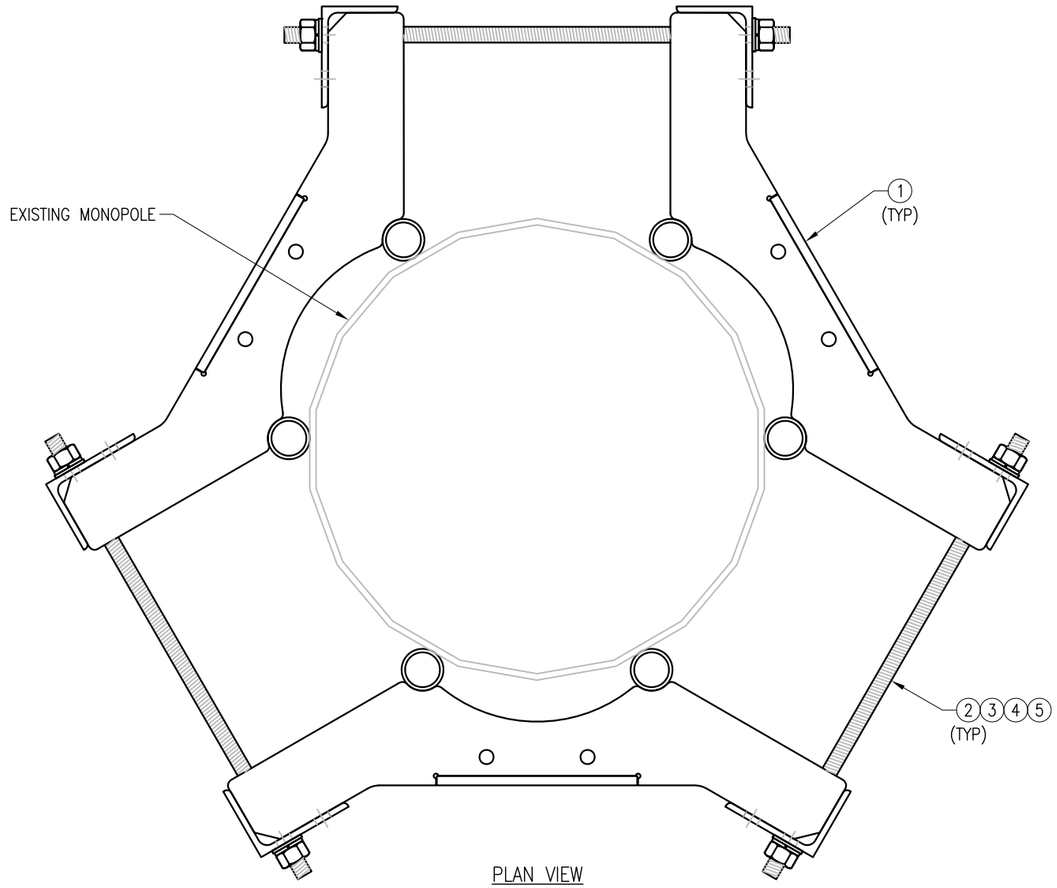
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	BT	05/08/20

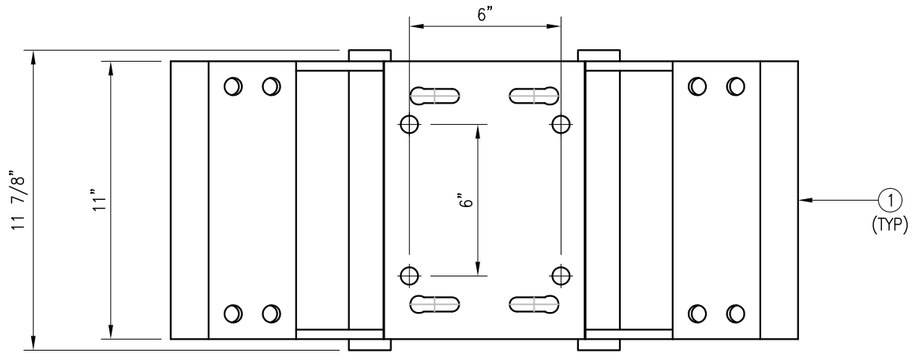
SHEET TITLE:
VZWSMART-SFK4
T-ARM KIT

SHEET NUMBER: VZWSMART-SFK4

REV #: 0



PLAN VIEW
MONOPOLE COLLAR MOUNT ASSEMBLY



FRONT VIEW

NOTES:
1. FIT 12" TO 45" DIA MONOPOLE.
2. HOT-DIPPED GALVANIZED PER ASTM A123.

VZWSMART-PLK7 (MONOPOLE COLLAR MOUNT ASSEMBLY)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	3	CM-1245	COLLAR MOUNT ASSEMBLY	PLK7-F1	147
2	6	---	THREADED ROD 5/8" X 4'-0" A193-B7	---	
3	12	FW-625	5/8" HDG USS FLAT WASHER	---	1
4	12	LW-625	5/8" HDG LOCK WASHER	---	0
5	12	NUT-625	5/8" HDG HEX NUT	---	1
				GALVANIZED WT	150

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REV.	DESCRIPTION	BY	DATE
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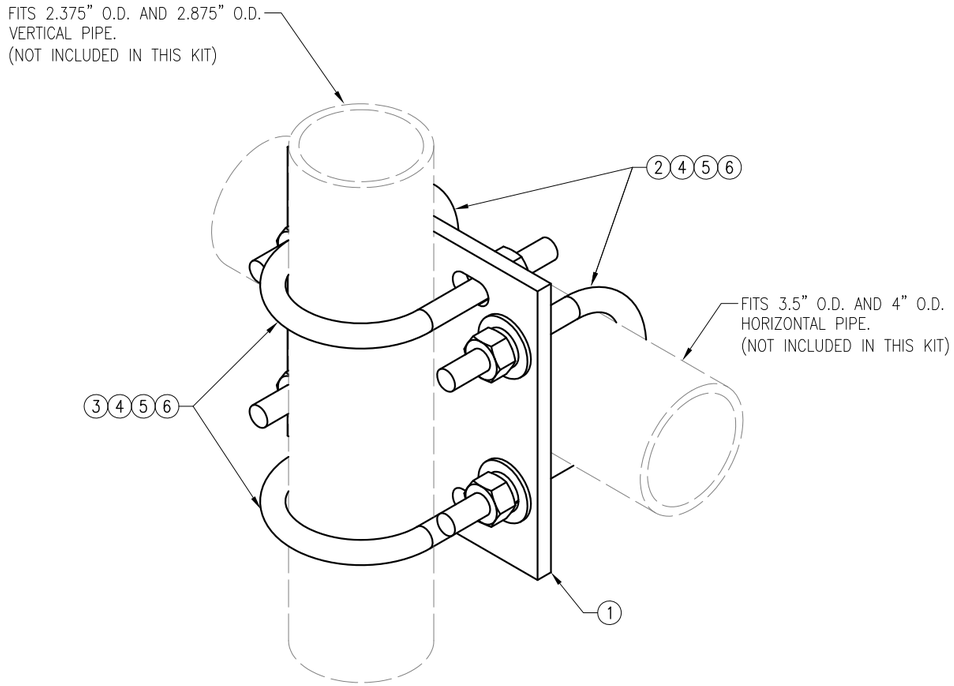
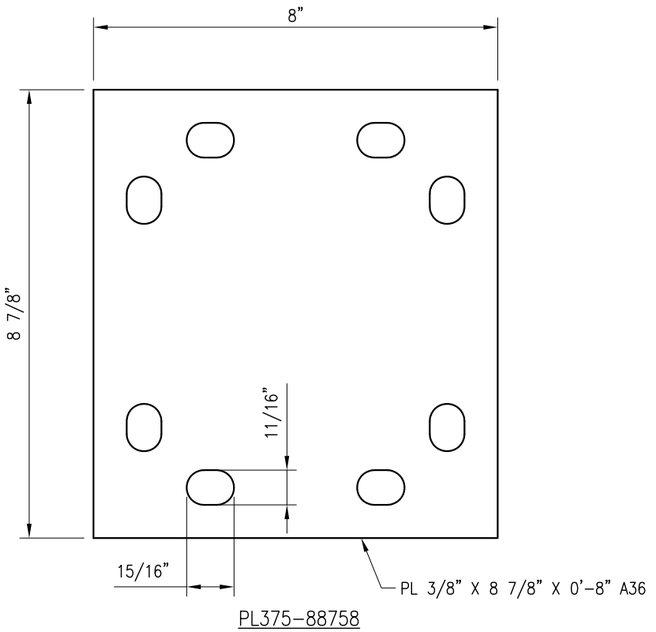
SHEET TITLE:
VZWSMART-PLK7
MONOPOLE COLLAR
MOUNT ASSEMBLY

SHEET NUMBER: VZWSMART-PLK7

REV #: 0





PL375-88758

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

VZWSMART-MSK2 (CROSSOVER PLATE)

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" I.W. X 6" I.L. A36 (OR EQUIV.)	RBC-1	3
3	2	MS02-625-300-500	RU-BOLT 5/8" X 3" I.W. X 5" I.L. A36 (OR EQUIV.)	RBC-1	3
4	8	FW-625	5/8" HDG USS FLAT WASHER	---	1
5	8	LW-625	5/8" HDG LOCK WASHER	---	0
6	8	NUT-625	5/8" HDG HEX NUT	---	1
				GALVANIZED WT	15

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DRAWN BY: H.R | CHECKED BY: HMA

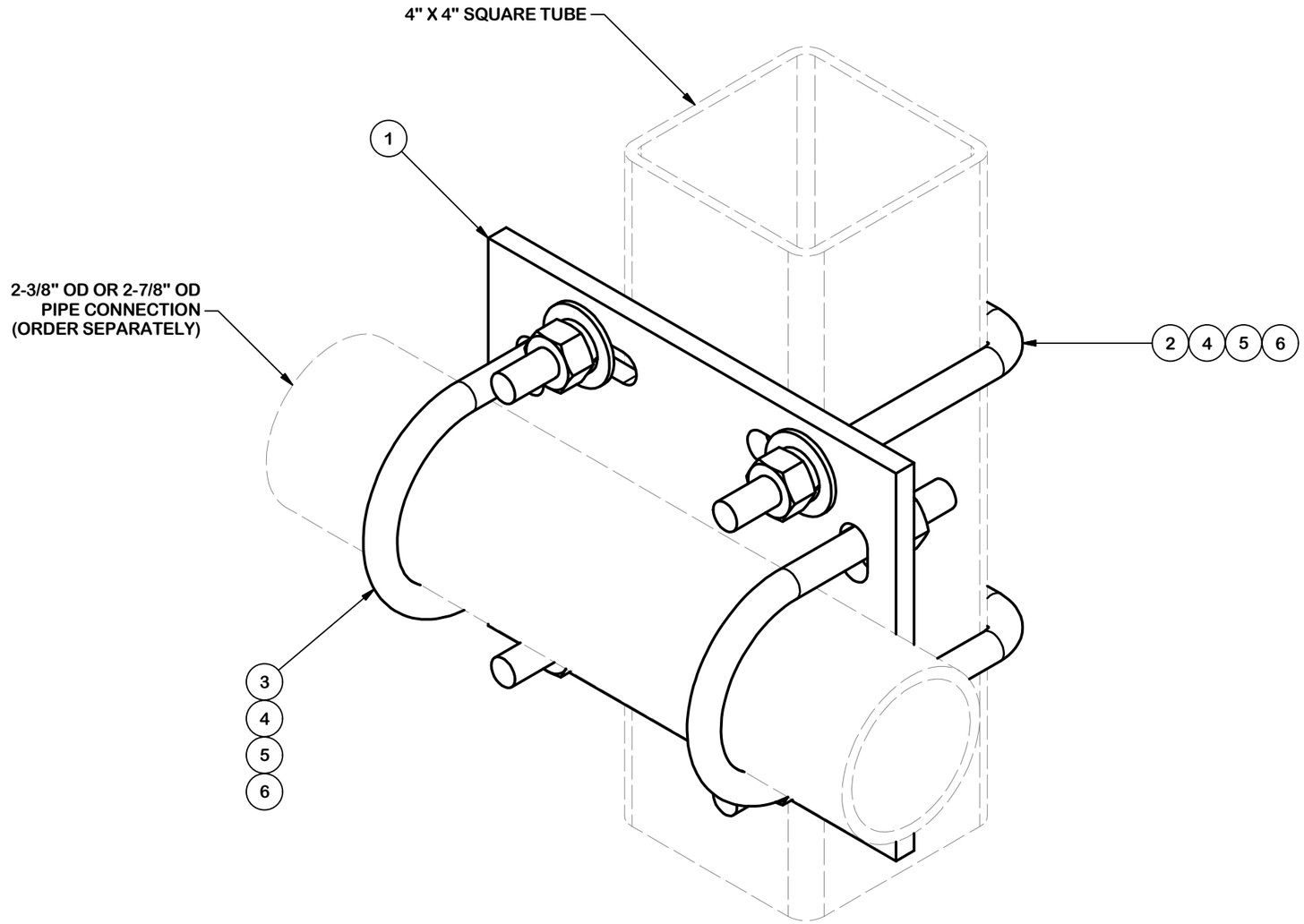
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	H.R	05/08/20

SHEET TITLE:
VZWSMART-MSK2
CROSSOVER PLATE

SHEET NUMBER: VZWSMART-MSK2

REV #: 0

PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	1	SCX4	CROSSOVER PLATE	8 1/2 in	6.02	6.02
2	2	X-SUB1418	SQUARE U-BOLT 0.5" DIA. X 4.125" IW X 6" IL X 3" TR		0.98	1.95
3	2	X-UB1212	1/2" X 2-1/2" X 4-1/2" X 2" U-BOLT (HDG.)		0.60	1.19
3	2	X-UB1300	1/2" X 3" X 5" X 2" U-BOLT (HDG.)		0.67	1.34
4	8	G12FW	1/2" HDG USS FLATWASHER	3/32 in	0.03	0.27
5	8	G12LW	1/2" HDG LOCKWASHER	1/8 in	0.01	0.11
6	8	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	0.57
					TOTAL WT. #	11.35



TOLERANCE NOTES

TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
SAWED, SHEARED AND GAS CUT EDGES (± 0.030")
DRILLED AND GAS CUT HOLES (± 0.030") - NO CONING OF HOLES
LASER CUT EDGES AND HOLES (± 0.010") - NO CONING OF HOLES
BENDS ARE ± 1/2 DEGREE
ALL OTHER MACHINING (± 0.030")
ALL OTHER ASSEMBLY (± 0.060")

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DESCRIPTION
CROSSOVER PLATE KIT
W/ SQUARE U-BOLTS AND STD. U-BOLTS

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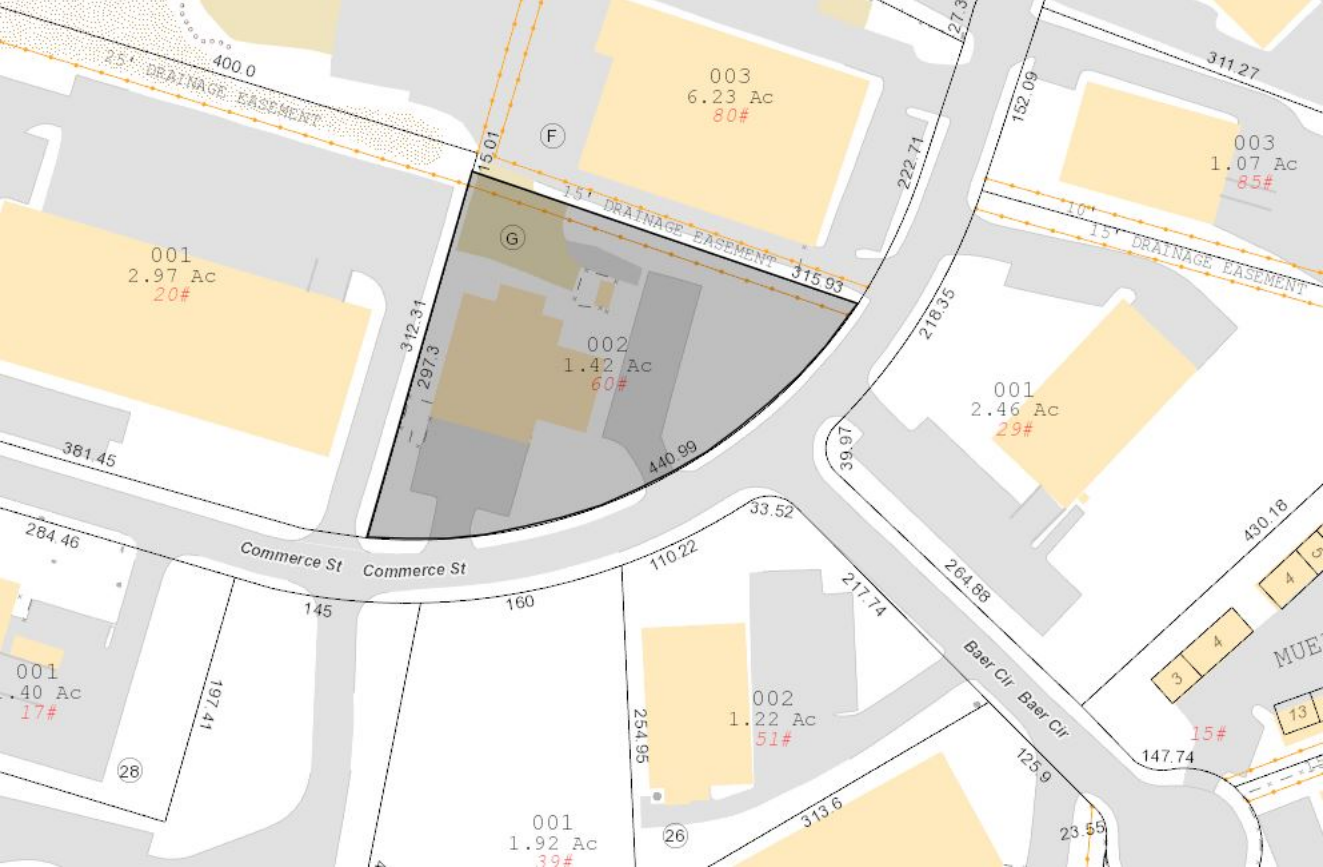
A valmont COMPANY
Engineering Support Team:
1-888-753-7446
Locations:
New York, NY
Atlanta, GA
Los Angeles, CA
Plymouth, IN
Salem, OR
Dallas, TX

CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.
	CSL 9/18/2018	3RD PARTY	SQCX4-K

CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
87	02	CUSTOMER	BMC 11/12/2018	SQCX4-K

ATTACHMENT 5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.40 Ac
17#
15' DRAINAGE EASEMENT
15' DRAINAGE EASEMENT
10'
15' DRAINAGE EASEMENT
Commerce St
Commerce St
Baer Clr
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400.0
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125.9
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254.95
197.41
23.55
15.01
F
G
28
26
15#

Town of East Haven, CT

Property Listing Report

Map Block Lot: 060 0610 002 | Building #: 1 | Unique Identifier: P0294950

Property Information

Property Location	60 COMMERCE ST
Mailing Address	60 COMMERCE ST EAST HAVEN CT 06512
Land Use	Commercial Garage
Zoning Code	LI-2
Neighborhood	IS1

Owner	PERRELLI ASSOCIATES LLC
Co-Owner	
Book / Page	1267/0276
Land Class	Commercial
Census Tract	1801000
Acreage	1.42

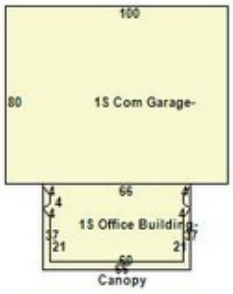
Valuation Summary

(Assessed value = 70% of Appraised Value)

Item	Appraised	Assessed
Buildings	568973	398280
Outbuildings	42490	29740
Land	166800	116760
Total	778263	544780

Utility Information

Electric	No
Gas	No
Sewer	Yes
Public Water	Yes
Well	No



Primary Construction Details

Year Built	1989	Heating Fuel	Oil	Livable Area (ft)	10199	Bsmt Area	0
Building Desc.	Commercial	Heating Type	FHA	Building Use	Commercial	Fin Bsmt Area	0
Building Style		AC Type	Central	Building Condition	Average	Fin Bsmt Quality	
Stories	1	Bedrooms	0	Frame Type	Average	Bsmt Access	
Exterior Walls	Metal	Full Bathrooms	0	Building Grade	5	Bsmt Gar	0
Exterior Walls 2	Concrete Block	Half Bathrooms	0	Fireplaces	0	Bsmt Sump Pump	No
Interior Walls		Extra Fixtures	10	Wood Stoves	0		
Interior Walls 2		Total Rooms	0	Attic Access			
Interior Floors 1	Carpet	Bath Style	NA	Roof Style			
Interior Floors 2		Kitchen Style		Roof Cover			
		Occupancy	0				

Report Created On 1/21/2022

Town of East Haven, CT

Property Listing Report | Map Block Lot **060 0610 002** | Building # **1** | Unique Identifier **P0294950**

Detached Outbuildings

Type	Description	Area (sq ft)	Condition	Year Built
Cell Towers	Cell Tower Flag Pole	1	Average	2011
Poles	Light Poles	5	Average	1989
Cell Towers	Cell Tower Mounted roof top	1	Average	2011
Shed	Frame Shed	240	Excellent	2010
Shed	Frame Shed	240	Average	2006
Shed	Frame Shed	200	Excellent	2010
Paving	Paving	8000	Average	1989

Attached Extra Features

Type	Description	Area (sq ft)	Condition	Year Built
Canopy	Canopy	375	Good	1989

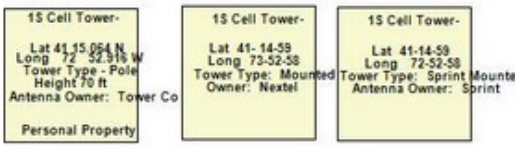
Sales History

Owner of Record	Book/ Page	Sale Date	Sale Price
PERRELLI ASSOCIATES LLC	1267_ 276	5/7/2002	0
PERRELLI FRANK P JR & GEORGE K	573_ 288	11/28/1989	0

Report Created On **1/21/2022**

Town of East Haven, CT

Property Listing Report | Map Block Lot: 060 0610 002 | Building #: 2 | Unique Identifier: P0294950



Primary Construction Details

Year Built	2011	Heating Fuel		Livable Area (ft)	1200	Bsmt Area	0
Building Desc.	Cell Site	Heating Type		Building Use	Commercial	Fin Bsmt Area	0
Building Style		AC Type		Building Condition	Average	Fin Bsmt Quality	
Stories	0	Bedrooms	0	Frame Type	Average	Bsmt Access	
Exterior Walls		Full Bathrooms	0	Building Grade	0	Bsmt Garage	0
Exterior Walls 2		Half Bathrooms	0	Fireplaces	0	Bsmt Sump Pump	No
Interior Walls		Extra Fixtures	0	Wood Stoves	0		
Interior Walls 2		Total Rooms	0	Attic Access			
Interior Floors 1		Bath Style	NA	Roof Style			
Interior Floors 2		Kitchen Style		Roof Cover			
		Occupancy	0				

Attached Extra Features

Type	Description	Area (sq ft)	Condition	Year Built

Report Created On 1/21/2022

ATTACHMENT 6

UNITED STATES POSTAL SERVICE®

EAST HAVEN COSEY BEACH

Certificate of Mailing — Firm

Name and Address of Sender	TOTAL NO. of Pieces Listed by Sender	TOTAL NO. of Pieces Received at Post Office™	Affix Stamp Here *Postmark with Date of Receipt.*
Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103	3	3	neopost 02/16/2022 US POSTAGE $002.99 ZIP 06103 041L12203937
	Postmaster, per *(name of receiving employee)*		

USPS® Tracking Number / Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	Joseph Carfora, Mayor Town of East Haven 250 Main Street East Haven, CT 06512				
2.	Joseph Budrow, Zoning Enforcement Officer Town of East Haven 250 Main Street East Haven, CT 06512				
3.	Perrelli Associates LLC 60 Commerce Street East Haven, CT 06512				
4.					
5.					
6.					

OLD STATE HOUSE STATION 06103 FEB 16 2022 USPS