Robinson+Cole

KENNETH C. BALDWIN

280 Trumbull Street
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Direct (860) 275-8345

Also admitted in Massachusetts and New York

January 8, 2024

Via Electronic Mail

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

Re: **Notice of Exempt Modification – Facility Modification**
7 Broadway Avenue Extension, Stonington (Mystic), 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 on an existing water tank and related equipment on the ground, near the base of the water tank. The water tank is owned by Planeta Properties and is managed by SBA. In April of 2011, Cellco received its first Siting Council ("Council") approval for proposed modification to its then – existing wireless facility. Since that time, the Council has approved antenna installations and modifications for AT&T, Metro PCS, and other wireless carriers. Cellco's use of the water tank was approved by the Town of Stonington in May of 2005. Cellco's first facility modification filing was approved by the Council in April 2011. A copy of the Town's 2005 approval for Cellco and the Council's 2011 approval of EM-VER-137-110322 are included in Attachment 1.[1]

Cellco now intends to modify its facility by installing three (3) new antennas and six (6) interference mitigation filters ("Filters") on Cellco's existing antenna platform and mounting assemblies. A set of project plans showing Cellco's proposed facility modifications and the new antenna and Filter specifications are included in Attachment 2.

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

[1] The Council has been approving wireless facilities modifications for Cellco and others since 2009 and continues to exercise jurisdiction over the wireless installations at the Property.

The planned modifications to the Cellco 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 structure. Cellco's new antennas and RRHs will be installed at the same height (93' above grade) on the 155-foot water tank.

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

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

4. The installation of Cellco's new antennas and RRHs will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. Included in Attachment 3 is a Calculated Radio Frequency Emissions Report demonstrating that the proposed modified facility will comply with the FCC safety standards. The modified facility will be capable of providing Cellco's 5G wireless service.

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

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

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

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

Sincerely,

Kenneth C. Baldwin

Enclosures
Copy to:
Danielle Chesebrough, First Selectman
Clifton Iler, AICP Town Planner
Planeta Properties, Property Owner
Aleksey Tyurin

ATTACHMENT 1

Town of Stonington
Building Permit

Permit Number: **B-2005-475**

Permit Date: 9/2/2005

This permit is hereby granted to: **Planeta Properties - owner; Cellco Partnership - applicant**

Of: 99 East River Drive
E. Hartford CT 06108

For the purpose of: **addition of panel antenna onto existing water tank. Installation of equipment shelter**

In compliance with the state provisions of the Basic Building Code of the State of Connecticut

Property Location **7 Broadway Ave. Ext.** **Mystic**

Assessor's Map: 174 **Block:** 22 **Lot:** 1 **Sub Lot:**

Special Conditions or Stipulations: NA

In accordance with the application dated: 8/19/2005

Wayne Frame
Building Official

Date: 9/2/2005

Building Fee: $402.00 **Paid:** ☒

OFFICE OF THE BUILDING OFFICIAL

Town Of Stonington
152 Elm Street
Stonington, Connecticut 06378
(860) 535-5075 • Fax (860) 535-1023

Date of Final Inspection: August 7, 2006

CERTIFICATE OF USE AND OCCUPANCY

This is to certify that the building located on:

7 Broadway Ave. Ext., Mystic

constructed as addition of panel antenna onto existing water tank; installation of equipment shelter

for Planeta Properties – owner; Cellco Partnership – applicant

under Building Permit No. B-2005-475 dated 9/2/2005

conforms substantially to the requirements of the 1996 edition of the BOCA National Building Code, and the 1999 Connecticut Supplement, the State of Connecticut Public Health Code and is hereby approved for use and/or occupancy as indicated below:

Temporary Occupancy in accordance with Section 118.2

Permanent Occupancy in accordance with Section 118.0 X

Use Group (Article 3) U /Construction Type 5B

Any additional work, structural, plumbing, heating or electrical will require new permits and a new certificate of occupancy. The above captioned structure may not be occupied for a period of more than thirty days from time of completion of such new work without a new certificate of occupancy.

Wayne Howe
Building Official

8/17/06
Date

Construction Services of Branford, LLC
63-3 North Branford Road
Branford, CT 06405
(203) 488-0712

FAX To: Jim Maher
From: Brian
Date: 7/13 Pages: 2
860 727-5762

ZONING PERMIT

TOWN OF STONINGTON

PLANNING & ZONING COMMISSION

DATE ISSUED: **August 19, 2005** NO. **05-328 ZON**

NAME OF OWNER / APPLICANT: **Planeta Properties / Cellco Partnership**

LOCATION OF PROPERTY: **7 Broadway Ave. Ext., Mystic, CT 06355**

MAP: **174** BLOCK: **22** LOT: **1** ZONE: **M-1**

PERMITTED ACTIVITY: **Cell tower antennas.**

STIPULATIONS OR SPECIAL CONDITIONS:

1. **To be constructed in strict compliance with PZ0522SPA approval, 6/21/05.**

APPROVED BY: Joseph M. Lacki
ZONING OFFICIAL

8-19-05
DATE

CONSTRUCTION MAY NOT PROCEED UNTIL
A BUILDING PERMIT HAS BEEN OBTAINED

THIS PERMIT MUST BE PROMINENTLY POSTED ON THE PREMISES

THIS PERMIT IS VALID FOR 1 YEAR

Applicant may publish **Notice** of this approval as per Public Act No. 03-144

TOWN OF STONINGTON

CERTIFICATE OF ZONING COMPLIANCE

December 28, 2006 Permit No. 05-328 ZON

This Certificate is hereby granted

To: Planata Properties

of: 7 Broadway Avenue Extension, Mystic, CT 06355

for: Cell Tower Antenna Installation

This is to certify that the property listed below has been inspected and substantially complies with the Town of Stonington Zoning Regulations.

Property Location: 7 Broadway Avenue Extension, Mystic, CT 06355

Assessor's Map 174 **Block** 22 **Lot** 1 **Zone:** M-1

Comments: As per PZ0522SPA approval.

Joseph M. Lash
Zoning Official

Date 12-28-06

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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

April 7, 2011

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

RE: **EM-VER-137-110322** - Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 7 Broadway Extension, Stonington, 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 following conditions:

- Any deviation from the proposed modification as specified in this notice and supporting materials with Council shall render this acknowledgement invalid;
- Any material changes to this modification as proposed shall require the filing of a new notice with the Council;
- Not less than 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
- The validity of this action shall expire one year from the date of this letter; and
- The applicant may file a request for an extension of time beyond the one year deadline provided that such request is submitted to the Council not less than 60 days prior to the expiration;

The proposed modifications including the placement of all necessary equipment and shelters within the tower compound are to be implemented as specified here and in your notice dated March 21, 2011. 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. Thank you for your attention and cooperation.

Very truly yours,

Linda Roberts

Linda Roberts
Executive Director

LR/CDM/laf

c: The Honorable Ed Haberek Jr., First Selectman, Town of Stonington
Jason Vincent, Town Planner, Town of Stonington
Planeta Properties

ATTACHMENT 2

verizon

SITE NAME:

MYSTIC SOUTH CT

WBS#: VT-00081527-C.9111

MDG#: 5000244749

VICINITY MAP

DIRECTIONS:

FROM THE WESTBOROUGH OFFICE, MERGE ONTO I-495 N AND FOLLOW (60.7 MI). TAKE EXIT 31B TO MERGE ONTO I-95 S TOWARD PROVIDENCE (39.2 MI) KEEP RIGHT AT THE FORK TO STAY ON I-95 S (34.5 MI). TAKE EXIT 90 FOR CT-27 TOWARD MYSTIC (0.3 MI) TURN LEFT ONTO CT-27 S (1.1 MI). TURN RIGHT ONTO WILLOW ST, WHICH TURNS LEFT AND BECOMES BROADWAY AVE. MAKE SLIGHT RIGHT ONTO BROADWAY AVE EXT. SITE WILL BE ON THE LEFT

SITE ADDRESS:	7 BROADWAY AVENUE EXT MYSTIC, CT 06355
MUNICIPALITY:	TOWN OF STONINGTON
COUNTY:	NEW LONDON
TAX MAP NUMBER:	174-22-1
STRUCTURE COORDINATES:	41.349570° -71.963740°
GROUND ELEVATION:	54' AMSL
SBA SITE:	CT9563
PROPERTY OWNER:	PLANETA PROPERTIES 7 BROADWAY AVE. EXT. STONINGTON, CT 06355
APPLICANT:	VERIZON WIRELESS 118 FLANDERS RD WESTBOROUGH, MA 01581
CONTACT:	ANDREW LEONE ALEONE@STRUCTURECONSULTING.NET

SITE INFORMATION

PROJECT INFORMATION

THE PROPOSED WORK ON AN EXISTING WATER TANK CONSISTS OF:

- REMOVE (6) EXISTING PANEL ANTENNAS
- REMOVE (3) EXISTING DIPLEXERS
- REMOVE (9) EXISTING RRHs
- REMOVE (9) EXISTING COAX CABLES
- INSTALL (3) PROPOSED ANTENNA/RRH UNITS
- INSTALL (6) PROPOSED DUAL-BAND RRHs

SHT NO:	DESCRIPTION	REV NO:	REVISION DATE:
T-1	TITLE SHEET	1	12/18/23
C-1	DETAIL SITE PLAN & ELEVATION	1	12/18/23
C-2	ANTENNA ORIENTATIONS	1	12/18/23
C-3	ANTENNA DETAILS & DIAGRAMS	1	12/10/23

SHEET INDEX

THIS SET OF PLANS SHALL NOT BE UTILIZED AS CONSTRUCTION DOCUMENTS UNTIL ALL ITEMS OF CONCERN HAVE BEEN ADDRESSED AND EACH OF THE DRAWINGS HAS BEEN REVISED AND ISSUED "FOR CONSTRUCTION"

CONTRACTOR PMI REQUIREMENTS	
PMI ACCESSED AT:	HTTPS://PMI.VZWSMART.COM
SMART TOOL VENDOR PROJECT NUMBER:	10210418
VZW LOCATION CODE (PSLC):	468402
***PMI AND REQUIREMENTS ALSO EMBEDDED IN MOUNT ANALYSIS REPORT	

MOUNT MODIFICATION REQUIRED	NO

VZW APPROVED SMART KIT VENDORS

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

verizon

118 FLANDERS RD
WESTBOROUGH, MA 01581

Tectonic

WORK ORDER NUMBER	DRAWN BY
11883.043	DA

NO.	DATE	ISSUE
0	10/18/23	FOR COMMENT
1	12/18/23	FOR CONSTRUCTION

RELEASED BY	DATE

STATE OF CONNECTICUT
LEONARD W. DANIELS
PEN 0026473
LICENSED PROFESSIONAL ENGINEER

ORIGINAL SIZE IN INCHES

SITE INFORMATION

MYSTIC SOUTH CT
LC: 468402

SITE ADDRESS

7 BROADWAY AVENUE EXT
TOWN OF STONINGTON
NEW LONDON COUNTY
CT 06355

SHEET TITLE

TITLE SHEET

SHEET NUMBER

T-1

GENERAL NOTES

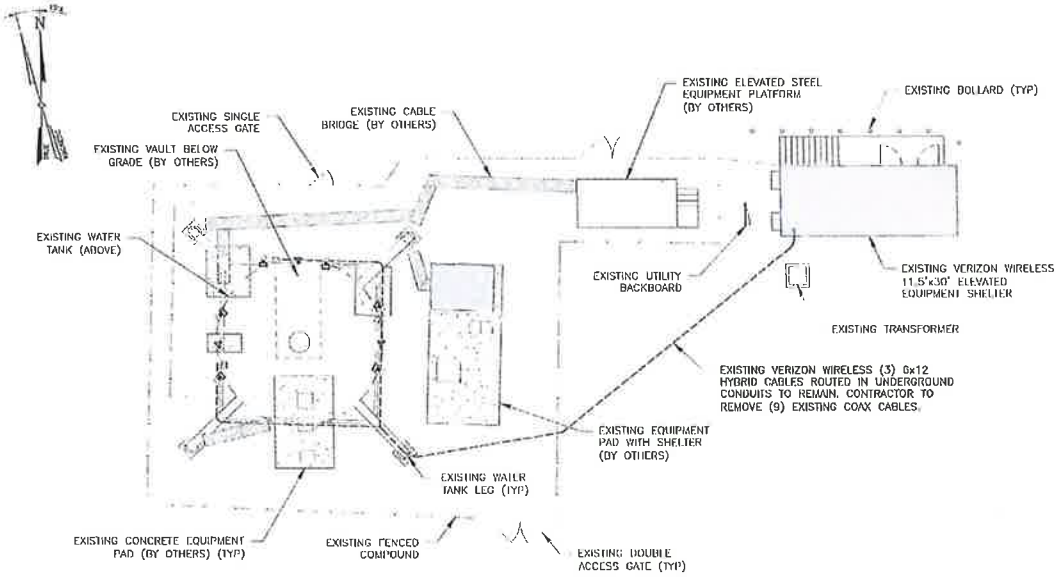
1. THIS PROJECT CONCERNS THE INSTALLATION, MAINTENANCE, AND OPERATION OF A PUBLIC UTILITY/PERSONAL WIRELESS SERVICE.
2. THE PROPOSED UPGRADE IS UNMANNED AND DOES NOT REQUIRE A MEANS OF WATER SUPPLY, SEWAGE DISPOSAL, OR HANDICAPPED ACCESS.
3. THE PROPOSED UPGRADE IS MINIMAL, WILL CREATE NEGLIGIBLE ADDITIONAL STORMWATER RUNOFF, AND WILL, THEREFORE, NOT IMPACT THE EXISTING STORMWATER DRAINAGE SYSTEM.
4. THE PROPOSED UPGRADE DOES NOT INCLUDE OUTDOOR STORAGE, SOLID WASTE RECEPTACLES, OR PLUMBING.
5. ADEQUATE PARKING EXISTS FOR ONE VEHICLE FOR MAINTENANCE OR EMERGENCY SERVICE ONCE A MONTH.
6. THERE ARE NO NEW STREETS, CURBS, SIDEWALKS, OR WALKWAYS PROPOSED.
7. THERE ARE NO COMMERCIAL SIGNS PROPOSED FOR THIS UPGRADE.

SITE NOTES

1. ALL WORK SHALL BE AS INDICATED ON THE DRAWINGS.
2. DEBRIS AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.

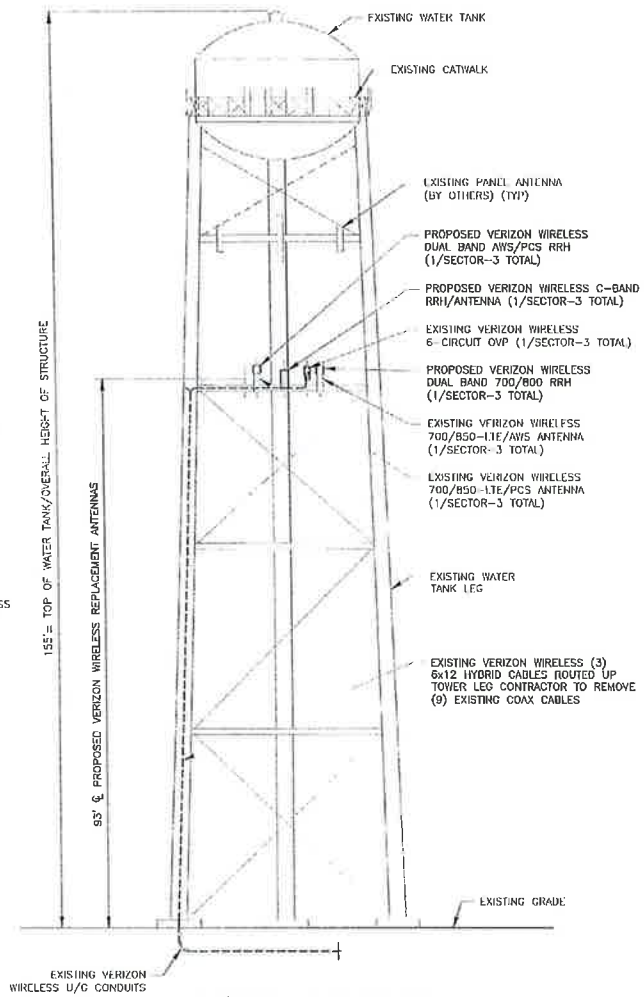
STRUCTURAL NOTES

1. ALL WORK SHALL CONFIRM TO ANSI/TIA-222-H-2017 " STRUCTURAL STANDARDS FOR ANTENNA SUPPORTING STRUCTURES, ANTENNA, AND SMALL WIND TURBINE SUPPORT STRUCTURES", THE 2022 CONNECTICUT STATE BUILDING CODE (CURRENT EDITION) AND ALL OTHER APPLICABLE LOCAL, STATE, AND FEDERAL CODES.
2. REFER TO STRUCTURAL ANALYSIS REPORT, PREPARED BY TECTONIC ENGINEERING CONSULTANTS, GEOLOGISTS, & LAND SURVEYORS, INC., DATED OCTOBER 17, 2023.
3. REFER TO MOUNT ANALYSIS REPORT AND PMI REQUIREMENTS, PREPARED BY COLLIERS ENGINEERING & DESIGN CT, P.C., DATED SEPTEMBER 29, 2023.
4. THE PREVIOUS ANALYSIS BY PAUL J. FORD & COMPANY, DATED MARCH 13, 2023, PROPOSED THE TANK BE FILLED WITH 333 KIPS OF SAND OR OTHER MATERIAL TO RESIST UPLIFT ON THE EXISTING FOUNDATION. THIS SHOULD BE COMPLETED PRIOR TO OR AS PART OF THIS MODIFICATION PROJECT.



NOTE:
SITE INFORMATION BASED ON A DRAWINGS BY ON AIR ENGINEERING, L.L.C. DATED 09/03/21.

1 / C-1 SITE PLAN
SCALE: 1" = 20'



2 / C-1 TOWER ELEVATION
SCALE: 1" = 20'

verizon

Tectonic
ENGINEERING CONSULTANTS, GEOLOGISTS & LAND SURVEYORS, INC.

WORK ORDER NUMBER	DRAWN BY
11863 083	DM

NO.	DATE	ISSUE
0	10/18/23	FOR COMMENT
1	12/18/23	FOR CONSTRUCTION

RE-ISSUED BY | DATE

STATE OF CONNECTICUT
EDWARD W. PARKER
PEN 0003813
LICENSED PROFESSIONAL ENGINEER

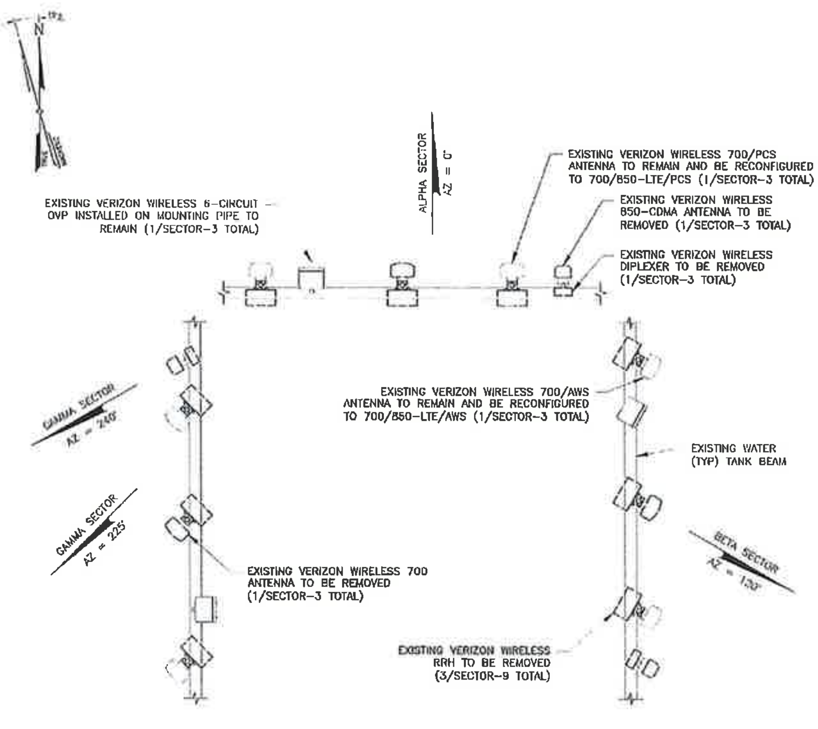
ORIGINAL SIZE 11 INCHES

SITE INFORMATION
MYSTIC SOUTH CT
LC: 468402

SITE ADDRESS
7 BROADWAY AVENUE EXT
TOWN OF STONINGTON
NEW LONDON COUNTY
CT 06355

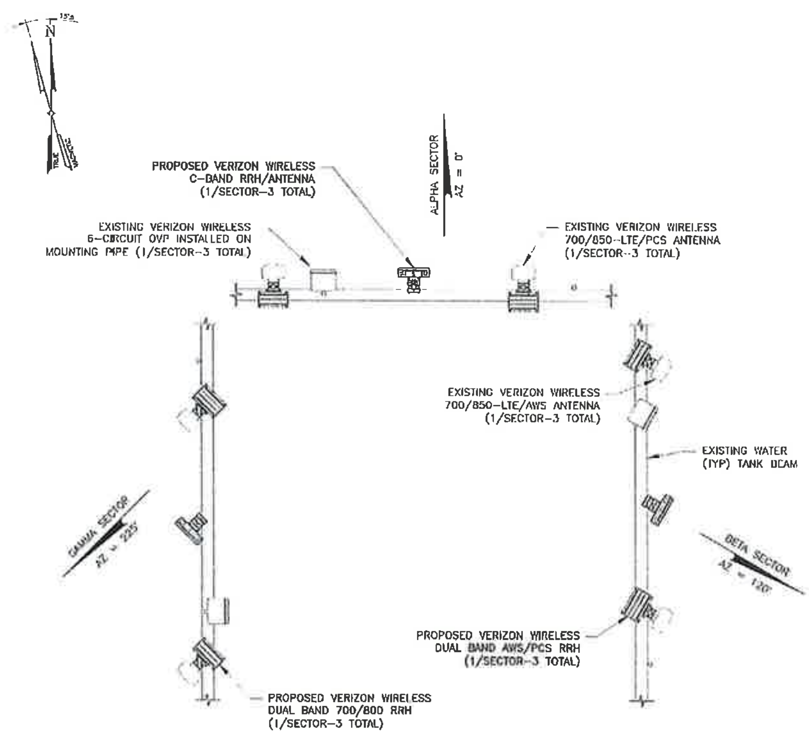
SHEET TITLE
DETAIL SITE PLAN & ELEVATION

SHEET NUMBER
C-1



1 C-2 EXISTING ANTENNA ORIENTATION PLAN

SCALE: 1" = 5'



2 C-2 PROPOSED ANTENNA ORIENTATION PLAN

SCALE: 1" = 5'

verizon

Tectonic

WORK ORDER NUMBER	DRAWN BY
11863.003	DAI

NO.	DATE	ISSUE
0	10/18/23	FOR COMMENT
1	12/18/23	FOR CONSTRUCTION

REVISED BY | DATE

STATE OF CONNECTICUT PROFESSIONAL ENGINEER LICENSED

SITE INFORMATION

MYSTIC SOUTH CT
LC: 468402

SITE ADDRESS

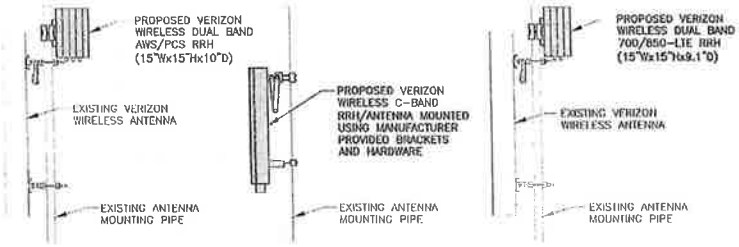
7 BROADWAY AVENUE EXT
TOWN OF STONINGTON
NEW LONDON COUNTY
CT 06355

SHEET TITLE

ANTENNA ORIENTATIONS

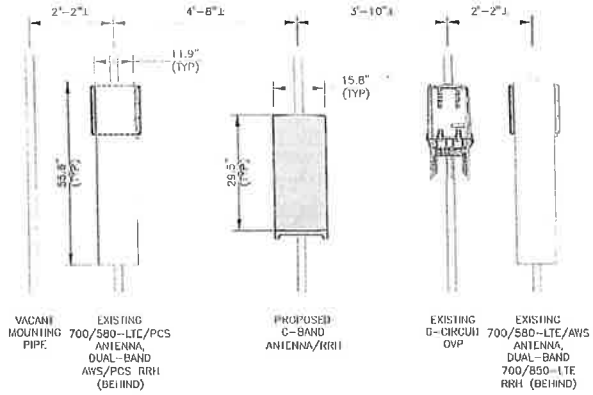
SHEET NUMBER

C-2



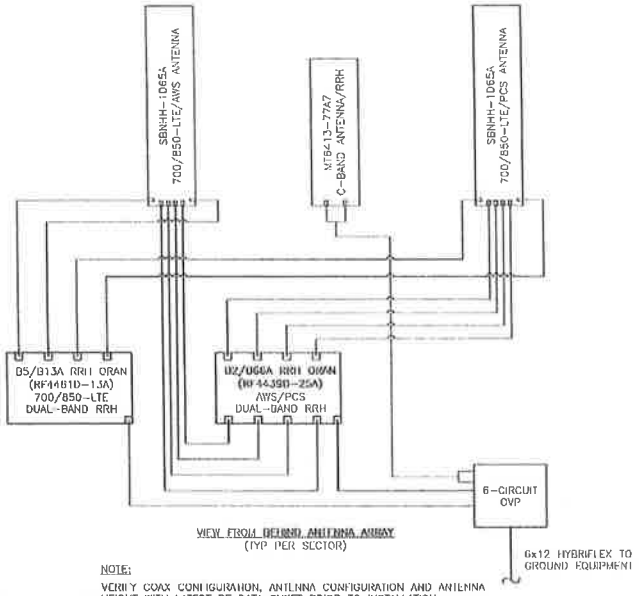
1 C-3 ANTENNA MOUNTING SECTION

SCALE: NTS



2 C-3 ANTENNA SECTOR VIEW

SCALE: NTS



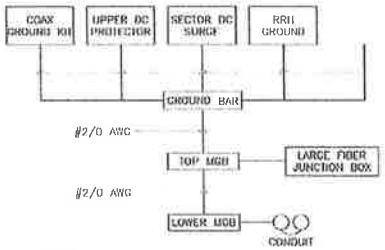
NOTE:
VERIFY COAX CONFIGURATION, ANTENNA CONFIGURATION AND ANTENNA HEIGHT WITH LATEST RF DATA SHEET PRIOR TO INSTALLATION.

3 C-3 ANTENNA SYSTEM LAYOUT

SCALE: NTS

GENERAL NOTES:

1. INSTALL ALL EQUIPMENT, MOUNTING BRACKETS, AND HARDWARE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
2. GROUND DISTRIBUTION BOXES, MOUNTING PIPES, AND RRHs IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
3. INSTALLED EQUIPMENT AND MOUNTING BRACKETS SHALL NOT INTERFERE WITH CLIMBING ACCESS NOR ANY INSTALLED SAFETY DEVICES.



NOTES:
1. BOND ANTENNA GROUNDING KIT CABLE TO TOP CIBE.
2. BOND ANTENNA GROUNDING KIT CABLE TO BOTTOM CIBE.
3. TYPICAL FOR ALL SECTORS.

4 C-3 GROUNDING SCHEMATIC DIAGRAM

SCALE: NTS

verizon

118 FLANDERS RD
WESTBOROUGH, MA 01581

Tectonic

WORK ORDER NUMBER: 11863.0C3
DRAWN BY: DAI

NO.	DATE	ISSUE
0	10/18/23	FOR COMMENT
1	12/18/23	FOR CONSTRUCTION

RELEASED BY | DATE

STATE OF CONNECTICUT
REGISTERED PROFESSIONAL ENGINEER
PEN 0028472
PROFESSIONAL ENGINEER

UNAUTHORIZED ALTERATION OR ADDITION TO A PLAN BEARING THE SEAL OF A LICENSED ENGINEER OR LAND SURVEYOR IS A VIOLATION OF THE STATE OF CONNECTICUT LAW.

COPIES OF THIS DOCUMENT WITHOUT A FACSIMILE OF THE SIGNATURE AND AN ORIGINAL EMBOSSED SEAL OR ORIGINAL STAMP IN BLUE OR RED INK OF THE PROFESSIONAL ENGINEER OR LAND SURVEYOR SHALL NOT BE CONSIDERED VALID COPIES.

ORIGINAL SIZE 36 INCHES

SITE INFORMATION

MYSTIC SOUTH CT
LC: 468402

SITE ADDRESS

7 BROADWAY AVENUE EXT
TOWN OF STONINGTON
NEW LONDON COUNTY
CT 06355

SHEET TITLE

ANTENNA DETAILS & DIAGRAMS

SHEET NUMBER

C-3

C-band 64T64R

SAMSUNG

Gen 2

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

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

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

Item	Gen 2 64T64R (MT6413-77A)
Air Technology	NR n77/TDD
Frequency	3700 – 3980 MHz
IBW	200 MHz
OBW	200 MHz
Carrier Bandwidth	20(HW ready)/40/60/80/100 MHz
# of Carriers	2 carriers
Layer	DL : 16L, UL : 16RX (8L)
RF Chain	64T64R
Antenna Configuration	4V16H with 192 AE
EIRP	80.5 dBm @320W (55 dBm + 25.5 dBi)
Conductive Power	320W
Spectrum Analyzer	TX/RX support
RX Sensitivity	Typical -97.8dBm @(1Rx, 18.36MHz with 30kHz,51RBs)
Modulation	DL 256QAM support, (DL 1024QAM with 1~2dB power back-off)
Function Split	DL/UL option 7-2x
Input Power	-48 VDC (-38 VDC to -57 VDC)
Power Consumption	1,287W (100% load, room temp.)
Size (WHD)	**400 x 734 x 140 mm (15.75 x 28.90 x 5.51 inch)**
Volume	**41.1L**
Weight	**26kg (57.3 lb)**
Operating Temperature	-40°C - 55°C (w/o solar load)
Cooling	Natural convection
Unwanted Emission	3GPP 38.104 FCC 47 CFR 27.53 : < -13dBm/MHz < -40 dBm/MHz @ above 4 GHz <-50 dBm /MHz @ 4,040 ~ 4,050 MHz, <-60 dBm /MHz @ above 4,050 MHz
Optic Interface	15km, 4 ports (25Gbps x 4), SFP28, single mode, Bi-di (Option: Duplex)
Mounting Options	Pole, wall
NB-IoT	Not support
External Alarm	4RX
Fronthaul Interface	eCPRI

SAMSUNG

AWS/PCS MACRO RADIO

DUAL-BAND AND HIGH POWER FOR MACRO COVERAGE

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

Model Code	RF4439d-25A

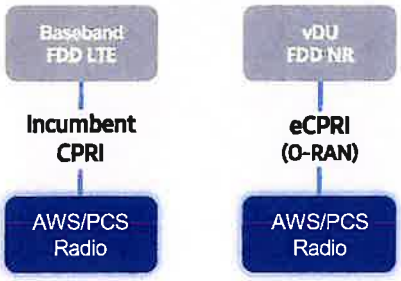
Homepage
samsungnetworks.com

Youtube
www.youtube.com/samsung5g

Points of Differentiation

Continuous Migration

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



O-RAN Compliant

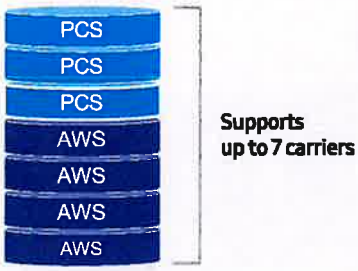
A standardized O-RAN radio can help in implementing cost-effective networks, which are capable of sending more data without compromising additional investments.

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

Optimum Spectrum Utilization

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

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



Brand New Features in a Compact Size

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

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

Same as an incumbent radio volume

Technical Specifications

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

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

SAMSUNG

Specifications

Item	Specification	
Air Interface	LTE, NR(HW resource ready)	
Band	Band13 (700MHz)	Band5 (850MHz)
Frequency	DL: 746~756MHz UL: 777~787MHz	DL: 869~894MHz UL: 824~849MHz
IBW	10MHz	25MHz
OBW	10MHz	25MHz
Carrier Bandwidth	LTE/NR 5*/10MHz	LTE 5/10MHz NR 5/10/15/20MHz
# of carriers	2C*	3C
Total # of carriers	4C + B13 (SDL) 1C	
RF Chain	4T4R/2T4R/2T2R/1T2R 2T2R+2T2R bi-sector	
RF Output Power	Total : 320W 4 x 40W or 2 x 60W	4 x 40W or 2 x 60W
Spectrum Analyzer	TX/RX Support	
RX Sensitivity	Typ. -104.5dBm @1Rx (25RBs 5MHz)	
Modulation	256QAM support, (1024QAM with 1~2dB power back-off)	
Input Power	-48VDC (-38VDC to -57VDC)	
Power Consumption	1,165 Watt @ 100% RF load, room temperature	
Size (WHD)	380 x 380 x 260 mm (14.96 x 14.96 x 10.23 inch)	
Volume	37.5 L	
Weight (W/o Solar Shield & finger guard)	35.9 kg (79.1 lb)	
Operating Temperature	-40°C (-40°F) ~ 55°C (131°F) (Without solar load)	
Cooling	Natural convection	
Unwanted Emission	3GPP 36.104 FCC 47 CFR 27.53 c), f) -	3GPP 36.104 FCC 47 CFR 22.917 -69 dBm/100 kHz per path @ 896 ~901MHz
CPRI Cascade	Not supported	
Optic Interface	20km, 2 ports (9.8Gbps x 2), SFP+, single mode, Duplex (Option: Bi-di)	
RET & TMA Interface	AISG 3.0	
Bias-T	4 ports (2 ports per band)	
Mounting Options	Pole, wall	
NB-IoT	2GB+2IB or 4IB	2SA+2GB or 2GB+2IB or 4GB
PIM Cancellation	Support	
# of antenna port	4	
External Alarm	4	
Fronthaul Interface	Opt. 8 CPRI / Opt. 7-2x selectable (not simultaneous support)	
CPRI compression	Not Support	

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

ATTACHMENT 3

C Squared Systems, LLC
65 Dartmouth Drive
Auburn, NH 03032
(603) 644-2800
support@csquaredsystems.com

Calculated Radio Frequency Emissions Report

verizon

Mystic South CT

7 Broadway Avenue Ext, Mystic, CT 06355

January 4, 2024

Table of Contents

List of Figures

List of Tables

1. Introduction

The purpose of this report is to investigate compliance with applicable FCC regulations for the proposed modification of Verizon's antenna arrays to be mounted at 93' on an existing Water tank located at 7 Broadway Avenue Ext in Mystic, CT. The coordinates of the water tank are 41° 20' 58.45" N, 71° 57' 49.45" W.

Verizon is proposing the following:

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

This report considers the planned antenna configuration for Verizon[1] as well as existing antenna configuration for AT&T[2], DISH[3], T-Mobile[4] to derive the resulting % MPE of its proposed modification.

2. FCC Guidelines for Evaluating RF Radiation Exposure Limits

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

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

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

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

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

---

[1] As referenced to Verizon's Radio Frequency Design Sheet updated 09/05/2023.

[2] As referenced to AT&T's Connecticut Siting Council Notice of Exempt Modification – 7 Broadway Avenue Extension, Mystic, Connecticut, dated 09/21/2022

[3] As referenced to DISH Connecticut Siting Council Tower Share Application – 7 Broadway Avenue, Mystic, Connecticut, dated 02/02/2023

[4] As referenced to T-Mobile's Connecticut Siting Council Notice of Exempt Modification – 7 Broadway Avenue Extension, Mystic, Connecticut, dated 8/03/2022

3. RF Exposure Prediction Methods

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

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

Where:

EIRP = Effective Isotropic Radiated Power

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

H = Horizontal Distance from antenna in meters

V = Vertical Distance from radiation center of antenna in meters

Off Beam Loss is determined by the selected antenna patterns

Ground reflection factor (GRF) of 1.6

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

4. Antenna Inventory

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

Operator	Sector / Call Sign	TX Freq (MHz)	Power at Antenna (Watts)	Ant Gain (dBi)	Power EIRP (Watts)	Antenna Model	Beam Width	Mech. Tilt	Length (ft)	Antenna Centerline Height (ft)
Verizon	Alpha / 0°	700	160	13.4	3500	SBNHH-1D65A	66.4	0	4.64	93
		850	160	13.5	3582		61			
		1900	160	16.7	7484		64.7			
		2100	240	17.2	12595		62			
		3700	320	25.5	113540	MT6413-77A	-	0	2.46	93
	Beta / 120°	700	160	13.4	3500	SBNHH-1D65A	68	0	4.64	93
		850	160	13.5	3582		65.5			
		1900	160	16.7	7484		66.2			
		2100	240	17.2	12595		63			
		3700	320	25.5	113540	MT6413-77A	105	0	2.46	93
	Gamma / 225°	700	160	13.4	3500	SBNHH-1D65A	68	0	4.64	93
		850	160	13.5	3582		65.5			
		1900	160	16.7	7484		66.2			
		2100	240	17.2	12595		63			
		3700	320	25.5	113540	MT6413-77A	105	0	2.46	93

Table 1: Proposed Antenna Inventory[5][6]

[5] Antenna heights are in reference to Verizon's Radio Frequency Design Sheet updated 09/05/2023.

[6] Transmit power assumes 0 dB of cable loss.

5. Calculation Results

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

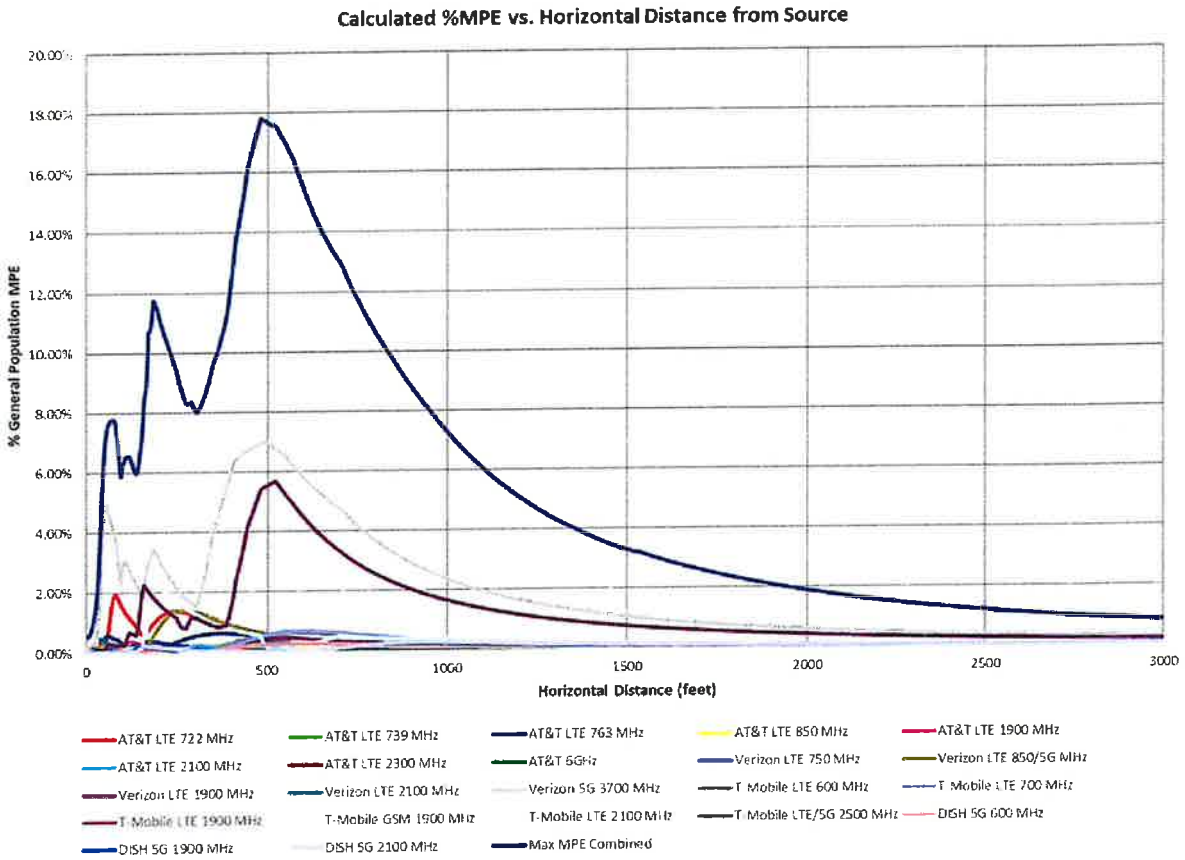


Figure 1: Graph of General Population % MPE vs. Distance

The highest percent of MPE (17.83% of the General Population limit) is calculated to occur at a horizontal distance of 481 feet from antennas. Please note that the percent of MPE calculations close to the site take into account off beam loss, which is determined from the vertical pattern of the antennas used. Therefore, RF power density levels may increase as the distance from the site increases. At distances of approximately 800 feet and beyond, one would now be in the main beam of the antenna pattern and off beam loss is no longer considered. Beyond this point, RF levels become calculated solely on distance from the site and the percent of MPE decreases significantly as distance from the site increases.

Table 2 below lists percent of MPE values as well as the associated parameters that were included in the calculations. The highest percent of MPE value was calculated to occur at a horizontal distance of 481 feet from the site (reference Figure 1).

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

Carrier	Number of Transmitters	Power out of Base Station Per Transmitter (Watts)	Antenna Height (Feet)	Distance to the Base of Antennas (Feet)	Power Density (mW/cm^2)	Limit (mW/cm^2)	% MPE
AT&T 6GHz	1	1.0	140.0	481	0.000000	1.000	0.00%
AT&T LTE 1900 MHz	1	160.0	140.0	481	0.000645	1.000	0.06%
AT&T LTE 2100 MHz	1	240.0	140.0	481	0.001341	1.000	0.13%
AT&T LTE 2300 MHz	1	100.0	140.0	481	0.000346	1.000	0.03%
AT&T LTE 722 MHz	1	160.0	67.0	481	0.002838	0.481	0.59%
AT&T LTE 739 MHz	1	160.0	140.0	481	0.001511	0.493	0.31%
AT&T LTE 763 MHz	1	160.0	140.0	481	0.001287	0.509	0.25%
AT&T LTE 850 MHz	1	160.0	140.0	481	0.001316	0.567	0.23%
DISH 5G 1900 MHz	1	160.0	140.0	481	0.000144	1.000	0.01%
DISH 5G 2100 MHz	1	160.0	140.0	481	0.000104	1.000	0.01%
DISH 5G 600 MHz	1	120.0	140.0	481	0.000853	0.400	0.21%
T-Mobile GSM 1900 MHz	1	80.0	117.0	481	0.000079	1.000	0.01%
T-Mobile LTE 1900 MHz	1	80.0	117.0	481	0.000079	1.000	0.01%
T-Mobile LTE 2100 MHz	1	160.0	117.0	481	0.005264	1.000	0.53%
T-Mobile LTE 600 MHz	1	160.0	117.0	481	0.002147	0.400	0.54%
T-Mobile LTE 700 MHz	1	160.0	117.0	481	0.002323	0.467	0.50%
T-Mobile LTE/5G 2500 MHz	1	240.0	117.0	481	0.054060	1.000	5.41%
Verizon 5G 3700 MHz	1	320.0	93.0	481	0.069604	1.000	6.96%
Verizon LTE 1900 MHz	1	160.0	93.0	481	0.003890	1.000	0.39%
Verizon LTE 2100 MHz	1	240.0	93.0	481	0.004867	1.000	0.49%
Verizon LTE 750 MHz	1	160.0	93.0	481	0.002633	0.500	0.53%
Verizon LTE 850/5G MHz	1	160.0	93.0	481	0.003563	0.567	0.63%
						Total	**17.83%**

Table 2: Maximum Percent of General Population Exposure Values[7]

[7] In the case where antenna pattern data was unavailable from the manufacturer, generic antenna pattern was used based on the frequency, bandwidth and gain of the antenna

6. Conclusion

The above analysis verifies that RF exposure levels from the site with Verizon's proposed antenna configuration will be well below the maximum permissible levels as outlined by the FCC in the OET Bulletin 65 Ed. 97-01. Using the conservative calculation methods and parameters detailed above, the maximum cumulative percent of MPE in consideration of all transmitters is calculated to be **17.83%** of the FCC limit (General Population/Uncontrolled). This maximum cumulative percent of MPE value is calculated to occur 481 feet away from the site.

7. Statement of Certification

I certify to the best of my knowledge that the statements in this report are true and accurate. The calculations follow guidelines set forth in ANSI/IEEE Std. C95.3, ANSI/IEEE Std. C95.1 and FCC OET Bulletin 65 Edition 97-01.

Report Prepared By: Ram Acharya
RF Engineer
C Squared Systems, LLC

January 3, 2024
Date

Reviewed/Approved By: Martin Lavin
Senior RF Engineer
C Squared Systems, LLC

January 4, 2024
Date

Attachment A: References

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

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

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

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

(A) Limits for Occupational/Controlled Exposure[8]

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

(B) Limits for General Population/Uncontrolled Exposure[9]

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

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

Table 3: FCC Limits for Maximum Permissible Exposure

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

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

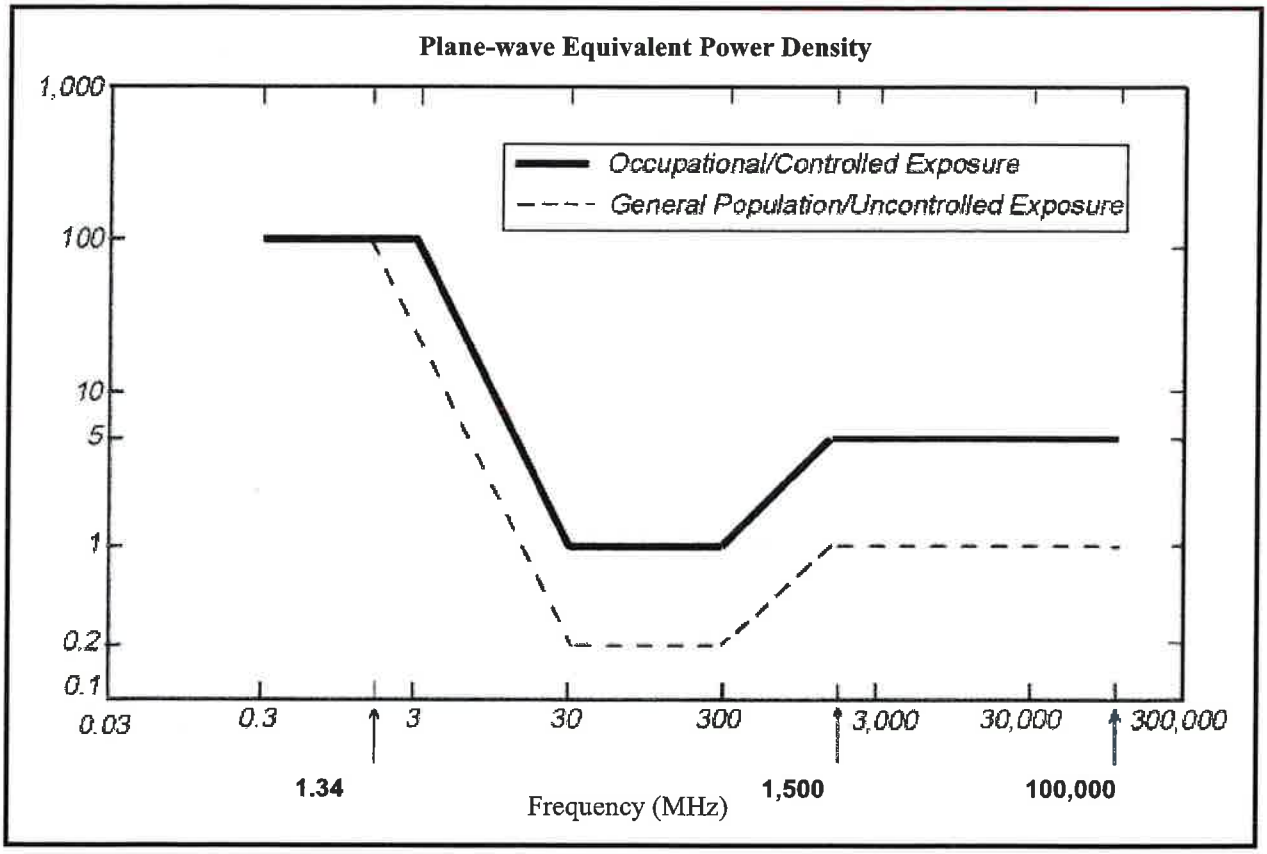
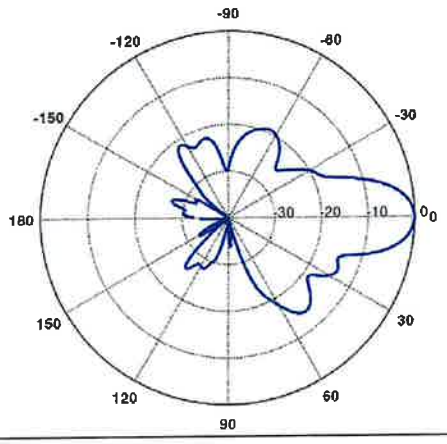
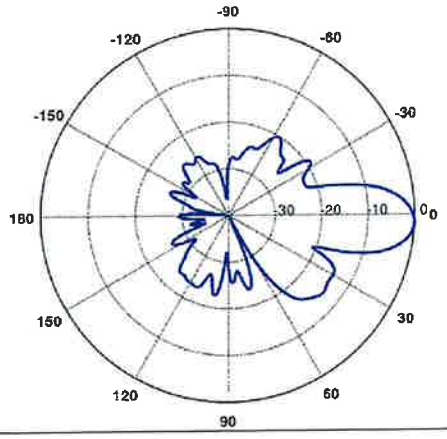
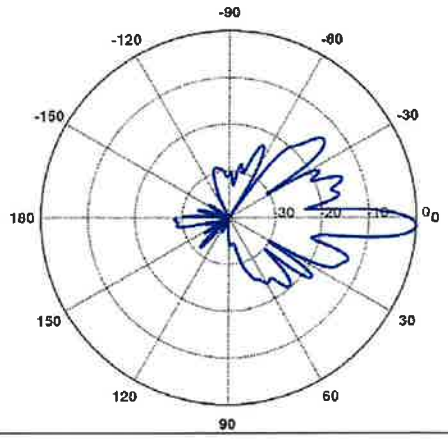
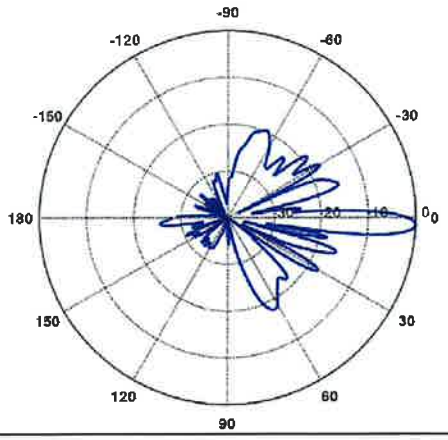


Figure 2: Graph of FCC Limits for Maximum Permissible Exposure (MPE)

Attachment C: Verizon Antenna Model Data Sheets and Electrical Patterns

750 MHz Manufacturer: COMMSCOPE Model #: SBNHH-1D65A Frequency Band: 698-806 MHz Gain: 13.4 dBi Vertical Beamwidth: 17.6° Horizontal Beamwidth: 66.4° Polarization: ±45° Dimensions (L x W x D): 55.63" x 11.85" x 7.1"	
885 MHz Manufacturer: COMMSCOPE Model #: SBNHH-1D65A Frequency Band: 806-896 MHz Gain: 13.5 dBi Vertical Beamwidth: 15.9° Horizontal Beamwidth: 61° Polarization: ±45° Dimensions (L x W x D): 55.63" x 11.85" x 7.1"	

1900 MHz Manufacturer: COMMSCOPE Model #: SBNHH-1D65A Frequency Band: 1850-1990 MHz Gain: 16.7 dBi Vertical Beamwidth: 6.6° Horizontal Beamwidth: 64.7° Polarization: ±45° Dimensions (L x W x D): 55.63" x 11.85" x 7.1"	
2100 MHz Manufacturer: COMMSCOPE Model #: SBNHH-1D65A Frequency Band: 1920-2200 MHz Gain: 17.2 dBi Vertical Beamwidth: 6.2° Horizontal Beamwidth: 62° Polarization: ±45° Dimensions (L x W x D): 55.63" x 11.85" x 7.1"	

ATTACHMENT 4

Tectonic
PRACTICAL SOLUTIONS EXCEPTIONAL SERVICE

Date: **October 17, 2023**

Structural Analysis Report

Carrier: Verizon Wireless

Project ID: 16244602
Site Name: Mystic South CT
Site Data: 7 Broadway Avenue Ext, Mystic, CT 06355
Latitude 41° 20' 58.45", Longitude -71° 57' 49.46"
156 Foot Water Tank

Tectonic Project Number: 11863.003

Tectonic Engineering Consultants, Geologists & Land Surveyors, D.P.C., Inc. is pleased to submit this **"Structural Analysis Report"** to determine the structural integrity of the above-mentioned tower.

The purpose of the analysis is to determine acceptability of the tower stress level. Based on our analysis we have determined the tower stress level for the structure and foundation to be:

Structure: **Sufficient – 93.3%**
Foundation: **Conditionally Sufficient – 85.8%***
*The existing foundation will have sufficient capacity to support the load configurations once the modifications in the report below have been implemented.

This analysis has been performed in accordance with the 2022 Connecticut State Building Code and the 2021 International Building Code based upon an ultimate 3-second gust wind speed of 140 mph per Appendix P as required for use in the ANSI/TIA-222-H-1-2019 Standard. Exposure Category C with a maximum topographic factor, Kzt, of 1.0 and Risk Category III were used in this analysis.

All modifications and equipment proposed in this report shall be installed in accordance with this analysis for the determined available structural capacity to be effective.

We at Tectonic appreciate the opportunity of providing our continuing professional services to you. If you have any questions or need further assistance on this or any other projects, please give us a call.

Structural analysis prepared by: John-Fritz Julien / Ian Marinaccio

Respectfully submitted by:
Tectonic Engineering Consultants, Geologists & Land Surveyors, D.P.C., Inc.

Edward N. Iamiceli, P.E.
Managing Director - Structural

Project Contact Info

1279 Route 300 | Newburgh, NY 12550
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tectonicengineering.com
Equal Opportunity Employer

TABLE OF CONTENTS

1) INTRODUCTION

The evaluation of the existing water tank tower structure and its ability to support the proposed Verizon Wireless load configurations and existing loads. The water tank tower structure was previously analyzed and reinforced by All-Points Technology in 2021. The water tank tower structure is analyzed under risk category III as required per AWWA Standards.

2) ANALYSIS CRITERIA

TIA-222 Revision:	TIA-222-H
Risk Category:	III
Wind Speed:	140 mph ultimate 3-second gust *per the town of Mystic, CT*
Exposure Category:	C
Topographic Factor:	1.0
Ice Thickness:	1.0 in
Wind Speed with Ice:	50 mph
Service Wind Speed:	60 mph
Seismic S_1 / S_s:	0.053 / 0.191

Table 1 – Final Verizon Wireless Load Configurations

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Notes
93'-0"	Verizon Wireless	3	Samsung	MT6413-77A	-	-	1
		3	Samsung	B2/B66A RRH ORAN			
		3	Samsung	B5/B13 RRH ORAN			
		6	CommScope	SBNHH-1D65A	3	6x12 Hybrid	2
		3	Raycap	OVP Distribution Box			

Notes:
1) Proposed Verizon Wireless equipment to be mounted on the face of the tower.
2) Existing equipment.

3) ANALYSIS PROCEDURE

Table 2 - Documents Provided

Document	Prepared By	Dated
Prev. Structural Analysis	All-Points Technology Corporation/ Verizon	10/26/2016
Prev. Structural Analysis	All-Points Technology Corporation/T-Mobile	05/10/2021
Foundation Investigation Report	KM Consulting Engineering, Inc.	01/04/2022
Mount Mapping Report and Inventory	Nexius	03/18/2022
Geotechnical Engineering Report	Atlantic Consulting & Engineering	05/05/2022
Prev. Mount Analysis	Hudson Design Group/AT&T	05/06/2022
Structural Analysis Report	Palu J. Ford & Company	
Tower Analysis Report	Tectonic Engineering	06/21/2023
RFDS	Verizon Wireless	09/05/2023
Preliminary Construction Drawings	Tectonic Engineering	10/12/2023

3.1) Analysis Method

tnxTower (version 8.1.1.0), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A.

3.2) Assumptions

1) Tower and structures were built and maintained in accordance with the manufacturer's specifications.
2) The proposed configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Table 1.
3) The AT&T load configurations are based on the previous tower analysis report by Hudson Design Group, referenced above.
4) The Dish Wireless load configurations are based on the previous tower analysis by Tectonic Engineering, referenced above.
5) The tower geometry is based solely on the previous analysis report by All-Points Technology, referenced above. The previously proposed diagonal modifications have been considered as installed in this analysis. The material grades used in this report are as follows:
   - Pipe Leg: A7-33
   - Solid Rod Diagonals: A36 (modified) & A7-33
   - W-Beam Girts: A7-33
   - Anchor Rods: A36
6) The previously proposed foundation modifications by Paul J. Ford & Company have been considered in this analysis.

This analysis is solely for the supporting tower structure, and it may be affected if any assumptions are not valid or have been made in error. Tectonic should be notified to determine the effect on the structural integrity of the tower.

4) ANALYSIS RESULTS

Table 3 - Section Capacity (Summary)

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
T1	138 - 117	Leg	P18x.25	3	-40.06	382.85	10.5	Pass
T2	117 - 92	Leg	P18x.25	20	-73.78	370.54	19.9	Pass
T3	92 - 65	Leg	P18x.25	36	-112.37	363.76	30.9	Pass
T4	65 - 35	Leg	P18x.25	52	-156.01	352.88	44.2	Pass
T5	35 - 0	Leg	P18x.25	68	-206.61	333.09	62.0	Pass
T1	138 - 117	Diagonal (modified)	1	11	21.77	23.33	93.3	Pass
T2	117 - 92	Diagonal (modified)	1 1/8	32	29.16	32.21	90.5	Pass
T3	92 - 65	Diagonal (modified)	1 3/8	48	34.88	48.11	72.5	Pass
T4	65 - 35	Diagonal (modified)	1 1/2	57	38.04	57.26	66.4	Pass
T5	35 - 0	Diagonal (modified)	1 5/8	73	43.62	67.20	64.9	Pass
T1	138 - 117	Top Girt	W8x35	6	-8.99	171.77	5.2	Pass
T2	117 - 92	Top Girt	W8x35	24	-18.09	146.09	12.4	Pass
T3	92 - 65	Top Girt	W8x35	40	-22.59	117.23	19.3	Pass
T4	65 - 35	Top Girt	W10x68	53	-25.94	279.70	9.3	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
T5	35 - 0	Top Girt	W10x68	69	-29.03	227.12	12.8	Pass
							Summary	
						Leg (T5)	62.0	Pass
						Diagonal (T1)	93.3	Pass
						Top Girt (T3)	19.3	Pass
						Rating =	93.3	Pass

Table 4 - Tower Component Stresses vs. Capacity

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Anchor Rods	0	40.3	Pass
2	Base Foundation	0	85.8	Pass
	Structure Rating (max from all components) =			**93.3%**

Notes:
1) See additional documentation in "Appendix A" for calculations supporting the % capacity consumed.
2) See Results / Conclusions below supporting the % capacity consumed.

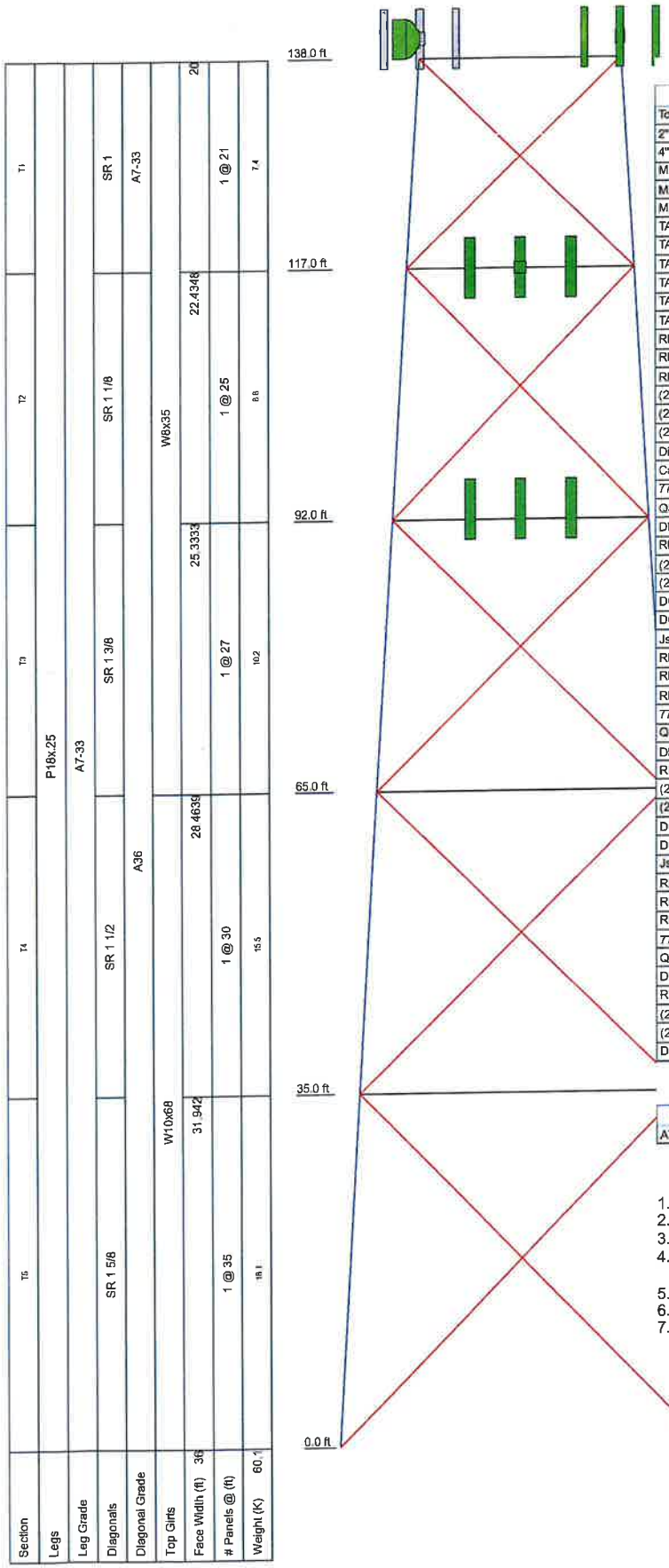
4.1) Results / Conclusions

The tower and its anchors have sufficient capacity to support the proposed Verizon Wireless load configurations.

The previous analysis by Paul J. Ford & Company referenced the above proposed that the tank be filled with 333 kips of sand or other material to resist the existing foundation in uplift. The maximum leg compression with the proposed weight does not exceed the allowable bearing capacity of 271 kips per the geotechnical report by Atlantic Consulting & Engineering referenced above. Additionally, the existing anchor rods have sufficient reserved capacity to support the lateral and uplift loading. We conclude that the foundation will be adequate to support the proposed configurations upon modification.

APPENDIX A

TNXTOWER OUTPUT



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Top	152.5	DC2-48-60-0-9E	140
2" STD Pipe (2.375 OD)x4'-0"	140	Jsource FMB	140
4" STD Pipe (4.5 OD)x5'-0"	140	RRUS 4449 B5/B12	140
MX08FRO665-21 w/ Mount Pipe	140	RRUS 4426 B66	140
MX08FRO665-21 w/ Mount Pipe	140	RRUS 4415 B25	140
MX08FRO665-21 w/ Mount Pipe	140	(3) 6' x 2.5" STD Pipe	140
TA08025-B605	140	(3) 6' x 2.5" STD Pipe	140
TA08025-B605	140	(3) 6' x 2.5" STD Pipe	140
TA08025-B605	140	4' Dish	140
TA08025-B604	140	Middle	138
TA08025-B604	140	Bottom	133.5
TA08025-B604	140	APXVAALL24_43-U-NA20 w/ Mount Pipe	117
RDIDC-9181-PF-48	140	APX16DWV-16DWV-S-E-A20_TIA w/ Mount Pipe	117
RDIDC-9181-PF-48	140	RADIO 4449 B71+B85	117
RDIDC-9181-PF-48	140	RRUS 4426 B66	117
(2) L3X3	140	RRUS 4415	117
(2) L3X3	140	AIR 6449 B41 w/ Mount Pipe	117
(2) L3X3	140	APXVAALL24_43-U-NA20 w/ Mount Pipe	117
Dipole	140	APX16DWV-16DWV-S-E-A20_TIA w/ Mount Pipe	117
Catwalk	140	RADIO 4449 B71+B85	117
7770.00 w/ Mount Pipe	140	RRUS 4426 B66	117
QS46512-2 w/ Mount Pipe	140	RRUS 4415	117
DMP65R-BU4D w/ Mount Pipe	140	AIR 6449 B41 w/ Mount Pipe	117
RRUS 32 B2	140	APXVAALL24_43-U-NA20 w/ Mount Pipe	117
(2) LGP21401	140	APX16DWV-16DWV-S-E-A20_TIA w/ Mount Pipe	117
(2) DBC0061F1V51-2	140	RADIO 4449 B71+B85	117
DC6-48-60-18-8F	140	RRUS 4426 B66	117
DC2-48-60-0-9E	140	RRUS 4415	117
Jsource FMB	140	AIR 6449 B41 w/ Mount Pipe	117
RRUS 4449 B5/B12	140	B2/B66 RRH ORAN	93
RRUS 4426 B66	140	B13/B5 RRH ORAN	93
RRUS 4415 B25	140	(2) SBNHH-1D65A_TIA w/ Mount Pipe	93
7770.00 w/ Mount Pipe	140	OVP-Distribution Box	93
QS46512-2 w/ Mount Pipe	140	MT6413-77A w/ Mount Pipe	93
DMP65R-BU4D w/ Mount Pipe	140	B2/B66 RRH ORAN	93
RRUS 32 B2	140	B13/B5 RRH ORAN	93
(2) LGP21401	140	(2) SBNHH-1D65A_TIA w/ Mount Pipe	93
(2) DBC0061F1V51-2	140	OVP-Distribution Box	93
DC6-48-60-18-8F	140	MT6413-77A w/ Mount Pipe	93

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A7-33	33 ksi	60 ksi	A36	36 ksi	58 ksi

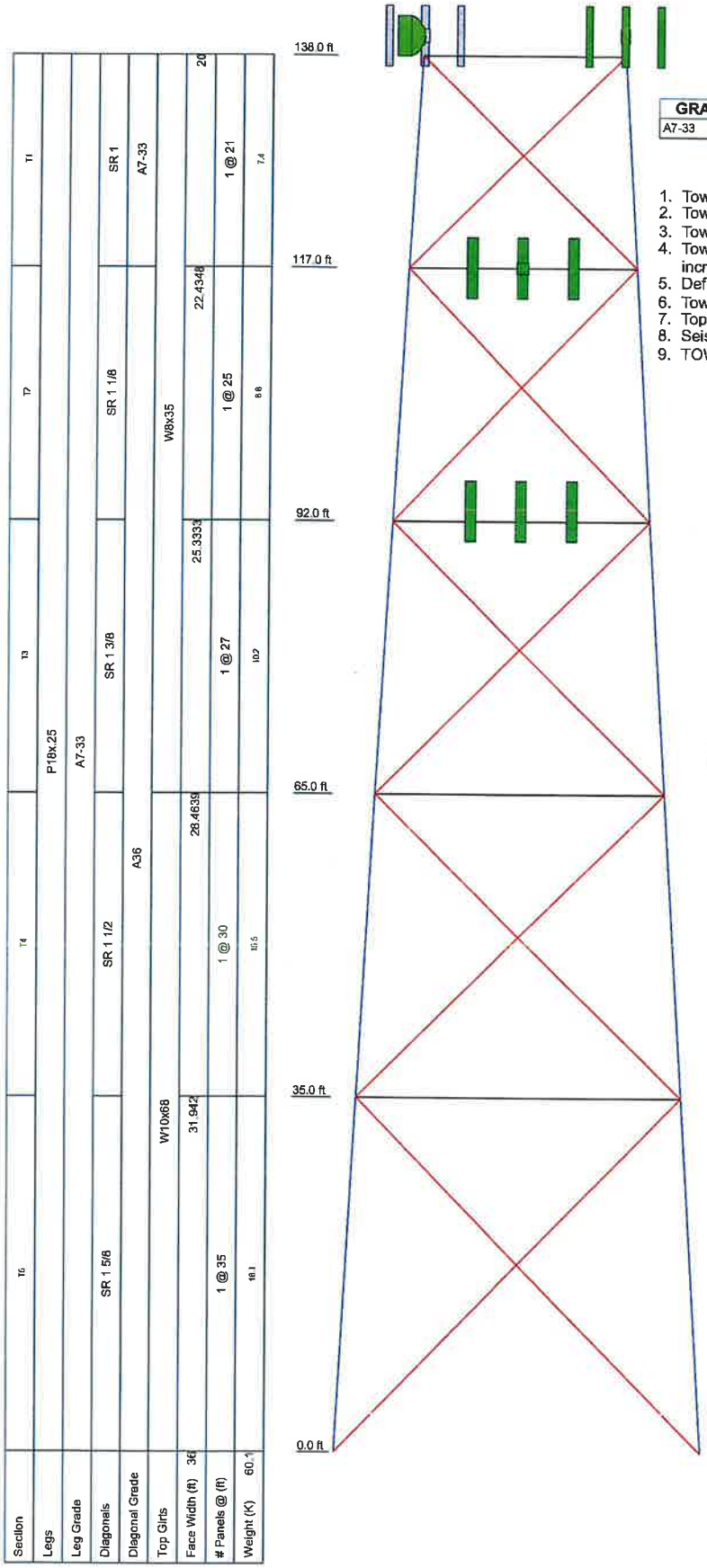
TOWER DESIGN NOTES

1. Tower is located in New London County, Connecticut.
2. Tower designed for Exposure C to the TIA-222-H Standard.
3. Tower designed for a 140 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 50 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Risk Category III.
7. Topographic Category 1 with Crest Height of 0.00 ft

Tectonic

Tectonic
1279 Route 300
Newburgh, NY 12550
Phone: (845) 567-6656
FAX: (845) 567-8703

Job:	***156' Water Tower Structural Analysis***		
Project:	***11863.003_Mystic South CT***		
Client:	Verizon Wireless	Drawn by: Ian Marinaccio	App'd:
Code:	TIA-222-H	Date: 10/16/23	Scale: NTS
Path:			Dwg No. E-1



MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A7-33	33 ksi	60 ksi	A36	36 ksi	58 ksi

TOWER DESIGN NOTES

1. Tower is located in New London County, Connecticut.
2. Tower designed for Exposure C to the TIA-222-H Standard.
3. Tower designed for a 140 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 50 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Risk Category III.
7. Topographic Category 1 with Crest Height of 0.00 ft
8. Seismic calculations are in accordance with TIA-222-H-1
9. TOWER RATING: 93.3%

ALL REACTIONS ARE FACTORED

MAX. CORNER REACTIONS AT BASE:
DOWN: 207 K
SHEAR: 18 K

UPLIFT: -147 K
SHEAR: 43 K

AXIAL 140 K
SHEAR 9 K *MOMENT 1161 kip-ft*
TORQUE 0 kip-ft
SEISMIC

AXIAL 195 K
SHEAR 16 K *MOMENT 1672 kip-ft*
TORQUE 26 kip-ft
50 mph WIND - 1.00 in ICE

AXIAL 135 K
SHEAR 91 K *MOMENT 8792 kip-ft*
TORQUE 111 kip-ft
REACTIONS - 140 mph WIND

Tectonic
1279 Route 300
Newburgh, NY 12550
Phone: (845) 567-6656
FAX: (845) 567-8703

Job: **156' Water Tower Structural Analysis**			
Project: **11863.003_Mystic South CT**			
Client: Verizon Wireless	Drawn by: Ian Marinaccio		App'd:
Code: TIA-222-H	Date: 10/16/23		Scale: NTS
Path:			Dwg No. E-1

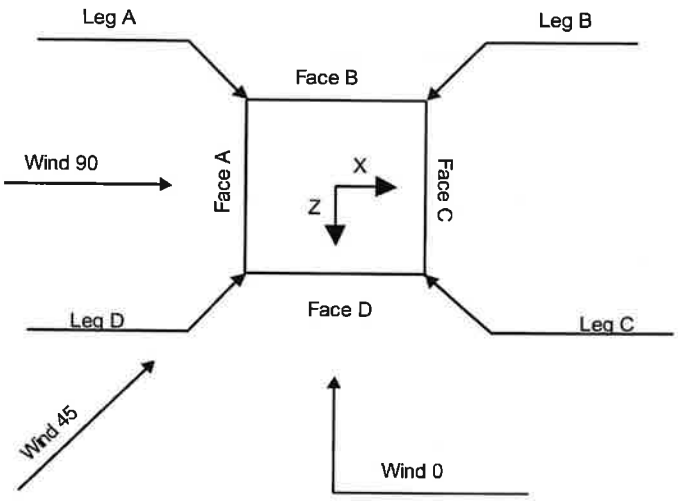
Tower Input Data

The main tower is a 4x free standing tower with an overall height of 138.00 ft above the ground line.
The base of the tower is set at an elevation of 0.00 ft above the ground line.
The face width of the tower is 20.00 ft at the top and 36.00 ft at the base.
This tower is designed using the TIA-222-H standard.
The following design criteria apply:

- Tower is located in New London County, Connecticut.
- Tower base elevation above sea level: 2.00 ft.
- Basic wind speed of 140 mph.
- Risk Category III.
- Exposure Category C.
- Simplified Topographic Factor Procedure for wind speed-up calculations is used.
- Topographic Category: 1.
- Crest Height: 0.00 ft.
- Nominal ice thickness of 1.00 in.
- Ice thickness is considered to increase with height.
- Ice density of 56 pcf.
- A wind speed of 50 mph is used in combination with ice.
- Temperature drop of 50 °F.
- Deflections calculated using a wind speed of 60 mph.
- Seismic calculations are in accordance with TIA-222-H-1.
- A non-linear (P-delta) analysis was used.
- Pressures are calculated at each section.
- Stress ratio used in tower member design is 1.
- Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

	Consider Moments - Legs		Distribute Leg Loads As Uniform		Use ASCE 10 X-Brace Ly Rules
	Consider Moments - Horizontals		Assume Legs Pinned	√	Calculate Redundant Bracing Forces
	Consider Moments - Diagonals	√	Assume Rigid Index Plate		Ignore Redundant Members in FEA
	Use Moment Magnification	√	Use Clear Spans For Wind Area		SR Leg Bolts Resist Compression
√	Use Code Stress Ratios	√	Use Clear Spans For KL/r		All Leg Panels Have Same Allowable
	Use Code Safety Factors - Guys		Retension Guys To Initial Tension		Offset Girt At Foundation
	Escalate Ice	√	Bypass Mast Stability Checks	√	Consider Feed Line Torque
	Always Use Max Kz	√	Use Azimuth Dish Coefficients	√	Include Angle Block Shear Check
	Use Special Wind Profile	√	Project Wind Area of Appurt.		Use TIA-222-H Bracing Resist. Exemption
√	Include Bolts In Member Capacity		Autocalc Torque Arm Areas		Use TIA-222-H Tension Splice Exemption
	Leg Bolts Are At Top Of Section		Add IBC .6D+W Combination		Poles
√	Secondary Horizontal Braces Leg	√	Sort Capacity Reports By Component	√	Include Shear-Torsion Interaction
	Use Diamond Inner Bracing (4 Sided)		Triangulate Diamond Inner Bracing		Always Use Sub-Critical Flow
	SR Members Have Cut Ends	√	Treat Feed Line Bundles As Cylinder		Use Top Mounted Sockets
	SR Members Are Concentric		Ignore KL/ry For 60 Deg. Angle Legs		Pole Without Linear Attachments
					Pole With Shroud Or No Appurtenances
					Outside and Inside Corner Radii Are Known



Square Tower

Tower Section Geometry

Tower Section	Tower Elevation ft	Assembly Database	Description	Section Width ft	Number of Sections	Section Length ft
T1	138.00-117.00			20.00	1	21.00
T2	117.00-92.00			22.43	1	25.00
T3	92.00-65.00			25.33	1	27.00
T4	65.00-35.00			28.46	1	30.00
T5	35.00-0.00			31.94	1	35.00

Tower Section Geometry *(cont'd)*

Tower Section	Tower Elevation ft	Diagonal Spacing ft	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset in	Bottom Girt Offset in
T1	138.00-117.00	21.00	TX Brace	No	Yes	0.00	0.00
T2	117.00-92.00	25.00	TX Brace	No	Yes	0.00	0.00
T3	92.00-65.00	27.00	TX Brace	No	Yes	0.00	0.00
T4	65.00-35.00	30.00	TX Brace	No	Yes	0.00	0.00
T5	35.00-0.00	35.00	TX Brace	No	Yes	0.00	0.00

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
T1 138.00-117.00	Pipe	P18x.25	A7-33 (33 ksi)	Solid Round	1	A7-33 (33 ksi)
T2 117.00-92.00	Pipe	P18x.25	A7-33 (33 ksi)	Solid Round	1 1/8	A36 (36 ksi)
T3 92.00-65.00	Pipe	P18x.25	A7-33 (33 ksi)	Solid Round	1 3/8	A36 (36 ksi)
T4 65.00-35.00	Pipe	P18x.25	A7-33 (33 ksi)	Solid Round	1 1/2	A36 (36 ksi)

Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
T5 35.00-0.00	Pipe	P18x.25	A7-33 (33 ksi)	Solid Round	1 5/8	A36 (36 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
T1 138.00-117.00	Wide Flange	W8x35	A7-33 (33 ksi)	Solid Round		A36 (36 ksi)
T2 117.00-92.00	Wide Flange	W8x35	A7-33 (33 ksi)	Solid Round		A36 (36 ksi)
T3 92.00-65.00	Wide Flange	W8x35	A7-33 (33 ksi)	Solid Round		A36 (36 ksi)
T4 65.00-35.00	Wide Flange	W10x68	A7-33 (33 ksi)	Solid Round		A36 (36 ksi)
T5 35.00-0.00	Wide Flange	W10x68	A7-33 (33 ksi)	Solid Round		A36 (36 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	No. of Mid Girts	Mid Girt Type	Mid Girt Size	Mid Girt Grade	Horizontal Type	Horizontal Size	Horizontal Grade
T1 138.00-117.00	None	Flat Bar		A36 (36 ksi)	Wide Flange	W8x35	A7-33 (33 ksi)
T2 117.00-92.00	None	Flat Bar		A36 (36 ksi)	Wide Flange	W8x35	A7-33 (33 ksi)
T3 92.00-65.00	None	Flat Bar		A36 (36 ksi)	Wide Flange	W8x35	A7-33 (33 ksi)
T4 65.00-35.00	None	Flat Bar		A36 (36 ksi)	Wide Flange	W10x68	A7-33 (33 ksi)
T5 35.00-0.00	None	Flat Bar		A36 (36 ksi)	Wide Flange	W10x68	A7-33 (33 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Gusset Area (per face) ft²	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
T1 138.00-117.00	0.00	0.00	A36 (36 ksi)	1	1	1	36.00	36.00	36.00
T2 117.00-92.00	0.00	0.00	A36 (36 ksi)	1	1	1	36.00	36.00	36.00
T3 92.00-65.00	0.00	0.00	A36 (36 ksi)	1	1	1	36.00	36.00	36.00
T4 65.00-35.00	0.00	0.00	A36 (36 ksi)	1	1	1	36.00	36.00	36.00
T5 35.00-0.00	0.00	0.00	A36 (36 ksi)	1	1	1	36.00	36.00	36.00

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Calc K Single Angles	Calc K Solid Rounds	K Factors[1] Legs	X Brace Diags X Y	K Brace Diags X Y	Single Diags X Y	Girts X Y	Horiz. X Y	Sec. Horiz. X Y	Inner Brace X Y
T1 138.00-117.00	No	No	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T2 117.00-92.00	No	No	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T3 92.00-65.00	No	No	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T4 65.00-35.00	No	No	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T5 35.00-0.00	No	No	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1

[1]*Note: K factors are applied to member segment lengths. K-braces without inner supporting members will have the K factor in the out-of-plane direction applied to the overall length.*

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
T1 138.00-117.00	0.00	1	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T2 117.00-92.00	0.00	1	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T3 92.00-65.00	0.00	1	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T4 65.00-35.00	0.00	1	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T5 35.00-0.00	0.00	1	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75

Tower Elevation ft	Redundant Horizontal		Redundant Diagonal		Redundant Sub-Diagonal		Redundant Sub-Horizontal		Redundant Vertical		Redundant Hip		Redundant Hip Diagonal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
T1 138.00-117.00	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T2 117.00-92.00	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T3 92.00-65.00	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T4 65.00-35.00	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T5 35.00-0.00	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg Connection Type	Leg Bolt Size in	Leg No.	Diagonal Bolt Size in	Diagonal No.	Top Girt Bolt Size in	Top Girt No.	Bottom Girt Bolt Size in	Bottom Girt No.	Mid Girt Bolt Size in	Mid Girt No.	Long Horizontal Bolt Size in	Long Horizontal No.	Short Horizontal Bolt Size in	Short Horizontal No.
T1 138.00-117.00	Flange	0.00 A325N	0	2.00 A325N	2	0.63 A325N	0	0.63 A325N	0	0.63 A325N	0	0.63 A325N	0	0.63 A325N	0
T2 117.00-92.00	Flange	0.00 A325N	0	2.00 A325N	2	0.63 A325N	0	0.63 A325N	0	0.63 A325N	0	0.63 A325N	0	0.63 A325N	0
T3 92.00-65.00	Flange	0.00 A325N	0	2.00 A325N	2	0.63 A325N	0	0.63 A325N	0	0.63 A325N	0	0.63 A325N	0	0.63 A325N	0
T4 65.00-35.00	Flange	0.00 A325N	0	2.00 A325N	2	0.63 A325N	0	0.63 A325N	0	0.63 A325N	0	0.63 A325N	0	0.63 A325N	0
T5 35.00-0.00	Flange	1.25 A36	4	2.00 A325N	2	0.63 A325N	0	0.63 A325N	0	0.63 A325N	0	0.63 A325N	0	0.63 A325N	0

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
*Dish Power	B	No	No	Ar (CaAa)	138.00 - 0.00	0.00	0.5	3	3	0.00	0.94		0.58
DC	B	No	No	Ar (CaAa)	138.00 - 0.00	0.00	0.5	3	3	0.00	0.33		0.15
*AT&T LDF7-50A(1-5/8)	D	No	No	Ar (CaAa)	138.00 - 0.00	0.00	0.5	12	4	1.98	1.98		0.82
2.25" Fiber Duct	D	No	No	Ar (CaAa)	138.00 - 0.00	0.00	0.5	1	1	2.25	2.25		0.25
Climbing Ladder	D	No	No	Ar (CaAa)	138.00 - 0.00	0.00	0.5	1	1	1.00	1.00		7.90
*TMO LDF7-50A(1-5/8)	C	No	No	Ar (CaAa)	117.00 - 0.00	0.00	0.5	6	6	1.98	1.98		0.82
LDF6-50A(1-1/4)	C	No	No	Ar (CaAa)	117.00 - 0.00	0.00	0.5	3	3	1.55	1.55		0.60
HC-24LCSM6GAB-XXXF(1")	C	No	No	Ar (CaAa)	117.00 - 0.00	0.00	0.5	1	1	0.99	0.99		0.71
*VZW HL-9612XXX(1-1/2")	A	No	No	Ar (CaAa)	93.00 - 0.00	0.00	0.5	3	3	1.49	1.49		1.87

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft²	A_F ft²	C_AA_A In Face ft²	C_AA_A Out Face ft²	Weight K
T1	138.00-117.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	7.988	0.000	0.05
		C	0.000	0.000	0.000	0.000	0.00
		D	0.000	0.000	56.721	0.000	0.38
T2	117.00-92.00	A	0.000	0.000	0.448	0.000	0.01
		B	0.000	0.000	9.510	0.000	0.05
		C	0.000	0.000	43.807	0.000	0.19
		D	0.000	0.000	67.525	0.000	0.45
T3	92.00-65.00	A	0.000	0.000	12.093	0.000	0.15
		B	0.000	0.000	10.271	0.000	0.06
		C	0.000	0.000	47.312	0.000	0.20
		D	0.000	0.000	72.927	0.000	0.49

Tower Section	Tower Elevation ft	Face	A_R ft²	A_F ft²	C_AA_A In Face ft²	C_AA_A Out Face ft²	Weight K
T4	65.00-35.00	A	0.000	0.000	13.437	0.000	0.17
		B	0.000	0.000	11.412	0.000	0.07
		C	0.000	0.000	52.569	0.000	0.22
		D	0.000	0.000	81.030	0.000	0.54
T5	35.00-0.00	A	0.000	0.000	15.677	0.000	0.20
		B	0.000	0.000	13.314	0.000	0.08
		C	0.000	0.000	61.331	0.000	0.26
		D	0.000	0.000	94.535	0.000	0.63

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft²	A_F ft²	C_AA_A In Face ft²	C_AA_A Out Face ft²	Weight K
T1	138.00-117.00	A	1.316	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	29.382	0.000	0.24
		C		0.000	0.000	0.000	0.000	0.00
		D		0.000	0.000	72.258	0.000	1.93
T2	117.00-92.00	A	1.291	0.000	0.000	1.355	0.000	0.02
		B		0.000	0.000	34.526	0.000	0.27
		C		0.000	0.000	121.156	0.000	1.46
		D		0.000	0.000	85.535	0.000	2.27
T3	92.00-65.00	A	1.254	0.000	0.000	36.267	0.000	0.48
		B		0.000	0.000	36.603	0.000	0.29
		C		0.000	0.000	130.046	0.000	1.54
		D		0.000	0.000	91.641	0.000	2.42
T4	65.00-35.00	A	1.199	0.000	0.000	39.758	0.000	0.52
		B		0.000	0.000	39.513	0.000	0.30
		C		0.000	0.000	143.143	0.000	1.65
		D		0.000	0.000	100.578	0.000	2.64
T5	35.00-0.00	A	1.079	0.000	0.000	45.033	0.000	0.56
		B		0.000	0.000	43.187	0.000	0.32
		C		0.000	0.000	163.603	0.000	1.79
		D		0.000	0.000	114.205	0.000	2.96

Feed Line Center of Pressure

Section	Elevation ft	CP_X in	CP_Z in	CP_X Ice in	CP_Z Ice in
T1	138.00-117.00	-16.56	15.20	-11.72	11.45
T2	117.00-92.00	-12.13	32.61	-2.36	38.42
T3	92.00-65.00	-15.11	29.83	-6.19	32.35
T4	65.00-35.00	-15.68	31.03	-6.77	34.58
T5	35.00-0.00	-17.56	34.69	-8.00	38.60

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T1	2	Power	117.00 - 138.00	0.6000	0.6000
T1	3	DC	117.00 - 138.00	0.6000	0.6000
T1	5	LDF7-50A(1-5/8)	117.00 -	0.6000	0.6000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T1	6	2.25" Fiber Duct	138.00 - 117.00	0.6000	0.6000
T1	7	Climbing Ladder	138.00 - 117.00	0.6000	0.6000
T2	2	Power	138.00 - 92.00	0.6000	0.6000
T2	3	DC	117.00 - 92.00	0.6000	0.6000
T2	5	LDF7-50A(1-5/8)	117.00 - 92.00	0.6000	0.6000
T2	6	2.25" Fiber Duct	117.00 - 92.00	0.6000	0.6000
T2	7	Climbing Ladder	117.00 - 92.00	0.6000	0.6000
T2	9	LDF7-50A(1-5/8)	117.00 - 92.00	0.6000	0.6000
T2	10	LDF6-50A(1-1/4)	117.00 - 92.00	0.6000	0.6000
T2	11	HC-24LCSM6GAB-XXXF(1")	117.00 - 92.00	0.6000	0.6000
T2	14	HL-9612XXX(1-1/2")	117.00 - 92.00	0.6000	0.6000
T3	2	Power	93.00 - 65.00	0.6000	0.6000
T3	3	DC	92.00 - 65.00	0.6000	0.6000
T3	5	LDF7-50A(1-5/8)	92.00 - 65.00	0.6000	0.6000
T3	6	2.25" Fiber Duct	92.00 - 65.00	0.6000	0.6000
T3	7	Climbing Ladder	92.00 - 65.00	0.6000	0.6000
T3	9	LDF7-50A(1-5/8)	92.00 - 65.00	0.6000	0.6000
T3	10	LDF6-50A(1-1/4)	92.00 - 65.00	0.6000	0.6000
T3	11	HC-24LCSM6GAB-XXXF(1")	92.00 - 65.00	0.6000	0.6000
T3	14	HL-9612XXX(1-1/2")	92.00 - 65.00	0.6000	0.6000
T4	2	Power	65.00 - 35.00	0.6000	0.6000
T4	3	DC	65.00 - 35.00	0.6000	0.6000
T4	5	LDF7-50A(1-5/8)	65.00 - 35.00	0.6000	0.6000
T4	6	2.25" Fiber Duct	65.00 - 35.00	0.6000	0.6000
T4	7	Climbing Ladder	65.00 - 35.00	0.6000	0.6000
T4	9	LDF7-50A(1-5/8)	65.00 - 35.00	0.6000	0.6000
T4	10	LDF6-50A(1-1/4)	65.00 - 35.00	0.6000	0.6000
T4	11	HC-24LCSM6GAB-XXXF(1")	65.00 - 35.00	0.6000	0.6000
T4	14	HL-9612XXX(1-1/2")	65.00 - 35.00	0.6000	0.6000
T5	2	Power	0.00 - 35.00	0.6000	0.6000
T5	3	DC	0.00 - 35.00	0.6000	0.6000
T5	5	LDF7-50A(1-5/8)	0.00 - 35.00	0.6000	0.6000
T5	6	2.25" Fiber Duct	0.00 - 35.00	0.6000	0.6000
T5	7	Climbing Ladder	0.00 - 35.00	0.6000	0.6000
T5	9	LDF7-50A(1-5/8)	0.00 - 35.00	0.6000	0.6000
T5	10	LDF6-50A(1-1/4)	0.00 - 35.00	0.6000	0.6000
T5	11	HC-24LCSM6GAB-XXXF(1")	0.00 - 35.00	0.6000	0.6000
T5	14	HL-9612XXX(1-1/2")	0.00 - 35.00	0.6000	0.6000

User Defined Loads - Seismic

Description	Elevation	Offset From Centroid	Azimuth Angle	E_v	E_{hx}	E_{hz}	E_h
	ft	ft	°	K	K	K	K
CCISeismic Tower Section 1	127.50	0.00	0.0000	0.29	0.00	0.00	0.82
CCISeismic Tower Section 2	104.50	0.00	0.0000	0.35	0.00	0.00	0.80
CCISeismic Tower Section 3	78.50	0.00	0.0000	0.40	0.00	0.00	0.69
CCISeismic Tower Section 4	50.00	0.00	0.0000	0.61	0.00	0.00	0.67
CCISeismic Tower Section 5	17.50	0.00	0.0000	0.71	0.00	0.00	0.27
CCISeismic miscl Dipole	140.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic pipe mounts 2" STD Pipe (2.375 OD)x4'-0"	140.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic pipe mounts 4" STD Pipe (4.5 OD)x5'-0"	140.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic jma wireless MX08FRO665-21 w/ Mount Pipe	140.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic jma wireless MX08FRO665-21 w/ Mount Pipe	140.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic jma wireless MX08FRO665-21 w/ Mount Pipe	140.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic fujitsu TA08025-B605	140.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic fujitsu TA08025-B605	140.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic fujitsu TA08025-B605	140.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic fujitsu TA08025-B604	140.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic fujitsu TA08025-B604	140.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic fujitsu TA08025-B604	140.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic raycap RDIDC-9181-PF-48	140.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic raycap RDIDC-9181-PF-48	140.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic raycap RDIDC-9181-PF-48	140.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (2) L3X3	140.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic (2) L3X3	140.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic (2) L3X3	140.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic Top	152.50	0.00	0.0000	0.42	0.00	0.00	1.40
CCISeismic Middle	138.00	0.00	0.0000	0.64	0.00	0.00	1.94
CCISeismic Bottom	133.50	0.00	0.0000	0.42	0.00	0.00	1.23
CCISeismic Catwalk	140.00	0.00	0.0000	0.20	0.00	0.00	0.60
CCISeismic powerwave technologies 7770.00 w/ Mount Pipe	140.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic quintel technology QS46512-2 w/ Mount Pipe	140.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic cci antennas DMP65R-BU4D w/ Mount Pipe	140.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic ericsson RRUS 32 B2	140.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic (2) powerwave technologies LGP21401	140.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (2) kaelus DBC0061F1V51-2	140.00	0.00	0.0000	0.00	0.00	0.00	0.01

Description	Elevation	Offset From Centroid	Azimuth Angle	E_v	E_{hx}	E_{hz}	E_h
	ft	ft	°	K	K	K	K
CCISeismic raycap DC6-48-60-18-8F	140.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic raycap DC2-48-60-0-9E	140.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic miscl Jsource FMB	140.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic ericsson RRUS 4449 B5/B12	140.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic ericsson RRUS 4426 B66	140.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic ericsson RRUS 4415 B25	140.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic powerwave technologies 7770.00 w/ Mount Pipe	140.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic quintel technology QS46512-2 w/ Mount Pipe	140.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic cci antennas DMP65R-BU4D w/ Mount Pipe	140.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic ericsson RRUS 32 B2	140.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (2) powerwave technologies LGP21401	140.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic (2) kaelus DBC0061F1V51-2	140.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic raycap DC6-48-60-18-8F	140.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic raycap DC2-48-60-0-9E	140.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic miscl Jsource FMB	140.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic ericsson RRUS 4449 B5/B12	140.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic ericsson RRUS 4426 B66	140.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic ericsson RRUS 4415 B25	140.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic powerwave technologies 7770.00 w/ Mount Pipe	140.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic quintel technology QS46512-2 w/ Mount Pipe	140.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic cci antennas DMP65R-BU4D w/ Mount Pipe	140.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic ericsson RRUS 32 B2	140.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (2) powerwave technologies LGP21401	140.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic (2) kaelus DBC0061F1V51-2	140.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic raycap DC6-48-60-18-8F	140.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic raycap DC2-48-60-0-9E	140.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic miscl Jsource FMB	140.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic ericsson RRUS 4449 B5/B12	140.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic ericsson RRUS 4426 B66	140.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic ericsson RRUS 4415 B25	140.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic (3) mount pipes 6' x 2.5" STD Pipe	140.00	0.00	0.0000	0.00	0.00	0.00	0.01

Description	Elevation ft	Offset From Centroid ft	Azimuth Angle °	E_v K	E_{hx} K	E_{hz} K	E_h K
CCISeismic (3) mount pipes 6' x 2.5" STD Pipe	140.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic (3) mount pipes 6' x 2.5" STD Pipe	140.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic ericsson AIR 6449 B41 w/ Mount Pipe	117.00	0.00	0.0000	0.01	0.00	0.00	0.01
CCISeismic rfs celwave APXVAALL24_43-U-NA20 w/ Mount Pipe	117.00	0.00	0.0000	0.01	0.00	0.00	0.02
CCISeismic rfs celwave APX16DWV-16DWV-S-E-A20_TIA w/ Mount Pipe	117.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic ericsson RADIO 4449 B71+B85	117.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic ericsson RRUS 4426 B66	117.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic ericsson RRUS 4415	117.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic ericsson AIR 6449 B41 w/ Mount Pipe	117.00	0.00	0.0000	0.01	0.00	0.00	0.01
CCISeismic rfs celwave APXVAALL24_43-U-NA20 w/ Mount Pipe	117.00	0.00	0.0000	0.01	0.00	0.00	0.02
CCISeismic rfs celwave APX16DWV-16DWV-S-E-A20_TIA w/ Mount Pipe	117.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic ericsson RADIO 4449 B71+B85	117.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic ericsson RRUS 4426 B66	117.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic ericsson RRUS 4415	117.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic ericsson AIR 6449 B41 w/ Mount Pipe	117.00	0.00	0.0000	0.01	0.00	0.00	0.01
CCISeismic rfs celwave APXVAALL24_43-U-NA20 w/ Mount Pipe	117.00	0.00	0.0000	0.01	0.00	0.00	0.02
CCISeismic rfs celwave APX16DWV-16DWV-S-E-A20_TIA w/ Mount Pipe	117.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic ericsson RADIO 4449 B71+B85	117.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic ericsson RRUS 4426 B66	117.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic ericsson RRUS 4415	117.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic samsung telecommunications MT6413-77A w/ Mount Pipe	93.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic samsung telecommunications B2/B66 RRH ORAN	93.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic samsung telecommunications B13/B5 RRH ORAN	93.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic (2) commscope SBNHH-1D65A_TIA w/ Mount Pipe	93.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic raycap OVP-Distribution Box	93.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic samsung telecommunications MT6413-77A w/ Mount Pipe	93.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic samsung telecommunications B2/B66 RRH ORAN	93.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic samsung telecommunications B13/B5	93.00	0.00	0.0000	0.00	0.00	0.00	0.01

Description	Elevation	Offset From Centroid	Azimuth Angle	E_v	E_{hx}	E_{hz}	E_h
	ft	ft	°	K	K	K	K
RRH ORAN CCISeismic (2) commscope SBNHH-1D65A_TIA w/ Mount Pipe	93.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic raycap OVP-Distribution Box	93.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic samsung telecommunications MT6413-77A w/ Mount Pipe	93.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic samsung telecommunications B2/B66 RRH ORAN	93.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic samsung telecommunications B13/B5 RRH ORAN	93.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic (2) commscope SBNHH-1D65A_TIA w/ Mount Pipe	93.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic raycap OVP-Distribution Box	140.00	0.00	0.0000	0.01	0.00	0.00	0.02
CCISeismic 4' Dish	127.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (3) Power From 0 to 138 (117ft to138ft)	104.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (3) Power From 0 to 138 (92ft to117ft)	78.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (3) Power From 0 to 138 (65ft to92ft)	50.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (3) Power From 0 to 138 (35ft to65ft)	17.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (3) Power From 0 to 138 (0ft to35ft)	127.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (3) DC From 0 to 138 (117ft to138ft)	104.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (3) DC From 0 to 138 (92ft to117ft)	78.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (3) DC From 0 to 138 (65ft to92ft)	50.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (3) DC From 0 to 138 (35ft to65ft)	17.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (3) DC From 0 to 138 (0ft to35ft)	127.50	0.00	0.0000	0.01	0.00	0.00	0.02
CCISeismic (12) andrew LDF7-50A(1-5/8) From 0 to 138 (117ft to138ft)	104.50	0.00	0.0000	0.01	0.00	0.00	0.02
CCISeismic (12) andrew LDF7-50A(1-5/8) From 0 to 138 (92ft to117ft)	78.50	0.00	0.0000	0.01	0.00	0.00	0.02
CCISeismic (12) andrew LDF7-50A(1-5/8) From 0 to 138 (65ft to92ft)	50.00	0.00	0.0000	0.01	0.00	0.00	0.01
CCISeismic (12) andrew LDF7-50A(1-5/8) From 0 to 138 (35ft to65ft)	17.50	0.00	0.0000	0.01	0.00	0.00	0.01
CCISeismic (12) andrew LDF7-50A(1-5/8) From 0 to 138 (0ft to35ft)	127.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic miscl 2.25" Fiber Duct From 0 to 138 (117ft to138ft)	104.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic miscl 2.25" Fiber Duct From 0 to 138 (92ft to117ft)	78.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic miscl 2.25" Fiber Duct From 0 to 138 (65ft to92ft)	50.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic miscl 2.25" Fiber Duct From 0 to 138 (35ft to65ft)							

Description	Elevation	Offset From Centroid	Azimuth Angle	E_v	E_{hx}	E_{hz}	E_h
	ft	ft	°	K	K	K	K
CCISeismic miscl 2.25" Fiber Duct From 0 to 138 (0ft to35ft)	17.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic miscl Climbing Ladder From 0 to 138 (117ft to138ft)	127.50	0.00	0.0000	0.01	0.00	0.00	0.02
CCISeismic miscl Climbing Ladder From 0 to 138 (92ft to117ft)	104.50	0.00	0.0000	0.01	0.00	0.00	0.02
CCISeismic miscl Climbing Ladder From 0 to 138 (65ft to92ft)	78.50	0.00	0.0000	0.01	0.00	0.00	0.01
CCISeismic miscl Climbing Ladder From 0 to 138 (35ft to65ft)	50.00	0.00	0.0000	0.01	0.00	0.00	0.01
CCISeismic miscl Climbing Ladder From 0 to 138 (0ft to35ft)	17.50	0.00	0.0000	0.01	0.00	0.00	0.00
CCISeismic (6) andrew LDF7-50A(1-5/8) From 0 to 117 (92ft to117ft)	104.50	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic (6) andrew LDF7-50A(1-5/8) From 0 to 117 (65ft to92ft)	78.50	0.00	0.0000	0.01	0.00	0.00	0.01
CCISeismic (6) andrew LDF7-50A(1-5/8) From 0 to 117 (35ft to65ft)	50.00	0.00	0.0000	0.01	0.00	0.00	0.01
CCISeismic (6) andrew LDF7-50A(1-5/8) From 0 to 117 (0ft to35ft)	17.50	0.00	0.0000	0.01	0.00	0.00	0.00
CCISeismic (3) andrew LDF6-50A(1-1/4) From 0 to 117 (92ft to117ft)	104.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (3) andrew LDF6-50A(1-1/4) From 0 to 117 (65ft to92ft)	78.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (3) andrew LDF6-50A(1-1/4) From 0 to 117 (35ft to65ft)	50.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (3) andrew LDF6-50A(1-1/4) From 0 to 117 (0ft to35ft)	17.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic rosenberger leoni HC-24LCSM6GAB-XXXF(1") From 0 to 117 (92ft to117ft)	104.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic rosenberger leoni HC-24LCSM6GAB-XXXF(1") From 0 to 117 (65ft to92ft)	78.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic rosenberger leoni HC-24LCSM6GAB-XXXF(1") From 0 to 117 (35ft to65ft)	50.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic rosenberger leoni HC-24LCSM6GAB-XXXF(1") From 0 to 117 (0ft to35ft)	17.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (3) rosenberger leoni HL-9612XXX(1-1/2") From 0 to 93 (92ft to93ft)	92.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (3) rosenberger leoni HL-9612XXX(1-1/2") From 0 to 93 (65ft to92ft)	78.50	0.00	0.0000	0.01	0.00	0.00	0.01
CCISeismic (3) rosenberger leoni HL-9612XXX(1-1/2") From 0 to 93 (35ft to65ft)	50.00	0.00	0.0000	0.01	0.00	0.00	0.01
CCISeismic (3) rosenberger leoni HL-9612XXX(1-1/2") From 0 to 93 (0ft to35ft)	17.50	0.00	0.0000	0.01	0.00	0.00	0.00

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft	Offsets: Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
Dipole	A	From Face	0.00	3.00	0.0000	140.00	No Ice	1.59	1.59	0.04
							1/2" Ice	2.46	2.46	0.06
							1" Ice	2.83	2.83	0.08
2" STD Pipe (2.375 OD)x4'-0"	A	From Face	0.00	0.00	0.0000	140.00	No Ice	0.87	0.87	0.01
							1/2" Ice	1.11	1.11	0.02
							1" Ice	1.36	1.36	0.03
4" STD Pipe (4.5 OD)x5'-0"	D	From Leg	0.00	0.00	0.0000	140.00	No Ice	1.31	1.31	0.05
							1/2" Ice	2.08	2.08	0.07
							1" Ice	2.40	2.40	0.09
Dish MX08FRO665-21 w/ Mount Pipe	A	From Leg	0.00	0.00	0.0000	140.00	No Ice	12.96	7.77	0.09
							1/2" Ice	13.67	9.05	0.19
							1" Ice	14.34	10.19	0.29
MX08FRO665-21 w/ Mount Pipe	B	From Leg	0.00	0.00	0.0000	140.00	No Ice	12.96	7.77	0.09
							1/2" Ice	13.67	9.05	0.19
							1" Ice	14.34	10.19	0.29
MX08FRO665-21 w/ Mount Pipe	C	From Leg	0.00	0.00	0.0000	140.00	No Ice	12.96	7.77	0.09
							1/2" Ice	13.67	9.05	0.19
							1" Ice	14.34	10.19	0.29
TA08025-B605	A	From Leg	0.00	0.00	0.0000	140.00	No Ice	1.96	1.19	0.07
							1/2" Ice	2.14	1.33	0.09
							1" Ice	2.32	1.48	0.11
TA08025-B605	B	From Leg	0.00	0.00	0.0000	140.00	No Ice	1.96	1.19	0.07
							1/2" Ice	2.14	1.33	0.09
							1" Ice	2.32	1.48	0.11
TA08025-B605	C	From Leg	0.00	0.00	0.0000	140.00	No Ice	1.96	1.19	0.07
							1/2" Ice	2.14	1.33	0.09
							1" Ice	2.32	1.48	0.11
TA08025-B604	A	From Leg	0.00	0.00	0.0000	140.00	No Ice	1.96	1.03	0.06
							1/2" Ice	2.14	1.17	0.08
							1" Ice	2.32	1.31	0.10
TA08025-B604	B	From Leg	0.00	0.00	0.0000	140.00	No Ice	1.96	1.03	0.06
							1/2" Ice	2.14	1.17	0.08
							1" Ice	2.32	1.31	0.10
TA08025-B604	C	From Leg	0.00	0.00	0.0000	140.00	No Ice	1.96	1.03	0.06
							1/2" Ice	2.14	1.17	0.08
							1" Ice	2.32	1.31	0.10
RDIDC-9181-PF-48	A	From Leg	0.00	0.00	0.0000	140.00	No Ice	1.87	1.07	0.02
							1/2" Ice	2.04	1.20	0.04
							1" Ice	2.21	1.35	0.06
RDIDC-9181-PF-48	B	From Leg	0.00	0.00	0.0000	140.00	No Ice	1.87	1.07	0.02
							1/2" Ice	2.04	1.20	0.04
							1" Ice	2.21	1.35	0.06
RDIDC-9181-PF-48	C	From Leg	0.00	0.00	0.0000	140.00	No Ice	1.87	1.07	0.02
							1/2" Ice	2.04	1.20	0.04
							1" Ice	2.21	1.35	0.06

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
(2) L3X3	A	From Leg	0.00 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	0.50 0.98 1.46	0.50 0.98 1.46	0.04 0.07 0.10
(2) L3X3	B	From Leg	0.00 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	0.50 0.98 1.46	0.50 0.98 1.46	0.04 0.07 0.10
(2) L3X3	C	From Leg	0.00 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	0.50 0.98 1.46	0.50 0.98 1.46	0.04 0.07 0.10
*									
*									
Top	A	None		0.0000	152.50	No Ice 1/2" Ice 1" Ice	111.00 111.00 111.00	111.00 111.00 111.00	10.65 10.65 10.65
Middle	A	None		0.0000	138.00	No Ice 1/2" Ice 1" Ice	508.00 508.00 508.00	508.00 508.00 508.00	16.29 16.29 16.29
Bottom	A	None		0.0000	133.50	No Ice 1/2" Ice 1" Ice	111.00 111.00 111.00	111.00 111.00 111.00	10.65 10.65 10.65
Catwalk	A	None		0.0000	140.00	No Ice 1/2" Ice 1" Ice	102.90 102.90 102.90	102.90 102.90 102.90	4.96 4.96 4.96
*									
AT&T 7770.00 w/ Mount Pipe	A	From Leg	0.00 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	5.75 6.18 6.61	4.25 5.01 5.71	0.06 0.10 0.16
QS46512-2 w/ Mount Pipe	A	From Leg	0.00 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	5.79 6.21 6.62	5.88 6.58 7.25	0.12 0.18 0.24
DMP65R-BU4D w/ Mount Pipe	A	From Leg	0.00 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	8.52 8.96 9.42	4.69 5.31 5.93	0.09 0.15 0.22
RRUS 32 B2	A	From Leg	0.00 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	2.71 2.93 3.16	1.66 1.85 2.04	0.05 0.07 0.10
(2) LGP21401	A	From Leg	0.00 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	1.10 1.24 1.38	0.21 0.27 0.35	0.01 0.02 0.03
(2) DBC0061F1V51-2	A	From Leg	0.00 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	0.43 0.52 0.61	0.41 0.50 0.59	0.03 0.03 0.04
DC6-48-60-18-8F	A	From Leg	0.00 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	0.92 1.46 1.64	0.92 1.46 1.64	0.02 0.04 0.06
DC2-48-60-0-9E	A	From Leg	0.00 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	0.93 1.05 1.18	0.56 0.66 0.77	0.02 0.02 0.04
Jsource FMB	A	From Leg	0.00	0.0000	140.00	No Ice	1.20	0.80	0.02

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft	Offsets: Vert ft	Offsets: ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			0.00					1/2" Ice	1.34	0.91	0.03
			0.00					1" Ice	1.48	1.04	0.04
RRUS 4449 B5/B12	A	From Leg	0.00		0.00	0.0000	140.00	No Ice	1.97	1.41	0.07
			0.00					1/2" Ice	2.14	1.56	0.09
			0.00					1" Ice	2.33	1.73	0.11
RRUS 4426 B66	A	From Leg	0.00		0.00	0.0000	140.00	No Ice	1.64	0.73	0.05
			0.00					1/2" Ice	1.80	0.84	0.06
			0.00					1" Ice	1.97	0.97	0.08
RRUS 4415 B25	A	From Leg	0.00		0.00	0.0000	140.00	No Ice	1.64	0.68	0.04
			0.00					1/2" Ice	1.80	0.79	0.06
			0.00					1" Ice	1.97	0.91	0.07
7770.00 w/ Mount Pipe	B	From Leg	0.00		0.00	0.0000	140.00	No Ice	5.75	4.25	0.06
			0.00					1/2" Ice	6.18	5.01	0.10
			0.00					1" Ice	6.61	5.71	0.16
QS46512-2 w/ Mount Pipe	B	From Leg	0.00		0.00	0.0000	140.00	No Ice	5.79	5.88	0.12
			0.00					1/2" Ice	6.21	6.58	0.18
			0.00					1" Ice	6.62	7.25	0.24
DMP65R-BU4D w/ Mount Pipe	B	From Leg	0.00		0.00	0.0000	140.00	No Ice	8.52	4.69	0.09
			0.00					1/2" Ice	8.96	5.31	0.15
			0.00					1" Ice	9.42	5.93	0.22
RRUS 32 B2	B	From Leg	0.00		0.00	0.0000	140.00	No Ice	2.71	1.66	0.05
			0.00					1/2" Ice	2.93	1.85	0.07
			0.00					1" Ice	3.16	2.04	0.10
(2) LGP21401	B	From Leg	0.00		0.00	0.0000	140.00	No Ice	1.10	0.21	0.01
			0.00					1/2" Ice	1.24	0.27	0.02
			0.00					1" Ice	1.38	0.35	0.03
(2) DBC0061F1V51-2	B	From Leg	0.00		0.00	0.0000	140.00	No Ice	0.43	0.41	0.03
			0.00					1/2" Ice	0.52	0.50	0.03
			0.00					1" Ice	0.61	0.59	0.04
DC6-48-60-18-8F	B	From Leg	0.00		0.00	0.0000	140.00	No Ice	0.92	0.92	0.02
			0.00					1/2" Ice	1.46	1.46	0.04
			0.00					1" Ice	1.64	1.64	0.06
DC2-48-60-0-9E	B	From Leg	0.00		0.00	0.0000	140.00	No Ice	0.93	0.56	0.02
			0.00					1/2" Ice	1.05	0.66	0.02
			0.00					1" Ice	1.18	0.77	0.04
Jsource FMB	B	From Leg	0.00		0.00	0.0000	140.00	No Ice	1.20	0.80	0.02
			0.00					1/2" Ice	1.34	0.91	0.03
			0.00					1" Ice	1.48	1.04	0.04
RRUS 4449 B5/B12	B	From Leg	0.00		0.00	0.0000	140.00	No Ice	1.97	1.41	0.07
			0.00					1/2" Ice	2.14	1.56	0.09
			0.00					1" Ice	2.33	1.73	0.11
RRUS 4426 B66	B	From Leg	0.00		0.00	0.0000	140.00	No Ice	1.64	0.73	0.05
			0.00					1/2" Ice	1.80	0.84	0.06
			0.00					1" Ice	1.97	0.97	0.08
RRUS 4415 B25	B	From Leg	0.00		0.00	0.0000	140.00	No Ice	1.64	0.68	0.04
			0.00					1/2" Ice	1.80	0.79	0.06
			0.00					1" Ice	1.97	0.91	0.07
7770.00 w/ Mount Pipe	C	From Leg	0.00		0.00	0.0000	140.00	No Ice	5.75	4.25	0.06
			0.00					1/2" Ice	6.18	5.01	0.10

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			0.00			Ice	6.61	5.71	0.16
						1" Ice			
QS46512-2 w/ Mount Pipe	C	From Leg	0.00	0.0000	140.00	No Ice	5.79	5.88	0.12
			0.00			1/2"	6.21	6.58	0.18
			0.00			Ice	6.62	7.25	0.24
						1" Ice			
DMP65R-BU4D w/ Mount Pipe	C	From Leg	0.00	0.0000	140.00	No Ice	8.52	4.69	0.09
			0.00			1/2"	8.96	5.31	0.15
			0.00			Ice	9.42	5.93	0.22
						1" Ice			
RRUS 32 B2	C	From Leg	0.00	0.0000	140.00	No Ice	2.71	1.66	0.05
			0.00			1/2"	2.93	1.85	0.07
			0.00			Ice	3.16	2.04	0.10
						1" Ice			
(2) LGP21401	C	From Leg	0.00	0.0000	140.00	No Ice	1.10	0.21	0.01
			0.00			1/2"	1.24	0.27	0.02
			0.00			Ice	1.38	0.35	0.03
						1" Ice			
(2) DBC0061F1V51-2	C	From Leg	0.00	0.0000	140.00	No Ice	0.43	0.41	0.03
			0.00			1/2"	0.52	0.50	0.03
			0.00			Ice	0.61	0.59	0.04
						1" Ice			
DC6-48-60-18-8F	C	From Leg	0.00	0.0000	140.00	No Ice	0.92	0.92	0.02
			0.00			1/2"	1.46	1.46	0.04
			0.00			Ice	1.64	1.64	0.06
						1" Ice			
DC2-48-60-0-9E	C	From Leg	0.00	0.0000	140.00	No Ice	0.93	0.56	0.02
			0.00			1/2"	1.05	0.66	0.02
			0.00			Ice	1.18	0.77	0.04
						1" Ice			
Jsource FMB	C	From Leg	0.00	0.0000	140.00	No Ice	1.20	0.80	0.02
			0.00			1/2"	1.34	0.91	0.03
			0.00			Ice	1.48	1.04	0.04
						1" Ice			
RRUS 4449 B5/B12	C	From Leg	0.00	0.0000	140.00	No Ice	1.97	1.41	0.07
			0.00			1/2"	2.14	1.56	0.09
			0.00			Ice	2.33	1.73	0.11
						1" Ice			
RRUS 4426 B66	C	From Leg	0.00	0.0000	140.00	No Ice	1.64	0.73	0.05
			0.00			1/2"	1.80	0.84	0.06
			0.00			Ice	1.97	0.97	0.08
						1" Ice			
RRUS 4415 B25	C	From Leg	0.00	0.0000	140.00	No Ice	1.64	0.68	0.04
			0.00			1/2"	1.80	0.79	0.06
			0.00			Ice	1.97	0.91	0.07
						1" Ice			
(3) 6' x 2.5" STD Pipe	A	From Leg	0.00	0.0000	140.00	No Ice	1.72	1.72	0.03
			0.00			1/2"	2.09	2.09	0.05
			0.00			Ice	2.46	2.46	0.06
						1" Ice			
(3) 6' x 2.5" STD Pipe	B	From Leg	0.00	0.0000	140.00	No Ice	1.72	1.72	0.03
			0.00			1/2"	2.09	2.09	0.05
			0.00			Ice	2.46	2.46	0.06
						1" Ice			
(3) 6' x 2.5" STD Pipe	C	From Leg	0.00	0.0000	140.00	No Ice	1.72	1.72	0.03
			0.00			1/2"	2.09	2.09	0.05
			0.00			Ice	2.46	2.46	0.06
						1" Ice			
TMO AIR 6449 B41 w/ Mount Pipe	A	From Face	0.00	0.0000	117.00	No Ice	6.90	4.32	0.13
			0.00			1/2"	7.74	5.37	0.19
			0.00			Ice	8.49	6.28	0.26
						1" Ice			
APXVAALL24_43-U-NA20 w/ Mount Pipe	A	From Face	0.00	0.0000	117.00	No Ice	20.24	10.63	0.15
			0.00			1/2"	20.89	12.06	0.28

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft	Offsets: Vert ft	Offsets: ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			0.00					Ice	21.55	13.34	0.43
								1" Ice			
APX16DWV-16DWV-S-E-A20_TIA w/ Mount Pipe	A	From Face	0.00		0.00	0.0000	117.00	No Ice	6.82	3.52	0.06
					0.00			1/2"	7.28	4.29	0.11
					0.00			Ice	7.72	4.98	0.17
								1" Ice			
RADIO 4449 B71+B85	A	From Face	0.00		0.00	0.0000	117.00	No Ice	1.64	1.31	0.07
					0.00			1/2"	1.80	1.46	0.09
					0.00			Ice	1.97	1.61	0.11
								1" Ice			
RRUS 4426 B66	A	From Face	0.00		0.00	0.0000	117.00	No Ice	1.64	0.73	0.05
					0.00			1/2"	1.80	0.84	0.06
					0.00			Ice	1.97	0.97	0.08
								1" Ice			
RRUS 4415	A	From Face	0.00		0.00	0.0000	117.00	No Ice	1.64	0.68	0.04
					0.00			1/2"	1.80	0.79	0.06
					0.00			Ice	1.97	0.91	0.07
								1" Ice			
AIR 6449 B41 w/ Mount Pipe	B	From Face	0.00		0.00	0.0000	117.00	No Ice	6.90	4.32	0.13
					0.00			1/2"	7.74	5.37	0.19
					0.00			Ice	8.49	6.28	0.26
								1" Ice			
APXVAALL24_43-U-NA20 w/ Mount Pipe	B	From Face	0.00		0.00	0.0000	117.00	No Ice	20.24	10.63	0.15
					0.00			1/2"	20.89	12.06	0.28
					0.00			Ice	21.55	13.34	0.43
								1" Ice			
APX16DWV-16DWV-S-E-A20_TIA w/ Mount Pipe	B	From Face	0.00		0.00	0.0000	117.00	No Ice	6.82	3.52	0.06
					0.00			1/2"	7.28	4.29	0.11
					0.00			Ice	7.72	4.98	0.17
								1" Ice			
RADIO 4449 B71+B85	B	From Face	0.00		0.00	0.0000	117.00	No Ice	1.64	1.31	0.07
					0.00			1/2"	1.80	1.46	0.09
					0.00			Ice	1.97	1.61	0.11
								1" Ice			
RRUS 4426 B66	B	From Face	0.00		0.00	0.0000	117.00	No Ice	1.64	0.73	0.05
					0.00			1/2"	1.80	0.84	0.06
					0.00			Ice	1.97	0.97	0.08
								1" Ice			
RRUS 4415	B	From Face	0.00		0.00	0.0000	117.00	No Ice	1.64	0.68	0.04
					0.00			1/2"	1.80	0.79	0.06
					0.00			Ice	1.97	0.91	0.07
								1" Ice			
AIR 6449 B41 w/ Mount Pipe	D	From Face	0.00		0.00	0.0000	117.00	No Ice	6.90	4.32	0.13
					0.00			1/2"	7.74	5.37	0.19
					0.00			Ice	8.49	6.28	0.26
								1" Ice			
APXVAALL24_43-U-NA20 w/ Mount Pipe	D	From Face	0.00		0.00	0.0000	117.00	No Ice	20.24	10.63	0.15
					0.00			1/2"	20.89	12.06	0.28
					0.00			Ice	21.55	13.34	0.43
								1" Ice			
APX16DWV-16DWV-S-E-A20_TIA w/ Mount Pipe	D	From Face	0.00		0.00	0.0000	117.00	No Ice	6.82	3.52	0.06
					0.00			1/2"	7.28	4.29	0.11
					0.00			Ice	7.72	4.98	0.17
								1" Ice			
RADIO 4449 B71+B85	D	From Face	0.00		0.00	0.0000	117.00	No Ice	1.64	1.31	0.07
					0.00			1/2"	1.80	1.46	0.09
					0.00			Ice	1.97	1.61	0.11
								1" Ice			
RRUS 4426 B66	D	From Face	0.00		0.00	0.0000	117.00	No Ice	1.64	0.73	0.05
					0.00			1/2"	1.80	0.84	0.06
					0.00			Ice	1.97	0.97	0.08
								1" Ice			
RRUS 4415	D	From Face	0.00		0.00	0.0000	117.00	No Ice	1.64	0.68	0.04
					0.00			1/2"	1.80	0.79	0.06
					0.00			Ice	1.97	0.91	0.07

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
VZW						1" Ice			
MT6413-77A w/ Mount Pipe	A	From Face	0.00 0.00 0.00	0.0000	93.00	No Ice 1/2" Ice 1" Ice	5.12 5.95 6.68	3.36 4.38 5.25	0.09 0.13 0.18
B2/B66 RRH ORAN	A	From Face	0.00 0.00 0.00	0.0000	93.00	No Ice 1/2" Ice 1" Ice	1.87 2.03 2.21	1.25 1.39 1.54	0.07 0.09 0.11
B13/B5 RRH ORAN	A	From Face	0.00 0.00 0.00	0.0000	93.00	No Ice 1/2" Ice 1" Ice	1.87 2.03 2.21	1.13 1.27 1.41	0.07 0.09 0.11
(2) SBNHH-1D65A_TIA w/ Mount Pipe	A	From Face	0.00 0.00 0.00	0.0000	93.00	No Ice 1/2" Ice 1" Ice	6.19 6.64 7.07	5.25 6.04 6.74	0.05 0.11 0.17
OVP-Distribution Box	A	From Face	0.00 0.00 0.00	0.0000	93.00	No Ice 1/2" Ice 1" Ice	2.51 2.71 2.92	1.64 1.81 1.98	0.03 0.05 0.08
MT6413-77A w/ Mount Pipe	B	From Face	0.00 0.00 0.00	0.0000	93.00	No Ice 1/2" Ice 1" Ice	5.12 5.95 6.68	3.36 4.38 5.25	0.09 0.13 0.18
B2/B66 RRH ORAN	B	From Face	0.00 0.00 0.00	0.0000	93.00	No Ice 1/2" Ice 1" Ice	1.87 2.03 2.21	1.25 1.39 1.54	0.07 0.09 0.11
B13/B5 RRH ORAN	B	From Face	0.00 0.00 0.00	0.0000	93.00	No Ice 1/2" Ice 1" Ice	1.87 2.03 2.21	1.13 1.27 1.41	0.07 0.09 0.11
(2) SBNHH-1D65A_TIA w/ Mount Pipe	B	From Face	0.00 0.00 0.00	0.0000	93.00	No Ice 1/2" Ice 1" Ice	6.19 6.64 7.07	5.25 6.04 6.74	0.05 0.11 0.17
OVP-Distribution Box	B	From Face	0.00 0.00 0.00	0.0000	93.00	No Ice 1/2" Ice 1" Ice	2.51 2.71 2.92	1.64 1.81 1.98	0.03 0.05 0.08
MT6413-77A w/ Mount Pipe	D	From Face	0.00 0.00 0.00	0.0000	93.00	No Ice 1/2" Ice 1" Ice	5.12 5.95 6.68	3.36 4.38 5.25	0.09 0.13 0.18
B2/B66 RRH ORAN	D	From Face	0.00 0.00 0.00	0.0000	93.00	No Ice 1/2" Ice 1" Ice	1.87 2.03 2.21	1.25 1.39 1.54	0.07 0.09 0.11
B13/B5 RRH ORAN	D	From Face	0.00 0.00 0.00	0.0000	93.00	No Ice 1/2" Ice 1" Ice	1.87 2.03 2.21	1.13 1.27 1.41	0.07 0.09 0.11
(2) SBNHH-1D65A_TIA w/ Mount Pipe	D	From Face	0.00 0.00 0.00	0.0000	93.00	No Ice 1/2" Ice 1" Ice	6.19 6.64 7.07	5.25 6.04 6.74	0.05 0.11 0.17
OVP-Distribution Box	D	From Face	0.00 0.00 0.00	0.0000	93.00	No Ice 1/2" Ice 1" Ice	2.51 2.71 2.92	1.64 1.81 1.98	0.03 0.05 0.08

Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft		Aperture Area ft²	Weight K
4' Dish	D	Paraboloid w/Shroud (HP)	From Leg	0.00 0.00 0.00	0.0000		140.00	4.00	No Ice 1/2" Ice 1" Ice	12.57 13.10 13.62	0.14 0.28 0.42

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice
3	0.9 Dead+1.0 Wind 0 deg - No Ice
4	1.2 Dead+1.0 Wind 45 deg - No Ice
5	0.9 Dead+1.0 Wind 45 deg - No Ice
6	1.2 Dead+1.0 Wind 90 deg - No Ice
7	0.9 Dead+1.0 Wind 90 deg - No Ice
8	1.2 Dead+1.0 Wind 135 deg - No Ice
9	0.9 Dead+1.0 Wind 135 deg - No Ice
10	1.2 Dead+1.0 Wind 180 deg - No Ice
11	0.9 Dead+1.0 Wind 180 deg - No Ice
12	1.2 Dead+1.0 Wind 225 deg - No Ice
13	0.9 Dead+1.0 Wind 225 deg - No Ice
14	1.2 Dead+1.0 Wind 270 deg - No Ice
15	0.9 Dead+1.0 Wind 270 deg - No Ice
16	1.2 Dead+1.0 Wind 315 deg - No Ice
17	0.9 Dead+1.0 Wind 315 deg - No Ice
18	1.2 Dead+1.0 Ice+1.0 Temp
19	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
20	1.2 Dead+1.0 Wind 45 deg+1.0 Ice+1.0 Temp
21	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
22	1.2 Dead+1.0 Wind 135 deg+1.0 Ice+1.0 Temp
23	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
24	1.2 Dead+1.0 Wind 225 deg+1.0 Ice+1.0 Temp
25	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
26	1.2 Dead+1.0 Wind 315 deg+1.0 Ice+1.0 Temp
27	Dead+Wind 0 deg - Service
28	Dead+Wind 45 deg - Service
29	Dead+Wind 90 deg - Service
30	Dead+Wind 135 deg - Service
31	Dead+Wind 180 deg - Service
32	Dead+Wind 225 deg - Service
33	Dead+Wind 270 deg - Service
34	Dead+Wind 315 deg - Service
35	1.2 Dead+1.0 Ev+1.0 Eh 0 deg
36	0.9 Dead-1.0 Ev+1.0 Eh 0 deg
37	1.2 Dead+1.0 Ev+1.0 Eh 45 deg
38	0.9 Dead-1.0 Ev+1.0 Eh 45 deg
39	1.2 Dead+1.0 Ev+1.0 Eh 90 deg
40	0.9 Dead-1.0 Ev+1.0 Eh 90 deg
41	1.2 Dead+1.0 Ev+1.0 Eh 135 deg
42	0.9 Dead-1.0 Ev+1.0 Eh 135 deg
43	1.2 Dead+1.0 Ev+1.0 Eh 180 deg
44	0.9 Dead-1.0 Ev+1.0 Eh 180 deg
45	1.2 Dead+1.0 Ev+1.0 Eh 225 deg
46	0.9 Dead-1.0 Ev+1.0 Eh 225 deg
47	1.2 Dead+1.0 Ev+1.0 Eh 270 deg
48	0.9 Dead-1.0 Ev+1.0 Eh 270 deg
49	1.2 Dead+1.0 Ev+1.0 Eh 315 deg

Comb. No.	Description
50	0.9 Dead-1.0 Ev+1.0 Eh 315 deg

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T1	138 - 117	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	4	-40.06	0.36	-0.17
			Max. Mx	4	-13.57	5.75	-0.42
			Max. My	8	-26.52	-0.37	5.54
			Max. Vy	4	-1.43	-0.00	0.00
			Max. Vx	8	-1.33	0.00	0.00
		Diagonal	Max Tension	2	21.77	0.00	0.00
		Top Girt	Max Tension	1	0.00	0.00	0.00
			Max. Compression	2	-8.99	0.00	0.00
			Max. Mx	21	-2.07	3.12	0.00
			Max. My	25	-0.96	0.00	-0.18
			Max. Vy	21	0.62	0.00	0.00
			Max. Vx	25	0.04	0.00	0.00
T2	117 - 92	Leg	Max Tension	5	10.66	-1.89	-0.42
			Max. Compression	16	-73.78	6.20	0.58
			Max. Mx	4	3.97	-6.75	-0.45
			Max. My	17	-30.11	0.26	6.99
			Max. Vy	4	-1.71	-1.99	-0.42
			Max. Vx	8	1.84	0.31	-6.97
		Diagonal	Max Tension	2	29.16	0.00	0.00
		Top Girt	Max Tension	1	0.00	0.00	0.00
			Max. Compression	2	-18.09	0.00	0.00
			Max. Mx	21	-3.01	3.90	0.00
			Max. My	25	-2.99	0.00	-0.23
			Max. Vy	21	-0.70	0.00	0.00
			Max. Vx	25	0.04	0.00	0.00
T3	92 - 65	Leg	Max Tension	17	37.87	-6.71	0.50
			Max. Compression	16	-112.37	3.18	0.48
			Max. Mx	4	31.91	-6.75	-0.45
			Max. My	17	-34.33	0.26	6.99
			Max. Vy	4	-0.97	-6.75	-0.45
			Max. Vx	8	-1.05	0.31	-6.97
		Diagonal	Max Tension	2	34.88	0.00	0.00
		Top Girt	Max Tension	1	0.00	0.00	0.00
			Max. Compression	2	-22.59	0.00	0.00
			Max. Mx	18	-0.45	4.92	0.00
			Max. My	25	-3.65	0.00	-0.29
			Max. Vy	18	-0.78	0.00	0.00
			Max. Vx	25	0.05	0.00	0.00
T4	65 - 35	Leg	Max Tension	17	69.77	-4.65	0.53
			Max. Compression	16	-156.01	6.59	0.84
			Max. Mx	4	60.51	-8.33	-0.73
			Max. My	17	-41.17	0.21	8.29
			Max. Vy	4	1.07	-8.33	-0.73
			Max. Vx	8	1.13	0.10	-8.25
		Diagonal	Max Tension	6	38.04	0.00	0.00
		Top Girt	Max Tension	1	0.00	0.00	0.00
			Max. Compression	6	-25.94	0.00	0.00
			Max. Mx	18	-0.61	10.58	0.00
			Max. My	25	-4.41	0.00	-0.61
			Max. Vy	18	-1.49	0.00	0.00
			Max. Vx	25	0.09	0.00	0.00
T5	35 - 0	Leg	Max Tension	17	104.44	-8.18	0.86
			Max. Compression	16	-206.61	0.00	-0.00
			Max. Mx	4	95.42	-8.33	-0.73
			Max. My	17	-47.19	0.21	8.29
			Max. Vy	4	-1.14	-8.33	-0.73
			Max. Vx	17	1.17	0.21	8.29
		Diagonal	Max Tension	6	43.62	0.00	0.00
		Top Girt	Max Tension	1	0.00	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Compression	6	-29.03	0.00	0.00
			Max. Mx	18	-1.17	13.02	0.00
			Max. My	22	-3.64	0.00	-0.75
			Max. Vy	18	-1.63	0.00	0.00
			Max. Vx	22	0.09	0.00	0.00

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Leg D	Max. Vert	12	206.37	12.53	-12.42
	Max. H_x	12	206.37	12.53	-12.42
	Max. H_z	3	-90.01	-7.72	34.28
	Min. Vert	5	-145.86	-30.86	29.36
	Min. H_x	7	-89.36	-35.04	7.36
	Min. H_z	12	206.37	12.53	-12.42
Leg C	Max. Vert	8	206.47	-12.54	-12.42
	Max. H_x	15	-89.85	34.96	7.41
	Max. H_z	3	-90.69	8.69	32.38
	Min. Vert	17	-147.22	31.41	28.98
	Min. H_x	8	206.47	-12.54	-12.42
	Min. H_z	8	206.47	-12.54	-12.42
Leg B	Max. Vert	4	204.91	-12.35	12.46
	Max. H_x	15	-90.53	32.04	-8.93
	Max. H_z	4	204.91	-12.35	12.46
	Min. Vert	13	-146.83	29.09	-31.02
	Min. H_x	4	204.91	-12.35	12.46
	Min. H_z	11	-91.18	8.74	-32.30
Leg A	Max. Vert	16	206.51	12.43	12.55
	Max. H_x	16	206.51	12.43	12.55
	Max. H_z	16	206.51	12.43	12.55
	Min. Vert	9	-147.19	-28.77	-31.63
	Min. H_x	7	-90.01	-32.12	-8.88
	Min. H_z	11	-90.47	-7.76	-34.21

Tower Mast Reaction Summary

Load Combination	Vertical K	$Shear_x$ K	$Shear_z$ K	Overturning Moment, M_x kip-ft	Overturning Moment, M_z kip-ft	Torque kip-ft
Dead Only	112.78	0.00	-0.00	27.36	28.42	-0.00
1.2 Dead+1.0 Wind 0 deg - No Ice	135.34	0.05	-84.61	-8330.90	26.06	-71.69
0.9 Dead+1.0 Wind 0 deg - No Ice	101.51	0.05	-84.61	-8332.34	17.88	-71.73
1.2 Dead+1.0 Wind 45 deg - No Ice	135.34	63.89	-64.56	-6197.75	-6121.64	65.70
0.9 Dead+1.0 Wind 45 deg - No Ice	101.51	63.89	-64.56	-6200.83	-6125.07	65.70
1.2 Dead+1.0 Wind 90 deg - No Ice	135.34	85.16	-0.05	24.80	-8282.62	111.33
0.9 Dead+1.0 Wind 90 deg - No Ice	101.51	85.16	-0.05	16.92	-8284.42	111.37
1.2 Dead+1.0 Wind 135 deg - No Ice	135.34	64.01	64.77	6293.66	-6138.04	101.52
0.9 Dead+1.0 Wind 135 deg - No Ice	101.51	64.01	64.77	6280.21	-6141.48	101.52
1.2 Dead+1.0 Wind 180 deg - No Ice	135.34	0.04	84.50	8381.64	27.19	71.82
0.9 Dead+1.0 Wind 180 deg	101.51	0.04	84.50	8366.61	19.03	71.86

Load Combination	Vertical K	$Shear_x$ K	$Shear_z$ K	Overturning Moment, M_x kip-ft	Overturning Moment, M_z kip-ft	Torque kip-ft
- No Ice						
1.2 Dead+1.0 Wind 225 deg - No Ice	135.34	-63.79	64.45	6248.61	6174.91	-65.69
0.9 Dead+1.0 Wind 225 deg - No Ice	101.51	-63.79	64.45	6235.19	6161.24	-65.69
1.2 Dead+1.0 Wind 270 deg - No Ice	135.34	-85.05	-0.04	25.92	8335.93	-111.46
0.9 Dead+1.0 Wind 270 deg - No Ice	101.51	-85.05	-0.04	18.06	8320.62	-111.50
1.2 Dead+1.0 Wind 315 deg - No Ice	135.34	-64.11	-64.68	-6214.25	6220.03	-101.54
0.9 Dead+1.0 Wind 315 deg - No Ice	101.51	-64.11	-64.68	-6217.30	6206.31	-101.53
1.2 Dead+1.0 Ice+1.0 Temp	194.95	0.00	-0.00	207.64	94.20	-0.00
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	194.95	0.02	-14.50	-1155.54	91.86	-7.02
1.2 Dead+1.0 Wind 45 deg+1.0 Ice+1.0 Temp	194.95	11.20	-11.27	-827.30	-933.19	14.32
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	194.95	15.41	-0.02	205.90	-1314.94	26.16
1.2 Dead+1.0 Wind 135 deg+1.0 Ice+1.0 Temp	194.95	11.21	11.29	1246.43	-933.78	14.38
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	194.95	-0.00	14.49	1569.87	94.57	7.09
1.2 Dead+1.0 Wind 225 deg+1.0 Ice+1.0 Temp	194.95	-11.19	11.25	1241.76	1120.39	-14.30
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	194.95	-15.39	0.00	208.43	1502.17	-26.17
1.2 Dead+1.0 Wind 315 deg+1.0 Ice+1.0 Temp	194.95	-11.22	-11.27	-827.97	1125.14	-14.37
Dead+Wind 0 deg - Service	112.78	0.01	-15.55	-1509.71	27.00	-13.35
Dead+Wind 45 deg - Service	112.78	11.74	-11.86	-1117.68	-1102.88	12.02
Dead+Wind 90 deg - Service	112.78	15.65	-0.01	25.93	-1500.02	20.58
Dead+Wind 135 deg - Service	112.78	11.76	11.90	1178.10	-1105.87	18.74
Dead+Wind 180 deg - Service	112.78	0.01	15.53	1561.83	27.20	13.38
Dead+Wind 225 deg - Service	112.78	-11.72	11.84	1169.83	1157.12	-12.03
Dead+Wind 270 deg - Service	112.78	-15.63	-0.01	26.12	1554.27	-20.60
Dead+Wind 315 deg - Service	112.78	-11.78	-11.89	-1120.69	1165.42	-18.74
1.2 Dead+1.0 Ev+1.0 Eh 0 deg	139.79	0.00	-9.27	-1080.35	33.51	0.06
0.9 Dead-1.0 Ev+1.0 Eh 0 deg	97.05	0.00	-9.27	-1087.13	25.32	0.05
1.2 Dead+1.0 Ev+1.0 Eh 45 deg	139.79	6.56	-6.56	-754.51	-753.22	-0.00
0.9 Dead-1.0 Ev+1.0 Eh 45 deg	97.05	6.56	-6.56	-761.60	-760.64	-0.00
1.2 Dead+1.0 Ev+1.0 Eh 90 deg	139.79	9.27	0.00	32.43	-1079.07	-0.05
0.9 Dead-1.0 Ev+1.0 Eh 90 deg	97.05	9.27	0.00	24.44	-1086.17	-0.04
1.2 Dead+1.0 Ev+1.0 Eh 135 deg	139.79	6.56	6.56	820.37	-753.22	0.01
0.9 Dead-1.0 Ev+1.0 Eh 135 deg	97.05	6.56	6.56	811.00	-760.64	0.01
1.2 Dead+1.0 Ev+1.0 Eh 180 deg	139.79	0.00	9.27	1146.23	33.50	-0.06
0.9 Dead-1.0 Ev+1.0 Eh 180 deg	97.05	0.00	9.27	1136.53	25.23	-0.06
1.2 Dead+1.0 Ev+1.0 Eh 225 deg	139.79	-6.56	6.56	820.39	821.68	0.00
0.9 Dead-1.0 Ev+1.0 Eh 225 deg	97.05	-6.56	6.56	811.00	811.97	0.00
1.2 Dead+1.0 Ev+1.0 Eh 270 deg	139.79	-9.27	0.00	32.42	1147.51	0.05

Load Combination	Vertical K	$Shear_x$ K	$Shear_z$ K	Overturning Moment, M_x kip-ft	Overturning Moment, M_z kip-ft	Torque kip-ft
0.9 Dead-1.0 Ev+1.0 Eh 270 deg	97.05	-9.27	0.00	24.44	1137.49	0.04
1.2 Dead+1.0 Ev+1.0 Eh 315 deg	139.79	-6.56	-6.56	-754.51	821.66	-0.01
0.9 Dead-1.0 Ev+1.0 Eh 315 deg	97.05	-6.56	-6.56	-761.60	811.96	-0.01

Solution Summary

Load Comb.	Sum of Applied Forces PX K	PY K	PZ K	Sum of Reactions PX K	PY K	PZ K	% Error
1	0.00	-112.78	0.00	-0.00	112.78	0.00	0.000%
2	0.05	-135.34	-84.61	-0.05	135.34	84.61	0.000%
3	0.05	-101.51	-84.61	-0.05	101.51	84.61	0.000%
4	63.89	-135.34	-64.56	-63.89	135.34	64.56	0.000%
5	63.89	-101.51	-64.56	-63.89	101.51	64.56	0.000%
6	85.16	-135.34	-0.05	-85.16	135.34	0.05	0.000%
7	85.16	-101.51	-0.05	-85.16	101.51	0.05	0.000%
8	64.01	-135.34	64.77	-64.01	135.34	-64.77	0.000%
9	64.01	-101.51	64.77	-64.01	101.51	-64.77	0.000%
10	0.04	-135.34	84.50	-0.04	135.34	-84.50	0.000%
11	0.04	-101.51	84.50	-0.04	101.51	-84.50	0.000%
12	-63.79	-135.34	64.45	63.79	135.34	-64.45	0.000%
13	-63.79	-101.51	64.45	63.79	101.51	-64.45	0.000%
14	-85.05	-135.34	-0.04	85.05	135.34	0.04	0.000%
15	-85.05	-101.51	-0.04	85.05	101.51	0.04	0.000%
16	-64.11	-135.34	-64.68	64.11	135.34	64.68	0.000%
17	-64.11	-101.51	-64.68	64.11	101.51	64.68	0.000%
18	0.00	-194.95	0.00	-0.00	194.95	0.00	0.000%
19	0.02	-194.95	-14.50	-0.02	194.95	14.50	0.000%
20	11.20	-194.95	-11.27	-11.20	194.95	11.27	0.000%
21	15.41	-194.95	-0.02	-15.41	194.95	0.02	0.000%
22	11.21	-194.95	11.29	-11.21	194.95	-11.29	0.000%
23	-0.00	-194.95	14.49	0.00	194.95	-14.49	0.001%
24	-11.19	-194.95	11.25	11.19	194.95	-11.25	0.000%
25	-15.39	-194.95	0.00	15.39	194.95	-0.00	0.000%
26	-11.22	-194.95	-11.27	11.22	194.95	11.27	0.000%
27	0.01	-112.78	-15.55	-0.01	112.78	15.55	0.000%
28	11.74	-112.78	-11.86	-11.74	112.78	11.86	0.000%
29	15.65	-112.78	-0.01	-15.65	112.78	0.01	0.000%
30	11.76	-112.78	11.90	-11.76	112.78	-11.90	0.000%
31	0.01	-112.78	15.53	-0.01	112.78	-15.53	0.000%
32	-11.72	-112.78	11.84	11.72	112.78	-11.84	0.000%
33	-15.63	-112.78	-0.01	15.63	112.78	0.01	0.000%
34	-11.78	-112.78	-11.89	11.78	112.78	11.89	0.000%
35	0.00	-139.79	-9.27	-0.00	139.79	9.27	0.000%
36	0.00	-97.05	-9.27	-0.00	97.05	9.27	0.000%
37	6.56	-139.79	-6.56	-6.56	139.79	6.56	0.000%
38	6.56	-97.05	-6.56	-6.56	97.05	6.56	0.000%
39	9.27	-139.79	0.00	-9.27	139.79	-0.00	0.000%
40	9.27	-97.05	0.00	-9.27	97.05	-0.00	0.000%
41	6.56	-139.79	6.56	-6.56	139.79	-6.56	0.000%
42	6.56	-97.05	6.56	-6.56	97.05	-6.56	0.000%
43	0.00	-139.79	9.27	-0.00	139.79	-9.27	0.000%
44	0.00	-97.05	9.27	-0.00	97.05	-9.27	0.001%
45	-6.56	-139.79	6.56	6.56	139.79	-6.56	0.000%
46	-6.56	-97.05	6.56	6.56	97.05	-6.56	0.000%
47	-9.27	-139.79	0.00	9.27	139.79	-0.00	0.000%
48	-9.27	-97.05	0.00	9.27	97.05	-0.00	0.000%
49	-6.56	-139.79	-6.56	6.56	139.79	6.56	0.000%
50	-6.56	-97.05	-6.56	6.56	97.05	6.56	0.000%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	6	0.00000001	0.00003756
2	Yes	7	0.00000001	0.00005633
3	Yes	7	0.00000001	0.00008312
4	Yes	4	0.00000001	0.00003906
5	Yes	4	0.00000001	0.00003357
6	Yes	7	0.00000001	0.00014489
7	Yes	7	0.00000001	0.00043688
8	Yes	4	0.00000001	0.00003924
9	Yes	4	0.00000001	0.00003374
10	Yes	7	0.00000001	0.00004592
11	Yes	7	0.00000001	0.00007327
12	Yes	4	0.00000001	0.00003926
13	Yes	4	0.00000001	0.00003373
14	Yes	7	0.00000001	0.00013482
15	Yes	7	0.00000001	0.00043989
16	Yes	4	0.00000001	0.00003934
17	Yes	4	0.00000001	0.00003379
18	Yes	6	0.00000001	0.00009682
19	Yes	6	0.00000001	0.00006806
20	Yes	5	0.00000001	0.00010835
21	Yes	5	0.00000001	0.00085129
22	Yes	5	0.00000001	0.00018761
23	Yes	7	0.00000001	0.00075979
24	Yes	5	0.00000001	0.00013061
25	Yes	6	0.00000001	0.00063416
26	Yes	5	0.00000001	0.00017688
27	Yes	5	0.00000001	0.00044948
28	Yes	5	0.00000001	0.00051403
29	Yes	5	0.00000001	0.00079725
30	Yes	5	0.00000001	0.00048594
31	Yes	5	0.00000001	0.00044720
32	Yes	5	0.00000001	0.00049852
33	Yes	5	0.00000001	0.00078417
34	Yes	5	0.00000001	0.00047104
35	Yes	6	0.00000001	0.00066883
36	Yes	6	0.00000001	0.00090102
37	Yes	6	0.00000001	0.00001652
38	Yes	5	0.00000001	0.00028748
39	Yes	7	0.00000001	0.00003759
40	Yes	7	0.00000001	0.00001864
41	Yes	6	0.00000001	0.00074461
42	Yes	5	0.00000001	0.00027546
43	Yes	6	0.00000001	0.00069324
44	Yes	5	0.00000001	0.00098422
45	Yes	6	0.00000001	0.00001212
46	Yes	7	0.00000001	0.00000797
47	Yes	7	0.00000001	0.00003283
48	Yes	7	0.00000001	0.00001557
49	Yes	6	0.00000001	0.00074219
50	Yes	5	0.00000001	0.00027397

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	138 - 117	0.76	34	0.0030	0.0189
T2	117 - 92	0.64	34	0.0043	0.0182
T3	92 - 65	0.49	30	0.0056	0.0151
T4	65 - 35	0.33	30	0.0052	0.0110
T5	35 - 0	0.17	28	0.0034	0.0062

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
152.50	Top	34	0.76	0.0030	0.0189	684927
140.00	4' Dish	34	0.76	0.0030	0.0189	684927
138.00	Middle	34	0.76	0.0030	0.0189	684927
133.50	Bottom	34	0.73	0.0033	0.0187	684927
127.50	CCISeismic Tower Section 1	34	0.70	0.0037	0.0185	326159
117.00	AIR 6449 B41 w/ Mount Pipe	34	0.64	0.0043	0.0182	180422
104.50	CCISeismic Tower Section 2	30	0.57	0.0051	0.0170	Inf
93.00	MT6407-77A w/ Mount Pipe	30	0.49	0.0056	0.0153	242125
92.50	CCISeismic (3) rosenberger leoni HL-9612XXX(1-1/2") From 0 to 93 (92ft to93ft)	30	0.49	0.0056	0.0152	236536
78.50	CCISeismic Tower Section 3	30	0.41	0.0056	0.0131	388698
50.00	CCISeismic Tower Section 4	30	0.25	0.0045	0.0087	876110
17.50	CCISeismic Tower Section 5	28	0.09	0.0018	0.0031	Inf

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	138 - 117	3.76	16	0.0176	0.0465
T2	117 - 92	3.15	8	0.0273	0.0515
T3	92 - 65	2.34	8	0.0339	0.0445
T4	65 - 35	1.56	8	0.0312	0.0334
T5	35 - 0	0.78	8	0.0203	0.0190

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
152.50	Top	16	3.76	0.0176	0.0465	147051
140.00	4' Dish	16	3.76	0.0176	0.0465	147051
138.00	Middle	16	3.76	0.0176	0.0465	147051
133.50	Bottom	16	3.64	0.0198	0.0481	147051
127.50	CCISeismic Tower Section 1	16	3.47	0.0227	0.0499	70024
117.00	AIR 6449 B41 w/ Mount Pipe	8	3.15	0.0273	0.0515	39024
104.50	CCISeismic Tower Section 2	8	2.75	0.0316	0.0493	313678
93.00	MT6407-77A w/ Mount Pipe	8	2.37	0.0338	0.0449	41925
92.50	CCISeismic (3) rosenberger leoni HL-9612XXX(1-1/2") From 0 to 93 (92ft to93ft)	8	2.35	0.0338	0.0447	41036
78.50	CCISeismic Tower Section 3	8	1.93	0.0336	0.0391	63812
50.00	CCISeismic Tower Section 4	8	1.16	0.0266	0.0265	112091
17.50	CCISeismic Tower Section 5	8	0.38	0.0108	0.0097	145785

Bolt Design Data

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt K	Allowable Load per Bolt K	Ratio Load / Allowable	Allowable Ratio	Criteria
T1	138	Diagonal	A325N	2.00	2	10.89	141.37	0.077	1	Bolt Shear
T2	117	Diagonal	A325N	2.00	2	14.58	141.37	0.103	1	Bolt Shear
T3	92	Diagonal	A325N	2.00	2	17.44	141.37	0.123	1	Bolt Shear
T4	65	Diagonal	A325N	2.00	2	19.02	141.37	0.135	1	Bolt Shear
T5	35	Leg	A36	1.25	4	26.11	42.16	0.619	1	Bolt Tension
		Diagonal	A325N	2.00	2	21.81	141.37	0.154	1	Bolt Shear

Compression Checks

Leg Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	138 - 117	P18x.25	21.07	21.07	40.3 K=1.00	13.94	-40.06	382.85	0.105 [1]
T2	117 - 92	P18x.25	25.08	25.08	48.0 K=1.00	13.94	-73.78	370.54	0.199 [1]
T3	92 - 65	P18x.25	27.09	27.09	51.8 K=1.00	13.94	-112.37	363.76	0.309 [1]
T4	65 - 35	P18x.25	30.10	30.10	57.6 K=1.00	13.94	-156.01	352.88	0.442 [1]
T5	35 - 0	P18x.25	35.12	35.12	67.1 K=1.00	13.94	-206.61	333.09	0.620 [1]

[1] $P_u / \phi P_n$ controls

Top Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	138 - 117	W8x35	20.00	18.50	109.4 K=1.00	10.30	-8.99	171.77	0.052 [1]
T2	117 - 92	W8x35	22.43	20.93	123.8 K=1.00	10.30	-18.09	146.09	0.124 [1]
T3	92 - 65	W8x35	25.33	23.83	140.9 K=1.00	10.30	-22.59	117.23	0.193 [1]
T4	65 - 35	W10x68	28.46	26.96	124.9 K=1.00	20.00	-25.94	279.70	0.093 [1]
T5	35 - 0	W10x68	31.94	30.44	141.0 K=1.00	20.00	-29.03	227.12	0.128 [1]

[1] $P_u / \phi P_n$ controls

Tension Checks

Leg Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T2	117 - 92	P18x.25	25.08	25.08	48.0	13.94	10.66	414.04	0.026 [1]
T3	92 - 65	P18x.25	27.09	27.09	51.8	13.94	37.87	414.04	0.091 [1]
T4	65 - 35	P18x.25	30.10	30.10	57.6	13.94	69.77	414.04	0.169 [1]
T5	35 - 0	P18x.25	35.12	35.12	67.1	13.94	104.44	414.04	0.252 [1]

[1] $P_u / \phi P_n$ controls

Diagonal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	138 - 117	1	29.88	27.77	1332.9	0.79	21.77	23.33	0.933 [1]
T2	117 - 92	1 1/8	34.61	32.44	1383.9	0.99	29.16	32.21	0.905 [1]
T3	92 - 65	1 3/8	38.14	36.02	1257.4	1.48	34.88	48.11	0.725 [1]
T4	65 - 35	1 1/2	42.61	40.49	1295.8	1.77	38.04	57.26	0.664 [1]
T5	35 - 0	1 5/8	48.82	46.67	1378.4	2.07	43.62	67.20	0.649 [1]

[1] $P_u / \phi P_n$ controls

Top Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T2	117 - 92	W8x35	22.43	20.93	123.8	10.30	1.11	305.91	0.004 [1]
T3	92 - 65	W8x35	25.33	23.83	140.9	10.30	1.69	305.91	0.006 [1]
T4	65 - 35	W10x68	28.46	26.96	124.9	20.00	2.34	594.00	0.004 [1]
T5	35 - 0	W10x68	31.94	30.44	141.0	20.00	3.10	594.00	0.005 [1]

[1] $P_u / \phi P_n$ controls

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
T1	138 - 117	Leg	P18x.25	3	-40.06	382.85	10.5	Pass
T2	117 - 92	Leg	P18x.25	20	-73.78	370.54	19.9	Pass
T3	92 - 65	Leg	P18x.25	36	-112.37	363.76	30.9	Pass
T4	65 - 35	Leg	P18x.25	52	-156.01	352.88	44.2	Pass
T5	35 - 0	Leg	P18x.25	68	-206.61	333.09	62.0	Pass
T1	138 - 117	Diagonal	1	11	21.77	23.33	93.3	Pass
T2	117 - 92	Diagonal	1 1/8	32	29.16	32.21	90.5	Pass
T3	92 - 65	Diagonal	1 3/8	48	34.88	48.11	72.5	Pass
T4	65 - 35	Diagonal	1 1/2	57	38.04	57.26	66.4	Pass
T5	35 - 0	Diagonal	1 5/8	73	43.62	67.20	64.9	Pass
T1	138 - 117	Top Girt	W8x35	6	-8.99	171.77	5.2	Pass
T2	117 - 92	Top Girt	W8x35	24	-18.09	146.09	12.4	Pass
T3	92 - 65	Top Girt	W8x35	40	-22.59	117.23	19.3	Pass
T4	65 - 35	Top Girt	W10x68	53	-25.94	279.70	9.3	Pass
T5	35 - 0	Top Girt	W10x68	69	-29.03	227.12	12.8	Pass
							Summary	
						Leg (T5)	62.0	Pass
						Diagonal (T1)	93.3	Pass

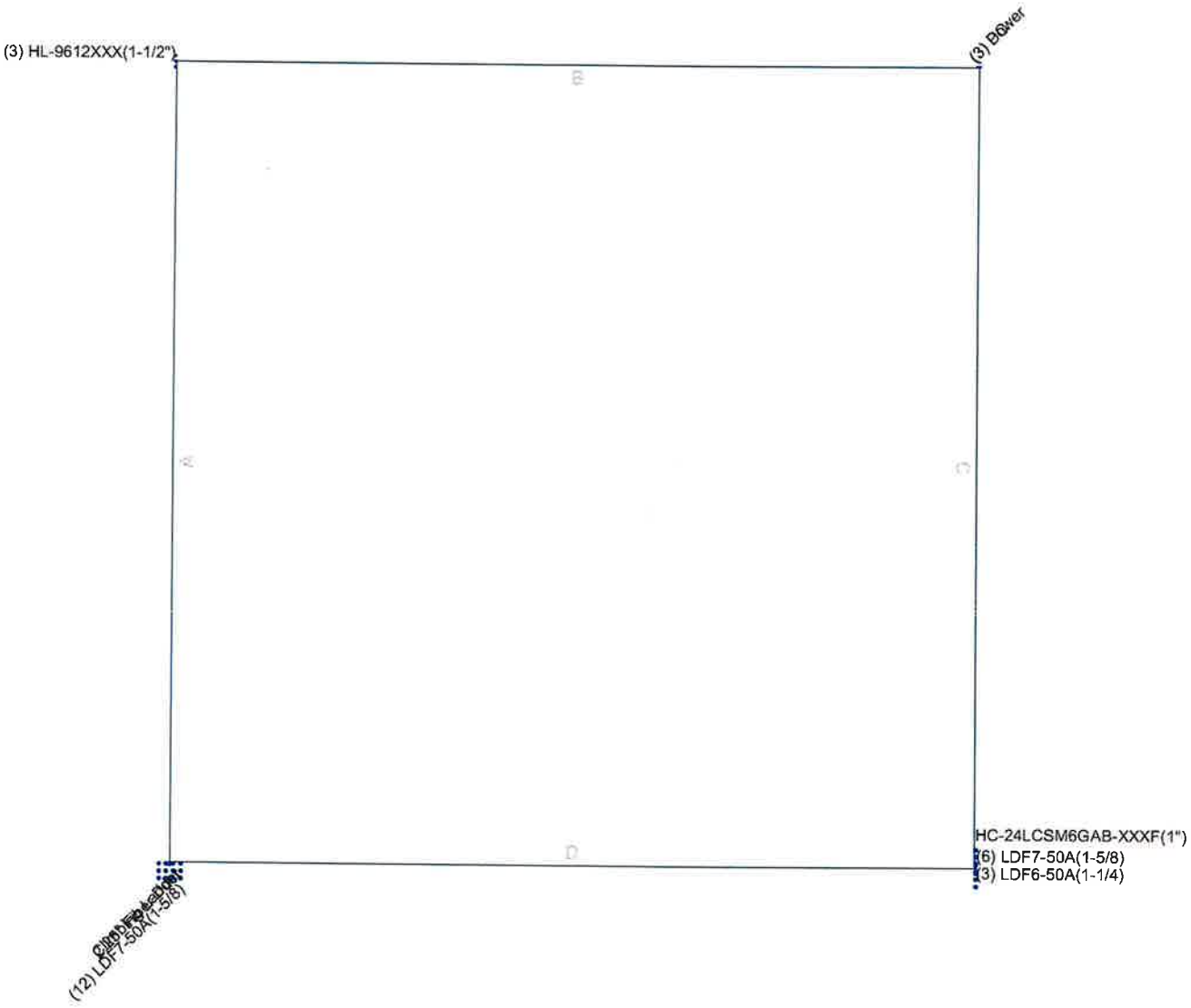
Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
						Top Girt (T3)	19.3	Pass
						RATING =	**93.3**	**Pass**

APPENDIX B

BASE LEVEL DRAWING

Feed Line Plan

Round Flat App In Face App Out Face



Tectonic	Tectonic 1279 Route 300 Newburgh, NY 12550 Phone: (845) 567-6656 FAX: (845) 567-8703	Job: 156' Water Tower Structural Analysis	
		Project: 11863.003_Mystic South CT	
		Client: Verizon Wireless	Drawn by: John-Fritz Julien / App'd:
		Code: TIA-222-H	Date: 10/16/23 / Scale: NTS
		Path:	Dwg No. E-7

APPENDIX C

ADDITIONAL CALCULATIONS

Tower Spread Footing Analysis

Soil Parameters		
Backfill unit weight (γ):	0.120	kcf
Allowable bearing pressure (4/3 q all):	4	ksf
Geotech Safety factor (for bearing)	2	(assumed)
Height of pier or footing above grade:	1.00	ft
Soil friction angle (Φ):	30.0	°
Sliding coefficient (tanδ):	0.30	
Phi(s) (For bearing on rock or soil)	0.75	
Phi (s) (For Friction or lateral resistance of soil)	0.75	
Net bearing pressure (q net):	8.00	ksf
Depth of footing below existing grade:	5.50	ft
Ultimate bearing pressure (q ult):	6.50	ksf

Concrete Parameters		
Unit weight (γ):	0.150	kcf
Comp.strength (f_c'):	3.0	ksi

Steel Parameters		
Yield strength (f_s):	60	ksi

Loads at Top of Pier			
Shear:	18	k	
Vertical*:	290.25	k	Case 1 - Compression
Uplift:	0	k	

*Considers 333 kips of surcharge added

Dimensions

Section	Width (ft)	Height (ft)	Depth (ft)	Volume (ft^3)	Arm (ft)	Weight (k)	Resisting Moment (ft-k)
Concrete in pier (circular, centered on ftg)	0.00	0.00	0.00	0.00	4.75	0.00	0.00
Concrete in footing	9.50	6.50	3.50	294.13	4.75	44.12	209.57
Soil above footing				0.00	4.75	0.00	0.00
Edges	12.68		5.50	589.54	4.75	70.74	336.04
Corners					0.00	0.00	0.00
Vertical load at top of pier					4.75	290.25	1378.69
Totals:						**405.11**	**1924.29**

Soil Pressure		
At Rest Pressure		
Kp	2.5	
At Grade	0	ksf
At Top of Footing	-0.30	ksf
At Bottom of Footing	1.65	ksf

STABILITY			
Overturning Moment			
Overturning moment:	117.0	ft-k	
Resisting Moment from Passive Pressure:	0.0	ft-k	
Factor of safety:	12.34	O.K.	8.1%
Sliding			
Sliding resistance from friction:	91.15	k	
Sliding resistance from passive pressure:	0	k	
Factor of safety:	5.06	O.K.	19.7%
SOIL BEARING PRESSURE			
Base Area	90.25	sq ft	
Max Pressure from Compression	4.49	psf	
Factor of safety:	1.45	O.K.	69.1%

Notes:

1) Sliding coefficient conservatively assumed based on similar soils

Tower Spread Footing Analysis

Soil Parameters		
Backfill unit weight (γ):	0.120	kcf
Allowable bearing pressure (q all):	3	ksf
Geotech Safety factor (for bearing)	2	(assumed)
Height of pier or footing above grade:	1.00	ft
Soil friction angle (Φ):	30.0	°
Sliding coefficient (tanδ):	0.30	
Phi(s) (For bearing on rock or soil)	0.75	
Phi (s) (For Friction or lateral resistance of soil)	0.75	
Net bearing pressure (q net):	6.00	ksf
Depth of footing below existing grade:	5.50	ft
Ultimate bearing pressure (q ult):	5.00	ksf

Concrete Parameters		
Unit weight (γ):	0.150	kcf
Comp.strength (f_c'):	3.0	ksi

Steel Parameters		
Yield strength (f_s):	60	ksi

Loads at Top of Pier			
Shear:	43	k	
Vertical:	0	k	Case 2 - Uplift
Uplift:*	63.75	k	

*Considers 333 kips of surcharge added

Dimensions

Section	Width (ft)	Height (ft)	Depth (ft)	Volume (ft^3)	Arm (ft)	Weight (k)	Resisting Moment (ft-k)
Concrete in pier (circular, centered on ftg)	0.00	0.00	0.00	0.00	4.75	0.00	0.00
Concrete in footing	9.50	6.50	3.50	294.13	4.75	44.12	209.57
Soil above footing				0.00	4.75	0.00	0.00
Edges	12.68		5.50	589.54	4.75	70.74	336.04
Corners					0.00	0.00	0.00
Vertical load at top of pier					4.75	0.00	0.00
Totals:						**114.86**	**545.60**

Soil Pressure		
At Rest Pressure		
Kp	2.5	
At Grade	0	ksf
At Top of Footing	-0.30	ksf
At Bottom of Footing	1.65	ksf

STABILITY			
Uplift			
Wc, Weight of Concrete	44.1	kips	
Wr, Soil Resistance	70.74	kips	
Uplift Design Strength	103.38	kips	
Factor of safety:	1.62	O.K.	61.7%
Sliding			
Sliding resistance from friction:	33.68	k	
Sliding resistance from passive pressure:	21.9375	k	
Factor of safety:	1.17	O.K.	85.8%

Notes:

1) Sliding coefficient conservatively assumed based on similar soils

Self Support Anchor Rod Capacity

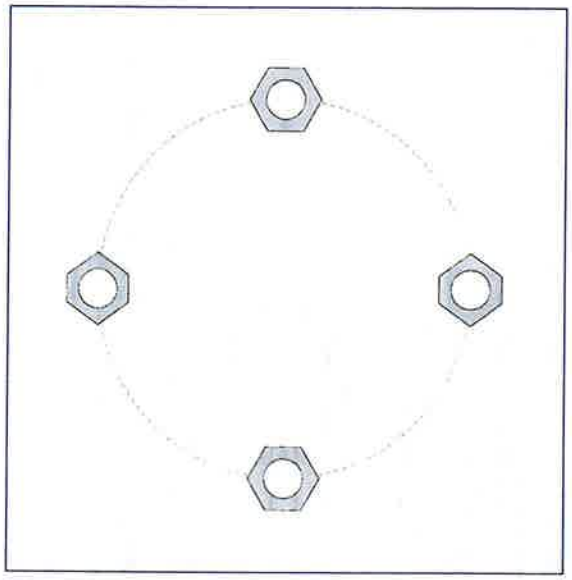
Site Info	
WO #	11863.003
Site Name	Mystic South CT

Analysis Considerations	
TIA-222 Revision	H
Grout Considered:	Yes
l_{ar} (in)	0

Applied Loads		
	Comp.	Uplift
Axial Force (kips)	290.25	63.75
Shear Force (kips)	18.00	43.00

Considered Eccentricity	
Leg Mod Eccentricity (in)	0.000
Anchor Rod N.A Shift (in)	0.000
Total Eccentricity (in)	0.000

**Anchor Rod Eccentricity Applied*



Connection Properties

Anchor Rod Data

(4) 1-1/4" ø bolts (A36 N; Fy=36 ksi, Fu=58 ksi)

l_{ar} (in): 0

Analysis Results

Anchor Rod Summary *(units of kips, kip-in)*

Pu_t = 15.94	ϕPn_t = 42.15	**Stress Rating**
Vu = 10.75	ϕVn = 26.69	**40.3%**
Mu = n/a	ϕMn = n/a	Pass

Analysis Date: 10/17/2023

SEISMIC CALCULATIONS

Location

	Decimal Degrees		Deg	Min	Sec
Lat:	41.349569	+	41	20	58.45
Long:	-71.963739	-	71	57	49.46

Code and Site Parameters

Seismic Design Code:	TIA-222-H-1	
Site Soil:	D (Default)	Default
Risk Category:	III	

USGS Seismic Reference

S_S:	0.1850	g
S_1:	0.0520	g
T_L:	6	s

Seismic Design Category Determination

Importance Factor, I_e:	1.25
Acceleration-based site coefficient, F_a:	1.6000
Velocity-based site coefficient, F_v:	2.4000

Design spectral response acceleration short period, S_{DS}:	0.1973	g
Design spectral response acceleration 1 s period, S_{D1}:	0.0832	g
T_s:	0.4216	

Seismic Design Category Based on S_{DS}:	B
Seismic Design Category Based on S_{D1}:	B
Seismic Design Category Based on S_1:	N/A

Controlling Seismic Design Category:	B

Tower Details

Tower Type:	Self-Support		
Height, h:	138	ft	
Effective Seismic Weight, W:	112.75	kips	
Amplification Factor, A_s:	1.0		2.7.8.1

Seismic Base Shear

Response Modification Factor, R:	3		
w_a:	28.0000	ft	
w_0:	36.0000	ft	
W_1:	85.1221	kips	
Weight of Structure and Appurtenances within top 5%, W_2:	48.4421	kips	
K_f:	4540	ft	
F_a:	5.3288	hz	
Approximate Fundamental Period Self-Support, T_a:	0.1877	s	2.7.7.1.3.2
Seismic Response Coefficient, C_s	0.0822		2.7.7.1.1
Seismic Response Coefficient Max 1, C_{smax}	0.1847		2.7.7.1.1
Seismic Response Coefficient Max 2, C_{smax}	N/A		2.7.7.1.1
Seismic Response Coefficient Min 1, C_{smin}	0.0300		2.7.7.1.1
Seismic Response Coefficient Min 2, C_{smin}	N/A		2.7.7.1.1
Controlling Seismic Response Coefficient, C_{sc}	0.0822		
Seismic Base Shear, V	[illegible]	kips	2.7.7.1.1

Vertical Distribution Factors

Period Related Exponent, k:	1.000
Sum of $w_i h_i^k$	10763.09

Tower Section Loads								
Section Number	Length	Top Height	Mid Height, h_z	Section Weight, w_z	$w_z h_z^k$	C_{xx}	F_{xh}	F_{xv}
1	21.00	138.00	127.50	7.4408	948.71	0.0881	0.8172	0.2937
2	25.00	117.00	104.50	8.8413	923.92	0.0858	0.7958	0.3489
3	27.00	92.00	78.50	10.2339	803.36	0.0746	0.6920	0.4039
4	30.00	65.00	50.00	15.5097	775.49	0.0721	0.6680	0.6121
5	35.00	35.00	17.50	18.1150	317.01	0.0295	0.2731	0.7149
			Sum	[illegible]	[illegible]			

Discrete Loads						
Name	h_x	w_x	$w_x h_x^k$	C_{vx}	F_{xh}	F_{xv}
miscl Dipole	140.00	0.0400	5.60	0.0005	0.0048	0.0016
pipe mounts 2" STD Pipe (2.375 OD)x4'-0"	140.00	0.0100	1.40	0.0001	0.0012	0.0004
pipe mounts 4" STD Pipe (4.5 OD)x5'-0"	140.00	0.0500	7.00	0.0007	0.0060	0.0020
jma wireless MX08FRO665-21 w/ Mount Pipe	140.00	0.0900	12.60	0.0012	0.0109	0.0036
jma wireless MX08FRO665-21 w/ Mount Pipe	140.00	0.0900	12.60	0.0012	0.0109	0.0036
jma wireless MX08FRO665-21 w/ Mount Pipe	140.00	0.0900	12.60	0.0012	0.0109	0.0036
fujitsu TA08025-B605	140.00	0.0700	9.80	0.0009	0.0084	0.0028
fujitsu TA08025-B605	140.00	0.0700	9.80	0.0009	0.0084	0.0028
fujitsu TA08025-B605	140.00	0.0700	9.80	0.0009	0.0084	0.0028
fujitsu TA08025-B604	140.00	0.0600	8.40	0.0008	0.0072	0.0024
fujitsu TA08025-B604	140.00	0.0600	8.40	0.0008	0.0072	0.0024
fujitsu TA08025-B604	140.00	0.0600	8.40	0.0008	0.0072	0.0024
raycap RDIDC-9181-PF-48	140.00	0.0200	2.80	0.0003	0.0024	0.0008
raycap RDIDC-9181-PF-48	140.00	0.0200	2.80	0.0003	0.0024	0.0008
raycap RDIDC-9181-PF-48	140.00	0.0200	2.80	0.0003	0.0024	0.0008
(2) L3X3	140.00	0.0700	9.80	0.0009	0.0084	0.0028
(2) L3X3	140.00	0.0700	9.80	0.0009	0.0084	0.0028
(2) L3X3	140.00	0.0700	9.80	0.0009	0.0084	0.0028
Top	152.50	10.6530	1624.58	0.1509	1.3993	0.4204
Middle	138.00	16.2920	2248.30	0.2089	1.9366	0.6430
Bottom	133.50	10.6530	1422.18	0.1321	1.2250	0.4204
Catwalk	140.00	4.9600	694.40	0.0645	0.5981	0.1958
powerwave technologies 7770.00 w/ Mount Pipe	140.00	0.0600	8.40	0.0008	0.0072	0.0024
quintel technology QS46512-2 w/ Mount Pipe	140.00	0.1200	16.80	0.0016	0.0145	0.0047
cci antennas DMP65R-BU4D w/ Mount Pipe	140.00	0.0900	12.60	0.0012	0.0109	0.0036
ericsson RRUS 32 B2	140.00	0.0500	7.00	0.0007	0.0060	0.0020
(2) powerwave technologies LGP21401	140.00	0.0200	2.80	0.0003	0.0024	0.0008
(2) kaelus DBC0061F1V51-2	140.00	0.0600	8.40	0.0008	0.0072	0.0024
raycap DC6-48-60-18-8F	140.00	0.0200	2.80	0.0003	0.0024	0.0008
raycap DC2-48-60-0-9E	140.00	0.0200	2.80	0.0003	0.0024	0.0008
miscl Jsource FMB	140.00	0.0200	2.80	0.0003	0.0024	0.0008
ericsson RRUS 4449 B5/B12	140.00	0.0700	9.80	0.0009	0.0084	0.0028
ericsson RRUS 4426 B66	140.00	0.0500	7.00	0.0007	0.0060	0.0020
ericsson RRUS 4415 B25	140.00	0.0400	5.60	0.0005	0.0048	0.0016
powerwave technologies 7770.00 w/ Mount Pipe	140.00	0.0600	8.40	0.0008	0.0072	0.0024
quintel technology QS46512-2 w/ Mount Pipe	140.00	0.1200	16.80	0.0016	0.0145	0.0047
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miscl Jsource FMB	140.00	0.0200	2.80	0.0003	0.0024	0.0008
ericsson RRUS 4449 B5/B12	140.00	0.0700	9.80	0.0009	0.0084	0.0028
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cci antennas DMP65R-BU4D w/ Mount Pipe	140.00	0.0900	12.60	0.0012	0.0109	0.0036
ericsson RRUS 32 B2	140.00	0.0500	7.00	0.0007	0.0060	0.0020
(2) powerwave technologies LGP21401	140.00	0.0200	2.80	0.0003	0.0024	0.0008
(2) kaelus DBC0061F1V51-2	140.00	0.0600	8.40	0.0008	0.0072	0.0024
raycap DC6-48-60-18-8F	140.00	0.0200	2.80	0.0003	0.0024	0.0008
raycap DC2-48-60-0-9E	140.00	0.0200	2.80	0.0003	0.0024	0.0008
miscl Jsource FMB	140.00	0.0200	2.80	0.0003	0.0024	0.0008
ericsson RRUS 4449 B5/B12	140.00	0.0700	9.80	0.0009	0.0084	0.0028
ericsson RRUS 4426 B66	140.00	0.0500	7.00	0.0007	0.0060	0.0020
ericsson RRUS 4415 B25	140.00	0.0400	5.60	0.0005	0.0048	0.0016
(3) mount pipes 6' x 2.5" STD Pipe	140.00	0.0900	12.60	0.0012	0.0109	0.0036
(3) mount pipes 6' x 2.5" STD Pipe	140.00	0.0900	12.60	0.0012	0.0109	0.0036
(3) mount pipes 6' x 2.5" STD Pipe	140.00	0.0900	12.60	0.0012	0.0109	0.0036
ericsson AIR 6449 B41 w/ Mount Pipe	117.00	0.1300	15.21	0.0014	0.0131	0.0051
rfs celwave APXVAALL24_43-U-NA20 w/ Mount Pipe	117.00	0.1500	17.55	0.0016	0.0151	0.0059
rfs celwave APX16DWV-16DWV-S-E-A20_TIA w/ Mount Pipe	117.00	0.0600	7.02	0.0007	0.0060	0.0024
ericsson RADIO 4449 B71+B85	117.00	0.0700	8.19	0.0008	0.0071	0.0028
ericsson RRUS 4426 B66	117.00	0.0500	5.85	0.0005	0.0050	0.0020
ericsson RRUS 4415	117.00	0.0400	4.68	0.0004	0.0040	0.0016
ericsson AIR 6449 B41 w/ Mount Pipe	117.00	0.1300	15.21	0.0014	0.0131	0.0051
rfs celwave APXVAALL24_43-U-NA20 w/ Mount Pipe	117.00	0.1500	17.55	0.0016	0.0151	0.0059
rfs celwave APX16DWV-16DWV-S-E-A20_TIA w/ Mount Pipe	117.00	0.0600	7.02	0.0007	0.0060	0.0024
ericsson RADIO 4449 B71+B85	117.00	0.0700	8.19	0.0008	0.0071	0.0028
ericsson RRUS 4426 B66	117.00	0.0500	5.85	0.0005	0.0050	0.0020
ericsson RRUS 4415	117.00	0.0400	4.68	0.0004	0.0040	0.0016
ericsson AIR 6449 B41 w/ Mount Pipe	117.00	0.1300	15.21	0.0014	0.0131	0.0051
rfs celwave APXVAALL24_43-U-NA20 w/ Mount Pipe	117.00	0.1500	17.55	0.0016	0.0151	0.0059
rfs celwave APX16DWV-16DWV-S-E-A20_TIA w/ Mount Pipe	117.00	0.0600	7.02	0.0007	0.0060	0.0024
ericsson RADIO 4449 B71+B85	117.00	0.0700	8.19	0.0008	0.0071	0.0028
ericsson RRUS 4426 B66	117.00	0.0500	5.85	0.0005	0.0050	0.0020
ericsson RRUS 4415	117.00	0.0400	4.68	0.0004	0.0040	0.0016
samsung telecommunications MT6413-77A w/ Mount Pipe	93.00	0.0900	8.37	0.0008	0.0072	0.0036

samsung telecommunications B2/B66 RRH ORAN	93.00	0.0700	6.51	0.0006	0.0056	0.0028
samsung telecommunications B13/B5 RRH ORAN	93.00	0.0700	6.51	0.0006	0.0056	0.0028
(2) commscope SBNHH-1D65A_TIA w/ Mount Pipe	93.00	0.1000	9.30	0.0009	0.0080	0.0039
raycap OVP-Distribution Box	93.00	0.0300	2.79	0.0003	0.0024	0.0012
samsung telecommunications MT6413-77A w/ Mount Pipe	93.00	0.0900	8.37	0.0008	0.0072	0.0036
samsung telecommunications B2/B66 RRH ORAN	93.00	0.0700	6.51	0.0006	0.0056	0.0028
samsung telecommunications B13/B5 RRH ORAN	93.00	0.0700	6.51	0.0006	0.0056	0.0028
(2) commscope SBNHH-1D65A_TIA w/ Mount Pipe	93.00	0.1000	9.30	0.0009	0.0080	0.0039
raycap OVP-Distribution Box	93.00	0.0300	2.79	0.0003	0.0024	0.0012
samsung telecommunications MT6413-77A w/ Mount Pipe	93.00	0.0900	8.37	0.0008	0.0072	0.0036
samsung telecommunications B2/B66 RRH ORAN	93.00	0.0700	6.51	0.0006	0.0056	0.0028
samsung telecommunications B13/B5 RRH ORAN	93.00	0.0700	6.51	0.0006	0.0056	0.0028
(2) commscope SBNHH-1D65A_TIA w/ Mount Pipe	93.00	0.1000	9.30	0.0009	0.0080	0.0039
raycap OVP-Distribution Box	93.00	0.0300	2.79	0.0003	0.0024	0.0012
4' Dish	140.00	0.1400	19.60	0.0018	0.0169	0.0055
	Sum					

Linear Loads								
Name	Start Height	End Height	h_z	w_z	$w_z h_z^{1.5}$	C_{AA}	F_{aa}	F_a
(3) Power From 0 to 138	117.00	138.00	127.50	0.0365	4.66	0.0004	0.0040	0.0014
(3) Power From 0 to 138	92.00	117.00	104.50	0.0435	4.55	0.0004	0.0039	0.0017
(3) Power From 0 to 138	65.00	92.00	78.50	0.0470	3.69	0.0003	0.0032	0.0019
(3) Power From 0 to 138	35.00	65.00	50.00	0.0522	2.61	0.0002	0.0022	0.0021
(3) Power From 0 to 138	0.00	35.00	17.50	0.0609	1.07	0.0001	0.0009	0.0024
(3) DC From 0 to 138	117.00	138.00	127.50	0.0095	1.20	0.0001	0.0010	0.0004
(3) DC From 0 to 138	92.00	117.00	104.50	0.0113	1.18	0.0001	0.0010	0.0004
(3) DC From 0 to 138	65.00	92.00	78.50	0.0122	0.95	0.0001	0.0008	0.0005
(3) DC From 0 to 138	35.00	65.00	50.00	0.0135	0.68	0.0001	0.0006	0.0005
(3) DC From 0 to 138	0.00	35.00	17.50	0.0158	0.28	0.0000	0.0002	0.0006
(12) andrew LDF7-50A(1-5/8) From 0 to 138	117.00	138.00	127.50	0.2066	26.35	0.0024	0.0227	0.0082
(12) andrew LDF7-50A(1-5/8) From 0 to 138	92.00	117.00	104.50	0.2460	25.71	0.0024	0.0221	0.0097
(12) andrew LDF7-50A(1-5/8) From 0 to 138	65.00	92.00	78.50	0.2657	20.86	0.0019	0.0180	0.0105
(12) andrew LDF7-50A(1-5/8) From 0 to 138	35.00	65.00	50.00	0.2952	14.76	0.0014	0.0127	0.0117
(12) andrew LDF7-50A(1-5/8) From 0 to 138	0.00	35.00	17.50	0.3444	6.03	0.0006	0.0052	0.0136
miscl 2.25" Fiber Duct From 0 to 138	117.00	138.00	127.50	0.0053	0.67	0.0001	0.0006	0.0002
miscl 2.25" Fiber Duct From 0 to 138	92.00	117.00	104.50	0.0063	0.65	0.0001	0.0006	0.0002
miscl 2.25" Fiber Duct From 0 to 138	65.00	92.00	78.50	0.0068	0.53	0.0000	0.0005	0.0003
miscl 2.25" Fiber Duct From 0 to 138	35.00	65.00	50.00	0.0075	0.38	0.0000	0.0003	0.0003
miscl 2.25" Fiber Duct From 0 to 138	0.00	35.00	17.50	0.0083	0.15	0.0000	0.0001	0.0003
miscl Climbing Ladder From 0 to 138	117.00	138.00	127.50	0.1659	21.15	0.0020	0.0182	0.0065
miscl Climbing Ladder From 0 to 138	92.00	117.00	104.50	0.1975	20.64	0.0019	0.0178	0.0078
miscl Climbing Ladder From 0 to 138	65.00	92.00	78.50	0.2133	16.74	0.0016	0.0144	0.0084
miscl Climbing Ladder From 0 to 138	35.00	65.00	50.00	0.2370	11.85	0.0011	0.0102	0.0094
miscl Climbing Ladder From 0 to 138	0.00	35.00	17.50	0.2765	4.84	0.0004	0.0042	0.0109
(6) andrew LDF7-50A(1-5/8) From 0 to 117	92.00	117.00	104.50	0.1230	12.85	0.0012	0.0111	0.0049
(6) andrew LDF7-50A(1-5/8) From 0 to 117	65.00	92.00	78.50	0.1328	10.43	0.0010	0.0090	0.0052
(6) andrew LDF7-50A(1-5/8) From 0 to 117	35.00	65.00	50.00	0.1476	7.38	0.0007	0.0064	0.0058
(6) andrew LDF7-50A(1-5/8) From 0 to 117	0.00	35.00	17.50	0.1722	3.01	0.0003	0.0026	0.0068
(3) andrew LDF6-50A(1-1/4) From 0 to 117	92.00	117.00	104.50	0.0450	4.70	0.0004	0.0041	0.0018
(3) andrew LDF6-50A(1-1/4) From 0 to 117	65.00	92.00	78.50	0.0486	3.82	0.0004	0.0033	0.0019
(3) andrew LDF6-50A(1-1/4) From 0 to 117	35.00	65.00	50.00	0.0540	2.70	0.0003	0.0023	0.0021
(3) andrew LDF6-50A(1-1/4) From 0 to 117	0.00	35.00	17.50	0.0630	1.10	0.0001	0.0009	0.0025
rosenberger leoni HC-24LCSM6GAB-XXXF(1") From 0 to 117	92.00	117.00	104.50	0.0177	1.85	0.0002	0.0016	0.0007
rosenberger leoni HC-24LCSM6GAB-XXXF(1") From 0 to 117	65.00	92.00	78.50	0.0191	1.50	0.0001	0.0013	0.0008
rosenberger leoni HC-24LCSM6GAB-XXXF(1") From 0 to 117	35.00	65.00	50.00	0.0212	1.06	0.0001	0.0009	0.0008
rosenberger leoni HC-24LCSM6GAB-XXXF(1") From 0 to 117	0.00	35.00	17.50	0.0247	0.43	0.0000	0.0004	0.0010
(3) rosenberger leoni HL-9612XXX(1-1/2") From 0 to 93	92.00	93.00	92.50	0.0056	0.52	0.0000	0.0004	0.0002
(3) rosenberger leoni HL-9612XXX(1-1/2") From 0 to 93	65.00	92.00	78.50	0.1512	11.87	0.0011	0.0102	0.0060
(3) rosenberger leoni HL-9612XXX(1-1/2") From 0 to 93	35.00	65.00	50.00	0.1680	8.40	0.0008	0.0072	0.0066
(3) rosenberger leoni HL-9612XXX(1-1/2") From 0 to 93	0.00	35.00	17.50	0.1960	3.43	0.0003	0.0030	0.0077
			Sum					

Municipality	Basic Design Wind Speeds, V (mph)				Allowable Stress Design Wind Speeds, V_{asd} (mph)				Ground Snow Load p_g (psf)	MCE Ground Accelerations		Wind-Borne Debris Region[1]		Hurricane-Prone Region
	Risk Cat. I	Risk Cat. II	Risk Cat. III	Risk Cat. IV	Risk Cat. I	Risk Cat. II	Risk Cat. III	Risk Cat. IV		S_S (g)	S_1 (g)	Risk Cat. III Occup. I-2	Risk Cat. IV	
Hampton	115	125	130	135	89	97	101	105	35	0.184	0.054			Yes
Hartford	110	120	130	135	85	93	101	105	30	0.189	0.055			Yes
Hartland	110	115	125	130	85	89	97	101	35	0.167	0.054			
Harwinton	110	120	125	130	85	93	97	101	35	0.177	0.054			Yes
Hebron	115	125	130	135	89	97	101	105	30	0.200	0.055			Yes
Kent	105	115	125	130	81	89	97	101	40	0.184	0.054			
Killingly	115	125	135	140	89	97	105	108	35	0.186	0.055			Yes
Killingworth	115	125	135	140	89	97	105	108	30	0.210	0.055			Yes
Lebanon	115	125	135	135	89	97	105	105	30	0.196	0.055			Yes
Ledyard	120	130	140	140	93	101	108	108	30	0.190	0.053			Yes
Lisbon	115	125	135	140	89	97	105	108	30	0.190	0.054			Yes
Litchfield	110	115	125	130	85	89	97	101	35	0.178	0.054			
Lyme	115	125	135	140	89	97	105	108	30	0.207	0.054			Yes
Madison	115	125	135	140	89	97	105	108	30	0.206	0.054	Type B	Type B	Yes
Manchester	110	120	130	135	85	93	101	105	30	0.190	0.055			Yes
Mansfield	110	120	130	135	85	93	101	105	35	0.186	0.055			Yes
Marlborough	110	125	130	135	85	97	101	105	30	0.205	0.056			Yes
Meriden	110	120	130	135	85	93	101	105	30	0.203	0.055			Yes
Middlebury	110	120	130	130	85	93	101	101	35	0.194	0.054			Yes
Middlefield	110	120	130	135	85	93	101	105	30	0.209	0.055			Yes
Middletown	110	120	130	135	85	93	101	105	30	0.209	0.056			Yes
Milford	110	120	130	135	85	93	101	105	30	0.202	0.053	Type B	Type B	Yes
Monroe	110	120	130	135	85	93	101	105	30	0.208	0.055			Yes
Montville	120	125	135	140	93	97	105	108	30	0.198	0.054			Yes
Morris	110	115	125	130	85	89	97	101	35	0.182	0.054			
Naugatuck	110	120	130	135	85	93	101	105	30	0.197	0.054			Yes
New Britain	110	120	130	135	85	93	101	105	30	0.195	0.055			Yes
New Canaan	110	120	130	135	85	93	101	105	30	0.252	0.058			Yes
New Fairfield	110	115	125	130	85	89	97	101	30	0.219	0.056			
New Hartford	110	115	125	130	85	89	97	101	35	0.172	0.054			
New Haven	110	125	130	135	85	97	101	105	30	0.201	0.054	Type B	Type B	Yes
New London	120	130	140	140	93	101	108	108	30	0.191	0.053	Type B	Type A	Yes

ASCE
AMERICAN SOCIETY OF CIVIL ENGINEERS

Seismic

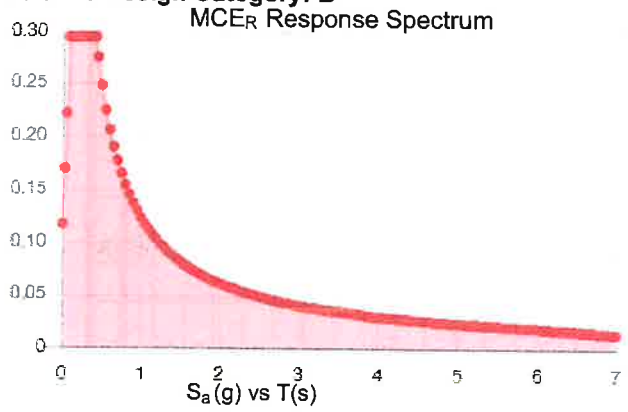
D - Default (see Section 11.4.3)

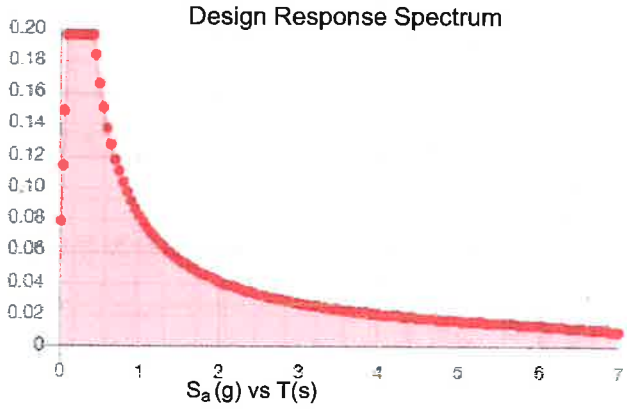
Site Soil Class:

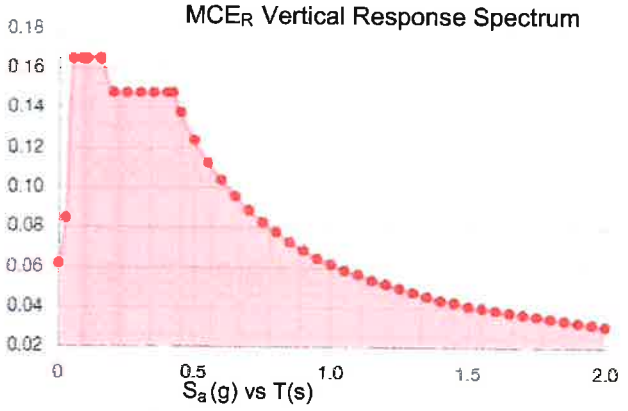
Results:

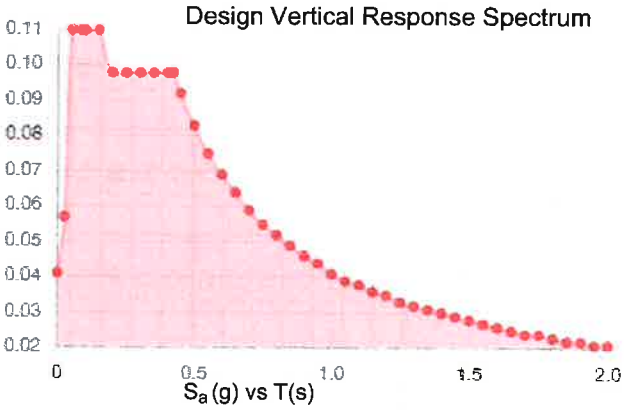
S_S :	0.185	S_{D1} :	0.083
S_1 :	0.052	T_L :	6
F_a :	1.6	PGA :	0.101
F_v :	2.4	PGA_M :	0.161
S_{MS} :	0.295	F_{PGA} :	1.598
S_{M1} :	0.124	I_e :	1.25
S_{DS} :	0.197	C_v :	0.7

Seismic Design Category: B









Data Accessed: **Fri Oct 13 2023**

Date Source:

USGS Seismic Design Maps based on ASCE/SEI 7-16 and ASCE/SEI 7-16 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-16 Ch. 21 are available from USGS.

Ice

Results:

Ice Thickness:	1.00 in.
Concurrent Temperature:	15 F
Gust Speed	50 mph
Data Source:	Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8
Date Accessed:	Fri Oct 13 2023

Ice thicknesses on structures in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 500-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Colliers Engineering & Design CT, P.C.
1055 Washington Boulevard
Stamford, CT 06901
203.324.0800
peter.albano@collierseng.com

Antenna Mount Analysis Report and PMI Requirements

Mount ReAnalysis-VZW

SMART Tool Project #: 10210419
Colliers Engineering & Design CT, P.C. Project #: 20777371 (Rev. 1)

September 29, 2023

Site Information	*Site ID:*	*5000244749-VZW / Mystic South CT*
	Site Name:	*Mystic South CT*
	Carrier Name:	*Verizon Wireless*
	Address:	*7 Broadway Avenue Ext* *Mystic, Connecticut 06355* *New London County*
	Latitude:	*41.34957°*
	Longitude:	*-71.96374°*
Structure Information	*Tower Type:*	*154-Ft Water Tank*
	Mount Type:	*(12) 7-Ft Pipe Mount*

FUZE ID # 16244602

Analysis Results

Pipe Mount: **29.6% Pass***

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

******Contractor PMI Requirements:***
Included at the end of this MA report
Available & Submitted via portal at https://pmi.vzwsmart.com

For additional questions and support, please reach out to:
pmisupport@colliersengineering.com

Report Prepared By: Frank Centone

Executive Summary:

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

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

Sources of Information:

Document Type	Remarks
Radio Frequency Data Sheet (RFDS)	*Verizon RFDS, Site ID: 324425, dated September 5, 2023*
Mount Mapping Report	*Tower Engineering Professionals, Site ID: 468402, dated March 11, 2021*

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H 2022 Connecticut State Building Code (CSBC), Effective October 1, 2022	
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), V_{ULT}:	140 mph
	Ice Wind Speed (3-sec. Gust):	50 mph
	Design Ice Thickness:	1.00 in
	Risk Category:	III
	Exposure Category:	C
	Topographic Category:	1
	Topographic Feature Considered:	N/A
	Topographic Method:	N/A
	Ground Elevation Factor, K_e:	1.000
Seismic Parameters:	S_S:	0.191 g
	S_1:	0.053 g
Maintenance Parameters:	Wind Speed (3-sec. Gust):	N/A
	Maintenance Load, Lv:	N/A
	Maintenance Load, Lm:	N/A
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
92.50	93.00	6	Andrew	SBNHH-1D65A	Retained
		3	Samsung	MT6413-77A	Added
		3	Samsung	RF4461d-13A	
		3	Samsung	RF4439d-25A	

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

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

Standard Conditions:

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

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

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

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

3. For mount analyses completed from other data sources (including new replacement mounts) and not specifically mapped in accordance with the NSTD-446 Standard, the mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer's specifications.

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

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

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

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

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

Analysis Results:

Component	Utilization %	Pass/Fail
Mount Pipe	29.5%	Pass
Connection Check	29.6%	Pass

Structure Rating – *(Controlling Utilization of all Components)*	29.6%

BASELINE mount weight per SBA agreement: 307.44 lbs

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

The weights listed above include 3 sectors.

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

Ice Thickness (In)	Mount Pipes Excluded		Mount Pipes Included	
	Front (EPA)a (Sq. Ft.)	Side (EPA)a (Sq. Ft.)	Front (EPA)a (Sq. Ft.)	Side (EPA)a (Sq. Ft.)
0	0.0	0.0	4.5	4.5
0.5	0.0	0.0	6.4	6.4
1	0.0	0.0	8.3	8.3

Notes:
- (EPA)a values listed above may be used in the absence of more precise information
- (EPA)a values in the table above include 1 sector(s).
- Ka factors included in (EPA)a calculations

Requirements:

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

N/A

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

Attachments:

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

Mount Desktop – Post Modification Inspection (PMI) Report Requirements

Documents & Photos Required from Contractor – Passing Mount Analysis

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

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

For additional questions and support, please reach out to pmisupport@colliersengineering.com

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MDG #: 5000244749 SMART Project #: 10210419 Fuze Project ID: 16244602

Purpose – to provide SMART Tool structural vendor the proper documentation in order to complete the required Mount Desktop review of the Post Modification Inspection Report.

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

Base Requirements:

- If installation will cause damage to the structure, the climbing facility, or safety climb if present or any installed system, SMART Tool vendor to be notified prior to install. Any special photos outside of the standard requirements will be indicated on the drawings.
- Provide "as built mount drawings" showing contractor's name, contact information, preparer's signature, and date. Any deviations from the drawings (Proposed modification) shall be shown. NOTE: If loading is different than what is conveyed in the passing mount analysis (MA) contact the SMART Tool vendor immediately.
- Each photo should be time and date stamped
- Photos should be high resolution.
- Contractor shall ensure that the safety climb wire rope is supported and not adversely impacted by the install of the modification components. This may involve the install of wire rope guides, or other items to protect the wire rope. If there is conflict, contact the SMART Tool engineer for recommendations.
- The PMI can be accessed at the following portal: ***https://pmi.vzwsmart.com***

Photo Requirements:

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

- Photos showing each individual sector after installation. Each entire sector shall be in one photo to show the interconnection of members.
  - These photos shall also certify that the placement and geometry of the equipment on the mount is as depicted in the antenna placement diagram in this form.
- Photos that show the model number of each antenna and piece of equipment installed per sector.

Antenna & equipment placement and Geometry Confirmation:

- The contractor shall certify that the antenna & equipment placement and geometry is in accordance with the sketch and table as included in the mount analysis and noted below.

☐ The contractor certifies that the photos support and the equipment on the mount is as depicted on the sketch and table included in this form and with the mount analysis provided.

OR

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

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

Issue:

N/A

Response:

Special Instruction Confirmation:

☐ The contractor has read and acknowledges the above special instructions.

☐ All hardware listed in the Special Instructions above (if applicable) has been properly installed, and the existing hardware was inspected.

☐ The material utilized was as specified in the SMART Tool engineering vendor Special Instructions above (if applicable) and included in the material certification folder is a packing list or invoice for these materials.

OR

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

Comments:

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

☐ Yes ☐ No

Contractor certifies no new damage created during the current installation:

☐ Yes ☐ No

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

☐ Safety Climb in Good Condition ☐ Safety Climb Damaged

Certifying Individual:

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

Structure: 5000244749-VZW - Mystic South CT

Sector: A

Structure Type: Water Tank

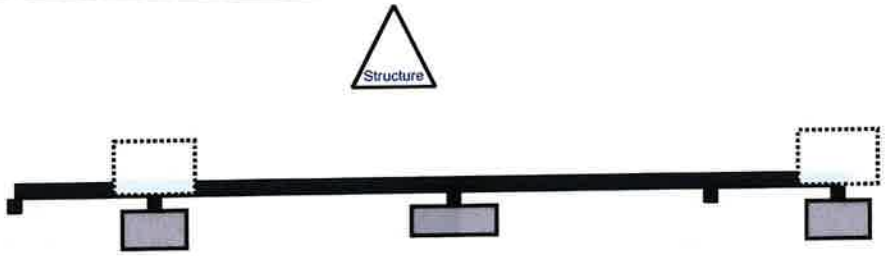
Mount Elev: 92.50

10210419

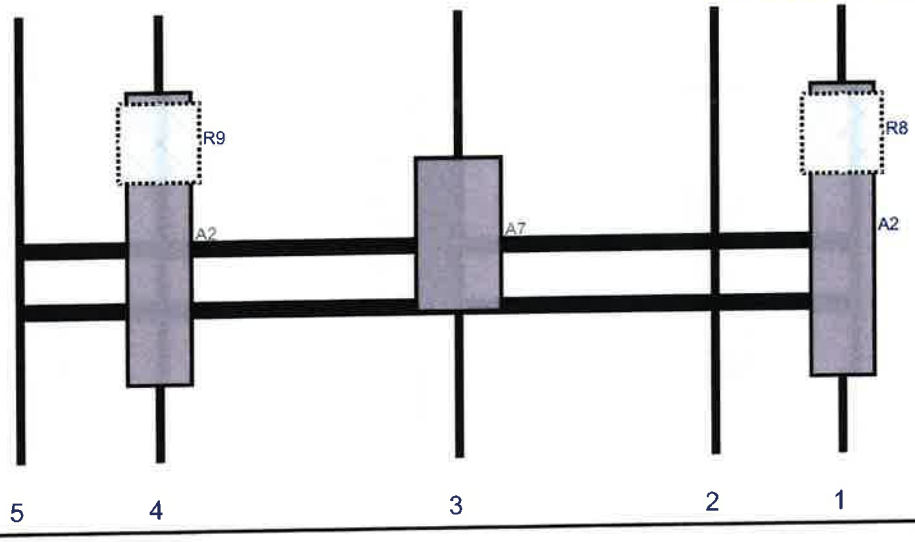
9/26/2023

Colliers Engineering & Design

Plan View



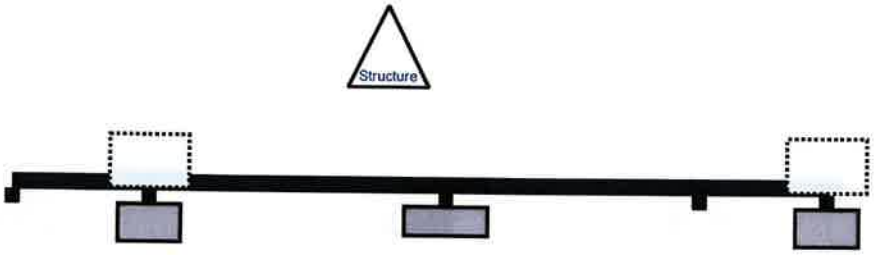
Front View - Looking at Structure



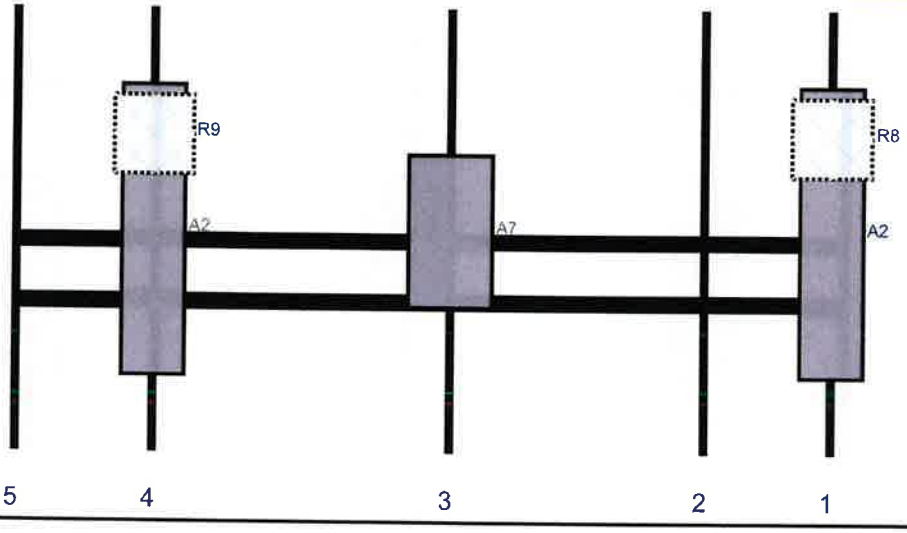
Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A2	SBNHH-1D65A	55	11.9	154	1	a	Front	42	0	Retained	03/11/2021
R8	RF4461d-13A	15	15	154	1	a	Behind	24	0	Added	
A7	MT6413-77A	28.9	15.8	82	3	a	Front	42	0	Added	
A2	SBNHH-1D65A	55	11.9	26	4	a	Front	42	0	Retained	03/11/2021
R9	RF4439d-25A	15	15	26	4	a	Behind	24	0	Added	

Colliers Engineering & Design

Plan View



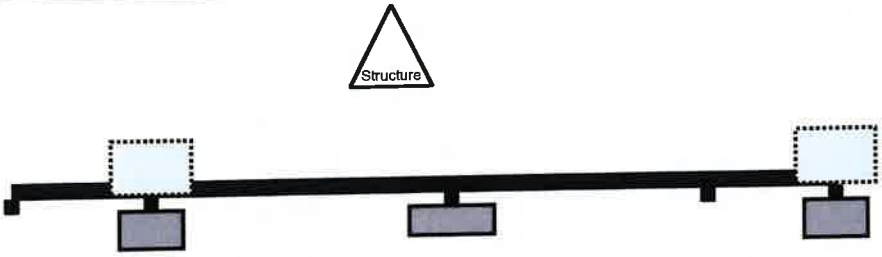
Front View - Looking at Structure



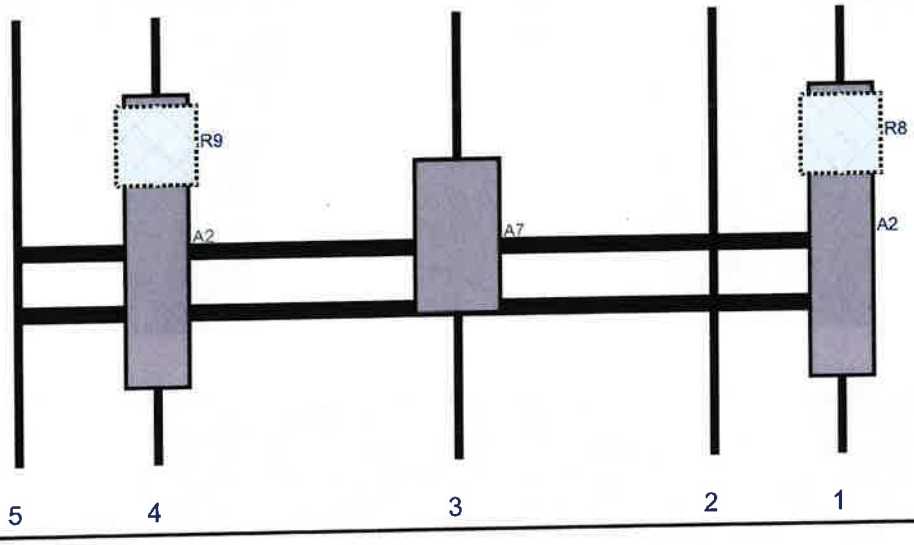
Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A2	SBNHH-1D65A	55	11.9	154	1	a	Front	42	0	Retained	03/11/2021
R8	RF4461d-13A	15	15	154	1	a	Behind	24	0	Added	
A7	MT6413-77A	28.9	15.8	82	3	a	Front	42	0	Added	
A2	SBNHH-1D65A	55	11.9	26	4	a	Front	42	0	Retained	03/11/2021
R9	RF4439d-25A	15	15	26	4	a	Behind	24	0	Added	

Colliers Engineering & Design

Plan View



Front View - Looking at Structure



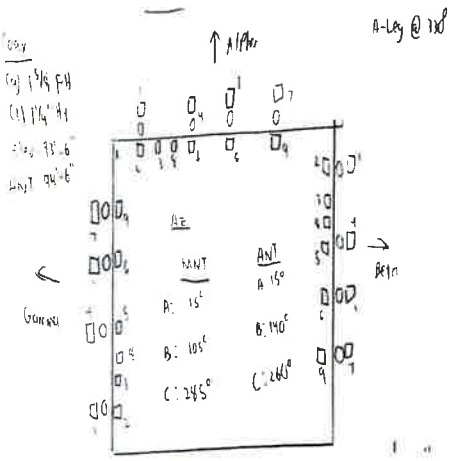
Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A2	SBNHH-1D65A	55	11.9	154	1	a	Front	42	0	Retained	03/11/2021
R8	RF4461d-13A	15	15	154	1	a	Behind	24	0	Added	
A7	MT6413-77A	28.9	15.8	82	3	a	Front	42	0	Added	
A2	SBNHH-1D65A	55	11.9	26	4	a	Front	42	0	Retained	03/11/2021
R9	RF4439d-25A	15	15	26	4	a	Behind	24	0	Added	

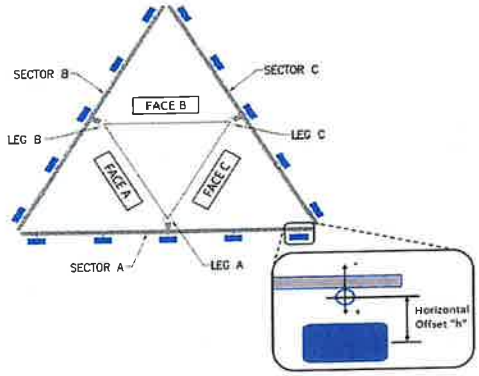
V3.0 Updated on 8-31-2020

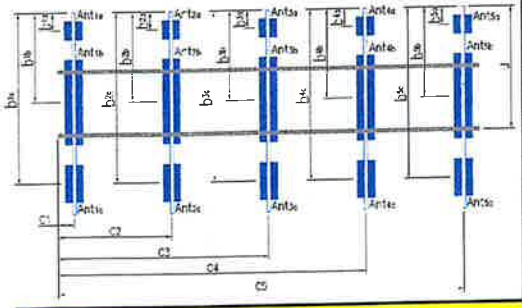
Antenna Mount Mapping Form (PATENT PENDING)

FCC # N/A

Tower Owner:	SBA	Mapping Date:	3/11/2021
Site Name:	Mystic South CT	Tower Type:	Other
Site Number or ID:	468402	Tower Height (Ft.):	153.75
Mapping Contractor:	Tower Engineering Professionals	Mount Elevation (Ft.):	93.5







Antenna Layout (Looking Out From Tower)

Mount Pipe Configuration and Geometries [Unit = Inches]

Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "d"	Horizontal Offset "C1, C2, C3, etc."	Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "d"	Horizontal Offset "C1, C2, C3, etc."
A1	2.4"x7'-0"Tx0.154"TH	45.00	0.00	C1	2.4"x7'-0"Tx0.154"TH	45.00	0.00
A2	2.4"x7'-0"Tx0.154"TH	45.00	72.00	C2	2.4"x7'-0"Tx0.154"TH	45.00	72.00
A3	2.4"x7'-0"Tx0.154"TH	45.00	128.00	C3	2.4"x7'-0"Tx0.154"TH	45.00	128.00
A4	2.4"x7'-0"Tx0.154"TH	45.00	154.00	C4	2.4"x7'-0"Tx0.154"TH	45.00	154.00
A5				C5			
A6				C6			
B1	2.4"x7'-0"Tx0.154"TH	45.00	0.00	D1			
B2	2.4"x7'-0"Tx0.154"TH	45.00	72.00	D2			
B3	2.4"x7'-0"Tx0.154"TH	45.00	128.00	D3			
B4	2.4"x7'-0"Tx0.154"TH	45.00	154.00	D4			
B5				D5			
B6				D6			

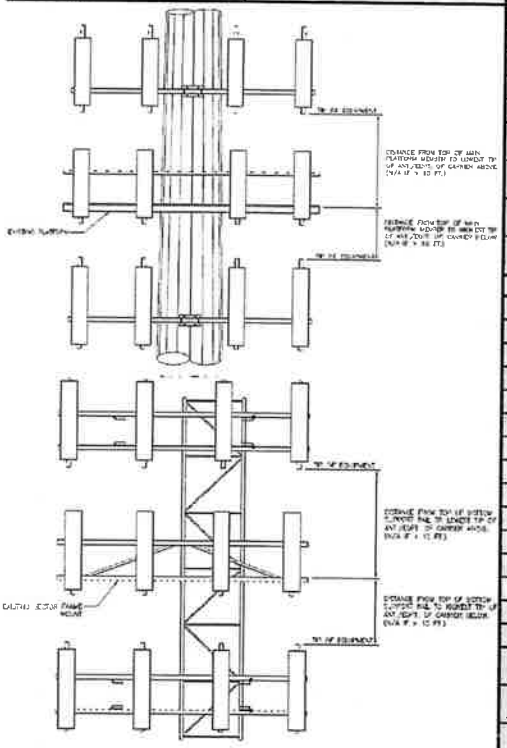
Distance between bottom rail and mount CL elevation (dim d). Unit is inches. See 'Mount Elev Ref' tab for details. :	0.00
Distance from top of bottom support rail to lowest tip of ant./eqpt. of Carrier above. (N/A if > 10 ft.) :	
Distance from top of bottom support rail to highest tip of ant./eqpt. of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

Tower Face Width at Mount Elev. (ft.):	30	Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.):	18

	Enter antenna model. If not labeled, enter "Unknown".						Mounting Locations [Units are inches and degrees]			Photos of antennas
Ants. Items	Antenna Models if Known	Width (in.)	Depth (in.)	Height (in.)	Coax Size and Qty	Antenna Center-line (Ft.)	Vertical Distances"b_{1a}, b_{2a}, b_{3a}, b_{1b},...." (Inches)	Horiz. Offset "h" (Use "-" if Ant. is behind)	Antenna Azimuth (Degrees)	Photo Numbers
Sector A										
Ant_{1a}										
Ant_{1b}	SBNHH-1D65A	11.85	7.10	72.87	d from Ra	94.25	36.00	7.50	15.00	100
Ant_{1c}	B66A RRH4x45	11.80	7.20	25.80	1) FH 1 5/	94.5833	32.00	8.00		101
Ant_{2a}										
Ant_{2b}	LNX-6514DS-A1M	11.85	7.11	80.63	d from Ra	94.75	30.00	7.00	15.00	103
Ant_{2c}	B13 RRH4x30	12.00	9.00	21.60	1) FH 1 5/	95.25	24.00	6.50		103
Ant_{3a}										
Ant_{3b}	SBNHH-1D65A	11.85	7.10	72.87	d from Ra	94.25	36.00	7.50	15.00	104
Ant_{3c}	B25 RRH4x30	11.97	7.18	21.20	1) FH 1 5/	95.2083	24.50	6.50		105
Ant_{4a}										
Ant_{4b}	BXA-80080-4CF	11.20	5.90	48.20	d from Ra	93.9167	40.00	9.00	15.00	106
Ant_{4c}	FD9R 6604/2C-3L	5.25	1.50	7.50	d from Ra	94.9167	28.00	4.50		107
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff	RRFDC-3315-PF-48	15.73	10.30	28.93	) HY 1 1/4"					102
Ant on Standoff	FD9R 6604/2C-3L	5.25	1.50	7.50	d from Radio					
Ant on Tower										
Ant on Tower										

Mount Azimuth (Degree) for Each Sector				Tower Leg Azimuth (Degree) for Each Sector	
Sector A:	15.00	Deg	Leg A:	330.00	Deg
Sector B:	105.00	Deg	Leg B:	60.00	Deg
Sector C:	285.00	Deg	Leg C:	150.00	Deg
Sector D:		Deg	Leg D:	240.00	Deg

Climbing Facility Information		
Location:	330.00 Deg	On Leg A
Climbing Facility	Corrosion Type:	Good condition.
	Access:	Climbing path was unobstructed.
	Condition:	Good condition.



Sector B											
Ant_{1a}											
Ant_{1b}	SBNHH-1D65A	11.85	7.10	72.87	d from Ra	94.25	36.00	7.50	140.00	65
Ant_{1c}	B66A RRH4x45	11.80	7.20	25.80	1) FH 1 5/	94.5833	32.00	8.00		67
Ant_{2a}										
Ant_{2b}	LNX-6514DS-A1M	11.85	7.11	80.63	d from Ra	94.75	30.00	7.00	140.00	75
Ant_{2c}	B13 RRH4x30	12.00	9.00	21.60	2) FH 1 5/	95.25	24.00	6.50		77
Ant_{3a}										
Ant_{3b}	SBNHH-1D65A	11.85	7.10	72.87	d from Ra	94.25	36.00	7.50	140.00	81
Ant_{3c}	B25 RRH4x30	11.97	7.18	21.20	1) FH 1 5/	95.2083	24.50	6.50		83
Ant_{4a}										
Ant_{4b}	BXA-80080-4CF	11.20	5.90	48.20	d from Ra	93.9167	40.00	9.00	140.00	85
Ant_{4c}	FD9R 6604/2C-3L	5.25	1.50	7.50	d from Ra	94.9167	28.00	4.50		86
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff	RRFDC-3315-PF-48	15.73	10.30	28.93	) HY 1 1/4"					69
Ant on Standoff	FD9R 6604/2C-3L	5.25	1.50	7.50	d from Radio					79
Ant on Tower										
Ant on Tower										
Sector C										
Ant_{1a}										
Ant_{1b}	SBNHH-1D65A	11.85	7.10	72.87	d from Ra	94.25	36.00	7.50	260.00	93
Ant_{1c}	B66A RRH4x45	11.80	7.20	25.80	1) FH 1 5/	94.5833	32.00	8.00		94
Ant_{2a}										
Ant_{2b}	LNX-6514DS-A1M	11.85	7.11	80.63	d from Ra	94.75	30.00	7.00	260.00	96
Ant_{2c}	B13 RRH4x30	12.00	9.00	21.60	1) FH 1 5/	95.25	24.00	6.50		97
Ant_{3a}										
Ant_{3b}	SBNHH-1D65A	11.85	7.10	72.87	d from Ra	94.25	36.00	7.50	260.00	98
Ant_{3c}	B25 RRH4x30	11.97	7.18	21.20	1) FH 1 5/	95.2083	24.50	6.50		98
Ant_{4a}										
Ant_{4b}	BXA-80080-4CF	11.20	5.90	48.20	d from Ra	93.9167	40.00	9.00	260.00	99
Ant_{4c}	FD9R 6604/2C-3L	5.25	1.50	7.50	d from Ra	94.9167	28.00	4.50		99
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff	RRFDC-3315-PF-48	15.73	10.30	28.93	) HY 1 1/4"					95
Ant on Standoff	FD9R 6604/2C-3L	5.25	1.50	7.50	d from Radio					
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

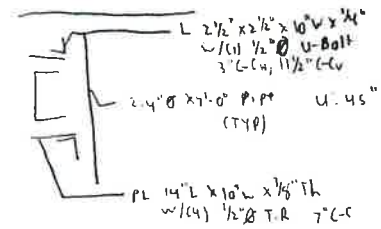
Antenna Mount Mapping Form (PATENT PENDING)

FCC #: N/A

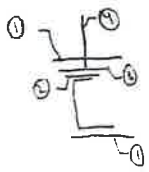
Tower Owner:	SBA	Mapping Date:	3/11/2021
Site Name:	Mystic South CT	Tower Type:	Other
Site Number or ID:	468402	Tower Height (Ft.):	153.75
Mapping Contractor:	Tower Engineering Professionals	Mount Elevation (Ft.):	93.5

Please Insert Sketches of the Antenna Mount

Side View ANT

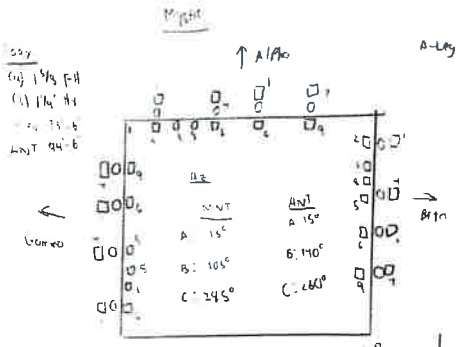


Side View Raycap

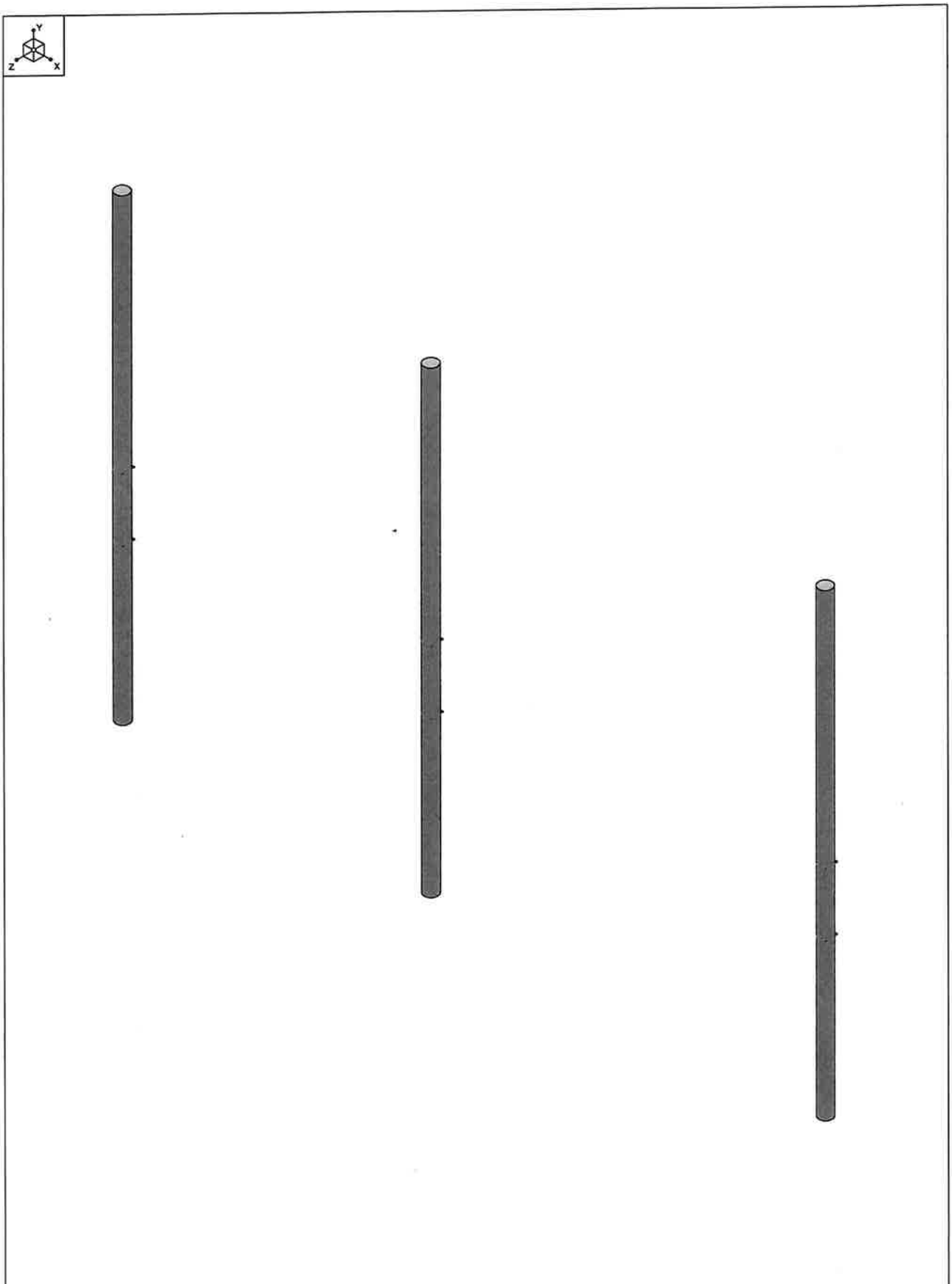


1. (2) L 5⅛" x 5⅛" x ⅛" x 14" L Unistrut w/(4) ½" Ø T.R. 7" C-C
2. (2) L 5⅛" x 5⅛" x ⅛" x 8" Unistrut
3. PL 8" x 8" x ¾" w/(4) ½" Ø Bolts 6" C-C
4. 2.4" Ø x 2'-0" Pipe

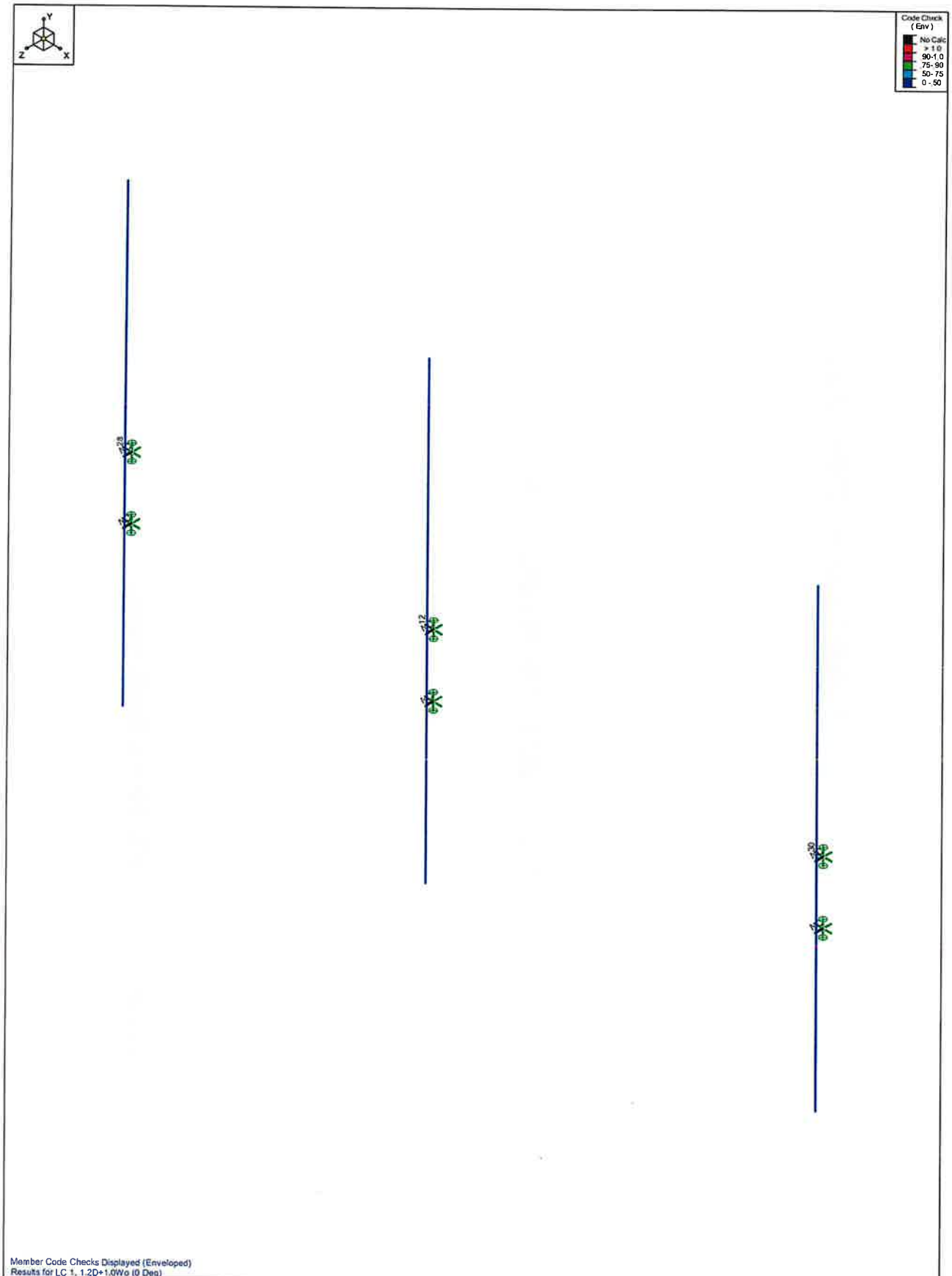
C1: 0"
C2: 72"
C3: 128"
C4: 154"



	B	H
1 SBNH-1D65A	36"	7½"
2 B66A RRU 4x45	32"	8"
3 RRFDC-3315-PF-48	—	—
4 LNX-6514DS-A1M	30"	7"
5 B13 RRH 4x30	~4"	6½"
6 B25 RRH 4x30	24½"	6½"
7 RXA800980-4CF	40"	9"
8 FDXR 6604/2C-3L	—	—
9	28"	4½"

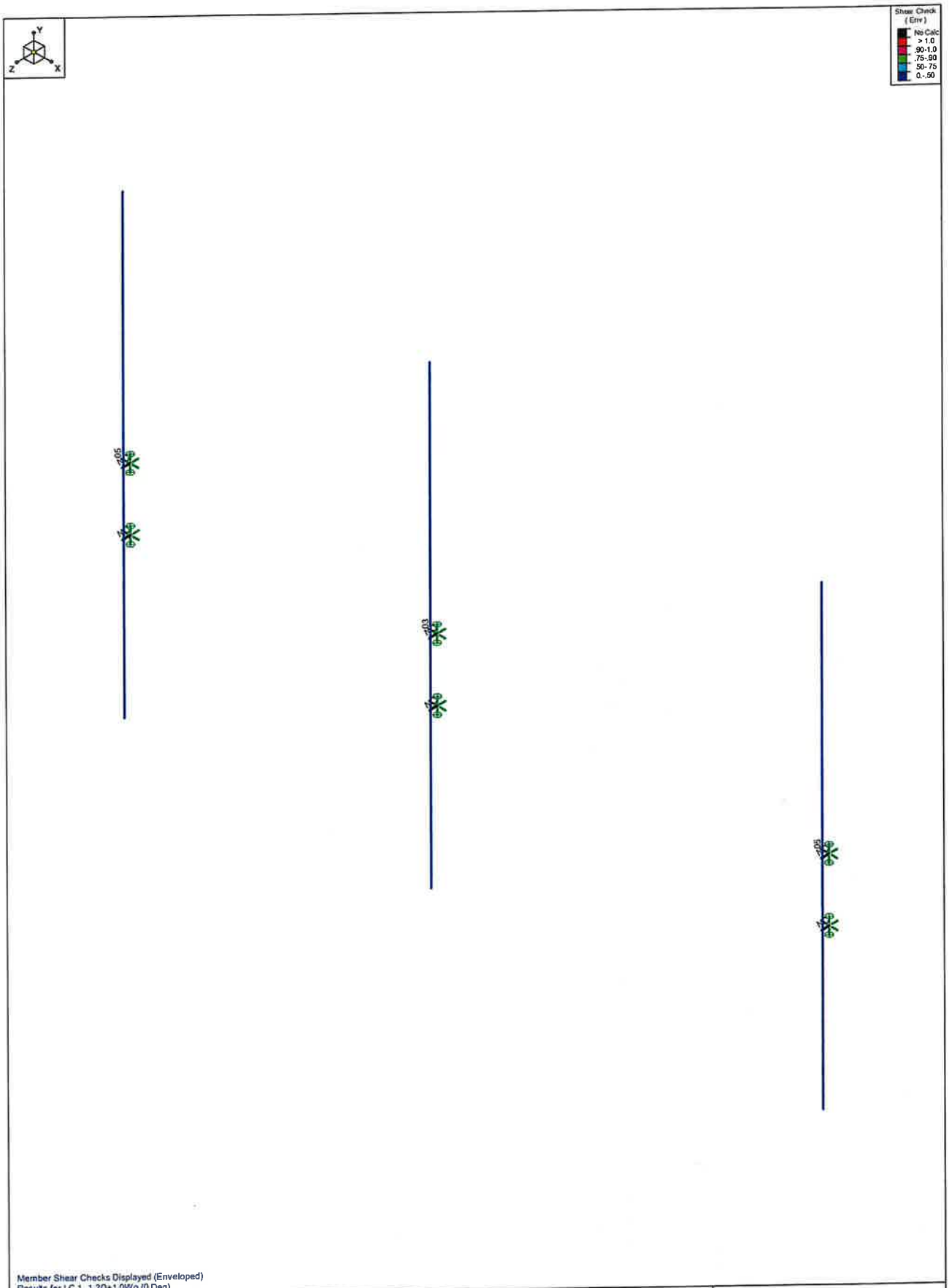


Colliers Engineering & De...	Mount Analysis	SK - 1
		Sept 26, 2023 at 2:42 PM
		5000244749-VZW_MT_LOT_A_...



Member Code Checks Displayed (Enveloped)
Results for LC 1, 1.2D+1.0Wo (0 Deg)

Colliers Engineering & De...	Mount Analysis	SK - 2
		Sept 26, 2023 at 2:43 PM
		5000244749-VZW_MT_LOT_A_...



Member Shear Checks Displayed (Enveloped)
Results for LC 1, 1.2D+1.0Wo (0 Deg)

Colliers Engineering & De...	Mount Analysis	SK - 3
		Sept 26, 2023 at 2:43 PM
		5000244749-VZW_MT_LOT_A_...

Basic Load Cases

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

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distribut...	Area(Me...	Surface(...
59	Structure Wi (180 Deg)	None						6		
60	Structure Wi (210 Deg)	None						6		
61	Structure Wi (240 Deg)	None						6		
62	Structure Wi (270 Deg)	None						6		
63	Structure Wi (300 Deg)	None						6		
64	Structure Wi (330 Deg)	None						6		
65	Structure Wm (0 Deg)	None						6		
66	Structure Wm (30 Deg)	None						6		
67	Structure Wm (60 Deg)	None						6		
68	Structure Wm (90 Deg)	None						6		
69	Structure Wm (120 Deg)	None						6		
70	Structure Wm (150 Deg)	None						6		
71	Structure Wm (180 Deg)	None						6		
72	Structure Wm (210 Deg)	None						6		
73	Structure Wm (240 Deg)	None						6		
74	Structure Wm (270 Deg)	None						6		
75	Structure Wm (300 Deg)	None						6		
76	Structure Wm (330 Deg)	None						6		
77	Lm1	None					1			
78	Lm2	None					1			
79	Lv1	None					1			
80	Lv2	None					1			
81	Antenna Ev	None					24			
82	Antenna Eh (0 Deg)	None					16			
83	Antenna Eh (90 Deg)	None					16			
84	Structure Ev	ELY								
85	Structure Eh (0 Deg)	ELZ			-.03					
86	Structure Eh (90 Deg)	ELX	.03							

Load Combinations

	Description	So...	P...	S...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...
1	1.2D+1.0Wo (0 Deg)	Yes	Y		1	1.2	39	1.2	3	1	41	1												
2	1.2D+1.0Wo (30 D...	Yes	Y		1	1.2	39	1.2	4	1	42	1												
3	1.2D+1.0Wo (60 D...	Yes	Y		1	1.2	39	1.2	5	1	43	1												
4	1.2D+1.0Wo (90 D...	Yes	Y		1	1.2	39	1.2	6	1	44	1												
5	1.2D+1.0Wo (120 ...	Yes	Y		1	1.2	39	1.2	7	1	45	1												
6	1.2D+1.0Wo (150 ...	Yes	Y		1	1.2	39	1.2	8	1	46	1												
7	1.2D+1.0Wo (180 ...	Yes	Y		1	1.2	39	1.2	9	1	47	1												
8	1.2D+1.0Wo (210 ...	Yes	Y		1	1.2	39	1.2	10	1	48	1												
9	1.2D+1.0Wo (240 ...	Yes	Y		1	1.2	39	1.2	11	1	49	1												
10	1.2D+1.0Wo (270 ...	Yes	Y		1	1.2	39	1.2	12	1	50	1												
11	1.2D+1.0Wo (300 ...	Yes	Y		1	1.2	39	1.2	13	1	51	1												
12	1.2D+1.0Wo (330 ...	Yes	Y		1	1.2	39	1.2	14	1	52	1												
13	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	15	1	53	1								
14	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	16	1	54	1								
15	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	17	1	55	1								
16	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	18	1	56	1								
17	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	19	1	57	1								
18	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	20	1	58	1								
19	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	21	1	59	1								
20	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	22	1	60	1								
21	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	23	1	61	1								
22	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	24	1	62	1								
23	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	25	1	63	1								
24	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	26	1	64	1								
25	1.2D + 1.5Lm1 + 1...	Yes	Y		1	1.2	39	1.2	77	1.5	27	1	65	1										
26	1.2D + 1.5Lm1 + 1...	Yes	Y		1	1.2	39	1.2	77	1.5	28	1	66	1										

Load Combinations (Continued)

	Description	So..	P...	S...	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..
27	1.2D + 1.5Lm1 + 1..	Yes	Y		1	1.2	39	1.2	77	1.5	29	1	67	1												
28	1.2D + 1.5Lm1 + 1..	Yes	Y		1	1.2	39	1.2	77	1.5	30	1	68	1												
29	1.2D + 1.5Lm1 + 1..	Yes	Y		1	1.2	39	1.2	77	1.5	31	1	69	1												
30	1.2D + 1.5Lm1 + 1..	Yes	Y		1	1.2	39	1.2	77	1.5	32	1	70	1												
31	1.2D + 1.5Lm1 + 1..	Yes	Y		1	1.2	39	1.2	77	1.5	33	1	71	1												
32	1.2D + 1.5Lm1 + 1..	Yes	Y		1	1.2	39	1.2	77	1.5	34	1	72	1												
33	1.2D + 1.5Lm1 + 1..	Yes	Y		1	1.2	39	1.2	77	1.5	35	1	73	1												
34	1.2D + 1.5Lm1 + 1..	Yes	Y		1	1.2	39	1.2	77	1.5	36	1	74	1												
35	1.2D + 1.5Lm1 + 1..	Yes	Y		1	1.2	39	1.2	77	1.5	37	1	75	1												
36	1.2D + 1.5Lm1 + 1..	Yes	Y		1	1.2	39	1.2	77	1.5	38	1	76	1												
37	1.2D + 1.5Lm2 + 1..	Yes	Y		1	1.2	39	1.2	78	1.5	27	1	65	1												
38	1.2D + 1.5Lm2 + 1..	Yes	Y		1	1.2	39	1.2	78	1.5	28	1	66	1												
39	1.2D + 1.5Lm2 + 1..	Yes	Y		1	1.2	39	1.2	78	1.5	29	1	67	1												
40	1.2D + 1.5Lm2 + 1..	Yes	Y		1	1.2	39	1.2	78	1.5	30	1	68	1												
41	1.2D + 1.5Lm2 + 1..	Yes	Y		1	1.2	39	1.2	78	1.5	31	1	69	1												
42	1.2D + 1.5Lm2 + 1..	Yes	Y		1	1.2	39	1.2	78	1.5	32	1	70	1												
43	1.2D + 1.5Lm2 + 1..	Yes	Y		1	1.2	39	1.2	78	1.5	33	1	71	1												
44	1.2D + 1.5Lm2 + 1..	Yes	Y		1	1.2	39	1.2	78	1.5	34	1	72	1												
45	1.2D + 1.5Lm2 + 1..	Yes	Y		1	1.2	39	1.2	78	1.5	35	1	73	1												
46	1.2D + 1.5Lm2 + 1..	Yes	Y		1	1.2	39	1.2	78	1.5	36	1	74	1												
47	1.2D + 1.5Lm2 + 1..	Yes	Y		1	1.2	39	1.2	78	1.5	37	1	75	1												
48	1.2D + 1.5Lm2 + 1..	Yes	Y		1	1.2	39	1.2	78	1.5	38	1	76	1												
49	1.2D + 1.5Lv1	Yes	Y		1	1.2	39	1.2	79	1.5																
50	1.2D + 1.5Lv2	Yes	Y		1	1.2	39	1.2	80	1.5																
51	1.4D	Yes	Y		1	1.4	39	1.4																		
52	1.2D + 1.0Ev + 1.0..	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	1	83		ELZ	1	ELX							
53	1.2D + 1.0Ev + 1.0..	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	.866	83	.5	ELZ	.866	ELX	.5						
54	1.2D + 1.0Ev + 1.0..	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	.5	83	.866	ELZ	.5	ELX	.866						
55	1.2D + 1.0Ev + 1.0..	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82		83	1	ELZ		ELX	1						
56	1.2D + 1.0Ev + 1.0..	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	-.5	83	.866	ELZ	-.5	ELX	.866						
57	1.2D + 1.0Ev + 1.0..	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	-.866	83	.5	ELZ	-.866	ELX	.5						
58	1.2D + 1.0Ev + 1.0..	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	-1	83		ELZ	-1	ELX							
59	1.2D + 1.0Ev + 1.0..	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	-.866	83	-.5	ELZ	-.866	ELX	-.5						
60	1.2D + 1.0Ev + 1.0..	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	-.5	83	-.866	ELZ	-.5	ELX	-.866						
61	1.2D + 1.0Ev + 1.0..	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82		83	-1	ELZ		ELX	-1						
62	1.2D + 1.0Ev + 1.0..	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	.5	83	-.866	ELZ	.5	ELX	-.866						
63	1.2D + 1.0Ev + 1.0..	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	.866	83	-.5	ELZ	.866	ELX	-.5						
64	0.9D - 1.0Ev + 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	1	83		ELZ	1	ELX							
65	0.9D - 1.0Ev + 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	.866	83	.5	ELZ	.866	ELX	.5						
66	0.9D - 1.0Ev + 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	.5	83	.866	ELZ	.5	ELX	.866						
67	0.9D - 1.0Ev + 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82		83	1	ELZ		ELX	1						
68	0.9D - 1.0Ev + 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	-.5	83	.866	ELZ	-.5	ELX	.866						
69	0.9D - 1.0Ev + 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	-.866	83	.5	ELZ	-.866	ELX	.5						
70	0.9D - 1.0Ev + 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	-1	83		ELZ	-1	ELX							
71	0.9D - 1.0Ev + 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	-.866	83	-.5	ELZ	-.866	ELX	-.5						
72	0.9D - 1.0Ev + 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	-.5	83	-.866	ELZ	-.5	ELX	-.866						
73	0.9D - 1.0Ev + 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82		83	-1	ELZ		ELX	-1						
74	0.9D - 1.0Ev + 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	.5	83	-.866	ELZ	.5	ELX	-.866						
75	0.9D - 1.0Ev + 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	.866	83	-.5	ELZ	.866	ELX	-.5						

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	N1	0	0	0	0	
2	N2	0	-7	0	0	
3	N3	0	-3.666667	0	0	
4	N4	0	-3.666667	-0.104167	0	
5	N5	0	-4.625	0	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
6	N6	0	-4.625	-0.104167	0	
7	N7	-6	0	0	0	
8	N8	-6	-7	0	0	
9	N9	-6	-3.666667	0	0	
10	N10	-6	-3.666667	-0.104167	0	
11	N11	-6	-4.625	0	0	
12	N12	-6	-4.625	-0.104167	0	
13	N13	-10.666667	0	0	0	
14	N14	-10.666667	-7	0	0	
15	N15	-10.666667	-3.666667	0	0	
16	N16	-10.666667	-3.666667	-0.104167	0	
17	N17	-10.666667	-4.625	0	0	
18	N18	-10.666667	-4.625	-0.104167	0	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design R...	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

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	MP1A	N1	N2			Mount Pipe	Column	Pipe	A53 Gr. B	Typical
2	M2	N3	N4			RIGID	None	None	RIGID	Typical
3	M3	N5	N6			RIGID	None	None	RIGID	Typical
4	MP3A	N7	N8			Mount Pipe	Column	Pipe	A53 Gr. B	Typical
5	M5	N9	N10			RIGID	None	None	RIGID	Typical
6	M6	N11	N12			RIGID	None	None	RIGID	Typical
7	MP4A	N13	N14			Mount Pipe	Column	Pipe	A53 Gr. B	Typical
8	M8	N15	N16			RIGID	None	None	RIGID	Typical
9	M9	N17	N18			RIGID	None	None	RIGID	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	MP1A						Yes	** NA **			None
2	M2						Yes	** NA **			None
3	M3						Yes	** NA **			None
4	MP3A						Yes	** NA **			None
5	M5						Yes	** NA **			None
6	M6						Yes	** NA **			None
7	MP4A						Yes	** NA **			None
8	M8						Yes	** NA **			None
9	M9						Yes	** NA **			None

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	Y	-28.65	2.5
2	MP3A	My	-.014	2.5
3	MP3A	Mz	0	2.5
4	MP3A	Y	-28.65	4.5
5	MP3A	My	-.014	4.5
6	MP3A	Mz	0	4.5
7	MP1A	Y	-79.1	2
8	MP1A	My	.04	2
9	MP1A	Mz	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
10	MP4A	Y	-74.7	2
11	MP4A	My	.037	2
12	MP4A	Mz	0	2
13	MP1A	Y	-16.75	2
14	MP1A	My	-.008	2
15	MP1A	Mz	0	2
16	MP1A	Y	-16.75	5
17	MP1A	My	-.008	5
18	MP1A	Mz	0	5
19	MP4A	Y	-16.75	2
20	MP4A	My	-.008	2
21	MP4A	Mz	0	2
22	MP4A	Y	-16.75	5
23	MP4A	My	-.008	5
24	MP4A	Mz	0	5

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	Y	-33.316	2.5
2	MP3A	My	-.017	2.5
3	MP3A	Mz	0	2.5
4	MP3A	Y	-33.316	4.5
5	MP3A	My	-.017	4.5
6	MP3A	Mz	0	4.5
7	MP1A	Y	-50.809	2
8	MP1A	My	.025	2
9	MP1A	Mz	0	2
10	MP4A	Y	-50.28	2
11	MP4A	My	.025	2
12	MP4A	Mz	0	2
13	MP1A	Y	-52.928	2
14	MP1A	My	-.026	2
15	MP1A	Mz	0	2
16	MP1A	Y	-52.928	5
17	MP1A	My	-.026	5
18	MP1A	Mz	0	5
19	MP4A	Y	-52.928	2
20	MP4A	My	-.026	2
21	MP4A	Mz	0	2
22	MP4A	Y	-52.928	5
23	MP4A	My	-.026	5
24	MP4A	Mz	0	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	0	2.5
2	MP3A	Z	-101.208	2.5
3	MP3A	Mx	0	2.5
4	MP3A	X	0	4.5
5	MP3A	Z	-101.208	4.5
6	MP3A	Mx	0	4.5
7	MP1A	X	0	2
8	MP1A	Z	-99.873	2
9	MP1A	Mx	0	2
10	MP4A	X	0	2
11	MP4A	Z	-82.782	2
12	MP4A	Mx	0	2
13	MP1A	X	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
14	MP1A	Z	-157.019	2
15	MP1A	Mx	0	2
16	MP1A	X	0	5
17	MP1A	Z	-157.019	5
18	MP1A	Mx	0	5
19	MP4A	X	0	2
20	MP4A	Z	-157.019	2
21	MP4A	Mx	0	2
22	MP4A	X	0	5
23	MP4A	Z	-157.019	5
24	MP4A	Mx	0	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	42.826	2.5
2	MP3A	Z	-74.176	2.5
3	MP3A	Mx	-.021	2.5
4	MP3A	X	42.826	4.5
5	MP3A	Z	-74.176	4.5
6	MP3A	Mx	-.021	4.5
7	MP1A	X	45.964	2
8	MP1A	Z	-79.612	2
9	MP1A	Mx	.023	2
10	MP4A	X	37.986	2
11	MP4A	Z	-65.794	2
12	MP4A	Mx	.019	2
13	MP1A	X	71.78	2
14	MP1A	Z	-124.327	2
15	MP1A	Mx	-.036	2
16	MP1A	X	71.78	5
17	MP1A	Z	-124.327	5
18	MP1A	Mx	-.036	5
19	MP4A	X	71.78	2
20	MP4A	Z	-124.327	2
21	MP4A	Mx	-.036	2
22	MP4A	X	71.78	5
23	MP4A	Z	-124.327	5
24	MP4A	Mx	-.036	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	47.231	2.5
2	MP3A	Z	-27.269	2.5
3	MP3A	Mx	-.024	2.5
4	MP3A	X	47.231	4.5
5	MP3A	Z	-27.269	4.5
6	MP3A	Mx	-.024	4.5
7	MP1A	X	65.852	2
8	MP1A	Z	-38.02	2
9	MP1A	Mx	.033	2
10	MP4A	X	54	2
11	MP4A	Z	-31.177	2
12	MP4A	Mx	.027	2
13	MP1A	X	101.016	2
14	MP1A	Z	-58.321	2
15	MP1A	Mx	-.051	2
16	MP1A	X	101.016	5
17	MP1A	Z	-58.321	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
18	MP1A	Mx	-.051	5
19	MP4A	X	101.016	2
20	MP4A	Z	-58.321	2
21	MP4A	Mx	-.051	2
22	MP4A	X	101.016	5
23	MP4A	Z	-58.321	5
24	MP4A	Mx	-.051	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	38.98	2.5
2	MP3A	Z	0	2.5
3	MP3A	Mx	-.019	2.5
4	MP3A	X	38.98	4.5
5	MP3A	Z	0	4.5
6	MP3A	Mx	-.019	4.5
7	MP1A	X	68.095	2
8	MP1A	Z	0	2
9	MP1A	Mx	.034	2
10	MP4A	X	55.544	2
11	MP4A	Z	0	2
12	MP4A	Mx	.028	2
13	MP1A	X	103.184	2
14	MP1A	Z	0	2
15	MP1A	Mx	-.052	2
16	MP1A	X	103.184	5
17	MP1A	Z	0	5
18	MP1A	Mx	-.052	5
19	MP4A	X	103.184	2
20	MP4A	Z	0	2
21	MP4A	Mx	-.052	2
22	MP4A	X	103.184	5
23	MP4A	Z	0	5
24	MP4A	Mx	-.052	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	47.231	2.5
2	MP3A	Z	27.269	2.5
3	MP3A	Mx	-.024	2.5
4	MP3A	X	47.231	4.5
5	MP3A	Z	27.269	4.5
6	MP3A	Mx	-.024	4.5
7	MP1A	X	65.852	2
8	MP1A	Z	38.02	2
9	MP1A	Mx	.033	2
10	MP4A	X	54	2
11	MP4A	Z	31.177	2
12	MP4A	Mx	.027	2
13	MP1A	X	101.016	2
14	MP1A	Z	58.321	2
15	MP1A	Mx	-.051	2
16	MP1A	X	101.016	5
17	MP1A	Z	58.321	5
18	MP1A	Mx	-.051	5
19	MP4A	X	101.016	2
20	MP4A	Z	58.321	2
21	MP4A	Mx	-.051	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
22	MP4A	X	101.016	5
23	MP4A	Z	58.321	5
24	MP4A	Mx	-.051	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	42.826	2.5
2	MP3A	Z	74.176	2.5
3	MP3A	Mx	-.021	2.5
4	MP3A	X	42.826	4.5
5	MP3A	Z	74.176	4.5
6	MP3A	Mx	-.021	4.5
7	MP1A	X	45.964	2
8	MP1A	Z	79.612	2
9	MP1A	Mx	.023	2
10	MP4A	X	37.986	2
11	MP4A	Z	65.794	2
12	MP4A	Mx	.019	2
13	MP1A	X	71.78	2
14	MP1A	Z	124.327	2
15	MP1A	Mx	-.036	2
16	MP1A	X	71.78	5
17	MP1A	Z	124.327	5
18	MP1A	Mx	-.036	5
19	MP4A	X	71.78	2
20	MP4A	Z	124.327	2
21	MP4A	Mx	-.036	2
22	MP4A	X	71.78	5
23	MP4A	Z	124.327	5
24	MP4A	Mx	-.036	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	0	2.5
2	MP3A	Z	101.208	2.5
3	MP3A	Mx	0	2.5
4	MP3A	X	0	4.5
5	MP3A	Z	101.208	4.5
6	MP3A	Mx	0	4.5
7	MP1A	X	0	2
8	MP1A	Z	99.873	2
9	MP1A	Mx	0	2
10	MP4A	X	0	2
11	MP4A	Z	82.782	2
12	MP4A	Mx	0	2
13	MP1A	X	0	2
14	MP1A	Z	157.019	2
15	MP1A	Mx	0	2
16	MP1A	X	0	5
17	MP1A	Z	157.019	5
18	MP1A	Mx	0	5
19	MP4A	X	0	2
20	MP4A	Z	157.019	2
21	MP4A	Mx	0	2
22	MP4A	X	0	5
23	MP4A	Z	157.019	5
24	MP4A	Mx	0	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-42.826	2.5
2	MP3A	Z	74.176	2.5
3	MP3A	Mx	.021	2.5
4	MP3A	X	-42.826	4.5
5	MP3A	Z	74.176	4.5
6	MP3A	Mx	.021	4.5
7	MP1A	X	-45.964	2
8	MP1A	Z	79.612	2
9	MP1A	Mx	-.023	2
10	MP4A	X	-37.986	2
11	MP4A	Z	65.794	2
12	MP4A	Mx	-.019	2
13	MP1A	X	-71.78	2
14	MP1A	Z	124.327	2
15	MP1A	Mx	.036	2
16	MP1A	X	-71.78	5
17	MP1A	Z	124.327	5
18	MP1A	Mx	.036	5
19	MP4A	X	-71.78	2
20	MP4A	Z	124.327	2
21	MP4A	Mx	.036	2
22	MP4A	X	-71.78	5
23	MP4A	Z	124.327	5
24	MP4A	Mx	.036	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-47.231	2.5
2	MP3A	Z	27.269	2.5
3	MP3A	Mx	.024	2.5
4	MP3A	X	-47.231	4.5
5	MP3A	Z	27.269	4.5
6	MP3A	Mx	.024	4.5
7	MP1A	X	-65.852	2
8	MP1A	Z	38.02	2
9	MP1A	Mx	-.033	2
10	MP4A	X	-54	2
11	MP4A	Z	31.177	2
12	MP4A	Mx	-.027	2
13	MP1A	X	-101.016	2
14	MP1A	Z	58.321	2
15	MP1A	Mx	.051	2
16	MP1A	X	-101.016	5
17	MP1A	Z	58.321	5
18	MP1A	Mx	.051	5
19	MP4A	X	-101.016	2
20	MP4A	Z	58.321	2
21	MP4A	Mx	.051	2
22	MP4A	X	-101.016	5
23	MP4A	Z	58.321	5
24	MP4A	Mx	.051	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-38.98	2.5
2	MP3A	Z	0	2.5
3	MP3A	Mx	.019	2.5
4	MP3A	X	-38.98	4.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
5	MP3A	Z	0	4.5
6	MP3A	Mx	.019	4.5
7	MP1A	X	-68.095	2
8	MP1A	Z	0	2
9	MP1A	Mx	-.034	2
10	MP4A	X	-55.544	2
11	MP4A	Z	0	2
12	MP4A	Mx	-.028	2
13	MP1A	X	-103.184	2
14	MP1A	Z	0	2
15	MP1A	Mx	.052	2
16	MP1A	X	-103.184	5
17	MP1A	Z	0	5
18	MP1A	Mx	.052	5
19	MP4A	X	-103.184	2
20	MP4A	Z	0	2
21	MP4A	Mx	.052	2
22	MP4A	X	-103.184	5
23	MP4A	Z	0	5
24	MP4A	Mx	.052	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-47.231	2.5
2	MP3A	Z	-27.269	2.5
3	MP3A	Mx	.024	2.5
4	MP3A	X	-47.231	4.5
5	MP3A	Z	-27.269	4.5
6	MP3A	Mx	.024	4.5
7	MP1A	X	-65.852	2
8	MP1A	Z	-38.02	2
9	MP1A	Mx	-.033	2
10	MP4A	X	-54	2
11	MP4A	Z	-31.177	2
12	MP4A	Mx	-.027	2
13	MP1A	X	-101.016	2
14	MP1A	Z	-58.321	2
15	MP1A	Mx	.051	2
16	MP1A	X	-101.016	5
17	MP1A	Z	-58.321	5
18	MP1A	Mx	.051	5
19	MP4A	X	-101.016	2
20	MP4A	Z	-58.321	2
21	MP4A	Mx	.051	2
22	MP4A	X	-101.016	5
23	MP4A	Z	-58.321	5
24	MP4A	Mx	.051	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-42.826	2.5
2	MP3A	Z	-74.176	2.5
3	MP3A	Mx	.021	2.5
4	MP3A	X	-42.826	4.5
5	MP3A	Z	-74.176	4.5
6	MP3A	Mx	.021	4.5
7	MP1A	X	-45.964	2
8	MP1A	Z	-79.612	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
9	MP1A	Mx	-.023	2
10	MP4A	X	-37.986	2
11	MP4A	Z	-65.794	2
12	MP4A	Mx	-.019	2
13	MP1A	X	-71.78	2
14	MP1A	Z	-124.327	2
15	MP1A	Mx	.036	2
16	MP1A	X	-71.78	5
17	MP1A	Z	-124.327	5
18	MP1A	Mx	.036	5
19	MP4A	X	-71.78	2
20	MP4A	Z	-124.327	2
21	MP4A	Mx	.036	2
22	MP4A	X	-71.78	5
23	MP4A	Z	-124.327	5
24	MP4A	Mx	.036	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	0	2.5
2	MP3A	Z	-14.956	2.5
3	MP3A	Mx	0	2.5
4	MP3A	X	0	4.5
5	MP3A	Z	-14.956	4.5
6	MP3A	Mx	0	4.5
7	MP1A	X	0	2
8	MP1A	Z	-15.521	2
9	MP1A	Mx	0	2
10	MP4A	X	0	2
11	MP4A	Z	-15.521	2
12	MP4A	Mx	0	2
13	MP1A	X	0	2
14	MP1A	Z	-22.668	2
15	MP1A	Mx	0	2
16	MP1A	X	0	5
17	MP1A	Z	-22.668	5
18	MP1A	Mx	0	5
19	MP4A	X	0	2
20	MP4A	Z	-22.668	2
21	MP4A	Mx	0	2
22	MP4A	X	0	5
23	MP4A	Z	-22.668	5
24	MP4A	Mx	0	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	6.405	2.5
2	MP3A	Z	-11.094	2.5
3	MP3A	Mx	-.003	2.5
4	MP3A	X	6.405	4.5
5	MP3A	Z	-11.094	4.5
6	MP3A	Mx	-.003	4.5
7	MP1A	X	7.199	2
8	MP1A	Z	-12.469	2
9	MP1A	Mx	.004	2
10	MP4A	X	7.176	2
11	MP4A	Z	-12.429	2
12	MP4A	Mx	.004	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
13	MP1A	X	10.442	2
14	MP1A	Z	-18.087	2
15	MP1A	Mx	-.005	2
16	MP1A	X	10.442	5
17	MP1A	Z	-18.087	5
18	MP1A	Mx	-.005	5
19	MP4A	X	10.442	2
20	MP4A	Z	-18.087	2
21	MP4A	Mx	-.005	2
22	MP4A	X	10.442	5
23	MP4A	Z	-18.087	5
24	MP4A	Mx	-.005	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	7.38	2.5
2	MP3A	Z	-4.261	2.5
3	MP3A	Mx	-.004	2.5
4	MP3A	X	7.38	4.5
5	MP3A	Z	-4.261	4.5
6	MP3A	Mx	-.004	4.5
7	MP1A	X	10.524	2
8	MP1A	Z	-6.076	2
9	MP1A	Mx	.005	2
10	MP4A	X	10.402	2
11	MP4A	Z	-6.006	2
12	MP4A	Mx	.005	2
13	MP1A	X	14.998	2
14	MP1A	Z	-8.659	2
15	MP1A	Mx	-.007	2
16	MP1A	X	14.998	5
17	MP1A	Z	-8.659	5
18	MP1A	Mx	-.007	5
19	MP4A	X	14.998	2
20	MP4A	Z	-8.659	2
21	MP4A	Mx	-.007	2
22	MP4A	X	14.998	5
23	MP4A	Z	-8.659	5
24	MP4A	Mx	-.007	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	6.376	2.5
2	MP3A	Z	0	2.5
3	MP3A	Mx	-.003	2.5
4	MP3A	X	6.376	4.5
5	MP3A	Z	0	4.5
6	MP3A	Mx	-.003	4.5
7	MP1A	X	11.029	2
8	MP1A	Z	0	2
9	MP1A	Mx	.006	2
10	MP4A	X	10.841	2
11	MP4A	Z	0	2
12	MP4A	Mx	.005	2
13	MP1A	X	15.535	2
14	MP1A	Z	0	2
15	MP1A	Mx	-.008	2
16	MP1A	X	15.535	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP1A	Z	0	5
18	MP1A	Mx	-.008	5
19	MP4A	X	15.535	2
20	MP4A	Z	0	2
21	MP4A	Mx	-.008	2
22	MP4A	X	15.535	5
23	MP4A	Z	0	5
24	MP4A	Mx	-.008	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	7.38	2.5
2	MP3A	Z	4.261	2.5
3	MP3A	Mx	-.004	2.5
4	MP3A	X	7.38	4.5
5	MP3A	Z	4.261	4.5
6	MP3A	Mx	-.004	4.5
7	MP1A	X	10.524	2
8	MP1A	Z	6.076	2
9	MP1A	Mx	.005	2
10	MP4A	X	10.402	2
11	MP4A	Z	6.006	2
12	MP4A	Mx	.005	2
13	MP1A	X	14.998	2
14	MP1A	Z	8.659	2
15	MP1A	Mx	-.007	2
16	MP1A	X	14.998	5
17	MP1A	Z	8.659	5
18	MP1A	Mx	-.007	5
19	MP4A	X	14.998	2
20	MP4A	Z	8.659	2
21	MP4A	Mx	-.007	2
22	MP4A	X	14.998	5
23	MP4A	Z	8.659	5
24	MP4A	Mx	-.007	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	6.405	2.5
2	MP3A	Z	11.094	2.5
3	MP3A	Mx	-.003	2.5
4	MP3A	X	6.405	4.5
5	MP3A	Z	11.094	4.5
6	MP3A	Mx	-.003	4.5
7	MP1A	X	7.199	2
8	MP1A	Z	12.469	2
9	MP1A	Mx	.004	2
10	MP4A	X	7.176	2
11	MP4A	Z	12.429	2
12	MP4A	Mx	.004	2
13	MP1A	X	10.442	2
14	MP1A	Z	18.087	2
15	MP1A	Mx	-.005	2
16	MP1A	X	10.442	5
17	MP1A	Z	18.087	5
18	MP1A	Mx	-.005	5
19	MP4A	X	10.442	2
20	MP4A	Z	18.087	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
21	MP4A	Mx	-.005	2
22	MP4A	X	10.442	5
23	MP4A	Z	18.087	5
24	MP4A	Mx	-.005	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	0	2.5
2	MP3A	Z	14.956	2.5
3	MP3A	Mx	0	2.5
4	MP3A	X	0	4.5
5	MP3A	Z	14.956	4.5
6	MP3A	Mx	0	4.5
7	MP1A	X	0	2
8	MP1A	Z	15.521	2
9	MP1A	Mx	0	2
10	MP4A	X	0	2
11	MP4A	Z	15.521	2
12	MP4A	Mx	0	2
13	MP1A	X	0	2
14	MP1A	Z	22.668	2
15	MP1A	Mx	0	2
16	MP1A	X	0	5
17	MP1A	Z	22.668	5
18	MP1A	Mx	0	5
19	MP4A	X	0	2
20	MP4A	Z	22.668	2
21	MP4A	Mx	0	2
22	MP4A	X	0	5
23	MP4A	Z	22.668	5
24	MP4A	Mx	0	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-6.405	2.5
2	MP3A	Z	11.094	2.5
3	MP3A	Mx	.003	2.5
4	MP3A	X	-6.405	4.5
5	MP3A	Z	11.094	4.5
6	MP3A	Mx	.003	4.5
7	MP1A	X	-7.199	2
8	MP1A	Z	12.469	2
9	MP1A	Mx	-.004	2
10	MP4A	X	-7.176	2
11	MP4A	Z	12.429	2
12	MP4A	Mx	-.004	2
13	MP1A	X	-10.442	2
14	MP1A	Z	18.087	2
15	MP1A	Mx	.005	2
16	MP1A	X	-10.442	5
17	MP1A	Z	18.087	5
18	MP1A	Mx	.005	5
19	MP4A	X	-10.442	2
20	MP4A	Z	18.087	2
21	MP4A	Mx	.005	2
22	MP4A	X	-10.442	5
23	MP4A	Z	18.087	5
24	MP4A	Mx	.005	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-7.38	2.5
2	MP3A	Z	4.261	2.5
3	MP3A	Mx	.004	2.5
4	MP3A	X	-7.38	4.5
5	MP3A	Z	4.261	4.5
6	MP3A	Mx	.004	4.5
7	MP1A	X	-10.524	2
8	MP1A	Z	6.076	2
9	MP1A	Mx	-.005	2
10	MP4A	X	-10.402	2
11	MP4A	Z	6.006	2
12	MP4A	Mx	-.005	2
13	MP1A	X	-14.998	2
14	MP1A	Z	8.659	2
15	MP1A	Mx	.007	2
16	MP1A	X	-14.998	5
17	MP1A	Z	8.659	5
18	MP1A	Mx	.007	5
19	MP4A	X	-14.998	2
20	MP4A	Z	8.659	2
21	MP4A	Mx	.007	2
22	MP4A	X	-14.998	5
23	MP4A	Z	8.659	5
24	MP4A	Mx	.007	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-6.376	2.5
2	MP3A	Z	0	2.5
3	MP3A	Mx	.003	2.5
4	MP3A	X	-6.376	4.5
5	MP3A	Z	0	4.5
6	MP3A	Mx	.003	4.5
7	MP1A	X	-11.029	2
8	MP1A	Z	0	2
9	MP1A	Mx	-.006	2
10	MP4A	X	-10.841	2
11	MP4A	Z	0	2
12	MP4A	Mx	-.005	2
13	MP1A	X	-15.535	2
14	MP1A	Z	0	2
15	MP1A	Mx	.008	2
16	MP1A	X	-15.535	5
17	MP1A	Z	0	5
18	MP1A	Mx	.008	5
19	MP4A	X	-15.535	2
20	MP4A	Z	0	2
21	MP4A	Mx	.008	2
22	MP4A	X	-15.535	5
23	MP4A	Z	0	5
24	MP4A	Mx	.008	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-7.38	2.5
2	MP3A	Z	-4.261	2.5
3	MP3A	Mx	.004	2.5
4	MP3A	X	-7.38	4.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
5	MP3A	Z	-4.261	4.5
6	MP3A	Mx	.004	4.5
7	MP1A	X	-10.524	2
8	MP1A	Z	-6.076	2
9	MP1A	Mx	-.005	2
10	MP4A	X	-10.402	2
11	MP4A	Z	-6.006	2
12	MP4A	Mx	-.005	2
13	MP1A	X	-14.998	2
14	MP1A	Z	-8.659	2
15	MP1A	Mx	.007	2
16	MP1A	X	-14.998	5
17	MP1A	Z	-8.659	5
18	MP1A	Mx	.007	5
19	MP4A	X	-14.998	2
20	MP4A	Z	-8.659	2
21	MP4A	Mx	.007	2
22	MP4A	X	-14.998	5
23	MP4A	Z	-8.659	5
24	MP4A	Mx	.007	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-6.405	2.5
2	MP3A	Z	-11.094	2.5
3	MP3A	Mx	.003	2.5
4	MP3A	X	-6.405	4.5
5	MP3A	Z	-11.094	4.5
6	MP3A	Mx	.003	4.5
7	MP1A	X	-7.199	2
8	MP1A	Z	-12.469	2
9	MP1A	Mx	-.004	2
10	MP4A	X	-7.176	2
11	MP4A	Z	-12.429	2
12	MP4A	Mx	-.004	2
13	MP1A	X	-10.442	2
14	MP1A	Z	-18.087	2
15	MP1A	Mx	.005	2
16	MP1A	X	-10.442	5
17	MP1A	Z	-18.087	5
18	MP1A	Mx	.005	5
19	MP4A	X	-10.442	2
20	MP4A	Z	-18.087	2
21	MP4A	Mx	.005	2
22	MP4A	X	-10.442	5
23	MP4A	Z	-18.087	5
24	MP4A	Mx	.005	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	0	2.5
2	MP3A	Z	-4.647	2.5
3	MP3A	Mx	0	2.5
4	MP3A	X	0	4.5
5	MP3A	Z	-4.647	4.5
6	MP3A	Mx	0	4.5
7	MP1A	X	0	2
8	MP1A	Z	-4.586	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
9	MP1A	Mx	0	2
10	MP4A	X	0	2
11	MP4A	Z	-3.801	2
12	MP4A	Mx	0	2
13	MP1A	X	0	2
14	MP1A	Z	-7.21	2
15	MP1A	Mx	0	2
16	MP1A	X	0	5
17	MP1A	Z	-7.21	5
18	MP1A	Mx	0	5
19	MP4A	X	0	2
20	MP4A	Z	-7.21	2
21	MP4A	Mx	0	2
22	MP4A	X	0	5
23	MP4A	Z	-7.21	5
24	MP4A	Mx	0	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	1.966	2.5
2	MP3A	Z	-3.406	2.5
3	MP3A	Mx	-.000983	2.5
4	MP3A	X	1.966	4.5
5	MP3A	Z	-3.406	4.5
6	MP3A	Mx	-.000983	4.5
7	MP1A	X	2.111	2
8	MP1A	Z	-3.656	2
9	MP1A	Mx	.001	2
10	MP4A	X	1.744	2
11	MP4A	Z	-3.021	2
12	MP4A	Mx	.000872	2
13	MP1A	X	3.296	2
14	MP1A	Z	-5.709	2
15	MP1A	Mx	-.002	2
16	MP1A	X	3.296	5
17	MP1A	Z	-5.709	5
18	MP1A	Mx	-.002	5
19	MP4A	X	3.296	2
20	MP4A	Z	-5.709	2
21	MP4A	Mx	-.002	2
22	MP4A	X	3.296	5
23	MP4A	Z	-5.709	5
24	MP4A	Mx	-.002	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	2.169	2.5
2	MP3A	Z	-1.252	2.5
3	MP3A	Mx	-.001	2.5
4	MP3A	X	2.169	4.5
5	MP3A	Z	-1.252	4.5
6	MP3A	Mx	-.001	4.5
7	MP1A	X	3.024	2
8	MP1A	Z	-1.746	2
9	MP1A	Mx	.002	2
10	MP4A	X	2.48	2
11	MP4A	Z	-1.432	2
12	MP4A	Mx	.001	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
13	MP1A	X	4.638	2
14	MP1A	Z	-2.678	2
15	MP1A	Mx	-.002	2
16	MP1A	X	4.638	5
17	MP1A	Z	-2.678	5
18	MP1A	Mx	-.002	5
19	MP4A	X	4.638	2
20	MP4A	Z	-2.678	2
21	MP4A	Mx	-.002	2
22	MP4A	X	4.638	5
23	MP4A	Z	-2.678	5
24	MP4A	Mx	-.002	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	1.79	2.5
2	MP3A	Z	0	2.5
3	MP3A	Mx	-.000895	2.5
4	MP3A	X	1.79	4.5
5	MP3A	Z	0	4.5
6	MP3A	Mx	-.000895	4.5
7	MP1A	X	3.127	2
8	MP1A	Z	0	2
9	MP1A	Mx	.002	2
10	MP4A	X	2.55	2
11	MP4A	Z	0	2
12	MP4A	Mx	.001	2
13	MP1A	X	4.738	2
14	MP1A	Z	0	2
15	MP1A	Mx	-.002	2
16	MP1A	X	4.738	5
17	MP1A	Z	0	5
18	MP1A	Mx	-.002	5
19	MP4A	X	4.738	2
20	MP4A	Z	0	2
21	MP4A	Mx	-.002	2
22	MP4A	X	4.738	5
23	MP4A	Z	0	5
24	MP4A	Mx	-.002	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	2.169	2.5
2	MP3A	Z	1.252	2.5
3	MP3A	Mx	-.001	2.5
4	MP3A	X	2.169	4.5
5	MP3A	Z	1.252	4.5
6	MP3A	Mx	-.001	4.5
7	MP1A	X	3.024	2
8	MP1A	Z	1.746	2
9	MP1A	Mx	.002	2
10	MP4A	X	2.48	2
11	MP4A	Z	1.432	2
12	MP4A	Mx	.001	2
13	MP1A	X	4.638	2
14	MP1A	Z	2.678	2
15	MP1A	Mx	-.002	2
16	MP1A	X	4.638	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP1A	Z	2.678	5
18	MP1A	Mx	-.002	5
19	MP4A	X	4.638	2
20	MP4A	Z	2.678	2
21	MP4A	Mx	-.002	2
22	MP4A	X	4.638	5
23	MP4A	Z	2.678	5
24	MP4A	Mx	-.002	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	1.966	2.5
2	MP3A	Z	3.406	2.5
3	MP3A	Mx	-.000983	2.5
4	MP3A	X	1.966	4.5
5	MP3A	Z	3.406	4.5
6	MP3A	Mx	-.000983	4.5
7	MP1A	X	2.111	2
8	MP1A	Z	3.656	2
9	MP1A	Mx	.001	2
10	MP4A	X	1.744	2
11	MP4A	Z	3.021	2
12	MP4A	Mx	.000872	2
13	MP1A	X	3.296	2
14	MP1A	Z	5.709	2
15	MP1A	Mx	-.002	2
16	MP1A	X	3.296	5
17	MP1A	Z	5.709	5
18	MP1A	Mx	-.002	5
19	MP4A	X	3.296	2
20	MP4A	Z	5.709	2
21	MP4A	Mx	-.002	2
22	MP4A	X	3.296	5
23	MP4A	Z	5.709	5
24	MP4A	Mx	-.002	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	0	2.5
2	MP3A	Z	4.647	2.5
3	MP3A	Mx	0	2.5
4	MP3A	X	0	4.5
5	MP3A	Z	4.647	4.5
6	MP3A	Mx	0	4.5
7	MP1A	X	0	2
8	MP1A	Z	4.586	2
9	MP1A	Mx	0	2
10	MP4A	X	0	2
11	MP4A	Z	3.801	2
12	MP4A	Mx	0	2
13	MP1A	X	0	2
14	MP1A	Z	7.21	2
15	MP1A	Mx	0	2
16	MP1A	X	0	5
17	MP1A	Z	7.21	5
18	MP1A	Mx	0	5
19	MP4A	X	0	2
20	MP4A	Z	7.21	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
21	MP4A	Mx	0	2
22	MP4A	X	0	5
23	MP4A	Z	7.21	5
24	MP4A	Mx	0	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-1.966	2.5
2	MP3A	Z	3.406	2.5
3	MP3A	Mx	.000983	2.5
4	MP3A	X	-1.966	4.5
5	MP3A	Z	3.406	4.5
6	MP3A	Mx	.000983	4.5
7	MP1A	X	-2.111	2
8	MP1A	Z	3.656	2
9	MP1A	Mx	-.001	2
10	MP4A	X	-1.744	2
11	MP4A	Z	3.021	2
12	MP4A	Mx	-.000872	2
13	MP1A	X	-3.296	2
14	MP1A	Z	5.709	2
15	MP1A	Mx	.002	2
16	MP1A	X	-3.296	5
17	MP1A	Z	5.709	5
18	MP1A	Mx	.002	5
19	MP4A	X	-3.296	2
20	MP4A	Z	5.709	2
21	MP4A	Mx	.002	2
22	MP4A	X	-3.296	5
23	MP4A	Z	5.709	5
24	MP4A	Mx	.002	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-2.169	2.5
2	MP3A	Z	1.252	2.5
3	MP3A	Mx	.001	2.5
4	MP3A	X	-2.169	4.5
5	MP3A	Z	1.252	4.5
6	MP3A	Mx	.001	4.5
7	MP1A	X	-3.024	2
8	MP1A	Z	1.746	2
9	MP1A	Mx	-.002	2
10	MP4A	X	-2.48	2
11	MP4A	Z	1.432	2
12	MP4A	Mx	-.001	2
13	MP1A	X	-4.638	2
14	MP1A	Z	2.678	2
15	MP1A	Mx	.002	2
16	MP1A	X	-4.638	5
17	MP1A	Z	2.678	5
18	MP1A	Mx	.002	5
19	MP4A	X	-4.638	2
20	MP4A	Z	2.678	2
21	MP4A	Mx	.002	2
22	MP4A	X	-4.638	5
23	MP4A	Z	2.678	5
24	MP4A	Mx	.002	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-1.79	2.5
2	MP3A	Z	0	2.5
3	MP3A	Mx	.000895	2.5
4	MP3A	X	-1.79	4.5
5	MP3A	Z	0	4.5
6	MP3A	Mx	.000895	4.5
7	MP1A	X	-3.127	2
8	MP1A	Z	0	2
9	MP1A	Mx	-.002	2
10	MP4A	X	-2.55	2
11	MP4A	Z	0	2
12	MP4A	Mx	-.001	2
13	MP1A	X	-4.738	2
14	MP1A	Z	0	2
15	MP1A	Mx	.002	2
16	MP1A	X	-4.738	5
17	MP1A	Z	0	5
18	MP1A	Mx	.002	5
19	MP4A	X	-4.738	2
20	MP4A	Z	0	2
21	MP4A	Mx	.002	2
22	MP4A	X	-4.738	5
23	MP4A	Z	0	5
24	MP4A	Mx	.002	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-2.169	2.5
2	MP3A	Z	-1.252	2.5
3	MP3A	Mx	.001	2.5
4	MP3A	X	-2.169	4.5
5	MP3A	Z	-1.252	4.5
6	MP3A	Mx	.001	4.5
7	MP1A	X	-3.024	2
8	MP1A	Z	-1.746	2
9	MP1A	Mx	-.002	2
10	MP4A	X	-2.48	2
11	MP4A	Z	-1.432	2
12	MP4A	Mx	-.001	2
13	MP1A	X	-4.638	2
14	MP1A	Z	-2.678	2
15	MP1A	Mx	.002	2
16	MP1A	X	-4.638	5
17	MP1A	Z	-2.678	5
18	MP1A	Mx	.002	5
19	MP4A	X	-4.638	2
20	MP4A	Z	-2.678	2
21	MP4A	Mx	.002	2
22	MP4A	X	-4.638	5
23	MP4A	Z	-2.678	5
24	MP4A	Mx	.002	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-1.966	2.5
2	MP3A	Z	-3.406	2.5
3	MP3A	Mx	.000983	2.5
4	MP3A	X	-1.966	4.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
5	MP3A	Z	-3.406	4.5
6	MP3A	Mx	.000983	4.5
7	MP1A	X	-2.111	2
8	MP1A	Z	-3.656	2
9	MP1A	Mx	-.001	2
10	MP4A	X	-1.744	2
11	MP4A	Z	-3.021	2
12	MP4A	Mx	-.000872	2
13	MP1A	X	-3.296	2
14	MP1A	Z	-5.709	2
15	MP1A	Mx	.002	2
16	MP1A	X	-3.296	5
17	MP1A	Z	-5.709	5
18	MP1A	Mx	.002	5
19	MP4A	X	-3.296	2
20	MP4A	Z	-5.709	2
21	MP4A	Mx	.002	2
22	MP4A	X	-3.296	5
23	MP4A	Z	-5.709	5
24	MP4A	Mx	.002	5

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M2	Y	-500	0

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M2	Y	-500	%50

Member Point Loads (BLC 79 : Lv1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M2	Y	-250	0

Member Point Loads (BLC 80 : Lv2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M2	Y	-250	%50

Member Point Loads (BLC 81 : Antenna Ev)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	Y	0	2.5
2	MP3A	My	0	2.5
3	MP3A	Mz	0	2.5
4	MP3A	Y	0	4.5
5	MP3A	My	0	4.5
6	MP3A	Mz	0	4.5
7	MP1A	Y	0	2
8	MP1A	My	0	2
9	MP1A	Mz	0	2
10	MP4A	Y	0	2
11	MP4A	My	0	2
12	MP4A	Mz	0	2
13	MP1A	Y	0	2
14	MP1A	My	0	2
15	MP1A	Mz	0	2
16	MP1A	Y	0	5
17	MP1A	My	0	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
18	MP1A	Mz	0	5
19	MP4A	Y	0	2
20	MP4A	My	0	2
21	MP4A	Mz	0	2
22	MP4A	Y	0	5
23	MP4A	My	0	5
24	MP4A	Mz	0	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	Z	-.86	2.5
2	MP3A	Mx	0	2.5
3	MP3A	Z	-.86	4.5
4	MP3A	Mx	0	4.5
5	MP1A	Z	-2.373	2
6	MP1A	Mx	0	2
7	MP4A	Z	-2.241	2
8	MP4A	Mx	0	2
9	MP1A	Z	-.502	2
10	MP1A	Mx	0	2
11	MP1A	Z	-.502	5
12	MP1A	Mx	0	5
13	MP4A	Z	-.502	2
14	MP4A	Mx	0	2
15	MP4A	Z	-.502	5
16	MP4A	Mx	0	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	.86	2.5
2	MP3A	Mx	-.00043	2.5
3	MP3A	X	.86	4.5
4	MP3A	Mx	-.00043	4.5
5	MP1A	X	2.373	2
6	MP1A	Mx	.001	2
7	MP4A	X	2.241	2
8	MP4A	Mx	.001	2
9	MP1A	X	.502	2
10	MP1A	Mx	-.000251	2
11	MP1A	X	.502	5
12	MP1A	Mx	-.000251	5
13	MP4A	X	.502	2
14	MP4A	Mx	-.000251	2
15	MP4A	X	.502	5
16	MP4A	Mx	-.000251	5

Member Distributed Loads (BLC 40 : Structure Di)

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
1	MP1A	Y	-5.685	-5.685	0	%100
2	MP3A	Y	-5.685	-5.685	0	%100
3	MP4A	Y	-5.685	-5.685	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
1	MP1A	X	0	0	0	%100
2	MP1A	Z	-12.684	-12.684	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
3	MP3A	X	0	0	0	%100
4	MP3A	Z	-12.684	-12.684	0	%100
5	MP4A	X	0	0	0	%100
6	MP4A	Z	-12.684	-12.684	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
1	MP1A	X	6.342	6.342	0	%100
2	MP1A	Z	-10.985	-10.985	0	%100
3	MP3A	X	6.342	6.342	0	%100
4	MP3A	Z	-10.985	-10.985	0	%100
5	MP4A	X	6.342	6.342	0	%100
6	MP4A	Z	-10.985	-10.985	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
1	MP1A	X	10.985	10.985	0	%100
2	MP1A	Z	-6.342	-6.342	0	%100
3	MP3A	X	10.985	10.985	0	%100
4	MP3A	Z	-6.342	-6.342	0	%100
5	MP4A	X	10.985	10.985	0	%100
6	MP4A	Z	-6.342	-6.342	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
1	MP1A	X	12.684	12.684	0	%100
2	MP1A	Z	0	0	0	%100
3	MP3A	X	12.684	12.684	0	%100
4	MP3A	Z	0	0	0	%100
5	MP4A	X	12.684	12.684	0	%100
6	MP4A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
1	MP1A	X	10.985	10.985	0	%100
2	MP1A	Z	6.342	6.342	0	%100
3	MP3A	X	10.985	10.985	0	%100
4	MP3A	Z	6.342	6.342	0	%100
5	MP4A	X	10.985	10.985	0	%100
6	MP4A	Z	6.342	6.342	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
1	MP1A	X	6.342	6.342	0	%100
2	MP1A	Z	10.985	10.985	0	%100
3	MP3A	X	6.342	6.342	0	%100
4	MP3A	Z	10.985	10.985	0	%100
5	MP4A	X	6.342	6.342	0	%100
6	MP4A	Z	10.985	10.985	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
1	MP1A	X	0	0	0	%100
2	MP1A	Z	12.684	12.684	0	%100
3	MP3A	X	0	0	0	%100
4	MP3A	Z	12.684	12.684	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,..	End Location[ft,...
5	MP4A	X	0	0	0	%100
6	MP4A	Z	12.684	12.684	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,..	End Location[ft,...
1	MP1A	X	-6.342	-6.342	0	%100
2	MP1A	Z	10.985	10.985	0	%100
3	MP3A	X	-6.342	-6.342	0	%100
4	MP3A	Z	10.985	10.985	0	%100
5	MP4A	X	-6.342	-6.342	0	%100
6	MP4A	Z	10.985	10.985	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,..	End Location[ft,...
1	MP1A	X	-10.985	-10.985	0	%100
2	MP1A	Z	6.342	6.342	0	%100
3	MP3A	X	-10.985	-10.985	0	%100
4	MP3A	Z	6.342	6.342	0	%100
5	MP4A	X	-10.985	-10.985	0	%100
6	MP4A	Z	6.342	6.342	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,..	End Location[ft,...
1	MP1A	X	-12.684	-12.684	0	%100
2	MP1A	Z	0	0	0	%100
3	MP3A	X	-12.684	-12.684	0	%100
4	MP3A	Z	0	0	0	%100
5	MP4A	X	-12.684	-12.684	0	%100
6	MP4A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,..	End Location[ft,...
1	MP1A	X	-10.985	-10.985	0	%100
2	MP1A	Z	-6.342	-6.342	0	%100
3	MP3A	X	-10.985	-10.985	0	%100
4	MP3A	Z	-6.342	-6.342	0	%100
5	MP4A	X	-10.985	-10.985	0	%100
6	MP4A	Z	-6.342	-6.342	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,..	End Location[ft,...
1	MP1A	X	-6.342	-6.342	0	%100
2	MP1A	Z	-10.985	-10.985	0	%100
3	MP3A	X	-6.342	-6.342	0	%100
4	MP3A	Z	-10.985	-10.985	0	%100
5	MP4A	X	-6.342	-6.342	0	%100
6	MP4A	Z	-10.985	-10.985	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,..	End Location[ft,...
1	MP1A	X	0	0	0	%100
2	MP1A	Z	-3.355	-3.355	0	%100
3	MP3A	X	0	0	0	%100
4	MP3A	Z	-3.355	-3.355	0	%100
5	MP4A	X	0	0	0	%100
6	MP4A	Z	-3.355	-3.355	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,..	End Location[ft,...
1	MP1A	X	1.677	1.677	0	%100
2	MP1A	Z	-2.905	-2.905	0	%100
3	MP3A	X	1.677	1.677	0	%100
4	MP3A	Z	-2.905	-2.905	0	%100
5	MP4A	X	1.677	1.677	0	%100
6	MP4A	Z	-2.905	-2.905	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,..	End Location[ft,...
1	MP1A	X	2.905	2.905	0	%100
2	MP1A	Z	-1.677	-1.677	0	%100
3	MP3A	X	2.905	2.905	0	%100
4	MP3A	Z	-1.677	-1.677	0	%100
5	MP4A	X	2.905	2.905	0	%100
6	MP4A	Z	-1.677	-1.677	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,..	End Location[ft,...
1	MP1A	X	3.355	3.355	0	%100
2	MP1A	Z	0	0	0	%100
3	MP3A	X	3.355	3.355	0	%100
4	MP3A	Z	0	0	0	%100
5	MP4A	X	3.355	3.355	0	%100
6	MP4A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,..	End Location[ft,...
1	MP1A	X	2.905	2.905	0	%100
2	MP1A	Z	1.677	1.677	0	%100
3	MP3A	X	2.905	2.905	0	%100
4	MP3A	Z	1.677	1.677	0	%100
5	MP4A	X	2.905	2.905	0	%100
6	MP4A	Z	1.677	1.677	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,..	End Location[ft,...
1	MP1A	X	1.677	1.677	0	%100
2	MP1A	Z	2.905	2.905	0	%100
3	MP3A	X	1.677	1.677	0	%100
4	MP3A	Z	2.905	2.905	0	%100
5	MP4A	X	1.677	1.677	0	%100
6	MP4A	Z	2.905	2.905	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,..	End Location[ft,...
1	MP1A	X	0	0	0	%100
2	MP1A	Z	3.355	3.355	0	%100
3	MP3A	X	0	0	0	%100
4	MP3A	Z	3.355	3.355	0	%100
5	MP4A	X	0	0	0	%100
6	MP4A	Z	3.355	3.355	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,..	End Location[ft,...
1	MP1A	X	-1.677	-1.677	0	%100
2	MP1A	Z	2.905	2.905	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
3	MP3A	X	-1.677	-1.677	0	%100
4	MP3A	Z	2.905	2.905	0	%100
5	MP4A	X	-1.677	-1.677	0	%100
6	MP4A	Z	2.905	2.905	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
1	MP1A	X	-2.905	-2.905	0	%100
2	MP1A	Z	1.677	1.677	0	%100
3	MP3A	X	-2.905	-2.905	0	%100
4	MP3A	Z	1.677	1.677	0	%100
5	MP4A	X	-2.905	-2.905	0	%100
6	MP4A	Z	1.677	1.677	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
1	MP1A	X	-3.355	-3.355	0	%100
2	MP1A	Z	0	0	0	%100
3	MP3A	X	-3.355	-3.355	0	%100
4	MP3A	Z	0	0	0	%100
5	MP4A	X	-3.355	-3.355	0	%100
6	MP4A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
1	MP1A	X	-2.905	-2.905	0	%100
2	MP1A	Z	-1.677	-1.677	0	%100
3	MP3A	X	-2.905	-2.905	0	%100
4	MP3A	Z	-1.677	-1.677	0	%100
5	MP4A	X	-2.905	-2.905	0	%100
6	MP4A	Z	-1.677	-1.677	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
1	MP1A	X	-1.677	-1.677	0	%100
2	MP1A	Z	-2.905	-2.905	0	%100
3	MP3A	X	-1.677	-1.677	0	%100
4	MP3A	Z	-2.905	-2.905	0	%100
5	MP4A	X	-1.677	-1.677	0	%100
6	MP4A	Z	-2.905	-2.905	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
1	MP1A	X	0	0	0	%100
2	MP1A	Z	-.582	-.582	0	%100
3	MP3A	X	0	0	0	%100
4	MP3A	Z	-.582	-.582	0	%100
5	MP4A	X	0	0	0	%100
6	MP4A	Z	-.582	-.582	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
1	MP1A	X	.291	.291	0	%100
2	MP1A	Z	-.504	-.504	0	%100
3	MP3A	X	.291	.291	0	%100
4	MP3A	Z	-.504	-.504	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
5	MP4A	X	.291	.291	0	%100
6	MP4A	Z	-.504	-.504	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
1	MP1A	X	.504	.504	0	%100
2	MP1A	Z	-.291	-.291	0	%100
3	MP3A	X	.504	.504	0	%100
4	MP3A	Z	-.291	-.291	0	%100
5	MP4A	X	.504	.504	0	%100
6	MP4A	Z	-.291	-.291	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
1	MP1A	X	.582	.582	0	%100
2	MP1A	Z	0	0	0	%100
3	MP3A	X	.582	.582	0	%100
4	MP3A	Z	0	0	0	%100
5	MP4A	X	.582	.582	0	%100
6	MP4A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
1	MP1A	X	.504	.504	0	%100
2	MP1A	Z	.291	.291	0	%100
3	MP3A	X	.504	.504	0	%100
4	MP3A	Z	.291	.291	0	%100
5	MP4A	X	.504	.504	0	%100
6	MP4A	Z	.291	.291	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
1	MP1A	X	.291	.291	0	%100
2	MP1A	Z	.504	.504	0	%100
3	MP3A	X	.291	.291	0	%100
4	MP3A	Z	.504	.504	0	%100
5	MP4A	X	.291	.291	0	%100
6	MP4A	Z	.504	.504	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
1	MP1A	X	0	0	0	%100
2	MP1A	Z	.582	.582	0	%100
3	MP3A	X	0	0	0	%100
4	MP3A	Z	.582	.582	0	%100
5	MP4A	X	0	0	0	%100
6	MP4A	Z	.582	.582	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
1	MP1A	X	-.291	-.291	0	%100
2	MP1A	Z	.504	.504	0	%100
3	MP3A	X	-.291	-.291	0	%100
4	MP3A	Z	.504	.504	0	%100
5	MP4A	X	-.291	-.291	0	%100
6	MP4A	Z	.504	.504	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
1	MP1A	X	-.504	-.504	0	%100
2	MP1A	Z	.291	.291	0	%100
3	MP3A	X	-.504	-.504	0	%100
4	MP3A	Z	.291	.291	0	%100
5	MP4A	X	-.504	-.504	0	%100
6	MP4A	Z	.291	.291	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
1	MP1A	X	-.582	-.582	0	%100
2	MP1A	Z	0	0	0	%100
3	MP3A	X	-.582	-.582	0	%100
4	MP3A	Z	0	0	0	%100
5	MP4A	X	-.582	-.582	0	%100
6	MP4A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
1	MP1A	X	-.504	-.504	0	%100
2	MP1A	Z	-.291	-.291	0	%100
3	MP3A	X	-.504	-.504	0	%100
4	MP3A	Z	-.291	-.291	0	%100
5	MP4A	X	-.504	-.504	0	%100
6	MP4A	Z	-.291	-.291	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
1	MP1A	X	-.291	-.291	0	%100
2	MP1A	Z	-.504	-.504	0	%100
3	MP3A	X	-.291	-.291	0	%100
4	MP3A	Z	-.504	-.504	0	%100
5	MP4A	X	-.291	-.291	0	%100
6	MP4A	Z	-.504	-.504	0	%100

Member Area Loads

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

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N4	max	534.079	10	2352.178	1	758.504	1	0	75	.073	10	0	75
2		min	-534.079	4	-1831.339	7	-736.725	7	0	1	-.073	4	0	1
3	N6	max	170.825	4	1995.614	7	234.024	7	0	75	.034	10	0	75
4		min	-170.825	10	-2187.903	1	-255.802	1	0	1	-.034	4	0	1
5	N10	max	201.299	11	815.152	1	295.488	1	0	75	.048	11	0	75
6		min	-201.299	3	-744.13	7	-388.538	7	0	1	-.048	3	0	1
7	N12	max	29.942	5	842.045	7	102.286	19	0	75	.017	11	0	75
8		min	-29.942	9	-717.237	1	-4.282	1	0	1	-.017	3	0	1
9	N16	max	499.605	10	2241.152	1	709.38	1	0	75	.076	10	0	75
10		min	-499.605	4	-1745.418	7	-692.007	7	0	1	-.076	4	0	1
11	N18	max	148.902	4	1904.413	7	206.396	7	0	75	.036	10	0	75
12		min	-148.902	10	-2082.157	1	-223.77	1	0	1	-.036	4	0	1
13	Totals:	max	880.707	10	1171.185	34	1279.519	1						
14		min	-880.707	4	315.889	67	-1279.519	7						

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

	Member	Shape	Code C...	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-...	phi*Mn z-...	Cb	Eqn
1	MP1A	PIPE 2.0	.295	3.646	1	.047	3.719		1	17855.085	32130	1.872	1.872	1	H1-1b
2	MP3A	PIPE 2.0	.118	3.646	7	.027	3.646		8	17855.085	32130	1.872	1.872	1	H1-1b
3	MP4A	PIPE 2.0	.279	3.646	1	.046	4.667		9	17855.085	32130	1.872	1.872	1	H1-1b

VzW SMART Tool© Vendor

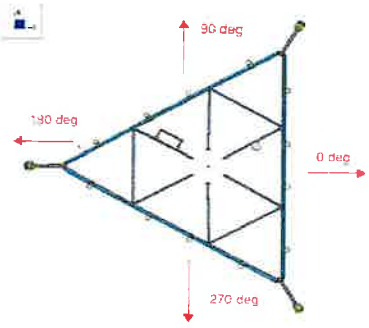
Client:	Verizon Wireless	Date:	9/29/2023
Site Name:	MYSTIC SOUTH CT		
MDG #:	5000244749		
Fuze ID #:	16244602	Page:	1

Version 1.01

I. Mount-to-Tower Connection Check

Custom Orientation Required — **Yes**

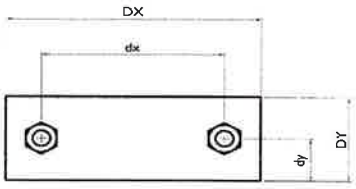
Nodes (labeled per Risa)	Orientation (per graphic of typical platform)
N4	0
N6	0
N10	0
N12	0
N18	0
N16	0



Tower Connection Bolt Checks — **Yes**

Bolt Orientation — **Parallel**

Bolt Quantity per Reaction:	2 (Horizontal)
d_x (in) *(Delta X of typ. bolt config. sketch)*:	2.875
d_y (in) *(Delta Y of typ. bolt config. sketch)*:	0.5
Bolt Type:	A307
Bolt Diameter (in):	0.5
Required Tensile Strength / bolt (kips):	0.0
Required Shear Strength / bolt (kips):	1.2
Tensile Capacity / bolt (kips):	6.6
Shear Capacity / bolt (kips):	4.0
Bolt Overall Utilization:	29.6%

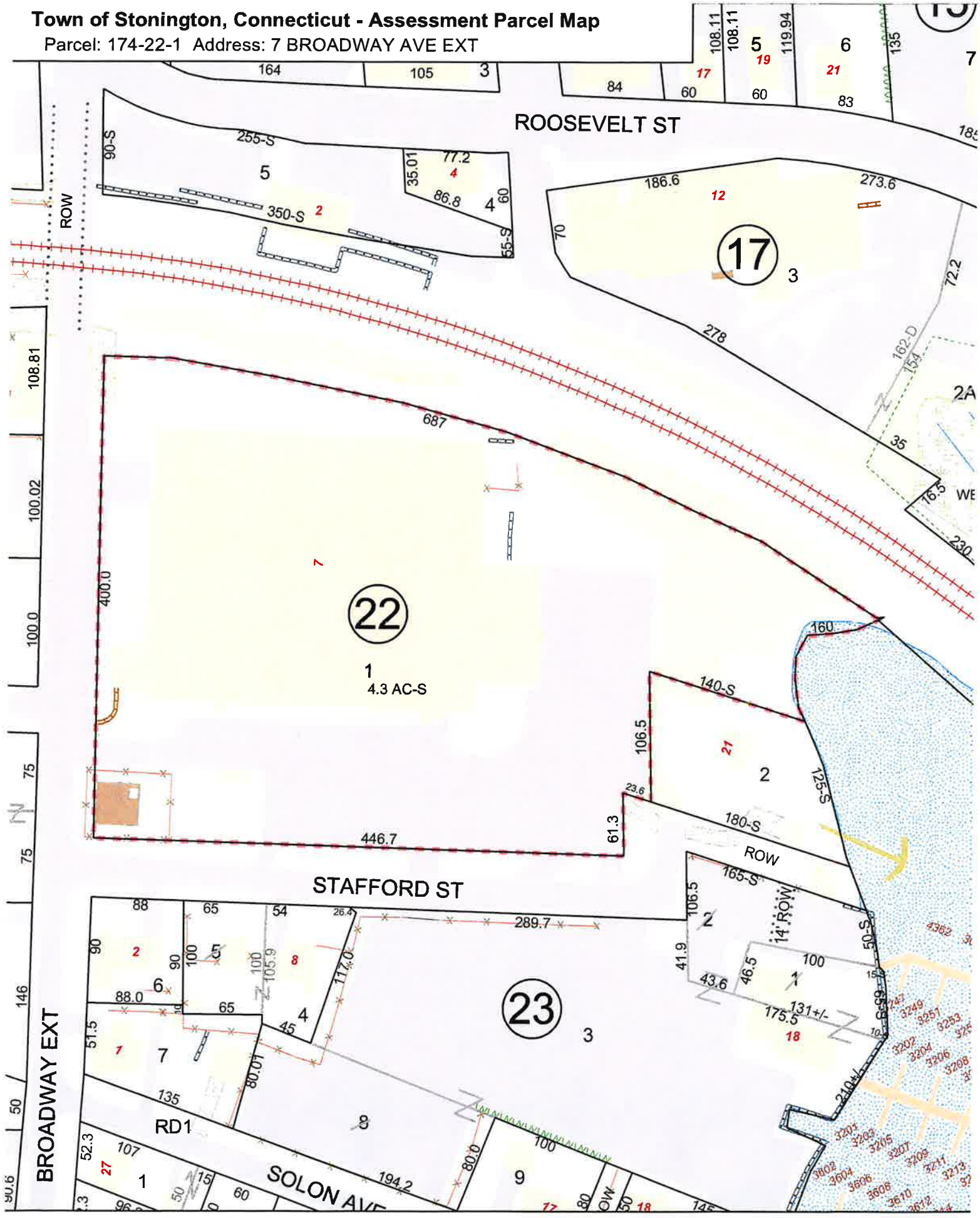


Tower Connection Baseplate Checks — **No**

ATTACHMENT 5

Town of Stonington, Connecticut - Assessment Parcel Map

Parcel: 174-22-1 Address: 7 BROADWAY AVE EXT



Approximate Scale:

1 inch = 100 feet

0 60 120 180 240 Feet

Revised To Grand List: October 2021 Map Produced: February 202

Town of Stonington, CT

Property Listing Report

Map Block Lot 174-22-1 | Building # 1 | PID 8983 | Account 00664600

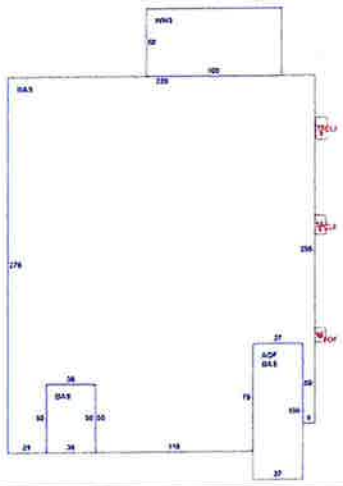
Property Information

Property Location	7 BROADWAY AVE EXT
Owner	PLANETA PROPERTIES
Co-Owner	
Mailing Address	PO BOX 218 MYSTIC CT 06355-0218
Land Use	4000 INDUSTRIAL M-96
Land Class	I
Zoning Code	M-1
Census Tract	7053

Neighborhood	3500
Acreage	4.3
Utilities	
Lot Setting/Desc	Suburban Level
Book / Page	0409/0933
Additional Info	

Photo

Sketch



Primary Construction Details

Year Built	1950
Building Desc.	INDUSTRIAL M-96
Building Style	Industrial
Building Grade	Ave/Good
Stories	1
Occupancy	1
Exterior Walls	Brick/Masonry
Exterior Walls 2	Pre-finsh Metl
Roof Style	Flat
Roof Cover	Tar & Gravel
Interior Walls	Minim/Masonry
Interior Walls 2	Drywall/Sheet
Interior Floors 1	Concr Abv Grad
Interior Floors 2	Carpet

Heating Fuel	Oil
Heating Type	Steam
AC Type	None
Bedrooms	0
Full Bathrooms	0
Half Bathrooms	0
Extra Fixtures	
Total Rooms	0
Bath Style	NA
Kitchen Style	NA
Fin Bsmt Area	
Fin Bsmt Quality	
Bsmt Gar	
Fireplaces	

(*Industrial / Commercial Details)

Building Use	Ind/Comm
Building Condition	AV
Sprinkler %	
Heat / AC	NONE
Frame Type	MASONRY
Baths / Plumbing	AVERAGE
Ceiling / Wall	CEIL & MIN WL
Rooms / Prtns	AVERAGE
Wall Height	14
First Floor Use	4000
Foundation	

Report Created On 3/23/2022

Town of Stonington, CT

Property Listing Report | Map Block Lot 174-22-1 | Building # 1 | PID 8983 | Account 00664600

Valuation Summary (Assessed value = 70% of Appraised Value)

Item	Appraised	Assessed
Buildings	2529700	1770800
Extras	49900	35000
Improvements		
Outbuildings	259000	181200
Land	740300	518200
Total	3578900	2505200

Sub Areas

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
Office, (Average)	3700	3700
First Floor	62973	62973
Loading Platform, Finished	240	0
Porch, Open	80	0
Warehouse	5000	3250
Total Area	71993	69923

Outbuilding and Extra Features

Type	Description
PAVING-ASPHALT	48000.00 S.F.
ELEVATED TANK	75000.00 GALS
FENCE-8' CHAIN	218.00 L.F.
W/LIGHTS ETC	64.00 S.F.
FENCE-6' CHAIN	288.00 L.F.
SHED FRAME	42.00 S.F.
SPRINKLERS-WET	64683.00 S.F.
WET/CONCEALED	6786.00 S.F.
DRY	777.00 S.F.
LOAD LEVELERS	2.00 UNITS

Sales History

Owner of Record	Book/ Page	Sale Date	Sale Price
PLANETA PROPERTIES	0409/0933	10/20/1997	0
PLANETA EDWARD J	0221/0680	12/29/1978	0

Report Created On 3/23/2022

ATTACHMENT 6

Verizon/Mystic South

UNITED STATES POSTAL SERVICE®

Certificate of Mailing — Firm

Name and Address of Sender	TOTAL NO. of Pieces Listed by Sender	TOTAL NO. of Pieces Received at Post Office™	Affix Stamp Here *Postmark with Date of Receipt.*
Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103		3	neopost 01/08/2024 US POSTAGE $003.19 ZIP 06103 041L12203937 USPS
	Postmaster, per *(name of receiving employee)*		

USPS® Tracking Number / Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	Danielle Chesebrough, First Selectman Town of Stonington 152 Elm Street Stonington, CT 06378				
2.	Clifton Iler, AICP Town Planner Town of Stonington 152 Elm Street Stonington, CT 06378				
3.	Planeta Properties PO Box 218 Mystic, CT 06355-0218				
4.					
5.					
6.					