Robinson+Cole

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Also admitted in Massachusetts and New York

December 21, 2021

Via Electronic Mail

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

Re: **Notice of Exempt Modification – Facility Modification**
1210 Highland Avenue, Torrington, 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 City of Torrington. Cellco's site acquisition consultant did reach out to the City Officials in advance of this filing in an effort to obtain a copy of the City's original tower approval but was told that no copy of the City's approval could be located. Cellco's shared use of the tower was approved by the Siting Council ("Council") in September of 2008 (EM-VER-143-080725). A copy of the Council's EM-VER-143-080725 approval is included in Attachment 1.

Cellco now intends to modify its facility by replacing six (6) existing antennas with three (3) new Samsung MT6407-77A antennas and six (6) QS6656-5D antennas on Cellco's existing 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 RRH are included in Attachment 2.

Please accept this letter as notification pursuant to R.C.S.A. § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to the City'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 replacement antennas will be installed on its existing antenna mount.

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

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

4. The installation of Cellco's new antennas will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. A cumulative General Power Density table for Cellco's modified facility is included in Attachment 3. The modified facility will be capable of providing Cellco's 5G wireless service.

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

6. According to the attached Structural Analysis ("SA") and Mount Analysis ("MA"), the existing tower, tower foundation and antenna platform, 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:
Elinor Carbone, Torrington Mayor
Martin Connor City Planner
Laurel Cablevision Inc, Property Owner
Karla Hanna, Verizon Wireless

ATTACHMENT 1

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

Internet: ct.gov/csc

Daniel F. Caruso
Chairman

September 2, 2008

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

RE: **EM-VER-143-080725** – Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 1210 Highland Avenue, Torrington, 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, with the condition that the coax lines are installed per Figure 1 of the structural analysis report dated January 7, 2008 and sealed by Christopher Murphy, P.E.

The proposed modifications are to be implemented as specified here and in your notice dated July 25, 2008, 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/jb

c: The Honorable Ryan J. Bingham, Mayor, City of Torrington
Martin Connor, City Planner, City of Torrington
SBA

ATTACHMENT 2

WIRELESS COMMUNICATIONS FACILITY

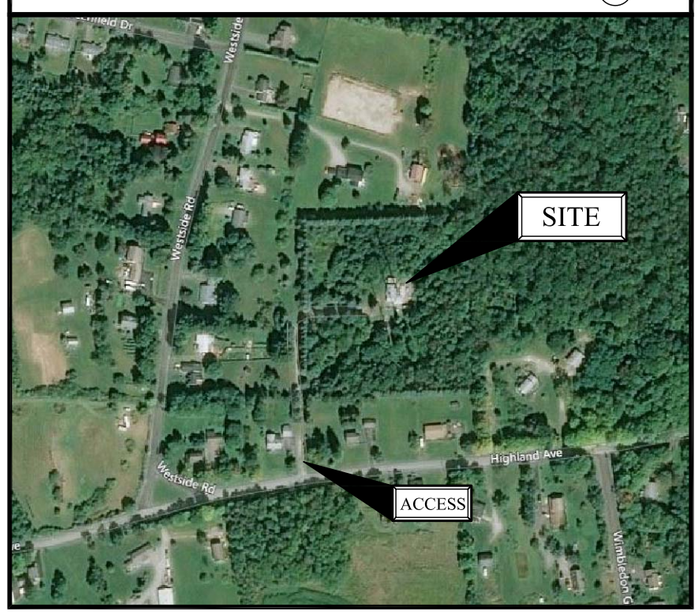
SITE NAME:
TORRINGTON 2 CT

SBA SITE # CT02303
1210 HIGHLAND AVE.
TORRINGTON, CT 06790

ANTENNA MODIFICATION

PROJECT SUMMARY	
SITE NAME:	TORRINGTON 2 CT
SITE ADDRESS:	1210 HIGHLAND AVE. TORRINGTON, CT 06790
PROPERTY OWNER:	SBA COMMUNICATIONS 8051 CONGRESS AVE. BOCA RATON, FL 33487
TOWER OWNER/MGMT:	SBA SITE # CT02303
PARCEL ID:	217-003-013
COORDINATES:	41° 48' 09.44" N 73° 09' 48.22" W
VERIZON CONSTRUCTION:	WALTER CHARCZYNSKI (860) 306-1806
VERIZON REAL ESTATE:	ALEX TYURIN (860) 550-3195

AERIAL MAP



SHEET INDEX	
DE-1	TITLE SHEET
DE-2	SITE LAYOUT & ELEVATION
DE-3	ANTENNA PLANS & ELEVATION
DE-4	RF PLUMBING DIAGRAM & B.O.M.
DE-5	GENERAL CONSTRUCTION NOTES

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WIRELESS COMMUNICATIONS FACILITY

20 ALEXANDER DRIVE
WALLINGFORD, CT 06492

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onair@optonline.net

LICENSURE

STATE OF CONNECTICUT
DAVID A. WEINPAHL
NO. 22144
LICENSED
LICENSED PROFESSIONAL ENGINEER

DAVID WEINPAHL, P.E.
CT LIC NO. 22144

SUBMITTALS

NO	DATE	DESCRIPTION
0	03.12.21	REVIEW
1	10.28.21	REVISED PER MOUNT ANALYSIS

DRAWN BY:	AS
CHECKED BY:	DW

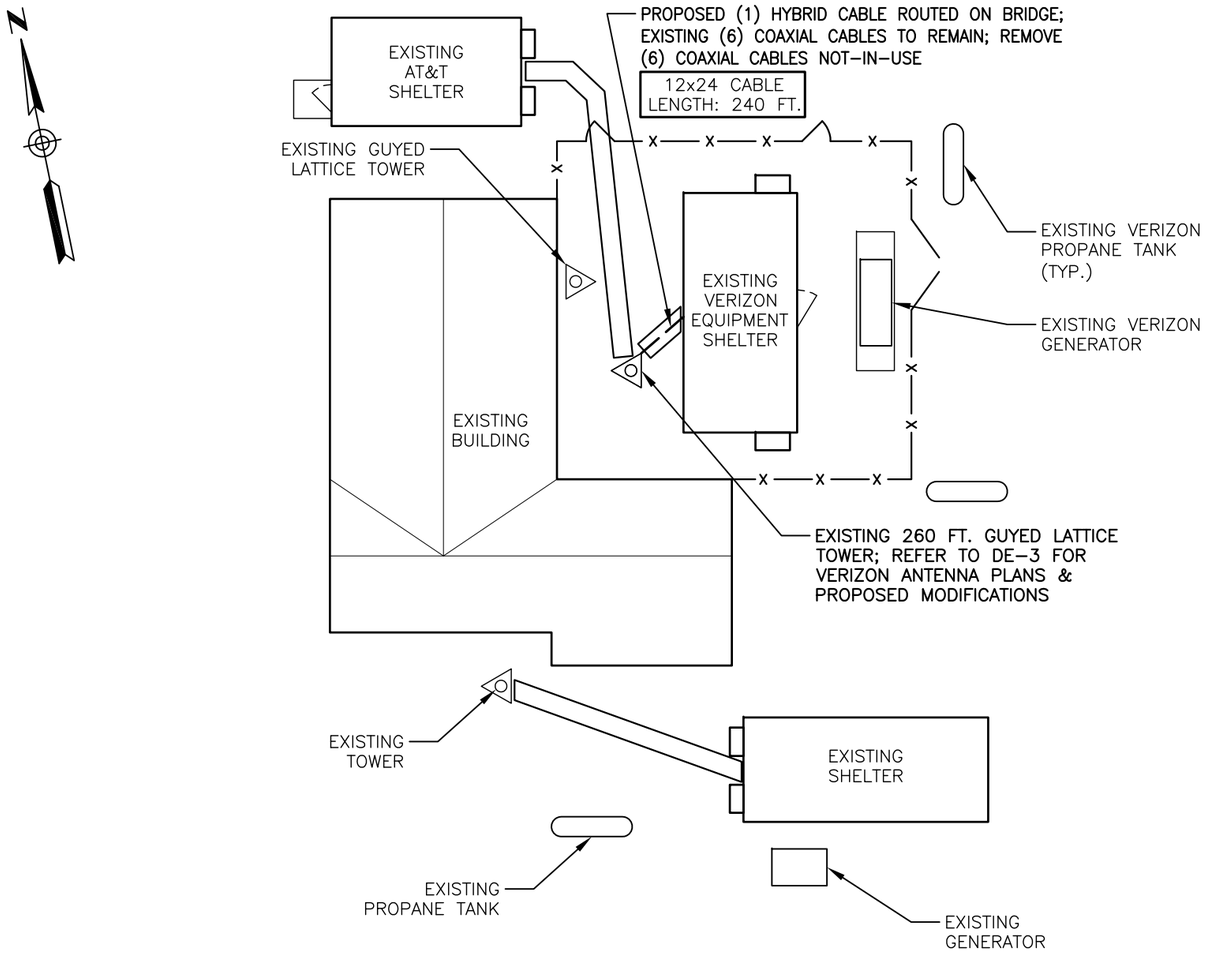
PROJECT NAME:
ANTMO MT6407
850-LTE-PCS-AWS
DESIGN EXHIBITS

SITE NAME:
TORRINGTON 2 CT

SITE ADDRESS:
SBA SITE # CT02303
1210 HIGHLAND AVE.
TORRINGTON, CT 06790

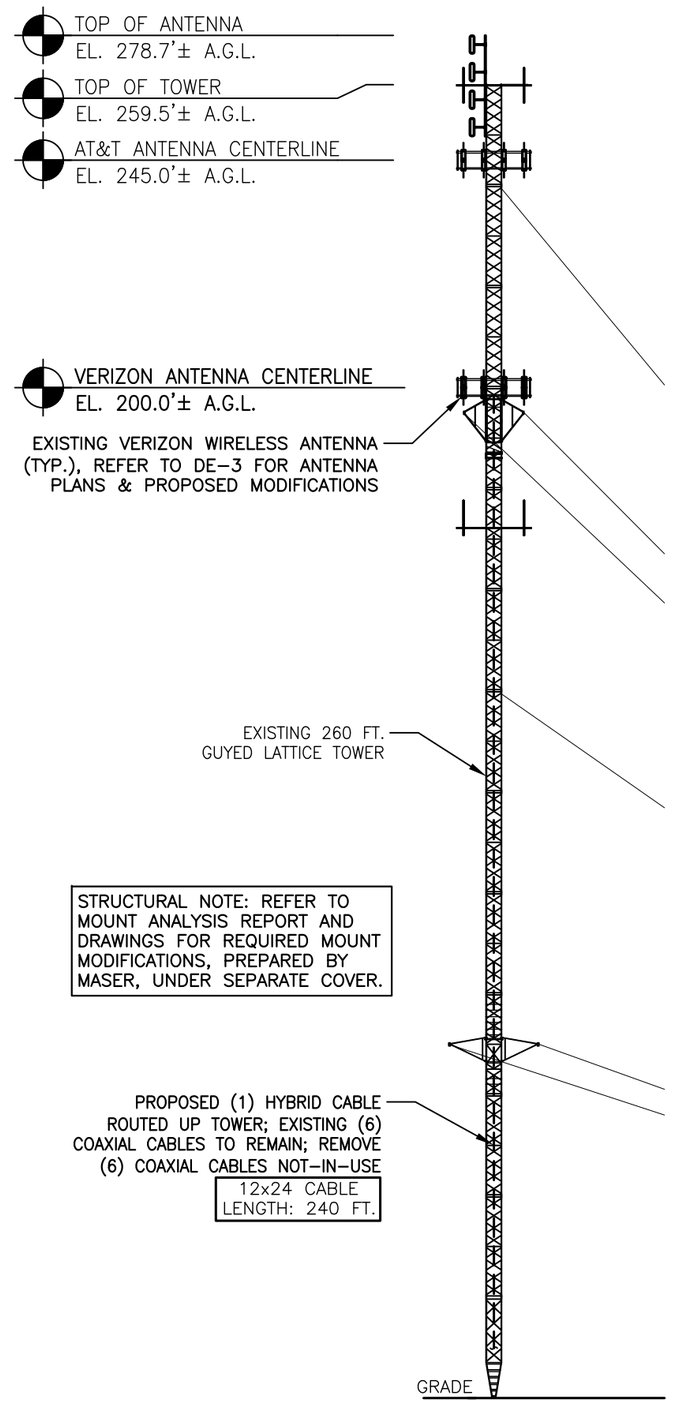
SHEET TITLE:
TITLE SHEET

SHEET NUMBER:
DE-1



1 DE-2 **SITE LAYOUT**
Scale: 1/16" = 1'-0"

NOTES:
1. SITE LAYOUT IS COMPILED FROM EXISTING DRAWINGS ON FILE WITH THE CT SITING COUNCIL AND A LIMITED DESIGN VISIT ON 11-05-20 FOR A PROPOSED VERIZON ANTENNA MODIFICATION.
2. PLANS ARE DIAGRAMMATIC ONLY AND NOT TO BE SCALED.
3. REFER TO STRUCTURAL TOWER AND MOUNT ANALYSIS REPORTS, BY OTHERS UNDER SEPARATE COVER, FOR ANY REQUIRED TOWER & MOUNT REINFORCEMENTS, WHICH MUST BE PERFORMED PRIOR TO ANY OTHER VERIZON ANTENNA MODIFICATIONS.



STRUCTURAL NOTE: REFER TO MOUNT ANALYSIS REPORT AND DRAWINGS FOR REQUIRED MOUNT MODIFICATIONS, PREPARED BY MASER, UNDER SEPARATE COVER.

2 DE-2 **ELEVATION**
Scale: NTS

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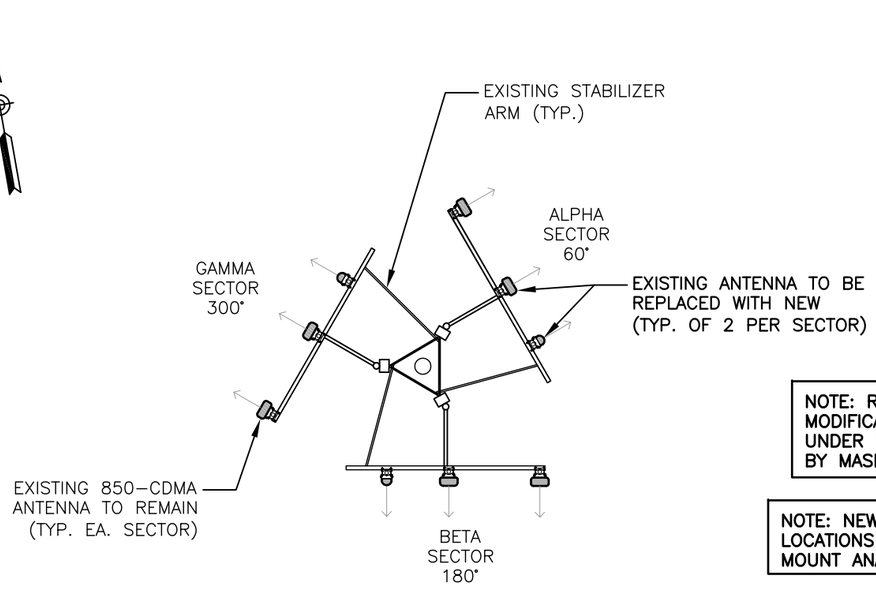
TORRINGTON, CT 06790

SHEET TITLE:
SITE LAYOUT &
ELEVATION

SHEET NUMBER:
DE-2

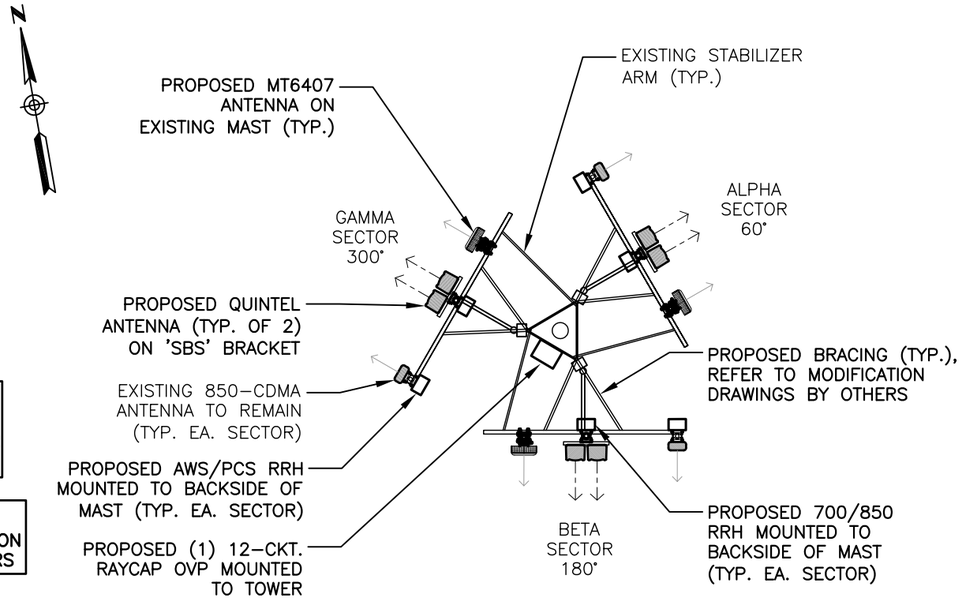


NOTE: REFER TO MOUNT MODIFICATION DRAWINGS, UNDER SEPARATE COVER BY MASER CONSULTING

NOTE: NEW DUAL RRH LOCATIONS SHOWN BASED ON MOUNT ANALYSIS BY OTHERS

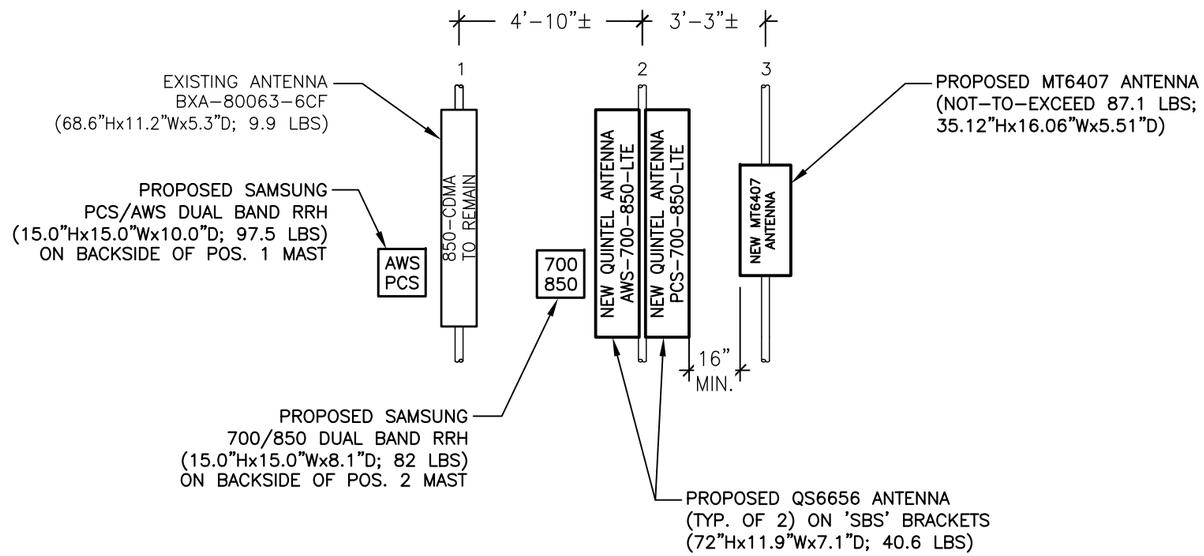
1 DE-3 ANTENNA PLAN @ 200 FT. - EXISTING

Scale: 1/8" = 1'-0"



2 DE-3 ANTENNA PLAN @ 200 FT. - PROPOSED

Scale: 1/8" = 1'-0"



(VIEWED FROM BEHIND SECTOR)

3 DE-3 ANTENNA ELEVATION (TYP.) - PROPOSED

Scale: 1/4" = 1'-0"

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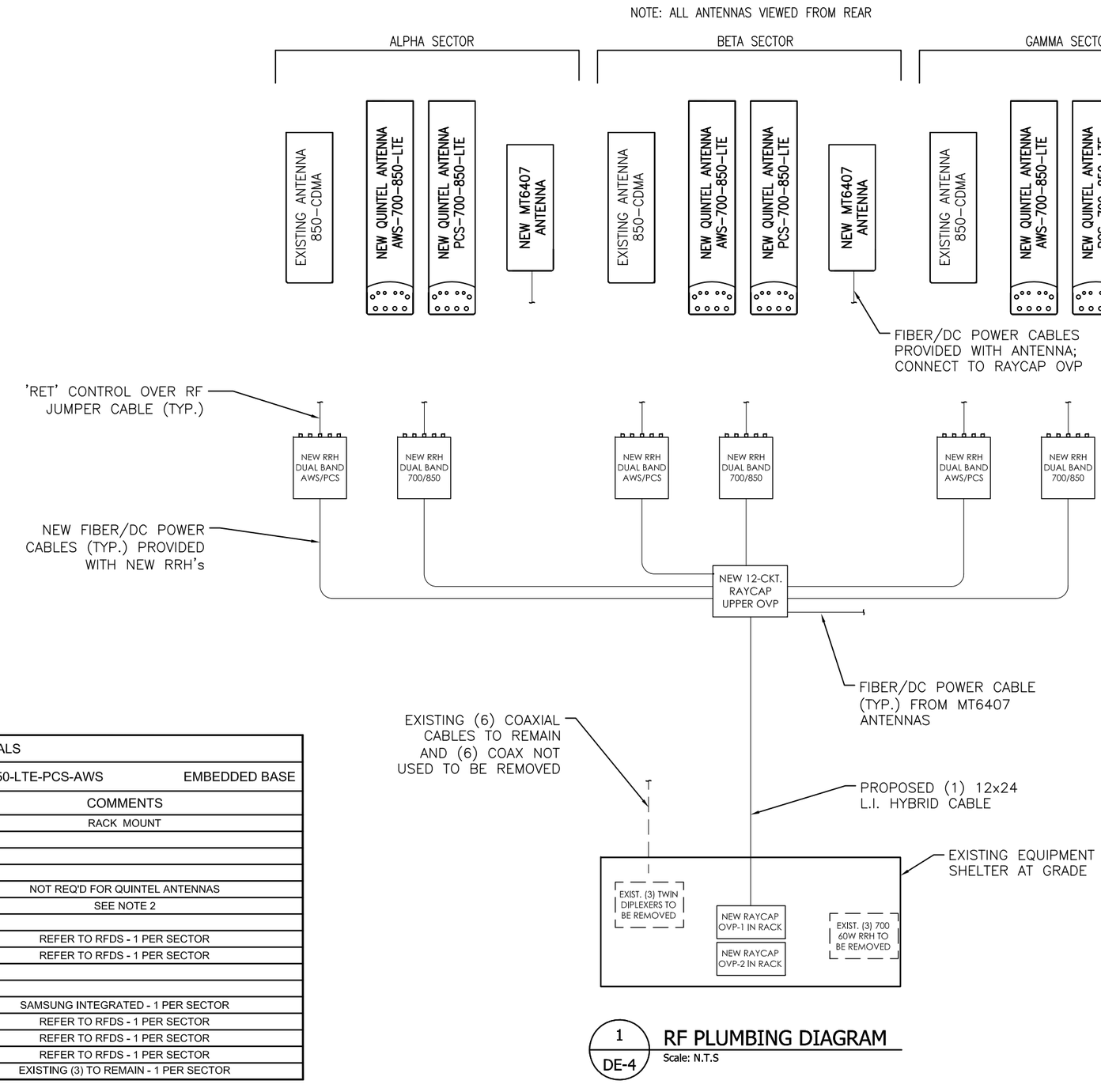
TORRINGTON, CT 06790

SHEET TITLE:
ANTENNA PLANS
& ELEVATION

SHEET NUMBER:
DE-3

GENERAL NOTES:

1. CONTRACTOR SHALL REFER TO THE LATEST VERIZON WIRELESS RFDS WHICH MAY INCLUDE ANTENNA SECTOR AZIMUTHS/ANTENNA CHANGES, ETC. THAT ARE REQUIRED AS PART OF THE PROJECT.
2. CONTRACTOR SHALL SECURE ALL CONTROL CABLES IN ACCORDANCE WITH INDUSTRY STANDARDS AND MANUFACTURERS INSTRUCTIONS. EXTERIOR CABLES MAY BE TAPED OR TIE-WRAPPED TO EXISTING SUPPORTS EVERY 4 FT. MAX. FOR HORIZONTAL RUNS. CONTRACTOR MAY USE HOISTING GRIPS AT TOP OF VERTICAL CABLE RUNS WHEN REQUIRED.
3. ALL CABLES SHALL BE ROUTED AND SECURED ON STRUCTURAL MEMBERS ONLY - DO NOT "LOOP" THE CABLES IN MID-AIR BETWEEN ANTENNAS
4. REFER TO RFDS FOR DETAILED PLUMBING DIAGRAM SHOWING ALL JUMPER AND OTHER CABLING CONNECTIONS AT ANTENNAS, RRH's, DIPLEXERS OR OTHER DEVICES.



1 / DE-4 **RF PLUMBING DIAGRAM**
Scale: N.T.S

BILL OF MATERIALS			
SITE NAME: TORRINGTON 2 CT	ANTMO MT6407-850-LTE-PCS-AWS		EMBEDDED BASE
DESCRIPTION	QTY	LENGTH	COMMENTS
LOWER OVP	2	-	RACK MOUNT
12-CKT. UPPER OVP	1	-	
12x24 L.I. HYBRID CABLE	1	240 FT.	
'RET' CONTROL CABLE	-	-	NOT REQ'D FOR QUINTEL ANTENNAS
1/2" JUMPER CABLE	-	-	SEE NOTE 2
AWS/PCS DUAL BAND RRH	3	-	REFER TO RFDS - 1 PER SECTOR
700/850 DUAL BAND RRH	3	-	REFER TO RFDS - 1 PER SECTOR
MT6407 ANTENNA	3	-	SAMSUNG INTEGRATED - 1 PER SECTOR
QUINTEL AWS-700-850-LTE ANTENNA	3	-	REFER TO RFDS - 1 PER SECTOR
QUINTEL PCS-700-850-LTE ANTENNA	3	-	REFER TO RFDS - 1 PER SECTOR
DUAL MOUNTING BRACKET	3	-	REFER TO RFDS - 1 PER SECTOR
850-CDMA ANTENNA	-	-	EXISTING (3) TO REMAIN - 1 PER SECTOR

NOTES:
1. ITEMS SHOWN ARE FOR MAJOR DESIGN ELEMENTS ONLY. REFER TO VERIZON WIRELESS RFDS FOR ALL MANUFACTURER PART NUMBERS AND ACCESSORY ITEMS REQUIRED FOR A COMPLETE INSTALLATION.
2. CONTRACTOR SHALL DETERMINE AND PROVIDE ALL REQUIRED PRE-FAB JUMPER QUANTITIES AND LENGTHS, KEEPING ALL LENGTHS TO A MINIMUM.

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SBA SITE # CT02303
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TORRINGTON, CT 06790

SHEET TITLE:
RF PLUMBING
DIAGRAM & B.O.M.

SHEET NUMBER:
DE-4

GENERAL CONSTRUCTION NOTES:

1. CONTRACTOR SHALL NOT COMMENCE ANY WORK UNTIL HE OBTAINS, AT HIS OWN EXPENSE, ALL INSURANCE REQUIRED BY *CELLCO PARTNERSHIP d/b/a VERIZON, THE PRO*PERTY OWNER AND/OR PROPERTY MANAGEMENT COMPANY.

2. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS AND ALL LOCAL LAWS AND REGULATIONS, CURRENT EDITIONS.

3. CONTRACTOR SHALL VISIT THE JOB SITE AND FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND MAKE PROVISIONS AS TO THE COST THEREOF. CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.

4. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, ELEVATIONS, ANGLES AND EXISTING CONDITIONS AT THE SITE PRIOR TO FABRICATION AND/OR INSTALLATION OF ANY WORK IN THE CONTRACT AREA AND SUBMIT TO THE ENGINEER ANY DISCREPANCIES FROM THE DRAWINGS.

5. CONTRACTOR IS TO REVIEW ALL DRAWINGS AND SPECIFICATIONS IN THE CONTRACT DOCUMENT SET. CONTRACTOR SHALL COORDINATE ALL WORK SHOWN IN THE SET OF DRAWINGS. CONTRACTOR SHALL PROVIDE A COMPLETE SET OF DRAWINGS TO ALL SUB-CONTRACTORS AND ALL RELATED PARTIES. THE SUB-CONTRACTORS SHALL EXAMINE ALL THE DRAWINGS AND SPECIFICATIONS FOR THE INFORMATION THAT AFFECTS THEIR WORK.

6. CONTRACTOR SHALL PROVIDE A COMPLETE BUILD-OUT WITH ALL FINISHES, STRUCTURAL, MECHANICAL AND ELECTRICAL COMPONENTS AND PROVIDE ALL ITEMS AS SHOWN OR INDICATED ON DRAWINGS OR WRITTEN IN SPECIFICATIONS.

7. CONTRACTOR SHALL FURNISH ALL MATERIAL, LABOR AND EQUIPMENT TO COMPLETE THE WORK AND FURNISH A COMPLETED JOB IN ACCORDANCE WITH LOCAL AND STATE GOVERNING AUTHORITIES AND OTHER AUTHORITIES HAVING LAWFUL JURISDICTION OVER THE WORK.

8. CONTRACTOR SHALL OBTAIN AT HIS OWN EXPENSE ALL PERMITS AND ALL INSPECTIONS REQUIRED FROM FEDERAL AND STATE GOVERNMENTS, COUNTIES, MUNICIPALITIES AND OTHER REGULATORY AGENCIES WHICH MAY BE REQUIRED FOR THE PROJECT.

10. DETAILS ARE INTENDED TO SHOW END RESULT OF DESIGN. MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS, AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK.

11. ALL MATERIAL PROVIDED BY *CELLCO PARTNERSHIP d/b/a VERIZON IS TO BE* REVIEWED BY CONTRACTOR AND ALL APPLICABLE SUB-CONTRACTOR PRIOR TO INSTALLATION. ANY DEFICIENCIES TO PROVIDED MATERIALS SHALL BE BROUGHT TO THE CONSTRUCTION MANAGERS ATTENTION IMMEDIATELY.

12. THE MATERIALS INSTALLED IN THE WORK SHALL MEET THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. NO SUBSTITUTIONS ARE ALLOWED.

13. CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION, FOR SEQUENCES AND PROCEDURES TO BE USED, AND TO ENSURE THE SAFETY OF THE EXISTING BUILDING AND ITS COMPONENT DURING CONSTRUCTION. THIS INCLUDES THE ADDITION OF WHATEVER SHORING, BRACING, UNDERPINNING, ETC. THAT MAY BE NECESSARY.

14. CONTRACTOR SHALL COORDINATE ALL CIVIL, STRUCTURAL AND ELECTRICAL DRAWINGS FOR THE LOCATION OF ALL OPENINGS, RECESSES, BUILT-IN WORK, ETC.

15. CONTRACTOR SHALL RECEIVE CLARIFICATION IN WRITING AND SHALL RECEIVE IN WRITING AUTHORIZATION TO PROCEED BEFORE STARTING WORK ON ANY ITEMS NOT CLEARLY DEFINED OR IDENTIFIED BY THE CONTRACT DOCUMENTS.

16. CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER OF ALL PRODUCTS OR ITEMS NOTED AS "EXISTING" WHICH ARE NOT FOUND TO BE IN THE FIELD.

17. ERECTION SHALL BE DONE IN A WORKMANLIKE MANNER BY COMPETENT EXPERIENCED WORKMEN IN ACCORDANCE WITH APPLICABLE CODES AND THE BEST-ACCEPTED PRACTICE. ALL MEMBERS SHALL BE LAID PLUMB AND TRUE AS INDICATED ON THE DRAWINGS.

18. CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE WORK AREA, ADJACENT AREAS, AND BUILDING OCCUPANTS THAT ARE LIKELY TO BE AFFECTED BY THE WORK UNDER THIS CONTRACT. WORK SHALL CONFORM TO ALL O.S.H.A REQUIREMENTS.

19. CONTRACTOR SHALL COORDINATE HIS WORK AND SCHEDULE HIS ACTIVITIES AND WORKING HOURS IN ACCORDANCE WITH THE REQUIREMENTS OF THE PROPERTY OWNER AND/OR PROPERTY MANAGEMENT COMPANY.

20. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS WORK WITH THE WORK OF OTHERS AS IT MAY RELATE TO RADIO EQUIPMENT, ANTENNAS AND ANY OTHER PORTIONS OF THE WORK.

21. CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY INDICATED OR WHERE LOCAL CODES OR REGULATIONS MAY TAKE PRECEDENCE.

22. CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING SURFACES, EQUIPMENT, IMPROVEMENTS, PIPING, ANTENNA AND ANTENNA CABLES AND REPAIR ANY DAMAGE THAT OCCURS DURING CONSTRUCTION.

23. CONTRACTOR SHALL REPAIR ALL EXISTING SURFACES DAMAGED DURING CONSTRUCTION SUCH THAT THEY MATCH AND BLEND WITH ADJACENT SURFACES.

24. CONTRACTOR SHALL KEEP CONTRACT AREA CLEAN, HAZARD FREE AND DISPOSE OF ALL DEBRIS AND RUBBISH. EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY OF THE OWNER SHALL BE REMOVED. LEAVE PREMISES IN CLEAN CONDITIONS AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL ITEMS UNTIL COMPLETION OF CONSTRUCTION.

25. BEFORE FINAL ACCEPTANCE OF THE WORK, CONTRACTOR SHALL REMOVE ALL EQUIPMENT, TEMPORARY WORKS, UNUSED AND USELESS MATERIALS, RUBBISH AND TEMPORARY STRUCTURES.

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TORRINGTON, CT 06790

SHEET TITLE:
GENERAL CONSTRUCTION NOTES

SHEET NUMBER:
DE-5

QS6656-5D

6ft 65° XXX MultiServ™ 6-Port Antenna

2x698-806 & 824-894MHz (Independent Tilts) / 4x1695-2400MHz

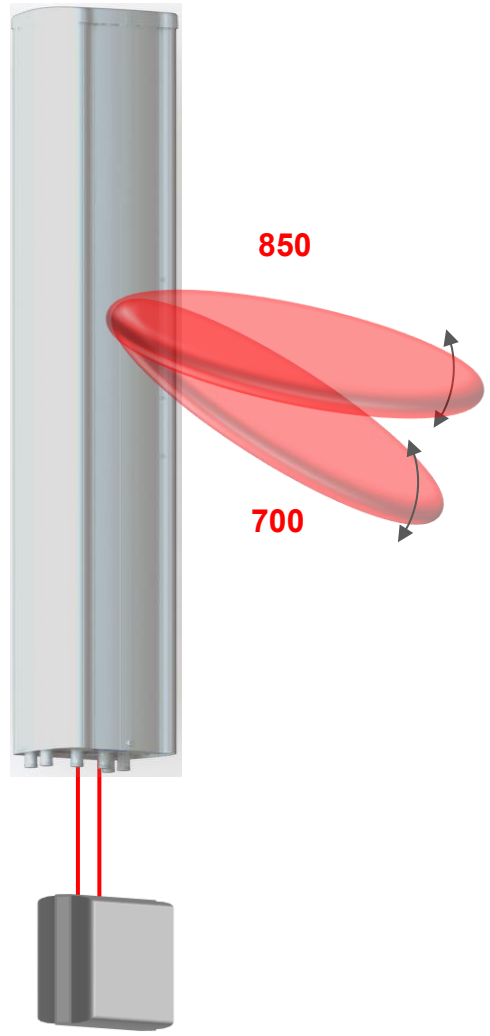
- Independent Tilts at 700 & 850MHz with Dual-Band Radios
- Optimized Azimuth patterns for Min Inter-Sector Interference
- Industry leading Minimal Wind-Load Radome design
- AISG & 3GPP compliant internal (RET) with Smart Bias T
- Best in class Quality and Internal PIM performance
- Slimline 12” Form factor

Electrical Characteristics	4x Ports 1 2		8x Ports 3 4 5 6			
Operating Frequency (MHz)	698-806 & 824-894		1695-2400			
	698-806	824-894	1695-1780	1850-1990	2110-2180	2300-2400
Peak Gain (dBi)	13.8	13.6	17.1	17.7	18.0	18.2
Azimuth beamwidth[1]	67°	63°	73°	66°	61°	60°
Elevation beamwidth[1]	11.9°	10.4°	6.4°	5.8°	5.3°	4.7°
Gain[1] (dBi)	13.4	13.2	16.6	17.1	17.4	17.7
Polarization	2x ±45°		2x ±45°			
Electrical down-tilt range	2°-14°	2°-14°	0°–8°			
USLS 20°>mainbeam (dB)[1]	17	17	16	18	17	16
FTB at 180°±10° (dB)[1]	30	28	28	33	35	36
Port to Port isolation[1]	25	25	30	30	30	30
Return loss/VSWR (dB)	14/1.5	14/1.5	14/1.5	14/1.5	14/1.5	14/1.5
X Polar at 0° (dB)	16	16	19	19	19	18
Max Power handling (port)	250 Watts		250 Watts			
Max Power (all ports)	700 Watts					
PIM (dBc: 2x43dBm)	>153		>153			

[1] *Typical Performance across ports, frequencies and Downtilt.*

Mechanical Characteristics	
Dimensions	L 72”(1828mm) x W 12”(304mm) x D 9.6”(245mm)
Weight (excl mounting brackets)	92.5lbs (42.0kg)
No. of Connectors	6x 4.3-10.0 DIN Female Long Neck
Max Wind Speed	150mph (67m/s)
Equivalent Projected Area[2]	Front: 2.6ft² (0.24m²) Side: 5ft² (0.48m²)
Wind Load[2] @161km/h (45m/s)	Front: 64lbs (285N), Side: 120lbs (535N)
Operating Temperature	-40°C to +65°C.

[2] *Equivalent Projected Area and Wind Load derived from wind tunnel measurements.*



700/850MHz Dual-Band Radio

Tel: +1 (585) 420-8720
info@quintelsolutions.com
www.quintelsolutions.com

QS6656-5D

6ft 65º XXX MultiServ™ 6-Port Antenna

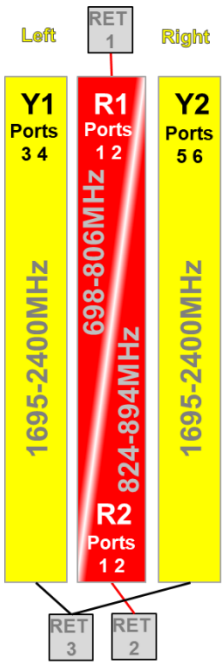
2x698-806 & 824-894MHz (Independent Tilts) / 4x1695-2400MHz

- Independent Tilts at 700 & 850MHz with Dual-Band Radios
- Optimized Azimuth patterns for Min Inter-Sector Interference
- Industry leading Minimal Wind-Load Radome design
- AISG & 3GPP compliant internal (RET) with Smart Bias T
- Best in class Quality and Internal PIM performance
- Slimline 12” Form factor

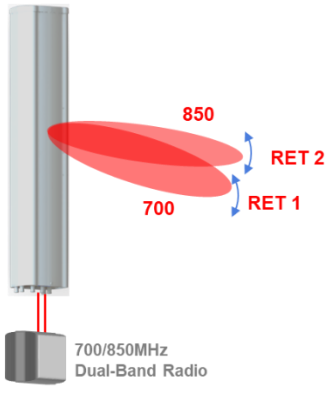
Fully Integrated RET Characteristics

Protocol	V 1.1/2.0/3GPP
Surge immunity	IEC 61000-4-5:2005 4KV(AISG PIN)
AISG Data rate	9.6 kbps
RET Connectors	2x 8-Pin DIN Female & 2x 8-Pin DIN Male

Port Layout, Array Configuration and RET ID



RET ID	Ports				Arrays		Freq Range
1	1		2		R1		698-806MHz
2	1		2		R2		824-894MHz
3	3	4	5	6	Y1	Y2	1695-2400MHz



Tel: +1 (585) 420-8720
info@quintelsolutions.com
www.quintelsolutions.com

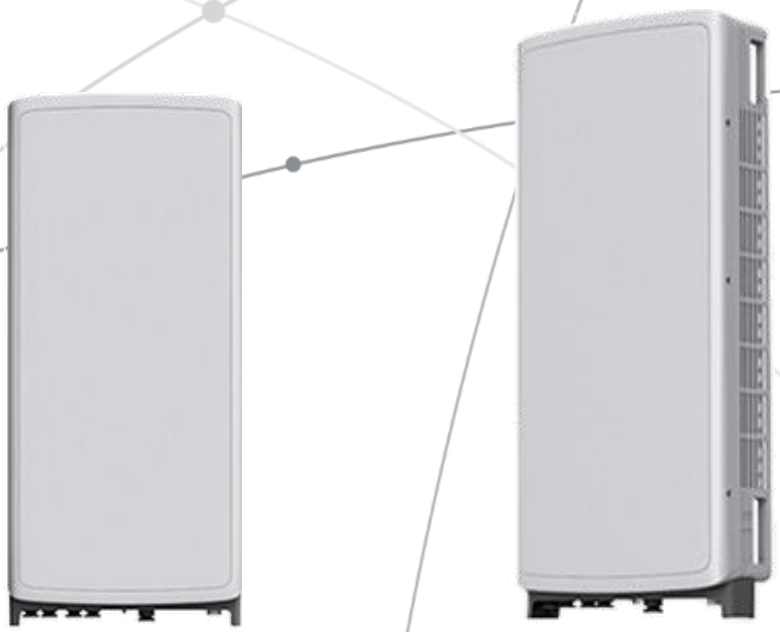
SAMSUNG

SAMSUNG C-Band 64T64R Massive MIMO Radio

for High Capacity and Wide Coverage

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

Model Code : MT6407-77A

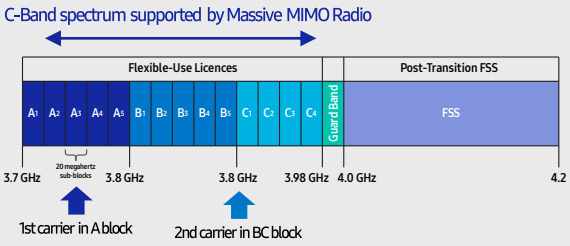


Points of Differentiation

Wide Bandwidth

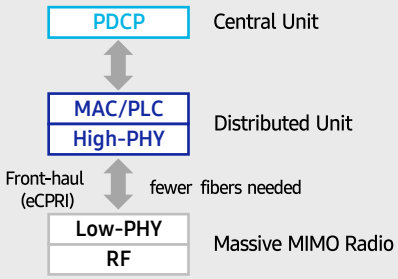
With capability to support up to 2 CC carrier configuration, Samsung C-Band massive MIMO Radio supports 200 MHz bandwidth in the C-Band spectrum.

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



Future Proof Product

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



Enhanced Performance

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

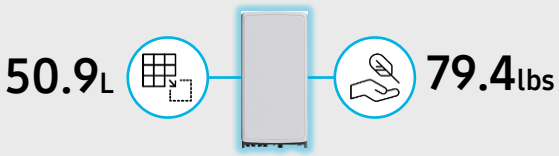
This helps operators reduce their CAPEX as they now need less products to cover the same area than before.

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

Well Matched Design

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

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



Technical Specifications

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

SAMSUNG

About Samsung Electronics Co., Ltd.

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

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

SAMSUNG

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

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

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

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

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

Features and Benefits

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

Key Technical Specifications

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

SAMSUNG

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

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

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

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

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

Features and Benefits

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

Key Technical Specifications

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

ATTACHMENT 3

	General	Power	Density					
Site Name: Torrington 2								
Tower Height: Verizon @ 200ft								
CARRIER	**# OF CHAN.**	**WATTS ERP**	**HEIGHT**	**FREQ.**	**CALC. POWER DENS**	**MAX. PERMISS.EXP.**	**FRACTION MPE**	**Total**
*Misc unidentified antennas			var.					
*Nextel	9	100	200	851	0.0086	0.5673		
*Marcus	1	100	60	5800	0.0123	1		
*Marcus	1	100	100	5800	0.0041	1	25.50%	
*AT&T	1	251	245	850	0.0016	0.5667	0.03%	
*AT&T	1	1476	245	737	0.0093	0.4913	0.19%	
*AT&T	1	2951	245	763	0.0186	0.5087	0.37%	
*AT&T	1	500	245	850	0.0031	0.5667	0.06%	
*AT&T	1	500	245	850	0.0031	0.5667	0.06%	
*AT&T	1	5070	245	2100	0.0319	1	0.32%	
*AT&T	1	1285	245	2300	0.0081	1	0.08%	
*AT&T	1	1476	245	737	0.0093	0.4913	0.19%	
*AT&T	1	3664	245	1900	0.0231	1	0.23%	
VZW 700	**4**	**442**	**200**	**751**	**0.0016**	**0.5007**	**0.31%**	
VZW CDMA	**2**	**498**	**200**	**878.49**	**0.0009**	**0.5857**	**0.15%**	
VZW Cellular	**4**	**508**	**200**	**874**	**0.0018**	**0.5827**	**0.31%**	
VZW PCS	**4**	**1682**	**200**	**1975**	**0.0060**	**1.0000**	**0.60%**	
VZW AWS	**4**	**1844**	**200**	**2120**	**0.0066**	**1.0000**	**0.66%**	
VZW CBAND	**2**	**21627**	**200**	**3730.08**	**0.0385**	**1.0000**	**3.85%**	
								32.91%
* Source: Siting Council								

ATTACHMENT 4

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

Post-Mod Structural Analysis Report

Existing 260 ft Pirod Guyed Tower

Customer Name: SBA Communications Corp

Customer Site Number: CT02303-A-3

Customer Site Name: Torrington 2 CT

Carrier Name: Verizon (App#: 156284-2)

Carrier Site ID / Name: 324975 / TORRINGTON_2_CT

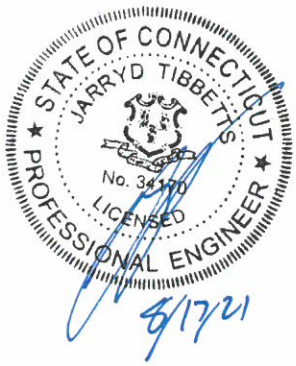
Site Location: 1210 Highland Ave

Torrington, Connecticut

Litchfield County

Latitude: 41.802500

Longitude: -73.164722



Analysis Result:

Max Structural Usage: 99.8% [Pass]

Max Foundation Usage: 71.0% [Pass]

Report Prepared By : Tawfeeq Alajaj

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

Post-Mod Structural Analysis Report

Existing 260 ft Pirod Guyed Tower

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Latitude: 41.802500

Longitude: -73.164722

Analysis Result:

Max Structural Usage: 99.8% [Pass]

Max Foundation Usage: 71.0% [Pass]

Report Prepared By : Tawfeeq Alajaj

Introduction

The purpose of this report is to summarize the analysis results on the 260 ft Pirod Guyed Tower to support the proposed antennas and transmission lines in addition to those currently installed. Any existing modification listed under Sources of Information was assumed completed and was included in this analysis.

The proposed modification by **TES** listed under Sources of Information was considered completed and was included in this analysis.

Sources of Information

Tower Drawings	All-point Technology Cororation, P.C, Job # CT122160, Dated 01/21/02
Foundation Drawing	All-point Technology Cororation, P.C, Job # CT122160, Dated 01/21/02
Geotechnical Report	FDH Engineering, Inc. (Project No. 12-08779E G1) Geotechnical Evaluation of Subsurface Conditions, Dated 10/08/12
Mount Analysis	Verizon post mod MA by Maser Consulting Connecticut Project #: 20777654A. Dated 05/07/2021. Verizon MMCD by Maser Consulting project # 20777654A. Dated 05/07/2021.
Existing Modification	FDH Engineering, Inc. (Project No. 05-0827E) Modification Drawings for a 260' Guyed Tower, Dated 08/29/05
Proposed Modification	TES Job # 112253

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 **TESTowers,** 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} = 120.0 mph (3-Sec. Gust)/ Nominal Design Wind Speed V_{asd} = 93.0 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

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	282.0	1	4" x 20' (8 Element) Dipole	(3) Standoff (8') at 263'	(1) 7/8"	Building 1
2		1	3" x 20' (16 Element) Dipole		(1) 1 1/4"	
3	275.0	1	2" x 15' Omni		(1) 7/8"	
4	257.0	1	2"x 18' Omnis		(1) 7/8"	
5	266.0	1	TWR 38" x 18"Ø Light	Direct Mount	(1) 0.59"	SBA
6	253.0	1	24" x 24" x 10" Box	Direct Mount	(1) 1/2"	Building 1
7	245.0	3	Powerwave - 7770 - Panel	(3) Sector Frames	(12) 1 5/8" (3) 3" Flex (Housing (6) 3/4" DC power & (2) 7/16" Fiber cables)	AT&T
8		2	KMW - AM-X-CD-16-65-00T-RET - Panel			
9		1	Kathrein - 800 10764 - Panel			
10		3	KMW - EPBQ-654L8H6-L2 - Panel			
11		2	CCI - DMP65R-BU6DA - Panel			
12		1	CCI - DMP65R-BU4DA - Panel			
13		12	Powerwave LGP21401 TMA			
14		3	RRUS 4478 B14			
15		3	RRUS 32 B30			
16		3	RRUS 4449 B5/B12			
17		3	RRUS 8843 B2 B66A			
18		3	Raycap DC6-48-60-18-8F - OVP			
19		3	Andrew ABT-DFDM-ADBH			
25	233.0	1	2' Ø x 18' Omni	(1) Standoff (36")	(1) 1 5/8"	Building 1
26	222.5	1	2' x 8' Omni	(3) Standoff (8') at 218.5'	(1) 1 1/4"	Building 1
27		1	3" x15' Omni		(1) 7/8"	
28	210.0	1	3" x15' Omni		(1) 1 1/4"	
29		1	3" x15' Omni		(1) 7/8"	
30	222.5	1	2' Ø x 18' Omni		(1) 1 1/4"	Unknown
31	200.0	6	RFS 6" x 4" x 1" TMAs	(3) 10' T-Frames	(12) 1 5/8"	Verizon
32		3	Amphenal BXA-171063-8BF-EDIN-X - Panel			
33		3	Amphenal BXA-70063-6CF-EDIN-^ - Panel			
34		3	Amphenal BXA-80063-6CF-EDIN-5 - Panel			
35	180.0	4	Bay Broadcast antenna	(1) Standoff (41")	(1) 1 5/8"	Unknown
36	178.0	1	8'x1" Omni		(1) 1 1/4"	
37	177.0	1	Andrew 10' x 2" Ø Omni	(1) Standoff (2')	(1) 7/8"	Building 1
38	173.0	1	21" x 4" x 7" Box	Direct Mount		
39	166.5	1	Andrew 14' x 3" Ø Omni	(1) Standoff (14")	(1) 7/8"	
40	118.0	3	3' x 2' Bay Broadcast antenna	(1) Standoff 20"	(1) 1 5/8"	Unknown
41	83.8	1	3' x 2' Bay Broadcast antenna	(1) Standoff 20"	(1) 7/8"	WAPJ

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
26	201.0	6	Quintel - QS6656-5D - Panel	(3) Modified 10' T-Frames with (3) JMA Mounting Brackets	(11) 1 5/8" (1) 1 5/8" Hybrid	Verizon
27		3	Samsung - MT6407-77A - Panel			
28		3	BXA-80063-6CF-EDIN-3 - Panel			
29		3	B2/B66A RRH-BR049 (RFV01U-D1A)			
30		3	B5/B13 RRH-BR04C (RFV01U-D2A)			
31		1	RFS DB-C1-12C-24AB-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:

Tower Component	Legs	Diagonals	Horizontals	Guy Wires
Max. Usage:	**99.8%**	**91.9%**	**79.5%**	**92.3%**
Pass/Fail	**Pass**	**Pass**	**Pass**	**Pass**

Foundations

	Base Reactions		Inner Anchors	
Reactions (kips)	Axial	Shear	Uplift	Shear
Analysis Reactions	190.8	1.8	46.0	57.7

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 0.2273 degrees under the operational wind speed as specified in the Analysis Criteria.

Conclusions

Based on the analysis results, the structure and its foundation will be adequate to safely support the existing and proposed equipment and meet the minimum requirements per the TIA-222-G-2 Standard after the following proposed modification is successfully completed.

- Proposed modification design drawing by **TES** Job # 112253

Pre-Mod Installation Determination

We have also checked this tower to determine if the proposed Verizon equipment loading can be installed prior to the completion of the required modifications. We ran a reduced wind loading case as required by TIA-322 considering a construction period of no more than 6 months.

The tower and foundations passed, so the Carrier can proceed and install their proposed loading prior to the mods completion. Please be aware that this approval is being provided and is based on the method outlined in TIA-322. This approval is not a blanket approval and there is still a risk that the tower will experience a wind event that cannot be predicted by TIA-322 or our Engineers. In the event of an unforeseen wind event, Tower Engineering Solutions will not be liable nor responsible for damage to the tower or the Carriers equipment. Additionally, the tower cannot go beyond the 6 month construction period without the modifications being completed. If the modifications cannot be completed within 6 months from the completed installation of the Carrier's proposed equipment, TES must be notified immediately for further review.

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 EIA/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.

Structure: CT02303-A-3-SBA

Site Name:	Torrington 2 CT			**Code:**	EIA/TIA-222-G	8/17/2021
Type:	Guyed	**Base Shape:**	Triangle	**Basic WS:**	93.00	
Height:	260.00 (ft)	**Base Width:**	0.00	**Basic Ice WS:**	50.00	
Base Elev:	0.00 (ft)	**Top Width:**	3.00	**Operational WS:**	60.00	Page: 1

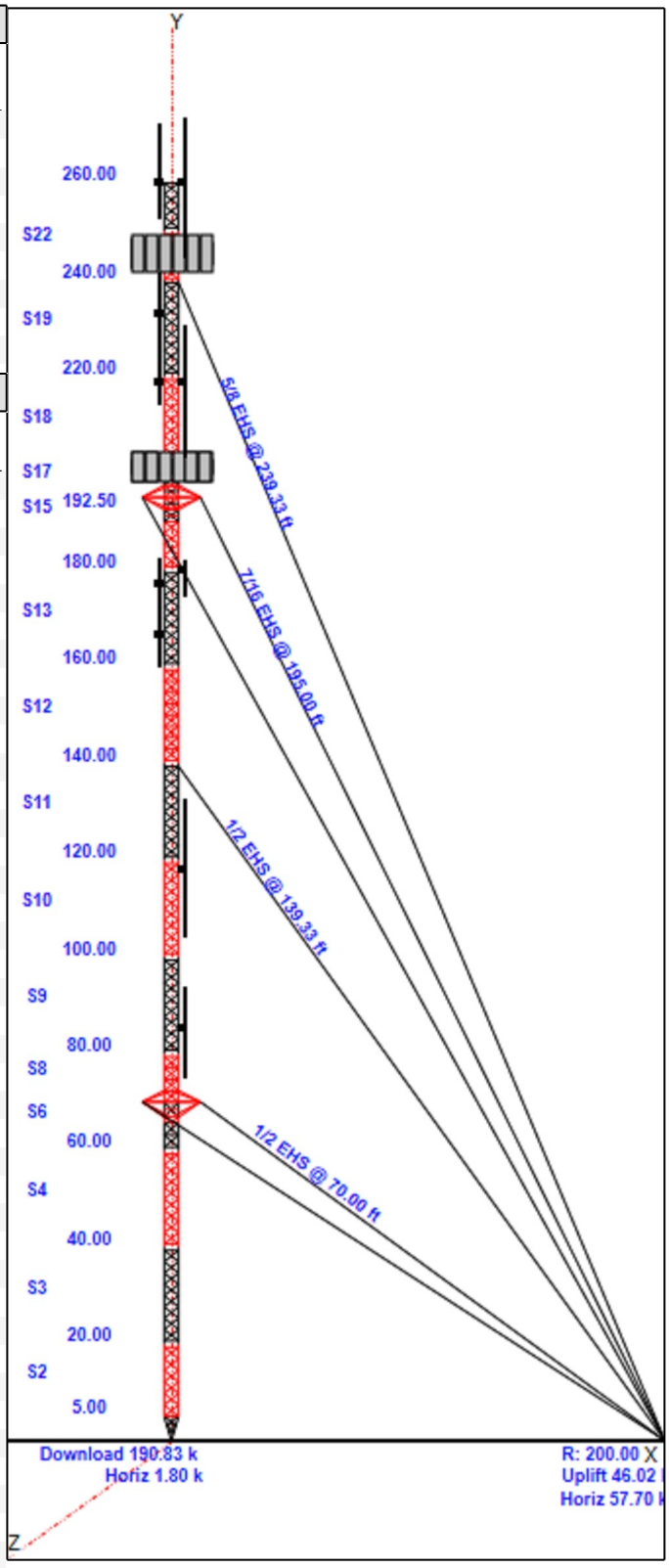
Tower Engineering Solutions

Section Properties

Sect	Leg Members	Diagonal Members	Horizontal Members
1	MOD 1.5"SR+2x2x.375L	SOL 5/8" SOLID	SOL 3/4" SOLID
2-5	SOL 1 3/4" SOLID	SOL 5/8" SOLID	SOL 3/4" SOLID
6	SOL 1 3/4" SOLID	SOL 5/8" SOLID	PLT 3" x 1/2"
7-9	SOL 1 3/4" SOLID	SOL 5/8" SOLID	SOL 3/4" SOLID
10-15	SOL 1 1/2" SOLID	SOL 9/16" SOLID	SOL 3/4" SOLID
16	SOL 1 1/2" SOLID	SOL 9/16" SOLID	CHN C3 x 6
17-20	SOL 1 1/2" SOLID	SOL 9/16" SOLID	SOL 3/4" SOLID
21	SOL 1 1/2" SOLID	SOL 9/16" SOLID	CHN C3 x 6
22-23	SOL 1 1/2" SOLID	SOL 9/16" SOLID	SOL 3/4" SOLID

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description
260.00	263.00	1	2" x 15' Omni
260.00	262.00	1	4" x 20' (8 Element) Dipole
260.00	260.00	3	Stand-Off
260.00	263.00	1	3" x 20' (16 Element) Dipole
260.00	260.00	1	38" x 18"Ø Light
257.00	253.00	1	2"x 18' Omnis
253.00	253.00	1	24" x 24" x 10" Box
245.00	245.00	3	T- Frame
245.00	245.00	3	7770
245.00	245.00	2	AM-X-CD-16-65-00T-RET
245.00	245.00	1	800 10764
245.00	245.00	3	EPBQ-654L8H6-L2
245.00	245.00	2	DMP65R-BU6DA
245.00	245.00	1	DMP65R-BU4DA
245.00	245.00	12	Powerwave LGP21401 TMA
245.00	245.00	3	RRUS 4478 B14
245.00	245.00	3	RRUS 32 B30
245.00	245.00	3	RRUS 4449 B5/B12
245.00	245.00	3	RRUS 8843 B2 B66A
245.00	245.00	3	Raycap DC6-48-60-18-8F
245.00	245.00	3	ABT-DFDM-ADBH
233.00	233.00	1	3' Standoff
223.00	232.00	1	2' Ø x 18' Omni
218.50	222.50	1	2" x 18' Omni
218.50	218.50	3	Stand-Off
218.50	210.00	1	3" x15' Omni
218.50	222.50	1	3" x15' Omni
218.50	210.00	1	3" x15' Omni
218.50	222.50	1	2' x 8' Omni
201.00	201.00	3	10' T-Frames
201.00	201.00	6	QS6656-5D
201.00	201.00	3	MT6407-77A
201.00	201.00	3	BXA-80063-6CF-EDIN-3
201.00	201.00	3	B2/B66A RRH-BR049 (RFV01U-D1A)
201.00	201.00	3	B5/B13 RRH-BR04C (RFV01U-D2A)
201.00	201.00	1	RFS DB-C1-12C-24AB-0Z
201.00	201.00	1	V-Brace Kits
201.00	201.00	1	Stabilizer Kit
180.00	180.00	1	Standoff (41")
180.00	180.00	4	Bay Broadcast antenna



178.00	178.00	1	8'x1" Omni
177.00	177.00	1	Standoff (2')
177.00	177.00	1	Andrew 10' x 2" Omni
173.00	173.00	1	21" x 4" x 7" Box
166.50	166.50	1	Andrew 14' x 3" Omni
166.50	166.50	1	Standoff (17")
118.00	118.00	1	Standoff 20"
118.00	118.00	3	Bay Broadcast antenna
85.00	85.00	1	Standoff 20"
83.80	83.80	1	Bay Broadcast Antenna

Linear Appurtenances

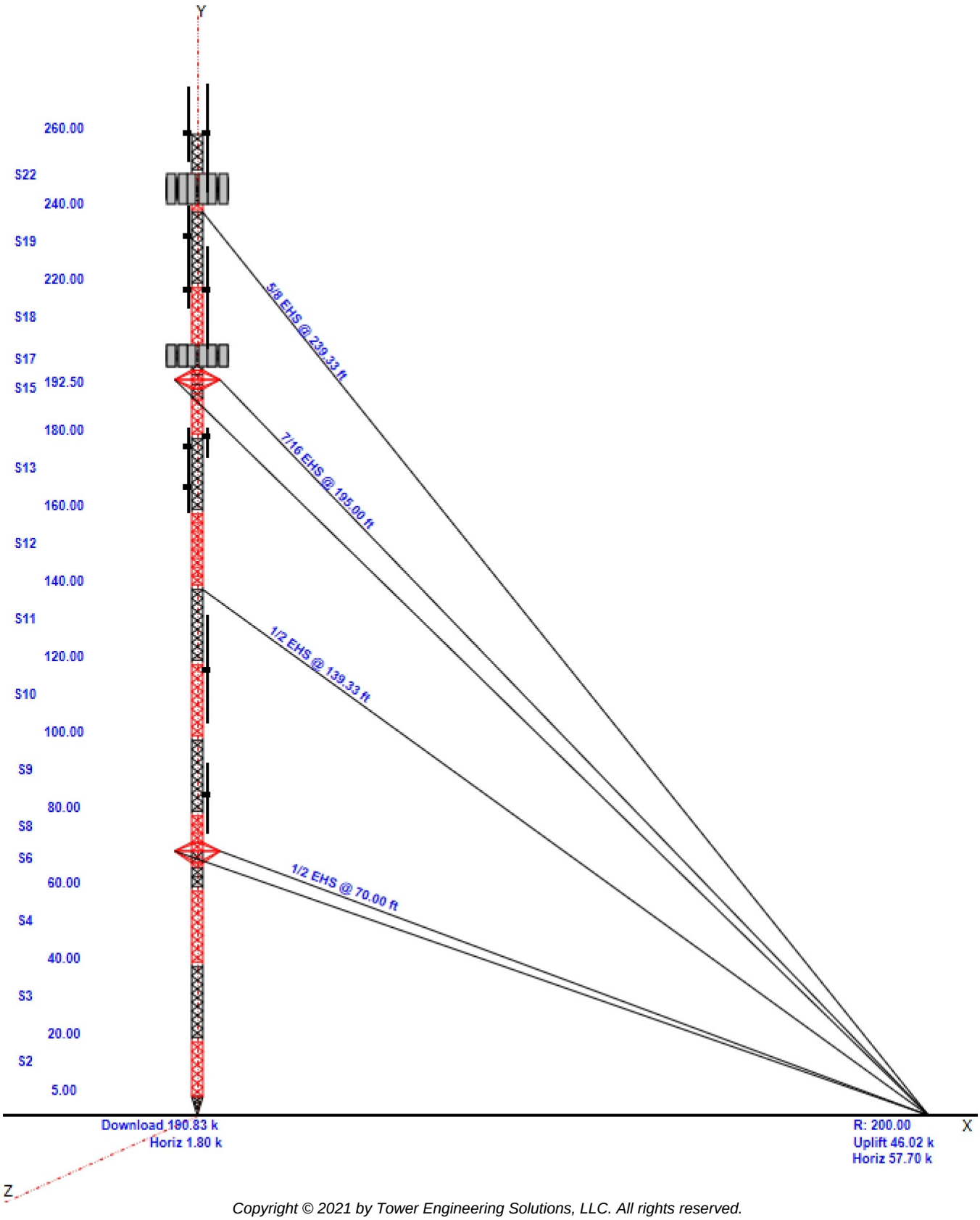
Elev From (ft)	Elev To (ft)	Qty	Description
0.00	260.00	1	1 1/4"
0.00	260.00	1	7/8"
0.00	260.00	1	7/8"
0.00	260.00	1	7/8"
0.00	260.00	1	Safety Climb
0.00	253.00	1	1/2"
0.00	245.00	12	1 5/8" Coax
0.00	245.00	1	3" Flex Conduit
0.00	245.00	6	3/4" DC Power
0.00	245.00	2	7/16" Fiber
0.00	233.00	1	1 5/8"
0.00	222.50	1	1-1/4"
0.00	222.50	1	1-1/4"
0.00	210.00	1	1-1/4"
0.00	210.00	1	7/8"
0.00	200.00	5	1 5/8"
0.00	200.00	6	1 5/8"
0.00	200.00	1	1 5/8" Hybrid
0.00	180.00	1	1 5/8"
0.00	178.00	1	1 1/4"
0.00	177.00	1	7/8"
0.00	166.50	1	7/8"
0.00	118.00	1	1 5/8"
0.00	83.80	1	7/8"

Max Guy Wire

92.31% @ 239.333 ft - 5/8 EHS

Structure: CT02303-A-3-SBA

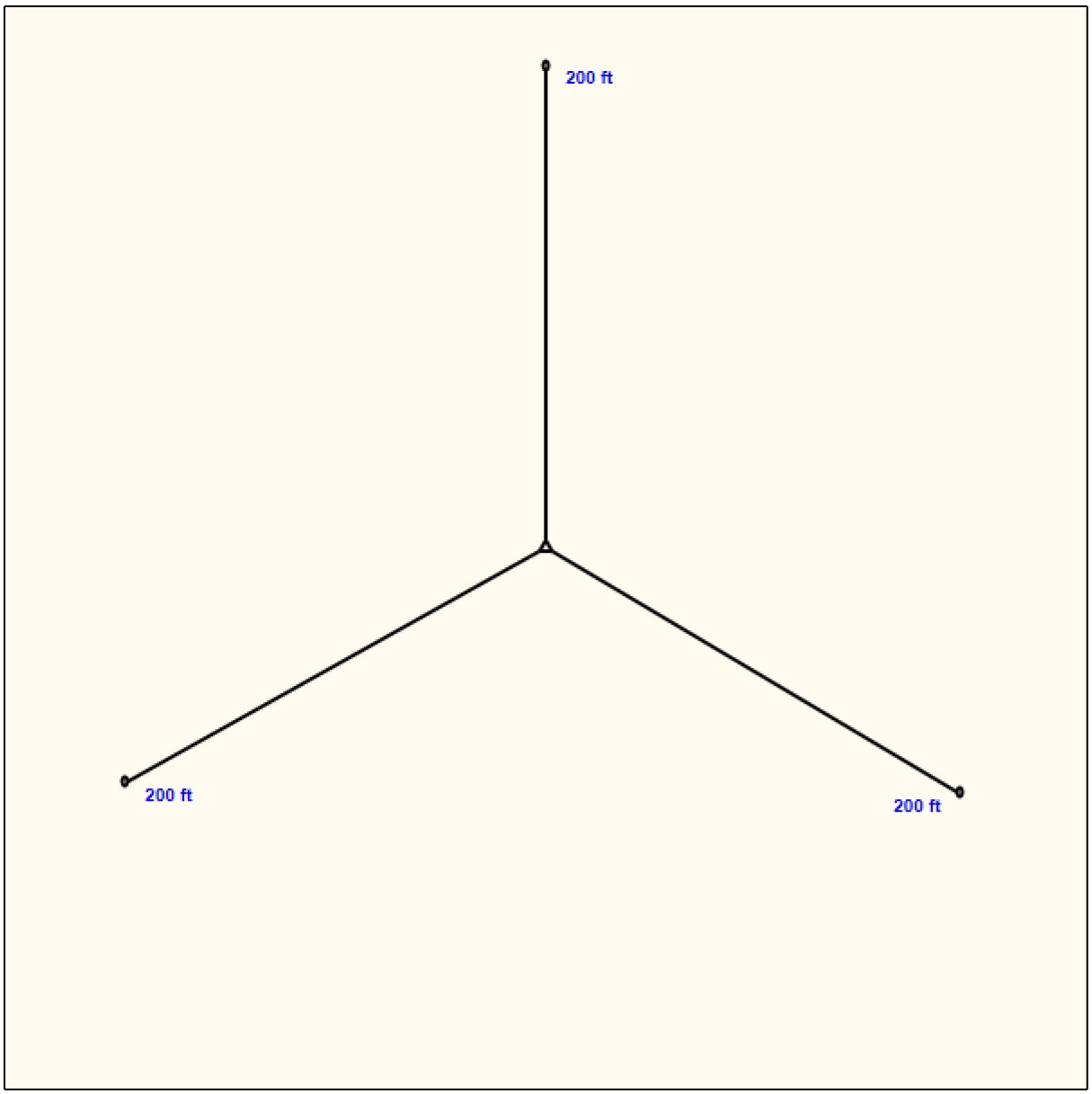
Site Name:	Torrington 2 CT			**Code:**	EIA/TIA-222-G	8/17/2021
Type:	Guyed	**Base Shape:**	Triangle	**Basic WS:**	93.00	
Height:	260.00 (ft)	**Base Width:**	0.00	**Basic Ice WS:**	50.00	
Base Elev:	0.00 (ft)	**Top Width:**	3.00	**Operational WS:**	60.00	Page: 3



Anchor Drops with Guy Radius - Structure: CT02303-A-3-SBA

Site Name:	Torrington 2 CT			**Code:**	EIA/TIA-222-G	8/17/2021
Type:	Guyed	**Base Shape:**	Triangle	**Basic WS:**	93.00	
Height:	260.00 (ft)	**Base Width:**	0.00	**Basic Ice WS:**	50.00	
Base Elev:	0.00 (ft)	**Top Width:**	3.00	**Operational WS:**	60.00	Page: 4

Tower Engineering Solutions

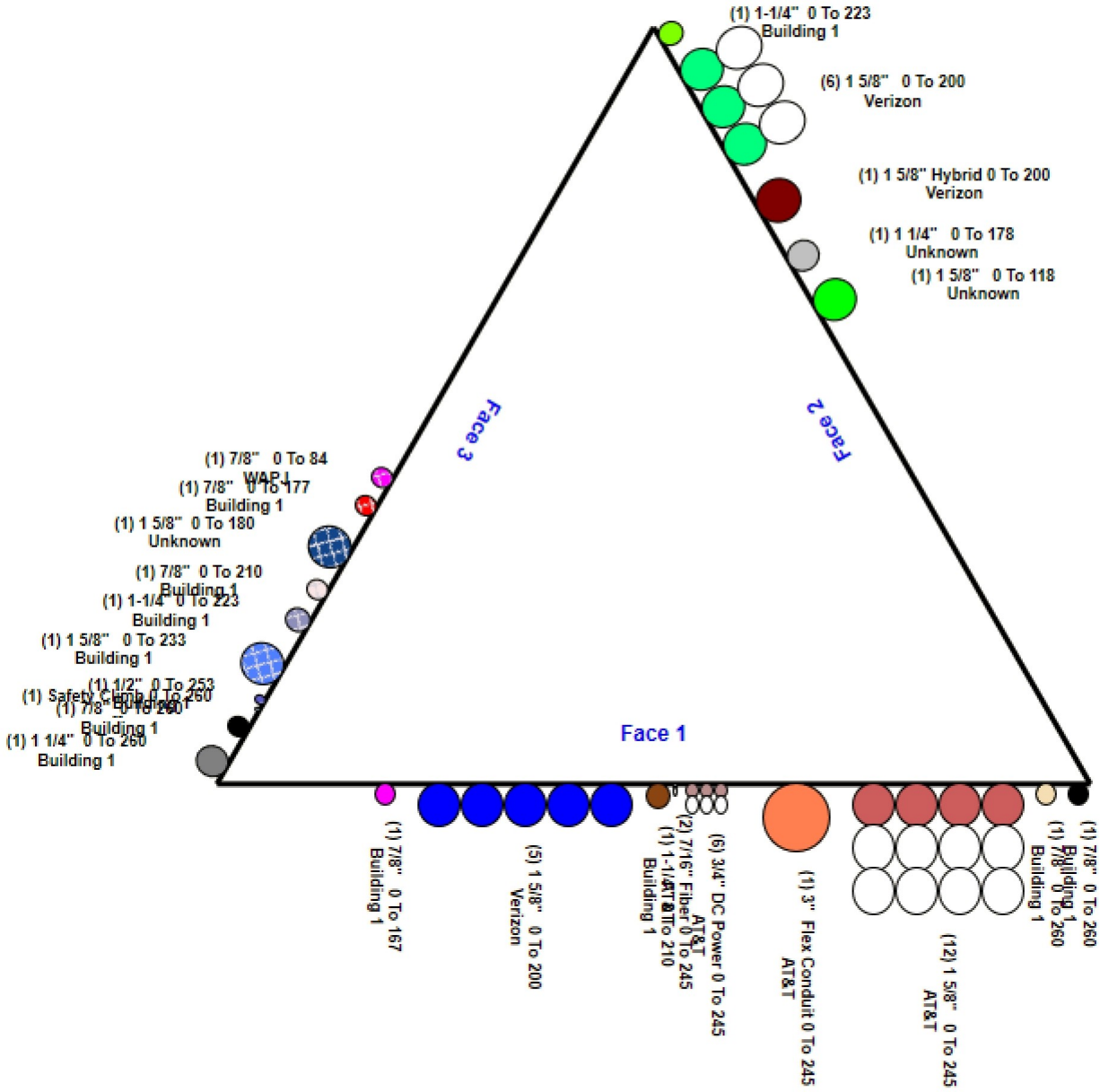


Structure: CT02303-A-3-SBA - Coax Line Placement

Type: Guyed
Site Name: Torrington 2 CT
Height: 260.00 (ft)

8/17/2021

Tower Engineering Solutions



Discrete Appurtenances Properties

Attach Elev (ft)	Description	Qty	No Ice Weight (lb)	No Ice CaAa (sf)	Ice Weight (lb)	Ice CaAa (sf)	Len (in)	Width (in)	Depth (in)	Ka	Orientation Factor	Vert Ecc (ft)
260.00	2" x 15' Omni	1	40.00	4.500	159.55	10.145	180.000	3.000	3.000	1.00	1.00	3.000
260.00	4" x 20' (8 Element) Dipole	1	60.00	7.520	293.82	20.053	240.000	3.000	3.000	1.00	1.00	2.000
260.00	Stand-Off	3	400.00	10.000	694.45	19.202	0.000	0.000	0.000	0.75	0.75	0.000
260.00	3" x 20' (16 Element) Dipole	1	60.00	7.520	293.82	20.053	240.000	3.000	3.000	1.00	1.00	3.000
260.00	38" x 18"Ø Light	1	5.00	6.000	27.08	28.084	72.000	1.000	1.000	1.00	1.00	0.000
257.00	2"x 18' Omnis	1	55.00	5.400	198.16	12.150	216.000	3.000	3.000	1.00	1.00	-4.000
253.00	24" x 24" x 10" Box	1	20.00	5.600	141.31	7.352	24.000	24.000	10.000	1.00	1.00	0.000
245.00	T- Frame	3	500.00	17.500	1232.81	36.736	0.000	0.000	0.000	0.75	0.75	0.000
245.00	7770	3	35.00	5.500	178.51	6.622	55.000	11.000	5.000	0.80	0.76	0.000
245.00	AM-X-CD-16-65-00T-RET	2	48.50	8.020	218.85	10.953	72.000	11.800	5.900	0.80	0.90	0.000
245.00	800 10764	1	40.80	5.880	174.66	8.129	55.200	11.800	6.000	0.80	1.00	0.000
245.00	EPBQ-654L8H6-L2	3	98.10	13.240	534.54	14.666	96.000	21.000	6.300	0.80	0.69	0.000
245.00	DMP65R-BU6DA	2	63.30	12.710	367.26	14.276	71.200	20.700	7.700	0.80	0.86	0.000
245.00	DMP65R-BU4DA	1	34.00	8.280	205.67	7.180	48.000	14.800	7.400	0.80	1.00	0.000
245.00	Powerwave LGP21401 TMA	12	14.10	1.290	40.34	2.167	14.400	9.200	2.600	0.80	1.00	0.000
245.00	RRUS 4478 B14	3	59.90	1.650	109.24	2.146	16.500	13.400	7.700	0.80	0.67	0.000
245.00	RRUS 32 B30	3	60.00	2.740	153.49	3.508	27.200	12.100	7.000	0.80	0.67	0.000
245.00	RRUS 4449 B5/B12	3	71.00	1.650	127.04	2.131	17.900	13.200	9.400	0.80	0.67	0.000
245.00	RRUS 8843 B2 B66A	3	72.00	1.640	121.17	2.162	14.900	13.200	10.900	0.80	0.67	0.000
245.00	Raycap DC6-48-60-18-8F	3	31.80	0.920	96.70	1.380	24.000	11.000	11.000	0.80	1.00	0.000
245.00	ABT-DFDM-ADBH	3	1.10	0.050	3.44	0.252	3.200	1.700	1.600	0.80	1.00	0.000
233.00	3' Standoff	1	40.00	2.630	123.79	8.859	0.000	0.000	0.000	1.00	1.00	0.000
223.00	2' Ø x 18' Omni	1	55.00	5.400	196.69	12.080	216.000	3.000	3.000	1.00	1.00	9.000
218.50	2" x 18' Omni	1	55.00	5.400	195.41	12.020	216.000	3.000	3.000	1.00	1.00	4.000
218.50	Stand-Off	3	350.00	10.000	891.48	23.668	0.000	0.000	0.000	0.75	0.75	0.000
218.50	3" x15' Omni	1	40.00	4.500	157.25	10.036	180.000	3.000	3.000	1.00	1.00	-8.500
218.50	3" x15' Omni	1	40.00	4.500	157.25	10.036	180.000	3.000	3.000	1.00	1.00	4.000
218.50	3" x15' Omni	1	40.00	4.500	157.25	10.036	180.000	3.000	3.000	1.00	1.00	-8.500
218.50	2' x 8' Omni	1	25.00	2.400	88.21	5.247	96.000	3.000	3.000	1.00	1.00	4.000
201.00	10' T-Frames	3	450.00	15.500	813.88	23.557	0.000	0.000	0.000	0.75	0.75	0.000
201.00	QS6656-5D	6	65.00	8.130	301.47	9.477	72.000	12.000	9.600	0.80	0.93	0.000
201.00	MT6407-77A	3	79.40	4.690	203.92	5.671	35.100	16.100	5.500	0.80	0.70	0.000
201.00	BXA-80063-6CF-EDIN-3	3	17.00	7.570	170.37	10.428	71.000	11.200	5.200	0.80	0.73	0.000
201.00	B2/B66A RRH-BR049	3	84.50	1.880	137.51	2.450	15.000	15.000	10.000	0.80	0.67	0.000
201.00	B5/B13 RRH-BR04C (RFV01U-D2A)	3	70.30	1.870	142.66	2.465	15.000	15.000	8.100	0.80	0.67	0.000
201.00	RFS DB-C1-12C-24AB-0Z	1	32.00	4.060	149.83	4.910	29.500	16.500	12.500	0.80	1.00	0.000
201.00	V-Brace Kits	1	650.00	15.500	1494.71	32.286	0.000	0.000	0.000	0.75	1.00	0.000
201.00	Stabilizer Kit	1	180.00	6.100	413.92	12.706	0.000	0.000	0.000	0.75	1.00	0.000
180.00	Standoff (41")	1	40.00	3.200	121.29	10.554	0.000	0.000	0.000	1.00	1.00	0.000
180.00	Bay Broadcast antenna	4	162.00	1.080	476.80	2.694	13.000	10.000	0.000	1.00	1.00	0.000
178.00	8'x1" Omni	1	25.00	2.400	86.89	5.187	96.000	3.000	3.000	1.00	1.00	0.000
177.00	Standoff (2')	1	40.00	2.200	121.29	7.256	0.000	0.000	0.000	1.00	1.00	0.000
177.00	Andrew 10' x 2" Omni	1	25.00	3.000	102.01	6.652	120.000	3.000	3.000	1.00	1.00	0.000
173.00	21" x 4" x 7" Box	1	15.00	1.250	71.70	1.884	21.000	7.000	4.000	1.00	1.00	0.000
166.50	Andrew 14' x 3" Omni	1	40.00	4.200	147.22	9.265	168.000	3.000	3.000	1.00	1.00	0.000
166.50	Standoff (17")	1	40.00	2.200	121.29	7.256	0.000	0.000	0.000	1.00	1.00	0.000
118.00	Standoff 20"	1	40.00	2.200	117.83	7.040	0.000	0.000	0.000	1.00	1.00	0.000
118.00	Bay Broadcast antenna	3	162.00	7.200	463.39	17.501	348.000	36.000	2.500	1.00	1.00	0.000

Loading Summary

Structure:	CT02303-A-3-SBA		**Code:**	EIA/TIA-222-G	8/17/2021
Site Name:	Torrington 2 CT		**Exposure:**	C	
Height:	260.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	0.85	**Topography:** 1	**Struct Class:**	II	Page: 7

85.00	Standoff 20"	1	40.00	2.200	116.28	6.944	0.000	0.000	0.000	1.00	1.00	0.000
83.80	Bay Broadcast Antenna	1	105.00	7.200	243.60	20.439	228.000	12.000	12.000	1.00	1.00	0.000
	Totals:	**105**	**10,938.90**		**29,473.99**				**Number of Appurtenances :**			**50**

Linear Appurtenances Properties

Elev. From (ft)	Elev. To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	Pct In Block	Spread On Faces	Bundling Arrangement	Cluster Dia (in)	Out of Zone	Spacing (in)	Orientation Factor	Ka Override
0.00	260.00	1 1/4"	1	1.55	0.66	100.00	3	Individual NR		N	1.00	1.00	
0.00	260.00	7/8"	1	1.11	0.52	100.00	1	Individual NR		N	1.00	1.00	
0.00	260.00	7/8"	1	1.11	0.52	100.00	1	Individual NR		N	1.00	1.00	
0.00	260.00	7/8"	1	1.11	0.52	100.00	3	Individual IR		N	1.00	1.00	
0.00	260.00	Safety Climb	1	0.38	0.27	100.00	3	Individual NR		N	1.00	1.00	
0.00	253.00	1/2"	1	0.65	0.16	100.00	3	Individual NR		N	1.00	1.00	
0.00	245.00	1 5/8" Coax	12	1.98	1.04	33.30	1	Block		Y	0.50	1.00	
0.00	245.00	3" Flex Conduit	1	3.02	1.78	100.00	1	Individual NR		N	1.00	1.00	
0.00	245.00	3/4" DC Power	6	0.75	0.40	50.00	1	Block		N	1.00	1.00	
0.00	245.00	7/16" Fiber	2	0.44	0.10	50.00	1	Block		N	1.00	1.00	
0.00	233.00	1 5/8"	1	1.98	1.04	100.00	3	Individual NR		N	1.00	1.00	
0.00	222.50	1-1/4"	1	1.25	0.95	100.00	3	Individual NR		N	1.00	1.00	
0.00	222.50	1-1/4"	1	1.25	0.95	100.00	2	Individual NR		N	1.00	1.00	
0.00	210.00	1-1/4"	1	1.25	0.95	100.00	1	Individual IR		N	1.00	1.00	
0.00	210.00	7/8"	1	1.11	0.52	100.00	3	Individual NR		N	1.00	1.00	
0.00	200.00	1 5/8"	5	1.98	1.04	100.00	1	Individual IR		N	0.50	1.00	
0.00	200.00	1 5/8"	6	1.98	1.04	50.00	2	Block		N	0.50	1.00	
0.00	200.00	1 5/8" Hybrid	1	2.00	1.10	100.00	2	Individual NR		N	1.00	1.00	
0.00	180.00	1 5/8"	1	1.98	1.04	100.00	3	Individual NR		N	1.00	1.00	
0.00	178.00	1 1/4"	1	1.55	0.66	100.00	2	Individual NR		N	1.00	1.00	
0.00	177.00	7/8"	1	1.11	0.52	100.00	3	Individual NR		N	1.00	1.00	
0.00	166.50	7/8"	1	1.11	0.52	100.00	1	Individual NR		N	1.00	1.00	
0.00	118.00	1 5/8"	1	1.98	1.04	100.00	2	Individual NR		N	1.00	1.00	
0.00	83.80	7/8"	1	1.11	0.52	100.00	3	Individual NR		N	1.00	1.00	

Section Forces

Structure:	CT02303-A-3-SBA	**Code:**	EIA/TIA-222-G	8/17/2021	
Site Name:	Torrington 2 CT	**Exposure:**	C		
Height:	260.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 1	**Struct Class:**	II	Page: 9	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W Normal Wind — 1.2D + 1.6W 93 mph Wind at Normal To Face

Wind Load Factor: 1.60 — **Wind Importance Factor:** 1.00

Dead Load Factor: 1.20

Ice Dead Load Factor: 0.00 — **Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	2.5	16.00	0.000	3.75	0.00	0.42	2.02	1.00	1.00	0.00	2.50	24.09	0.00	519.4	0.0	109.82	389.59	406.11
2	12.5	16.00	0.000	7.02	0.00	0.15	2.78	1.00	1.00	0.00	4.06	72.26	0.00	1,381.4	0.0	244.90	1214.09	1,459.00
3	30.0	18.49	0.000	9.24	0.00	0.15	2.78	1.00	1.00	0.00	5.32	96.34	0.00	1,828.9	0.0	372.13	1870.66	2,242.79
4	50.0	20.59	0.000	9.24	0.00	0.15	2.78	1.00	1.00	0.00	5.32	96.34	0.00	1,828.9	0.0	414.38	2083.05	2,497.43
5	62.8	21.60	0.000	2.97	0.00	0.17	2.71	1.00	1.00	0.00	1.72	27.30	0.00	551.7	0.0	137.36	619.32	756.68
6	66.3	21.84	0.000	0.54	0.00	0.14	2.80	1.00	1.00	0.00	0.31	5.82	0.00	136.7	0.0	26.05	133.50	159.56
7	68.5	21.99	0.750	1.36	0.00	0.21	2.56	1.00	1.00	0.00	1.54	15.26	0.00	336.2	0.0	118.10	352.41	470.51
8	75.0	22.42	0.000	4.96	0.00	0.16	2.74	1.00	1.00	0.00	2.87	47.97	0.00	943.4	0.0	239.83	1129.64	1,369.47
9	90.0	23.30	0.000	9.24	0.00	0.15	2.78	1.00	1.00	0.00	5.32	94.84	0.00	1,818.8	0.0	468.97	2323.26	2,792.23
10	110.0	24.30	0.000	8.12	0.00	0.13	2.85	1.00	1.00	0.00	4.65	94.16	0.00	1,614.1	0.0	437.78	2407.30	2,845.07
11	130.0	25.17	0.000	8.16	0.00	0.13	2.84	1.00	1.00	0.00	4.67	91.19	0.00	1,597.5	0.0	454.83	2420.26	2,875.08
12	150.0	25.94	0.000	9.37	0.00	0.15	2.77	1.00	1.00	0.00	5.41	91.19	0.00	1,705.3	0.0	529.17	2494.28	3,023.45
13	170.0	26.63	0.000	8.12	0.00	0.13	2.85	1.00	1.00	0.00	4.65	89.41	0.00	1,579.8	0.0	479.79	2514.34	2,994.13
14	185.0	27.11	0.000	4.24	0.00	0.14	2.83	1.00	1.00	0.00	2.43	40.80	0.00	779.2	0.0	253.58	1176.22	1,429.80
15	191.3	27.30	0.000	1.23	0.00	0.16	2.74	1.00	1.00	0.00	0.71	10.20	0.00	216.2	0.0	71.87	296.12	367.99
16	195.0	27.41	0.383	2.46	0.00	0.18	2.66	1.00	1.00	0.00	1.80	20.40	0.00	497.2	0.0	178.52	594.67	773.19
17	198.8	27.53	0.000	1.41	0.00	0.18	2.66	1.00	1.00	0.00	0.82	10.20	0.00	232.4	0.0	81.34	298.53	379.87
18	210.0	27.85	0.000	8.12	0.00	0.13	2.85	1.00	1.00	0.00	4.65	48.24	0.00	1,207.3	0.0	501.62	1427.42	1,929.04
19	230.0	28.38	0.000	8.12	0.00	0.13	2.85	1.00	1.00	0.00	4.65	41.47	0.00	1,140.8	0.0	511.24	1266.92	1,778.17
20	241.3	28.67	0.000	1.16	0.00	0.15	2.78	1.00	1.00	0.00	0.67	4.85	0.00	152.7	0.0	72.40	150.61	223.01
21	243.8	28.73	0.767	0.98	0.00	0.22	2.52	1.00	1.00	0.00	1.34	4.85	0.00	266.0	0.0	131.96	150.94	282.89
22	247.5	28.83	0.000	2.10	0.00	0.13	2.83	1.00	1.00	0.00	1.21	2.46	0.00	185.4	0.0	133.82	69.45	203.27
23	255.0	29.01	0.000	4.24	0.00	0.14	2.83	1.00	1.00	0.00	2.43	4.54	0.00	372.0	0.0	271.30	129.00	400.31
														20,891.3	**0.0**			**31,659.06**

Section Forces

Structure:	CT02303-A-3-SBA	**Code:**	EIA/TIA-222-G	8/17/2021	
Site Name:	Torrington 2 CT	**Exposure:**	C		
Height:	260.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 1	**Struct Class:**	II	Page: 10	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 60° Wind — 1.2D + 1.6W 93 mph Wind at 60° From Face

Wind Load Factor: 1.60 — **Wind Importance Factor:** 1.00

Dead Load Factor: 1.20

Ice Dead Load Factor: 0.00 — **Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	2.5	16.00	0.000	3.75	0.00	0.42	2.02	0.80	1.00	0.00	2.50	24.09	0.00	519.4	0.0	109.82	389.59	499.41
2	12.5	16.00	0.000	7.02	0.00	0.15	2.78	0.80	1.00	0.00	4.06	72.26	0.00	1,381.4	0.0	244.90	1214.09	1,459.00
3	30.0	18.49	0.000	9.24	0.00	0.15	2.78	0.80	1.00	0.00	5.32	96.34	0.00	1,828.9	0.0	372.13	1870.66	2,242.79
4	50.0	20.59	0.000	9.24	0.00	0.15	2.78	0.80	1.00	0.00	5.32	96.34	0.00	1,828.9	0.0	414.38	2083.05	2,497.43
5	62.8	21.60	0.000	2.97	0.00	0.17	2.71	0.80	1.00	0.00	1.72	27.30	0.00	551.7	0.0	137.36	619.32	756.68
6	66.3	21.84	0.000	0.54	0.00	0.14	2.80	0.80	1.00	0.00	0.31	5.82	0.00	136.7	0.0	26.05	133.50	159.56
7	68.5	21.99	0.750	1.36	0.00	0.21	2.56	0.80	1.00	0.00	1.39	15.26	0.00	336.2	0.0	106.64	352.41	459.04
8	75.0	22.42	0.000	4.96	0.00	0.16	2.74	0.80	1.00	0.00	2.87	47.97	0.00	943.4	0.0	239.83	1129.64	1,369.47
9	90.0	23.30	0.000	9.24	0.00	0.15	2.78	0.80	1.00	0.00	5.32	94.84	0.00	1,818.8	0.0	468.97	2323.26	2,792.23
10	110.0	24.30	0.000	8.12	0.00	0.13	2.85	0.80	1.00	0.00	4.65	94.16	0.00	1,614.1	0.0	437.78	2407.30	2,845.07
11	130.0	25.17	0.000	8.16	0.00	0.13	2.84	0.80	1.00	0.00	4.67	91.19	0.00	1,597.5	0.0	454.83	2420.26	2,875.08
12	150.0	25.94	0.000	9.37	0.00	0.15	2.77	0.80	1.00	0.00	5.41	91.19	0.00	1,705.3	0.0	529.17	2494.28	3,023.45
13	170.0	26.63	0.000	8.12	0.00	0.13	2.85	0.80	1.00	0.00	4.65	89.41	0.00	1,579.8	0.0	479.79	2514.34	2,994.13
14	185.0	27.11	0.000	4.24	0.00	0.14	2.83	0.80	1.00	0.00	2.43	40.80	0.00	779.2	0.0	253.58	1176.22	1,429.80
15	191.3	27.30	0.000	1.23	0.00	0.16	2.74	0.80	1.00	0.00	0.71	10.20	0.00	216.2	0.0	71.87	296.12	367.99
16	195.0	27.41	0.383	2.46	0.00	0.18	2.66	0.80	1.00	0.00	1.72	20.40	0.00	497.2	0.0	170.92	594.67	765.59
17	198.8	27.53	0.000	1.41	0.00	0.18	2.66	0.80	1.00	0.00	0.82	10.20	0.00	232.4	0.0	81.34	298.53	379.87
18	210.0	27.85	0.000	8.12	0.00	0.13	2.85	0.80	1.00	0.00	4.65	48.24	0.00	1,207.3	0.0	501.62	1427.42	1,929.04
19	230.0	28.38	0.000	8.12	0.00	0.13	2.85	0.80	1.00	0.00	4.65	41.47	0.00	1,140.8	0.0	511.24	1266.92	1,778.17
20	241.3	28.67	0.000	1.16	0.00	0.15	2.78	0.80	1.00	0.00	0.67	4.85	0.00	152.7	0.0	72.40	150.61	223.01
21	243.8	28.73	0.767	0.98	0.00	0.22	2.52	0.80	1.00	0.00	1.19	4.85	0.00	266.0	0.0	116.86	150.94	267.80
22	247.5	28.83	0.000	2.10	0.00	0.13	2.83	0.80	1.00	0.00	1.21	2.46	0.00	185.4	0.0	133.82	69.45	203.27
23	255.0	29.01	0.000	4.24	0.00	0.14	2.83	0.80	1.00	0.00	2.43	4.54	0.00	372.0	0.0	271.30	129.00	400.31
														20,891.3	**0.0**			**31,718.19**

Section Forces

Structure:	CT02303-A-3-SBA	**Code:**	EIA/TIA-222-G	8/17/2021	
Site Name:	Torrington 2 CT	**Exposure:**	C		
Height:	260.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 1	**Struct Class:**	II	Page: 11	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 90° Wind — 1.2D + 1.6W 93 mph Wind at 90° From Face

Wind Load Factor: 1.60 — **Wind Importance Factor:** 1.00

Dead Load Factor: 1.20

Ice Dead Load Factor: 0.00 — **Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	2.5	16.00	0.000	3.75	0.00	0.42	2.02	0.85	1.00	0.00	2.50	24.09	0.00	519.4	0.0	109.82	389.59	499.41
2	12.5	16.00	0.000	7.02	0.00	0.15	2.78	0.85	1.00	0.00	4.06	72.26	0.00	1,381.4	0.0	244.90	1214.09	1,459.00
3	30.0	18.49	0.000	9.24	0.00	0.15	2.78	0.85	1.00	0.00	5.32	96.34	0.00	1,828.9	0.0	372.13	1870.66	2,242.79
4	50.0	20.59	0.000	9.24	0.00	0.15	2.78	0.85	1.00	0.00	5.32	96.34	0.00	1,828.9	0.0	414.38	2083.05	2,497.43
5	62.8	21.60	0.000	2.97	0.00	0.17	2.71	0.85	1.00	0.00	1.72	27.30	0.00	551.7	0.0	137.36	619.32	756.68
6	66.3	21.84	0.000	0.54	0.00	0.14	2.80	0.85	1.00	0.00	0.31	5.82	0.00	136.7	0.0	26.05	133.50	159.56
7	68.5	21.99	0.750	1.36	0.00	0.21	2.56	0.85	1.00	0.00	1.43	15.26	0.00	336.2	0.0	109.50	352.41	461.91
8	75.0	22.42	0.000	4.96	0.00	0.16	2.74	0.85	1.00	0.00	2.87	47.97	0.00	943.4	0.0	239.83	1129.64	1,369.47
9	90.0	23.30	0.000	9.24	0.00	0.15	2.78	0.85	1.00	0.00	5.32	94.84	0.00	1,818.8	0.0	468.97	2323.26	2,792.23
10	110.0	24.30	0.000	8.12	0.00	0.13	2.85	0.85	1.00	0.00	4.65	94.16	0.00	1,614.1	0.0	437.78	2407.30	2,845.07
11	130.0	25.17	0.000	8.16	0.00	0.13	2.84	0.85	1.00	0.00	4.67	91.19	0.00	1,597.5	0.0	454.83	2420.26	2,875.08
12	150.0	25.94	0.000	9.37	0.00	0.15	2.77	0.85	1.00	0.00	5.41	91.19	0.00	1,705.3	0.0	529.17	2494.28	3,023.45
13	170.0	26.63	0.000	8.12	0.00	0.13	2.85	0.85	1.00	0.00	4.65	89.41	0.00	1,579.8	0.0	479.79	2514.34	2,994.13
14	185.0	27.11	0.000	4.24	0.00	0.14	2.83	0.85	1.00	0.00	2.43	40.80	0.00	779.2	0.0	253.58	1176.22	1,429.80
15	191.3	27.30	0.000	1.23	0.00	0.16	2.74	0.85	1.00	0.00	0.71	10.20	0.00	216.2	0.0	71.87	296.12	367.99
16	195.0	27.41	0.383	2.46	0.00	0.18	2.66	0.85	1.00	0.00	1.74	20.40	0.00	497.2	0.0	172.82	594.67	767.49
17	198.8	27.53	0.000	1.41	0.00	0.18	2.66	0.85	1.00	0.00	0.82	10.20	0.00	232.4	0.0	81.34	298.53	379.87
18	210.0	27.85	0.000	8.12	0.00	0.13	2.85	0.85	1.00	0.00	4.65	48.24	0.00	1,207.3	0.0	501.62	1427.42	1,929.04
19	230.0	28.38	0.000	8.12	0.00	0.13	2.85	0.85	1.00	0.00	4.65	41.47	0.00	1,140.8	0.0	511.24	1266.92	1,778.17
20	241.3	28.67	0.000	1.16	0.00	0.15	2.78	0.85	1.00	0.00	0.67	4.85	0.00	152.7	0.0	72.40	150.61	223.01
21	243.8	28.73	0.767	0.98	0.00	0.22	2.52	0.85	1.00	0.00	1.23	4.85	0.00	266.0	0.0	120.64	150.94	271.57
22	247.5	28.83	0.000	2.10	0.00	0.13	2.83	0.85	1.00	0.00	1.21	2.46	0.00	185.4	0.0	133.82	69.45	203.27
23	255.0	29.01	0.000	4.24	0.00	0.14	2.83	0.85	1.00	0.00	2.43	4.54	0.00	372.0	0.0	271.30	129.00	400.31
														20,891.3	**0.0**			**31,726.73**

Section Forces

Structure:	CT02303-A-3-SBA	**Code:**	EIA/TIA-222-G	8/17/2021	
Site Name:	Torrington 2 CT	**Exposure:**	C		
Height:	260.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 1	**Struct Class:**	II	Page: 12	

Tower Engineering Solutions

Load Case: 1.2D + 1.0Di + 1.0Wi Normal Wind — 1.2D + 1.0Di + 1.0Wi 50 mph Wind at Normal From Face

Wind Load Factor: 1.00
Dead Load Factor: 1.20
Ice Dead Load Factor: 1.00
Wind Importance Factor: 1.00
Ice Importance Factor: 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	2.5	4.62	0.000	9.00	5.24	0.91	1.94	1.00	1.00	1.16	8.89	29.64	18.35	1,446.1	926.8	67.90	21.61	89.51
2	12.5	4.62	0.000	25.63	18.61	0.51	1.89	1.00	1.00	1.36	17.73	91.46	64.66	4,679.6	3298.3	131.85	397.15	529.00
3	30.0	5.34	0.000	35.68	26.45	0.53	1.87	1.00	1.00	1.49	25.05	124.02	94.10	6,747.2	4918.2	212.62	615.25	827.86
4	50.0	5.95	0.000	37.07	27.84	0.54	1.85	1.00	1.00	1.56	26.41	125.32	99.03	7,104.2	5275.3	247.02	676.73	923.75
5	62.8	6.24	0.000	12.56	9.59	0.65	1.78	1.00	1.00	1.60	9.79	35.68	28.71	2,174.1	1622.4	92.56	156.68	249.24
6	66.3	6.31	0.000	2.22	1.68	0.54	1.85	1.00	1.00	1.61	1.58	7.61	6.15	517.2	380.5	15.71	44.54	60.24
7	68.5	6.36	0.750	5.41	4.05	0.57	1.83	1.00	1.00	1.61	4.69	19.98	16.18	1,287.7	951.5	46.23	109.89	156.11
8	75.0	6.48	0.000	21.05	16.09	0.62	1.79	1.00	1.00	1.63	15.97	62.93	51.35	3,808.6	2865.1	157.78	314.00	471.78
9	90.0	6.73	0.000	38.76	29.52	0.57	1.83	1.00	1.00	1.66	28.12	125.40	100.5	7,452.9	5634.0	294.33	734.66	1,028.99
10	110.0	7.02	0.000	38.23	30.12	0.56	1.83	1.00	1.00	1.69	27.60	125.28	100.9	7,317.2	5703.0	302.10	776.73	1,078.83
11	130.0	7.28	0.000	38.78	30.63	0.57	1.83	1.00	1.00	1.72	28.16	122.78	97.49	7,299.0	5701.5	318.14	772.59	1,090.73
12	150.0	7.50	0.000	46.55	37.18	0.68	1.78	1.00	1.00	1.75	37.27	123.20	98.90	7,856.3	6151.0	421.94	592.42	1,014.36
13	170.0	7.70	0.000	39.57	31.46	0.58	1.82	1.00	1.00	1.77	28.99	121.78	94.69	7,383.1	5803.3	344.98	786.02	1,131.00
14	185.0	7.84	0.000	20.99	16.75	0.61	1.80	1.00	1.00	1.78	15.84	57.11	38.61	3,544.3	2765.1	189.52	328.50	518.03
15	191.3	7.89	0.000	5.05	3.82	0.59	1.81	1.00	1.00	1.79	3.73	14.29	9.69	943.8	727.6	45.30	87.92	133.22
16	195.0	7.92	0.383	11.00	8.55	0.67	1.78	1.00	1.00	1.79	9.06	28.60	19.41	2,043.9	1546.7	108.51	144.21	252.72
17	198.8	7.96	0.000	6.14	4.73	0.72	1.78	1.00	1.00	1.80	5.07	14.31	9.72	1,014.3	781.9	60.97	61.24	122.21
18	210.0	8.05	0.000	40.25	32.13	0.59	1.81	1.00	1.00	1.80	29.69	65.87	66.18	5,385.3	4178.1	368.19	482.53	850.71
19	230.0	8.20	0.000	40.55	32.42	0.59	1.81	1.00	1.00	1.82	30.01	59.27	47.96	4,924.1	3783.3	378.73	402.44	781.16
20	241.3	8.29	0.000	5.98	4.82	0.70	1.78	1.00	1.00	1.83	4.86	7.09	5.34	653.1	500.4	60.76	35.11	95.86
21	243.8	8.31	0.767	6.72	5.74	0.87	1.89	1.00	1.00	1.83	7.12	7.09	5.34	898.1	632.0	94.96	14.74	109.70
22	247.5	8.33	0.000	10.60	8.50	0.62	1.79	1.00	1.00	1.83	8.03	2.46	9.17	787.5	602.0	102.04	37.77	139.80
23	255.0	8.38	0.000	21.54	17.30	0.63	1.79	1.00	1.00	1.84	16.45	4.54	16.26	1,555.9	1183.9	209.78	66.24	276.02
														86,823.4	**65932.1**			**11,930.85**

Section Forces

Structure:	CT02303-A-3-SBA	**Code:**	EIA/TIA-222-G	8/17/2021	
Site Name:	Torrington 2 CT	**Exposure:**	C		
Height:	260.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 1	**Struct Class:**	II	Page: 13	

Tower Engineering Solutions

Load Case: 1.2D + 1.0Di + 1.0Wi 60° Wind — 1.2D + 1.0Di + 1.0Wi 50 mph Wind at 60° From Face

Wind Load Factor: 1.00
Dead Load Factor: 1.20
Ice Dead Load Factor: 1.00
Wind Importance Factor: 1.00
Ice Importance Factor: 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	2.5	4.62	0.000	9.00	5.24	0.91	1.94	0.80	1.00	1.16	8.89	29.64	18.35	1,446.1	926.8	67.90	21.61	89.51
2	12.5	4.62	0.000	25.63	18.61	0.51	1.89	0.80	1.00	1.36	17.73	91.46	64.66	4,679.6	3298.3	131.85	397.15	529.00
3	30.0	5.34	0.000	35.68	26.45	0.53	1.87	0.80	1.00	1.49	25.05	124.02	94.10	6,747.2	4918.2	212.62	615.25	827.86
4	50.0	5.95	0.000	37.07	27.84	0.54	1.85	0.80	1.00	1.56	26.41	125.32	99.03	7,104.2	5275.3	247.02	676.73	923.75
5	62.8	6.24	0.000	12.56	9.59	0.65	1.78	0.80	1.00	1.60	9.79	35.68	28.71	2,174.1	1622.4	92.56	156.68	249.24
6	66.3	6.31	0.000	2.22	1.68	0.54	1.85	0.80	1.00	1.61	1.58	7.61	6.15	517.2	380.5	15.71	44.54	60.24
7	68.5	6.36	0.750	5.41	4.05	0.57	1.83	0.80	1.00	1.61	4.54	19.98	16.18	1,287.7	951.5	44.75	109.89	154.63
8	75.0	6.48	0.000	21.05	16.09	0.62	1.79	0.80	1.00	1.63	15.97	62.93	51.35	3,808.6	2865.1	157.78	314.00	471.78
9	90.0	6.73	0.000	38.76	29.52	0.57	1.83	0.80	1.00	1.66	28.12	125.40	100.5	7,452.9	5634.0	294.33	734.66	1,028.99
10	110.0	7.02	0.000	38.23	30.12	0.56	1.83	0.80	1.00	1.69	27.60	125.28	100.9	7,317.2	5703.0	302.10	776.73	1,078.83
11	130.0	7.28	0.000	38.78	30.63	0.57	1.83	0.80	1.00	1.72	28.16	122.78	97.49	7,299.0	5701.5	318.14	772.59	1,090.73
12	150.0	7.50	0.000	46.55	37.18	0.68	1.78	0.80	1.00	1.75	37.27	123.20	98.90	7,856.3	6151.0	421.94	592.42	1,014.36
13	170.0	7.70	0.000	39.57	31.46	0.58	1.82	0.80	1.00	1.77	28.99	121.78	94.69	7,383.1	5803.3	344.98	786.02	1,131.00
14	185.0	7.84	0.000	20.99	16.75	0.61	1.80	0.80	1.00	1.78	15.84	57.11	38.61	3,544.3	2765.1	189.52	328.50	518.03
15	191.3	7.89	0.000	5.05	3.82	0.59	1.81	0.80	1.00	1.79	3.73	14.29	9.69	943.8	727.6	45.30	87.92	133.22
16	195.0	7.92	0.383	11.00	8.55	0.67	1.78	0.80	1.00	1.79	8.98	28.60	19.41	2,043.9	1546.7	107.59	144.21	251.80
17	198.8	7.96	0.000	6.14	4.73	0.72	1.78	0.80	1.00	1.80	5.07	14.31	9.72	1,014.3	781.9	60.97	61.24	122.21
18	210.0	8.05	0.000	40.25	32.13	0.59	1.81	0.80	1.00	1.80	29.69	65.87	66.18	5,385.3	4178.1	368.19	482.53	850.71
19	230.0	8.20	0.000	40.55	32.42	0.59	1.81	0.80	1.00	1.82	30.01	59.27	47.96	4,924.1	3783.3	378.73	402.44	781.16
20	241.3	8.29	0.000	5.98	4.82	0.70	1.78	0.80	1.00	1.83	4.86	7.09	5.34	653.1	500.4	60.76	35.11	95.86
21	243.8	8.31	0.767	6.72	5.74	0.87	1.89	0.80	1.00	1.83	6.97	7.09	5.34	898.1	632.0	92.92	14.74	107.66
22	247.5	8.33	0.000	10.60	8.50	0.62	1.79	0.80	1.00	1.83	8.03	2.46	9.17	787.5	602.0	102.04	37.77	139.80
23	255.0	8.38	0.000	21.54	17.30	0.63	1.79	0.80	1.00	1.84	16.45	4.54	16.26	1,555.9	1183.9	209.78	66.24	276.02
														86,823.4	**65932.1**			**11,926.40**

Section Forces

Structure:	CT02303-A-3-SBA	**Code:**	EIA/TIA-222-G	8/17/2021	
Site Name:	Torrington 2 CT	**Exposure:**	C		
Height:	260.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 1	**Struct Class:**	II	Page: 14	

Tower Engineering Solutions

Load Case: 1.2D + 1.0Di + 1.0Wi 90° Wind — 1.2D + 1.0Di + 1.0Wi 50 mph Wind at 90° From Face

Wind Load Factor: 1.00
Dead Load Factor: 1.20
Ice Dead Load Factor: 1.00
Wind Importance Factor: 1.00
Ice Importance Factor: 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	2.5	4.62	0.000	9.00	5.24	0.91	1.94	0.85	1.00	1.16	8.89	29.64	18.35	1,446.1	926.8	67.90	21.61	89.51
2	12.5	4.62	0.000	25.63	18.61	0.51	1.89	0.85	1.00	1.36	17.73	91.46	64.66	4,679.6	3298.3	131.85	397.15	529.00
3	30.0	5.34	0.000	35.68	26.45	0.53	1.87	0.85	1.00	1.49	25.05	124.02	94.10	6,747.2	4918.2	212.62	615.25	827.86
4	50.0	5.95	0.000	37.07	27.84	0.54	1.85	0.85	1.00	1.56	26.41	125.32	99.03	7,104.2	5275.3	247.02	676.73	923.75
5	62.8	6.24	0.000	12.56	9.59	0.65	1.78	0.85	1.00	1.60	9.79	35.68	28.71	2,174.1	1622.4	92.56	156.68	249.24
6	66.3	6.31	0.000	2.22	1.68	0.54	1.85	0.85	1.00	1.61	1.58	7.61	6.15	517.2	380.5	15.71	44.54	60.24
7	68.5	6.36	0.750	5.41	4.05	0.57	1.83	0.85	1.00	1.61	4.57	19.98	16.18	1,287.7	951.5	45.12	109.89	155.00
8	75.0	6.48	0.000	21.05	16.09	0.62	1.79	0.85	1.00	1.63	15.97	62.93	51.35	3,808.6	2865.1	157.78	314.00	471.78
9	90.0	6.73	0.000	38.76	29.52	0.57	1.83	0.85	1.00	1.66	28.12	125.40	100.5	7,452.9	5634.0	294.33	734.66	1,028.99
10	110.0	7.02	0.000	38.23	30.12	0.56	1.83	0.85	1.00	1.69	27.60	125.28	100.9	7,317.2	5703.0	302.10	776.73	1,078.83
11	130.0	7.28	0.000	38.78	30.63	0.57	1.83	0.85	1.00	1.72	28.16	122.78	97.49	7,299.0	5701.5	318.14	772.59	1,090.73
12	150.0	7.50	0.000	46.55	37.18	0.68	1.78	0.85	1.00	1.75	37.27	123.20	98.90	7,856.3	6151.0	421.94	592.42	1,014.36
13	170.0	7.70	0.000	39.57	31.46	0.58	1.82	0.85	1.00	1.77	28.99	121.78	94.69	7,383.1	5803.3	344.98	786.02	1,131.00
14	185.0	7.84	0.000	20.99	16.75	0.61	1.80	0.85	1.00	1.78	15.84	57.11	38.61	3,544.3	2765.1	189.52	328.50	518.03
15	191.3	7.89	0.000	5.05	3.82	0.59	1.81	0.85	1.00	1.79	3.73	14.29	9.69	943.8	727.6	45.30	87.92	133.22
16	195.0	7.92	0.383	11.00	8.55	0.67	1.78	0.85	1.00	1.79	9.00	28.60	19.41	2,043.9	1546.7	107.82	144.21	252.03
17	198.8	7.96	0.000	6.14	4.73	0.72	1.78	0.85	1.00	1.80	5.07	14.31	9.72	1,014.3	781.9	60.97	61.24	122.21
18	210.0	8.05	0.000	40.25	32.13	0.59	1.81	0.85	1.00	1.80	29.69	65.87	66.18	5,385.3	4178.1	368.19	482.53	850.71
19	230.0	8.20	0.000	40.55	32.42	0.59	1.81	0.85	1.00	1.82	30.01	59.27	47.96	4,924.1	3783.3	378.73	402.44	781.16
20	241.3	8.29	0.000	5.98	4.82	0.70	1.78	0.85	1.00	1.83	4.86	7.09	5.34	653.1	500.4	60.76	35.11	95.86
21	243.8	8.31	0.767	6.72	5.74	0.87	1.89	0.85	1.00	1.83	7.01	7.09	5.34	898.1	632.0	93.43	14.74	108.17
22	247.5	8.33	0.000	10.60	8.50	0.62	1.79	0.85	1.00	1.83	8.03	2.46	9.17	787.5	602.0	102.04	37.77	139.80
23	255.0	8.38	0.000	21.54	17.30	0.63	1.79	0.85	1.00	1.84	16.45	4.54	16.26	1,555.9	1183.9	209.78	66.24	276.02
														86,823.4	**65932.1**			**11,927.52**

Section Forces

Structure:	CT02303-A-3-SBA	**Code:**	EIA/TIA-222-G	8/17/2021	
Site Name:	Torrington 2 CT	**Exposure:**	C		
Height:	260.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 1	**Struct Class:**	II	Page: 15	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W Normal Wind — 1.0D + 1.0W 60 mph Wind at Normal To Face

Wind Load Factor: 1.00 — **Wind Importance Factor:** 1.00

Dead Load Factor: 1.00

Ice Dead Load Factor: 0.00 — **Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	2.5	6.66	0.000	3.75	0.00	0.42	2.02	1.00	1.00	0.00	2.50	24.09	0.00	432.8	0.0	28.57	101.35	129.92
2	12.5	6.66	0.000	7.02	0.00	0.15	2.78	1.00	1.00	0.00	4.06	72.26	0.00	1,151.1	0.0	63.71	315.84	379.55
3	30.0	7.69	0.000	9.24	0.00	0.15	2.78	1.00	1.00	0.00	5.32	96.34	0.00	1,524.1	0.0	96.81	486.64	583.45
4	50.0	8.57	0.000	9.24	0.00	0.15	2.78	1.00	1.00	0.00	5.32	96.34	0.00	1,524.1	0.0	107.80	541.90	649.70
5	62.8	8.99	0.000	2.97	0.00	0.17	2.71	1.00	1.00	0.00	1.72	27.30	0.00	459.7	0.0	35.73	161.11	196.85
6	66.3	9.09	0.000	0.54	0.00	0.14	2.80	1.00	1.00	0.00	0.31	5.82	0.00	113.9	0.0	6.78	34.73	41.51
7	68.5	9.15	0.750	1.36	0.00	0.21	2.56	1.00	1.00	0.00	1.54	15.26	0.00	280.1	0.0	30.72	91.68	122.40
8	75.0	9.33	0.000	4.96	0.00	0.16	2.74	1.00	1.00	0.00	2.87	47.97	0.00	786.2	0.0	62.39	293.87	356.26
9	90.0	9.70	0.000	9.24	0.00	0.15	2.78	1.00	1.00	0.00	5.32	94.84	0.00	1,515.7	0.0	122.00	604.39	726.39
10	110.0	10.12	0.000	8.12	0.00	0.13	2.85	1.00	1.00	0.00	4.65	94.16	0.00	1,345.1	0.0	113.89	626.25	740.13
11	130.0	10.48	0.000	8.16	0.00	0.13	2.84	1.00	1.00	0.00	4.67	91.19	0.00	1,331.3	0.0	118.32	629.62	747.94
12	150.0	10.80	0.000	9.37	0.00	0.15	2.77	1.00	1.00	0.00	5.41	91.19	0.00	1,421.1	0.0	137.66	648.88	786.54
13	170.0	11.09	0.000	8.12	0.00	0.13	2.85	1.00	1.00	0.00	4.65	89.41	0.00	1,316.5	0.0	124.82	654.09	778.91
14	185.0	11.29	0.000	4.24	0.00	0.14	2.83	1.00	1.00	0.00	2.43	40.80	0.00	649.3	0.0	65.97	305.99	371.96
15	191.3	11.36	0.000	1.23	0.00	0.16	2.74	1.00	1.00	0.00	0.71	10.20	0.00	180.2	0.0	18.70	77.03	95.73
16	195.0	11.41	0.383	2.46	0.00	0.18	2.66	1.00	1.00	0.00	1.80	20.40	0.00	414.3	0.0	46.44	154.70	201.14
17	198.8	11.46	0.000	1.41	0.00	0.18	2.66	1.00	1.00	0.00	0.82	10.20	0.00	193.7	0.0	21.16	77.66	98.82
18	210.0	11.59	0.000	8.12	0.00	0.13	2.85	1.00	1.00	0.00	4.65	48.24	0.00	1,006.1	0.0	130.49	371.34	501.83
19	230.0	11.81	0.000	8.12	0.00	0.13	2.85	1.00	1.00	0.00	4.65	41.47	0.00	950.6	0.0	133.00	329.58	462.58
20	241.3	11.93	0.000	1.16	0.00	0.15	2.78	1.00	1.00	0.00	0.67	4.85	0.00	127.2	0.0	18.84	39.18	58.02
21	243.8	11.96	0.767	0.98	0.00	0.22	2.52	1.00	1.00	0.00	1.34	4.85	0.00	221.7	0.0	34.33	39.27	73.59
22	247.5	12.00	0.000	2.10	0.00	0.13	2.83	1.00	1.00	0.00	1.21	2.46	0.00	154.5	0.0	34.81	18.07	52.88
23	255.0	12.07	0.000	4.24	0.00	0.14	2.83	1.00	1.00	0.00	2.43	4.54	0.00	310.0	0.0	70.58	33.56	104.14
														17,409.4	**0.0**			**8,260.24**

Section Forces

Structure:	CT02303-A-3-SBA	**Code:**	EIA/TIA-222-G	8/17/2021	
Site Name:	Torrington 2 CT	**Exposure:**	C		
Height:	260.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 1	**Struct Class:**	II	Page: 16	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60° Wind — 1.0D + 1.0W 60 mph Wind at 60° From Face

Wind Load Factor: 1.00 — **Wind Importance Factor:** 1.00

Dead Load Factor: 1.00

Ice Dead Load Factor: 0.00 — **Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	2.5	6.66	0.000	3.75	0.00	0.42	2.02	0.80	1.00	0.00	2.50	24.09	0.00	432.8	0.0	28.57	101.35	129.92
2	12.5	6.66	0.000	7.02	0.00	0.15	2.78	0.80	1.00	0.00	4.06	72.26	0.00	1,151.1	0.0	63.71	315.84	379.55
3	30.0	7.69	0.000	9.24	0.00	0.15	2.78	0.80	1.00	0.00	5.32	96.34	0.00	1,524.1	0.0	96.81	486.64	583.45
4	50.0	8.57	0.000	9.24	0.00	0.15	2.78	0.80	1.00	0.00	5.32	96.34	0.00	1,524.1	0.0	107.80	541.90	649.70
5	62.8	8.99	0.000	2.97	0.00	0.17	2.71	0.80	1.00	0.00	1.72	27.30	0.00	459.7	0.0	35.73	161.11	196.85
6	66.3	9.09	0.000	0.54	0.00	0.14	2.80	0.80	1.00	0.00	0.31	5.82	0.00	113.9	0.0	6.78	34.73	41.51
7	68.5	9.15	0.750	1.36	0.00	0.21	2.56	0.80	1.00	0.00	1.39	15.26	0.00	280.1	0.0	27.74	91.68	119.42
8	75.0	9.33	0.000	4.96	0.00	0.16	2.74	0.80	1.00	0.00	2.87	47.97	0.00	786.2	0.0	62.39	293.87	356.26
9	90.0	9.70	0.000	9.24	0.00	0.15	2.78	0.80	1.00	0.00	5.32	94.84	0.00	1,515.7	0.0	122.00	604.39	726.39
10	110.0	10.12	0.000	8.12	0.00	0.13	2.85	0.80	1.00	0.00	4.65	94.16	0.00	1,345.1	0.0	113.89	626.25	740.13
11	130.0	10.48	0.000	8.16	0.00	0.13	2.84	0.80	1.00	0.00	4.67	91.19	0.00	1,331.3	0.0	118.32	629.62	747.94
12	150.0	10.80	0.000	9.37	0.00	0.15	2.77	0.80	1.00	0.00	5.41	91.19	0.00	1,421.1	0.0	137.66	648.88	786.54
13	170.0	11.09	0.000	8.12	0.00	0.13	2.85	0.80	1.00	0.00	4.65	89.41	0.00	1,316.5	0.0	124.82	654.09	778.91
14	185.0	11.29	0.000	4.24	0.00	0.14	2.83	0.80	1.00	0.00	2.43	40.80	0.00	649.3	0.0	65.97	305.99	371.96
15	191.3	11.36	0.000	1.23	0.00	0.16	2.74	0.80	1.00	0.00	0.71	10.20	0.00	180.2	0.0	18.70	77.03	95.73
16	195.0	11.41	0.383	2.46	0.00	0.18	2.66	0.80	1.00	0.00	1.72	20.40	0.00	414.3	0.0	44.46	154.70	199.16
17	198.8	11.46	0.000	1.41	0.00	0.18	2.66	0.80	1.00	0.00	0.82	10.20	0.00	193.7	0.0	21.16	77.66	98.82
18	210.0	11.59	0.000	8.12	0.00	0.13	2.85	0.80	1.00	0.00	4.65	48.24	0.00	1,006.1	0.0	130.49	371.34	501.83
19	230.0	11.81	0.000	8.12	0.00	0.13	2.85	0.80	1.00	0.00	4.65	41.47	0.00	950.6	0.0	133.00	329.58	462.58
20	241.3	11.93	0.000	1.16	0.00	0.15	2.78	0.80	1.00	0.00	0.67	4.85	0.00	127.2	0.0	18.84	39.18	58.02
21	243.8	11.96	0.767	0.98	0.00	0.22	2.52	0.80	1.00	0.00	1.19	4.85	0.00	221.7	0.0	30.40	39.27	69.67
22	247.5	12.00	0.000	2.10	0.00	0.13	2.83	0.80	1.00	0.00	1.21	2.46	0.00	154.5	0.0	34.81	18.07	52.88
23	255.0	12.07	0.000	4.24	0.00	0.14	2.83	0.80	1.00	0.00	2.43	4.54	0.00	310.0	0.0	70.58	33.56	104.14
														17,409.4	**0.0**			**8,251.35**

Section Forces

Structure:	CT02303-A-3-SBA	**Code:**	EIA/TIA-222-G	8/17/2021	
Site Name:	Torrington 2 CT	**Exposure:**	C		
Height:	260.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 1	**Struct Class:**	II	Page: 17	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 90° Wind — 1.0D + 1.0W 60 mph Wind at 90° From Face

Wind Load Factor: 1.00 — **Wind Importance Factor:** 1.00

Dead Load Factor: 1.00

Ice Dead Load Factor: 0.00 — **Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	2.5	6.66	0.000	3.75	0.00	0.42	2.02	0.85	1.00	0.00	2.50	24.09	0.00	432.8	0.0	28.57	101.35	129.92
2	12.5	6.66	0.000	7.02	0.00	0.15	2.78	0.85	1.00	0.00	4.06	72.26	0.00	1,151.1	0.0	63.71	315.84	379.55
3	30.0	7.69	0.000	9.24	0.00	0.15	2.78	0.85	1.00	0.00	5.32	96.34	0.00	1,524.1	0.0	96.81	486.64	583.45
4	50.0	8.57	0.000	9.24	0.00	0.15	2.78	0.85	1.00	0.00	5.32	96.34	0.00	1,524.1	0.0	107.80	541.90	649.70
5	62.8	8.99	0.000	2.97	0.00	0.17	2.71	0.85	1.00	0.00	1.72	27.30	0.00	459.7	0.0	35.73	161.11	196.85
6	66.3	9.09	0.000	0.54	0.00	0.14	2.80	0.85	1.00	0.00	0.31	5.82	0.00	113.9	0.0	6.78	34.73	41.51
7	68.5	9.15	0.750	1.36	0.00	0.21	2.56	0.85	1.00	0.00	1.43	15.26	0.00	280.1	0.0	28.49	91.68	120.16
8	75.0	9.33	0.000	4.96	0.00	0.16	2.74	0.85	1.00	0.00	2.87	47.97	0.00	786.2	0.0	62.39	293.87	356.26
9	90.0	9.70	0.000	9.24	0.00	0.15	2.78	0.85	1.00	0.00	5.32	94.84	0.00	1,515.7	0.0	122.00	604.39	726.39
10	110.0	10.12	0.000	8.12	0.00	0.13	2.85	0.85	1.00	0.00	4.65	94.16	0.00	1,345.1	0.0	113.89	626.25	740.13
11	130.0	10.48	0.000	8.16	0.00	0.13	2.84	0.85	1.00	0.00	4.67	91.19	0.00	1,331.3	0.0	118.32	629.62	747.94
12	150.0	10.80	0.000	9.37	0.00	0.15	2.77	0.85	1.00	0.00	5.41	91.19	0.00	1,421.1	0.0	137.66	648.88	786.54
13	170.0	11.09	0.000	8.12	0.00	0.13	2.85	0.85	1.00	0.00	4.65	89.41	0.00	1,316.5	0.0	124.82	654.09	778.91
14	185.0	11.29	0.000	4.24	0.00	0.14	2.83	0.85	1.00	0.00	2.43	40.80	0.00	649.3	0.0	65.97	305.99	371.96
15	191.3	11.36	0.000	1.23	0.00	0.16	2.74	0.85	1.00	0.00	0.71	10.20	0.00	180.2	0.0	18.70	77.03	95.73
16	195.0	11.41	0.383	2.46	0.00	0.18	2.66	0.85	1.00	0.00	1.74	20.40	0.00	414.3	0.0	44.96	154.70	199.66
17	198.8	11.46	0.000	1.41	0.00	0.18	2.66	0.85	1.00	0.00	0.82	10.20	0.00	193.7	0.0	21.16	77.66	98.82
18	210.0	11.59	0.000	8.12	0.00	0.13	2.85	0.85	1.00	0.00	4.65	48.24	0.00	1,006.1	0.0	130.49	371.34	501.83
19	230.0	11.81	0.000	8.12	0.00	0.13	2.85	0.85	1.00	0.00	4.65	41.47	0.00	950.6	0.0	133.00	329.58	462.58
20	241.3	11.93	0.000	1.16	0.00	0.15	2.78	0.85	1.00	0.00	0.67	4.85	0.00	127.2	0.0	18.84	39.18	58.02
21	243.8	11.96	0.767	0.98	0.00	0.22	2.52	0.85	1.00	0.00	1.23	4.85	0.00	221.7	0.0	31.38	39.27	70.65
22	247.5	12.00	0.000	2.10	0.00	0.13	2.83	0.85	1.00	0.00	1.21	2.46	0.00	154.5	0.0	34.81	18.07	52.88
23	255.0	12.07	0.000	4.24	0.00	0.14	2.83	0.85	1.00	0.00	2.43	4.54	0.00	310.0	0.0	70.58	33.56	104.14
														17,409.4	**0.0**			**8,253.57**

Force/Stress Compression Summary

Structure:	CT02303-A-3-SBA	**Code:**	EIA/TIA-222-G	8/17/2021	
Site Name:	Torrington 2 CT	**Exposure:**	C		
Height:	260.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 1	**Struct Class:**	II	Page: 18	

Tower Engineering Solutions

LEG MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fy (ksi)	Mem Cap (kips)	Leg Use %	Controls
1	5	MOD - 1.5"SR+2x2x.375L	-68.88	1.2D + 1.0Di + 1.0Wi 60° Wind	1.76	100	100	100	41.28	50.00	124.16	55.5	Member X
2	20	SOL - 1 3/4" SOLID	-67.00	1.2D + 1.0Di + 1.0Wi 60° Wind	2.39	100	100	100	65.52	50.00	79.08	84.7	Member X
3	40	SOL - 1 3/4" SOLID	-66.78	1.2D + 1.0Di + 1.0Wi 60° Wind	2.33	100	100	100	64.00	50.00	80.23	83.2	Member X
4	60	SOL - 1 3/4" SOLID	-62.49	1.2D + 1.0Di + 1.0Wi Normal	2.33	100	100	100	64.00	50.00	80.23	77.9	Member X
5	65.66	SOL - 1 3/4" SOLID	-71.51	1.2D + 1.6W Normal Wind	2.50	100	100	100	68.57	50.00	76.75	93.2	Member X
6	66.87	SOL - 1 3/4" SOLID	-71.50	1.2D + 1.6W Normal Wind	1.21	100	100	100	33.13	50.00	99.89	71.6	Member X
7	70.04	SOL - 1 3/4" SOLID	-68.05	1.2D + 1.6W Normal Wind	3.17	50	50	50	43.43	50.00	94.29	72.2	Member X
8	80	SOL - 1 3/4" SOLID	-74.86	1.2D + 1.6W Normal Wind	2.32	100	100	100	63.71	50.00	80.44	93.1	Member X
9	100	SOL - 1 3/4" SOLID	-54.82	1.2D + 1.6W Normal Wind	2.33	100	100	100	64.00	50.00	80.23	68.3	Member X
10	120	SOL - 1 1/2" SOLID	-52.81	1.2D + 1.0Di + 1.0Wi 60° Wind	2.33	100	100	100	74.66	50.00	52.90	99.8	Member X
11	140	SOL - 1 1/2" SOLID	-48.90	1.2D + 1.0Di + 1.0Wi 60° Wind	2.33	100	100	100	74.66	50.00	52.90	92.4	Member X
12	160	SOL - 1 1/2" SOLID	-41.69	1.2D + 1.6W Normal Wind	2.33	100	100	100	74.66	50.00	52.90	78.8	Member X
13	180	SOL - 1 1/2" SOLID	-39.76	1.2D + 1.0Di + 1.0Wi 60° Wind	2.33	100	100	100	74.66	50.00	52.90	75.2	Member X
14	190	SOL - 1 1/2" SOLID	-35.33	1.2D + 1.0Di + 1.0Wi Normal	2.33	100	100	100	74.66	50.00	52.90	66.8	Member X
15	192.5	SOL - 1 1/2" SOLID	-37.65	1.2D + 1.6W Normal Wind	2.50	50	50	50	40.00	50.00	70.74	53.2	Member X
16	197.5	SOL - 1 1/2" SOLID	-45.03	1.2D + 1.6W Normal Wind	2.50	50	50	50	40.00	50.00	70.74	63.7	Member X
17	200	SOL - 1 1/2" SOLID	-43.54	1.2D + 1.6W Normal Wind	2.50	65	65	65	52.00	50.00	65.25	66.7	Member X
18	220	SOL - 1 1/2" SOLID	-32.46	1.2D + 1.6W Normal Wind	2.33	100	100	100	74.66	50.00	52.90	61.4	Member X
19	240	SOL - 1 1/2" SOLID	-33.49	1.2D + 1.6W Normal Wind	2.33	100	100	100	74.66	50.00	52.90	63.3	Member X
20	242.5	SOL - 1 1/2" SOLID	-33.19	1.2D + 1.6W Normal Wind	2.50	100	100	100	80.00	50.00	49.80	66.6	Member X
21	245	SOL - 1 1/2" SOLID	-23.75	1.2D + 1.6W Normal Wind	2.50	100	100	100	80.00	50.00	49.80	47.7	Member X
22	250	SOL - 1 1/2" SOLID	-13.70	1.2D + 1.6W Normal Wind	2.17	100	100	100	69.33	50.00	55.96	24.5	Member X
23	260	SOL - 1 1/2" SOLID	-7.92	1.2D + 1.6W Normal Wind	2.33	100	100	100	74.66	50.00	52.90	15.0	Member X

HORIZONTAL MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	Use %	Controls
1	5										0.00	0	0				
2	20	SOL - 3/4" SOLID	-0.12	1.2D + 1.6W 60° Wind	3.00	100	100	100	134.40	50.00	5.53	0	0			2	Member X
3	40	SOL - 3/4" SOLID	-0.40	1.2D + 1.6W Normal Wind	3.00	100	100	100	134.40	50.00	5.53	0	0			7	Member X
4	60	SOL - 3/4" SOLID	-1.34	1.2D + 1.6W Normal Wind	3.00	100	100	100	134.40	50.00	5.53	0	0			24	Member X
5	65.6	SOL - 3/4" SOLID	-4.20	1.2D + 1.6W 90° Wind	3.00	100	100	100	134.40	50.00	5.53	0	0			76	Member X
6	66.8	PLT - 3" x 1/2"	-0.01	1.2D + 1.6W 90° Wind	1.50	100	100	100	87.50	36.00	32.48	0	0			0	Member Y
7	70.0										0.00	0	0				
8	80	SOL - 3/4" SOLID	-4.39	1.2D + 1.6W Normal Wind	3.00	100	100	100	134.40	36.00	5.53	0	0			79	Member X
9	100	SOL - 3/4" SOLID	-1.60	1.2D + 1.6W Normal Wind	3.00	100	100	100	134.40	50.00	5.53	0	0			29	Member X
10	120	SOL - 3/4" SOLID	-0.54	1.2D + 1.6W Normal Wind	3.00	100	100	100	134.40	50.00	5.53	0	0			10	Member X
11	140	SOL - 3/4" SOLID	-0.68	1.2D + 1.6W 60° Wind	3.00	100	100	100	134.40	50.00	5.53	0	0			12	Member X
12	160	SOL - 3/4" SOLID	-2.10	1.2D + 1.6W 60° Wind	3.00	100	100	100	134.40	50.00	5.53	0	0			38	Member X
13	180	SOL - 3/4" SOLID	-0.66	1.2D + 1.6W Normal Wind	3.00	100	100	100	134.40	50.00	5.53	0	0			12	Member X
14	190	SOL - 3/4" SOLID	-1.24	1.2D + 1.6W Normal Wind	3.00	100	100	100	134.40	50.00	5.53	0	0			22	Member X
15	192.										0.00	0	0				
16	197.	CHN - C3 x 6	-3.29	1.2D + 1.6W Normal Wind	3.00	100	100	100	87.17	36.00	38.22	0	0			9	Member Y
17	200	SOL - 3/4" SOLID	-3.01	1.2D + 1.6W Normal Wind	3.00	100	100	100	134.40	50.00	5.53	0	0			54	Member X
18	220	SOL - 3/4" SOLID	-0.69	1.2D + 1.6W Normal Wind	3.00	100	100	100	134.40	50.00	5.53	0	0			13	Member X
19	240	SOL - 3/4" SOLID	-0.01	1.2D + 1.6W 90° Wind	3.00	100	100	100	134.40	50.00	5.53	0	0			0	Member X
20	242.	SOL - 3/4" SOLID	-3.11	1.2D + 1.6W 60° Wind	3.00	100	100	100	134.40	50.00	5.53	0	0			56	Member X
21	245	CHN - C3 x 6	-5.89	1.2D + 1.6W 90° Wind	3.00	100	100	100	87.17	36.00	38.22	0	0			15	Member Y
22	250	SOL - 3/4" SOLID	-0.68	1.2D + 1.6W 60° Wind	3.00	100	100	100	134.40	50.00	5.53	0	0			12	Member X
23	260	SOL - 3/4" SOLID	-0.71	1.2D + 1.6W 90° Wind	3.00	100	100	100	134.40	50.00	5.53	0	0			13	Member X

Force/Stress Compression Summary

Structure:	CT02303-A-3-SBA	**Code:**	EIA/TIA-222-G	8/17/2021	
Site Name:	Torrington 2 CT	**Exposure:**	C		
Height:	260.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 1	**Struct Class:**	II	Page: 19	

TES Tower Engineering Solutions

DIAGONAL MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	Use %	Controls
1	5	SOL - 5/8" SOLID	-3.16	1.2D + 1.0Di + 1.0Wi Normal	2.26	50	50	50	78.26	50.00	8.82	0	0			36	Member X
2	20	SOL - 5/8" SOLID	-0.76	1.2D + 1.6W 90° Wind	3.83	50	50	50	132.75	50.00	3.93	0	0			19	Member X
3	40	SOL - 5/8" SOLID	-1.35	1.2D + 1.6W 90° Wind	3.80	50	50	50	131.56	50.00	4.00	0	0			34	Member X
4	60	SOL - 5/8" SOLID	-2.91	1.2D + 1.6W 90° Wind	3.80	50	50	50	131.56	50.00	4.00	0	0			73	Member X
5	65.6	SOL - 5/8" SOLID	-0.71	1.2D + 1.6W Normal Wind	3.91	50	50	50	135.18	50.00	3.79	0	0				T-Only
6	66.8	SOL - 5/8" SOLID	-0.02	1.2D + 1.6W 90° Wind	1.93	100	100	100	103.70	50.00	6.29	0	0			0	Member X
7	70.0	SOL - 5/8" SOLID	-2.39	1.2D + 1.6W Normal Wind	4.36	50	50	50	151.00	50.00	3.04	0	0				T-Only
8	80	SOL - 5/8" SOLID	-0.82	1.2D + 1.6W Normal Wind	3.79	50	50	50	131.33	50.00	4.02	0	0				T-Only
9	100	SOL - 5/8" SOLID	-3.68	1.2D + 1.6W Normal Wind	3.80	50	50	50	131.56	50.00	4.00	0	0			92	Member X
10	120	SOL - 9/16" SOLID	-1.59	1.2D + 1.6W Normal Wind	3.80	50	50	50	145.97	50.00	2.63	0	0			60	Member X
11	140	SOL - 9/16" SOLID	-1.91	1.2D + 1.6W 90° Wind	3.80	50	50	50	145.97	50.00	2.63	0	0			72	Member X
12	160	SOL - 9/16" SOLID	-1.00	1.2D + 1.6W Normal Wind	3.80	50	50	50	145.97	50.00	2.63	0	0				T-Only
13	180	SOL - 9/16" SOLID	-1.62	1.2D + 1.6W Normal Wind	3.80	50	50	50	145.97	50.00	2.63	0	0			62	Member X
14	190	SOL - 9/16" SOLID	-1.81	1.2D + 1.6W Normal Wind	3.80	50	50	50	145.97	50.00	2.63	0	0			69	Member X
15	192.	SOL - 9/16" SOLID	-1.36	1.2D + 1.6W Normal Wind	3.91	50	50	50	149.98	50.00	2.50	0	0				T-Only
16	197.	SOL - 9/16" SOLID	-0.78	1.2D + 1.6W Normal Wind	3.91	50	50	50	149.98	50.00	2.50	0	0				T-Only
17	200	SOL - 9/16" SOLID	-0.16	1.2D + 1.6W Normal Wind	3.91	50	50	50	149.98	50.00	2.50	0	0				T-Only
18	220	SOL - 9/16" SOLID	-1.58	1.2D + 1.6W Normal Wind	3.80	50	50	50	145.97	50.00	2.63	0	0			60	Member X
19	240	SOL - 9/16" SOLID	-1.32	1.2D + 1.6W 60° Wind	3.80	50	50	50	145.97	50.00	2.63	0	0			50	Member X
20	242.	SOL - 9/16" SOLID	-0.64	1.2D + 1.6W 60° Wind	3.91	50	50	50	149.98	50.00	2.50	0	0				T-Only
21	245	SOL - 9/16" SOLID	-0.69	1.2D + 1.6W 60° Wind	3.91	50	50	50	149.98	50.00	2.50	0	0				T-Only
22	250	SOL - 9/16" SOLID	-1.51	1.2D + 1.6W 90° Wind	3.70	50	50	50	142.12	50.00	2.78	0	0			54	Member X
23	260	SOL - 9/16" SOLID	-1.56	1.2D + 1.6W 90° Wind	3.80	50	50	50	145.97	50.00	2.63	0	0			59	Member X

Force/Stress Tension Summary

Structure:	CT02303-A-3-SBA	**Code:**	EIA/TIA-222-G	8/17/2021	
Site Name:	Torrington 2 CT	**Exposure:**	C		
Height:	260.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 1	**Struct Class:**	II	Page: 20	

TES Tower Engineering Solutions

LEG MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Fy (ksi)	Mem Cap (kips)	Leg Use %	Controls
1	5				0	0.00		
2	20				0	0.00		
3	40				0	0.00		
4	60				0	0.00		
5	65.667				0	0.00		
6	66.875				0	0.00		
7	70.042	SOL - 1 3/4" SOLID	5.73	1.2D + 1.6W 60° Wind	50	108.24	5.3	Member
8	80	SOL - 1 3/4" SOLID	7.64	1.2D + 1.6W 60° Wind	50	108.24	7.1	Member
9	100				0	0.00		
10	120				0	0.00		
11	140				0	0.00		
12	160				0	0.00		
13	180				0	0.00		
14	190				0	0.00		
15	192.5				0	0.00		
16	197.5	SOL - 1 1/2" SOLID	4.43	1.2D + 1.6W 60° Wind	50	79.52	5.6	Member
17	200	SOL - 1 1/2" SOLID	4.90	1.2D + 1.6W 60° Wind	50	79.52	6.2	Member
18	220	SOL - 1 1/2" SOLID	4.93	1.2D + 1.6W 60° Wind	50	79.52	6.2	Member
19	240	SOL - 1 1/2" SOLID	27.95	1.2D + 1.6W 60° Wind	50	79.52	35.1	Member
20	242.5	SOL - 1 1/2" SOLID	18.57	1.2D + 1.6W 60° Wind	50	79.52	23.4	Member
21	245	SOL - 1 1/2" SOLID	11.28	1.2D + 1.6W 60° Wind	50	79.52	14.2	Member
22	250	SOL - 1 1/2" SOLID	11.53	1.2D + 1.6W 60° Wind	50	79.52	14.5	Member
23	260	SOL - 1 1/2" SOLID	7.34	1.2D + 1.6W 60° Wind	50	79.52	9.2	Member

HORIZONTAL MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	B.S. Cap (kips)	Use %	Controls
1	5	SOL - 3/4" SOLID	6.48	1.2D + 1.0Di + 1.0Wi N(	50	19.88	0	0				32.6	Member
2	20	SOL - 3/4" SOLID	6.48	1.2D + 1.0Di + 1.0Wi N(	50	19.88	0	0				32.6	Member
3	40	SOL - 3/4" SOLID	0.62	1.2D + 1.6W 90° Wind	50	19.88	0	0				3.1	Member
4	60	SOL - 3/4" SOLID	1.48	1.2D + 1.6W 90° Wind	50	19.88	0	0				7.4	Member
5	65.667	SOL - 3/4" SOLID	3.26	1.2D + 1.0Di + 1.0Wi 6(	50	19.88	0	0				16.4	Member
6	66.875	PLT - 3" x 1/2"	0.05	1.2D + 1.6W Normal Wi	36	48.60	0	0				0.1	Member
7	70.042	SOL - 3/4" SOLID			36	0.00	0	0					
8	80	SOL - 3/4" SOLID	2.76	1.2D + 1.0Di + 1.0Wi 6(	36	14.31	0	0				19.3	Member
9	100	SOL - 3/4" SOLID	1.65	1.2D + 1.6W 90° Wind	50	19.88	0	0				8.3	Member
10	120	SOL - 3/4" SOLID	0.68	1.2D + 1.6W 60° Wind	50	19.88	0	0				3.4	Member
11	140	SOL - 3/4" SOLID	0.80	1.2D + 1.6W Normal Wi	50	19.88	0	0				4.0	Member
12	160	SOL - 3/4" SOLID	2.18	1.2D + 1.0Di + 1.0Wi N(	50	19.88	0	0				11.0	Member
13	180	SOL - 3/4" SOLID	0.81	1.2D + 1.6W 60° Wind	50	19.88	0	0				4.0	Member
14	190	SOL - 3/4" SOLID	1.18	1.2D + 1.0Di + 1.0Wi N(	50	19.88	0	0				5.9	Member
15	192.5	SOL - 3/4" SOLID			50	0.00	0	0					
16	197.5	CHN - C3 x 6	2.23	1.2D + 1.6W 60° Wind	36	57.02	0	0				3.9	Member
17	200	SOL - 3/4" SOLID	1.40	1.2D + 1.6W Normal Wi	50	19.88	0	0				7.0	Member
18	220	SOL - 3/4" SOLID	0.81	1.2D + 1.6W 60° Wind	50	19.88	0	0				4.1	Member
19	240	SOL - 3/4" SOLID	0.33	1.2D + 1.6W Normal Wi	50	19.88	0	0				1.7	Member
20	242.5	SOL - 3/4" SOLID	1.84	1.2D + 1.6W 60° Wind	50	19.88	0	0				9.3	Member
21	245	CHN - C3 x 6	0.83	1.2D + 1.6W Normal Wi	36	57.02	0	0				1.5	Member
22	250	SOL - 3/4" SOLID	0.73	1.2D + 1.6W Normal Wi	50	19.88	0	0				3.7	Member
23	260	SOL - 3/4" SOLID	0.77	1.2D + 1.6W 60° Wind	50	19.88	0	0				3.9	Member

Force/Stress Tension Summary

Structure:	CT02303-A-3-SBA	**Code:**	EIA/TIA-222-G	8/17/2021	
Site Name:	Torrington 2 CT	**Exposure:**	C		
Height:	260.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 1	**Struct Class:**	II	Page: 21	

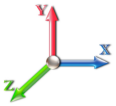
IES
Tower Engineering Solutions

DIAGONAL MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	B.S. Cap (kips)	Use %	Controls
1	5	SOL - 5/8" SOLID	0.00		50	0.00	0	0					
2	20	SOL - 5/8" SOLID	0.84	1.2D + 1.6W 90° Wind	50	13.81	0	0				6.1	Member
3	40	SOL - 5/8" SOLID	0.90	1.2D + 1.6W 90° Wind	50	13.81	0	0				6.5	Member
4	60	SOL - 5/8" SOLID	2.55	1.2D + 1.6W 90° Wind	50	13.81	0	0				18.4	Member
5	65.667	SOL - 5/8" SOLID	5.72	1.2D + 1.6W 90° Wind	50	13.81	0	0				41.4	Member
6	66.875	SOL - 5/8" SOLID	0.08	1.2D + 1.0Di + 1.0Wi 9(	50	13.81	0	0				0.6	Member
7	70.042	SOL - 5/8" SOLID	0.00	1.2D + 1.0Di + 1.0Wi N(	50	13.81	0	0					Member
8	80	SOL - 5/8" SOLID	7.16	1.2D + 1.6W 90° Wind	50	13.81	0	0				51.8	Member
9	100	SOL - 5/8" SOLID	3.14	1.2D + 1.6W 90° Wind	50	13.81	0	0				22.7	Member
10	120	SOL - 9/16" SOLID	1.06	1.2D + 1.6W 90° Wind	50	11.18	0	0				9.5	Member
11	140	SOL - 9/16" SOLID	1.96	1.2D + 1.6W 90° Wind	50	11.18	0	0				17.5	Member
12	160	SOL - 9/16" SOLID	4.90	1.2D + 1.6W 90° Wind	50	11.18	0	0				43.8	Member
13	180	SOL - 9/16" SOLID	1.26	1.2D + 1.6W 60° Wind	50	11.18	0	0				11.2	Member
14	190	SOL - 9/16" SOLID	2.04	1.2D + 1.6W Normal Wi	50	11.18	0	0				18.2	Member
15	192.5	SOL - 9/16" SOLID	3.53	1.2D + 1.6W Normal Wi	50	11.18	0	0				31.6	Member
16	197.5	SOL - 9/16" SOLID	3.11	1.2D + 1.6W 90° Wind	50	11.18	0	0				27.8	Member
17	200	SOL - 9/16" SOLID	6.63	1.2D + 1.6W 90° Wind	50	11.18	0	0				59.3	Member
18	220	SOL - 9/16" SOLID	1.46	1.2D + 1.6W 60° Wind	50	11.18	0	0				13.0	Member
19	240	SOL - 9/16" SOLID	1.13	1.2D + 1.6W 90° Wind	50	11.18	0	0				10.1	Member
20	242.5	SOL - 9/16" SOLID	8.50	1.2D + 1.6W 90° Wind	50	11.18	0	0				76.0	Member
21	245	SOL - 9/16" SOLID	6.71	1.2D + 1.6W 90° Wind	50	11.18	0	0				60.0	Member
22	250	SOL - 9/16" SOLID	1.58	1.2D + 1.6W 90° Wind	50	11.18	0	0				14.1	Member
23	260	SOL - 9/16" SOLID	1.47	1.2D + 1.6W 60° Wind	50	11.18	0	0				13.1	Member

Support Forces Summary

Structure:	CT02303-A-3-SBA		**Code:**	EIA/TIA-222-G	8/17/2021
Site Name:	Torrington 2 CT		**Exposure:**	C	
Height:	260.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	0.85	**Topography:** 1	**Struct Class:**	II	Page: 22



Tower Engineering Solutions

Load Case	Node	FX (kips)	FY (kips)	FZ (kips)	(-) = Uplift (+) = Down
1.2D + 1.6W Normal Wind	1	0.01	116.53	-1.02	
	A1	0.00	-1.25	1.23	
	A1b	-41.74	-39.27	-25.73	
	A1a	41.74	-39.29	-25.72	
1.2D + 1.6W 60° Wind	1	-1.56	93.39	-0.91	
	A1	-1.05	-6.48	8.56	
	A1b	-48.72	-44.34	-28.13	
	A1a	6.88	-6.50	-5.18	
1.2D + 1.6W 90° Wind	1	-1.35	108.86	-0.34	
	A1	-1.51	-24.20	30.12	
	A1b	-50.37	-46.02	-28.15	
	A1a	1.92	-2.24	-1.65	
1.2D + 1.0Di + 1.0Wi Normal Wind	1	0.00	190.83	-0.14	
	A1	0.00	-7.97	16.05	
	A1b	-31.03	-23.31	-19.55	
	A1a	31.03	-23.33	-19.55	
1.2D + 1.0Di + 1.0Wi 60° Wind	1	-0.16	189.91	-0.10	
	A1	-1.38	-13.04	22.40	
	A1b	-37.29	-28.47	-21.53	
	A1a	18.70	-13.05	-12.39	
1.2D + 1.0Di + 1.0Wi 90° Wind	1	-0.18	190.17	0.00	
	A1	-1.74	-18.10	29.42	
	A1b	-36.16	-27.01	-20.11	
	A1a	14.88	-9.28	-9.32	
1.0D + 1.0W Normal Wind	1	0.00	57.02	-0.55	
	A1	0.00	-2.26	4.43	
	A1b	-14.27	-11.97	-8.56	
	A1a	14.27	-11.98	-8.56	
1.0D + 1.0W 60° Wind	1	-0.49	57.57	-0.28	
	A1	-0.27	-5.74	8.64	
	A1b	-18.04	-15.45	-10.42	
	A1a	7.34	-5.75	-4.55	
1.0D + 1.0W 90° Wind	1	-0.56	57.36	0.00	
	A1	-0.34	-8.85	12.60	
	A1b	-17.13	-14.49	-9.74	
	A1a	4.81	-3.30	-2.92	

Max Reactions (kips)	Base	Anchor 1
Vertical	190.83	46.02
Horizontal	1.80	57.70

Cable Forces Summary

Structure:	CT02303-A-3-SBA	**Code:**	EIA/TIA-222-G	8/17/2021	
Site Name:	Torrington 2 CT	**Exposure:**	C		
Height:	260.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 1	**Struct Class:**	II	Page: 23	

Tower Engineering Solutions

Load Case	Elevation (ft)	Cable	Node 1	Node 2	Allow Tension (kips)	Applied Tension (kips)	Use %
1.2D + 1.6W Normal Wind	70.04	1/2 EHS	A1	T1	16.02	0.32	2
			A1b	T1b	16.02	6.86	43
			A1a	T1a	16.02	7.08	44
			A1a	T1	16.02	6.75	42
			A1b	T1a	16.02	7.00	44
			A1	T1b	16.02	0.32	2
	139.33		A1	70	16.02	0.13	1
			A1a	70a	16.02	11.39	71
			A1b	70b	16.02	11.40	71
	195.00	7/16 EHS	A1	T3	12.48	0.40	3
			A1b	T3b	12.48	9.60	77
			A1a	T3a	12.48	9.64	77
			A1a	T3	12.48	9.52	76
			A1b	T3a	12.48	9.53	76
			A1	T3b	12.48	0.40	3
	239.33	5/8 EHS	A1	119	25.44	0.80	3
			A1a	119a	25.44	20.22	79
			A1b	119b	25.44	20.20	79
1.2D + 1.6W 60° Wind	70.04	1/2 EHS	A1	T1	16.02	1.83	11
			A1b	T1b	16.02	8.31	52
			A1a	T1a	16.02	1.76	11
			A1a	T1	16.02	1.81	11
			A1b	T1a	16.02	8.29	52
			A1	T1b	16.02	1.77	11
	139.33		A1	70	16.02	1.67	10
			A1a	70a	16.02	1.65	10
			A1b	70b	16.02	13.44	84
	195.00	7/16 EHS	A1	T3	12.48	1.75	14
			A1b	T3b	12.48	10.69	86
			A1a	T3a	12.48	1.67	13
			A1a	T3	12.48	1.73	14
			A1b	T3a	12.48	10.59	85
			A1	T3b	12.48	1.65	13
	239.33	5/8 EHS	A1	119	25.44	2.91	11
			A1a	119a	25.44	2.96	12
			A1b	119b	25.44	22.26	87
1.2D + 1.6W 90° Wind	70.04	1/2 EHS	A1	T1	16.02	4.37	27
			A1b	T1b	16.02	8.26	52
			A1a	T1a	16.02	0.50	3
			A1a	T1	16.02	0.55	3
			A1b	T1a	16.02	8.05	50
			A1	T1b	16.02	4.53	28
	139.33		A1	70	16.02	6.71	42
			A1a	70a	16.02	0.49	3
			A1b	70b	16.02	13.70	86
	195.00	7/16 EHS	A1	T3	12.48	6.06	49
			A1b	T3b	12.48	11.19	90
			A1a	T3a	12.48	0.63	5
			A1a	T3	12.48	0.67	5
			A1b	T3a	12.48	11.10	89
			A1	T3b	12.48	5.98	48
	239.33	5/8 EHS	A1	119	25.44	12.34	49
			A1a	119a	25.44	1.18	5
			A1b	119b	25.44	23.48	92

1.2D + 1.0Di + 1.0Wi Normal Wind	70.04	1/2 EHS	A1	T1	16.02	4.40	28
			A1b	T1b	16.02	7.16	45
			A1a	T1a	16.02	7.18	45
			A1a	T1	16.02	7.11	44
			A1b	T1a	16.02	7.15	45
			A1	T1b	16.02	4.38	27
	139.33		A1	70	16.02	3.71	23
			A1a	70a	16.02	8.25	52
			A1b	70b	16.02	8.26	52
	195.00	7/16 EHS	A1	T3	12.48	3.19	26
			A1b	T3b	12.48	7.38	59
			A1a	T3a	12.48	7.31	59
			A1a	T3	12.48	7.36	59
			A1b	T3a	12.48	7.28	58
			A1	T3b	12.48	3.18	25
	239.33	5/8 EHS	A1	119	25.44	3.87	15
			A1a	119a	25.44	11.65	46
			A1b	119b	25.44	11.63	46
1.2D + 1.0Di + 1.0Wi 60° Wind	70.04	1/2 EHS	A1	T1	16.02	5.20	32
			A1b	T1b	16.02	7.87	49
			A1a	T1a	16.02	5.17	32
			A1a	T1	16.02	5.19	32
			A1b	T1a	16.02	7.86	49
			A1	T1b	16.02	5.18	32
	139.33		A1	70	16.02	4.96	31
			A1a	70a	16.02	4.94	31
			A1b	70b	16.02	9.86	62
	195.00	7/16 EHS	A1	T3	12.48	4.70	38
			A1b	T3b	12.48	8.55	69
			A1a	T3a	12.48	4.57	37
			A1a	T3	12.48	4.68	38
			A1b	T3a	12.48	8.52	68
			A1	T3b	12.48	4.55	36
	239.33	5/8 EHS	A1	119	25.44	6.42	25
			A1a	119a	25.44	6.45	25
			A1b	119b	25.44	14.52	57
1.2D + 1.0Di + 1.0Wi 90° Wind	70.04	1/2 EHS	A1	T1	16.02	6.17	39
			A1b	T1b	16.02	7.72	48
			A1a	T1a	16.02	4.57	29
			A1a	T1	16.02	4.56	28
			A1b	T1a	16.02	7.68	48
			A1	T1b	16.02	6.16	38
	139.33		A1	70	16.02	6.53	41
			A1a	70a	16.02	3.97	25
			A1b	70b	16.02	9.44	59
	195.00	7/16 EHS	A1	T3	12.48	6.10	49
			A1b	T3b	12.48	8.23	66
			A1a	T3a	12.48	3.52	28
			A1a	T3	12.48	3.57	29
			A1b	T3a	12.48	8.19	66
			A1	T3b	12.48	5.93	48
	239.33	5/8 EHS	A1	119	25.44	8.93	35
			A1a	119a	25.44	4.57	18
			A1b	119b	25.44	13.68	54
1.0D + 1.0W Normal Wind	70.04	1/2 EHS	A1	T1	16.02	1.56	10
			A1b	T1b	16.02	3.27	20
			A1a	T1a	16.02	3.29	21
			A1a	T1	16.02	3.24	20
			A1b	T1a	16.02	3.27	20
			A1	T1b	16.02	1.55	10
	139.33		A1	70	16.02	0.82	5
			A1a	70a	16.02	3.67	23
			A1b	70b	16.02	3.67	23
	195.00	7/16 EHS	A1	T3	12.48	0.41	3
			A1b	T3b	12.48	2.82	23

1.0D + 1.0W Normal Wind	195.00	7/16 EHS	A1a	T3a	12.48	2.79	22
			A1a	T3	12.48	2.81	23
			A1b	T3a	12.48	2.76	22
			A1	T3b	12.48	0.41	3
	239.33	5/8 EHS	A1	119	25.44	0.83	3
			A1a	119a	25.44	5.69	22
			A1b	119b	25.44	5.67	22
1.0D + 1.0W 60° Wind	70.04	1/2 EHS	A1	T1	16.02	2.11	13
			A1b	T1b	16.02	3.79	24
			A1a	T1a	16.02	2.11	13
			A1a	T1	16.02	2.11	13
			A1b	T1a	16.02	3.79	24
			A1	T1b	16.02	2.11	13
	139.33		A1	70	16.02	1.67	10
			A1a	70a	16.02	1.67	10
			A1b	70b	16.02	4.70	29
	195.00	7/16 EHS	A1	T3	12.48	1.38	11
			A1b	T3b	12.48	3.63	29
			A1a	T3a	12.48	1.33	11
			A1a	T3	12.48	1.37	11
			A1b	T3a	12.48	3.62	29
			A1	T3b	12.48	1.31	11
	239.33	5/8 EHS	A1	119	25.44	2.55	10
			A1a	119a	25.44	2.56	10
			A1b	119b	25.44	7.49	29
1.0D + 1.0W 90° Wind	70.04	1/2 EHS	A1	T1	16.02	2.67	17
			A1b	T1b	16.02	3.66	23
			A1a	T1a	16.02	1.70	11
			A1a	T1	16.02	1.70	11
			A1b	T1a	16.02	3.65	23
			A1	T1b	16.02	2.69	17
	139.33		A1	70	16.02	2.64	17
			A1a	70a	16.02	1.00	6
			A1b	70b	16.02	4.42	28
	195.00	7/16 EHS	A1	T3	12.48	2.12	17
			A1b	T3b	12.48	3.40	27
			A1a	T3a	12.48	0.70	6
			A1a	T3	12.48	0.74	6
			A1b	T3a	12.48	3.39	27
			A1	T3b	12.48	2.05	16
	239.33	5/8 EHS	A1	119	25.44	4.10	16
			A1a	119a	25.44	1.36	5
			A1b	119b	25.44	7.00	28

Max Reactions

Base:	190.83 (Vertical)	1.80 (Horizontal)
Anchor 1:	46.02 (Vertical)	57.70 (Horizontal)

Max Usages

Max Leg: 99.8% (1.2D + 1.0Di + 1.0Wi 60° Wind - Sect 10)
Max Diag: 91.9% (1.2D + 1.6W Normal Wind - Sect 9)
Max Horiz: 79.5% (1.2D + 1.6W Normal Wind - Sect 8)
Max Cable: 92.3% (1.2D + 1.6W 90° Wind) - Elev: 239 ft

Max Deflection, Twist and Sway

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)
1.0D + 1.0W 60 mph Wind at 60° From Face	83.00	0.1107	0.0016	0.0902
	85.33	0.1162	0.0016	0.1399
	117.00	0.1808	0.0073	0.1039
	165.33	0.2501	0.0265	0.0731
	172.33	0.2577	0.0209	0.0569
	177.00	0.2618	0.0181	0.0766
	180.00	0.2608	0.0168	0.1360
	200.67	0.2776	0.0156	0.2303
	219.33	0.3075	0.0133	0.1739
	223.00	0.3127	0.0132	0.1814
	232.33	0.3302	0.0060	0.1182
	245.00	0.3650	0.0007	0.1763
	253.00	0.3929	0.0057	0.1519
	257.67	0.4073	-0.0034	0.2572
	260.00	0.4147	0.0111	0.1879
1.0D + 1.0W 60 mph Wind at 90° From Face	83.00	0.1111	-0.0025	0.0916
	85.33	0.1166	-0.0023	0.1418
	117.00	0.1828	0.0001	0.1057
	165.33	0.2474	0.0171	0.0660
	172.33	0.2539	0.0173	0.0488
	177.00	0.2574	0.0180	0.0694
	180.00	0.2557	0.0187	0.1459
	200.67	0.2711	0.0244	0.2261
	219.33	0.3008	0.0138	0.1985
	223.00	0.3066	0.0107	0.0897
	232.33	0.3242	0.0106	0.1199
	245.00	0.3592	0.0127	0.1776
	253.00	0.3871	0.0109	0.1556
	257.67	0.4011	0.0105	0.2982
	260.00	0.4087	0.0104	0.0529

1.0D + 1.0W 60 mph Wind at Normal To Face	83.00	0.1164	0.0125	0.0934
	85.33	0.1218	0.0124	0.1458
	117.00	0.1908	0.0274	0.1048
	165.33	0.2418	0.0501	0.0454
	172.33	0.2473	0.0386	0.0304
	177.00	0.2493	0.0320	0.0585
	180.00	0.2479	0.0278	0.2124
	200.67	0.2567	0.0175	0.2246
	219.33	0.2850	0.0117	0.0952
	223.00	0.2889	0.0112	0.3201
	232.33	0.3074	0.0129	0.1200
	245.00	0.3442	0.0170	0.1848
	253.00	0.3733	0.0151	0.1564
	257.67	0.3886	0.0145	0.0651
	260.00	0.3963	0.0145	0.3787
1.2D + 1.0Di + 1.0Wi 50 mph Wind at 60° From Face	83.00	0.2634	0.0066	0.1991
	85.33	0.2759	0.0077	0.3094
	117.00	0.4234	0.0328	0.2615
	165.33	0.5781	0.0708	0.1535
	172.33	0.5943	0.0634	0.1224
	177.00	0.6031	0.0582	0.1789
	180.00	0.6007	0.0551	0.3409
	200.67	0.6332	0.0448	0.3646
	219.33	0.6919	0.0760	0.3184
	223.00	0.7031	0.0773	0.2957
	232.33	0.7374	0.0515	0.2289
	245.00	0.8007	0.0240	0.3218
	253.00	0.8526	0.0492	0.2778
	257.67	0.8792	0.0125	0.4459
	260.00	0.8928	0.0707	0.3551
1.2D + 1.0Di + 1.0Wi 50 mph Wind at 90° From Face	83.00	0.2685	0.0040	0.1999
	85.33	0.2809	0.0052	0.3131
	117.00	0.4296	0.0302	0.2575
	165.33	0.5603	0.0841	0.1210
	172.33	0.5718	0.0864	0.0924
	177.00	0.5777	0.0870	0.1507
	180.00	0.5711	0.0864	0.4113
	200.67	0.5975	0.0914	0.3606
	219.33	0.6544	0.0978	0.3897
	223.00	0.6675	0.0871	0.1062
	232.33	0.7023	0.0910	0.2355
	245.00	0.7667	0.0966	0.3276
	253.00	0.8190	0.0973	0.2876
	257.67	0.8421	0.0977	0.5201
	260.00	0.8595	0.0976	0.1025
1.2D + 1.0Di + 1.0Wi 50 mph Wind at Normal From Face	83.00	0.2911	0.0365	0.2052
	85.33	0.3034	0.0383	0.3257
	117.00	0.4596	0.0847	0.2611
	165.33	0.5589	0.1090	0.0751
	172.33	0.5690	0.0901	0.0541
	177.00	0.5725	0.0778	0.1368
	180.00	0.5682	0.0688	0.5621
	200.67	0.5832	0.0386	0.3646
	219.33	0.6421	0.0302	0.2295
	223.00	0.6524	0.0269	0.5527
	232.33	0.6916	0.0242	0.2549
	245.00	0.7635	0.0220	0.3589
	253.00	0.8207	0.0221	0.3084
	257.67	0.8507	0.0215	0.1776
	260.00	0.8660	0.0223	0.7234

1.2D + 1.6W 93 mph Wind at 60° From Face	83.00	0.5110	0.0154	0.4338
	85.33	0.5356	0.0180	0.6379
	117.00	0.8481	0.0707	0.5369
	165.33	1.2180	0.1471	0.3961
	172.33	1.2605	0.1331	0.3275
	177.00	1.2848	0.1236	0.4290
	180.00	1.2846	0.1181	0.5584
	200.67	1.3892	0.1190	1.0637
	219.33	1.5405	0.3523	0.7367
	223.00	1.5671	0.3655	0.7243
	232.33	1.6532	0.2142	0.5674
	245.00	1.8195	0.0463	0.8123
	253.00	1.9430	0.1772	0.6957
	257.67	2.0070	-0.0195	1.0884
	260.00	2.0405	0.2856	0.8247
1.2D + 1.6W 93 mph Wind at 90° From Face	83.00	0.6707	-0.0456	0.6312
	85.33	0.7039	-0.0468	0.8642
	117.00	1.1663	-0.0646	0.8443
	165.33	1.7902	-0.0555	0.7143
	172.33	1.8708	-0.0365	0.6408
	177.00	1.9208	-0.0243	0.7508
	180.00	1.9421	-0.0032	0.4268
	200.67	2.1577	0.0231	1.4204
	219.33	2.4199	-0.2173	1.2204
	223.00	2.4713	-0.2362	0.2750
	232.33	2.6134	-0.1703	0.9160
	245.00	2.8590	-0.1506	1.1551
	253.00	3.0297	-0.2025	1.0522
	257.67	3.1228	-0.1146	1.5944
	260.00	3.1690	-0.2458	0.6860
1.2D + 1.6W 93 mph Wind at Normal To Face	83.00	0.7768	0.2041	0.7038
	85.33	0.8130	0.2086	0.9533
	117.00	1.3300	0.3046	0.9522
	165.33	2.0238	0.2732	0.8073
	172.33	2.1232	0.2199	0.7419
	177.00	2.1814	0.1847	0.8820
	180.00	2.2058	0.1587	0.4162
	200.67	2.4585	0.0682	1.6052
	219.33	2.7676	0.0635	0.9406
	223.00	2.8196	0.0609	1.8549
	232.33	2.9901	0.0593	1.0707
	245.00	3.2755	0.0641	1.3565
	253.00	3.4747	0.0657	1.2186
	257.67	3.5839	0.0561	0.8717
	260.00	3.6392	0.0675	2.0761

Guyed Tower Base Design

				Date
				8/16/2021
Customer Name:	SBA Communications Corp	**EIA/TIA Standard:**	EIA-222-G
Site Name:		**Structure Height (Ft.):**	260
Site Nmber:	CT02303-A-3-SBA	**Engineer Name:**	T. Alajaj
Engr. Number:	112253	**Engineer Login ID:**	

Foundation Info Obtained from: Drawings/Calculations

Structure Type: Guyed Tower

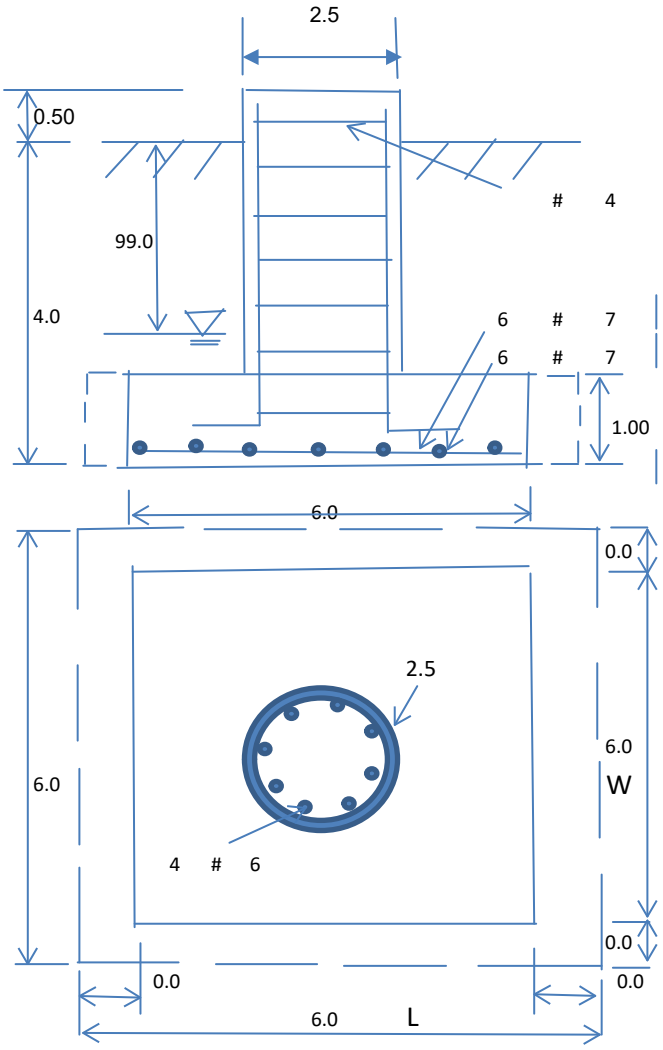
Analysis or Design? Analysis

Base Reactions (Factored):

Axial Load (Kips):	190.8	Shear Force (Kips):	1.8
Uplift Force (Kips):	0.0	Moment (Kips-ft):	
Allowable overstress %:	5.0%		

Foundation Geometries:

		Mods required -Yes/No ?:	No
Diameter of Pier (ft.):	2.5	Depth of Base BG (ft.):	4.0
Pier Height A. G. (ft.):	0.50	Thickness of Pad (ft):	1.00
Length of Pad (ft.):	6	Width of Pad (ft.):	6
Final Length of pad (ft)	6.0	Final width of pad (ft):	6.0



Material Properties and Reabr Info:

Concrete Strength (psi):	4500	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	60	
Vertical Rebar Size #:	6	Tie / Stirrup Size #:	4	
Qty. of Vertical Rebars:	4	Tie Spacing (in):	6.0	
Pad Rebar Yield (Ksi):	60	Pad Steel Rebar Size (#):	7	
Concrete Cover (in.):	3	Unit Weight of Concrete:	150.0	pcf
Rebar at the bottom of the concrete pad:				
Qty. of Rebar in Pad (L):	6	Qty. of Rebar in Pad (W):	6	

Soil Design Parameters:

Soil Unit Weight (pcf):	125.0	Soil Buoyant Weight:	50.0	Pcf		
Water Table B.G.S. (ft):	99.0	Unit Weight of Water:	62.4	pcf	Angle from Top of Pad:	30
Ultimate Bearing Pressure (psf):	30000	Ultimate Skin Friction:	0	Psf	Angle from Bottm of Pad:	25
					Angle from Bottm of Pad:	25

Foundation Analysis and Design: Uplift Strength Reduction Factor: 0.75 — Compression Strength Reduction Factor: 0.6

Total Dry Soil Volume (cu. Ft.):	93.27	Total Dry Soil Weight (Kips):	11.66
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	11.66	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	53.18	Total Dry Concrete Weight (Kips):	7.98
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	7.98	Total Vertical Load on Base (Kips):	210.44

Check Soil Capacities:

					Load/ Capacity Ratio	
Calculated Maxium Net Soil Pressure under the base (psf):	5501.0	<	Allowable Factored Soil Bearing (psf):	18000	0.31	OK!
Calculated Foundation Allowable Axail Capacity (Kips):	648.0	>	Design Factored Axial Load (Kips):	193	0.30	OK!

Check the capacities of Reinforceing Concrete:

Strength reduction factor (Flexure and axial tension):	0.90	Strength reduction factor (Shear):	0.75		
Strength reduction factor (Axial compresion):	0.65	Wind Load Factor on Concrete Design:	1.00		
				Load/ Capacity Ratio	
(1) Concrete Pier:					
Vertical Steel Rebar Area (sq. in./each):	0.44	Tie / Stirrup Area (sq. in./each):	0.20		
Calculated Moment Capacity (Mn,Kips-Ft):	92.1	>	Design Factored Moment (Mu, Kips-Ft	6.3	0.07	OK!
Calculated Shear Capacity (Kips):	167.1	>	Design Factored Shear (Kips):	1.8	0.01	OK!
Calculated Tension Capacity (Tn, Kips):	95.0	>	Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	1402.4	>	Design Factored Axial Load (Pu Kips):	190.8	0.14	OK!
Moment & Axial Strength Combination(Pu/Pn+Mu/Mn):	0.20	OK!				
Pier Reinforcement Ratio:	0.002					
(2).Concrete Pad:						
One-Way Design Shear Capacity (L-Dir. Kips);	62.0	>	One-Way Factored Shear (L-Dir Kips):	33.2	0.54	OK!
One-Way Design Shear Capacity (W-Dir. Kips):	62.0	>	One-Way Factored Shear (W-Dir Kips)	33.2	0.54	OK!
Two-Way Design Shear Capacity (Kips):	208.8	>	Two-Way Factored Shear (Kips):	148.4	0.71	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0058	OK!	Lower Steel Pad Reinf. Ratio (W-Direc	0.0058		OK!
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	132.2	>	Moment at Bottom (L-Direct. K-Ft):	49.1	0.37	OK!
Lower Steel Pad Moment Capacity (W-Dir. Kips-ft):	132.2	>	Moment at Bottom (W-Dir. Kips-Ft):	49.1	0.37	OK!

Last revised on 5/4/2020

Guy Anchor Analysis and Design

			Date: 8/16/2021
Customer Name:	SBA Communications Corp	**EIA/TIA Standard:**	EIA-222-G
Site Name:	0	**Structure Height (Ft.):**	260
Site Nmber:	CT02303-A-3-SBA	**Engineer Name:**	T. Alajaj
Engr. Number:	112253	**Engineer Login ID:**	

Foundation Info Obtained from: Drawings/Calculations **Number of Anchors:** 1 Set Failure model: New

Soil Design Parameters:

Soil Unit Weight (pcf):	127.0	Soil Buoyant Weight:	64.6	Pcf	Cohesion of Soils (psf):		
Water Table B.G.S. (ft):	99.0	Unit Weight of Water:	62.4	pcf	Internal Angle of Friction (°)		
Ultimate lateral pressure (psf):	3000	Ultimate Skin Friction:	200	Psf	Coefficient of Shear Friction:		0.30
Conical Failure Angle from Top:	30	Failure Angle from Bottm	30				

Material Properties:

Concrete Strength (psi):	3000	Unit Weight of Concrete:	150.0	psf	Horizontal Rebar Yield (psi):		60000
Shear Strength Reduction Factor:	0.75				Flexure Strength Reduction Factor:		0.9

A. Inner Anchors:

Radius (ft.): 200

1. Design Reactions (Factored):

Uplift (Kips:)	46.0	Shear (Kips)	57.7		Angle of force resultant (Ø):		38.6

2. Foundation Geometries:

Block Base Depth B.G.S. (ft):	8.0	Block with/without toe?	No		Water Table below grade (ft):		99.00
Length of Anchor Block (L, ft.):	10.0	Width of Anchor Block:	5.5	ft.	Thickness of Anchor Block (ft.):		2.5
Concrete Block @ top of Anchor?	No						

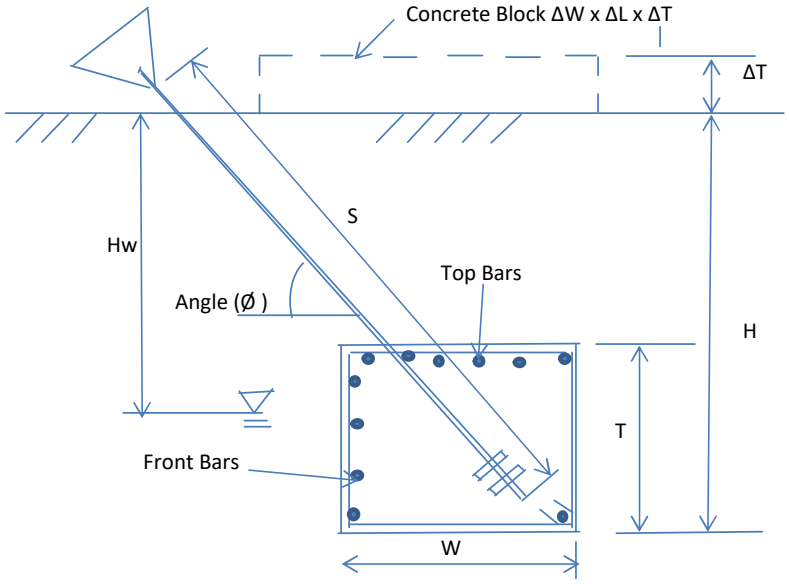
(1). Inner Anchors: *Radius (ft.):* 200

H (ft.):	8.0	*Hw(ft.):*	99.0
L (ft.):	10.0	*W (ft.):*	5.5
T (ft.):	2.5	*Angle (Ø):*	38.6
S (ft.):	13.64		

Top bars: 3 # 6

Front bars: 3 # 6

Concrete Volume (Cu. Yd.)/Each: 5.09



3. Foundation Analysis and Design:

Total Dry Soil Volume (cu. Ft.):	631.28	Total Dry Soil Weight (Kips):	133.85
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	80.17	Weight of the Concrete Block at Top (Kips):	0.00
Total Dry Concrete Volume (cu. Ft.):	137.50	Total Dry Concrete Weight (Kip):	20.63
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	20.63	Weight Reduction Factor:	0.9
Uplift Strength Reduction Factor on Soil:	0.75	Shear Strength Reduction Factor:	0.75

4. Check Soil and Foundation Capacities:

Nominal Factored Uplift Resistance:	78.69	Kips >	Design Uplift Force (Kips):	46.0	OK!
Ultimate Shear Friction Resistance at base:	9.09	Kips	Ultimate Resistance Pressure:	3000.0	Psf
Factored Shear Resistance:	67.19	Kips >	Design Shear Force (Kips):	57.7	OK!

5. Design Concrete Block:

Rebar Size (#):	6	Wind Load Factor on Concrete Design:	1.00		
Qty. of the Rebar at top of the block:	3	Qty. of the Rebar in the front of the block:	3		
Area of Single Rebar (sq. in.):	0.44	Factor for concrete compression zone:	0.85		
One Way Shear due to Shear Force (Kips):	28.9	One Way Shear Capacity for shear (kips):	152.8	OK!	
One Way Shear due to Uplift (Kips):	23.0	One Way Shear Capacity for uplift (kips):	141.0	OK!	
Moment due to Shear Load (Kips-ft):	72.1	Flexural Capacity for Shear Load (Kips-ft):	368.2	OK!	
Moment due to uplift Load (Kips-ft):	57.5	Flexural Capacity for uplift Load (Kips-ft):	154.4	OK!	
Ratio of Design Moment/Moment capacity:	0.37	Minimum ratio of rebar (top & front) :	0.11	OK!	
Max. Ratio of Shear Force/Shear capacity:	0.19	OK!			

0.0 0.0

Maser Consulting Connecticut
2000 Midlantic Drive, Suite 100
Mt. Laurel, NJ 08054
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peter.albano@colliersengineering.com

Post-Mod Antenna Mount Analysis Report and PMI Requirements

Mount Fix

SMART Tool Project #: 10063099
Maser Consulting Connecticut Project #: 20777654A

May 5, 2021

Site Information	*Site ID:*	*468293-VZW / Torrington 2 CT*
	Site Name:	*Torrington 2 CT*
	Carrier Name:	*Verizon Wireless*
	Address:	*1210 Highland Ave.*
		Torrington, Connecticut 06790
		Litchfield County
	Latitude:	*41.802597°*
	Longitude:	*-73.164664°*
Structure Information	*Tower Type:*	*260-Ft Guyed*
	Mount Type:	*9.00-Ft T-Frame*

FUZE ID # 16244627

Analysis Results

T-Frame: **82.0% 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

Digitally signed by Taqi Khawaja-Ghulam
Date: 2021.05.07 11:38:40-04'00'

Report Prepared By: Zachary Bandilla

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: 324975, dated November 18, 2020*
Mount Mapping Report	*Structural Components, Site #: 20777654, dated March 11, 2021*
Construction Drawings	*On Air Engineering, LLC, Site Name: Torrington 2 CT, dated March 12, 2021*
Previous Mount Analysis	*Maser Consulting, Project #: 20777654A, Dated April 9, 2021*
Mount Modification Drawings	*Maser Consulting, Project #: 20777654A, Dated May 5, 2021*

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H	
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), V_{ULT}	115 mph
	Ice Wind Speed (3-sec. Gust):	50 mph
	Design Ice Thickness:	1.00 in
	Risk Category:	II
	Exposure Category:	C
	Topographic Category:	1
	Topographic Feature Considered:	N/A
	Topographic Method:	N/A
	Ground Elevation Factor, K_e:	0.956
Seismic Parameters:	S_S:	0.174
	S_1:	0.054
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
198.00	200.00	6	Quintel	QS6656-5D	Added
		3	Samsung	MT6407-77A	
		3	Samsung	B2/B66A RRH-BR049	
		3	Samsung	B5/B13 RRH-BR04C	
		1	Raycap	RVZDC-6627-PF-48	
		3	Amphenol	BXA-80063-6BF-EDIN-5	Retained

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.

Analysis Results:

Component	Utilization %	Pass/Fail
Standoff Horizontal	*39.8 %*	*Pass*
Face Horizontal	*82.0 %*	*Pass*
Mast Pipe	*21.1 %*	*Pass*
Standoff Bracing	*19.8 %*	*Pass*
Mount Pipe	*53.6 %*	*Pass*
Face Vertical	*8.4 %*	*Pass*
Vertical Face Bracing	*32.7 %*	*Pass*
Face Bracing	*8.6 %*	*Pass*
Replacement Pipe	*28.8 %*	*Pass*
Tieback	*32.2 %*	*Pass*
Mod Horizontal	*76.0 %*	*Pass*
Mod V-Brace	*15.3 %*	*Pass*
Mod Tieback	*35.2 %*	*Pass*
Mount Connection	*64.3 %*	*Pass*

Structure Rating – *(Controlling Utilization of all Components)*	**82.0%**

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:

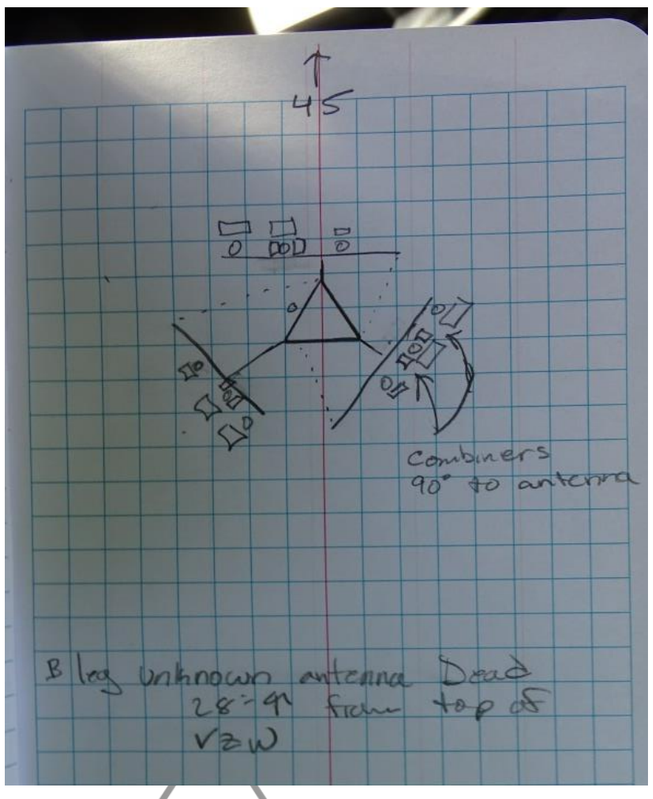
1. Mount Photos
2. Mount Mapping Report (for reference only)
3. Analysis Calculations
4. **Contractor Required PMI Report Deliverables**
5. Antenna Placement Diagrams

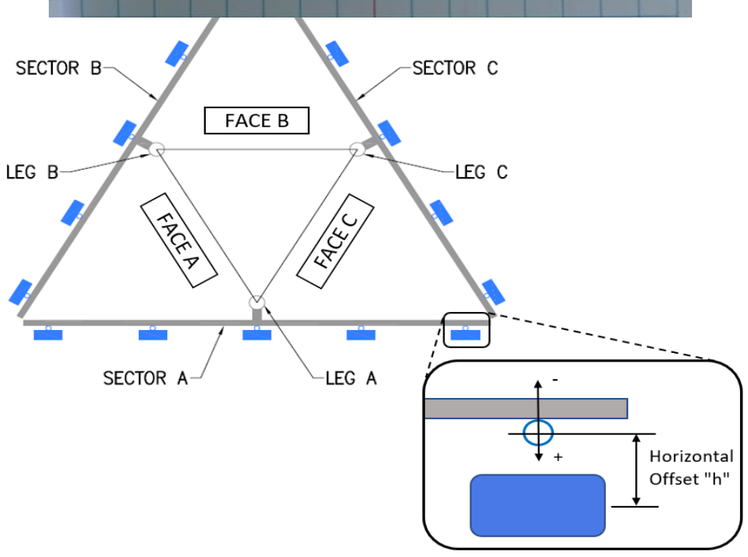
V3.0 Updated on 8-31-2020

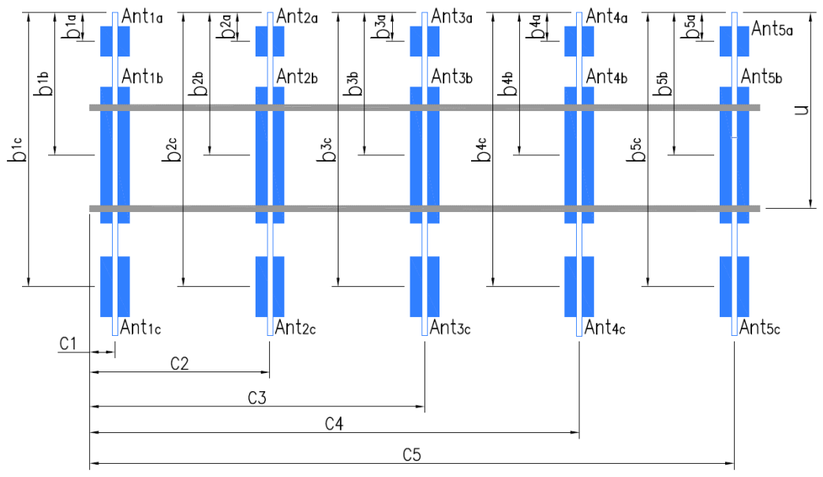
Antenna Mount Mapping Form (PATENT PENDING)

FCC #
1000068

Tower Owner:	SBA	**Mapping Date:**	3/11/2021
Site Name:	Torrington 2	**Tower Type:**	Guyed Tower
Site Number or ID:	20777654	**Tower Height (Ft.):**	255
Mapping Contractor:	Structural Components	**Mount Elevation (Ft.):**	195







Antenna Layout (Looking Out From Tower)

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	2-3/8 x .154 x 84	75.50	2.00	C1	2-3/8 x .154 x 84	75.00	2.50
A2	2-3/8 x .154 x 84	75.00	60.00	C2	2-3/8 x .154 x 84	75.00	60.00
A3	2-3/8 x .154 x 84	75.00	99.00	C3	2-3/8 x .154 x 84	75.00	90.00
A4				C4			
A5				C5			
A6				C6			
B1	2-3/8 x .154 x 84	75.00	2.50	D1			
B2	2-3/8 x .154 x 84	75.00	60.50	D2			
B3	2-3/8 x .154 x 84	75.00	90.50	D3			
B4				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. :	15.00
Distance from top of bottom support rail to lowest tip of ant./eqpt. of Carrier above. (N/A if > 10 ft.) :	
Distance from top of bottom support rail to highest tip of ant./eqpt. of Carrier below. (N/A if > 10 ft.) :	

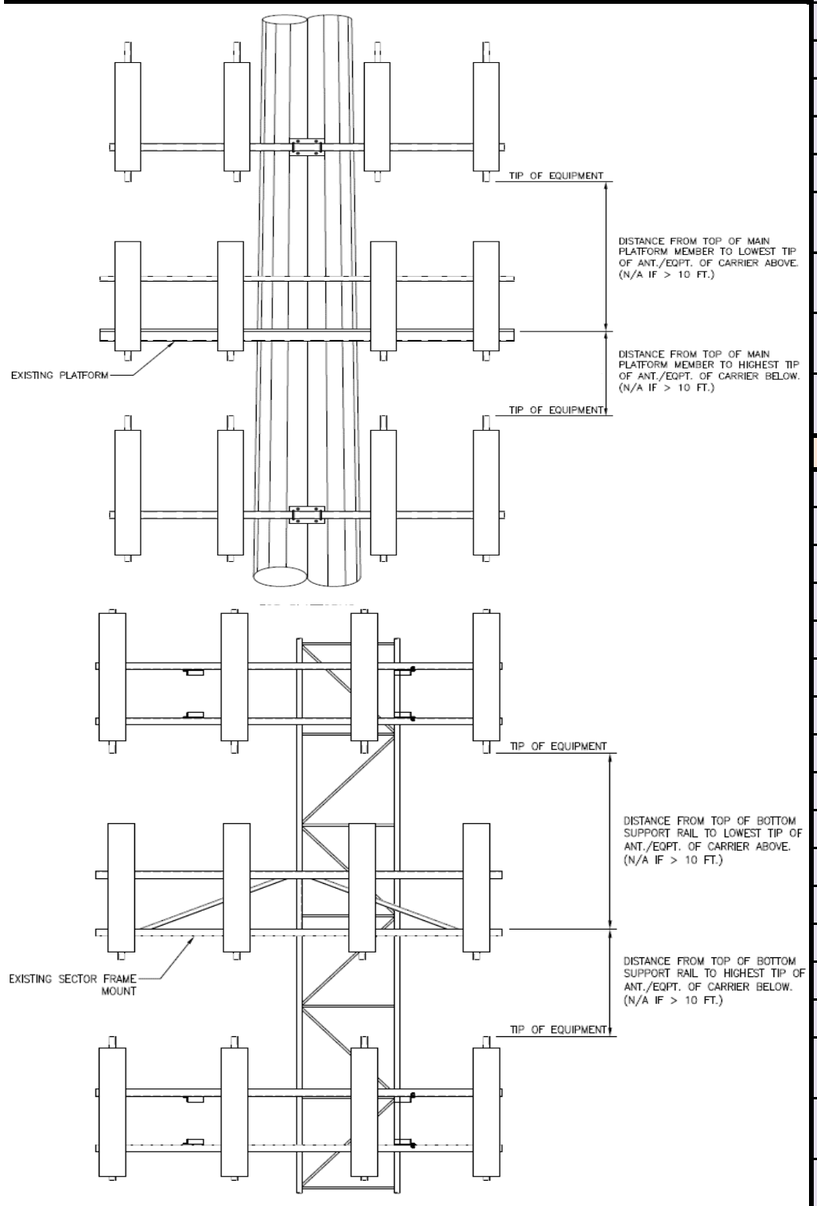
Please enter additional infomation or comments below.

Tower Face Width at Mount Elev. (ft.):	36	Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.):	1.5

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}										
Ant_{1b}	BXA-80063-6CF-EDIN-	11.00	4.50	72.00	Jumpers	197.042	36.00	13.00	45.00	18, 168
Ant_{1c}										
Ant_{2a}	RFS M43126537	6.50	1.00	5.00	1-5/8 tx	197.583	29.00	-3.00		171
Ant_{2b}	BXA-70063-6CF-EDIN-	11.00	4.50	70.00	(2)1-5/8 tx	196.667	40.00	13.00	45.00	18, 171, 195
Ant_{2c}	RFS M43126537	6.50	1.00	5.00	1-5/8 tx	197.583	29.00	-3.00		171
Ant_{3a}										
Ant_{3b}	Amphonal BXA-17106	6.00	4.00	48.00	Jumpers	197	36.00	8.00	45.00	18
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										

Mount Azimuth (Degree) for Each Sector				Tower Leg Azimuth (Degree) for Each Sector	
Sector A:	45.00	Deg	Leg A:	45.00	Deg
Sector B:	165.00	Deg	Leg B:	165.00	Deg
Sector C:	285.00	Deg	Leg C:	285.00	Deg
Sector D:		Deg	Leg D:		Deg

Climbing Facility Information		
Location:	320.00 Deg	Outside Face C
Climbing Facility	Corrosion Type:	Good condition.
	Access:	Climbing path was unobstructed.
	Condition:	Good condition.



Sector B										
Ant_{1a}										
Ant_{1b}	BXA-80063-6CF-EDIN-	11.00	4.50	72.00	Jumpers	197	36.00	11.00	165.00	27, 237
Ant_{1c}										
Ant_{2a}	RFS M43126537	6.50	1.00	5.00	1-5/8 tx	197.75	27.00	-3.00		238
Ant_{2b}	BXA-70063-6CF-EDIN-	11.00	4.50	70.00	(2)1-5/8 tx	197	36.00	11.00	165.00	27, 238
Ant_{2c}	RFS M43126537	6.50	1.00	5.00	1-5/8 tx	197.75	27.00	-3.00		238
Ant_{3a}										
Ant_{3b}	Amphonal BXA-17106	6.00	4.00	48.00	Jumpers	197.25	33.00	8.00	165.00	27, 239
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										
Sector C										
Ant_{1a}										
Ant_{1b}	BXA-80063-6CF-EDIN-	11.00	4.50	72.00	Jumpers	197	36.00	11.00	285.00	36, 291
Ant_{1c}										
Ant_{2a}	RFS M43126537	6.50	1.00	5.00	1-5/8 tx	197.917	25.00	-3.00		292
Ant_{2b}	BXA-70063-6CF-EDIN-	11.00	4.50	70.00	(2)1-5/8 tx	197	36.00	10.00	285.00	36, 292
Ant_{2c}	RFS M43126537	6.50	1.00	5.00	1-5/8 tx	197.917	25.00	-3.00		292
Ant_{3a}										
Ant_{3b}	Amphonal BXA-17106	6.00	4.00	48.00	Jumpers	197.333	32.00	9.00	285.00	36, 293
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										
Sector D										
Ant_{1a}										
Ant_{1b}										
Ant_{1c}										
Ant_{2a}										
Ant_{2b}										
Ant_{2c}										
Ant_{3a}										
Ant_{3b}										
Ant_{3c}										
Ant_{4a}										
Ant_{4b}										
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										

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

1		
2		
3		
4		
5		
6		
7		
8		

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

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

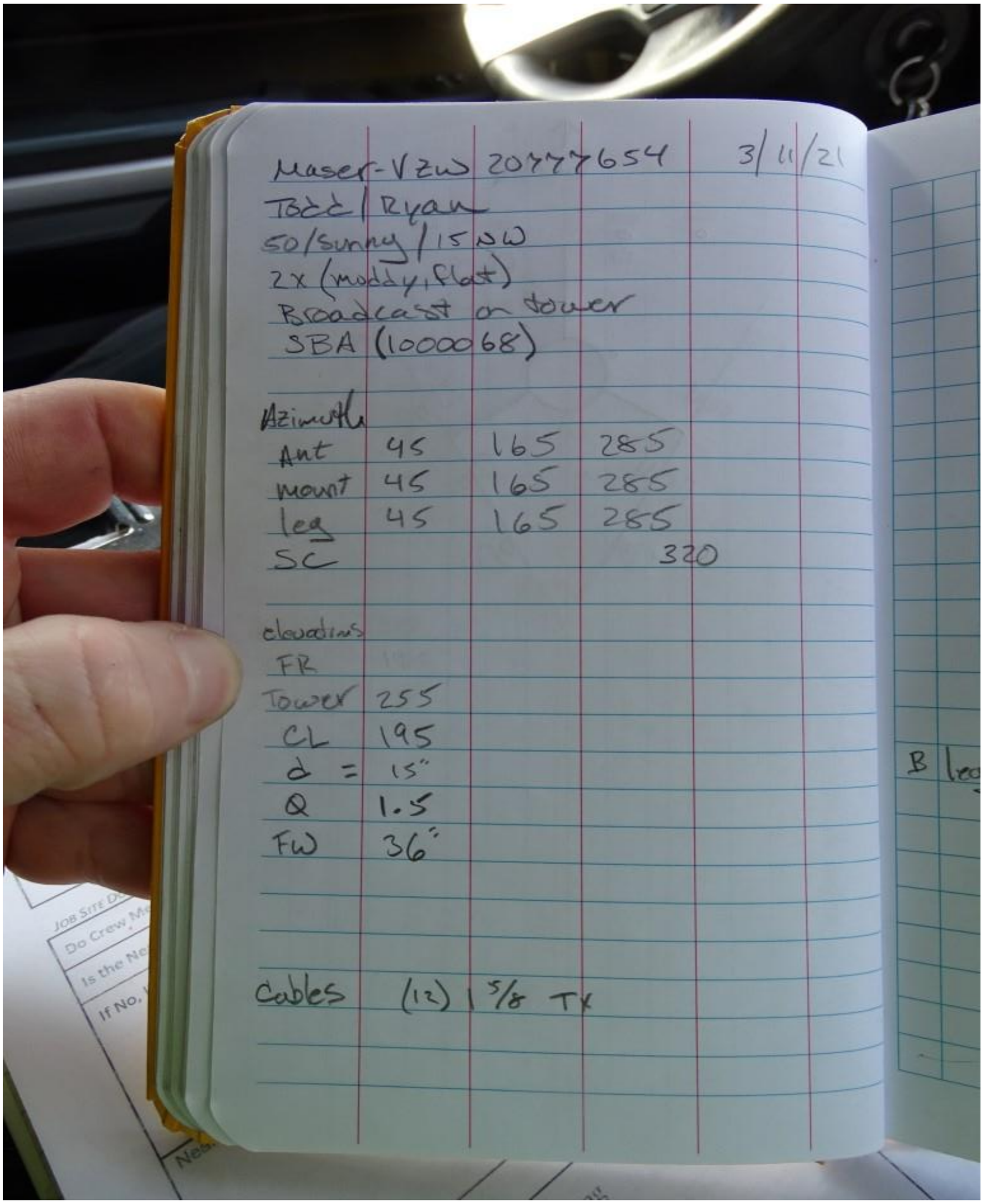
V3.0 Updated on 8-31-2020

Antenna Mount Mapping Form (PATENT PENDING)

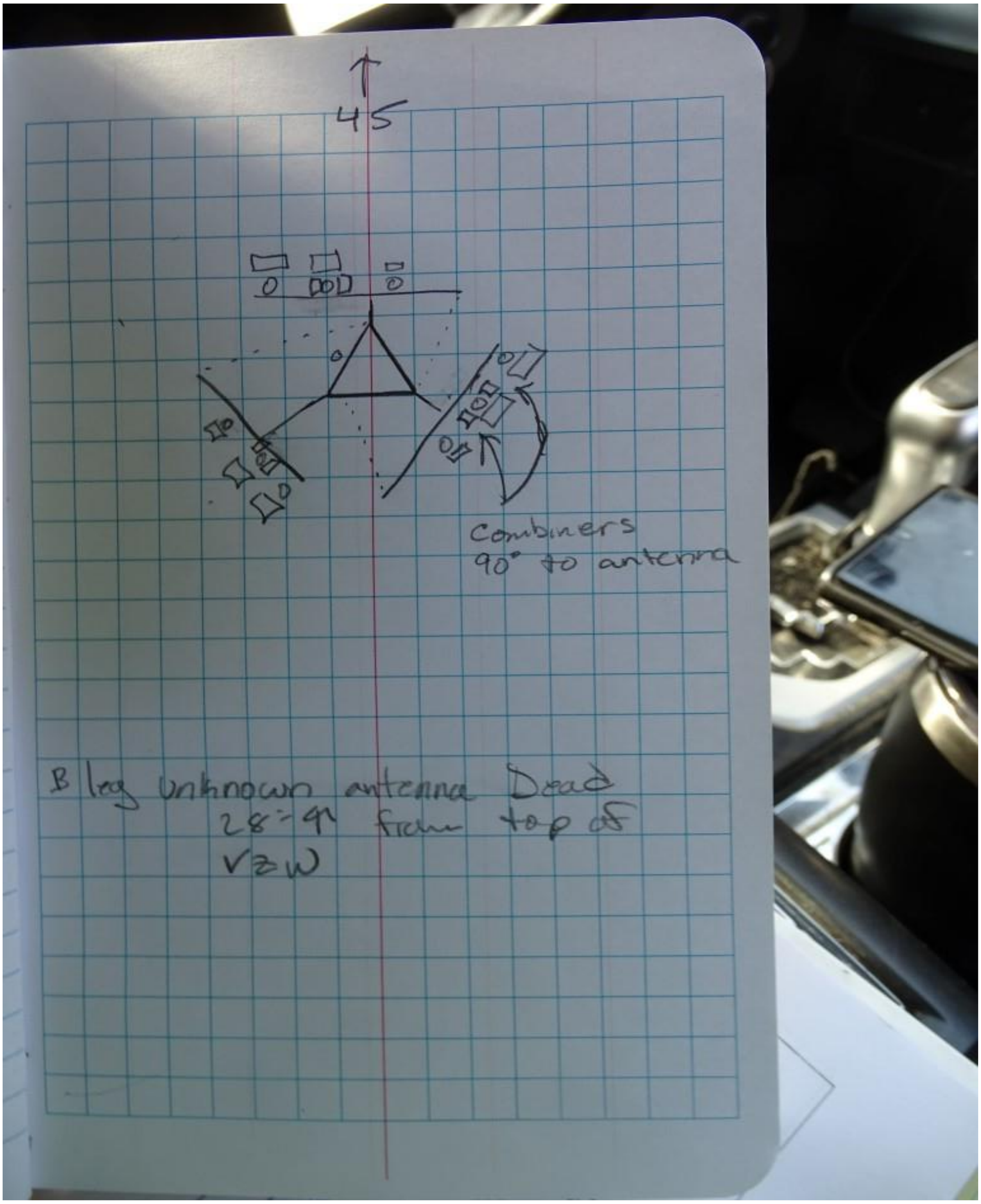
FCC #
1000068

Tower Owner:	SBA	**Mapping Date:**	3/11/2021
Site Name:	Torrington 2	**Tower Type:**	Guyed Tower
Site Number or ID:	20777654	**Tower Height (Ft.):**	255
Mapping Contractor:	Structural Components	**Mount Elevation (Ft.):**	195

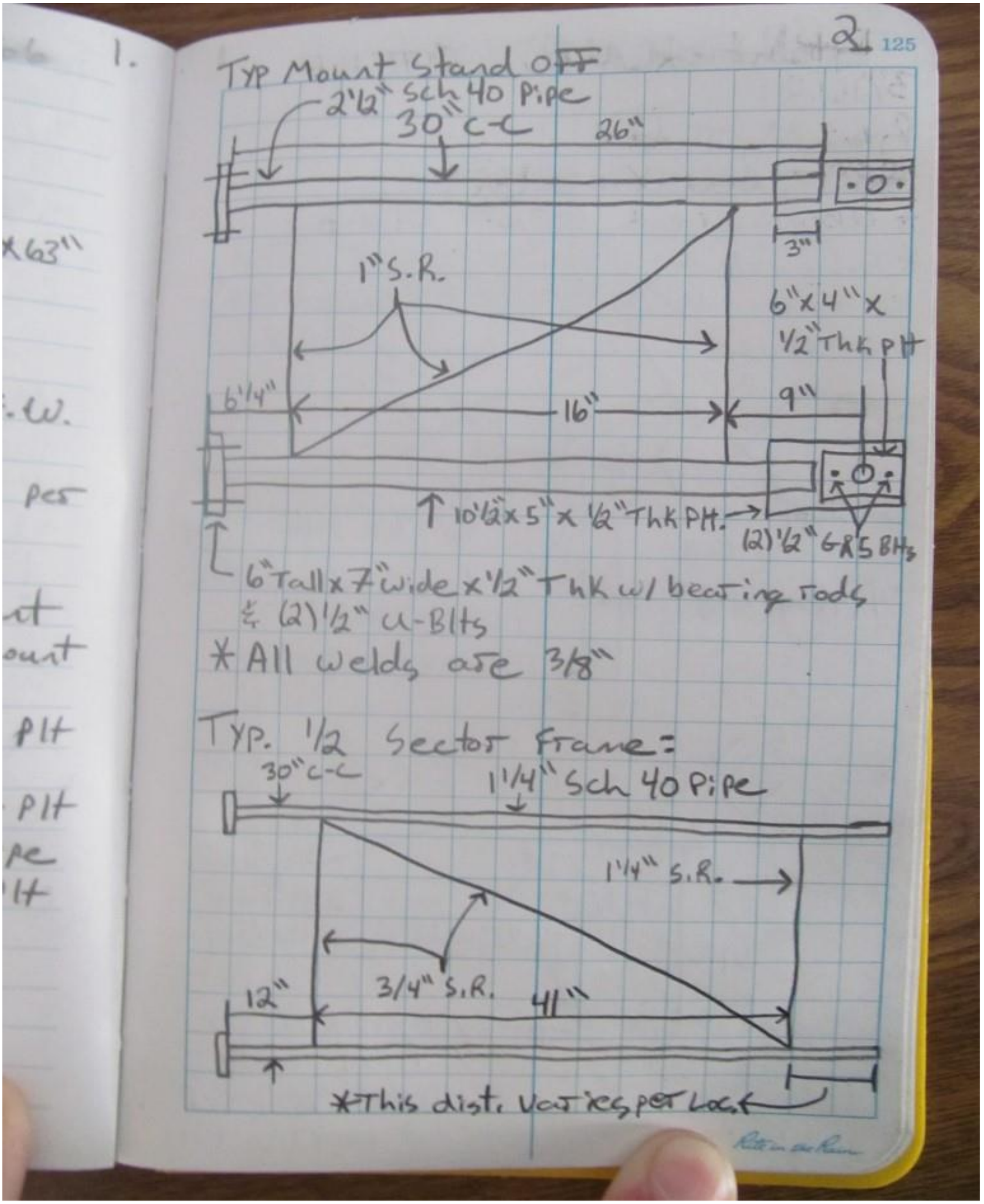
Please Insert Sketches of the Antenna Mount



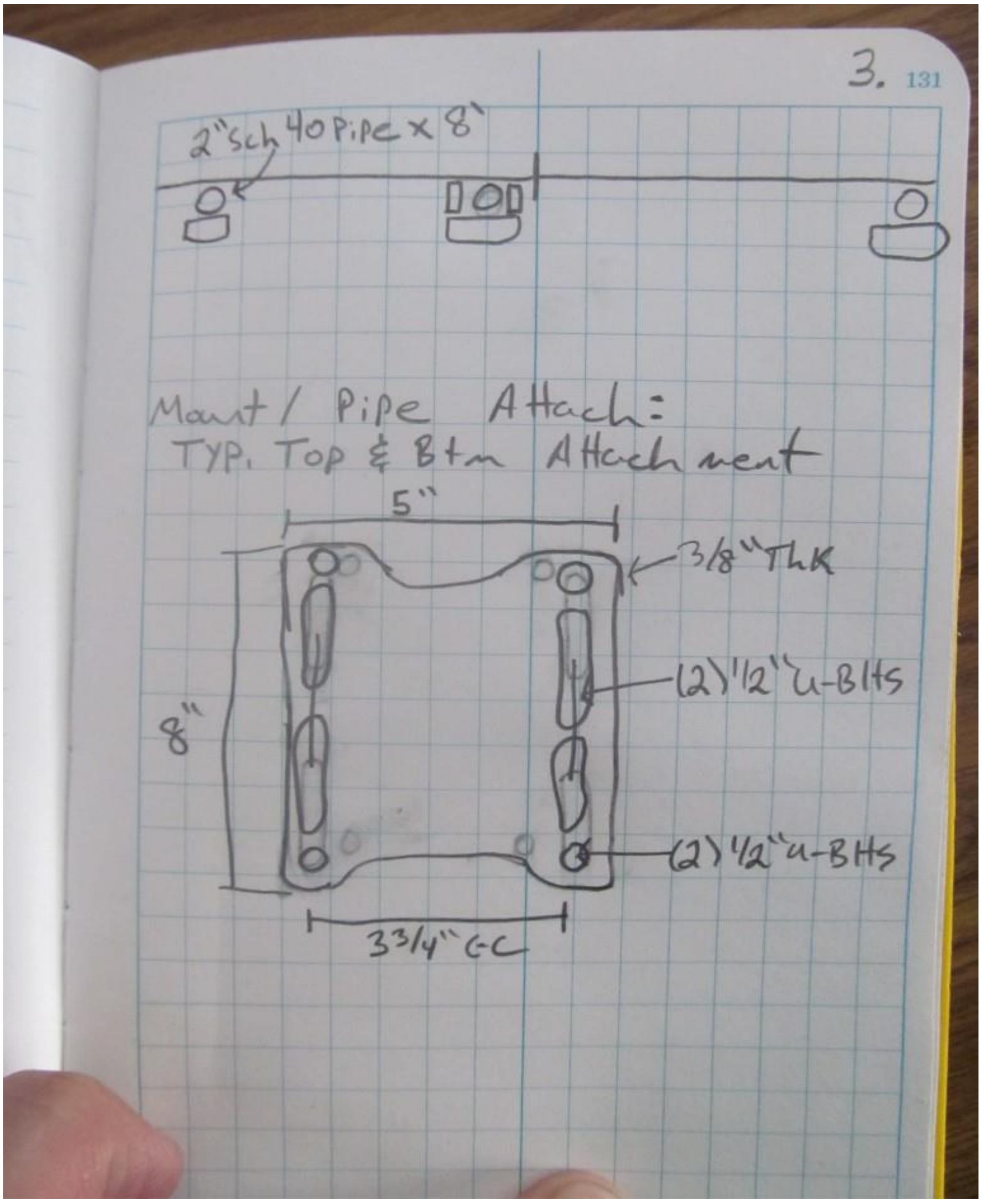
Please Insert Sketches of the Antenna Mount, cont'd



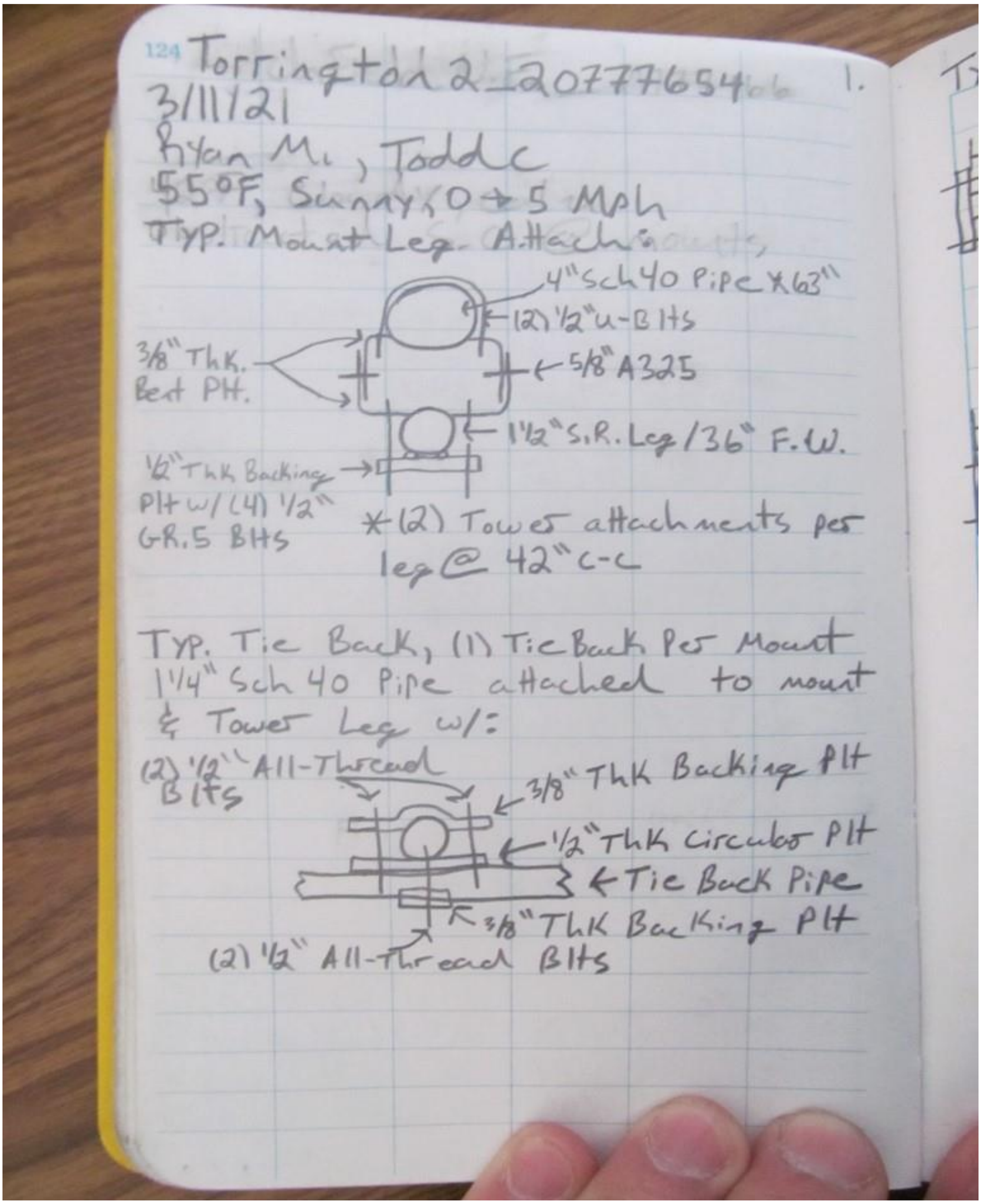
Please Insert Sketches of the Antenna Mount, cont'd

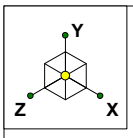


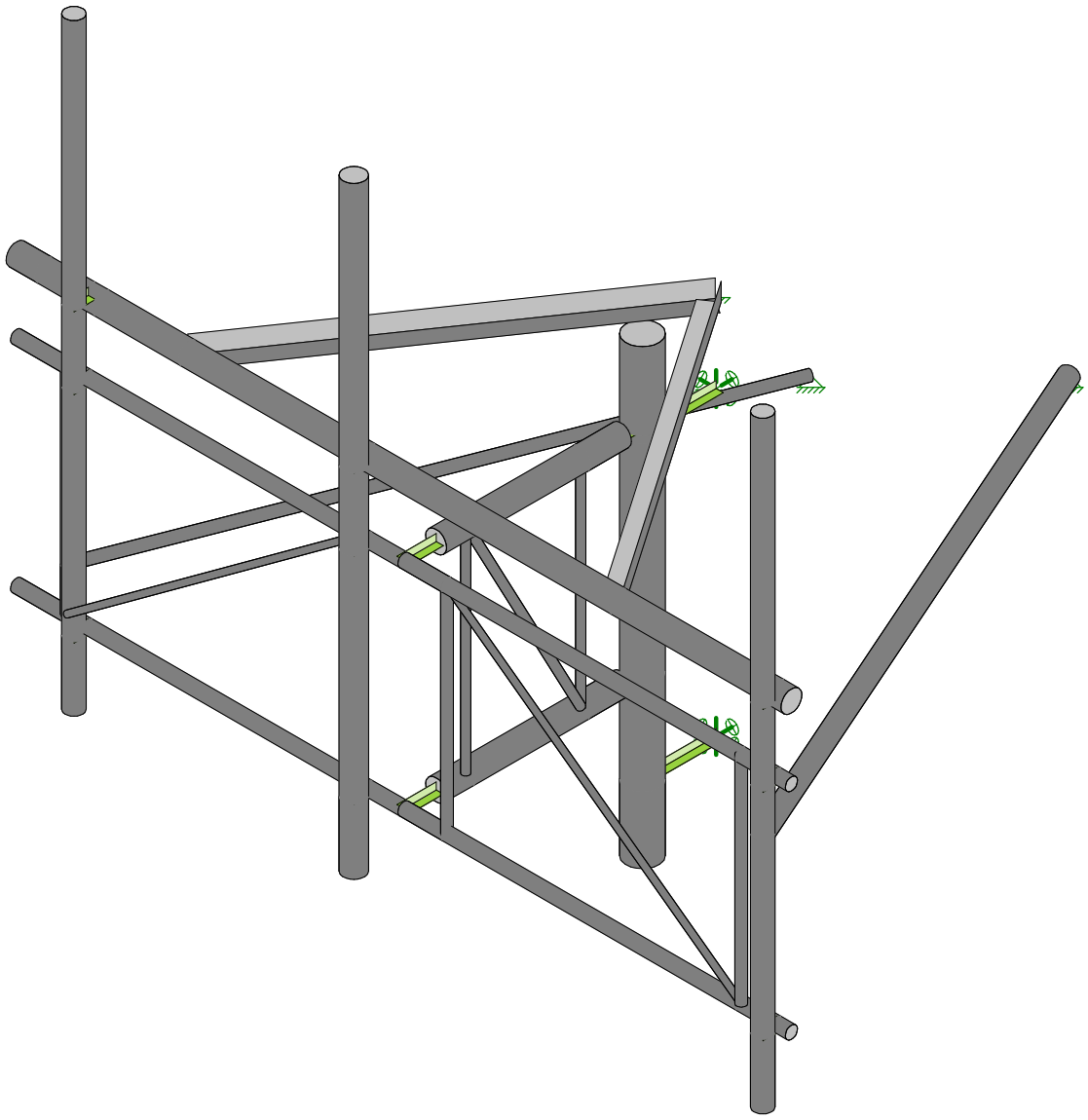
Please Insert Sketches of the Antenna Mount, cont'd



Please Insert Sketches of the Antenna Mount, cont'd

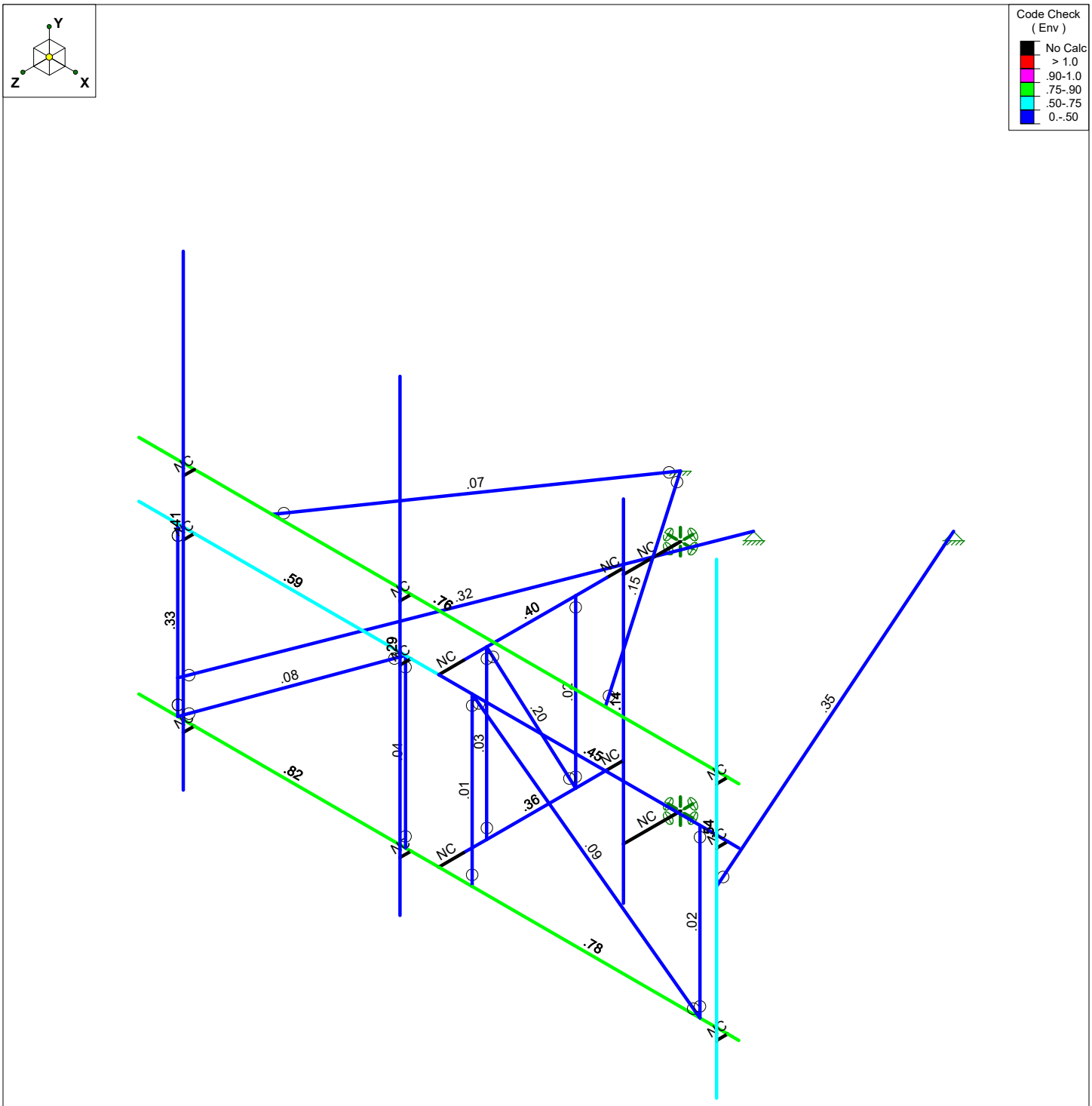






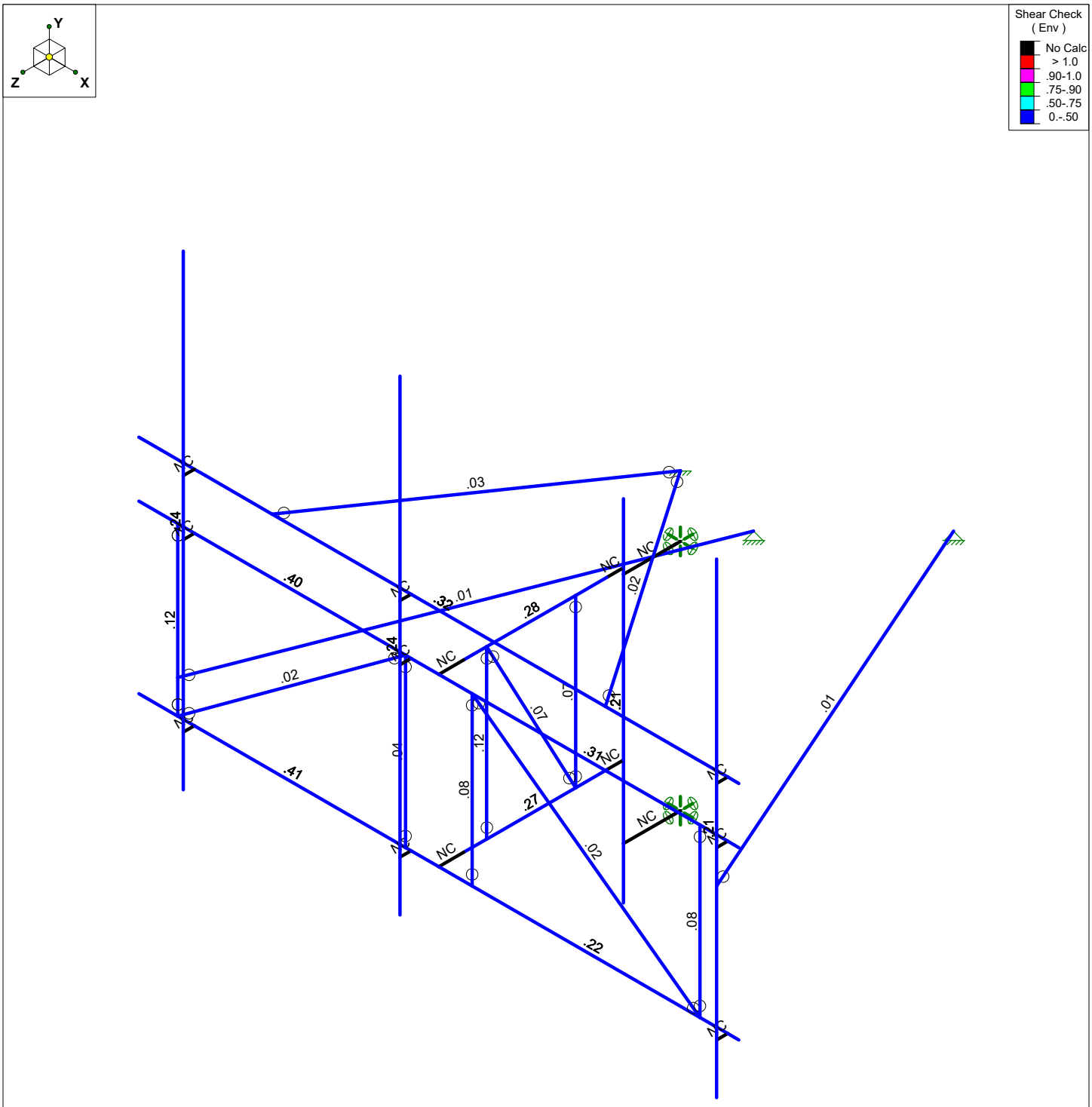
Envelope Only Solution

Maser Consulting	468293-VZW_MT_LOT_SectorA_H	SK - 1
MNC		May 4, 2021 at 2:31 PM
Project No. 10054310		Loaded_468293-VZW_MT_LOT_A...



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

Maser Consulting	468293-VZW_MT_LOT_SectorA_H	SK - 2
MNC		May 4, 2021 at 2:40 PM
Project No. 10054310		Loaded_468293-VZW_MT_LOT_A...



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

Maser Consulting	468293-VZW_MT_LOT_SectorA_H	SK - 3
MNC		May 4, 2021 at 2:40 PM
Project No. 10054310		Loaded_468293-VZW_MT_LOT_A...

Basic Load Cases

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

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						48		
58	Structure Wi (150 De...	None						48		
59	Structure Wi (180 De...	None						48		
60	Structure Wi (210 De...	None						48		
61	Structure Wi (240 De...	None						48		
62	Structure Wi (270 De...	None						48		
63	Structure Wi (300 De...	None						48		
64	Structure Wi (330 De...	None						48		
65	Structure Wm (0 Deg)	None						48		
66	Structure Wm (30 De...	None						48		
67	Structure Wm (60 De...	None						48		
68	Structure Wm (90 De...	None						48		
69	Structure Wm (120 D...	None						48		
70	Structure Wm (150 D...	None						48		
71	Structure Wm (180 D...	None						48		
72	Structure Wm (210 D...	None						48		
73	Structure Wm (240 D...	None						48		
74	Structure Wm (270 D...	None						48		
75	Structure Wm (300 D...	None						48		
76	Structure Wm (330 D...	None						48		
77	Lm1	None					1			
78	Lm2	None					1			
79	Lv1	None					1			
80	Lv2	None					1			

Load Combinations

	Description	Solve	P...	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	P...	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 [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
1	N1	0	0	11.75	0	
2	N2	0	0	42	0	
3	N3	0	0	37.5	0	
4	N4	54	0	42	0	
5	N6	0	0	33.375	0	
6	N7	0	0	17.375	0	
7	N8	0	0	8.75	0	
8	N9	0	30	11.75	0	
9	N10	0	30	42	0	
10	N11	0	30	37.5	0	
11	N12	54	30	42	0	
12	N14	0	30	33.375	0	
13	N15	0	30	17.375	0	
14	N16	0	30	8.75	0	
15	N17	0	40.75	8.75	0	
16	N18	0	-22.25	8.75	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
17	N19	0	29	8.75	0	
18	N20	0	-13	8.75	0	
19	N21	0	29	-1.5	0	
20	N22	0	-13	-1.5	0	
21	N23	-44.	0	42	0	
22	N24	-44.	30	42	0	
23	N27	52	0	42	0	
24	N28	52	30	42	0	
25	N29	-44.	0	44	0	
26	N30	-44.	30	44	0	
27	N33	52	0	44	0	
28	N34	52	30	44	0	
29	N35	-44.	75	44	0	
30	N37	52	75	44	0	
31	N38	-44.	-9	44	0	
32	N40	52	-9	44	0	
33	N41	6.	0	42	0	
34	N42	6.	30	42	0	
35	N47	47	0	42	0	
36	N48	47	30	42	0	
37	N55A	-5.	0	42	0	
38	N56A	-5.	30	42	0	
39	N57	-5.	0	44	0	
40	N58	-5.	30	44	0	
41	N59	-5.	75	44	0	
42	N60	-5.	-9	44	0	
43	N47A	-54	0	42	0	
44	N49	-54	30	42	0	
45	N50	-6.	0	42	0	
46	N51	-6.	30	42	0	
47	N52	-47	0	42	0	
48	N53	-47	30	42	0	
49	N52A	-18	6	-32.676915	0	
50	N53A	-47	6	42	0	
51	N53B	54	40	42	0	
52	N54	-44.	40	42	0	
53	N55	52	40	42	0	
54	N56	-44.	40	44	0	
55	N57A	52	40	44	0	
56	N58A	-54	40	42	0	
57	N58B	-5.	40	42	0	
58	N59A	-5.	40	44	0	
59	N60A	-42	40	42	0	
60	N61	-30	40	42	0	
61	N62	30	40	42	0	
62	N65	-50.	40	42	0	
63	N66	50	40	42	0	
64	N67	0	40	-1.5	0	
65	N68	52	24	44	0	
66	N70	18.	24	-32.676915	0	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design L...	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Mount Pipe	PIPE_2.0	Column	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
2	Tieback	PIPE_1.0	Beam	Pipe	A53 Gr. B	Typical	.469	.083	.083	.166

Hot Rolled Steel Section Sets (Continued)

	Label	Shape	Type	Design L...	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
3	Mast Pipe	PIPE_4.0	Beam	Pipe	A53 Gr. B	Typical	2.96	6.82	6.82	13.6
4	Standoff Horizontal	PIPE_2.5	Beam	Pipe	A53 Gr. B	Typical	1.61	1.45	1.45	2.89
5	Face Horizontal	PIPE_1.25	Beam	Pipe	A53 Gr. B	Typical	.625	.184	.184	.368
6	Vertical Face Bracing	SR_1.25	Beam	BAR	A36 Gr.36	Typical	1.227	.12	.12	.24
7	Standoff Bracing	SR_1	Beam	BAR	A36 Gr.36	Typical	.785	.049	.049	.098
8	Face Bracing	SR_0.75	Beam	BAR	A36 Gr.36	Typical	.442	.016	.016	.031
9	Standoff Plate	PL1/2x5	Beam	BAR	A36 Gr.36	Typical	2.5	.052	5.208	.195
10	Face Vetical	SR_1.25	Beam	BAR	A36 Gr.36	Typical	1.227	.12	.12	.24
11	Mod Horizontal	PIPE_2.5	Beam	Pipe	A53 Gr. B	Typical	1.61	1.45	1.45	2.89
12	Mod V-Brace	L2.5x2.5x4	Beam	Single A...	A36 Gr.36	Typical	1.19	.692	.692	.026
13	MOD Tieback	PIPE_2.0	Beam	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
14	Replacement Pipe	PIPE_2.5	Column	Pipe	A53 Gr. B	Typical	1.61	1.45	1.45	2.89

Hot Rolled Steel Design Parameters

	Label	Shape	Length[in]	Lbyy[in]	Lbzz[in]	Lcomp top[in]	Lcomp bot[in]	L-torqu...	Kyy	Kzz	Cb	Function
1	M1	Standoff Ho...	25.75			Lbyy						Lateral
2	M4	Face Horizo...	54			Lbyy						Lateral
3	M6	Standoff Ho...	25.75			Lbyy						Lateral
4	M9	Face Horizo...	54			Lbyy						Lateral
5	M11	Mast Pipe	63			Lbyy						Lateral
6	M14	Standoff Br...	30			Lbyy			.7	.7		Lateral
7	M15	Standoff Br...	30			Lbyy			.7	.7		Lateral
8	M16	Standoff Br...	34			Lbyy			.7	.7		Lateral
9	MP1A	Mount Pipe	84			Lbyy						Lateral
10	MP3A	Mount Pipe	84			Lbyy						Lateral
11	M28	Face Vetical	30			Lbyy			.7	.7		Lateral
12	M29	Vertical Fac...	30			Lbyy			.7	.7		Lateral
13	M31	Face Bracing	50.804			Lbyy			.7	.7		Lateral
14	MP2A	Replaceme...	84			Lbyy						Lateral
15	M27	Face Horizo...	54			Lbyy						Lateral
16	M28A	Face Horizo...	54			Lbyy						Lateral
17	M29A	Face Vetical	30			Lbyy			.7	.7		Lateral
18	M30	Vertical Fac...	30			Lbyy			.7	.7		Lateral
19	M31A	Face Bracing	50.804			Lbyy			.7	.7		Lateral
20	M32	Tieback	80.11			Lbyy						Lateral
21	M35A	Mod Horizo...	108			Lbyy						Lateral
22	M39	Mod V-Brace	52.842			Lbyy						Lateral
23	M40	Mod V-Brace	52.842			Lbyy						Lateral
24	M41	MOD Tieback	83.877			Lbyy						Lateral

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N1	N3			Standoff Horiz...	Beam	Pipe	A53 Gr. B	Typical
2	M4	N2	N4			Face Horizontal	Beam	Pipe	A53 Gr. B	Typical
3	M5	N1	N8			RIGID	None	None	RIGID	Typical
4	M6	N9	N11			Standoff Horiz...	Beam	Pipe	A53 Gr. B	Typical
5	M9	N10	N12			Face Horizontal	Beam	Pipe	A53 Gr. B	Typical
6	M10	N9	N16			RIGID	None	None	RIGID	Typical
7	M11	N18	N17			Mast Pipe	Beam	Pipe	A53 Gr. B	Typical
8	M12	N19	N21			RIGID	None	None	RIGID	Typical
9	M13	N20	N22			RIGID	None	None	RIGID	Typical
10	M14	N6	N14			Standoff Braci...	Beam	BAR	A36 Gr.36	Typical
11	M15	N7	N15			Standoff Braci...	Beam	BAR	A36 Gr.36	Typical
12	M16	N7	N14			Standoff Braci...	Beam	BAR	A36 Gr.36	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
13	M17	N24	N30			RIGID	None	None	RIGID	Typical
14	M18	N23	N29			RIGID	None	None	RIGID	Typical
15	M21	N28	N34			RIGID	None	None	RIGID	Typical
16	M22	N27	N33			RIGID	None	None	RIGID	Typical
17	MP1A	N37	N40			Mount Pipe	Column	Pipe	A53 Gr. B	Typical
18	MP3A	N35	N38			Mount Pipe	Column	Pipe	A53 Gr. B	Typical
19	M28	N41	N42			Face Vetical	Beam	BAR	A36 Gr.36	Typical
20	M29	N47	N48			Vertical Face ...	Beam	BAR	A36 Gr.36	Typical
21	M31	N42	N47			Face Bracing	Beam	BAR	A36 Gr.36	Typical
22	M36	N56A	N58			RIGID	None	None	RIGID	Typical
23	M37A	N55A	N57			RIGID	None	None	RIGID	Typical
24	MP2A	N59	N60			Replacement ...	Column	Pipe	A53 Gr. B	Typical
25	M33	N3	N2			RIGID	None	None	RIGID	Typical
26	M34A	N11	N10			RIGID	None	None	RIGID	Typical
27	M27	N2	N47A			Face Horizontal	Beam	Pipe	A53 Gr. B	Typical
28	M28A	N10	N49			Face Horizontal	Beam	Pipe	A53 Gr. B	Typical
29	M29A	N50	N51			Face Vetical	Beam	BAR	A36 Gr.36	Typical
30	M30	N52	N53			Vertical Face ...	Beam	BAR	A36 Gr.36	Typical
31	M31A	N51	N52			Face Bracing	Beam	BAR	A36 Gr.36	Typical
32	M32	N53A	N52A			Tieback	Beam	Pipe	A53 Gr. B	Typical
33	M34	N54	N56			RIGID	None	None	RIGID	Typical
34	M35	N55	N57A			RIGID	None	None	RIGID	Typical
35	M35A	N58A	N53B			Mod Horizontal	Beam	Pipe	A53 Gr. B	Typical
36	M36A	N58B	N59A			RIGID	None	None	RIGID	Typical
37	M39	N61	N67			Mod V-Brace	Beam	Single Angle	A36 Gr.36	Typical
38	M40	N62	N67		270	Mod V-Brace	Beam	Single Angle	A36 Gr.36	Typical
39	M41	N68	N70			MOD Tieback	Beam	Pipe	A53 Gr. B	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	M1						Yes				None
2	M4						Yes				None
3	M5						Yes	** NA **			None
4	M6						Yes				None
5	M9						Yes	Default			None
6	M10						Yes	** NA **			None
7	M11						Yes				None
8	M12						Yes	** NA **			None
9	M13						Yes	** NA **			None
10	M14	BenPIN	BenPIN				Yes				None
11	M15	BenPIN	BenPIN				Yes				None
12	M16	BenPIN	BenPIN				Yes				None
13	M17						Yes	** NA **			None
14	M18						Yes	** NA **			None
15	M21						Yes	** NA **			None
16	M22						Yes	** NA **			None
17	MP1A						Yes	** NA **			None
18	MP3A						Yes	** NA **			None
19	M28	BenPIN	BenPIN				Yes				None
20	M29	BenPIN	BenPIN				Yes	Default			None
21	M31	BenPIN	BenPIN				Yes				None
22	M36						Yes	** NA **			None
23	M37A						Yes	** NA **			None
24	MP2A						Yes	** NA **			None
25	M33						Yes	** NA **			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
26	M34A						Yes	** NA **			None
27	M27						Yes	Default			None
28	M28A						Yes	Default			None
29	M29A	BenPIN	BenPIN				Yes				None
30	M30	BenPIN	BenPIN				Yes	Default			None
31	M31A	BenPIN	BenPIN				Yes				None
32	M32	BenPIN					Yes	Default			None
33	M34						Yes	** NA **			None
34	M35						Yes	** NA **			None
35	M35A						Yes				None
36	M36A						Yes	** NA **			None
37	M39	BenPIN	BenPIN				Yes				None
38	M40	BenPIN	BenPIN				Yes				None
39	M41	OOOOXO					Yes	Default			None

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2A	Y	-32.5	3
2	MP2A	My	-.016	3
3	MP2A	Mz	.019	3
4	MP2A	Y	-32.5	63
5	MP2A	My	-.016	63
6	MP2A	Mz	.019	63
7	MP2A	Y	-32.5	3
8	MP2A	My	-.016	3
9	MP2A	Mz	-.019	3
10	MP2A	Y	-32.5	63
11	MP2A	My	-.016	63
12	MP2A	Mz	-.019	63
13	MP3A	Y	-43.55	21
14	MP3A	My	-.022	21
15	MP3A	Mz	0	21
16	MP3A	Y	-43.55	45
17	MP3A	My	-.022	45
18	MP3A	Mz	0	45
19	MP1A	Y	-84.4	24
20	MP1A	My	.042	24
21	MP1A	Mz	0	24
22	MP2A	Y	-70.3	24
23	MP2A	My	.035	24
24	MP2A	Mz	0	24
25	M6	Y	-32	12
26	M6	My	0	12
27	M6	Mz	0	12
28	MP1A	Y	-9.6	3
29	MP1A	My	-.01	3
30	MP1A	Mz	0	3
31	MP1A	Y	-9.6	63
32	MP1A	My	-.01	63
33	MP1A	Mz	0	63

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2A	Y	-71.69	3
2	MP2A	My	-.036	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
3	MP2A	Mz	.042	3
4	MP2A	Y	-71.69	63
5	MP2A	My	-.036	63
6	MP2A	Mz	.042	63
7	MP2A	Y	-71.69	3
8	MP2A	My	-.036	3
9	MP2A	Mz	-.042	3
10	MP2A	Y	-71.69	63
11	MP2A	My	-.036	63
12	MP2A	Mz	-.042	63
13	MP3A	Y	-37.071	21
14	MP3A	My	-.019	21
15	MP3A	Mz	0	21
16	MP3A	Y	-37.071	45
17	MP3A	My	-.019	45
18	MP3A	Mz	0	45
19	MP1A	Y	-46.765	24
20	MP1A	My	.023	24
21	MP1A	Mz	0	24
22	MP2A	Y	-42.069	24
23	MP2A	My	.021	24
24	MP2A	Mz	0	24
25	M6	Y	-79.027	12
26	M6	My	0	12
27	M6	Mz	0	12
28	MP1A	Y	-52.496	3
29	MP1A	My	-.057	3
30	MP1A	Mz	0	3
31	MP1A	Y	-52.496	63
32	MP1A	My	-.057	63
33	MP1A	Mz	0	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2A	X	0	3
2	MP2A	Z	-164.416	3
3	MP2A	Mx	-.096	3
4	MP2A	X	0	63
5	MP2A	Z	-164.416	63
6	MP2A	Mx	-.096	63
7	MP2A	X	0	3
8	MP2A	Z	-164.416	3
9	MP2A	Mx	.096	3
10	MP2A	X	0	63
11	MP2A	Z	-164.416	63
12	MP2A	Mx	.096	63
13	MP3A	X	0	21
14	MP3A	Z	-95.05	21
15	MP3A	Mx	0	21
16	MP3A	X	0	45
17	MP3A	Z	-95.05	45
18	MP3A	Mx	0	45
19	MP1A	X	0	24
20	MP1A	Z	-75.635	24
21	MP1A	Mx	0	24
22	MP2A	X	0	24

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
23	MP2A	Z	-75.635	24
24	MP2A	Mx	0	24
25	M6	X	0	12
26	M6	Z	-114.424	12
27	M6	Mx	0	12
28	MP1A	X	0	3
29	MP1A	Z	-146.822	3
30	MP1A	Mx	0	3
31	MP1A	X	0	63
32	MP1A	Z	-146.822	63
33	MP1A	Mx	0	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2A	X	78.846	3
2	MP2A	Z	-136.565	3
3	MP2A	Mx	-.119	3
4	MP2A	X	78.846	63
5	MP2A	Z	-136.565	63
6	MP2A	Mx	-.119	63
7	MP2A	X	78.846	3
8	MP2A	Z	-136.565	3
9	MP2A	Mx	.04	3
10	MP2A	X	78.846	63
11	MP2A	Z	-136.565	63
12	MP2A	Mx	.04	63
13	MP3A	X	40.295	21
14	MP3A	Z	-69.793	21
15	MP3A	Mx	-.02	21
16	MP3A	X	40.295	45
17	MP3A	Z	-69.793	45
18	MP3A	Mx	-.02	45
19	MP1A	X	34.683	24
20	MP1A	Z	-60.073	24
21	MP1A	Mx	.017	24
22	MP2A	X	33.482	24
23	MP2A	Z	-57.993	24
24	MP2A	Mx	.017	24
25	M6	X	50.734	12
26	M6	Z	-87.874	12
27	M6	Mx	0	12
28	MP1A	X	65.258	3
29	MP1A	Z	-113.031	3
30	MP1A	Mx	-.071	3
31	MP1A	X	65.258	63
32	MP1A	Z	-113.031	63
33	MP1A	Mx	-.071	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2A	X	124.918	3
2	MP2A	Z	-72.122	3
3	MP2A	Mx	-.105	3
4	MP2A	X	124.918	63
5	MP2A	Z	-72.122	63
6	MP2A	Mx	-.105	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
7	MP2A	X	124.918	3
8	MP2A	Z	-72.122	3
9	MP2A	Mx	-.02	3
10	MP2A	X	124.918	63
11	MP2A	Z	-72.122	63
12	MP2A	Mx	-.02	63
13	MP3A	X	44.749	21
14	MP3A	Z	-25.836	21
15	MP3A	Mx	-.022	21
16	MP3A	X	44.749	45
17	MP3A	Z	-25.836	45
18	MP3A	Mx	-.022	45
19	MP1A	X	49.214	24
20	MP1A	Z	-28.414	24
21	MP1A	Mx	.025	24
22	MP2A	X	42.975	24
23	MP2A	Z	-24.812	24
24	MP2A	Mx	.021	24
25	M6	X	99.094	12
26	M6	Z	-57.212	12
27	M6	Mx	0	12
28	MP1A	X	84.79	3
29	MP1A	Z	-48.953	3
30	MP1A	Mx	-.092	3
31	MP1A	X	84.79	63
32	MP1A	Z	-48.953	63
33	MP1A	Mx	-.092	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2A	X	137.519	3
2	MP2A	Z	0	3
3	MP2A	Mx	-.069	3
4	MP2A	X	137.519	63
5	MP2A	Z	0	63
6	MP2A	Mx	-.069	63
7	MP2A	X	137.519	3
8	MP2A	Z	0	3
9	MP2A	Mx	-.069	3
10	MP2A	X	137.519	63
11	MP2A	Z	0	63
12	MP2A	Mx	-.069	63
13	MP3A	X	37.212	21
14	MP3A	Z	0	21
15	MP3A	Mx	-.019	21
16	MP3A	X	37.212	45
17	MP3A	Z	0	45
18	MP3A	Mx	-.019	45
19	MP1A	X	50.558	24
20	MP1A	Z	0	24
21	MP1A	Mx	.025	24
22	MP2A	X	40.952	24
23	MP2A	Z	0	24
24	MP2A	Mx	.02	24
25	M6	X	140.337	12
26	M6	Z	0	12

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
27	M6	Mx	0	12
28	MP1A	X	81.602	3
29	MP1A	Z	0	3
30	MP1A	Mx	-.088	3
31	MP1A	X	81.602	63
32	MP1A	Z	0	63
33	MP1A	Mx	-.088	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2A	X	124.918	3
2	MP2A	Z	72.122	3
3	MP2A	Mx	-.02	3
4	MP2A	X	124.918	63
5	MP2A	Z	72.122	63
6	MP2A	Mx	-.02	63
7	MP2A	X	124.918	3
8	MP2A	Z	72.122	3
9	MP2A	Mx	-.105	3
10	MP2A	X	124.918	63
11	MP2A	Z	72.122	63
12	MP2A	Mx	-.105	63
13	MP3A	X	44.749	21
14	MP3A	Z	25.836	21
15	MP3A	Mx	-.022	21
16	MP3A	X	44.749	45
17	MP3A	Z	25.836	45
18	MP3A	Mx	-.022	45
19	MP1A	X	49.214	24
20	MP1A	Z	28.414	24
21	MP1A	Mx	.025	24
22	MP2A	X	42.975	24
23	MP2A	Z	24.812	24
24	MP2A	Mx	.021	24
25	M6	X	132.756	12
26	M6	Z	76.647	12
27	M6	Mx	0	12
28	MP1A	X	84.79	3
29	MP1A	Z	48.953	3
30	MP1A	Mx	-.092	3
31	MP1A	X	84.79	63
32	MP1A	Z	48.953	63
33	MP1A	Mx	-.092	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2A	X	78.846	3
2	MP2A	Z	136.565	3
3	MP2A	Mx	.04	3
4	MP2A	X	78.846	63
5	MP2A	Z	136.565	63
6	MP2A	Mx	.04	63
7	MP2A	X	78.846	3
8	MP2A	Z	136.565	3
9	MP2A	Mx	-.119	3
10	MP2A	X	78.846	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
11	MP2A	Z	136.565	63
12	MP2A	Mx	-.119	63
13	MP3A	X	40.295	21
14	MP3A	Z	69.793	21
15	MP3A	Mx	-.02	21
16	MP3A	X	40.295	45
17	MP3A	Z	69.793	45
18	MP3A	Mx	-.02	45
19	MP1A	X	34.683	24
20	MP1A	Z	60.073	24
21	MP1A	Mx	.017	24
22	MP2A	X	33.482	24
23	MP2A	Z	57.993	24
24	MP2A	Mx	.017	24
25	M6	X	70.168	12
26	M6	Z	121.535	12
27	M6	Mx	0	12
28	MP1A	X	65.258	3
29	MP1A	Z	113.031	3
30	MP1A	Mx	-.071	3
31	MP1A	X	65.258	63
32	MP1A	Z	113.031	63
33	MP1A	Mx	-.071	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2A	X	0	3
2	MP2A	Z	164.416	3
3	MP2A	Mx	.096	3
4	MP2A	X	0	63
5	MP2A	Z	164.416	63
6	MP2A	Mx	.096	63
7	MP2A	X	0	3
8	MP2A	Z	164.416	3
9	MP2A	Mx	-.096	3
10	MP2A	X	0	63
11	MP2A	Z	164.416	63
12	MP2A	Mx	-.096	63
13	MP3A	X	0	21
14	MP3A	Z	95.05	21
15	MP3A	Mx	0	21
16	MP3A	X	0	45
17	MP3A	Z	95.05	45
18	MP3A	Mx	0	45
19	MP1A	X	0	24
20	MP1A	Z	75.635	24
21	MP1A	Mx	0	24
22	MP2A	X	0	24
23	MP2A	Z	75.635	24
24	MP2A	Mx	0	24
25	M6	X	0	12
26	M6	Z	114.424	12
27	M6	Mx	0	12
28	MP1A	X	0	3
29	MP1A	Z	146.822	3
30	MP1A	Mx	0	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
31	MP1A	X	0	63
32	MP1A	Z	146.822	63
33	MP1A	Mx	0	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2A	X	-78.846	3
2	MP2A	Z	136.565	3
3	MP2A	Mx	.119	3
4	MP2A	X	-78.846	63
5	MP2A	Z	136.565	63
6	MP2A	Mx	.119	63
7	MP2A	X	-78.846	3
8	MP2A	Z	136.565	3
9	MP2A	Mx	-.04	3
10	MP2A	X	-78.846	63
11	MP2A	Z	136.565	63
12	MP2A	Mx	-.04	63
13	MP3A	X	-40.295	21
14	MP3A	Z	69.793	21
15	MP3A	Mx	.02	21
16	MP3A	X	-40.295	45
17	MP3A	Z	69.793	45
18	MP3A	Mx	.02	45
19	MP1A	X	-34.683	24
20	MP1A	Z	60.073	24
21	MP1A	Mx	-.017	24
22	MP2A	X	-33.482	24
23	MP2A	Z	57.993	24
24	MP2A	Mx	-.017	24
25	M6	X	-50.734	12
26	M6	Z	87.874	12
27	M6	Mx	0	12
28	MP1A	X	-65.258	3
29	MP1A	Z	113.031	3
30	MP1A	Mx	.071	3
31	MP1A	X	-65.258	63
32	MP1A	Z	113.031	63
33	MP1A	Mx	.071	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2A	X	-124.918	3
2	MP2A	Z	72.122	3
3	MP2A	Mx	.105	3
4	MP2A	X	-124.918	63
5	MP2A	Z	72.122	63
6	MP2A	Mx	.105	63
7	MP2A	X	-124.918	3
8	MP2A	Z	72.122	3
9	MP2A	Mx	.02	3
10	MP2A	X	-124.918	63
11	MP2A	Z	72.122	63
12	MP2A	Mx	.02	63
13	MP3A	X	-44.749	21
14	MP3A	Z	25.836	21

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
15	MP3A	Mx	.022	21
16	MP3A	X	-44.749	45
17	MP3A	Z	25.836	45
18	MP3A	Mx	.022	45
19	MP1A	X	-49.214	24
20	MP1A	Z	28.414	24
21	MP1A	Mx	-.025	24
22	MP2A	X	-42.975	24
23	MP2A	Z	24.812	24
24	MP2A	Mx	-.021	24
25	M6	X	-99.094	12
26	M6	Z	57.212	12
27	M6	Mx	0	12
28	MP1A	X	-84.79	3
29	MP1A	Z	48.953	3
30	MP1A	Mx	.092	3
31	MP1A	X	-84.79	63
32	MP1A	Z	48.953	63
33	MP1A	Mx	.092	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2A	X	-137.519	3
2	MP2A	Z	0	3
3	MP2A	Mx	.069	3
4	MP2A	X	-137.519	63
5	MP2A	Z	0	63
6	MP2A	Mx	.069	63
7	MP2A	X	-137.519	3
8	MP2A	Z	0	3
9	MP2A	Mx	.069	3
10	MP2A	X	-137.519	63
11	MP2A	Z	0	63
12	MP2A	Mx	.069	63
13	MP3A	X	-37.212	21
14	MP3A	Z	0	21
15	MP3A	Mx	.019	21
16	MP3A	X	-37.212	45
17	MP3A	Z	0	45
18	MP3A	Mx	.019	45
19	MP1A	X	-50.558	24
20	MP1A	Z	0	24
21	MP1A	Mx	-.025	24
22	MP2A	X	-40.952	24
23	MP2A	Z	0	24
24	MP2A	Mx	-.02	24
25	M6	X	-140.337	12
26	M6	Z	0	12
27	M6	Mx	0	12
28	MP1A	X	-81.602	3
29	MP1A	Z	0	3
30	MP1A	Mx	.088	3
31	MP1A	X	-81.602	63
32	MP1A	Z	0	63
33	MP1A	Mx	.088	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2A	X	-124.918	3
2	MP2A	Z	-72.122	3
3	MP2A	Mx	.02	3
4	MP2A	X	-124.918	63
5	MP2A	Z	-72.122	63
6	MP2A	Mx	.02	63
7	MP2A	X	-124.918	3
8	MP2A	Z	-72.122	3
9	MP2A	Mx	.105	3
10	MP2A	X	-124.918	63
11	MP2A	Z	-72.122	63
12	MP2A	Mx	.105	63
13	MP3A	X	-44.749	21
14	MP3A	Z	-25.836	21
15	MP3A	Mx	.022	21
16	MP3A	X	-44.749	45
17	MP3A	Z	-25.836	45
18	MP3A	Mx	.022	45
19	MP1A	X	-49.214	24
20	MP1A	Z	-28.414	24
21	MP1A	Mx	-.025	24
22	MP2A	X	-42.975	24
23	MP2A	Z	-24.812	24
24	MP2A	Mx	-.021	24
25	M6	X	-132.756	12
26	M6	Z	-76.647	12
27	M6	Mx	0	12
28	MP1A	X	-84.79	3
29	MP1A	Z	-48.953	3
30	MP1A	Mx	.092	3
31	MP1A	X	-84.79	63
32	MP1A	Z	-48.953	63
33	MP1A	Mx	.092	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2A	X	-78.846	3
2	MP2A	Z	-136.565	3
3	MP2A	Mx	-.04	3
4	MP2A	X	-78.846	63
5	MP2A	Z	-136.565	63
6	MP2A	Mx	-.04	63
7	MP2A	X	-78.846	3
8	MP2A	Z	-136.565	3
9	MP2A	Mx	.119	3
10	MP2A	X	-78.846	63
11	MP2A	Z	-136.565	63
12	MP2A	Mx	.119	63
13	MP3A	X	-40.295	21
14	MP3A	Z	-69.793	21
15	MP3A	Mx	.02	21
16	MP3A	X	-40.295	45
17	MP3A	Z	-69.793	45
18	MP3A	Mx	.02	45
19	MP1A	X	-34.683	24
20	MP1A	Z	-60.073	24

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
21	MP1A	Mx	-.017	24
22	MP2A	X	-33.482	24
23	MP2A	Z	-57.993	24
24	MP2A	Mx	-.017	24
25	M6	X	-70.168	12
26	M6	Z	-121.535	12
27	M6	Mx	0	12
28	MP1A	X	-65.258	3
29	MP1A	Z	-113.031	3
30	MP1A	Mx	.071	3
31	MP1A	X	-65.258	63
32	MP1A	Z	-113.031	63
33	MP1A	Mx	.071	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2A	X	0	3
2	MP2A	Z	-34.413	3
3	MP2A	Mx	-.02	3
4	MP2A	X	0	63
5	MP2A	Z	-34.413	63
6	MP2A	Mx	-.02	63
7	MP2A	X	0	3
8	MP2A	Z	-34.413	3
9	MP2A	Mx	.02	3
10	MP2A	X	0	63
11	MP2A	Z	-34.413	63
12	MP2A	Mx	.02	63
13	MP3A	X	0	21
14	MP3A	Z	-20.386	21
15	MP3A	Mx	0	21
16	MP3A	X	0	45
17	MP3A	Z	-20.386	45
18	MP3A	Mx	0	45
19	MP1A	X	0	24
20	MP1A	Z	-17.216	24
21	MP1A	Mx	0	24
22	MP2A	X	0	24
23	MP2A	Z	-17.216	24
24	MP2A	Mx	0	24
25	M6	X	0	12
26	M6	Z	-25.271	12
27	M6	Mx	0	12
28	MP1A	X	0	3
29	MP1A	Z	-30.916	3
30	MP1A	Mx	0	3
31	MP1A	X	0	63
32	MP1A	Z	-30.916	63
33	MP1A	Mx	0	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2A	X	16.556	3
2	MP2A	Z	-28.677	3
3	MP2A	Mx	-.025	3
4	MP2A	X	16.556	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
5	MP2A	Z	-28.677	63
6	MP2A	Mx	-.025	63
7	MP2A	X	16.556	3
8	MP2A	Z	-28.677	3
9	MP2A	Mx	.008	3
10	MP2A	X	16.556	63
11	MP2A	Z	-28.677	63
12	MP2A	Mx	.008	63
13	MP3A	X	8.734	21
14	MP3A	Z	-15.127	21
15	MP3A	Mx	-.004	21
16	MP3A	X	8.734	45
17	MP3A	Z	-15.127	45
18	MP3A	Mx	-.004	45
19	MP1A	X	7.955	24
20	MP1A	Z	-13.779	24
21	MP1A	Mx	.004	24
22	MP2A	X	7.707	24
23	MP2A	Z	-13.349	24
24	MP2A	Mx	.004	24
25	M6	X	11.332	12
26	M6	Z	-19.628	12
27	M6	Mx	0	12
28	MP1A	X	13.887	3
29	MP1A	Z	-24.053	3
30	MP1A	Mx	-.015	3
31	MP1A	X	13.887	63
32	MP1A	Z	-24.053	63
33	MP1A	Mx	-.015	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2A	X	26.425	3
2	MP2A	Z	-15.257	3
3	MP2A	Mx	-.022	3
4	MP2A	X	26.425	63
5	MP2A	Z	-15.257	63
6	MP2A	Mx	-.022	63
7	MP2A	X	26.425	3
8	MP2A	Z	-15.257	3
9	MP2A	Mx	-.004	3
10	MP2A	X	26.425	63
11	MP2A	Z	-15.257	63
12	MP2A	Mx	-.004	63
13	MP3A	X	10.072	21
14	MP3A	Z	-5.815	21
15	MP3A	Mx	-.005	21
16	MP3A	X	10.072	45
17	MP3A	Z	-5.815	45
18	MP3A	Mx	-.005	45
19	MP1A	X	11.517	24
20	MP1A	Z	-6.649	24
21	MP1A	Mx	.006	24
22	MP2A	X	10.228	24
23	MP2A	Z	-5.905	24
24	MP2A	Mx	.005	24

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
25	M6	X	21.885	12
26	M6	Z	-12.635	12
27	M6	Mx	0	12
28	MP1A	X	18.61	3
29	MP1A	Z	-10.745	3
30	MP1A	Mx	-.02	3
31	MP1A	X	18.61	63
32	MP1A	Z	-10.745	63
33	MP1A	Mx	-.02	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2A	X	29.214	3
2	MP2A	Z	0	3
3	MP2A	Mx	-.015	3
4	MP2A	X	29.214	63
5	MP2A	Z	0	63
6	MP2A	Mx	-.015	63
7	MP2A	X	29.214	3
8	MP2A	Z	0	3
9	MP2A	Mx	-.015	3
10	MP2A	X	29.214	63
11	MP2A	Z	0	63
12	MP2A	Mx	-.015	63
13	MP3A	X	8.711	21
14	MP3A	Z	0	21
15	MP3A	Mx	-.004	21
16	MP3A	X	8.711	45
17	MP3A	Z	0	45
18	MP3A	Mx	-.004	45
19	MP1A	X	11.993	24
20	MP1A	Z	0	24
21	MP1A	Mx	.006	24
22	MP2A	X	10.008	24
23	MP2A	Z	0	24
24	MP2A	Mx	.005	24
25	M6	X	30.483	12
26	M6	Z	0	12
27	M6	Mx	0	12
28	MP1A	X	18.347	3
29	MP1A	Z	0	3
30	MP1A	Mx	-.02	3
31	MP1A	X	18.347	63
32	MP1A	Z	0	63
33	MP1A	Mx	-.02	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2A	X	26.425	3
2	MP2A	Z	15.257	3
3	MP2A	Mx	-.004	3
4	MP2A	X	26.425	63
5	MP2A	Z	15.257	63
6	MP2A	Mx	-.004	63
7	MP2A	X	26.425	3
8	MP2A	Z	15.257	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
9	MP2A	Mx	-.022	3
10	MP2A	X	26.425	63
11	MP2A	Z	15.257	63
12	MP2A	Mx	-.022	63
13	MP3A	X	10.072	21
14	MP3A	Z	5.815	21
15	MP3A	Mx	-.005	21
16	MP3A	X	10.072	45
17	MP3A	Z	5.815	45
18	MP3A	Mx	-.005	45
19	MP1A	X	11.517	24
20	MP1A	Z	6.649	24
21	MP1A	Mx	.006	24
22	MP2A	X	10.228	24
23	MP2A	Z	5.905	24
24	MP2A	Mx	.005	24
25	M6	X	28.655	12
26	M6	Z	16.544	12
27	M6	Mx	0	12
28	MP1A	X	18.61	3
29	MP1A	Z	10.745	3
30	MP1A	Mx	-.02	3
31	MP1A	X	18.61	63
32	MP1A	Z	10.745	63
33	MP1A	Mx	-.02	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2A	X	16.556	3
2	MP2A	Z	28.677	3
3	MP2A	Mx	.008	3
4	MP2A	X	16.556	63
5	MP2A	Z	28.677	63
6	MP2A	Mx	.008	63
7	MP2A	X	16.556	3
8	MP2A	Z	28.677	3
9	MP2A	Mx	-.025	3
10	MP2A	X	16.556	63
11	MP2A	Z	28.677	63
12	MP2A	Mx	-.025	63
13	MP3A	X	8.734	21
14	MP3A	Z	15.127	21
15	MP3A	Mx	-.004	21
16	MP3A	X	8.734	45
17	MP3A	Z	15.127	45
18	MP3A	Mx	-.004	45
19	MP1A	X	7.955	24
20	MP1A	Z	13.779	24
21	MP1A	Mx	.004	24
22	MP2A	X	7.707	24
23	MP2A	Z	13.349	24
24	MP2A	Mx	.004	24
25	M6	X	15.241	12
26	M6	Z	26.399	12
27	M6	Mx	0	12
28	MP1A	X	13.887	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
29	MP1A	Z	24.053	3
30	MP1A	Mx	-.015	3
31	MP1A	X	13.887	63
32	MP1A	Z	24.053	63
33	MP1A	Mx	-.015	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2A	X	0	3
2	MP2A	Z	34.413	3
3	MP2A	Mx	.02	3
4	MP2A	X	0	63
5	MP2A	Z	34.413	63
6	MP2A	Mx	.02	63
7	MP2A	X	0	3
8	MP2A	Z	34.413	3
9	MP2A	Mx	-.02	3
10	MP2A	X	0	63
11	MP2A	Z	34.413	63
12	MP2A	Mx	-.02	63
13	MP3A	X	0	21
14	MP3A	Z	20.386	21
15	MP3A	Mx	0	21
16	MP3A	X	0	45
17	MP3A	Z	20.386	45
18	MP3A	Mx	0	45
19	MP1A	X	0	24
20	MP1A	Z	17.216	24
21	MP1A	Mx	0	24
22	MP2A	X	0	24
23	MP2A	Z	17.216	24
24	MP2A	Mx	0	24
25	M6	X	0	12
26	M6	Z	25.271	12
27	M6	Mx	0	12
28	MP1A	X	0	3
29	MP1A	Z	30.916	3
30	MP1A	Mx	0	3
31	MP1A	X	0	63
32	MP1A	Z	30.916	63
33	MP1A	Mx	0	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2A	X	-16.556	3
2	MP2A	Z	28.677	3
3	MP2A	Mx	.025	3
4	MP2A	X	-16.556	63
5	MP2A	Z	28.677	63
6	MP2A	Mx	.025	63
7	MP2A	X	-16.556	3
8	MP2A	Z	28.677	3
9	MP2A	Mx	-.008	3
10	MP2A	X	-16.556	63
11	MP2A	Z	28.677	63
12	MP2A	Mx	-.008	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
13	MP3A	X	-8.734	21
14	MP3A	Z	15.127	21
15	MP3A	Mx	.004	21
16	MP3A	X	-8.734	45
17	MP3A	Z	15.127	45
18	MP3A	Mx	.004	45
19	MP1A	X	-7.955	24
20	MP1A	Z	13.779	24
21	MP1A	Mx	-.004	24
22	MP2A	X	-7.707	24
23	MP2A	Z	13.349	24
24	MP2A	Mx	-.004	24
25	M6	X	-11.332	12
26	M6	Z	19.628	12
27	M6	Mx	0	12
28	MP1A	X	-13.887	3
29	MP1A	Z	24.053	3
30	MP1A	Mx	.015	3
31	MP1A	X	-13.887	63
32	MP1A	Z	24.053	63
33	MP1A	Mx	.015	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2A	X	-26.425	3
2	MP2A	Z	15.257	3
3	MP2A	Mx	.022	3
4	MP2A	X	-26.425	63
5	MP2A	Z	15.257	63
6	MP2A	Mx	.022	63
7	MP2A	X	-26.425	3
8	MP2A	Z	15.257	3
9	MP2A	Mx	.004	3
10	MP2A	X	-26.425	63
11	MP2A	Z	15.257	63
12	MP2A	Mx	.004	63
13	MP3A	X	-10.072	21
14	MP3A	Z	5.815	21
15	MP3A	Mx	.005	21
16	MP3A	X	-10.072	45
17	MP3A	Z	5.815	45
18	MP3A	Mx	.005	45
19	MP1A	X	-11.517	24
20	MP1A	Z	6.649	24
21	MP1A	Mx	-.006	24
22	MP2A	X	-10.228	24
23	MP2A	Z	5.905	24
24	MP2A	Mx	-.005	24
25	M6	X	-21.885	12
26	M6	Z	12.635	12
27	M6	Mx	0	12
28	MP1A	X	-18.61	3
29	MP1A	Z	10.745	3
30	MP1A	Mx	.02	3
31	MP1A	X	-18.61	63
32	MP1A	Z	10.745	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
33	MP1A	Mx	.02	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2A	X	-29.214	3
2	MP2A	Z	0	3
3	MP2A	Mx	.015	3
4	MP2A	X	-29.214	63
5	MP2A	Z	0	63
6	MP2A	Mx	.015	63
7	MP2A	X	-29.214	3
8	MP2A	Z	0	3
9	MP2A	Mx	.015	3
10	MP2A	X	-29.214	63
11	MP2A	Z	0	63
12	MP2A	Mx	.015	63
13	MP3A	X	-8.711	21
14	MP3A	Z	0	21
15	MP3A	Mx	.004	21
16	MP3A	X	-8.711	45
17	MP3A	Z	0	45
18	MP3A	Mx	.004	45
19	MP1A	X	-11.993	24
20	MP1A	Z	0	24
21	MP1A	Mx	-.006	24
22	MP2A	X	-10.008	24
23	MP2A	Z	0	24
24	MP2A	Mx	-.005	24
25	M6	X	-30.483	12
26	M6	Z	0	12
27	M6	Mx	0	12
28	MP1A	X	-18.347	3
29	MP1A	Z	0	3
30	MP1A	Mx	.02	3
31	MP1A	X	-18.347	63
32	MP1A	Z	0	63
33	MP1A	Mx	.02	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2A	X	-26.425	3
2	MP2A	Z	-15.257	3
3	MP2A	Mx	.004	3
4	MP2A	X	-26.425	63
5	MP2A	Z	-15.257	63
6	MP2A	Mx	.004	63
7	MP2A	X	-26.425	3
8	MP2A	Z	-15.257	3
9	MP2A	Mx	.022	3
10	MP2A	X	-26.425	63
11	MP2A	Z	-15.257	63
12	MP2A	Mx	.022	63
13	MP3A	X	-10.072	21
14	MP3A	Z	-5.815	21
15	MP3A	Mx	.005	21
16	MP3A	X	-10.072	45

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
17	MP3A	Z	-5.815	45
18	MP3A	Mx	.005	45
19	MP1A	X	-11.517	24
20	MP1A	Z	-6.649	24
21	MP1A	Mx	-.006	24
22	MP2A	X	-10.228	24
23	MP2A	Z	-5.905	24
24	MP2A	Mx	-.005	24
25	M6	X	-28.655	12
26	M6	Z	-16.544	12
27	M6	Mx	0	12
28	MP1A	X	-18.61	3
29	MP1A	Z	-10.745	3
30	MP1A	Mx	.02	3
31	MP1A	X	-18.61	63
32	MP1A	Z	-10.745	63
33	MP1A	Mx	.02	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2A	X	-16.556	3
2	MP2A	Z	-28.677	3
3	MP2A	Mx	-.008	3
4	MP2A	X	-16.556	63
5	MP2A	Z	-28.677	63
6	MP2A	Mx	-.008	63
7	MP2A	X	-16.556	3
8	MP2A	Z	-28.677	3
9	MP2A	Mx	.025	3
10	MP2A	X	-16.556	63
11	MP2A	Z	-28.677	63
12	MP2A	Mx	.025	63
13	MP3A	X	-8.734	21
14	MP3A	Z	-15.127	21
15	MP3A	Mx	.004	21
16	MP3A	X	-8.734	45
17	MP3A	Z	-15.127	45
18	MP3A	Mx	.004	45
19	MP1A	X	-7.955	24
20	MP1A	Z	-13.779	24
21	MP1A	Mx	-.004	24
22	MP2A	X	-7.707	24
23	MP2A	Z	-13.349	24
24	MP2A	Mx	-.004	24
25	M6	X	-15.241	12
26	M6	Z	-26.399	12
27	M6	Mx	0	12
28	MP1A	X	-13.887	3
29	MP1A	Z	-24.053	3
30	MP1A	Mx	.015	3
31	MP1A	X	-13.887	63
32	MP1A	Z	-24.053	63
33	MP1A	Mx	.015	63

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

Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2A	X	0	3
2	MP2A	Z	-11.189	3
3	MP2A	Mx	-.007	3
4	MP2A	X	0	63
5	MP2A	Z	-11.189	63
6	MP2A	Mx	-.007	63
7	MP2A	X	0	3
8	MP2A	Z	-11.189	3
9	MP2A	Mx	.007	3
10	MP2A	X	0	63
11	MP2A	Z	-11.189	63
12	MP2A	Mx	.007	63
13	MP3A	X	0	21
14	MP3A	Z	-6.468	21
15	MP3A	Mx	0	21
16	MP3A	X	0	45
17	MP3A	Z	-6.468	45
18	MP3A	Mx	0	45
19	MP1A	X	0	24
20	MP1A	Z	-5.147	24
21	MP1A	Mx	0	24
22	MP2A	X	0	24
23	MP2A	Z	-5.147	24
24	MP2A	Mx	0	24
25	M6	X	0	12
26	M6	Z	-7.787	12
27	M6	Mx	0	12
28	MP1A	X	0	3
29	MP1A	Z	-9.992	3
30	MP1A	Mx	0	3
31	MP1A	X	0	63
32	MP1A	Z	-9.992	63
33	MP1A	Mx	0	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2A	X	5.366	3
2	MP2A	Z	-9.294	3
3	MP2A	Mx	-.008	3
4	MP2A	X	5.366	63
5	MP2A	Z	-9.294	63
6	MP2A	Mx	-.008	63
7	MP2A	X	5.366	3
8	MP2A	Z	-9.294	3
9	MP2A	Mx	.003	3
10	MP2A	X	5.366	63
11	MP2A	Z	-9.294	63
12	MP2A	Mx	.003	63
13	MP3A	X	2.742	21
14	MP3A	Z	-4.75	21
15	MP3A	Mx	-.001	21
16	MP3A	X	2.742	45
17	MP3A	Z	-4.75	45
18	MP3A	Mx	-.001	45
19	MP1A	X	2.36	24
20	MP1A	Z	-4.088	24

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
21	MP1A	Mx	.001	24
22	MP2A	X	2.279	24
23	MP2A	Z	-3.947	24
24	MP2A	Mx	.001	24
25	M6	X	3.453	12
26	M6	Z	-5.98	12
27	M6	Mx	0	12
28	MP1A	X	4.441	3
29	MP1A	Z	-7.692	3
30	MP1A	Mx	-.005	3
31	MP1A	X	4.441	63
32	MP1A	Z	-7.692	63
33	MP1A	Mx	-.005	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2A	X	8.501	3
2	MP2A	Z	-4.908	3
3	MP2A	Mx	-.007	3
4	MP2A	X	8.501	63
5	MP2A	Z	-4.908	63
6	MP2A	Mx	-.007	63
7	MP2A	X	8.501	3
8	MP2A	Z	-4.908	3
9	MP2A	Mx	-.001	3
10	MP2A	X	8.501	63
11	MP2A	Z	-4.908	63
12	MP2A	Mx	-.001	63
13	MP3A	X	3.045	21
14	MP3A	Z	-1.758	21
15	MP3A	Mx	-.002	21
16	MP3A	X	3.045	45
17	MP3A	Z	-1.758	45
18	MP3A	Mx	-.002	45
19	MP1A	X	3.349	24
20	MP1A	Z	-1.934	24
21	MP1A	Mx	.002	24
22	MP2A	X	2.925	24
23	MP2A	Z	-1.689	24
24	MP2A	Mx	.001	24
25	M6	X	6.744	12
26	M6	Z	-3.893	12
27	M6	Mx	0	12
28	MP1A	X	5.77	3
29	MP1A	Z	-3.331	3
30	MP1A	Mx	-.006	3
31	MP1A	X	5.77	63
32	MP1A	Z	-3.331	63
33	MP1A	Mx	-.006	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2A	X	9.359	3
2	MP2A	Z	0	3
3	MP2A	Mx	-.005	3
4	MP2A	X	9.359	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
5	MP2A	Z	0	63
6	MP2A	Mx	-.005	63
7	MP2A	X	9.359	3
8	MP2A	Z	0	3
9	MP2A	Mx	-.005	3
10	MP2A	X	9.359	63
11	MP2A	Z	0	63
12	MP2A	Mx	-.005	63
13	MP3A	X	2.532	21
14	MP3A	Z	0	21
15	MP3A	Mx	-.001	21
16	MP3A	X	2.532	45
17	MP3A	Z	0	45
18	MP3A	Mx	-.001	45
19	MP1A	X	3.441	24
20	MP1A	Z	0	24
21	MP1A	Mx	.002	24
22	MP2A	X	2.787	24
23	MP2A	Z	0	24
24	MP2A	Mx	.001	24
25	M6	X	9.55	12
26	M6	Z	0	12
27	M6	Mx	0	12
28	MP1A	X	5.553	3
29	MP1A	Z	0	3
30	MP1A	Mx	-.006	3
31	MP1A	X	5.553	63
32	MP1A	Z	0	63
33	MP1A	Mx	-.006	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2A	X	8.501	3
2	MP2A	Z	4.908	3
3	MP2A	Mx	-.001	3
4	MP2A	X	8.501	63
5	MP2A	Z	4.908	63
6	MP2A	Mx	-.001	63
7	MP2A	X	8.501	3
8	MP2A	Z	4.908	3
9	MP2A	Mx	-.007	3
10	MP2A	X	8.501	63
11	MP2A	Z	4.908	63
12	MP2A	Mx	-.007	63
13	MP3A	X	3.045	21
14	MP3A	Z	1.758	21
15	MP3A	Mx	-.002	21
16	MP3A	X	3.045	45
17	MP3A	Z	1.758	45
18	MP3A	Mx	-.002	45
19	MP1A	X	3.349	24
20	MP1A	Z	1.934	24
21	MP1A	Mx	.002	24
22	MP2A	X	2.925	24
23	MP2A	Z	1.689	24
24	MP2A	Mx	.001	24

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
25	M6	X	9.034	12
26	M6	Z	5.216	12
27	M6	Mx	0	12
28	MP1A	X	5.77	3
29	MP1A	Z	3.331	3
30	MP1A	Mx	-.006	3
31	MP1A	X	5.77	63
32	MP1A	Z	3.331	63
33	MP1A	Mx	-.006	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2A	X	5.366	3
2	MP2A	Z	9.294	3
3	MP2A	Mx	.003	3
4	MP2A	X	5.366	63
5	MP2A	Z	9.294	63
6	MP2A	Mx	.003	63
7	MP2A	X	5.366	3
8	MP2A	Z	9.294	3
9	MP2A	Mx	-.008	3
10	MP2A	X	5.366	63
11	MP2A	Z	9.294	63
12	MP2A	Mx	-.008	63
13	MP3A	X	2.742	21
14	MP3A	Z	4.75	21
15	MP3A	Mx	-.001	21
16	MP3A	X	2.742	45
17	MP3A	Z	4.75	45
18	MP3A	Mx	-.001	45
19	MP1A	X	2.36	24
20	MP1A	Z	4.088	24
21	MP1A	Mx	.001	24
22	MP2A	X	2.279	24
23	MP2A	Z	3.947	24
24	MP2A	Mx	.001	24
25	M6	X	4.775	12
26	M6	Z	8.271	12
27	M6	Mx	0	12
28	MP1A	X	4.441	3
29	MP1A	Z	7.692	3
30	MP1A	Mx	-.005	3
31	MP1A	X	4.441	63
32	MP1A	Z	7.692	63
33	MP1A	Mx	-.005	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2A	X	0	3
2	MP2A	Z	11.189	3
3	MP2A	Mx	.007	3
4	MP2A	X	0	63
5	MP2A	Z	11.189	63
6	MP2A	Mx	.007	63
7	MP2A	X	0	3
8	MP2A	Z	11.189	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
9	MP2A	Mx	-.007	3
10	MP2A	X	0	63
11	MP2A	Z	11.189	63
12	MP2A	Mx	-.007	63
13	MP3A	X	0	21
14	MP3A	Z	6.468	21
15	MP3A	Mx	0	21
16	MP3A	X	0	45
17	MP3A	Z	6.468	45
18	MP3A	Mx	0	45
19	MP1A	X	0	24
20	MP1A	Z	5.147	24
21	MP1A	Mx	0	24
22	MP2A	X	0	24
23	MP2A	Z	5.147	24
24	MP2A	Mx	0	24
25	M6	X	0	12
26	M6	Z	7.787	12
27	M6	Mx	0	12
28	MP1A	X	0	3
29	MP1A	Z	9.992	3
30	MP1A	Mx	0	3
31	MP1A	X	0	63
32	MP1A	Z	9.992	63
33	MP1A	Mx	0	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2A	X	-5.366	3
2	MP2A	Z	9.294	3
3	MP2A	Mx	.008	3
4	MP2A	X	-5.366	63
5	MP2A	Z	9.294	63
6	MP2A	Mx	.008	63
7	MP2A	X	-5.366	3
8	MP2A	Z	9.294	3
9	MP2A	Mx	-.003	3
10	MP2A	X	-5.366	63
11	MP2A	Z	9.294	63
12	MP2A	Mx	-.003	63
13	MP3A	X	-2.742	21
14	MP3A	Z	4.75	21
15	MP3A	Mx	.001	21
16	MP3A	X	-2.742	45
17	MP3A	Z	4.75	45
18	MP3A	Mx	.001	45
19	MP1A	X	-2.36	24
20	MP1A	Z	4.088	24
21	MP1A	Mx	-.001	24
22	MP2A	X	-2.279	24
23	MP2A	Z	3.947	24
24	MP2A	Mx	-.001	24
25	M6	X	-3.453	12
26	M6	Z	5.98	12
27	M6	Mx	0	12
28	MP1A	X	-4.441	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
29	MP1A	Z	7.692	3
30	MP1A	Mx	.005	3
31	MP1A	X	-4.441	63
32	MP1A	Z	7.692	63
33	MP1A	Mx	.005	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2A	X	-8.501	3
2	MP2A	Z	4.908	3
3	MP2A	Mx	.007	3
4	MP2A	X	-8.501	63
5	MP2A	Z	4.908	63
6	MP2A	Mx	.007	63
7	MP2A	X	-8.501	3
8	MP2A	Z	4.908	3
9	MP2A	Mx	.001	3
10	MP2A	X	-8.501	63
11	MP2A	Z	4.908	63
12	MP2A	Mx	.001	63
13	MP3A	X	-3.045	21
14	MP3A	Z	1.758	21
15	MP3A	Mx	.002	21
16	MP3A	X	-3.045	45
17	MP3A	Z	1.758	45
18	MP3A	Mx	.002	45
19	MP1A	X	-3.349	24
20	MP1A	Z	1.934	24
21	MP1A	Mx	-.002	24
22	MP2A	X	-2.925	24
23	MP2A	Z	1.689	24
24	MP2A	Mx	-.001	24
25	M6	X	-6.744	12
26	M6	Z	3.893	12
27	M6	Mx	0	12
28	MP1A	X	-5.77	3
29	MP1A	Z	3.331	3
30	MP1A	Mx	.006	3
31	MP1A	X	-5.77	63
32	MP1A	Z	3.331	63
33	MP1A	Mx	.006	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2A	X	-9.359	3
2	MP2A	Z	0	3
3	MP2A	Mx	.005	3
4	MP2A	X	-9.359	63
5	MP2A	Z	0	63
6	MP2A	Mx	.005	63
7	MP2A	X	-9.359	3
8	MP2A	Z	0	3
9	MP2A	Mx	.005	3
10	MP2A	X	-9.359	63
11	MP2A	Z	0	63
12	MP2A	Mx	.005	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
13	MP3A	X	-2.532	21
14	MP3A	Z	0	21
15	MP3A	Mx	.001	21
16	MP3A	X	-2.532	45
17	MP3A	Z	0	45
18	MP3A	Mx	.001	45
19	MP1A	X	-3.441	24
20	MP1A	Z	0	24
21	MP1A	Mx	-.002	24
22	MP2A	X	-2.787	24
23	MP2A	Z	0	24
24	MP2A	Mx	-.001	24
25	M6	X	-9.55	12
26	M6	Z	0	12
27	M6	Mx	0	12
28	MP1A	X	-5.553	3
29	MP1A	Z	0	3
30	MP1A	Mx	.006	3
31	MP1A	X	-5.553	63
32	MP1A	Z	0	63
33	MP1A	Mx	.006	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2A	X	-8.501	3
2	MP2A	Z	-4.908	3
3	MP2A	Mx	.001	3
4	MP2A	X	-8.501	63
5	MP2A	Z	-4.908	63
6	MP2A	Mx	.001	63
7	MP2A	X	-8.501	3
8	MP2A	Z	-4.908	3
9	MP2A	Mx	.007	3
10	MP2A	X	-8.501	63
11	MP2A	Z	-4.908	63
12	MP2A	Mx	.007	63
13	MP3A	X	-3.045	21
14	MP3A	Z	-1.758	21
15	MP3A	Mx	.002	21
16	MP3A	X	-3.045	45
17	MP3A	Z	-1.758	45
18	MP3A	Mx	.002	45
19	MP1A	X	-3.349	24
20	MP1A	Z	-1.934	24
21	MP1A	Mx	-.002	24
22	MP2A	X	-2.925	24
23	MP2A	Z	-1.689	24
24	MP2A	Mx	-.001	24
25	M6	X	-9.034	12
26	M6	Z	-5.216	12
27	M6	Mx	0	12
28	MP1A	X	-5.77	3
29	MP1A	Z	-3.331	3
30	MP1A	Mx	.006	3
31	MP1A	X	-5.77	63
32	MP1A	Z	-3.331	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
33	MP1A	Mx	.006	63

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2A	X	-5.366	3
2	MP2A	Z	-9.294	3
3	MP2A	Mx	-.003	3
4	MP2A	X	-5.366	63
5	MP2A	Z	-9.294	63
6	MP2A	Mx	-.003	63
7	MP2A	X	-5.366	3
8	MP2A	Z	-9.294	3
9	MP2A	Mx	.008	3
10	MP2A	X	-5.366	63
11	MP2A	Z	-9.294	63
12	MP2A	Mx	.008	63
13	MP3A	X	-2.742	21
14	MP3A	Z	-4.75	21
15	MP3A	Mx	.001	21
16	MP3A	X	-2.742	45
17	MP3A	Z	-4.75	45
18	MP3A	Mx	.001	45
19	MP1A	X	-2.36	24
20	MP1A	Z	-4.088	24
21	MP1A	Mx	-.001	24
22	MP2A	X	-2.279	24
23	MP2A	Z	-3.947	24
24	MP2A	Mx	-.001	24
25	M6	X	-4.775	12
26	M6	Z	-8.271	12
27	M6	Mx	0	12
28	MP1A	X	-4.441	3
29	MP1A	Z	-7.692	3
30	MP1A	Mx	.005	3
31	MP1A	X	-4.441	63
32	MP1A	Z	-7.692	63
33	MP1A	Mx	.005	63

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	M27	Y	-500	%9.259

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	M4	Y	-500	%96.296

Member Point Loads (BLC 79 : Lv1)

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

Member Point Loads (BLC 80 : Lv2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	M27	Y	-250	%100

Member Distributed Loads (BLC 40 : Structure Di)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	Y	-5.95	-5.95	0	%100
2	M4	Y	-4.174	-4.174	0	%100
3	M6	Y	-5.95	-5.95	0	%100
4	M9	Y	-4.174	-4.174	0	%100
5	M11	Y	-8.325	-8.325	0	%100
6	M14	Y	-3.21	-3.21	0	%100
7	M15	Y	-3.21	-3.21	0	%100
8	M16	Y	-3.21	-3.21	0	%100
9	MP1A	Y	-5.219	-5.219	0	%100
10	MP3A	Y	-5.219	-5.219	0	%100
11	M28	Y	-3.575	-3.575	0	%100
12	M29	Y	-3.575	-3.575	0	%100
13	M31	Y	-2.844	-2.844	0	%100
14	MP2A	Y	-5.219	-5.219	0	%100
15	M27	Y	-4.174	-4.174	0	%100
16	M28A	Y	-4.174	-4.174	0	%100
17	M29A	Y	-3.575	-3.575	0	%100
18	M30	Y	-3.575	-3.575	0	%100
19	M31A	Y	-2.844	-2.844	0	%100
20	M32	Y	-5.219	-5.219	0	%100
21	M35A	Y	-5.219	-5.219	0	%100
22	M39	Y	-6.915	-6.915	0	%100
23	M40	Y	-6.915	-6.915	0	%100
24	M41	Y	-5.219	-5.219	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	-6.714	-6.714	0	%100
5	M6	X	0	0	0	%100
6	M6	Z	0	0	0	%100
7	M9	X	0	0	0	%100
8	M9	Z	-6.714	-6.714	0	%100
9	M11	X	0	0	0	%100
10	M11	Z	-12.052	-12.052	0	%100
11	M14	X	0	0	0	%100
12	M14	Z	-4.045	-4.045	0	%100
13	M15	X	0	0	0	%100
14	M15	Z	-4.045	-4.045	0	%100
15	M16	X	0	0	0	%100
16	M16	Z	-3.149	-3.149	0	%100
17	MP1A	X	0	0	0	%100
18	MP1A	Z	-9.606	-9.606	0	%100
19	MP3A	X	0	0	0	%100
20	MP3A	Z	-9.606	-9.606	0	%100
21	M28	X	0	0	0	%100
22	M28	Z	-4.962	-4.962	0	%100
23	M29	X	0	0	0	%100
24	M29	Z	-4.962	-4.962	0	%100
25	M31	X	0	0	0	%100
26	M31	Z	-3.034	-3.034	0	%100
27	MP2A	X	0	0	0	%100
28	MP2A	Z	-9.606	-9.606	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[in,%]	End Location[in,%]
29	M27	X	0	0	0	%100
30	M27	Z	-6.714	-6.714	0	%100
31	M28A	X	0	0	0	%100
32	M28A	Z	-6.714	-6.714	0	%100
33	M29A	X	0	0	0	%100
34	M29A	Z	-4.962	-4.962	0	%100
35	M30	X	0	0	0	%100
36	M30	Z	-4.962	-4.962	0	%100
37	M31A	X	0	0	0	%100
38	M31A	Z	-3.034	-3.034	0	%100
39	M32	X	0	0	0	%100
40	M32	Z	-1.259	-1.259	0	%100
41	M35A	X	0	0	0	%100
42	M35A	Z	-9.606	-9.606	0	%100
43	M39	X	0	0	0	%100
44	M39	Z	-7.016	-7.016	0	%100
45	M40	X	0	0	0	%100
46	M40	Z	-7.016	-7.016	0	%100
47	M41	X	0	0	0	%100
48	M41	Z	-1.259	-1.259	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	1.022	1.022	0	%100
2	M1	Z	-1.77	-1.77	0	%100
3	M4	X	2.518	2.518	0	%100
4	M4	Z	-4.361	-4.361	0	%100
5	M6	X	1.022	1.022	0	%100
6	M6	Z	-1.77	-1.77	0	%100
7	M9	X	2.518	2.518	0	%100
8	M9	Z	-4.361	-4.361	0	%100
9	M11	X	6.026	6.026	0	%100
10	M11	Z	-10.437	-10.437	0	%100
11	M14	X	2.022	2.022	0	%100
12	M14	Z	-3.503	-3.503	0	%100
13	M15	X	2.022	2.022	0	%100
14	M15	Z	-3.503	-3.503	0	%100
15	M16	X	1.686	1.686	0	%100
16	M16	Z	-2.921	-2.921	0	%100
17	MP1A	X	4.803	4.803	0	%100
18	MP1A	Z	-8.319	-8.319	0	%100
19	MP3A	X	4.803	4.803	0	%100
20	MP3A	Z	-8.319	-8.319	0	%100
21	M28	X	2.481	2.481	0	%100
22	M28	Z	-4.297	-4.297	0	%100
23	M29	X	2.481	2.481	0	%100
24	M29	Z	-4.297	-4.297	0	%100
25	M31	X	1.27	1.27	0	%100
26	M31	Z	-2.199	-2.199	0	%100
27	MP2A	X	4.803	4.803	0	%100
28	MP2A	Z	-8.319	-8.319	0	%100
29	M27	X	2.518	2.518	0	%100
30	M27	Z	-4.361	-4.361	0	%100
31	M28A	X	2.518	2.518	0	%100
32	M28A	Z	-4.361	-4.361	0	%100
33	M29A	X	2.481	2.481	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
34	M29A	Z	-4.297	-4.297	0	%100
35	M30	X	2.481	2.481	0	%100
36	M30	Z	-4.297	-4.297	0	%100
37	M31A	X	1.27	1.27	0	%100
38	M31A	Z	-2.199	-2.199	0	%100
39	M32	X	.112	.112	0	%100
40	M32	Z	-.194	-.194	0	%100
41	M35A	X	3.602	3.602	0	%100
42	M35A	Z	-6.239	-6.239	0	%100
43	M39	X	1.343	1.343	0	%100
44	M39	Z	-2.325	-2.325	0	%100
45	M40	X	6.891	6.891	0	%100
46	M40	Z	-11.936	-11.936	0	%100
47	M41	X	2.919	2.919	0	%100
48	M41	Z	-5.056	-5.056	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	5.309	5.309	0	%100
2	M1	Z	-3.065	-3.065	0	%100
3	M4	X	1.454	1.454	0	%100
4	M4	Z	-.839	-.839	0	%100
5	M6	X	5.309	5.309	0	%100
6	M6	Z	-3.065	-3.065	0	%100
7	M9	X	1.454	1.454	0	%100
8	M9	Z	-.839	-.839	0	%100
9	M11	X	10.437	10.437	0	%100
10	M11	Z	-6.026	-6.026	0	%100
11	M14	X	3.503	3.503	0	%100
12	M14	Z	-2.022	-2.022	0	%100
13	M15	X	3.503	3.503	0	%100
14	M15	Z	-2.022	-2.022	0	%100
15	M16	X	3.309	3.309	0	%100
16	M16	Z	-1.91	-1.91	0	%100
17	MP1A	X	8.319	8.319	0	%100
18	MP1A	Z	-4.803	-4.803	0	%100
19	MP3A	X	8.319	8.319	0	%100
20	MP3A	Z	-4.803	-4.803	0	%100
21	M28	X	4.297	4.297	0	%100
22	M28	Z	-2.481	-2.481	0	%100
23	M29	X	4.297	4.297	0	%100
24	M29	Z	-2.481	-2.481	0	%100
25	M31	X	1.344	1.344	0	%100
26	M31	Z	-.776	-.776	0	%100
27	MP2A	X	8.319	8.319	0	%100
28	MP2A	Z	-4.803	-4.803	0	%100
29	M27	X	1.454	1.454	0	%100
30	M27	Z	-.839	-.839	0	%100
31	M28A	X	1.454	1.454	0	%100
32	M28A	Z	-.839	-.839	0	%100
33	M29A	X	4.297	4.297	0	%100
34	M29A	Z	-2.481	-2.481	0	%100
35	M30	X	4.297	4.297	0	%100
36	M30	Z	-2.481	-2.481	0	%100
37	M31A	X	1.344	1.344	0	%100
38	M31A	Z	-.776	-.776	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
39	M32	X	3.263	3.263	0	%100
40	M32	Z	-1.884	-1.884	0	%100
41	M35A	X	2.08	2.08	0	%100
42	M35A	Z	-1.201	-1.201	0	%100
43	M39	X	4.435	4.435	0	%100
44	M39	Z	-2.56	-2.56	0	%100
45	M40	X	14.045	14.045	0	%100
46	M40	Z	-8.109	-8.109	0	%100
47	M41	X	8.125	8.125	0	%100
48	M41	Z	-4.691	-4.691	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	8.174	8.174	0	%100
2	M1	Z	0	0	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	0	0	0	%100
5	M6	X	8.174	8.174	0	%100
6	M6	Z	0	0	0	%100
7	M9	X	0	0	0	%100
8	M9	Z	0	0	0	%100
9	M11	X	12.052	12.052	0	%100
10	M11	Z	0	0	0	%100
11	M14	X	4.045	4.045	0	%100
12	M14	Z	0	0	0	%100
13	M15	X	4.045	4.045	0	%100
14	M15	Z	0	0	0	%100
15	M16	X	4.045	4.045	0	%100
16	M16	Z	0	0	0	%100
17	MP1A	X	9.606	9.606	0	%100
18	MP1A	Z	0	0	0	%100
19	MP3A	X	9.606	9.606	0	%100
20	MP3A	Z	0	0	0	%100
21	M28	X	4.962	4.962	0	%100
22	M28	Z	0	0	0	%100
23	M29	X	4.962	4.962	0	%100
24	M29	Z	0	0	0	%100
25	M31	X	1.058	1.058	0	%100
26	M31	Z	0	0	0	%100
27	MP2A	X	9.606	9.606	0	%100
28	MP2A	Z	0	0	0	%100
29	M27	X	0	0	0	%100
30	M27	Z	0	0	0	%100
31	M28A	X	0	0	0	%100
32	M28A	Z	0	0	0	%100
33	M29A	X	4.962	4.962	0	%100
34	M29A	Z	0	0	0	%100
35	M30	X	4.962	4.962	0	%100
36	M30	Z	0	0	0	%100
37	M31A	X	1.058	1.058	0	%100
38	M31A	Z	0	0	0	%100
39	M32	X	8.347	8.347	0	%100
40	M32	Z	0	0	0	%100
41	M35A	X	0	0	0	%100
42	M35A	Z	0	0	0	%100
43	M39	X	11.887	11.887	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[in,%]	End Location[in,%]
44	M39	Z	0	0	0	%100
45	M40	X	11.887	11.887	0	%100
46	M40	Z	0	0	0	%100
47	M41	X	8.347	8.347	0	%100
48	M41	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	5.309	5.309	0	%100
2	M1	Z	3.065	3.065	0	%100
3	M4	X	1.454	1.454	0	%100
4	M4	Z	.839	.839	0	%100
5	M6	X	5.309	5.309	0	%100
6	M6	Z	3.065	3.065	0	%100
7	M9	X	1.454	1.454	0	%100
8	M9	Z	.839	.839	0	%100
9	M11	X	10.437	10.437	0	%100
10	M11	Z	6.026	6.026	0	%100
11	M14	X	3.503	3.503	0	%100
12	M14	Z	2.022	2.022	0	%100
13	M15	X	3.503	3.503	0	%100
14	M15	Z	2.022	2.022	0	%100
15	M16	X	3.309	3.309	0	%100
16	M16	Z	1.91	1.91	0	%100
17	MP1A	X	8.319	8.319	0	%100
18	MP1A	Z	4.803	4.803	0	%100
19	MP3A	X	8.319	8.319	0	%100
20	MP3A	Z	4.803	4.803	0	%100
21	M28	X	4.297	4.297	0	%100
22	M28	Z	2.481	2.481	0	%100
23	M29	X	4.297	4.297	0	%100
24	M29	Z	2.481	2.481	0	%100
25	M31	X	1.344	1.344	0	%100
26	M31	Z	.776	.776	0	%100
27	MP2A	X	8.319	8.319	0	%100
28	MP2A	Z	4.803	4.803	0	%100
29	M27	X	1.454	1.454	0	%100
30	M27	Z	.839	.839	0	%100
31	M28A	X	1.454	1.454	0	%100
32	M28A	Z	.839	.839	0	%100
33	M29A	X	4.297	4.297	0	%100
34	M29A	Z	2.481	2.481	0	%100
35	M30	X	4.297	4.297	0	%100
36	M30	Z	2.481	2.481	0	%100
37	M31A	X	1.344	1.344	0	%100
38	M31A	Z	.776	.776	0	%100
39	M32	X	8.125	8.125	0	%100
40	M32	Z	4.691	4.691	0	%100
41	M35A	X	2.08	2.08	0	%100
42	M35A	Z	1.201	1.201	0	%100
43	M39	X	14.045	14.045	0	%100
44	M39	Z	8.109	8.109	0	%100
45	M40	X	4.435	4.435	0	%100
46	M40	Z	2.56	2.56	0	%100
47	M41	X	3.263	3.263	0	%100
48	M41	Z	1.884	1.884	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	1.022	1.022	0	%100
2	M1	Z	1.77	1.77	0	%100
3	M4	X	2.518	2.518	0	%100
4	M4	Z	4.361	4.361	0	%100
5	M6	X	1.022	1.022	0	%100
6	M6	Z	1.77	1.77	0	%100
7	M9	X	2.518	2.518	0	%100
8	M9	Z	4.361	4.361	0	%100
9	M11	X	6.026	6.026	0	%100
10	M11	Z	10.437	10.437	0	%100
11	M14	X	2.022	2.022	0	%100
12	M14	Z	3.503	3.503	0	%100
13	M15	X	2.022	2.022	0	%100
14	M15	Z	3.503	3.503	0	%100
15	M16	X	1.686	1.686	0	%100
16	M16	Z	2.921	2.921	0	%100
17	MP1A	X	4.803	4.803	0	%100
18	MP1A	Z	8.319	8.319	0	%100
19	MP3A	X	4.803	4.803	0	%100
20	MP3A	Z	8.319	8.319	0	%100
21	M28	X	2.481	2.481	0	%100
22	M28	Z	4.297	4.297	0	%100
23	M29	X	2.481	2.481	0	%100
24	M29	Z	4.297	4.297	0	%100
25	M31	X	1.27	1.27	0	%100
26	M31	Z	2.199	2.199	0	%100
27	MP2A	X	4.803	4.803	0	%100
28	MP2A	Z	8.319	8.319	0	%100
29	M27	X	2.518	2.518	0	%100
30	M27	Z	4.361	4.361	0	%100
31	M28A	X	2.518	2.518	0	%100
32	M28A	Z	4.361	4.361	0	%100
33	M29A	X	2.481	2.481	0	%100
34	M29A	Z	4.297	4.297	0	%100
35	M30	X	2.481	2.481	0	%100
36	M30	Z	4.297	4.297	0	%100
37	M31A	X	1.27	1.27	0	%100
38	M31A	Z	2.199	2.199	0	%100
39	M32	X	2.919	2.919	0	%100
40	M32	Z	5.056	5.056	0	%100
41	M35A	X	3.602	3.602	0	%100
42	M35A	Z	6.239	6.239	0	%100
43	M39	X	6.891	6.891	0	%100
44	M39	Z	11.936	11.936	0	%100
45	M40	X	1.343	1.343	0	%100
46	M40	Z	2.325	2.325	0	%100
47	M41	X	.112	.112	0	%100
48	M41	Z	.194	.194	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	6.714	6.714	0	%100
5	M6	X	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
6	M6	Z	0	0	0	%100
7	M9	X	0	0	0	%100
8	M9	Z	6.714	6.714	0	%100
9	M11	X	0	0	0	%100
10	M11	Z	12.052	12.052	0	%100
11	M14	X	0	0	0	%100
12	M14	Z	4.045	4.045	0	%100
13	M15	X	0	0	0	%100
14	M15	Z	4.045	4.045	0	%100
15	M16	X	0	0	0	%100
16	M16	Z	3.149	3.149	0	%100
17	MP1A	X	0	0	0	%100
18	MP1A	Z	9.606	9.606	0	%100
19	MP3A	X	0	0	0	%100
20	MP3A	Z	9.606	9.606	0	%100
21	M28	X	0	0	0	%100
22	M28	Z	4.962	4.962	0	%100
23	M29	X	0	0	0	%100
24	M29	Z	4.962	4.962	0	%100
25	M31	X	0	0	0	%100
26	M31	Z	3.034	3.034	0	%100
27	MP2A	X	0	0	0	%100
28	MP2A	Z	9.606	9.606	0	%100
29	M27	X	0	0	0	%100
30	M27	Z	6.714	6.714	0	%100
31	M28A	X	0	0	0	%100
32	M28A	Z	6.714	6.714	0	%100
33	M29A	X	0	0	0	%100
34	M29A	Z	4.962	4.962	0	%100
35	M30	X	0	0	0	%100
36	M30	Z	4.962	4.962	0	%100
37	M31A	X	0	0	0	%100
38	M31A	Z	3.034	3.034	0	%100
39	M32	X	0	0	0	%100
40	M32	Z	1.259	1.259	0	%100
41	M35A	X	0	0	0	%100
42	M35A	Z	9.606	9.606	0	%100
43	M39	X	0	0	0	%100
44	M39	Z	7.016	7.016	0	%100
45	M40	X	0	0	0	%100
46	M40	Z	7.016	7.016	0	%100
47	M41	X	0	0	0	%100
48	M41	Z	1.259	1.259	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	-1.022	-1.022	0	%100
2	M1	Z	1.77	1.77	0	%100
3	M4	X	-2.518	-2.518	0	%100
4	M4	Z	4.361	4.361	0	%100
5	M6	X	-1.022	-1.022	0	%100
6	M6	Z	1.77	1.77	0	%100
7	M9	X	-2.518	-2.518	0	%100
8	M9	Z	4.361	4.361	0	%100
9	M11	X	-6.026	-6.026	0	%100
10	M11	Z	10.437	10.437	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
11	M14	X	-2.022	-2.022	0	%100
12	M14	Z	3.503	3.503	0	%100
13	M15	X	-2.022	-2.022	0	%100
14	M15	Z	3.503	3.503	0	%100
15	M16	X	-1.686	-1.686	0	%100
16	M16	Z	2.921	2.921	0	%100
17	MP1A	X	-4.803	-4.803	0	%100
18	MP1A	Z	8.319	8.319	0	%100
19	MP3A	X	-4.803	-4.803	0	%100
20	MP3A	Z	8.319	8.319	0	%100
21	M28	X	-2.481	-2.481	0	%100
22	M28	Z	4.297	4.297	0	%100
23	M29	X	-2.481	-2.481	0	%100
24	M29	Z	4.297	4.297	0	%100
25	M31	X	-1.27	-1.27	0	%100
26	M31	Z	2.199	2.199	0	%100
27	MP2A	X	-4.803	-4.803	0	%100
28	MP2A	Z	8.319	8.319	0	%100
29	M27	X	-2.518	-2.518	0	%100
30	M27	Z	4.361	4.361	0	%100
31	M28A	X	-2.518	-2.518	0	%100
32	M28A	Z	4.361	4.361	0	%100
33	M29A	X	-2.481	-2.481	0	%100
34	M29A	Z	4.297	4.297	0	%100
35	M30	X	-2.481	-2.481	0	%100
36	M30	Z	4.297	4.297	0	%100
37	M31A	X	-1.27	-1.27	0	%100
38	M31A	Z	2.199	2.199	0	%100
39	M32	X	-.112	-.112	0	%100
40	M32	Z	.194	.194	0	%100
41	M35A	X	-3.602	-3.602	0	%100
42	M35A	Z	6.239	6.239	0	%100
43	M39	X	-1.343	-1.343	0	%100
44	M39	Z	2.325	2.325	0	%100
45	M40	X	-6.891	-6.891	0	%100
46	M40	Z	11.936	11.936	0	%100
47	M41	X	-2.919	-2.919	0	%100
48	M41	Z	5.056	5.056	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	-5.309	-5.309	0	%100
2	M1	Z	3.065	3.065	0	%100
3	M4	X	-1.454	-1.454	0	%100
4	M4	Z	.839	.839	0	%100
5	M6	X	-5.309	-5.309	0	%100
6	M6	Z	3.065	3.065	0	%100
7	M9	X	-1.454	-1.454	0	%100
8	M9	Z	.839	.839	0	%100
9	M11	X	-10.437	-10.437	0	%100
10	M11	Z	6.026	6.026	0	%100
11	M14	X	-3.503	-3.503	0	%100
12	M14	Z	2.022	2.022	0	%100
13	M15	X	-3.503	-3.503	0	%100
14	M15	Z	2.022	2.022	0	%100
15	M16	X	-3.309	-3.309	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
16	M16	Z	1.91	1.91	0	%100
17	MP1A	X	-8.319	-8.319	0	%100
18	MP1A	Z	4.803	4.803	0	%100
19	MP3A	X	-8.319	-8.319	0	%100
20	MP3A	Z	4.803	4.803	0	%100
21	M28	X	-4.297	-4.297	0	%100
22	M28	Z	2.481	2.481	0	%100
23	M29	X	-4.297	-4.297	0	%100
24	M29	Z	2.481	2.481	0	%100
25	M31	X	-1.344	-1.344	0	%100
26	M31	Z	.776	.776	0	%100
27	MP2A	X	-8.319	-8.319	0	%100
28	MP2A	Z	4.803	4.803	0	%100
29	M27	X	-1.454	-1.454	0	%100
30	M27	Z	.839	.839	0	%100
31	M28A	X	-1.454	-1.454	0	%100
32	M28A	Z	.839	.839	0	%100
33	M29A	X	-4.297	-4.297	0	%100
34	M29A	Z	2.481	2.481	0	%100
35	M30	X	-4.297	-4.297	0	%100
36	M30	Z	2.481	2.481	0	%100
37	M31A	X	-1.344	-1.344	0	%100
38	M31A	Z	.776	.776	0	%100
39	M32	X	-3.263	-3.263	0	%100
40	M32	Z	1.884	1.884	0	%100
41	M35A	X	-2.08	-2.08	0	%100
42	M35A	Z	1.201	1.201	0	%100
43	M39	X	-4.435	-4.435	0	%100
44	M39	Z	2.56	2.56	0	%100
45	M40	X	-14.045	-14.045	0	%100
46	M40	Z	8.109	8.109	0	%100
47	M41	X	-8.125	-8.125	0	%100
48	M41	Z	4.691	4.691	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	-8.174	-8.174	0	%100
2	M1	Z	0	0	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	0	0	0	%100
5	M6	X	-8.174	-8.174	0	%100
6	M6	Z	0	0	0	%100
7	M9	X	0	0	0	%100
8	M9	Z	0	0	0	%100
9	M11	X	-12.052	-12.052	0	%100
10	M11	Z	0	0	0	%100
11	M14	X	-4.045	-4.045	0	%100
12	M14	Z	0	0	0	%100
13	M15	X	-4.045	-4.045	0	%100
14	M15	Z	0	0	0	%100
15	M16	X	-4.045	-4.045	0	%100
16	M16	Z	0	0	0	%100
17	MP1A	X	-9.606	-9.606	0	%100
18	MP1A	Z	0	0	0	%100
19	MP3A	X	-9.606	-9.606	0	%100
20	MP3A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
21	M28	X	-4.962	-4.962	0	%100
22	M28	Z	0	0	0	%100
23	M29	X	-4.962	-4.962	0	%100
24	M29	Z	0	0	0	%100
25	M31	X	-1.058	-1.058	0	%100
26	M31	Z	0	0	0	%100
27	MP2A	X	-9.606	-9.606	0	%100
28	MP2A	Z	0	0	0	%100
29	M27	X	0	0	0	%100
30	M27	Z	0	0	0	%100
31	M28A	X	0	0	0	%100
32	M28A	Z	0	0	0	%100
33	M29A	X	-4.962	-4.962	0	%100
34	M29A	Z	0	0	0	%100
35	M30	X	-4.962	-4.962	0	%100
36	M30	Z	0	0	0	%100
37	M31A	X	-1.058	-1.058	0	%100
38	M31A	Z	0	0	0	%100
39	M32	X	-8.347	-8.347	0	%100
40	M32	Z	0	0	0	%100
41	M35A	X	0	0	0	%100
42	M35A	Z	0	0	0	%100
43	M39	X	-11.887	-11.887	0	%100
44	M39	Z	0	0	0	%100
45	M40	X	-11.887	-11.887	0	%100
46	M40	Z	0	0	0	%100
47	M41	X	-8.347	-8.347	0	%100
48	M41	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	-5.309	-5.309	0	%100
2	M1	Z	-3.065	-3.065	0	%100
3	M4	X	-1.454	-1.454	0	%100
4	M4	Z	-.839	-.839	0	%100
5	M6	X	-5.309	-5.309	0	%100
6	M6	Z	-3.065	-3.065	0	%100
7	M9	X	-1.454	-1.454	0	%100
8	M9	Z	-.839	-.839	0	%100
9	M11	X	-10.437	-10.437	0	%100
10	M11	Z	-6.026	-6.026	0	%100
11	M14	X	-3.503	-3.503	0	%100
12	M14	Z	-2.022	-2.022	0	%100
13	M15	X	-3.503	-3.503	0	%100
14	M15	Z	-2.022	-2.022	0	%100
15	M16	X	-3.309	-3.309	0	%100
16	M16	Z	-1.91	-1.91	0	%100
17	MP1A	X	-8.319	-8.319	0	%100
18	MP1A	Z	-4.803	-4.803	0	%100
19	MP3A	X	-8.319	-8.319	0	%100
20	MP3A	Z	-4.803	-4.803	0	%100
21	M28	X	-4.297	-4.297	0	%100
22	M28	Z	-2.481	-2.481	0	%100
23	M29	X	-4.297	-4.297	0	%100
24	M29	Z	-2.481	-2.481	0	%100
25	M31	X	-1.344	-1.344	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[in,%]	End Location[in,%]
26	M31	Z	-.776	-.776	0	%100
27	MP2A	X	-8.319	-8.319	0	%100
28	MP2A	Z	-4.803	-4.803	0	%100
29	M27	X	-1.454	-1.454	0	%100
30	M27	Z	-.839	-.839	0	%100
31	M28A	X	-1.454	-1.454	0	%100
32	M28A	Z	-.839	-.839	0	%100
33	M29A	X	-4.297	-4.297	0	%100
34	M29A	Z	-2.481	-2.481	0	%100
35	M30	X	-4.297	-4.297	0	%100
36	M30	Z	-2.481	-2.481	0	%100
37	M31A	X	-1.344	-1.344	0	%100
38	M31A	Z	-.776	-.776	0	%100
39	M32	X	-8.125	-8.125	0	%100
40	M32	Z	-4.691	-4.691	0	%100
41	M35A	X	-2.08	-2.08	0	%100
42	M35A	Z	-1.201	-1.201	0	%100
43	M39	X	-14.045	-14.045	0	%100
44	M39	Z	-8.109	-8.109	0	%100
45	M40	X	-4.435	-4.435	0	%100
46	M40	Z	-2.56	-2.56	0	%100
47	M41	X	-3.263	-3.263	0	%100
48	M41	Z	-1.884	-1.884	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	-1.022	-1.022	0	%100
2	M1	Z	-1.77	-1.77	0	%100
3	M4	X	-2.518	-2.518	0	%100
4	M4	Z	-4.361	-4.361	0	%100
5	M6	X	-1.022	-1.022	0	%100
6	M6	Z	-1.77	-1.77	0	%100
7	M9	X	-2.518	-2.518	0	%100
8	M9	Z	-4.361	-4.361	0	%100
9	M11	X	-6.026	-6.026	0	%100
10	M11	Z	-10.437	-10.437	0	%100
11	M14	X	-2.022	-2.022	0	%100
12	M14	Z	-3.503	-3.503	0	%100
13	M15	X	-2.022	-2.022	0	%100
14	M15	Z	-3.503	-3.503	0	%100
15	M16	X	-1.686	-1.686	0	%100
16	M16	Z	-2.921	-2.921	0	%100
17	MP1A	X	-4.803	-4.803	0	%100
18	MP1A	Z	-8.319	-8.319	0	%100
19	MP3A	X	-4.803	-4.803	0	%100
20	MP3A	Z	-8.319	-8.319	0	%100
21	M28	X	-2.481	-2.481	0	%100
22	M28	Z	-4.297	-4.297	0	%100
23	M29	X	-2.481	-2.481	0	%100
24	M29	Z	-4.297	-4.297	0	%100
25	M31	X	-1.27	-1.27	0	%100
26	M31	Z	-2.199	-2.199	0	%100
27	MP2A	X	-4.803	-4.803	0	%100
28	MP2A	Z	-8.319	-8.319	0	%100
29	M27	X	-2.518	-2.518	0	%100
30	M27	Z	-4.361	-4.361	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
31	M28A	X	-2.518	-2.518	0	%100
32	M28A	Z	-4.361	-4.361	0	%100
33	M29A	X	-2.481	-2.481	0	%100
34	M29A	Z	-4.297	-4.297	0	%100
35	M30	X	-2.481	-2.481	0	%100
36	M30	Z	-4.297	-4.297	0	%100
37	M31A	X	-1.27	-1.27	0	%100
38	M31A	Z	-2.199	-2.199	0	%100
39	M32	X	-2.919	-2.919	0	%100
40	M32	Z	-5.056	-5.056	0	%100
41	M35A	X	-3.602	-3.602	0	%100
42	M35A	Z	-6.239	-6.239	0	%100
43	M39	X	-6.891	-6.891	0	%100
44	M39	Z	-11.936	-11.936	0	%100
45	M40	X	-1.343	-1.343	0	%100
46	M40	Z	-2.325	-2.325	0	%100
47	M41	X	-.112	-.112	0	%100
48	M41	Z	-.194	-.194	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	-3.016	-3.016	0	%100
5	M6	X	0	0	0	%100
6	M6	Z	0	0	0	%100
7	M9	X	0	0	0	%100
8	M9	Z	-3.016	-3.016	0	%100
9	M11	X	0	0	0	%100
10	M11	Z	-4.569	-4.569	0	%100
11	M14	X	0	0	0	%100
12	M14	Z	-2.172	-2.172	0	%100
13	M15	X	0	0	0	%100
14	M15	Z	-2.172	-2.172	0	%100
15	M16	X	0	0	0	%100
16	M16	Z	-1.735	-1.735	0	%100
17	MP1A	X	0	0	0	%100
18	MP1A	Z	-3.645	-3.645	0	%100
19	MP3A	X	0	0	0	%100
20	MP3A	Z	-3.645	-3.645	0	%100
21	M28	X	0	0	0	%100
22	M28	Z	-2.345	-2.345	0	%100
23	M29	X	0	0	0	%100
24	M29	Z	-2.345	-2.345	0	%100
25	M31	X	0	0	0	%100
26	M31	Z	-2.275	-2.275	0	%100
27	MP2A	X	0	0	0	%100
28	MP2A	Z	-3.645	-3.645	0	%100
29	M27	X	0	0	0	%100
30	M27	Z	-3.016	-3.016	0	%100
31	M28A	X	0	0	0	%100
32	M28A	Z	-3.016	-3.016	0	%100
33	M29A	X	0	0	0	%100
34	M29A	Z	-2.345	-2.345	0	%100
35	M30	X	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
36	M30	Z	-2.345	-2.345	0	%100
37	M31A	X	0	0	0	%100
38	M31A	Z	-2.275	-2.275	0	%100
39	M32	X	0	0	0	%100
40	M32	Z	-.478	-.478	0	%100
41	M35A	X	0	0	0	%100
42	M35A	Z	-3.645	-3.645	0	%100
43	M39	X	0	0	0	%100
44	M39	Z	-2.1	-2.1	0	%100
45	M40	X	0	0	0	%100
46	M40	Z	-2.1	-2.1	0	%100
47	M41	X	0	0	0	%100
48	M41	Z	-.478	-.478	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	.362	.362	0	%100
2	M1	Z	-.626	-.626	0	%100
3	M4	X	1.131	1.131	0	%100
4	M4	Z	-1.959	-1.959	0	%100
5	M6	X	.362	.362	0	%100
6	M6	Z	-.626	-.626	0	%100
7	M9	X	1.131	1.131	0	%100
8	M9	Z	-1.959	-1.959	0	%100
9	M11	X	2.285	2.285	0	%100
10	M11	Z	-3.957	-3.957	0	%100
11	M14	X	1.086	1.086	0	%100
12	M14	Z	-1.881	-1.881	0	%100
13	M15	X	1.086	1.086	0	%100
14	M15	Z	-1.881	-1.881	0	%100
15	M16	X	.929	.929	0	%100
16	M16	Z	-1.609	-1.609	0	%100
17	MP1A	X	1.823	1.823	0	%100
18	MP1A	Z	-3.157	-3.157	0	%100
19	MP3A	X	1.823	1.823	0	%100
20	MP3A	Z	-3.157	-3.157	0	%100
21	M28	X	1.173	1.173	0	%100
22	M28	Z	-2.031	-2.031	0	%100
23	M29	X	1.173	1.173	0	%100
24	M29	Z	-2.031	-2.031	0	%100
25	M31	X	.952	.952	0	%100
26	M31	Z	-1.65	-1.65	0	%100
27	MP2A	X	1.823	1.823	0	%100
28	MP2A	Z	-3.157	-3.157	0	%100
29	M27	X	1.131	1.131	0	%100
30	M27	Z	-1.959	-1.959	0	%100
31	M28A	X	1.131	1.131	0	%100
32	M28A	Z	-1.959	-1.959	0	%100
33	M29A	X	1.173	1.173	0	%100
34	M29A	Z	-2.031	-2.031	0	%100
35	M30	X	1.173	1.173	0	%100
36	M30	Z	-2.031	-2.031	0	%100
37	M31A	X	.952	.952	0	%100
38	M31A	Z	-1.65	-1.65	0	%100
39	M32	X	.042	.042	0	%100
40	M32	Z	-.073	-.073	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
41	M35A	X	1.367	1.367	0	%100
42	M35A	Z	-2.368	-2.368	0	%100
43	M39	X	.402	.402	0	%100
44	M39	Z	-.696	-.696	0	%100
45	M40	X	2.063	2.063	0	%100
46	M40	Z	-3.573	-3.573	0	%100
47	M41	X	1.108	1.108	0	%100
48	M41	Z	-1.919	-1.919	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	1.878	1.878	0	%100
2	M1	Z	-1.085	-1.085	0	%100
3	M4	X	.653	.653	0	%100
4	M4	Z	-.377	-.377	0	%100
5	M6	X	1.878	1.878	0	%100
6	M6	Z	-1.085	-1.085	0	%100
7	M9	X	.653	.653	0	%100
8	M9	Z	-.377	-.377	0	%100
9	M11	X	3.957	3.957	0	%100
10	M11	Z	-2.285	-2.285	0	%100
11	M14	X	1.881	1.881	0	%100
12	M14	Z	-1.086	-1.086	0	%100
13	M15	X	1.881	1.881	0	%100
14	M15	Z	-1.086	-1.086	0	%100
15	M16	X	1.823	1.823	0	%100
16	M16	Z	-1.053	-1.053	0	%100
17	MP1A	X	3.157	3.157	0	%100
18	MP1A	Z	-1.823	-1.823	0	%100
19	MP3A	X	3.157	3.157	0	%100
20	MP3A	Z	-1.823	-1.823	0	%100
21	M28	X	2.031	2.031	0	%100
22	M28	Z	-1.173	-1.173	0	%100
23	M29	X	2.031	2.031	0	%100
24	M29	Z	-1.173	-1.173	0	%100
25	M31	X	1.008	1.008	0	%100
26	M31	Z	-.582	-.582	0	%100
27	MP2A	X	3.157	3.157	0	%100
28	MP2A	Z	-1.823	-1.823	0	%100
29	M27	X	.653	.653	0	%100
30	M27	Z	-.377	-.377	0	%100
31	M28A	X	.653	.653	0	%100
32	M28A	Z	-.377	-.377	0	%100
33	M29A	X	2.031	2.031	0	%100
34	M29A	Z	-1.173	-1.173	0	%100
35	M30	X	2.031	2.031	0	%100
36	M30	Z	-1.173	-1.173	0	%100
37	M31A	X	1.008	1.008	0	%100
38	M31A	Z	-.582	-.582	0	%100
39	M32	X	1.238	1.238	0	%100
40	M32	Z	-.715	-.715	0	%100
41	M35A	X	.789	.789	0	%100
42	M35A	Z	-.456	-.456	0	%100
43	M39	X	1.327	1.327	0	%100
44	M39	Z	-.766	-.766	0	%100
45	M40	X	4.204	4.204	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
46	M40	Z	-2.427	-2.427	0	%100
47	M41	X	3.083	3.083	0	%100
48	M41	Z	-1.78	-1.78	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	2.892	2.892	0	%100
2	M1	Z	0	0	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	0	0	0	%100
5	M6	X	2.892	2.892	0	%100
6	M6	Z	0	0	0	%100
7	M9	X	0	0	0	%100
8	M9	Z	0	0	0	%100
9	M11	X	4.569	4.569	0	%100
10	M11	Z	0	0	0	%100
11	M14	X	2.172	2.172	0	%100
12	M14	Z	0	0	0	%100
13	M15	X	2.172	2.172	0	%100
14	M15	Z	0	0	0	%100
15	M16	X	2.228	2.228	0	%100
16	M16	Z	0	0	0	%100
17	MP1A	X	3.645	3.645	0	%100
18	MP1A	Z	0	0	0	%100
19	MP3A	X	3.645	3.645	0	%100
20	MP3A	Z	0	0	0	%100
21	M28	X	2.345	2.345	0	%100
22	M28	Z	0	0	0	%100
23	M29	X	2.345	2.345	0	%100
24	M29	Z	0	0	0	%100
25	M31	X	.793	.793	0	%100
26	M31	Z	0	0	0	%100
27	MP2A	X	3.645	3.645	0	%100
28	MP2A	Z	0	0	0	%100
29	M27	X	0	0	0	%100
30	M27	Z	0	0	0	%100
31	M28A	X	0	0	0	%100
32	M28A	Z	0	0	0	%100
33	M29A	X	2.345	2.345	0	%100
34	M29A	Z	0	0	0	%100
35	M30	X	2.345	2.345	0	%100
36	M30	Z	0	0	0	%100
37	M31A	X	.793	.793	0	%100
38	M31A	Z	0	0	0	%100
39	M32	X	3.167	3.167	0	%100
40	M32	Z	0	0	0	%100
41	M35A	X	0	0	0	%100
42	M35A	Z	0	0	0	%100
43	M39	X	3.558	3.558	0	%100
44	M39	Z	0	0	0	%100
45	M40	X	3.558	3.558	0	%100
46	M40	Z	0	0	0	%100
47	M41	X	3.167	3.167	0	%100
48	M41	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	1.878	1.878	0	%100
2	M1	Z	1.085	1.085	0	%100
3	M4	X	.653	.653	0	%100
4	M4	Z	.377	.377	0	%100
5	M6	X	1.878	1.878	0	%100
6	M6	Z	1.085	1.085	0	%100
7	M9	X	.653	.653	0	%100
8	M9	Z	.377	.377	0	%100
9	M11	X	3.957	3.957	0	%100
10	M11	Z	2.285	2.285	0	%100
11	M14	X	1.881	1.881	0	%100
12	M14	Z	1.086	1.086	0	%100
13	M15	X	1.881	1.881	0	%100
14	M15	Z	1.086	1.086	0	%100
15	M16	X	1.823	1.823	0	%100
16	M16	Z	1.053	1.053	0	%100
17	MP1A	X	3.157	3.157	0	%100
18	MP1A	Z	1.823	1.823	0	%100
19	MP3A	X	3.157	3.157	0	%100
20	MP3A	Z	1.823	1.823	0	%100
21	M28	X	2.031	2.031	0	%100
22	M28	Z	1.173	1.173	0	%100
23	M29	X	2.031	2.031	0	%100
24	M29	Z	1.173	1.173	0	%100
25	M31	X	1.008	1.008	0	%100
26	M31	Z	.582	.582	0	%100
27	MP2A	X	3.157	3.157	0	%100
28	MP2A	Z	1.823	1.823	0	%100
29	M27	X	.653	.653	0	%100
30	M27	Z	.377	.377	0	%100
31	M28A	X	.653	.653	0	%100
32	M28A	Z	.377	.377	0	%100
33	M29A	X	2.031	2.031	0	%100
34	M29A	Z	1.173	1.173	0	%100
35	M30	X	2.031	2.031	0	%100
36	M30	Z	1.173	1.173	0	%100
37	M31A	X	1.008	1.008	0	%100
38	M31A	Z	.582	.582	0	%100
39	M32	X	3.083	3.083	0	%100
40	M32	Z	1.78	1.78	0	%100
41	M35A	X	.789	.789	0	%100
42	M35A	Z	.456	.456	0	%100
43	M39	X	4.204	4.204	0	%100
44	M39	Z	2.427	2.427	0	%100
45	M40	X	1.327	1.327	0	%100
46	M40	Z	.766	.766	0	%100
47	M41	X	1.238	1.238	0	%100
48	M41	Z	.715	.715	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	.362	.362	0	%100
2	M1	Z	.626	.626	0	%100
3	M4	X	1.131	1.131	0	%100
4	M4	Z	1.959	1.959	0	%100
5	M6	X	.362	.362	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
6	M6	Z	.626	.626	0	%100
7	M9	X	1.131	1.131	0	%100
8	M9	Z	1.959	1.959	0	%100
9	M11	X	2.285	2.285	0	%100
10	M11	Z	3.957	3.957	0	%100
11	M14	X	1.086	1.086	0	%100
12	M14	Z	1.881	1.881	0	%100
13	M15	X	1.086	1.086	0	%100
14	M15	Z	1.881	1.881	0	%100
15	M16	X	.929	.929	0	%100
16	M16	Z	1.609	1.609	0	%100
17	MP1A	X	1.823	1.823	0	%100
18	MP1A	Z	3.157	3.157	0	%100
19	MP3A	X	1.823	1.823	0	%100
20	MP3A	Z	3.157	3.157	0	%100
21	M28	X	1.173	1.173	0	%100
22	M28	Z	2.031	2.031	0	%100
23	M29	X	1.173	1.173	0	%100
24	M29	Z	2.031	2.031	0	%100
25	M31	X	.952	.952	0	%100
26	M31	Z	1.65	1.65	0	%100
27	MP2A	X	1.823	1.823	0	%100
28	MP2A	Z	3.157	3.157	0	%100
29	M27	X	1.131	1.131	0	%100
30	M27	Z	1.959	1.959	0	%100
31	M28A	X	1.131	1.131	0	%100
32	M28A	Z	1.959	1.959	0	%100
33	M29A	X	1.173	1.173	0	%100
34	M29A	Z	2.031	2.031	0	%100
35	M30	X	1.173	1.173	0	%100
36	M30	Z	2.031	2.031	0	%100
37	M31A	X	.952	.952	0	%100
38	M31A	Z	1.65	1.65	0	%100
39	M32	X	1.108	1.108	0	%100
40	M32	Z	1.919	1.919	0	%100
41	M35A	X	1.367	1.367	0	%100
42	M35A	Z	2.368	2.368	0	%100
43	M39	X	2.063	2.063	0	%100
44	M39	Z	3.573	3.573	0	%100
45	M40	X	.402	.402	0	%100
46	M40	Z	.696	.696	0	%100
47	M41	X	.042	.042	0	%100
48	M41	Z	.073	.073	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	3.016	3.016	0	%100
5	M6	X	0	0	0	%100
6	M6	Z	0	0	0	%100
7	M9	X	0	0	0	%100
8	M9	Z	3.016	3.016	0	%100
9	M11	X	0	0	0	%100
10	M11	Z	4.569	4.569	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
11	M14	X	0	0	0	%100
12	M14	Z	2.172	2.172	0	%100
13	M15	X	0	0	0	%100
14	M15	Z	2.172	2.172	0	%100
15	M16	X	0	0	0	%100
16	M16	Z	1.735	1.735	0	%100
17	MP1A	X	0	0	0	%100
18	MP1A	Z	3.645	3.645	0	%100
19	MP3A	X	0	0	0	%100
20	MP3A	Z	3.645	3.645	0	%100
21	M28	X	0	0	0	%100
22	M28	Z	2.345	2.345	0	%100
23	M29	X	0	0	0	%100
24	M29	Z	2.345	2.345	0	%100
25	M31	X	0	0	0	%100
26	M31	Z	2.275	2.275	0	%100
27	MP2A	X	0	0	0	%100
28	MP2A	Z	3.645	3.645	0	%100
29	M27	X	0	0	0	%100
30	M27	Z	3.016	3.016	0	%100
31	M28A	X	0	0	0	%100
32	M28A	Z	3.016	3.016	0	%100
33	M29A	X	0	0	0	%100
34	M29A	Z	2.345	2.345	0	%100
35	M30	X	0	0	0	%100
36	M30	Z	2.345	2.345	0	%100
37	M31A	X	0	0	0	%100
38	M31A	Z	2.275	2.275	0	%100
39	M32	X	0	0	0	%100
40	M32	Z	.478	.478	0	%100
41	M35A	X	0	0	0	%100
42	M35A	Z	3.645	3.645	0	%100
43	M39	X	0	0	0	%100
44	M39	Z	2.1	2.1	0	%100
45	M40	X	0	0	0	%100
46	M40	Z	2.1	2.1	0	%100
47	M41	X	0	0	0	%100
48	M41	Z	.478	.478	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	-.362	-.362	0	%100
2	M1	Z	.626	.626	0	%100
3	M4	X	-1.131	-1.131	0	%100
4	M4	Z	1.959	1.959	0	%100
5	M6	X	-.362	-.362	0	%100
6	M6	Z	.626	.626	0	%100
7	M9	X	-1.131	-1.131	0	%100
8	M9	Z	1.959	1.959	0	%100
9	M11	X	-2.285	-2.285	0	%100
10	M11	Z	3.957	3.957	0	%100
11	M14	X	-1.086	-1.086	0	%100
12	M14	Z	1.881	1.881	0	%100
13	M15	X	-1.086	-1.086	0	%100
14	M15	Z	1.881	1.881	0	%100
15	M16	X	-.929	-.929	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
16	M16	Z	1.609	1.609	0	%100
17	MP1A	X	-1.823	-1.823	0	%100
18	MP1A	Z	3.157	3.157	0	%100
19	MP3A	X	-1.823	-1.823	0	%100
20	MP3A	Z	3.157	3.157	0	%100
21	M28	X	-1.173	-1.173	0	%100
22	M28	Z	2.031	2.031	0	%100
23	M29	X	-1.173	-1.173	0	%100
24	M29	Z	2.031	2.031	0	%100
25	M31	X	-.952	-.952	0	%100
26	M31	Z	1.65	1.65	0	%100
27	MP2A	X	-1.823	-1.823	0	%100
28	MP2A	Z	3.157	3.157	0	%100
29	M27	X	-1.131	-1.131	0	%100
30	M27	Z	1.959	1.959	0	%100
31	M28A	X	-1.131	-1.131	0	%100
32	M28A	Z	1.959	1.959	0	%100
33	M29A	X	-1.173	-1.173	0	%100
34	M29A	Z	2.031	2.031	0	%100
35	M30	X	-1.173	-1.173	0	%100
36	M30	Z	2.031	2.031	0	%100
37	M31A	X	-.952	-.952	0	%100
38	M31A	Z	1.65	1.65	0	%100
39	M32	X	-.042	-.042	0	%100
40	M32	Z	.073	.073	0	%100
41	M35A	X	-1.367	-1.367	0	%100
42	M35A	Z	2.368	2.368	0	%100
43	M39	X	-.402	-.402	0	%100
44	M39	Z	.696	.696	0	%100
45	M40	X	-2.063	-2.063	0	%100
46	M40	Z	3.573	3.573	0	%100
47	M41	X	-1.108	-1.108	0	%100
48	M41	Z	1.919	1.919	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	-1.878	-1.878	0	%100
2	M1	Z	1.085	1.085	0	%100
3	M4	X	-.653	-.653	0	%100
4	M4	Z	.377	.377	0	%100
5	M6	X	-1.878	-1.878	0	%100
6	M6	Z	1.085	1.085	0	%100
7	M9	X	-.653	-.653	0	%100
8	M9	Z	.377	.377	0	%100
9	M11	X	-3.957	-3.957	0	%100
10	M11	Z	2.285	2.285	0	%100
11	M14	X	-1.881	-1.881	0	%100
12	M14	Z	1.086	1.086	0	%100
13	M15	X	-1.881	-1.881	0	%100
14	M15	Z	1.086	1.086	0	%100
15	M16	X	-1.823	-1.823	0	%100
16	M16	Z	1.053	1.053	0	%100
17	MP1A	X	-3.157	-3.157	0	%100
18	MP1A	Z	1.823	1.823	0	%100
19	MP3A	X	-3.157	-3.157	0	%100
20	MP3A	Z	1.823	1.823	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[in,%]	End Location[in,%]
21	M28	X	-2.031	-2.031	0	%100
22	M28	Z	1.173	1.173	0	%100
23	M29	X	-2.031	-2.031	0	%100
24	M29	Z	1.173	1.173	0	%100
25	M31	X	-1.008	-1.008	0	%100
26	M31	Z	.582	.582	0	%100
27	MP2A	X	-3.157	-3.157	0	%100
28	MP2A	Z	1.823	1.823	0	%100
29	M27	X	-.653	-.653	0	%100
30	M27	Z	.377	.377	0	%100
31	M28A	X	-.653	-.653	0	%100
32	M28A	Z	.377	.377	0	%100
33	M29A	X	-2.031	-2.031	0	%100
34	M29A	Z	1.173	1.173	0	%100
35	M30	X	-2.031	-2.031	0	%100
36	M30	Z	1.173	1.173	0	%100
37	M31A	X	-1.008	-1.008	0	%100
38	M31A	Z	.582	.582	0	%100
39	M32	X	-1.238	-1.238	0	%100
40	M32	Z	.715	.715	0	%100
41	M35A	X	-.789	-.789	0	%100
42	M35A	Z	.456	.456	0	%100
43	M39	X	-1.327	-1.327	0	%100
44	M39	Z	.766	.766	0	%100
45	M40	X	-4.204	-4.204	0	%100
46	M40	Z	2.427	2.427	0	%100
47	M41	X	-3.083	-3.083	0	%100
48	M41	Z	1.78	1.78	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	-2.892	-2.892	0	%100
2	M1	Z	0	0	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	0	0	0	%100
5	M6	X	-2.892	-2.892	0	%100
6	M6	Z	0	0	0	%100
7	M9	X	0	0	0	%100
8	M9	Z	0	0	0	%100
9	M11	X	-4.569	-4.569	0	%100
10	M11	Z	0	0	0	%100
11	M14	X	-2.172	-2.172	0	%100
12	M14	Z	0	0	0	%100
13	M15	X	-2.172	-2.172	0	%100
14	M15	Z	0	0	0	%100
15	M16	X	-2.228	-2.228	0	%100
16	M16	Z	0	0	0	%100
17	MP1A	X	-3.645	-3.645	0	%100
18	MP1A	Z	0	0	0	%100
19	MP3A	X	-3.645	-3.645	0	%100
20	MP3A	Z	0	0	0	%100
21	M28	X	-2.345	-2.345	0	%100
22	M28	Z	0	0	0	%100
23	M29	X	-2.345	-2.345	0	%100
24	M29	Z	0	0	0	%100
25	M31	X	-.793	-.793	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
26	M31	Z	0	0	0	%100
27	MP2A	X	-3.645	-3.645	0	%100
28	MP2A	Z	0	0	0	%100
29	M27	X	0	0	0	%100
30	M27	Z	0	0	0	%100
31	M28A	X	0	0	0	%100
32	M28A	Z	0	0	0	%100
33	M29A	X	-2.345	-2.345	0	%100
34	M29A	Z	0	0	0	%100
35	M30	X	-2.345	-2.345	0	%100
36	M30	Z	0	0	0	%100
37	M31A	X	-.793	-.793	0	%100
38	M31A	Z	0	0	0	%100
39	M32	X	-3.167	-3.167	0	%100
40	M32	Z	0	0	0	%100
41	M35A	X	0	0	0	%100
42	M35A	Z	0	0	0	%100
43	M39	X	-3.558	-3.558	0	%100
44	M39	Z	0	0	0	%100
45	M40	X	-3.558	-3.558	0	%100
46	M40	Z	0	0	0	%100
47	M41	X	-3.167	-3.167	0	%100
48	M41	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	-1.878	-1.878	0	%100
2	M1	Z	-1.085	-1.085	0	%100
3	M4	X	-.653	-.653	0	%100
4	M4	Z	-.377	-.377	0	%100
5	M6	X	-1.878	-1.878	0	%100
6	M6	Z	-1.085	-1.085	0	%100
7	M9	X	-.653	-.653	0	%100
8	M9	Z	-.377	-.377	0	%100
9	M11	X	-3.957	-3.957	0	%100
10	M11	Z	-2.285	-2.285	0	%100
11	M14	X	-1.881	-1.881	0	%100
12	M14	Z	-1.086	-1.086	0	%100
13	M15	X	-1.881	-1.881	0	%100
14	M15	Z	-1.086	-1.086	0	%100
15	M16	X	-1.823	-1.823	0	%100
16	M16	Z	-1.053	-1.053	0	%100
17	MP1A	X	-3.157	-3.157	0	%100
18	MP1A	Z	-1.823	-1.823	0	%100
19	MP3A	X	-3.157	-3.157	0	%100
20	MP3A	Z	-1.823	-1.823	0	%100
21	M28	X	-2.031	-2.031	0	%100
22	M28	Z	-1.173	-1.173	0	%100
23	M29	X	-2.031	-2.031	0	%100
24	M29	Z	-1.173	-1.173	0	%100
25	M31	X	-1.008	-1.008	0	%100
26	M31	Z	-.582	-.582	0	%100
27	MP2A	X	-3.157	-3.157	0	%100
28	MP2A	Z	-1.823	-1.823	0	%100
29	M27	X	-.653	-.653	0	%100
30	M27	Z	-.377	-.377	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
31	M28A	X	-.653	-.653	0	%100
32	M28A	Z	-.377	-.377	0	%100
33	M29A	X	-2.031	-2.031	0	%100
34	M29A	Z	-1.173	-1.173	0	%100
35	M30	X	-2.031	-2.031	0	%100
36	M30	Z	-1.173	-1.173	0	%100
37	M31A	X	-1.008	-1.008	0	%100
38	M31A	Z	-.582	-.582	0	%100
39	M32	X	-3.083	-3.083	0	%100
40	M32	Z	-1.78	-1.78	0	%100
41	M35A	X	-.789	-.789	0	%100
42	M35A	Z	-.456	-.456	0	%100
43	M39	X	-4.204	-4.204	0	%100
44	M39	Z	-2.427	-2.427	0	%100
45	M40	X	-1.327	-1.327	0	%100
46	M40	Z	-.766	-.766	0	%100
47	M41	X	-1.238	-1.238	0	%100
48	M41	Z	-.715	-.715	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	-.362	-.362	0	%100
2	M1	Z	-.626	-.626	0	%100
3	M4	X	-1.131	-1.131	0	%100
4	M4	Z	-1.959	-1.959	0	%100
5	M6	X	-.362	-.362	0	%100
6	M6	Z	-.626	-.626	0	%100
7	M9	X	-1.131	-1.131	0	%100
8	M9	Z	-1.959	-1.959	0	%100
9	M11	X	-2.285	-2.285	0	%100
10	M11	Z	-3.957	-3.957	0	%100
11	M14	X	-1.086	-1.086	0	%100
12	M14	Z	-1.881	-1.881	0	%100
13	M15	X	-1.086	-1.086	0	%100
14	M15	Z	-1.881	-1.881	0	%100
15	M16	X	-.929	-.929	0	%100
16	M16	Z	-1.609	-1.609	0	%100
17	MP1A	X	-1.823	-1.823	0	%100
18	MP1A	Z	-3.157	-3.157	0	%100
19	MP3A	X	-1.823	-1.823	0	%100
20	MP3A	Z	-3.157	-3.157	0	%100
21	M28	X	-1.173	-1.173	0	%100
22	M28	Z	-2.031	-2.031	0	%100
23	M29	X	-1.173	-1.173	0	%100
24	M29	Z	-2.031	-2.031	0	%100
25	M31	X	-.952	-.952	0	%100
26	M31	Z	-1.65	-1.65	0	%100
27	MP2A	X	-1.823	-1.823	0	%100
28	MP2A	Z	-3.157	-3.157	0	%100
29	M27	X	-1.131	-1.131	0	%100
30	M27	Z	-1.959	-1.959	0	%100
31	M28A	X	-1.131	-1.131	0	%100
32	M28A	Z	-1.959	-1.959	0	%100
33	M29A	X	-1.173	-1.173	0	%100
34	M29A	Z	-2.031	-2.031	0	%100
35	M30	X	-1.173	-1.173	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
36	M30	Z	-2.031	-2.031	0	%100
37	M31A	X	-.952	-.952	0	%100
38	M31A	Z	-1.65	-1.65	0	%100
39	M32	X	-1.108	-1.108	0	%100
40	M32	Z	-1.919	-1.919	0	%100
41	M35A	X	-1.367	-1.367	0	%100
42	M35A	Z	-2.368	-2.368	0	%100
43	M39	X	-2.063	-2.063	0	%100
44	M39	Z	-3.573	-3.573	0	%100
45	M40	X	-.402	-.402	0	%100
46	M40	Z	-.696	-.696	0	%100
47	M41	X	-.042	-.042	0	%100
48	M41	Z	-.073	-.073	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	-.457	-.457	0	%100
5	M6	X	0	0	0	%100
6	M6	Z	0	0	0	%100
7	M9	X	0	0	0	%100
8	M9	Z	-.457	-.457	0	%100
9	M11	X	0	0	0	%100
10	M11	Z	-.82	-.82	0	%100
11	M14	X	0	0	0	%100
12	M14	Z	-.275	-.275	0	%100
13	M15	X	0	0	0	%100
14	M15	Z	-.275	-.275	0	%100
15	M16	X	0	0	0	%100
16	M16	Z	-.214	-.214	0	%100
17	MP1A	X	0	0	0	%100
18	MP1A	Z	-.654	-.654	0	%100
19	MP3A	X	0	0	0	%100
20	MP3A	Z	-.654	-.654	0	%100
21	M28	X	0	0	0	%100
22	M28	Z	-.338	-.338	0	%100
23	M29	X	0	0	0	%100
24	M29	Z	-.338	-.338	0	%100
25	M31	X	0	0	0	%100
26	M31	Z	-.206	-.206	0	%100
27	MP2A	X	0	0	0	%100
28	MP2A	Z	-.654	-.654	0	%100
29	M27	X	0	0	0	%100
30	M27	Z	-.457	-.457	0	%100
31	M28A	X	0	0	0	%100
32	M28A	Z	-.457	-.457	0	%100
33	M29A	X	0	0	0	%100
34	M29A	Z	-.338	-.338	0	%100
35	M30	X	0	0	0	%100
36	M30	Z	-.338	-.338	0	%100
37	M31A	X	0	0	0	%100
38	M31A	Z	-.206	-.206	0	%100
39	M32	X	0	0	0	%100
40	M32	Z	-.086	-.086	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
41	M35A	X	0	0	0	%100
42	M35A	Z	-.654	-.654	0	%100
43	M39	X	0	0	0	%100
44	M39	Z	-.477	-.477	0	%100
45	M40	X	0	0	0	%100
46	M40	Z	-.477	-.477	0	%100
47	M41	X	0	0	0	%100
48	M41	Z	-.086	-.086	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	.07	.07	0	%100
2	M1	Z	-.12	-.12	0	%100
3	M4	X	.171	.171	0	%100
4	M4	Z	-.297	-.297	0	%100
5	M6	X	.07	.07	0	%100
6	M6	Z	-.12	-.12	0	%100
7	M9	X	.171	.171	0	%100
8	M9	Z	-.297	-.297	0	%100
9	M11	X	.41	.41	0	%100
10	M11	Z	-.71	-.71	0	%100
11	M14	X	.138	.138	0	%100
12	M14	Z	-.238	-.238	0	%100
13	M15	X	.138	.138	0	%100
14	M15	Z	-.238	-.238	0	%100
15	M16	X	.115	.115	0	%100
16	M16	Z	-.199	-.199	0	%100
17	MP1A	X	.327	.327	0	%100
18	MP1A	Z	-.566	-.566	0	%100
19	MP3A	X	.327	.327	0	%100
20	MP3A	Z	-.566	-.566	0	%100
21	M28	X	.169	.169	0	%100
22	M28	Z	-.292	-.292	0	%100
23	M29	X	.169	.169	0	%100
24	M29	Z	-.292	-.292	0	%100
25	M31	X	.086	.086	0	%100
26	M31	Z	-.15	-.15	0	%100
27	MP2A	X	.327	.327	0	%100
28	MP2A	Z	-.566	-.566	0	%100
29	M27	X	.171	.171	0	%100
30	M27	Z	-.297	-.297	0	%100
31	M28A	X	.171	.171	0	%100
32	M28A	Z	-.297	-.297	0	%100
33	M29A	X	.169	.169	0	%100
34	M29A	Z	-.292	-.292	0	%100
35	M30	X	.169	.169	0	%100
36	M30	Z	-.292	-.292	0	%100
37	M31A	X	.086	.086	0	%100
38	M31A	Z	-.15	-.15	0	%100
39	M32	X	.008	.008	0	%100
40	M32	Z	-.013	-.013	0	%100
41	M35A	X	.245	.245	0	%100
42	M35A	Z	-.425	-.425	0	%100
43	M39	X	.091	.091	0	%100
44	M39	Z	-.158	-.158	0	%100
45	M40	X	.469	.469	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[in,%]	End Location[in,%]
46	M40	Z	-.812	-.812	0	%100
47	M41	X	.199	.199	0	%100
48	M41	Z	-.344	-.344	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	.361	.361	0	%100
2	M1	Z	-.209	-.209	0	%100
3	M4	X	.099	.099	0	%100
4	M4	Z	-.057	-.057	0	%100
5	M6	X	.361	.361	0	%100
6	M6	Z	-.209	-.209	0	%100
7	M9	X	.099	.099	0	%100
8	M9	Z	-.057	-.057	0	%100
9	M11	X	.71	.71	0	%100
10	M11	Z	-.41	-.41	0	%100
11	M14	X	.238	.238	0	%100
12	M14	Z	-.138	-.138	0	%100
13	M15	X	.238	.238	0	%100
14	M15	Z	-.138	-.138	0	%100
15	M16	X	.225	.225	0	%100
16	M16	Z	-.13	-.13	0	%100
17	MP1A	X	.566	.566	0	%100
18	MP1A	Z	-.327	-.327	0	%100
19	MP3A	X	.566	.566	0	%100
20	MP3A	Z	-.327	-.327	0	%100
21	M28	X	.292	.292	0	%100
22	M28	Z	-.169	-.169	0	%100
23	M29	X	.292	.292	0	%100
24	M29	Z	-.169	-.169	0	%100
25	M31	X	.091	.091	0	%100
26	M31	Z	-.053	-.053	0	%100
27	MP2A	X	.566	.566	0	%100
28	MP2A	Z	-.327	-.327	0	%100
29	M27	X	.099	.099	0	%100
30	M27	Z	-.057	-.057	0	%100
31	M28A	X	.099	.099	0	%100
32	M28A	Z	-.057	-.057	0	%100
33	M29A	X	.292	.292	0	%100
34	M29A	Z	-.169	-.169	0	%100
35	M30	X	.292	.292	0	%100
36	M30	Z	-.169	-.169	0	%100
37	M31A	X	.091	.091	0	%100
38	M31A	Z	-.053	-.053	0	%100
39	M32	X	.222	.222	0	%100
40	M32	Z	-.128	-.128	0	%100
41	M35A	X	.142	.142	0	%100
42	M35A	Z	-.082	-.082	0	%100
43	M39	X	.302	.302	0	%100
44	M39	Z	-.174	-.174	0	%100
45	M40	X	.956	.956	0	%100
46	M40	Z	-.552	-.552	0	%100
47	M41	X	.553	.553	0	%100
48	M41	Z	-.319	-.319	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	.556	.556	0	%100
2	M1	Z	0	0	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	0	0	0	%100
5	M6	X	.556	.556	0	%100
6	M6	Z	0	0	0	%100
7	M9	X	0	0	0	%100
8	M9	Z	0	0	0	%100
9	M11	X	.82	.82	0	%100
10	M11	Z	0	0	0	%100
11	M14	X	.275	.275	0	%100
12	M14	Z	0	0	0	%100
13	M15	X	.275	.275	0	%100
14	M15	Z	0	0	0	%100
15	M16	X	.275	.275	0	%100
16	M16	Z	0	0	0	%100
17	MP1A	X	.654	.654	0	%100
18	MP1A	Z	0	0	0	%100
19	MP3A	X	.654	.654	0	%100
20	MP3A	Z	0	0	0	%100
21	M28	X	.338	.338	0	%100
22	M28	Z	0	0	0	%100
23	M29	X	.338	.338	0	%100
24	M29	Z	0	0	0	%100
25	M31	X	.072	.072	0	%100
26	M31	Z	0	0	0	%100
27	MP2A	X	.654	.654	0	%100
28	MP2A	Z	0	0	0	%100
29	M27	X	0	0	0	%100
30	M27	Z	0	0	0	%100
31	M28A	X	0	0	0	%100
32	M28A	Z	0	0	0	%100
33	M29A	X	.338	.338	0	%100
34	M29A	Z	0	0	0	%100
35	M30	X	.338	.338	0	%100
36	M30	Z	0	0	0	%100
37	M31A	X	.072	.072	0	%100
38	M31A	Z	0	0	0	%100
39	M32	X	.568	.568	0	%100
40	M32	Z	0	0	0	%100
41	M35A	X	0	0	0	%100
42	M35A	Z	0	0	0	%100
43	M39	X	.809	.809	0	%100
44	M39	Z	0	0	0	%100
45	M40	X	.809	.809	0	%100
46	M40	Z	0	0	0	%100
47	M41	X	.568	.568	0	%100
48	M41	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	.361	.361	0	%100
2	M1	Z	.209	.209	0	%100
3	M4	X	.099	.099	0	%100
4	M4	Z	.057	.057	0	%100
5	M6	X	.361	.361	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
6	M6	Z	.209	.209	0	%100
7	M9	X	.099	.099	0	%100
8	M9	Z	.057	.057	0	%100
9	M11	X	.71	.71	0	%100
10	M11	Z	.41	.41	0	%100
11	M14	X	.238	.238	0	%100
12	M14	Z	.138	.138	0	%100
13	M15	X	.238	.238	0	%100
14	M15	Z	.138	.138	0	%100
15	M16	X	.225	.225	0	%100
16	M16	Z	.13	.13	0	%100
17	MP1A	X	.566	.566	0	%100
18	MP1A	Z	.327	.327	0	%100
19	MP3A	X	.566	.566	0	%100
20	MP3A	Z	.327	.327	0	%100
21	M28	X	.292	.292	0	%100
22	M28	Z	.169	.169	0	%100
23	M29	X	.292	.292	0	%100
24	M29	Z	.169	.169	0	%100
25	M31	X	.091	.091	0	%100
26	M31	Z	.053	.053	0	%100
27	MP2A	X	.566	.566	0	%100
28	MP2A	Z	.327	.327	0	%100
29	M27	X	.099	.099	0	%100
30	M27	Z	.057	.057	0	%100
31	M28A	X	.099	.099	0	%100
32	M28A	Z	.057	.057	0	%100
33	M29A	X	.292	.292	0	%100
34	M29A	Z	.169	.169	0	%100
35	M30	X	.292	.292	0	%100
36	M30	Z	.169	.169	0	%100
37	M31A	X	.091	.091	0	%100
38	M31A	Z	.053	.053	0	%100
39	M32	X	.553	.553	0	%100
40	M32	Z	.319	.319	0	%100
41	M35A	X	.142	.142	0	%100
42	M35A	Z	.082	.082	0	%100
43	M39	X	.956	.956	0	%100
44	M39	Z	.552	.552	0	%100
45	M40	X	.302	.302	0	%100
46	M40	Z	.174	.174	0	%100
47	M41	X	.222	.222	0	%100
48	M41	Z	.128	.128	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	.07	.07	0	%100
2	M1	Z	.12	.12	0	%100
3	M4	X	.171	.171	0	%100
4	M4	Z	.297	.297	0	%100
5	M6	X	.07	.07	0	%100
6	M6	Z	.12	.12	0	%100
7	M9	X	.171	.171	0	%100
8	M9	Z	.297	.297	0	%100
9	M11	X	.41	.41	0	%100
10	M11	Z	.71	.71	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
11	M14	X	.138	.138	0	%100
12	M14	Z	.238	.238	0	%100
13	M15	X	.138	.138	0	%100
14	M15	Z	.238	.238	0	%100
15	M16	X	.115	.115	0	%100
16	M16	Z	.199	.199	0	%100
17	MP1A	X	.327	.327	0	%100
18	MP1A	Z	.566	.566	0	%100
19	MP3A	X	.327	.327	0	%100
20	MP3A	Z	.566	.566	0	%100
21	M28	X	.169	.169	0	%100
22	M28	Z	.292	.292	0	%100
23	M29	X	.169	.169	0	%100
24	M29	Z	.292	.292	0	%100
25	M31	X	.086	.086	0	%100
26	M31	Z	.15	.15	0	%100
27	MP2A	X	.327	.327	0	%100
28	MP2A	Z	.566	.566	0	%100
29	M27	X	.171	.171	0	%100
30	M27	Z	.297	.297	0	%100
31	M28A	X	.171	.171	0	%100
32	M28A	Z	.297	.297	0	%100
33	M29A	X	.169	.169	0	%100
34	M29A	Z	.292	.292	0	%100
35	M30	X	.169	.169	0	%100
36	M30	Z	.292	.292	0	%100
37	M31A	X	.086	.086	0	%100
38	M31A	Z	.15	.15	0	%100
39	M32	X	.199	.199	0	%100
40	M32	Z	.344	.344	0	%100
41	M35A	X	.245	.245	0	%100
42	M35A	Z	.425	.425	0	%100
43	M39	X	.469	.469	0	%100
44	M39	Z	.812	.812	0	%100
45	M40	X	.091	.091	0	%100
46	M40	Z	.158	.158	0	%100
47	M41	X	.008	.008	0	%100
48	M41	Z	.013	.013	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	.457	.457	0	%100
5	M6	X	0	0	0	%100
6	M6	Z	0	0	0	%100
7	M9	X	0	0	0	%100
8	M9	Z	.457	.457	0	%100
9	M11	X	0	0	0	%100
10	M11	Z	.82	.82	0	%100
11	M14	X	0	0	0	%100
12	M14	Z	.275	.275	0	%100
13	M15	X	0	0	0	%100
14	M15	Z	.275	.275	0	%100
15	M16	X	0	0	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[in,%]	End Location[in,%]
16	M16	Z	.214	.214	0	%100
17	MP1A	X	0	0	0	%100
18	MP1A	Z	.654	.654	0	%100
19	MP3A	X	0	0	0	%100
20	MP3A	Z	.654	.654	0	%100
21	M28	X	0	0	0	%100
22	M28	Z	.338	.338	0	%100
23	M29	X	0	0	0	%100
24	M29	Z	.338	.338	0	%100
25	M31	X	0	0	0	%100
26	M31	Z	.206	.206	0	%100
27	MP2A	X	0	0	0	%100
28	MP2A	Z	.654	.654	0	%100
29	M27	X	0	0	0	%100
30	M27	Z	.457	.457	0	%100
31	M28A	X	0	0	0	%100
32	M28A	Z	.457	.457	0	%100
33	M29A	X	0	0	0	%100
34	M29A	Z	.338	.338	0	%100
35	M30	X	0	0	0	%100
36	M30	Z	.338	.338	0	%100
37	M31A	X	0	0	0	%100
38	M31A	Z	.206	.206	0	%100
39	M32	X	0	0	0	%100
40	M32	Z	.086	.086	0	%100
41	M35A	X	0	0	0	%100
42	M35A	Z	.654	.654	0	%100
43	M39	X	0	0	0	%100
44	M39	Z	.477	.477	0	%100
45	M40	X	0	0	0	%100
46	M40	Z	.477	.477	0	%100
47	M41	X	0	0	0	%100
48	M41	Z	.086	.086	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	-.07	-.07	0	%100
2	M1	Z	.12	.12	0	%100
3	M4	X	-.171	-.171	0	%100
4	M4	Z	.297	.297	0	%100
5	M6	X	-.07	-.07	0	%100
6	M6	Z	.12	.12	0	%100
7	M9	X	-.171	-.171	0	%100
8	M9	Z	.297	.297	0	%100
9	M11	X	-.41	-.41	0	%100
10	M11	Z	.71	.71	0	%100
11	M14	X	-.138	-.138	0	%100
12	M14	Z	.238	.238	0	%100
13	M15	X	-.138	-.138	0	%100
14	M15	Z	.238	.238	0	%100
15	M16	X	-.115	-.115	0	%100
16	M16	Z	.199	.199	0	%100
17	MP1A	X	-.327	-.327	0	%100
18	MP1A	Z	.566	.566	0	%100
19	MP3A	X	-.327	-.327	0	%100
20	MP3A	Z	.566	.566	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
21	M28	X	-.169	-.169	0	%100
22	M28	Z	.292	.292	0	%100
23	M29	X	-.169	-.169	0	%100
24	M29	Z	.292	.292	0	%100
25	M31	X	-.086	-.086	0	%100
26	M31	Z	.15	.15	0	%100
27	MP2A	X	-.327	-.327	0	%100
28	MP2A	Z	.566	.566	0	%100
29	M27	X	-.171	-.171	0	%100
30	M27	Z	.297	.297	0	%100
31	M28A	X	-.171	-.171	0	%100
32	M28A	Z	.297	.297	0	%100
33	M29A	X	-.169	-.169	0	%100
34	M29A	Z	.292	.292	0	%100
35	M30	X	-.169	-.169	0	%100
36	M30	Z	.292	.292	0	%100
37	M31A	X	-.086	-.086	0	%100
38	M31A	Z	.15	.15	0	%100
39	M32	X	-.008	-.008	0	%100
40	M32	Z	.013	.013	0	%100
41	M35A	X	-.245	-.245	0	%100
42	M35A	Z	.425	.425	0	%100
43	M39	X	-.091	-.091	0	%100
44	M39	Z	.158	.158	0	%100
45	M40	X	-.469	-.469	0	%100
46	M40	Z	.812	.812	0	%100
47	M41	X	-.199	-.199	0	%100
48	M41	Z	.344	.344	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	-.361	-.361	0	%100
2	M1	Z	.209	.209	0	%100
3	M4	X	-.099	-.099	0	%100
4	M4	Z	.057	.057	0	%100
5	M6	X	-.361	-.361	0	%100
6	M6	Z	.209	.209	0	%100
7	M9	X	-.099	-.099	0	%100
8	M9	Z	.057	.057	0	%100
9	M11	X	-.71	-.71	0	%100
10	M11	Z	.41	.41	0	%100
11	M14	X	-.238	-.238	0	%100
12	M14	Z	.138	.138	0	%100
13	M15	X	-.238	-.238	0	%100
14	M15	Z	.138	.138	0	%100
15	M16	X	-.225	-.225	0	%100
16	M16	Z	.13	.13	0	%100
17	MP1A	X	-.566	-.566	0	%100
18	MP1A	Z	.327	.327	0	%100
19	MP3A	X	-.566	-.566	0	%100
20	MP3A	Z	.327	.327	0	%100
21	M28	X	-.292	-.292	0	%100
22	M28	Z	.169	.169	0	%100
23	M29	X	-.292	-.292	0	%100
24	M29	Z	.169	.169	0	%100
25	M31	X	-.091	-.091	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
26	M31	Z	.053	.053	0	%100
27	MP2A	X	-.566	-.566	0	%100
28	MP2A	Z	.327	.327	0	%100
29	M27	X	-.099	-.099	0	%100
30	M27	Z	.057	.057	0	%100
31	M28A	X	-.099	-.099	0	%100
32	M28A	Z	.057	.057	0	%100
33	M29A	X	-.292	-.292	0	%100
34	M29A	Z	.169	.169	0	%100
35	M30	X	-.292	-.292	0	%100
36	M30	Z	.169	.169	0	%100
37	M31A	X	-.091	-.091	0	%100
38	M31A	Z	.053	.053	0	%100
39	M32	X	-.222	-.222	0	%100
40	M32	Z	.128	.128	0	%100
41	M35A	X	-.142	-.142	0	%100
42	M35A	Z	.082	.082	0	%100
43	M39	X	-.302	-.302	0	%100
44	M39	Z	.174	.174	0	%100
45	M40	X	-.956	-.956	0	%100
46	M40	Z	.552	.552	0	%100
47	M41	X	-.553	-.553	0	%100
48	M41	Z	.319	.319	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	-.556	-.556	0	%100
2	M1	Z	0	0	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	0	0	0	%100
5	M6	X	-.556	-.556	0	%100
6	M6	Z	0	0	0	%100
7	M9	X	0	0	0	%100
8	M9	Z	0	0	0	%100
9	M11	X	-.82	-.82	0	%100
10	M11	Z	0	0	0	%100
11	M14	X	-.275	-.275	0	%100
12	M14	Z	0	0	0	%100
13	M15	X	-.275	-.275	0	%100
14	M15	Z	0	0	0	%100
15	M16	X	-.275	-.275	0	%100
16	M16	Z	0	0	0	%100
17	MP1A	X	-.654	-.654	0	%100
18	MP1A	Z	0	0	0	%100
19	MP3A	X	-.654	-.654	0	%100
20	MP3A	Z	0	0	0	%100
21	M28	X	-.338	-.338	0	%100
22	M28	Z	0	0	0	%100
23	M29	X	-.338	-.338	0	%100
24	M29	Z	0	0	0	%100
25	M31	X	-.072	-.072	0	%100
26	M31	Z	0	0	0	%100
27	MP2A	X	-.654	-.654	0	%100
28	MP2A	Z	0	0	0	%100
29	M27	X	0	0	0	%100
30	M27	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
31	M28A	X	0	0	0	%100
32	M28A	Z	0	0	0	%100
33	M29A	X	-.338	-.338	0	%100
34	M29A	Z	0	0	0	%100
35	M30	X	-.338	-.338	0	%100
36	M30	Z	0	0	0	%100
37	M31A	X	-.072	-.072	0	%100
38	M31A	Z	0	0	0	%100
39	M32	X	-.568	-.568	0	%100
40	M32	Z	0	0	0	%100
41	M35A	X	0	0	0	%100
42	M35A	Z	0	0	0	%100
43	M39	X	-.809	-.809	0	%100
44	M39	Z	0	0	0	%100
45	M40	X	-.809	-.809	0	%100
46	M40	Z	0	0	0	%100
47	M41	X	-.568	-.568	0	%100
48	M41	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	-.361	-.361	0	%100
2	M1	Z	-.209	-.209	0	%100
3	M4	X	-.099	-.099	0	%100
4	M4	Z	-.057	-.057	0	%100
5	M6	X	-.361	-.361	0	%100
6	M6	Z	-.209	-.209	0	%100
7	M9	X	-.099	-.099	0	%100
8	M9	Z	-.057	-.057	0	%100
9	M11	X	-.71	-.71	0	%100
10	M11	Z	-.41	-.41	0	%100
11	M14	X	-.238	-.238	0	%100
12	M14	Z	-.138	-.138	0	%100
13	M15	X	-.238	-.238	0	%100
14	M15	Z	-.138	-.138	0	%100
15	M16	X	-.225	-.225	0	%100
16	M16	Z	-.13	-.13	0	%100
17	MP1A	X	-.566	-.566	0	%100
18	MP1A	Z	-.327	-.327	0	%100
19	MP3A	X	-.566	-.566	0	%100
20	MP3A	Z	-.327	-.327	0	%100
21	M28	X	-.292	-.292	0	%100
22	M28	Z	-.169	-.169	0	%100
23	M29	X	-.292	-.292	0	%100
24	M29	Z	-.169	-.169	0	%100
25	M31	X	-.091	-.091	0	%100
26	M31	Z	-.053	-.053	0	%100
27	MP2A	X	-.566	-.566	0	%100
28	MP2A	Z	-.327	-.327	0	%100
29	M27	X	-.099	-.099	0	%100
30	M27	Z	-.057	-.057	0	%100
31	M28A	X	-.099	-.099	0	%100
32	M28A	Z	-.057	-.057	0	%100
33	M29A	X	-.292	-.292	0	%100
34	M29A	Z	-.169	-.169	0	%100
35	M30	X	-.292	-.292	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
36	M30	Z	-.169	-.169	0	%100
37	M31A	X	-.091	-.091	0	%100
38	M31A	Z	-.053	-.053	0	%100
39	M32	X	-.553	-.553	0	%100
40	M32	Z	-.319	-.319	0	%100
41	M35A	X	-.142	-.142	0	%100
42	M35A	Z	-.082	-.082	0	%100
43	M39	X	-.956	-.956	0	%100
44	M39	Z	-.552	-.552	0	%100
45	M40	X	-.302	-.302	0	%100
46	M40	Z	-.174	-.174	0	%100
47	M41	X	-.222	-.222	0	%100
48	M41	Z	-.128	-.128	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	X	-.07	-.07	0	%100
2	M1	Z	-.12	-.12	0	%100
3	M4	X	-.171	-.171	0	%100
4	M4	Z	-.297	-.297	0	%100
5	M6	X	-.07	-.07	0	%100
6	M6	Z	-.12	-.12	0	%100
7	M9	X	-.171	-.171	0	%100
8	M9	Z	-.297	-.297	0	%100
9	M11	X	-.41	-.41	0	%100
10	M11	Z	-.71	-.71	0	%100
11	M14	X	-.138	-.138	0	%100
12	M14	Z	-.238	-.238	0	%100
13	M15	X	-.138	-.138	0	%100
14	M15	Z	-.238	-.238	0	%100
15	M16	X	-.115	-.115	0	%100
16	M16	Z	-.199	-.199	0	%100
17	MP1A	X	-.327	-.327	0	%100
18	MP1A	Z	-.566	-.566	0	%100
19	MP3A	X	-.327	-.327	0	%100
20	MP3A	Z	-.566	-.566	0	%100
21	M28	X	-.169	-.169	0	%100
22	M28	Z	-.292	-.292	0	%100
23	M29	X	-.169	-.169	0	%100
24	M29	Z	-.292	-.292	0	%100
25	M31	X	-.086	-.086	0	%100
26	M31	Z	-.15	-.15	0	%100
27	MP2A	X	-.327	-.327	0	%100
28	MP2A	Z	-.566	-.566	0	%100
29	M27	X	-.171	-.171	0	%100
30	M27	Z	-.297	-.297	0	%100
31	M28A	X	-.171	-.171	0	%100
32	M28A	Z	-.297	-.297	0	%100
33	M29A	X	-.169	-.169	0	%100
34	M29A	Z	-.292	-.292	0	%100
35	M30	X	-.169	-.169	0	%100
36	M30	Z	-.292	-.292	0	%100
37	M31A	X	-.086	-.086	0	%100
38	M31A	Z	-.15	-.15	0	%100
39	M32	X	-.199	-.199	0	%100
40	M32	Z	-.344	-.344	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[in,%]	End Location[in,%]
41	M35A	X	-.245	-.245	0	%100
42	M35A	Z	-.425	-.425	0	%100
43	M39	X	-.469	-.469	0	%100
44	M39	Z	-.812	-.812	0	%100
45	M40	X	-.091	-.091	0	%100
46	M40	Z	-.158	-.158	0	%100
47	M41	X	-.008	-.008	0	%100
48	M41	Z	-.013	-.013	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[in]	LC	Shear Check	Loc.....		LC	phi*Pn...	phi*Pn...	phi*Mn...	phi*Mn.....	Eqn
1	M1	PIPE_2.5	.357	0	46	.274	0		46	48839....	50715	3.596	3.596	1... H1-1b
2	M4	PIPE_1.25	.783	0	10	.220	47.25		10	11858....	19687.5	.801	.801	3... H1-1b
3	M6	PIPE_2.5	.398	0	46	.277	21....		46	48839....	50715	3.596	3.596	1... H1-1b
4	M9	PIPE_1.25	.451	0	46	.306	47.25		3	11858....	19687.5	.801	.801	3... H1-1b
5	M11	PIPE_4.0	.137	51.188	46	.211	51....		46	85371....	93240	10.631	10.631	1... H1-1b
6	M14	SR_1	.029	15.313	21	.124	0		46	17534....	25434	.423	.423	1... H1-1b
7	M15	SR_1	.024	15.313	21	.074	0		46	17534....	25434	.423	.423	1... H1-1b
8	M16	SR_1	.198	0	21	.073	0		46	15773....	25434	.423	.423	1... H1-1b*
9	MP1A	PIPE_2.0	.536	50.75	3	.210	45.5		10	17855....	32130	1.872	1.872	2... H1-1b
10	MP3A	PIPE_2.0	.411	35	9	.240	35		10	17855....	32130	1.872	1.872	1... H1-1b
11	M28	SR_1.25	.014	0	46	.084	0		39	31347....	39760....	.828	.828	1... H1-1b*
12	M29	SR_1.25	.024	0	3	.079	0		10	31347....	39760....	.828	.828	1... H1-1b*
13	M31	SR_0.75	.086	25.402	24	.022	50....		10	2774.49	14313....	.179	.179	1... H1-1b
14	MP2A	PIPE_2.5	.288	44.625	2	.239	35		4	33961....	50715	3.596	3.596	2... H1-1b
15	M27	PIPE_1.25	.820	4.5	46	.414	5.063		3	11858....	19687.5	.801	.801	4... H1-1b
16	M28A	PIPE_1.25	.587	4.5	46	.403	5.063		9	11858....	19687.5	.801	.801	4... H1-1b
17	M29A	SR_1.25	.043	0	3	.041	30		40	31347....	39760....	.828	.828	1... H1-1b*
18	M30	SR_1.25	.327	6.25	10	.119	0		10	31347....	39760....	.828	.828	1... H1-1b
19	M31A	SR_0.75	.077	25.402	14	.018	0		3	2774.49	14313....	.179	.179	1... H1-1b
20	M32	PIPE_1.0	.322	40.055	11	.007	80.11		11	2921.7...	14773.5	.465	.465	1... H1-1a
21	M35A	PIPE_2.5	.760	83.25	5	.324	103.5		4	26137....	50715	3.596	3.596	3... H3-6
22	M39	L2.5x2.5x4	.071	26.971	2	.025	52....	y	45	20478....	38556	1.114	2.311	1... H2-1
23	M40	L2.5x2.5x4	.153	26.971	11	.023	0	z	38	20478....	38556	1.114	2.311	1... H2-1
24	M41	PIPE_2.0	.352	0	3	.011	0		9	17885....	32130	1.872	1.872	1... 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	N21	max	328.8	10	1094.709	22	377.683	3	-.625	3	0	51	2.156	46
2		min	-272.491	4	490.058	5	-1677.371	9	-1.646	22	0	1	-.979	50
3	N22	max	116.98	10	960.393	22	1565.725	23	.027	11	0	51	1.045	46
4		min	-133.014	4	369.723	3	474.552	4	-.104	5	0	1	-.471	50
5	N52A	max	200.522	3	24.117	22	618.554	10	0	51	0	51	0	51
6		min	-230.952	9	6.319	40	-579.56	4	0	1	0	1	0	1
7	N67	max	2044.818	10	52.805	18	2234.608	12	.002	2	0	51	.008	38
8		min	-2100.707	4	9.248	10	-2315.445	6	-.002	8	0	1	-.003	50
9	N70	max	705.101	3	100.811	3	1613.425	3	0	51	0	51	0	51
10		min	-640.066	9	-62.624	10	-1579.348	9	0	1	0	1	0	1

Envelope Joint Reactions (Continued)

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
11	Totals:	max	1628.685	10	2135.807	16	2062.856	1						
12		min	-1628.683	4	983.872	10	-2062.853	7						

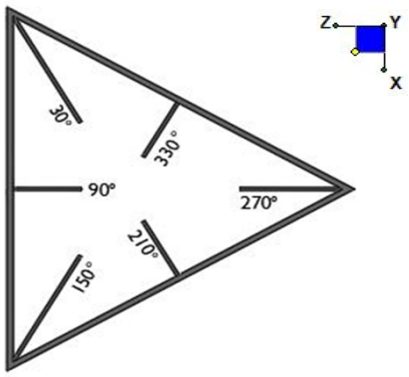
Client:	Verizon Wireless	Date:	5/4/2021
Site Name:	Torrington 2 CT		
Project No.	20777654A		
Title:	Mount Analysis	Page:	1

Version 3.1

I. Mount-to-Tower Connection Check

RISA Model Data

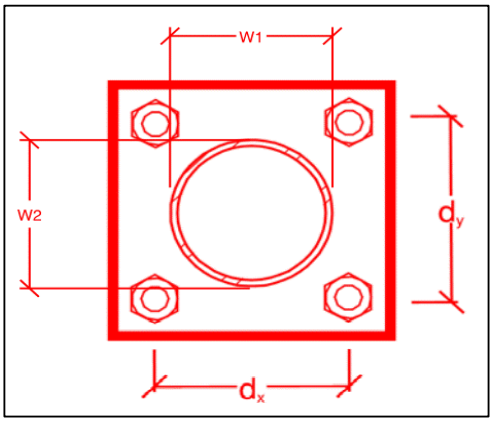
Nodes *(labeled per RISA)*	Orientation *(per graphic of typical platform)*
N21	90
N22	90



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)* :	5
d_y (in) *(Delta Y of typ. bolt config. sketch)* :	2.5
Bolt Type:	A307
Bolt Diameter (in):	0.5
Required Tensile Strength (kips):	16.5
Required Shear Strength (kips):	4.5
Tensile Strength / bolt (kips):	6.4
Shear Strength / bolt (kips):	3.8
Tensile Capacity Overall:	**64.3%***
Shear Capacity Overall:	**29.1%**



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

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 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 ensure existing and proposed mount connections do not nor will not interfere with safety climb wire rope. Contractor to install safety climb wire rope guides as necessary. Install proposed OVP to top standoff horizontal of the Alpha Sector.

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 468293-VZ - Torrington 2 CT

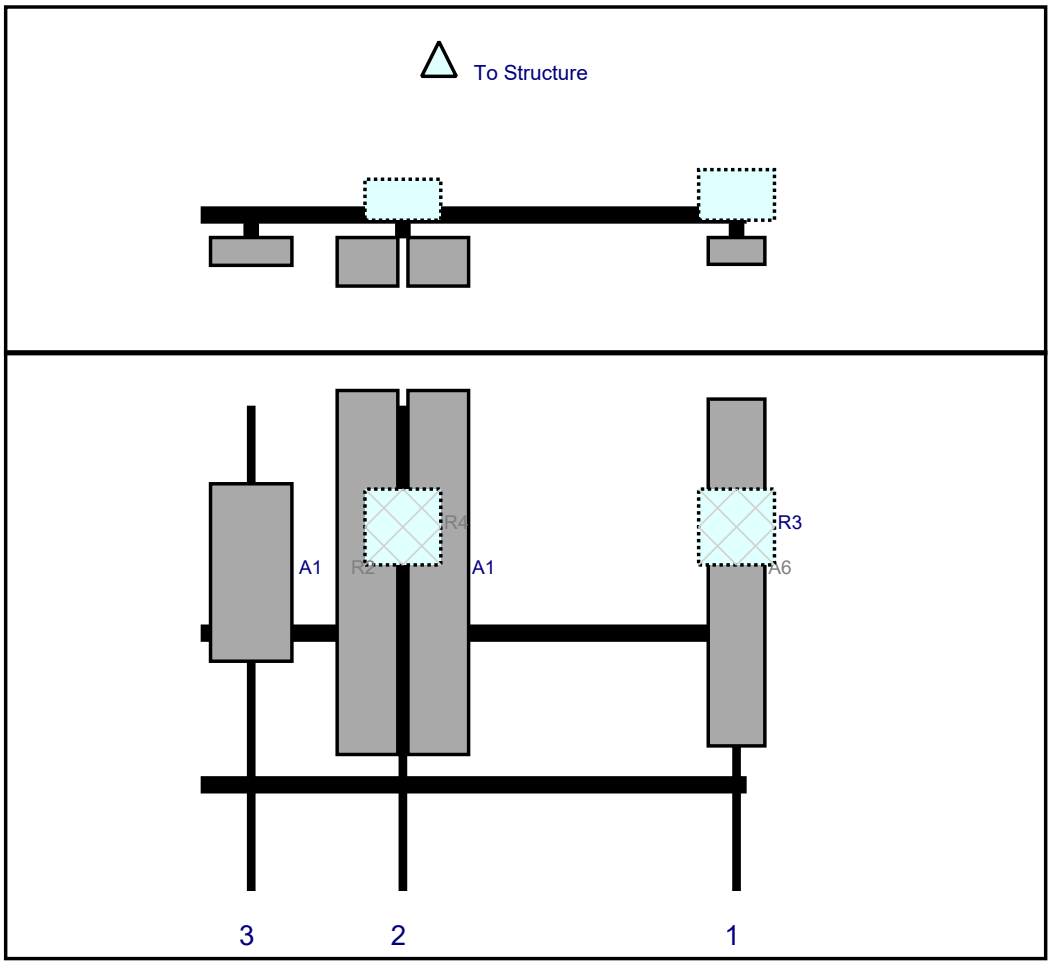
Sector: **A** 5/4/2021

Structure Type: Guyed

Mount Elev: 198.00 Page: 1

Plan Vie

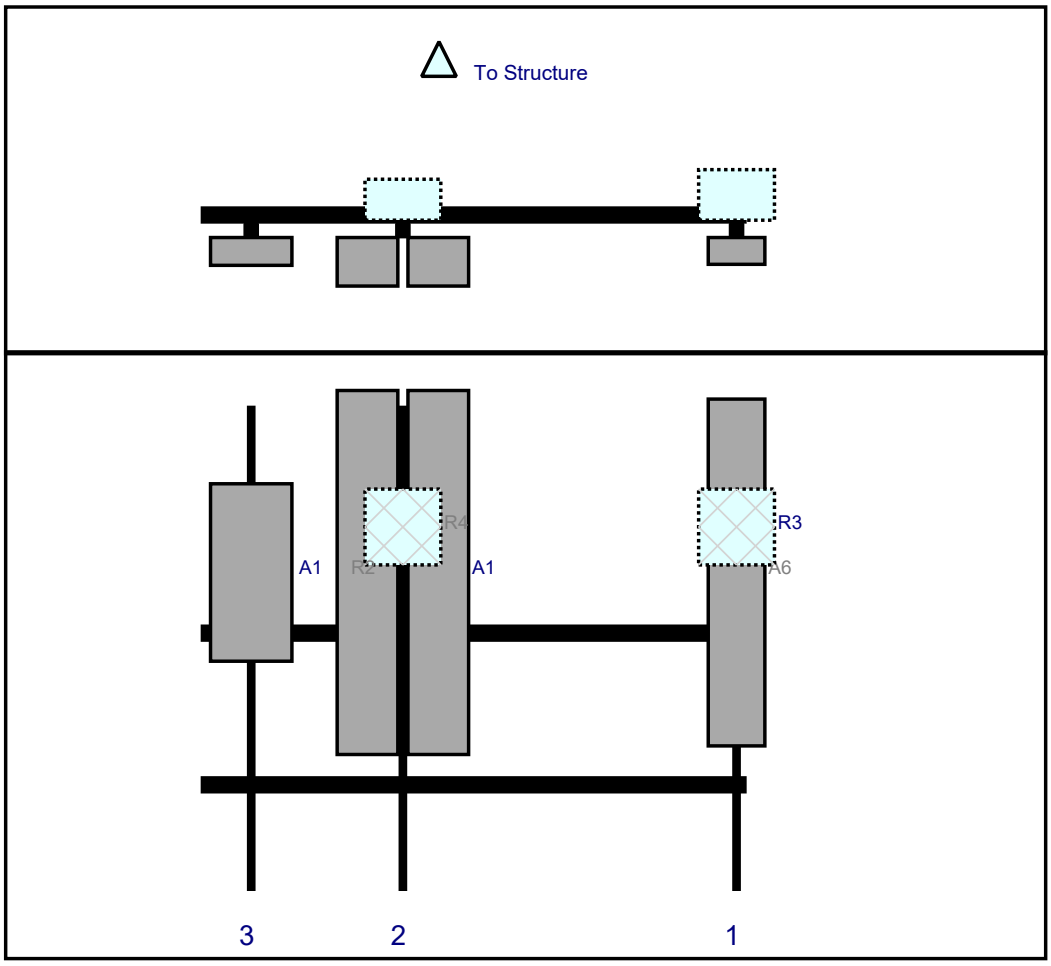
Front Vie
Looking at Structure



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
A6	BXA-80063-6BF-EDIN-5	68.6	11.2	106	1	a	Front	33	0	Retained	03/11/2021
R3	B2/B66A RRH-BR049	15	15	106	1	a	Behind	24	0	Added	
A1	QS6656-5D	72	12	40	2	a	Front	33	7	Added	
A1	QS6656-5D	72	12	40	2	b	Front	33	-7	Added	
R4	B5/B13 RRH-BR04C	15	15	40	2	a	Behind	24	0	Added	
R2	MT6407-77A	35.1	16.1	10	3	a	Front	33	0	Added	

Plan Vie

Front Vie
Looking at Structure



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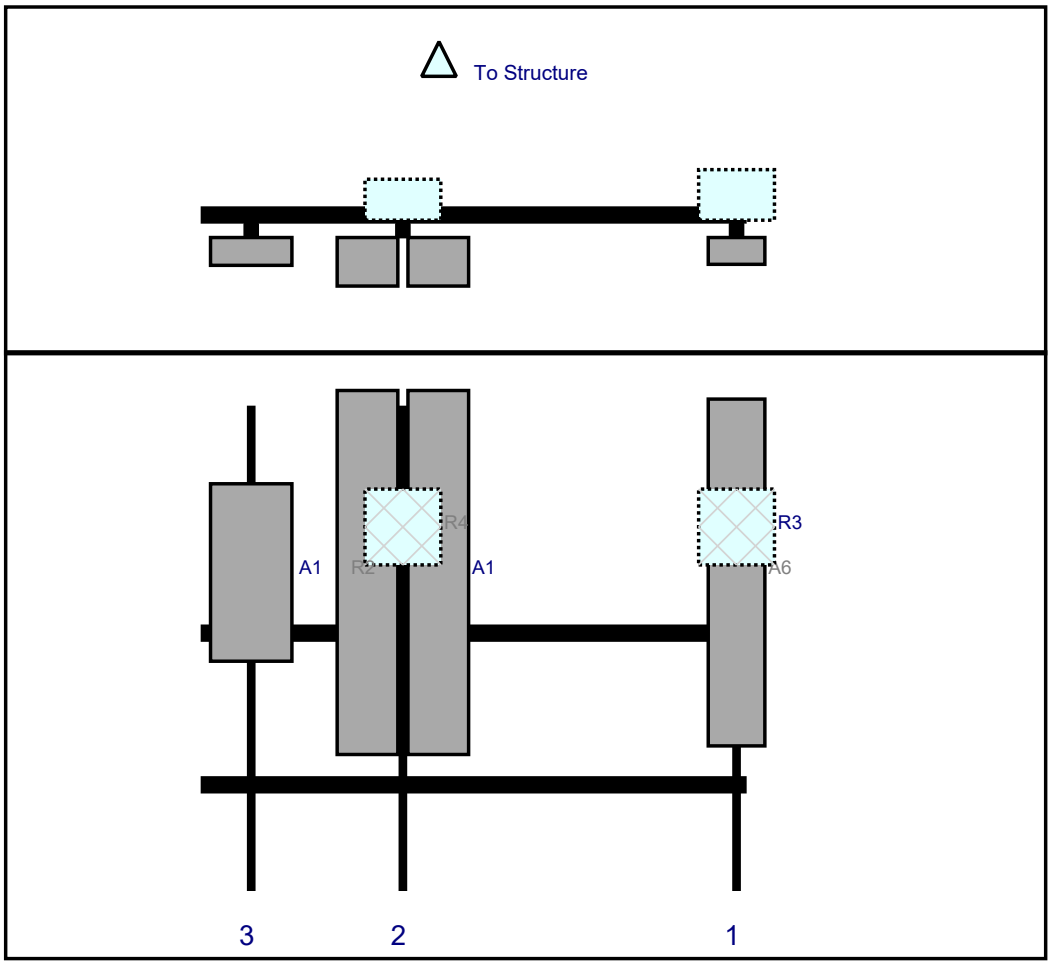
R2	MT6407-77A	35.1	16.1	10	3	a	Front	33	0	Added	

Plan Vie

Front Vie
Looking at Structure



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A1	QS6656-5D	72	12	40	2	b	Front	33	-7	Added	
R4	B5/B13 RRH-BR04C	15	15	40	2	a	Behind	24	0	Added	
R2	MT6407-77A	35.1	16.1	10	3	a	Front	33	0	Added	

Maser Consulting Connecticut

MASER CONSULTING
— CONNECTICUT —

Subject:	*TIA-222-H Usage*	
Site Information	*Site ID:*	*468293-VZW / Torrington 2 CT*
	Site Name:	*Torrington 2 CT*
	Carrier Name:	*Verizon Wireless*
	Address:	*1210 Highland Ave.* *Torrington, Connecticut 06790* *Litchfield County*
	Latitude:	*41.802597°*
	Longitude:	*-73.164664°*
Structure Information	*Tower Type:*	*255-Ft Guyed*
	Mount Type:	*9.00-Ft T-Frame*

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 2018 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 map 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 method, seismic analysis, 30-degree increment wind direction 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,

Taqi Khawaja, PE
Technical Manager

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).

verizon

MOUNT MODIFICATION DRAWINGS
EXISTING 9.00' T-FRAME

SITE NAME: TORRINGTON 2 CT
SITE NUMBER: 468293

1210 HIGHLAND AVE.
TORRINGTON, CT 06790
LITCHFIELD COUNTY

PROJECT INFORMATION

SITE INFORMATION

LATITUDE:	41.802597° N
LONGITUDE:	73.164664° W
JURISDICTION:	LITCHFIELD 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 CONNECTICUT
CONTACT:	PETER ALBANO
PHONE:	(856) 797-0412
E-MAIL:	PETER.ALBANO@COLLIERSENGINEERING.COM

SHEET INDEX

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

CONTRACTOR PMI REQUIREMENTS

PMI LOCATION:	HTTPS://PMI.VZWSMART.COM
SMART TOOL PROJECT #:	10063099
VZW LOCATION CODE (PSLC):	468293
FUZE ID:	16244627

PMI REQUIREMENTS EMBEDDED WITHIN MOUNT MODIFICATION REPORT

REFERENCED DOCUMENTS

FAILING MOUNT ANALYSIS REPORT

SMART TOOL PROJECT #:	10054310
MASER CONSULTING PROJECT #:	20777654A
ANALYSIS DATE:	4/9/2021

MASER CONSULTING CONNECTICUT
(FORMERLY KNOWN AS COLLIERS ENGINEERING & DESIGN P.C. 2021)
Customer Loyalty *through* Client Satisfaction
www.maserconsulting.com
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verizon

811 PROTECT YOURSELF
ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN ANY STATE.
Know what's below. Call before you dig.
FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

SCALE:	JOB NUMBER:
AS SHOWN	20777654A

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
0	5/5/2021	ISSUED FOR CONSTRUCTION	MSG	TK

Digitally signed by Taqi Khawaja-Ghulam
Date: 2021.05.07 11:47:45 -04'00'

TAQI KHAWAJA
LICENSE NUMBER: 34997
MASER CONSULTING
C.T. C.O.A #: PC.0000131

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:

TORRINGTON 2 CT
468293
1210 HIGHLAND AVE.
TORRINGTON, CT 06790
LITCHFIELD 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-MSK1	CROSSOVER PLATE	
3		VZWSMART-SFK1	TIE BACK ASSEMBLY	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET S-2
3		VZWSMART-SFK3	V-BRACING KIT	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET S-2

OTHER REQUIRED PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES
3	-	-	84" LONG, P2.5 STD PIPE	GALVANIZED
3	-	-	108" LONG, P2.5 STD PIPE	GALVANIZED
6	SITE PRO 1	R5-REINF	R5 UNIVERSAL PIPE MOUNT REINFORCEMENT KIT	OR EOR APPORVED 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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AS SHOWN	20777654A

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
0	5/5/2021	ISSUED FOR CONSTRUCTION	MSG	TK

Digitally signed by Taqi Khawaja-Ghulam
Date: 2024.05.07 14:47:54 -04'00'

TAQI KHAWAJA
LICENSE NUMBER: 34997
MASER CONSULTING
C.T. C.O.A #: PC.0000131

SITE NAME:

TORRINGTON 2 CT
468293

1210 HIGHLAND AVE.
TORRINGTON, CT 06790
LITCHFIELD COUNTY

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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 = 115 MPH

b. EXPOSURE CATEGORY C

c. TOPOGRAPHIC CATEGORY 1

d. MEAN BASE ELEVATION (AMSL) = 1,238.98'

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 = .174

c. LONG TERM MCER GROUND MOTION, S_1 = .054

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 PETER.ALBANO@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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Digitally signed by Taqi Khawaja-Ghulam
Date: 2021.05.07 11:47:59 -04'00'

TAQI KHAWAJA
CONNECTICUT PROFESSIONAL ENGINEER
LICENSE NUMBER: 34997
MASER CONSULTING
C.T. C.O.A #: JPC.0000131

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:

TORRINGTON 2 CT
468293

1210 HIGHLAND AVE.
TORRINGTON, CT 06790
LITCHFIELD 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-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:

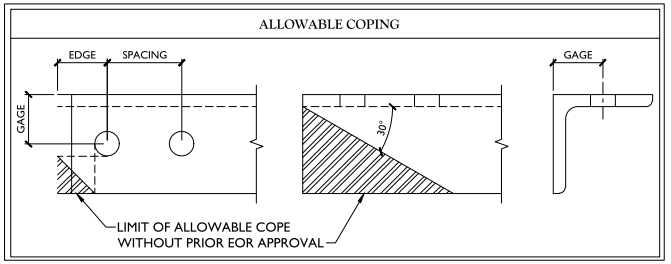
- CORRECT FAILING ISSUES TO COMPLY WITH THE SPECIFICATIONS CONTAINED IN THE ORIGINAL CONTRACT DOCUMENTS AND COORDINATE A SUPPLEMENT MI.

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:

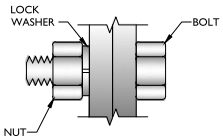
- PRE-CONSTRUCTION GENERAL SITE CONDITION
- PHOTOGRAPHS DURING THE REINFORCEMENT MODIFICATION CONSTRUCTION/ERECTION AND INSPECTION
  - RAW MATERIALS
  - PHOTOS OF ALL CRITICAL DETAILS
  - FOUNDATION MODIFICATIONS
  - WELD PREPARATION
  - BOLT INSTALLATION
  - FINAL INSTALLED CONDITION
  - SURFACE COATING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

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



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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TAQI KHAWAJA
LICENSE NUMBER: 34997
MASER CONSULTING
C.T. C.O.A #: PC.0000131

Digitally signed by Taqi Khawaja-Ghulam
Date: 2021.05.07 14:04:04 -04'00'

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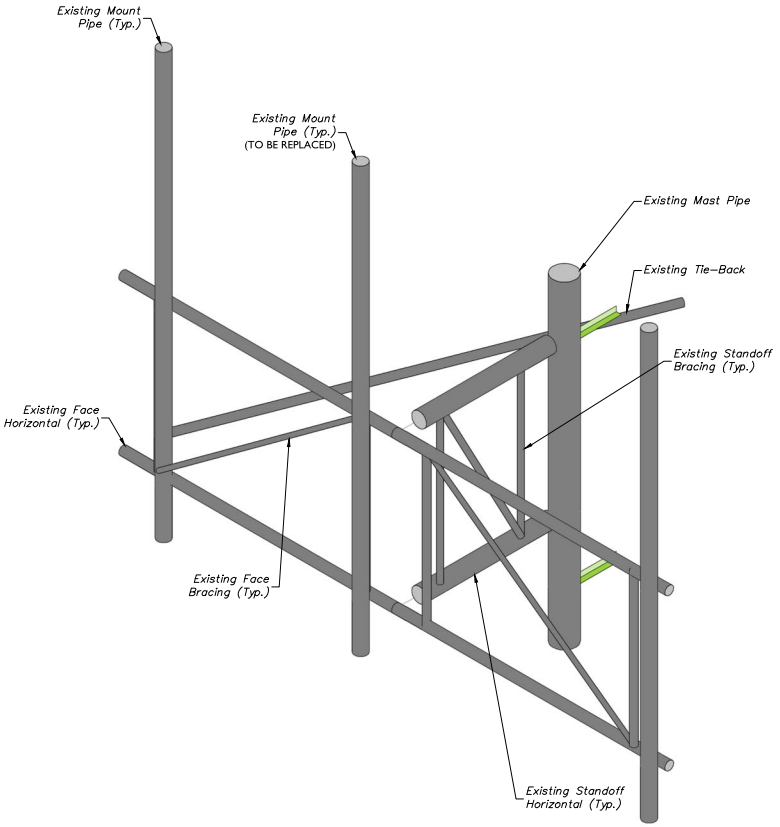
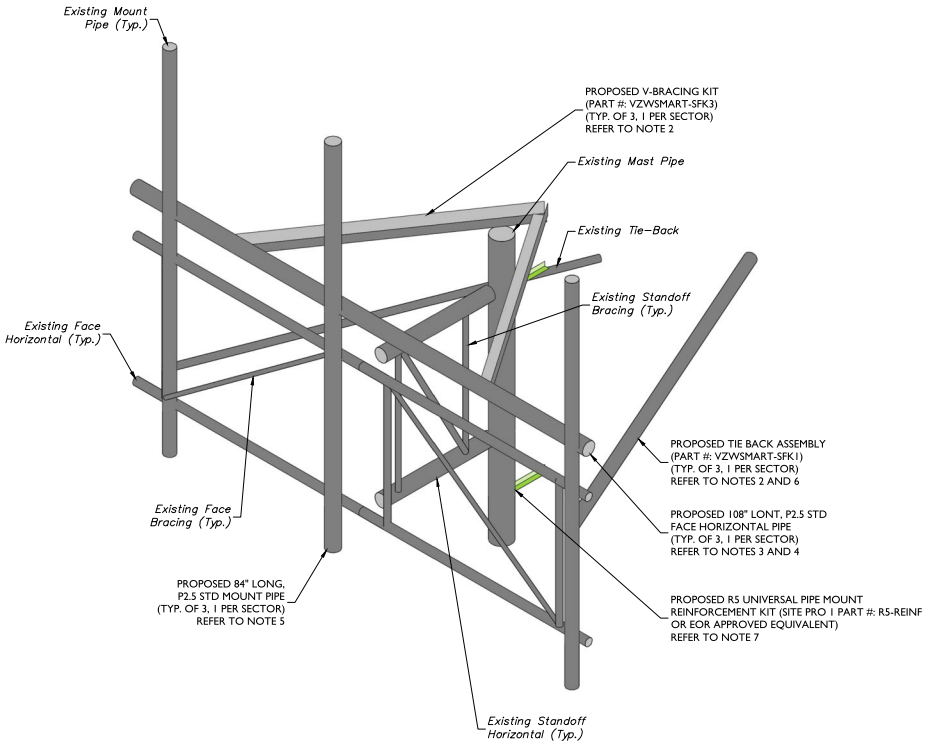
SHEET TITLE: MODIFICATION NOTES

SHEET NUMBER: S-3



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

SCALE : N.T.S.



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

SCALE : N.T.S.

STRUCTURAL NOTES:

1. PER THE MOUNT MAPPING COMPLETED BY STRUCTURAL COMPONENTS, LLC ON 3/11/21, THE SAFETY CLIMB AND CLIMBING FACILITIES UP TO THE VERIZON MOUNT ELEVATION (198'-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. 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.
4. CONNECT NEW HORIZONTAL TO ALL EXISTING AND PROPOSED VERTICAL MOUNT PIPES WITH CROSSOVER PLATES (PART #: VZWSMART-MSK1).
5. CONNECT NEW MOUNT PIPE TO EXISTING FACE HORIZONTALS WITH EXISTING CONNECTIONS.
6. CONNECT NEW TIE BACK TO MOUNT PIPE WITH CROSSOVER PLATES (PART#: VZWSMART-MSK1). CONNECT OTHER END TO ADJACENT TOWER LEG.
7. INSTALL (1) R5 UNIVERSAL PIPE MOUNT REINFORCEMENT KIT (SITE PRO 1 PART #: R5-REINF OR EOR APPROVED EQUIVALENT) AT EACH MAST PIPE TO TOWER LEG CONNECTION.

MASER CONSULTING CONNECTICUT
WILL BE KNOWN AS COLLINS ENGINEERING EFFECTIVE AUGUST 9, 2021
Customer Loyalty through Client Satisfaction
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Office Locations:
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ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN ANY STATE.
Know what's below. Call before you dig.
FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

SCALE	JOB NUMBER
AS SHOWN	20777654A

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
0	5/5/2021	ISSUED FOR CONSTRUCTION	MSG	TK

Digitally signed by Taqi Khawaja-Ghulam
Date: 2021.05.07 14:40:10 -04'00'

TAQI KHAWAJA
LICENSE NUMBER: 34997
MASER CONSULTING
C.T. C.O.A.#: PEC.0000131

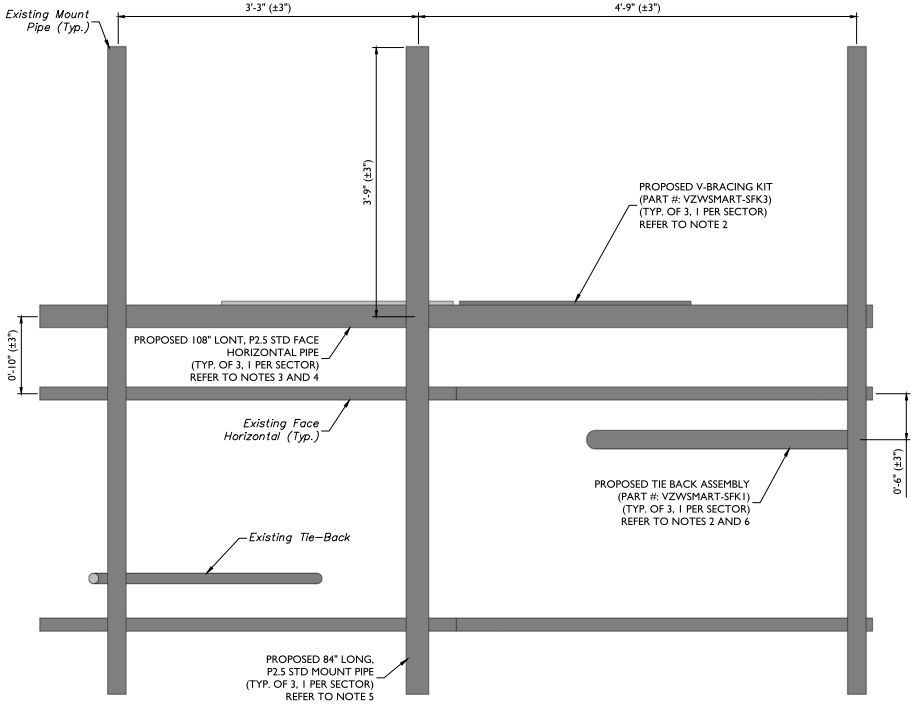
SITE NAME:

TORRINGTON 2 CT
468293
1210 HIGHLAND AVE.
TORRINGTON, CT 06790
LITCHFIELD COUNTY

MT. LAUREL OFFICE
2000 Midlantic Drive
Suite 100
Mount Laurel, NJ 08054
Phone: 856.797.0412
Fax: 856.722.1120

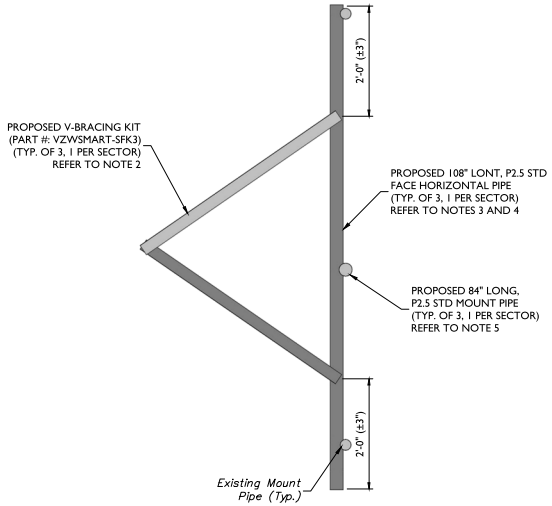
SHEET TITLE: MODIFICATION DETAILS

SHEET NUMBER: S-4



1 PROPOSED FRONT ELEVATION (TYP. ALL SECTORS)

SCALE : N.T.S.

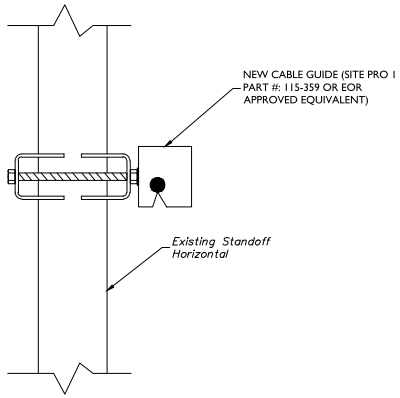


2 PROPOSED PLAN VIEW

SCALE : N.T.S.

MODIFICATION NOTES:

1. MOUNT MEMBERS NOT SHOWN FOR CLARITY U.N.O.
2. CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET S-2.
3. 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.
4. CONNECT NEW HORIZONTAL TO ALL EXISTING AND PROPOSED VERTICAL MOUNT PIPES WITH CROSSOVER PLATES (PART #: VZWSMART-MSK1).
5. CONNECT NEW MOUNT PIPE TO EXISTING FACE HORIZONTALS WITH EXISTING CONNECTIONS.
6. CONNECT NEW TIE BACK TO MOUNT PIPE WITH CROSSOVER PLATES (PART#: VZWSMART-MSK1). CONNECT OTHER END TO ADJACENT TOWER LEG.
7. INSTALL (1) R5 UNIVERSAL PIPE MOUNT REINFORCEMENT KIT (SITE PRO 1 PART #: R5-REINF OR EOR APPROVED EQUIVALENT) AT EACH MAST PIPE TO TOWER LEG CONNECTION.



3 PROPOSED CABLE GUIDE STANDOFF PIPE ATTACHMENT - PLAN VIEW

SCALE : N.T.S.

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SCALE	JOB NUMBER
AS SHOWN	20777654A

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
0	5/5/2021	ISSUED FOR CONSTRUCTION	MSG	TK

TAQI KHAWAJA
LICENSE NUMBER: 34997
MASER CONSULTING
C.T. C.O.A.#: PEC.0000131
Digitally signed by Taqi Khawaja-Ghulam
Date: 2021.05.07 14:46:17 -04'00'

SITE NAME:

TORRINGTON 2 CT
468293
1210 HIGHLAND AVE.
TORRINGTON, CT 06790
LITCHFIELD COUNTY

MT. LAUREL OFFICE
2000 Midlantic Drive
Suite 100
Mount Laurel, NJ 08054
Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE: MODIFICATION DETAILS

SHEET NUMBER: S-5

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

MOUNT PHOTO 1

MOUNT PHOTO 2

MOUNT PHOTO 3

MOUNT PHOTO 4

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SCALE:	JOB NUMBER:
AS SHOWN	20777654A

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
0	5/5/2021	ISSUED FOR CONSTRUCTION	MSG	TK

Digitally signed by Taqi Khawaja-Ghulam
Date: 2021.05.07 11:48:24 -04'00'

TAQI KHAWAJA
LICENSE NUMBER: 34997
MASER CONSULTING
C.T. C.O.A #: JPC.0000131

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:

TORRINGTON 2 CT
468293

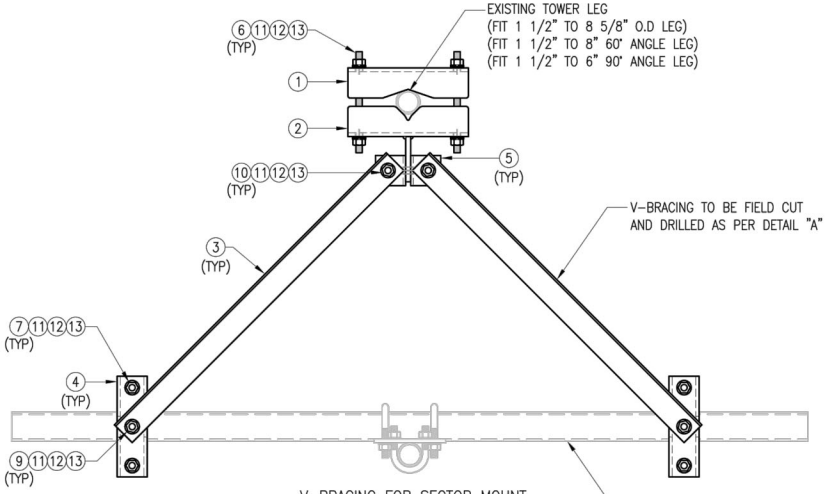
1210 HIGHLAND AVE.
TORRINGTON, CT 06790
LITCHFIELD COUNTY

MT. LAUREL OFFICE
2000 Midlantic Drive
Suite 100
Mount Laurel, NJ 08054
Phone: 856.797.0412
Fax: 856.722.1120

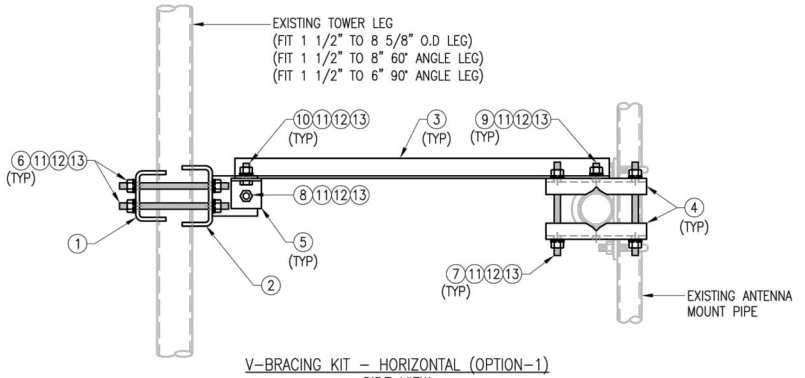
SHEET TITLE:
MOUNT PHOTOS

SHEET NUMBER:
S-6

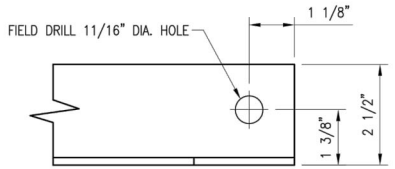
NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



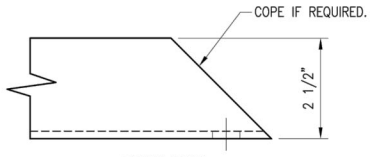
V-BRACING FOR SECTOR MOUNT
PLAN VIEW



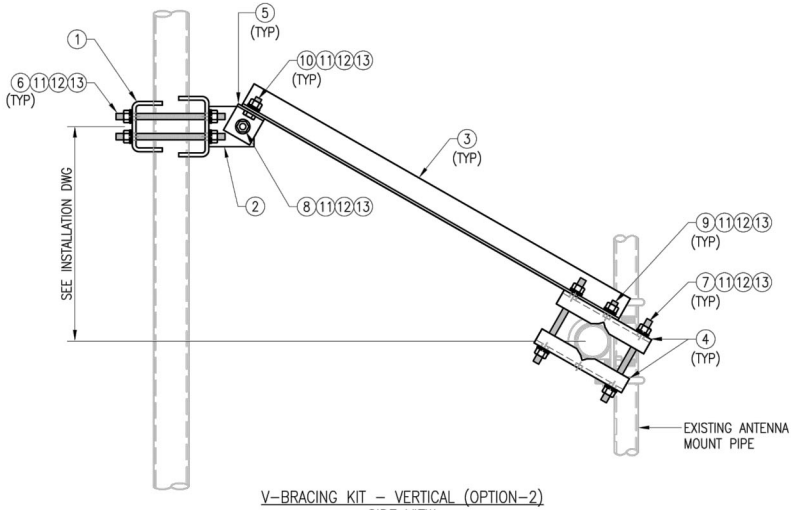
V-BRACING KIT – HORIZONTAL (OPTION-1)
SIDE VIEW



PLAN VIEW



FRONT VIEW
DETAIL "A"



V-BRACING KIT – VERTICAL (OPTION-2)
SIDE VIEW

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

VZWSMART-SFK3 (V-BRACING KIT)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	BP9625-12	PL 3/8" X 9 5/8" X 1'-0" A36 BENT PLATE	VBSM-F1	12
2	1	BRKW-VBSM	WELDMENT BRACKET	VBSM-F3	16
3	2	L252525-8	L 2 1/2" X 2 1/2" X 1/4" X 8'-0" A36	VBSM-F5	67
4	4	BP6875-10	PL 3/8" X 6 7/8" X 10" A36 BENT PLATE	VBSM-F2	20
5	2	AL-333	L 3" X 3" X 1/4" X 3" A36	VBSM-F2	3
6	4	---	THREADED ROD 5/8" DIA. X 1'-6" F1554-36 HDG	---	--
7	4	---	THREADED ROD 5/8" DIA. X 10" F1554-36 HDG	---	--
8	1	---	BOLT 5/8" X 2 1/4" A325	---	--
9	2	---	BOLT 5/8" X 2" A325	---	--
10	2	---	BOLT 5/8" X 1 3/4" A325	---	--
11	21	FW-625	5/8" HDG USS FLAT WASHER	---	2
12	21	LW-625	5/8" HDG LOCK WASHER	---	0
13	21	NUT-625	5/8" HDG HEX NUT	---	2
				GALVANIZED WT	122

VzW
SMART Tool©
Vendor

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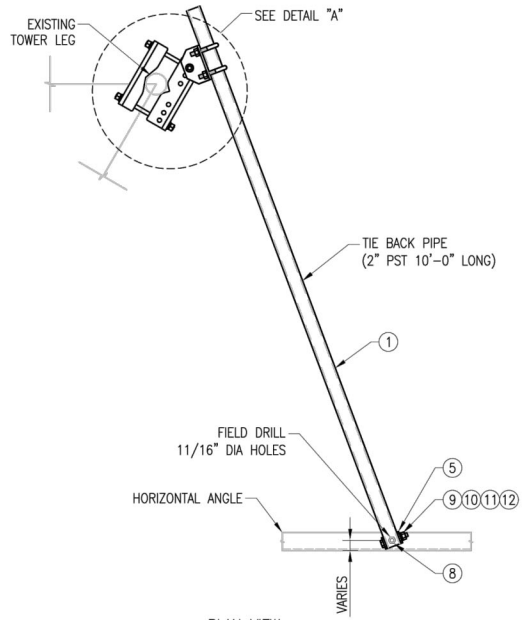
Date: 2021.05.07 11:48:31-04'00'

DRAWN BY: H.R. | CHECKED BY: HMA

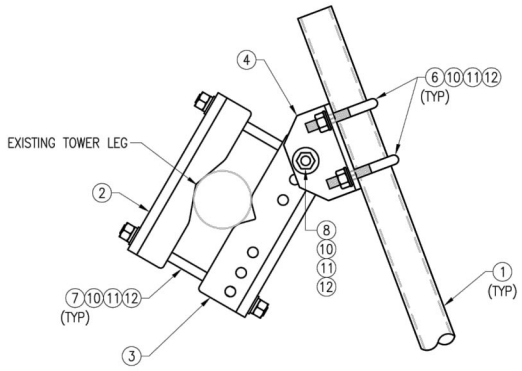
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	H.R.	05/08/20

SHEET TITLE:
VZWSMART-SFK3
V-BRACING KIT

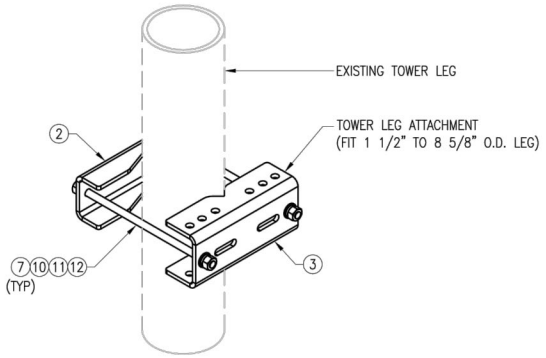
SHEET NUMBER: VZWSMART-SFK3
REV #: 0



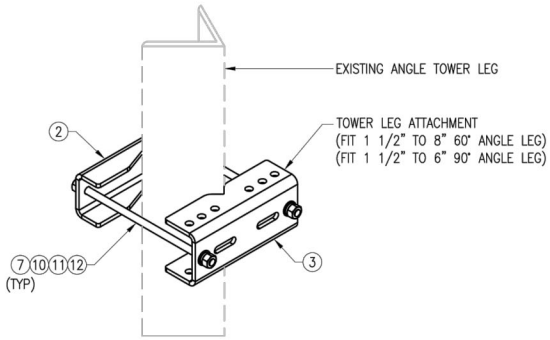
PLAN VIEW
TIE BACK ASSEMBLY



DETAIL "A"



ROUND TOWER LEG ATTACHMENT DETAIL



ANGLE TOWER LEG ATTACHMENT DETAIL

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

VZWSMART-SFK1 (TIE BACK ASSEMBLY)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	PST2375-10	2" PST (2.375" O.D. X 0.154" THK) X 10'-0" A53 GR-B 35KSI	SFK1-F1	38
2	1	BP825-12	PL 3/8" X 8 1/4" X 1'-0" A36 BENT PLATE	SFK1-F2	11
3	1	BP11125-12	PL 3/8" X 11 1/8" X 1'-0" A36 BENT PLATE	SFK1-F3	14
4	1	BP6-9375	PL 3/8" X 6" X 9 3/8" A36 BENT PLATE	SFK1-F4	6
5	1	BP2-875	PL 1/4" X 2" X 8 3/4" A36 BENT PLATE	SFK1-F4	1
6	2	MS02-625-300-500	RU-BOLT 5/8" X 3" I.W. X 5" I.L. A36 (OR EQUIV.)	RBC-1	2
7	2	---	THREADED ROD 5/8" DIA. X 1'-6" F1554-36 HDG	---	0
8	2	---	BOLT 5/8" X 2" A325	---	0
9	1	---	BOLT 5/8" X 4 1/4" A325	---	0
10	11	FW-625	5/8" HDG USS FLAT WASHER	---	1
11	11	LW-625	5/8" HDG LOCK WASHER	---	0
12	11	NUT-625	5/8" HDG HEX NUT	---	1
				GALVANIZED WT	72

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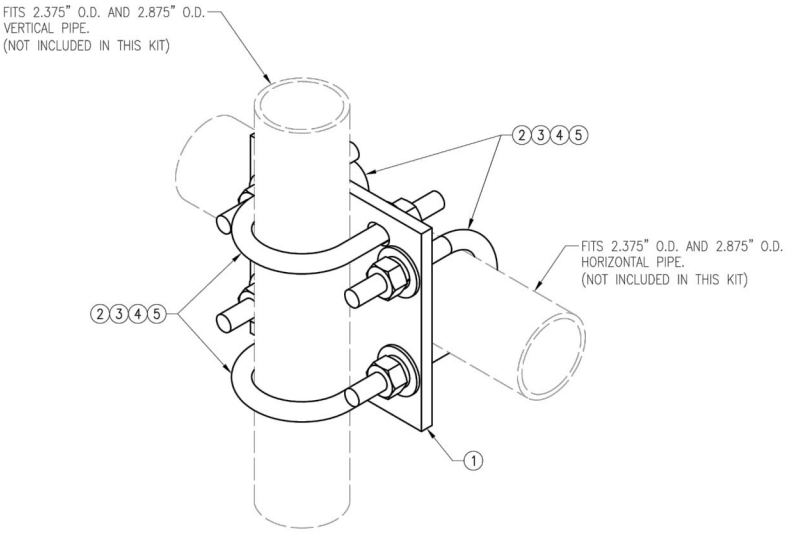
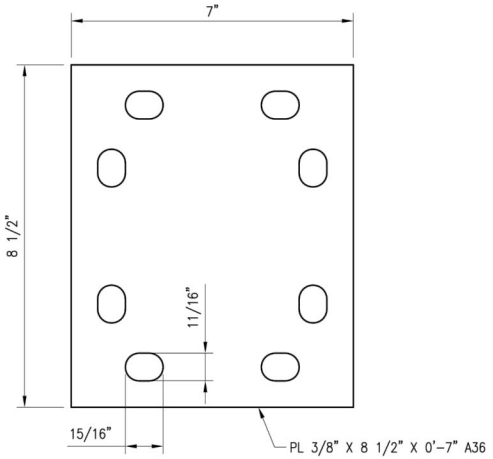
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	BT	05/08/20

SHEET TITLE:
VZWSMART-SFK1
TIE BACK ASSEMBLY

SHEET NUMBER: VZWSMART-SFK1

REV #: 0





PL375-857

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

VZWSMART-MSK1 (CROSSOVER PLATE)					
ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	PL375-857	PL 3/8" X 8 1/2" X 0'-7" A36	MSK1-F1	6
2	4	MS02-625-300-500	RU-BOLT 5/8" X 3" I.W. X 5" I.L. A36 (OR EQUIV.)	RBC-1	5
3	8	FW-625	5/8" HDG USS FLAT WASHER	---	1
4	8	LW-625	5/8" HDG LOCK WASHER	---	0
5	8	NUT-625	5/8" HDG HEX NUT	---	1
				GALVANIZED WT	14

VzW SMART Tool© Vendor

verizon

DRAWN BY: H.R | CHECKED BY: HMA

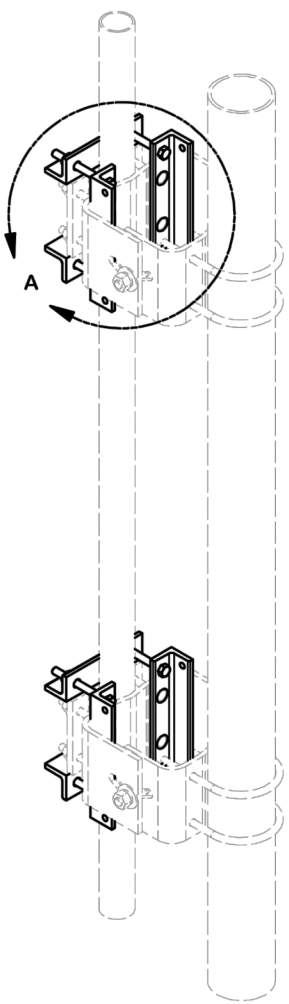
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	H.R	05/08/20

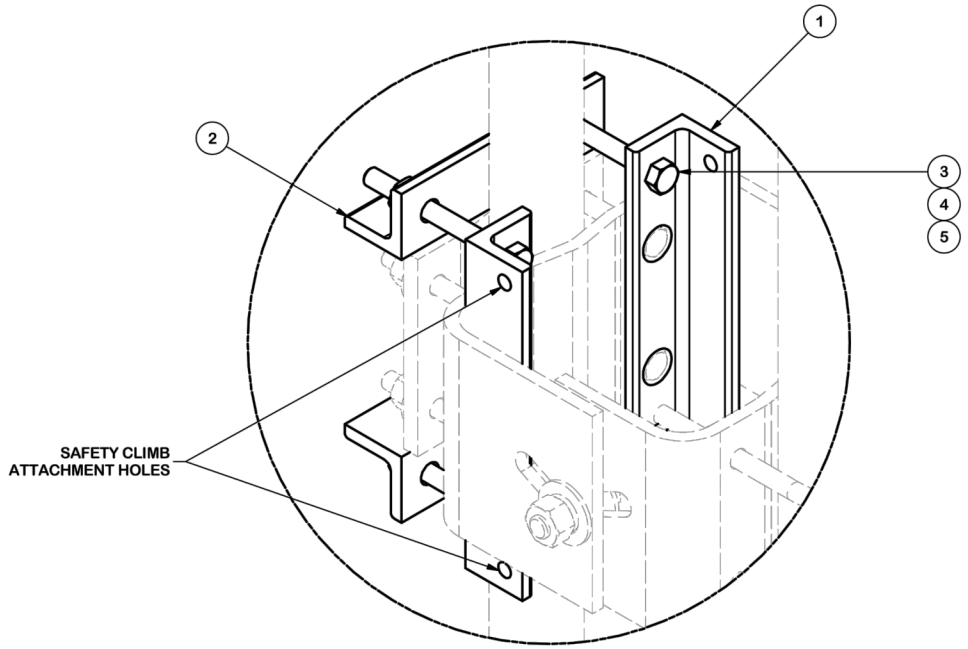
SHEET TITLE:
VZWSMART-MSK1
CROSSOVER PLATE

SHEET NUMBER: VZWSMART-MSK1

REV #: 0

PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	4	X-R5-FRA1	REINFORCEMENT ANGLE	10 in	3.84	15.36
2	4	X-R5-RFA2	REINFORCEMENT ANGLE	7 1/8 in	2.86	11.45
3	8	G1208	1/2" x 8" HDG HEX BOLT GR5 FULL THREAD	8 in	0.49	3.94
3	8	G1205	1/2" x 5" HDG HEX BOLT GR5 FULL THREAD	5 in	0.33	2.61
4	8	G12LW	1/2" HDG LOCKWASHER		0.01	0.11
5	8	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	0.57
					TOTAL WT. #	34.04





DETAIL A

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")

DESCRIPTION
R5 UNIVERSAL PIPE MOUNT
REINFORCEMENT KIT

SITE PRO 1
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.
	JFS 4/22/2020	5/6/2020	R5-REINF

CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
81	02	CUSTOMER	BMC 5/6/2020	R5-REINF

ATTACHMENT 5


Highland Ave
Highland Ave
Highland Ave
Wimbledon Gate N
Layers
Google

The Assessor's office is responsible for the maintenance of records on the ownership of properties. Assessments are computed at 70% of the estimated market value of real property at the time of the last revaluation which was 2019.

Information on the Property Records for the Municipality of Torrington was last updated on 12/15/2021.

Property Summary Information

Parcel Data And Values | Building | Outbuildings | Sales | Permits

Parcel Information

Location:	1210 HIGHLAND AVE UNIT 1	Property Use:	Industrial	Primary Use:	Warehouse
Unique ID:	6279	Map Block Lot:	217/003/013/001	Acres:	0.00
490 Acres:	0.00	Zone:	R60	Volume / Page:	
Developers Map / Lot:		Census:	3106-2		

Value Information

	Appraised Value	Assessed Value
Land	0	0
Buildings	21,085	14,760
Detached Outbuildings	2,527	1,770
Total	23,612	16,530

Owner's Information

Owner's Data
LAUREL CABLEVISION INC C/O CABLEVISION SYSTEMS CORP 1111 STEWART AVE BETHPAGE, NY 11714

ATTACHMENT 6

UNITED STATES POSTAL SERVICE®

Certificate of Mailing — Firm

Name and Address of Sender	TOTAL NO. of Pieces Listed by Sender	TOTAL NO. of Pieces Received at Post Office™	Affix Stamp Here ***Postmark with Date of Receipt.***
Attorney Kenneth C. Baldwin Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103-3597	3 Postmaster, per *(name of receiving employee)*		neopost 12/21/2021 US POSTAGE $002.99 ZIP 06103 041L12203937

USPS® Tracking Number Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	Elinor Carbone, Mayor City of Torrington 140 Main Street Torrington, CT 06790				
2.	Martin Connor, City Planner City of Torrington 140 Main Street Torrington, CT 06790				
3.	Laurel Cablevision, Inc. c/o Cablevision Systems Corp. 1111 Stewart Avenue Bethpage, NY 11714				
4.					
5.					
6.					

OLD STATE HOUSE STATION 06103 DEC 21 2021 USPS

PS Form **3665**, January 2017 (Page ___ of ___) PSN 7530-17-000-5549

See Reverse for Instructions