Crown Castle
300 Barr Harbor Drive
Suite 300
Conshohocken, PA 19428

July 2, 2024

Via Fedex #777185875962

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

RE: **Notice of Exempt Modification for Verizon Wireless: 5000245769**
Crown Site ID# 806478
539 Plains Road, Haddam, CT 06438
Latitude: 41° 26′ 35.0″/ Longitude: -72° 30′ 22.4″

Dear Ms. Bachman:

Cellco Partnership d/b/a Verizon Wireless currently maintains fifteen (15) antennas at the 178-foot mount on the existing 190-foot monopole tower located at 539 Plains Road, Haddam, CT. The property is owned by Kayes Neil Alan and the tower is owned by Crown Castle. Cellco Partnership d/b/a Verizon Wireless now intends to add nine (9) new antennas with 6 remaining antennas and ancillary antenna equipment at the 178-ft mount level. This Eligible Facilities Request for antenna modification/proposal of an existing telecommunications facility includes hardware that is both 4G (LTE) and 5G capable through remote software configuration and either or both services may be turned on or off at various times.

Planned Modification:

Tower:
Install New:
- •INSTALL (6) COMMSCOPE - JAHH-65B-R3B ANTENNA
- •INSTALL (3) SAMSUNG - MT6413-77A ANTENNA
- •INSTALL (3) SAMSUNG - B2/B66A RRH ORAN (RF4439D-25A) RADIO
- •INSTALL (3) SAMSUNG - RF4461D-13A RADIO
- •INSTALL (3) COMMSCOPE - CBC78T-DS-43-2X DIPLEXER
- •INSTALL MOUNT MODIFICATIONS

Remove:
- •REMOVE (3) COMMSCOPE - HBX-6517DS-A1M ANTENNA
- •REMOVE (6) COMMSCOPE, ANDREW - SBNHH-1D65B ANTENNA
- •REMOVE (3) NOKIA - UHBA B13 RRH 4X30 RADIO
- •REMOVE (3) NOKIA - UHFA B25 RRH 4X30 RADIO
- •REMOVE (3) NOKIA - UHIE B66A RRH 4X45 RADIO
- •REMOVE (3) COMMSCOPE - BSAMNT-SBS-1-2

The facility was approved by the Connecticut Siting Council, Docket No. 58 on July 11, 1986.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies §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 Robert McGarry, First Selectman and Leon Mularski, Zoning Enforcement Officer, both of the Town of Haddam as well as to Kayes Neil Alan property owner. Crown Castle is the tower owner.

1. The proposed modifications will not result in an increase in the height of the existing tower.

2. The proposed modifications will not require the extension of the site boundary.

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

4. The operation of the replacement antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communication Commission safety standard.

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

6. The existing structure and its foundation can support the proposed loading.

For the foregoing reasons, Cellco Partnership d/b/a Verizon Wireless respectfully submits that the proposed modifications to the above-reference telecommunications facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2). Please send approval/rejection letter to Attn: Jenifer Bachi.

Sincerely,

Jenifer Bachi
Permitting Specialist
300 Barr Harbor Drive, Ste. 300
Conshohocken, PA 19428
(610) 635-3221
Jenifer.bachi@crowncastle.com

Attachments are as follows:

Exhibit A – Original Facility Approval
Exhibit B – Property Card
Exhibit C – Property Map
Exhibit D – Construction Drawings
Exhibit E – Structural Analysis Report

Exhibit F – Mount Analysis Report
Exhibit G – Power Density / RF Emissions Report
Exhibit H – Recipient Mailing Records
Check #2969850 for $625 Application Fee

cc: Via Fedex # 777185748430
Robert McGarry, First Selectman
Town of Haddam
30 Field Park Drive
Haddam, CT 06438
860-345-8531 X204

Via Fedex # 777185823954
Leon Mularski, Zoning Enforcement Officer
Town of Haddam
30 Field Park Drive
Haddam, CT 06438
860-345-8531 X224

Via Fedex # 777185853843
Kayes Neil Alan
50 Cold Spring Road, Apt 327
Rocky Hill, Ct 06067

Crown Castle, Tower Owner

EXHIBIT A

Original Facility Approval

DOCKET NO. 58

AN APPLICATION OF HARTFORD CELLULAR COPANY FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED FOR THE CONSTRUCTION, MAINTENANCE, AND OPERATION OF FACILITIES TO PROVIDE CELLULAR SERVICE IN HARTFORD, TOLLAND AND MIDDLESEX COUNTIES.

CONNECTICUT SITING COUNCIL

July 11, 1986.

D E C I S I O N A N D O R D E R

Pursuant to the foregoing opinion, the Connecticut Siting Council (Council) hereby directs that a Certificate of Environmental Compatibility and Public Need as provided by Section 16-50k of the General Statutes of Connecticut (CGS) be issued to the Hartford Cellular Company for the construction, maintenance, and operation of cellular mobile phone telecommunication towers and associated equipment in the towns of Glastonbury, Haddam, Hartford, Portland, Rocky Hill, Somers, Vernon, Windsor, and Willington subject to the conditions below.

1) The proposed Bloomfield and Middlefield sites are rejected without prejudice.

2) The antennas on the Glastonbury tower shall be mounted no higher than the 180' level of this existing tower.

3) The Portland and Rocky Hill towers shall be monopoles.

4) The towers shall be no taller than necessary to provide the proposed service, and in no event shall exceed total heights, including antennas, of

a) 193' at the Haddam site;

b) 173' at the Portland site;

c) 153' at the Rocky Hill site;

d) 173' at the Somers site;

e) 173' at the Vernon site;

f) 153' at the Willington site;

g) 173' at the Windsor site.

5) The Hartford site receive antennas shall be mounted below the top of the high point of the building to preclude visibility.

6) Any future actions requiring the removal of the existing Glastonbury tower to be shared by the certificate holder shall also apply to the equipment mounted on that tower by the certificate holder, regardless of that equipment's status under Chapter 277a of the CGS.

7) The certificate holder shall submit a development and management (D&M) plan for the Haddam, Portland, Rocky Hill, Somers, Vernon and Windsor sites pursuant to Sections 16-50j-75 through 16-50j-77 of the Regulations of State Agencies (RSA), except that irrelevant items in Section 16-50j-76 need only be identified as such. In addition to the requirements of Section 16-50j-76, the D&M plan shall provide plans for evergreen screening around the fenced perimeter at the Haddam, Somers, Vernon, and Windsor sites. The D&M plan shall include a proposal for painting the approved monopole structures to blend with the sky. The D&M plan must be approved prior to facility construction. Any changes to specifications in the D&M plan must be approved by the Council prior to facility operation.

8) All certified facilities shall be constructed, operated, and maintained as specified in the Council's record and in the

site plan required by order number 7.

9) The certificate holder shall comply with any future radiofrequency (RF) standards promulgated by state or federal regulatory agencies. Upon the establishment of any new governmental RF standards, the facilities granted in this decison shall continue to be in compliance with such standards.

10) The certificate holder shall permit public or private entities to share space on the towers approved herein, for due consideration received, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing. In addition to complying with Section 16-50j-73 of the RSA, the certificate holder shall notify the Council of the addition of any equipment to any approved tower.

11) A fence not lower than 8' shall surround each tower and associated equipment.

12) Unless necessary to comply with order 13, no lights shall be installed on any of these towers.

13) The facilities' construction and any future tower sharing shall be in accordance with all applicable federal, state, and municipal laws and regulations. Shared uses by entities not subject to jurisdiction pursuant to Section 16-50k of the CGS shall be subject to all applicable federal, state, and municipal laws and regulations.

14) Construction activities shall take place during daylight working hours.

15) This decision and order shall be void and the towers and associate equipment shall be dismantled and removed, or reapplication for any new use shall be made to the Council before any such new use is made, if the towers do not provide or permanently cease to provide cellular service following completion of construction.

16) This decision and order shall be void if all construction authorized herein is not completed within three years of the issuance of this decision, or within three years of the completion of any appeal if appeal of this decision is taken, unless otherwise approved by the Council.

Pursuant to CGS Section 16-50p, we hereby direct that a copy of the decision and order shall be served on each person listed below. A notice of the issuance shall be published in the Hartford Courant, Middletown Press, Manchester Journal Inquirer, and the Willimantic Chronicle.

The parties to the proceeding are:

Metro Mobile (applicant)
5 Eversley Avenue
Norwalk, Connecticut 06855
ATTN: Armand Mascioli
General Manager

Howard L. Slater, Esq. (its attorneys)
Scott A. Gursky, Esq.
Byrne, Slater, Sandler,
Shulman & Rouse, P.C.
111 Pearl Street
Hartford, Connecticut 06103

Richard Rubin, Esq.
Fleischman and Walsh, P.C.
1725 N Street, N.W.
Washington, D. C. 20036

Mr. William Wamester
1225 Randolph Road
Middletown, Connecticut 06457

The Southern New England Telephone Company
227 Church Street
New Haven, Connecticut 06506
ATTN: Peter J. Tyrrell, Esq.

Mr. James W. Tilney

represented by:
Patricia A. Ayars
Samuel Baily, Jr.
Robinson & Cole
One Commercial Plaza
Hartford, CT. 06103-3597

Mr. Samuel DuBosar, Chairman
Bessie Bennett, Esq.
Town Plan & Zoning Commission
P.O. Box 337
Bloomfield, Connecticut 06002

Town of Somers

represented by:

Mr. Robert F. Peters
Town Counsel
Tatoian, Devline, Peters
& Davis
11 South Road
P.O. Box 415
Somers, CT. 06071

Town of Haddam
represented by:

Lucy R. Petrella
Chairperson
Town Office Building
Route 9A
P.O. Box 87
Haddam, CT. 06438

Midstate Regional Planning Agency

represented by:

Thomas M.Gilligan
Regional Planner
P.O. Box 139
Middletown, CT. 06457

Dr. Donald P. LaSalle
Director
Talcott Mountain Science Center
Montevideo Road
Avon, Connecticut 06001

Barnard Tilson (service waived)
Secretary
Avon Planning and Zoning
60 West Main Street
Avon, Connecticut 06001

Alden Giddings
33 Privelege Road
Bloomfield, Connecticut 06002

Town of Bloomfield

represented by:

Joseph M.Suggs, Jr.
Deputy Mayor
Town Hall
880 Bloomfield Avenue
P.O. Box 337
Bloomfield, CT. 06002
(service waived)

Town of Middlefield

represented by:

David Silverstone, Esq.
Silverstone & Koontz
37 Lewis Street
Hartford, CT. 06103

with a copy to:

Geoffrey Colegrove
Midstate Regional Planning Agency
100 DeKoven Drive
Middletown, CT. 06457

Zoning Commission
Town of Somers

represented by:

Joseph A. Paradis
Chairman
Town Hall
600 Main Street
P.O. Box 803
Somers, CT. 06071

Barbara Sirwilo, Secretary (service waived)
Planning & Zoning Commission
Town of Rocky Hill
600 Old Main Street
P.O. Box 657
Rocky Hill, Connecticut 06067

H. Robert Goodrich (service waived)
Goodrich Lane
Portland, Connecticut 06480

The Honorable Richard P. Antonetti
State Representative (service waived)
5 Sachem Circle
Meriden, Connecticut 06450

John Hevrin
R.D. #1 - Plains Road
Haddam, Connecticut 06438

Norman and Darlene Manning (represented by)

Elizabeth Allen, Esq.
P.O. Box 467
Higganum, CT. 06441
(service waived)

C E R T I F I C A T I O N

The undersigned members of the Connecticut Siting Council hereby certify that they have heard this case or read the record thereof, and that we voted as follows:

Dated at New Britain, Connecticut, this 11th day of July, 1986.

Council Members	Vote Cast
Gloria Dibble Pond Chairperson	Absent
Commissioner John Downey Designee: Patricia Shea	Yes
Commissioner Stanley Pac Designee: Christopher Cooper	Yes
Owen L. Clark	Yes
Mortimer A. Gelston	Yes
James G. Horsfall	Yes
Pamela B. Katz	Absent
William H. Smith	Yes
Colin C. Tait	Yes

STATE OF CONNECTICUT)
: ss. New Britain, July 11, 1986
COUNTY OF HARTFORD)

I hereby certify that the foregoing is a true and correct copy of the decision and order issued by the Connecticut Siting Council, State of Connecticut.

ATTEST:

Christopher S. Wood, Executive Director
Connecticut Siting Council

Petition No. 434
Docket 58
(Alternately, EM-CROWN-061-990927)
Crown Atlantic Company LLC
Staff Report
October 21, 1999

On October 8, 1999, Connecticut Siting Council (Council) Chairman Mortimer A. Gelston and Council staff Steve Levine conducted a field review of Crown Atlantic Company's (Crown) Turkey Hill communications tower in Haddam. Crown proposes to modify the tower to permit use by Omnipoint Communications, Inc. (Omnipoint), and is petitioning the Council for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need (Certificate) is required for the modification. Crown submits that the proposed modification will not have a substantial adverse environmental effect, but instead will reduce the unnecessary proliferation of telecommunications towers by utilizing an existing structure, and qualifies for an order of tower sharing pursuant to C.G.S. § 16-50aa.

The Turkey Hill tower is a 180-foot-tall lattice tower. In 1986, the Council approved a maximum height of 193 feet, *including antennas, in Docket 58*. According to a verbal communication from Crown's attorney in this matter, 13-foot antennas were originally mounted on this tower to a height of 193 feet, but were removed in the early 1990's. The tower presently supports antennas owned by Bell Atlantic Mobile, Springwich Cellular, and Sprint. The Council recently approved additional shared use of the tower by Nextel Communications. An engineering study submitted by Crown indicates the tower is capable of supporting all of these antennas and the proposed Omnipoint antennas as well.

Omnipoint would install three panel-type antennas in an accelerator unit mounted on a mast extending above the 180-foot top of the existing tower. The Omnipoint antennas would extend to a height of 189 feet above grade, four feet under the maximum height approved by the Council in 1986. Omnipoint's antennas would be held in place by a 4-inch diameter, 3-foot-long extension pipe mounted to the top of the tower. The antennas themselves are 19 inches in diameter and rise an additional six feet above the pipe to a total height of 189 feet. Omnipoint also plans to install a 5 x 7-foot equipment cabinet within existing fencing at the base of the tower.

The proposed antennas and associated equipment will not increase the noise levels at the existing site, under normal operating conditions, by six decibels or more. The worst case power density for the telecommunications operations at the site has been calculated to be 13.3% of the applicable standard for uncontrolled environments, including a contribution of 0.5% by Omnipoint. Crown asserts that the proposed installation will not cause a substantial adverse environmental effect, and for this reason would not require a Certificate.

Crown has given separate prior notice of this work as an exempt modification under R.C.S.A. § 16-50j-72(b)(2). See EM-CROWN-061-990927. This item was tabled at the October 8, 1999 Council meeting due to concerns that the pipe might be considered part of the tower, thereby increasing tower height and disqualifying this installation as an exempt modification. Crown would withdraw the Petition from further consideration if the Council chooses to acknowledge the addition of Omnipoint's antennas on the Turkey Hill tower as an exempt modification.

EXHIBIT B

Property Card

The Assessor's office is responsible for the maintenance of records on the ownership of properties. Assessments are computed at 70% of the estimated market value of real property at the time of the last revaluation which was 2020.

Information on the Property Records for the Municipality of Haddam was last updated on 7/2/2024.

Parcel Information

Location:	539 PLAINS RD	Property Use:	Residential	Primary Use:	Residential
Unique ID:	P0496400	Map Block Lot:	63 022	Acres:	1.4200
490 Acres:	0.00	Zone:	R-2A	Volume / Page:	421/ 831
Developers Map / Lot:		Census:	5901		

Value Information

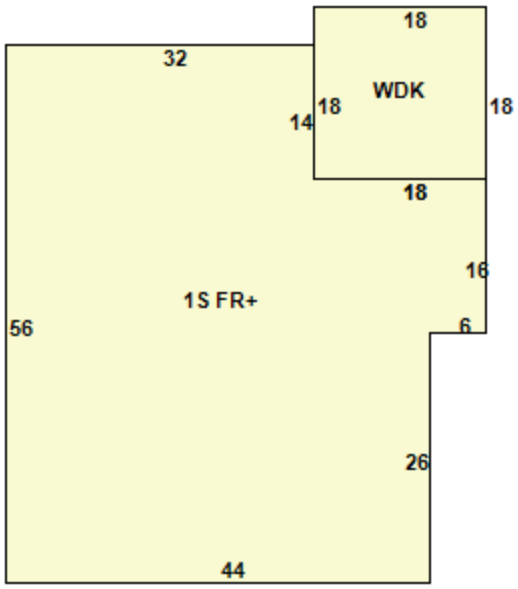
	Appraised Value	Assessed Value
Land	82,620	57,830
Buildings	262,910	184,040
Detached Outbuildings	0	0
Total	345,530	241,870

Owner's Information

Owner's Data
KAYES NEIL ALAN 50 COLD SPRING ROAD APT 327 ROCKY HILL, CT 06067

Building 1

Photo Not Available



Building Use:	Single Family	Style:	Ranch	Living Area:	2,392
Stories:	1.00	Construction:	Wood Frame	Year Built:	2023
Total Rooms:	7	Bedrooms:	4	Full Baths:	2
Half Baths:	1	Fireplaces:	0	Heating:	Forced Hot Air

Fuel:	Oil	Cooling Percent:	100%	Basement Area:	2,392
Basement Finished Area:	0	Basement Garages:	0	Roof Material:	
Siding:		Units:			

Special Features

Extra Fixtures	2
Fireplace	1

Attached Components

Type:	Year Built:	Area:
Wood Deck	2023	324

Owner History - Sales

Owner Name	Volume	Page	Sale Date	Deed Type	Sale Price
KAYES NEIL ALAN	0421	0831	04/13/2023	Warranty Deed	$150,000
539 PLAINS RD LLC	0347	0725	10/25/2011	Quit Claim	$325,000
MICHAEL JACQUELINE A	0330	0411	06/26/2009		$0
PIONEER ENTERPRISES LLC	0308	0256	12/21/2006		$0
MICHAEL JACQUELINE	0284	0001	10/26/2004		$0
MICHAEL JACK + JACQUELINE	0090	0198			$0

Building Permits

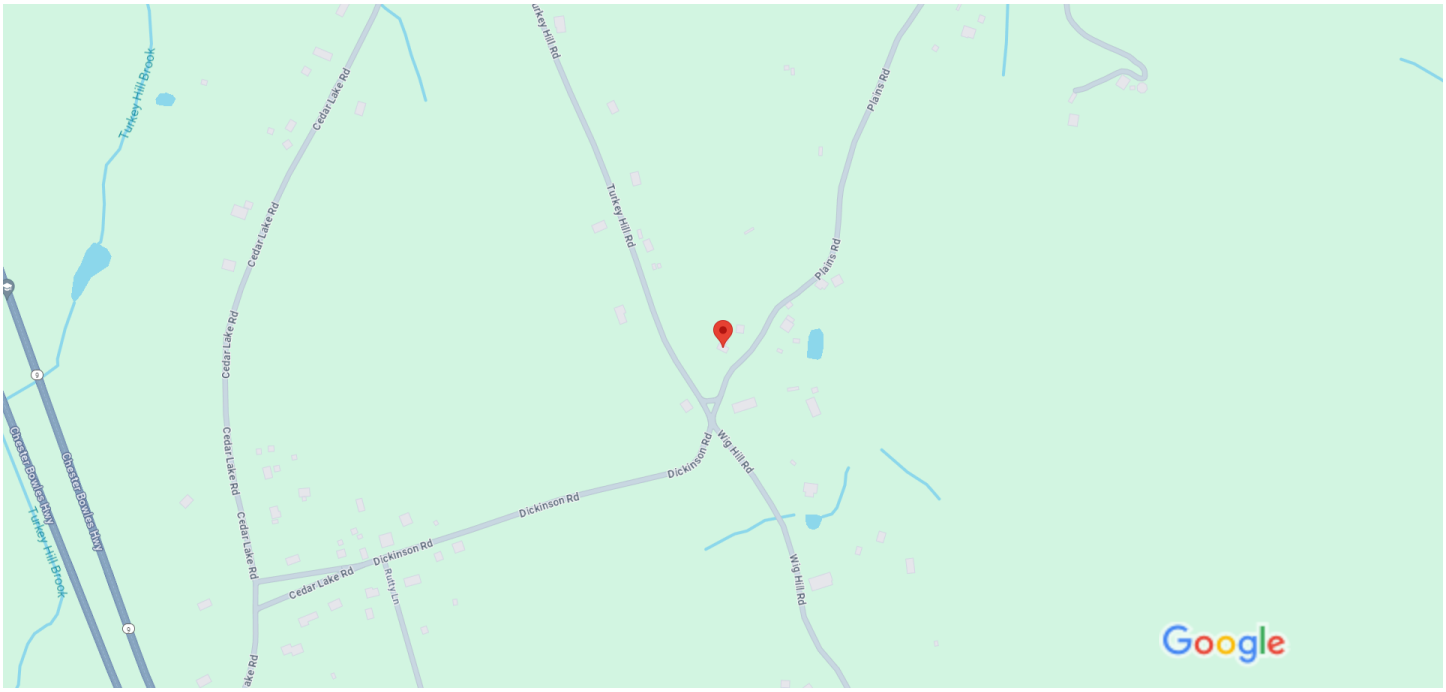
Permit Number	Permit Type	Date Opened	Reason
B-24-034	Deck	02/27/2024	DECK 2 BACK 18X18 W PIERS
M-24-011	Mechanical	01/23/2024	Installation of 4 ton heat pump condersor with 4 ton air handler in bassement and all new ductwork f
E-23-220	Electrical	12/13/2023	Installation of 200 amp service for new Modulat home
F-23-006		10/11/2023	Blasting for new house
B-23-223	Building	10/04/2023	Construction of single family dweeling, 4 bedrooms, 2 bathrooms, no garage Old house that was there
Z-23-051		10/04/2023	Construction of single family dwelling with 4 bedrooms, 2 bathrooms, no garage
B-23-184	Residential Demolition	08/28/2023	Demolition of house and garage
B-23-172	Building	08/14/2023	Installation of 48 KW generator on anew concrete pad with the existing cell tower compound
B-23-184	Residential Demolition	06/12/2023	Demolition of house and garage
B-23-045	Building	03/28/2023	Tower to extend tower 10' and add 3 new antennas and antenna mount
B-22-003	Building	01/10/2022	Add (3) Antennna, (6) RBU as well as associated telecommunications equipment
B-20-210	Building	10/15/2020	Modify existing antenna configuration on existing cell tower by removing and replacing three existin
B-18-157	Building	12/11/2018	Sprint to remove and replace (6) six antennas and add (12) twelve remote radio heads non-antennas
13817	Building	04/20/2018	Reroof house, 40 squares
13773	Building	03/02/2018	No Description Given
11972	Building	02/11/2014	New Boiler
11564	Electrical	04/29/2013	No Description Given
11462	Building	02/04/2013	No Description Given
11422	Building	12/13/2012	No Description Given

Permit Number	Permit Type	Date Opened	Reason
11369	Electrical	11/07/2012	e-mailed to CL and P 8/24/2011
10933	Building	12/08/2011	No final inspections made by current Building Official. Closed on 9/4/19 per public act no 17-176 re
9825	Electrical	01/13/2009	7/2/09 inspections

EXHIBIT C

Property Map

Google Maps 539 Plains Rd



Map data ©2024 Google 200 ft

539 Plains Rd

Building

Directions Save Nearby Send to phone Share

539 Plains Rd, Haddam, CT 06438

EXHIBIT D

Construction Drawings

verizon

VERIZON SITE NUMBER:	**5000245769**	**BUSINESS UNIT #:**	**806478**
VERIZON SITE NAME:	**HADDAM CT**	**SITE ADDRESS:**	**539 PLAINS RD**
VERIZON FUZE ID:	**16271944**		**HADDAM, CT 06438**
SITE TYPE:	**SELF SUPPORT TOWER**	**COUNTY:**	**MIDDLESEX**
TOWER HEIGHT:	**190'-0"**	**JURISDICTION:**	**CT - TOWN OF HADDAM**

SITE INFORMATION

CROWN CASTLE USA INC.	
SITE NAME:	HRT 080 953381
BU NUMBER:	806478
TOWER OWNER:	CROWN CASTLE 2000 CORPORATE DRIVE CANONSBURG, PA 15317
CARRIER/APPLICANT:	VERIZON WIRELESS 20 ALEXANDER DRIVE WALLINGFORD, CT 06492
SITE ADDRESS:	539 PLAINS RD HADDAM, CT 06438
COUNTY:	MIDDLESEX
LATITUDE:	41° 26' 35.0" / 41.4431°
LONGITUDE:	-72° 30' 22.4" / -72.5062°
LAT/LONG TYPE:	NAD83
GROUND ELEVATION:	516'+/- AMSL
AREA OF CONSTRUCTION:	EXISTING
CURRENT ZONING:	R-2A
MAP/PARCEL #:	63-022-2
OCCUPANCY CLASSIFICATION:	U
TYPE OF CONSTRUCTION:	IIB
A.D.A. COMPLIANCE:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION
PROPERTY OWNER:	539 PLAINS RD LLC 444 ROUTE 312 BREWSTER, NY 10509
JURISDICTION:	CT - TOWN OF HADDAM 30 FIELD PARK DRIVE HADDAM, CT 06438
ELECTRIC PROVIDER:	CONNECTICUT LIGHT & POWER CO (800) 286-2000
TELCO PROVIDER:	FRONTIER COMM

PROJECT TEAM

A&E FIRM:	TOWER ENGINEERING PROFFESIONALS 326 TRYON ROAD RALEIGH, NC 27603 (91) 661-6351
	JOSEPH T. CRESS - PROJECT MANAGER
	SCOTT C. BRANTLEY - CIVIL ENGINEER
CROWN CASTLE USA INC. DISTRICT CONTACTS:	3 CORPORATE PARK DRIVE, SUITE 101 CLIFTON PARK, NY 12065
	ALEX MABBETT - PROJECT MANAGER ALEXANDER.MABBETT@CROWNCASTLE.COM
	WILLIAM GATES - PROJECT MANAGER WILLIAM.GATES@CROWNCASTLE.COM
	HEATHER MILLER - AES PAIGE.THOMSEN@CROWNCASTLE.COM

NOTE:
PRIOR TO ACCESSING/ENTERING THE SITE YOU MUST CONTACT THE CROWN NOC AT (800) 788-7011 & CROWN CONSTRUCTION MANAGER

DRAWING INDEX

SHEET #	SHEET DESCRIPTION
T-1	TITLE SHEET
T-2	GENERAL NOTES
C-1	COMPOUND PLAN
C-2	TOWER ELEVATIONS
C-3	ANTENNA PLANS
C-4	FINAL EQUIPMENT SCHEDULE
C-5.1	RFDS PLUMBING DIAGRAMS
C-5.2	RFDS PLUMBING DIAGRAMS
C-5.3	RFDS PLUMBING DIAGRAMS
C-5.4	RFDS PLUMBING DIAGRAMS
C-6.1	EQUIPMENT DETAILS & SPECIFICATIONS
C-6.2	EQUIPMENT DETAILS & SPECIFICATIONS
C-7	COLOR CODE MATRIX
G-1	GROUNDING DETAILS
ATTACTED	MOUNT MODIFICATION (BY OTHERS)

ALL DRAWINGS CONTAINED HEREIN ARE FORMATTED FOR 22X34. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

CALL CONNECTICUT ONE CALL
(800) 922-4455 CBYD.COM
CALL 2 WORKING DAYS
BEFORE YOU DIG!

CONTRACTOR PMI REQUIREMENTS

PMI ACCESSED AT	https://pmi.vzwsmart.com
SMART TOOL VENDOR	
PROJECT NUMBER	10219426
VzW LOCATION CODE (PSLC)	468763

*** PMI AND REQUIREMENTS ALSO EMBEDDED IN MOUNT ANALYSIS REPORT

MOUNT MODIFICATION REQUIRED	**Y**

VzW APPROVED SMART KIT VENDORS

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

APPROVALS

VERIZON SIGNATURE BLOCK

APPROVAL	SIGNATURE	DATE
SITE ACQUISITION		
CONSTRUCTION		
RADIO		
MICROWAVE		
TELCO		
EQUIPMENT		
PROJECT ADMINISTRATOR		
WO ADMINISTRATOR		

CROWN CASTLE USA INC. SINGNATURE BLOCK

APPROVAL		
SITE ACQUISITION		
PLANNER		
CONSTRUCTION		
PROJECT MANAGER		
UTILITY MANAGER		
LANDLORD		

PROJECT DESCRIPTION

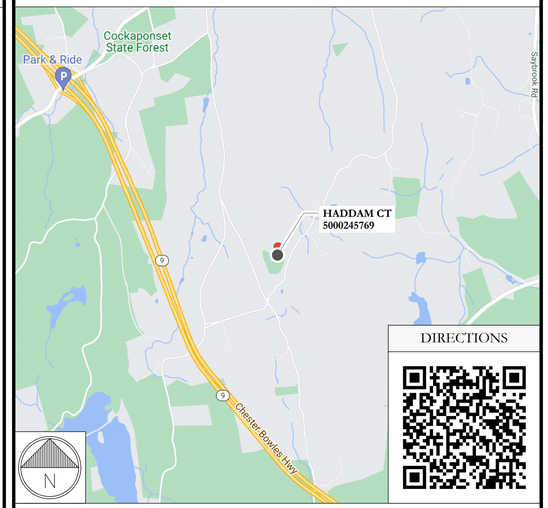
THE PURPOSE OF THIS PROJECT IS TO ENHANCE BROADBAND CONNECTIVITY AND CAPACITY TO THE EXISTING ELIGIBLE WIRELESS FACILITY.

TOWER SCOPE OF WORK:
- REMOVE (3) COMMSCOPE - HBX-6517DS-A1M ANTENNA
- REMOVE (6) COMMSCOPE,ANDREW - SBNHH-1D65B ANTENNA
- REMOVE (3) NOKIA - UHBA B13 RRH 4X30 RADIO
- REMOVE (3) NOKIA - UHFA B25 RRH 4X30 RADIO
- REMOVE (3) NOKIA - UHIE B66A RRH 4X45 RADIO
- REMOVE (3) COMMSCOPE - BSAMNT-SBS-1-2
- INSTALL (6) COMMSCOPE - JAHH-65B-R3B ANTENNA
- INSTALL (3) SAMSUNG - MT6413-77A ANTENNA
- INSTALL (3) SAMSUNG - B2/B66A RRH ORAN (RF4439D-25A) RADIO
- INSTALL (3) SAMSUNG - RF4461D-13A RADIO
- INSTALL (3) COMMSCOPE - CBC78T-DS-43-2X DIPLEXER
- INSTALL MOUNT MODIFICATIONS

INSTALLER NOTE:

NO PROPOSED LOADING TO BE ADDED UNTIL TOWER MODIFICATIONS ARE INSTALLED PER TOWER MODIFICATION DESIGN BY COLLIERS ENGINEERING & DESIGN, DATED 01/23/2024.

LOCATION MAP



NO SCALE

APPLICABLE CODES & REFERENCE DOCUMENTS

ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES:

CODE TYPE	CODE
BUILDING	2022 CONNECTICUT SBC/2021 IBC
MECHANICAL	2022 CONNECTICUT SBC/2021 IMC
ELECTRICAL	2022 CONNECTICUT SBC/2020 NEC

REFERENCE DOCUMENTS:

STRUCTURAL ANALYSIS:	B+T GROUP
DATED:	2/14/2024
MOUNT ANALYSIS:	COLLIERS ENGINEERING & DESIGN,
DATED:	JANUARY 23, 2024
RFDS REVISION:	REV4
DATED:	8/15/2023
ORDER ID:	662902
REVISION:	0

INSTALLER NOTE:

NO PROPOSED LOADING TO BE ADDED UNTIL TOWER MODIFICATIONS ARE INSTALLED PER TOWER MODIFICATION DESIGN BY COLLIERS ENGINEERING & DESIGN, DATED 01/23/2024.

verizon
20 ALEXANDER DRIVE, 2ND FLOOR
WALLINGFORD, CT 06492

CROWN CASTLE
3 CORPORATE PARK DRIVE, SUITE 101
CLIFTON PARK, NY 12065

TOWER ENGINEERING PROFESSIONALS
326 TRYON RD
RALEIGH, NC 27603
(919) 661-6351
TEP JOB #: 63731.944603

VERIZON SITE NUMBER:
5000245769

BU #: **806478**

CROWN CASTLE SITE NAME
HRT 080 953381
539 PLAINS RD
HADDAM, CT 06438

EXISTING 190'-0" SELF SUPPORT TOWER

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	04/08/24	NP	PRELIMINARY	VD
1	06/13/24	NP	PRELIMINARY	SPK

STATE OF CONNECTICUT
SCOTT C. BRANTLEY
35536
LICENSED
PROFESSIONAL ENGINEER

06/13/24

SHEET NUMBER:	REVISION:
T-1	1

CROWN CASTLE USA INC. SITE ACTIVITY REQUIREMENTS:

1. NOTICE TO PROCEED– NO WORK SHALL COMMENCE PRIOR TO CROWN CASTLE USA INC. WRITTEN NOTICE TO PROCEED (NTP) AND THE ISSUANCE OF A PURCHASE ORDER. PRIOR TO ACCESSING/ENTERING THE SITE YOU MUST CONTACT THE CROWN CASTLE USA INC. NOC AT 800–788–7011 & THE CROWN CASTLE USA INC. CONSTRUCTION MANAGER.
2. "LOOK UP" – CROWN CASTLE USA INC. SAFETY CLIMB REQUIREMENT:
   THE INTEGRITY OF THE SAFETY CLIMB AND ALL COMPONENTS OF THE CLIMBING FACILITY SHALL BE CONSIDERED DURING ALL STAGES OF DESIGN, INSTALLATION, AND INSPECTION. TOWER MODIFICATION, MOUNT REINFORCEMENTS, AND/OR EQUIPMENT INSTALLATIONS SHALL NOT COMPROMISE THE INTEGRITY OR FUNCTIONAL USE OF THE SAFETY CLIMB OR ANY COMPONENTS OF THE CLIMBING FACILITY ON THE STRUCTURE. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO: PINCHING OF THE WIRE ROPE, BENDING OF THE WIRE ROPE FROM ITS SUPPORTS, DIRECT CONTACT OR CLOSE PROXIMITY TO THE WIRE ROPE WHICH MAY CAUSE FRICTIONAL WEAR, IMPACT TO THE ANCHORAGE POINTS IN ANY WAY, OR TO IMPEDE/BLOCK ITS INTENDED USE. ANY COMPROMISED SAFETY CLIMB, INCLUDING EXISTING CONDITIONS MUST BE TAGGED OUT AND REPORTED TO YOUR CROWN CASTLE USA INC. POC OR CALL THE NOC TO GENERATE A SAFETY CLIMB MAINTENANCE AND CONTRACTOR NOTICE TICKET.
3. PRIOR TO THE START OF CONSTRUCTION, ALL REQUIRED JURISDICTIONAL PERMITS SHALL BE OBTAINED. THIS INCLUDES, BUT IS NOT LIMITED TO, BUILDING, ELECTRICAL, MECHANICAL, FIRE, FLOOD ZONE, ENVIRONMENTAL, AND ZONING. AFTER ONSITE ACTIVITIES AND CONSTRUCTION ARE COMPLETED, ALL REQUIRED PERMITS SHALL BE SATISFIED AND CLOSED OUT ACCORDING TO LOCAL JURISDICTIONAL REQUIREMENTS.
4. ALL CONSTRUCTION MEANS AND METHODS; INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS, AND RESCUE PLANS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN, AND SHALL MEET ANSI/ASSE A10.48 (LATEST EDITION); FEDERAL, STATE, AND LOCAL REGULATIONS; AND ANY APPLICABLE INDUSTRY CONSENSUS STANDARDS RELATED TO THE CONSTRUCTION ACTIVITIES BEING PERFORMED. ALL RIGGING PLANS SHALL ADHERE TO ANSI/ASSE A10.48 (LATEST EDITION) AND CROWN CASTLE USA INC. STANDARD CED–STD–10253, INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION, TO CERTIFY THE SUPPORTING STRUCTURE(S) IN ACCORDANCE WITH ANSI/TIA–322 (LATEST EDITION).
5. ALL SITE WORK TO COMPLY WITH QAS–STD–10068 "INSTALLATION STANDARDS FOR CONSTRUCTION ACTIVITIES ON CROWN CASTLE USA INC. TOWER SITE," CED–STD–10294 "STANDARD FOR INSTALLATION OF MOUNTS AND APPURTENANCES," AND LATEST VERSION OF ANSI/TIA–1019–A–2012 "STANDARD FOR INSTALLATION, ALTERATION, AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS."
6. IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY CROWN CASTLE USA INC. PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
7. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
8. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
9. THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
10. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY CONTRACTOR. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING AND EXCAVATION E) CONSTRUCTION SAFETY PROCEDURES.
11. ALL SITE WORK SHALL BE AS INDICATED ON THE STAMPED CONSTRUCTION DRAWINGS AND PROJECT SPECIFICATIONS, LATEST APPROVED REVISION.
12. CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH AT THE COMPLETION OF THE WORK. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
13. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF CONTRACTOR, TOWER OWNER, CROWN CASTLE USA INC., AND/OR LOCAL UTILITIES.
14. THE CONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION FOR SITE SIGNAGE REQUIRED BY LOCAL JURISDICTION AND SIGNAGE REQUIRED ON INDIVIDUAL PIECES OF EQUIPMENT, ROOMS, AND SHELTERS.
15. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE CARRIER'S EQUIPMENT AND TOWER AREAS.
16. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
17. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION AS SPECIFIED ON THE CONSTRUCTION DRAWINGS AND/OR PROJECT SPECIFICATIONS.
18. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
19. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
20. CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
21. CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.
22. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.

GENERAL NOTES:

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
   CONTRACTOR: GENERAL CONTRACTOR RESPONSIBLE FOR CONSTRUCTION
   CARRIER: VERIZON
   TOWER OWNER: CROWN CASTLE USA INC.
2. THESE DRAWINGS HAVE BEEN PREPARED USING STANDARDS OF PROFESSIONAL CARE AND COMPLETENESS NORMALLY EXERCISED UNDER SIMILAR CIRCUMSTANCES BY REPUTABLE ENGINEERS IN THIS OR SIMILAR LOCALITIES. IT IS ASSUMED THAT THE WORK DEPICTED WILL BE PERFORMED BY AN EXPERIENCED CONTRACTOR AND/OR WORKPEOPLE WHO HAVE A WORKING KNOWLEDGE OF THE APPLICABLE CODE STANDARDS AND REQUIREMENTS AND OF INDUSTRY ACCEPTED STANDARD GOOD PRACTICE. AS NOT EVERY CONDITION OR ELEMENT IS (OR CAN BE) EXPLICITLY SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL USE INDUSTRY ACCEPTED STANDARD GOOD PRACTICE FOR MISCELLANEOUS WORK NOT EXPLICITLY SHOWN.
3. THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE MEANS OR METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY FOR PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, FORMWORK, SHORING, ETC. SITE VISITS BY THE ENGINEER OR HIS REPRESENTATIVE WILL NOT INCLUDE INSPECTION OF THESE ITEMS AND IS FOR STRUCTURAL OBSERVATION OF THE FINISHED STRUCTURE ONLY.
4. NOTES AND DETAILS IN THE CONSTRUCTION DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT, AND/OR AS PROVIDED FOR IN THE CONTRACT DOCUMENTS. WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL NOTES, AND SPECIFICATIONS, THE GREATER, MORE STRICT REQUIREMENTS, SHALL GOVERN. IF FURTHER CLARIFICATION IS REQUIRED CONTACT THE ENGINEER OF RECORD.
5. SUBSTANTIAL EFFORT HAS BEEN MADE TO PROVIDE ACCURATE DIMENSIONS AND MEASUREMENTS ON THE DRAWINGS TO ASSIST IN THE FABRICATION AND/OR PLACEMENT OF CONSTRUCTION ELEMENTS BUT IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE DIMENSIONS, MEASUREMENTS, AND/OR CLEARANCES SHOWN IN THE CONSTRUCTION DRAWINGS PRIOR TO FABRICATION OR CUTTING OF ANY NEW OR EXISTING CONSTRUCTION ELEMENTS. IF IT IS DETERMINED THAT THERE ARE DISCREPANCIES AND/OR CONFLICTS WITH THE CONSTRUCTION DRAWINGS THE ENGINEER OF RECORD IS TO BE NOTIFIED AS SOON AS POSSIBLE.
6. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING CONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CROWN CASTLE.
7. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
8. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
9. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
10. IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CARRIER AND CROWN CASTLE PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
11. CONTRACTOR IS TO PERFORM A SITE INVESTIGATION AND IS TO DETERMINE THE BEST ROUTING OF ALL CONDUITS FOR POWER, AND TELCO AND FOR GROUNDING CABLES AS SHOWN IN THE POWER, TELCO, AND GROUNDING PLAN DRAWINGS.
12. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF CROWN CASTLE USA INC.
13. CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
14. CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.

CONCRETE, FOUNDATIONS, AND REINFORCING STEEL:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST–IN–PLACE CONCRETE.
2. UNLESS NOTED OTHERWISE, SOIL BEARING PRESSURE USED FOR DESIGN OF SLABS AND FOUNDATIONS IS ASSUMED TO BE 1000 psf.
3. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (f'c) OF 3000 psi AT 28 DAYS, UNLESS NOTED OTHERWISE. NO MORE THAN 90 MINUTES SHALL ELAPSE FROM BATCH TIME TO TIME OF PLACEMENT UNLESS APPROVED BY THE ENGINEER OF RECORD. TEMPERATURE OF CONCRETE SHALL NOT EXCEED 90°f AT TIME OF PLACEMENT.
4. CONCRETE EXPOSED TO FREEZE–THAW CYCLES SHALL CONTAIN AIR ENTRAINING ADMIXTURES. AMOUNT OF AIR ENTRAINMENT TO BE BASED ON SIZE OF AGGREGATE AND F3 CLASS EXPOSURE (VERY SEVERE). CEMENT USED TO BE TYPE II PORTLAND CEMENT WITH A MAXIMUM WATER–TO–CEMENT RATIO (W/C) OF 0.45.
5. ALL STEEL REINFORCING SHALL CONFORM TO ASTM A615. ALL WELDED WIRE FABRIC (WWF) SHALL CONFORM TO ASTM A185. ALL SPLICES SHALL BE CLASS "B" TENSION SPLICES, UNLESS NOTED OTHERWISE. ALL HOOKS SHALL BE STANDARD 90 DEGREE HOOKS, UNLESS NOTED OTHERWISE. YIELD STRENGTH (Fy) OF STANDARD DEFORMED BARS ARE AS FOLLOWS:
   #4 BARS AND SMALLER....................40 ksi
   #5 BARS AND LARGER....................60 ksi
6. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
   CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH....................3"
   CONCRETE EXPOSED TO EARTH OR WEATHER:
      #6 BARS AND LARGER....................2"
      #5 BARS AND SMALLER....................1–1/2"
   CONCRETE NOT EXPOSED TO EARTH OR WEATHER:
      SLAB AND WALLS....................3/4"
      BEAMS AND COLUMNS....................1–1/2"
7. A TOOLED EDGE OR A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNLESS NOTED OTHERWISE, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.

GREENFIELD GROUNDING NOTES:

1. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION AND AC POWER GES'S) SHALL BE BONDED TOGETHER AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
2. THE CONTRACTOR SHALL PERFORM IEEE FALL–OF–POTENTAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR GROUND ELECTRODE SYSTEMS, THE CONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
3. THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING GROUNDING AND UNDERGROUND CONDUIT INSTALLATION AS TO PREVENT ANY LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT AND PROVIDE TESTING RESULTS.
4. METAL CONDUIT AND TRAY SHALL BE GROUNDED AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
5. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.
6. EACH CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, #6 STRANDED COPPER OR LARGER FOR INDOOR BTS; #2 BARE SOLID TINNED COPPER FOR OUTDOOR BTS.
7. CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED BACK TO BACK CONNECTIONS ON OPPOSITE SIDE OF THE GROUND BUS ARE PERMITTED.
8. ALL EXTERIOR GROUND CONDUCTORS BETWEEN EQUIPMENT/GROUND BARS AND THE GROUND RING SHALL BE #2 SOLID TINNED COPPER UNLESS OTHERWISE INDICATED.
9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
10. USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.
11. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
12. ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR AND EXTERIOR) SHALL BE FORMED USING HIGH PRESS CRIMPS.
13. COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC WELD CONNECTIONS.
14. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.
15. APPROVED ANTIOXIDANT COATINGS (i.e. CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
16. ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
17. MISCELLANEOUS ELECTRICAL AND NON–ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
18. BOND ALL METALLIC OBJECTS WITHIN 6 ft OF MAIN GROUND RING WITH (1) #2 BARE SOLID TINNED COPPER GROUND CONDUCTOR.
19. GROUND CONDUCTORS USED FOR THE FACILITY GROUNDING AND LIGHTNING PROTECTION SYSTEMS SHALL NOT BE ROUTED THROUGH METALLIC OBJECTS THAT FORM A RING AROUND THE CONDUCTOR, SUCH AS METALLIC CONDUITS, METAL SUPPORT CLIPS OR SLEEVES THROUGH WALLS OR FLOORS. WHEN IT IS REQUIRED TO BE HOUSED IN CONDUIT TO MEET CODE REQUIREMENTS OR LOCAL CONDITIONS, NON–METALLIC MATERIAL SUCH AS PVC CONDUIT SHALL BE USED. WHERE USE OF METAL CONDUIT IS UNAVOIDABLE (i.e., NONMETALLIC CONDUIT PROHIBITED BY LOCAL CODE) THE GROUND CONDUCTOR SHALL BE BONDED TO EACH END OF THE METAL CONDUIT.
20. ALL GROUNDS THAT TRANSITION FROM BELOW GRADE TO ABOVE GRADE MUST BE #2 BARE SOLID TINNED COPPER IN 3/4" NON–METALLIC, FLEXIBLE CONDUIT FROM 24" BELOW GRADE TO WITHIN 3" TO 6" OF CAD–WELD TERMINATION POINT. THE EXPOSED END OF THE CONDUIT MUST BE SEALED WITH SILICONE CAULK. (ADD TRANSITIONING GROUND STANDARD DETAIL AS WELL).
21. BUILDINGS WHERE THE MAIN GROUNDING CONDUCTORS ARE REQUIRED TO BE ROUTED TO GRADE, THE CONTRACTOR SHALL ROUTE TWO GROUNDING CONDUCTORS FROM THE ROOFTOP, TOWERS, AND WATER TOWERS GROUNDING RING, TO THE EXISTING GROUNDING SYSTEM, THE GROUNDING CONDUCTORS SHALL NOT BE SMALLER THAN 2/0 COPPER. ROOFTOP GROUNDING RING SHALL BE BONDED TO THE EXISTING GROUNDING SYSTEM, THE BUILDING STEEL COLUMNS, LIGHTNING PROTECTION SYSTEM, AND BUILDING MAIN WATER LINE (FERROUS OR NONFERROUS METAL PIPING ONLY).

ELECTRICAL INSTALLATION NOTES:

1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES/ORDINANCES.
2. CONDUIT ROUTINGS ARE SCHEMATIC. CONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED AND TRIP HAZARDS ARE ELIMINATED.
3. WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC.
4. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC.
   - 4.1. ALL EQUIPMENT SHALL BEAR THE UNDERWRITERS LABORATORIES LABEL OF APPROVAL, AND SHALL CONFORM TO REQUIREMENT OF THE NATIONAL ELECTRICAL CODE.
   - 4.2. ALL OVERCURRENT DEVICES SHALL HAVE AN INTERRUPTING CURRENT RATING THAT SHALL BE GREATER THAN THE SHORT CIRCUIT CURRENT TO WHICH THEY ARE SUBJECTED, 22,000 AIC MINIMUM. VERYIFY AVAILABLE SHORT CIRCUIT CURRENT DOES NOT EXCEED THE RATING OF ELECTRICAL EQUIPMENT IN ACCORDANCE WITH ARTICLE 110.24 NEC OR THE MOST CURRENT ADOPTED CODE PRE THE GOVERNING JURISDICTION.
5. EACH END OF EVERY POWER PHASE CONDUCTOR, GROUNDING CONDUCTOR, AND TELCO CONDUCTOR OR CABLE SHALL BE LABELED WITH COLOR–CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2" PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC AND OSHA.
6. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH LAMICOID TAGS SHOWING THEIR RATED VOLTAGE, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING AND BRANCH CIRCUIT ID NUMBERS (i.e. PANEL BOARD AND CIRCUIT ID'S).
7. PANEL BOARDS (ID NUMBERS) SHALL BE CLEARLY LABELED WITH PLASTIC LABELS.
8. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
9. ALL POWER AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE COPPER CONDUCTOR (#14 OR LARGER) WITH TYPE THHW, THWN, THWN–2, XHHW, XHHW–2, THW, THW–2, RHW, OR RHW–2 INSULATION UNLESS OTHERWISE SPECIFIED.
10. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE COPPER CONDUCTOR (#6 OR LARGER) WITH TYPE THHW, THWN, THWN–2, XHHW, XHHW–2, THW, THW–2, RHW, OR RHW–2 INSULATION UNLESS OTHERWISE SPECIFIED.
11. POWER AND CONTROL WIRING IN FLEXIBLE CORD SHALL BE MULTI–CONDUCTOR, TYPE SOOW CORD (#14 OR LARGER) UNLESS OTHERWISE SPECIFIED.
12. POWER AND CONTROL WIRING FOR USE IN CABLE TRAY SHALL BE MULTI–CONDUCTOR, TYPE TC CABLE (#14 OR LARGER), WITH TYPE THHW, THWN, THWN–2, XHHW, XHHW–2, THW, THW–2, RHW, OR RHW–2 INSULATION UNLESS OTHERWISE SPECIFIED.
13. ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP–STYLE, COMPRESSION WIRE LUGS AND WIRE NUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRE NUTS SHALL BE RATED FOR OPERATION NOT LESS THAN 75° C (90° C IF AVAILABLE).
14. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.
15. ELECTRICAL METALLIC TUBING (EMT), INTERMEDIATE METAL CONDUIT (IMC), OR RIGID METAL CONDUIT (RMC) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
16. ELECTRICAL METALLIC TUBING (EMT) OR METAL–CLAD CABLE (MC) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
17. UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC ON STRAIGHTS AND SCHEDULE 80 PVC UNDER ALL TRAFFIC EASEMENTS AND ALL ELBOWS/90s. ABOVE GRADE CONDUIT TO BE SCH 80 PVC OR IMC/RMC CONDUIT. EMT IS ALLOWED AT STUB UP LOCATIONS AND INDOORS ONLY.
18. LIQUID–TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID–TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
19. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION–TYPE AND APPROVED FOR THE LOCATION USED. SET SCREW FITTINGS ARE NOT ACCEPTABLE.
20. CABINETS, BOXES AND WIRE WAYS SHALL BE LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND THE NEC.
21. WIREWAYS SHALL BE METAL WITH AN ENAMEL FINISH AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARDS (WIREMOLD SPECMATE WIREWAY).
22. SLOTTED WIRING DUCT SHALL BE PVC AND INCLUDE COVER (PANDUIT TYPE E OR EQUAL).
23. CONDUITS SHALL BE FASTENED SECURELY IN PLACE WITH APPROVED NON–PERFORATED STRAPS AND HANGERS. EXPLOSIVE DEVICES (i.e. POWDER–ACTUATED) FOR ATTACHING HANGERS TO STRUCTURE WILL NOT BE PERMITTED. CLOSELY FOLLOW THE LINES OF THE STRUCTURE, MAINTAIN CLOSE PROXIMITY TO THE STRUCTURE AND KEEP CONDUITS IN TIGHT ENVELOPES. CHANGES IN DIRECTION TO ROUTE AROUND OBSTACLES SHALL BE MADE WITH CONDUIT OUTLET BODIES. CONDUIT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER. PARALLEL AND PERPENDICULAR TO STRUCTURE WALL AND CEILING LINES. ALL CONDUIT SHALL BE FISHED TO CLEAR OBSTRUCTIONS. ENDS OF CONDUITS SHALL BE TEMPORARILY CAPPED FLUSH TO FINISH GRADE TO PREVENT CONCRETE, PLASTER OR DIRT FROM ENTERING. CONDUITS SHALL BE RIGIDLY CLAMPED TO BOXES BY GALVANIZED MALLEABLE IRON BUSHING ON INSIDE AND GALVANIZED MALLEABLE IRON LOCKNUT ON OUTSIDE AND INSIDE.
24. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES AND PULL BOXES SHALL BE GALVANIZED OR EPOXY–COATED SHEET STEEL. SHALL MEET OR EXCEED UL 50 AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND NEMA 3R (OR BETTER) FOR EXTERIOR LOCATIONS.
25. METAL RECEPTACLE, SWITCH AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY–COATED OR NON–CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1 AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND WEATHER PROTECTED (WP OR BETTER) FOR EXTERIOR LOCATIONS.
26. NONMETALLIC RECEPTACLE, SWITCH AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2 (NEWEST REVISION) AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND WEATHER PROTECTED (WP OR BETTER) FOR EXTERIOR LOCATIONS.
27. THE CONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CARRIER AND/OR CROWN CASTLE USA INC. BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
28. THE CONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD LIFE AND PROPERTY.
29. INSTALL LAMICOID LABEL ON THE METER CENTER TO SHOW "VERIZON".
30. ALL EMPTY/SPARE CONDUITS THAT ARE INSTALLED ARE TO HAVE A METERED MULE TAPE PULL CORD INSTALLED.

CONDUCTOR COLOR CODE

SYSTEM	CONDUCTOR	COLOR
120/240V, 1Ø	A PHASE	BLACK
	B PHASE	RED
	NEUTRAL	WHITE
	GROUND	GREEN
120/208V, 3Ø	A PHASE	BLACK
	B PHASE	RED
	C PHASE	BLUE
	NEUTRAL	WHITE
	GROUND	GREEN
277/480V, 3Ø	A PHASE	BROWN
	B PHASE	ORANGE OR PURPLE
	C PHASE	YELLOW
	NEUTRAL	GREY
	GROUND	GREEN
DC VOLTAGE	POS (+)	RED**
	NEG (–)	BLACK**

* SEE NEC 210.5(C)(1) AND (2)
** POLARITY MARKED AT TERMINATION

APWA UNIFORM COLOR CODE:

WHITE	PROPOSED EXCAVATION
PINK	TEMPORARY SURVEY MARKINGS
RED	ELECTRIC POWER LINES, CABLES, CONDUIT, AND LIGHTING CABLES
YELLOW	GAS, OIL, STEAM, PETROLEUM, OR GASEOUS MATERIALS
ORANGE	COMMUNICATION, ALARM OR SIGNAL LINES, CABLES, OR CONDUIT AND TRAFFIC LOOPS
BLUE	POTABLE WATER
PURPLE	RECLAIMED WATER, IRRIGATION, AND SLURRY LINES
GREEN	SEWERS AND DRAIN LINES

ABBREVIATIONS:

ANT	ANTENNA
(E)	EXISTING
FIF	FACILITY INTERFACE FRAME
GEN	GENERATOR
GPS	GLOBAL POSITIONING SYSTEM
GSM	GLOBAL SYSTEM FOR MOBILE
LTE	LONG TERM EVOLUTION
MGB	MASTER GROUND BAR
MW	MICROWAVE
(N)	NEW
NEC	NATIONAL ELECTRIC CODE
(P)	PROPOSED
PP	POWER PLANT
QTY	QUANTITY
RECT	RECTIFIER
RBS	RADIO BASE STATION
RET	REMOTE ELECTRIC TILT
RFDS	RADIO FREQUENCY DATA SHEET
RRH	REMOTE RADIO HEAD
RRU	REMOTE RADIO UNIT
SIAD	SMART INTEGRATED DEVICE
TMA	TOWER MOUNTED AMPLIFIER
TYP	TYPICAL
UMTS	UNIVERSAL MOBILE TELECOMMUNICATIONS SYSTEM
W.P.	WORK POINT

verizon
20 ALEXANDER DRIVE, 2ND FLOOR
WALLINGFORD, CT 06492

CROWN CASTLE
3 CORPORATE PARK DRIVE, SUITE 101
CLIFTON PARK, NY 12065

TOWER
ENGINEERING
PROFESSIONALS

326 TRYON RD
RALEIGH, NC 27603
(919) 661-6351

TEP JOB #: 63731.944603

VERIZON SITE NUMBER:
5000245769

BU #: **806478**

CROWN CASTLE SITE NAME
HRT 080 953381
539 PLAINS RD
HADDAM, CT 06438

EXISTING 190'-0" SELF
SUPPORT TOWER

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	04/08/24	NP	PRELIMINARY	VD

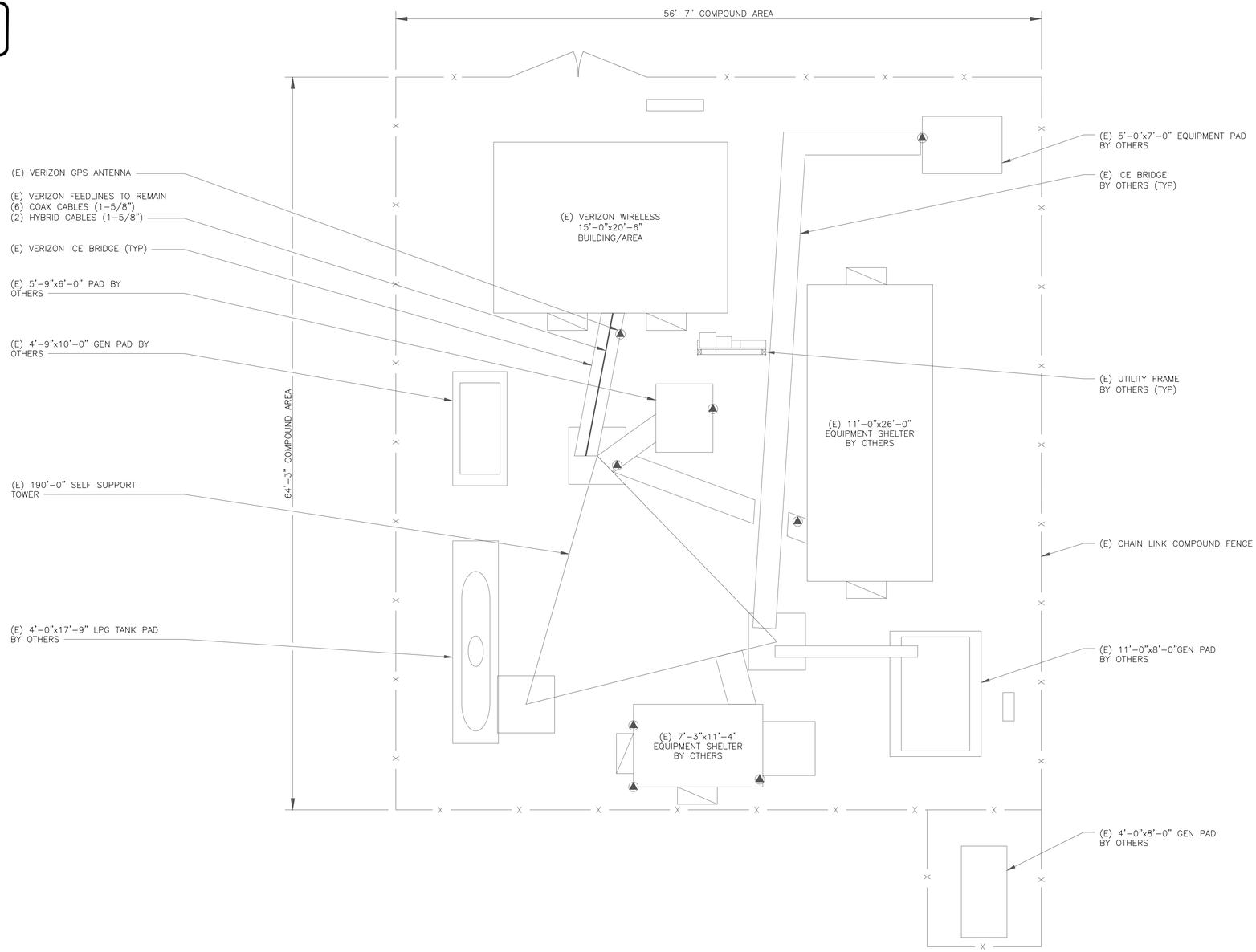
35536
04/08/24

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

SHEET NUMBER: T-2
REVISION: 0

NOTE:
SITE PLAN SHOWN BELOW WAS REPRODUCED FROM INFORMATION PROVIDED BY CROWN CASTLE. CONTRACTOR TO VERIFY ALL EXISTING INFORMATION IS AS INDICATED ON COMPOUND PLAN. CONTRACTOR IS TO ESTABLISH THE EXISTENCE AND LOCATION OF ALL EXISTING UNDERGROUND AND OVERHEAD UTILITIES. IMMEDIATELY NOTIFY THE CONSTRUCTION MANAGER OF ANY DISCREPANCIES.

FLOODPLAIN NOTE:
THE TOWER IS LOCATED IN ZONE "X" AREAS OF MINIMAL FLOODING ACCORDING TO FEMA COMMUNITY PANEL #09007C0234G, DATED 08/28/2008



1 COMPOUND PLAN
SCALE: 4' 2' 0 4' 3/16"=1'-0" (FULL SIZE) 3/32"=1'-0" (11x17)

N

verizon
20 ALEXANDER DRIVE, 2ND FLOOR
WALLINGFORD, CT 06492

CROWN CASTLE
3 CORPORATE PARK DRIVE, SUITE 101
CLIFTON PARK, NY 12065

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VERIZON SITE NUMBER:
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BU #: **806478**

CROWN CASTLE SITE NAME
HRT 080 953381
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HADDAM, CT 06438

EXISTING 190'-0" SELF SUPPORT TOWER

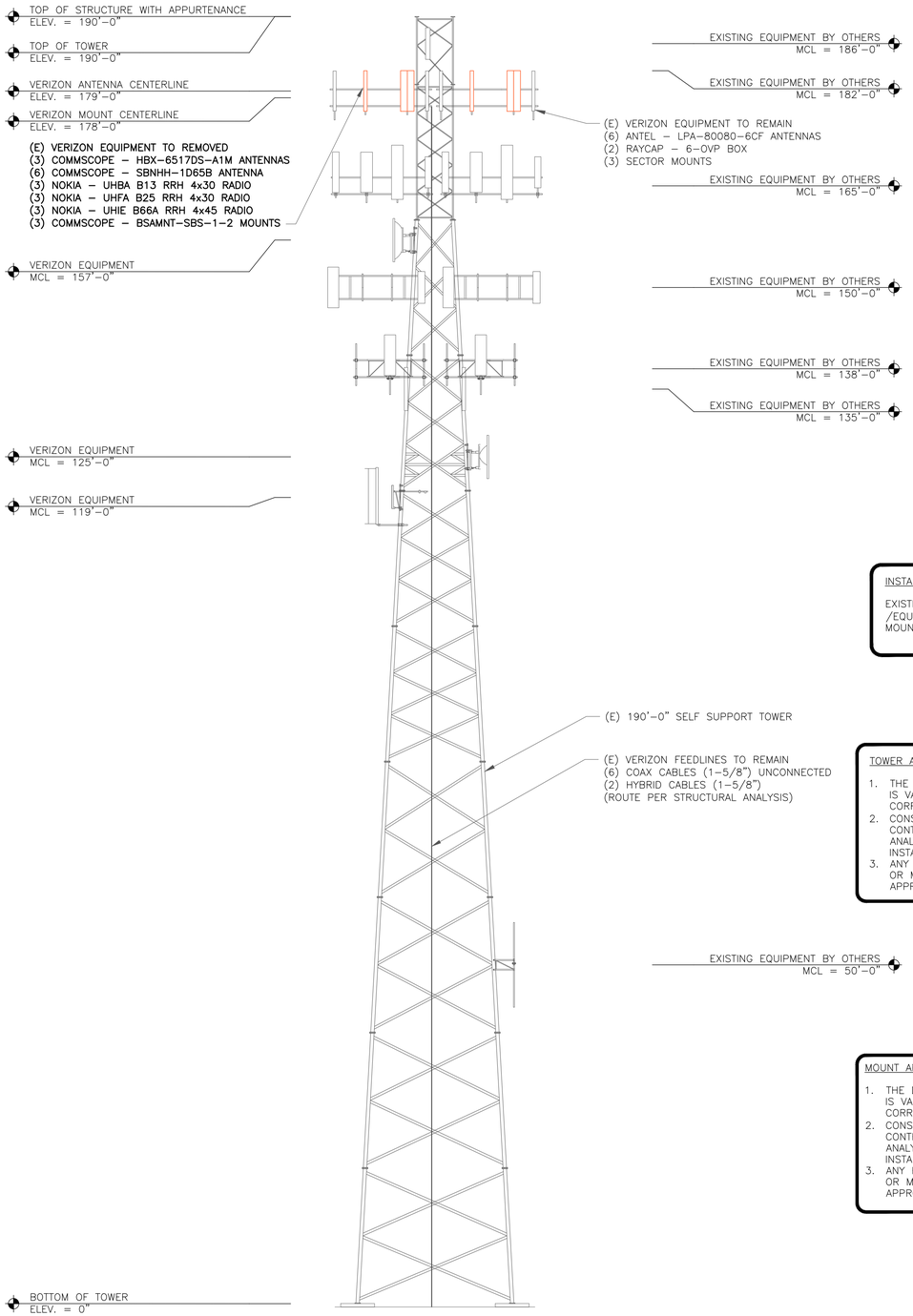
ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	04/08/24	NP	PRELIMINARY	VD

STATE OF CONNECTICUT
SCOTT C. BRANCH
35536
LICENSED PROFESSIONAL ENGINEER
04/08/24

SHEET NUMBER: C-1

REVISION: 0



1 EXISTING TOWER ELEVATION

SCALE: 8' 4' 0 8' 3/32"=1'-0" (FULL SIZE) 3/64"=1'-0" (11x17)

VERIZON EQUIPMENT

ANTENNA CL: 179'-0"
MOUNT CL: 178'-0"

FAA APPROVED HEIGHT: 191'-0"

INSTALLER NOTE:

EXISTING AND PROPOSED ANTENNA /EQUIPMENT POSITIONING SHOWN PER MOUNT ANALYSIS. FIELD CONDITIONS MAY VARY.

TOWER ANALYSIS NOTES:

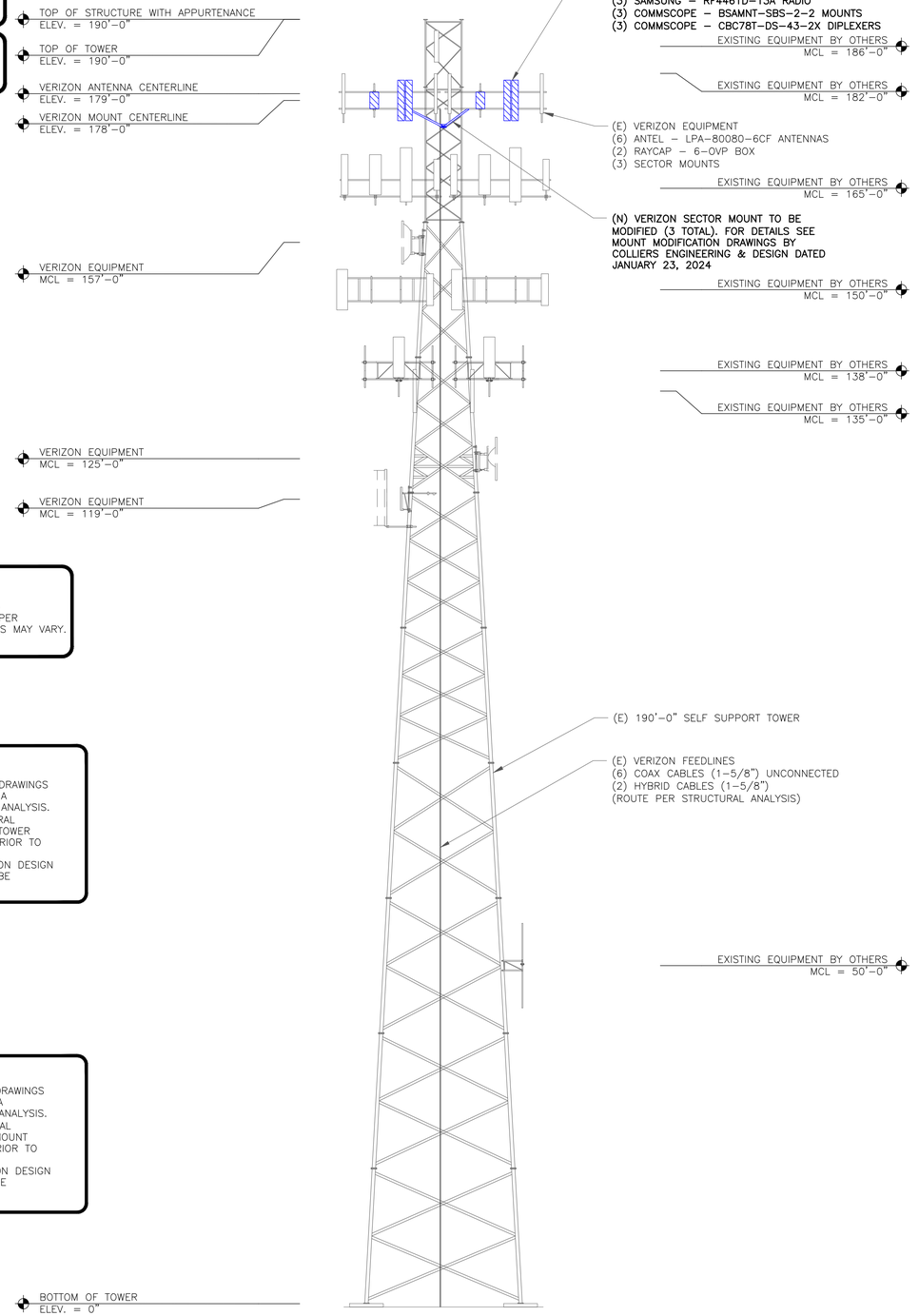
1. THE DESIGN DEPICTED IN THESE DRAWINGS IS VALID WHEN ACCOMPANIED BY A CORRESPONDING PASSING TOWER ANALYSIS.
2. CONSTRUCTION MANAGER / GENERAL CONTRACTOR SHALL REVIEW THE TOWER ANALYSIS FOR ANY CONDITIONS PRIOR TO INSTALLATION.
3. ANY REQUIRED TOWER MODIFICATION DESIGN OR MOUNT REPLACEMENT SHALL BE APPROVED BY EOR.

MOUNT ANALYSIS NOTES:

1. THE DESIGN DEPICTED IN THESE DRAWINGS IS VALID WHEN ACCOMPANIED BY A CORRESPONDING PASSING MOUNT ANALYSIS.
2. CONSTRUCTION MANAGER / GENERAL CONTRACTOR SHALL REVIEW THE MOUNT ANALYSIS FOR ANY CONDITIONS PRIOR TO INSTALLATION.
3. ANY REQUIRED MOUNT MODIFICATION DESIGN OR MOUNT REPLACEMENT SHALL BE APPROVED BY EOR.

INSTALLER NOTE:

NO PROPOSED LOADING TO BE ADDED UNTIL TOWER MODIFICATIONS ARE INSTALLED PER TOWER MODIFICATION DESIGN BY COLLIERS ENGINEERING & DESIGN, DATED 01/23/2024.



2 FINAL TOWER ELEVATION

SCALE: 8' 4' 0 8' 3/32"=1'-0" (FULL SIZE) 3/64"=1'-0" (11x17)

verizon
20 ALEXANDER DRIVE, 2ND FLOOR
WALLINGFORD, CT 06492

CROWN CASTLE
3 CORPORATE PARK DRIVE, SUITE 101
CLIFTON PARK, NY 12065

TOWER ENGINEERING PROFESSIONALS
326 TRYON RD
RALEIGH, NC 27603
(919) 661-6351
TEP JOB #: 63731.944603

VERIZON SITE NUMBER:
5000245769

BU #: **806478**

CROWN CASTLE SITE NAME
HRT 080 953381
539 PLAINS RD
HADDAM, CT 06438

EXISTING 190'-0" SELF SUPPORT TOWER

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	04/08/24	NP	PRELIMINARY	VD

04/08/24

SHEET NUMBER: C-2

REVISION: 0

INSTALLER NOTE:

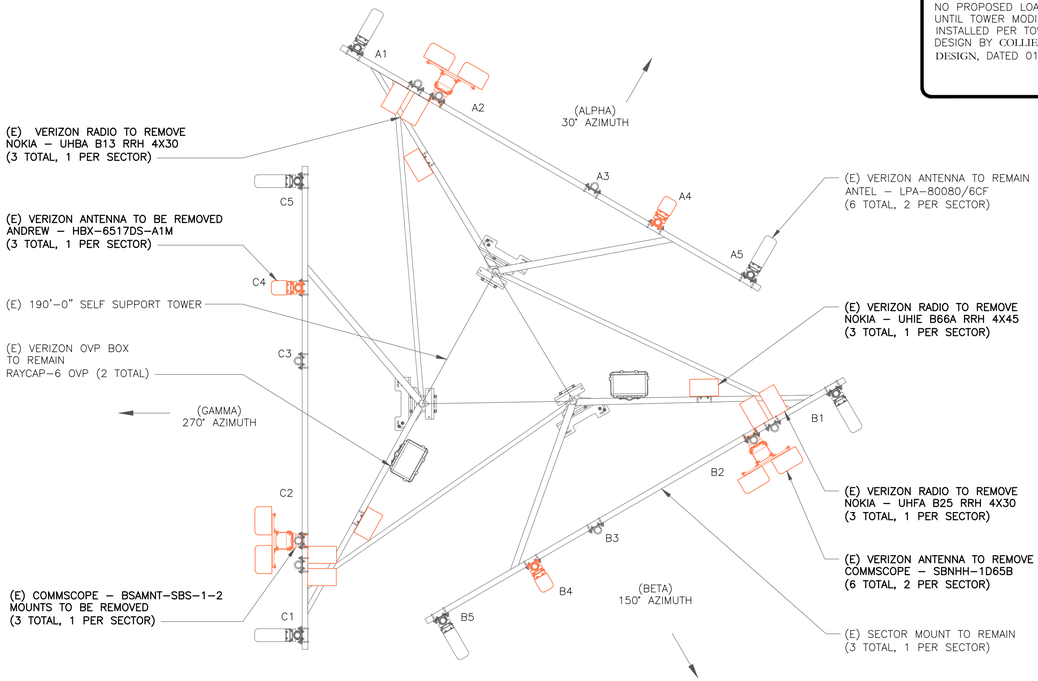
EXISTING AND PROPOSED ANTENNA AND EQUIPMENT POSITIONING SHOWN PER MOUNT ANALYSIS. FIELD CONDITIONS MAY VARY.

TIE-BACK ARM NOTE:

TIE-BACK ARMS SHOWN ARE FOR REFERENCE PURPOSES ONLY. TIE-BACK ARMS TO BE INSTALLED PER MOUNT MANUFACTURERS SPECIFICATIONS, ALSO ADHERING TO CROWN CASTLE CED-STD-10294 STANDARD FOR INSTALLATION OF MOUNTS AND APPURTENANCES.

INSTALLER NOTE:

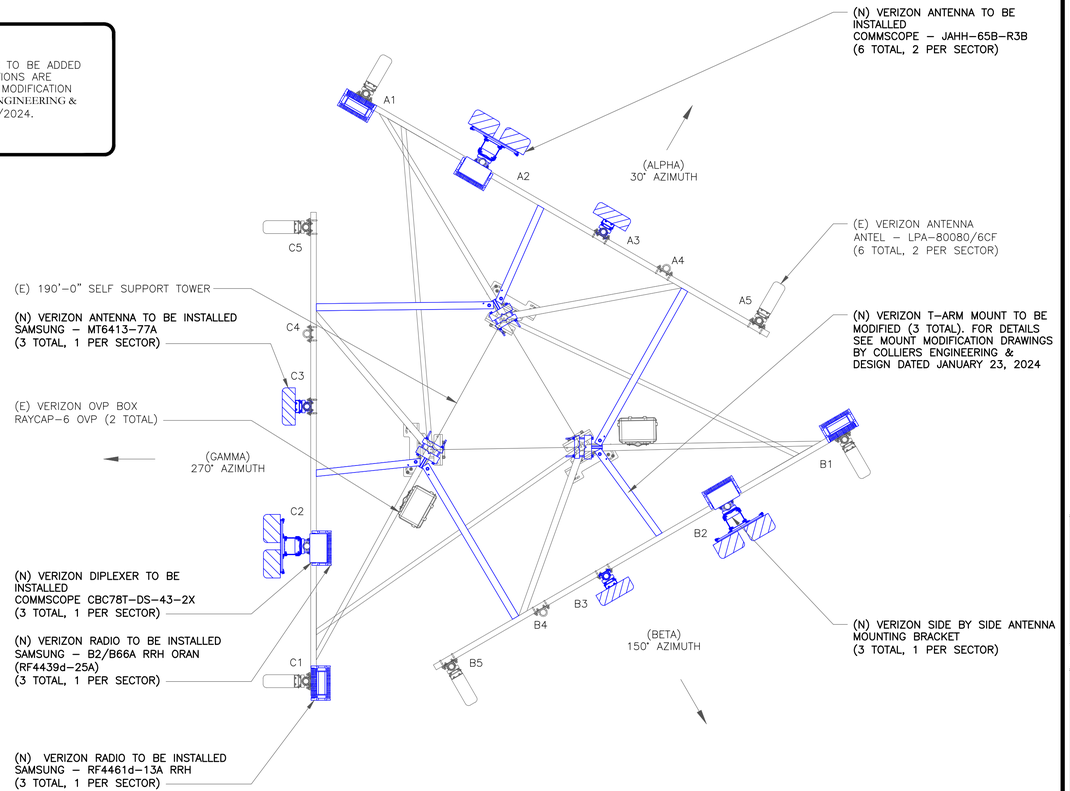
NO PROPOSED LOADING TO BE ADDED UNTIL TOWER MODIFICATIONS ARE INSTALLED PER TOWER MODIFICATION DESIGN BY COLLIERS ENGINEERING & DESIGN, DATED 01/23/2024.



1 EXISTING ANTENNA PLAN

SCALE: 2' 1' 0 2' 3/8"=1'-0" (FULL SIZE) 3/16"=1'-0" (11x17)

N



2 FINAL ANTENNA PLAN

SCALE: 2' 1' 0 2' 3/8"=1'-0" (FULL SIZE) 3/16"=1'-0" (11x17)

N

MOUNT ANALYSIS NOTES:

1. THE DESIGN DEPICTED IN THESE DRAWINGS IS VALID WHEN ACCOMPANIED BY A CORRESPONDING PASSING MOUNT ANALYSIS.
2. CONSTRUCTION MANAGER / GENERAL CONTRACTOR SHALL REVIEW THE MOUNT ANALYSIS FOR ANY CONDITIONS PRIOR TO INSTALLATION.
3. ANY REQUIRED MOUNT MODIFICATION DESIGN OR MOUNT REPLACEMENT SHALL BE APPROVED BY EOR.

verizon
20 ALEXANDER DRIVE, 2ND FLOOR
WALLINGFORD, CT 06492

CROWN CASTLE
3 CORPORATE PARK DRIVE, SUITE 101
CLIFTON PARK, NY 12065

TOWER ENGINEERING PROFESSIONALS
326 TRYON RD
RALEIGH, NC 27603
(919) 661-6351
TEP JOB #: 63731.944603

VERIZON SITE NUMBER:
5000245769

BU #: **806478**

CROWN CASTLE SITE NAME
HRT 080 953381
539 PLAINS RD
HADDAM, CT 06438

EXISTING 190'-0" SELF SUPPORT TOWER

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	04/08/24	NP	PRELIMINARY	VD

04/08/24

SHEET NUMBER: C-3

REVISION: 0

FINAL EQUIPMENT SCHEDULE
(VERIFY WITH CURRENT RFDS)

POSITION	ANTENNA				RADIO			DIPLEXER			TMA		SURGE PROTECTION		CABLES			
	TECH	STATUS/MANUFACTURER MODEL	AZIMUTH	RAD CENTER	QTY.	STATUS/MODEL	LOCATION	QTY.	STATUS	LOCATION	QTY.	STATUS	QTY.	STATUS/MODEL	QTY.	STATUS/TYPE	SIZE	LENGTH
A1	1900	(E) ANTEL – LPA–80080/6CF	30°	179'–0"	1	(N) SAMSUNG – B2/B66A RRH ORAN (RF4439D–25A)	TOWER	–	–	–	–	–	–	–	1	6x12 HYBRID CABLE	1–5/8	±229'
A2	850 700	(N) COMMSCOPE,ANDREW – JAHH–65B–R3B	30°	179'–0"	1	(N) SAMSUNG – RF4461D–13A	TOWER	1	(N)	TOWER	–	–	–	–	–	–	–	–
		(N) COMMSCOPE,ANDREW – JAHH–65B–R3B	30°	179'–0"														
A3	–	(N) SAMSUNG – MT6413–77A	30°	179'–0"	–	–	–	–	–	–	–	–	–	–	–	–	–	–
A4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
A5	–	(E) ANTEL – LPA–80080/6CF	30°	179'–0"	–	–	–	–	–	–	–	–	–	–	–	–	–	–
B1	1900	(E) ANTEL – LPA–80080/6CF	150°	179'–0"	1	(N) SAMSUNG – B2/B66A RRH ORAN (RF4439D–25A)	TOWER	–	–		–	–	–	–	1	6x12 HYBRID CABLE	1–5/8	±229'
B2	850 700	(N) COMMSCOPE,ANDREW – JAHH–65B–R3B	150°	179'–0"	1	(N) SAMSUNG – RF4461D–13A	TOWER	1	(N)	TOWER	–	–	–	–	–	–	–	–
		(N) COMMSCOPE,ANDREW – JAHH–65B–R3B	150°	179'–0"														
B3	–	(N) SAMSUNG – MT6413–77A	150°	179'–0"	–	–	–	–	–	–	–	–	–	–	–	–	–	–
B4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
B5	–	(E) ANTEL – LPA–80080/6CF	150°	179'–0"	–	–	–	–	–	–	–	–	–	–	–	–	–	–
G1	1900	(E) ANTEL – LPA–80080/6CF	270°	179'–0"	1	(N) SAMSUNG – B2/B66A RRH ORAN (RF4439D–25A)	TOWER	–	–		–	–	–	–	–	–	–	–
G2	850 700	(N) COMMSCOPE,ANDREW – JAHH–65B–R3B	270°	179'–0"	1	(N) SAMSUNG – RF4461D–13A	TOWER	1	(N)	TOWER	–	–	–	–	–	–	–	–
		(N) COMMSCOPE,ANDREW – JAHH–65B–R3B	270°	179'–0"														
G3	–	(N) SAMSUNG – MT6413–77A	270°	179'–0"	–	–	–	–	–	–	–	–	–	–	–	–	–	–
G4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
G5	–	(E) ANTEL – LPA–80080/6CF	270°	179'–0"	–	–	–	–	–		–	–	–	–	–	–	–	–

–

UNUSED FEEDLINES

6	COAX CABLES	1–5/8	±229'
–	–	–	–

1 FINAL EQUIPMENT SCHEDULE
SCALE: NOT TO SCALE

verizon
20 ALEXANDER DRIVE, 2ND FLOOR
WALLINGFORD, CT 06492

CROWN CASTLE
3 CORPORATE PARK DRIVE, SUITE 101
CLIFTON PARK, NY 12065

TOWER ENGINEERING PROFESSIONALS
326 TRYON RD
RALEIGH, NC 27603
(919) 661-6351
TEP JOB #: 63731.944603

VERIZON SITE NUMBER:
5000245769

BU #: **806478**

CROWN CASTLE SITE NAME
HRT 080 953381
539 PLAINS RD
HADDAM, CT 06438

EXISTING 190'-0" SELF SUPPORT TOWER

ISSUED FOR:

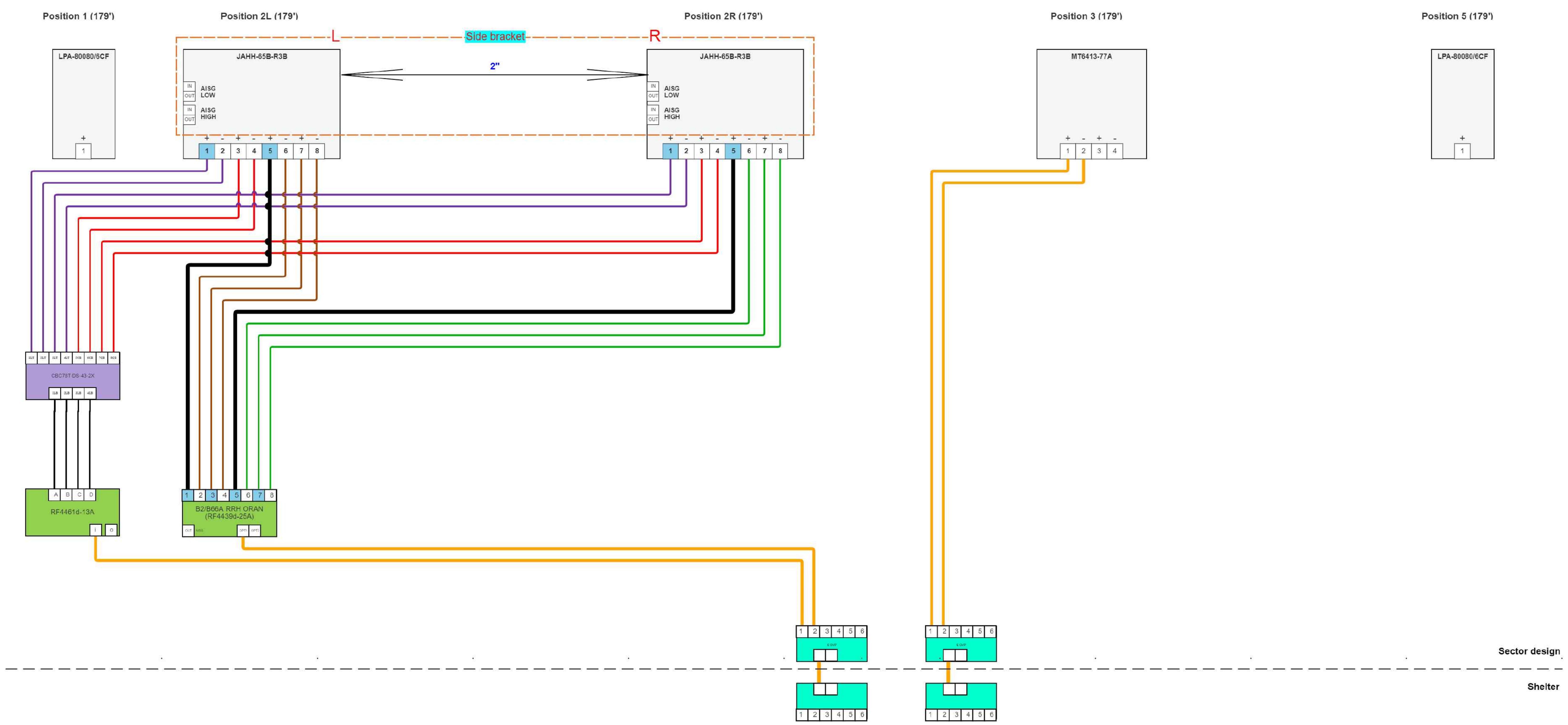
REV	DATE	DRWN	DESCRIPTION	DES./QA
0	04/08/24	NP	PRELIMINARY	VD

STATE OF CONNECTICUT
SCOTT C. BRANTLEY
LICENSED PROFESSIONAL ENGINEER
04/08/24

SHEET NUMBER: C-4

REVISION: 0

Alpha
(Proposed)



Legends

RET dc signal capable port

- 700/850(LB)
- 700(LT)
- 850(CB)
- AWS(AW)
- PCS(PC)
- AWS/PCS(HB)
- 28GHz(U28)
- 39GHz(U39)
- L-Sub6(S6)
- CBRS(RS)
- LAA(LA)
- Fiber
- AISG
- DC

Coax
Coax Jumper
Sectors Shared Equipments

Notes:

-Antenna view is from the back of the antennas
-Colors of connections are just for clarification
-Size of objects in drawing doesn't reflect equipment true dimensions

1 RFDS PLUMBING DIAGRAM

verizon
20 ALEXANDER DRIVE, 2ND FLOOR
WALLINGFORD, CT 06492

CROWN CASTLE
3 CORPORATE PARK DRIVE, SUITE 101
CLIFTON PARK, NY 12065

TOWER ENGINEERING PROFESSIONALS
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RALEIGH, NC 27603
(919) 661-6351
TEP JOB #: 63731.944603

VERIZON SITE NUMBER:
5000245769

BU #: **806478**

CROWN CASTLE SITE NAME
HRT 080 953381
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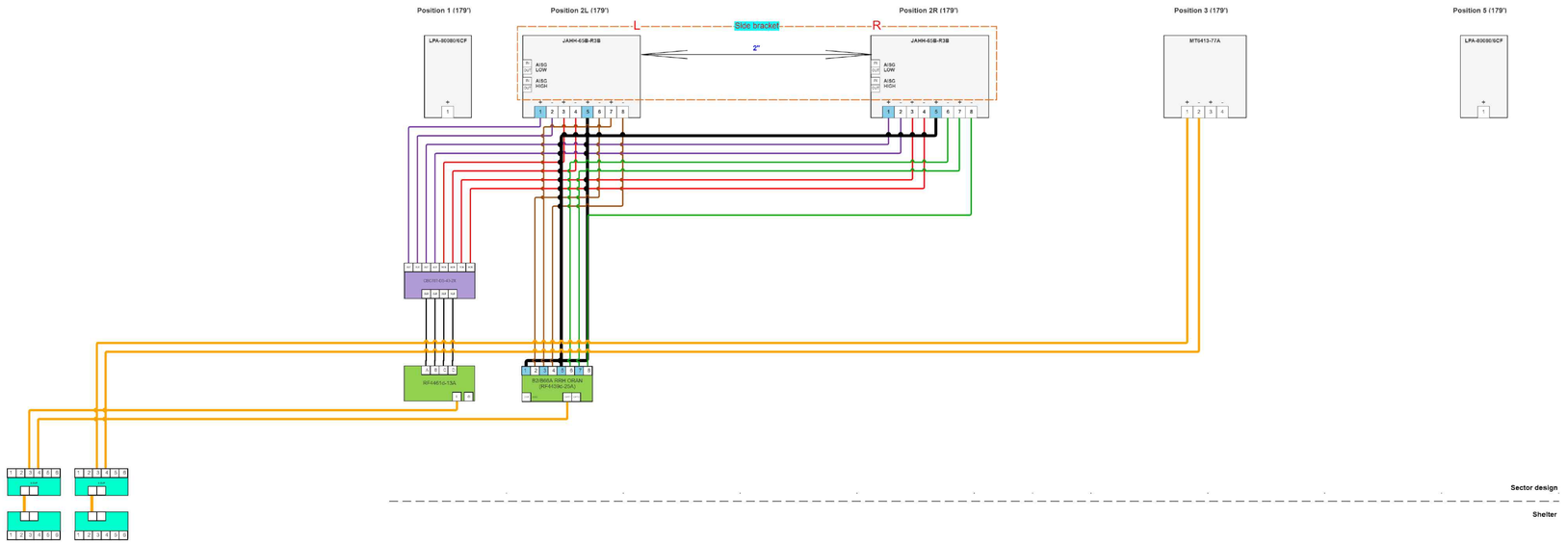
EXISTING 190'-0" SELF SUPPORT TOWER

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	04/08/24	NP	PRELIMINARY	VD

04/08/24

SHEET NUMBER: C-5.1
REVISION: 0



Beta
(Proposed)

Legends

RET dc signal capable port

- 700/850(LB)
- 700(LT)
- 850(CB)
- AWS(AW)
- PCS(PC)
- AWS/PCS(HB)
- 28GHz(U28)
- 39GHz(U39)
- L-Sub6(S6)
- CBRS(RS)
- LAA(LA)
- Fiber
- AISG
- DC
- Coax
- Coax Jumper
- Sectors Shared Equipments

Notes:

-Antenna view is from the back of the antennas
-Colors of connections are just for clarification
-Size of objects in drawing doesn't reflect equipment true dimensions

verizon

20 ALEXANDER DRIVE, 2ND FLOOR
WALLINGFORD, CT 06492

CROWN CASTLE

3 CORPORATE PARK DRIVE, SUITE 101
CLIFTON PARK, NY 12065

TOWER ENGINEERING PROFESSIONALS

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TEP JOB #: 63731.944603

VERIZON SITE NUMBER:
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BU #: **806478**

CROWN CASTLE SITE NAME
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EXISTING 190'-0" SELF SUPPORT TOWER

ISSUED FOR:

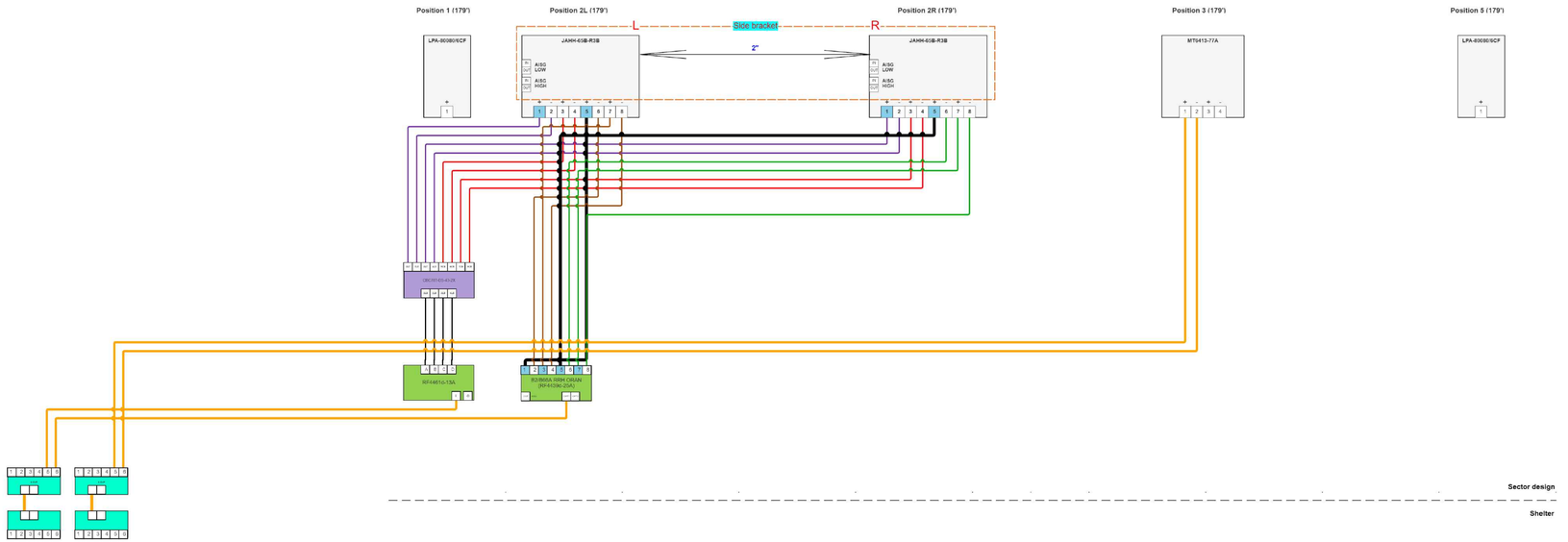
REV	DATE	DRWN	DESCRIPTION	DES./QA
0	04/08/24	NP	PRELIMINARY	VD

04/08/24

SHEET NUMBER: C-5.2

REVISION: 0

1 RFDS PLUMBING DIAGRAM



Gamma
(Proposed)

Legends

RET dc signal capable port

- 700/850(LB)
- 700(LT)
- 850(CB)
- AWS(AW)
- PCS(PC)
- AWS/PCS(HB)
- 28GHz(U28)
- 39GHz(U39)
- L-Sub6(S6)
- CBRS(RS)
- LAA(LA)
- Fiber
- AISG
- DC

Coax

Coax Jumper

Sectors Shared Equipments

Notes:

-Antenna view is from the back of the antennas
-Colors of connections are just for clarification
-Size of objects in drawing doesn't reflect equipment true dimensions

verizon

20 ALEXANDER DRIVE, 2ND FLOOR
WALLINGFORD, CT 06492

CROWN CASTLE

3 CORPORATE PARK DRIVE, SUITE 101
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TOWER ENGINEERING PROFESSIONALS

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RALEIGH, NC 27603
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TEP JOB #: 63731.944603

VERIZON SITE NUMBER:
5000245769

BU #: **806478**

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539 PLAINS RD
HADDAM, CT 06438

EXISTING 190'-0" SELF SUPPORT TOWER

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	04/08/24	NP	PRELIMINARY	VD

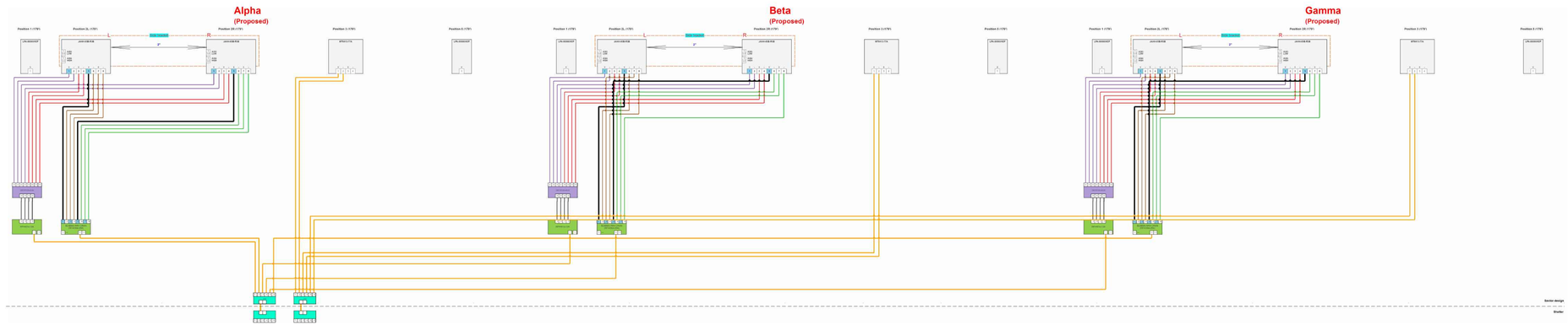
STATE OF CONNECTICUT
SCOTT C. BRANTLEY
35536
LICENSED PROFESSIONAL ENGINEER

04/08/24

SHEET NUMBER: C-5.3

REVISION: 0

1 RFDS PLUMBING DIAGRAM



1 RFDS PLUMBING DIAGRAM

verizon
20 ALEXANDER DRIVE, 2ND FLOOR
WALLINGFORD, CT 06492

CROWN CASTLE
3 CORPORATE PARK DRIVE, SUITE 101
CLIFTON PARK, NY 12065

TOWER ENGINEERING PROFESSIONALS
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(919) 661-6351

TEP JOB #: 63731.944603

VERIZON SITE NUMBER:
5000245769

BU #: **806478**

CROWN CASTLE SITE NAME
HRT 080 953381
539 PLAINS RD
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EXISTING 190'-0" SELF SUPPORT TOWER

ISSUED FOR:

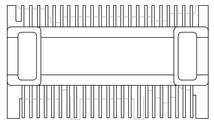
REV	DATE	DRWN	DESCRIPTION	DES./QA
0	04/08/24	NP	PRELIMINARY	VD

STATE OF CONNECTICUT
SCOTT C. BRANTLEY
35536
LICENSED PROFESSIONAL ENGINEER

04/08/24

SHEET NUMBER: C-5.4

REVISION: 0



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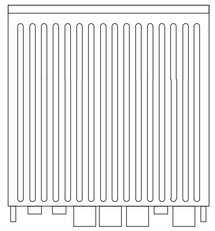
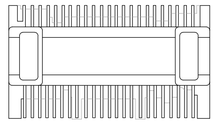


FRONT

SAMSUNG – RF4439D–25A
WEIGHT: 74.7 LBS
SIZE (HxWxD): 14.96X14.96X10.04 IN.

NOTE:
1. MOUNTING OF RRH TO PIPE MAST SHALL BE PER MANUFACTURER DIRECTION.

1 SAMSUNG – RF4439D–25A
SCALE: NOT TO SCALE



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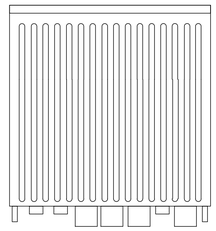


FRONT

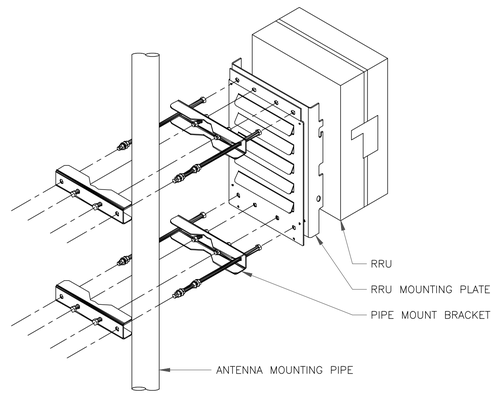
SAMSUNG – RF4461D–13A
WEIGHT: 79.10 LBS
SIZE (HxWxD): 14.96X14.96X10.23 IN.

NOTE:
1. MOUNTING OF RRH TO PIPE MAST SHALL BE PER MANUFACTURER DIRECTION.

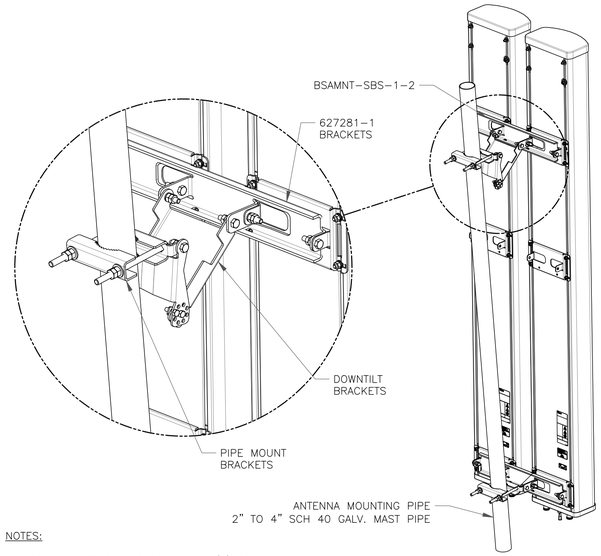
2 SAMSUNG – RF4461D–13A
SCALE: NOT TO SCALE

INSTALLER NOTES:

1. COMPLY WITH MANUFACTURERS INSTRUCTIONS TO ENSURE THAT ALL RRUs RECEIVE ELECTRICAL POWER WITHIN 24 HOURS OF BEING REMOVED FROM THE MANUFACTURER'S PACKAGING.
2. DO NOT OPEN RRU PACKAGES IN THE RAIN.
3. ALL PIPES, BRACKETS, AND MISCELLANEOUS HARDWARE TO BE GALVANIZED UNLESS NOTED OTHERWISE.
4. ANTENNA NOT SHOWN FOR CLARITY



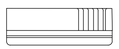
3 RRU MOUNTING DETAIL
SCALE: NOT TO SCALE

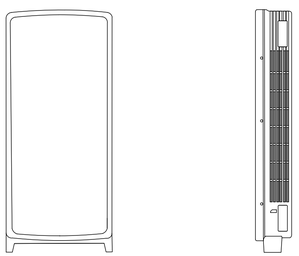


NOTES:

- BSAMNT–SBS–1–2 KIT CONTAINS (2) 627281 MOUNTING BRACKETS.
- TORQUE THE M10 BOLT ASSEMBLY TO 37 N.m. PER MANUFACTURE'S RECOMMENDATIONS.

4 COMMSCOPE – BSAMNT–SBS–2–2
SCALE: NOT TO SCALE



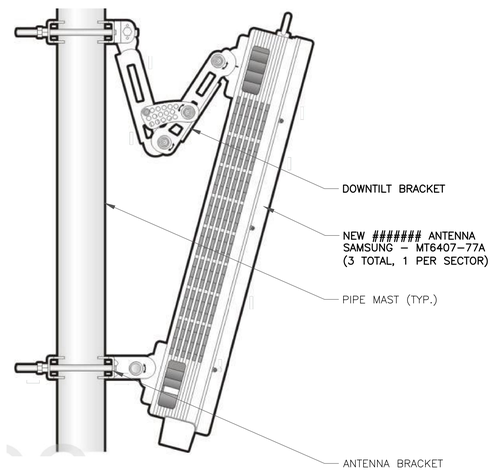


FRONT

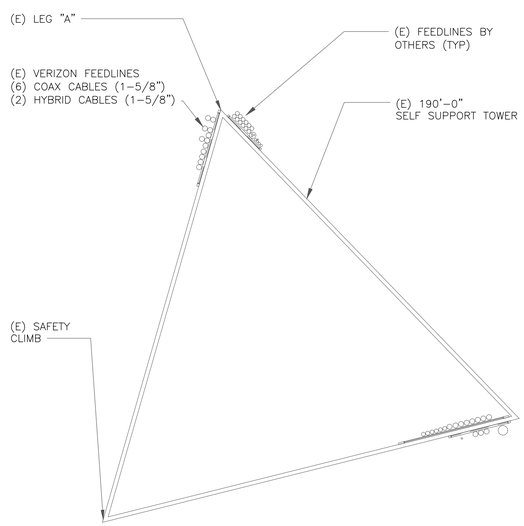
SIDE

SAMSUNG TELECOMMUNICATIONS – MT6413–77A ANTENNA
WEIGHT: 57.30 LBS
SIZE (HxWxD): 28.90x15.75x5.51 IN.

5 SAMSUNG – MT6413–77A
SCALE: NOT TO SCALE



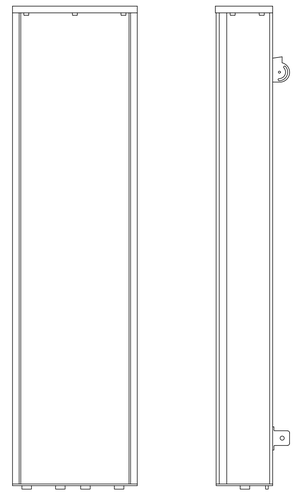
6 SAMSUNG ANTENNA MOUNTING DETAIL
SCALE: NOT TO SCALE



NOTE:
1. ROUTE NEW CABLES PER PASSING STRUCTURAL ANALYSIS.

7 BASE LEVEL DETAIL
SCALE: NOT TO SCALE

N



COMMSCOPE – JAHH–65B–R3B
WEIGHT (WITHOUT MOUNTING HARDWARE): 64.375 LBS
SIZE (HxWxD): 71.9x13.8x8.2 IN.

8 COMMSCOPE – JAHH–65B–R3B
SCALE: NOT TO SCALE

verizon
20 ALEXANDER DRIVE, 2ND FLOOR
WALLINGFORD, CT 06492

CROWN CASTLE
3 CORPORATE PARK DRIVE, SUITE 101
CLIFTON PARK, NY 12065

TOWER ENGINEERING PROFESSIONALS
326 TRYON RD
RALEIGH, NC 27603
(919) 661-6351
TEP JOB #: 63731.944603

VERIZON SITE NUMBER:
5000245769

BU #: **806478**

CROWN CASTLE SITE NAME
HRT 080 953381
539 PLAINS RD
HADDAM, CT 06438

EXISTING 190'-0" SELF SUPPORT TOWER

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	04/08/24	NP	PRELIMINARY	VD

STATE OF CONNECTICUT
SCOTT C. BRANT
35436
LICENSED PROFESSIONAL ENGINEER
04/08/24

SHEET NUMBER: C-6

REVISION: 0

Azimuth (1) Alpha					
Cell (850 CDMA)	Red				
PCS2 (1900 LTE)	Pink	Red	Pink		
700 LTE	Lt. Green	Red	Lt. Green		
850 LTE	Purple	Red	Purple		
2100 LTE	Orange	Red	Orange		
High Band Dual Band (Shared Lines)	Orange	Pink	Red	Pink	Orange
Low Band Dual Band (Shared Lines)	Purple	Lt. Green	Red	Lt. Green	Purple
5G 28GHz	Brown	Red	Brown		
5G 39GHz	Blue	Red	Blue		
LAA	Gray	Red	Gray		
CBRS	White	Red	White		
L-Sub6 (C-Band)	Red	Red	Red		

Azimuth (2) Beta					
Cell (850 CDMA)	Blue				
PCS2 (1900 LTE)	Pink	Blue	Pink		
700 LTE	Lt. Green	Blue	Lt. Green		
850 LTE	Purple	Blue	Purple		
2100 LTE	Orange	Blue	Orange		
High Band Dual Band (Shared Lines)	Orange	Pink	Blue	Pink	Orange
Low Band Dual Band (Shared Lines)	Purple	Lt. Green	Blue	Lt. Green	Purple
5G 28GHz	Brown	Blue	Brown		
5G 39GHz	Blue	Blue	Blue		
LAA	Gray	Blue	Gray		
CBRS	White	Blue	White		
L-Sub6 (C-Band)	Red	Blue	Red		

Azimuth (3) Gamma					
Cell (850 CDMA)	Yellow				
PCS2 (1900 LTE)	Pink	Yellow	Pink		
700 LTE	Lt. Green	Yellow	Lt. Green		
850 LTE	Purple	Yellow	Purple		
2100 LTE	Orange	Yellow	Orange		
High Band Dual Band (Shared Lines)	Orange	Pink	Yellow	Pink	Orange
Low Band Dual Band (Shared Lines)	Purple	Lt. Green	Yellow	Lt. Green	Purple
5G 28GHz	Brown	Yellow	Brown		
5G 39GHz	Blue	Yellow	Blue		
LAA	Gray	Yellow	Gray		
CBRS	White	Yellow	White		
L-Sub6 (C-Band)	Red	Yellow	Red		

Azimuth (4) Delta					
Cell (850 CDMA)	Orange				
PCS2 (1900 LTE)	Pink	Orange	Pink		
700 LTE	Lt. Green	Orange	Lt. Green		
850 LTE	Purple	Orange	Purple		
2100 LTE	Orange	Orange	Orange		
High Band Dual Band (Shared Lines)	Orange	Pink	Orange	Pink	Orange
Low Band Dual Band (Shared Lines)	Purple	Lt. Green	Orange	Lt. Green	Purple
5G 28GHz	Brown	Orange	Brown		
5G 39GHz	Blue	Orange	Blue		
LAA	Gray	Orange	Gray		
CBRS	White	Orange	White		
L-Sub6 (C-Band)	Red	Orange	Red		

Azimuth (5) Epsilon					
Cell (850 CDMA)	White				
PCS2 (1900 LTE)	Pink	White	Pink		
700 LTE	Lt. Green	White	Lt. Green		
850 LTE	Purple	White	Purple		
2100 LTE	Orange	White	Orange		
High Band Dual Band (Shared Lines)	Orange	Pink	White	Pink	Orange
Low Band Dual Band (Shared Lines)	Purple	Lt. Green	White	Lt. Green	Purple
5G 28GHz	Brown	White	Brown		
5G 39GHz	Blue	White	Blue		
LAA	Gray	White	Gray		
CBRS	White	White	White		
L-Sub6 (C-Band)	Red	White	Red		

Azimuth (6) Zeta					
Cell (850 CDMA)	Gray				
PCS2 (1900 LTE)	Pink	Gray	Pink		
700 LTE	Lt. Green	Gray	Lt. Green		
850 LTE	Purple	Gray	Purple		
2100 LTE	Orange	Gray	Orange		
High Band Dual Band (Shared Lines)	Orange	Pink	Gray	Pink	Orange
Low Band Dual Band (Shared Lines)	Purple	Lt. Green	Gray	Lt. Green	Purple
5G 28GHz	Brown	Gray	Brown		
5G 39GHz	Blue	Gray	Blue		
LAA	Gray	Gray	Gray		
CBRS	White	Gray	White		
L-Sub6 (C-Band)	Red	Gray	Red		

1 COLOR CODE MATRIX
SCALE: NOT TO SCALE

verizon
20 ALEXANDER DRIVE, 2ND FLOOR
WALLINGFORD, CT 06492

CROWN CASTLE
3 CORPORATE PARK DRIVE, SUITE 101
CLIFTON PARK, NY 12065

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EXISTING 190'-0" SELF SUPPORT TOWER

ISSUED FOR:

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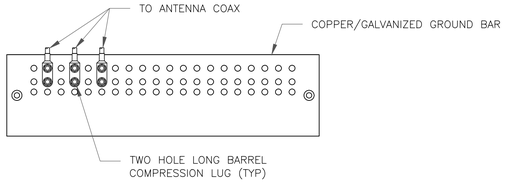
0	04/08/24	NP	PRELIMINARY	VD

STATE OF CONNECTICUT
SCOTT C. BRANDT
35536
LICENSED PROFESSIONAL ENGINEER
04/08/24

SHEET NUMBER: C-7

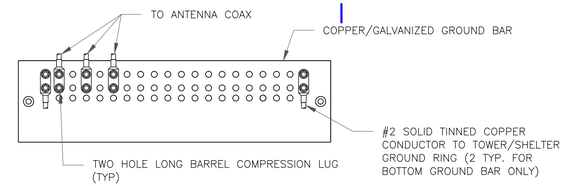
REVISION: 0



NOTES:

1. DOUBLING UP "OR STACKING" OF CONNECTIONS IS NOT PERMITTED.
2. EXTERIOR ANTIOXIDANT JOINT COMPOUND TO BE USED ON ALL EXTERIOR CONNECTIONS.
3. GROUND BAR SHALL NOT BE ISOLATED FROM TOWER. MOUNT DIRECTLY TO ANTENNA MOUNT STEEL.

1 ANTENNA SECTOR GROUND BAR DETAIL
SCALE: NOT TO SCALE

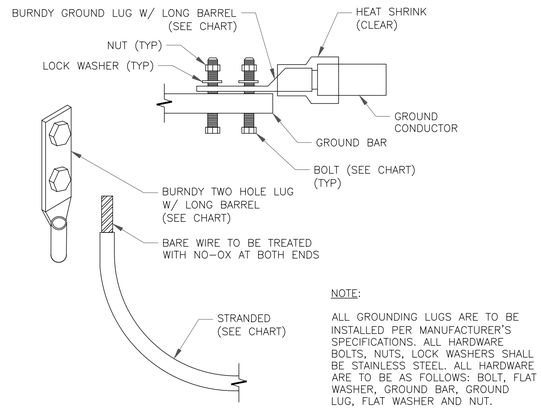


NOTES:

1. EXTERIOR ANTIOXIDANT JOINT COMPOUND TO BE USED ON ALL EXTERIOR CONNECTIONS.
2. GROUND BAR SHALL NOT BE ISOLATED FROM TOWER. MOUNT DIRECTLY TO TOWER STEEL (TOWER ONLY).
3. GROUND BAR SHALL BE ISOLATED FROM BUILDING OR SHELTER.

2 TOWER/SHELTER GROUND BAR DETAIL
SCALE: NOT TO SCALE

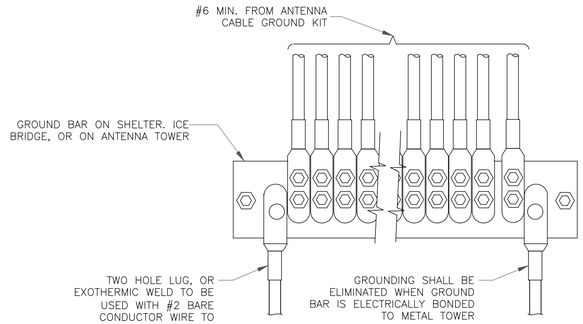
WIRE SIZE	BURNDY LUG	BOLT SIZE
#6 GREEN INSULATED	YA6C-2TC38	3/8" – 16 NC SS 2 BOLT
#2 SOLID TINNED	YA3C-2TC38	3/8" – 16 NC SS 2 BOLT
#2 STRANDED	YA2C-2TC38	3/8" – 16 NC SS 2 BOLT
#2/0 STRANDED	YA26-2TC38	3/8" – 16 NC SS 2 BOLT
#4/0 STRANDED	YA28-2N	1/2" – 16 NC SS 2 BOLT



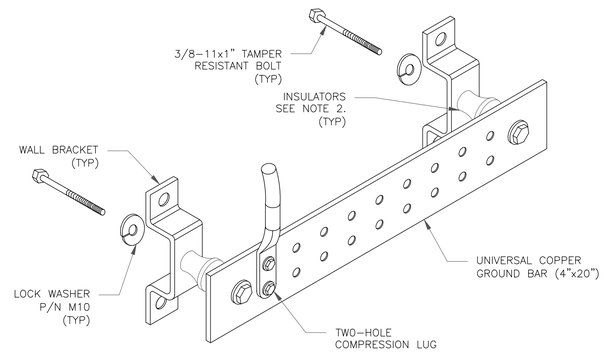
NOTE:

ALL GROUNDING LUGS ARE TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. ALL HARDWARE BOLTS, NUTS, LOCK WASHERS SHALL BE STAINLESS STEEL. ALL HARDWARE ARE TO BE AS FOLLOWS: BOLT, FLAT WASHER, GROUND BAR, GROUND LUG, FLAT WASHER AND NUT.

3 MECHANICAL LUG CONNECTION
SCALE: NOT TO SCALE



4 GROUNDWIRE INSTALLATION
SCALE: NOT TO SCALE

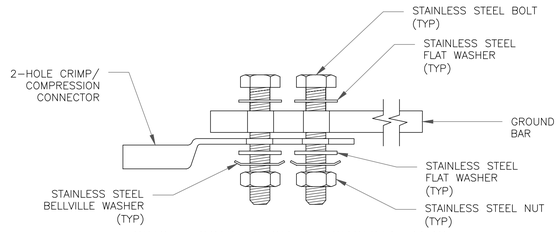


NOTES:

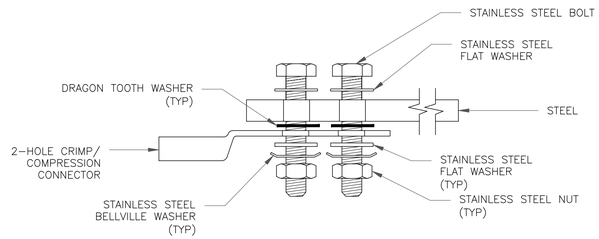
1. DOWN LEAD (HOME RUN) CONDUCTORS ARE NOT TO BE INSTALLED ON CROWN CASTLE USA INC. TOWER, PER THE GROUNDING DOWN CONDUCTOR POLICY QAS-STD-10091. NO MODIFICATION OR DRILLING TO TOWER STEEL IS ALLOWED IN ANY FORM OR FASHION, CAD-WELDING ON THE TOWER AND/OR IN THE AIR ARE NOT PERMITTED.

2. OMIT INSULATOR WHEN MOUNTING TO TOWER STEEL OR PLATFORM STEEL USE INSULATORS WHEN ATTACHING TO BUILDING OR SHELTERS.

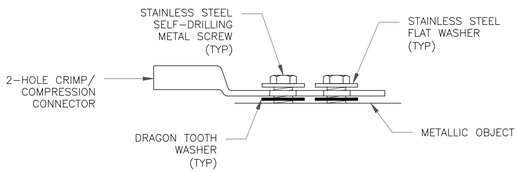
5 GROUND BAR DETAIL
SCALE: NOT TO SCALE



SINGLE CONNECTOR AT GROUND BARS

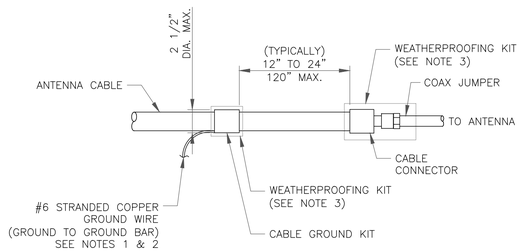


SINGLE CONNECTOR AT STEEL OBJECTS



SINGLE CONNECTOR AT METALLIC/STEEL OBJECTS

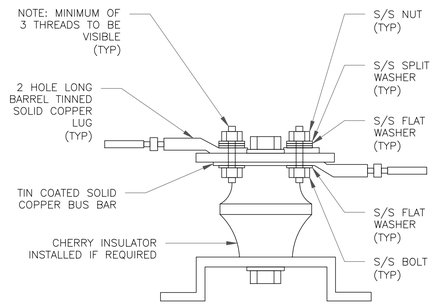
8 HARDWARE DETAIL FOR EXTERIOR CONNECTIONS
SCALE: NOT TO SCALE



NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
3. WEATHER PROOFING SHALL BE TWO-PART TAPE KIT, COLD SHRINK SHALL NOT BE USED.

6 CABLE GROUND KIT CONNECTION
SCALE: NOT TO SCALE



7 LUG DETAIL
SCALE: NOT TO SCALE

verizon
20 ALEXANDER DRIVE, 2ND FLOOR
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VERIZON SITE NUMBER:
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STATE OF CONNECTICUT
SCOTT C. BRANT
35536
LICENSED
PROFESSIONAL ENGINEER
04/08/24

SHEET NUMBER: G-1

REVISION: 0

EXHIBIT E

Structural Analysis Report

Date: **February 14, 2024**

B+T Group
1717 S. Boulder, Suite 300
Tulsa, OK 74119
(918) 587-4630

Subject:	**Structural Analysis Report**	
Carrier Designation:	***Verizon Wireless* Co-Locate**	
	Site Number:	5000245769
	Site Name:	Haddam CT
Crown Castle Designation:	**BU Number:**	806478
	Site Name:	HRT 080 953381
	JDE Job Number:	2107958
	Work Order Number:	2283471
	Order Number:	662902 Rev. 0
Engineering Firm Designation:	**B+T Group Project Number:**	100140.024.01.0001
Site Data:	**539 Plains Rd, Haddam, Middlesex County, CT** **Latitude *41° 26' 35"*, Longitude *-72° 30' 22.4"*** **190 Foot - Self Support Tower**	

B+T Group is pleased to submit this **"Structural Analysis Report"** to determine the structural integrity of the above-mentioned tower.

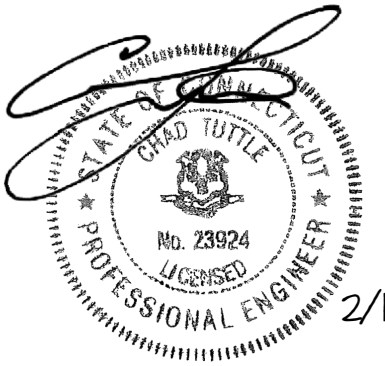
The purpose of the analysis is to determine acceptability of the tower stress level. Based on our analysis we have determined the tower stress level for the structure and foundation, under the following load case, to be:

LC7: Proposed Equipment Configuration **Sufficient Capacity – 89.1%**

This analysis utilizes an ultimate 3-second gust wind speed of 122 mph as required by the 2022 Connecticut State Building Code. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria

Structural analysis prepared by: Angela Ashwood

Respectfully submitted by: B+T Engineering, Inc.
COA: PEC.0001564; Expires: 02/01/2025



2/14/24

Chad E. Tuttle, P.E.

tnxTower Report - version 8.2.2.0

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tnxTower Output

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1) INTRODUCTION

This tower is a 180 ft. self-support tower designed by ROHN. A 10-ft tower extension has been considered in this analysis, bringing the total tower height to 190 ft. The tower has been modified multiple times to accommodate additional loading.

2) ANALYSIS CRITERIA

TIA-222 Revision:	TIA-222-H
Risk Category:	II
Wind Speed:	122 mph
Exposure Category:	B
Topographic Factor:	1
Ice Thickness:	1 in
Wind Speed with Ice:	50 mph
Service Wind Speed:	60 mph

Table 1 - Proposed Equipment Configuration

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
178.0	179.0	6	Antel	LPA-80080/6CF	8	1-5/8
		3	Commscope	CBC78T-DS-43-2X		
		6	Commscope	JAHH-65B-R3B		
		1	RFS Celwave	DB-B1-6C-8AB-0Z		
		1	RFS Celwave	DB-T1-6Z-8AB-0Z		
		3	Samsung Telecom.	MT6413-77A		
		3	Samsung Telecom.	RF4439D-25A		
		3	Samsung Telecom.	RF4461D-13A		
	178.0	3	VZWSMART	VZWSMART-P40-278X096		
		3	VZWSMART	VZWSMART-SFK3		
		1	--	Sector Mount [SM 511-3]		

Table 2 - Other Considered Equipment

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
186.0	186.0	3	Site Pro 1	VFA12-HD Sector Mount	1	1-5/8
		3	Ericsson	RADIO 4460 B2/B25 B66_TMO		
		3	Ericsson	Radio 4480_TMOV2		
		3	RFS Celwave	APXVAALL24_43-U-NA20_TMO		
165.0	167.0	3	CCI Antennas	DMP65R-BU8D	12	1-1/4
		3	CCI Antennas	OPA65R-BU6D	4	3/4
		3	Ericsson	RRUS 32 B2	2	7/16
		3	Ericsson	RRUS 32 B30	2	3/8
		3	Ericsson	RRUS 4449 B5/B12		

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
		3	Ericsson	RRUS 4478 B14		
		3	Powerwave Tech.	7770.00		
		6	Powerwave Tech.	LGP21401		
		3	Quintel Tech.	QS66512-2		
		3	Raycap	DC6-48-60-18-8F		
	165.0	1	--	Sector Mount [SM 505-3]		
150.0	150.0	3	Alcatel Lucent	PCS 1900MHZ 4X45W-65MHZ	4	1-1/4
		6	Alcatel Lucent	RRH2X50-800		
		3	Alcatel Lucent	TD-RRH8X20-25		
		3	Commscope	NNVV-65B-R4		
		3	RFS Celwave	APXVTM14-ALU-I20		
		1	--	Sector Mount [SM 502-3]		
138.0	140.0	3	Fujitsu	TA08025-B604	1	1-1/2
		3	Fujitsu	TA08025-B605		
		3	JMA Wireless	MX08FRO665-21		
		1	Raycap	RDIDC-9181-PF-48		
	138.0	1	--	Commscope MTC3975083 (3)		
50.0	50.0	1	GPS	GPS_A	1	1/2
		1	--	Side Arm Mount [SO 305-1]		

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Reference	Source
Tower Manufacturer Drawing	1067089	CCI Sites
Modification Details	1004663	CCI Sites
Tower Modification Drawing	1274944	CCI Sites
Post Modification Inspection	2393878	CCI Sites
Tower Modification Drawing	5864073	CCI Sites
Post Modification Inspection	6011748	CCI Sites
Tower Modification Drawing	10476211	CCI Sites
Post Modification Inspection	11015010	CCI Sites
Foundation Drawing	300985	CCI Sites
Foundation Mapping	300985	CCI Sites
Geotech Report	1240448	CCI Sites
Crown CAD Package	Date: 02/09/2024	CCI Sites

3.1) Analysis Method

tnxTower (version 8.2.2.0), 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. When applicable, Crown Castle has calculated and provided the effective area for panel antennas using approved methods following the intent of the TIA-222 standard.

tnxTower was used to determine the loads on the modified structure. Additional calculations were performed to determine the stresses in the reinforced leg sections. These calculations are presented in Appendix C.

3.2) Assumptions

1) The tower and structures were maintained in accordance with the - TIA-222 standard.
2) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.

This analysis may be affected if any assumptions are not valid or have been made in error. B+T Group should be notified to determine the effect on the structural integrity of the tower.

4) ANALYSIS RESULTS

Table 4 - Section Capacity (Summary)

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
T1	190 - 180	Leg	P2STD	2	-4.226	50.591	9.3	Pass
T2	180 - 160	Leg	ROHN 2 STD	21	-34.365	38.684	88.8	Pass
T3	160 - 155	Leg	ROHN 2.5 EH	57	-43.516	78.151	55.7	Pass
T4	155 - 150	Leg	ROHN 2.5 EH	66	-51.760	78.148	66.2	Pass
T5	150 - 145	Leg	ROHN 2.5 EH	75	-61.136	78.149	78.2	Pass
T6	145 - 140	Leg	ROHN 2.5 EH	83	-70.397	98.081	71.8	Pass
T7	140 - 133.333	Leg	ROHN 3 EH	95	-81.105	99.059	81.9	Pass
T8	133.333 - 126.667	Leg	ROHN 3 EH	104	-93.502	129.274	72.3	Pass
T9	126.667 - 120	Leg	ROHN 3 EH	116	-104.463	139.089	75.1	Pass
T10	120 - 113.333	Leg	ROHN 3.5 EH	128	-116.109	161.556	71.9	Pass
T11	113.333 - 106.667	Leg	ROHN 3.5 EH	140	-126.434	161.594	78.2	Pass
T12	106.667 - 100	Leg	BT100140- Rohn 3.5EH w/ 2" SR	152	-137.690	244.582	56.3	Pass
T13	100 - 80	Leg	BT100140- Rohn 4EH w/ 2" SR	161	-167.687	286.747	58.5	Pass
T14	80 - 60	Leg	BT100140- Rohn 5EH w/ 2" SR (60-80)	182	-194.675	319.408	60.9	Pass
T15	60 - 40	Leg	BT100140- Rohn 5EH w/ 2" SR (40-60)	197	-221.483	400.743	55.3	Pass
T16	40 - 30	Leg	BT100140- Rohn 6EHS w/ 2" SR (30-40)	218	-236.866	373.300	63.5	Pass
T17	30 - 20	Leg	BT100140- Rohn 6EHS w/ 2" SR (20-30)	227	-249.335	439.396	56.7	Pass
T18	20 - 0	Leg	BT100140- Rohn 6EH w/ 2" SR	239	-277.751	437.361	63.5	Pass
T1	190 - 180	Diagonal	L2x2x1/4	8	-1.174	20.752	5.7	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
T2	180 - 160	Diagonal	L2x2x1/4	28	-5.171	21.921	23.6	Pass
T3	160 - 155	Diagonal	L1 3/4x1 3/4x3/16	60	-4.184	8.960	46.7	Pass
T4	155 - 150	Diagonal	L1 3/4x1 3/4x3/16	69	-4.019	8.115	49.5	Pass
T5	150 - 145	Diagonal	L2x2x1/4	78	-5.026	14.435	34.8	Pass
T6	145 - 140	Diagonal	2L1 3/4x1 3/4x3/16x3/16	88	-0.268	0.000	14.3	Pass
T7	140 - 133.333	Diagonal	2L2x2x3/16x1/2	99	-5.904	34.333	17.2	Pass
T8	133.333 - 126.667	Diagonal	2L2x2x3/16x1/2	108	-6.023	31.258	19.3	Pass
T9	126.667 - 120	Diagonal	2L2x2x3/16x1/2	120	-6.428	29.165	22.0	Pass
T10	120 - 113.333	Diagonal	2L2 1/2x2 1/2x3/16x1/2	132	-6.284	43.852	14.3	Pass
T11	113.333 - 106.667	Diagonal	2L2 1/2x2 1/2x3/16x1/2	144	-6.737	41.968	16.1	Pass
T12	106.667 - 100	Diagonal	2L2 1/2x2 1/2x3/16x1/2	156	-5.915	41.098	14.4	Pass
T13	100 - 80	Diagonal	2L3x3x3/16x1/2	165	-6.567	48.925	13.4	Pass
T14	80 - 60	Diagonal	2L3x3x3/16x1/4	186	-7.890	36.097	21.9	Pass
T15	60 - 40	Diagonal	2L3x3x1/4x1/4	201	-9.291	41.581	22.3	Pass
T16	40 - 30	Diagonal	2L3 1/2x3 1/2x1/4x1/4	222	-8.553	60.389	14.2	Pass
T17	30 - 20	Diagonal	2L3 1/2x3 1/2x1/4x1/4	231	-10.487	54.955	19.1	Pass
T18	20 - 0	Diagonal	L4x4x1/4	243	-9.769	20.932	46.7	Pass
T6	145 - 140	Secondary Horizontal	L2x2x1/4	91	-1.221	18.245	6.7	Pass
T8	133.333 - 126.667	Secondary Horizontal	L2x2x1/4	112	-1.622	13.793	11.8	Pass
T9	126.667 - 120	Secondary Horizontal	L2 1/2x2 1/2x1/4	124	-1.812	23.886	7.6	Pass
T10	120 - 113.333	Secondary Horizontal	L2 1/2x2 1/2x1/4	136	-2.014	21.189	9.5	Pass
T11	113.333 - 106.667	Secondary Horizontal	L2 1/2x2 1/2x1/4	148	-2.193	18.713	11.7	Pass
T15	60 - 40	Secondary Horizontal	L3x3x1/4	205	-3.841	13.215	29.1	Pass
T17	30 - 20	Secondary Horizontal	L3 1/2x3 1/2x1/4	235	-4.324	17.337	24.9	Pass
T1	190 - 180	Top Girt	L2x2x1/4	6	-0.378	8.005	4.7	Pass
T2	180 - 160	Top Girt	L2x2x1/8	23	-0.595	4.273	13.9	Pass
							Summary	
						Leg (T2)	88.8	Pass
						Diagonal (T4)	49.5	Pass
						Secondary Horizontal (T15)	29.1	Pass
						Top Girt (T2)	13.9	Pass
						Bolt Checks	70.5	Pass
						Rating =	88.8	Pass

Table 6 - Tower Component Stresses vs. Capacity – LC7

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1,2	Redundant Connections	120-126.7	18.9	Pass
1,2	Anchor Rods	Base	89.1	Pass
1,2	Anchor Rod Brackets	Base	69.6	Pass
1,2	Base Foundation (Structure)	Base	27.3	Pass
1,2	Base Foundation (Soil Interaction)	Base	77.5	Pass

Structure Rating (max from all components) =	89.1%

Notes:
1) See additional documentation in “Appendix C – Additional Calculations” for calculations supporting the % capacity consumed.
2) Rating per TIA-222-H Section 15.5.

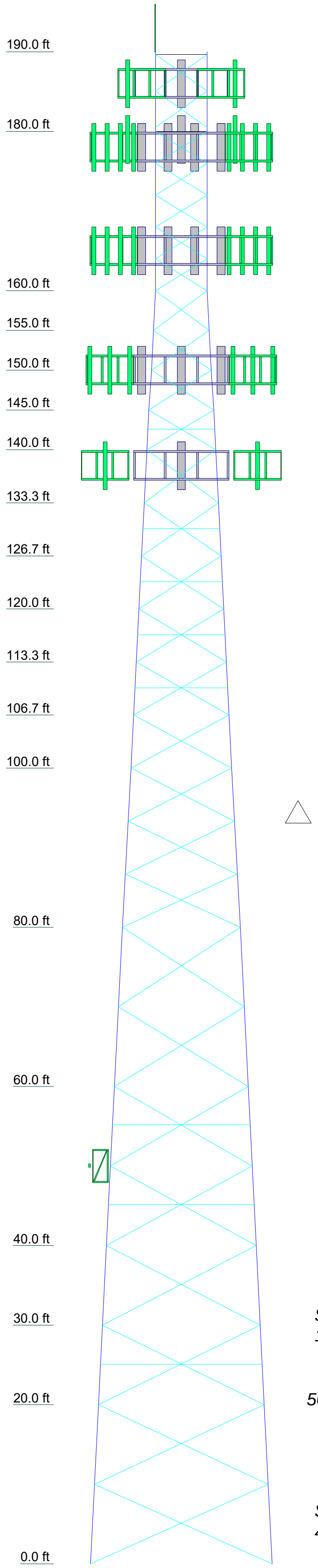
4.1) Recommendations

The tower and its foundations have sufficient capacity to carry the proposed load configuration. No modifications are required at this time.

APPENDIX A

TNXTOWER OUTPUT

Section	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13	T14	T15	T16	T17	T18	
Legs	P2STD	ROHN 2 STD	ROHN 2.5 EH				ROHN 3 EH			ROHN 3.5 EH		A	B	C	D	E	F	G	
Leg Grade	A572-50																		
Diagonals	L2x2x1/4		H		I	J	2L2x2x3/16x1/2			2L2 1/2x2 1/2x3/16x1/2			2L3x3x3/16x1/2	2L3x3x3/16x1/4	2L3x3x1/4x1/4	2L3 1/2x3 1/2x1/4x1/4		L4x4x1/4	
Diagonal Grade	A572-50		A36		K	A36									A572-50				
Top Girts	L2x2x1/4	L2x2x1/8	N.A.																
Sec. Horizontals	N.A.					I	N.A.	I	L2 1/2x2 1/2x1/4			N.A.			L3x3x1/4	N.A.	L	N.A.	
Face Width (ft)	6.52083		6.5625	7.06771	7.58073	8.09115	8.60418	9.28125	9.95833	10.6354	11.3151	11.9974	12.6771	14.7708	16.7708	18.8542	19.8594	20.8646	22.8646
# Panels @ (ft)	2 @ 4.58333	5 @ 4	4 @ 5				9 @ 6.66667							8 @ 10					
Weight (K)	0.5	1.0	0.2	0.2	0.3	0.5	0.6	0.7	0.8	0.9	0.9	1.0	3.8	3.7	5.1	2.6	3.1	4.5	30.4



SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	BT100140- Rohn 3.5EH w/ 2" SR	G	BT100140- Rohn 6EH w/ 2" SR
B	BT100140- Rohn 4EH w/ 2" SR	H	L1 3/4x1 3/4x3/16
C	BT100140- Rohn 5EH w/ 2" SR (60-80)	I	L2x2x1/4
D	BT100140- Rohn 5EH w/ 2" SR (40-60)	J	2L1 3/4x1 3/4x3/16x3/16
E	BT100140- Rohn 6EHS w/ 2" SR (30-40)	K	A572-50
F	BT100140- Rohn 6EHS w/ 2" SR (20-30)	L	L3 1/2x3 1/2x1/4

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

TOWER DESIGN NOTES

1. Tower is located in Middlesex County, Connecticut.
2. Tower designed for Exposure B to the TIA-222-H Standard.
3. Tower designed for a 122 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 II.
7. Topographic Category 1 with Crest Height of 0'
8. TIA-222-H Annex S
9. TOWER RATING: 88.8%

ALL REACTIONS ARE FACTORED

MAX. CORNER REACTIONS AT BASE:
DOWN: 284 K
SHEAR: 29 K

UPLIFT: -232 K
SHEAR: 25 K

AXIAL 129 K
SHEAR 11 K
MOMENT 1322 kip-ft
TORQUE 12 kip-ft
50 mph WIND - 1.000 in ICE

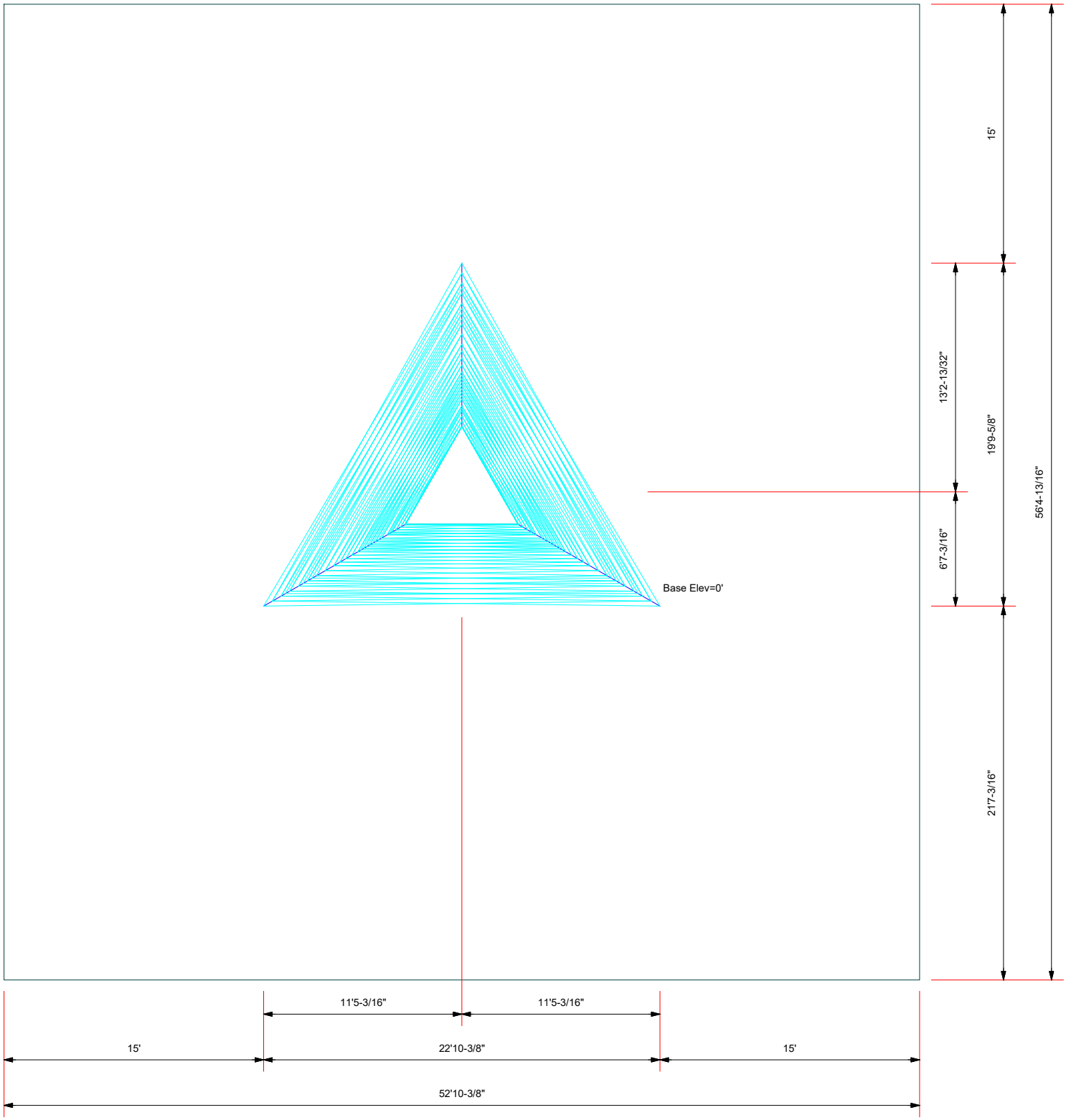
AXIAL 71 K
SHEAR 47 K
MOMENT 5160 kip-ft
TORQUE 53 kip-ft
REACTIONS - 122 mph WIND

B+T Group
1717 S. Boulder, Suite 300
Tulsa, OK 74119
Phone: (918) 587-4630
FAX: (918) 295-0265

Job: **100140.024.01.0001 - HRT 080 953381, CT (BU# 80647**		
Project:		
Client: Crown Castle	Drawn by: Sahana	App'd:
Code: TIA-222-H	Date: 02/13/24	Scale: NTS
Path: C:\Users\i1\Desktop\Feb 13\100140_806478_HRT 080 953381------Sahana-----Sunil----Q\tnxTower\100140_024_01_0001_HRT_080_953381_CT.eri		Dwg No. E-1

Plot Plan

Total Area - 0.07 Acres



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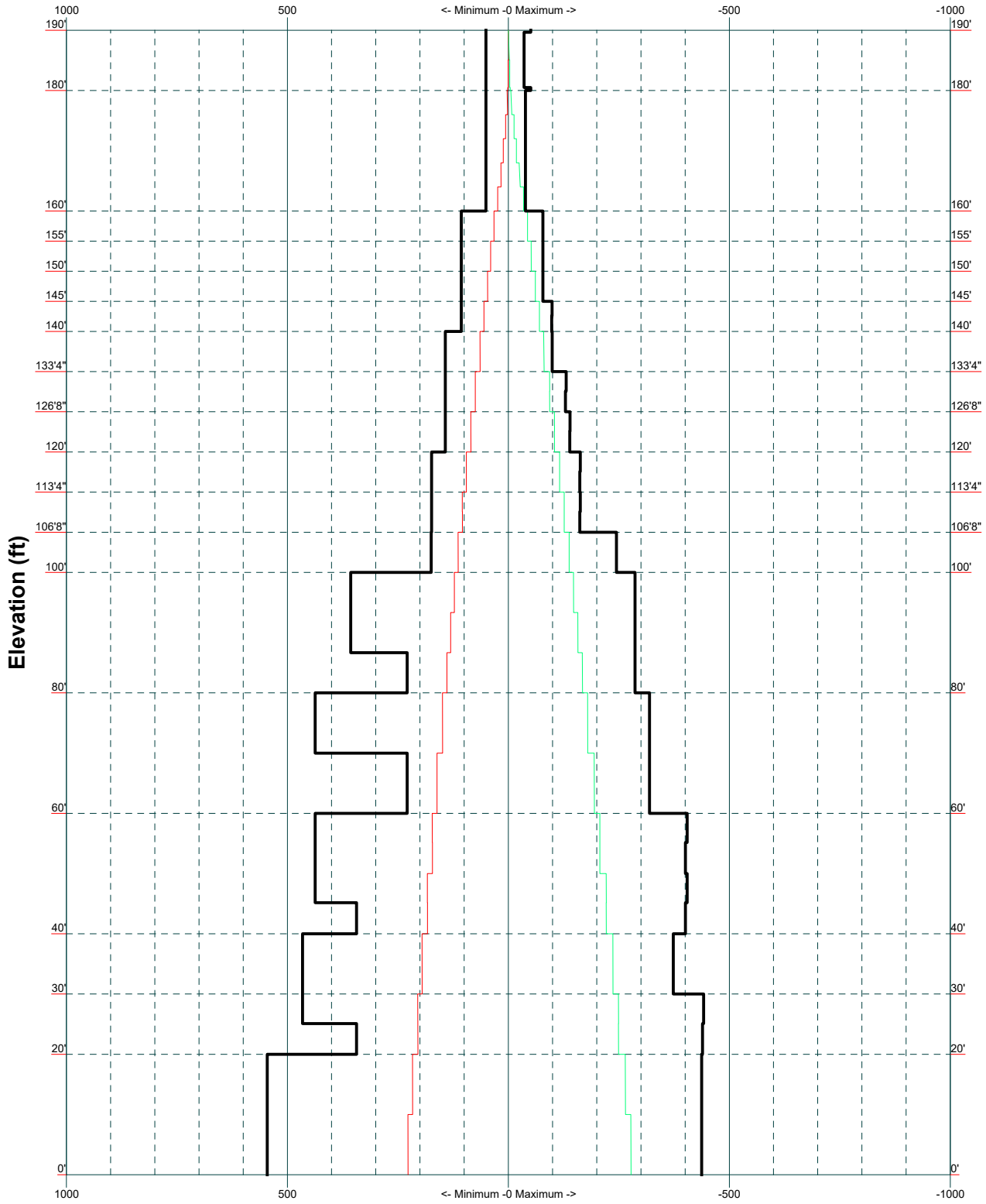
Job: ***100140.024.01.0001 - HRT 080 953381, CT (BU# 80647***		
Project:		
Client: Crown Castle	Drawn by: Sahana	App'd:
Code: TIA-222-H	Date: 02/13/24	Scale: NTS
Path:		Dwg No. E-2

TIA-222-H - 122 mph/50 mph 1.000 in Ice Exposure B

Leg Capacity ——— **Leg Compression (K)**



B+T GRP

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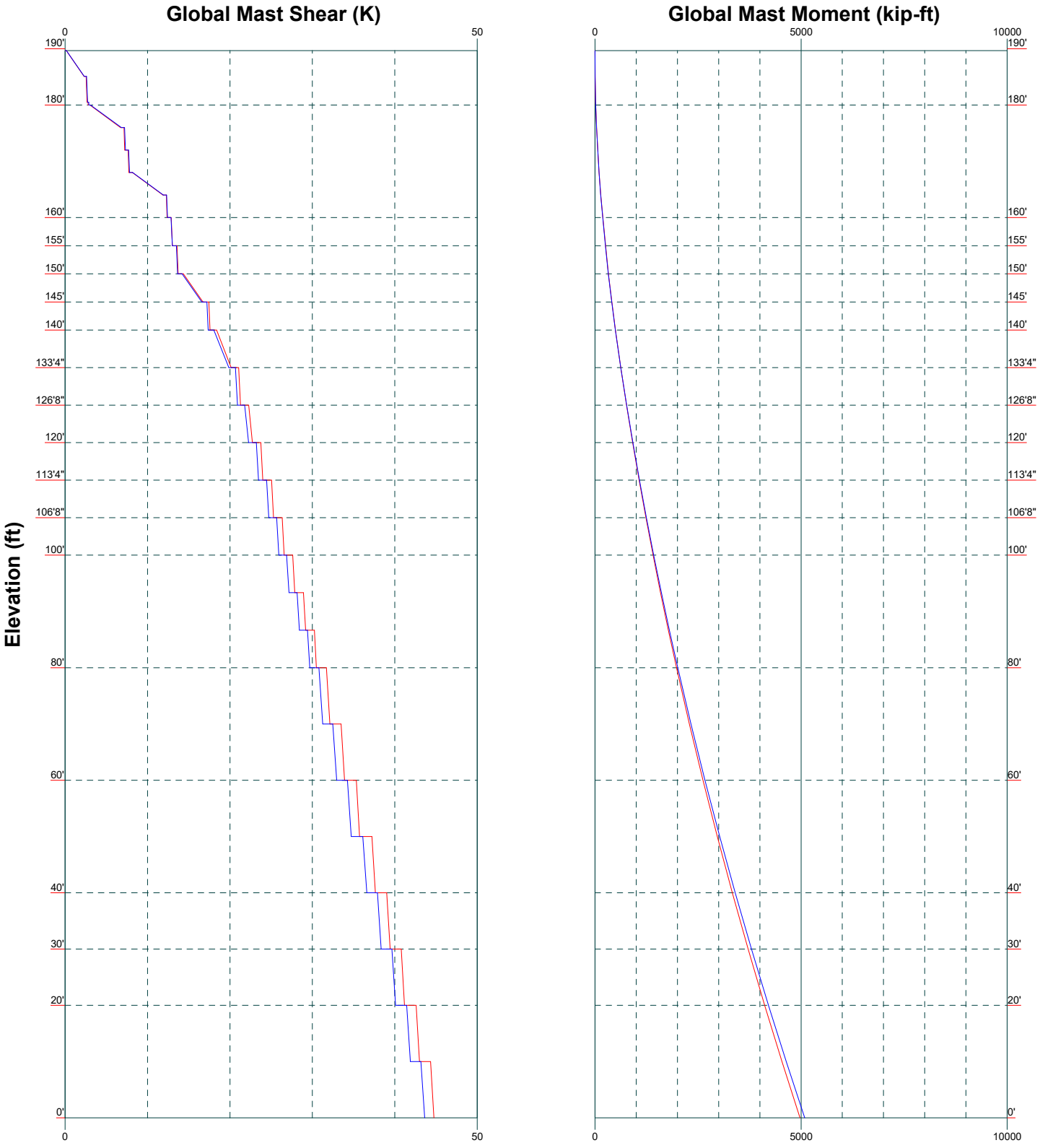
Phone: (918) 587-4630
FAX: (918) 295-0265

Job: ***100140.024.01.0001 - HRT 080 953381, CT (BU# 80647***		
Project:		
Client: Crown Castle	Drawn by: Sahana	App'd:
Code: TIA-222-H	Date: 02/13/24	Scale: NTS
Path:		Dwg No. E-3

TIA-222-H - 122 mph/50 mph 1.000 in Ice Exposure B

Maximum Values

Vx Vz Mx Mz



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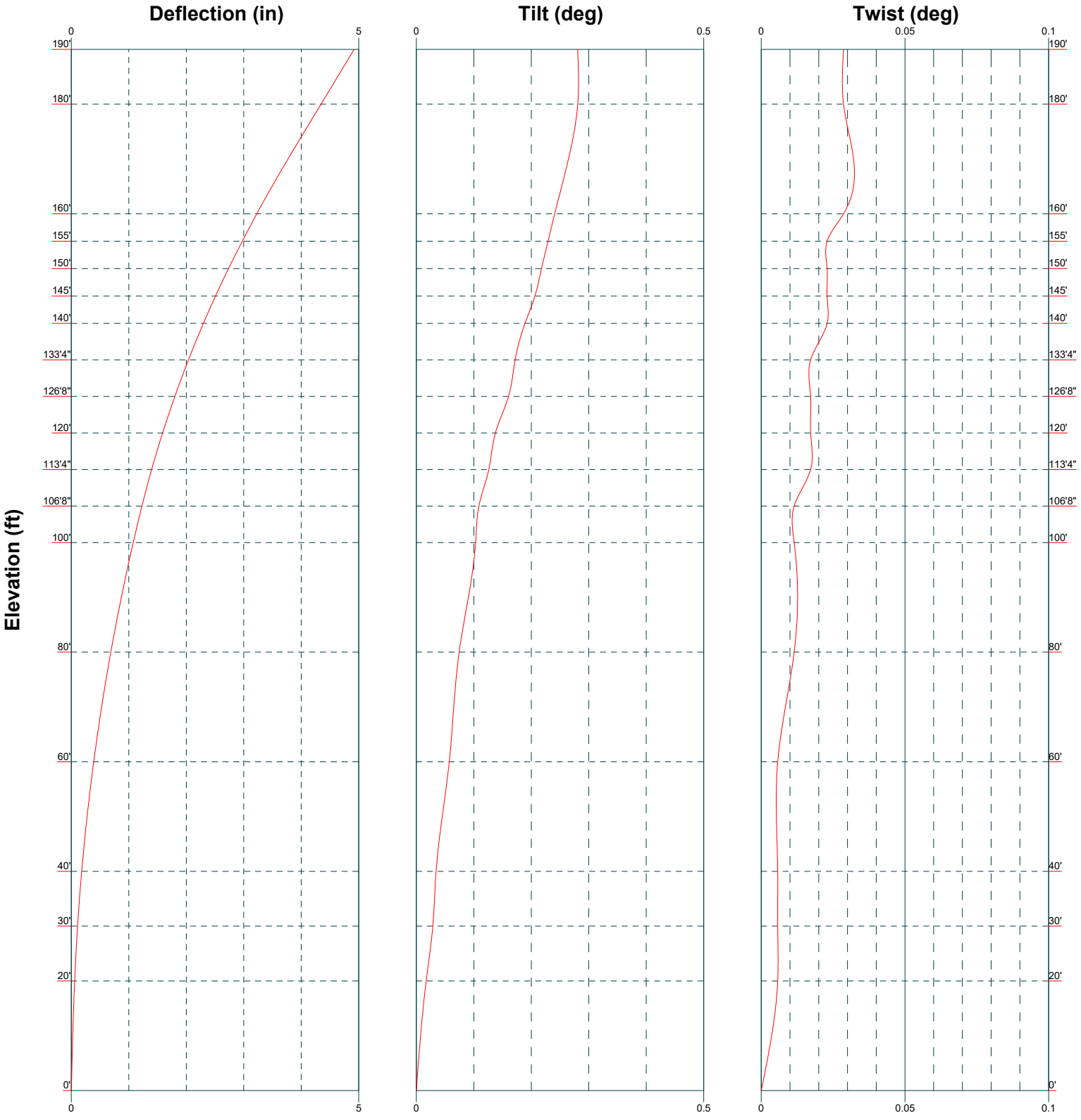
Tulsa, OK 74119
Phone: (918) 587-4630
FAX: (918) 295-0265

Job: ***100140.024.01.0001 - HRT 080 953381, CT (BU# 80647***		
Project:		
Client: Crown Castle	Drawn by: Sahana	App'd:
Code: TIA-222-H	Date: 02/13/24	Scale: NTS
Path:		Dwg No. E-4

TIA-222-H - Service - 60 mph

Maximum Values



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B+T Group
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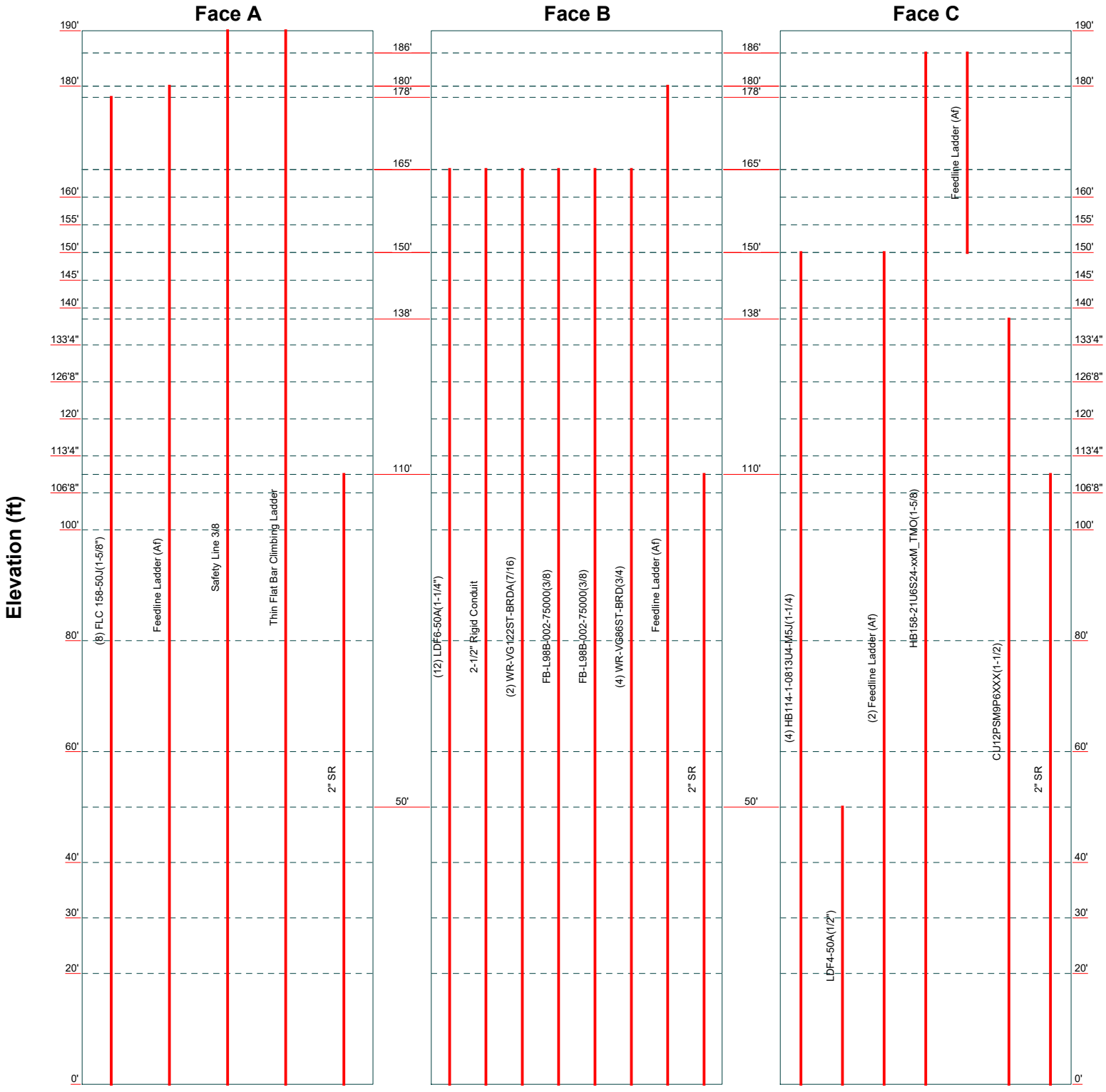
Tulsa, OK 74119
Phone: (918) 587-4630
FAX: (918) 295-0265

Job: ***100140.024.01.0001 - HRT 080 953381, CT (BU# 80647***		
Project:		
Client: Crown Castle	Drawn by: Sahana	App'd:
Code: TIA-222-H	Date: 02/13/24	Scale: NTS
Path:		Dwg No. E-5

Feed Line Distribution Chart
0' - 190'

Round | Flat | App In Face | App Out Face | Truss Leg



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Tulsa, OK 74119
Phone: (918) 587-4630
FAX: (918) 295-0265

Job: 100140.024.01.0001 - HRT 080 953381, CT (BU# 80647		
Project:		
Client: Crown Castle	Drawn by: Sahana	App'd:
Code: TIA-222-H	Date: 02/13/24	Scale: NTS
Path:		Dwg No. E-7

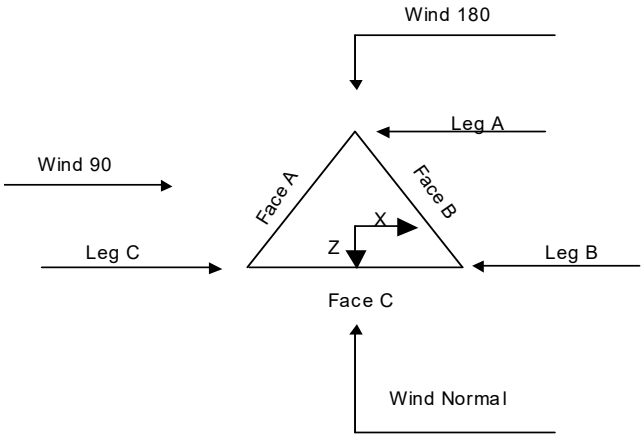
Tower Input Data

The main tower is a 3x free standing tower with an overall height of 190' above the ground line.
The base of the tower is set at an elevation of 0' above the ground line.
The face width of the tower is 6'6-1/4" at the top and 22'10-3/8" at the base.
This tower is designed using the TIA-222-H standard.
The following design criteria apply:

Tower is located in Middlesex County, Connecticut.
Tower base elevation above sea level: 504'.
Basic wind speed of 122 mph.
Risk Category II.
Exposure Category B.
Simplified Topographic Factor Procedure for wind speed-up calculations is used.
Topographic Category: 1.
Crest Height: 0'.
Nominal ice thickness of 1.000 in.
Ice thickness is considered to increase with height.
Ice density of 56.000 pcf.
A wind speed of 50 mph is used in combination with ice.
Temperature drop of 50.000 °F.
Deflections calculated using a wind speed of 60 mph.
TIA-222-H Annex S.
Pressures are calculated at each section.
Stress ratio used in tower member design is 1.
Tower analysis based on target reliabilities in accordance with Annex S.
Load Modification Factors used: $K_{es}(F_w) = 0.95$, $K_{es}(t_i) = 0.85$.
Maximum demand-capacity ratio is: 1.05.
Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

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



Triangular Tower

Tower Section Geometry

Tower Section	Tower Elevation	Assembly Database	Description	Section Width	Number of Sections	Section Length
	ft			ft		ft
T1	190'-180'			6'6-1/4"	1	10'
T2	180'-160'			6'6-1/4"	1	20'
T3	160'-155'			6'6-3/4"	1	5'
T4	155'-150'			7'13/16"	1	5'
T5	150'-145'			7'6-31/32"	1	5'
T6	145'-140'			8'1-3/32"	1	5'
T7	140'-133'4"			8'7-1/4"	1	6'8"
T8	133'4"-126'8"			9'3-3/8"	1	6'8"
T9	126'8"-120'			9'11-1/2"	1	6'8"
T10	120'-113'4"			10'7-5/8"	1	6'8"
T11	113'4"-106'8"			11'3-25/32"	1	6'8"
T12	106'8"-100'			11'11-31/32"	1	6'8"
T13	100'-80'			12'8-1/8"	1	20'
T14	80'-60'			14'9-1/4"	1	20'
T15	60'-40'			16'9-1/4"	1	20'
T16	40'-30'			18'10-1/4"	1	10'
T17	30'-20'			19'10-5/16"	1	10'
T18	20'-0'			20'10-3/8"	1	20'

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	190'-180'	4'7"	X Brace	No	No	4.500	5.500
T2	180'-160'	4'	X Brace	No	No	0.000	0.000
T3	160'-155'	5'	X Brace	No	No	0.000	0.000
T4	155'-150'	5'	X Brace	No	No	0.000	0.000
T5	150'-145'	5'	X Brace	No	No	0.000	0.000
T6	145'-140'	5'	X Brace	No	Yes	0.000	0.000
T7	140'-133'4"	6'8"	X Brace	No	No	0.000	0.000
T8	133'4"-126'8"	6'8"	X Brace	No	Yes	0.000	0.000
T9	126'8"-120'	6'8"	X Brace	No	Yes	0.000	0.000
T10	120'-113'4"	6'8"	X Brace	No	Yes	0.000	0.000
T11	113'4"-106'8"	6'8"	X Brace	No	Yes	0.000	0.000
T12	106'8"-100'	6'8"	X Brace	No	No	0.000	0.000
T13	100'-80'	6'8"	X Brace	No	No	0.000	0.000
T14	80'-60'	10'	X Brace	No	No	0.000	0.000
T15	60'-40'	10'	X Brace	No	Yes	0.000	0.000
T16	40'-30'	10'	X Brace	No	No	0.000	0.000
T17	30'-20'	10'	X Brace	No	Yes	0.000	0.000
T18	20'-0'	10'	X Brace	No	No	0.000	0.000

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
T1 190'-180'	Pipe	P2STD	A572-50 (50 ksi)	Equal Angle	L2x2x1/4	A572-50 (50 ksi)
T2 180'-160'	Pipe	ROHN 2 STD	A572-50 (50 ksi)	Equal Angle	L2x2x1/4	A572-50 (50 ksi)
T3 160'-155'	Pipe	ROHN 2.5 EH	A572-50 (50 ksi)	Single Angle	L1 3/4x1 3/4x3/16	A36 (36 ksi)
T4 155'-150'	Pipe	ROHN 2.5 EH	A572-50 (50 ksi)	Single Angle	L1 3/4x1 3/4x3/16	A36 (36 ksi)
T5 150'-145'	Pipe	ROHN 2.5 EH	A572-50 (50 ksi)	Equal Angle	L2x2x1/4	A572-50 (50 ksi)
T6 145'-140'	Pipe	ROHN 2.5 EH	A572-50 (50 ksi)	Double Equal Angle	2L1 3/4x1 3/4x3/16x3/16	A36 (36 ksi)
T7 140'-133'4"	Pipe	ROHN 3 EH	A572-50 (50 ksi)	Double Equal Angle	2L2x2x3/16x1/2	A36 (36 ksi)
T8 133'4"-126'8"	Pipe	ROHN 3 EH	A572-50 (50 ksi)	Double Equal Angle	2L2x2x3/16x1/2	A36 (36 ksi)
T9 126'8"-120'	Pipe	ROHN 3 EH	A572-50 (50 ksi)	Double Equal Angle	2L2x2x3/16x1/2	A36 (36 ksi)
T10 120'-113'4"	Pipe	ROHN 3.5 EH	A572-50 (50 ksi)	Double Equal Angle	2L2 1/2x2 1/2x3/16x1/2	A36 (36 ksi)
T11 113'4"-106'8"	Pipe	ROHN 3.5 EH	A572-50 (50 ksi)	Double Equal Angle	2L2 1/2x2 1/2x3/16x1/2	A36 (36 ksi)
T12 106'8"-100'	Arbitrary Shape	BT100140- Rohn 3.5EH w/ 2" SR	A572-50 (50 ksi)	Double Equal Angle	2L2 1/2x2 1/2x3/16x1/2	A36 (36 ksi)
T13 100'-80'	Arbitrary Shape	BT100140- Rohn 4EH w/ 2" SR	A572-50 (50 ksi)	Double Equal Angle	2L3x3x3/16x1/2	A36 (36 ksi)
T14 80'-60'	Arbitrary Shape	BT100140- Rohn 5EH w/ 2" SR (60-80)	A572-50 (50 ksi)	Double Equal Angle	2L3x3x3/16x1/4	A36 (36 ksi)
T15 60'-40'	Arbitrary Shape	BT100140- Rohn 5EH w/ 2" SR (40-60)	A572-50 (50 ksi)	Double Equal Angle	2L3x3x1/4x1/4	A572-50 (50 ksi)
T16 40'-30'	Arbitrary Shape	BT100140- Rohn 6EHS w/ 2" SR (30-40)	A572-50 (50 ksi)	Double Equal Angle	2L3 1/2x3 1/2x1/4x1/4	A572-50 (50 ksi)
T17 30'-20'	Arbitrary Shape	BT100140- Rohn 6EHS w/ 2"	A572-50	Double Equal	2L3 1/2x3 1/2x1/4x1/4	A572-50

Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
T18 20'-0'	Arbitrary Shape	SR (20-30) BT100140- Rohn 6EH w/ 2" SR	(50 ksi) A572-50 (50 ksi)	Angle Equal Angle	L4x4x1/4	(50 ksi) A572-50 (50 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 190'-180'	Single Angle	L2x2x1/4	A572-50 (50 ksi)	Flat Bar		A36 (36 ksi)
T2 180'-160'	Single Angle	L2x2x1/8	A36 (36 ksi)	Flat Bar		A36 (36 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Secondary Horizontal Type	Secondary Horizontal Size	Secondary Horizontal Grade	Inner Bracing Type	Inner Bracing Size	Inner Bracing Grade
T6 145'-140'	Equal Angle	L2x2x1/4	A572-50 (50 ksi)	Solid Round		A36 (36 ksi)
T8 133'4"-126'8"	Equal Angle	L2x2x1/4	A572-50 (50 ksi)	Solid Round		A36 (36 ksi)
T9 126'8"-120'	Equal Angle	L2 1/2x2 1/2x1/4	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T10 120'-113'4"	Equal Angle	L2 1/2x2 1/2x1/4	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T11 113'4"-106'8"	Equal Angle	L2 1/2x2 1/2x1/4	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T15 60'-40'	Equal Angle	L3x3x1/4	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T17 30'-20'	Equal Angle	L3 1/2x3 1/2x1/4	A36 (36 ksi)	Solid Round		A36 (36 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Gusset Area (per face) ft^2	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 190'-180'	0.000	0.375	A36 (36 ksi)	1.03	1	1.05	Mid-Pt	Mid-Pt	Mid-Pt
T2 180'-160'	0.000	0.188	A36 (36 ksi)	1.03	1	1.05	Mid-Pt	Mid-Pt	Mid-Pt
T3 160'-155'	0.000	0.188	A36	1.03	1	1.05	Mid-Pt	Mid-Pt	Mid-Pt

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
T4 155'-150'	0.000	0.188	(36 ksi) A36	1.03	1	1.05	Mid-Pt	Mid-Pt	Mid-Pt
T5 150'-145'	0.000	0.188	(36 ksi) A36	1.03	1	1.05	Mid-Pt	Mid-Pt	Mid-Pt
T6 145'-140'	0.000	0.188	(36 ksi) A36	1.03	1	1.05	58.500	Mid-Pt	Mid-Pt
T7 140'-133'4"	0.000	0.500	(36 ksi) A36	1.03	1	1.05	Mid-Pt	Mid-Pt	Mid-Pt
T8 133'4"-126'8"	0.000	0.500	(36 ksi) A36	1.03	1	1.05	Mid-Pt	Mid-Pt	Mid-Pt
T9 126'8"-120'	0.000	0.500	(36 ksi) A36	1.1	1	1.1	Mid-Pt	Mid-Pt	Mid-Pt
T10 120'-113'4"	0.000	0.500	(36 ksi) A36	1.03	1	1.05	Mid-Pt	Mid-Pt	Mid-Pt
T11 113'4"-106'8"	0.000	0.500	(36 ksi) A36	1.03	1	1.05	Mid-Pt	Mid-Pt	Mid-Pt
T12 106'8"-100'	0.000	0.500	(36 ksi) A36	1.1	1	1.05	Mid-Pt	Mid-Pt	Mid-Pt
T13 100'-80'	0.000	0.500	(36 ksi) A36	1.1	1	1.05	Mid-Pt	Mid-Pt	Mid-Pt
T14 80'-60'	0.000	0.250	(36 ksi) A36	1.1	1	1.05	Mid-Pt	Mid-Pt	Mid-Pt
T15 60'-40'	0.000	0.250	(36 ksi) A36	1.1	1	1.05	Mid-Pt	Mid-Pt	Mid-Pt
T16 40'-30'	0.000	0.250	(36 ksi) A36	1.1	1	1.05	Mid-Pt	Mid-Pt	Mid-Pt
T17 30'-20'	0.000	0.250	(36 ksi) A36	1.1	1	1.05	Mid-Pt	Mid-Pt	Mid-Pt
T18 20'-0'	0.000	0.500	(36 ksi) A36	1.1	1	1.05	Mid-Pt	Mid-Pt	Mid-Pt

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 190'-180'	Yes	No	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T2 180'-160'	Yes	No	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T3 160'-155'	Yes	No	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T4 155'-150'	Yes	No	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T5 150'-145'	Yes	No	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T6 145'-140'	No	No	1	1	1	1	1	1	1	1
				1	1	1	1	1	0.5	1
T7 140'-133'4"	Yes	No	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T8	No	No	1	1	1	1	1	1	1	1

Tower Elevation ft	Calc K Single Angles	Calc K Solid Rounds	K Factors[1] Legs	X Brace Diags X	X Brace Diags Y	K Brace Diags X	K Brace Diags Y	Single Diags X	Single Diags Y	Girts X	Girts Y	Horiz. X	Horiz. Y	Sec. Horiz. X	Sec. Horiz. Y	Inner Brace X	Inner Brace Y
133'4"-126'8"				1		1		1		1		1		0.5		1	
T9	No	No	0.5	1		1		1		1		1		1		1	
126'8"-120'				1		1		1		1		1		0.5		1	
T10	No	No	1	1		1		1		1		1		1		1	
120'-113'4"				1		1		1		1		1		0.5		1	
T11	No	No	1	1		1		1		1		1		1		1	
113'4"-106'8"				1		1		1		1		1		0.5		1	
T12	Yes	No	0.78	1		1		1		1		1		1		1	
106'8"-100'				1		1		1		1		1		1		1	
T13 100'-80'	Yes	No	0.8	1		1		1		1		1		1		1	
				1		1		1		1		1		1		1	
T14 80'-60'	Yes	No	0.83	1		1		1		1		1		1		1	
				1		1		1		1		1		1		1	
T15 60'-40'	No	No	0.85	1		1		1		1		1		1		1	
				1		1		1		1		1		0.5		1	
T16 40'-30'	Yes	No	0.85	1		1		1		1		1		1		1	
				1		1		1		1		1		1		1	
T17 30'-20'	No	No	0.85	1		1		1		1		1		1		1	
				1		1		1		1		1		0.5		1	
T18 20'-0'	Yes	No	0.865	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 Net Width Deduct in	Leg U	Diagonal Net Width Deduct in	Diagonal U	Top Girt Net Width Deduct in	Top Girt U	Bottom Girt Net Width Deduct in	Bottom Girt U	Mid Girt Net Width Deduct in	Mid Girt U	Long Horizontal Net Width Deduct in	Long Horizontal U	Short Horizontal Net Width Deduct in	Short Horizontal U
T1 190'-180'	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T2 180'-160'	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T3 160'-155'	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T4 155'-150'	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T5 150'-145'	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T6 145'-140'	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T7 140'-133'4"	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T8 133'4"-126'8"	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T9 126'8"-120'	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T10 120'-113'4"	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T11 113'4"-106'8"	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T12 106'8"-100'	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T13 100'-80'	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T14 80'-60'	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T15 60'-40'	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T16 40'-30'	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T17 30'-20'	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75

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
T18 20'-0'	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	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 190'-180'	0.000	0.75 (1)	0.000	0.75 (1)	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75 (1)	0.000	0.75 (1)
	0.000	0.75 (2)	0.000	0.75 (2)							0.000	0.75 (2)	0.000	0.75 (2)
	0.000	0.75 (3)	0.000	0.75 (3)							0.000	0.75 (3)	0.000	0.75 (3)
	0.000	0.75 (4)	0.000	0.75 (4)							0.000	0.75 (4)	0.000	0.75 (4)
T2 180'-160'	0.000	0.75 (1)	0.000	0.75 (1)	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75 (1)	0.000	0.75 (1)
	0.000	0.75 (2)	0.000	0.75 (2)							0.000	0.75 (2)	0.000	0.75 (2)
	0.000	0.75 (3)	0.000	0.75 (3)							0.000	0.75 (3)	0.000	0.75 (3)
	0.000	0.75 (4)	0.000	0.75 (4)							0.000	0.75 (4)	0.000	0.75 (4)
T3 160'-155'	0.000	0.75 (1)	0.000	0.75 (1)	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75 (1)	0.000	0.75 (1)
	0.000	0.75 (2)	0.000	0.75 (2)							0.000	0.75 (2)	0.000	0.75 (2)
	0.000	0.75 (3)	0.000	0.75 (3)							0.000	0.75 (3)	0.000	0.75 (3)
	0.000	0.75 (4)	0.000	0.75 (4)							0.000	0.75 (4)	0.000	0.75 (4)
T4 155'-150'	0.000	0.75 (1)	0.000	0.75 (1)	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75 (1)	0.000	0.75 (1)
	0.000	0.75 (2)	0.000	0.75 (2)							0.000	0.75 (2)	0.000	0.75 (2)
	0.000	0.75 (3)	0.000	0.75 (3)							0.000	0.75 (3)	0.000	0.75 (3)
	0.000	0.75 (4)	0.000	0.75 (4)							0.000	0.75 (4)	0.000	0.75 (4)
T5 150'-145'	0.000	0.75 (1)	0.000	0.75 (1)	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75 (1)	0.000	0.75 (1)
	0.000	0.75 (2)	0.000	0.75 (2)							0.000	0.75 (2)	0.000	0.75 (2)
	0.000	0.75 (3)	0.000	0.75 (3)							0.000	0.75 (3)	0.000	0.75 (3)
	0.000	0.75 (4)	0.000	0.75 (4)							0.000	0.75 (4)	0.000	0.75 (4)
T6 145'-140'	0.000	0.75 (1)	0.000	0.75 (1)	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75 (1)	0.000	0.75 (1)
	0.000	0.75 (2)	0.000	0.75 (2)							0.000	0.75 (2)	0.000	0.75 (2)
	0.000	0.75 (3)	0.000	0.75 (3)							0.000	0.75 (3)	0.000	0.75 (3)

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
	0.000	0.75 (4)	0.000	0.75 (4)							0.000	0.75 (4)	0.000	0.75 (4)
T7 140'-133'4"	0.000	0.75 (1)	0.000	0.75 (1)	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75 (1)	0.000	0.75 (1)
	0.000	0.75 (2)	0.000	0.75 (2)							0.000	0.75 (2)	0.000	0.75 (2)
	0.000	0.75 (3)	0.000	0.75 (3)							0.000	0.75 (3)	0.000	0.75 (3)
	0.000	0.75 (4)	0.000	0.75 (4)							0.000	0.75 (4)	0.000	0.75 (4)
T8 133'4"-126'8"	0.000	0.75 (1)	0.000	0.75 (1)	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75 (1)	0.000	0.75 (1)
	0.000	0.75 (2)	0.000	0.75 (2)							0.000	0.75 (2)	0.000	0.75 (2)
	0.000	0.75 (3)	0.000	0.75 (3)							0.000	0.75 (3)	0.000	0.75 (3)
	0.000	0.75 (4)	0.000	0.75 (4)							0.000	0.75 (4)	0.000	0.75 (4)
T9 126'8"-120'	0.000	0.75 (1)	0.000	0.75 (1)	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75 (1)	0.000	0.75 (1)
	0.000	0.75 (2)	0.000	0.75 (2)							0.000	0.75 (2)	0.000	0.75 (2)
	0.000	0.75 (3)	0.000	0.75 (3)							0.000	0.75 (3)	0.000	0.75 (3)
	0.000	0.75 (4)	0.000	0.75 (4)							0.000	0.75 (4)	0.000	0.75 (4)
T10 120'-113'4"	0.000	0.75 (1)	0.000	0.75 (1)	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75 (1)	0.000	0.75 (1)
	0.000	0.75 (2)	0.000	0.75 (2)							0.000	0.75 (2)	0.000	0.75 (2)
	0.000	0.75 (3)	0.000	0.75 (3)							0.000	0.75 (3)	0.000	0.75 (3)
	0.000	0.75 (4)	0.000	0.75 (4)							0.000	0.75 (4)	0.000	0.75 (4)
T11 113'4"-106'8"	0.000	0.75 (1)	0.000	0.75 (1)	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75 (1)	0.000	0.75 (1)
	0.000	0.75 (2)	0.000	0.75 (2)							0.000	0.75 (2)	0.000	0.75 (2)
	0.000	0.75 (3)	0.000	0.75 (3)							0.000	0.75 (3)	0.000	0.75 (3)
	0.000	0.75 (4)	0.000	0.75 (4)							0.000	0.75 (4)	0.000	0.75 (4)
T12 106'8"-100'	0.000	0.75 (1)	0.000	0.75 (1)	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75 (1)	0.000	0.75 (1)
	0.000	0.75 (2)	0.000	0.75 (2)							0.000	0.75 (2)	0.000	0.75 (2)
	0.000	0.75 (3)	0.000	0.75 (3)							0.000	0.75 (3)	0.000	0.75 (3)
	0.000	0.75 (4)	0.000	0.75 (4)							0.000	0.75 (4)	0.000	0.75 (4)
T13 100'-80'	0.000	0.75 (1)	0.000	0.75 (1)	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75 (1)	0.000	0.75 (1)
	0.000	0.75 (2)	0.000	0.75 (2)							0.000	0.75 (2)	0.000	0.75 (2)
	0.000	0.75 (3)	0.000	0.75 (3)							0.000	0.75 (3)	0.000	0.75 (3)

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
	0.000	0.75 (4)	0.000	0.75 (4)							0.000	0.75 (4)	0.000	0.75 (4)
T14 80'-60'	0.000	0.75 (1)	0.000	0.75 (1)	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75 (1)	0.000	0.75 (1)
	0.000	0.75 (2)	0.000	0.75 (2)							0.000	0.75 (2)	0.000	0.75 (2)
	0.000	0.75 (3)	0.000	0.75 (3)							0.000	0.75 (3)	0.000	0.75 (3)
	0.000	0.75 (4)	0.000	0.75 (4)							0.000	0.75 (4)	0.000	0.75 (4)
T15 60'-40'	0.000	0.75 (1)	0.000	0.75 (1)	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75 (1)	0.000	0.75 (1)
	0.000	0.75 (2)	0.000	0.75 (2)							0.000	0.75 (2)	0.000	0.75 (2)
	0.000	0.75 (3)	0.000	0.75 (3)							0.000	0.75 (3)	0.000	0.75 (3)
	0.000	0.75 (4)	0.000	0.75 (4)							0.000	0.75 (4)	0.000	0.75 (4)
T16 40'-30'	0.000	0.75 (1)	0.000	0.75 (1)	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75 (1)	0.000	0.75 (1)
	0.000	0.75 (2)	0.000	0.75 (2)							0.000	0.75 (2)	0.000	0.75 (2)
	0.000	0.75 (3)	0.000	0.75 (3)							0.000	0.75 (3)	0.000	0.75 (3)
	0.000	0.75 (4)	0.000	0.75 (4)							0.000	0.75 (4)	0.000	0.75 (4)
T17 30'-20'	0.000	0.75 (1)	0.000	0.75 (1)	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75 (1)	0.000	0.75 (1)
	0.000	0.75 (2)	0.000	0.75 (2)							0.000	0.75 (2)	0.000	0.75 (2)
	0.000	0.75 (3)	0.000	0.75 (3)							0.000	0.75 (3)	0.000	0.75 (3)
	0.000	0.75 (4)	0.000	0.75 (4)							0.000	0.75 (4)	0.000	0.75 (4)
T18 20'-0'	0.000	0.75 (1)	0.000	0.75 (1)	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75 (1)	0.000	0.75 (1)
	0.000	0.75 (2)	0.000	0.75 (2)							0.000	0.75 (2)	0.000	0.75 (2)
	0.000	0.75 (3)	0.000	0.75 (3)							0.000	0.75 (3)	0.000	0.75 (3)
	0.000	0.75 (4)	0.000	0.75 (4)							0.000	0.75 (4)	0.000	0.75 (4)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg Connection Type	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
		Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.
T1 190'-180'	Flange	0.625 A325N	4	0.500 A325N	1	0.500 A325N	1	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0
T2 180'-160'	Flange	0.625 A325N	4	0.500 A325X	1	0.500 A325N	1	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0
T3 160'-155'	Flange	0.750 A325N	0	0.500 A325N	1	0.500 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0
T4 155'-150'	Flange	0.750 A325N	0	0.500 A325N	1	0.625 A325N	0	0.000 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0
T5 150'-145'	Flange	0.750 A325N	0	0.500 A325X	1	0.625 A325N	0	0.000 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0
T6 145'-140'	Flange	0.750 A325N	4	0.500 A325N	1	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325X	1
T7 140'-133'4"	Flange	0.875 A325N	0	0.500 A325N	2	0.625 A325N	0	0.000 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0
T8 133'4"-126'8"	Flange	0.875 A325N	0	0.500 A325N	2	0.625 A325N	0	0.000 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325X	1
T9 126'8"-120'	Flange	0.875 A325N	4	0.500 A325N	2	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	1
T10 120'-113'4"	Flange	0.875 A325N	0	0.500 A325N	2	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	1
T11 113'4"-106'8"	Flange	0.875 A325N	0	0.500 A325N	2	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	1
T12 106'8"-100'	Flange	0.875 A325N	4	0.500 A325N	2	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0
T13 100'-80'	Flange	1.000 A325N	4	0.500 A325N	2	0.625 A325N	0	0.000 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0
T14 80'-60'	Flange	1.000 A325N	4	0.625 A325N	1	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0
T15 60'-40'	Flange	1.000 A325N	6	0.625 A325N	1	0.625 A325X	0	0.625 A325X	0	0.625 A325X	0	0.625 A325X	0	0.625 A325N	1
T16 40'-30'	Flange	1.000 A325N	0	0.625 A325N	1	0.625 A325N	0	0.000 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0
T17 30'-20'	Flange	1.000 A325N	6	0.625 A325N	1	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	1
T18 20'-0'	Flange	1.000 A449	0	0.625 A325N	2	0.625 A325X	0	0.625 A325X	0	0.625 A325X	0	0.625 A325X	0	0.625 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 klf
FLC 158-50J(1-5/8")	A	No	No	Ar (CaAa)	178' - 0'	0.000	0.39	8	6	0.850 0.750	2.015		0.001
Feedline Ladder (Af) *	A	No	No	Af (CaAa)	180' - 0'	0.000	0.385	1	1	3.000	3.000		0.008
LDF6-50A(1-1/4")	B	No	No	Ar (CaAa)	165' - 0'	0.000	-0.4	12	6	0.500	1.550		0.001
2-1/2" Rigid Conduit	B	No	No	Ar (CaAa)	165' - 0'	0.000	-0.36	1	1	0.850 0.750	2.500		0.003
WR-VG122S	B	No	No	Ar (CaAa)	165' - 0'	0.000	-0.36	2	2	0.500	0.460		0.000

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 klf
T-BRDA(7/16)													
FB-L98B-002-75000(3/8)	B	No	No	Ar (CaAa)	165' - 0'	0.000	-0.36	1	1	0.500	0.394		0.000
FB-L98B-002-75000(3/8)	B	No	No	Ar (CaAa)	165' - 0'	2.500	-0.37	1	1	0.394	0.394		0.000
WR-VG86ST-BRD(3/4)	B	No	No	Ar (CaAa)	165' - 0'	0.000	-0.37	4	2	0.500	0.795		0.001
Feedline Ladder (Af) *	B	No	No	Af (CaAa)	180' - 0'	0.000	-0.39	1	1	3.000	3.000		0.008
HB114-1-0813U4-M5J(1-1/4)	C	No	No	Ar (CaAa)	150' - 0'	0.000	-0.37	4	4	0.850 0.750	1.540		0.001
LDF4-50A(1/2")	C	No	No	Ar (CaAa)	50' - 0'	0.000	-0.35	1	1	0.630	0.630		0.000
Feedline Ladder (Af) *	C	No	No	Af (CaAa)	150' - 0'	-0.750	-0.42	2	1	3.000	3.000		0.008
HB158-21U6S24-xxM_TMO(1-5/8)	C	No	No	Ar (CaAa)	186' - 0'	-1.000	-0.38	1	1	0.850 0.750	1.996		0.003
Feedline Ladder (Af) *	C	No	No	Af (CaAa)	186' - 150'	-0.750	-0.41	1	1	3.000	3.000		0.008
CU12PSM9P6XXX(1-1/2) *	C	No	No	Ar (CaAa)	138' - 0'	0.000	-0.395	1	1	0.850 0.750	1.600		0.002
Safety Line 3/8	A	No	No	Ar (CaAa)	190' - 0'	0.000	0.02	1	1	0.375	0.375		0.000
Thin Flat Bar Climbing Ladder *	A	No	No	Af (CaAa)	190' - 0'	0.000	0	1	1	2.000	2.000		0.004
2" SR	A	No	No	Ar (CaAa)	110' - 0'	0.000	0.5	1	1	2.000	2.000		0.000
2" SR	B	No	No	Ar (CaAa)	110' - 0'	0.000	0.5	1	1	2.000	2.000		0.000
2" SR *	C	No	No	Ar (CaAa)	110' - 0'	0.000	0.5	1	1	2.000	2.000		0.000

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	C_AA_A ft^2/ft	Weight klf
*								

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
T1	190'-180'	A	0.000	0.000	3.708	0.000	0.042
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	4.198	0.000	0.065
T2	180'-160'	A	0.000	0.000	46.433	0.000	0.385
		B	0.000	0.000	22.994	0.000	0.236
		C	0.000	0.000	13.992	0.000	0.218
T3	160'-155'	A	0.000	0.000	12.414	0.000	0.100
		B	0.000	0.000	15.494	0.000	0.110
		C	0.000	0.000	3.498	0.000	0.054
T4	155'-150'	A	0.000	0.000	12.414	0.000	0.100
		B	0.000	0.000	15.494	0.000	0.110
		C	0.000	0.000	3.498	0.000	0.054
T5	150'-145'	A	0.000	0.000	12.414	0.000	0.100
		B	0.000	0.000	15.494	0.000	0.110
		C	0.000	0.000	9.078	0.000	0.120
T6	145'-140'	A	0.000	0.000	12.414	0.000	0.100
		B	0.000	0.000	15.494	0.000	0.110
		C	0.000	0.000	9.078	0.000	0.120
T7	140'-133'4"	A	0.000	0.000	16.552	0.000	0.133
		B	0.000	0.000	20.658	0.000	0.147
		C	0.000	0.000	12.851	0.000	0.172
T8	133'4"-126'8"	A	0.000	0.000	16.552	0.000	0.133
		B	0.000	0.000	20.658	0.000	0.147
		C	0.000	0.000	13.171	0.000	0.176
T9	126'8"-120'	A	0.000	0.000	16.552	0.000	0.133
		B	0.000	0.000	20.658	0.000	0.147
		C	0.000	0.000	13.171	0.000	0.176
T10	120'-113'4"	A	0.000	0.000	16.552	0.000	0.133
		B	0.000	0.000	20.658	0.000	0.147
		C	0.000	0.000	13.171	0.000	0.176
T11	113'4"-106'8"	A	0.000	0.000	17.219	0.000	0.133
		B	0.000	0.000	21.325	0.000	0.147
		C	0.000	0.000	13.837	0.000	0.176
T12	106'8"-100'	A	0.000	0.000	17.886	0.000	0.133
		B	0.000	0.000	21.992	0.000	0.147
		C	0.000	0.000	14.504	0.000	0.176
T13	100'-80'	A	0.000	0.000	53.657	0.000	0.400
		B	0.000	0.000	65.975	0.000	0.441
		C	0.000	0.000	43.512	0.000	0.529
T14	80'-60'	A	0.000	0.000	53.657	0.000	0.400
		B	0.000	0.000	65.975	0.000	0.441
		C	0.000	0.000	43.512	0.000	0.529
T15	60'-40'	A	0.000	0.000	53.657	0.000	0.400
		B	0.000	0.000	65.975	0.000	0.441
		C	0.000	0.000	44.142	0.000	0.530
T16	40'-30'	A	0.000	0.000	26.828	0.000	0.200
		B	0.000	0.000	32.987	0.000	0.221
		C	0.000	0.000	22.386	0.000	0.266
T17	30'-20'	A	0.000	0.000	26.828	0.000	0.200
		B	0.000	0.000	32.987	0.000	0.221
		C	0.000	0.000	22.386	0.000	0.266
T18	20'-0'	A	0.000	0.000	53.657	0.000	0.400
		B	0.000	0.000	65.975	0.000	0.441
		C	0.000	0.000	44.772	0.000	0.532

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
T1	190'-180'	A	1.010	0.000	0.000	7.748	0.000	0.106
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	6.621	0.000	0.125
T2	180'-160'	A	1.001	0.000	0.000	73.436	0.000	1.072
		B		0.000	0.000	34.217	0.000	0.537
		C		0.000	0.000	22.003	0.000	0.414
T3	160'-155'	A	0.994	0.000	0.000	19.546	0.000	0.282
		B		0.000	0.000	23.643	0.000	0.318
		C		0.000	0.000	5.486	0.000	0.103
T4	155'-150'	A	0.991	0.000	0.000	19.532	0.000	0.282
		B		0.000	0.000	23.614	0.000	0.317
		C		0.000	0.000	5.479	0.000	0.103
T5	150'-145'	A	0.987	0.000	0.000	19.516	0.000	0.281
		B		0.000	0.000	23.584	0.000	0.316
		C		0.000	0.000	15.990	0.000	0.252
T6	145'-140'	A	0.984	0.000	0.000	19.501	0.000	0.281
		B		0.000	0.000	23.553	0.000	0.316
		C		0.000	0.000	15.974	0.000	0.252
T7	140'-133'4"	A	0.980	0.000	0.000	25.976	0.000	0.373
		B		0.000	0.000	31.354	0.000	0.420
		C		0.000	0.000	22.935	0.000	0.360
T8	133'4"-126'8"	A	0.975	0.000	0.000	25.946	0.000	0.372
		B		0.000	0.000	31.294	0.000	0.418
		C		0.000	0.000	23.611	0.000	0.370
T9	126'8"-120'	A	0.970	0.000	0.000	25.914	0.000	0.371
		B		0.000	0.000	31.232	0.000	0.417
		C		0.000	0.000	23.573	0.000	0.369
T10	120'-113'4"	A	0.964	0.000	0.000	25.881	0.000	0.370
		B		0.000	0.000	31.166	0.000	0.415
		C		0.000	0.000	23.533	0.000	0.368
T11	113'4"-106'8"	A	0.959	0.000	0.000	27.152	0.000	0.380
		B		0.000	0.000	32.403	0.000	0.425
		C		0.000	0.000	24.796	0.000	0.378
T12	106'8"-100'	A	0.953	0.000	0.000	28.414	0.000	0.390
		B		0.000	0.000	33.628	0.000	0.435
		C		0.000	0.000	26.050	0.000	0.388
T13	100'-80'	A	0.940	0.000	0.000	84.948	0.000	1.160
		B		0.000	0.000	100.354	0.000	1.293
		C		0.000	0.000	77.806	0.000	1.154
T14	80'-60'	A	0.916	0.000	0.000	84.425	0.000	1.143
		B		0.000	0.000	99.409	0.000	1.272
		C		0.000	0.000	77.192	0.000	1.136
T15	60'-40'	A	0.886	0.000	0.000	83.746	0.000	1.120
		B		0.000	0.000	98.180	0.000	1.245
		C		0.000	0.000	78.798	0.000	1.131
T16	40'-30'	A	0.855	0.000	0.000	41.525	0.000	0.548
		B		0.000	0.000	48.461	0.000	0.609
		C		0.000	0.000	40.130	0.000	0.562
T17	30'-20'	A	0.827	0.000	0.000	41.208	0.000	0.538
		B		0.000	0.000	47.888	0.000	0.596
		C		0.000	0.000	39.702	0.000	0.551
T18	20'-0'	A	0.754	0.000	0.000	80.796	0.000	1.022
		B		0.000	0.000	92.846	0.000	1.131
		C		0.000	0.000	77.216	0.000	1.046

Feed Line Center of Pressure

Section	Elevation	CP_X	CP_Z	CP_X Ice	CP_Z Ice
	ft	in	in	in	in
T1	190'-180'	1.078	0.869	0.637	0.552
T2	180'-160'	1.213	-13.077	1.285	-11.913
T3	160'-155'	1.884	-19.186	2.025	-17.778
T4	155'-150'	1.990	-20.259	2.135	-18.759
T5	150'-145'	4.389	-16.388	5.448	-15.309
T6	145'-140'	4.218	-16.088	5.291	-15.021
T7	140'-133'4"	5.471	-17.900	6.862	-16.496
T8	133'4"-126'8"	5.395	-17.257	6.932	-15.911
T9	126'8"-120'	5.372	-17.415	7.062	-16.322
T10	120'-113'4"	5.346	-17.499	7.166	-16.648
T11	113'4"-106'8"	5.392	-17.733	7.188	-16.745
T12	106'8"-100'	6.050	-19.565	7.877	-18.200
T13	100'-80'	6.004	-19.769	8.067	-18.833
T14	80'-60'	7.230	-23.448	9.503	-22.018
T15	60'-40'	6.897	-22.420	9.594	-21.258
T16	40'-30'	7.948	-24.863	11.132	-23.191
T17	30'-20'	6.944	-22.367	10.073	-21.430
T18	20'-0'	8.021	-25.516	11.436	-24.399

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T1	19	HB158-21U6S24-xxM_TMO (1-5/8)	180.00 - 186.00	0.6000	0.6000
T1	21	Feedline Ladder (Af)	180.00 - 186.00	0.6000	0.6000
T1	25	Safety Line 3/8	180.00 - 190.00	0.6000	0.6000
T1	26	Thin Flat Bar Climbing Ladder	180.00 - 190.00	0.6000	0.6000
T2	1	FLC 158-50J(1-5/8")	160.00 - 178.00	0.6000	0.6000
T2	2	Feedline Ladder (Af)	160.00 - 180.00	0.6000	0.6000
T2	4	LDF6-50A(1-1/4")	160.00 - 165.00	0.6000	0.6000
T2	5	2-1/2" Rigid Conduit	160.00 - 165.00	0.6000	0.6000
T2	6	WR-VG122ST-BRDA(7/16)	160.00 - 165.00	0.0000	0.0000
T2	7	FB-L98B-002-75000(3/8)	160.00 - 165.00	0.0000	0.0000
T2	8	FB-L98B-002-75000(3/8)	160.00 - 165.00	0.6000	0.6000
T2	9	WR-VG86ST-BRD(3/4)	160.00 - 165.00	0.6000	0.6000
T2	10	Feedline Ladder (Af)	160.00 - 180.00	0.6000	0.6000
T2	19	HB158-21U6S24-xxM_TMO (1-5/8)	160.00 - 180.00	0.6000	0.6000
T2	21	Feedline Ladder (Af)	160.00 - 180.00	0.6000	0.6000
T2	25	Safety Line 3/8	160.00 - 180.00	0.6000	0.6000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T2	26	Thin Flat Bar Climbing Ladder	160.00 - 180.00	0.6000	0.6000
T3	1	FLC 158-50J(1-5/8")	155.00 - 160.00	0.6000	0.6000
T3	2	Feedline Ladder (Af)	155.00 - 160.00	0.6000	0.6000
T3	4	LDF6-50A(1-1/4")	155.00 - 160.00	0.6000	0.6000
T3	5	2-1/2" Rigid Conduit	155.00 - 160.00	0.6000	0.6000
T3	6	WR-VG122ST-BRDA(7/16)	155.00 - 160.00	0.0000	0.0000
T3	7	FB-L98B-002-75000(3/8)	155.00 - 160.00	0.0000	0.0000
T3	8	FB-L98B-002-75000(3/8)	155.00 - 160.00	0.6000	0.6000
T3	9	WR-VG86ST-BRD(3/4)	155.00 - 160.00	0.6000	0.6000
T3	10	Feedline Ladder (Af)	155.00 - 160.00	0.6000	0.6000
T3	19	HB158-21U6S24-xxM_TMO (1-5/8)	155.00 - 160.00	0.6000	0.6000
T3	21	Feedline Ladder (Af)	155.00 - 160.00	0.6000	0.6000
T3	25	Safety Line 3/8	155.00 - 160.00	0.6000	0.6000
T3	26	Thin Flat Bar Climbing Ladder	155.00 - 160.00	0.6000	0.6000
T4	1	FLC 158-50J(1-5/8")	150.00 - 155.00	0.6000	0.6000
T4	2	Feedline Ladder (Af)	150.00 - 155.00	0.6000	0.6000
T4	4	LDF6-50A(1-1/4")	150.00 - 155.00	0.6000	0.6000
T4	5	2-1/2" Rigid Conduit	150.00 - 155.00	0.6000	0.6000
T4	6	WR-VG122ST-BRDA(7/16)	150.00 - 155.00	0.0000	0.0000
T4	7	FB-L98B-002-75000(3/8)	150.00 - 155.00	0.0000	0.0000
T4	8	FB-L98B-002-75000(3/8)	150.00 - 155.00	0.6000	0.6000
T4	9	WR-VG86ST-BRD(3/4)	150.00 - 155.00	0.6000	0.6000
T4	10	Feedline Ladder (Af)	150.00 - 155.00	0.6000	0.6000
T4	19	HB158-21U6S24-xxM_TMO (1-5/8)	150.00 - 155.00	0.6000	0.6000
T4	21	Feedline Ladder (Af)	150.00 - 155.00	0.6000	0.6000
T4	25	Safety Line 3/8	150.00 - 155.00	0.6000	0.6000
T4	26	Thin Flat Bar Climbing Ladder	150.00 - 155.00	0.6000	0.6000
T5	1	FLC 158-50J(1-5/8")	145.00 - 150.00	0.6000	0.6000
T5	2	Feedline Ladder (Af)	145.00 - 150.00	0.6000	0.6000
T5	4	LDF6-50A(1-1/4")	145.00 - 150.00	0.6000	0.6000
T5	5	2-1/2" Rigid Conduit	145.00 - 150.00	0.6000	0.6000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T5	6	WR-VG122ST-BRDA(7/16)	145.00 - 150.00	0.0000	0.0000
T5	7	FB-L98B-002-75000(3/8)	145.00 - 150.00	0.0000	0.0000
T5	8	FB-L98B-002-75000(3/8)	145.00 - 150.00	0.6000	0.6000
T5	9	WR-VG86ST-BRD(3/4)	145.00 - 150.00	0.6000	0.6000
T5	10	Feedline Ladder (Af)	145.00 - 150.00	0.6000	0.6000
T5	12	HB114-1-0813U4-M5J(1-1/4)	145.00 - 150.00	0.6000	0.6000
T5	15	Feedline Ladder (Af)	145.00 - 150.00	0.6000	0.6000
T5	19	HB158-21U6S24-xxM_TMO (1-5/8)	145.00 - 150.00	0.6000	0.6000
T5	25	Safety Line 3/8	145.00 - 150.00	0.6000	0.6000
T5	26	Thin Flat Bar Climbing Ladder	145.00 - 150.00	0.6000	0.6000
T6	1	FLC 158-50J(1-5/8")	140.00 - 145.00	0.6000	0.6000
T6	2	Feedline Ladder (Af)	140.00 - 145.00	0.6000	0.6000
T6	4	LDF6-50A(1-1/4")	140.00 - 145.00	0.6000	0.6000
T6	5	2-1/2" Rigid Conduit	140.00 - 145.00	0.6000	0.6000
T6	6	WR-VG122ST-BRDA(7/16)	140.00 - 145.00	0.0000	0.0000
T6	7	FB-L98B-002-75000(3/8)	140.00 - 145.00	0.0000	0.0000
T6	8	FB-L98B-002-75000(3/8)	140.00 - 145.00	0.6000	0.6000
T6	9	WR-VG86ST-BRD(3/4)	140.00 - 145.00	0.6000	0.6000
T6	10	Feedline Ladder (Af)	140.00 - 145.00	0.6000	0.6000
T6	12	HB114-1-0813U4-M5J(1-1/4)	140.00 - 145.00	0.6000	0.6000
T6	15	Feedline Ladder (Af)	140.00 - 145.00	0.6000	0.6000
T6	19	HB158-21U6S24-xxM_TMO (1-5/8)	140.00 - 145.00	0.6000	0.6000
T6	25	Safety Line 3/8	140.00 - 145.00	0.6000	0.6000
T6	26	Thin Flat Bar Climbing Ladder	140.00 - 145.00	0.6000	0.6000
T7	1	FLC 158-50J(1-5/8")	133.33 - 140.00	0.6000	0.6000
T7	2	Feedline Ladder (Af)	133.33 - 140.00	0.6000	0.6000
T7	4	LDF6-50A(1-1/4")	133.33 - 140.00	0.6000	0.6000
T7	5	2-1/2" Rigid Conduit	133.33 - 140.00	0.6000	0.6000
T7	6	WR-VG122ST-BRDA(7/16)	133.33 - 140.00	0.0000	0.0000
T7	7	FB-L98B-002-75000(3/8)	133.33 - 140.00	0.0000	0.0000
T7	8	FB-L98B-002-75000(3/8)	133.33 - 140.00	0.6000	0.6000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T7	9	WR-VG86ST-BRD(3/4)	133.33 - 140.00	0.6000	0.6000
T7	10	Feedline Ladder (Af)	133.33 - 140.00	0.6000	0.6000
T7	12	HB114-1-0813U4-M5J(1-1/4)	133.33 - 140.00	0.6000	0.6000
T7	15	Feedline Ladder (Af)	133.33 - 140.00	0.6000	0.6000
T7	19	HB158-21U6S24-xxM_TMO (1-5/8)	133.33 - 140.00	0.6000	0.6000
T7	23	CU12PSM9P6XXX(1-1/2)	133.33 - 138.00	0.6000	0.6000
T7	25	Safety Line 3/8	133.33 - 140.00	0.6000	0.6000
T7	26	Thin Flat Bar Climbing Ladder	133.33 - 140.00	0.6000	0.6000
T8	1	FLC 158-50J(1-5/8")	126.67 - 133.33	0.6000	0.6000
T8	2	Feedline Ladder (Af)	126.67 - 133.33	0.6000	0.6000
T8	4	LDF6-50A(1-1/4")	126.67 - 133.33	0.6000	0.6000
T8	5	2-1/2" Rigid Conduit	126.67 - 133.33	0.6000	0.6000
T8	6	WR-VG122ST-BRDA(7/16)	126.67 - 133.33	0.0000	0.0000
T8	7	FB-L98B-002-75000(3/8)	126.67 - 133.33	0.0000	0.0000
T8	8	FB-L98B-002-75000(3/8)	126.67 - 133.33	0.6000	0.6000
T8	9	WR-VG86ST-BRD(3/4)	126.67 - 133.33	0.6000	0.6000
T8	10	Feedline Ladder (Af)	126.67 - 133.33	0.6000	0.6000
T8	12	HB114-1-0813U4-M5J(1-1/4)	126.67 - 133.33	0.6000	0.6000
T8	15	Feedline Ladder (Af)	126.67 - 133.33	0.6000	0.6000
T8	19	HB158-21U6S24-xxM_TMO (1-5/8)	126.67 - 133.33	0.6000	0.6000
T8	23	CU12PSM9P6XXX(1-1/2)	126.67 - 133.33	0.6000	0.6000
T8	25	Safety Line 3/8	126.67 - 133.33	0.6000	0.6000
T8	26	Thin Flat Bar Climbing Ladder	126.67 - 133.33	0.6000	0.6000
T9	1	FLC 158-50J(1-5/8")	120.00 - 126.67	0.6000	0.6000
T9	2	Feedline Ladder (Af)	120.00 - 126.67	0.6000	0.6000
T9	4	LDF6-50A(1-1/4")	120.00 - 126.67	0.6000	0.6000
T9	5	2-1/2" Rigid Conduit	120.00 - 126.67	0.6000	0.6000
T9	6	WR-VG122ST-BRDA(7/16)	120.00 - 126.67	0.0000	0.0000
T9	7	FB-L98B-002-75000(3/8)	120.00 - 126.67	0.0000	0.0000
T9	8	FB-L98B-002-75000(3/8)	120.00 - 126.67	0.6000	0.6000
T9	9	WR-VG86ST-BRD(3/4)	120.00 - 126.67	0.6000	0.6000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T9	10	Feedline Ladder (Af)	120.00 - 126.67	0.6000	0.6000
T9	12	HB114-1-0813U4-M5J(1-1/4)	120.00 - 126.67	0.6000	0.6000
T9	15	Feedline Ladder (Af)	120.00 - 126.67	0.6000	0.6000
T9	19	HB158-21U6S24-xxM_TMO (1-5/8)	120.00 - 126.67	0.6000	0.6000
T9	23	CU12PSM9P6XXX(1-1/2)	120.00 - 126.67	0.6000	0.6000
T9	25	Safety Line 3/8	120.00 - 126.67	0.6000	0.6000
T9	26	Thin Flat Bar Climbing Ladder	120.00 - 126.67	0.6000	0.6000
T10	1	FLC 158-50J(1-5/8")	113.33 - 120.00	0.6000	0.6000
T10	2	Feedline Ladder (Af)	113.33 - 120.00	0.6000	0.6000
T10	4	LDF6-50A(1-1/4")	113.33 - 120.00	0.6000	0.6000
T10	5	2-1/2" Rigid Conduit	113.33 - 120.00	0.6000	0.6000
T10	6	WR-VG122ST-BRDA(7/16)	113.33 - 120.00	0.0000	0.0000
T10	7	FB-L98B-002-75000(3/8)	113.33 - 120.00	0.0000	0.0000
T10	8	FB-L98B-002-75000(3/8)	113.33 - 120.00	0.6000	0.6000
T10	9	WR-VG86ST-BRD(3/4)	113.33 - 120.00	0.6000	0.6000
T10	10	Feedline Ladder (Af)	113.33 - 120.00	0.6000	0.6000
T10	12	HB114-1-0813U4-M5J(1-1/4)	113.33 - 120.00	0.6000	0.6000
T10	15	Feedline Ladder (Af)	113.33 - 120.00	0.6000	0.6000
T10	19	HB158-21U6S24-xxM_TMO (1-5/8)	113.33 - 120.00	0.6000	0.6000
T10	23	CU12PSM9P6XXX(1-1/2)	113.33 - 120.00	0.6000	0.6000
T10	25	Safety Line 3/8	113.33 - 120.00	0.6000	0.6000
T10	26	Thin Flat Bar Climbing Ladder	113.33 - 120.00	0.6000	0.6000
T11	1	FLC 158-50J(1-5/8")	106.67 - 113.33	0.6000	0.6000
T11	2	Feedline Ladder (Af)	106.67 - 113.33	0.6000	0.6000
T11	4	LDF6-50A(1-1/4")	106.67 - 113.33	0.6000	0.6000
T11	5	2-1/2" Rigid Conduit	106.67 - 113.33	0.6000	0.6000
T11	6	WR-VG122ST-BRDA(7/16)	106.67 - 113.33	0.0000	0.0000
T11	7	FB-L98B-002-75000(3/8)	106.67 - 113.33	0.0000	0.0000
T11	8	FB-L98B-002-75000(3/8)	106.67 - 113.33	0.6000	0.6000
T11	9	WR-VG86ST-BRD(3/4)	106.67 - 113.33	0.6000	0.6000
T11	10	Feedline Ladder (Af)	106.67 - 113.33	0.6000	0.6000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T11	12	HB114-1-0813U4-M5J(1-1/4)	106.67 - 113.33	0.6000	0.6000
T11	15	Feedline Ladder (Af)	106.67 - 113.33	0.6000	0.6000
T11	19	HB158-21U6S24-xxM_TMO (1-5/8)	106.67 - 113.33	0.6000	0.6000
T11	23	CU12PSM9P6XXX(1-1/2)	106.67 - 113.33	0.6000	0.6000
T11	25	Safety Line 3/8	106.67 - 113.33	0.6000	0.6000
T11	26	Thin Flat Bar Climbing Ladder	106.67 - 113.33	0.6000	0.6000
T11	28	2" SR	106.67 - 110.00	0.6000	0.6000
T11	29	2" SR	106.67 - 110.00	0.6000	0.6000
T11	30	2" SR	106.67 - 110.00	0.6000	0.6000
T12	1	FLC 158-50J(1-5/8")	100.00 - 106.67	0.6000	0.6000
T12	2	Feedline Ladder (Af)	100.00 - 106.67	0.6000	0.6000
T12	4	LDF6-50A(1-1/4")	100.00 - 106.67	0.6000	0.6000
T12	5	2-1/2" Rigid Conduit	100.00 - 106.67	0.6000	0.6000
T12	6	WR-VG122ST-BRDA(7/16)	100.00 - 106.67	0.0000	0.0000
T12	7	FB-L98B-002-75000(3/8)	100.00 - 106.67	0.0000	0.0000
T12	8	FB-L98B-002-75000(3/8)	100.00 - 106.67	0.6000	0.6000
T12	9	WR-VG86ST-BRD(3/4)	100.00 - 106.67	0.6000	0.6000
T12	10	Feedline Ladder (Af)	100.00 - 106.67	0.6000	0.6000
T12	12	HB114-1-0813U4-M5J(1-1/4)	100.00 - 106.67	0.6000	0.6000
T12	15	Feedline Ladder (Af)	100.00 - 106.67	0.6000	0.6000
T12	19	HB158-21U6S24-xxM_TMO (1-5/8)	100.00 - 106.67	0.6000	0.6000
T12	23	CU12PSM9P6XXX(1-1/2)	100.00 - 106.67	0.6000	0.6000
T12	25	Safety Line 3/8	100.00 - 106.67	0.6000	0.6000
T12	26	Thin Flat Bar Climbing Ladder	100.00 - 106.67	0.6000	0.6000
T12	28	2" SR	100.00 - 106.67	0.6000	0.6000
T12	29	2" SR	100.00 - 106.67	0.6000	0.6000
T12	30	2" SR	100.00 - 106.67	0.6000	0.6000
T13	1	FLC 158-50J(1-5/8")	80.00 - 100.00	0.6000	0.6000
T13	2	Feedline Ladder (Af)	80.00 - 100.00	0.6000	0.6000
T13	4	LDF6-50A(1-1/4")	80.00 - 100.00	0.6000	0.6000
T13	5	2-1/2" Rigid Conduit	80.00 - 100.00	0.6000	0.6000
T13	6	WR-VG122ST-BRDA(7/16)	80.00 - 100.00	0.0000	0.0000
T13	7	FB-L98B-002-75000(3/8)	80.00 - 100.00	0.0000	0.0000
T13	8	FB-L98B-002-75000(3/8)	80.00 - 100.00	0.6000	0.6000
T13	9	WR-VG86ST-BRD(3/4)	80.00 - 100.00	0.6000	0.6000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T13	10	Feedline Ladder (Af)	80.00 - 100.00	0.6000	0.6000
T13	12	HB114-1-0813U4-M5J(1-1/4)	80.00 - 100.00	0.6000	0.6000
T13	15	Feedline Ladder (Af)	80.00 - 100.00	0.6000	0.6000
T13	19	HB158-21U6S24-xxM_TMO (1-5/8)	80.00 - 100.00	0.6000	0.6000
T13	23	CU12PSM9P6XXX(1-1/2)	80.00 - 100.00	0.6000	0.6000
T13	25	Safety Line 3/8	80.00 - 100.00	0.6000	0.6000
T13	26	Thin Flat Bar Climbing Ladder	80.00 - 100.00	0.6000	0.6000
T13	28	2" SR	80.00 - 100.00	0.6000	0.6000
T13	29	2" SR	80.00 - 100.00	0.6000	0.6000
T13	30	2" SR	80.00 - 100.00	0.6000	0.6000
T14	1	FLC 158-50J(1-5/8")	60.00 - 80.00	0.6000	0.6000
T14	2	Feedline Ladder (Af)	60.00 - 80.00	0.6000	0.6000
T14	4	LDF6-50A(1-1/4")	60.00 - 80.00	0.6000	0.6000
T14	5	2-1/2" Rigid Conduit	60.00 - 80.00	0.6000	0.6000
T14	6	WR-VG122ST-BRDA(7/16)	60.00 - 80.00	0.0000	0.0000
T14	7	FB-L98B-002-75000(3/8)	60.00 - 80.00	0.0000	0.0000
T14	8	FB-L98B-002-75000(3/8)	60.00 - 80.00	0.6000	0.6000
T14	9	WR-VG86ST-BRD(3/4)	60.00 - 80.00	0.6000	0.6000
T14	10	Feedline Ladder (Af)	60.00 - 80.00	0.6000	0.6000
T14	12	HB114-1-0813U4-M5J(1-1/4)	60.00 - 80.00	0.6000	0.6000
T14	15	Feedline Ladder (Af)	60.00 - 80.00	0.6000	0.6000
T14	19	HB158-21U6S24-xxM_TMO (1-5/8)	60.00 - 80.00	0.6000	0.6000
T14	23	CU12PSM9P6XXX(1-1/2)	60.00 - 80.00	0.6000	0.6000
T14	25	Safety Line 3/8	60.00 - 80.00	0.6000	0.6000
T14	26	Thin Flat Bar Climbing Ladder	60.00 - 80.00	0.6000	0.6000
T14	28	2" SR	60.00 - 80.00	0.6000	0.6000
T14	29	2" SR	60.00 - 80.00	0.6000	0.6000
T14	30	2" SR	60.00 - 80.00	0.6000	0.6000
T15	1	FLC 158-50J(1-5/8")	40.00 - 60.00	0.6000	0.6000
T15	2	Feedline Ladder (Af)	40.00 - 60.00	0.6000	0.6000
T15	4	LDF6-50A(1-1/4")	40.00 - 60.00	0.6000	0.6000
T15	5	2-1/2" Rigid Conduit	40.00 - 60.00	0.6000	0.6000
T15	6	WR-VG122ST-BRDA(7/16)	40.00 - 60.00	0.0000	0.0000
T15	7	FB-L98B-002-75000(3/8)	40.00 - 60.00	0.0000	0.0000
T15	8	FB-L98B-002-75000(3/8)	40.00 - 60.00	0.6000	0.6000
T15	9	WR-VG86ST-BRD(3/4)	40.00 - 60.00	0.6000	0.6000
T15	10	Feedline Ladder (Af)	40.00 - 60.00	0.6000	0.6000
T15	12	HB114-1-0813U4-M5J(1-1/4)	40.00 - 60.00	0.6000	0.6000
T15	14	LDF4-50A(1/2")	40.00 - 50.00	0.6000	0.6000
T15	15	Feedline Ladder (Af)	40.00 - 60.00	0.6000	0.6000
T15	19	HB158-21U6S24-xxM_TMO (1-5/8)	40.00 - 60.00	0.6000	0.6000
T15	23	CU12PSM9P6XXX(1-1/2)	40.00 - 60.00	0.6000	0.6000
T15	25	Safety Line 3/8	40.00 - 60.00	0.6000	0.6000
T15	26	Thin Flat Bar Climbing Ladder	40.00 - 60.00	0.6000	0.6000
T15	28	2" SR	40.00 - 60.00	0.6000	0.6000
T15	29	2" SR	40.00 - 60.00	0.6000	0.6000
T15	30	2" SR	40.00 - 60.00	0.6000	0.6000
T16	1	FLC 158-50J(1-5/8")	30.00 - 40.00	0.6000	0.6000
T16	2	Feedline Ladder (Af)	30.00 - 40.00	0.6000	0.6000
T16	4	LDF6-50A(1-1/4")	30.00 - 40.00	0.6000	0.6000
T16	5	2-1/2" Rigid Conduit	30.00 - 40.00	0.6000	0.6000
T16	6	WR-VG122ST-BRDA(7/16)	30.00 - 40.00	0.0000	0.0000
T16	7	FB-L98B-002-75000(3/8)	30.00 - 40.00	0.0000	0.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T16	8	FB-L98B-002-75000(3/8)	30.00 - 40.00	0.6000	0.6000
T16	9	WR-VG86ST-BRD(3/4)	30.00 - 40.00	0.6000	0.6000
T16	10	Feedline Ladder (Af)	30.00 - 40.00	0.6000	0.6000
T16	12	HB114-1-0813U4-M5J(1-1/4)	30.00 - 40.00	0.6000	0.6000
T16	14	LDF4-50A(1/2")	30.00 - 40.00	0.6000	0.6000
T16	15	Feedline Ladder (Af)	30.00 - 40.00	0.6000	0.6000
T16	19	HB158-21U6S24-xxM_TMO (1-5/8)	30.00 - 40.00	0.6000	0.6000
T16	23	CU12PSM9P6XXX(1-1/2)	30.00 - 40.00	0.6000	0.6000
T16	25	Safety Line 3/8	30.00 - 40.00	0.6000	0.6000
T16	26	Thin Flat Bar Climbing Ladder	30.00 - 40.00	0.6000	0.6000
T16	28	2" SR	30.00 - 40.00	0.6000	0.6000
T16	29	2" SR	30.00 - 40.00	0.6000	0.6000
T16	30	2" SR	30.00 - 40.00	0.6000	0.6000
T17	1	FLC 158-50J(1-5/8")	20.00 - 30.00	0.6000	0.6000
T17	2	Feedline Ladder (Af)	20.00 - 30.00	0.6000	0.6000
T17	4	LDF6-50A(1-1/4")	20.00 - 30.00	0.6000	0.6000
T17	5	2-1/2" Rigid Conduit	20.00 - 30.00	0.6000	0.6000
T17	6	WR-VG122ST-BRDA(7/16)	20.00 - 30.00	0.0000	0.0000
T17	7	FB-L98B-002-75000(3/8)	20.00 - 30.00	0.0000	0.0000
T17	8	FB-L98B-002-75000(3/8)	20.00 - 30.00	0.6000	0.6000
T17	9	WR-VG86ST-BRD(3/4)	20.00 - 30.00	0.6000	0.6000
T17	10	Feedline Ladder (Af)	20.00 - 30.00	0.6000	0.6000
T17	12	HB114-1-0813U4-M5J(1-1/4)	20.00 - 30.00	0.6000	0.6000
T17	14	LDF4-50A(1/2")	20.00 - 30.00	0.6000	0.6000
T17	15	Feedline Ladder (Af)	20.00 - 30.00	0.6000	0.6000
T17	19	HB158-21U6S24-xxM_TMO (1-5/8)	20.00 - 30.00	0.6000	0.6000
T17	23	CU12PSM9P6XXX(1-1/2)	20.00 - 30.00	0.6000	0.6000
T17	25	Safety Line 3/8	20.00 - 30.00	0.6000	0.6000
T17	26	Thin Flat Bar Climbing Ladder	20.00 - 30.00	0.6000	0.6000
T17	28	2" SR	20.00 - 30.00	0.6000	0.6000
T17	29	2" SR	20.00 - 30.00	0.6000	0.6000
T17	30	2" SR	20.00 - 30.00	0.6000	0.6000
T18	1	FLC 158-50J(1-5/8")	0.00 - 20.00	0.6000	0.6000
T18	2	Feedline Ladder (Af)	0.00 - 20.00	0.6000	0.6000
T18	4	LDF6-50A(1-1/4")	0.00 - 20.00	0.6000	0.6000
T18	5	2-1/2" Rigid Conduit	0.00 - 20.00	0.6000	0.6000
T18	6	WR-VG122ST-BRDA(7/16)	0.00 - 20.00	0.0000	0.0000
T18	7	FB-L98B-002-75000(3/8)	0.00 - 20.00	0.0000	0.0000
T18	8	FB-L98B-002-75000(3/8)	0.00 - 20.00	0.6000	0.6000
T18	9	WR-VG86ST-BRD(3/4)	0.00 - 20.00	0.6000	0.6000
T18	10	Feedline Ladder (Af)	0.00 - 20.00	0.6000	0.6000
T18	12	HB114-1-0813U4-M5J(1-1/4)	0.00 - 20.00	0.6000	0.6000
T18	14	LDF4-50A(1/2")	0.00 - 20.00	0.6000	0.6000
T18	15	Feedline Ladder (Af)	0.00 - 20.00	0.6000	0.6000
T18	19	HB158-21U6S24-xxM_TMO (1-5/8)	0.00 - 20.00	0.6000	0.6000
T18	23	CU12PSM9P6XXX(1-1/2)	0.00 - 20.00	0.6000	0.6000
T18	25	Safety Line 3/8	0.00 - 20.00	0.6000	0.6000
T18	26	Thin Flat Bar Climbing Ladder	0.00 - 20.00	0.6000	0.6000
T18	28	2" SR	0.00 - 20.00	0.6000	0.6000
T18	29	2" SR	0.00 - 20.00	0.6000	0.6000
T18	30	2" SR	0.00 - 20.00	0.6000	0.6000

Discrete Tower Loads

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
Lightning Rod 5/8" x 6'	C	From Leg	0.000 0' 3'	0.000	190'	No Ice 1/2" Ice 1" Ice	0.375 0.989 1.619	0.375 0.989 1.619	0.006 0.010 0.019
*									
APXVAALL24_43-U-NA20 _TMO w/ Mount Pipe	A	From Leg	4.000 0' 0'	0.000	186'	No Ice 1/2" Ice 1" Ice	14.694 15.455 16.230	6.873 7.554 8.247	0.183 0.311 0.453
APXVAALL24_43-U-NA20 _TMO w/ Mount Pipe	B	From Leg	4.000 0' 0'	0.000	186'	No Ice 1/2" Ice 1" Ice	14.694 15.455 16.230	6.873 7.554 8.247	0.183 0.311 0.453
APXVAALL24_43-U-NA20 _TMO w/ Mount Pipe	C	From Leg	4.000 0' 0'	0.000	186'	No Ice 1/2" Ice 1" Ice	14.694 15.455 16.230	6.873 7.554 8.247	0.183 0.311 0.453
Radio 4480_TMOV2	A	From Leg	4.000 0' 0'	0.000	186'	No Ice 1/2" Ice 1" Ice	2.878 3.091 3.312	1.397 1.558 1.727	0.081 0.103 0.128
Radio 4480_TMOV2	B	From Leg	4.000 0' 0'	0.000	186'	No Ice 1/2" Ice 1" Ice	2.878 3.091 3.312	1.397 1.558 1.727	0.081 0.103 0.128
Radio 4480_TMOV2	C	From Leg	4.000 0' 0'	0.000	186'	No Ice 1/2" Ice 1" Ice	2.878 3.091 3.312	1.397 1.558 1.727	0.081 0.103 0.128
RADIO 4460 B2/B25 B66_TMO	A	From Leg	4.000 0' 0'	0.000	186'	No Ice 1/2" Ice 1" Ice	2.139 2.321 2.511	1.686 1.850 2.022	0.109 0.131 0.156
RADIO 4460 B2/B25 B66_TMO	B	From Leg	4.000 0' 0'	0.000	186'	No Ice 1/2" Ice 1" Ice	2.139 2.321 2.511	1.686 1.850 2.022	0.109 0.131 0.156
RADIO 4460 B2/B25 B66_TMO	C	From Leg	4.000 0' 0'	0.000	186'	No Ice 1/2" Ice 1" Ice	2.139 2.321 2.511	1.686 1.850 2.022	0.109 0.131 0.156
10' x 2" Mount Pipe	A	From Leg	4.000 0' 0'	0.000	186'	No Ice 1/2" Ice 1" Ice	2.375 3.403 4.448	2.375 3.403 4.448	0.037 0.054 0.079
10' x 2" Mount Pipe	B	From Leg	4.000 0' 0'	0.000	186'	No Ice 1/2" Ice 1" Ice	2.375 3.403 4.448	2.375 3.403 4.448	0.037 0.054 0.079
10' x 2" Mount Pipe	C	From Leg	4.000 0' 0'	0.000	186'	No Ice 1/2" Ice 1" Ice	2.375 3.403 4.448	2.375 3.403 4.448	0.037 0.054 0.079
VFA12-HD	A	From Leg	2.000 0' 0'	0.000	186'	No Ice 1/2" Ice 1" Ice	13.200 19.500 25.800	9.200 14.600 19.500	0.658 0.804 1.015
VFA12-HD	B	From Leg	2.000 0' 0'	0.000	186'	No Ice 1/2" Ice 1" Ice	13.200 19.500 25.800	9.200 14.600 19.500	0.658 0.804 1.015
VFA12-HD	C	From Leg	2.000 0' 0'	0.000	186'	No Ice 1/2" Ice 1" Ice	13.200 19.500 25.800	9.200 14.600 19.500	0.658 0.804 1.015

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft Vert ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
*									
(2) LPA-80080/6CF w/ Mount Pipe	A	From Leg	4.000 0' 1'	0.000	178'	No Ice 1/2" Ice 1" Ice	3.015 3.569 4.137	7.800 8.422 9.057	0.058 0.119 0.190
(2) LPA-80080/6CF w/ Mount Pipe	B	From Leg	4.000 0' 1'	0.000	178'	No Ice 1/2" Ice 1" Ice	3.015 3.569 4.137	7.800 8.422 9.057	0.058 0.119 0.190
(2) LPA-80080/6CF w/ Mount Pipe	C	From Leg	4.000 0' 1'	0.000	178'	No Ice 1/2" Ice 1" Ice	3.015 3.569 4.137	7.800 8.422 9.057	0.058 0.119 0.190
DB-B1-6C-8AB-0Z	A	From Leg	4.000 0' 1'	0.000	178'	No Ice 1/2" Ice 1" Ice	4.800 5.070 5.348	2.000 2.193 2.393	0.044 0.080 0.120
DB-T1-6Z-8AB-0Z	C	From Leg	4.000 0' 1'	0.000	178'	No Ice 1/2" Ice 1" Ice	4.800 5.070 5.348	2.000 2.193 2.393	0.044 0.080 0.120
(2) JAHH-65B-R3B	A	From Leg	4.000 0' 1'	0.000	178'	No Ice 1/2" Ice 1" Ice	5.286 5.750 6.223	3.053 3.485 3.927	0.063 0.121 0.186
(2) JAHH-65B-R3B	B	From Leg	4.000 0' 1'	0.000	178'	No Ice 1/2" Ice 1" Ice	5.286 5.750 6.223	3.053 3.485 3.927	0.063 0.121 0.186
(2) JAHH-65B-R3B	C	From Leg	4.000 0' 1'	0.000	178'	No Ice 1/2" Ice 1" Ice	5.286 5.750 6.223	3.053 3.485 3.927	0.063 0.121 0.186
MT6413-77A	A	From Leg	4.000 0' 1'	0.000	178'	No Ice 1/2" Ice 1" Ice	3.793 4.045 4.304	1.462 1.651 1.847	0.057 0.082 0.110
MT6413-77A	B	From Leg	4.000 0' 1'	0.000	178'	No Ice 1/2" Ice 1" Ice	3.793 4.045 4.304	1.462 1.651 1.847	0.057 0.082 0.110
MT6413-77A	C	From Leg	4.000 0' 1'	0.000	178'	No Ice 1/2" Ice 1" Ice	3.793 4.045 4.304	1.462 1.651 1.847	0.057 0.082 0.110
RF4439D-25A	A	From Leg	4.000 0' 1'	0.000	178'	No Ice 1/2" Ice 1" Ice	1.865 2.035 2.212	1.252 1.394 1.544	0.075 0.093 0.114
RF4439D-25A	B	From Leg	4.000 0' 1'	0.000	178'	No Ice 1/2" Ice 1" Ice	1.865 2.035 2.212	1.252 1.394 1.544	0.075 0.093 0.114
RF4439D-25A	C	From Leg	4.000 0' 1'	0.000	178'	No Ice 1/2" Ice 1" Ice	1.865 2.035 2.212	1.252 1.394 1.544	0.075 0.093 0.114
CBC78T-DS-43-2X	A	From Leg	4.000 0' 1'	0.000	178'	No Ice 1/2" Ice 1" Ice	0.368 0.446 0.531	0.512 0.605 0.705	0.021 0.027 0.035
CBC78T-DS-43-2X	B	From Leg	4.000 0' 1'	0.000	178'	No Ice 1/2" Ice 1" Ice	0.368 0.446 0.531	0.512 0.605 0.705	0.021 0.027 0.035
CBC78T-DS-43-2X	C	From Leg	4.000 0' 1'	0.000	178'	No Ice 1/2" Ice 1" Ice	0.368 0.446 0.531	0.512 0.605 0.705	0.021 0.027 0.035
RF4461D-13A	A	From Leg	4.000 0' 1'	0.000	178'	No Ice 1/2" Ice 1" Ice	1.865 2.035 2.212	1.275 1.419 1.570	0.079 0.098 0.119
RF4461D-13A	B	From Leg	4.000 0'	0.000	178'	No Ice 1/2" Ice	1.865 2.035	1.275 1.419	0.079 0.098

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			1'			1" Ice	2.212	1.570	0.119
RF4461D-13A	C	From Leg	4.000	0.000	178'	No Ice	1.865	1.275	0.079
			0'			1/2" Ice	2.035	1.419	0.098
			1'			1" Ice	2.212	1.570	0.119
8'x2 1/2" Pipe Mount	A	From Leg	4.000	0.000	178'	No Ice	2.300	2.300	0.041
			0'			1/2" Ice	3.132	3.132	0.057
			0'			1" Ice	3.620	3.620	0.080
8'x2 1/2" Pipe Mount	B	From Leg	4.000	0.000	178'	No Ice	2.300	2.300	0.041
			0'			1/2" Ice	3.132	3.132	0.057
			0'			1" Ice	3.620	3.620	0.080
8'x2 1/2" Pipe Mount	C	From Leg	4.000	0.000	178'	No Ice	2.300	2.300	0.041
			0'			1/2" Ice	3.132	3.132	0.057
			0'			1" Ice	3.620	3.620	0.080
(2) L 2 1/2x2 1/2x1/4x8'	A	From Leg	4.000	0.000	178'	No Ice	2.000	0.007	0.062
			0'			1/2" Ice	2.551	0.025	0.074
			-4'2"			1" Ice	3.109	0.051	0.092
(2) L 2 1/2x2 1/2x1/4x8'	B	From Leg	4.000	0.000	178'	No Ice	2.000	0.007	0.062
			0'			1/2" Ice	2.551	0.025	0.074
			-4'2"			1" Ice	3.109	0.051	0.092
(2) L 2 1/2x2 1/2x1/4x8'	C	From Leg	4.000	0.000	178'	No Ice	2.000	0.007	0.062
			0'			1/2" Ice	2.551	0.025	0.074
			-4'2"			1" Ice	3.109	0.051	0.092
6' x 2" Mount Pipe	A	From Leg	3.000	0.000	178'	No Ice	1.425	1.425	0.022
			0'			1/2" Ice	1.925	1.925	0.033
			0'			1" Ice	2.294	2.294	0.048
6' x 2" Mount Pipe	B	From Leg	3.000	0.000	178'	No Ice	1.425	1.425	0.022
			0'			1/2" Ice	1.925	1.925	0.033
			0'			1" Ice	2.294	2.294	0.048
6' x 2" Mount Pipe	C	From Leg	3.000	0.000	178'	No Ice	1.425	1.425	0.022
			0'			1/2" Ice	1.925	1.925	0.033
			0'			1" Ice	2.294	2.294	0.048
Sector Mount [SM 511-3]	C	None		0.000	178'	No Ice	41.210	41.210	2.466
						1/2" Ice	58.100	58.100	3.171
						1" Ice	74.620	74.620	4.086
*									
7770.00 w/ Mount Pipe	A	From Leg	4.000	0.000	165'	No Ice	3.385	2.323	0.055
			0'			1/2" Ice	3.746	2.664	0.098
			2'			1" Ice	4.117	3.016	0.149
7770.00 w/ Mount Pipe	B	From Leg	4.000	0.000	165'	No Ice	3.385	2.323	0.055
			0'			1/2" Ice	3.746	2.664	0.098
			2'			1" Ice	4.117	3.016	0.149
7770.00 w/ Mount Pipe	C	From Leg	4.000	0.000	165'	No Ice	3.385	2.323	0.055
			0'			1/2" Ice	3.746	2.664	0.098
			2'			1" Ice	4.117	3.016	0.149
DMP65R-BU8D w/ Mount Pipe	A	From Leg	4.000	0.000	165'	No Ice	15.886	7.889	0.139
			0'			1/2" Ice	16.815	8.735	0.252
			2'			1" Ice	17.760	9.597	0.380
DMP65R-BU8D w/ Mount Pipe	B	From Leg	4.000	0.000	165'	No Ice	15.886	7.889	0.139
			0'			1/2" Ice	16.815	8.735	0.252
			2'			1" Ice	17.760	9.597	0.380
DMP65R-BU8D w/ Mount Pipe	C	From Leg	4.000	0.000	165'	No Ice	15.886	7.889	0.139
			0'			1/2" Ice	16.815	8.735	0.252
			2'			1" Ice	17.760	9.597	0.380
OPA65R-BU6D w/ Mount Pipe	A	From Leg	4.000	0.000	165'	No Ice	12.248	6.047	0.089
			0'			1/2" Ice	12.998	6.710	0.176
			2'			1" Ice	13.764	7.388	0.275
OPA65R-BU6D w/ Mount	B	From Leg	4.000	0.000	165'	No Ice	12.248	6.047	0.089

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
Pipe			0'			1/2" Ice	12.998	6.710	0.176
			2'			1" Ice	13.764	7.388	0.275
OPA65R-BU6D w/ Mount Pipe	C	From Leg	4.000 0'	0.000	165'	No Ice 1/2" Ice	12.248 12.998	6.047 6.710	0.089 0.176
			2'			1" Ice	13.764	7.388	0.275
QS66512-2 w/ Mount Pipe	A	From Leg	4.000 0'	0.000	165'	No Ice 1/2" Ice	4.035 4.421	4.181 4.569	0.137 0.206
			2'			1" Ice	4.816	4.966	0.287
QS66512-2 w/ Mount Pipe	B	From Leg	4.000 0'	0.000	165'	No Ice 1/2" Ice	4.035 4.421	4.181 4.569	0.137 0.206
			2'			1" Ice	4.816	4.966	0.287
QS66512-2 w/ Mount Pipe	C	From Leg	4.000 0'	0.000	165'	No Ice 1/2" Ice	4.035 4.421	4.181 4.569	0.137 0.206
			2'			1" Ice	4.816	4.966	0.287
(2) LGP21401	A	From Leg	4.000 0'	0.000	165'	No Ice 1/2" Ice	1.104 1.239	0.207 0.274	0.014 0.021
			2'			1" Ice	1.381	0.348	0.030
(2) LGP21401	B	From Leg	4.000 0'	0.000	165'	No Ice 1/2" Ice	1.104 1.239	0.207 0.274	0.014 0.021
			2'			1" Ice	1.381	0.348	0.030
(2) LGP21401	C	From Leg	4.000 0'	0.000	165'	No Ice 1/2" Ice	1.104 1.239	0.207 0.274	0.014 0.021
			2'			1" Ice	1.381	0.348	0.030
RRUS 4449 B5/B12	A	From Leg	4.000 0'	0.000	165'	No Ice 1/2" Ice	1.968 2.144	1.408 1.564	0.071 0.090
			2'			1" Ice	2.328	1.727	0.111
RRUS 4449 B5/B12	B	From Leg	4.000 0'	0.000	165'	No Ice 1/2" Ice	1.968 2.144	1.408 1.564	0.071 0.090
			2'			1" Ice	2.328	1.727	0.111
RRUS 4449 B5/B12	C	From Leg	4.000 0'	0.000	165'	No Ice 1/2" Ice	1.968 2.144	1.408 1.564	0.071 0.090
			2'			1" Ice	2.328	1.727	0.111
RRUS 4478 B14	A	From Leg	4.000 0'	0.000	165'	No Ice 1/2" Ice	1.843 2.012	1.059 1.197	0.060 0.076
			2'			1" Ice	2.190	1.342	0.094
RRUS 4478 B14	B	From Leg	4.000 0'	0.000	165'	No Ice 1/2" Ice	1.843 2.012	1.059 1.197	0.060 0.076
			2'			1" Ice	2.190	1.342	0.094
RRUS 4478 B14	C	From Leg	4.000 0'	0.000	165'	No Ice 1/2" Ice	1.843 2.012	1.059 1.197	0.060 0.076
			2'			1" Ice	2.190	1.342	0.094
DC6-48-60-18-8F	A	From Leg	1.000 0'	0.000	165'	No Ice 1/2" Ice	1.212 1.892	1.212 1.892	0.033 0.055
			2'			1" Ice	2.105	2.105	0.080
DC6-48-60-18-8F	B	From Leg	1.000 0'	0.000	165'	No Ice 1/2" Ice	1.212 1.892	1.212 1.892	0.033 0.055
			2'			1" Ice	2.105	2.105	0.080
DC6-48-60-18-8F	C	From Leg	1.000 0'	0.000	165'	No Ice 1/2" Ice	1.212 1.892	1.212 1.892	0.033 0.055
			2'			1" Ice	2.105	2.105	0.080
RRUS 32 B30	A	From Leg	4.000 0'	0.000	165'	No Ice 1/2" Ice	2.731 2.953	1.668 1.855	0.053 0.074
			2'			1" Ice	3.182	2.049	0.098
RRUS 32 B30	B	From Leg	4.000 0'	0.000	165'	No Ice 1/2" Ice	2.731 2.953	1.668 1.855	0.053 0.074
			2'			1" Ice	3.182	2.049	0.098
RRUS 32 B30	C	From Leg	4.000	0.000	165'	No Ice	2.731	1.668	0.053

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			0'			1/2" Ice	2.953	1.855	0.074
			2'			1" Ice	3.182	2.049	0.098
RRUS 32 B2	A	From Leg	4.000	0.000	165'	No Ice	2.731	1.668	0.053
			0'			1/2" Ice	2.953	1.855	0.074
			2'			1" Ice	3.182	2.049	0.098
RRUS 32 B2	B	From Leg	4.000	0.000	165'	No Ice	2.731	1.668	0.053
			0'			1/2" Ice	2.953	1.855	0.074
			2'			1" Ice	3.182	2.049	0.098
RRUS 32 B2	C	From Leg	4.000	0.000	165'	No Ice	2.731	1.668	0.053
			0'			1/2" Ice	2.953	1.855	0.074
			2'			1" Ice	3.182	2.049	0.098
Sector Mount [SM 505-3]	C	None		0.000	165'	No Ice	31.660	31.660	1.725
						1/2" Ice	44.640	44.640	2.356
						1" Ice	57.440	57.440	3.189
*									
APXVTM14-ALU-I20 w/ Mount Pipe	A	From Leg	4.000	0.000	150'	No Ice	4.091	2.862	0.077
			0'			1/2" Ice	4.480	3.229	0.127
			0'			1" Ice	4.880	3.607	0.185
APXVTM14-ALU-I20 w/ Mount Pipe	B	From Leg	4.000	0.000	150'	No Ice	4.091	2.862	0.077
			0'			1/2" Ice	4.480	3.229	0.127
			0'			1" Ice	4.880	3.607	0.185
APXVTM14-ALU-I20 w/ Mount Pipe	C	From Leg	4.000	0.000	150'	No Ice	4.091	2.862	0.077
			0'			1/2" Ice	4.480	3.229	0.127
			0'			1" Ice	4.880	3.607	0.185
NNVV-65B-R4 w/ Mount Pipe	A	From Leg	4.000	0.000	150'	No Ice	7.550	4.230	0.110
			0'			1/2" Ice	8.040	4.670	0.197
			0'			1" Ice	8.530	5.120	0.296
NNVV-65B-R4 w/ Mount Pipe	B	From Leg	4.000	0.000	150'	No Ice	7.550	4.230	0.110
			0'			1/2" Ice	8.040	4.670	0.197
			0'			1" Ice	8.530	5.120	0.296
NNVV-65B-R4 w/ Mount Pipe	C	From Leg	4.000	0.000	150'	No Ice	7.550	4.230	0.110
			0'			1/2" Ice	8.040	4.670	0.197
			0'			1" Ice	8.530	5.120	0.296
TD-RRH8X20-25	A	From Leg	4.000	0.000	150'	No Ice	3.704	1.294	0.066
			0'			1/2" Ice	3.946	1.465	0.090
			0'			1" Ice	4.196	1.642	0.117
TD-RRH8X20-25	B	From Leg	4.000	0.000	150'	No Ice	3.704	1.294	0.066
			0'			1/2" Ice	3.946	1.465	0.090
			0'			1" Ice	4.196	1.642	0.117
TD-RRH8X20-25	C	From Leg	4.000	0.000	150'	No Ice	3.704	1.294	0.066
			0'			1/2" Ice	3.946	1.465	0.090
			0'			1" Ice	4.196	1.642	0.117
(2) RRH2X50-800	A	From Leg	4.000	0.000	150'	No Ice	1.701	1.282	0.053
			0'			1/2" Ice	1.864	1.428	0.070
			0'			1" Ice	2.035	1.580	0.090
(2) RRH2X50-800	B	From Leg	4.000	0.000	150'	No Ice	1.701	1.282	0.053
			0'			1/2" Ice	1.864	1.428	0.070
			0'			1" Ice	2.035	1.580	0.090
(2) RRH2X50-800	C	From Leg	4.000	0.000	150'	No Ice	1.701	1.282	0.053
			0'			1/2" Ice	1.864	1.428	0.070
			0'			1" Ice	2.035	1.580	0.090
PCS 1900MHZ 4X45W-65MHZ	A	From Leg	4.000	0.000	150'	No Ice	2.322	2.238	0.060
			0'			1/2" Ice	2.527	2.441	0.083
			0'			1" Ice	2.739	2.651	0.110
PCS 1900MHZ 4X45W-65MHZ	B	From Leg	4.000	0.000	150'	No Ice	2.322	2.238	0.060
			0'			1/2" Ice	2.527	2.441	0.083
			0'			1" Ice	2.739	2.651	0.110

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
PCS 1900MHZ 4X45W-65MHZ	C	From Leg	4.000 0' 0'	0.000	150'	No Ice 1/2" Ice 1" Ice	2.322 2.527 2.739	2.238 2.441 2.651	0.060 0.083 0.110
10'-11" horizontal x 3" Pipe Mount	A	From Leg	4.000 0' 0'	0.000	150'	No Ice 1/2" Ice 1" Ice	3.600 4.830 6.080	0.030 0.070 0.130	0.088 0.114 0.148
10'-11" horizontal x 3" Pipe Mount	B	From Leg	4.000 0' 0'	0.000	150'	No Ice 1/2" Ice 1" Ice	3.600 4.830 6.080	0.030 0.070 0.130	0.088 0.114 0.148
10'-11" horizontal x 3" Pipe Mount	C	From Leg	4.000 0' 0'	0.000	150'	No Ice 1/2" Ice 1" Ice	3.600 4.830 6.080	0.030 0.070 0.130	0.088 0.114 0.148
6' x 2" Mount Pipe	A	From Leg	4.000 0' 0'	0.000	150'	No Ice 1/2" Ice 1" Ice	1.425 1.925 2.294	1.425 1.925 2.294	0.022 0.033 0.048
6' x 2" Mount Pipe	B	From Leg	4.000 0' 0'	0.000	150'	No Ice 1/2" Ice 1" Ice	1.425 1.925 2.294	1.425 1.925 2.294	0.022 0.033 0.048
6' x 2" Mount Pipe	C	From Leg	4.000 0' 0'	0.000	150'	No Ice 1/2" Ice 1" Ice	1.425 1.925 2.294	1.425 1.925 2.294	0.022 0.033 0.048
Sector Mount [SM 502-3]	C	None		0.000	150'	No Ice 1/2" Ice 1" Ice	29.820 42.210 54.430	29.820 42.210 54.430	1.673 2.266 3.052
*									
MX08FRO665-21 w/ Mount Pipe	A	From Leg	4.000 0' 2'	0.000	138'	No Ice 1/2" Ice 1" Ice	8.009 8.518 9.038	4.233 4.689 5.156	0.108 0.194 0.292
MX08FRO665-21 w/ Mount Pipe	B	From Leg	4.000 0' 2'	0.000	138'	No Ice 1/2" Ice 1" Ice	8.009 8.518 9.038	4.233 4.689 5.156	0.108 0.194 0.292
MX08FRO665-21 w/ Mount Pipe	C	From Leg	4.000 0' 2'	0.000	138'	No Ice 1/2" Ice 1" Ice	8.009 8.518 9.038	4.233 4.689 5.156	0.108 0.194 0.292
TA08025-B604	A	From Leg	4.000 0' 2'	0.000	138'	No Ice 1/2" Ice 1" Ice	1.964 2.138 2.320	0.981 1.112 1.250	0.064 0.081 0.100
TA08025-B604	B	From Leg	4.000 0' 2'	0.000	138'	No Ice 1/2" Ice 1" Ice	1.964 2.138 2.320	0.981 1.112 1.250	0.064 0.081 0.100
TA08025-B604	C	From Leg	4.000 0' 2'	0.000	138'	No Ice 1/2" Ice 1" Ice	1.964 2.138 2.320	0.981 1.112 1.250	0.064 0.081 0.100
TA08025-B605	A	From Leg	4.000 0' 2'	0.000	138'	No Ice 1/2" Ice 1" Ice	1.964 2.138 2.320	1.129 1.267 1.411	0.075 0.093 0.114
TA08025-B605	B	From Leg	4.000 0' 2'	0.000	138'	No Ice 1/2" Ice 1" Ice	1.964 2.138 2.320	1.129 1.267 1.411	0.075 0.093 0.114
TA08025-B605	C	From Leg	4.000 0' 2'	0.000	138'	No Ice 1/2" Ice 1" Ice	1.964 2.138 2.320	1.129 1.267 1.411	0.075 0.093 0.114
RDIDC-9181-PF-48	A	From Leg	4.000 0' 2'	0.000	138'	No Ice 1/2" Ice 1" Ice	2.012 2.189 2.373	1.168 1.311 1.461	0.022 0.040 0.060
(2) 8' x 2" Mount Pipe	A	From Leg	4.000 0'	0.000	138'	No Ice 1/2" Ice	1.900 2.728	1.900 2.728	0.029 0.044

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			0'			1" Ice	3.401	3.401	0.063
(2) 8' x 2" Mount Pipe	B	From Leg	4.000	0.000	138'	No Ice	1.900	1.900	0.029
			0'			1/2" Ice	2.728	2.728	0.044
			0'			1" Ice	3.401	3.401	0.063
(2) 8' x 2" Mount Pipe	C	From Leg	4.000	0.000	138'	No Ice	1.900	1.900	0.029
			0'			1/2" Ice	2.728	2.728	0.044
			0'			1" Ice	3.401	3.401	0.063
Commscope MTC3975083 (3)	C	None		0.000	138'	No Ice	23.850	23.850	1.260
						1/2" Ice	34.120	34.120	1.803
						1" Ice	44.390	44.390	2.345
*									
*									
GPS_A	C	From Leg	3.000	0.000	50'	No Ice	0.255	0.255	0.001
			0'			1/2" Ice	0.320	0.320	0.005
			0'			1" Ice	0.393	0.393	0.010
Side Arm Mount [SO 305-1]	C	From Leg	1.500	0.000	50'	No Ice	0.530	1.520	0.030
			0'			1/2" Ice	0.780	2.070	0.044
			0'			1" Ice	1.060	2.660	0.064
*									
(4) L2x2x1/4 (RD)	A	From Leg	0.500	0.000	126'8" - 120'	No Ice	0.944	0.005	0.016
			0'			1/2" Ice	1.273	0.021	0.022
			0'			1" Ice	1.610	0.044	0.032
(4) L2x2x1/4 (RD)	B	From Leg	0.500	0.000	126'8" - 120'	No Ice	0.944	0.005	0.016
			0'			1/2" Ice	1.273	0.021	0.022
			0'			1" Ice	1.610	0.044	0.032
(4) L2x2x1/4 (RD)	C	From Leg	0.500	0.000	126'8" - 120'	No Ice	0.944	0.005	0.016
			0'			1/2" Ice	1.273	0.021	0.022
			0'			1" Ice	1.610	0.044	0.032
(4) L2x2x1/4 (RH)	A	From Leg	0.500	0.000	126'8" - 120'	No Ice	0.825	0.005	0.014
			0'			1/2" Ice	1.115	0.021	0.019
			0'			1" Ice	1.412	0.044	0.028
(4) L2x2x1/4 (RH)	B	From Leg	0.500	0.000	126'8" - 120'	No Ice	0.825	0.005	0.014
			0'			1/2" Ice	1.115	0.021	0.019
			0'			1" Ice	1.412	0.044	0.028
(4) L2x2x1/4 (RH)	C	From Leg	0.500	0.000	126'8" - 120'	No Ice	0.825	0.005	0.014
			0'			1/2" Ice	1.115	0.021	0.019
			0'			1" Ice	1.412	0.044	0.028
*									

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 30 deg - No Ice
5	0.9 Dead+1.0 Wind 30 deg - No Ice
6	1.2 Dead+1.0 Wind 60 deg - No Ice
7	0.9 Dead+1.0 Wind 60 deg - No Ice
8	1.2 Dead+1.0 Wind 90 deg - No Ice

Comb. No.	Description
9	0.9 Dead+1.0 Wind 90 deg - No Ice
10	1.2 Dead+1.0 Wind 120 deg - No Ice
11	0.9 Dead+1.0 Wind 120 deg - No Ice
12	1.2 Dead+1.0 Wind 150 deg - No Ice
13	0.9 Dead+1.0 Wind 150 deg - No Ice
14	1.2 Dead+1.0 Wind 180 deg - No Ice
15	0.9 Dead+1.0 Wind 180 deg - No Ice
16	1.2 Dead+1.0 Wind 210 deg - No Ice
17	0.9 Dead+1.0 Wind 210 deg - No Ice
18	1.2 Dead+1.0 Wind 240 deg - No Ice
19	0.9 Dead+1.0 Wind 240 deg - No Ice
20	1.2 Dead+1.0 Wind 270 deg - No Ice
21	0.9 Dead+1.0 Wind 270 deg - No Ice
22	1.2 Dead+1.0 Wind 300 deg - No Ice
23	0.9 Dead+1.0 Wind 300 deg - No Ice
24	1.2 Dead+1.0 Wind 330 deg - No Ice
25	0.9 Dead+1.0 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service

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	190 - 180	Leg	Max Tension	15	1.452	0.009	0.026
			Max. Compression	10	-4.226	-0.505	-0.297
			Max. Mx	8	-3.809	-0.531	-0.082
			Max. My	2	-4.183	-0.008	0.590
			Max. Vy	18	-1.230	0.505	-0.305
			Max. Vx	2	-1.416	-0.008	0.590
		Diagonal	Max Tension	21	1.113	0.000	0.000
			Max. Compression	8	-1.174	0.000	0.000
			Max. Mx	28	0.113	0.018	-0.001
			Max. My	8	1.078	0.006	-0.004
			Max. Vy	28	-0.019	0.018	-0.001

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vx	8	-0.001	0.006	-0.004
		Top Girt	Max Tension	23	0.298	0.000	0.000
			Max. Compression	10	-0.378	0.000	0.000
			Max. Mx	26	-0.072	-0.047	0.000
			Max. Vy	26	0.029	0.000	0.000
T2	180 - 160	Leg	Max Tension	23	24.004	-0.403	-0.012
			Max. Compression	2	-34.365	-0.055	-0.003
			Max. Mx	14	2.500	0.771	-0.008
			Max. My	8	-3.419	-0.001	-0.851
			Max. Vy	22	0.957	-0.406	-0.012
			Max. Vx	8	-0.992	-0.013	0.440
		Diagonal	Max Tension	13	4.942	0.000	0.000
			Max. Compression	24	-5.171	0.000	0.000
			Max. Mx	2	3.884	0.047	0.001
			Max. My	4	-2.874	0.001	0.004
			Max. Vy	27	-0.024	0.039	-0.000
			Max. Vx	4	-0.001	0.000	0.000
		Top Girt	Max Tension	29	0.203	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
			Max. Mx	26	0.188	-0.036	0.000
			Max. My	26	0.185	0.000	0.000
			Max. Vy	26	-0.022	0.000	0.000
			Max. Vx	26	-0.000	0.000	0.000
T3	160 - 155	Leg	Max Tension	23	32.587	0.082	-0.023
			Max. Compression	2	-43.516	0.084	-0.002
			Max. Mx	14	30.360	-0.111	0.002
			Max. My	8	-6.199	-0.015	0.191
			Max. Vy	14	0.066	-0.111	0.002
			Max. Vx	20	0.124	-0.016	-0.191
		Diagonal	Max Tension	13	4.021	0.000	0.000
			Max. Compression	12	-4.184	0.000	0.000
			Max. Mx	27	0.642	0.016	0.002
			Max. My	22	-3.712	-0.002	-0.002
			Max. Vy	27	-0.015	0.016	0.002
			Max. Vx	37	0.001	0.000	0.000
T4	155 - 150	Leg	Max Tension	23	40.037	-0.104	-0.031
			Max. Compression	2	-51.760	0.130	-0.006
			Max. Mx	18	-51.176	0.134	-0.026
			Max. My	8	-6.511	-0.015	0.191
			Max. Vy	18	-0.036	0.134	-0.026
			Max. Vx	20	-0.095	-0.016	-0.191
		Diagonal	Max Tension	12	4.124	0.000	0.000
			Max. Compression	13	-4.019	0.000	0.000
			Max. Mx	27	0.899	0.020	-0.002
			Max. My	20	3.538	0.017	-0.002
			Max. Vy	27	-0.017	0.020	-0.002
			Max. Vx	36	0.001	0.000	0.000
T5	150 - 145	Leg	Max Tension	23	46.977	-0.109	-0.033
			Max. Compression	2	-61.136	-0.030	-0.007
			Max. Mx	18	-60.608	0.134	-0.026
			Max. My	8	-8.081	-0.029	0.228
			Max. Vy	18	0.059	0.134	-0.026
			Max. Vx	20	0.096	-0.029	-0.227
		Diagonal	Max Tension	13	4.811	0.000	0.000
			Max. Compression	12	-5.026	0.000	0.000
			Max. Mx	2	3.725	0.034	-0.000
			Max. My	22	-4.288	-0.010	-0.004
			Max. Vy	27	-0.023	0.030	0.002
			Max. Vx	31	-0.001	0.000	0.000
T6	145 - 140	Leg	Max Tension	23	55.293	-0.017	-0.025
			Max. Compression	10	-70.397	0.304	0.044

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Mx	14	51.771	-0.405	0.011
			Max. My	8	-8.602	-0.053	0.501
			Max. Vy	10	-0.139	0.280	-0.007
			Max. Vx	8	-0.285	-0.053	0.501
		Diagonal	Max Tension	12	4.946	0.000	0.000
			Max. Compression	13	-4.795	0.011	-0.001
			Max. Mx	10	4.630	-0.042	0.003
			Max. My	10	-4.396	0.013	-0.010
			Max. Vy	27	0.030	-0.039	0.006
			Max. Vx	10	-0.002	0.000	0.000
		Secondary Horizontal	Max Tension	24	0.390	0.000	0.000
			Max. Compression	25	-0.316	0.000	0.000
			Max. Mx	35	0.153	0.019	0.001
			Max. My	6	0.005	0.010	0.007
			Max. Vy	35	0.022	0.019	0.001
			Max. Vx	6	0.002	0.000	0.000
T7	140 - 133.333	Leg	Max Tension	23	64.255	-0.387	-0.047
			Max. Compression	10	-81.105	0.157	0.049
			Max. Mx	14	60.522	0.487	0.011
			Max. My	8	-9.798	-0.061	0.570
			Max. Vy	14	-0.457	-0.405	0.011
			Max. Vx	20	-0.452	-0.053	-0.500
		Diagonal	Max Tension	13	5.703	0.000	0.000
			Max. Compression	12	-5.904	0.000	0.000
			Max. Mx	10	3.842	-0.056	-0.002
			Max. My	22	-5.026	0.001	0.013
			Max. Vy	27	0.037	-0.054	-0.004
			Max. Vx	10	0.003	0.000	0.000
T8	133.333 - 126.667	Leg	Max Tension	7	74.917	-0.511	-0.004
			Max. Compression	10	-93.502	-0.553	0.015
			Max. Mx	10	-93.440	0.703	-0.001
			Max. My	8	-10.239	-0.061	0.570
			Max. Vy	10	0.383	0.703	-0.001
			Max. Vx	8	0.287	-0.061	0.570
		Diagonal	Max Tension	12	5.987	0.000	0.000
			Max. Compression	12	-6.023	0.000	0.000
			Max. Mx	10	5.609	-0.064	0.004
			Max. My	10	-5.682	0.016	-0.016
			Max. Vy	27	0.040	-0.060	0.009
			Max. Vx	10	-0.003	0.000	0.000
		Secondary Horizontal	Max Tension	22	0.554	0.000	0.000
			Max. Compression	11	-0.453	0.008	0.005
			Max. Mx	35	0.169	0.026	0.001
			Max. My	10	0.355	0.009	-0.009
			Max. Vy	35	0.026	0.026	0.001
			Max. Vx	10	-0.002	0.009	-0.009
T9	126.667 - 120	Leg	Max Tension	7	84.872	0.348	0.015
			Max. Compression	10	-104.463	-0.609	0.022
			Max. Mx	10	-104.358	0.895	0.003
			Max. My	8	-10.959	-0.120	0.550
			Max. Vy	10	-0.483	0.895	0.003
			Max. Vx	8	0.271	-0.118	0.522
		Diagonal	Max Tension	13	5.957	-0.047	-0.005
			Max. Compression	10	-6.428	0.000	0.000
			Max. Mx	10	4.951	-0.069	0.009
			Max. My	10	3.636	-0.068	-0.019
			Max. Vy	27	0.043	-0.067	-0.011
			Max. Vx	10	0.004	0.000	0.000

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
		Secondary Horizontal	Max Tension	8	0.683	0.020	-0.013
			Max. Compression	9	-0.556	0.013	0.015
			Max. Mx	31	0.142	0.039	0.003
			Max. My	22	-0.427	0.021	0.015
			Max. Vy	31	-0.035	0.039	0.003
			Max. Vx	6	-0.003	0.000	0.000
T10	120 - 113.333	Leg	Max Tension	7	94.962	-0.912	-0.002
			Max. Compression	10	-116.109	-0.808	0.014
			Max. Mx	10	-116.038	1.179	0.002
			Max. My	8	-11.677	-0.153	0.713
			Max. Vy	10	0.598	1.179	0.002
			Max. Vx	8	-0.323	-0.153	0.713
		Diagonal	Max Tension	13	6.129	-0.071	-0.011
			Max. Compression	12	-6.284	0.000	0.000
			Max. Mx	10	5.540	-0.101	0.002
			Max. My	10	-6.060	0.030	-0.025
			Max. Vy	27	0.055	-0.091	0.013
			Max. Vx	10	-0.004	0.000	0.000
		Secondary Horizontal	Max Tension	8	0.859	0.016	-0.011
			Max. Compression	9	-0.698	0.017	0.012
			Max. Mx	32	0.108	0.040	0.003
			Max. My	6	-0.494	0.023	0.013
			Max. Vy	32	-0.036	0.040	0.003
			Max. Vx	6	-0.003	0.000	0.000
T11	113.333 - 106.667	Leg	Max Tension	7	104.178	-0.893	-0.002
			Max. Compression	10	-126.434	-0.544	0.031
			Max. Mx	10	-126.407	1.149	-0.001
			Max. My	8	-11.948	-0.153	0.713
			Max. Vy	10	-0.623	1.149	-0.001
			Max. Vx	8	0.303	-0.153	0.713
		Diagonal	Max Tension	13	6.134	-0.075	-0.001
			Max. Compression	10	-6.737	0.000	0.000
			Max. Mx	10	5.127	-0.107	0.009
			Max. My	8	4.651	-0.095	-0.023
			Max. Vy	27	0.059	-0.100	-0.014
			Max. Vx	10	0.004	0.000	0.000
		Secondary Horizontal	Max Tension	8	0.777	0.024	-0.010
			Max. Compression	9	-0.618	0.015	0.012
			Max. Mx	30	0.258	0.047	0.001
			Max. My	8	-0.596	0.020	0.012
			Max. Vy	30	-0.038	0.047	0.001
			Max. Vx	8	-0.002	0.000	0.000
T12	106.667 - 100	Leg	Max Tension	7	113.667	0.318	0.021
			Max. Compression	10	-137.690	4.076	0.052
			Max. Mx	10	-137.690	4.076	0.052
			Max. My	8	-12.716	-0.130	0.360
			Max. Vy	10	-0.730	4.076	0.052
			Max. Vx	8	0.117	-0.130	0.360
		Diagonal	Max Tension	12	5.986	0.000	0.000
			Max. Compression	12	-5.915	0.000	0.000
			Max. Mx	27	1.358	-0.094	-0.011
			Max. My	8	4.556	-0.069	-0.017
			Max. Vy	29	-0.061	-0.090	0.011
			Max. Vx	30	0.004	0.000	0.000
T13	100 - 80	Leg	Max Tension	7	138.970	-2.942	0.022
			Max. Compression	10	-167.687	2.906	0.065
			Max. Mx	10	-147.310	4.076	0.052

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. My	8	-15.204	-0.018	0.405
			Max. Vy	18	0.339	4.048	-0.032
			Max. Vx	8	-0.126	-0.018	0.405
		Diagonal	Max Tension	12	6.661	0.000	0.000
			Max. Compression	12	-6.567	0.000	0.000
			Max. Mx	27	1.390	-0.139	0.016
			Max. My	10	-6.100	-0.041	-0.025
			Max. Vy	29	-0.083	-0.136	-0.017
			Max. Vx	37	-0.005	0.000	0.000
T14	80 - 60	Leg	Max Tension	7	161.515	-3.217	0.058
			Max. Compression	10	-194.675	1.313	0.085
			Max. Mx	11	-190.344	3.243	0.093
			Max. My	8	-17.323	-0.252	0.689
			Max. Vy	18	0.261	3.205	-0.056
			Max. Vx	8	-0.150	-0.041	0.563
		Diagonal	Max Tension	12	7.900	0.000	0.000
			Max. Compression	12	-7.890	0.000	0.000
			Max. Mx	29	1.476	-0.184	0.022
			Max. My	10	-7.662	-0.029	-0.026
			Max. Vy	29	-0.091	-0.184	0.022
			Max. Vx	30	0.005	0.000	0.000
T15	60 - 40	Leg	Max Tension	7	183.324	2.398	0.027
			Max. Compression	10	-221.483	1.406	0.068
			Max. Mx	10	-207.201	9.524	-0.009
			Max. My	8	-18.248	-0.778	0.901
			Max. Vy	10	-2.763	9.501	-0.007
			Max. Vx	8	0.291	-0.778	0.901
		Diagonal	Max Tension	13	8.497	-0.150	0.006
			Max. Compression	10	-9.755	0.000	0.000
			Max. Mx	29	1.095	-0.254	-0.035
			Max. My	31	-2.730	-0.226	-0.040
			Max. Vy	29	-0.118	-0.254	-0.035
			Max. Vx	31	-0.007	0.000	0.000
		Secondary Horizontal	Max Tension	10	2.552	0.060	-0.000
			Max. Compression	7	-1.960	0.046	0.011
			Max. Mx	32	0.328	0.121	0.010
			Max. My	8	-1.814	0.059	0.012
			Max. Vy	32	-0.067	0.121	0.010
			Max. Vx	30	-0.003	0.000	0.000
T16	40 - 30	Leg	Max Tension	7	195.193	-2.101	0.044
			Max. Compression	10	-236.866	1.098	0.054
			Max. Mx	37	17.814	-2.314	-0.029
			Max. My	8	-21.285	-0.181	0.965
			Max. Vy	33	-0.366	-2.292	0.013
			Max. Vx	8	-0.143	-0.181	0.965
		Diagonal	Max Tension	12	8.462	0.000	0.000
			Max. Compression	12	-8.553	0.000	0.000
			Max. Mx	29	0.537	-0.335	-0.040
			Max. My	37	-2.627	-0.301	0.043
			Max. Vy	29	-0.144	-0.335	-0.040
			Max. Vx	37	-0.008	0.000	0.000
T17	30 - 20	Leg	Max Tension	7	204.964	-1.364	0.038
			Max. Compression	10	-249.335	-0.482	-0.031
			Max. Mx	10	-249.270	10.251	-0.002
			Max. My	8	-22.046	-0.181	0.965
			Max. Vy	27	2.301	-6.948	0.007
			Max. Vx	8	0.259	-0.181	0.965
		Diagonal	Max Tension	13	9.166	-0.223	0.018
			Max. Compression	10	-10.487	0.000	0.000
			Max. Mx	27	2.006	-0.332	-0.048

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. My	31	1.702	-0.331	-0.052
			Max. Vy	29	-0.147	-0.332	0.045
			Max. Vx	31	0.008	0.000	0.000
		Secondary Horizontal	Max Tension	10	2.365	0.092	-0.000
			Max. Compression	7	-1.835	0.070	0.013
			Max. Mx	30	1.234	0.162	0.011
			Max. My	8	-1.641	0.089	0.015
			Max. Vy	30	-0.082	0.162	0.011
			Max. Vx	30	-0.003	0.000	0.000
T18	20 - 0	Leg	Max Tension	7	227.224	-3.685	0.062
			Max. Compression	10	-277.751	0.000	-0.000
			Max. Mx	27	-101.093	9.557	-0.001
			Max. My	8	-24.717	-0.204	1.368
			Max. Vy	27	-1.663	-6.948	0.007
			Max. Vx	8	-0.253	-0.204	1.368
		Diagonal	Max Tension	12	9.154	0.000	0.000
			Max. Compression	10	-9.769	0.000	0.000
			Max. Mx	29	-1.211	0.273	0.028
			Max. My	30	5.483	0.179	0.034
			Max. Vy	29	0.100	0.273	0.028
			Max. Vx	30	-0.005	0.000	0.000

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Leg C	Max. Vert	18	282.350	25.108	-15.359
	Max. H_x	18	282.350	25.108	-15.359
	Max. H_z	7	-232.426	-20.926	12.919
	Min. Vert	7	-232.426	-20.926	12.919
	Min. H_x	7	-232.426	-20.926	12.919
	Min. H_z	18	282.350	25.108	-15.359
Leg B	Max. Vert	10	284.409	-24.836	-15.744
	Max. H_x	23	-230.264	20.615	13.234
	Max. H_z	23	-230.264	20.615	13.234
	Min. Vert	23	-230.264	20.615	13.234
	Min. H_x	10	284.409	-24.836	-15.744
	Min. H_z	10	284.409	-24.836	-15.744
Leg A	Max. Vert	2	275.003	0.378	28.054
	Max. H_x	20	25.306	4.855	1.917
	Max. H_z	2	275.003	0.378	28.054
	Min. Vert	15	-218.452	-0.338	-23.104
	Min. H_x	9	19.400	-4.815	1.462
	Min. H_z	15	-218.452	-0.338	-23.104

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	59.565	0.000	-0.000	-28.390	-22.983	0.000

Load Combination	Vertical	$Shear_x$	$Shear_z$	Overturning Moment, M_x	Overturning Moment, M_z	Torque
	K	K	K	kip-ft	kip-ft	kip-ft
1.2 Dead+1.0 Wind 0 deg - No Ice	71.478	0.020	-44.266	-4973.630	-32.336	14.048
0.9 Dead+1.0 Wind 0 deg - No Ice	53.609	0.020	-44.266	-4965.113	-25.442	14.048
1.2 Dead+1.0 Wind 30 deg - No Ice	71.478	21.411	-37.120	-4204.651	-2433.631	-2.677
0.9 Dead+1.0 Wind 30 deg - No Ice	53.609	21.411	-37.120	-4196.134	-2426.737	-2.677
1.2 Dead+1.0 Wind 60 deg - No Ice	71.478	38.099	-22.039	-2502.310	-4290.006	-29.054
0.9 Dead+1.0 Wind 60 deg - No Ice	53.609	38.099	-22.039	-2493.793	-4283.111	-29.054
1.2 Dead+1.0 Wind 90 deg - No Ice	71.478	45.412	-0.020	-38.825	-5087.219	-53.384
0.9 Dead+1.0 Wind 90 deg - No Ice	53.609	45.412	-0.020	-30.308	-5080.324	-53.384
1.2 Dead+1.0 Wind 120 deg - No Ice	71.478	40.369	23.327	2543.827	-4489.445	-46.695
0.9 Dead+1.0 Wind 120 deg - No Ice	53.609	40.369	23.327	2552.344	-4482.550	-46.695
1.2 Dead+1.0 Wind 150 deg - No Ice	71.478	21.779	37.797	4210.991	-2471.136	-33.176
0.9 Dead+1.0 Wind 150 deg - No Ice	53.609	21.779	37.797	4219.508	-2464.242	-33.176
1.2 Dead+1.0 Wind 180 deg - No Ice	71.478	-0.020	41.503	4670.963	-22.822	-14.048
0.9 Dead+1.0 Wind 180 deg - No Ice	53.609	-0.020	41.503	4679.480	-15.927	-14.048
1.2 Dead+1.0 Wind 210 deg - No Ice	71.478	-21.411	37.120	4136.516	2378.473	2.677
0.9 Dead+1.0 Wind 210 deg - No Ice	53.609	-21.411	37.120	4145.032	2385.368	2.677
1.2 Dead+1.0 Wind 240 deg - No Ice	71.478	-40.492	23.421	2551.440	4437.959	29.054
0.9 Dead+1.0 Wind 240 deg - No Ice	53.609	-40.492	23.421	2559.957	4444.853	29.054
1.2 Dead+1.0 Wind 270 deg - No Ice	71.478	-45.412	0.020	-29.310	5032.061	53.384
0.9 Dead+1.0 Wind 270 deg - No Ice	53.609	-45.412	0.020	-20.793	5038.955	53.384
1.2 Dead+1.0 Wind 300 deg - No Ice	71.478	-37.976	-21.945	-2494.696	4231.176	46.695
0.9 Dead+1.0 Wind 300 deg - No Ice	53.609	-37.976	-21.945	-2486.179	4238.071	46.695
1.2 Dead+1.0 Wind 330 deg - No Ice	71.478	-21.779	-37.797	-4279.126	2415.978	33.176
0.9 Dead+1.0 Wind 330 deg - No Ice	53.609	-21.779	-37.797	-4270.610	2422.873	33.176
1.2 Dead+1.0 Ice+1.0 Temp	128.606	0.000	-0.000	-95.002	-49.091	0.000
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	128.606	0.003	-10.835	-1321.485	-49.898	4.600
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	128.606	5.273	-9.140	-1136.640	-650.108	-0.155
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	128.606	9.238	-5.341	-703.581	-1100.921	-6.743
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	128.606	10.967	-0.003	-95.809	-1292.082	-11.908
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	128.606	9.742	5.629	538.721	-1146.084	-12.004
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	128.606	5.350	9.280	961.654	-657.846	-8.504

Load Combination	Vertical	$Shear_x$	$Shear_z$	Overturning Moment, M_x	Overturning Moment, M_z	Torque
	K	K	K	kip-ft	kip-ft	kip-ft
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	128.606	-0.003	10.415	1096.673	-48.284	-4.600
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	128.606	-5.273	9.140	946.637	551.927	0.155
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	128.606	-9.602	5.551	530.982	1032.885	6.743
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	128.606	-10.967	0.003	-94.194	1193.901	11.908
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	128.606	-9.378	-5.419	-711.320	1017.757	12.004
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	128.606	-5.350	-9.280	-1151.658	559.665	8.504
Dead+Wind 0 deg - Service	59.565	0.005	-11.351	-1289.938	-24.194	3.577
Dead+Wind 30 deg - Service	59.565	5.492	-9.521	-1093.629	-637.531	-0.682
Dead+Wind 60 deg - Service	59.565	9.770	-5.652	-658.772	-1111.605	-7.397
Dead+Wind 90 deg - Service	59.565	11.643	-0.005	-29.601	-1315.103	-13.592
Dead+Wind 120 deg - Service	59.565	10.348	5.980	629.910	-1162.382	-11.888
Dead+Wind 150 deg - Service	59.565	5.586	9.694	1055.811	-647.080	-8.447
Dead+Wind 180 deg - Service	59.565	-0.005	10.648	1173.447	-21.771	-3.577
Dead+Wind 210 deg - Service	59.565	-5.492	9.521	1036.849	591.566	0.682
Dead+Wind 240 deg - Service	59.565	-10.379	6.004	631.849	1117.352	7.397
Dead+Wind 270 deg - Service	59.565	-11.643	0.005	-27.179	1269.138	13.592
Dead+Wind 300 deg - Service	59.565	-9.739	-5.628	-656.834	1064.705	11.888
Dead+Wind 330 deg - Service	59.565	-5.586	-9.694	-1112.590	601.115	8.447

Solution Summary

	Sum of Applied Forces			Sum of Reactions			
Load Comb.	PX K	PY K	PZ K	PX K	PY K	PZ K	% Error
1	0.000	-59.565	0.000	-0.000	59.565	0.000	0.000%
2	0.020	-71.478	-44.266	-0.020	71.478	44.266	0.000%
3	0.020	-53.609	-44.266	-0.020	53.609	44.266	0.000%
4	21.411	-71.478	-37.120	-21.411	71.478	37.120	0.000%
5	21.411	-53.609	-37.120	-21.411	53.609	37.120	0.000%
6	38.099	-71.478	-22.039	-38.099	71.478	22.039	0.000%
7	38.099	-53.609	-22.039	-38.099	53.609	22.039	0.000%
8	45.412	-71.478	-0.020	-45.412	71.478	0.020	0.000%
9	45.412	-53.609	-0.020	-45.412	53.609	0.020	0.000%
10	40.369	-71.478	23.327	-40.369	71.478	-23.327	0.000%
11	40.369	-53.609	23.327	-40.369	53.609	-23.327	0.000%
12	21.779	-71.478	37.797	-21.779	71.478	-37.797	0.000%
13	21.779	-53.609	37.797	-21.779	53.609	-37.797	0.000%
14	-0.020	-71.478	41.503	0.020	71.478	-41.503	0.000%
15	-0.020	-53.609	41.503	0.020	53.609	-41.503	0.000%
16	-21.411	-71.478	37.120	21.411	71.478	-37.120	0.000%
17	-21.411	-53.609	37.120	21.411	53.609	-37.120	0.000%
18	-40.492	-71.478	23.421	40.492	71.478	-23.421	0.000%
19	-40.492	-53.609	23.421	40.492	53.609	-23.421	0.000%
20	-45.412	-71.478	0.020	45.412	71.478	-0.020	0.000%
21	-45.412	-53.609	0.020	45.412	53.609	-0.020	0.000%
22	-37.976	-71.478	-21.945	37.976	71.478	21.945	0.000%
23	-37.976	-53.609	-21.945	37.976	53.609	21.945	0.000%
24	-21.779	-71.478	-37.797	21.779	71.478	37.797	0.000%
25	-21.779	-53.609	-37.797	21.779	53.609	37.797	0.000%
26	0.000	-128.606	0.000	-0.000	128.606	0.000	0.000%
27	0.003	-128.606	-10.835	-0.003	128.606	10.835	0.000%
28	5.273	-128.606	-9.140	-5.273	128.606	9.140	0.000%

	Sum of Applied Forces			Sum of Reactions			
Load Comb.	PX K	PY K	PZ K	PX K	PY K	PZ K	% Error
29	9.238	-128.606	-5.341	-9.238	128.606	5.341	0.000%
30	10.967	-128.606	-0.003	-10.967	128.606	0.003	0.000%
31	9.742	-128.606	5.629	-9.742	128.606	-5.629	0.000%
32	5.350	-128.606	9.280	-5.350	128.606	-9.280	0.000%
33	-0.003	-128.606	10.415	0.003	128.606	-10.415	0.000%
34	-5.273	-128.606	9.140	5.273	128.606	-9.140	0.000%
35	-9.602	-128.606	5.551	9.602	128.606	-5.551	0.000%
36	-10.967	-128.606	0.003	10.967	128.606	-0.003	0.000%
37	-9.378	-128.606	-5.419	9.378	128.606	5.419	0.000%
38	-5.350	-128.606	-9.280	5.350	128.606	9.280	0.000%
39	0.005	-59.565	-11.351	-0.005	59.565	11.351	0.000%
40	5.492	-59.565	-9.521	-5.492	59.565	9.521	0.000%
41	9.770	-59.565	-5.652	-9.770	59.565	5.652	0.000%
42	11.643	-59.565	-0.005	-11.643	59.565	0.005	0.000%
43	10.348	-59.565	5.980	-10.348	59.565	-5.980	0.000%
44	5.586	-59.565	9.694	-5.586	59.565	-9.694	0.000%
45	-0.005	-59.565	10.648	0.005	59.565	-10.648	0.000%
46	-5.492	-59.565	9.521	5.492	59.565	-9.521	0.000%
47	-10.379	-59.565	6.004	10.379	59.565	-6.004	0.000%
48	-11.643	-59.565	0.005	11.643	59.565	-0.005	0.000%
49	-9.739	-59.565	-5.628	9.739	59.565	5.628	0.000%
50	-5.586	-59.565	-9.694	5.586	59.565	9.694	0.000%

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	190 - 180	4.920	43	0.280	0.028
T2	180 - 160	4.344	43	0.279	0.028
T3	160 - 155	3.226	43	0.239	0.026
T4	155 - 150	2.975	43	0.229	0.024
T5	150 - 145	2.735	43	0.217	0.023
T6	145 - 140	2.509	43	0.204	0.021
T7	140 - 133.333	2.298	43	0.190	0.020
T8	133.333 - 126.667	2.038	43	0.174	0.019
T9	126.667 - 120	1.801	43	0.158	0.018
T10	120 - 113.333	1.588	43	0.140	0.016
T11	113.333 - 106.667	1.397	43	0.125	0.015
T12	106.667 - 100	1.229	43	0.110	0.014
T13	100 - 80	1.077	43	0.101	0.013
T14	80 - 60	0.687	43	0.077	0.010
T15	60 - 40	0.390	43	0.057	0.007
T16	40 - 30	0.181	43	0.036	0.005
T17	30 - 20	0.109	43	0.027	0.004
T18	20 - 0	0.058	43	0.017	0.003

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
190'	Lightning Rod 5/8" x 6'	43	4.920	0.280	0.028	483190
186'	APXVAALL24_43-U-NA20_TMO w/ Mount Pipe	43	4.690	0.280	0.028	483190
178'	(2) LPA-80080/6CF w/ Mount Pipe	43	4.229	0.277	0.028	352920
165'	7770.00 w/ Mount Pipe	43	3.492	0.251	0.027	23992
150'	APXVTM14-ALU-I20 w/ Mount Pipe	43	2.735	0.217	0.023	21996
138'	MX08FRO665-21 w/ Mount Pipe	43	2.218	0.185	0.020	23389
126'8"	(4) L2x2x1/4 (RD)	43	1.801	0.158	0.018	21692
123'4"	(4) L2x2x1/4 (RD)	43	1.691	0.149	0.017	22300
120'	(4) L2x2x1/4 (RD)	43	1.588	0.140	0.016	23172
50'	GPS_A	43	0.275	0.047	0.006	55461

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	190 - 180	19.295	10	1.089	0.109
T2	180 - 160	17.031	10	1.085	0.110
T3	160 - 155	12.635	10	0.935	0.102
T4	155 - 150	11.647	10	0.895	0.096
T5	150 - 145	10.707	10	0.850	0.089
T6	145 - 140	9.819	10	0.799	0.084
T7	140 - 133.333	8.995	10	0.743	0.080
T8	133.333 - 126.667	7.976	10	0.682	0.075
T9	126.667 - 120	7.045	10	0.617	0.069
T10	120 - 113.333	6.209	10	0.549	0.064
T11	113.333 - 106.667	5.463	10	0.490	0.059
T12	106.667 - 100	4.804	10	0.429	0.055
T13	100 - 80	4.209	10	0.396	0.050
T14	80 - 60	2.686	10	0.302	0.039
T15	60 - 40	1.524	10	0.223	0.028
T16	40 - 30	0.709	10	0.142	0.019
T17	30 - 20	0.427	10	0.104	0.016
T18	20 - 0	0.228	19	0.065	0.012

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
190'	Lightning Rod 5/8" x 6'	10	19.295	1.089	0.109	124033
186'	APXVAALL24_43-U-NA20_TMO w/ Mount Pipe	10	18.391	1.091	0.109	124033
178'	(2) LPA-80080/6CF w/ Mount Pipe	10	16.576	1.077	0.110	96127
165'	7770.00 w/ Mount Pipe	10	13.681	0.979	0.106	6287
150'	APXVTM14-ALU-I20 w/ Mount Pipe	10	10.707	0.850	0.089	5727
138'	MX08FRO665-21 w/ Mount Pipe	10	8.680	0.723	0.078	6067
126'8"	(4) L2x2x1/4 (RD)	10	7.045	0.617	0.069	5589
123'4"	(4) L2x2x1/4 (RD)	10	6.615	0.582	0.067	5728

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
120'	(4) L2x2x1/4 (RD)	10	6.209	0.549	0.064	5936
50'	GPS_A	10	1.074	0.183	0.023	14174

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	190	Leg	A325N	0.625	4	0.363	20.340	0.018 ✔	1.05	Bolt Tension
		Diagonal	A325N	0.500	1	1.174	8.836	0.133 ✔	1.05	Bolt Shear
		Top Girt	A325N	0.500	1	0.378	8.836	0.043 ✔	1.05	Bolt Shear
T2	180	Leg	A325N	0.625	4	6.001	20.340	0.295 ✔	1.05	Bolt Tension
		Diagonal	A325X	0.500	1	4.942	7.504	0.659 ✔	1.05	Gusset Bearing
		Top Girt	A325N	0.500	1	0.595	4.133	0.144 ✔	1.05	Member Bearing
T3	160	Diagonal	A325N	0.500	1	4.021	6.199	0.649 ✔	1.05	Member Bearing
T4	155	Diagonal	A325N	0.500	1	4.124	6.199	0.665 ✔	1.05	Member Bearing
T5	150	Diagonal	A325X	0.500	1	4.811	7.504	0.641 ✔	1.05	Gusset Bearing
T6	145	Leg	A325N	0.750	4	13.816	30.101	0.459 ✔	1.05	Bolt Tension
		Diagonal	A325N	0.500	1	4.946	7.504	0.659 ✔	1.05	Gusset Bearing
		Secondary Horizontal	A325X	0.625	1	1.221	7.178	0.170 ✔	1.05	Gusset Bearing
T7	140	Diagonal	A325N	0.500	2	2.852	11.011	0.259 ✔	1.05	Member Block Shear
T8	133.333	Diagonal	A325N	0.500	2	2.994	11.011	0.272 ✔	1.05	Member Block Shear
		Secondary Horizontal	A325X	0.625	1	1.622	12.492	0.130 ✔	1.05	Member Block Shear
T9	126.667	Leg	A325N	0.875	4	21.196	41.556	0.510 ✔	1.05	Bolt Tension
		Diagonal	A325N	0.500	2	2.979	11.011	0.271 ✔	1.05	Member Block Shear
		Secondary Horizontal	A325N	0.625	1	1.812	10.440	0.174 ✔	1.05	Member Bearing
T10	120	Diagonal	A325N	0.500	2	3.064	13.050	0.235 ✔	1.05	Member Block Shear
		Secondary Horizontal	A325N	0.625	1	2.014	10.440	0.193 ✔	1.05	Member Bearing
T11	113.333	Diagonal	A325N	0.500	2	3.067	13.050	0.235 ✔	1.05	Member Block Shear
		Secondary Horizontal	A325N	0.625	1	2.193	10.440	0.210 ✔	1.05	Member Bearing
T12	106.667	Leg	A325N	0.875	4	28.417	41.556	0.684 ✔	1.05	Bolt Tension
		Diagonal	A325N	0.500	2	2.993	13.050	0.229 ✔	1.05	Member Block Shear
T13	100	Leg	A325N	1.000	4	34.743	54.517	0.637 ✔	1.05	Bolt Tension
		Diagonal	A325N	0.500	2	3.330	14.069	0.237 ✔	1.05	Member Block Shear
T14	80	Leg	A325N	1.000	4	40.379	54.517	0.741 ✔	1.05	Bolt Tension

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
		Diagonal	A325N	0.625	1	7.900	13.920	0.568 ✔	1.05	Gusset Bearing
T15	60	Leg	A325N	1.000	6	30.500	54.517	0.559 ✔	1.05	Bolt Tension
		Diagonal	A325N	0.625	1	8.497	13.920	0.610 ✔	1.05	Gusset Bearing
		Secondary Horizontal	A325N	0.625	1	3.841	10.440	0.368 ✔	1.05	Member Bearing
T16	40	Diagonal	A325N	0.625	1	8.462	13.920	0.608 ✔	1.05	Gusset Bearing
T17	30	Leg	A325N	1.000	6	34.110	54.517	0.626 ✔	1.05	Bolt Tension
		Diagonal	A325N	0.625	1	9.166	13.920	0.658 ✔	1.05	Gusset Bearing
		Secondary Horizontal	A325N	0.625	1	4.324	10.440	0.414 ✔	1.05	Member Bearing
T18	20	Diagonal	A325N	0.625	2	4.885	13.806	0.354 ✔	1.05	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	190 - 180	P2STD	10'	4'7"	69.9 K=1.00	1.075	-3.043	33.837	0.090 [1] ✔
T2	180 - 160	ROHN 2 STD	20'	4'	61.0 K=1.00	1.075	-34.365	36.842	0.933 [1] ✔
T3	160 - 155	ROHN 2.5 EH	5'3/32"	5'3/32"	65.0 K=1.00	2.254	-43.516	74.429	0.585 [1] ✔
T4	155 - 150	ROHN 2.5 EH	5'3/32"	5'3/32"	65.0 K=1.00	2.254	-51.760	74.427	0.695 [1] ✔
T5	150 - 145	ROHN 2.5 EH	5'3/32"	5'3/32"	65.0 K=1.00	2.254	-61.136	74.427	0.821 [1] ✔
T6	145 - 140	ROHN 2.5 EH	5'3/32"	2'6-31/32"	33.5 K=1.00	2.254	-70.397	93.410	0.754 [1] ✔
T7	140 - 133.333	ROHN 3 EH	6'8-1/8"	6'8-1/8"	70.5 K=1.00	3.016	-81.105	94.342	0.860 [1] ✔
T8	133.333 - 126.667	ROHN 3 EH	6'8-1/8"	3'5-15/32"	36.5 K=1.00	3.016	-93.502	123.118	0.759 [1] ✔
T9	126.667 - 120	ROHN 3 EH	6'8-1/8"	3'5-3/8"	18.2 K=0.50	3.016	-104.463	132.466	0.789 [1] ✔
T10	120 - 113.333	ROHN 3.5 EH	6'8-1/8"	3'5-5/16"	31.6 K=1.00	3.678	-116.109	153.863	0.755 [1] ✔
T11	113.333 - 106.667	ROHN 3.5 EH	6'8-1/8"	3'5-1/4"	31.6 K=1.00	3.678	-126.434	153.899	0.822 [1] ✔
T12	106.667 - 100	BT100140- Rohn 3.5EH w/ 2" SR	6'8-1/8"	6'8-1/8"	61.4 K=0.78	6.820	-137.690	232.935	0.591 [1] ✔
T13	100 - 80	BT100140- Rohn 4EH w/ 2" SR	20'7/16"	6'8-5/32"	54.6 K=0.80	7.549	-167.687	273.092	0.614 [1]

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T14	80 - 60	BT100140- Rohn 5EH w/ 2" SR (60-80)	20'13/32"	10'7/32"	65.5 K=0.83	9.253	-194.675	304.198	0.640 [1]
T15	60 - 40	BT100140- Rohn 5EH w/ 2" SR (40-60)	20'7/16"	5'1-13/16"	34.5 K=0.85	9.253	-221.483	381.660	0.580 [1]
T16	40 - 30	BT100140- Rohn 6EHS w/ 2" SR (30-40)	10'7/32"	10'7/32"	55.0 K=0.85	9.855	-236.866	355.524	0.666 [1]
T17	30 - 20	BT100140- Rohn 6EHS w/ 2" SR (20-30)	10'7/32"	5'1-19/32"	28.2 K=0.85	9.855	-249.335	418.472	0.596 [1]
T18	20 - 0	BT100140- Rohn 6EH w/ 2" SR	20'13/32"	10'7/32"	55.0 K=0.87	11.547	-277.751	416.534	0.667 [1]

[1] P_u / ϕP_n controls

Diagonal 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	190 - 180	L2x2x1/4	7'11-5/8"	3'9-1/8"	116.6 K=1.01	0.938	-1.174	19.764	0.059 [1]
T2	180 - 160	L2x2x1/4	7'8-3/16"	3'7-15/32"	113.4 K=1.02	0.938	-5.171	20.877	0.248 [1]
T3	160 - 155	L1 3/4x1 3/4x3/16	8'5-7/16"	4'1-9/16"	144.3 K=1.00	0.621	-4.184	8.534	0.490 [1]
T4	155 - 150	L1 3/4x1 3/4x3/16	8'10-7/16"	4'4-3/32"	151.7 K=1.00	0.621	-4.019	7.728	0.520 [1]
T5	150 - 145	L2x2x1/4	9'3-9/16"	4'6-5/8"	139.7 K=1.00	0.938	-5.026	13.748	0.366 [1]
T6	145 - 140	2L1 3/4x1 3/4x3/16x3/16	9'8-25/32"	4'10-1/2"	109.0 K=1.00	1.242	-0.062	-4.055	-0.015
T7	140 - 133.333	2L 'a' > 28.068 in - 89 2L2x2x3/16x1/2	11'1-7/8"	5'5-9/32"	105.8 K=1.00	1.430	-5.904	32.698	0.181 [1]
T8	133.333 - 126.667	2L 'a' > 31.235 in - 99 2L2x2x3/16x1/2	11'8-15/32"	5'10-9/16"	114.3 K=1.00	1.430	-6.023	29.769	0.202 [1]
T9	126.667 - 120	2L 'a' > 33.766 in - 108 2L2x2x3/16x1/2	12'3-7/32"	6'1-15/16"	119.8 K=1.00	1.430	-6.428	27.776	0.231 [1]
T10	120 - 113.333	2L 'a' > 35.377 in - 120 2L2 1/2x2 1/2x3/16x1/2	12'10-1/8"	6'5-3/32"	99.1 K=1.00	1.805	-6.284	41.764	0.150 [1]
T11	113.333 - 106.667	2L 'a' > 36.772 in - 132 2L2 1/2x2 1/2x3/16x1/2	13'5-5/32"	6'8-5/8"	103.6 K=1.00	1.805	-6.737	39.969	0.169 [1]
T12	106.667 - 100	2L 'a' > 38.454 in - 144 2L2 1/2x2 1/2x3/16x1/2	14'5/16"	6'10-3/16"	105.6 K=1.00	1.805	-5.915	39.141	0.151 [1]
		2L 'a' > 39.199 in - 156							

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T13	100 - 80	2L3x3x3/16x1/2	15'10-21/32"	7'9-5/32"	99.2 K=1.00	2.180	-6.567	46.595	0.141 [1] ✔
T14	80 - 60	2L 'a' > 44.357 in - 165 2L3x3x3/16x1/4	19'1-3/16"	9'5-7/16"	120.7 K=1.00	2.180	-7.890	34.378	0.230 [1] ✔
T15	60 - 40	2L 'a' > 54.001 in - 186 2L3x3x1/4x1/4	20'10-5/8"	10'5-11/16"	135.1 K=1.00	2.875	-9.291	39.600	0.235 [1] ✔
T16	40 - 30	2L 'a' > 60.029 in - 201 2L3 1/2x3 1/2x1/4x1/4	21'9-15/32"	10'8-31/32"	118.2 K=1.00	3.375	-8.553	57.513	0.149 [1] ✔
T17	30 - 20	2L 'a' > 61.473 in - 222 2L3 1/2x3 1/2x1/4x1/4	22'8-1/4"	11'3-25/32"	124.4 K=1.00	3.375	-10.487	52.338	0.200 [1] ✔
T18	20 - 0	2L 'a' > 64.727 in - 231 L4x4x1/4	24'6"	12'9/32"	166.9 K=0.92	1.940	-9.769	19.935	0.490 [1] ✔

[1] P_u / ϕP_n controls

Secondary Horizontal 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 $\frac{P_u}{\phi P_n}$
T6	145 - 140	L2x2x1/4	8'4-3/32"	4'19/32"	124.3 K=1.00	0.938	-1.221	17.377	0.070 [1] ✔
T8	133.333 - 126.667	L2x2x1/4	9'7-9/32"	4'7-29/32"	143.0 K=1.00	0.938	-1.622	13.136	0.123 [1] ✔
T9	126.667 - 120	L2 1/2x2 1/2x1/4	10'3-7/16"	4'11-31/32"	122.1 K=1.00	1.190	-1.812	22.748	0.080 [1] ✔
T10	120 - 113.333	L2 1/2x2 1/2x1/4	10'11-19/32"	5'3-25/32"	129.9 K=1.00	1.190	-2.014	20.180	0.100 [1] ✔
T11	113.333 - 106.667	L2 1/2x2 1/2x1/4	11'7-3/4"	5'7-7/8"	138.2 K=1.00	1.190	-2.193	17.822	0.123 [1] ✔
T15	60 - 40	L3x3x1/4	18'3-13/16"	8'11-1/8"	181.0 K=1.00	1.440	-3.841	12.586	0.305 [1] ✔
T17	30 - 20	L3 1/2x3 1/2x1/4	20'4-3/16"	9'10-25/32"	171.2 K=1.00	1.690	-4.324	16.511	0.262 [1] ✔

[1] P_u / ϕP_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 $\frac{P_u}{\phi P_n}$

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	190 - 180	L2x2x1/4	6'6-1/4"	6'1-3/8"	187.7 K=1.00	0.938	-0.378	7.624	0.050 [1] ✔
T2	180 - 160	L2x2x1/8	6'6-1/4"	6'1-3/8"	184.6 K=1.00	0.484	-0.595	4.070	0.146 [1] ✔

[1] P_u / ϕP_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 $\frac{P_u}{\phi P_n}$
T1	190 - 180	P2STD	10'	5-1/2"	7.0	1.075	1.452	48.354	0.030 [1] ✔
T2	180 - 160	ROHN 2 STD	20'	4'	61.0	1.075	24.004	48.354	0.496 [1] ✔
T3	160 - 155	ROHN 2.5 EH	5'3/32"	5'3/32"	65.0	2.254	32.587	101.409	0.321 [1] ✔
T4	155 - 150	ROHN 2.5 EH	5'3/32"	5'3/32"	65.0	2.254	40.037	101.409	0.395 [1] ✔
T5	150 - 145	ROHN 2.5 EH	5'3/32"	5'3/32"	65.0	2.254	46.977	101.409	0.463 [1] ✔
T6	145 - 140	ROHN 2.5 EH	5'3/32"	2'5-1/8"	31.5	2.254	55.293	101.409	0.545 [1] ✔
T7	140 - 133.333	ROHN 3 EH	6'8-1/8"	6'8-1/8"	70.5	3.016	64.255	135.717	0.473 [1] ✔
T8	133.333 - 126.667	ROHN 3 EH	6'8-1/8"	3'2-21/32"	34.0	3.016	74.917	135.717	0.552 [1] ✔
T9	126.667 - 120	ROHN 3 EH	6'8-1/8"	3'2-3/4"	34.1	3.016	84.872	135.717	0.625 [1] ✔
T10	120 - 113.333	ROHN 3.5 EH	6'8-1/8"	3'2-27/32"	29.7	3.678	94.962	165.529	0.574 [1] ✔
T11	113.333 - 106.667	ROHN 3.5 EH	6'8-1/8"	3'2-29/32"	29.8	3.678	104.178	165.529	0.629 [1] ✔
T12	106.667 - 100	BT100140- Rohn 3.5EH w/ 2" SR	6'8-1/8"	6'8-1/8"	78.7	6.820	113.667	306.900	0.370 [1] ✔
T13	100 - 80	BT100140- Rohn 4EH w/ 2" SR	20'7/16"	6'8-5/32"	68.3	7.549	138.970	339.705	0.409 [1] ✔
T14	80 - 60	BT100140- Rohn 5EH w/ 2" SR (60-80)	20'13/32"	10'7/32"	78.9	9.253	161.515	416.385	0.388 [1] ✔
T15	60 - 40	BT100140- Rohn 5EH w/ 2" SR (40-60)	20'7/16"	4'10-13/32"	38.4	9.253	183.294	416.385	0.440 [1] ✔
T16	40 - 30	BT100140- Rohn 6EHS w/ 2" SR (30-40)	10'7/32"	10'7/32"	64.7	9.855	195.193	443.470	0.440 [1] ✔
T17	30 - 20	BT100140- Rohn 6EHS w/ 2" SR (20-30)	10'7/32"	4'10-5/8"	31.5	9.855	204.964	443.470	0.462 [1] ✔

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T18	20 - 0	BT100140- Rohn 6EH w/ 2" SR	20'13/32"	10'7/32"	63.6	11.547	227.224	519.615	0.437 [1] ✔

[1] P_u / ϕP_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	190 - 180	L2x2x1/4	7'11-5/8"	3'9-1/8"	76.1	0.586	1.113	28.583	0.039 [1] ✔
T2	180 - 160	L2x2x1/4	7'8-3/16"	3'7-15/32"	73.4	0.586	4.942	28.583	0.173 [1] ✔
T3	160 - 155	L1 3/4x1 3/4x3/16	8'5-7/16"	4'1-9/16"	94.6	0.378	4.021	16.440	0.245 [1] ✔
T4	155 - 150	L1 3/4x1 3/4x3/16	8'10-7/16"	4'4-3/32"	99.3	0.378	4.124	16.440	0.251 [1] ✔
T5	150 - 145	L2x2x1/4	9'3-9/16"	4'6-5/8"	91.8	0.586	4.811	28.583	0.168 [1] ✔
T6	145 - 140	2L1 3/4x1 3/4x3/16x3/16	9'8-25/32"	4'10-1/2"	109.0	0.756	4.946	32.880	0.150 [1] ✔
T7	140 - 133.333	2L 'a' > 28.068 in - 88 2L2x2x3/16x1/2	11'1-7/8"	5'5-9/32"	109.0	0.896	5.703	38.997	0.146 [1] ✔
T8	133.333 - 126.667	2L 'a' > 31.235 in - 100 2L2x2x3/16x1/2	11'8-15/32"	5'10-9/16"	114.3	0.896	5.987	38.997	0.154 [1] ✔
T9	126.667 - 120	2L 'a' > 33.766 in - 109 2L2x2x3/16x1/2	12'3-7/32"	6'1-15/16"	119.8	0.896	5.957	38.997	0.153 [1] ✔
T10	120 - 113.333	2L 'a' > 35.377 in - 121 2L2 1/2x2 1/2x3/16x1/2	12'10-1/8"	6'5-3/32"	99.1	1.178	6.129	51.231	0.120 [1] ✔
T11	113.333 - 106.667	2L 'a' > 36.772 in - 133 2L2 1/2x2 1/2x3/16x1/2	13'5-5/32"	6'8-5/8"	103.6	1.178	6.134	51.231	0.120 [1] ✔
T12	106.667 - 100	2L 'a' > 38.454 in - 145 2L2 1/2x2 1/2x3/16x1/2	14'5/16"	6'10-3/16"	108.2	1.178	5.986	51.231	0.117 [1] ✔
T13	100 - 80	2L 'a' > 39.199 in - 157 2L3x3x3/16x1/2	15'10-21/32"	7'9-5/32"	101.3	1.459	6.661	63.466	0.105 [1] ✔
T14	80 - 60	2L 'a' > 44.357 in - 166 2L3x3x3/16x1/4	19'1-3/16"	9'5-7/16"	122.3	1.424	7.900	61.937	0.128 [1] ✔
T15	60 - 40	2L 'a' > 54.001 in - 187 2L3x3x1/4x1/4	19'11-23/32"	10'5/16"	129.3	1.875	8.497	91.406	0.093 [1] ✔
T16	40 - 30	2L 'a' > 57.451 in - 211 2L3 1/2x3 1/2x1/4x1/4	21'9-15/	10'8-31/	119.5	2.250	8.462	109.688	0.077 [1]

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T17	30 - 20	2L 'a' > 61.473 in - 223 2L3 1/2x3 1/2x1/4x1/4	32" 22'8-1/4"	32" 11'3-25/32"	124.4	2.250	9.166	109.688	0.084 [1]
T18	20 - 0	2L 'a' > 64.727 in - 232 L4x4x1/4	24'6"	12'9/32"	117.3	1.314	9.154	64.076	0.143 [1]

[1] P_u / ϕP_n controls

Secondary Horizontal 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 $\frac{P_u}{\phi P_n}$
T6	145 - 140	L2x2x1/4	8'4-3/32"	4'19/32"	159.6	0.563	1.221	27.440	0.044 [1]
T8	133.333 - 126.667	L2x2x1/4	9'7-9/32"	4'7-29/32"	183.6	0.563	1.622	27.440	0.059 [1]
T9	126.667 - 120	L2 1/2x2 1/2x1/4	10'3-7/16"	4'11-31/32"	156.0	0.752	1.812	32.707	0.055 [1]
T10	120 - 113.333	L2 1/2x2 1/2x1/4	10'11-19/32"	5'3-25/32"	165.9	0.752	2.014	32.707	0.062 [1]
T11	113.333 - 106.667	L2 1/2x2 1/2x1/4	11'7-3/4"	5'7-7/8"	176.5	0.752	2.193	32.707	0.067 [1]
T15	60 - 40	L3x3x1/4	18'3-13/16"	8'11-1/8"	230.4	0.939	3.841	40.863	0.094 [1]
T17	30 - 20	L3 1/2x3 1/2x1/4	20'4-3/16"	9'10-25/32"	218.0	1.127	4.324	49.019	0.088 [1]

[1] P_u / ϕP_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 $\frac{P_u}{\phi P_n}$
T1	190 - 180	L2x2x1/4	6'6-1/4"	6'1-3/8"	124.6	0.586	0.298	28.583	0.010 [1]
T2	180 - 160	L2x2x1/8	6'6-1/4"	6'1-3/8"	121.2	0.305	0.595	13.254	0.045 [1]

[1] P_u / ϕP_n controls

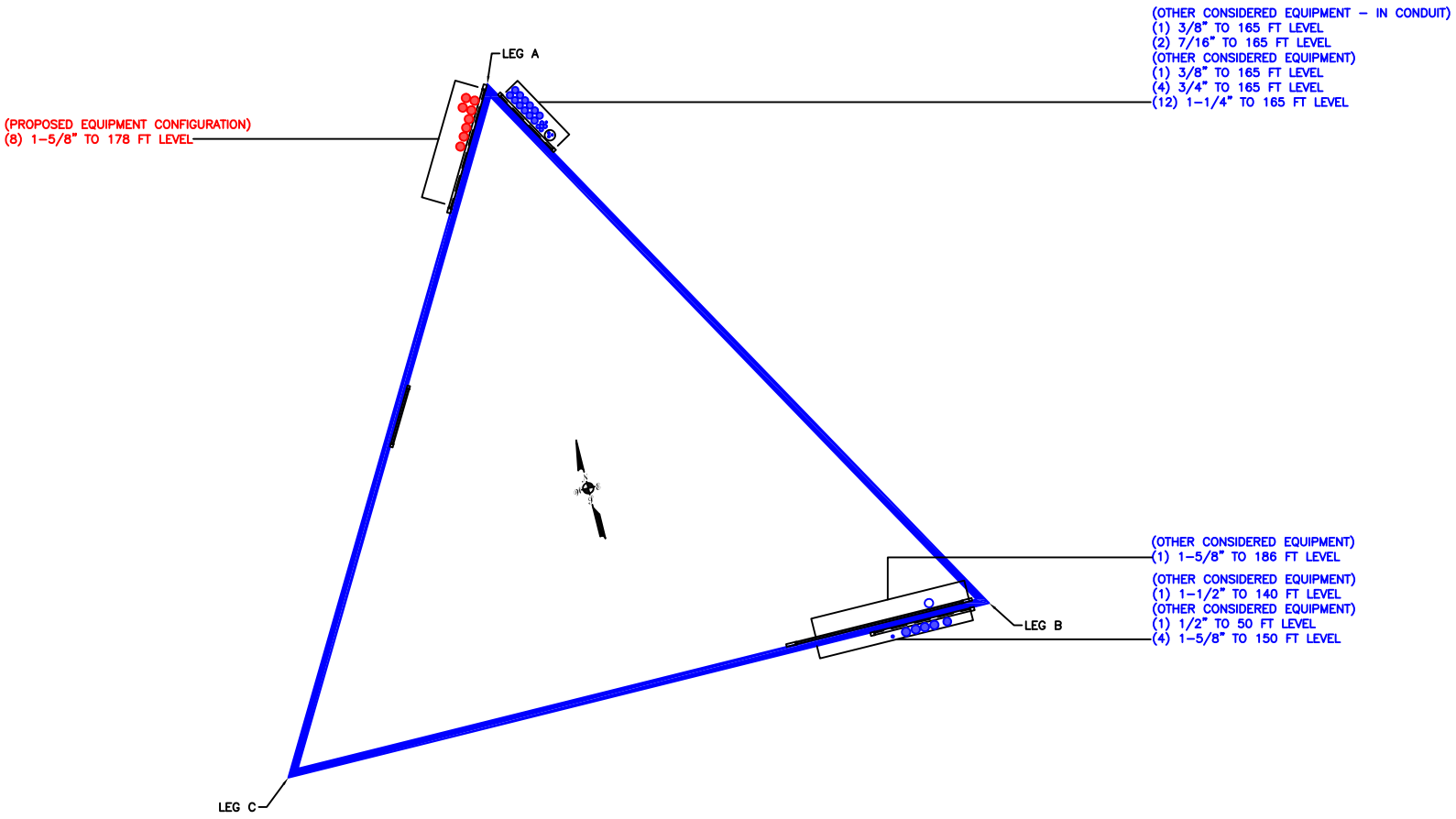
Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
T1	190 - 180	Leg	P2STD	2	-4.226	50.591	9.3	Pass
T2	180 - 160	Leg	ROHN 2 STD	21	-34.365	38.684	88.8	Pass
T3	160 - 155	Leg	ROHN 2.5 EH	57	-43.516	78.151	55.7	Pass
T4	155 - 150	Leg	ROHN 2.5 EH	66	-51.760	78.148	66.2	Pass
T5	150 - 145	Leg	ROHN 2.5 EH	75	-61.136	78.149	78.2	Pass
T6	145 - 140	Leg	ROHN 2.5 EH	83	-70.397	98.081	71.8	Pass
T7	140 - 133.333	Leg	ROHN 3 EH	95	-81.105	99.059	81.9	Pass
T8	133.333 - 126.667	Leg	ROHN 3 EH	104	-93.502	129.274	72.3	Pass
T9	126.667 - 120	Leg	ROHN 3 EH	116	-104.463	139.089	75.1	Pass
T10	120 - 113.333	Leg	ROHN 3.5 EH	128	-116.109	161.556	71.9	Pass
T11	113.333 - 106.667	Leg	ROHN 3.5 EH	140	-126.434	161.594	78.2	Pass
T12	106.667 - 100	Leg	BT100140- Rohn 3.5EH w/ 2" SR	152	-137.690	244.582	56.3	Pass
T13	100 - 80	Leg	BT100140- Rohn 4EH w/ 2" SR	161	-167.687	286.747	58.5	Pass
T14	80 - 60	Leg	BT100140- Rohn 5EH w/ 2" SR (60-80)	182	-194.675	319.408	60.9	Pass
T15	60 - 40	Leg	BT100140- Rohn 5EH w/ 2" SR (40-60)	197	-221.483	400.743	55.3	Pass
T16	40 - 30	Leg	BT100140- Rohn 6EHS w/ 2" SR (30-40)	218	-236.866	373.300	63.5	Pass
T17	30 - 20	Leg	BT100140- Rohn 6EHS w/ 2" SR (20-30)	227	-249.335	439.396	56.7	Pass
T18	20 - 0	Leg	BT100140- Rohn 6EH w/ 2" SR	239	-277.751	437.361	63.5	Pass
T1	190 - 180	Diagonal	L2x2x1/4	8	-1.174	20.752	5.7	Pass
T2	180 - 160	Diagonal	L2x2x1/4	28	-5.171	21.921	23.6	Pass
T3	160 - 155	Diagonal	L1 3/4x1 3/4x3/16	60	-4.184	8.960	46.7	Pass
T4	155 - 150	Diagonal	L1 3/4x1 3/4x3/16	69	-4.019	8.115	49.5	Pass
T5	150 - 145	Diagonal	L2x2x1/4	78	-5.026	14.435	34.8	Pass
T6	145 - 140	Diagonal	2L1 3/4x1 3/4x3/16x3/16	88	-0.268	0.000	14.3	Pass
T7	140 - 133.333	Diagonal	2L2x2x3/16x1/2	99	-5.904	34.333	17.2	Pass
T8	133.333 - 126.667	Diagonal	2L2x2x3/16x1/2	108	-6.023	31.258	19.3	Pass
T9	126.667 - 120	Diagonal	2L2x2x3/16x1/2	120	-6.428	29.165	22.0	Pass
T10	120 - 113.333	Diagonal	2L2 1/2x2 1/2x3/16x1/2	132	-6.284	43.852	14.3	Pass
T11	113.333 - 106.667	Diagonal	2L2 1/2x2 1/2x3/16x1/2	144	-6.737	41.968	16.1	Pass
T12	106.667 - 100	Diagonal	2L2 1/2x2 1/2x3/16x1/2	156	-5.915	41.098	14.4	Pass
T13	100 - 80	Diagonal	2L3x3x3/16x1/2	165	-6.567	48.925	13.4	Pass
T14	80 - 60	Diagonal	2L3x3x3/16x1/4	186	-7.890	36.097	21.9	Pass
T15	60 - 40	Diagonal	2L3x3x1/4x1/4	201	-9.291	41.581	22.3	Pass
T16	40 - 30	Diagonal	2L3 1/2x3 1/2x1/4x1/4	222	-8.553	60.389	14.2	Pass
T17	30 - 20	Diagonal	2L3 1/2x3 1/2x1/4x1/4	231	-10.487	54.955	19.1	Pass
T18	20 - 0	Diagonal	L4x4x1/4	243	-9.769	20.932	46.7	Pass
T6	145 - 140	Secondary Horizontal	L2x2x1/4	91	-1.221	18.245	6.7	Pass
T8	133.333 - 126.667	Secondary Horizontal	L2x2x1/4	112	-1.622	13.793	11.8	Pass
T9	126.667 - 120	Secondary Horizontal	L2 1/2x2 1/2x1/4	124	-1.812	23.886	7.6	Pass
T10	120 - 113.333	Secondary Horizontal	L2 1/2x2 1/2x1/4	136	-2.014	21.189	9.5	Pass
T11	113.333 - 106.667	Secondary Horizontal	L2 1/2x2 1/2x1/4	148	-2.193	18.713	11.7	Pass
T15	60 - 40	Secondary Horizontal	L3x3x1/4	205	-3.841	13.215	29.1	Pass
T17	30 - 20	Secondary Horizontal	L3 1/2x3 1/2x1/4	235	-4.324	17.337	24.9	Pass
T1	190 - 180	Top Girt	L2x2x1/4	6	-0.378	8.005	4.7	Pass
T2	180 - 160	Top Girt	L2x2x1/8	23	-0.595	4.273	13.9	Pass
							Summary	
						Leg (T2)	88.8	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
						Diagonal (T4)	49.5	Pass
						Secondary Horizontal (T15)	29.1	Pass
						Top Girt (T2)	13.9	Pass
						Bolt Checks	70.5	Pass
						RATING =	**88.8**	**Pass**

APPENDIX B

BASE LEVEL DRAWING


LEG A
(OTHER CONSIDERED EQUIPMENT – IN CONDUIT)
(1) 3/8" TO 165 FT LEVEL
(2) 7/16" TO 165 FT LEVEL
(OTHER CONSIDERED EQUIPMENT)
(1) 3/8" TO 165 FT LEVEL
(4) 3/4" TO 165 FT LEVEL
(12) 1-1/4" TO 165 FT LEVEL
(PROPOSED EQUIPMENT CONFIGURATION)
(8) 1-5/8" TO 178 FT LEVEL
(OTHER CONSIDERED EQUIPMENT)
(1) 1-5/8" TO 186 FT LEVEL
(OTHER CONSIDERED EQUIPMENT)
(1) 1-1/2" TO 140 FT LEVEL
(OTHER CONSIDERED EQUIPMENT)
(1) 1/2" TO 50 FT LEVEL
(4) 1-5/8" TO 150 FT LEVEL
LEG B
LEG C

APPENDIX C

ADDITIONAL CALCULATIONS

PROJECT	**100140.024.01.0001 - HRT 080 953381, CT**
SUBJECT	**Bolted Angle Connection Analysis**
DATE	**02-13-24** PAGE 1 OF 1

v2.5.0

B+T GRP
1717 S. Boulder, Suite 300
Tulsa, OK 74119
(918) 587-4630

TIA-222 Rev.	H
Apply TIA-222-H Section 15.5?	Yes

Max Rating	18.9%

	Elevation (ft)	Component	Angle			Bolt						Coping Dimensions (in)						Tens. Load (k)	Comp. Load (k)	Tens. Capacity (k)	Comp. Capacity (k)	Rating	Limit State
			Qty	Size	Grade	Qty	Size	Grade	Edge Dist. (in)	Gage (in)	Pitch (in)	Coping	A	B	C	D	E						
1	120 - 126.7	Redundant Horizontal	1	L2X2X1/4	A36	1	5/8	A325N	Auto Calc	Auto Calc		Allowable						1.81	1.81	9.11	13.81	18.9%	Tension - Mbr. Block Shear
2	120 - 126.7	Redundant Diagonal	1	L2X2X1/4	A36	1	5/8	A325N	Auto Calc	Auto Calc		Allowable						1.10	1.17	9.11	13.81	11.5%	Tension - Mbr. Block Shear

PROJECT	**100140.024.01.0001 - HRT 080 953381, CT**
SUBJECT	**Reinforced Tower Legs**
DATE	**02-13-24**

v3.4.2

B+T GRP
1717 S. Boulder, Suite 300
Tulsa, OK 74119
(918) 587-4630

Tower Information	
TIA-222 Rev.	H
Apply TIA-222-H Section 15.5	Yes

Calculation Type	Original Member		Modification				BP & Angle?	Section Geometry															Leg Capacity								Results
								Custom Area Input			Custom MOIxx Input			Custom MOIyy Input			Leg Comp. Load Pu (k)	Leg Fy (ksi)	Reinf. Fy (ksi)	L (in)	a (in)	Gap (in)	K Leg	K Mod	K Comp.	Custom h (in)	Fe (ksi)	Fcr (ksi)	Φ	Leg Crushing Capacity (k)	Reinf. Leg Tension Yield Capacity (k)	Reinf. Leg Comp. Capacity (k)	Original leg Capacity (k)	Spacing Req.	Leg Load Final Rating	
	Elevation (ft)	Leg Type	Type	Analysis Method	Intermediate Connection	Leg Crushing?		Area LEG (in^2)	Area MOD (in^2)	Area Gross (in^2)	I LEG (in^4)	I MOD (in^4)	I Gross (in^4)	I LEG (in^4)	I MOD (in^4)	I Gross (in^4)																	
Analysis	100-110.7	Custom	Custom	Parallel	Pinned	No	No	3.69	3.14	6.82	6.3	0.8	144.3	6.3	0.8	7.1	137.69	50	105	80.1	36.0	0.0	1.0	1.00	1.0		11.1456	9.8	0.90		462.8	233.0	126.0	Exceeded @ 4.13	56.3%	Passing
Analysis	80-100	Custom	Custom	Parallel	Pinned	No	No	4.41	3.14	7.55	9.6	0.8	167.3	9.6	0.8	10.4	167.69	50	105	80.2	36.0	0.0	1.0	1.00	1.0		11.1369	9.8	0.90		495.2	273.9	159.9	Exceeded @ 4.23	58.3%	Passing
Analysis	60-80	Custom	Custom	Parallel	Pinned	No	No	6.11	3.14	9.25	20.7	0.8	220.0	20.7	0.8	21.5	194.68	50	105	120.2	36.0	0.0	1.0	1.00	1.0		4.951	4.3	0.90		571.8	304.6	201.2	Exceeded @ 2.92	60.9%	Passing
Analysis	40-60	Custom	Custom	Parallel	Pinned	No	No	6.11	3.14	9.25	20.7	0.8	220.0	20.7	0.8	21.5	221.48	50	105	61.8	36.0	0.0	1.0	1.00	1.0		18.7277	16.4	0.90		571.8	383.4	253.2	Exceeded @ 5.68	55.0%	Passing
Analysis	30-40	Custom	Custom	Parallel	Pinned	No	No	6.71	3.14	9.85	33.2	0.8	261.6	33.2	0.8	34.0	236.87	50	105	120.2	36.0	0.0	1.0	1.00	1.0		4.951	4.3	0.90		599.0	358.3	244.0	Exceeded @ 3.09	63.0%	Passing
Analysis	20-30	Custom	Custom	Parallel	Pinned	No	No	6.71	3.14	9.85	33.2	0.8	261.6	33.2	0.8	34.0	249.34	50	105	61.6	36.0	0.0	1.0	1.00	1.0		18.8614	16.5	0.90		599.0	419.3	285.6	Exceeded @ 6.02	56.6%	Passing
Analysis	0-20	Custom	Custom	Parallel	Pinned	No	No	8.40	3.14	11.55	40.5	0.8	284.5	40.5	0.8	41.3	277.75	50	105	120.2	36.0	0.0	1.0	1.00	1.0		4.951	4.3	0.90		674.9	417.3	303.6	Exceeded @ 2.97	63.4%	Passing

Anchor Rod Check for Self Supporting Towers

v8.4.4

B+T GRP
1717 S. Boulder, Suite 300
Tulsa, OK 74119

Site Data	
BU#:	806478
Site Name:	HRT 080 953381, CT
Order #:	662902 Rev. 0
TIA Rev.	H
Apply TIA-222-H Section 15.5	Yes
Seismic Design Category:	B
No. of Mods:	1
Grout Present:	No

Leg Base Reactions			
		Wind/Ice	
Download, Pu:		284.0	kips
Download Shear, Vu:		29.0	kips
Uplift, Pu:		232.0	kips
Uplift Shear, Vu:		25.0	kips

Anchor Rod Data				
	Existing	New 1		
Qty:	6	2		
Diam:	1	1		in
Rod Material:	A449 (1/4 to 1 Incl.)	A193 Gr B7		
l_{ar}:	1.50	3.50		in
Do Mods Resist Shear?		No		
Strength (Fu):	120	125		ksi
Yield (Fy):	92	105		ksi
Gross Area (Ag):	4.71	1.57		in^2
Net Area (An):	3.64	1.21		in^2

Anchor Rod Calculations			
	Existing	New 1	
Put (k):	29.00	29.0	
ϕRnt (k):	54.54	56.8	
Puc (k):	35.50	35.5	
ϕRnc (k):	65.03	74.2	
ϕRnb (k):	64.58	71.1	
Uplift Vu (k):	4.17	0.0	
Download Vu (k):	4.83	0.0	
ϕRnv (k):	35.34	36.8	
ϕRnvc (k):	29.26	33.4	
Uplift Mu (k-in):	4.06	0.0	
Download Mu (k-in):	4.71	0.0	
ϕMn (k-in):	13.01	14.8	
Anchor Rod Stress Ratio:	**0.936**	**0.510**	

Anchor Rod Rating: **89.1%** **Pass**

Eccentric Load Calculations		
e=	0	in

PROJECT	**100140.024.01.0001 - HRT 080 953381, CT**
SUBJECT	**Anchor Rod Bracket Analysis**
DATE	**02-13-24**
v4.6.1	

TIA-222 Rev.	H
Apply TIA-222-H Section 15.5?	Yes

B+T GRP
1717 S. Boulder, Suite 300
Tulsa, OK 74119
(918) 587-4630

Analysis Criteria		
Design/Analysis	Analysis	
Load Type	Current Load	
Current load	29	kips
AR Capacity	74.2	kips

Tower Type	Self Support	

Manufacturers Tower Prop.		
Leg Thickness	0.432	in
Leg Grade	A572-50	
Fy	50	ksi
Fu	65	ksi
Base Plate Gr.	A36	
Fy	36	ksi
Fu	58	ksi

Post-Installed Adhesive AR Mod.		
ARB Type	Welded	
Size	1	in
Grade	A193 Gr B7	
Fy	105	ksi
Fu	125	ksi

Anchor Rod Bracket Analysis Checks		
Tube Bearing	46.4%	-
Tube Compression	69.6%	-
Gusset Shear	10.5%	-
Gusset Flexure	13.7%	-
Welds: Gusset to Tower and BP	11.1%	-
Welds: Gusset to Tube	9.2%	-
Welds: Geometry	N/A	
Tower Punching	12.2%	-
Tube Punching	4.0%	-
Utilization	**69.6%**	

Bracket Properties

Gusset			Pipe/Tube			Weld - Gusset to Pipe/Tube		
Thickness	0.5	in	Size	.25 SCh 80 Pip		FEXX	70	ksi
Width at Tube	5.1875	in	Total Length	18	in	Weld Type	Double Fillet	
Height at Leg	18	in	Length above Gusset	0	in	Fillet Size	3/8	in
Height at Tube	18	in	Length below Gusset	0	in			
Grade	A572-50		Grade	A500 Grade C (Square)				
Fy	50	ksi	Fy	50	ksi			
Fu	65	ksi	Fu	62	ksi			

Weld - Gusset to Tower			Weld - Gusset to Base Plate		
FEXX	70	ksi	Weld Type	Floating	
Weld Type	CJP - Single Bevel				
Fillet Size	7/16	in			
Bevel Depth	7/16	in			

Pier and Pad Foundation

BU # :	806478
Site Name:	HRT 080 953381, C
App. Number:	662902 Rev. 0

TIA-222 Revision:	H
Tower Type:	Self Support

Top & Bot. Pad Rein. Different?:	☐
Block Foundation?:	☐
Rectangular Pad?:	☐

Superstructure Analysis Reactions

Compression, P_{comp}:	284	kips
Compression Shear, Vu_comp:	29	kips
Uplift, P_{uplift}:	232	kips
Uplift Shear, V_{u_uplift}:	25	kips
Tower Height, **H**:	190	ft
Base Face Width, **BW**:	22.8646	ft
BP Dist. Above Fdn, bp_{dist}:	2.5	in

Pier Properties

Pier Shape:	Square	
Pier Diameter, **dpier**:	5	ft
Ext. Above Grade, **E**:	0.33333333	ft
Pier Rebar Size, **Sc**:	8	
Pier Rebar Quantity, **mc**:	18	
Pier Tie/Spiral Size, **St**:	3	
Pier Tie/Spiral Quantity, **mt**:	7	
Pier Reinforcement Type:	Tie	
Pier Clear Cover, cc_{pier}:	3	in

Pad Properties

Depth, **D**:	9.66666667	ft
Pad Width, W_1:	7.33333333	ft
Pad Thickness, **T**:	2	ft
Pad Rebar Size (Bottom dir. 2), Sp_2:	9	
Pad Rebar Quantity (Bottom dir. 2), mp_2:	4	
Pad Clear Cover, cc_{pad}:	3	in

Material Properties

Rebar Grade, **Fy**:	60	ksi
Concrete Compressive Strength, **F'c**:	3	ksi
Dry Concrete Density, δ**c**:	150	pcf

Soil Properties

Total Soil Unit Weight, γ:	122	pcf
Ultimate Net Bearing, Qnet:	30.000	ksf
Cohesion, **Cu**:	0.000	ksf
Friction Angle, φ:	32	degrees
SPT Blow Count, N_{blows}:		
Base Friction, μ:	0.4	
Neglected Depth, **N**:	3.33	ft
Foundation Bearing on Rock?	Yes	
Groundwater Depth, **gw**:	N/A	ft

Foundation Analysis Checks

	Capacity	Demand	Rating*	Check
Uplift (kips)	284.92	232.00	**77.5%**	**Pass**
Lateral (Sliding) (kips)	73.30	25.00	**32.5%**	**Pass**
Bearing Pressure (ksf)	23.38	6.91	**28.1%**	**Pass**
*Pier Flexure (Comp.) (kip*ft)*	2029.08	232.00	**10.9%**	**Pass**
*Pier Flexure (Tension) (kip*ft)*	1191.69	200.00	**16.0%**	**Pass**
Pier Compression (kip)	8751.60	320.00	**3.5%**	**Pass**
*Pad Flexure (kip*ft)*	337.92	27.10	**7.6%**	**Pass**
Pad Shear - 1-way (kips)	139.60	0.00	**0.0%**	**Pass**
Pad Shear - 2-way (Comp) (ksi)	0.164	0.016	**9.0%**	**Pass**
*Flexural 2-way (Comp) (kip*ft)*	675.84	139.20	**19.6%**	**Pass**
Pad Shear - 2-way (Uplift) (ksi)	0.164	0.047	**27.3%**	**Pass**
*Flexural 2-way (Tension) (kip*ft)*	675.84	120.00	**16.9%**	**Pass**

**Rating per TIA-222-H Section 15.5*

0.5% min steel assumed

Structural Rating*:	**27.3%**
Soil Rating*:	**77.5%**

0.18% min steel assumed

<--Toggle between Gross and Net

Version 5.0.2

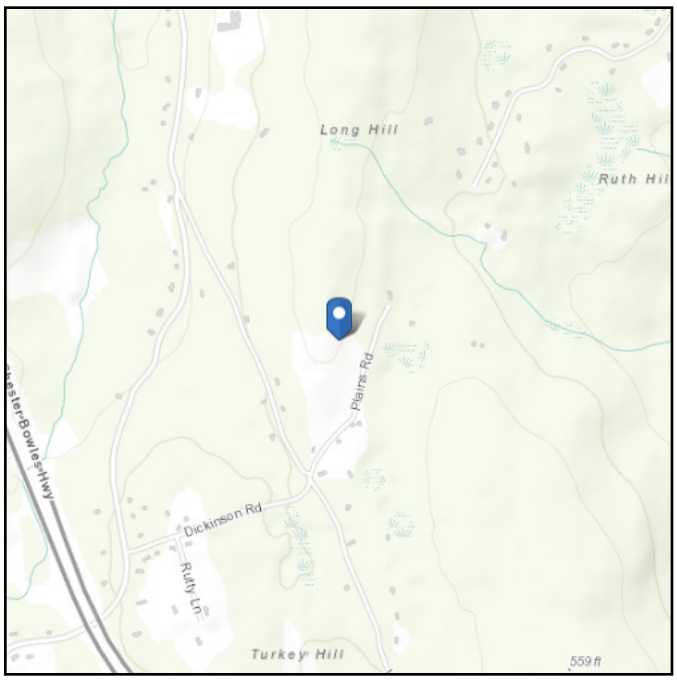
Modified

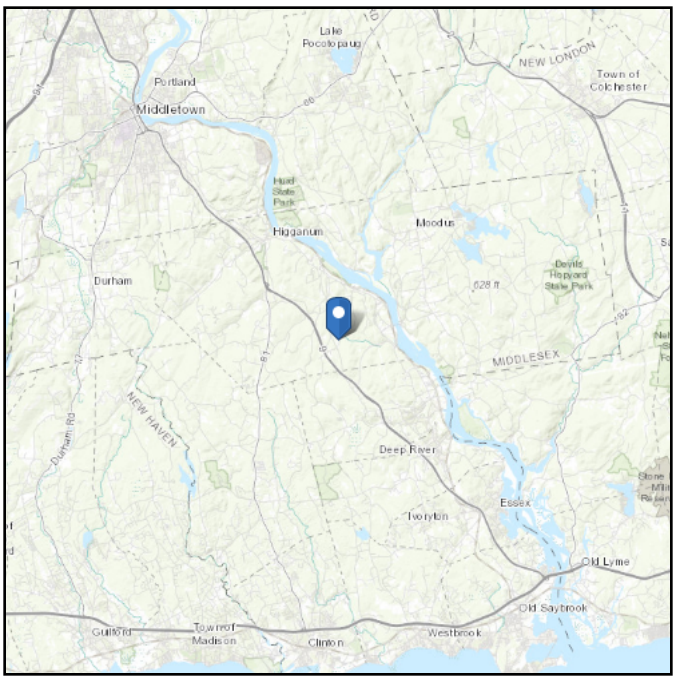
ASCE Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-16
Risk Category: II
Soil Class: D - Default (see Section 11.4.3)

Latitude: 41.443056
Longitude: -72.506222
Elevation: 0 ft (NAVD 88)





Wind

Results:

Wind Speed	122 Vmph
10-year MRI	75 Vmph
25-year MRI	85 Vmph
50-year MRI	94 Vmph
100-year MRI	100 Vmph

Data Source: ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4, and Section 26.5.2
Date Accessed: Sat Feb 10 2024

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-16 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

Site is in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2. Glazed openings need not be protected against wind-borne debris.

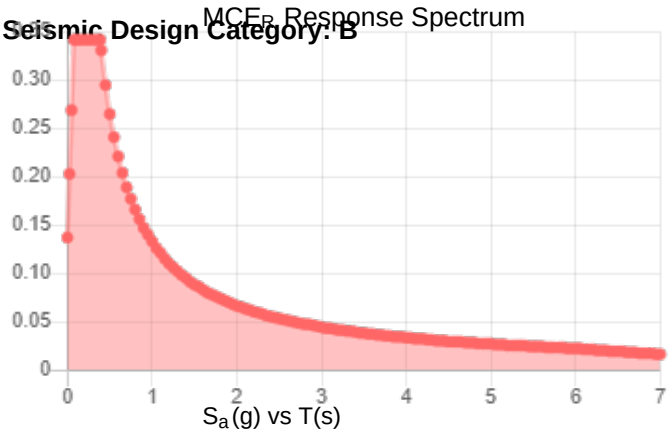
Seismic

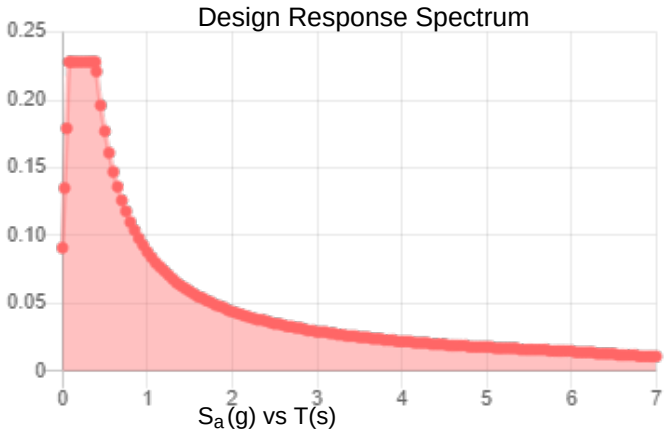
Site Soil Class: D - Default (see Section 11.4.3)

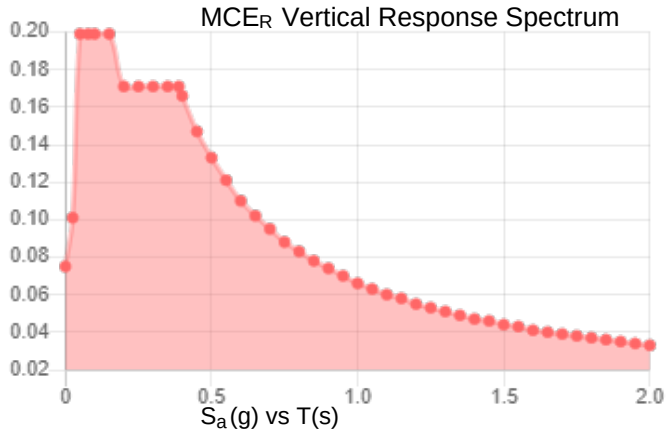
Results:

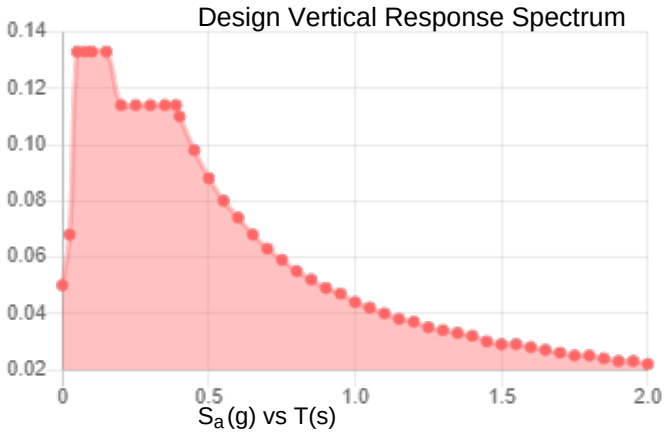
S_S :	0.214	S_{D1} :	0.088
S_1 :	0.055	T_L :	6
F_a :	1.6	PGA :	0.12
F_v :	2.4	PGA_M :	0.187
S_{MS} :	0.342	F_{PGA} :	1.56
S_{M1} :	0.133	I_e :	1
S_{DS} :	0.228	C_v :	0.727

Seismic Design Category: B









Data Accessed: **Sat Feb 10 2024**

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:	Sat Feb 10 2024

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.

EXHIBIT F

Mount Analysis Report

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

Post-Modification Antenna Mount Analysis Report and PMI Requirements

Mount Fix

SMART Tool Project #: 10219426
Colliers Engineering & Design Project #: 21777316 (Rev 1)

January 23, 2024

Site Information	*Site ID:*	*5000245769-VZW / HADDAM CT*
	Site Name:	*HADDAM CT*
	Carrier Name:	*Verizon Wireless*
	Address:	*539 Plains Rd* *Haddam, Connecticut 06438* *Middlesex County*
	Latitude:	*41.443056°*
	Longitude:	*-72.506222°*
Structure Information	*Tower Type:*	*Self Support*
	Mount Type:	*17.00-Ft Sector Frame*

FUZE ID # 16271944

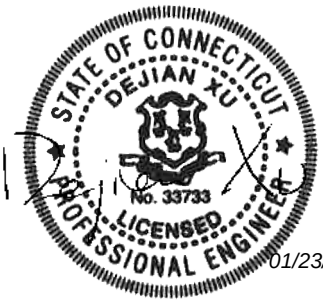
Analysis Results

Sector Frame: **97.1% Pass w/ Modifications***

***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: Vincent DiGirolamo



01/23/2024

Executive Summary:

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

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

Sources of Information:

Document Type	Remarks
Radio Frequency Data Sheet (RFDS)	*Verizon RFDS Site ID: 324019* *Dated August 15, 2023*
Mount Mapping Report	*Roaming Networks Inc. Site ID: PSLC: 468763* *Dated March 22, 2021*
Failing Mount Analysis	*Colliers Engineering & Design* *Project #: 21777316, Rev 1* *Dated January 3, 2024*
Mount Modification Drawings	*Colliers Engineering & Design* *Project #: 21777316, Rev 1* *Dated January 23, 2024*

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H Connecticut State Building Code, Effective October 1, 2022	
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), V_{ULT}:	125 mph
	Ice Wind Speed (3-sec. Gust):	50 mph
	Design Ice Thickness:	1.00 in
	Risk Category:	II
	Exposure Category:	B
	Topographic Category:	1
	Topographic Feature Considered:	N/A
	Topographic Method:	N/A
	Ground Elevation Factor, K_e:	0.982
Seismic Parameters:	S_S:	0.214 g
	S_1:	0.055 g
Maintenance Parameters:	Wind Speed (3-sec. Gust):	30 mph
	Maintenance Load, Lv:	250 lbs.
	Maintenance Load, Lm:	500 lbs.
Analysis Software:	RISA-3D (V20)	

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
177.75	179.00	6	Commscope	JAHH-65B-R3B	Added
		3	Samsung	MT6413-77A	
		3	Commscope	CBC78T-DS-43-2X	
		3	Samsung	RF4439d-25A	
		3	Samsung	RF4461d-13A	
		6	Amphenol Antel	LPA-80080/6CF	Retained
		1	Raycap	RRFDC-3315-PF-48*	
		1	Raycap	RC3DC-3315-PF-48	

*Equipment is flush mounted directly to the Self Support Tower. They are not mounted on sector mounts and are not included in this mount analysis.

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

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

Standard Conditions:

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

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

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

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

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

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

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

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

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

8. Any mount modifications listed under Sources of Information are assumed to have been installed per the design specifications.

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

Analysis Results:

Component	Utilization %	Pass/Fail
Antenna Pipe	*71.3*	*Pass*
Standoff Horizontal	*54.2*	*Pass*
Face Horizontal	*42.2*	*Pass*
Tieback	*63.3*	*Pass*
Standoff Bracing	*22.9*	*Pass*
Plate	*97.1*	*Pass*
V-Brace	*18.7*	*Pass*
Mount Connection	*57.9*	*Pass*

Structure Rating – *(Controlling Utilization of all Components)*	**97.1%**

Mount Connection Envelope Reactions:

Connection Description	Elev. AGL (Ft)	Node Label	Envelope Wind Reactions				Envelope Wind + Ice Reactions			
			Axial (Lbs)	Lateral (Lbs)	Moment (K-Ft)	Torsion (K-Ft)	Axial (Lbs)	Lateral (Lbs)	Moment (K-Ft)	Torsion (K-Ft)
Sector B Top Standoff	179	N245	836	4946	0.218	0.000	1426	6171	0.357	0.000
Sector B Bottom Standoff	176	N249	765	4304	0.188	0.000	1225	5691	0.301	0.000
Sector A Top Standoff	179	N248 A	856	5194	0.223	0.000	1484	6384	0.374	0.000
Sector A Bottom Standoff	176	N252	784	4379	0.196	0.000	1268	5858	0.314	0.000
Sector C Top Standoff	179	N261	819	4817	0.213	0.000	1395	6054	0.349	0.000
Sector C Bottom Standoff	176	N265	752	4269	0.184	0.000	1201	5602	0.294	0.000

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

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	54.0	54.0	78.3	78.3
0.5	79.4	79.4	114.0	114.0
1	103.1	103.1	147.9	147.9

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

Requirements:

The existing mounts will be **SUFFICIENT** for the final loading configuration (attachment 2) after the modifications detailed in attachment 3 are successfully completed.

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

Attachments:

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

Mount Desktop – Post Modification Inspection (PMI) Report Requirements

Documents & Photos Required from Contractor – Mount Modification

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 #: 5000245769 SMART Project #: 10219426 Fuze Project ID: 16271944

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

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

Base Requirements:

- If installation of the modification 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 drawings" showing contractor's name, 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 post-modification passing mount analysis (MA) contact the SMART Tool vendor immediately.
- Each photo shall be time and date stamped.
- Photos should be high resolution.
- Contractor shall ensure that the safety climb wire rope is 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 of the modifications.
  - Photos of the mount after installation of the modifications; if the mounts are at different rad elevations, pictures must be provided for all elevations that the modifications were installed

- *Photos taken at Mount Elevation*
  - Photos showing the safety climb wire rope above and below the mount prior to modification.
  - Photos showing the climbing facility and safety climb if present.

- Photos showing each individual sector after installation of modifications. Each entire sector must 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.
- Photos of each installed modification per the modification drawings; pictures shall also include connection hardware (U-bolts, bolts, nuts, all-threaded rods, etc.)
- Photos showing the distances (relative distance between collars) of the installed modifications from the appropriate reference locations shown in the modification drawings.
- Photos showing the installed modifications onto the tower (i.e. ring/collar mounts, tie-backs, V-bracing kits, etc.); if the existing mount elevation needs to be changed according to the modification drawings, an elevation measurement shall be provided before the elevation change.

Material Certification:

- Materials utilized must be as per specification on the drawings or the equivalent as validated by the SMART Tool vendor.
    - If the materials are as specified on the drawings
        - The contractor shall provide the packing list, or the materials certifications for the materials utilized to perform the mount modification
        - Commscope, Metrosite, Perfect Vision, Sabre, and Site Pro have all agreed to support Verizon vendors with the necessary material certifications
    - If seeking permission to use an equivalent
        - It is required that the SMART Tool engineering vendor approval of such is included in the contractor submission package. There may be an additional charge for approval if the equivalent submission doesn't meet specifications as prescribed in the drawings.

☐ All hardware has been properly installed, and the existing hardware was inspected.

☐ The material utilized was as specified on the SMART Tool engineering vendor Mount Modification Drawings 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.

Antenna & Equipment Placement and Geometry Confirmation:

☐ 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.

Comments:

Was the mount modification completed in conjunction with the equipment change / installation?

☐ Yes ☐ No

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

Issue:

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

Response:

Special Instruction Confirmation:

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

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

Comments:

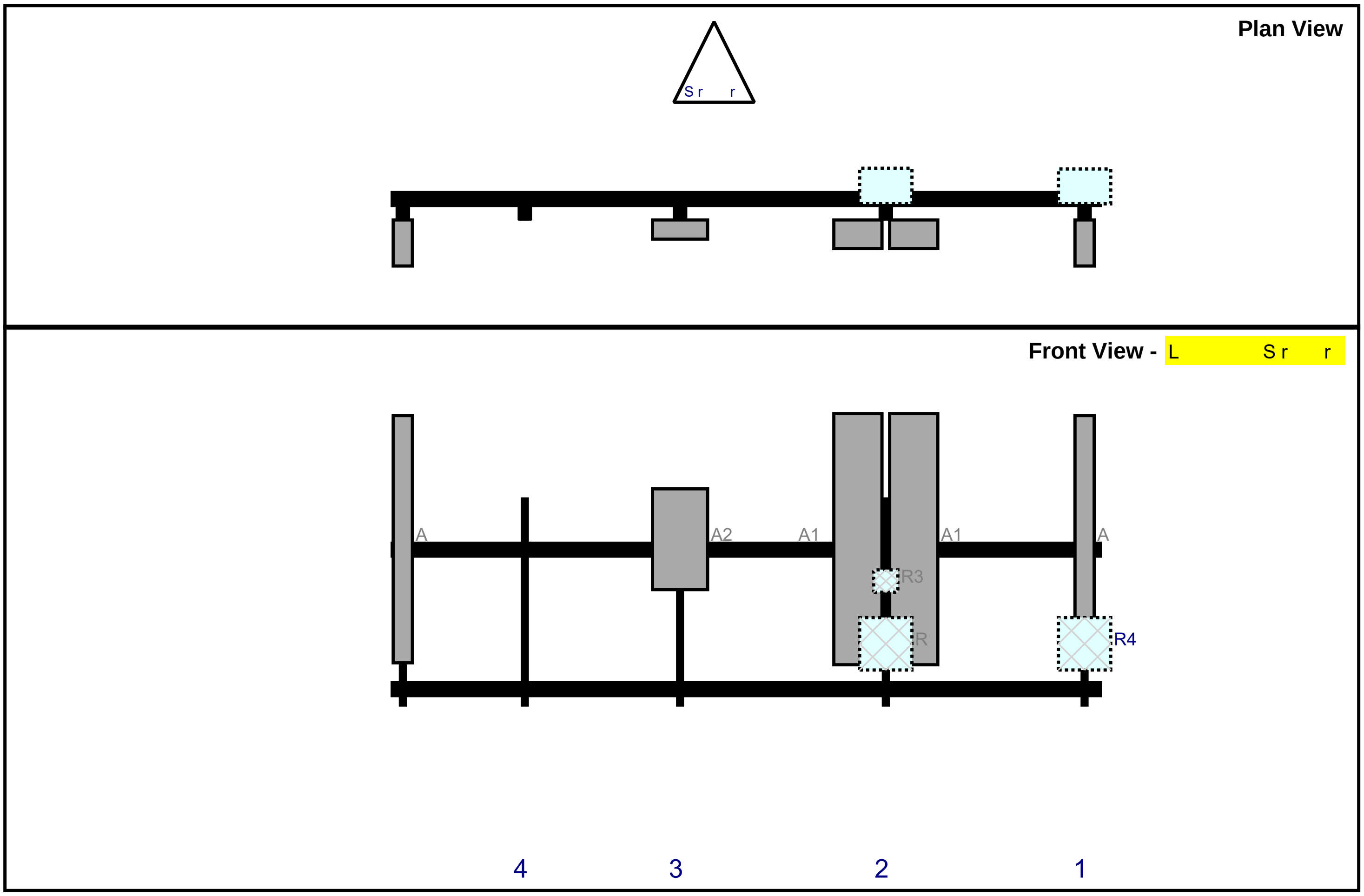
Certifying Individual:

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

S r **C** 1 23 2 24

S r r T S S r 1 21 42

M E 1 . P 3



R	M d		d	D r L.	P	P P	A P	. A r T.	A O	S	d
A	LPA	.	.	1	1		r	12		R d	3 22 2 21
R4	R 443 d 2 A	1	1	1	1		B d	42		Add d	
A1	A B R3B	2	13.	142	2		r	12		Add d	
A1	A B R3B	2	13.	142	2		r	12		Add d	
R3	B T DS 43 2	.4	.	142	2		B d	24		Add d	
R	R 44 1d 13A	1	1	142	2		B d	42		Add d	
A2	MT 413 A	2 .	1 .	3	3		r	12		Add d	
A	LPA	.	.	3.			r	12		R d	3 22 2 21

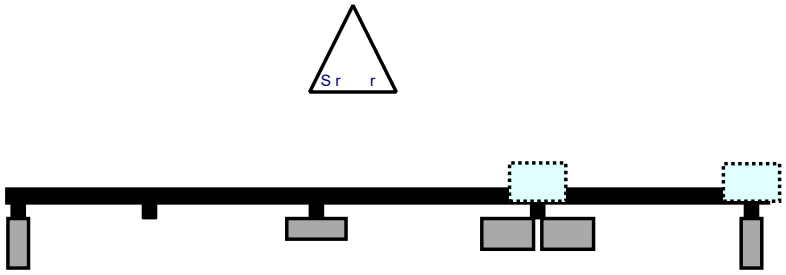
Structure: 5000245769-VZW - HADDAM CT

S r **A** 1 23 2 24

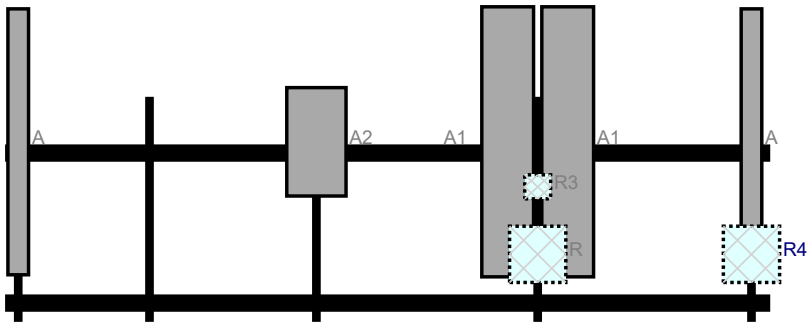
S r r T S S r 1 21 42

M E 1 . P 1

Plan View



Front View - L S r r



4 3 2 1

R	M d	d	D r	P L.	P	A P	. A r T.	A O	S	d
A	LPA	. .	1	1		r	12		R d	3 22 2 21
R4	R 443 d 2 A	1 1	1	1		B d	42		Add d	
A1	A B R3B	2 13.	142	2		r	12		Add d	
A1	A B R3B	2 13.	142	2		r	12		Add d	
R3	B T DS 43 2	.4 .	142	2		B d	24		Add d	
R	R 44 1d 13A	1 1	142	2		B d	42		Add d	
A2	MT 413 A	2 . 1 .	3	3		r	12		Add d	
A	LPA	. .	3.			r	12		R d	3 22 2 21
O P2	R 3D 331 P 4	23 1 .		M r					R d	3 22 2 21

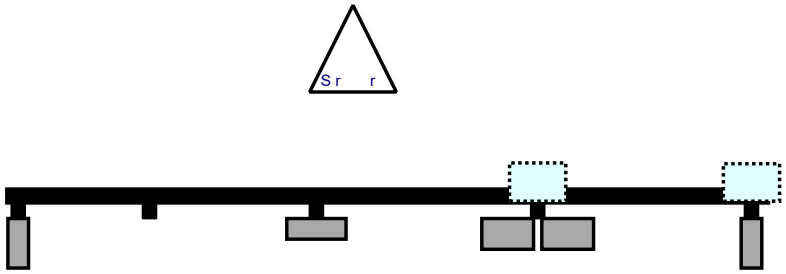
Structure: 5000245769-VZW - HADDAM CT

S r **B** 1 23 2 24

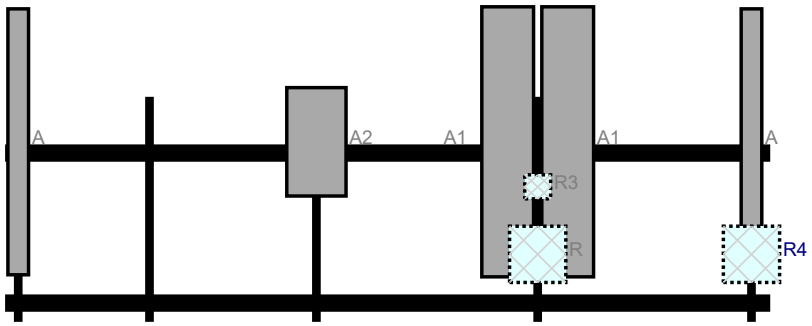
S r r T S S r 1 21 42

M E 1 . P 2

Plan View



Front View - L S r r



4 3 2 1

R	M d		d	D r L.	P P	P P	A r T.	.A O	A S	d
A	LPA		.	. 1	1		r	12	R	d 3 22 2 21
R4	R 443 d 2 A		1	1 1	1		B d	42	Add	d
A1	A B R3B		2	13. 142	2		r	12	Add	d
A1	A B R3B		2	13. 142	2		r	12	Add	d
R3	B T DS 43 2		.4	. 142	2		B d	24	Add	d
R	R 44 1d 13A		1	1 142	2		B d	42	Add	d
A2	MT 413 A		2 .	1 . 3	3		r	12	Add	d
A	LPA		.	. 3.			r	12	R	d 3 22 2 21

MOUNT MODIFICATION DRAWINGS
17.00' SECTOR FRAME

TOWER OWNER: CROWN CASTLE
TOWER OWNER SITE NUMBER: 806478

CARRIER SITE NAME: HADDAM CT
CARRIER SITE NUMBER: 5000245769
FUZE ID: 16271944

539 PLAINS RD
HADDAM, CT 06438
MIDDLESEX COUNTY

LATITUDE: 41.443056° N
LONGITUDE: 72.506222° W

DESIGN CRITERIA

WIND LOADS

BASIC WIND SPEED (3 SECOND GUST), V = 125 MPH
EXPOSURE CATEGORY B
TOPOGRAPHIC CATEGORY: 1
TOPOGRAPHIC CONSIDERED: N/A
TOPOGRAPHIC METHOD: N/A
MEAN BASE ELEVATION (AMSL) = 504.12'

ICE LOADS

ICE WIND SPEED (3 SECOND GUST), V = 50 MPH
ICE THICKNESS = 1.00 IN

SEISMIC LOADS

SEISMIC DESIGN CATEGORY B
SHORT TERM MCER GROUND MOTION, S_S = .214
LONG TERM MCER GROUND MOTION, S_1 = .055

PROJECT INFORMATION

APPLICANT/LESSEE

COMPANY: VERIZON WIRELESS

CLIENT REPRESENTATIVE

COMPANY: VERIZON WIRELESS

PROJECT MANAGER

COMPANY: COLLIERS ENGINEERING & DESIGN
CONTACT: PETER ALBANO
PHONE: 856.797.0412
E-MAIL: PETER.ALBANO@COLLIERSENG.COM

CONTRACTOR PMI REQUIREMENTS

PMI LOCATION: HTTPS://PMI.VZWSMART.COM
SMART TOOL PROJECT #: 10219426
VZW MDG #: 5000245769
ANALYSIS DATE: 1/23/2024

PMI REQUIREMENTS EMBEDDED WITHIN MOUNT MODIFICATION REPORT

SHEET INDEX

SHEET	DESCRIPTION
ST-1	TITLE SHEET
SBOM-1	BILL OF MATERIALS
SGN-1	GENERAL NOTES
SCF-1	CLIMBING FACILITY DETAIL
SS-1	MODIFICATION DETAILS
SS-2	MOUNT PHOTOS
	SPECIFICATION SHEETS

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STAMFORD
1055 Washington Boulevard
Stamford, CT 06901
Phone: 203.324.0800
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SHEET TITLE : TITLE SHEET

SHEET NUMBER : ST-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

BILL OF MATERIALS

SECTION 1 - VZWSMART KITS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
6	VZWSMART	VZWSMART-MSK1	CROSSOVER PLATE		14	84
3		VZWSMART-SFK3	V-BRACING KIT	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1.	122	366
3		VZWSMART-AL333	CLIP ANGLE		3	9
3		VZWSMART-P40-278X096	96" LONG, PIPE 2.5 SCH40 (2.875"OD X 0.203" THK)		46	138

SECTION 2 - OTHER REQUIRED PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)

SECTION 3 - REQUIRED SAFETY CLIMB PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
1	PERFECT VISON	H42-0501-06	STANDOFF CLAMP BRACKET	OR EOR APPROVED EQUIVALENT	-	-
1	PERFECT VISION	PV-CMX-CG-BO	WIRE ROPE GUIDE	OR EOR APPROVED EQUIVALENT	-	-
					TOTAL:	597

NOTES:

1. THE MANUFACTURERS LISTED ARE THE APPROVED VENDORS FOR THE VZW MOUNT KITS. EACH MANUFACTURER WILL BE AWARE OF WHICH KITS HAVE BEEN THROUGH THE VZW APPROVAL PROCESS AND THEY ARE IN TURN APPROVED TO SELL. PLEASE NOTE THAT THE MATERIAL UTILIZED ON THE MOUNT MODIFICATIONS WILL BE REVIEWED AS A PART OF THE DESKTOP PMI COMPLETED BY THE SMART TOOL VENDOR. IT WILL BE REQUIRED THAT THE VZW KITS SPECIFIED ARE UTILIZED IN THE MODIFICATIONS.
2. ALL MATERIALS REQUIRED FOR THE DESIGNED MODIFICATIONS BUT NOT LISTED IN THIS SHEET ARE ASSUMED TO BE PROVIDED BY THE CONTRACTOR.

VZWSMART KITS - APPROVED VENDORS

COMMSCOPE	
CONTACT	SALVADOR ANGUIANO
PHONE	(817) 304-7492
EMAIL	SALVADOR.ANGUIANO@COMMSCOPE.COM
WEBSITE	WWW.COMMSCOPE.COM

METROSITE FABRICATORS, LLC	
CONTACT	KENT RAMEY
PHONE	(706) 335-7045 (O), (706) 982-9788 (M)
EMAIL	KENT@METROSITELLC.COM
WEBSITE	METROSITEFABRICATORS.COM

PERFECTVISION	
CONTACT	WIRELESS SALES
PHONE	(844) 887-6723
EMAIL	WWW.PERFECT-VISION.COM
WEBSITE	WIRELESSSALES@PERFECT-VISION.COM

SABRE INDUSTRIES, INC.	
CONTACT	ANGIE WELCH
PHONE	(866) 428-6937
EMAIL	AKWELCH@SABREINDUSTRIES.COM
WEBSITE	WWW.SABRESITESOLUTIONS.COM

SITE PRO 1	
CONTACT	PAULA BOSWELL
PHONE	(972) 236-9843
EMAIL	PAULA.BOSWELL@VALMONT.COM
WEBSITE	WWW.SITEPRO1.COM

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SHEET TITLE : BILL OF MATERIALS

SHEET NUMBER : SBOM-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

GENERAL NOTES

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

STRUCTURAL STEEL

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

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

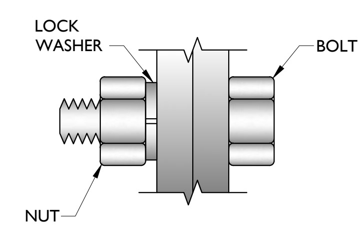
3. ALL SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE APPROVED IN WRITING BY THE ENGINEER. CONTRACTOR SHALL PROVIDE DOCUMENTATION TO ENGINEER FOR VERIFYING THE SUBSTITUTE IS SUITABLE FOR USE AND MEETS ORIGINAL DESIGN CRITERIA. DIFFERENCES FROM THE ORIGINAL DESIGN, INCLUDING MAINTENANCE, REPAIR AND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

BOLT SCHEDULE (IN.)

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

WORKABLE GAGES (IN.)

LEG	GAGE
4	2 1/2
3 1/2	2
3	1 3/4
2 1/2	1 3/8
2	1 1/8

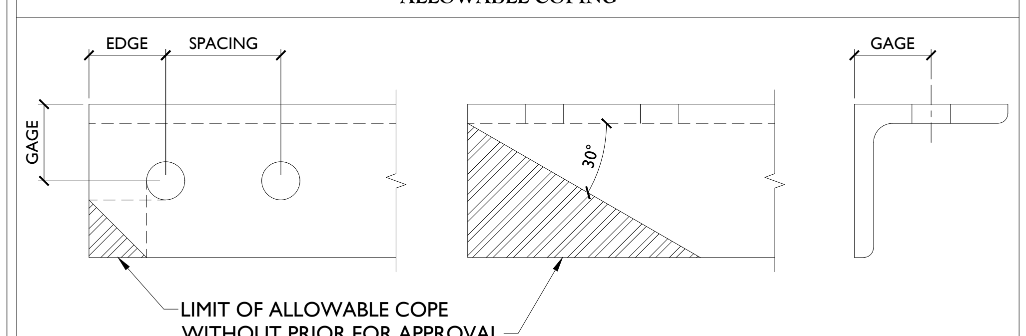


TYP. BOLT ASSEMBLY

NOTES:

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

ALLOWABLE COPING



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SHEET TITLE : GENERAL NOTES

SHEET NUMBER : SGN-1

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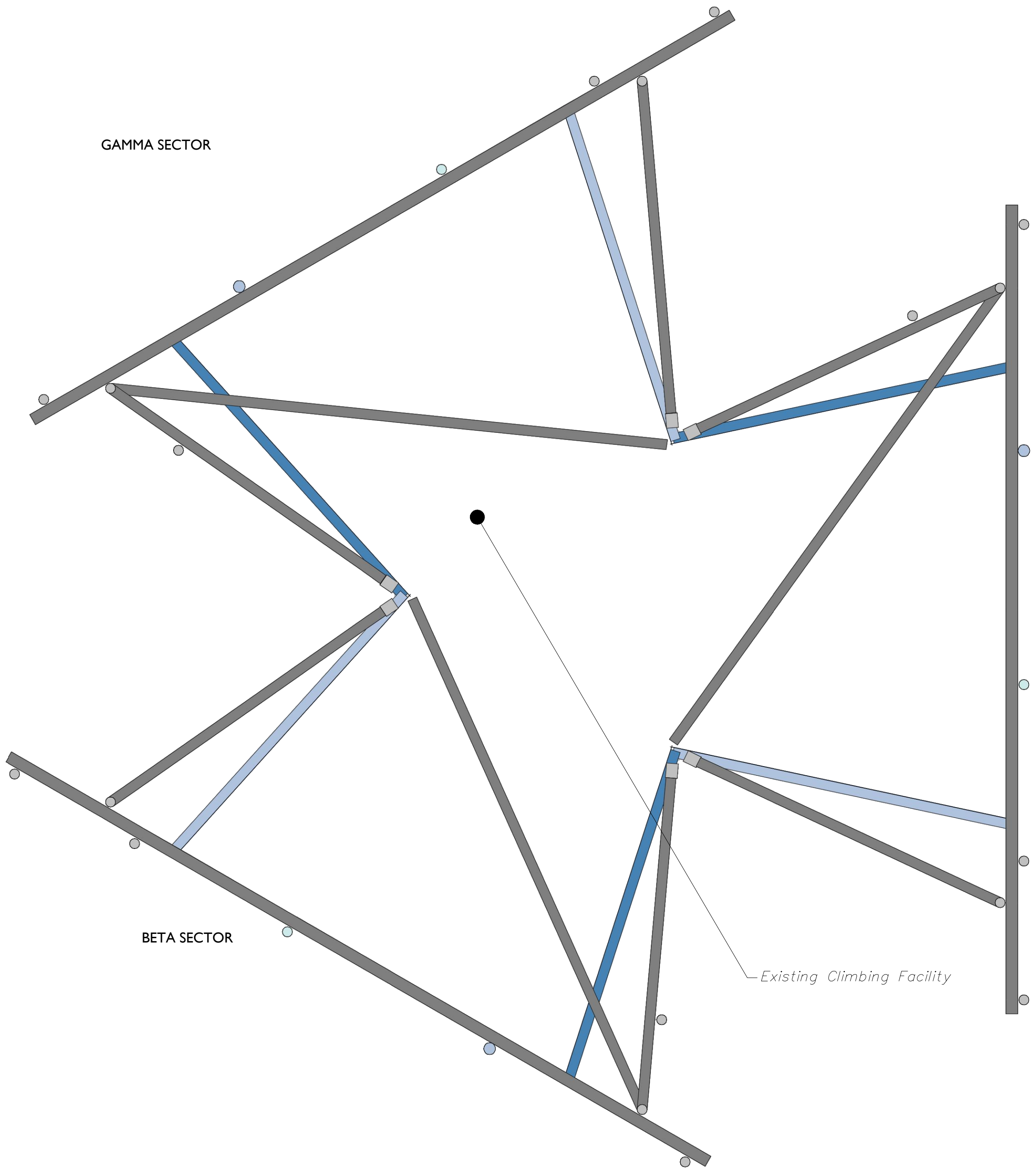
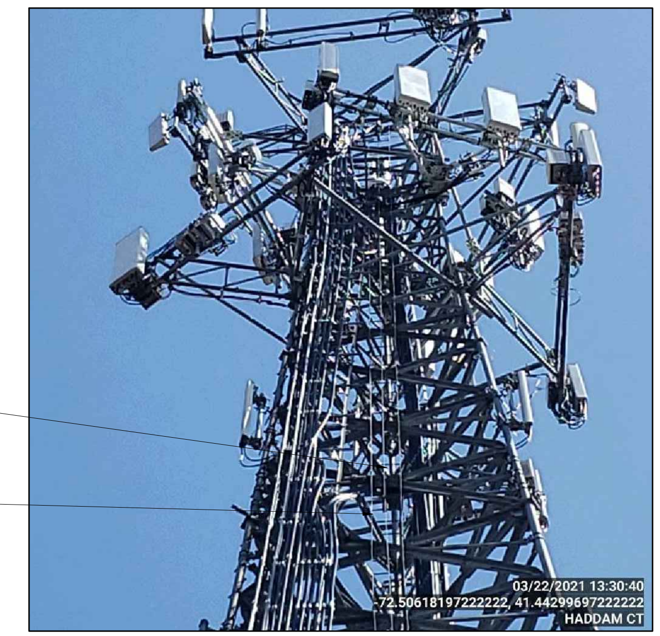


1 CLIMBING FACILITY LOCATION
SCALE : N.T.S.



CLIMBING FACILITY PHOTO

STRUCTURAL NOTES:

1. PER THE MOUNT MAPPING COMPLETED BY ROAMING NETWORKS, INC. ON 3/22/2021, THE SAFETY CLIMB AND CLIMBING FACILITIES UP TO THE VERIZON MOUNT ELEVATION (177'-9") ARE IN GOOD CONDITION. COLLIERS ENGINEERING & DESIGN DOES NOT WARRANT THIS INFORMATION.

2. INSTALL SHALL NOT CAUSE HARM TO THE STRUCTURE, CLIMBING FACILITY, SAFETY CLIMB, OR ANY SYSTEM INSTALLED ON THE STRUCTURE. TIMELY NOTICE AND DOCUMENTATION SHALL BE PROVIDED BY CONTRACTORS TO THE EOR (OF STRUCTURAL DESIGN) IF AN OBSTRUCTION WAS REQUIRED TO MEET THE RF SYSTEM DESIGN REQUIREMENTS AND PERFORMANCES.

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SHEET TITLE : CLIMBING FACILITY DETAIL

SHEET NUMBER : SCF-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

LEGEND:

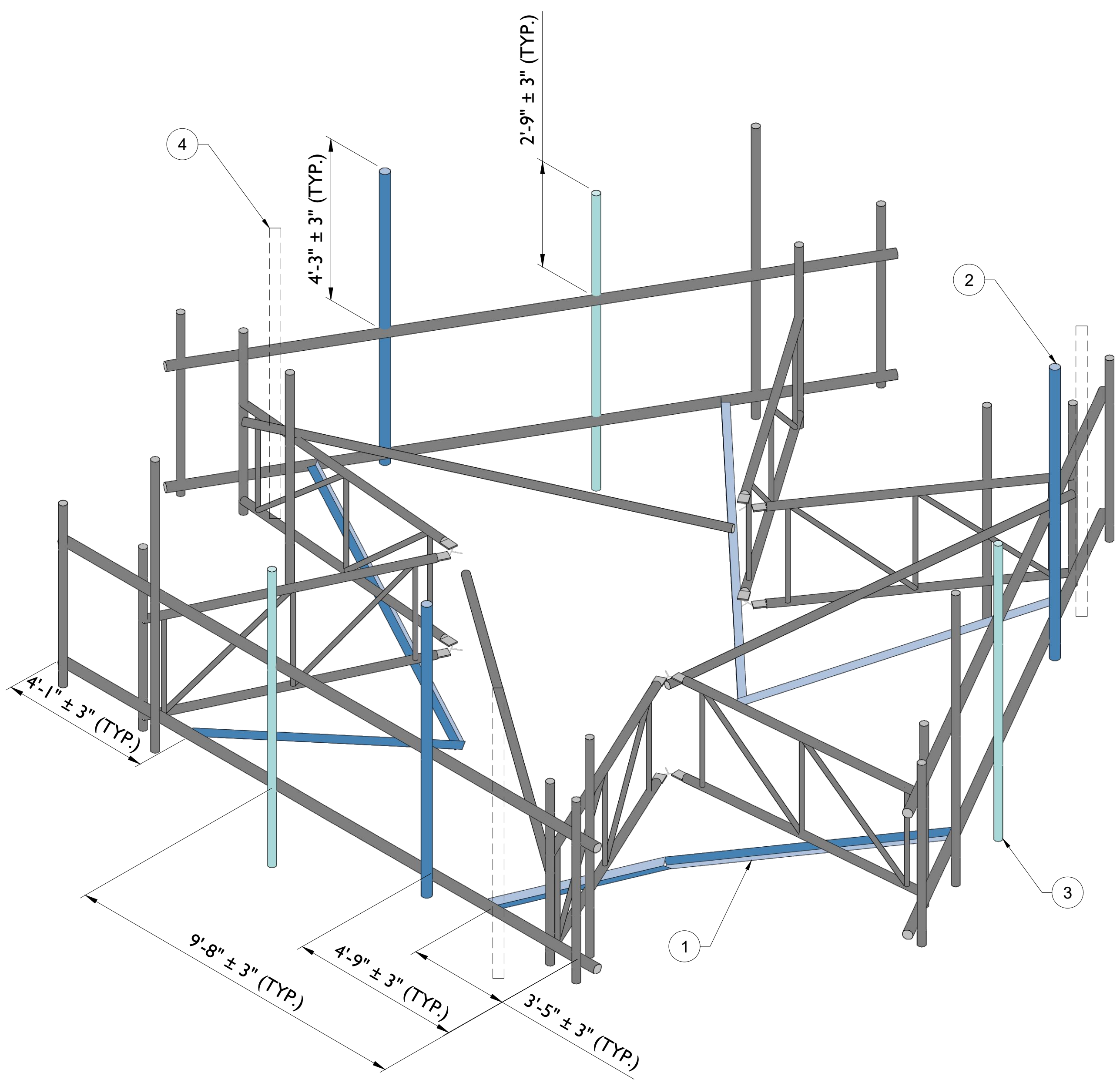
- PROPOSED
- RELOCATED
- EXISTING

MOUNT MODIFICATION SCHEDULE

NO.	ELEVATION	QUANTITY	DESCRIPTION	NOTES
1	177'-9"	3	PROPOSED V-BRACING KIT (PART #: VZWSMART-SFK3)	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1. CONTRACTOR SHALL INSTALL ONE PROPOSED CLIP ANGLE (PART #:VZWSMART-AL333) AT EITHER END OF EACH LONG ANGLE IN THE SFK3 KIT.
2		3	PROPOSED 96" LONG, PIPE 2.5 SCH40 (PART #: VZWSMART-P40-278X096)	CONNECT NEW MOUNT PIPE TO EXISTING HORIZONTAL WITH CROSSOVER PLATES (PART #: VZWSMART-MSK1).
3		3	RELOCATED MOUNT PIPE	CONTRACTOR SHALL RELOCATE EXISTING MOUNT PIPE AND CONNECT TO EXISTING HORIZONTALS WITH CROSSOVER PLATES (PAR #: VZWSMART-MSK1).
4		3	EXISTING MOUNT PIPE TO BE REMOVED	CONTRACTOR SHALL REMOVE EXISTING MOUNT PIPE AND ASSOCIATED HARDWARE.

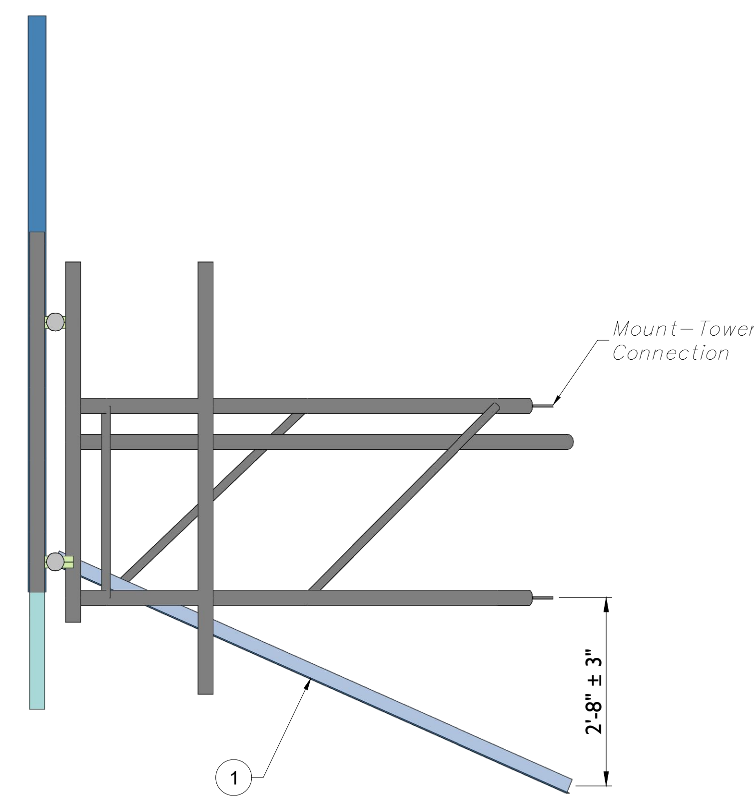
GENERAL NOTES:

A. CONTRACTOR SHALL VERIFY THAT NEW & EXISTING STEEL IS FREE OF CORROSION. VISIBLE MINOR CORROSION SHALL BE WIRE BRUSHED CLEAN AND TREATED WITH COLD GALVANIZATION. REPORT ANY SIGNIFICANT CORROSION TO EOR
B. THREADED ROD FROM PROPOSED KITS SHALL BE TRIMMED TO EXTEND NO MORE THAN 3" BEYOND THE LOCK NUT. TREAT ALL CUT ENDS WITH (2) COATS OF COLD GALVANIZATION (ZINC KOTE, OR EOR APPROVED EQUAL).
C. MOUNT MEMBERS NOT SHOWN FOR CLARITY U.N.O.



1 PROPOSED ISOMETRIC VIEW

SCALE : N.T.S.



2 PROPOSED SIDE ELEVATION VIEW (TYP. ALL SECTORS)

SCALE : N.T.S.

Colliers Engineering & Design

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ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN ANY STATE

811 Know what's below. Call before you dig.

FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

SCALE : AS SHOWN
JOB NUMBER : 21777316

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
-	-	-	-	-
-	-	-	-	-
1	1/23/24	ISSUED FOR CONSTRUCTION	VRD	DX
0	6/15/21	ISSUED FOR CONSTRUCTION	FAC	PET

COLLIERS ENGINEERING & DESIGN CT, P.C.
C.T. JPC.0000131

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

SITE NAME:

HADDAM CT
5000245769

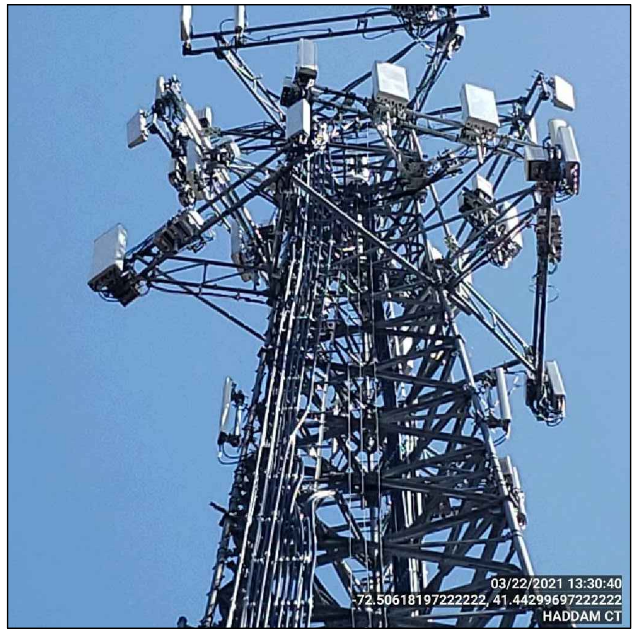
539 PLAINS RD
HADDAM, CT 06438
MIDDLESEX COUNTY

Colliers Engineering & Design
STAMFORD
1055 Washington Boulevard
Stamford, CT 06901
Phone: 203.324.0800
COLLIERS ENGINEERING & DESIGN CT, P.C.
DOING BUSINESS AS MASER CONSULTING

SHEET TITLE : MODIFICATION DETAILS

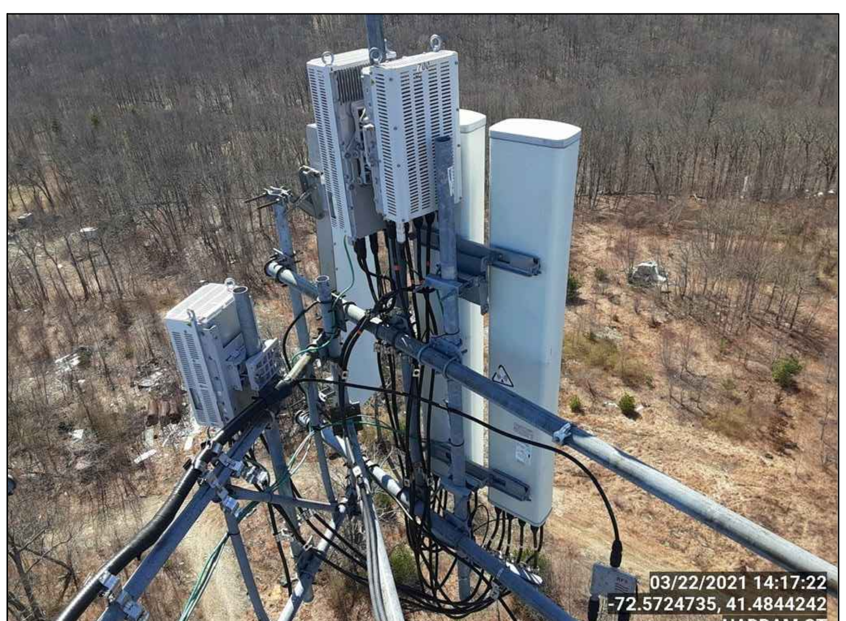
SHEET NUMBER : SS-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

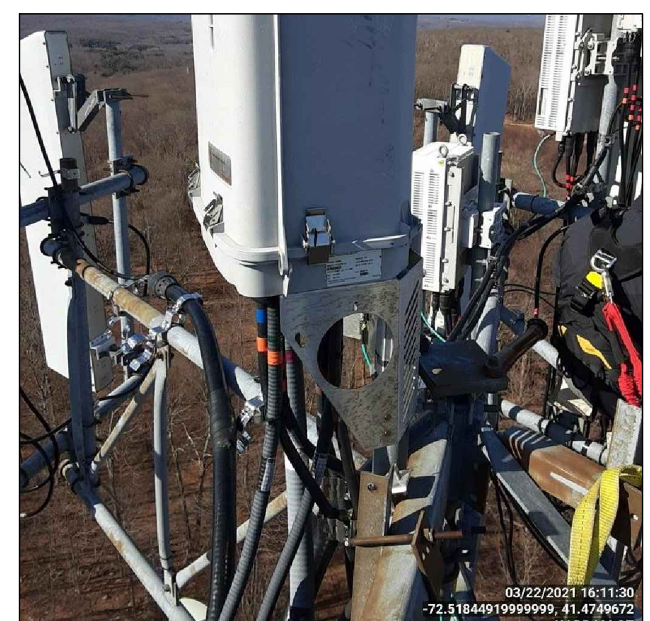


MOUNT PHOTO 1

MOUNT PHOTO 2



MOUNT PHOTO 3



MOUNT PHOTO 4

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SCALE : AS SHOWN

JOB NUMBER : 21777316

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
.	.	.	.	.
.	.	.	.	.
1	1/23/24	ISSUED FOR CONSTRUCTION	VRD	DX
0	6/15/21	ISSUED FOR CONSTRUCTION	FAC	PET

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HADDAM, CT 06438
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STAMFORD
1055 Washington Boulevard
Stamford, CT 06901
Phone: 203.324.0800
COLLIERS ENGINEERING & DESIGN CT, P.C.
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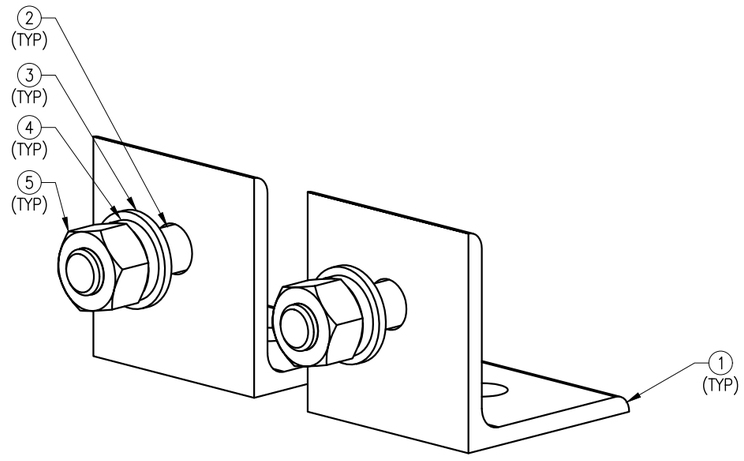
SHEET TITLE : MOUNT PHOTOS

SHEET NUMBER : SS-2

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



CLIP ANGLE
ISOMETRIC VIEW

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

VZWSMART-AL333 (CLIP ANGLE)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	2	AL-333	L 3" X 3" X 1/4" X 3" A36	AL333-F1	2.50
2	2	---	BOLT 5/8" X 2" FULL THREAD SAE GR-5	---	0.77
3	2	FW-625	5/8" HDG USS FLAT WASHER	---	0
4	2	LW-625	5/8" HDG LOCK WASHER	---	0
5	2	NUT-625	5/8" HDG HEX NUT	---	0
				GALVANIZED WT	3.27

VzW
SMART Tool©
Vendor

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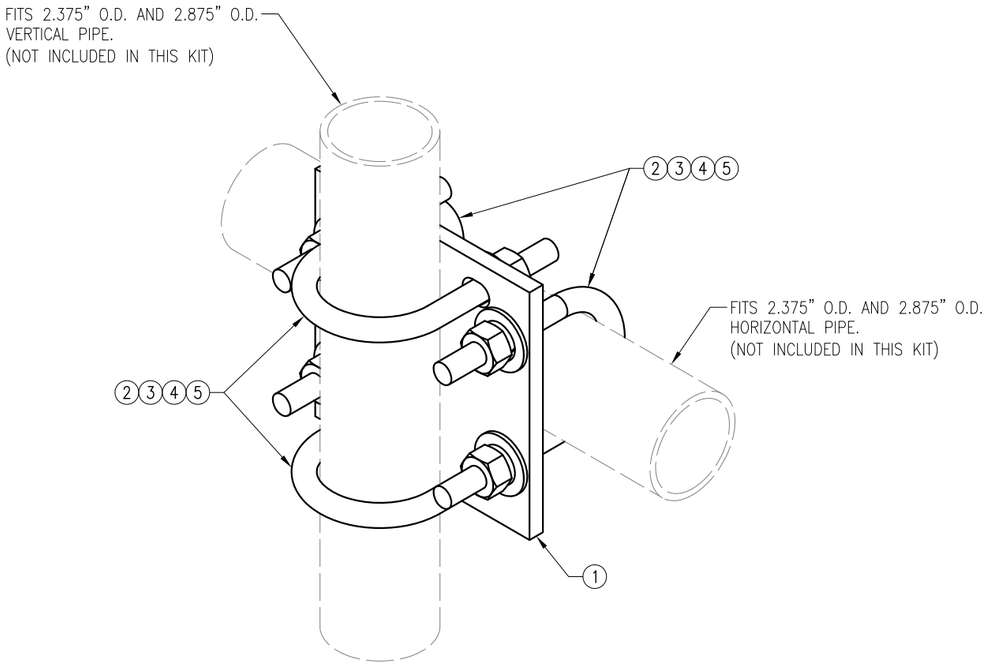
DRAWN BY: JBM | CHECKED BY: ----

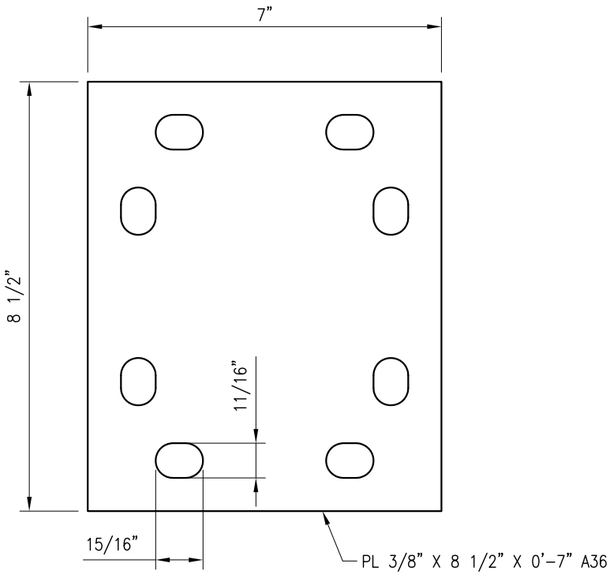
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	JBM	10/08/21

SHEET TITLE:
VZWSMART-AL333
CLIP ANGLE

SHEET NUMBER: VZWSMART-AL333

REV #: 0





PL375-857

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

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

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DRAWN BY: H.R | CHECKED BY: HMA

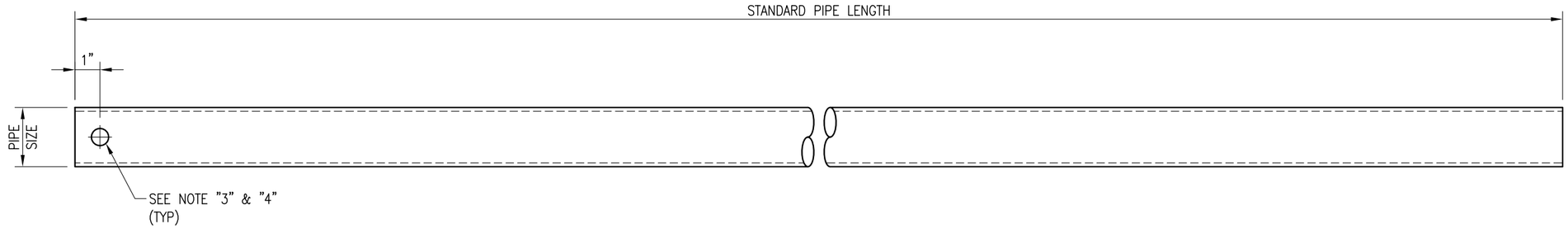
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	H.R	05/08/20

SHEET TITLE:

VZWSMART-MSK1
CROSSOVER PLATE

SHEET NUMBER: VZWSMART-MSK1

REV #: 0



VZWSMART Standard Pipe		
VZWSMART Number	Size	Length
P40-238X048	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	48"
P40-238X072	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	72"
P40-238X096	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	96"
P40-238X120	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	120"
P40-238X126	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	126"
P40-238X150	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	150"
P40-238X174	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	174"
P40-278X048	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	48"
P40-278X072	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	72"
P40-278X096	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	96"
P40-278X120	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	120"
P40-278X126	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	126"
P40-278X150	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	150"
P40-278X174	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	174"
P40-312X048	PIPE 3 SCH40 (3.5" OD x 0.216" THK)	48"
P40-312X072	PIPE 3 SCH40 (3.5" OD x 0.216" THK)	72"
P40-312X126	PIPE 3 SCH40 (3.5" OD x 0.216" THK)	126"
P40-312X150	PIPE 3 SCH40 (3.5" OD x 0.216" THK)	150"
P40-312X174	PIPE 3 SCH40 (3.5" OD x 0.216" THK)	174"

NOTE:
APPROVED SMART KIT VENDORS ARE ALLOWED TO SUBSTITUTE AT THEIR DISCRETION PIPES LISTED ON THIS PAGE FOR CUSTOM LENGTH COMPONENTS OF MATCHING SIZE. SUBSTITUTIONS SHALL MEET THE ORIGINAL STRUCTURAL INTENT.

NOTES:
1. ALL PIPE GRADE A53-B OR BETTER.
2. HOT-DIPPED GALVANIZED PER ASTM A123.
3. ALL HOLES ARE 11/16" DIA. U.N.O
4. HOLES MAY OR MAY NOT BE PRESENT, DEPEND UPON MANUFACTURE DISCRETION.
5. ALL FIELD CUT AND DRILLED SURFACES SHALL BE REPAIRED WITH A MINIMUM OF TWO COATS OF ZINGA OR ZINC COTE PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS.

VzW SMART Tool© Vendor

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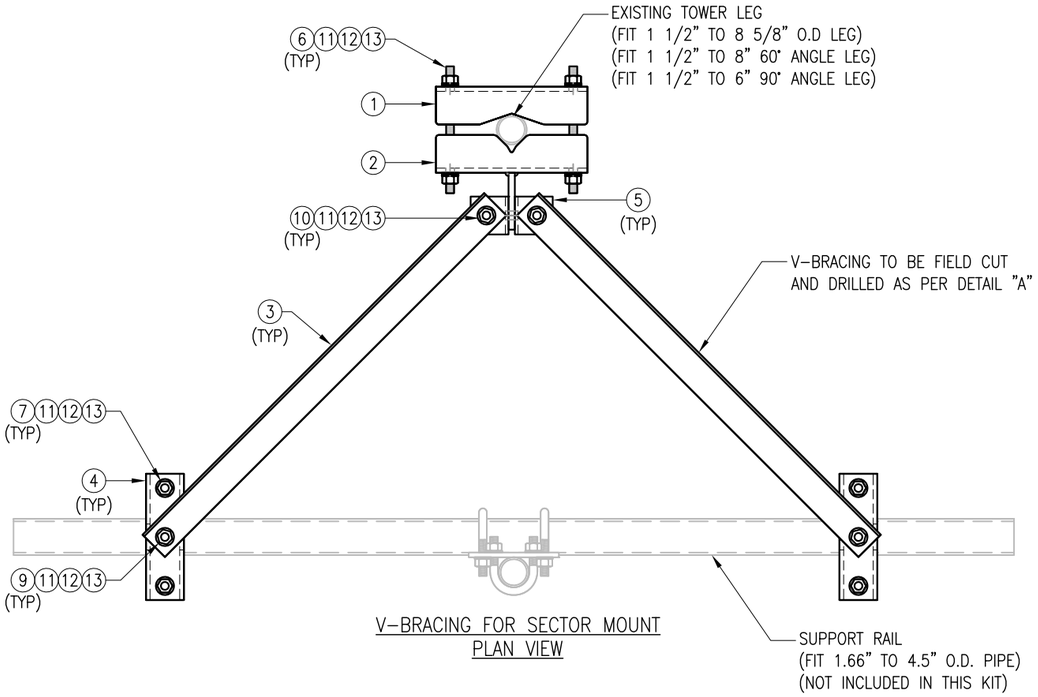
DRAWN BY: BT | CHECKED BY: HMA/KW

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	BT	08/04/21

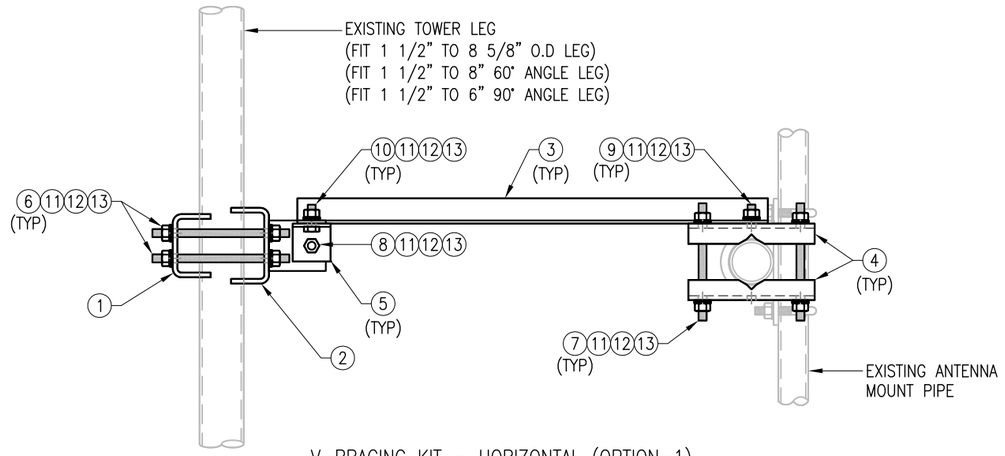
SHEET TITLE:
VZWSMART STANDARD PIPE

SHEET NUMBER: VZWSMART-PIPE

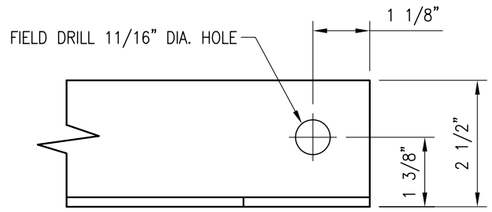
REV #: 0



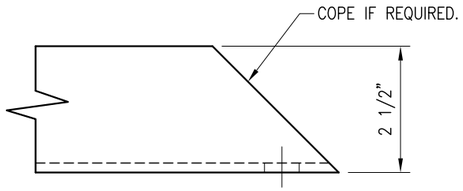
V-BRACING FOR SECTOR MOUNT
PLAN VIEW



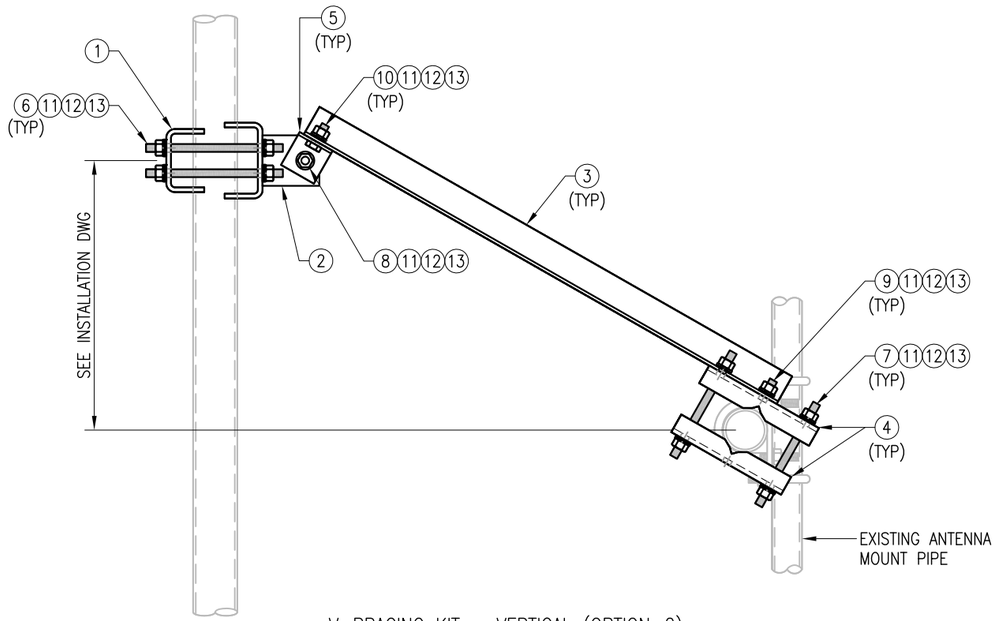
V-BRACING KIT - HORIZONTAL (OPTION-1)
SIDE VIEW



PLAN VIEW



FRONT VIEW
DETAIL "A"



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

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

VZWSMART-SFK3 (V-BRACING KIT)

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

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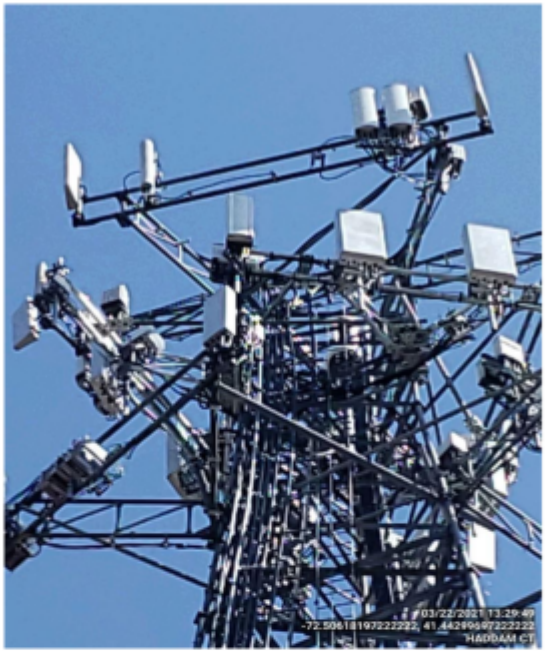
DRAWN BY: H.R. | CHECKED BY: HMA

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

SHEET TITLE:
VZWSMART-SFK3
V-BRACING KIT

SHEET NUMBER: VZWSMART-SFK3

REV #: 0


03/22/2021 13:29:49
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HADDAM CT


03/22/2021 14:17:22
-72.5724735, 41.4844242
HADDAM CT

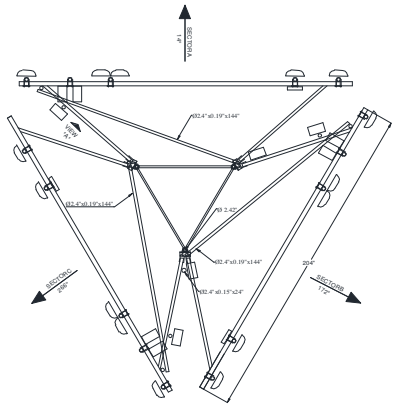
V3.0 Updated on 8-31-2020

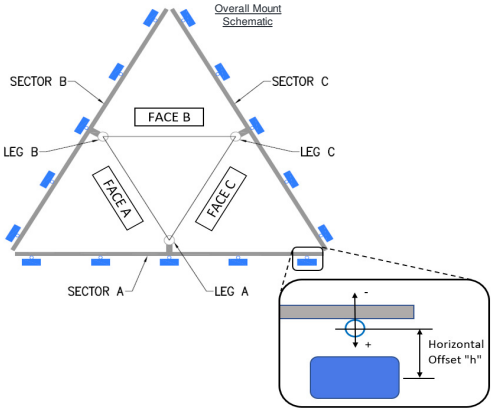
PAUL J. FORD & COMPANY

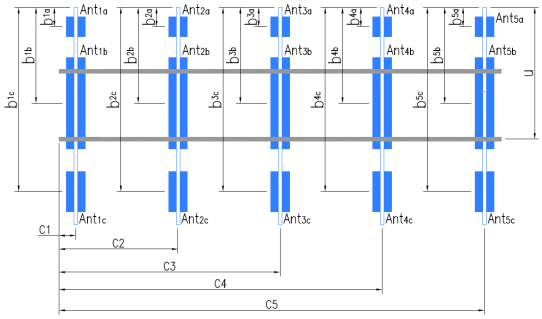
Antenna Mount Mapping Form (PATENT PENDING)

FCC # N/A

Tower Owner:	CCI	**Mapping Date:**	03/22/2021
Site Name:	CCI:HADDAM, VZW: HADDAM CT	**Tower Type:**	Monopole
Site Number or ID:	PSLC: 468763	**Tower Height (Ft.):**	N/A
Mapping Contractor:	Roaming Networks Inc.	**Mount Elevation (Ft.):**	178.12







Antenna Layout (Looking Out From Tower)

Mount Pipe Configuration and Geometries [Unit = Inches]

Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."	Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."
A1	PIPE Ø 2.45"x0.19"x60"	55.00	5.00	C1	PIPE Ø 2.45"x0.19"x60"	55.00	5.00
A2	PIPE Ø 2.4"x0.17"x96"	91.00	26.00	C2	PIPE Ø 2.4"x0.17"x96"	91.00	26.00
A3	PIPE Ø 2.4"x0.17"x97.5"	73.00	49.00	C3	PIPE Ø 2.4"x0.17"x97.5"	73.00	49.00
A4	PIPE Ø 2.4"x0.17"x96"	87.00	165.50	C4	PIPE Ø 2.4"x0.17"x96"	87.00	165.50
A5	PIPE Ø 2.45"x0.19"x60"	55.00	200.50	C5	PIPE Ø 2.45"x0.19"x60"	55.00	200.50
A6				C6			
B1	PIPE Ø 2.45"x0.19"x60"	55.00	5.00	D1			
B2	PIPE Ø 2.4"x0.17"x96"	91.00	26.00	D2			
B3	PIPE Ø 2.4"x0.17"x97.5"	73.00	49.00	D3			
B4	PIPE Ø 2.4"x0.17"x96"	87.00	165.50	D4			
B5	PIPE Ø 2.45"x0.19"x60"	55.00	200.50	D5			
B6				D6			

Distance between bottom rail and mount CL elevation (dim d). Unit is inches. See 'Mount Elev Ref' tab for details. :	16.00
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.) :	6

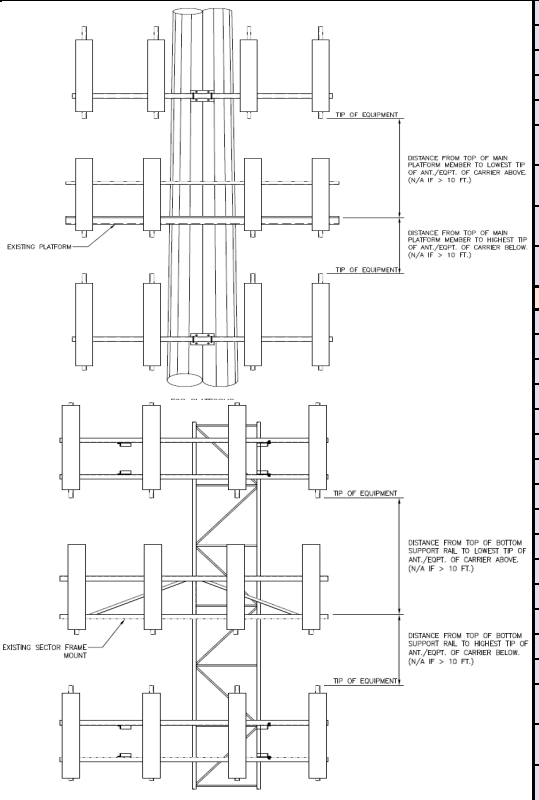
Please enter additional infomation or comments below.

Tower Face Width at Mount Elev. (ft.):	6.5	Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.):	2.42

	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}	LPA80080/6CF-E-DIN	5.50	13.20	70.90		179.12	27.00	16.50	14.00	12,13
Ant_{1c}										
Ant_{2a}	B66a RRH 4x45	11.80	7.18	25.80		182.328	24.50			14,15
Ant_{2b}										
Ant_{2c}	B13 RRH 4x30	11.80	7.50	20.90		183.453	11.00			16,18
Ant_{3a}										
Ant_{3b}	(2)SBNHH-1D65B	11.85	7.09	96.58		179.87	36.00	8.00	14.00	4,5,6
Ant_{3c}										
Ant_{4a}	RFS	5.30	1.20	5.30		180.953	37.00	2.50		9,10
Ant_{4b}	BXA17108512BFEDIN	6.10	4.10	72.50		179.62	53.00	9.50	14.00	7,8
Ant_{4c}										
Ant_{5a}										
Ant_{5b}	LPA80080/6CF-E-DIN	5.50	13.20	70.90		179.203	26.00	16.50	14.00	19,20
Ant_{5c}										
Ant on Standoff	B25 RRH 4x30	11.97	7.18	21.20						21,22
Ant on Standoff										
Ant on Tower										
Ant on Tower										

Mount Azimuth (Degree) for Each Sector				Tower Leg Azimuth (Degree) for Each Sector	
Sector A:	14.00	Deg	Leg A:	117.00	Deg
Sector B:	172.00	Deg	Leg B:	237.00	Deg
Sector C:	266.00	Deg	Leg C:	357.00	Deg
Sector D:		Deg	Leg D:		Deg

Climbing Facility Information			
Location:	266.00	Deg	Outside Face C
Climbing Facility	Corrosion Type:		Good condition.
	Access:		Climbing path was obstructed.
	Condition:		Good condition.



Sector B										
Ant_{1a}										
Ant_{1b}	LPA80080/6CF-E-DIN	5.50	13.20	70.90		179.12	27.00	16.50	172.00	12,13
Ant_{1c}										
Ant_{2a}	B66a RRH 4x45	11.80	7.18	25.80		182.328	24.50			14,15
Ant_{2b}										
Ant_{2c}	B13 RRH 4x30	11.80	7.50	20.90		183.453	11.00			16,18
Ant_{3a}										
Ant_{3b}	(2)SBNHH-1D65B	11.85	7.09	96.58		179.87	36.00	8.00	172.00	4,5,6
Ant_{3c}										
Ant_{4a}	RFS	5.30	1.20	5.30		180.953	37.00	2.50		9,10
Ant_{4b}	BXA17108512BFEDIN	6.10	4.10	72.50		179.62	53.00	9.50	172.00	7,8
Ant_{4c}										
Ant_{5a}										
Ant_{5b}	LPA80080/6CF-E-DIN	5.50	13.20	70.90		179.203	26.00	16.50	172.00	19,20
Ant_{5c}										
Ant on Standoff	B25 RRH 4x30	11.97	7.18	21.20						21,22
Ant on Standoff	RC3DC-3315-PF-48	15.73	10.30	28.93						
Ant on Tower										
Ant on Tower										
Sector C										
Ant_{1a}										
Ant_{1b}	LPA80080/6CF-E-DIN	5.50	13.20	70.90		179.12	27.00	16.50	266.00	12,13
Ant_{1c}										
Ant_{2a}	B66a RRH 4x45	11.80	7.18	25.80		182.328	24.50			14,15
Ant_{2b}										
Ant_{2c}	B13 RRH 4x30	11.80	7.50	20.90		183.453	11.00			16,18
Ant_{3a}										
Ant_{3b}	(2)SBNHH-1D65B	11.85	7.09	96.58		179.87	36.00	8.00	266.00	4,5,6
Ant_{3c}										
Ant_{4a}	RFS	5.30	1.20	5.30		180.953	37.00	2.50		9,10
Ant_{4b}	BXA17108512BFEDIN	6.10	4.10	72.50		179.62	53.00	9.50	266.00	7,8
Ant_{4c}										
Ant_{5a}										
Ant_{5b}	LPA80080/6CF-E-DIN	5.50	13.20	70.90		179.203	26.00	16.50	266.00	19,20
Ant_{5c}										
Ant on Standoff	B25 RRH 4x30	11.97	7.18	21.20						21,22
Ant on Standoff										
Ant on Tower	RRFDC-3315-PF-48	15.73	10.30	28.93						
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.

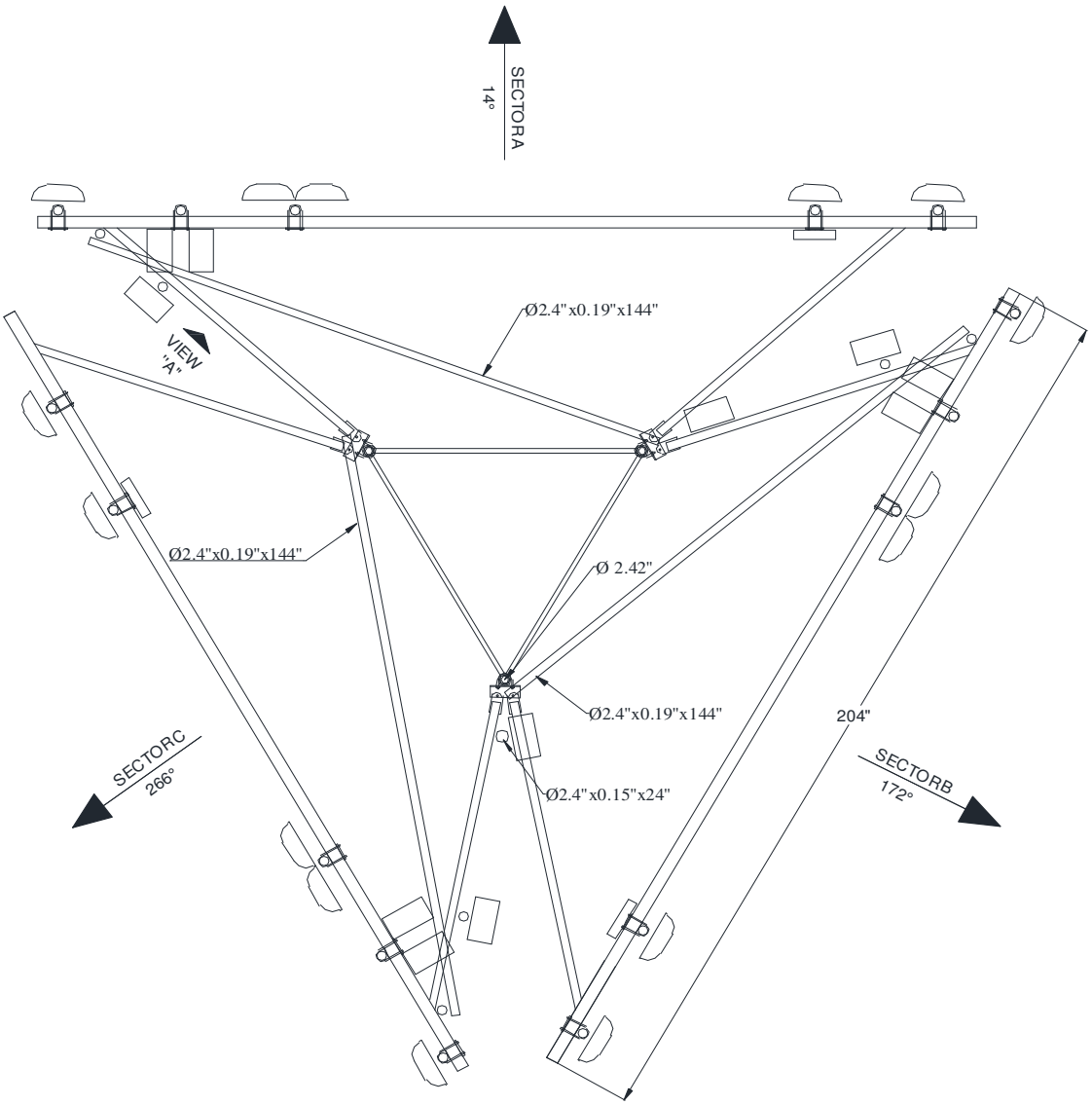
PAUL J. FORD & COMPANY

Antenna Mount Mapping Form (PATENT PENDING)

FCC #
N/A

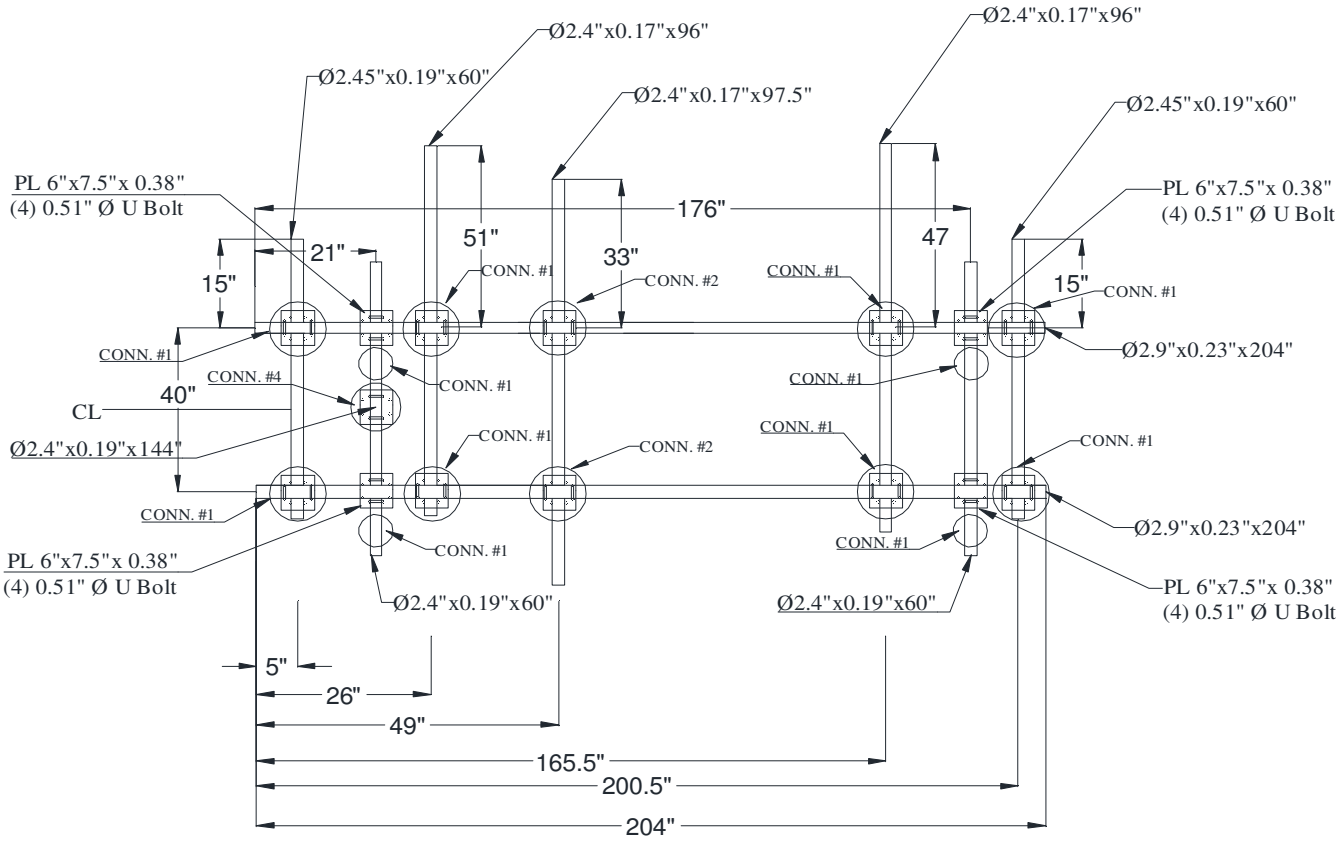
Tower Owner:	CCI	**Mapping Date:**	03/22/2021
Site Name:	CCI:HADDAM, VZW: HADDAM CT	**Tower Type:**	Monopole
Site Number or ID:	PSLC: 468763	**Tower Height (Ft.):**	N/A
Mapping Contractor:	Roaming Networks Inc.	**Mount Elevation (Ft.):**	178.12

Please Insert Sketches of the Antenna Mount



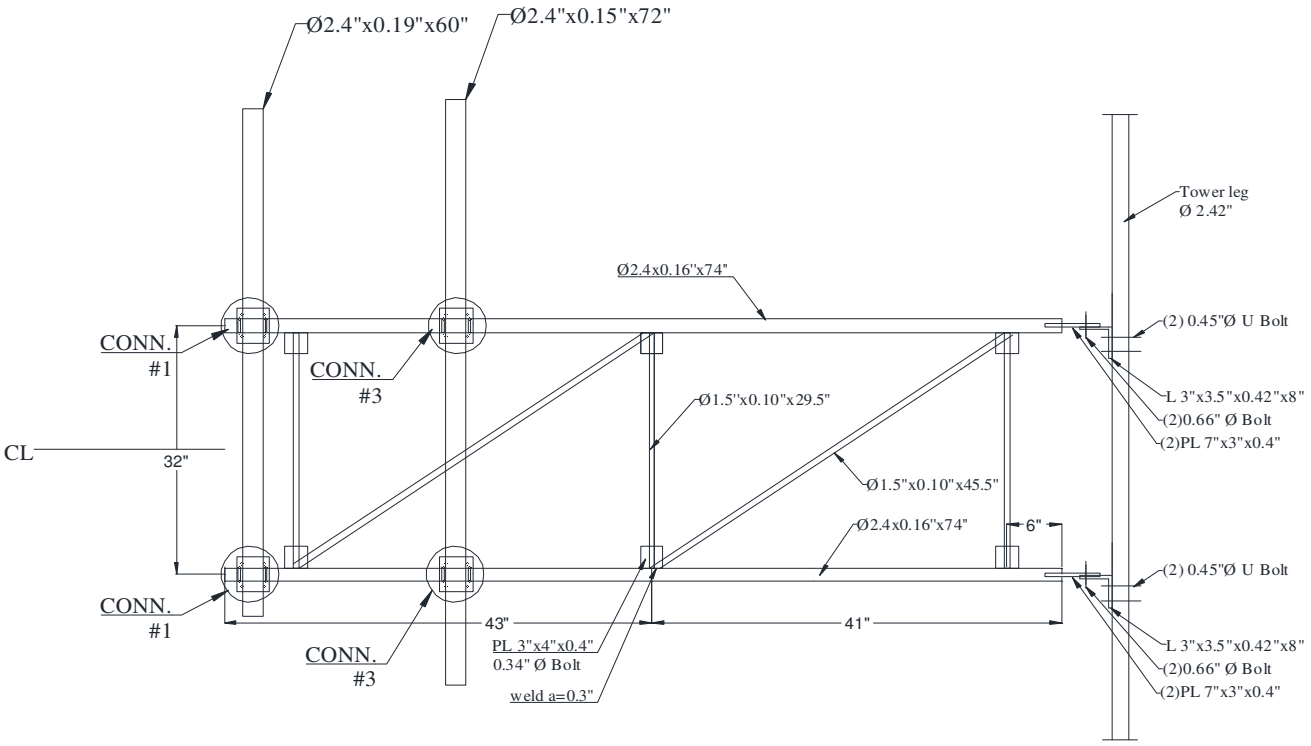
Overall Mount Schematic

Please Insert Sketches of the Antenna Mount, cont'd



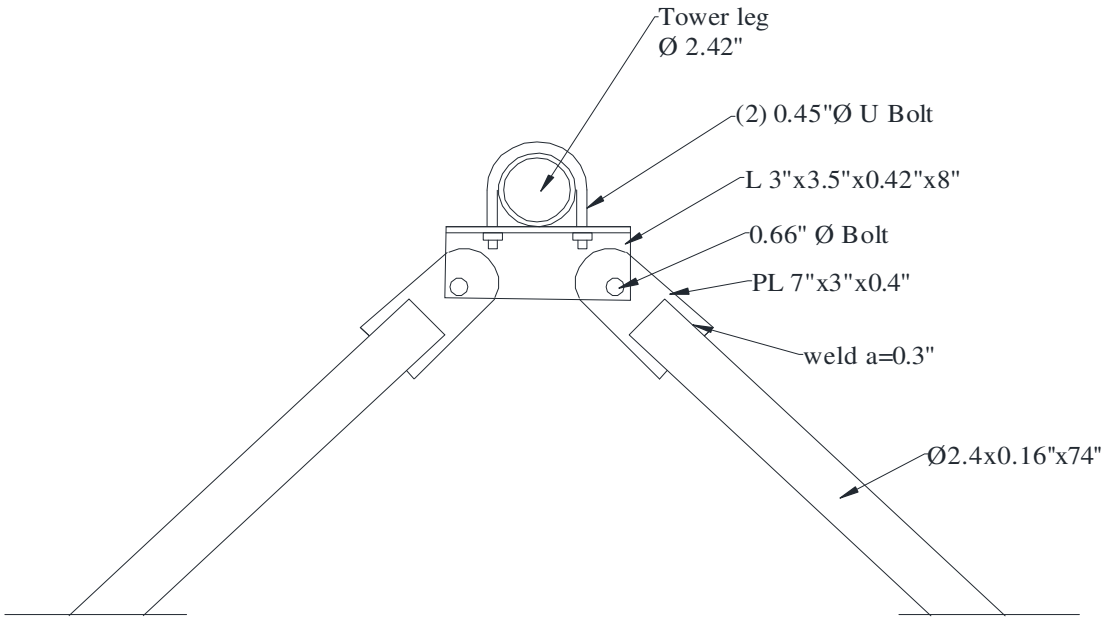
SECTOR A, B, C

Please Insert Sketches of the Antenna Mount, cont'd



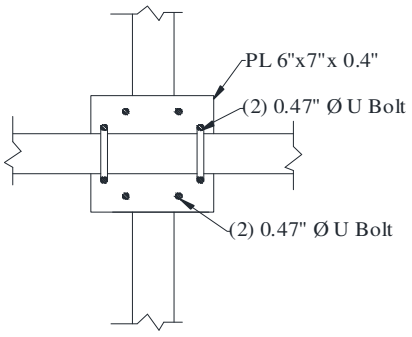
VIEW "A"

Please Insert Sketches of the Antenna Mount, cont'd

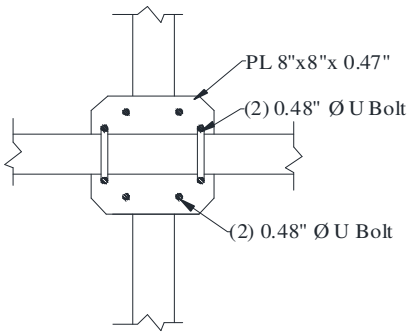


TOWER
CONNECTION

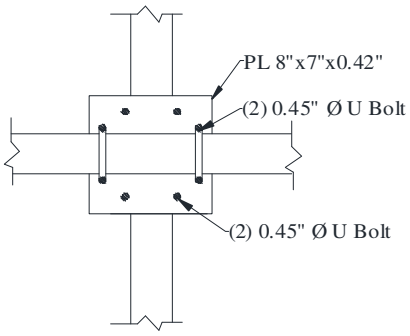
Please Insert Sketches of the Antenna Mount, cont'd



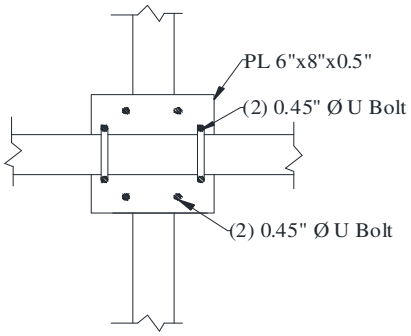
CONN.
#1



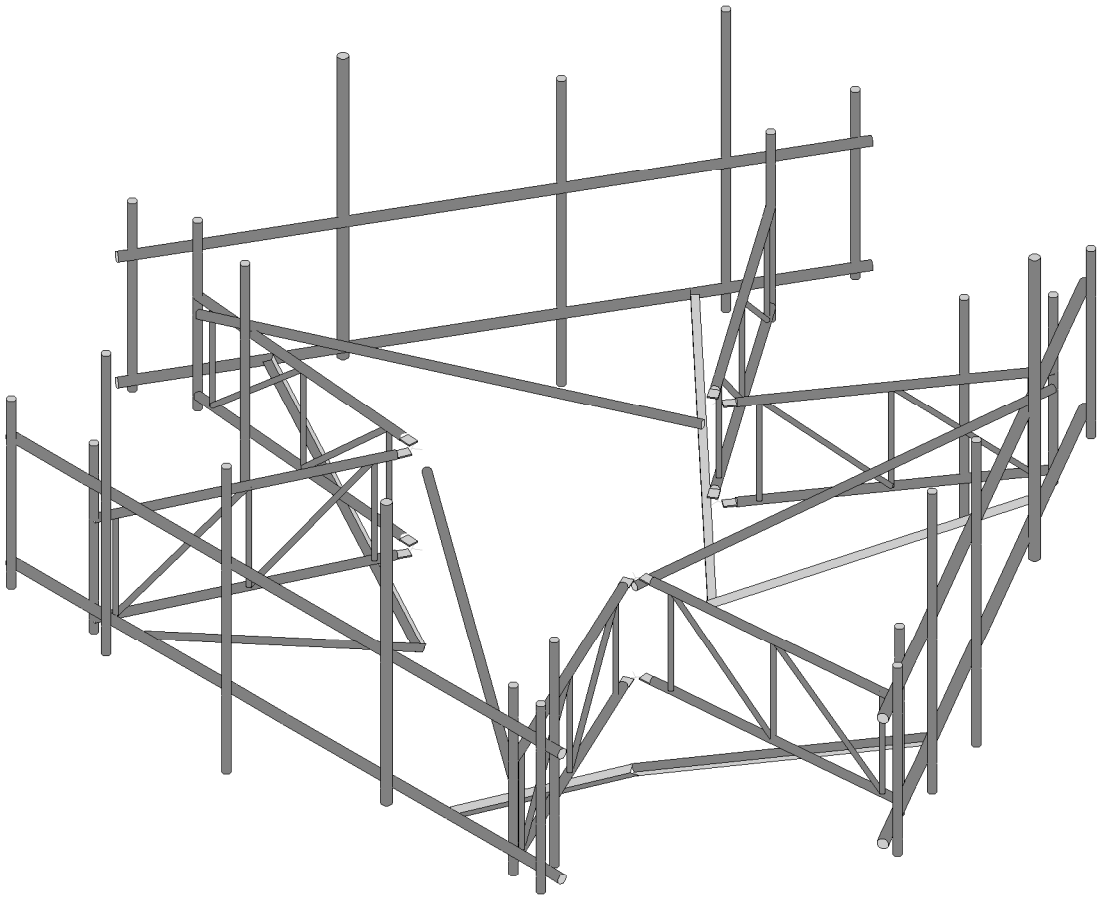
CONN.
#2



CONN.
#3

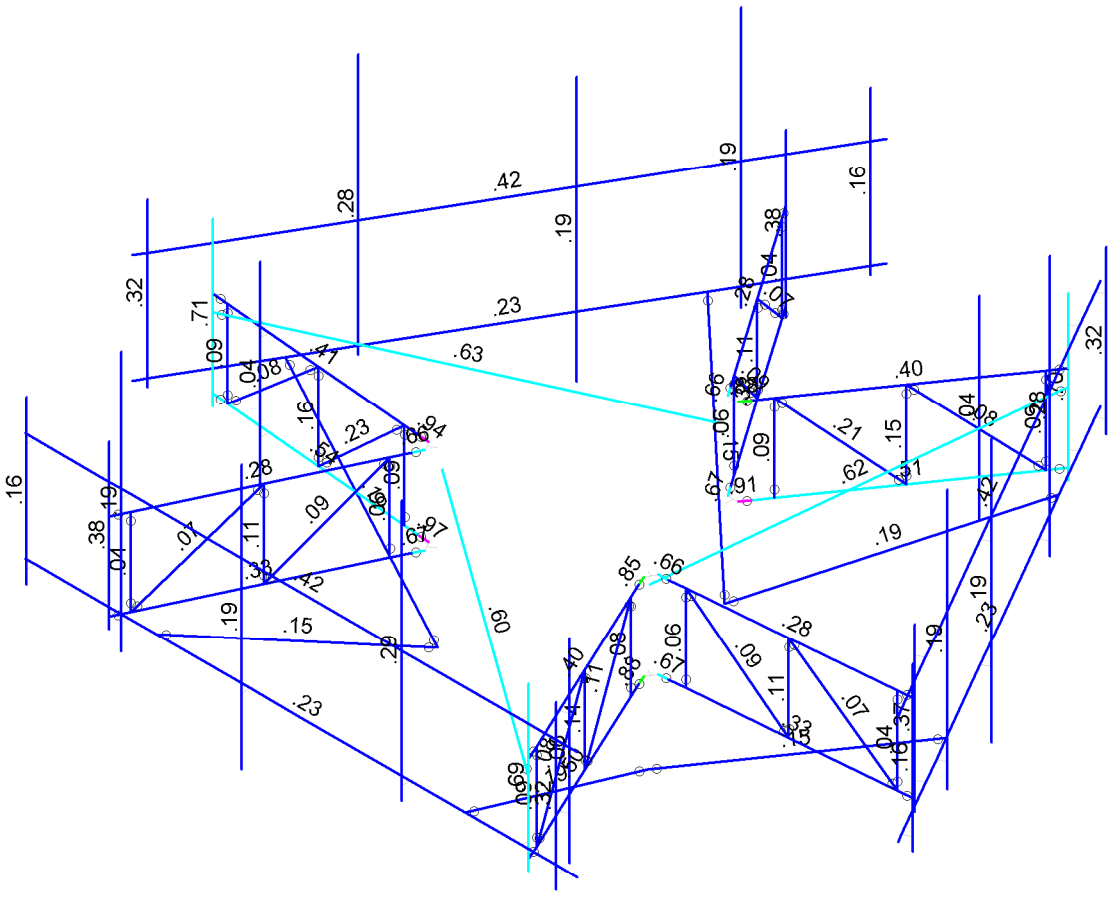


CONN.
#4



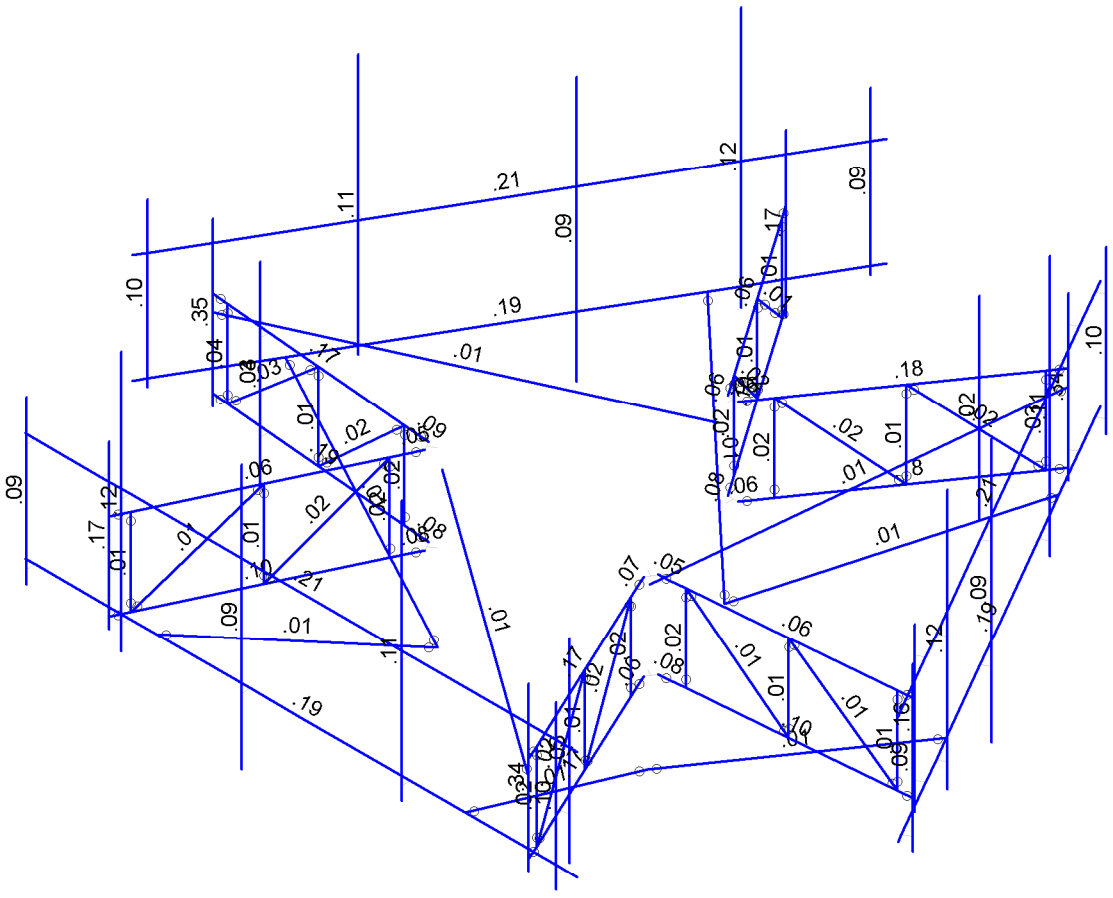
Envelope Only Solution

Colliers Engineering & Des...		SK - 1
	5000245769-VZW_MT_LO_H	Jan 23, 2024 at 10:22 AM
	Rendered Model	5000245769-VZW_MT_LO_H.r3d



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

Colliers Engineering & Des...		SK - 2
	5000245769-VZW_MT_LO_H	Jan 23, 2024 at 10:22 AM
	Bending Check	5000245769-VZW_MT_LO_H.r3d



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

Colliers Engineering & Des...		SK - 3
	5000245769-VZW_MT_LO_H	Jan 23, 2024 at 10:22 AM
	Shear Check	5000245769-VZW_MT_LO_H.r3d

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
1	Antenna D	None					120			
2	Antenna Di	None					120			
3	Antenna Wo (0 Deg)	None					120			
4	Antenna Wo (30 Deg)	None					120			
5	Antenna Wo (60 Deg)	None					120			
6	Antenna Wo (90 Deg)	None					120			
7	Antenna Wo (120 Deg)	None					120			
8	Antenna Wo (150 Deg)	None					120			
9	Antenna Wo (180 Deg)	None					120			
10	Antenna Wo (210 Deg)	None					120			
11	Antenna Wo (240 Deg)	None					120			
12	Antenna Wo (270 Deg)	None					120			
13	Antenna Wo (300 Deg)	None					120			
14	Antenna Wo (330 Deg)	None					120			
15	Antenna Wi (0 Deg)	None					120			
16	Antenna Wi (30 Deg)	None					120			
17	Antenna Wi (60 Deg)	None					120			
18	Antenna Wi (90 Deg)	None					120			
19	Antenna Wi (120 Deg)	None					120			
20	Antenna Wi (150 Deg)	None					120			
21	Antenna Wi (180 Deg)	None					120			
22	Antenna Wi (210 Deg)	None					120			
23	Antenna Wi (240 Deg)	None					120			
24	Antenna Wi (270 Deg)	None					120			
25	Antenna Wi (300 Deg)	None					120			
26	Antenna Wi (330 Deg)	None					120			
27	Antenna Wm (0 Deg)	None					120			
28	Antenna Wm (30 Deg)	None					120			
29	Antenna Wm (60 Deg)	None					120			
30	Antenna Wm (90 Deg)	None					120			
31	Antenna Wm (120 Deg)	None					120			
32	Antenna Wm (150 Deg)	None					120			
33	Antenna Wm (180 Deg)	None					120			
34	Antenna Wm (210 Deg)	None					120			
35	Antenna Wm (240 Deg)	None					120			
36	Antenna Wm (270 Deg)	None					120			
37	Antenna Wm (300 Deg)	None					120			
38	Antenna Wm (330 Deg)	None					120			
39	Structure D	None		-1						
40	Structure Di	None						95		
41	Structure Wo (0 Deg)	None						190		
42	Structure Wo (30 Deg)	None						190		
43	Structure Wo (60 Deg)	None						190		
44	Structure Wo (90 Deg)	None						190		
45	Structure Wo (120 D...	None						190		
46	Structure Wo (150 D...	None						190		
47	Structure Wo (180 D...	None						190		
48	Structure Wo (210 D...	None						190		
49	Structure Wo (240 D...	None						190		
50	Structure Wo (270 D...	None						190		
51	Structure Wo (300 D...	None						190		
52	Structure Wo (330 D...	None						190		
53	Structure Wi (0 Deg)	None						190		

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
54	Structure Wi (30 Deg)	None						190		
55	Structure Wi (60 Deg)	None						190		
56	Structure Wi (90 Deg)	None						190		
57	Structure Wi (120 De...	None						190		
58	Structure Wi (150 De...	None						190		
59	Structure Wi (180 De...	None						190		
60	Structure Wi (210 De...	None						190		
61	Structure Wi (240 De...	None						190		
62	Structure Wi (270 De...	None						190		
63	Structure Wi (300 De...	None						190		
64	Structure Wi (330 De...	None						190		
65	Structure Wm (0 Deg)	None						190		
66	Structure Wm (30 De...	None						190		
67	Structure Wm (60 De...	None						190		
68	Structure Wm (90 De...	None						190		
69	Structure Wm (120 D...	None						190		
70	Structure Wm (150 D...	None						190		
71	Structure Wm (180 D...	None						190		
72	Structure Wm (210 D...	None						190		
73	Structure Wm (240 D...	None						190		
74	Structure Wm (270 D...	None						190		
75	Structure Wm (300 D...	None						190		
76	Structure Wm (330 D...	None						190		
77	Lm1	None					1			
78	Lm2	None					1			
79	Lv1	None					1			
80	Lv2	None					1			
81	Antenna Ev	None					120			
82	Antenna Eh (0 Deg)	None					80			
83	Antenna Eh (90 Deg)	None					80			
84	Structure Ev	ELY		-.046						
85	Structure Eh (0 Deg)	ELZ			-.114					
86	Structure Eh (90 Deg)	ELX	.114							

Load Combinations

	Description	S...	P...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
1	1.2D+1.0Wo (0 Deg)	Yes	Y		1	1.2	39	1.2	3	1	41	1														
2	1.2D+1.0Wo (30 Deg)	Yes	Y		1	1.2	39	1.2	4	1	42	1														
3	1.2D+1.0Wo (60 Deg)	Yes	Y		1	1.2	39	1.2	5	1	43	1														
4	1.2D+1.0Wo (90 Deg)	Yes	Y		1	1.2	39	1.2	6	1	44	1														
5	1.2D+1.0Wo (120 Deg)	Yes	Y		1	1.2	39	1.2	7	1	45	1														
6	1.2D+1.0Wo (150 Deg)	Yes	Y		1	1.2	39	1.2	8	1	46	1														
7	1.2D+1.0Wo (180 Deg)	Yes	Y		1	1.2	39	1.2	9	1	47	1														
8	1.2D+1.0Wo (210 Deg)	Yes	Y		1	1.2	39	1.2	10	1	48	1														
9	1.2D+1.0Wo (240 Deg)	Yes	Y		1	1.2	39	1.2	11	1	49	1														
10	1.2D+1.0Wo (270 Deg)	Yes	Y		1	1.2	39	1.2	12	1	50	1														
11	1.2D+1.0Wo (300 Deg)	Yes	Y		1	1.2	39	1.2	13	1	51	1														
12	1.2D+1.0Wo (330 Deg)	Yes	Y		1	1.2	39	1.2	14	1	52	1														
13	1.2D + 1.0Di + 1.0Wi (0 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	15	1	53	1										
14	1.2D + 1.0Di + 1.0Wi (30 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	16	1	54	1										
15	1.2D + 1.0Di + 1.0Wi (60 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	17	1	55	1										
16	1.2D + 1.0Di + 1.0Wi (90 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	18	1	56	1										
17	1.2D + 1.0Di + 1.0Wi (120 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	19	1	57	1										
18	1.2D + 1.0Di + 1.0Wi (150 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	20	1	58	1										
19	1.2D + 1.0Di + 1.0Wi (180 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	21	1	59	1										

Load Combinations (Continued)

	Description	S...	P...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
20	1.2D + 1.0Di + 1.0Wi (210 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	22	1	60	1								
21	1.2D + 1.0Di + 1.0Wi (240 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	23	1	61	1								
22	1.2D + 1.0Di + 1.0Wi (270 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	24	1	62	1								
23	1.2D + 1.0Di + 1.0Wi (300 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	25	1	63	1								
24	1.2D + 1.0Di + 1.0Wi (330 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	26	1	64	1								
25	1.2D + 1.5Lm1 + 1.0Wm (0 Deg)	Yes	Y		1	1.2	39	1.2	77	1.5	27	1	65	1										
26	1.2D + 1.5Lm1 + 1.0Wm (30 Deg)	Yes	Y		1	1.2	39	1.2	77	1.5	28	1	66	1										
27	1.2D + 1.5Lm1 + 1.0Wm (60 Deg)	Yes	Y		1	1.2	39	1.2	77	1.5	29	1	67	1										
28	1.2D + 1.5Lm1 + 1.0Wm (90 Deg)	Yes	Y		1	1.2	39	1.2	77	1.5	30	1	68	1										
29	1.2D + 1.5Lm1 + 1.0Wm (120 Deg)	Yes	Y		1	1.2	39	1.2	77	1.5	31	1	69	1										
30	1.2D + 1.5Lm1 + 1.0Wm (150 Deg)	Yes	Y		1	1.2	39	1.2	77	1.5	32	1	70	1										
31	1.2D + 1.5Lm1 + 1.0Wm (180 Deg)	Yes	Y		1	1.2	39	1.2	77	1.5	33	1	71	1										
32	1.2D + 1.5Lm1 + 1.0Wm (210 Deg)	Yes	Y		1	1.2	39	1.2	77	1.5	34	1	72	1										
33	1.2D + 1.5Lm1 + 1.0Wm (240 Deg)	Yes	Y		1	1.2	39	1.2	77	1.5	35	1	73	1										
34	1.2D + 1.5Lm1 + 1.0Wm (270 Deg)	Yes	Y		1	1.2	39	1.2	77	1.5	36	1	74	1										
35	1.2D + 1.5Lm1 + 1.0Wm (300 Deg)	Yes	Y		1	1.2	39	1.2	77	1.5	37	1	75	1										
36	1.2D + 1.5Lm1 + 1.0Wm (330 Deg)	Yes	Y		1	1.2	39	1.2	77	1.5	38	1	76	1										
37	1.2D + 1.5Lm2 + 1.0Wm (0 Deg)	Yes	Y		1	1.2	39	1.2	78	1.5	27	1	65	1										
38	1.2D + 1.5Lm2 + 1.0Wm (30 Deg)	Yes	Y		1	1.2	39	1.2	78	1.5	28	1	66	1										
39	1.2D + 1.5Lm2 + 1.0Wm (60 Deg)	Yes	Y		1	1.2	39	1.2	78	1.5	29	1	67	1										
40	1.2D + 1.5Lm2 + 1.0Wm (90 Deg)	Yes	Y		1	1.2	39	1.2	78	1.5	30	1	68	1										
41	1.2D + 1.5Lm2 + 1.0Wm (120 Deg)	Yes	Y		1	1.2	39	1.2	78	1.5	31	1	69	1										
42	1.2D + 1.5Lm2 + 1.0Wm (150 Deg)	Yes	Y		1	1.2	39	1.2	78	1.5	32	1	70	1										
43	1.2D + 1.5Lm2 + 1.0Wm (180 Deg)	Yes	Y		1	1.2	39	1.2	78	1.5	33	1	71	1										
44	1.2D + 1.5Lm2 + 1.0Wm (210 Deg)	Yes	Y		1	1.2	39	1.2	78	1.5	34	1	72	1										
45	1.2D + 1.5Lm2 + 1.0Wm (240 Deg)	Yes	Y		1	1.2	39	1.2	78	1.5	35	1	73	1										
46	1.2D + 1.5Lm2 + 1.0Wm (270 Deg)	Yes	Y		1	1.2	39	1.2	78	1.5	36	1	74	1										
47	1.2D + 1.5Lm2 + 1.0Wm (300 Deg)	Yes	Y		1	1.2	39	1.2	78	1.5	37	1	75	1										
48	1.2D + 1.5Lm2 + 1.0Wm (330 Deg)	Yes	Y		1	1.2	39	1.2	78	1.5	38	1	76	1										
49	1.2D + 1.5Lv1	Yes	Y		1	1.2	39	1.2	79	1.5														
50	1.2D + 1.5Lv2	Yes	Y		1	1.2	39	1.2	80	1.5														
51	1.4D	Yes	Y		1	1.4	39	1.4																
52	1.2D + 1.0Ev + 1.0Eh (0 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	1	83		E...	1	E...					
53	1.2D + 1.0Ev + 1.0Eh (30 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	.866	83	.5	E...	.866	E...	.5				
54	1.2D + 1.0Ev + 1.0Eh (60 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	.5	83	.866	E...	.5	E...	.866				
55	1.2D + 1.0Ev + 1.0Eh (90 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82		83	1	E...		E...	1				
56	1.2D + 1.0Ev + 1.0Eh (120 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-.5	83	.866	E...	-.5	E...	.866				
57	1.2D + 1.0Ev + 1.0Eh (150 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-.8...	83	.5	E...	-.8...	E...	.5				
58	1.2D + 1.0Ev + 1.0Eh (180 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-1	83		E...	-1	E...					
59	1.2D + 1.0Ev + 1.0Eh (210 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-.8...	83	-.5	E...	-.8...	E...	-.5				
60	1.2D + 1.0Ev + 1.0Eh (240 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-.5	83	-.8...	E...	-.5	E...	-.8...				
61	1.2D + 1.0Ev + 1.0Eh (270 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82		83	-1	E...		E...	-1				
62	1.2D + 1.0Ev + 1.0Eh (300 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	.5	83	-.8...	E...	.5	E...	-.8...				
63	1.2D + 1.0Ev + 1.0Eh (330 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	.866	83	-.5	E...	.866	E...	-.5				
64	0.9D - 1.0Ev + 1.0Eh (0 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	1	83		E...	1	E...					
65	0.9D - 1.0Ev + 1.0Eh (30 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	.866	83	.5	E...	.866	E...	.5				
66	0.9D - 1.0Ev + 1.0Eh (60 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	.5	83	.866	E...	.5	E...	.866				
67	0.9D - 1.0Ev + 1.0Eh (90 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82		83	1	E...		E...	1				
68	0.9D - 1.0Ev + 1.0Eh (120 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-.5	83	.866	E...	-.5	E...	.866				
69	0.9D - 1.0Ev + 1.0Eh (150 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-.8...	83	.5	E...	-.8...	E...	.5				
70	0.9D - 1.0Ev + 1.0Eh (180 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-1	83		E...	-1	E...					
71	0.9D - 1.0Ev + 1.0Eh (210 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-.8...	83	-.5	E...	-.8...	E...	-.5				
72	0.9D - 1.0Ev + 1.0Eh (240 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-.5	83	-.8...	E...	-.5	E...	-.8...				
73	0.9D - 1.0Ev + 1.0Eh (270 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82		83	-1	E...		E...	-1				
74	0.9D - 1.0Ev + 1.0Eh (300 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	.5	83	-.8...	E...	.5	E...	-.8...				
75	0.9D - 1.0Ev + 1.0Eh (330 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	.866	83	-.5	E...	.866	E...	-.5				

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design R...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Antenna Pipe	PIPE_2.0	Column	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
2	Standoff Horizontal	PIPE_2.0	Beam	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
3	Face Horizontal	PIPE_2.5	Beam	Pipe	A53 Gr. B	Typical	1.61	1.45	1.45	2.89
4	Tieback	PIPE_2.0	Beam	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
5	Standoff Bracing	PIPE_1.0	Beam	Pipe	A53 Gr. B	Typical	.469	.083	.083	.166
6	Plate	PL3/8X3	Beam	RECT	A36 Gr.36	Typical	1.125	.013	.844	.049
7	Secondary Horizontal	PIPE_2.5	Beam	Pipe	A53 Gr. B	Typical	1.61	1.45	1.45	2.89
8	V-Brace	L2.5x2.5x4	Beam	Single Angle	A36 Gr.36	Typical	1.19	.692	.692	.026
9	Replacement Pipe	PIPE_2.5	Column	Pipe	A53 Gr. B	Typical	1.61	1.45	1.45	2.89

Hot Rolled Steel Properties

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

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N3	N2			Face Horizontal	Beam	Pipe	A53 Gr. B	Typical
2	M2	N5	N4			Face Horizontal	Beam	Pipe	A53 Gr. B	Typical
3	M3	N9	N7			RIGID	None	None	RIGID	Typical
4	M4	N8	N6			RIGID	None	None	RIGID	Typical
5	M5	N13	N11			RIGID	None	None	RIGID	Typical
6	M6	N12	N10			RIGID	None	None	RIGID	Typical
7	M7	N17	N15			RIGID	None	None	RIGID	Typical
8	M8	N16	N14			RIGID	None	None	RIGID	Typical
9	M9	N21	N19			RIGID	None	None	RIGID	Typical
10	M10	N20	N18			RIGID	None	None	RIGID	Typical
11	M11	N25	N23			RIGID	None	None	RIGID	Typical
12	M12	N24	N22			RIGID	None	None	RIGID	Typical
13	MP1A	N26	N27			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
14	MP2A	N28	N29			Replacement ...	Column	Pipe	A53 Gr. B	Typical
15	MP3A	N30	N31			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
16	MP4A	N32	N33			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
17	MP5A	N34	N35			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
18	M18	N37	N39			RIGID	None	None	RIGID	Typical
19	M19	N36	N38			RIGID	None	None	RIGID	Typical
20	M20	N41	N43			RIGID	None	None	RIGID	Typical
21	M21	N40	N42			RIGID	None	None	RIGID	Typical
22	M22	N44	N45			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
23	M23	N46	N47			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
24	M24	N48	N50			Standoff Horiz...	Beam	Pipe	A53 Gr. B	Typical
25	M25	N49	N51			Standoff Horiz...	Beam	Pipe	A53 Gr. B	Typical
26	M26	N54	N55			Standoff Braci...	Beam	Pipe	A53 Gr. B	Typical
27	M27	N55	N52			Standoff Braci...	Beam	Pipe	A53 Gr. B	Typical
28	M28	N52	N53			Standoff Braci...	Beam	Pipe	A53 Gr. B	Typical
29	M29	N53	N56			Standoff Braci...	Beam	Pipe	A53 Gr. B	Typical
30	M30	N56	N57			Standoff Braci...	Beam	Pipe	A53 Gr. B	Typical
31	M31	N58	N60			RIGID	None	None	RIGID	Typical
32	M32	N59	N61			RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
33	M33	N62	N63			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
34	M34	N64	N66			Standoff Horiz...	Beam	Pipe	A53 Gr. B	Typical
35	M35	N65	N67			Standoff Horiz...	Beam	Pipe	A53 Gr. B	Typical
36	M36	N70	N71			Standoff Braci...	Beam	Pipe	A53 Gr. B	Typical
37	M37	N71	N68			Standoff Braci...	Beam	Pipe	A53 Gr. B	Typical
38	M38	N68	N69			Standoff Braci...	Beam	Pipe	A53 Gr. B	Typical
39	M39	N69	N72			Standoff Braci...	Beam	Pipe	A53 Gr. B	Typical
40	M40	N72	N73			Standoff Braci...	Beam	Pipe	A53 Gr. B	Typical
41	M45	N78	N79			Tieback	Beam	Pipe	A53 Gr. B	Typical
42	M47	N83	N82			Face Horizontal	Beam	Pipe	A53 Gr. B	Typical
43	M48	N85	N84			Face Horizontal	Beam	Pipe	A53 Gr. B	Typical
44	M49	N89	N87			RIGID	None	None	RIGID	Typical
45	M50	N88	N86			RIGID	None	None	RIGID	Typical
46	M55	N101	N99			RIGID	None	None	RIGID	Typical
47	M56	N100	N98			RIGID	None	None	RIGID	Typical
48	M57	N105	N103			RIGID	None	None	RIGID	Typical
49	M58	N104	N102			RIGID	None	None	RIGID	Typical
50	MP1C	N106	N107			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
51	MP4C	N112	N113			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
52	MP5C	N114	N115			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
53	M64	N117	N119			RIGID	None	None	RIGID	Typical
54	M65	N116	N118			RIGID	None	None	RIGID	Typical
55	M66	N121	N123			RIGID	None	None	RIGID	Typical
56	M67	N120	N122			RIGID	None	None	RIGID	Typical
57	M68	N124	N125			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
58	M69	N126	N127			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
59	M70	N128	N130			Standoff Horiz...	Beam	Pipe	A53 Gr. B	Typical
60	OVP1	N129	N131			Standoff Horiz...	Beam	Pipe	A53 Gr. B	Typical
61	M72	N134	N135			Standoff Braci...	Beam	Pipe	A53 Gr. B	Typical
62	M73	N135	N132			Standoff Braci...	Beam	Pipe	A53 Gr. B	Typical
63	M74	N132	N133			Standoff Braci...	Beam	Pipe	A53 Gr. B	Typical
64	M75	N133	N136			Standoff Braci...	Beam	Pipe	A53 Gr. B	Typical
65	M76	N136	N137			Standoff Braci...	Beam	Pipe	A53 Gr. B	Typical
66	M77	N138	N140			RIGID	None	None	RIGID	Typical
67	M78	N139	N141			RIGID	None	None	RIGID	Typical
68	O	N142	N143			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
69	M80	N144	N146			Standoff Horiz...	Beam	Pipe	A53 Gr. B	Typical
70	M81	N145	N147			Standoff Horiz...	Beam	Pipe	A53 Gr. B	Typical
71	M82	N150	N151			Standoff Braci...	Beam	Pipe	A53 Gr. B	Typical
72	M83	N151	N148			Standoff Braci...	Beam	Pipe	A53 Gr. B	Typical
73	M84	N148	N149			Standoff Braci...	Beam	Pipe	A53 Gr. B	Typical
74	M85	N149	N152			Standoff Braci...	Beam	Pipe	A53 Gr. B	Typical
75	M86	N152	N153			Standoff Braci...	Beam	Pipe	A53 Gr. B	Typical
76	M87	N130	N246		90	Plate	Beam	RECT	A36 Gr.36	Typical
77	M91	N158	N159			Tieback	Beam	Pipe	A53 Gr. B	Typical
78	M93	N163	N162			Face Horizontal	Beam	Pipe	A53 Gr. B	Typical
79	M94	N165	N164			Face Horizontal	Beam	Pipe	A53 Gr. B	Typical
80	M95	N169	N167			RIGID	None	None	RIGID	Typical
81	M96	N168	N166			RIGID	None	None	RIGID	Typical
82	M101	N181	N179			RIGID	None	None	RIGID	Typical
83	M102	N180	N178			RIGID	None	None	RIGID	Typical
84	M103	N185	N183			RIGID	None	None	RIGID	Typical
85	M104	N184	N182			RIGID	None	None	RIGID	Typical
86	MP1B	N186	N187			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
87	MP4B	N192	N193			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
88	MP5B	N194	N195			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
89	M110	N197	N199			RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
90	M111	N196	N198			RIGID	None	None	RIGID	Typical
91	M112	N201	N203			RIGID	None	None	RIGID	Typical
92	M113	N200	N202			RIGID	None	None	RIGID	Typical
93	M114	N204	N205			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
94	M115	N206	N207			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
95	M116	N208	N210			Standoff Horiz...	Beam	Pipe	A53 Gr. B	Typical
96	M117	N209	N211			Standoff Horiz...	Beam	Pipe	A53 Gr. B	Typical
97	M118	N214	N215			Standoff Braci...	Beam	Pipe	A53 Gr. B	Typical
98	M119	N215	N212			Standoff Braci...	Beam	Pipe	A53 Gr. B	Typical
99	M120	N212	N213			Standoff Braci...	Beam	Pipe	A53 Gr. B	Typical
100	M121	N213	N216			Standoff Braci...	Beam	Pipe	A53 Gr. B	Typical
101	M122	N216	N217			Standoff Braci...	Beam	Pipe	A53 Gr. B	Typical
102	M123	N218	N220			RIGID	None	None	RIGID	Typical
103	M124	N219	N221			RIGID	None	None	RIGID	Typical
104	OVP2	N222	N223			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
105	M126	N224	N226			Standoff Horiz...	Beam	Pipe	A53 Gr. B	Typical
106	M127	N225	N227			Standoff Horiz...	Beam	Pipe	A53 Gr. B	Typical
107	M128	N230	N231			Standoff Braci...	Beam	Pipe	A53 Gr. B	Typical
108	M129	N231	N228			Standoff Braci...	Beam	Pipe	A53 Gr. B	Typical
109	M130	N228	N229			Standoff Braci...	Beam	Pipe	A53 Gr. B	Typical
110	M131	N229	N232			Standoff Braci...	Beam	Pipe	A53 Gr. B	Typical
111	M132	N232	N233			Standoff Braci...	Beam	Pipe	A53 Gr. B	Typical
112	M136	N226	N247		90	Plate	Beam	RECT	A36 Gr.36	Typical
113	M137	N238	N239			Tieback	Beam	Pipe	A53 Gr. B	Typical
114	M142	N138	N140			RIGID	None	None	RIGID	Typical
115	M143	N139	N141			RIGID	None	None	RIGID	Typical
116	M144	N142	N143			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
117	M145	N218	N220			RIGID	None	None	RIGID	Typical
118	M146	N219	N221			RIGID	None	None	RIGID	Typical
119	M147	N222	N223			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
120	M148	N247	N246			RIGID	None	None	RIGID	Typical
121	M148A	N246A	N245			RIGID	None	None	RIGID	Typical
122	M146A	N131	N246B		90	Plate	Beam	RECT	A36 Gr.36	Typical
123	M147A	N227	N247A		90	Plate	Beam	RECT	A36 Gr.36	Typical
124	M148B	N247A	N246B			RIGID	None	None	RIGID	Typical
125	M149	N248	N249			RIGID	None	None	RIGID	Typical
126	M138	N210	N245A		90	Plate	Beam	RECT	A36 Gr.36	Typical
127	M139	N66	N246C		90	Plate	Beam	RECT	A36 Gr.36	Typical
128	M140	N246C	N245A			RIGID	None	None	RIGID	Typical
129	M141	N247B	N248A			RIGID	None	None	RIGID	Typical
130	M142A	N211	N249A		90	Plate	Beam	RECT	A36 Gr.36	Typical
131	M143A	N67	N250		90	Plate	Beam	RECT	A36 Gr.36	Typical
132	M144A	N250	N249A			RIGID	None	None	RIGID	Typical
133	M145A	N251	N252			RIGID	None	None	RIGID	Typical
134	M146B	N50	N258		90	Plate	Beam	RECT	A36 Gr.36	Typical
135	M147B	N146	N259		90	Plate	Beam	RECT	A36 Gr.36	Typical
136	M148C	N259	N258			RIGID	None	None	RIGID	Typical
137	M149A	N260	N261			RIGID	None	None	RIGID	Typical
138	M150	N51	N262		90	Plate	Beam	RECT	A36 Gr.36	Typical
139	M151	N147	N263		90	Plate	Beam	RECT	A36 Gr.36	Typical
140	M152	N263	N262			RIGID	None	None	RIGID	Typical
141	M153	N264	N265			RIGID	None	None	RIGID	Typical
142	M142B	N235	N233A			RIGID	None	None	RIGID	Typical
143	M143B	N234	N232A			RIGID	None	None	RIGID	Typical
144	M144B	N239A	N237			RIGID	None	None	RIGID	Typical
145	M145B	N238A	N236			RIGID	None	None	RIGID	Typical
146	MP2C	N240A	N241A			Replacement ...	Column	Pipe	A53 Gr. B	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
147	MP3C	N242A	N243			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
148	M148D	N247C	N245B			RIGID	None	None	RIGID	Typical
149	M149B	N246D	N244			RIGID	None	None	RIGID	Typical
150	M150A	N251A	N249B			RIGID	None	None	RIGID	Typical
151	M151A	N250A	N248B			RIGID	None	None	RIGID	Typical
152	MP2B	N252A	N253			Replacement ...	Column	Pipe	A53 Gr. B	Typical
153	MP3B	N254	N255			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
154	M181	N310	N307		270	V-Brace	Beam	Single Angle	A36 Gr.36	Typical
155	M182	N315	N307			V-Brace	Beam	Single Angle	A36 Gr.36	Typical
156	M183	N311	N308			V-Brace	Beam	Single Angle	A36 Gr.36	Typical
157	M184	N312	N308		270	V-Brace	Beam	Single Angle	A36 Gr.36	Typical
158	M185	N313	N309			V-Brace	Beam	Single Angle	A36 Gr.36	Typical
159	M186	N314	N309		270	V-Brace	Beam	Single Angle	A36 Gr.36	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	M1						Yes				None
2	M2						Yes				None
3	M3						Yes	** NA **			None
4	M4						Yes	** NA **			None
5	M5						Yes	** NA **			None
6	M6						Yes	** NA **			None
7	M7						Yes	** NA **			None
8	M8						Yes	** NA **			None
9	M9						Yes	** NA **			None
10	M10						Yes	** NA **			None
11	M11						Yes	** NA **			None
12	M12						Yes	** NA **			None
13	MP1A						Yes	** NA **			None
14	MP2A						Yes	** NA **			None
15	MP3A						Yes	** NA **			None
16	MP4A						Yes	** NA **			None
17	MP5A						Yes	** NA **			None
18	M18						Yes	** NA **			None
19	M19						Yes	** NA **			None
20	M20						Yes	** NA **			None
21	M21						Yes	** NA **			None
22	M22						Yes	** NA **			None
23	M23						Yes	** NA **			None
24	M24	OOOOXO					Yes				None
25	M25	OOOOXO					Yes				None
26	M26	BenPIN	BenPIN				Yes	Default			None
27	M27	BenPIN	BenPIN				Yes	Default			None
28	M28	BenPIN	BenPIN				Yes	Default			None
29	M29	BenPIN	BenPIN				Yes	Default			None
30	M30	BenPIN	BenPIN				Yes	Default			None
31	M31						Yes	** NA **			None
32	M32						Yes	** NA **			None
33	M33						Yes	** NA **			None
34	M34	OOOOXO					Yes				None
35	M35	OOOOXO					Yes				None
36	M36	BenPIN	BenPIN				Yes	Default			None
37	M37	BenPIN	BenPIN				Yes	Default			None
38	M38	BenPIN	BenPIN				Yes	Default			None
39	M39	BenPIN	BenPIN				Yes	Default			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
40	M40	BenPIN	BenPIN				Yes	Default			None
41	M45	OOOOXO					Yes	Default			None
42	M47						Yes				None
43	M48						Yes				None
44	M49						Yes	** NA **			None
45	M50						Yes	** NA **			None
46	M55						Yes	** NA **			None
47	M56						Yes	** NA **			None
48	M57						Yes	** NA **			None
49	M58						Yes	** NA **			None
50	MP1C						Yes	** NA **			None
51	MP4C						Yes	** NA **			None
52	MP5C						Yes	** NA **			None
53	M64						Yes	** NA **			None
54	M65						Yes	** NA **			None
55	M66						Yes	** NA **			None
56	M67						Yes	** NA **			None
57	M68						Yes	** NA **			None
58	M69						Yes	** NA **			None
59	M70	OOOOXO					Yes				None
60	OVP1	OOOOXO					Yes	Default			None
61	M72	BenPIN	BenPIN				Yes	Default			None
62	M73	BenPIN	BenPIN				Yes	Default			None
63	M74	BenPIN	BenPIN				Yes	Default			None
64	M75	BenPIN	BenPIN				Yes	Default			None
65	M76	BenPIN	BenPIN				Yes	Default			None
66	M77						Yes	** NA **			None
67	M78						Yes	** NA **			None
68	O						Yes	** NA **			None
69	M80	OOOOXO					Yes				None
70	M81	OOOOXO					Yes				None
71	M82	BenPIN	BenPIN				Yes	Default			None
72	M83	BenPIN	BenPIN				Yes	Default			None
73	M84	BenPIN	BenPIN				Yes	Default			None
74	M85	BenPIN	BenPIN				Yes	Default			None
75	M86	BenPIN	BenPIN				Yes	Default			None
76	M87		OOOOOO				Yes				None
77	M91	OOOOXO					Yes	Default			None
78	M93						Yes				None
79	M94						Yes				None
80	M95						Yes	** NA **			None
81	M96						Yes	** NA **			None
82	M101						Yes	** NA **			None
83	M102						Yes	** NA **			None
84	M103						Yes	** NA **			None
85	M104						Yes	** NA **			None
86	MP1B						Yes	** NA **			None
87	MP4B						Yes	** NA **			None
88	MP5B						Yes	** NA **			None
89	M110						Yes	** NA **			None
90	M111						Yes	** NA **			None
91	M112						Yes	** NA **			None
92	M113						Yes	** NA **			None
93	M114						Yes	** NA **			None
94	M115						Yes	** NA **			None
95	M116	OOOOXO					Yes				None
96	M117	OOOOXO					Yes				None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
97	M118	BenPIN	BenPIN				Yes	Default			None
98	M119	BenPIN	BenPIN				Yes	Default			None
99	M120	BenPIN	BenPIN				Yes	Default			None
100	M121	BenPIN	BenPIN				Yes	Default			None
101	M122	BenPIN	BenPIN				Yes	Default			None
102	M123						Yes	** NA **			None
103	M124						Yes	** NA **			None
104	OVP2						Yes	** NA **			None
105	M126	OOOOXO					Yes				None
106	M127	OOOOXO					Yes				None
107	M128	BenPIN	BenPIN				Yes	Default			None
108	M129	BenPIN	BenPIN				Yes	Default			None
109	M130	BenPIN	BenPIN				Yes	Default			None
110	M131	BenPIN	BenPIN				Yes	Default			None
111	M132	BenPIN	BenPIN				Yes	Default			None
112	M136		OOOOOO				Yes				None
113	M137	OOOOXO					Yes	Default			None
114	M142						Yes	** NA **			None
115	M143						Yes	** NA **			None
116	M144						Yes	** NA **			None
117	M145						Yes	** NA **			None
118	M146						Yes	** NA **			None
119	M147						Yes	** NA **			None
120	M148						Yes	** NA **			None
121	M148A						Yes	** NA **			None
122	M146A		OOOOOO				Yes				None
123	M147A		OOOOOO				Yes				None
124	M148B						Yes	** NA **			None
125	M149						Yes	** NA **			None
126	M138		OOOOOO				Yes				None
127	M139		OOOOOO				Yes				None
128	M140						Yes	** NA **			None
129	M141						Yes	** NA **			None
130	M142A		OOOOOO				Yes				None
131	M143A		OOOOOO				Yes				None
132	M144A						Yes	** NA **			None
133	M145A						Yes	** NA **			None
134	M146B		OOOOOO				Yes				None
135	M147B		OOOOOO				Yes				None
136	M148C						Yes	** NA **			None
137	M149A						Yes	** NA **			None
138	M150		OOOOOO				Yes				None
139	M151		OOOOOO				Yes				None
140	M152						Yes	** NA **			None
141	M153						Yes	** NA **			None
142	M142B						Yes	** NA **			None
143	M143B						Yes	** NA **			None
144	M144B						Yes	** NA **			None
145	M145B						Yes	** NA **			None
146	MP2C						Yes	** NA **			None
147	MP3C						Yes	** NA **			None
148	M148D						Yes	** NA **			None
149	M149B						Yes	** NA **			None
150	M150A						Yes	** NA **			None
151	M151A						Yes	** NA **			None
152	MP2B						Yes	** NA **			None
153	MP3B						Yes	** NA **			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
154	M181	BenPIN	BenPIN				Yes				None
155	M182	BenPIN	BenPIN				Yes				None
156	M183	BenPIN	BenPIN				Yes				None
157	M184	BenPIN	BenPIN				Yes				None
158	M185	BenPIN	BenPIN				Yes				None
159	M186	BenPIN	BenPIN				Yes				None

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	OVP2	Y	-32	1.5
2	OVP2	My	0	1.5
3	OVP2	Mz	0	1.5
4	MP2A	Y	-31.65	2
5	MP2A	My	-.024	2
6	MP2A	Mz	.021	2
7	MP2A	Y	-31.65	6
8	MP2A	My	-.024	6
9	MP2A	Mz	.021	6
10	MP2B	Y	-31.65	2
11	MP2B	My	-.006	2
12	MP2B	Mz	-.031	2
13	MP2B	Y	-31.65	6
14	MP2B	My	-.006	6
15	MP2B	Mz	-.031	6
16	MP2C	Y	-31.65	2
17	MP2C	My	.03	2
18	MP2C	Mz	.01	2
19	MP2C	Y	-31.65	6
20	MP2C	My	.03	6
21	MP2C	Mz	.01	6
22	MP2A	Y	-31.65	2
23	MP2A	My	-.024	2
24	MP2A	Mz	-.021	2
25	MP2A	Y	-31.65	6
26	MP2A	My	-.024	6
27	MP2A	Mz	-.021	6
28	MP2B	Y	-31.65	2
29	MP2B	My	.03	2
30	MP2B	Mz	-.01	2
31	MP2B	Y	-31.65	6
32	MP2B	My	.03	6
33	MP2B	Mz	-.01	6
34	MP2C	Y	-31.65	2
35	MP2C	My	-.006	2
36	MP2C	Mz	.031	2
37	MP2C	Y	-31.65	6
38	MP2C	My	-.006	6
39	MP2C	Mz	.031	6
40	MP3A	Y	-28.65	1.5
41	MP3A	My	-.021	1.5
42	MP3A	Mz	0	1.5
43	MP3A	Y	-28.65	3.5
44	MP3A	My	-.021	3.5
45	MP3A	Mz	0	3.5
46	MP3B	Y	-28.65	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
47	MP3B	My	.011	1.5
48	MP3B	Mz	-.019	1.5
49	MP3B	Y	-28.65	3.5
50	MP3B	My	.011	3.5
51	MP3B	Mz	-.019	3.5
52	MP3C	Y	-28.65	1.5
53	MP3C	My	.011	1.5
54	MP3C	Mz	.019	1.5
55	MP3C	Y	-28.65	3.5
56	MP3C	My	.011	3.5
57	MP3C	Mz	.019	3.5
58	MP2A	Y	-10.4	2
59	MP2A	My	.005	2
60	MP2A	Mz	0	2
61	MP2B	Y	-10.4	2
62	MP2B	My	-.003	2
63	MP2B	Mz	.005	2
64	MP2C	Y	-10.4	2
65	MP2C	My	-.003	2
66	MP2C	Mz	-.005	2
67	MP1A	Y	-74.7	3.5
68	MP1A	My	.037	3.5
69	MP1A	Mz	0	3.5
70	MP1B	Y	-74.7	3.5
71	MP1B	My	-.019	3.5
72	MP1B	Mz	.032	3.5
73	MP1C	Y	-74.7	3.5
74	MP1C	My	-.019	3.5
75	MP1C	Mz	-.032	3.5
76	MP2A	Y	-79.1	3.5
77	MP2A	My	.04	3.5
78	MP2A	Mz	0	3.5
79	MP2B	Y	-79.1	3.5
80	MP2B	My	-.02	3.5
81	MP2B	Mz	.034	3.5
82	MP2C	Y	-79.1	3.5
83	MP2C	My	-.02	3.5
84	MP2C	Mz	-.034	3.5
85	MP1A	Y	-10.5	.5
86	MP1A	My	-.008	.5
87	MP1A	Mz	0	.5
88	MP1A	Y	-10.5	2.5
89	MP1A	My	-.008	2.5
90	MP1A	Mz	0	2.5
91	MP1B	Y	-10.5	.5
92	MP1B	My	.004	.5
93	MP1B	Mz	-.007	.5
94	MP1B	Y	-10.5	2.5
95	MP1B	My	.004	2.5
96	MP1B	Mz	-.007	2.5
97	MP1C	Y	-10.5	.5
98	MP1C	My	.004	.5
99	MP1C	Mz	.007	.5
100	MP1C	Y	-10.5	2.5
101	MP1C	My	.004	2.5
102	MP1C	Mz	.007	2.5
103	MP5A	Y	-10.5	.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
104	MP5A	My	-.008	.5
105	MP5A	Mz	0	.5
106	MP5A	Y	-10.5	2.5
107	MP5A	My	-.008	2.5
108	MP5A	Mz	0	2.5
109	MP5B	Y	-10.5	.5
110	MP5B	My	.004	.5
111	MP5B	Mz	-.007	.5
112	MP5B	Y	-10.5	2.5
113	MP5B	My	.004	2.5
114	MP5B	Mz	-.007	2.5
115	MP5C	Y	-10.5	.5
116	MP5C	My	.004	.5
117	MP5C	Mz	.007	.5
118	MP5C	Y	-10.5	2.5
119	MP5C	My	.004	2.5
120	MP5C	Mz	.007	2.5

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	OVP2	Y	-65.482	1.5
2	OVP2	My	0	1.5
3	OVP2	Mz	0	1.5
4	MP2A	Y	-71.901	2
5	MP2A	My	-.054	2
6	MP2A	Mz	.048	2
7	MP2A	Y	-71.901	6
8	MP2A	My	-.054	6
9	MP2A	Mz	.048	6
10	MP2B	Y	-71.901	2
11	MP2B	My	-.015	2
12	MP2B	Mz	-.071	2
13	MP2B	Y	-71.901	6
14	MP2B	My	-.015	6
15	MP2B	Mz	-.071	6
16	MP2C	Y	-71.901	2
17	MP2C	My	.068	2
18	MP2C	Mz	.023	2
19	MP2C	Y	-71.901	6
20	MP2C	My	.068	6
21	MP2C	Mz	.023	6
22	MP2A	Y	-71.901	2
23	MP2A	My	-.054	2
24	MP2A	Mz	-.048	2
25	MP2A	Y	-71.901	6
26	MP2A	My	-.054	6
27	MP2A	Mz	-.048	6
28	MP2B	Y	-71.901	2
29	MP2B	My	.068	2
30	MP2B	Mz	-.023	2
31	MP2B	Y	-71.901	6
32	MP2B	My	.068	6
33	MP2B	Mz	-.023	6
34	MP2C	Y	-71.901	2
35	MP2C	My	-.015	2
36	MP2C	Mz	.071	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
37	MP2C	Y	-71.901	6
38	MP2C	My	-.015	6
39	MP2C	Mz	.071	6
40	MP3A	Y	-30.631	1.5
41	MP3A	My	-.023	1.5
42	MP3A	Mz	0	1.5
43	MP3A	Y	-30.631	3.5
44	MP3A	My	-.023	3.5
45	MP3A	Mz	0	3.5
46	MP3B	Y	-30.631	1.5
47	MP3B	My	.011	1.5
48	MP3B	Mz	-.02	1.5
49	MP3B	Y	-30.631	3.5
50	MP3B	My	.011	3.5
51	MP3B	Mz	-.02	3.5
52	MP3C	Y	-30.631	1.5
53	MP3C	My	.011	1.5
54	MP3C	Mz	.02	1.5
55	MP3C	Y	-30.631	3.5
56	MP3C	My	.011	3.5
57	MP3C	Mz	.02	3.5
58	MP2A	Y	-11.089	2
59	MP2A	My	.006	2
60	MP2A	Mz	0	2
61	MP2B	Y	-11.089	2
62	MP2B	My	-.003	2
63	MP2B	Mz	.005	2
64	MP2C	Y	-11.089	2
65	MP2C	My	-.003	2
66	MP2C	Mz	-.005	2
67	MP1A	Y	-46.196	3.5
68	MP1A	My	.023	3.5
69	MP1A	Mz	0	3.5
70	MP1B	Y	-46.196	3.5
71	MP1B	My	-.012	3.5
72	MP1B	Mz	.02	3.5
73	MP1C	Y	-46.196	3.5
74	MP1C	My	-.012	3.5
75	MP1C	Mz	-.02	3.5
76	MP2A	Y	-46.685	3.5
77	MP2A	My	.023	3.5
78	MP2A	Mz	0	3.5
79	MP2B	Y	-46.685	3.5
80	MP2B	My	-.012	3.5
81	MP2B	Mz	.02	3.5
82	MP2C	Y	-46.685	3.5
83	MP2C	My	-.012	3.5
84	MP2C	Mz	-.02	3.5
85	MP1A	Y	-60.131	.5
86	MP1A	My	-.045	.5
87	MP1A	Mz	0	.5
88	MP1A	Y	-60.131	2.5
89	MP1A	My	-.045	2.5
90	MP1A	Mz	0	2.5
91	MP1B	Y	-60.131	.5
92	MP1B	My	.023	.5
93	MP1B	Mz	-.039	.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
94	MP1B	Y	-60.131	2.5
95	MP1B	My	.023	2.5
96	MP1B	Mz	-.039	2.5
97	MP1C	Y	-60.131	.5
98	MP1C	My	.023	.5
99	MP1C	Mz	.039	.5
100	MP1C	Y	-60.131	2.5
101	MP1C	My	.023	2.5
102	MP1C	Mz	.039	2.5
103	MP5A	Y	-60.131	.5
104	MP5A	My	-.045	.5
105	MP5A	Mz	0	.5
106	MP5A	Y	-60.131	2.5
107	MP5A	My	-.045	2.5
108	MP5A	Mz	0	2.5
109	MP5B	Y	-60.131	.5
110	MP5B	My	.023	.5
111	MP5B	Mz	-.039	.5
112	MP5B	Y	-60.131	2.5
113	MP5B	My	.023	2.5
114	MP5B	Mz	-.039	2.5
115	MP5C	Y	-60.131	.5
116	MP5C	My	.023	.5
117	MP5C	Mz	.039	.5
118	MP5C	Y	-60.131	2.5
119	MP5C	My	.023	2.5
120	MP5C	Mz	.039	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	OVP2	X	0	1.5
2	OVP2	Z	-116.56	1.5
3	OVP2	Mx	0	1.5
4	MP2A	X	0	2
5	MP2A	Z	-178.165	2
6	MP2A	Mx	-.119	2
7	MP2A	X	0	6
8	MP2A	Z	-178.165	6
9	MP2A	Mx	-.119	6
10	MP2B	X	0	2
11	MP2B	Z	-132.303	2
12	MP2B	Mx	.13	2
13	MP2B	X	0	6
14	MP2B	Z	-132.303	6
15	MP2B	Mx	.13	6
16	MP2C	X	0	2
17	MP2C	Z	-132.303	2
18	MP2C	Mx	-.042	2
19	MP2C	X	0	6
20	MP2C	Z	-132.303	6
21	MP2C	Mx	-.042	6
22	MP2A	X	0	2
23	MP2A	Z	-178.165	2
24	MP2A	Mx	.119	2
25	MP2A	X	0	6
26	MP2A	Z	-178.165	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
27	MP2A	Mx	.119	6
28	MP2B	X	0	2
29	MP2B	Z	-132.303	2
30	MP2B	Mx	.042	2
31	MP2B	X	0	6
32	MP2B	Z	-132.303	6
33	MP2B	Mx	.042	6
34	MP2C	X	0	2
35	MP2C	Z	-132.303	2
36	MP2C	Mx	-.13	2
37	MP2C	X	0	6
38	MP2C	Z	-132.303	6
39	MP2C	Mx	-.13	6
40	MP3A	X	0	1.5
41	MP3A	Z	-61.8	1.5
42	MP3A	Mx	0	1.5
43	MP3A	X	0	3.5
44	MP3A	Z	-61.8	3.5
45	MP3A	Mx	0	3.5
46	MP3B	X	0	1.5
47	MP3B	Z	-31.731	1.5
48	MP3B	Mx	.021	1.5
49	MP3B	X	0	3.5
50	MP3B	Z	-31.731	3.5
51	MP3B	Mx	.021	3.5
52	MP3C	X	0	1.5
53	MP3C	Z	-31.731	1.5
54	MP3C	Mx	-.021	1.5
55	MP3C	X	0	3.5
56	MP3C	Z	-31.731	3.5
57	MP3C	Mx	-.021	3.5
58	MP2A	X	0	2
59	MP2A	Z	-14.472	2
60	MP2A	Mx	0	2
61	MP2B	X	0	2
62	MP2B	Z	-11.128	2
63	MP2B	Mx	-.005	2
64	MP2C	X	0	2
65	MP2C	Z	-11.128	2
66	MP2C	Mx	.005	2
67	MP1A	X	0	3.5
68	MP1A	Z	-60.627	3.5
69	MP1A	Mx	0	3.5
70	MP1B	X	0	3.5
71	MP1B	Z	-45.666	3.5
72	MP1B	Mx	-.02	3.5
73	MP1C	X	0	3.5
74	MP1C	Z	-45.666	3.5
75	MP1C	Mx	.02	3.5
76	MP2A	X	0	3.5
77	MP2A	Z	-73.143	3.5
78	MP2A	Mx	0	3.5
79	MP2B	X	0	3.5
80	MP2B	Z	-55.689	3.5
81	MP2B	Mx	-.024	3.5
82	MP2C	X	0	3.5
83	MP2C	Z	-55.689	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
84	MP2C	Mx	.024	3.5
85	MP1A	X	0	.5
86	MP1A	Z	-84.682	.5
87	MP1A	Mx	0	.5
88	MP1A	X	0	2.5
89	MP1A	Z	-84.682	2.5
90	MP1A	Mx	0	2.5
91	MP1B	X	0	.5
92	MP1B	Z	-147.729	.5
93	MP1B	Mx	.096	.5
94	MP1B	X	0	2.5
95	MP1B	Z	-147.729	2.5
96	MP1B	Mx	.096	2.5
97	MP1C	X	0	.5
98	MP1C	Z	-147.729	.5
99	MP1C	Mx	-.096	.5
100	MP1C	X	0	2.5
101	MP1C	Z	-147.729	2.5
102	MP1C	Mx	-.096	2.5
103	MP5A	X	0	.5
104	MP5A	Z	-84.682	.5
105	MP5A	Mx	0	.5
106	MP5A	X	0	2.5
107	MP5A	Z	-84.682	2.5
108	MP5A	Mx	0	2.5
109	MP5B	X	0	.5
110	MP5B	Z	-147.729	.5
111	MP5B	Mx	.096	.5
112	MP5B	X	0	2.5
113	MP5B	Z	-147.729	2.5
114	MP5B	Mx	.096	2.5
115	MP5C	X	0	.5
116	MP5C	Z	-147.729	.5
117	MP5C	Mx	-.096	.5
118	MP5C	X	0	2.5
119	MP5C	Z	-147.729	2.5
120	MP5C	Mx	-.096	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	OVP2	X	50.848	1.5
2	OVP2	Z	-88.072	1.5
3	OVP2	Mx	0	1.5
4	MP2A	X	81.439	2
5	MP2A	Z	-141.056	2
6	MP2A	Mx	-.155	2
7	MP2A	X	81.439	6
8	MP2A	Z	-141.056	6
9	MP2A	Mx	-.155	6
10	MP2B	X	58.508	2
11	MP2B	Z	-101.339	2
12	MP2B	Mx	.088	2
13	MP2B	X	58.508	6
14	MP2B	Z	-101.339	6
15	MP2B	Mx	.088	6
16	MP2C	X	81.439	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP2C	Z	-141.056	2
18	MP2C	Mx	.033	2
19	MP2C	X	81.439	6
20	MP2C	Z	-141.056	6
21	MP2C	Mx	.033	6
22	MP2A	X	81.439	2
23	MP2A	Z	-141.056	2
24	MP2A	Mx	.033	2
25	MP2A	X	81.439	6
26	MP2A	Z	-141.056	6
27	MP2A	Mx	.033	6
28	MP2B	X	58.508	2
29	MP2B	Z	-101.339	2
30	MP2B	Mx	.088	2
31	MP2B	X	58.508	6
32	MP2B	Z	-101.339	6
33	MP2B	Mx	.088	6
34	MP2C	X	81.439	2
35	MP2C	Z	-141.056	2
36	MP2C	Mx	-.155	2
37	MP2C	X	81.439	6
38	MP2C	Z	-141.056	6
39	MP2C	Mx	-.155	6
40	MP3A	X	25.889	1.5
41	MP3A	Z	-44.84	1.5
42	MP3A	Mx	-.019	1.5
43	MP3A	X	25.889	3.5
44	MP3A	Z	-44.84	3.5
45	MP3A	Mx	-.019	3.5
46	MP3B	X	10.854	1.5
47	MP3B	Z	-18.8	1.5
48	MP3B	Mx	.016	1.5
49	MP3B	X	10.854	3.5
50	MP3B	Z	-18.8	3.5
51	MP3B	Mx	.016	3.5
52	MP3C	X	25.889	1.5
53	MP3C	Z	-44.84	1.5
54	MP3C	Mx	-.019	1.5
55	MP3C	X	25.889	3.5
56	MP3C	Z	-44.84	3.5
57	MP3C	Mx	-.019	3.5
58	MP2A	X	6.679	2
59	MP2A	Z	-11.568	2
60	MP2A	Mx	.003	2
61	MP2B	X	5.007	2
62	MP2B	Z	-8.672	2
63	MP2B	Mx	-.005	2
64	MP2C	X	6.679	2
65	MP2C	Z	-11.568	2
66	MP2C	Mx	.003	2
67	MP1A	X	27.82	3.5
68	MP1A	Z	-48.185	3.5
69	MP1A	Mx	.014	3.5
70	MP1B	X	20.339	3.5
71	MP1B	Z	-35.229	3.5
72	MP1B	Mx	-.02	3.5
73	MP1C	X	27.82	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
74	MP1C	Z	-48.185	3.5
75	MP1C	Mx	.014	3.5
76	MP2A	X	33.663	3.5
77	MP2A	Z	-58.305	3.5
78	MP2A	Mx	.017	3.5
79	MP2B	X	24.935	3.5
80	MP2B	Z	-43.189	3.5
81	MP2B	Mx	-.025	3.5
82	MP2C	X	33.663	3.5
83	MP2C	Z	-58.305	3.5
84	MP2C	Mx	.017	3.5
85	MP1A	X	52.849	.5
86	MP1A	Z	-91.537	.5
87	MP1A	Mx	-.04	.5
88	MP1A	X	52.849	2.5
89	MP1A	Z	-91.537	2.5
90	MP1A	Mx	-.04	2.5
91	MP1B	X	84.373	.5
92	MP1B	Z	-146.138	.5
93	MP1B	Mx	.127	.5
94	MP1B	X	84.373	2.5
95	MP1B	Z	-146.138	2.5
96	MP1B	Mx	.127	2.5
97	MP1C	X	52.849	.5
98	MP1C	Z	-91.537	.5
99	MP1C	Mx	-.04	.5
100	MP1C	X	52.849	2.5
101	MP1C	Z	-91.537	2.5
102	MP1C	Mx	-.04	2.5
103	MP5A	X	52.849	.5
104	MP5A	Z	-91.537	.5
105	MP5A	Mx	-.04	.5
106	MP5A	X	52.849	2.5
107	MP5A	Z	-91.537	2.5
108	MP5A	Mx	-.04	2.5
109	MP5B	X	84.373	.5
110	MP5B	Z	-146.138	.5
111	MP5B	Mx	.127	.5
112	MP5B	X	84.373	2.5
113	MP5B	Z	-146.138	2.5
114	MP5B	Mx	.127	2.5
115	MP5C	X	52.849	.5
116	MP5C	Z	-91.537	.5
117	MP5C	Mx	-.04	.5
118	MP5C	X	52.849	2.5
119	MP5C	Z	-91.537	2.5
120	MP5C	Mx	-.04	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	OVP2	X	81.636	1.5
2	OVP2	Z	-47.132	1.5
3	OVP2	Mx	0	1.5
4	MP2A	X	114.578	2
5	MP2A	Z	-66.152	2
6	MP2A	Mx	-.13	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
7	MP2A	X	114.578	6
8	MP2A	Z	-66.152	6
9	MP2A	Mx	-.13	6
10	MP2B	X	114.578	2
11	MP2B	Z	-66.152	2
12	MP2B	Mx	.042	2
13	MP2B	X	114.578	6
14	MP2B	Z	-66.152	6
15	MP2B	Mx	.042	6
16	MP2C	X	154.295	2
17	MP2C	Z	-89.082	2
18	MP2C	Mx	.119	2
19	MP2C	X	154.295	6
20	MP2C	Z	-89.082	6
21	MP2C	Mx	.119	6
22	MP2A	X	114.578	2
23	MP2A	Z	-66.152	2
24	MP2A	Mx	-.042	2
25	MP2A	X	114.578	6
26	MP2A	Z	-66.152	6
27	MP2A	Mx	-.042	6
28	MP2B	X	114.578	2
29	MP2B	Z	-66.152	2
30	MP2B	Mx	.13	2
31	MP2B	X	114.578	6
32	MP2B	Z	-66.152	6
33	MP2B	Mx	.13	6
34	MP2C	X	154.295	2
35	MP2C	Z	-89.082	2
36	MP2C	Mx	-.119	2
37	MP2C	X	154.295	6
38	MP2C	Z	-89.082	6
39	MP2C	Mx	-.119	6
40	MP3A	X	27.48	1.5
41	MP3A	Z	-15.866	1.5
42	MP3A	Mx	-.021	1.5
43	MP3A	X	27.48	3.5
44	MP3A	Z	-15.866	3.5
45	MP3A	Mx	-.021	3.5
46	MP3B	X	27.48	1.5
47	MP3B	Z	-15.866	1.5
48	MP3B	Mx	.021	1.5
49	MP3B	X	27.48	3.5
50	MP3B	Z	-15.866	3.5
51	MP3B	Mx	.021	3.5
52	MP3C	X	53.521	1.5
53	MP3C	Z	-30.9	1.5
54	MP3C	Mx	0	1.5
55	MP3C	X	53.521	3.5
56	MP3C	Z	-30.9	3.5
57	MP3C	Mx	0	3.5
58	MP2A	X	9.637	2
59	MP2A	Z	-5.564	2
60	MP2A	Mx	.005	2
61	MP2B	X	9.637	2
62	MP2B	Z	-5.564	2
63	MP2B	Mx	-.005	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
64	MP2C	X	12.533	2
65	MP2C	Z	-7.236	2
66	MP2C	Mx	0	2
67	MP1A	X	39.548	3.5
68	MP1A	Z	-22.833	3.5
69	MP1A	Mx	.02	3.5
70	MP1B	X	39.548	3.5
71	MP1B	Z	-22.833	3.5
72	MP1B	Mx	-.02	3.5
73	MP1C	X	52.504	3.5
74	MP1C	Z	-30.313	3.5
75	MP1C	Mx	0	3.5
76	MP2A	X	48.228	3.5
77	MP2A	Z	-27.844	3.5
78	MP2A	Mx	.024	3.5
79	MP2B	X	48.228	3.5
80	MP2B	Z	-27.844	3.5
81	MP2B	Mx	-.024	3.5
82	MP2C	X	63.344	3.5
83	MP2C	Z	-36.572	3.5
84	MP2C	Mx	0	3.5
85	MP1A	X	127.937	.5
86	MP1A	Z	-73.865	.5
87	MP1A	Mx	-.096	.5
88	MP1A	X	127.937	2.5
89	MP1A	Z	-73.865	2.5
90	MP1A	Mx	-.096	2.5
91	MP1B	X	127.937	.5
92	MP1B	Z	-73.865	.5
93	MP1B	Mx	.096	.5
94	MP1B	X	127.937	2.5
95	MP1B	Z	-73.865	2.5
96	MP1B	Mx	.096	2.5
97	MP1C	X	73.337	.5
98	MP1C	Z	-42.341	.5
99	MP1C	Mx	0	.5
100	MP1C	X	73.337	2.5
101	MP1C	Z	-42.341	2.5
102	MP1C	Mx	0	2.5
103	MP5A	X	127.937	.5
104	MP5A	Z	-73.865	.5
105	MP5A	Mx	-.096	.5
106	MP5A	X	127.937	2.5
107	MP5A	Z	-73.865	2.5
108	MP5A	Mx	-.096	2.5
109	MP5B	X	127.937	.5
110	MP5B	Z	-73.865	.5
111	MP5B	Mx	.096	.5
112	MP5B	X	127.937	2.5
113	MP5B	Z	-73.865	2.5
114	MP5B	Mx	.096	2.5
115	MP5C	X	73.337	.5
116	MP5C	Z	-42.341	.5
117	MP5C	Mx	0	.5
118	MP5C	X	73.337	2.5
119	MP5C	Z	-42.341	2.5
120	MP5C	Mx	0	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	OVP2	X	101.697	1.5
2	OVP2	Z	0	1.5
3	OVP2	Mx	0	1.5
4	MP2A	X	117.016	2
5	MP2A	Z	0	2
6	MP2A	Mx	-.088	2
7	MP2A	X	117.016	6
8	MP2A	Z	0	6
9	MP2A	Mx	-.088	6
10	MP2B	X	162.878	2
11	MP2B	Z	0	2
12	MP2B	Mx	-.033	2
13	MP2B	X	162.878	6
14	MP2B	Z	0	6
15	MP2B	Mx	-.033	6
16	MP2C	X	162.878	2
17	MP2C	Z	0	2
18	MP2C	Mx	.155	2
19	MP2C	X	162.878	6
20	MP2C	Z	0	6
21	MP2C	Mx	.155	6
22	MP2A	X	117.016	2
23	MP2A	Z	0	2
24	MP2A	Mx	-.088	2
25	MP2A	X	117.016	6
26	MP2A	Z	0	6
27	MP2A	Mx	-.088	6
28	MP2B	X	162.878	2
29	MP2B	Z	0	2
30	MP2B	Mx	.155	2
31	MP2B	X	162.878	6
32	MP2B	Z	0	6
33	MP2B	Mx	.155	6
34	MP2C	X	162.878	2
35	MP2C	Z	0	2
36	MP2C	Mx	-.033	2
37	MP2C	X	162.878	6
38	MP2C	Z	0	6
39	MP2C	Mx	-.033	6
40	MP3A	X	21.708	1.5
41	MP3A	Z	0	1.5
42	MP3A	Mx	-.016	1.5
43	MP3A	X	21.708	3.5
44	MP3A	Z	0	3.5
45	MP3A	Mx	-.016	3.5
46	MP3B	X	51.777	1.5
47	MP3B	Z	0	1.5
48	MP3B	Mx	.019	1.5
49	MP3B	X	51.777	3.5
50	MP3B	Z	0	3.5
51	MP3B	Mx	.019	3.5
52	MP3C	X	51.777	1.5
53	MP3C	Z	0	1.5
54	MP3C	Mx	.019	1.5
55	MP3C	X	51.777	3.5
56	MP3C	Z	0	3.5
57	MP3C	Mx	.019	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP2A	X	10.013	2
59	MP2A	Z	0	2
60	MP2A	Mx	.005	2
61	MP2B	X	13.357	2
62	MP2B	Z	0	2
63	MP2B	Mx	-.003	2
64	MP2C	X	13.357	2
65	MP2C	Z	0	2
66	MP2C	Mx	-.003	2
67	MP1A	X	40.679	3.5
68	MP1A	Z	0	3.5
69	MP1A	Mx	.02	3.5
70	MP1B	X	55.64	3.5
71	MP1B	Z	0	3.5
72	MP1B	Mx	-.014	3.5
73	MP1C	X	55.64	3.5
74	MP1C	Z	0	3.5
75	MP1C	Mx	-.014	3.5
76	MP2A	X	49.87	3.5
77	MP2A	Z	0	3.5
78	MP2A	Mx	.025	3.5
79	MP2B	X	67.325	3.5
80	MP2B	Z	0	3.5
81	MP2B	Mx	-.017	3.5
82	MP2C	X	67.325	3.5
83	MP2C	Z	0	3.5
84	MP2C	Mx	-.017	3.5
85	MP1A	X	168.745	.5
86	MP1A	Z	0	.5
87	MP1A	Mx	-.127	.5
88	MP1A	X	168.745	2.5
89	MP1A	Z	0	2.5
90	MP1A	Mx	-.127	2.5
91	MP1B	X	105.698	.5
92	MP1B	Z	0	.5
93	MP1B	Mx	.04	.5
94	MP1B	X	105.698	2.5
95	MP1B	Z	0	2.5
96	MP1B	Mx	.04	2.5
97	MP1C	X	105.698	.5
98	MP1C	Z	0	.5
99	MP1C	Mx	.04	.5
100	MP1C	X	105.698	2.5
101	MP1C	Z	0	2.5
102	MP1C	Mx	.04	2.5
103	MP5A	X	168.745	.5
104	MP5A	Z	0	.5
105	MP5A	Mx	-.127	.5
106	MP5A	X	168.745	2.5
107	MP5A	Z	0	2.5
108	MP5A	Mx	-.127	2.5
109	MP5B	X	105.698	.5
110	MP5B	Z	0	.5
111	MP5B	Mx	.04	.5
112	MP5B	X	105.698	2.5
113	MP5B	Z	0	2.5
114	MP5B	Mx	.04	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
115	MP5C	X	105.698	.5
116	MP5C	Z	0	.5
117	MP5C	Mx	.04	.5
118	MP5C	X	105.698	2.5
119	MP5C	Z	0	2.5
120	MP5C	Mx	.04	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	OVP2	X	100.944	1.5
2	OVP2	Z	58.28	1.5
3	OVP2	Mx	0	1.5
4	MP2A	X	114.578	2
5	MP2A	Z	66.152	2
6	MP2A	Mx	-.042	2
7	MP2A	X	114.578	6
8	MP2A	Z	66.152	6
9	MP2A	Mx	-.042	6
10	MP2B	X	154.295	2
11	MP2B	Z	89.082	2
12	MP2B	Mx	-.119	2
13	MP2B	X	154.295	6
14	MP2B	Z	89.082	6
15	MP2B	Mx	-.119	6
16	MP2C	X	114.578	2
17	MP2C	Z	66.152	2
18	MP2C	Mx	.13	2
19	MP2C	X	114.578	6
20	MP2C	Z	66.152	6
21	MP2C	Mx	.13	6
22	MP2A	X	114.578	2
23	MP2A	Z	66.152	2
24	MP2A	Mx	-.13	2
25	MP2A	X	114.578	6
26	MP2A	Z	66.152	6
27	MP2A	Mx	-.13	6
28	MP2B	X	154.295	2
29	MP2B	Z	89.082	2
30	MP2B	Mx	.119	2
31	MP2B	X	154.295	6
32	MP2B	Z	89.082	6
33	MP2B	Mx	.119	6
34	MP2C	X	114.578	2
35	MP2C	Z	66.152	2
36	MP2C	Mx	.042	2
37	MP2C	X	114.578	6
38	MP2C	Z	66.152	6
39	MP2C	Mx	.042	6
40	MP3A	X	27.48	1.5
41	MP3A	Z	15.866	1.5
42	MP3A	Mx	-.021	1.5
43	MP3A	X	27.48	3.5
44	MP3A	Z	15.866	3.5
45	MP3A	Mx	-.021	3.5
46	MP3B	X	53.521	1.5
47	MP3B	Z	30.9	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
48	MP3B	Mx	0	1.5
49	MP3B	X	53.521	3.5
50	MP3B	Z	30.9	3.5
51	MP3B	Mx	0	3.5
52	MP3C	X	27.48	1.5
53	MP3C	Z	15.866	1.5
54	MP3C	Mx	.021	1.5
55	MP3C	X	27.48	3.5
56	MP3C	Z	15.866	3.5
57	MP3C	Mx	.021	3.5
58	MP2A	X	9.637	2
59	MP2A	Z	5.564	2
60	MP2A	Mx	.005	2
61	MP2B	X	12.533	2
62	MP2B	Z	7.236	2
63	MP2B	Mx	0	2
64	MP2C	X	9.637	2
65	MP2C	Z	5.564	2
66	MP2C	Mx	-.005	2
67	MP1A	X	39.548	3.5
68	MP1A	Z	22.833	3.5
69	MP1A	Mx	.02	3.5
70	MP1B	X	52.504	3.5
71	MP1B	Z	30.313	3.5
72	MP1B	Mx	0	3.5
73	MP1C	X	39.548	3.5
74	MP1C	Z	22.833	3.5
75	MP1C	Mx	-.02	3.5
76	MP2A	X	48.228	3.5
77	MP2A	Z	27.844	3.5
78	MP2A	Mx	.024	3.5
79	MP2B	X	63.344	3.5
80	MP2B	Z	36.572	3.5
81	MP2B	Mx	0	3.5
82	MP2C	X	48.228	3.5
83	MP2C	Z	27.844	3.5
84	MP2C	Mx	-.024	3.5
85	MP1A	X	127.937	.5
86	MP1A	Z	73.865	.5
87	MP1A	Mx	-.096	.5
88	MP1A	X	127.937	2.5
89	MP1A	Z	73.865	2.5
90	MP1A	Mx	-.096	2.5
91	MP1B	X	73.337	.5
92	MP1B	Z	42.341	.5
93	MP1B	Mx	0	.5
94	MP1B	X	73.337	2.5
95	MP1B	Z	42.341	2.5
96	MP1B	Mx	0	2.5
97	MP1C	X	127.937	.5
98	MP1C	Z	73.865	.5
99	MP1C	Mx	.096	.5
100	MP1C	X	127.937	2.5
101	MP1C	Z	73.865	2.5
102	MP1C	Mx	.096	2.5
103	MP5A	X	127.937	.5
104	MP5A	Z	73.865	.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
105	MP5A	Mx	-.096	.5
106	MP5A	X	127.937	2.5
107	MP5A	Z	73.865	2.5
108	MP5A	Mx	-.096	2.5
109	MP5B	X	73.337	.5
110	MP5B	Z	42.341	.5
111	MP5B	Mx	0	.5
112	MP5B	X	73.337	2.5
113	MP5B	Z	42.341	2.5
114	MP5B	Mx	0	2.5
115	MP5C	X	127.937	.5
116	MP5C	Z	73.865	.5
117	MP5C	Mx	.096	.5
118	MP5C	X	127.937	2.5
119	MP5C	Z	73.865	2.5
120	MP5C	Mx	.096	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	OVP2	X	61.996	1.5
2	OVP2	Z	107.38	1.5
3	OVP2	Mx	0	1.5
4	MP2A	X	81.439	2
5	MP2A	Z	141.056	2
6	MP2A	Mx	.033	2
7	MP2A	X	81.439	6
8	MP2A	Z	141.056	6
9	MP2A	Mx	.033	6
10	MP2B	X	81.439	2
11	MP2B	Z	141.056	2
12	MP2B	Mx	-.155	2
13	MP2B	X	81.439	6
14	MP2B	Z	141.056	6
15	MP2B	Mx	-.155	6
16	MP2C	X	58.508	2
17	MP2C	Z	101.339	2
18	MP2C	Mx	.088	2
19	MP2C	X	58.508	6
20	MP2C	Z	101.339	6
21	MP2C	Mx	.088	6
22	MP2A	X	81.439	2
23	MP2A	Z	141.056	2
24	MP2A	Mx	-.155	2
25	MP2A	X	81.439	6
26	MP2A	Z	141.056	6
27	MP2A	Mx	-.155	6
28	MP2B	X	81.439	2
29	MP2B	Z	141.056	2
30	MP2B	Mx	.033	2
31	MP2B	X	81.439	6
32	MP2B	Z	141.056	6
33	MP2B	Mx	.033	6
34	MP2C	X	58.508	2
35	MP2C	Z	101.339	2
36	MP2C	Mx	.088	2
37	MP2C	X	58.508	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
38	MP2C	Z	101.339	6
39	MP2C	Mx	.088	6
40	MP3A	X	25.889	1.5
41	MP3A	Z	44.84	1.5
42	MP3A	Mx	-.019	1.5
43	MP3A	X	25.889	3.5
44	MP3A	Z	44.84	3.5
45	MP3A	Mx	-.019	3.5
46	MP3B	X	25.889	1.5
47	MP3B	Z	44.84	1.5
48	MP3B	Mx	-.019	1.5
49	MP3B	X	25.889	3.5
50	MP3B	Z	44.84	3.5
51	MP3B	Mx	-.019	3.5
52	MP3C	X	10.854	1.5
53	MP3C	Z	18.8	1.5
54	MP3C	Mx	.016	1.5
55	MP3C	X	10.854	3.5
56	MP3C	Z	18.8	3.5
57	MP3C	Mx	.016	3.5
58	MP2A	X	6.679	2
59	MP2A	Z	11.568	2
60	MP2A	Mx	.003	2
61	MP2B	X	6.679	2
62	MP2B	Z	11.568	2
63	MP2B	Mx	.003	2
64	MP2C	X	5.007	2
65	MP2C	Z	8.672	2
66	MP2C	Mx	-.005	2
67	MP1A	X	27.82	3.5
68	MP1A	Z	48.185	3.5
69	MP1A	Mx	.014	3.5
70	MP1B	X	27.82	3.5
71	MP1B	Z	48.185	3.5
72	MP1B	Mx	.014	3.5
73	MP1C	X	20.339	3.5
74	MP1C	Z	35.229	3.5
75	MP1C	Mx	-.02	3.5
76	MP2A	X	33.663	3.5
77	MP2A	Z	58.305	3.5
78	MP2A	Mx	.017	3.5
79	MP2B	X	33.663	3.5
80	MP2B	Z	58.305	3.5
81	MP2B	Mx	.017	3.5
82	MP2C	X	24.935	3.5
83	MP2C	Z	43.189	3.5
84	MP2C	Mx	-.025	3.5
85	MP1A	X	52.849	.5
86	MP1A	Z	91.537	.5
87	MP1A	Mx	-.04	.5
88	MP1A	X	52.849	2.5
89	MP1A	Z	91.537	2.5
90	MP1A	Mx	-.04	2.5
91	MP1B	X	52.849	.5
92	MP1B	Z	91.537	.5
93	MP1B	Mx	-.04	.5
94	MP1B	X	52.849	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
95	MP1B	Z	91.537	2.5
96	MP1B	Mx	-.04	2.5
97	MP1C	X	84.373	.5
98	MP1C	Z	146.138	.5
99	MP1C	Mx	.127	.5
100	MP1C	X	84.373	2.5
101	MP1C	Z	146.138	2.5
102	MP1C	Mx	.127	2.5
103	MP5A	X	52.849	.5
104	MP5A	Z	91.537	.5
105	MP5A	Mx	-.04	.5
106	MP5A	X	52.849	2.5
107	MP5A	Z	91.537	2.5
108	MP5A	Mx	-.04	2.5
109	MP5B	X	52.849	.5
110	MP5B	Z	91.537	.5
111	MP5B	Mx	-.04	.5
112	MP5B	X	52.849	2.5
113	MP5B	Z	91.537	2.5
114	MP5B	Mx	-.04	2.5
115	MP5C	X	84.373	.5
116	MP5C	Z	146.138	.5
117	MP5C	Mx	.127	.5
118	MP5C	X	84.373	2.5
119	MP5C	Z	146.138	2.5
120	MP5C	Mx	.127	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	OVP2	X	0	1.5
2	OVP2	Z	116.56	1.5
3	OVP2	Mx	0	1.5
4	MP2A	X	0	2
5	MP2A	Z	178.165	2
6	MP2A	Mx	.119	2
7	MP2A	X	0	6
8	MP2A	Z	178.165	6
9	MP2A	Mx	.119	6
10	MP2B	X	0	2
11	MP2B	Z	132.303	2
12	MP2B	Mx	-.13	2
13	MP2B	X	0	6
14	MP2B	Z	132.303	6
15	MP2B	Mx	-.13	6
16	MP2C	X	0	2
17	MP2C	Z	132.303	2
18	MP2C	Mx	.042	2
19	MP2C	X	0	6
20	MP2C	Z	132.303	6
21	MP2C	Mx	.042	6
22	MP2A	X	0	2
23	MP2A	Z	178.165	2
24	MP2A	Mx	-.119	2
25	MP2A	X	0	6
26	MP2A	Z	178.165	6
27	MP2A	Mx	-.119	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
28	MP2B	X	0	2
29	MP2B	Z	132.303	2
30	MP2B	Mx	-.042	2
31	MP2B	X	0	6
32	MP2B	Z	132.303	6
33	MP2B	Mx	-.042	6
34	MP2C	X	0	2
35	MP2C	Z	132.303	2
36	MP2C	Mx	.13	2
37	MP2C	X	0	6
38	MP2C	Z	132.303	6
39	MP2C	Mx	.13	6
40	MP3A	X	0	1.5
41	MP3A	Z	61.8	1.5
42	MP3A	Mx	0	1.5
43	MP3A	X	0	3.5
44	MP3A	Z	61.8	3.5
45	MP3A	Mx	0	3.5
46	MP3B	X	0	1.5
47	MP3B	Z	31.731	1.5
48	MP3B	Mx	-.021	1.5
49	MP3B	X	0	3.5
50	MP3B	Z	31.731	3.5
51	MP3B	Mx	-.021	3.5
52	MP3C	X	0	1.5
53	MP3C	Z	31.731	1.5
54	MP3C	Mx	.021	1.5
55	MP3C	X	0	3.5
56	MP3C	Z	31.731	3.5
57	MP3C	Mx	.021	3.5
58	MP2A	X	0	2
59	MP2A	Z	14.472	2
60	MP2A	Mx	0	2
61	MP2B	X	0	2
62	MP2B	Z	11.128	2
63	MP2B	Mx	.005	2
64	MP2C	X	0	2
65	MP2C	Z	11.128	2
66	MP2C	Mx	-.005	2
67	MP1A	X	0	3.5
68	MP1A	Z	60.627	3.5
69	MP1A	Mx	0	3.5
70	MP1B	X	0	3.5
71	MP1B	Z	45.666	3.5
72	MP1B	Mx	.02	3.5
73	MP1C	X	0	3.5
74	MP1C	Z	45.666	3.5
75	MP1C	Mx	-.02	3.5
76	MP2A	X	0	3.5
77	MP2A	Z	73.143	3.5
78	MP2A	Mx	0	3.5
79	MP2B	X	0	3.5
80	MP2B	Z	55.689	3.5
81	MP2B	Mx	.024	3.5
82	MP2C	X	0	3.5
83	MP2C	Z	55.689	3.5
84	MP2C	Mx	-.024	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
85	MP1A	X	0	.5
86	MP1A	Z	84.682	.5
87	MP1A	Mx	0	.5
88	MP1A	X	0	2.5
89	MP1A	Z	84.682	2.5
90	MP1A	Mx	0	2.5
91	MP1B	X	0	.5
92	MP1B	Z	147.729	.5
93	MP1B	Mx	-.096	.5
94	MP1B	X	0	2.5
95	MP1B	Z	147.729	2.5
96	MP1B	Mx	-.096	2.5
97	MP1C	X	0	.5
98	MP1C	Z	147.729	.5
99	MP1C	Mx	.096	.5
100	MP1C	X	0	2.5
101	MP1C	Z	147.729	2.5
102	MP1C	Mx	.096	2.5
103	MP5A	X	0	.5
104	MP5A	Z	84.682	.5
105	MP5A	Mx	0	.5
106	MP5A	X	0	2.5
107	MP5A	Z	84.682	2.5
108	MP5A	Mx	0	2.5
109	MP5B	X	0	.5
110	MP5B	Z	147.729	.5
111	MP5B	Mx	-.096	.5
112	MP5B	X	0	2.5
113	MP5B	Z	147.729	2.5
114	MP5B	Mx	-.096	2.5
115	MP5C	X	0	.5
116	MP5C	Z	147.729	.5
117	MP5C	Mx	.096	.5
118	MP5C	X	0	2.5
119	MP5C	Z	147.729	2.5
120	MP5C	Mx	.096	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	OVP2	X	-50.848	1.5
2	OVP2	Z	88.072	1.5
3	OVP2	Mx	0	1.5
4	MP2A	X	-81.439	2
5	MP2A	Z	141.056	2
6	MP2A	Mx	.155	2
7	MP2A	X	-81.439	6
8	MP2A	Z	141.056	6
9	MP2A	Mx	.155	6
10	MP2B	X	-58.508	2
11	MP2B	Z	101.339	2
12	MP2B	Mx	-.088	2
13	MP2B	X	-58.508	6
14	MP2B	Z	101.339	6
15	MP2B	Mx	-.088	6
16	MP2C	X	-81.439	2
17	MP2C	Z	141.056	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
18	MP2C	Mx	-.033	2
19	MP2C	X	-81.439	6
20	MP2C	Z	141.056	6
21	MP2C	Mx	-.033	6
22	MP2A	X	-81.439	2
23	MP2A	Z	141.056	2
24	MP2A	Mx	-.033	2
25	MP2A	X	-81.439	6
26	MP2A	Z	141.056	6
27	MP2A	Mx	-.033	6
28	MP2B	X	-58.508	2
29	MP2B	Z	101.339	2
30	MP2B	Mx	-.088	2
31	MP2B	X	-58.508	6
32	MP2B	Z	101.339	6
33	MP2B	Mx	-.088	6
34	MP2C	X	-81.439	2
35	MP2C	Z	141.056	2
36	MP2C	Mx	.155	2
37	MP2C	X	-81.439	6
38	MP2C	Z	141.056	6
39	MP2C	Mx	.155	6
40	MP3A	X	-25.889	1.5
41	MP3A	Z	44.84	1.5
42	MP3A	Mx	.019	1.5
43	MP3A	X	-25.889	3.5
44	MP3A	Z	44.84	3.5
45	MP3A	Mx	.019	3.5
46	MP3B	X	-10.854	1.5
47	MP3B	Z	18.8	1.5
48	MP3B	Mx	-.016	1.5
49	MP3B	X	-10.854	3.5
50	MP3B	Z	18.8	3.5
51	MP3B	Mx	-.016	3.5
52	MP3C	X	-25.889	1.5
53	MP3C	Z	44.84	1.5
54	MP3C	Mx	.019	1.5
55	MP3C	X	-25.889	3.5
56	MP3C	Z	44.84	3.5
57	MP3C	Mx	.019	3.5
58	MP2A	X	-6.679	2
59	MP2A	Z	11.568	2
60	MP2A	Mx	-.003	2
61	MP2B	X	-5.007	2
62	MP2B	Z	8.672	2
63	MP2B	Mx	.005	2
64	MP2C	X	-6.679	2
65	MP2C	Z	11.568	2
66	MP2C	Mx	-.003	2
67	MP1A	X	-27.82	3.5
68	MP1A	Z	48.185	3.5
69	MP1A	Mx	-.014	3.5
70	MP1B	X	-20.339	3.5
71	MP1B	Z	35.229	3.5
72	MP1B	Mx	.02	3.5
73	MP1C	X	-27.82	3.5
74	MP1C	Z	48.185	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
75	MP1C	Mx	-.014	3.5
76	MP2A	X	-33.663	3.5
77	MP2A	Z	58.305	3.5
78	MP2A	Mx	-.017	3.5
79	MP2B	X	-24.935	3.5
80	MP2B	Z	43.189	3.5
81	MP2B	Mx	.025	3.5
82	MP2C	X	-33.663	3.5
83	MP2C	Z	58.305	3.5
84	MP2C	Mx	-.017	3.5
85	MP1A	X	-52.849	.5
86	MP1A	Z	91.537	.5
87	MP1A	Mx	.04	.5
88	MP1A	X	-52.849	2.5
89	MP1A	Z	91.537	2.5
90	MP1A	Mx	.04	2.5
91	MP1B	X	-84.373	.5
92	MP1B	Z	146.138	.5
93	MP1B	Mx	-.127	.5
94	MP1B	X	-84.373	2.5
95	MP1B	Z	146.138	2.5
96	MP1B	Mx	-.127	2.5
97	MP1C	X	-52.849	.5
98	MP1C	Z	91.537	.5
99	MP1C	Mx	.04	.5
100	MP1C	X	-52.849	2.5
101	MP1C	Z	91.537	2.5
102	MP1C	Mx	.04	2.5
103	MP5A	X	-52.849	.5
104	MP5A	Z	91.537	.5
105	MP5A	Mx	.04	.5
106	MP5A	X	-52.849	2.5
107	MP5A	Z	91.537	2.5
108	MP5A	Mx	.04	2.5
109	MP5B	X	-84.373	.5
110	MP5B	Z	146.138	.5
111	MP5B	Mx	-.127	.5
112	MP5B	X	-84.373	2.5
113	MP5B	Z	146.138	2.5
114	MP5B	Mx	-.127	2.5
115	MP5C	X	-52.849	.5
116	MP5C	Z	91.537	.5
117	MP5C	Mx	.04	.5
118	MP5C	X	-52.849	2.5
119	MP5C	Z	91.537	2.5
120	MP5C	Mx	.04	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	OVP2	X	-81.636	1.5
2	OVP2	Z	47.132	1.5
3	OVP2	Mx	0	1.5
4	MP2A	X	-114.578	2
5	MP2A	Z	66.152	2
6	MP2A	Mx	.13	2
7	MP2A	X	-114.578	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
8	MP2A	Z	66.152	6
9	MP2A	Mx	.13	6
10	MP2B	X	-114.578	2
11	MP2B	Z	66.152	2
12	MP2B	Mx	-.042	2
13	MP2B	X	-114.578	6
14	MP2B	Z	66.152	6
15	MP2B	Mx	-.042	6
16	MP2C	X	-154.295	2
17	MP2C	Z	89.082	2
18	MP2C	Mx	-.119	2
19	MP2C	X	-154.295	6
20	MP2C	Z	89.082	6
21	MP2C	Mx	-.119	6
22	MP2A	X	-114.578	2
23	MP2A	Z	66.152	2
24	MP2A	Mx	.042	2
25	MP2A	X	-114.578	6
26	MP2A	Z	66.152	6
27	MP2A	Mx	.042	6
28	MP2B	X	-114.578	2
29	MP2B	Z	66.152	2
30	MP2B	Mx	-.13	2
31	MP2B	X	-114.578	6
32	MP2B	Z	66.152	6
33	MP2B	Mx	-.13	6
34	MP2C	X	-154.295	2
35	MP2C	Z	89.082	2
36	MP2C	Mx	.119	2
37	MP2C	X	-154.295	6
38	MP2C	Z	89.082	6
39	MP2C	Mx	.119	6
40	MP3A	X	-27.48	1.5
41	MP3A	Z	15.866	1.5
42	MP3A	Mx	.021	1.5
43	MP3A	X	-27.48	3.5
44	MP3A	Z	15.866	3.5
45	MP3A	Mx	.021	3.5
46	MP3B	X	-27.48	1.5
47	MP3B	Z	15.866	1.5
48	MP3B	Mx	-.021	1.5
49	MP3B	X	-27.48	3.5
50	MP3B	Z	15.866	3.5
51	MP3B	Mx	-.021	3.5
52	MP3C	X	-53.521	1.5
53	MP3C	Z	30.9	1.5
54	MP3C	Mx	0	1.5
55	MP3C	X	-53.521	3.5
56	MP3C	Z	30.9	3.5
57	MP3C	Mx	0	3.5
58	MP2A	X	-9.637	2
59	MP2A	Z	5.564	2
60	MP2A	Mx	-.005	2
61	MP2B	X	-9.637	2
62	MP2B	Z	5.564	2
63	MP2B	Mx	.005	2
64	MP2C	X	-12.533	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
65	MP2C	Z	7.236	2
66	MP2C	Mx	0	2
67	MP1A	X	-39.548	3.5
68	MP1A	Z	22.833	3.5
69	MP1A	Mx	-.02	3.5
70	MP1B	X	-39.548	3.5
71	MP1B	Z	22.833	3.5
72	MP1B	Mx	.02	3.5
73	MP1C	X	-52.504	3.5
74	MP1C	Z	30.313	3.5
75	MP1C	Mx	0	3.5
76	MP2A	X	-48.228	3.5
77	MP2A	Z	27.844	3.5
78	MP2A	Mx	-.024	3.5
79	MP2B	X	-48.228	3.5
80	MP2B	Z	27.844	3.5
81	MP2B	Mx	.024	3.5
82	MP2C	X	-63.344	3.5
83	MP2C	Z	36.572	3.5
84	MP2C	Mx	0	3.5
85	MP1A	X	-127.937	.5
86	MP1A	Z	73.865	.5
87	MP1A	Mx	.096	.5
88	MP1A	X	-127.937	2.5
89	MP1A	Z	73.865	2.5
90	MP1A	Mx	.096	2.5
91	MP1B	X	-127.937	.5
92	MP1B	Z	73.865	.5
93	MP1B	Mx	-.096	.5
94	MP1B	X	-127.937	2.5
95	MP1B	Z	73.865	2.5
96	MP1B	Mx	-.096	2.5
97	MP1C	X	-73.337	.5
98	MP1C	Z	42.341	.5
99	MP1C	Mx	0	.5
100	MP1C	X	-73.337	2.5
101	MP1C	Z	42.341	2.5
102	MP1C	Mx	0	2.5
103	MP5A	X	-127.937	.5
104	MP5A	Z	73.865	.5
105	MP5A	Mx	.096	.5
106	MP5A	X	-127.937	2.5
107	MP5A	Z	73.865	2.5
108	MP5A	Mx	.096	2.5
109	MP5B	X	-127.937	.5
110	MP5B	Z	73.865	.5
111	MP5B	Mx	-.096	.5
112	MP5B	X	-127.937	2.5
113	MP5B	Z	73.865	2.5
114	MP5B	Mx	-.096	2.5
115	MP5C	X	-73.337	.5
116	MP5C	Z	42.341	.5
117	MP5C	Mx	0	.5
118	MP5C	X	-73.337	2.5
119	MP5C	Z	42.341	2.5
120	MP5C	Mx	0	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	OVP2	X	-101.697	1.5
2	OVP2	Z	0	1.5
3	OVP2	Mx	0	1.5
4	MP2A	X	-117.016	2
5	MP2A	Z	0	2
6	MP2A	Mx	.088	2
7	MP2A	X	-117.016	6
8	MP2A	Z	0	6
9	MP2A	Mx	.088	6
10	MP2B	X	-162.878	2
11	MP2B	Z	0	2
12	MP2B	Mx	.033	2
13	MP2B	X	-162.878	6
14	MP2B	Z	0	6
15	MP2B	Mx	.033	6
16	MP2C	X	-162.878	2
17	MP2C	Z	0	2
18	MP2C	Mx	-.155	2
19	MP2C	X	-162.878	6
20	MP2C	Z	0	6
21	MP2C	Mx	-.155	6
22	MP2A	X	-117.016	2
23	MP2A	Z	0	2
24	MP2A	Mx	.088	2
25	MP2A	X	-117.016	6
26	MP2A	Z	0	6
27	MP2A	Mx	.088	6
28	MP2B	X	-162.878	2
29	MP2B	Z	0	2
30	MP2B	Mx	-.155	2
31	MP2B	X	-162.878	6
32	MP2B	Z	0	6
33	MP2B	Mx	-.155	6
34	MP2C	X	-162.878	2
35	MP2C	Z	0	2
36	MP2C	Mx	.033	2
37	MP2C	X	-162.878	6
38	MP2C	Z	0	6
39	MP2C	Mx	.033	6
40	MP3A	X	-21.708	1.5
41	MP3A	Z	0	1.5
42	MP3A	Mx	.016	1.5
43	MP3A	X	-21.708	3.5
44	MP3A	Z	0	3.5
45	MP3A	Mx	.016	3.5
46	MP3B	X	-51.777	1.5
47	MP3B	Z	0	1.5
48	MP3B	Mx	-.019	1.5
49	MP3B	X	-51.777	3.5
50	MP3B	Z	0	3.5
51	MP3B	Mx	-.019	3.5
52	MP3C	X	-51.777	1.5
53	MP3C	Z	0	1.5
54	MP3C	Mx	-.019	1.5
55	MP3C	X	-51.777	3.5
56	MP3C	Z	0	3.5
57	MP3C	Mx	-.019	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP2A	X	-10.013	2
59	MP2A	Z	0	2
60	MP2A	Mx	-.005	2
61	MP2B	X	-13.357	2
62	MP2B	Z	0	2
63	MP2B	Mx	.003	2
64	MP2C	X	-13.357	2
65	MP2C	Z	0	2
66	MP2C	Mx	.003	2
67	MP1A	X	-40.679	3.5
68	MP1A	Z	0	3.5
69	MP1A	Mx	-.02	3.5
70	MP1B	X	-55.64	3.5
71	MP1B	Z	0	3.5
72	MP1B	Mx	.014	3.5
73	MP1C	X	-55.64	3.5
74	MP1C	Z	0	3.5
75	MP1C	Mx	.014	3.5
76	MP2A	X	-49.87	3.5
77	MP2A	Z	0	3.5
78	MP2A	Mx	-.025	3.5
79	MP2B	X	-67.325	3.5
80	MP2B	Z	0	3.5
81	MP2B	Mx	.017	3.5
82	MP2C	X	-67.325	3.5
83	MP2C	Z	0	3.5
84	MP2C	Mx	.017	3.5
85	MP1A	X	-168.745	.5
86	MP1A	Z	0	.5
87	MP1A	Mx	.127	.5
88	MP1A	X	-168.745	2.5
89	MP1A	Z	0	2.5
90	MP1A	Mx	.127	2.5
91	MP1B	X	-105.698	.5
92	MP1B	Z	0	.5
93	MP1B	Mx	-.04	.5
94	MP1B	X	-105.698	2.5
95	MP1B	Z	0	2.5
96	MP1B	Mx	-.04	2.5
97	MP1C	X	-105.698	.5
98	MP1C	Z	0	.5
99	MP1C	Mx	-.04	.5
100	MP1C	X	-105.698	2.5
101	MP1C	Z	0	2.5
102	MP1C	Mx	-.04	2.5
103	MP5A	X	-168.745	.5
104	MP5A	Z	0	.5
105	MP5A	Mx	.127	.5
106	MP5A	X	-168.745	2.5
107	MP5A	Z	0	2.5
108	MP5A	Mx	.127	2.5
109	MP5B	X	-105.698	.5
110	MP5B	Z	0	.5
111	MP5B	Mx	-.04	.5
112	MP5B	X	-105.698	2.5
113	MP5B	Z	0	2.5
114	MP5B	Mx	-.04	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
115	MP5C	X	-105.698	.5
116	MP5C	Z	0	.5
117	MP5C	Mx	-.04	.5
118	MP5C	X	-105.698	2.5
119	MP5C	Z	0	2.5
120	MP5C	Mx	-.04	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	OVP2	X	-100.944	1.5
2	OVP2	Z	-58.28	1.5
3	OVP2	Mx	0	1.5
4	MP2A	X	-114.578	2
5	MP2A	Z	-66.152	2
6	MP2A	Mx	.042	2
7	MP2A	X	-114.578	6
8	MP2A	Z	-66.152	6
9	MP2A	Mx	.042	6
10	MP2B	X	-154.295	2
11	MP2B	Z	-89.082	2
12	MP2B	Mx	.119	2
13	MP2B	X	-154.295	6
14	MP2B	Z	-89.082	6
15	MP2B	Mx	.119	6
16	MP2C	X	-114.578	2
17	MP2C	Z	-66.152	2
18	MP2C	Mx	-.13	2
19	MP2C	X	-114.578	6
20	MP2C	Z	-66.152	6
21	MP2C	Mx	-.13	6
22	MP2A	X	-114.578	2
23	MP2A	Z	-66.152	2
24	MP2A	Mx	.13	2
25	MP2A	X	-114.578	6
26	MP2A	Z	-66.152	6
27	MP2A	Mx	.13	6
28	MP2B	X	-154.295	2
29	MP2B	Z	-89.082	2
30	MP2B	Mx	-.119	2
31	MP2B	X	-154.295	6
32	MP2B	Z	-89.082	6
33	MP2B	Mx	-.119	6
34	MP2C	X	-114.578	2
35	MP2C	Z	-66.152	2
36	MP2C	Mx	-.042	2
37	MP2C	X	-114.578	6
38	MP2C	Z	-66.152	6
39	MP2C	Mx	-.042	6
40	MP3A	X	-27.48	1.5
41	MP3A	Z	-15.866	1.5
42	MP3A	Mx	.021	1.5
43	MP3A	X	-27.48	3.5
44	MP3A	Z	-15.866	3.5
45	MP3A	Mx	.021	3.5
46	MP3B	X	-53.521	1.5
47	MP3B	Z	-30.9	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
48	MP3B	Mx	0	1.5
49	MP3B	X	-53.521	3.5
50	MP3B	Z	-30.9	3.5
51	MP3B	Mx	0	3.5
52	MP3C	X	-27.48	1.5
53	MP3C	Z	-15.866	1.5
54	MP3C	Mx	-.021	1.5
55	MP3C	X	-27.48	3.5
56	MP3C	Z	-15.866	3.5
57	MP3C	Mx	-.021	3.5
58	MP2A	X	-9.637	2
59	MP2A	Z	-5.564	2
60	MP2A	Mx	-.005	2
61	MP2B	X	-12.533	2
62	MP2B	Z	-7.236	2
63	MP2B	Mx	0	2
64	MP2C	X	-9.637	2
65	MP2C	Z	-5.564	2
66	MP2C	Mx	.005	2
67	MP1A	X	-39.548	3.5
68	MP1A	Z	-22.833	3.5
69	MP1A	Mx	-.02	3.5
70	MP1B	X	-52.504	3.5
71	MP1B	Z	-30.313	3.5
72	MP1B	Mx	0	3.5
73	MP1C	X	-39.548	3.5
74	MP1C	Z	-22.833	3.5
75	MP1C	Mx	.02	3.5
76	MP2A	X	-48.228	3.5
77	MP2A	Z	-27.844	3.5
78	MP2A	Mx	-.024	3.5
79	MP2B	X	-63.344	3.5
80	MP2B	Z	-36.572	3.5
81	MP2B	Mx	0	3.5
82	MP2C	X	-48.228	3.5
83	MP2C	Z	-27.844	3.5
84	MP2C	Mx	.024	3.5
85	MP1A	X	-127.937	.5
86	MP1A	Z	-73.865	.5
87	MP1A	Mx	.096	.5
88	MP1A	X	-127.937	2.5
89	MP1A	Z	-73.865	2.5
90	MP1A	Mx	.096	2.5
91	MP1B	X	-73.337	.5
92	MP1B	Z	-42.341	.5
93	MP1B	Mx	0	.5
94	MP1B	X	-73.337	2.5
95	MP1B	Z	-42.341	2.5
96	MP1B	Mx	0	2.5
97	MP1C	X	-127.937	.5
98	MP1C	Z	-73.865	.5
99	MP1C	Mx	-.096	.5
100	MP1C	X	-127.937	2.5
101	MP1C	Z	-73.865	2.5
102	MP1C	Mx	-.096	2.5
103	MP5A	X	-127.937	.5
104	MP5A	Z	-73.865	.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
105	MP5A	Mx	.096	.5
106	MP5A	X	-127.937	2.5
107	MP5A	Z	-73.865	2.5
108	MP5A	Mx	.096	2.5
109	MP5B	X	-73.337	.5
110	MP5B	Z	-42.341	.5
111	MP5B	Mx	0	.5
112	MP5B	X	-73.337	2.5
113	MP5B	Z	-42.341	2.5
114	MP5B	Mx	0	2.5
115	MP5C	X	-127.937	.5
116	MP5C	Z	-73.865	.5
117	MP5C	Mx	-.096	.5
118	MP5C	X	-127.937	2.5
119	MP5C	Z	-73.865	2.5
120	MP5C	Mx	-.096	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	OVP2	X	-61.996	1.5
2	OVP2	Z	-107.38	1.5
3	OVP2	Mx	0	1.5
4	MP2A	X	-81.439	2
5	MP2A	Z	-141.056	2
6	MP2A	Mx	-.033	2
7	MP2A	X	-81.439	6
8	MP2A	Z	-141.056	6
9	MP2A	Mx	-.033	6
10	MP2B	X	-81.439	2
11	MP2B	Z	-141.056	2
12	MP2B	Mx	.155	2
13	MP2B	X	-81.439	6
14	MP2B	Z	-141.056	6
15	MP2B	Mx	.155	6
16	MP2C	X	-58.508	2
17	MP2C	Z	-101.339	2
18	MP2C	Mx	-.088	2
19	MP2C	X	-58.508	6
20	MP2C	Z	-101.339	6
21	MP2C	Mx	-.088	6
22	MP2A	X	-81.439	2
23	MP2A	Z	-141.056	2
24	MP2A	Mx	.155	2
25	MP2A	X	-81.439	6
26	MP2A	Z	-141.056	6
27	MP2A	Mx	.155	6
28	MP2B	X	-81.439	2
29	MP2B	Z	-141.056	2
30	MP2B	Mx	-.033	2
31	MP2B	X	-81.439	6
32	MP2B	Z	-141.056	6
33	MP2B	Mx	-.033	6
34	MP2C	X	-58.508	2
35	MP2C	Z	-101.339	2
36	MP2C	Mx	-.088	2
37	MP2C	X	-58.508	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
38	MP2C	Z	-101.339	6
39	MP2C	Mx	-.088	6
40	MP3A	X	-25.889	1.5
41	MP3A	Z	-44.84	1.5
42	MP3A	Mx	.019	1.5
43	MP3A	X	-25.889	3.5
44	MP3A	Z	-44.84	3.5
45	MP3A	Mx	.019	3.5
46	MP3B	X	-25.889	1.5
47	MP3B	Z	-44.84	1.5
48	MP3B	Mx	.019	1.5
49	MP3B	X	-25.889	3.5
50	MP3B	Z	-44.84	3.5
51	MP3B	Mx	.019	3.5
52	MP3C	X	-10.854	1.5
53	MP3C	Z	-18.8	1.5
54	MP3C	Mx	-.016	1.5
55	MP3C	X	-10.854	3.5
56	MP3C	Z	-18.8	3.5
57	MP3C	Mx	-.016	3.5
58	MP2A	X	-6.679	2
59	MP2A	Z	-11.568	2
60	MP2A	Mx	-.003	2
61	MP2B	X	-6.679	2
62	MP2B	Z	-11.568	2
63	MP2B	Mx	-.003	2
64	MP2C	X	-5.007	2
65	MP2C	Z	-8.672	2
66	MP2C	Mx	.005	2
67	MP1A	X	-27.82	3.5
68	MP1A	Z	-48.185	3.5
69	MP1A	Mx	-.014	3.5
70	MP1B	X	-27.82	3.5
71	MP1B	Z	-48.185	3.5
72	MP1B	Mx	-.014	3.5
73	MP1C	X	-20.339	3.5
74	MP1C	Z	-35.229	3.5
75	MP1C	Mx	.02	3.5
76	MP2A	X	-33.663	3.5
77	MP2A	Z	-58.305	3.5
78	MP2A	Mx	-.017	3.5
79	MP2B	X	-33.663	3.5
80	MP2B	Z	-58.305	3.5
81	MP2B	Mx	-.017	3.5
82	MP2C	X	-24.935	3.5
83	MP2C	Z	-43.189	3.5
84	MP2C	Mx	.025	3.5
85	MP1A	X	-52.849	.5
86	MP1A	Z	-91.537	.5
87	MP1A	Mx	.04	.5
88	MP1A	X	-52.849	2.5
89	MP1A	Z	-91.537	2.5
90	MP1A	Mx	.04	2.5
91	MP1B	X	-52.849	.5
92	MP1B	Z	-91.537	.5
93	MP1B	Mx	.04	.5
94	MP1B	X	-52.849	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
95	MP1B	Z	-91.537	2.5
96	MP1B	Mx	.04	2.5
97	MP1C	X	-84.373	.5
98	MP1C	Z	-146.138	.5
99	MP1C	Mx	-.127	.5
100	MP1C	X	-84.373	2.5
101	MP1C	Z	-146.138	2.5
102	MP1C	Mx	-.127	2.5
103	MP5A	X	-52.849	.5
104	MP5A	Z	-91.537	.5
105	MP5A	Mx	.04	.5
106	MP5A	X	-52.849	2.5
107	MP5A	Z	-91.537	2.5
108	MP5A	Mx	.04	2.5
109	MP5B	X	-52.849	.5
110	MP5B	Z	-91.537	.5
111	MP5B	Mx	.04	.5
112	MP5B	X	-52.849	2.5
113	MP5B	Z	-91.537	2.5
114	MP5B	Mx	.04	2.5
115	MP5C	X	-84.373	.5
116	MP5C	Z	-146.138	.5
117	MP5C	Mx	-.127	.5
118	MP5C	X	-84.373	2.5
119	MP5C	Z	-146.138	2.5
120	MP5C	Mx	-.127	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	OVP2	X	0	1.5
2	OVP2	Z	-20.073	1.5
3	OVP2	Mx	0	1.5
4	MP2A	X	0	2
5	MP2A	Z	-31.31	2
6	MP2A	Mx	-.021	2
7	MP2A	X	0	6
8	MP2A	Z	-31.31	6
9	MP2A	Mx	-.021	6
10	MP2B	X	0	2
11	MP2B	Z	-23.861	2
12	MP2B	Mx	.023	2
13	MP2B	X	0	6
14	MP2B	Z	-23.861	6
15	MP2B	Mx	.023	6
16	MP2C	X	0	2
17	MP2C	Z	-23.861	2
18	MP2C	Mx	-.008	2
19	MP2C	X	0	6
20	MP2C	Z	-23.861	6
21	MP2C	Mx	-.008	6
22	MP2A	X	0	2
23	MP2A	Z	-31.31	2
24	MP2A	Mx	.021	2
25	MP2A	X	0	6
26	MP2A	Z	-31.31	6
27	MP2A	Mx	.021	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
28	MP2B	X	0	2
29	MP2B	Z	-23.861	2
30	MP2B	Mx	.008	2
31	MP2B	X	0	6
32	MP2B	Z	-23.861	6
33	MP2B	Mx	.008	6
34	MP2C	X	0	2
35	MP2C	Z	-23.861	2
36	MP2C	Mx	-.023	2
37	MP2C	X	0	6
38	MP2C	Z	-23.861	6
39	MP2C	Mx	-.023	6
40	MP3A	X	0	1.5
41	MP3A	Z	-13.601	1.5
42	MP3A	Mx	0	1.5
43	MP3A	X	0	3.5
44	MP3A	Z	-13.601	3.5
45	MP3A	Mx	0	3.5
46	MP3B	X	0	1.5
47	MP3B	Z	-7.718	1.5
48	MP3B	Mx	.005	1.5
49	MP3B	X	0	3.5
50	MP3B	Z	-7.718	3.5
51	MP3B	Mx	.005	3.5
52	MP3C	X	0	1.5
53	MP3C	Z	-7.718	1.5
54	MP3C	Mx	-.005	1.5
55	MP3C	X	0	3.5
56	MP3C	Z	-7.718	3.5
57	MP3C	Mx	-.005	3.5
58	MP2A	X	0	2
59	MP2A	Z	-3.431	2
60	MP2A	Mx	0	2
61	MP2B	X	0	2
62	MP2B	Z	-2.792	2
63	MP2B	Mx	-.001	2
64	MP2C	X	0	2
65	MP2C	Z	-2.792	2
66	MP2C	Mx	.001	2
67	MP1A	X	0	3.5
68	MP1A	Z	-14.065	3.5
69	MP1A	Mx	0	3.5
70	MP1B	X	0	3.5
71	MP1B	Z	-10.861	3.5
72	MP1B	Mx	-.005	3.5
73	MP1C	X	0	3.5
74	MP1C	Z	-10.861	3.5
75	MP1C	Mx	.005	3.5
76	MP2A	X	0	3.5
77	MP2A	Z	-14.065	3.5
78	MP2A	Mx	0	3.5
79	MP2B	X	0	3.5
80	MP2B	Z	-10.989	3.5
81	MP2B	Mx	-.005	3.5
82	MP2C	X	0	3.5
83	MP2C	Z	-10.989	3.5
84	MP2C	Mx	.005	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
85	MP1A	X	0	.5
86	MP1A	Z	-15.966	.5
87	MP1A	Mx	0	.5
88	MP1A	X	0	2.5
89	MP1A	Z	-15.966	2.5
90	MP1A	Mx	0	2.5
91	MP1B	X	0	.5
92	MP1B	Z	-26.289	.5
93	MP1B	Mx	.017	.5
94	MP1B	X	0	2.5
95	MP1B	Z	-26.289	2.5
96	MP1B	Mx	.017	2.5
97	MP1C	X	0	.5
98	MP1C	Z	-26.289	.5
99	MP1C	Mx	-.017	.5
100	MP1C	X	0	2.5
101	MP1C	Z	-26.289	2.5
102	MP1C	Mx	-.017	2.5
103	MP5A	X	0	.5
104	MP5A	Z	-15.966	.5
105	MP5A	Mx	0	.5
106	MP5A	X	0	2.5
107	MP5A	Z	-15.966	2.5
108	MP5A	Mx	0	2.5
109	MP5B	X	0	.5
110	MP5B	Z	-26.289	.5
111	MP5B	Mx	.017	.5
112	MP5B	X	0	2.5
113	MP5B	Z	-26.289	2.5
114	MP5B	Mx	.017	2.5
115	MP5C	X	0	.5
116	MP5C	Z	-26.289	.5
117	MP5C	Mx	-.017	.5
118	MP5C	X	0	2.5
119	MP5C	Z	-26.289	2.5
120	MP5C	Mx	-.017	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	OVP2	X	8.32	1.5
2	OVP2	Z	-14.41	1.5
3	OVP2	Mx	0	1.5
4	MP2A	X	14.414	2
5	MP2A	Z	-24.965	2
6	MP2A	Mx	-.027	2
7	MP2A	X	14.414	6
8	MP2A	Z	-24.965	6
9	MP2A	Mx	-.027	6
10	MP2B	X	10.689	2
11	MP2B	Z	-18.514	2
12	MP2B	Mx	.016	2
13	MP2B	X	10.689	6
14	MP2B	Z	-18.514	6
15	MP2B	Mx	.016	6
16	MP2C	X	14.414	2
17	MP2C	Z	-24.965	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
18	MP2C	Mx	.006	2
19	MP2C	X	14.414	6
20	MP2C	Z	-24.965	6
21	MP2C	Mx	.006	6
22	MP2A	X	14.414	2
23	MP2A	Z	-24.965	2
24	MP2A	Mx	.006	2
25	MP2A	X	14.414	6
26	MP2A	Z	-24.965	6
27	MP2A	Mx	.006	6
28	MP2B	X	10.689	2
29	MP2B	Z	-18.514	2
30	MP2B	Mx	.016	2
31	MP2B	X	10.689	6
32	MP2B	Z	-18.514	6
33	MP2B	Mx	.016	6
34	MP2C	X	14.414	2
35	MP2C	Z	-24.965	2
36	MP2C	Mx	-.027	2
37	MP2C	X	14.414	6
38	MP2C	Z	-24.965	6
39	MP2C	Mx	-.027	6
40	MP3A	X	5.82	1.5
41	MP3A	Z	-10.081	1.5
42	MP3A	Mx	-.004	1.5
43	MP3A	X	5.82	3.5
44	MP3A	Z	-10.081	3.5
45	MP3A	Mx	-.004	3.5
46	MP3B	X	2.878	1.5
47	MP3B	Z	-4.986	1.5
48	MP3B	Mx	.004	1.5
49	MP3B	X	2.878	3.5
50	MP3B	Z	-4.986	3.5
51	MP3B	Mx	.004	3.5
52	MP3C	X	5.82	1.5
53	MP3C	Z	-10.081	1.5
54	MP3C	Mx	-.004	1.5
55	MP3C	X	5.82	3.5
56	MP3C	Z	-10.081	3.5
57	MP3C	Mx	-.004	3.5
58	MP2A	X	1.609	2
59	MP2A	Z	-2.787	2
60	MP2A	Mx	.000804	2
61	MP2B	X	1.289	2
62	MP2B	Z	-2.233	2
63	MP2B	Mx	-.001	2
64	MP2C	X	1.609	2
65	MP2C	Z	-2.787	2
66	MP2C	Mx	.000805	2
67	MP1A	X	6.498	3.5
68	MP1A	Z	-11.256	3.5
69	MP1A	Mx	.003	3.5
70	MP1B	X	4.897	3.5
71	MP1B	Z	-8.481	3.5
72	MP1B	Mx	-.005	3.5
73	MP1C	X	6.498	3.5
74	MP1C	Z	-11.256	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
75	MP1C	Mx	.003	3.5
76	MP2A	X	6.52	3.5
77	MP2A	Z	-11.293	3.5
78	MP2A	Mx	.003	3.5
79	MP2B	X	4.982	3.5
80	MP2B	Z	-8.629	3.5
81	MP2B	Mx	-.005	3.5
82	MP2C	X	6.52	3.5
83	MP2C	Z	-11.293	3.5
84	MP2C	Mx	.003	3.5
85	MP1A	X	9.703	.5
86	MP1A	Z	-16.807	.5
87	MP1A	Mx	-.007	.5
88	MP1A	X	9.703	2.5
89	MP1A	Z	-16.807	2.5
90	MP1A	Mx	-.007	2.5
91	MP1B	X	14.865	.5
92	MP1B	Z	-25.747	.5
93	MP1B	Mx	.022	.5
94	MP1B	X	14.865	2.5
95	MP1B	Z	-25.747	2.5
96	MP1B	Mx	.022	2.5
97	MP1C	X	9.703	.5
98	MP1C	Z	-16.807	.5
99	MP1C	Mx	-.007	.5
100	MP1C	X	9.703	2.5
101	MP1C	Z	-16.807	2.5
102	MP1C	Mx	-.007	2.5
103	MP5A	X	9.703	.5
104	MP5A	Z	-16.807	.5
105	MP5A	Mx	-.007	.5
106	MP5A	X	9.703	2.5
107	MP5A	Z	-16.807	2.5
108	MP5A	Mx	-.007	2.5
109	MP5B	X	14.865	.5
110	MP5B	Z	-25.747	.5
111	MP5B	Mx	.022	.5
112	MP5B	X	14.865	2.5
113	MP5B	Z	-25.747	2.5
114	MP5B	Mx	.022	2.5
115	MP5C	X	9.703	.5
116	MP5C	Z	-16.807	.5
117	MP5C	Mx	-.007	.5
118	MP5C	X	9.703	2.5
119	MP5C	Z	-16.807	2.5
120	MP5C	Mx	-.007	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	OVP2	X	12.924	1.5
2	OVP2	Z	-7.461	1.5
3	OVP2	Mx	0	1.5
4	MP2A	X	20.664	2
5	MP2A	Z	-11.931	2
6	MP2A	Mx	-.023	2
7	MP2A	X	20.664	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
8	MP2A	Z	-11.931	6
9	MP2A	Mx	-.023	6
10	MP2B	X	20.664	2
11	MP2B	Z	-11.931	2
12	MP2B	Mx	.008	2
13	MP2B	X	20.664	6
14	MP2B	Z	-11.931	6
15	MP2B	Mx	.008	6
16	MP2C	X	27.115	2
17	MP2C	Z	-15.655	2
18	MP2C	Mx	.021	2
19	MP2C	X	27.115	6
20	MP2C	Z	-15.655	6
21	MP2C	Mx	.021	6
22	MP2A	X	20.664	2
23	MP2A	Z	-11.931	2
24	MP2A	Mx	-.008	2
25	MP2A	X	20.664	6
26	MP2A	Z	-11.931	6
27	MP2A	Mx	-.008	6
28	MP2B	X	20.664	2
29	MP2B	Z	-11.931	2
30	MP2B	Mx	.023	2
31	MP2B	X	20.664	6
32	MP2B	Z	-11.931	6
33	MP2B	Mx	.023	6
34	MP2C	X	27.115	2
35	MP2C	Z	-15.655	2
36	MP2C	Mx	-.021	2
37	MP2C	X	27.115	6
38	MP2C	Z	-15.655	6
39	MP2C	Mx	-.021	6
40	MP3A	X	6.684	1.5
41	MP3A	Z	-3.859	1.5
42	MP3A	Mx	-.005	1.5
43	MP3A	X	6.684	3.5
44	MP3A	Z	-3.859	3.5
45	MP3A	Mx	-.005	3.5
46	MP3B	X	6.684	1.5
47	MP3B	Z	-3.859	1.5
48	MP3B	Mx	.005	1.5
49	MP3B	X	6.684	3.5
50	MP3B	Z	-3.859	3.5
51	MP3B	Mx	.005	3.5
52	MP3C	X	11.779	1.5
53	MP3C	Z	-6.801	1.5
54	MP3C	Mx	0	1.5
55	MP3C	X	11.779	3.5
56	MP3C	Z	-6.801	3.5
57	MP3C	Mx	0	3.5
58	MP2A	X	2.418	2
59	MP2A	Z	-1.396	2
60	MP2A	Mx	.001	2
61	MP2B	X	2.418	2
62	MP2B	Z	-1.396	2
63	MP2B	Mx	-.001	2
64	MP2C	X	2.971	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
65	MP2C	Z	-1.716	2
66	MP2C	Mx	0	2
67	MP1A	X	9.406	3.5
68	MP1A	Z	-5.431	3.5
69	MP1A	Mx	.005	3.5
70	MP1B	X	9.406	3.5
71	MP1B	Z	-5.431	3.5
72	MP1B	Mx	-.005	3.5
73	MP1C	X	12.18	3.5
74	MP1C	Z	-7.032	3.5
75	MP1C	Mx	0	3.5
76	MP2A	X	9.517	3.5
77	MP2A	Z	-5.495	3.5
78	MP2A	Mx	.005	3.5
79	MP2B	X	9.517	3.5
80	MP2B	Z	-5.495	3.5
81	MP2B	Mx	-.005	3.5
82	MP2C	X	12.18	3.5
83	MP2C	Z	-7.032	3.5
84	MP2C	Mx	0	3.5
85	MP1A	X	22.767	.5
86	MP1A	Z	-13.144	.5
87	MP1A	Mx	-.017	.5
88	MP1A	X	22.767	2.5
89	MP1A	Z	-13.144	2.5
90	MP1A	Mx	-.017	2.5
91	MP1B	X	22.767	.5
92	MP1B	Z	-13.144	.5
93	MP1B	Mx	.017	.5
94	MP1B	X	22.767	2.5
95	MP1B	Z	-13.144	2.5
96	MP1B	Mx	.017	2.5
97	MP1C	X	13.827	.5
98	MP1C	Z	-7.983	.5
99	MP1C	Mx	0	.5
100	MP1C	X	13.827	2.5
101	MP1C	Z	-7.983	2.5
102	MP1C	Mx	0	2.5
103	MP5A	X	22.767	.5
104	MP5A	Z	-13.144	.5
105	MP5A	Mx	-.017	.5
106	MP5A	X	22.767	2.5
107	MP5A	Z	-13.144	2.5
108	MP5A	Mx	-.017	2.5
109	MP5B	X	22.767	.5
110	MP5B	Z	-13.144	.5
111	MP5B	Mx	.017	.5
112	MP5B	X	22.767	2.5
113	MP5B	Z	-13.144	2.5
114	MP5B	Mx	.017	2.5
115	MP5C	X	13.827	.5
116	MP5C	Z	-7.983	.5
117	MP5C	Mx	0	.5
118	MP5C	X	13.827	2.5
119	MP5C	Z	-7.983	2.5
120	MP5C	Mx	0	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	OVP2	X	16.639	1.5
2	OVP2	Z	0	1.5
3	OVP2	Mx	0	1.5
4	MP2A	X	21.378	2
5	MP2A	Z	0	2
6	MP2A	Mx	-.016	2
7	MP2A	X	21.378	6
8	MP2A	Z	0	6
9	MP2A	Mx	-.016	6
10	MP2B	X	28.827	2
11	MP2B	Z	0	2
12	MP2B	Mx	-.006	2
13	MP2B	X	28.827	6
14	MP2B	Z	0	6
15	MP2B	Mx	-.006	6
16	MP2C	X	28.827	2
17	MP2C	Z	0	2
18	MP2C	Mx	.027	2
19	MP2C	X	28.827	6
20	MP2C	Z	0	6
21	MP2C	Mx	.027	6
22	MP2A	X	21.378	2
23	MP2A	Z	0	2
24	MP2A	Mx	-.016	2
25	MP2A	X	21.378	6
26	MP2A	Z	0	6
27	MP2A	Mx	-.016	6
28	MP2B	X	28.827	2
29	MP2B	Z	0	2
30	MP2B	Mx	.027	2
31	MP2B	X	28.827	6
32	MP2B	Z	0	6
33	MP2B	Mx	.027	6
34	MP2C	X	28.827	2
35	MP2C	Z	0	2
36	MP2C	Mx	-.006	2
37	MP2C	X	28.827	6
38	MP2C	Z	0	6
39	MP2C	Mx	-.006	6
40	MP3A	X	5.757	1.5
41	MP3A	Z	0	1.5
42	MP3A	Mx	-.004	1.5
43	MP3A	X	5.757	3.5
44	MP3A	Z	0	3.5
45	MP3A	Mx	-.004	3.5
46	MP3B	X	11.64	1.5
47	MP3B	Z	0	1.5
48	MP3B	Mx	.004	1.5
49	MP3B	X	11.64	3.5
50	MP3B	Z	0	3.5
51	MP3B	Mx	.004	3.5
52	MP3C	X	11.64	1.5
53	MP3C	Z	0	1.5
54	MP3C	Mx	.004	1.5
55	MP3C	X	11.64	3.5
56	MP3C	Z	0	3.5
57	MP3C	Mx	.004	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP2A	X	2.579	2
59	MP2A	Z	0	2
60	MP2A	Mx	.001	2
61	MP2B	X	3.218	2
62	MP2B	Z	0	2
63	MP2B	Mx	-.000804	2
64	MP2C	X	3.218	2
65	MP2C	Z	0	2
66	MP2C	Mx	-.000804	2
67	MP1A	X	9.793	3.5
68	MP1A	Z	0	3.5
69	MP1A	Mx	.005	3.5
70	MP1B	X	12.997	3.5
71	MP1B	Z	0	3.5
72	MP1B	Mx	-.003	3.5
73	MP1C	X	12.997	3.5
74	MP1C	Z	0	3.5
75	MP1C	Mx	-.003	3.5
76	MP2A	X	9.964	3.5
77	MP2A	Z	0	3.5
78	MP2A	Mx	.005	3.5
79	MP2B	X	13.04	3.5
80	MP2B	Z	0	3.5
81	MP2B	Mx	-.003	3.5
82	MP2C	X	13.04	3.5
83	MP2C	Z	0	3.5
84	MP2C	Mx	-.003	3.5
85	MP1A	X	29.73	.5
86	MP1A	Z	0	.5
87	MP1A	Mx	-.022	.5
88	MP1A	X	29.73	2.5
89	MP1A	Z	0	2.5
90	MP1A	Mx	-.022	2.5
91	MP1B	X	19.407	.5
92	MP1B	Z	0	.5
93	MP1B	Mx	.007	.5
94	MP1B	X	19.407	2.5
95	MP1B	Z	0	2.5
96	MP1B	Mx	.007	2.5
97	MP1C	X	19.407	.5
98	MP1C	Z	0	.5
99	MP1C	Mx	.007	.5
100	MP1C	X	19.407	2.5
101	MP1C	Z	0	2.5
102	MP1C	Mx	.007	2.5
103	MP5A	X	29.73	.5
104	MP5A	Z	0	.5
105	MP5A	Mx	-.022	.5
106	MP5A	X	29.73	2.5
107	MP5A	Z	0	2.5
108	MP5A	Mx	-.022	2.5
109	MP5B	X	19.407	.5
110	MP5B	Z	0	.5
111	MP5B	Mx	.007	.5
112	MP5B	X	19.407	2.5
113	MP5B	Z	0	2.5
114	MP5B	Mx	.007	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
115	MP5C	X	19.407	.5
116	MP5C	Z	0	.5
117	MP5C	Mx	.007	.5
118	MP5C	X	19.407	2.5
119	MP5C	Z	0	2.5
120	MP5C	Mx	.007	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	OVP2	X	17.383	1.5
2	OVP2	Z	10.036	1.5
3	OVP2	Mx	0	1.5
4	MP2A	X	20.664	2
5	MP2A	Z	11.931	2
6	MP2A	Mx	-.008	2
7	MP2A	X	20.664	6
8	MP2A	Z	11.931	6
9	MP2A	Mx	-.008	6
10	MP2B	X	27.115	2
11	MP2B	Z	15.655	2
12	MP2B	Mx	-.021	2
13	MP2B	X	27.115	6
14	MP2B	Z	15.655	6
15	MP2B	Mx	-.021	6
16	MP2C	X	20.664	2
17	MP2C	Z	11.931	2
18	MP2C	Mx	.023	2
19	MP2C	X	20.664	6
20	MP2C	Z	11.931	6
21	MP2C	Mx	.023	6
22	MP2A	X	20.664	2
23	MP2A	Z	11.931	2
24	MP2A	Mx	-.023	2
25	MP2A	X	20.664	6
26	MP2A	Z	11.931	6
27	MP2A	Mx	-.023	6
28	MP2B	X	27.115	2
29	MP2B	Z	15.655	2
30	MP2B	Mx	.021	2
31	MP2B	X	27.115	6
32	MP2B	Z	15.655	6
33	MP2B	Mx	.021	6
34	MP2C	X	20.664	2
35	MP2C	Z	11.931	2
36	MP2C	Mx	.008	2
37	MP2C	X	20.664	6
38	MP2C	Z	11.931	6
39	MP2C	Mx	.008	6
40	MP3A	X	6.684	1.5
41	MP3A	Z	3.859	1.5
42	MP3A	Mx	-.005	1.5
43	MP3A	X	6.684	3.5
44	MP3A	Z	3.859	3.5
45	MP3A	Mx	-.005	3.5
46	MP3B	X	11.779	1.5
47	MP3B	Z	6.801	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
48	MP3B	Mx	0	1.5
49	MP3B	X	11.779	3.5
50	MP3B	Z	6.801	3.5
51	MP3B	Mx	0	3.5
52	MP3C	X	6.684	1.5
53	MP3C	Z	3.859	1.5
54	MP3C	Mx	.005	1.5
55	MP3C	X	6.684	3.5
56	MP3C	Z	3.859	3.5
57	MP3C	Mx	.005	3.5
58	MP2A	X	2.418	2
59	MP2A	Z	1.396	2
60	MP2A	Mx	.001	2
61	MP2B	X	2.971	2
62	MP2B	Z	1.716	2
63	MP2B	Mx	0	2
64	MP2C	X	2.418	2
65	MP2C	Z	1.396	2
66	MP2C	Mx	-.001	2
67	MP1A	X	9.406	3.5
68	MP1A	Z	5.431	3.5
69	MP1A	Mx	.005	3.5
70	MP1B	X	12.18	3.5
71	MP1B	Z	7.032	3.5
72	MP1B	Mx	0	3.5
73	MP1C	X	9.406	3.5
74	MP1C	Z	5.431	3.5
75	MP1C	Mx	-.005	3.5
76	MP2A	X	9.517	3.5
77	MP2A	Z	5.495	3.5
78	MP2A	Mx	.005	3.5
79	MP2B	X	12.18	3.5
80	MP2B	Z	7.032	3.5
81	MP2B	Mx	0	3.5
82	MP2C	X	9.517	3.5
83	MP2C	Z	5.495	3.5
84	MP2C	Mx	-.005	3.5
85	MP1A	X	22.767	.5
86	MP1A	Z	13.144	.5
87	MP1A	Mx	-.017	.5
88	MP1A	X	22.767	2.5
89	MP1A	Z	13.144	2.5
90	MP1A	Mx	-.017	2.5
91	MP1B	X	13.827	.5
92	MP1B	Z	7.983	.5
93	MP1B	Mx	0	.5
94	MP1B	X	13.827	2.5
95	MP1B	Z	7.983	2.5
96	MP1B	Mx	0	2.5
97	MP1C	X	22.767	.5
98	MP1C	Z	13.144	.5
99	MP1C	Mx	.017	.5
100	MP1C	X	22.767	2.5
101	MP1C	Z	13.144	2.5
102	MP1C	Mx	.017	2.5
103	MP5A	X	22.767	.5
104	MP5A	Z	13.144	.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
105	MP5A	Mx	-.017	.5
106	MP5A	X	22.767	2.5
107	MP5A	Z	13.144	2.5
108	MP5A	Mx	-.017	2.5
109	MP5B	X	13.827	.5
110	MP5B	Z	7.983	.5
111	MP5B	Mx	0	.5
112	MP5B	X	13.827	2.5
113	MP5B	Z	7.983	2.5
114	MP5B	Mx	0	2.5
115	MP5C	X	22.767	.5
116	MP5C	Z	13.144	.5
117	MP5C	Mx	.017	.5
118	MP5C	X	22.767	2.5
119	MP5C	Z	13.144	2.5
120	MP5C	Mx	.017	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	OVP2	X	10.895	1.5
2	OVP2	Z	18.87	1.5
3	OVP2	Mx	0	1.5
4	MP2A	X	14.414	2
5	MP2A	Z	24.965	2
6	MP2A	Mx	.006	2
7	MP2A	X	14.414	6
8	MP2A	Z	24.965	6
9	MP2A	Mx	.006	6
10	MP2B	X	14.414	2
11	MP2B	Z	24.965	2
12	MP2B	Mx	-.027	2
13	MP2B	X	14.414	6
14	MP2B	Z	24.965	6
15	MP2B	Mx	-.027	6
16	MP2C	X	10.689	2
17	MP2C	Z	18.514	2
18	MP2C	Mx	.016	2
19	MP2C	X	10.689	6
20	MP2C	Z	18.514	6
21	MP2C	Mx	.016	6
22	MP2A	X	14.414	2
23	MP2A	Z	24.965	2
24	MP2A	Mx	-.027	2
25	MP2A	X	14.414	6
26	MP2A	Z	24.965	6
27	MP2A	Mx	-.027	6
28	MP2B	X	14.414	2
29	MP2B	Z	24.965	2
30	MP2B	Mx	.006	2
31	MP2B	X	14.414	6
32	MP2B	Z	24.965	6
33	MP2B	Mx	.006	6
34	MP2C	X	10.689	2
35	MP2C	Z	18.514	2
36	MP2C	Mx	.016	2
37	MP2C	X	10.689	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
38	MP2C	Z	18.514	6
39	MP2C	Mx	.016	6
40	MP3A	X	5.82	1.5
41	MP3A	Z	10.081	1.5
42	MP3A	Mx	-.004	1.5
43	MP3A	X	5.82	3.5
44	MP3A	Z	10.081	3.5
45	MP3A	Mx	-.004	3.5
46	MP3B	X	5.82	1.5
47	MP3B	Z	10.081	1.5
48	MP3B	Mx	-.004	1.5
49	MP3B	X	5.82	3.5
50	MP3B	Z	10.081	3.5
51	MP3B	Mx	-.004	3.5
52	MP3C	X	2.878	1.5
53	MP3C	Z	4.986	1.5
54	MP3C	Mx	.004	1.5
55	MP3C	X	2.878	3.5
56	MP3C	Z	4.986	3.5
57	MP3C	Mx	.004	3.5
58	MP2A	X	1.609	2
59	MP2A	Z	2.787	2
60	MP2A	Mx	.000804	2
61	MP2B	X	1.609	2
62	MP2B	Z	2.787	2
63	MP2B	Mx	.000805	2
64	MP2C	X	1.289	2
65	MP2C	Z	2.233	2
66	MP2C	Mx	-.001	2
67	MP1A	X	6.498	3.5
68	MP1A	Z	11.256	3.5
69	MP1A	Mx	.003	3.5
70	MP1B	X	6.498	3.5
71	MP1B	Z	11.256	3.5
72	MP1B	Mx	.003	3.5
73	MP1C	X	4.897	3.5
74	MP1C	Z	8.481	3.5
75	MP1C	Mx	-.005	3.5
76	MP2A	X	6.52	3.5
77	MP2A	Z	11.293	3.5
78	MP2A	Mx	.003	3.5
79	MP2B	X	6.52	3.5
80	MP2B	Z	11.293	3.5
81	MP2B	Mx	.003	3.5
82	MP2C	X	4.982	3.5
83	MP2C	Z	8.629	3.5
84	MP2C	Mx	-.005	3.5
85	MP1A	X	9.703	.5
86	MP1A	Z	16.807	.5
87	MP1A	Mx	-.007	.5
88	MP1A	X	9.703	2.5
89	MP1A	Z	16.807	2.5
90	MP1A	Mx	-.007	2.5
91	MP1B	X	9.703	.5
92	MP1B	Z	16.807	.5
93	MP1B	Mx	-.007	.5
94	MP1B	X	9.703	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
95	MP1B	Z	16.807	2.5
96	MP1B	Mx	-.007	2.5
97	MP1C	X	14.865	.5
98	MP1C	Z	25.747	.5
99	MP1C	Mx	.022	.5
100	MP1C	X	14.865	2.5
101	MP1C	Z	25.747	2.5
102	MP1C	Mx	.022	2.5
103	MP5A	X	9.703	.5
104	MP5A	Z	16.807	.5
105	MP5A	Mx	-.007	.5
106	MP5A	X	9.703	2.5
107	MP5A	Z	16.807	2.5
108	MP5A	Mx	-.007	2.5
109	MP5B	X	9.703	.5
110	MP5B	Z	16.807	.5
111	MP5B	Mx	-.007	.5
112	MP5B	X	9.703	2.5
113	MP5B	Z	16.807	2.5
114	MP5B	Mx	-.007	2.5
115	MP5C	X	14.865	.5
116	MP5C	Z	25.747	.5
117	MP5C	Mx	.022	.5
118	MP5C	X	14.865	2.5
119	MP5C	Z	25.747	2.5
120	MP5C	Mx	.022	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	OVP2	X	0	1.5
2	OVP2	Z	20.073	1.5
3	OVP2	Mx	0	1.5
4	MP2A	X	0	2
5	MP2A	Z	31.31	2
6	MP2A	Mx	.021	2
7	MP2A	X	0	6
8	MP2A	Z	31.31	6
9	MP2A	Mx	.021	6
10	MP2B	X	0	2
11	MP2B	Z	23.861	2
12	MP2B	Mx	-.023	2
13	MP2B	X	0	6
14	MP2B	Z	23.861	6
15	MP2B	Mx	-.023	6
16	MP2C	X	0	2
17	MP2C	Z	23.861	2
18	MP2C	Mx	.008	2
19	MP2C	X	0	6
20	MP2C	Z	23.861	6
21	MP2C	Mx	.008	6
22	MP2A	X	0	2
23	MP2A	Z	31.31	2
24	MP2A	Mx	-.021	2
25	MP2A	X	0	6
26	MP2A	Z	31.31	6
27	MP2A	Mx	-.021	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
28	MP2B	X	0	2
29	MP2B	Z	23.861	2
30	MP2B	Mx	-.008	2
31	MP2B	X	0	6
32	MP2B	Z	23.861	6
33	MP2B	Mx	-.008	6
34	MP2C	X	0	2
35	MP2C	Z	23.861	2
36	MP2C	Mx	.023	2
37	MP2C	X	0	6
38	MP2C	Z	23.861	6
39	MP2C	Mx	.023	6
40	MP3A	X	0	1.5
41	MP3A	Z	13.601	1.5
42	MP3A	Mx	0	1.5
43	MP3A	X	0	3.5
44	MP3A	Z	13.601	3.5
45	MP3A	Mx	0	3.5
46	MP3B	X	0	1.5
47	MP3B	Z	7.718	1.5
48	MP3B	Mx	-.005	1.5
49	MP3B	X	0	3.5
50	MP3B	Z	7.718	3.5
51	MP3B	Mx	-.005	3.5
52	MP3C	X	0	1.5
53	MP3C	Z	7.718	1.5
54	MP3C	Mx	.005	1.5
55	MP3C	X	0	3.5
56	MP3C	Z	7.718	3.5
57	MP3C	Mx	.005	3.5
58	MP2A	X	0	2
59	MP2A	Z	3.431	2
60	MP2A	Mx	0	2
61	MP2B	X	0	2
62	MP2B	Z	2.792	2
63	MP2B	Mx	.001	2
64	MP2C	X	0	2
65	MP2C	Z	2.792	2
66	MP2C	Mx	-.001	2
67	MP1A	X	0	3.5
68	MP1A	Z	14.065	3.5
69	MP1A	Mx	0	3.5
70	MP1B	X	0	3.5
71	MP1B	Z	10.861	3.5
72	MP1B	Mx	.005	3.5
73	MP1C	X	0	3.5
74	MP1C	Z	10.861	3.5
75	MP1C	Mx	-.005	3.5
76	MP2A	X	0	3.5
77	MP2A	Z	14.065	3.5
78	MP2A	Mx	0	3.5
79	MP2B	X	0	3.5
80	MP2B	Z	10.989	3.5
81	MP2B	Mx	.005	3.5
82	MP2C	X	0	3.5
83	MP2C	Z	10.989	3.5
84	MP2C	Mx	-.005	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
85	MP1A	X	0	.5
86	MP1A	Z	15.966	.5
87	MP1A	Mx	0	.5
88	MP1A	X	0	2.5
89	MP1A	Z	15.966	2.5
90	MP1A	Mx	0	2.5
91	MP1B	X	0	.5
92	MP1B	Z	26.289	.5
93	MP1B	Mx	-.017	.5
94	MP1B	X	0	2.5
95	MP1B	Z	26.289	2.5
96	MP1B	Mx	-.017	2.5
97	MP1C	X	0	.5
98	MP1C	Z	26.289	.5
99	MP1C	Mx	.017	.5
100	MP1C	X	0	2.5
101	MP1C	Z	26.289	2.5
102	MP1C	Mx	.017	2.5
103	MP5A	X	0	.5
104	MP5A	Z	15.966	.5
105	MP5A	Mx	0	.5
106	MP5A	X	0	2.5
107	MP5A	Z	15.966	2.5
108	MP5A	Mx	0	2.5
109	MP5B	X	0	.5
110	MP5B	Z	26.289	.5
111	MP5B	Mx	-.017	.5
112	MP5B	X	0	2.5
113	MP5B	Z	26.289	2.5
114	MP5B	Mx	-.017	2.5
115	MP5C	X	0	.5
116	MP5C	Z	26.289	.5
117	MP5C	Mx	.017	.5
118	MP5C	X	0	2.5
119	MP5C	Z	26.289	2.5
120	MP5C	Mx	.017	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	OVP2	X	-8.32	1.5
2	OVP2	Z	14.41	1.5
3	OVP2	Mx	0	1.5
4	MP2A	X	-14.414	2
5	MP2A	Z	24.965	2
6	MP2A	Mx	.027	2
7	MP2A	X	-14.414	6
8	MP2A	Z	24.965	6
9	MP2A	Mx	.027	6
10	MP2B	X	-10.689	2
11	MP2B	Z	18.514	2
12	MP2B	Mx	-.016	2
13	MP2B	X	-10.689	6
14	MP2B	Z	18.514	6
15	MP2B	Mx	-.016	6
16	MP2C	X	-14.414	2
17	MP2C	Z	24.965	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
18	MP2C	Mx	-.006	2
19	MP2C	X	-14.414	6
20	MP2C	Z	24.965	6
21	MP2C	Mx	-.006	6
22	MP2A	X	-14.414	2
23	MP2A	Z	24.965	2
24	MP2A	Mx	-.006	2
25	MP2A	X	-14.414	6
26	MP2A	Z	24.965	6
27	MP2A	Mx	-.006	6
28	MP2B	X	-10.689	2
29	MP2B	Z	18.514	2
30	MP2B	Mx	-.016	2
31	MP2B	X	-10.689	6
32	MP2B	Z	18.514	6
33	MP2B	Mx	-.016	6
34	MP2C	X	-14.414	2
35	MP2C	Z	24.965	2
36	MP2C	Mx	.027	2
37	MP2C	X	-14.414	6
38	MP2C	Z	24.965	6
39	MP2C	Mx	.027	6
40	MP3A	X	-5.82	1.5
41	MP3A	Z	10.081	1.5
42	MP3A	Mx	.004	1.5
43	MP3A	X	-5.82	3.5
44	MP3A	Z	10.081	3.5
45	MP3A	Mx	.004	3.5
46	MP3B	X	-2.878	1.5
47	MP3B	Z	4.986	1.5
48	MP3B	Mx	-.004	1.5
49	MP3B	X	-2.878	3.5
50	MP3B	Z	4.986	3.5
51	MP3B	Mx	-.004	3.5
52	MP3C	X	-5.82	1.5
53	MP3C	Z	10.081	1.5
54	MP3C	Mx	.004	1.5
55	MP3C	X	-5.82	3.5
56	MP3C	Z	10.081	3.5
57	MP3C	Mx	.004	3.5
58	MP2A	X	-1.609	2
59	MP2A	Z	2.787	2
60	MP2A	Mx	-.000804	2
61	MP2B	X	-1.289	2
62	MP2B	Z	2.233	2
63	MP2B	Mx	.001	2
64	MP2C	X	-1.609	2
65	MP2C	Z	2.787	2
66	MP2C	Mx	-.000805	2
67	MP1A	X	-6.498	3.5
68	MP1A	Z	11.256	3.5
69	MP1A	Mx	-.003	3.5
70	MP1B	X	-4.897	3.5
71	MP1B	Z	8.481	3.5
72	MP1B	Mx	.005	3.5
73	MP1C	X	-6.498	3.5
74	MP1C	Z	11.256	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
75	MP1C	Mx	-.003	3.5
76	MP2A	X	-6.52	3.5
77	MP2A	Z	11.293	3.5
78	MP2A	Mx	-.003	3.5
79	MP2B	X	-4.982	3.5
80	MP2B	Z	8.629	3.5
81	MP2B	Mx	.005	3.5
82	MP2C	X	-6.52	3.5
83	MP2C	Z	11.293	3.5
84	MP2C	Mx	-.003	3.5
85	MP1A	X	-9.703	.5
86	MP1A	Z	16.807	.5
87	MP1A	Mx	.007	.5
88	MP1A	X	-9.703	2.5
89	MP1A	Z	16.807	2.5
90	MP1A	Mx	.007	2.5
91	MP1B	X	-14.865	.5
92	MP1B	Z	25.747	.5
93	MP1B	Mx	-.022	.5
94	MP1B	X	-14.865	2.5
95	MP1B	Z	25.747	2.5
96	MP1B	Mx	-.022	2.5
97	MP1C	X	-9.703	.5
98	MP1C	Z	16.807	.5
99	MP1C	Mx	.007	.5
100	MP1C	X	-9.703	2.5
101	MP1C	Z	16.807	2.5
102	MP1C	Mx	.007	2.5
103	MP5A	X	-9.703	.5
104	MP5A	Z	16.807	.5
105	MP5A	Mx	.007	.5
106	MP5A	X	-9.703	2.5
107	MP5A	Z	16.807	2.5
108	MP5A	Mx	.007	2.5
109	MP5B	X	-14.865	.5
110	MP5B	Z	25.747	.5
111	MP5B	Mx	-.022	.5
112	MP5B	X	-14.865	2.5
113	MP5B	Z	25.747	2.5
114	MP5B	Mx	-.022	2.5
115	MP5C	X	-9.703	.5
116	MP5C	Z	16.807	.5
117	MP5C	Mx	.007	.5
118	MP5C	X	-9.703	2.5
119	MP5C	Z	16.807	2.5
120	MP5C	Mx	.007	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	OVP2	X	-12.924	1.5
2	OVP2	Z	7.461	1.5
3	OVP2	Mx	0	1.5
4	MP2A	X	-20.664	2
5	MP2A	Z	11.931	2
6	MP2A	Mx	.023	2
7	MP2A	X	-20.664	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
8	MP2A	Z	11.931	6
9	MP2A	Mx	.023	6
10	MP2B	X	-20.664	2
11	MP2B	Z	11.931	2
12	MP2B	Mx	-.008	2
13	MP2B	X	-20.664	6
14	MP2B	Z	11.931	6
15	MP2B	Mx	-.008	6
16	MP2C	X	-27.115	2
17	MP2C	Z	15.655	2
18	MP2C	Mx	-.021	2
19	MP2C	X	-27.115	6
20	MP2C	Z	15.655	6
21	MP2C	Mx	-.021	6
22	MP2A	X	-20.664	2
23	MP2A	Z	11.931	2
24	MP2A	Mx	.008	2
25	MP2A	X	-20.664	6
26	MP2A	Z	11.931	6
27	MP2A	Mx	.008	6
28	MP2B	X	-20.664	2
29	MP2B	Z	11.931	2
30	MP2B	Mx	-.023	2
31	MP2B	X	-20.664	6
32	MP2B	Z	11.931	6
33	MP2B	Mx	-.023	6
34	MP2C	X	-27.115	2
35	MP2C	Z	15.655	2
36	MP2C	Mx	.021	2
37	MP2C	X	-27.115	6
38	MP2C	Z	15.655	6
39	MP2C	Mx	.021	6
40	MP3A	X	-6.684	1.5
41	MP3A	Z	3.859	1.5
42	MP3A	Mx	.005	1.5
43	MP3A	X	-6.684	3.5
44	MP3A	Z	3.859	3.5
45	MP3A	Mx	.005	3.5
46	MP3B	X	-6.684	1.5
47	MP3B	Z	3.859	1.5
48	MP3B	Mx	-.005	1.5
49	MP3B	X	-6.684	3.5
50	MP3B	Z	3.859	3.5
51	MP3B	Mx	-.005	3.5
52	MP3C	X	-11.779	1.5
53	MP3C	Z	6.801	1.5
54	MP3C	Mx	0	1.5
55	MP3C	X	-11.779	3.5
56	MP3C	Z	6.801	3.5
57	MP3C	Mx	0	3.5
58	MP2A	X	-2.418	2
59	MP2A	Z	1.396	2
60	MP2A	Mx	-.001	2
61	MP2B	X	-2.418	2
62	MP2B	Z	1.396	2
63	MP2B	Mx	.001	2
64	MP2C	X	-2.971	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
65	MP2C	Z	1.716	2
66	MP2C	Mx	0	2
67	MP1A	X	-9.406	3.5
68	MP1A	Z	5.431	3.5
69	MP1A	Mx	-.005	3.5
70	MP1B	X	-9.406	3.5
71	MP1B	Z	5.431	3.5
72	MP1B	Mx	.005	3.5
73	MP1C	X	-12.18	3.5
74	MP1C	Z	7.032	3.5
75	MP1C	Mx	0	3.5
76	MP2A	X	-9.517	3.5
77	MP2A	Z	5.495	3.5
78	MP2A	Mx	-.005	3.5
79	MP2B	X	-9.517	3.5
80	MP2B	Z	5.495	3.5
81	MP2B	Mx	.005	3.5
82	MP2C	X	-12.18	3.5
83	MP2C	Z	7.032	3.5
84	MP2C	Mx	0	3.5
85	MP1A	X	-22.767	.5
86	MP1A	Z	13.144	.5
87	MP1A	Mx	.017	.5
88	MP1A	X	-22.767	2.5
89	MP1A	Z	13.144	2.5
90	MP1A	Mx	.017	2.5
91	MP1B	X	-22.767	.5
92	MP1B	Z	13.144	.5
93	MP1B	Mx	-.017	.5
94	MP1B	X	-22.767	2.5
95	MP1B	Z	13.144	2.5
96	MP1B	Mx	-.017	2.5
97	MP1C	X	-13.827	.5
98	MP1C	Z	7.983	.5
99	MP1C	Mx	0	.5
100	MP1C	X	-13.827	2.5
101	MP1C	Z	7.983	2.5
102	MP1C	Mx	0	2.5
103	MP5A	X	-22.767	.5
104	MP5A	Z	13.144	.5
105	MP5A	Mx	.017	.5
106	MP5A	X	-22.767	2.5
107	MP5A	Z	13.144	2.5
108	MP5A	Mx	.017	2.5
109	MP5B	X	-22.767	.5
110	MP5B	Z	13.144	.5
111	MP5B	Mx	-.017	.5
112	MP5B	X	-22.767	2.5
113	MP5B	Z	13.144	2.5
114	MP5B	Mx	-.017	2.5
115	MP5C	X	-13.827	.5
116	MP5C	Z	7.983	.5
117	MP5C	Mx	0	.5
118	MP5C	X	-13.827	2.5
119	MP5C	Z	7.983	2.5
120	MP5C	Mx	0	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	OVP2	X	-16.639	1.5
2	OVP2	Z	0	1.5
3	OVP2	Mx	0	1.5
4	MP2A	X	-21.378	2
5	MP2A	Z	0	2
6	MP2A	Mx	.016	2
7	MP2A	X	-21.378	6
8	MP2A	Z	0	6
9	MP2A	Mx	.016	6
10	MP2B	X	-28.827	2
11	MP2B	Z	0	2
12	MP2B	Mx	.006	2
13	MP2B	X	-28.827	6
14	MP2B	Z	0	6
15	MP2B	Mx	.006	6
16	MP2C	X	-28.827	2
17	MP2C	Z	0	2
18	MP2C	Mx	-.027	2
19	MP2C	X	-28.827	6
20	MP2C	Z	0	6
21	MP2C	Mx	-.027	6
22	MP2A	X	-21.378	2
23	MP2A	Z	0	2
24	MP2A	Mx	.016	2
25	MP2A	X	-21.378	6
26	MP2A	Z	0	6
27	MP2A	Mx	.016	6
28	MP2B	X	-28.827	2
29	MP2B	Z	0	2
30	MP2B	Mx	-.027	2
31	MP2B	X	-28.827	6
32	MP2B	Z	0	6
33	MP2B	Mx	-.027	6
34	MP2C	X	-28.827	2
35	MP2C	Z	0	2
36	MP2C	Mx	.006	2
37	MP2C	X	-28.827	6
38	MP2C	Z	0	6
39	MP2C	Mx	.006	6
40	MP3A	X	-5.757	1.5
41	MP3A	Z	0	1.5
42	MP3A	Mx	.004	1.5
43	MP3A	X	-5.757	3.5
44	MP3A	Z	0	3.5
45	MP3A	Mx	.004	3.5
46	MP3B	X	-11.64	1.5
47	MP3B	Z	0	1.5
48	MP3B	Mx	-.004	1.5
49	MP3B	X	-11.64	3.5
50	MP3B	Z	0	3.5
51	MP3B	Mx	-.004	3.5
52	MP3C	X	-11.64	1.5
53	MP3C	Z	0	1.5
54	MP3C	Mx	-.004	1.5
55	MP3C	X	-11.64	3.5
56	MP3C	Z	0	3.5
57	MP3C	Mx	-.004	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP2A	X	-2.579	2
59	MP2A	Z	0	2
60	MP2A	Mx	-.001	2
61	MP2B	X	-3.218	2
62	MP2B	Z	0	2
63	MP2B	Mx	.000804	2
64	MP2C	X	-3.218	2
65	MP2C	Z	0	2
66	MP2C	Mx	.000804	2
67	MP1A	X	-9.793	3.5
68	MP1A	Z	0	3.5
69	MP1A	Mx	-.005	3.5
70	MP1B	X	-12.997	3.5
71	MP1B	Z	0	3.5
72	MP1B	Mx	.003	3.5
73	MP1C	X	-12.997	3.5
74	MP1C	Z	0	3.5
75	MP1C	Mx	.003	3.5
76	MP2A	X	-9.964	3.5
77	MP2A	Z	0	3.5
78	MP2A	Mx	-.005	3.5
79	MP2B	X	-13.04	3.5
80	MP2B	Z	0	3.5
81	MP2B	Mx	.003	3.5
82	MP2C	X	-13.04	3.5
83	MP2C	Z	0	3.5
84	MP2C	Mx	.003	3.5
85	MP1A	X	-29.73	.5
86	MP1A	Z	0	.5
87	MP1A	Mx	.022	.5
88	MP1A	X	-29.73	2.5
89	MP1A	Z	0	2.5
90	MP1A	Mx	.022	2.5
91	MP1B	X	-19.407	.5
92	MP1B	Z	0	.5
93	MP1B	Mx	-.007	.5
94	MP1B	X	-19.407	2.5
95	MP1B	Z	0	2.5
96	MP1B	Mx	-.007	2.5
97	MP1C	X	-19.407	.5
98	MP1C	Z	0	.5
99	MP1C	Mx	-.007	.5
100	MP1C	X	-19.407	2.5
101	MP1C	Z	0	2.5
102	MP1C	Mx	-.007	2.5
103	MP5A	X	-29.73	.5
104	MP5A	Z	0	.5
105	MP5A	Mx	.022	.5
106	MP5A	X	-29.73	2.5
107	MP5A	Z	0	2.5
108	MP5A	Mx	.022	2.5
109	MP5B	X	-19.407	.5
110	MP5B	Z	0	.5
111	MP5B	Mx	-.007	.5
112	MP5B	X	-19.407	2.5
113	MP5B	Z	0	2.5
114	MP5B	Mx	-.007	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
115	MP5C	X	-19.407	.5
116	MP5C	Z	0	.5
117	MP5C	Mx	-.007	.5
118	MP5C	X	-19.407	2.5
119	MP5C	Z	0	2.5
120	MP5C	Mx	-.007	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	OVP2	X	-17.383	1.5
2	OVP2	Z	-10.036	1.5
3	OVP2	Mx	0	1.5
4	MP2A	X	-20.664	2
5	MP2A	Z	-11.931	2
6	MP2A	Mx	.008	2
7	MP2A	X	-20.664	6
8	MP2A	Z	-11.931	6
9	MP2A	Mx	.008	6
10	MP2B	X	-27.115	2
11	MP2B	Z	-15.655	2
12	MP2B	Mx	.021	2
13	MP2B	X	-27.115	6
14	MP2B	Z	-15.655	6
15	MP2B	Mx	.021	6
16	MP2C	X	-20.664	2
17	MP2C	Z	-11.931	2
18	MP2C	Mx	-.023	2
19	MP2C	X	-20.664	6
20	MP2C	Z	-11.931	6
21	MP2C	Mx	-.023	6
22	MP2A	X	-20.664	2
23	MP2A	Z	-11.931	2
24	MP2A	Mx	.023	2
25	MP2A	X	-20.664	6
26	MP2A	Z	-11.931	6
27	MP2A	Mx	.023	6
28	MP2B	X	-27.115	2
29	MP2B	Z	-15.655	2
30	MP2B	Mx	-.021	2
31	MP2B	X	-27.115	6
32	MP2B	Z	-15.655	6
33	MP2B	Mx	-.021	6
34	MP2C	X	-20.664	2
35	MP2C	Z	-11.931	2
36	MP2C	Mx	-.008	2
37	MP2C	X	-20.664	6
38	MP2C	Z	-11.931	6
39	MP2C	Mx	-.008	6
40	MP3A	X	-6.684	1.5
41	MP3A	Z	-3.859	1.5
42	MP3A	Mx	.005	1.5
43	MP3A	X	-6.684	3.5
44	MP3A	Z	-3.859	3.5
45	MP3A	Mx	.005	3.5
46	MP3B	X	-11.779	1.5
47	MP3B	Z	-6.801	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
48	MP3B	Mx	0	1.5
49	MP3B	X	-11.779	3.5
50	MP3B	Z	-6.801	3.5
51	MP3B	Mx	0	3.5
52	MP3C	X	-6.684	1.5
53	MP3C	Z	-3.859	1.5
54	MP3C	Mx	-.005	1.5
55	MP3C	X	-6.684	3.5
56	MP3C	Z	-3.859	3.5
57	MP3C	Mx	-.005	3.5
58	MP2A	X	-2.418	2
59	MP2A	Z	-1.396	2
60	MP2A	Mx	-.001	2
61	MP2B	X	-2.971	2
62	MP2B	Z	-1.716	2
63	MP2B	Mx	0	2
64	MP2C	X	-2.418	2
65	MP2C	Z	-1.396	2
66	MP2C	Mx	.001	2
67	MP1A	X	-9.406	3.5
68	MP1A	Z	-5.431	3.5
69	MP1A	Mx	-.005	3.5
70	MP1B	X	-12.18	3.5
71	MP1B	Z	-7.032	3.5
72	MP1B	Mx	0	3.5
73	MP1C	X	-9.406	3.5
74	MP1C	Z	-5.431	3.5
75	MP1C	Mx	.005	3.5
76	MP2A	X	-9.517	3.5
77	MP2A	Z	-5.495	3.5
78	MP2A	Mx	-.005	3.5
79	MP2B	X	-12.18	3.5
80	MP2B	Z	-7.032	3.5
81	MP2B	Mx	0	3.5
82	MP2C	X	-9.517	3.5
83	MP2C	Z	-5.495	3.5
84	MP2C	Mx	.005	3.5
85	MP1A	X	-22.767	.5
86	MP1A	Z	-13.144	.5
87	MP1A	Mx	.017	.5
88	MP1A	X	-22.767	2.5
89	MP1A	Z	-13.144	2.5
90	MP1A	Mx	.017	2.5
91	MP1B	X	-13.827	.5
92	MP1B	Z	-7.983	.5
93	MP1B	Mx	0	.5
94	MP1B	X	-13.827	2.5
95	MP1B	Z	-7.983	2.5
96	MP1B	Mx	0	2.5
97	MP1C	X	-22.767	.5
98	MP1C	Z	-13.144	.5
99	MP1C	Mx	-.017	.5
100	MP1C	X	-22.767	2.5
101	MP1C	Z	-13.144	2.5
102	MP1C	Mx	-.017	2.5
103	MP5A	X	-22.767	.5
104	MP5A	Z	-13.144	.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
105	MP5A	Mx	.017	.5
106	MP5A	X	-22.767	2.5
107	MP5A	Z	-13.144	2.5
108	MP5A	Mx	.017	2.5
109	MP5B	X	-13.827	.5
110	MP5B	Z	-7.983	.5
111	MP5B	Mx	0	.5
112	MP5B	X	-13.827	2.5
113	MP5B	Z	-7.983	2.5
114	MP5B	Mx	0	2.5
115	MP5C	X	-22.767	.5
116	MP5C	Z	-13.144	.5
117	MP5C	Mx	-.017	.5
118	MP5C	X	-22.767	2.5
119	MP5C	Z	-13.144	2.5
120	MP5C	Mx	-.017	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	OVP2	X	-10.895	1.5
2	OVP2	Z	-18.87	1.5
3	OVP2	Mx	0	1.5
4	MP2A	X	-14.414	2
5	MP2A	Z	-24.965	2
6	MP2A	Mx	-.006	2
7	MP2A	X	-14.414	6
8	MP2A	Z	-24.965	6
9	MP2A	Mx	-.006	6
10	MP2B	X	-14.414	2
11	MP2B	Z	-24.965	2
12	MP2B	Mx	.027	2
13	MP2B	X	-14.414	6
14	MP2B	Z	-24.965	6
15	MP2B	Mx	.027	6
16	MP2C	X	-10.689	2
17	MP2C	Z	-18.514	2
18	MP2C	Mx	-.016	2
19	MP2C	X	-10.689	6
20	MP2C	Z	-18.514	6
21	MP2C	Mx	-.016	6
22	MP2A	X	-14.414	2
23	MP2A	Z	-24.965	2
24	MP2A	Mx	.027	2
25	MP2A	X	-14.414	6
26	MP2A	Z	-24.965	6
27	MP2A	Mx	.027	6
28	MP2B	X	-14.414	2
29	MP2B	Z	-24.965	2
30	MP2B	Mx	-.006	2
31	MP2B	X	-14.414	6
32	MP2B	Z	-24.965	6
33	MP2B	Mx	-.006	6
34	MP2C	X	-10.689	2
35	MP2C	Z	-18.514	2
36	MP2C	Mx	-.016	2
37	MP2C	X	-10.689	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
38	MP2C	Z	-18.514	6
39	MP2C	Mx	-.016	6
40	MP3A	X	-5.82	1.5
41	MP3A	Z	-10.081	1.5
42	MP3A	Mx	.004	1.5
43	MP3A	X	-5.82	3.5
44	MP3A	Z	-10.081	3.5
45	MP3A	Mx	.004	3.5
46	MP3B	X	-5.82	1.5
47	MP3B	Z	-10.081	1.5
48	MP3B	Mx	.004	1.5
49	MP3B	X	-5.82	3.5
50	MP3B	Z	-10.081	3.5
51	MP3B	Mx	.004	3.5
52	MP3C	X	-2.878	1.5
53	MP3C	Z	-4.986	1.5
54	MP3C	Mx	-.004	1.5
55	MP3C	X	-2.878	3.5
56	MP3C	Z	-4.986	3.5
57	MP3C	Mx	-.004	3.5
58	MP2A	X	-1.609	2
59	MP2A	Z	-2.787	2
60	MP2A	Mx	-.000804	2
61	MP2B	X	-1.609	2
62	MP2B	Z	-2.787	2
63	MP2B	Mx	-.000805	2
64	MP2C	X	-1.289	2
65	MP2C	Z	-2.233	2
66	MP2C	Mx	.001	2
67	MP1A	X	-6.498	3.5
68	MP1A	Z	-11.256	3.5
69	MP1A	Mx	-.003	3.5
70	MP1B	X	-6.498	3.5
71	MP1B	Z	-11.256	3.5
72	MP1B	Mx	-.003	3.5
73	MP1C	X	-4.897	3.5
74	MP1C	Z	-8.481	3.5
75	MP1C	Mx	.005	3.5
76	MP2A	X	-6.52	3.5
77	MP2A	Z	-11.293	3.5
78	MP2A	Mx	-.003	3.5
79	MP2B	X	-6.52	3.5
80	MP2B	Z	-11.293	3.5
81	MP2B	Mx	-.003	3.5
82	MP2C	X	-4.982	3.5
83	MP2C	Z	-8.629	3.5
84	MP2C	Mx	.005	3.5
85	MP1A	X	-9.703	.5
86	MP1A	Z	-16.807	.5
87	MP1A	Mx	.007	.5
88	MP1A	X	-9.703	2.5
89	MP1A	Z	-16.807	2.5
90	MP1A	Mx	.007	2.5
91	MP1B	X	-9.703	.5
92	MP1B	Z	-16.807	.5
93	MP1B	Mx	.007	.5
94	MP1B	X	-9.703	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
95	MP1B	Z	-16.807	2.5
96	MP1B	Mx	.007	2.5
97	MP1C	X	-14.865	.5
98	MP1C	Z	-25.747	.5
99	MP1C	Mx	-.022	.5
100	MP1C	X	-14.865	2.5
101	MP1C	Z	-25.747	2.5
102	MP1C	Mx	-.022	2.5
103	MP5A	X	-9.703	.5
104	MP5A	Z	-16.807	.5
105	MP5A	Mx	.007	.5
106	MP5A	X	-9.703	2.5
107	MP5A	Z	-16.807	2.5
108	MP5A	Mx	.007	2.5
109	MP5B	X	-9.703	.5
110	MP5B	Z	-16.807	.5
111	MP5B	Mx	.007	.5
112	MP5B	X	-9.703	2.5
113	MP5B	Z	-16.807	2.5
114	MP5B	Mx	.007	2.5
115	MP5C	X	-14.865	.5
116	MP5C	Z	-25.747	.5
117	MP5C	Mx	-.022	.5
118	MP5C	X	-14.865	2.5
119	MP5C	Z	-25.747	2.5
120	MP5C	Mx	-.022	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	OVP2	X	0	1.5
2	OVP2	Z	-6.714	1.5
3	OVP2	Mx	0	1.5
4	MP2A	X	0	2
5	MP2A	Z	-10.262	2
6	MP2A	Mx	-.007	2
7	MP2A	X	0	6
8	MP2A	Z	-10.262	6
9	MP2A	Mx	-.007	6
10	MP2B	X	0	2
11	MP2B	Z	-7.621	2
12	MP2B	Mx	.007	2
13	MP2B	X	0	6
14	MP2B	Z	-7.621	6
15	MP2B	Mx	.007	6
16	MP2C	X	0	2
17	MP2C	Z	-7.621	2
18	MP2C	Mx	-.002	2
19	MP2C	X	0	6
20	MP2C	Z	-7.621	6
21	MP2C	Mx	-.002	6
22	MP2A	X	0	2
23	MP2A	Z	-10.262	2
24	MP2A	Mx	.007	2
25	MP2A	X	0	6
26	MP2A	Z	-10.262	6
27	MP2A	Mx	.007	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
28	MP2B	X	0	2
29	MP2B	Z	-7.621	2
30	MP2B	Mx	.002	2
31	MP2B	X	0	6
32	MP2B	Z	-7.621	6
33	MP2B	Mx	.002	6
34	MP2C	X	0	2
35	MP2C	Z	-7.621	2
36	MP2C	Mx	-.007	2
37	MP2C	X	0	6
38	MP2C	Z	-7.621	6
39	MP2C	Mx	-.007	6
40	MP3A	X	0	1.5
41	MP3A	Z	-3.56	1.5
42	MP3A	Mx	0	1.5
43	MP3A	X	0	3.5
44	MP3A	Z	-3.56	3.5
45	MP3A	Mx	0	3.5
46	MP3B	X	0	1.5
47	MP3B	Z	-1.828	1.5
48	MP3B	Mx	.001	1.5
49	MP3B	X	0	3.5
50	MP3B	Z	-1.828	3.5
51	MP3B	Mx	.001	3.5
52	MP3C	X	0	1.5
53	MP3C	Z	-1.828	1.5
54	MP3C	Mx	-.001	1.5
55	MP3C	X	0	3.5
56	MP3C	Z	-1.828	3.5
57	MP3C	Mx	-.001	3.5
58	MP2A	X	0	2
59	MP2A	Z	-.834	2
60	MP2A	Mx	0	2
61	MP2B	X	0	2
62	MP2B	Z	-.641	2
63	MP2B	Mx	-.000278	2
64	MP2C	X	0	2
65	MP2C	Z	-.641	2
66	MP2C	Mx	.000278	2
67	MP1A	X	0	3.5
68	MP1A	Z	-3.492	3.5
69	MP1A	Mx	0	3.5
70	MP1B	X	0	3.5
71	MP1B	Z	-2.63	3.5
72	MP1B	Mx	-.001	3.5
73	MP1C	X	0	3.5
74	MP1C	Z	-2.63	3.5
75	MP1C	Mx	.001	3.5
76	MP2A	X	0	3.5
77	MP2A	Z	-4.213	3.5
78	MP2A	Mx	0	3.5
79	MP2B	X	0	3.5
80	MP2B	Z	-3.208	3.5
81	MP2B	Mx	-.001	3.5
82	MP2C	X	0	3.5
83	MP2C	Z	-3.208	3.5
84	MP2C	Mx	.001	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
85	MP1A	X	0	.5
86	MP1A	Z	-4.878	.5
87	MP1A	Mx	0	.5
88	MP1A	X	0	2.5
89	MP1A	Z	-4.878	2.5
90	MP1A	Mx	0	2.5
91	MP1B	X	0	.5
92	MP1B	Z	-8.509	.5
93	MP1B	Mx	.006	.5
94	MP1B	X	0	2.5
95	MP1B	Z	-8.509	2.5
96	MP1B	Mx	.006	2.5
97	MP1C	X	0	.5
98	MP1C	Z	-8.509	.5
99	MP1C	Mx	-.006	.5
100	MP1C	X	0	2.5
101	MP1C	Z	-8.509	2.5
102	MP1C	Mx	-.006	2.5
103	MP5A	X	0	.5
104	MP5A	Z	-4.878	.5
105	MP5A	Mx	0	.5
106	MP5A	X	0	2.5
107	MP5A	Z	-4.878	2.5
108	MP5A	Mx	0	2.5
109	MP5B	X	0	.5
110	MP5B	Z	-8.509	.5
111	MP5B	Mx	.006	.5
112	MP5B	X	0	2.5
113	MP5B	Z	-8.509	2.5
114	MP5B	Mx	.006	2.5
115	MP5C	X	0	.5
116	MP5C	Z	-8.509	.5
117	MP5C	Mx	-.006	.5
118	MP5C	X	0	2.5
119	MP5C	Z	-8.509	2.5
120	MP5C	Mx	-.006	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	OVP2	X	2.929	1.5
2	OVP2	Z	-5.073	1.5
3	OVP2	Mx	0	1.5
4	MP2A	X	4.691	2
5	MP2A	Z	-8.125	2
6	MP2A	Mx	-.009	2
7	MP2A	X	4.691	6
8	MP2A	Z	-8.125	6
9	MP2A	Mx	-.009	6
10	MP2B	X	3.37	2
11	MP2B	Z	-5.837	2
12	MP2B	Mx	.005	2
13	MP2B	X	3.37	6
14	MP2B	Z	-5.837	6
15	MP2B	Mx	.005	6
16	MP2C	X	4.691	2
17	MP2C	Z	-8.125	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
18	MP2C	Mx	.002	2
19	MP2C	X	4.691	6
20	MP2C	Z	-8.125	6
21	MP2C	Mx	.002	6
22	MP2A	X	4.691	2
23	MP2A	Z	-8.125	2
24	MP2A	Mx	.002	2
25	MP2A	X	4.691	6
26	MP2A	Z	-8.125	6
27	MP2A	Mx	.002	6
28	MP2B	X	3.37	2
29	MP2B	Z	-5.837	2
30	MP2B	Mx	.005	2
31	MP2B	X	3.37	6
32	MP2B	Z	-5.837	6
33	MP2B	Mx	.005	6
34	MP2C	X	4.691	2
35	MP2C	Z	-8.125	2
36	MP2C	Mx	-.009	2
37	MP2C	X	4.691	6
38	MP2C	Z	-8.125	6
39	MP2C	Mx	-.009	6
40	MP3A	X	1.491	1.5
41	MP3A	Z	-2.583	1.5
42	MP3A	Mx	-.001	1.5
43	MP3A	X	1.491	3.5
44	MP3A	Z	-2.583	3.5
45	MP3A	Mx	-.001	3.5
46	MP3B	X	.625	1.5
47	MP3B	Z	-1.083	1.5
48	MP3B	Mx	.000938	1.5
49	MP3B	X	.625	3.5
50	MP3B	Z	-1.083	3.5
51	MP3B	Mx	.000938	3.5
52	MP3C	X	1.491	1.5
53	MP3C	Z	-2.583	1.5
54	MP3C	Mx	-.001	1.5
55	MP3C	X	1.491	3.5
56	MP3C	Z	-2.583	3.5
57	MP3C	Mx	-.001	3.5
58	MP2A	X	.385	2
59	MP2A	Z	-.666	2
60	MP2A	Mx	.000193	2
61	MP2B	X	.288	2
62	MP2B	Z	-.499	2
63	MP2B	Mx	-.000288	2
64	MP2C	X	.385	2
65	MP2C	Z	-.666	2
66	MP2C	Mx	.000192	2
67	MP1A	X	1.602	3.5
68	MP1A	Z	-2.775	3.5
69	MP1A	Mx	.000801	3.5
70	MP1B	X	1.172	3.5
71	MP1B	Z	-2.029	3.5
72	MP1B	Mx	-.001	3.5
73	MP1C	X	1.602	3.5
74	MP1C	Z	-2.775	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
75	MP1C	Mx	.000801	3.5
76	MP2A	X	1.939	3.5
77	MP2A	Z	-3.358	3.5
78	MP2A	Mx	.00097	3.5
79	MP2B	X	1.436	3.5
80	MP2B	Z	-2.488	3.5
81	MP2B	Mx	-.001	3.5
82	MP2C	X	1.939	3.5
83	MP2C	Z	-3.358	3.5
84	MP2C	Mx	.000969	3.5
85	MP1A	X	3.044	.5
86	MP1A	Z	-5.273	.5
87	MP1A	Mx	-.002	.5
88	MP1A	X	3.044	2.5
89	MP1A	Z	-5.273	2.5
90	MP1A	Mx	-.002	2.5
91	MP1B	X	4.86	.5
92	MP1B	Z	-8.418	.5
93	MP1B	Mx	.007	.5
94	MP1B	X	4.86	2.5
95	MP1B	Z	-8.418	2.5
96	MP1B	Mx	.007	2.5
97	MP1C	X	3.044	.5
98	MP1C	Z	-5.273	.5
99	MP1C	Mx	-.002	.5
100	MP1C	X	3.044	2.5
101	MP1C	Z	-5.273	2.5
102	MP1C	Mx	-.002	2.5
103	MP5A	X	3.044	.5
104	MP5A	Z	-5.273	.5
105	MP5A	Mx	-.002	.5
106	MP5A	X	3.044	2.5
107	MP5A	Z	-5.273	2.5
108	MP5A	Mx	-.002	2.5
109	MP5B	X	4.86	.5
110	MP5B	Z	-8.418	.5
111	MP5B	Mx	.007	.5
112	MP5B	X	4.86	2.5
113	MP5B	Z	-8.418	2.5
114	MP5B	Mx	.007	2.5
115	MP5C	X	3.044	.5
116	MP5C	Z	-5.273	.5
117	MP5C	Mx	-.002	.5
118	MP5C	X	3.044	2.5
119	MP5C	Z	-5.273	2.5
120	MP5C	Mx	-.002	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	OVP2	X	4.702	1.5
2	OVP2	Z	-2.715	1.5
3	OVP2	Mx	0	1.5
4	MP2A	X	6.6	2
5	MP2A	Z	-3.81	2
6	MP2A	Mx	-.007	2
7	MP2A	X	6.6	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
8	MP2A	Z	-3.81	6
9	MP2A	Mx	-.007	6
10	MP2B	X	6.6	2
11	MP2B	Z	-3.81	2
12	MP2B	Mx	.002	2
13	MP2B	X	6.6	6
14	MP2B	Z	-3.81	6
15	MP2B	Mx	.002	6
16	MP2C	X	8.887	2
17	MP2C	Z	-5.131	2
18	MP2C	Mx	.007	2
19	MP2C	X	8.887	6
20	MP2C	Z	-5.131	6
21	MP2C	Mx	.007	6
22	MP2A	X	6.6	2
23	MP2A	Z	-3.81	2
24	MP2A	Mx	-.002	2
25	MP2A	X	6.6	6
26	MP2A	Z	-3.81	6
27	MP2A	Mx	-.002	6
28	MP2B	X	6.6	2
29	MP2B	Z	-3.81	2
30	MP2B	Mx	.007	2
31	MP2B	X	6.6	6
32	MP2B	Z	-3.81	6
33	MP2B	Mx	.007	6
34	MP2C	X	8.887	2
35	MP2C	Z	-5.131	2
36	MP2C	Mx	-.007	2
37	MP2C	X	8.887	6
38	MP2C	Z	-5.131	6
39	MP2C	Mx	-.007	6
40	MP3A	X	1.583	1.5
41	MP3A	Z	-.914	1.5
42	MP3A	Mx	-.001	1.5
43	MP3A	X	1.583	3.5
44	MP3A	Z	-.914	3.5
45	MP3A	Mx	-.001	3.5
46	MP3B	X	1.583	1.5
47	MP3B	Z	-.914	1.5
48	MP3B	Mx	.001	1.5
49	MP3B	X	1.583	3.5
50	MP3B	Z	-.914	3.5
51	MP3B	Mx	.001	3.5
52	MP3C	X	3.083	1.5
53	MP3C	Z	-1.78	1.5
54	MP3C	Mx	0	1.5
55	MP3C	X	3.083	3.5
56	MP3C	Z	-1.78	3.5
57	MP3C	Mx	0	3.5
58	MP2A	X	.555	2
59	MP2A	Z	-.32	2
60	MP2A	Mx	.000278	2
61	MP2B	X	.555	2
62	MP2B	Z	-.32	2
63	MP2B	Mx	-.000277	2
64	MP2C	X	.722	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
65	MP2C	Z	-.417	2
66	MP2C	Mx	0	2
67	MP1A	X	2.278	3.5
68	MP1A	Z	-1.315	3.5
69	MP1A	Mx	.001	3.5
70	MP1B	X	2.278	3.5
71	MP1B	Z	-1.315	3.5
72	MP1B	Mx	-.001	3.5
73	MP1C	X	3.024	3.5
74	MP1C	Z	-1.746	3.5
75	MP1C	Mx	0	3.5
76	MP2A	X	2.778	3.5
77	MP2A	Z	-1.604	3.5
78	MP2A	Mx	.001	3.5
79	MP2B	X	2.778	3.5
80	MP2B	Z	-1.604	3.5
81	MP2B	Mx	-.001	3.5
82	MP2C	X	3.649	3.5
83	MP2C	Z	-2.107	3.5
84	MP2C	Mx	0	3.5
85	MP1A	X	7.369	.5
86	MP1A	Z	-4.255	.5
87	MP1A	Mx	-.006	.5
88	MP1A	X	7.369	2.5
89	MP1A	Z	-4.255	2.5
90	MP1A	Mx	-.006	2.5
91	MP1B	X	7.369	.5
92	MP1B	Z	-4.255	.5
93	MP1B	Mx	.006	.5
94	MP1B	X	7.369	2.5
95	MP1B	Z	-4.255	2.5
96	MP1B	Mx	.006	2.5
97	MP1C	X	4.224	.5
98	MP1C	Z	-2.439	.5
99	MP1C	Mx	0	.5
100	MP1C	X	4.224	2.5
101	MP1C	Z	-2.439	2.5
102	MP1C	Mx	0	2.5
103	MP5A	X	7.369	.5
104	MP5A	Z	-4.255	.5
105	MP5A	Mx	-.006	.5
106	MP5A	X	7.369	2.5
107	MP5A	Z	-4.255	2.5
108	MP5A	Mx	-.006	2.5
109	MP5B	X	7.369	.5
110	MP5B	Z	-4.255	.5
111	MP5B	Mx	.006	.5
112	MP5B	X	7.369	2.5
113	MP5B	Z	-4.255	2.5
114	MP5B	Mx	.006	2.5
115	MP5C	X	4.224	.5
116	MP5C	Z	-2.439	.5
117	MP5C	Mx	0	.5
118	MP5C	X	4.224	2.5
119	MP5C	Z	-2.439	2.5
120	MP5C	Mx	0	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	OVP2	X	5.858	1.5
2	OVP2	Z	0	1.5
3	OVP2	Mx	0	1.5
4	MP2A	X	6.74	2
5	MP2A	Z	0	2
6	MP2A	Mx	-.005	2
7	MP2A	X	6.74	6
8	MP2A	Z	0	6
9	MP2A	Mx	-.005	6
10	MP2B	X	9.382	2
11	MP2B	Z	0	2
12	MP2B	Mx	-.002	2
13	MP2B	X	9.382	6
14	MP2B	Z	0	6
15	MP2B	Mx	-.002	6
16	MP2C	X	9.382	2
17	MP2C	Z	0	2
18	MP2C	Mx	.009	2
19	MP2C	X	9.382	6
20	MP2C	Z	0	6
21	MP2C	Mx	.009	6
22	MP2A	X	6.74	2
23	MP2A	Z	0	2
24	MP2A	Mx	-.005	2
25	MP2A	X	6.74	6
26	MP2A	Z	0	6
27	MP2A	Mx	-.005	6
28	MP2B	X	9.382	2
29	MP2B	Z	0	2
30	MP2B	Mx	.009	2
31	MP2B	X	9.382	6
32	MP2B	Z	0	6
33	MP2B	Mx	.009	6
34	MP2C	X	9.382	2
35	MP2C	Z	0	2
36	MP2C	Mx	-.002	2
37	MP2C	X	9.382	6
38	MP2C	Z	0	6
39	MP2C	Mx	-.002	6
40	MP3A	X	1.25	1.5
41	MP3A	Z	0	1.5
42	MP3A	Mx	-.000938	1.5
43	MP3A	X	1.25	3.5
44	MP3A	Z	0	3.5
45	MP3A	Mx	-.000938	3.5
46	MP3B	X	2.982	1.5
47	MP3B	Z	0	1.5
48	MP3B	Mx	.001	1.5
49	MP3B	X	2.982	3.5
50	MP3B	Z	0	3.5
51	MP3B	Mx	.001	3.5
52	MP3C	X	2.982	1.5
53	MP3C	Z	0	1.5
54	MP3C	Mx	.001	1.5
55	MP3C	X	2.982	3.5
56	MP3C	Z	0	3.5
57	MP3C	Mx	.001	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP2A	X	.577	2
59	MP2A	Z	0	2
60	MP2A	Mx	.000288	2
61	MP2B	X	.769	2
62	MP2B	Z	0	2
63	MP2B	Mx	-.000192	2
64	MP2C	X	.769	2
65	MP2C	Z	0	2
66	MP2C	Mx	-.000192	2
67	MP1A	X	2.343	3.5
68	MP1A	Z	0	3.5
69	MP1A	Mx	.001	3.5
70	MP1B	X	3.205	3.5
71	MP1B	Z	0	3.5
72	MP1B	Mx	-.000801	3.5
73	MP1C	X	3.205	3.5
74	MP1C	Z	0	3.5
75	MP1C	Mx	-.000801	3.5
76	MP2A	X	2.873	3.5
77	MP2A	Z	0	3.5
78	MP2A	Mx	.001	3.5
79	MP2B	X	3.878	3.5
80	MP2B	Z	0	3.5
81	MP2B	Mx	-.00097	3.5
82	MP2C	X	3.878	3.5
83	MP2C	Z	0	3.5
84	MP2C	Mx	-.00097	3.5
85	MP1A	X	9.72	.5
86	MP1A	Z	0	.5
87	MP1A	Mx	-.007	.5
88	MP1A	X	9.72	2.5
89	MP1A	Z	0	2.5
90	MP1A	Mx	-.007	2.5
91	MP1B	X	6.088	.5
92	MP1B	Z	0	.5
93	MP1B	Mx	.002	.5
94	MP1B	X	6.088	2.5
95	MP1B	Z	0	2.5
96	MP1B	Mx	.002	2.5
97	MP1C	X	6.088	.5
98	MP1C	Z	0	.5
99	MP1C	Mx	.002	.5
100	MP1C	X	6.088	2.5
101	MP1C	Z	0	2.5
102	MP1C	Mx	.002	2.5
103	MP5A	X	9.72	.5
104	MP5A	Z	0	.5
105	MP5A	Mx	-.007	.5
106	MP5A	X	9.72	2.5
107	MP5A	Z	0	2.5
108	MP5A	Mx	-.007	2.5
109	MP5B	X	6.088	.5
110	MP5B	Z	0	.5
111	MP5B	Mx	.002	.5
112	MP5B	X	6.088	2.5
113	MP5B	Z	0	2.5
114	MP5B	Mx	.002	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
115	MP5C	X	6.088	.5
116	MP5C	Z	0	.5
117	MP5C	Mx	.002	.5
118	MP5C	X	6.088	2.5
119	MP5C	Z	0	2.5
120	MP5C	Mx	.002	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	OVP2	X	5.814	1.5
2	OVP2	Z	3.357	1.5
3	OVP2	Mx	0	1.5
4	MP2A	X	6.6	2
5	MP2A	Z	3.81	2
6	MP2A	Mx	-.002	2
7	MP2A	X	6.6	6
8	MP2A	Z	3.81	6
9	MP2A	Mx	-.002	6
10	MP2B	X	8.887	2
11	MP2B	Z	5.131	2
12	MP2B	Mx	-.007	2
13	MP2B	X	8.887	6
14	MP2B	Z	5.131	6
15	MP2B	Mx	-.007	6
16	MP2C	X	6.6	2
17	MP2C	Z	3.81	2
18	MP2C	Mx	.007	2
19	MP2C	X	6.6	6
20	MP2C	Z	3.81	6
21	MP2C	Mx	.007	6
22	MP2A	X	6.6	2
23	MP2A	Z	3.81	2
24	MP2A	Mx	-.007	2
25	MP2A	X	6.6	6
26	MP2A	Z	3.81	6
27	MP2A	Mx	-.007	6
28	MP2B	X	8.887	2
29	MP2B	Z	5.131	2
30	MP2B	Mx	.007	2
31	MP2B	X	8.887	6
32	MP2B	Z	5.131	6
33	MP2B	Mx	.007	6
34	MP2C	X	6.6	2
35	MP2C	Z	3.81	2
36	MP2C	Mx	.002	2
37	MP2C	X	6.6	6
38	MP2C	Z	3.81	6
39	MP2C	Mx	.002	6
40	MP3A	X	1.583	1.5
41	MP3A	Z	.914	1.5
42	MP3A	Mx	-.001	1.5
43	MP3A	X	1.583	3.5
44	MP3A	Z	.914	3.5
45	MP3A	Mx	-.001	3.5
46	MP3B	X	3.083	1.5
47	MP3B	Z	1.78	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
48	MP3B	Mx	0	1.5
49	MP3B	X	3.083	3.5
50	MP3B	Z	1.78	3.5
51	MP3B	Mx	0	3.5
52	MP3C	X	1.583	1.5
53	MP3C	Z	.914	1.5
54	MP3C	Mx	.001	1.5
55	MP3C	X	1.583	3.5
56	MP3C	Z	.914	3.5
57	MP3C	Mx	.001	3.5
58	MP2A	X	.555	2
59	MP2A	Z	.32	2
60	MP2A	Mx	.000278	2
61	MP2B	X	.722	2
62	MP2B	Z	.417	2
63	MP2B	Mx	0	2
64	MP2C	X	.555	2
65	MP2C	Z	.32	2
66	MP2C	Mx	-.000277	2
67	MP1A	X	2.278	3.5
68	MP1A	Z	1.315	3.5
69	MP1A	Mx	.001	3.5
70	MP1B	X	3.024	3.5
71	MP1B	Z	1.746	3.5
72	MP1B	Mx	0	3.5
73	MP1C	X	2.278	3.5
74	MP1C	Z	1.315	3.5
75	MP1C	Mx	-.001	3.5
76	MP2A	X	2.778	3.5
77	MP2A	Z	1.604	3.5
78	MP2A	Mx	.001	3.5
79	MP2B	X	3.649	3.5
80	MP2B	Z	2.107	3.5
81	MP2B	Mx	0	3.5
82	MP2C	X	2.778	3.5
83	MP2C	Z	1.604	3.5
84	MP2C	Mx	-.001	3.5
85	MP1A	X	7.369	.5
86	MP1A	Z	4.255	.5
87	MP1A	Mx	-.006	.5
88	MP1A	X	7.369	2.5
89	MP1A	Z	4.255	2.5
90	MP1A	Mx	-.006	2.5
91	MP1B	X	4.224	.5
92	MP1B	Z	2.439	.5
93	MP1B	Mx	0	.5
94	MP1B	X	4.224	2.5
95	MP1B	Z	2.439	2.5
96	MP1B	Mx	0	2.5
97	MP1C	X	7.369	.5
98	MP1C	Z	4.255	.5
99	MP1C	Mx	.006	.5
100	MP1C	X	7.369	2.5
101	MP1C	Z	4.255	2.5
102	MP1C	Mx	.006	2.5
103	MP5A	X	7.369	.5
104	MP5A	Z	4.255	.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
105	MP5A	Mx	-.006	.5
106	MP5A	X	7.369	2.5
107	MP5A	Z	4.255	2.5
108	MP5A	Mx	-.006	2.5
109	MP5B	X	4.224	.5
110	MP5B	Z	2.439	.5
111	MP5B	Mx	0	.5
112	MP5B	X	4.224	2.5
113	MP5B	Z	2.439	2.5
114	MP5B	Mx	0	2.5
115	MP5C	X	7.369	.5
116	MP5C	Z	4.255	.5
117	MP5C	Mx	.006	.5
118	MP5C	X	7.369	2.5
119	MP5C	Z	4.255	2.5
120	MP5C	Mx	.006	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	OVP2	X	3.571	1.5
2	OVP2	Z	6.185	1.5
3	OVP2	Mx	0	1.5
4	MP2A	X	4.691	2
5	MP2A	Z	8.125	2
6	MP2A	Mx	.002	2
7	MP2A	X	4.691	6
8	MP2A	Z	8.125	6
9	MP2A	Mx	.002	6
10	MP2B	X	4.691	2
11	MP2B	Z	8.125	2
12	MP2B	Mx	-.009	2
13	MP2B	X	4.691	6
14	MP2B	Z	8.125	6
15	MP2B	Mx	-.009	6
16	MP2C	X	3.37	2
17	MP2C	Z	5.837	2
18	MP2C	Mx	.005	2
19	MP2C	X	3.37	6
20	MP2C	Z	5.837	6
21	MP2C	Mx	.005	6
22	MP2A	X	4.691	2
23	MP2A	Z	8.125	2
24	MP2A	Mx	-.009	2
25	MP2A	X	4.691	6
26	MP2A	Z	8.125	6
27	MP2A	Mx	-.009	6
28	MP2B	X	4.691	2
29	MP2B	Z	8.125	2
30	MP2B	Mx	.002	2
31	MP2B	X	4.691	6
32	MP2B	Z	8.125	6
33	MP2B	Mx	.002	6
34	MP2C	X	3.37	2
35	MP2C	Z	5.837	2
36	MP2C	Mx	.005	2
37	MP2C	X	3.37	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
38	MP2C	Z	5.837	6
39	MP2C	Mx	.005	6
40	MP3A	X	1.491	1.5
41	MP3A	Z	2.583	1.5
42	MP3A	Mx	-.001	1.5
43	MP3A	X	1.491	3.5
44	MP3A	Z	2.583	3.5
45	MP3A	Mx	-.001	3.5
46	MP3B	X	1.491	1.5
47	MP3B	Z	2.583	1.5
48	MP3B	Mx	-.001	1.5
49	MP3B	X	1.491	3.5
50	MP3B	Z	2.583	3.5
51	MP3B	Mx	-.001	3.5
52	MP3C	X	.625	1.5
53	MP3C	Z	1.083	1.5
54	MP3C	Mx	.000938	1.5
55	MP3C	X	.625	3.5
56	MP3C	Z	1.083	3.5
57	MP3C	Mx	.000938	3.5
58	MP2A	X	.385	2
59	MP2A	Z	.666	2
60	MP2A	Mx	.000193	2
61	MP2B	X	.385	2
62	MP2B	Z	.666	2
63	MP2B	Mx	.000192	2
64	MP2C	X	.288	2
65	MP2C	Z	.499	2
66	MP2C	Mx	-.000288	2
67	MP1A	X	1.602	3.5
68	MP1A	Z	2.775	3.5
69	MP1A	Mx	.000801	3.5
70	MP1B	X	1.602	3.5
71	MP1B	Z	2.775	3.5
72	MP1B	Mx	.000801	3.5
73	MP1C	X	1.172	3.5
74	MP1C	Z	2.029	3.5
75	MP1C	Mx	-.001	3.5
76	MP2A	X	1.939	3.5
77	MP2A	Z	3.358	3.5
78	MP2A	Mx	.00097	3.5
79	MP2B	X	1.939	3.5
80	MP2B	Z	3.358	3.5
81	MP2B	Mx	.000969	3.5
82	MP2C	X	1.436	3.5
83	MP2C	Z	2.488	3.5
84	MP2C	Mx	-.001	3.5
85	MP1A	X	3.044	.5
86	MP1A	Z	5.273	.5
87	MP1A	Mx	-.002	.5
88	MP1A	X	3.044	2.5
89	MP1A	Z	5.273	2.5
90	MP1A	Mx	-.002	2.5
91	MP1B	X	3.044	.5
92	MP1B	Z	5.273	.5
93	MP1B	Mx	-.002	.5
94	MP1B	X	3.044	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
95	MP1B	Z	5.273	2.5
96	MP1B	Mx	-.002	2.5
97	MP1C	X	4.86	.5
98	MP1C	Z	8.418	.5
99	MP1C	Mx	.007	.5
100	MP1C	X	4.86	2.5
101	MP1C	Z	8.418	2.5
102	MP1C	Mx	.007	2.5
103	MP5A	X	3.044	.5
104	MP5A	Z	5.273	.5
105	MP5A	Mx	-.002	.5
106	MP5A	X	3.044	2.5
107	MP5A	Z	5.273	2.5
108	MP5A	Mx	-.002	2.5
109	MP5B	X	3.044	.5
110	MP5B	Z	5.273	.5
111	MP5B	Mx	-.002	.5
112	MP5B	X	3.044	2.5
113	MP5B	Z	5.273	2.5
114	MP5B	Mx	-.002	2.5
115	MP5C	X	4.86	.5
116	MP5C	Z	8.418	.5
117	MP5C	Mx	.007	.5
118	MP5C	X	4.86	2.5
119	MP5C	Z	8.418	2.5
120	MP5C	Mx	.007	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	OVP2	X	0	1.5
2	OVP2	Z	6.714	1.5
3	OVP2	Mx	0	1.5
4	MP2A	X	0	2
5	MP2A	Z	10.262	2
6	MP2A	Mx	.007	2
7	MP2A	X	0	6
8	MP2A	Z	10.262	6
9	MP2A	Mx	.007	6
10	MP2B	X	0	2
11	MP2B	Z	7.621	2
12	MP2B	Mx	-.007	2
13	MP2B	X	0	6
14	MP2B	Z	7.621	6
15	MP2B	Mx	-.007	6
16	MP2C	X	0	2
17	MP2C	Z	7.621	2
18	MP2C	Mx	.002	2
19	MP2C	X	0	6
20	MP2C	Z	7.621	6
21	MP2C	Mx	.002	6
22	MP2A	X	0	2
23	MP2A	Z	10.262	2
24	MP2A	Mx	-.007	2
25	MP2A	X	0	6
26	MP2A	Z	10.262	6
27	MP2A	Mx	-.007	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
28	MP2B	X	0	2
29	MP2B	Z	7.621	2
30	MP2B	Mx	-.002	2
31	MP2B	X	0	6
32	MP2B	Z	7.621	6
33	MP2B	Mx	-.002	6
34	MP2C	X	0	2
35	MP2C	Z	7.621	2
36	MP2C	Mx	.007	2
37	MP2C	X	0	6
38	MP2C	Z	7.621	6
39	MP2C	Mx	.007	6
40	MP3A	X	0	1.5
41	MP3A	Z	3.56	1.5
42	MP3A	Mx	0	1.5
43	MP3A	X	0	3.5
44	MP3A	Z	3.56	3.5
45	MP3A	Mx	0	3.5
46	MP3B	X	0	1.5
47	MP3B	Z	1.828	1.5
48	MP3B	Mx	-.001	1.5
49	MP3B	X	0	3.5
50	MP3B	Z	1.828	3.5
51	MP3B	Mx	-.001	3.5
52	MP3C	X	0	1.5
53	MP3C	Z	1.828	1.5
54	MP3C	Mx	.001	1.5
55	MP3C	X	0	3.5
56	MP3C	Z	1.828	3.5
57	MP3C	Mx	.001	3.5
58	MP2A	X	0	2
59	MP2A	Z	.834	2
60	MP2A	Mx	0	2
61	MP2B	X	0	2
62	MP2B	Z	.641	2
63	MP2B	Mx	.000278	2
64	MP2C	X	0	2
65	MP2C	Z	.641	2
66	MP2C	Mx	-.000278	2
67	MP1A	X	0	3.5
68	MP1A	Z	3.492	3.5
69	MP1A	Mx	0	3.5
70	MP1B	X	0	3.5
71	MP1B	Z	2.63	3.5
72	MP1B	Mx	.001	3.5
73	MP1C	X	0	3.5
74	MP1C	Z	2.63	3.5
75	MP1C	Mx	-.001	3.5
76	MP2A	X	0	3.5
77	MP2A	Z	4.213	3.5
78	MP2A	Mx	0	3.5
79	MP2B	X	0	3.5
80	MP2B	Z	3.208	3.5
81	MP2B	Mx	.001	3.5
82	MP2C	X	0	3.5
83	MP2C	Z	3.208	3.5
84	MP2C	Mx	-.001	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
85	MP1A	X	0	.5
86	MP1A	Z	4.878	.5
87	MP1A	Mx	0	.5
88	MP1A	X	0	2.5
89	MP1A	Z	4.878	2.5
90	MP1A	Mx	0	2.5
91	MP1B	X	0	.5
92	MP1B	Z	8.509	.5
93	MP1B	Mx	-.006	.5
94	MP1B	X	0	2.5
95	MP1B	Z	8.509	2.5
96	MP1B	Mx	-.006	2.5
97	MP1C	X	0	.5
98	MP1C	Z	8.509	.5
99	MP1C	Mx	.006	.5
100	MP1C	X	0	2.5
101	MP1C	Z	8.509	2.5
102	MP1C	Mx	.006	2.5
103	MP5A	X	0	.5
104	MP5A	Z	4.878	.5
105	MP5A	Mx	0	.5
106	MP5A	X	0	2.5
107	MP5A	Z	4.878	2.5
108	MP5A	Mx	0	2.5
109	MP5B	X	0	.5
110	MP5B	Z	8.509	.5
111	MP5B	Mx	-.006	.5
112	MP5B	X	0	2.5
113	MP5B	Z	8.509	2.5
114	MP5B	Mx	-.006	2.5
115	MP5C	X	0	.5
116	MP5C	Z	8.509	.5
117	MP5C	Mx	.006	.5
118	MP5C	X	0	2.5
119	MP5C	Z	8.509	2.5
120	MP5C	Mx	.006	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	OVP2	X	-2.929	1.5
2	OVP2	Z	5.073	1.5
3	OVP2	Mx	0	1.5
4	MP2A	X	-4.691	2
5	MP2A	Z	8.125	2
6	MP2A	Mx	.009	2
7	MP2A	X	-4.691	6
8	MP2A	Z	8.125	6
9	MP2A	Mx	.009	6
10	MP2B	X	-3.37	2
11	MP2B	Z	5.837	2
12	MP2B	Mx	-.005	2
13	MP2B	X	-3.37	6
14	MP2B	Z	5.837	6
15	MP2B	Mx	-.005	6
16	MP2C	X	-4.691	2
17	MP2C	Z	8.125	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
18	MP2C	Mx	-.002	2
19	MP2C	X	-4.691	6
20	MP2C	Z	8.125	6
21	MP2C	Mx	-.002	6
22	MP2A	X	-4.691	2
23	MP2A	Z	8.125	2
24	MP2A	Mx	-.002	2
25	MP2A	X	-4.691	6
26	MP2A	Z	8.125	6
27	MP2A	Mx	-.002	6
28	MP2B	X	-3.37	2
29	MP2B	Z	5.837	2
30	MP2B	Mx	-.005	2
31	MP2B	X	-3.37	6
32	MP2B	Z	5.837	6
33	MP2B	Mx	-.005	6
34	MP2C	X	-4.691	2
35	MP2C	Z	8.125	2
36	MP2C	Mx	.009	2
37	MP2C	X	-4.691	6
38	MP2C	Z	8.125	6
39	MP2C	Mx	.009	6
40	MP3A	X	-1.491	1.5
41	MP3A	Z	2.583	1.5
42	MP3A	Mx	.001	1.5
43	MP3A	X	-1.491	3.5
44	MP3A	Z	2.583	3.5
45	MP3A	Mx	.001	3.5
46	MP3B	X	-.625	1.5
47	MP3B	Z	1.083	1.5
48	MP3B	Mx	-.000938	1.5
49	MP3B	X	-.625	3.5
50	MP3B	Z	1.083	3.5
51	MP3B	Mx	-.000938	3.5
52	MP3C	X	-1.491	1.5
53	MP3C	Z	2.583	1.5
54	MP3C	Mx	.001	1.5
55	MP3C	X	-1.491	3.5
56	MP3C	Z	2.583	3.5
57	MP3C	Mx	.001	3.5
58	MP2A	X	-.385	2
59	MP2A	Z	.666	2
60	MP2A	Mx	-.000193	2
61	MP2B	X	-.288	2
62	MP2B	Z	.499	2
63	MP2B	Mx	.000288	2
64	MP2C	X	-.385	2
65	MP2C	Z	.666	2
66	MP2C	Mx	-.000192	2
67	MP1A	X	-1.602	3.5
68	MP1A	Z	2.775	3.5
69	MP1A	Mx	-.000801	3.5
70	MP1B	X	-1.172	3.5
71	MP1B	Z	2.029	3.5
72	MP1B	Mx	.001	3.5
73	MP1C	X	-1.602	3.5
74	MP1C	Z	2.775	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
75	MP1C	Mx	-.000801	3.5
76	MP2A	X	-1.939	3.5
77	MP2A	Z	3.358	3.5
78	MP2A	Mx	-.00097	3.5
79	MP2B	X	-1.436	3.5
80	MP2B	Z	2.488	3.5
81	MP2B	Mx	.001	3.5
82	MP2C	X	-1.939	3.5
83	MP2C	Z	3.358	3.5
84	MP2C	Mx	-.000969	3.5
85	MP1A	X	-3.044	.5
86	MP1A	Z	5.273	.5
87	MP1A	Mx	.002	.5
88	MP1A	X	-3.044	2.5
89	MP1A	Z	5.273	2.5
90	MP1A	Mx	.002	2.5
91	MP1B	X	-4.86	.5
92	MP1B	Z	8.418	.5
93	MP1B	Mx	-.007	.5
94	MP1B	X	-4.86	2.5
95	MP1B	Z	8.418	2.5
96	MP1B	Mx	-.007	2.5
97	MP1C	X	-3.044	.5
98	MP1C	Z	5.273	.5
99	MP1C	Mx	.002	.5
100	MP1C	X	-3.044	2.5
101	MP1C	Z	5.273	2.5
102	MP1C	Mx	.002	2.5
103	MP5A	X	-3.044	.5
104	MP5A	Z	5.273	.5
105	MP5A	Mx	.002	.5
106	MP5A	X	-3.044	2.5
107	MP5A	Z	5.273	2.5
108	MP5A	Mx	.002	2.5
109	MP5B	X	-4.86	.5
110	MP5B	Z	8.418	.5
111	MP5B	Mx	-.007	.5
112	MP5B	X	-4.86	2.5
113	MP5B	Z	8.418	2.5
114	MP5B	Mx	-.007	2.5
115	MP5C	X	-3.044	.5
116	MP5C	Z	5.273	.5
117	MP5C	Mx	.002	.5
118	MP5C	X	-3.044	2.5
119	MP5C	Z	5.273	2.5
120	MP5C	Mx	.002	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	OVP2	X	-4.702	1.5
2	OVP2	Z	2.715	1.5
3	OVP2	Mx	0	1.5
4	MP2A	X	-6.6	2
5	MP2A	Z	3.81	2
6	MP2A	Mx	.007	2
7	MP2A	X	-6.6	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
8	MP2A	Z	3.81	6
9	MP2A	Mx	.007	6
10	MP2B	X	-6.6	2
11	MP2B	Z	3.81	2
12	MP2B	Mx	-.002	2
13	MP2B	X	-6.6	6
14	MP2B	Z	3.81	6
15	MP2B	Mx	-.002	6
16	MP2C	X	-8.887	2
17	MP2C	Z	5.131	2
18	MP2C	Mx	-.007	2
19	MP2C	X	-8.887	6
20	MP2C	Z	5.131	6
21	MP2C	Mx	-.007	6
22	MP2A	X	-6.6	2
23	MP2A	Z	3.81	2
24	MP2A	Mx	.002	2
25	MP2A	X	-6.6	6
26	MP2A	Z	3.81	6
27	MP2A	Mx	.002	6
28	MP2B	X	-6.6	2
29	MP2B	Z	3.81	2
30	MP2B	Mx	-.007	2
31	MP2B	X	-6.6	6
32	MP2B	Z	3.81	6
33	MP2B	Mx	-.007	6
34	MP2C	X	-8.887	2
35	MP2C	Z	5.131	2
36	MP2C	Mx	.007	2
37	MP2C	X	-8.887	6
38	MP2C	Z	5.131	6
39	MP2C	Mx	.007	6
40	MP3A	X	-1.583	1.5
41	MP3A	Z	.914	1.5
42	MP3A	Mx	.001	1.5
43	MP3A	X	-1.583	3.5
44	MP3A	Z	.914	3.5
45	MP3A	Mx	.001	3.5
46	MP3B	X	-1.583	1.5
47	MP3B	Z	.914	1.5
48	MP3B	Mx	-.001	1.5
49	MP3B	X	-1.583	3.5
50	MP3B	Z	.914	3.5
51	MP3B	Mx	-.001	3.5
52	MP3C	X	-3.083	1.5
53	MP3C	Z	1.78	1.5
54	MP3C	Mx	0	1.5
55	MP3C	X	-3.083	3.5
56	MP3C	Z	1.78	3.5
57	MP3C	Mx	0	3.5
58	MP2A	X	-.555	2
59	MP2A	Z	.32	2
60	MP2A	Mx	-.000278	2
61	MP2B	X	-.555	2
62	MP2B	Z	.32	2
63	MP2B	Mx	.000277	2
64	MP2C	X	-.722	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
65	MP2C	Z	.417	2
66	MP2C	Mx	0	2
67	MP1A	X	-2.278	3.5
68	MP1A	Z	1.315	3.5
69	MP1A	Mx	-.001	3.5
70	MP1B	X	-2.278	3.5
71	MP1B	Z	1.315	3.5
72	MP1B	Mx	.001	3.5
73	MP1C	X	-3.024	3.5
74	MP1C	Z	1.746	3.5
75	MP1C	Mx	0	3.5
76	MP2A	X	-2.778	3.5
77	MP2A	Z	1.604	3.5
78	MP2A	Mx	-.001	3.5
79	MP2B	X	-2.778	3.5
80	MP2B	Z	1.604	3.5
81	MP2B	Mx	.001	3.5
82	MP2C	X	-3.649	3.5
83	MP2C	Z	2.107	3.5
84	MP2C	Mx	0	3.5
85	MP1A	X	-7.369	.5
86	MP1A	Z	4.255	.5
87	MP1A	Mx	.006	.5
88	MP1A	X	-7.369	2.5
89	MP1A	Z	4.255	2.5
90	MP1A	Mx	.006	2.5
91	MP1B	X	-7.369	.5
92	MP1B	Z	4.255	.5
93	MP1B	Mx	-.006	.5
94	MP1B	X	-7.369	2.5
95	MP1B	Z	4.255	2.5
96	MP1B	Mx	-.006	2.5
97	MP1C	X	-4.224	.5
98	MP1C	Z	2.439	.5
99	MP1C	Mx	0	.5
100	MP1C	X	-4.224	2.5
101	MP1C	Z	2.439	2.5
102	MP1C	Mx	0	2.5
103	MP5A	X	-7.369	.5
104	MP5A	Z	4.255	.5
105	MP5A	Mx	.006	.5
106	MP5A	X	-7.369	2.5
107	MP5A	Z	4.255	2.5
108	MP5A	Mx	.006	2.5
109	MP5B	X	-7.369	.5
110	MP5B	Z	4.255	.5
111	MP5B	Mx	-.006	.5
112	MP5B	X	-7.369	2.5
113	MP5B	Z	4.255	2.5
114	MP5B	Mx	-.006	2.5
115	MP5C	X	-4.224	.5
116	MP5C	Z	2.439	.5
117	MP5C	Mx	0	.5
118	MP5C	X	-4.224	2.5
119	MP5C	Z	2.439	2.5
120	MP5C	Mx	0	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	OVP2	X	-5.858	1.5
2	OVP2	Z	0	1.5
3	OVP2	Mx	0	1.5
4	MP2A	X	-6.74	2
5	MP2A	Z	0	2
6	MP2A	Mx	.005	2
7	MP2A	X	-6.74	6
8	MP2A	Z	0	6
9	MP2A	Mx	.005	6
10	MP2B	X	-9.382	2
11	MP2B	Z	0	2
12	MP2B	Mx	.002	2
13	MP2B	X	-9.382	6
14	MP2B	Z	0	6
15	MP2B	Mx	.002	6
16	MP2C	X	-9.382	2
17	MP2C	Z	0	2
18	MP2C	Mx	-.009	2
19	MP2C	X	-9.382	6
20	MP2C	Z	0	6
21	MP2C	Mx	-.009	6
22	MP2A	X	-6.74	2
23	MP2A	Z	0	2
24	MP2A	Mx	.005	2
25	MP2A	X	-6.74	6
26	MP2A	Z	0	6
27	MP2A	Mx	.005	6
28	MP2B	X	-9.382	2
29	MP2B	Z	0	2
30	MP2B	Mx	-.009	2
31	MP2B	X	-9.382	6
32	MP2B	Z	0	6
33	MP2B	Mx	-.009	6
34	MP2C	X	-9.382	2
35	MP2C	Z	0	2
36	MP2C	Mx	.002	2
37	MP2C	X	-9.382	6
38	MP2C	Z	0	6
39	MP2C	Mx	.002	6
40	MP3A	X	-1.25	1.5
41	MP3A	Z	0	1.5
42	MP3A	Mx	.000938	1.5
43	MP3A	X	-1.25	3.5
44	MP3A	Z	0	3.5
45	MP3A	Mx	.000938	3.5
46	MP3B	X	-2.982	1.5
47	MP3B	Z	0	1.5
48	MP3B	Mx	-.001	1.5
49	MP3B	X	-2.982	3.5
50	MP3B	Z	0	3.5
51	MP3B	Mx	-.001	3.5
52	MP3C	X	-2.982	1.5
53	MP3C	Z	0	1.5
54	MP3C	Mx	-.001	1.5
55	MP3C	X	-2.982	3.5
56	MP3C	Z	0	3.5
57	MP3C	Mx	-.001	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP2A	X	-.577	2
59	MP2A	Z	0	2
60	MP2A	Mx	-.000288	2
61	MP2B	X	-.769	2
62	MP2B	Z	0	2
63	MP2B	Mx	.000192	2
64	MP2C	X	-.769	2
65	MP2C	Z	0	2
66	MP2C	Mx	.000192	2
67	MP1A	X	-2.343	3.5
68	MP1A	Z	0	3.5
69	MP1A	Mx	-.001	3.5
70	MP1B	X	-3.205	3.5
71	MP1B	Z	0	3.5
72	MP1B	Mx	.000801	3.5
73	MP1C	X	-3.205	3.5
74	MP1C	Z	0	3.5
75	MP1C	Mx	.000801	3.5
76	MP2A	X	-2.873	3.5
77	MP2A	Z	0	3.5
78	MP2A	Mx	-.001	3.5
79	MP2B	X	-3.878	3.5
80	MP2B	Z	0	3.5
81	MP2B	Mx	.00097	3.5
82	MP2C	X	-3.878	3.5
83	MP2C	Z	0	3.5
84	MP2C	Mx	.00097	3.5
85	MP1A	X	-9.72	.5
86	MP1A	Z	0	.5
87	MP1A	Mx	.007	.5
88	MP1A	X	-9.72	2.5
89	MP1A	Z	0	2.5
90	MP1A	Mx	.007	2.5
91	MP1B	X	-6.088	.5
92	MP1B	Z	0	.5
93	MP1B	Mx	-.002	.5
94	MP1B	X	-6.088	2.5
95	MP1B	Z	0	2.5
96	MP1B	Mx	-.002	2.5
97	MP1C	X	-6.088	.5
98	MP1C	Z	0	.5
99	MP1C	Mx	-.002	.5
100	MP1C	X	-6.088	2.5
101	MP1C	Z	0	2.5
102	MP1C	Mx	-.002	2.5
103	MP5A	X	-9.72	.5
104	MP5A	Z	0	.5
105	MP5A	Mx	.007	.5
106	MP5A	X	-9.72	2.5
107	MP5A	Z	0	2.5
108	MP5A	Mx	.007	2.5
109	MP5B	X	-6.088	.5
110	MP5B	Z	0	.5
111	MP5B	Mx	-.002	.5
112	MP5B	X	-6.088	2.5
113	MP5B	Z	0	2.5
114	MP5B	Mx	-.002	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
115	MP5C	X	-6.088	.5
116	MP5C	Z	0	.5
117	MP5C	Mx	-.002	.5
118	MP5C	X	-6.088	2.5
119	MP5C	Z	0	2.5
120	MP5C	Mx	-.002	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	OVP2	X	-5.814	1.5
2	OVP2	Z	-3.357	1.5
3	OVP2	Mx	0	1.5
4	MP2A	X	-6.6	2
5	MP2A	Z	-3.81	2
6	MP2A	Mx	.002	2
7	MP2A	X	-6.6	6
8	MP2A	Z	-3.81	6
9	MP2A	Mx	.002	6
10	MP2B	X	-8.887	2
11	MP2B	Z	-5.131	2
12	MP2B	Mx	.007	2
13	MP2B	X	-8.887	6
14	MP2B	Z	-5.131	6
15	MP2B	Mx	.007	6
16	MP2C	X	-6.6	2
17	MP2C	Z	-3.81	2
18	MP2C	Mx	-.007	2
19	MP2C	X	-6.6	6
20	MP2C	Z	-3.81	6
21	MP2C	Mx	-.007	6
22	MP2A	X	-6.6	2
23	MP2A	Z	-3.81	2
24	MP2A	Mx	.007	2
25	MP2A	X	-6.6	6
26	MP2A	Z	-3.81	6
27	MP2A	Mx	.007	6
28	MP2B	X	-8.887	2
29	MP2B	Z	-5.131	2
30	MP2B	Mx	-.007	2
31	MP2B	X	-8.887	6
32	MP2B	Z	-5.131	6
33	MP2B	Mx	-.007	6
34	MP2C	X	-6.6	2
35	MP2C	Z	-3.81	2
36	MP2C	Mx	-.002	2
37	MP2C	X	-6.6	6
38	MP2C	Z	-3.81	6
39	MP2C	Mx	-.002	6
40	MP3A	X	-1.583	1.5
41	MP3A	Z	-.914	1.5
42	MP3A	Mx	.001	1.5
43	MP3A	X	-1.583	3.5
44	MP3A	Z	-.914	3.5
45	MP3A	Mx	.001	3.5
46	MP3B	X	-3.083	1.5
47	MP3B	Z	-1.78	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
48	MP3B	Mx	0	1.5
49	MP3B	X	-3.083	3.5
50	MP3B	Z	-1.78	3.5
51	MP3B	Mx	0	3.5
52	MP3C	X	-1.583	1.5
53	MP3C	Z	-.914	1.5
54	MP3C	Mx	-.001	1.5
55	MP3C	X	-1.583	3.5
56	MP3C	Z	-.914	3.5
57	MP3C	Mx	-.001	3.5
58	MP2A	X	-.555	2
59	MP2A	Z	-.32	2
60	MP2A	Mx	-.000278	2
61	MP2B	X	-.722	2
62	MP2B	Z	-.417	2
63	MP2B	Mx	0	2
64	MP2C	X	-.555	2
65	MP2C	Z	-.32	2
66	MP2C	Mx	.000277	2
67	MP1A	X	-2.278	3.5
68	MP1A	Z	-1.315	3.5
69	MP1A	Mx	-.001	3.5
70	MP1B	X	-3.024	3.5
71	MP1B	Z	-1.746	3.5
72	MP1B	Mx	0	3.5
73	MP1C	X	-2.278	3.5
74	MP1C	Z	-1.315	3.5
75	MP1C	Mx	.001	3.5
76	MP2A	X	-2.778	3.5
77	MP2A	Z	-1.604	3.5
78	MP2A	Mx	-.001	3.5
79	MP2B	X	-3.649	3.5
80	MP2B	Z	-2.107	3.5
81	MP2B	Mx	0	3.5
82	MP2C	X	-2.778	3.5
83	MP2C	Z	-1.604	3.5
84	MP2C	Mx	.001	3.5
85	MP1A	X	-7.369	.5
86	MP1A	Z	-4.255	.5
87	MP1A	Mx	.006	.5
88	MP1A	X	-7.369	2.5
89	MP1A	Z	-4.255	2.5
90	MP1A	Mx	.006	2.5
91	MP1B	X	-4.224	.5
92	MP1B	Z	-2.439	.5
93	MP1B	Mx	0	.5
94	MP1B	X	-4.224	2.5
95	MP1B	Z	-2.439	2.5
96	MP1B	Mx	0	2.5
97	MP1C	X	-7.369	.5
98	MP1C	Z	-4.255	.5
99	MP1C	Mx	-.006	.5
100	MP1C	X	-7.369	2.5
101	MP1C	Z	-4.255	2.5
102	MP1C	Mx	-.006	2.5
103	MP5A	X	-7.369	.5
104	MP5A	Z	-4.255	.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
105	MP5A	Mx	.006	.5
106	MP5A	X	-7.369	2.5
107	MP5A	Z	-4.255	2.5
108	MP5A	Mx	.006	2.5
109	MP5B	X	-4.224	.5
110	MP5B	Z	-2.439	.5
111	MP5B	Mx	0	.5
112	MP5B	X	-4.224	2.5
113	MP5B	Z	-2.439	2.5
114	MP5B	Mx	0	2.5
115	MP5C	X	-7.369	.5
116	MP5C	Z	-4.255	.5
117	MP5C	Mx	-.006	.5
118	MP5C	X	-7.369	2.5
119	MP5C	Z	-4.255	2.5
120	MP5C	Mx	-.006	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	OVP2	X	-3.571	1.5
2	OVP2	Z	-6.185	1.5
3	OVP2	Mx	0	1.5
4	MP2A	X	-4.691	2
5	MP2A	Z	-8.125	2
6	MP2A	Mx	-.002	2
7	MP2A	X	-4.691	6
8	MP2A	Z	-8.125	6
9	MP2A	Mx	-.002	6
10	MP2B	X	-4.691	2
11	MP2B	Z	-8.125	2
12	MP2B	Mx	.009	2
13	MP2B	X	-4.691	6
14	MP2B	Z	-8.125	6
15	MP2B	Mx	.009	6
16	MP2C	X	-3.37	2
17	MP2C	Z	-5.837	2
18	MP2C	Mx	-.005	2
19	MP2C	X	-3.37	6
20	MP2C	Z	-5.837	6
21	MP2C	Mx	-.005	6
22	MP2A	X	-4.691	2
23	MP2A	Z	-8.125	2
24	MP2A	Mx	.009	2
25	MP2A	X	-4.691	6
26	MP2A	Z	-8.125	6
27	MP2A	Mx	.009	6
28	MP2B	X	-4.691	2
29	MP2B	Z	-8.125	2
30	MP2B	Mx	-.002	2
31	MP2B	X	-4.691	6
32	MP2B	Z	-8.125	6
33	MP2B	Mx	-.002	6
34	MP2C	X	-3.37	2
35	MP2C	Z	-5.837	2
36	MP2C	Mx	-.005	2
37	MP2C	X	-3.37	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
38	MP2C	Z	-5.837	6
39	MP2C	Mx	-.005	6
40	MP3A	X	-1.491	1.5
41	MP3A	Z	-2.583	1.5
42	MP3A	Mx	.001	1.5
43	MP3A	X	-1.491	3.5
44	MP3A	Z	-2.583	3.5
45	MP3A	Mx	.001	3.5
46	MP3B	X	-1.491	1.5
47	MP3B	Z	-2.583	1.5
48	MP3B	Mx	.001	1.5
49	MP3B	X	-1.491	3.5
50	MP3B	Z	-2.583	3.5
51	MP3B	Mx	.001	3.5
52	MP3C	X	-.625	1.5
53	MP3C	Z	-1.083	1.5
54	MP3C	Mx	-.000938	1.5
55	MP3C	X	-.625	3.5
56	MP3C	Z	-1.083	3.5
57	MP3C	Mx	-.000938	3.5
58	MP2A	X	-.385	2
59	MP2A	Z	-.666	2
60	MP2A	Mx	-.000193	2
61	MP2B	X	-.385	2
62	MP2B	Z	-.666	2
63	MP2B	Mx	-.000192	2
64	MP2C	X	-.288	2
65	MP2C	Z	-.499	2
66	MP2C	Mx	.000288	2
67	MP1A	X	-1.602	3.5
68	MP1A	Z	-2.775	3.5
69	MP1A	Mx	-.000801	3.5
70	MP1B	X	-1.602	3.5
71	MP1B	Z	-2.775	3.5
72	MP1B	Mx	-.000801	3.5
73	MP1C	X	-1.172	3.5
74	MP1C	Z	-2.029	3.5
75	MP1C	Mx	.001	3.5
76	MP2A	X	-1.939	3.5
77	MP2A	Z	-3.358	3.5
78	MP2A	Mx	-.00097	3.5
79	MP2B	X	-1.939	3.5
80	MP2B	Z	-3.358	3.5
81	MP2B	Mx	-.000969	3.5
82	MP2C	X	-1.436	3.5
83	MP2C	Z	-2.488	3.5
84	MP2C	Mx	.001	3.5
85	MP1A	X	-3.044	.5
86	MP1A	Z	-5.273	.5
87	MP1A	Mx	.002	.5
88	MP1A	X	-3.044	2.5
89	MP1A	Z	-5.273	2.5
90	MP1A	Mx	.002	2.5
91	MP1B	X	-3.044	.5
92	MP1B	Z	-5.273	.5
93	MP1B	Mx	.002	.5
94	MP1B	X	-3.044	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
95	MP1B	Z	-5.273	2.5
96	MP1B	Mx	.002	2.5
97	MP1C	X	-4.86	.5
98	MP1C	Z	-8.418	.5
99	MP1C	Mx	-.007	.5
100	MP1C	X	-4.86	2.5
101	MP1C	Z	-8.418	2.5
102	MP1C	Mx	-.007	2.5
103	MP5A	X	-3.044	.5
104	MP5A	Z	-5.273	.5
105	MP5A	Mx	.002	.5
106	MP5A	X	-3.044	2.5
107	MP5A	Z	-5.273	2.5
108	MP5A	Mx	.002	2.5
109	MP5B	X	-3.044	.5
110	MP5B	Z	-5.273	.5
111	MP5B	Mx	.002	.5
112	MP5B	X	-3.044	2.5
113	MP5B	Z	-5.273	2.5
114	MP5B	Mx	.002	2.5
115	MP5C	X	-4.86	.5
116	MP5C	Z	-8.418	.5
117	MP5C	Mx	-.007	.5
118	MP5C	X	-4.86	2.5
119	MP5C	Z	-8.418	2.5
120	MP5C	Mx	-.007	2.5

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M1	Y	-500	%76

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M1	Y	-500	%19

Member Point Loads (BLC 79 : Lv1)

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

Member Point Loads (BLC 80 : Lv2)

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

Member Point Loads (BLC 81 : Antenna Ev)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	OVP2	Y	-1.461	1.5
2	OVP2	My	0	1.5
3	OVP2	Mz	0	1.5
4	MP2A	Y	-1.445	2
5	MP2A	My	-.001	2
6	MP2A	Mz	.000963	2
7	MP2A	Y	-1.445	6
8	MP2A	My	-.001	6
9	MP2A	Mz	.000963	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
10	MP2B	Y	-1.445	2
11	MP2B	My	-.000292	2
12	MP2B	Mz	-.001	2
13	MP2B	Y	-1.445	6
14	MP2B	My	-.000292	6
15	MP2B	Mz	-.001	6
16	MP2C	Y	-1.445	2
17	MP2C	My	.001	2
18	MP2C	Mz	.000457	2
19	MP2C	Y	-1.445	6
20	MP2C	My	.001	6
21	MP2C	Mz	.000457	6
22	MP2A	Y	-1.445	2
23	MP2A	My	-.001	2
24	MP2A	Mz	-.000963	2
25	MP2A	Y	-1.445	6
26	MP2A	My	-.001	6
27	MP2A	Mz	-.000963	6
28	MP2B	Y	-1.445	2
29	MP2B	My	.001	2
30	MP2B	Mz	-.000457	2
31	MP2B	Y	-1.445	6
32	MP2B	My	.001	6
33	MP2B	Mz	-.000457	6
34	MP2C	Y	-1.445	2
35	MP2C	My	-.000292	2
36	MP2C	Mz	.001	2
37	MP2C	Y	-1.445	6
38	MP2C	My	-.000292	6
39	MP2C	Mz	.001	6
40	MP3A	Y	-1.308	1.5
41	MP3A	My	-.000981	1.5
42	MP3A	Mz	0	1.5
43	MP3A	Y	-1.308	3.5
44	MP3A	My	-.000981	3.5
45	MP3A	Mz	0	3.5
46	MP3B	Y	-1.308	1.5
47	MP3B	My	.00049	1.5
48	MP3B	Mz	-.00085	1.5
49	MP3B	Y	-1.308	3.5
50	MP3B	My	.00049	3.5
51	MP3B	Mz	-.00085	3.5
52	MP3C	Y	-1.308	1.5
53	MP3C	My	.00049	1.5
54	MP3C	Mz	.00085	1.5
55	MP3C	Y	-1.308	3.5
56	MP3C	My	.00049	3.5
57	MP3C	Mz	.00085	3.5
58	MP2A	Y	-.475	2
59	MP2A	My	.000237	2
60	MP2A	Mz	0	2
61	MP2B	Y	-.475	2
62	MP2B	My	-.000119	2
63	MP2B	Mz	.000206	2
64	MP2C	Y	-.475	2
65	MP2C	My	-.000119	2
66	MP2C	Mz	-.000206	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
67	MP1A	Y	-3.41	3.5
68	MP1A	My	.002	3.5
69	MP1A	Mz	0	3.5
70	MP1B	Y	-3.41	3.5
71	MP1B	My	-.000853	3.5
72	MP1B	Mz	.001	3.5
73	MP1C	Y	-3.41	3.5
74	MP1C	My	-.000853	3.5
75	MP1C	Mz	-.001	3.5
76	MP2A	Y	-3.611	3.5
77	MP2A	My	.002	3.5
78	MP2A	Mz	0	3.5
79	MP2B	Y	-3.611	3.5
80	MP2B	My	-.000903	3.5
81	MP2B	Mz	.002	3.5
82	MP2C	Y	-3.611	3.5
83	MP2C	My	-.000903	3.5
84	MP2C	Mz	-.002	3.5
85	MP1A	Y	-.479	.5
86	MP1A	My	-.00036	.5
87	MP1A	Mz	0	.5
88	MP1A	Y	-.479	2.5
89	MP1A	My	-.00036	2.5
90	MP1A	Mz	0	2.5
91	MP1B	Y	-.479	.5
92	MP1B	My	.00018	.5
93	MP1B	Mz	-.000311	.5
94	MP1B	Y	-.479	2.5
95	MP1B	My	.00018	2.5
96	MP1B	Mz	-.000311	2.5
97	MP1C	Y	-.479	.5
98	MP1C	My	.00018	.5
99	MP1C	Mz	.000311	.5
100	MP1C	Y	-.479	2.5
101	MP1C	My	.00018	2.5
102	MP1C	Mz	.000311	2.5
103	MP5A	Y	-.479	.5
104	MP5A	My	-.00036	.5
105	MP5A	Mz	0	.5
106	MP5A	Y	-.479	2.5
107	MP5A	My	-.00036	2.5
108	MP5A	Mz	0	2.5
109	MP5B	Y	-.479	.5
110	MP5B	My	.00018	.5
111	MP5B	Mz	-.000311	.5
112	MP5B	Y	-.479	2.5
113	MP5B	My	.00018	2.5
114	MP5B	Mz	-.000311	2.5
115	MP5C	Y	-.479	.5
116	MP5C	My	.00018	.5
117	MP5C	Mz	.000311	.5
118	MP5C	Y	-.479	2.5
119	MP5C	My	.00018	2.5
120	MP5C	Mz	.000311	2.5

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

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

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	OVP2	Z	-3.652	1.5
2	OVP2	Mx	0	1.5
3	MP2A	Z	-3.612	2
4	MP2A	Mx	-.002	2
5	MP2A	Z	-3.612	6
6	MP2A	Mx	-.002	6
7	MP2B	Z	-3.612	2
8	MP2B	Mx	.004	2
9	MP2B	Z	-3.612	6
10	MP2B	Mx	.004	6
11	MP2C	Z	-3.612	2
12	MP2C	Mx	-.001	2
13	MP2C	Z	-3.612	6
14	MP2C	Mx	-.001	6
15	MP2A	Z	-3.612	2
16	MP2A	Mx	.002	2
17	MP2A	Z	-3.612	6
18	MP2A	Mx	.002	6
19	MP2B	Z	-3.612	2
20	MP2B	Mx	.001	2
21	MP2B	Z	-3.612	6
22	MP2B	Mx	.001	6
23	MP2C	Z	-3.612	2
24	MP2C	Mx	-.004	2
25	MP2C	Z	-3.612	6
26	MP2C	Mx	-.004	6
27	MP3A	Z	-3.27	1.5
28	MP3A	Mx	0	1.5
29	MP3A	Z	-3.27	3.5
30	MP3A	Mx	0	3.5
31	MP3B	Z	-3.27	1.5
32	MP3B	Mx	.002	1.5
33	MP3B	Z	-3.27	3.5
34	MP3B	Mx	.002	3.5
35	MP3C	Z	-3.27	1.5
36	MP3C	Mx	-.002	1.5
37	MP3C	Z	-3.27	3.5
38	MP3C	Mx	-.002	3.5
39	MP2A	Z	-1.187	2
40	MP2A	Mx	0	2
41	MP2B	Z	-1.187	2
42	MP2B	Mx	-.000514	2
43	MP2C	Z	-1.187	2
44	MP2C	Mx	.000514	2
45	MP1A	Z	-8.526	3.5
46	MP1A	Mx	0	3.5
47	MP1B	Z	-8.526	3.5
48	MP1B	Mx	-.004	3.5
49	MP1C	Z	-8.526	3.5
50	MP1C	Mx	.004	3.5
51	MP2A	Z	-9.028	3.5
52	MP2A	Mx	0	3.5
53	MP2B	Z	-9.028	3.5
54	MP2B	Mx	-.004	3.5
55	MP2C	Z	-9.028	3.5
56	MP2C	Mx	.004	3.5
57	MP1A	Z	-1.198	.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP1A	Mx	0	.5
59	MP1A	Z	-1.198	2.5
60	MP1A	Mx	0	2.5
61	MP1B	Z	-1.198	.5
62	MP1B	Mx	.000778	.5
63	MP1B	Z	-1.198	2.5
64	MP1B	Mx	.000778	2.5
65	MP1C	Z	-1.198	.5
66	MP1C	Mx	-.000778	.5
67	MP1C	Z	-1.198	2.5
68	MP1C	Mx	-.000778	2.5
69	MP5A	Z	-1.198	.5
70	MP5A	Mx	0	.5
71	MP5A	Z	-1.198	2.5
72	MP5A	Mx	0	2.5
73	MP5B	Z	-1.198	.5
74	MP5B	Mx	.000778	.5
75	MP5B	Z	-1.198	2.5
76	MP5B	Mx	.000778	2.5
77	MP5C	Z	-1.198	.5
78	MP5C	Mx	-.000778	.5
79	MP5C	Z	-1.198	2.5
80	MP5C	Mx	-.000778	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	OVP2	X	3.652	1.5
2	OVP2	Mx	0	1.5
3	MP2A	X	3.612	2
4	MP2A	Mx	-.003	2
5	MP2A	X	3.612	6
6	MP2A	Mx	-.003	6
7	MP2B	X	3.612	2
8	MP2B	Mx	-.000731	2
9	MP2B	X	3.612	6
10	MP2B	Mx	-.000731	6
11	MP2C	X	3.612	2
12	MP2C	Mx	.003	2
13	MP2C	X	3.612	6
14	MP2C	Mx	.003	6
15	MP2A	X	3.612	2
16	MP2A	Mx	-.003	2
17	MP2A	X	3.612	6
18	MP2A	Mx	-.003	6
19	MP2B	X	3.612	2
20	MP2B	Mx	.003	2
21	MP2B	X	3.612	6
22	MP2B	Mx	.003	6
23	MP2C	X	3.612	2
24	MP2C	Mx	-.000731	2
25	MP2C	X	3.612	6
26	MP2C	Mx	-.000731	6
27	MP3A	X	3.27	1.5
28	MP3A	Mx	-.002	1.5
29	MP3A	X	3.27	3.5
30	MP3A	Mx	-.002	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
31	MP3B	X	3.27	1.5
32	MP3B	Mx	.001	1.5
33	MP3B	X	3.27	3.5
34	MP3B	Mx	.001	3.5
35	MP3C	X	3.27	1.5
36	MP3C	Mx	.001	1.5
37	MP3C	X	3.27	3.5
38	MP3C	Mx	.001	3.5
39	MP2A	X	1.187	2
40	MP2A	Mx	.000593	2
41	MP2B	X	1.187	2
42	MP2B	Mx	-.000297	2
43	MP2C	X	1.187	2
44	MP2C	Mx	-.000297	2
45	MP1A	X	8.526	3.5
46	MP1A	Mx	.004	3.5
47	MP1B	X	8.526	3.5
48	MP1B	Mx	-.002	3.5
49	MP1C	X	8.526	3.5
50	MP1C	Mx	-.002	3.5
51	MP2A	X	9.028	3.5
52	MP2A	Mx	.005	3.5
53	MP2B	X	9.028	3.5
54	MP2B	Mx	-.002	3.5
55	MP2C	X	9.028	3.5
56	MP2C	Mx	-.002	3.5
57	MP1A	X	1.198	.5
58	MP1A	Mx	-.000899	.5
59	MP1A	X	1.198	2.5
60	MP1A	Mx	-.000899	2.5
61	MP1B	X	1.198	.5
62	MP1B	Mx	.000449	.5
63	MP1B	X	1.198	2.5
64	MP1B	Mx	.000449	2.5
65	MP1C	X	1.198	.5
66	MP1C	Mx	.000449	.5
67	MP1C	X	1.198	2.5
68	MP1C	Mx	.000449	2.5
69	MP5A	X	1.198	.5
70	MP5A	Mx	-.000899	.5
71	MP5A	X	1.198	2.5
72	MP5A	Mx	-.000899	2.5
73	MP5B	X	1.198	.5
74	MP5B	Mx	.000449	.5
75	MP5B	X	1.198	2.5
76	MP5B	Mx	.000449	2.5
77	MP5C	X	1.198	.5
78	MP5C	Mx	.000449	.5
79	MP5C	X	1.198	2.5
80	MP5C	Mx	.000449	2.5

Joint Loads and Enforced Displacements

Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2/ft, lb*s^2*ft)]
No Data to Print ...			

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	N79	max	3301.809	10	43.836	17	2367.562	10	0	75	0	75	0	75
2		min	-3254.513	4	13.674	66	-2326.432	4	0	1	0	1	0	1
3	N159	max	406.76	6	43.884	13	4050.369	12	0	75	0	75	0	75
4		min	-394.315	12	13.68	74	-4114.551	6	0	1	0	1	0	1
5	N239	max	3814.598	8	43.972	21	1756.427	2	0	75	0	75	0	75
6		min	-3881.32	2	13.687	70	-1733.301	8	0	1	0	1	0	1
7	N245	max	2467.681	10	1426.409	24	6070.357	15	.355	24	0	75	.063	3
8		min	-3129.079	4	323.185	6	605.562	9	.074	6	0	1	-.025	10
9	N249	max	1408.786	3	1224.551	24	-243.557	6	.3	24	0	75	.051	3
10		min	-900.905	9	299.016	6	-5671.252	24	.073	6	0	1	-.025	9
11	N248A	max	6068.63	24	1484.339	20	1217.337	1	.001	1	0	75	-.069	4
12		min	-417.578	5	342.784	2	-3078.795	7	-.152	19	0	1	-.348	22
13	N252	max	-48.016	4	1268.317	20	2514.944	43	-.003	1	0	75	-.064	4
14		min	-5392.154	22	315.214	2	-361.638	1	-.134	43	0	1	-.288	22
15	N261	max	-879.592	10	1395.236	16	1572.728	2	-.025	12	0	75	.286	15
16		min	-4799.414	16	314.186	10	-4505.342	8	-.209	19	0	1	.049	10
17	N265	max	4659.302	15	1201.255	16	3315.927	18	-.021	12	0	75	.244	15
18		min	65.212	9	289.745	10	-541.599	12	-.172	18	0	1	.052	9
19	N307	max	596.808	11	361.618	4	702.736	12	.001	11	0	6	.001	19
20		min	-928.472	5	-117.675	10	-774.965	6	0	5	0	12	0	1
21	N308	max	659.393	9	356.714	12	1082.504	1	0	3	0	2	0	1
22		min	-552.075	3	-121.079	6	-779.41	7	0	9	0	8	-.002	19
23	N309	max	962.201	9	356.605	8	313.833	2	0	9	0	10	0	4
24		min	-745.071	3	-119.809	2	-557.182	8	-.002	14	0	4	0	10
25	Totals:	max	7575.454	10	8682.501	13	7590.284	1						
26		min	-7575.466	4	2689.055	71	-7590.289	7						

Joint Reactions (By Combination)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
1	1	N79	-206.482	18.073	-112.693	0	0	0
2	1	N159	-346.049	19.468	3456.043	0	0	0
3	1	N239	-3660.705	22.13	1690.955	0	0	0
4	1	N245	403.551	819.686	3019.126	.211	0	.034
5	1	N249	955.499	743.397	-4095.601	.184	0	.03
6	1	N248A	4212.976	386.38	1217.337	.001	0	-.103
7	1	N252	-836.281	346.058	-361.638	-.003	0	-.095
8	1	N261	-1396.535	397.387	1156.967	-.026	0	.099
9	1	N265	1340.641	382.072	-320.861	-.023	0	.093
10	1	N307	-223.731	347.924	638.448	0	0	0
11	1	N308	-37.757	345.298	1082.504	0	0	0
12	1	N309	-205.126	-50.865	219.696	-.001	0	0
13	1	Totals:	0	3777.008	7590.284			
14	1	COG (ft):	X: -.13	Y: -.11	Z: -.029			
15	2	N79	-2002.743	16.83	-1374.518	0	0	0
16	2	N159	-198.032	20.181	1934.469	0	0	0
17	2	N239	-3881.32	22.595	1756.427	0	0	0
18	2	N245	-1020.361	829.84	3790.476	.211	0	.053
19	2	N249	1343.782	736.009	-4085.475	.182	0	.044
20	2	N248A	3251.808	342.784	811.481	-.012	0	-.081

Joint Reactions (By Combination) (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
21	2	N252	-325.02	315.214	16.333	-.016	0	-.077
22	2	N261	-2168.943	593.634	1572.728	-.051	0	.144
23	2	N265	2593.394	562.467	671.238	-.049	0	.129
24	2	N307	-467.152	344.949	270.292	0	0	0
25	2	N308	-378.807	112.313	883.243	0	0	0
26	2	N309	-534.348	-119.809	313.833	-.001	0	0
27	2	Totals:	-3787.741	3777.007	6560.527			
28	2	COG (ft):	X: -.13	Y: -.11	Z: -.029			
29	3	N79	-3045.587	17.517	-2138.934	0	0	0
30	3	N159	6.69	20.399	-357.444	0	0	0
31	3	N239	-3294.048	22.148	1480.973	0	0	0
32	3	N245	-2369.362	763.538	4297.25	.19	0	.063
33	3	N249	1408.786	668.652	-3495.641	.165	0	.051
34	3	N248A	2207.565	362.099	-12.719	-.034	0	-.074
35	3	N252	-219.28	339.976	616.563	-.038	0	-.071
36	3	N261	-2902.985	777.855	1027.454	-.087	0	.179
37	3	N265	3571.069	720.653	1777.868	-.08	0	.155
38	3	N307	-619.813	295.875	-119.152	0	0	0
39	3	N308	-552.075	-103.698	443.464	0	0	0
40	3	N309	-745.071	-108.01	264.348	-.001	0	0
41	3	Totals:	-6554.111	3777.003	3784.031			
42	3	COG (ft):	X: -.13	Y: -.11	Z: -.029			
43	4	N79	-3254.513	18.529	-2326.432	0	0	0
44	4	N159	205.927	20.941	-2568.776	0	0	0
45	4	N239	-1844.466	20.519	825.671	0	0	0
46	4	N245	-3129.079	558.161	3829.845	.137	0	.06
47	4	N249	1167.268	493.891	-1906.269	.123	0	.049
48	4	N248A	757.079	361.019	-879.093	-.053	0	-.069
49	4	N252	-48.016	344.459	955.59	-.054	0	-.064
50	4	N261	-2985.074	818.757	92.758	-.112	0	.179
51	4	N265	3493.599	752.235	2428.977	-.102	0	.153
52	4	N307	-859.766	361.618	-359.261	0	0	0
53	4	N308	-348.066	-99.142	41.212	0	0	0
54	4	N309	-730.359	126.013	-134.185	0	0	0
55	4	Totals:	-7575.466	3777	.036			
56	4	COG (ft):	X: -.13	Y: -.11	Z: -.029			
57	5	N79	-2796.08	19.403	-2010.529	0	0	0
58	5	N159	349.777	21.976	-3857.675	0	0	0
59	5	N239	314.598	17.966	-173.718	0	0	0
60	5	N245	-3034.273	368.829	2896.137	.088	0	.045
61	5	N249	715.628	332.567	-501.62	.083	0	.038
62	5	N248A	-417.578	429.984	-1811.399	-.075	0	-.082
63	5	N252	-525.25	413.55	1305.644	-.073	0	-.076
64	5	N261	-2762.9	801.794	-1115.281	-.13	0	.164
65	5	N265	3037.984	729.927	2847.407	-.116	0	.141
66	5	N307	-928.472	350.049	-576.187	0	0	0
67	5	N308	-88.381	-52.595	-291.67	0	0	0
68	5	N309	-438.464	343.546	-506.225	0	0	0
69	5	Totals:	-6573.411	3776.996	-3795.116			
70	5	COG (ft):	X: -.13	Y: -.11	Z: -.029			
71	6	N79	-1592.739	20.155	-1150.562	0	0	0
72	6	N159	406.76	22.464	-4114.551	0	0	0
73	6	N239	2392.246	16.74	-1137.692	0	0	0
74	6	N245	-2260.586	323.185	2324.934	.074	0	.023
75	6	N249	138.936	299.016	-243.557	.073	0	.018
76	6	N248A	-397.113	628.937	-2711.056	-.105	0	-.128
77	6	N252	-2026.22	595.858	1890.725	-.095	0	-.117

Joint Reactions (By Combination) (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
78	6	N261	-2712.189	812.462	-2695.589	-.147	0	.154
79	6	N265	2840.689	722.773	3186.917	-.127	0	.132
80	6	N307	-586.542	116.727	-774.965	0	0	0
81	6	N308	-5.13	-121.079	-622.72	0	0	-.001
82	6	N309	2.996	339.753	-531.685	0	0	0
83	6	Totals:	-3798.891	3776.991	-6579.801			
84	6	COG (ft):	X: -.13	Y: -.11	Z: -.029			
85	7	N79	254.876	20.42	147.546	0	0	0
86	7	N159	356.971	22.079	-3519.778	0	0	0
87	7	N239	3595.129	17.537	-1667.518	0	0	0
88	7	N245	-1076.011	340.985	1885.78	.077	0	.002
89	7	N249	-435.788	321.608	-447.625	.076	0	-.002
90	7	N248A	518.787	814.903	-3078.795	-.118	0	-.176
91	7	N252	-3478.078	753.923	2184.441	-.103	0	-.157
92	7	N261	-2478.752	747.556	-4089.862	-.146	0	.131
93	7	N265	2302.611	655.836	2950.729	-.123	0	.115
94	7	N307	-119.48	-99.621	-706.984	0	0	.001
95	7	N308	143.532	-108.686	-779.41	0	0	-.001
96	7	N309	416.19	290.449	-468.812	0	0	0
97	7	Totals:	-.013	3776.988	-7590.289			
98	7	COG (ft):	X: -.13	Y: -.11	Z: -.029			
99	8	N79	2050.249	20.977	1411.206	0	0	0
100	8	N159	205.992	20.523	-1998.422	0	0	0
101	8	N239	3814.598	18.633	-1733.301	0	0	0
102	8	N245	353.929	339.307	1115.566	.08	0	-.015
103	8	N249	-823.004	324.46	-466.321	.078	0	-.018
104	8	N248A	1482.514	856.07	-2668.958	-.103	0	-.198
105	8	N252	-3994.224	783.905	1795.14	-.09	0	-.174
106	8	N261	-1705.044	544.276	-4505.342	-.117	0	.085
107	8	N265	1050.686	481.643	1942.932	-.101	0	.08
108	8	N307	127.49	-95.373	-329.134	0	0	0
109	8	N308	482.035	125.962	-566.715	0	0	-.001
110	8	N309	742.505	356.605	-557.182	0	0	0
111	8	Totals:	3787.727	3776.988	-6560.531			
112	8	COG (ft):	X: -.13	Y: -.11	Z: -.029			
113	9	N79	3092.091	22.002	2178.411	0	0	0
114	9	N159	-.084	18.055	292.057	0	0	0
115	9	N239	3229.696	19.53	-1457.086	0	0	0
116	9	N245	1708.384	407.47	605.562	.101	0	-.025
117	9	N249	-900.905	391.572	-1048.122	.095	0	-.025
118	9	N248A	2528.189	838.667	-1850.088	-.079	0	-.206
119	9	N252	-4113.256	759.625	1195.675	-.069	0	-.18
120	9	N261	-963.994	357.555	-3966.925	-.081	0	.051
121	9	N265	65.212	321.679	840.289	-.071	0	.052
122	9	N307	287.172	-49.071	63.543	0	0	0
123	9	N308	659.393	344.096	-127.959	0	0	0
124	9	N309	962.201	345.811	-509.393	0	0	0
125	9	Totals:	6554.099	3776.992	-3784.035			
126	9	COG (ft):	X: -.13	Y: -.11	Z: -.029			
127	10	N79	3301.809	22.483	2367.562	0	0	0
128	10	N159	-197.258	16.849	2504.383	0	0	0
129	10	N239	1782.917	20.243	-799.606	0	0	0
130	10	N245	2467.681	605.76	1071.473	.153	0	-.025
131	10	N249	-673.155	572.609	-2630.591	.139	0	-.022
132	10	N248A	3975.115	848.485	-988.597	-.06	0	-.215
133	10	N252	-4292.759	750.309	859.292	-.053	0	-.184
134	10	N261	-879.592	314.186	-3038.196	-.056	0	.049

Joint Reactions (By Combination) (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
135	10	N265	134.83	289.745	199.757	-.049	0	.054
136	10	N307	533.744	-117.675	303.353	.001	0	0
137	10	N308	461.734	340.638	266.344	0	0	0
138	10	N309	960.389	113.362	-115.216	0	0	0
139	10	Totals:	7575.454	3776.995	-.041			
140	10	COG (ft):	X: -.13	Y: -.11	Z: -.029			
141	11	N79	2843.068	22.1	2049.784	0	0	0
142	11	N159	-338.245	17.577	3794.187	0	0	0
143	11	N239	-376.241	20.455	201.444	0	0	0
144	11	N245	2364.025	792.565	2002.191	.201	0	-.011
145	11	N249	-214.345	731.963	-4030.773	.178	0	-.008
146	11	N248A	5144.678	781.465	-58.483	-.038	0	-.201
147	11	N252	-3802.741	681.306	515.518	-.036	0	-.172
148	11	N261	-1108.408	332.922	-1830.171	-.039	0	.064
149	11	N265	598.186	312.978	-207.528	-.033	0	.067
150	11	N307	596.808	-105.306	513.293	.001	0	0
151	11	N308	200.975	291.144	591.635	0	0	0
152	11	N309	665.64	-102.169	254.014	0	0	0
153	11	Totals:	6573.399	3776.999	3795.111			
154	11	COG (ft):	X: -.13	Y: -.11	Z: -.029			
155	12	N79	1639.726	20.549	1186.288	0	0	0
156	12	N159	-394.315	18.604	4050.369	0	0	0
157	12	N239	-2455.491	21.042	1163.496	0	0	0
158	12	N245	1584.605	835.751	2574.017	.214	0	.011
159	12	N249	375.249	764.983	-4287.453	.188	0	.011
160	12	N248A	5125.544	575.122	842.073	-.011	0	-.153
161	12	N252	-2289.018	505.93	-60.938	-.014	0	-.134
162	12	N261	-1162.911	330.68	-244.402	-.025	0	.075
163	12	N265	802.664	315.5	-541.599	-.021	0	.075
164	12	N307	244.684	129.447	702.736	.001	0	0
165	12	N308	113.986	356.714	917.2	0	0	0
166	12	N309	214.156	-97.317	278.011	-.001	0	0
167	12	Totals:	3798.878	3777.004	6579.797			
168	12	COG (ft):	X: -.13	Y: -.11	Z: -.029			
169	13	N79	18.104	43.254	24.529	0	0	0
170	13	N159	-74.369	43.884	739.116	0	0	0
171	13	N239	-916.378	43.279	427.018	0	0	0
172	13	N245	-448.956	1423.061	5779.342	.355	0	.041
173	13	N249	600.094	1219.554	-5621.484	.299	0	.029
174	13	N248A	5877.514	1383.58	-1765.093	-.125	0	-.325
175	13	N252	-4690.916	1185.306	1947.33	-.113	0	-.272
176	13	N261	-4469.183	1302.513	-2703.037	-.181	0	.269
177	13	N265	4216.657	1135.382	2594.362	-.152	0	.233
178	13	N307	-397.665	339.318	93.952	0	0	.001
179	13	N308	94.589	321.462	563.788	0	0	-.001
180	13	N309	190.498	241.908	-211.311	-.002	0	0
181	13	Totals:	-.011	8682.501	1868.513			
182	13	COG (ft):	X: -.144	Y: -.071	Z: -.025			
183	14	N79	-415.412	43.417	-277.871	0	0	0
184	14	N159	-41.479	43.842	399.839	0	0	0
185	14	N239	-959.948	43.207	435.931	0	0	0
186	14	N245	-781.534	1425.026	5944.08	.354	0	.045
187	14	N249	690.144	1217.041	-5608.115	.299	0	.032
188	14	N248A	5664.986	1373.753	-1870.557	-.128	0	-.319
189	14	N252	-4596.224	1180.848	2033.254	-.116	0	-.269
190	14	N261	-4636.578	1345.626	-2579.788	-.187	0	.278
191	14	N265	4468.664	1168.05	2802.037	-.157	0	.239

Joint Reactions (By Combination) (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
192	14	N307	-453.067	338.195	10.307	0	0	.001
193	14	N308	19.572	272.418	523.844	0	0	-.001
194	14	N309	108.319	231.078	-197.745	-.002	0	0
195	14	Totals:	-932.556	8682.501	1615.215			
196	14	COG (ft):	X: -.144	Y: -.071	Z: -.025			
197	15	N79	-656.584	43.635	-456.316	0	0	0
198	15	N159	4.91	43.663	-141.715	0	0	0
199	15	N239	-833.893	43.191	375.411	0	0	0
200	15	N245	-1108.12	1411.029	6070.357	.35	0	.048
201	15	N249	702.499	1203.465	-5479.503	.295	0	.034
202	15	N248A	5440.869	1377.218	-2071.463	-.134	0	-.317
203	15	N252	-4575.505	1186.46	2171.488	-.121	0	-.267
204	15	N261	-4793.805	1385.987	-2692.45	-.194	0	.286
205	15	N265	4659.302	1196.286	3021.665	-.162	0	.244
206	15	N307	-490.904	326.918	-83.411	0	0	.001
207	15	N308	-16.695	228.188	431.478	0	0	-.001
208	15	N309	54.184	236.46	-213.852	-.002	0	0
209	15	Totals:	-1613.741	8682.5	931.688			
210	15	COG (ft):	X: -.144	Y: -.071	Z: -.025			
211	16	N79	-695.194	43.776	-496.105	0	0	0
212	16	N159	51.008	43.44	-676.782	0	0	0
213	16	N239	-515.092	43.216	230.589	0	0	0
214	16	N245	-1302.113	1367.276	5986.785	.339	0	.048
215	16	N249	648.895	1171.063	-5157.683	.288	0	.033
216	16	N248A	5120.677	1375.539	-2279.59	-.138	0	-.315
217	16	N252	-4543.345	1189.213	2255.657	-.124	0	-.266
218	16	N261	-4799.414	1395.236	-2907.797	-.2	0	.286
219	16	N265	4632.663	1201.255	3150.504	-.166	0	.243
220	16	N307	-543.487	337.505	-148.217	0	0	.001
221	16	N308	28.576	229.53	341.442	0	0	-.001
222	16	N309	51.719	285.451	-298.798	-.002	0	0
223	16	Totals:	-1865.105	8682.499	.005			
224	16	COG (ft):	X: -.144	Y: -.071	Z: -.025			
225	17	N79	-595.568	43.836	-428.679	0	0	0
226	17	N159	85.327	43.294	-976.957	0	0	0
227	17	N239	-10.672	43.311	-5.423	0	0	0
228	17	N245	-1283.31	1326.209	5788.909	.329	0	.045
229	17	N249	556.791	1142.669	-4883.795	.281	0	.031
230	17	N248A	4837.37	1389.761	-2502.485	-.143	0	-.318
231	17	N252	-4649.989	1203.185	2330.269	-.128	0	-.269
232	17	N261	-4730.317	1391.558	-3179.796	-.205	0	.282
233	17	N265	4524.905	1196.191	3242.281	-.17	0	.24
234	17	N307	-556.974	331.993	-204.146	0	0	.001
235	17	N308	90.759	240.81	261.942	0	0	-.001
236	17	N309	113.479	329.682	-376.376	-.001	0	0
237	17	Totals:	-1618.199	8682.499	-934.256			
238	17	COG (ft):	X: -.144	Y: -.071	Z: -.025			
239	18	N79	-329.932	43.814	-239.008	0	0	0
240	18	N159	100.022	43.229	-1025.361	0	0	0
241	18	N239	487.216	43.529	-238.333	0	0	0
242	18	N245	-1095.717	1316.228	5667.5	.326	0	.04
243	18	N249	435.756	1137.546	-4844.067	.279	0	.027
244	18	N248A	4811.522	1433.597	-2714.625	-.149	0	-.327
245	18	N252	-4958.001	1235.95	2444.458	-.132	0	-.276
246	18	N261	-4704.326	1393.451	-3538.456	-.209	0	.28
247	18	N265	4469.552	1193.767	3315.927	-.172	0	.238
248	18	N307	-485.199	282.872	-249.946	0	0	.001

Joint Reactions (By Combination) (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
249	18	N308	120.139	230.15	184.459	0	0	-.002
250	18	N309	213.834	328.364	-382.221	-.001	0	0
251	18	Totals:	-935.134	8682.498	-1619.673			
252	18	COG (ft):	X: -.144	Y: -.071	Z: -.025			
253	19	N79	105.166	43.663	64.231	0	0	0
254	19	N159	90.228	43.209	-894.036	0	0	0
255	19	N239	766.799	43.781	-359.986	0	0	0
256	19	N245	-817.744	1319.641	5581.893	.326	0	.034
257	19	N249	305.296	1142.619	-4894.494	.28	0	.022
258	19	N248A	5002.909	1474.685	-2795.726	-.152	0	-.338
259	19	N252	-5243.132	1263.841	2500.188	-.133	0	-.283
260	19	N261	-4650.061	1379.586	-3875.958	-.209	0	.274
261	19	N265	4352.599	1180.231	3263.01	-.171	0	.235
262	19	N307	-387.114	238.51	-235.672	0	0	.001
263	19	N308	161.208	235.7	146.064	0	0	-.002
264	19	N309	313.833	317.031	-368.033	-.001	0	0
265	19	Totals:	-.015	8682.497	-1868.519			
266	19	COG (ft):	X: -.144	Y: -.071	Z: -.025			
267	20	N79	538.662	43.462	366.755	0	0	0
268	20	N159	57.173	43.215	-554.692	0	0	0
269	20	N239	810.281	43.928	-368.894	0	0	0
270	20	N245	-484.841	1318.091	5417.162	.326	0	.029
271	20	N249	215.287	1144.914	-4908.325	.281	0	.019
272	20	N248A	5215.609	1484.339	-2690.051	-.148	0	-.343
273	20	N252	-5338.118	1268.317	2413.66	-.13	0	-.286
274	20	N261	-4482.603	1336.192	-3999.2	-.204	0	.265
275	20	N265	4100.602	1147.795	3054.499	-.167	0	.229
276	20	N307	-331.509	239.693	-151.507	0	0	.001
277	20	N308	236.09	284.832	186.685	0	0	-.001
278	20	N309	395.897	327.719	-381.313	-.001	0	0
279	20	Totals:	932.531	8682.497	-1615.221			
280	20	COG (ft):	X: -.144	Y: -.071	Z: -.025			
281	21	N79	779.867	43.325	545.411	0	0	0
282	21	N159	10.703	43.279	-13.179	0	0	0
283	21	N239	684.427	43.972	-308.373	0	0	0
284	21	N245	-157.973	1332.218	5290.703	.331	0	.027
285	21	N249	202.286	1158.44	-5036.503	.284	0	.018
286	21	N248A	5439.73	1480.942	-2489.379	-.143	0	-.345
287	21	N252	-5359.559	1262.762	2275.456	-.126	0	-.287
288	21	N261	-4325.082	1295.685	-3886.953	-.196	0	.257
289	21	N265	3909.558	1119.489	2835.045	-.162	0	.224
290	21	N307	-293.313	250.83	-57.612	0	0	.001
291	21	N308	272.563	329.169	278.986	0	0	-.001
292	21	N309	450.509	322.388	-365.297	-.001	0	0
293	21	Totals:	1613.715	8682.498	-931.695			
294	21	COG (ft):	X: -.144	Y: -.071	Z: -.025			
295	22	N79	818.536	43.257	585.291	0	0	0
296	22	N159	-35.271	43.465	521.891	0	0	0
297	22	N239	365.841	43.908	-163.47	0	0	0
298	22	N245	35.989	1375.687	5374.22	.342	0	.027
299	22	N249	255.169	1191.078	-5357.925	.292	0	.018
300	22	N248A	5759.698	1483.043	-2281.5	-.138	0	-.348
301	22	N252	-5392.154	1259.781	2191.45	-.122	0	-.288
302	22	N261	-4319.366	1286.262	-3671.934	-.19	0	.257
303	22	N265	3935.799	1114.561	2706.789	-.157	0	.225
304	22	N307	-240.418	240.098	7.152	.001	0	.001
305	22	N308	227.627	327.878	368.59	0	0	-.001

Joint Reactions (By Combination) (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
306	22	N309	453.631	273.48	-280.565	-.002	0	0
307	22	Totals:	1865.08	8682.498	-.011			
308	22	COG (ft):	X: -.144	Y: -.071	Z: -.025			
309	23	N79	718.826	43.227	517.722	0	0	0
310	23	N159	-69.423	43.695	821.981	0	0	0
311	23	N239	-138.542	43.696	72.62	0	0	0
312	23	N245	16.715	1416.605	5572.056	.352	0	.03
313	23	N249	347.604	1219.395	-5631.567	.298	0	.021
314	23	N248A	6042.714	1468.948	-2058.731	-.133	0	-.345
315	23	N252	-5284.835	1245.777	2117.155	-.119	0	-.286
316	23	N261	-4388.74	1290.005	-3399.886	-.186	0	.261
317	23	N265	4043.974	1119.698	2615.615	-.154	0	.228
318	23	N307	-227.237	245.652	62.709	.001	0	.001
319	23	N308	165.401	316.451	447.698	0	0	-.001
320	23	N309	391.717	229.35	-203.123	-.002	0	0
321	23	Totals:	1618.174	8682.499	934.249			
322	23	COG (ft):	X: -.144	Y: -.071	Z: -.025			
323	24	N79	453.144	43.214	327.833	0	0	0
324	24	N159	-84.075	43.835	870.322	0	0	0
325	24	N239	-636.554	43.442	305.439	0	0	0
326	24	N245	-171.179	1426.409	5693.526	.355	0	.035
327	24	N249	469.327	1224.551	-5671.252	.3	0	.025
328	24	N248A	6068.63	1424.819	-1846.554	-.127	0	-.335
329	24	N252	-4976.119	1213.274	2003.409	-.115	0	-.279
330	24	N261	-4414.908	1288.525	-3040.916	-.182	0	.263
331	24	N265	4099.728	1121.901	2542.24	-.152	0	.23
332	24	N307	-299.525	294.85	108.032	.001	0	.001
333	24	N308	135.82	326.962	524.934	0	0	-.001
334	24	N309	290.82	230.718	-197.348	-.002	0	0
335	24	Totals:	935.108	8682.5	1619.667			
336	24	COG (ft):	X: -.144	Y: -.071	Z: -.025			
337	25	N79	68.751	19.323	51.576	0	0	0
338	25	N159	-16.857	19.308	167.339	0	0	0
339	25	N239	-240.078	19.525	110.725	0	0	0
340	25	N245	-289.85	590.096	2481.676	.147	0	.019
341	25	N249	293.944	547.873	-2367.201	.134	0	.015
342	25	N248A	2647.595	661.688	-1190.351	-.073	0	-.147
343	25	N252	-2273.603	609.665	1244.635	-.07	0	-.131
344	25	N261	-2581.24	850.053	-2761.739	-.159	0	.151
345	25	N265	2363.055	762.689	2447.172	-.139	0	.134
346	25	N307	-160.252	108.185	-58.268	0	0	0
347	25	N308	96.653	226.681	420.306	0	0	-.001
348	25	N309	91.875	111.903	-108.67	0	0	0
349	25	Totals:	-.006	4526.991	437.2			
350	25	COG (ft):	X: .576	Y: -.451	Z: 1.467			
351	26	N79	-34.713	19.333	-21.174	0	0	0
352	26	N159	-8.25	19.373	79.693	0	0	0
353	26	N239	-252.749	19.51	114.502	0	0	0
354	26	N245	-372.032	590.448	2526.081	.147	0	.02
355	26	N249	316.277	547.574	-2366.385	.134	0	.016
356	26	N248A	2592.162	659.298	-1213.912	-.074	0	-.146
357	26	N252	-2244.057	607.883	1266.85	-.071	0	-.13
358	26	N261	-2625.825	861.844	-2737.718	-.161	0	.154
359	26	N265	2435.297	772.559	2504.768	-.14	0	.136
360	26	N307	-174.358	107.956	-79.811	0	0	0
361	26	N308	77.077	213.207	408.398	0	0	-.001
362	26	N309	72.993	108.008	-103.405	0	0	0

Joint Reactions (By Combination) (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
363	26	Totals:	-218.178	4526.991	377.888			
364	26	COG (ft):	X: .576	Y: -.451	Z: 1.467			
365	27	N79	-94.763	19.361	-65.289	0	0	0
366	27	N159	3.579	19.447	-52.276	0	0	0
367	27	N239	-218.981	19.472	98.612	0	0	0
368	27	N245	-449.884	586.588	2555.358	.146	0	.021
369	27	N249	320.377	543.692	-2332.632	.133	0	.016
370	27	N248A	2531.941	660.453	-1261.252	-.075	0	-.146
371	27	N252	-2237.609	609.21	1301.474	-.072	0	-.13
372	27	N261	-2668.317	873.02	-2768.855	-.163	0	.156
373	27	N265	2491.887	781.204	2568.417	-.142	0	.137
374	27	N307	-183.333	105.189	-102.392	0	0	0
375	27	N308	66.972	200.695	383	0	0	-.001
376	27	N309	60.61	108.659	-106.207	0	0	0
377	27	Totals:	-377.522	4526.991	217.957			
378	27	COG (ft):	X: .576	Y: -.451	Z: 1.467			
379	28	N79	-106.81	19.386	-76.128	0	0	0
380	28	N159	14.997	19.496	-179.663	0	0	0
381	28	N239	-135.559	19.403	60.807	0	0	0
382	28	N245	-493.629	574.954	2528.478	.143	0	.02
383	28	N249	306.84	533.454	-2241.28	.131	0	.016
384	28	N248A	2448.454	660.215	-1310.992	-.077	0	-.145
385	28	N252	-2227.508	609.536	1320.936	-.073	0	-.13
386	28	N261	-2673.089	875.81	-2822.501	-.164	0	.156
387	28	N265	2487.636	782.687	2605.661	-.143	0	.137
388	28	N307	-197.328	109.044	-116.243	0	0	0
389	28	N308	78.535	200.911	359.964	0	0	-.001
390	28	N309	61.108	122.095	-129.041	0	0	0
391	28	Totals:	-436.352	4526.991	-.002			
392	28	COG (ft):	X: .576	Y: -.451	Z: 1.467			
393	29	N79	-80.388	19.406	-57.874	0	0	0
394	29	N159	23.203	19.509	-253.905	0	0	0
395	29	N239	-11.196	19.319	3.198	0	0	0
396	29	N245	-487.92	564.111	2474.777	.14	0	.02
397	29	N249	280.633	524.223	-2160.506	.128	0	.016
398	29	N248A	2380.897	664.192	-1364.586	-.078	0	-.146
399	29	N252	-2255.309	613.441	1340.89	-.074	0	-.13
400	29	N261	-2660.059	875.098	-2892.064	-.165	0	.155
401	29	N265	2461.142	781.108	2629.487	-.144	0	.137
402	29	N307	-201.136	108.362	-128.551	0	0	0
403	29	N308	93.502	203.651	340.925	0	0	-.001
404	29	N309	77.995	134.571	-150.395	0	0	0
405	29	Totals:	-378.634	4526.99	-218.603			
406	29	COG (ft):	X: .576	Y: -.451	Z: 1.467			
407	30	N79	-11.06	19.428	-8.232	0	0	0
408	30	N159	26.458	19.496	-268.654	0	0	0
409	30	N239	108.52	19.265	-52.275	0	0	0
410	30	N245	-443.187	561.55	2441.846	.139	0	.018
411	30	N249	247.064	522.304	-2145.685	.128	0	.014
412	30	N248A	2381.997	675.95	-1416.352	-.08	0	-.149
413	30	N252	-2342.067	623.628	1374.266	-.075	0	-.133
414	30	N261	-2656.95	875.847	-2983.205	-.166	0	.155
415	30	N265	2449.501	780.513	2648.881	-.144	0	.136
416	30	N307	-181.173	94.905	-139.721	0	0	0
417	30	N308	98.381	199.779	321.949	0	0	-.001
418	30	N309	103.695	134.324	-151.822	0	0	0
419	30	Totals:	-218.82	4526.99	-379.005			

Joint Reactions (By Combination) (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
420	30	COG (ft):	X: .576	Y: -.451	Z: 1.467			
421	31	N79	95.346	19.438	66.581	0	0	0
422	31	N159	23.629	19.461	-234.381	0	0	0
423	31	N239	177.867	19.259	-82.728	0	0	0
424	31	N245	-375.045	562.534	2416.372	.139	0	.017
425	31	N249	213.817	523.571	-2157.11	.128	0	.013
426	31	N248A	2434.633	686.794	-1437.628	-.08	0	-.152
427	31	N252	-2425.67	632.691	1391.226	-.076	0	-.135
428	31	N261	-2643.415	872.211	-3063.707	-.166	0	.154
429	31	N265	2418.405	776.582	2635.65	-.144	0	.135
430	31	N307	-154.242	82.413	-135.849	0	0	0
431	31	N308	107.015	200.474	312.689	0	0	-.001
432	31	N309	127.657	131.561	-148.323	0	0	0
433	31	Totals:	-.006	4526.99	-437.208			
434	31	COG (ft):	X: .576	Y: -.451	Z: 1.467			
435	32	N79	198.807	19.426	139.338	0	0	0
436	32	N159	15.012	19.394	-146.736	0	0	0
437	32	N239	190.534	19.28	-86.506	0	0	0
438	32	N245	-292.843	562.211	2371.97	.139	0	.016
439	32	N249	191.487	523.856	-2157.954	.128	0	.012
440	32	N248A	2490.075	689.176	-1414.054	-.079	0	-.153
441	32	N252	-2455.232	634.471	1368.974	-.075	0	-.136
442	32	N261	-2598.826	860.396	-3087.727	-.165	0	.151
443	32	N265	2346.166	766.733	2578.002	-.143	0	.133
444	32	N307	-140.124	82.646	-114.274	0	0	0
445	32	N308	126.582	213.954	324.642	0	0	-.001
446	32	N309	146.529	135.448	-153.57	0	0	0
447	32	Totals:	218.166	4526.99	-377.895			
448	32	COG (ft):	X: .576	Y: -.451	Z: 1.467			
449	33	N79	258.853	19.404	183.461	0	0	0
450	33	N159	3.179	19.312	-14.771	0	0	0
451	33	N239	156.773	19.319	-70.614	0	0	0
452	33	N245	-214.973	566.076	2342.683	.141	0	.016
453	33	N249	187.345	527.737	-2191.681	.129	0	.012
454	33	N248A	2550.301	688.027	-1366.731	-.078	0	-.153
455	33	N252	-2461.725	633.145	1334.352	-.074	0	-.136
456	33	N261	-2556.311	849.213	-3056.612	-.163	0	.149
457	33	N265	2289.55	758.081	2514.367	-.141	0	.132
458	33	N307	-131.126	85.404	-91.682	0	0	0
459	33	N308	136.701	226.473	350.036	0	0	-.001
460	33	N309	158.942	134.799	-150.773	0	0	0
461	33	Totals:	377.51	4526.99	-217.965			
462	33	COG (ft):	X: .576	Y: -.451	Z: 1.467			
463	34	N79	270.904	19.384	194.306	0	0	0
464	34	N159	-8.233	19.261	112.619	0	0	0
465	34	N239	73.361	19.386	-32.801	0	0	0
466	34	N245	-171.229	577.686	2369.557	.144	0	.016
467	34	N249	200.836	537.995	-2283.01	.132	0	.012
468	34	N248A	2633.775	688.294	-1317.008	-.077	0	-.154
469	34	N252	-2471.853	632.803	1314.899	-.073	0	-.137
470	34	N261	-2551.532	846.416	-3002.987	-.161	0	.149
471	34	N265	2293.775	756.596	2477.158	-.14	0	.132
472	34	N307	-117.109	81.539	-77.832	0	0	0
473	34	N308	125.159	226.261	373.046	0	0	-.001
474	34	N309	158.487	121.369	-127.954	0	0	0
475	34	Totals:	436.34	4526.99	-.006			
476	34	COG (ft):	X: .576	Y: -.451	Z: 1.467			

Joint Reactions (By Combination) (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
477	35	N79	244.48	19.365	176.046	0	0	0
478	35	N159	-16.429	19.254	186.864	0	0	0
479	35	N239	-51.003	19.462	24.814	0	0	0
480	35	N245	-176.967	588.521	2423.248	.146	0	.016
481	35	N249	227.066	547.22	-2363.769	.134	0	.013
482	35	N248A	2701.315	684.324	-1263.421	-.076	0	-.153
483	35	N252	-2444.009	628.898	1294.966	-.072	0	-.136
484	35	N261	-2564.584	847.134	-2933.424	-.16	0	.15
485	35	N265	2320.294	758.177	2453.369	-.139	0	.132
486	35	N307	-113.32	82.224	-65.548	0	0	0
487	35	N308	110.188	223.51	392.059	0	0	-.001
488	35	N309	141.59	108.9	-106.61	0	0	0
489	35	Totals:	378.622	4526.99	218.595			
490	35	COG (ft):	X: .576	Y: -.451	Z: 1.467			
491	36	N79	175.153	19.341	126.392	0	0	0
492	36	N159	-19.681	19.271	201.611	0	0	0
493	36	N239	-170.724	19.513	80.28	0	0	0
494	36	N245	-221.72	591.074	2456.182	.147	0	.018
495	36	N249	260.679	549.137	-2378.585	.134	0	.014
496	36	N248A	2700.22	672.541	-1211.652	-.074	0	-.15
497	36	N252	-2357.209	618.734	1261.619	-.07	0	-.134
498	36	N261	-2567.704	846.413	-2842.265	-.159	0	.15
499	36	N265	2331.959	758.757	2433.993	-.138	0	.133
500	36	N307	-133.317	95.686	-54.408	0	0	0
501	36	N308	105.296	227.373	411.017	0	0	-.001
502	36	N309	115.857	109.15	-105.187	0	0	0
503	36	Totals:	218.808	4526.991	378.997			
504	36	COG (ft):	X: .576	Y: -.451	Z: 1.467			
505	37	N79	-24.253	19.566	-15.39	0	0	0
506	37	N159	-16.927	19.307	168.037	0	0	0
507	37	N239	-239.256	19.521	110.355	0	0	0
508	37	N245	-290.74	589.969	2480.748	.147	0	.019
509	37	N249	295.176	547.76	-2366.659	.134	0	.015
510	37	N248A	3246.222	933.968	-2469.374	-.144	0	-.187
511	37	N252	-2800.718	833.651	2368.146	-.129	0	-.163
512	37	N261	-1974.287	588.07	-1466.982	-.091	0	.115
513	37	N265	1879.661	546.793	1417.332	-.081	0	.106
514	37	N307	-207.161	206.187	163.984	0	0	0
515	37	N308	40.575	110.303	155.668	0	0	0
516	37	N309	91.702	111.902	-108.668	0	0	0
517	37	Totals:	-.005	4526.999	437.196			
518	37	COG (ft):	X: -1.03	Y: -.451	Z: 1.467			
519	38	N79	-127.702	19.522	-88.124	0	0	0
520	38	N159	-8.32	19.372	80.398	0	0	0
521	38	N239	-251.94	19.506	114.137	0	0	0
522	38	N245	-372.921	590.321	2525.148	.147	0	.02
523	38	N249	317.51	547.46	-2365.841	.134	0	.016
524	38	N248A	3190.722	931.713	-2492.964	-.145	0	-.186
525	38	N252	-2771.095	831.739	2390.377	-.13	0	-.162
526	38	N261	-2018.807	599.594	-1442.997	-.092	0	.118
527	38	N265	1951.823	556.968	1474.908	-.083	0	.108
528	38	N307	-221.258	205.97	142.455	0	0	0
529	38	N308	20.99	96.828	143.79	0	0	0
530	38	N309	72.819	108.006	-103.403	0	0	0
531	38	Totals:	-218.178	4526.999	377.884			
532	38	COG (ft):	X: -1.03	Y: -.451	Z: 1.467			
533	39	N79	-187.743	19.52	-132.229	0	0	0

Joint Reactions (By Combination) (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
534	39	N159	3.508	19.446	-51.577	0	0	0
535	39	N239	-218.189	19.468	98.256	0	0	0
536	39	N245	-450.771	586.462	2554.43	.146	0	.021
537	39	N249	321.606	543.579	-2332.089	.133	0	.016
538	39	N248A	3130.463	933.153	-2540.372	-.147	0	-.185
539	39	N252	-2764.589	832.801	2425.065	-.131	0	-.161
540	39	N261	-2061.268	610.334	-1474.182	-.094	0	.12
541	39	N265	2008.365	566.052	1538.54	-.085	0	.109
542	39	N307	-230.224	203.206	119.867	0	0	0
543	39	N308	10.884	84.321	118.45	0	0	0
544	39	N309	60.436	108.658	-106.205	0	0	0
545	39	Totals:	-377.522	4526.999	217.953			
546	39	COG (ft):	X: -1.03	Y: -.451	Z: 1.467			
547	40	N79	-199.797	19.538	-143.072	0	0	0
548	40	N159	14.928	19.495	-178.979	0	0	0
549	40	N239	-134.786	19.398	60.459	0	0	0
550	40	N245	-494.514	574.83	2527.562	.143	0	.021
551	40	N249	308.061	533.342	-2240.74	.131	0	.016
552	40	N248A	3046.969	933.131	-2590.193	-.148	0	-.185
553	40	N252	-2754.46	832.944	2444.616	-.132	0	-.161
554	40	N261	-2066.041	612.794	-1527.821	-.096	0	.12
555	40	N265	2004.107	567.831	1575.736	-.086	0	.109
556	40	N307	-244.211	207.051	105.99	0	0	0
557	40	N308	22.456	84.551	95.477	0	0	0
558	40	N309	60.935	122.094	-129.04	0	0	0
559	40	Totals:	-436.351	4526.998	-.005			
560	40	COG (ft):	X: -1.03	Y: -.451	Z: 1.467			
561	41	N79	-173.384	19.574	-124.826	0	0	0
562	41	N159	23.136	19.508	-253.241	0	0	0
563	41	N239	-10.44	19.314	2.857	0	0	0
564	41	N245	-488.805	563.988	2473.875	.14	0	.02
565	41	N249	281.847	524.111	-2159.968	.128	0	.016
566	41	N248A	2979.421	937.363	-2643.825	-.149	0	-.186
567	41	N252	-2782.249	836.617	2464.618	-.133	0	-.161
568	41	N261	-2053.051	611.796	-1597.371	-.097	0	.119
569	41	N265	1977.645	566.487	1599.511	-.087	0	.108
570	41	N307	-248.016	206.36	93.655	0	0	0
571	41	N308	37.438	87.311	76.502	0	0	0
572	41	N309	77.824	134.57	-150.394	0	0	0
573	41	Totals:	-378.633	4526.998	-218.607			
574	41	COG (ft):	X: -1.03	Y: -.451	Z: 1.467			
575	42	N79	-104.059	19.634	-75.19	0	0	0
576	42	N159	26.393	19.495	-268.011	0	0	0
577	42	N239	109.267	19.261	-52.612	0	0	0
578	42	N245	-444.073	561.427	2440.956	.139	0	.018
579	42	N249	248.27	522.193	-2145.149	.128	0	.014
580	42	N248A	2980.548	949.491	-2695.579	-.151	0	-.188
581	42	N252	-2869.019	846.437	2497.991	-.134	0	-.164
582	42	N261	-2050.019	612.221	-1688.548	-.098	0	.118
583	42	N265	1966.07	566.163	1618.905	-.087	0	.108
584	42	N307	-228.056	192.901	82.466	0	0	0
585	42	N308	42.335	83.451	57.582	0	0	0
586	42	N309	103.524	134.323	-151.822	0	0	0
587	42	Totals:	-218.82	4526.998	-379.009			
588	42	COG (ft):	X: -1.03	Y: -.451	Z: 1.467			
589	43	N79	2.34	19.701	-.387	0	0	0
590	43	N159	23.566	19.46	-233.754	0	0	0

Joint Reactions (By Combination) (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
591	43	N239	178.617	19.255	-83.065	0	0	0
592	43	N245	-375.934	562.412	2415.493	.139	0	.017
593	43	N249	215.018	523.461	-2156.575	.128	0	.013
594	43	N248A	3033.24	960.554	-2716.833	-.152	0	-.191
595	43	N252	-2952.678	855.278	2514.944	-.134	0	-.166
596	43	N261	-2036.572	608.463	-1769.08	-.098	0	.117
597	43	N265	1935.059	562.301	1605.709	-.087	0	.107
598	43	N307	-201.134	180.403	86.32	0	0	0
599	43	N308	50.985	84.148	48.341	0	0	0
600	43	N309	127.487	131.561	-148.323	0	0	0
601	43	Totals:	-.006	4526.998	-437.212			
602	43	COG (ft):	X: -1.03	Y: -.451	Z: 1.467			
603	44	N79	105.787	19.743	72.353	0	0	0
604	44	N159	14.949	19.393	-146.115	0	0	0
605	44	N239	191.296	19.275	-86.849	0	0	0
606	44	N245	-293.733	562.088	2371.096	.139	0	.016
607	44	N249	192.688	523.747	-2157.422	.128	0	.012
608	44	N248A	3088.749	962.801	-2693.229	-.151	0	-.193
609	44	N252	-2982.317	857.188	2492.675	-.133	0	-.167
610	44	N261	-1992.048	596.915	-1793.064	-.096	0	.114
611	44	N265	1862.9	552.147	1548.081	-.086	0	.105
612	44	N307	-187.026	180.625	107.882	0	0	0
613	44	N308	70.563	97.629	60.263	0	0	0
614	44	N309	146.36	135.447	-153.569	0	0	0
615	44	Totals:	218.167	4526.998	-377.899			
616	44	COG (ft):	X: -1.03	Y: -.451	Z: 1.467			
617	45	N79	165.824	19.751	116.467	0	0	0
618	45	N159	3.116	19.311	-14.145	0	0	0
619	45	N239	157.552	19.315	-70.965	0	0	0
620	45	N245	-215.864	565.953	2341.805	.141	0	.016
621	45	N249	188.549	527.627	-2191.147	.129	0	.012
622	45	N248A	3149.014	961.367	-2645.84	-.149	0	-.193
623	45	N252	-2988.867	856.127	2457.989	-.132	0	-.167
624	45	N261	-1949.564	586.167	-1761.902	-.094	0	.112
625	45	N265	1806.332	543.058	1484.462	-.084	0	.103
626	45	N307	-178.036	183.379	130.48	0	0	0
627	45	N308	80.682	110.144	85.6	0	0	0
628	45	N309	158.772	134.799	-150.773	0	0	0
629	45	Totals:	377.511	4526.998	-217.969			
630	45	COG (ft):	X: -1.03	Y: -.451	Z: 1.467			
631	46	N79	177.88	19.737	127.315	0	0	0
632	46	N159	-8.297	19.26	113.26	0	0	0
633	46	N239	74.159	19.381	-33.161	0	0	0
634	46	N245	-172.123	577.562	2368.667	.144	0	.016
635	46	N249	202.048	537.885	-2282.473	.132	0	.012
636	46	N248A	3232.496	961.419	-2596.035	-.148	0	-.193
637	46	N252	-2999.024	855.967	2438.448	-.131	0	-.168
638	46	N261	-1944.783	583.7	-1708.282	-.092	0	.112
639	46	N265	1810.564	541.277	1447.301	-.083	0	.103
640	46	N307	-164.027	179.525	144.356	0	0	0
641	46	N308	69.131	109.917	108.547	0	0	0
642	46	N309	158.316	121.368	-127.953	0	0	0
643	46	Totals:	436.34	4526.998	-.01			
644	46	COG (ft):	X: -1.03	Y: -.451	Z: 1.467			
645	47	N79	151.466	19.704	109.063	0	0	0
646	47	N159	-16.496	19.253	187.525	0	0	0
647	47	N239	-50.188	19.458	24.447	0	0	0

Joint Reactions (By Combination) (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
648	47	N245	-177.861	588.395	2422.345	.146	0	.016
649	47	N249	228.287	547.109	-2363.23	.134	0	.013
650	47	N248A	3300.027	957.193	-2542.41	-.147	0	-.192
651	47	N252	-2971.192	852.295	2418.467	-.13	0	-.167
652	47	N261	-1957.795	584.704	-1638.733	-.091	0	.113
653	47	N265	1837.051	542.623	1423.564	-.082	0	.104
654	47	N307	-160.241	180.219	156.667	0	0	0
655	47	N308	54.146	107.147	127.496	0	0	0
656	47	N309	141.418	108.899	-106.608	0	0	0
657	47	Totals:	378.622	4526.998	218.592			
658	47	COG (ft):	X: -1.03	Y: -.451	Z: 1.467			
659	48	N79	82.142	19.64	59.415	0	0	0
660	48	N159	-19.749	19.271	202.292	0	0	0
661	48	N239	-169.899	19.509	79.909	0	0	0
662	48	N245	-222.612	590.948	2455.265	.147	0	.018
663	48	N249	261.906	549.025	-2378.045	.134	0	.014
664	48	N248A	3298.904	945.041	-2490.653	-.145	0	-.19
665	48	N252	-2884.38	842.498	2385.122	-.129	0	-.165
666	48	N261	-1960.839	584.306	-1547.538	-.091	0	.114
667	48	N265	1848.651	542.933	1404.187	-.081	0	.105
668	48	N307	-180.234	193.682	167.826	0	0	0
669	48	N308	49.236	110.997	146.398	0	0	0
670	48	N309	115.684	109.149	-105.185	0	0	0
671	48	Totals:	218.809	4526.999	378.994			
672	48	COG (ft):	X: -1.03	Y: -.451	Z: 1.467			
673	49	N79	14.865	20.332	10.704	0	0	0
674	49	N159	3.28	19.379	-32.546	0	0	0
675	49	N239	-30.257	19.39	13.626	0	0	0
676	49	N245	-332.384	576.364	2448.885	.143	0	.018
677	49	N249	254.204	535.791	-2262.597	.131	0	.014
678	49	N248A	2870.089	821.551	-2017.841	-.113	0	-.174
679	49	N252	-2645.443	744.104	1948.65	-.1	0	-.16
680	49	N261	-1860.231	534.056	-1310.896	-.079	0	.104
681	49	N265	1746.852	498.9	1171.92	-.071	0	.096
682	49	N307	-183.155	149.214	24.785	0	0	0
683	49	N308	52.443	111.231	133.74	0	0	0
684	49	N309	109.732	121.687	-128.43	0	0	0
685	49	Totals:	-.004	4151.999	-.002			
686	49	COG (ft):	X: -.912	Y: -.296	Z: .786			
687	50	N79	30.313	19.315	21.826	0	0	0
688	50	N159	3.373	19.379	-33.465	0	0	0
689	50	N239	-31.565	19.391	14.216	0	0	0
690	50	N245	-332.809	576.397	2449.452	.143	0	.018
691	50	N249	254.302	535.814	-2262.63	.131	0	.014
692	50	N248A	2584.674	693.288	-1405.422	-.081	0	-.153
693	50	N252	-2363.621	637.85	1347.546	-.077	0	-.135
694	50	N261	-2134.102	650.783	-1892.427	-.107	0	.124
695	50	N265	1991.26	599.499	1689.78	-.096	0	.113
696	50	N307	-177.987	138.527	.714	0	0	0
697	50	N308	66.476	140.05	198.858	0	0	0
698	50	N309	109.68	121.702	-128.453	0	0	0
699	50	Totals:	-.006	4151.995	-.005			
700	50	COG (ft):	X: -.144	Y: -.296	Z: .786			
701	51	N79	31.351	22.594	22.574	0	0	0
702	51	N159	3.971	22.604	-39.396	0	0	0
703	51	N239	-37.686	22.621	16.972	0	0	0
704	51	N245	-388.261	675.823	2858.821	.168	0	.021

Joint Reactions (By Combination) (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
705	51	N249	296.537	622.14	-2640.702	.152	0	.016
706	51	N248A	2757.976	699.344	-1088.366	-.066	0	-.163
707	51	N252	-2516.079	642.264	1057.735	-.062	0	-.146
708	51	N261	-2258.686	660.637	-1714.079	-.099	0	.132
709	51	N265	2116.182	609.26	1529.147	-.087	0	.121
710	51	N307	-200.302	146.071	-34.384	0	0	0
711	51	N308	67.037	141.248	181.473	0	0	0
712	51	N309	127.955	141.891	-149.798	0	0	0
713	51	Totals:	-.007	4406.497	-.002			
714	51	COG (ft):	X: -.13	Y: -.11	Z: -.029			
715	52	N79	13.66	20.055	12.166	0	0	0
716	52	N159	-12.106	20.082	122.476	0	0	0
717	52	N239	-198.315	20.217	91.634	0	0	0
718	52	N245	-311.187	610.388	2573.504	.152	0	.019
719	52	N249	286.566	565.582	-2430.932	.138	0	.015
720	52	N248A	2552.341	613.14	-877.46	-.056	0	-.144
721	52	N252	-2201.252	566.979	885.183	-.053	0	-.13
722	52	N261	-1998.259	581.3	-1415.29	-.085	0	.118
723	52	N265	1890.656	540.928	1302.787	-.076	0	.109
724	52	N307	-172.288	137.421	6.226	0	0	0
725	52	N308	44.418	129.076	201.927	0	0	0
726	52	N309	105.761	115.522	-112.987	0	0	0
727	52	Totals:	-.007	3920.691	359.232			
728	52	COG (ft):	X: -.13	Y: -.11	Z: -.029			
729	53	N79	-62.126	20.025	-41.875	0	0	0
730	53	N159	-5.51	20.125	45.135	0	0	0
731	53	N239	-213.406	20.202	97.592	0	0	0
732	53	N245	-378.198	608.26	2599.763	.151	0	.02
733	53	N249	307.62	563.295	-2409.019	.138	0	.016
734	53	N248A	2504.719	609.51	-890.086	-.056	0	-.143
735	53	N252	-2169.325	564.138	896.983	-.054	0	-.129
736	53	N261	-2020.724	587.014	-1389.807	-.086	0	.119
737	53	N265	1925.877	546.103	1328.979	-.077	0	.11
738	53	N307	-187.255	140.534	-7.384	0	0	0
739	53	N308	34.219	123.368	198.296	0	0	0
740	53	N309	84.485	118.118	-117.481	0	0	0
741	53	Totals:	-179.624	3920.691	311.095			
742	53	COG (ft):	X: -.13	Y: -.11	Z: -.029			
743	54	N79	-113.793	20.018	-79.313	0	0	0
744	54	N159	3.511	20.165	-53.681	0	0	0
745	54	N239	-180.301	20.167	81.449	0	0	0
746	54	N245	-436.44	603.688	2610.959	.15	0	.021
747	54	N249	316.946	558.968	-2371.156	.137	0	.017
748	54	N248A	2443.472	608.675	-923.677	-.057	0	-.142
749	54	N252	-2155.974	563.868	920.599	-.055	0	-.128
750	54	N261	-2040.202	592.378	-1400.573	-.087	0	.12
751	54	N265	1949.556	550.752	1363.643	-.078	0	.11
752	54	N307	-199.794	140.823	-27.211	0	0	0
753	54	N308	30.836	118.287	184.786	0	0	0
754	54	N309	71.081	122.903	-126.209	0	0	0
755	54	Totals:	-311.105	3920.691	179.616			
756	54	COG (ft):	X: -.13	Y: -.11	Z: -.029			
757	55	N79	-127.504	20.035	-90.124	0	0	0
758	55	N159	12.541	20.192	-147.511	0	0	0
759	55	N239	-107.868	20.121	47.527	0	0	0
760	55	N245	-470.321	597.891	2604.097	.148	0	.021
761	55	N249	312.057	553.767	-2327.485	.136	0	.017

Joint Reactions (By Combination) (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
762	55	N248A	2384.999	610.853	-969.235	-.058	0	-.142
763	55	N252	-2164.764	566.244	949.709	-.056	0	-.129
764	55	N261	-2051.483	595.957	-1444.701	-.088	0	.12
765	55	N265	1955.357	553.634	1397.493	-.079	0	.111
766	55	N307	-206.554	138.212	-47.95	0	0	0
767	55	N308	35.171	115.19	165.014	0	0	0
768	55	N309	69.128	128.594	-136.834	0	0	0
769	55	Totals:	-359.242	3920.691	0			
770	55	COG (ft):	X: -.13	Y: -.11	Z: -.029			
771	56	N79	-99.572	20.071	-71.404	0	0	0
772	56	N159	19.158	20.2	-211.198	0	0	0
773	56	N239	-15.512	20.077	4.912	0	0	0
774	56	N245	-470.748	592.427	2581.011	.147	0	.02
775	56	N249	294.266	549.082	-2289.721	.134	0	.016
776	56	N248A	2344.979	615.461	-1014.544	-.06	0	-.143
777	56	N252	-2193.343	570.628	976.503	-.057	0	-.129
778	56	N261	-2051.543	596.797	-1510.367	-.089	0	.12
779	56	N265	1941.723	553.971	1421.444	-.08	0	.11
780	56	N307	-205.723	133.404	-64.039	0	0	0
781	56	N308	46.061	114.91	144.286	0	0	0
782	56	N309	79.148	133.664	-146.502	0	0	0
783	56	Totals:	-311.104	3920.691	-179.618			
784	56	COG (ft):	X: -.13	Y: -.11	Z: -.029			
785	57	N79	-37.494	20.115	-28.175	0	0	0
786	57	N159	21.588	20.187	-227.685	0	0	0
787	57	N239	72.009	20.048	-34.973	0	0	0
788	57	N245	-437.609	588.764	2547.898	.146	0	.02
789	57	N249	268.338	546.168	-2267.986	.134	0	.015
790	57	N248A	2334.134	621.259	-1047.458	-.061	0	-.144
791	57	N252	-2234.055	575.846	993.794	-.058	0	-.13
792	57	N261	-2040.364	594.67	-1579.966	-.09	0	.119
793	57	N265	1912.309	551.674	1429.071	-.08	0	.109
794	57	N307	-197.52	127.685	-71.161	0	0	0
795	57	N308	60.587	117.522	128.166	0	0	0
796	57	N309	98.454	136.753	-152.622	0	0	0
797	57	Totals:	-179.624	3920.691	-311.098			
798	57	COG (ft):	X: -.13	Y: -.11	Z: -.029			
799	58	N79	42.105	20.156	27.988	0	0	0
800	58	N159	19.179	20.153	-192.559	0	0	0
801	58	N239	131.261	20.042	-61.448	0	0	0
802	58	N245	-379.775	587.885	2513.623	.146	0	.018
803	58	N249	241.206	545.803	-2268.098	.134	0	.014
804	58	N248A	2355.368	626.699	-1059.168	-.061	0	-.145
805	58	N252	-2276.007	580.5	996.953	-.058	0	-.131
806	58	N261	-2020.935	590.144	-1634.869	-.09	0	.117
807	58	N265	1874.983	547.357	1418.334	-.08	0	.108
808	58	N307	-184.137	122.587	-67.405	0	0	0
809	58	N308	74.862	122.329	120.968	0	0	0
810	58	N309	121.885	137.034	-153.555	0	0	0
811	58	Totals:	-.006	3920.69	-359.236			
812	58	COG (ft):	X: -.13	Y: -.11	Z: -.029			
813	59	N79	117.891	20.185	82.034	0	0	0
814	59	N159	12.576	20.108	-115.219	0	0	0
815	59	N239	146.353	20.061	-67.409	0	0	0
816	59	N245	-312.745	590.024	2487.372	.146	0	.017
817	59	N249	220.138	548.089	-2290.024	.134	0	.013
818	59	N248A	2402.996	630.322	-1046.536	-.06	0	-.147

Joint Reactions (By Combination) (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
819	59	N252	-2307.957	583.343	985.134	-.057	0	-.133
820	59	N261	-1998.46	584.427	-1660.354	-.089	0	.116
821	59	N265	1839.748	542.182	1392.116	-.08	0	.107
822	59	N307	-169.158	119.473	-53.779	0	0	0
823	59	N308	85.062	128.043	124.618	0	0	0
824	59	N309	143.166	134.434	-149.053	0	0	0
825	59	Totals:	179.611	3920.69	-311.099			
826	59	COG (ft):	X: -.13	Y: -.11	Z: -.029			
827	60	N79	169.556	20.194	119.477	0	0	0
828	60	N159	3.554	20.064	-16.406	0	0	0
829	60	N239	113.254	20.097	-51.264	0	0	0
830	60	N245	-254.492	594.603	2476.173	.148	0	.017
831	60	N249	210.784	552.411	-2327.876	.135	0	.013
832	60	N248A	2464.243	631.161	-1012.956	-.059	0	-.148
833	60	N252	-2321.336	583.614	961.517	-.056	0	-.133
834	60	N261	-1978.966	579.052	-1649.602	-.088	0	.115
835	60	N265	1816.05	537.535	1357.459	-.079	0	.106
836	60	N307	-156.602	119.179	-33.943	0	0	0
837	60	N308	88.455	133.13	138.128	0	0	0
838	60	N309	156.592	129.651	-140.328	0	0	0
839	60	Totals:	311.092	3920.69	-179.62			
840	60	COG (ft):	X: -.13	Y: -.11	Z: -.029			
841	61	N79	183.265	20.18	130.289	0	0	0
842	61	N159	-5.472	20.035	77.423	0	0	0
843	61	N239	40.824	20.141	-17.337	0	0	0
844	61	N245	-220.619	600.395	2483.028	.149	0	.017
845	61	N249	215.658	557.613	-2371.523	.136	0	.013
846	61	N248A	2522.71	628.993	-967.416	-.058	0	-.148
847	61	N252	-2312.551	581.236	932.426	-.055	0	-.133
848	61	N261	-1967.679	575.465	-1605.485	-.087	0	.115
849	61	N265	1810.243	534.658	1323.639	-.077	0	.106
850	61	N307	-149.838	121.784	-13.212	0	0	0
851	61	N308	84.128	136.225	157.88	0	0	0
852	61	N309	158.561	123.966	-129.714	0	0	0
853	61	Totals:	359.229	3920.691	-.003			
854	61	COG (ft):	X: -.13	Y: -.11	Z: -.029			
855	62	N79	155.332	20.146	111.564	0	0	0
856	62	N159	-12.083	20.029	141.112	0	0	0
857	62	N239	-51.532	20.182	25.281	0	0	0
858	62	N245	-220.212	605.85	2506.106	.151	0	.017
859	62	N249	233.464	562.3	-2409.275	.138	0	.013
860	62	N248A	2562.724	624.394	-922.115	-.057	0	-.147
861	62	N252	-2283.95	576.848	905.65	-.054	0	-.132
862	62	N261	-1967.631	574.63	-1539.817	-.086	0	.115
863	62	N265	1823.89	534.321	1299.713	-.076	0	.107
864	62	N307	-150.682	126.594	2.86	0	0	0
865	62	N308	73.237	136.499	178.588	0	0	0
866	62	N309	148.535	118.9	-120.053	0	0	0
867	62	Totals:	311.091	3920.691	179.614			
868	62	COG (ft):	X: -.13	Y: -.11	Z: -.029			
869	63	N79	93.257	20.1	68.33	0	0	0
870	63	N159	-14.511	20.046	157.602	0	0	0
871	63	N239	-139.058	20.209	65.164	0	0	0
872	63	N245	-253.361	609.506	2539.22	.152	0	.018
873	63	N249	259.42	565.217	-2431.019	.138	0	.014
874	63	N248A	2573.569	618.591	-889.19	-.056	0	-.145
875	63	N252	-2243.211	571.63	888.359	-.053	0	-.131

Joint Reactions (By Combination) (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
876	63	N261	-1978.825	576.767	-1470.203	-.085	0	.116
877	63	N265	1853.324	536.615	1292.08	-.076	0	.108
878	63	N307	-158.901	132.318	9.972	0	0	0
879	63	N308	58.701	133.882	194.71	0	0	0
880	63	N309	129.207	115.81	-113.931	0	0	0
881	63	Totals:	179.611	3920.691	311.094			
882	63	COG (ft):	X: -.13	Y: -.11	Z: -.029			
883	64	N79	4.902	13.74	5.86	0	0	0
884	64	N159	-13.217	13.737	133.5	0	0	0
885	64	N239	-187.76	13.935	86.881	0	0	0
886	64	N245	-202.672	418.175	1774.336	.104	0	.013
887	64	N249	203.676	395.007	-1692.733	.097	0	.011
888	64	N248A	1781.38	414.362	-573.262	-.037	0	-.097
889	64	N252	-1497.958	390.678	589.556	-.036	0	-.09
890	64	N261	-1366.773	393.829	-936.221	-.057	0	.08
891	64	N265	1298.965	373.389	875.425	-.052	0	.075
892	64	N307	-116.285	96.64	15.836	0	0	0
893	64	N308	25.726	89.662	151.16	0	0	0
894	64	N309	70.011	75.899	-71.104	0	0	0
895	64	Totals:	-.005	2689.055	359.233			
896	64	COG (ft):	X: -.13	Y: -.11	Z: -.029			
897	65	N79	-70.884	13.692	-48.181	0	0	0
898	65	N159	-6.622	13.796	56.167	0	0	0
899	65	N239	-202.857	13.924	92.842	0	0	0
900	65	N245	-269.645	416.028	1800.611	.103	0	.014
901	65	N249	224.691	392.725	-1670.861	.096	0	.012
902	65	N248A	1733.766	410.849	-585.851	-.038	0	-.096
903	65	N252	-1466.034	387.708	601.302	-.037	0	-.089
904	65	N261	-1389.234	399.455	-910.734	-.058	0	.081
905	65	N265	1334.18	378.677	901.6	-.053	0	.076
906	65	N307	-131.249	99.762	2.251	0	0	0
907	65	N308	15.52	83.951	147.539	0	0	0
908	65	N309	48.745	78.49	-75.589	0	0	0
909	65	Totals:	-179.622	2689.055	311.096			
910	65	COG (ft):	X: -.13	Y: -.11	Z: -.029			
911	66	N79	-122.554	13.674	-85.621	0	0	0
912	66	N159	2.398	13.855	-42.644	0	0	0
913	66	N239	-169.762	13.881	76.703	0	0	0
914	66	N245	-327.863	411.496	1811.82	.102	0	.015
915	66	N249	234	388.338	-1633.03	.095	0	.012
916	66	N248A	1672.525	410.093	-619.393	-.038	0	-.095
917	66	N252	-1452.674	387.357	624.853	-.037	0	-.088
918	66	N261	-1408.725	404.708	-921.484	-.059	0	.082
919	66	N265	1357.88	383.46	936.235	-.054	0	.077
920	66	N307	-143.787	100.06	-17.553	0	0	0
921	66	N308	12.121	78.862	134.042	0	0	0
922	66	N309	35.339	83.273	-84.313	0	0	0
923	66	Totals:	-311.102	2689.055	179.617			
924	66	COG (ft):	X: -.13	Y: -.11	Z: -.029			
925	67	N79	-136.273	13.688	-96.437	0	0	0
926	67	N159	11.428	13.9	-136.473	0	0	0
927	67	N239	-97.336	13.819	42.785	0	0	0
928	67	N245	-361.742	405.79	1804.963	.101	0	.015
929	67	N249	229.122	383.02	-1589.374	.094	0	.012
930	67	N248A	1614.057	412.297	-664.902	-.04	0	-.096
931	67	N252	-1461.447	389.72	653.901	-.039	0	-.088
932	67	N261	-1420.032	408.186	-965.585	-.06	0	.083

Joint Reactions (By Combination) (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
933	67	N265	1363.725	386.457	970.056	-.055	0	.077
934	67	N307	-150.55	97.455	-38.279	0	0	0
935	67	N308	16.435	75.755	114.284	0	0	0
936	67	N309	33.373	88.968	-94.939	0	0	0
937	67	Totals:	-359.24	2689.055	0			
938	67	COG (ft):	X: -.13	Y: -.11	Z: -.029			
939	68	N79	-108.349	13.73	-77.723	0	0	0
940	68	N159	18.046	13.921	-200.165	0	0	0
941	68	N239	-4.986	13.754	.172	0	0	0
942	68	N245	-362.189	400.44	1781.874	.099	0	.014
943	68	N249	211.365	378.197	-1551.603	.093	0	.012
944	68	N248A	1574.038	416.866	-710.176	-.041	0	-.096
945	68	N252	-1490.005	394.165	680.655	-.04	0	-.089
946	68	N261	-1420.124	408.959	-1031.221	-.061	0	.082
947	68	N265	1350.146	386.863	993.984	-.056	0	.077
948	68	N307	-149.722	92.648	-54.366	0	0	0
949	68	N308	27.306	75.466	93.567	0	0	0
950	68	N309	43.373	94.047	-104.615	0	0	0
951	68	Totals:	-311.102	2689.055	-179.617			
952	68	COG (ft):	X: -.13	Y: -.11	Z: -.029			
953	69	N79	-46.279	13.789	-34.5	0	0	0
954	69	N159	20.476	13.91	-216.659	0	0	0
955	69	N239	82.533	13.706	-39.713	0	0	0
956	69	N245	-329.088	396.884	1748.75	.098	0	.013
957	69	N249	185.486	375.161	-1529.844	.092	0	.011
958	69	N248A	1563.19	422.573	-743.078	-.042	0	-.098
959	69	N252	-1530.698	399.501	697.938	-.04	0	-.09
960	69	N261	-1408.975	406.819	-1100.797	-.062	0	.081
961	69	N265	1320.782	384.569	1001.6	-.056	0	.076
962	69	N307	-141.525	86.926	-61.499	0	0	0
963	69	N308	41.819	78.072	77.45	0	0	0
964	69	N309	62.656	97.146	-110.746	0	0	0
965	69	Totals:	-179.622	2689.055	-311.097			
966	69	COG (ft):	X: -.13	Y: -.11	Z: -.029			
967	70	N79	33.316	13.848	21.659	0	0	0
968	70	N159	18.068	13.869	-181.541	0	0	0
969	70	N239	141.789	13.687	-66.19	0	0	0
970	70	N245	-271.298	396.077	1714.458	.098	0	.012
971	70	N249	158.406	374.724	-1529.917	.092	0	.01
972	70	N248A	1584.417	427.89	-754.802	-.042	0	-.099
973	70	N252	-1572.638	404.3	701.123	-.041	0	-.091
974	70	N261	-1389.565	402.335	-1155.688	-.062	0	.08
975	70	N265	1283.49	380.191	990.868	-.056	0	.075
976	70	N307	-128.146	81.819	-57.764	0	0	0
977	70	N308	56.09	82.878	70.248	0	0	0
978	70	N309	86.068	97.436	-111.69	0	0	0
979	70	Totals:	-.004	2689.055	-359.235			
980	70	COG (ft):	X: -.13	Y: -.11	Z: -.029			
981	71	N79	109.102	13.894	75.704	0	0	0
982	71	N159	11.466	13.809	-104.209	0	0	0
983	71	N239	156.887	13.703	-72.154	0	0	0
984	71	N245	-204.306	398.234	1688.19	.099	0	.011
985	71	N249	137.377	377.003	-1551.803	.092	0	.009
986	71	N248A	1632.037	431.396	-742.205	-.042	0	-.1
987	71	N252	-1604.585	407.274	689.358	-.04	0	-.092
988	71	N261	-1367.093	396.706	-1181.177	-.061	0	.078
989	71	N265	1248.261	374.902	964.669	-.056	0	.074

Joint Reactions (By Combination) (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
990	71	N307	-113.169	78.696	-44.162	0	0	0
991	71	N308	66.298	88.596	73.888	0	0	0
992	71	N309	107.339	94.841	-107.197	0	0	0
993	71	Totals:	179.613	2689.055	-311.099			
994	71	COG (ft):	X: -.13	Y: -.11	Z: -.029			
995	72	N79	160.77	13.915	113.15	0	0	0
996	72	N159	2.445	13.746	-5.401	0	0	0
997	72	N239	123.797	13.747	-56.013	0	0	0
998	72	N245	-146.077	402.774	1676.98	.1	0	.011
999	72	N249	128.039	381.387	-1589.624	.093	0	.008
1000	72	N248A	1693.278	432.156	-708.674	-.041	0	-.101
1001	72	N252	-1617.972	407.625	665.807	-.039	0	-.093
1002	72	N261	-1347.587	391.443	-1170.442	-.06	0	.077
1003	72	N265	1224.542	370.122	930.039	-.055	0	.073
1004	72	N307	-100.614	78.393	-24.349	0	0	0
1005	72	N308	69.707	93.69	87.383	0	0	0
1006	72	N309	120.767	90.059	-98.476	0	0	0
1007	72	Totals:	311.094	2689.055	-179.62			
1008	72	COG (ft):	X: -.13	Y: -.11	Z: -.029			
1009	73	N79	174.486	13.904	123.968	0	0	0
1010	73	N159	-6.581	13.699	88.426	0	0	0
1011	73	N239	51.376	13.807	-22.089	0	0	0
1012	73	N245	-112.206	408.477	1683.829	.102	0	.01
1013	73	N249	132.902	386.704	-1633.256	.095	0	.008
1014	73	N248A	1751.74	429.963	-663.183	-.04	0	-.101
1015	73	N252	-1609.205	405.259	636.777	-.038	0	-.093
1016	73	N261	-1336.274	387.957	-1126.352	-.059	0	.077
1017	73	N265	1218.691	367.128	896.248	-.053	0	.073
1018	73	N307	-93.847	80.992	-3.632	0	0	0
1019	73	N308	65.401	96.795	107.122	0	0	0
1020	73	N309	122.748	84.37	-87.861	0	0	0
1021	73	Totals:	359.231	2689.055	-.003			
1022	73	COG (ft):	X: -.13	Y: -.11	Z: -.029			
1023	74	N79	146.562	13.864	105.248	0	0	0
1024	74	N159	-13.192	13.68	152.119	0	0	0
1025	74	N239	-40.975	13.868	20.527	0	0	0
1026	74	N245	-111.778	413.816	1706.91	.103	0	.011
1027	74	N249	150.674	391.529	-1671.013	.096	0	.009
1028	74	N248A	1791.753	425.401	-617.917	-.038	0	-.1
1029	74	N252	-1580.624	400.811	610.041	-.037	0	-.092
1030	74	N261	-1336.194	387.188	-1060.712	-.058	0	.077
1031	74	N265	1232.283	366.723	872.345	-.052	0	.073
1032	74	N307	-94.687	85.801	12.438	0	0	0
1033	74	N308	54.529	97.078	127.82	0	0	0
1034	74	N309	112.743	79.296	-78.192	0	0	0
1035	74	Totals:	311.093	2689.055	179.614			
1036	74	COG (ft):	X: -.13	Y: -.11	Z: -.029			
1037	75	N79	84.495	13.803	62.02	0	0	0
1038	75	N159	-15.621	13.695	168.617	0	0	0
1039	75	N239	-128.499	13.915	60.409	0	0	0
1040	75	N245	-144.89	417.365	1740.036	.104	0	.012
1041	75	N249	176.581	394.568	-1692.783	.097	0	.01
1042	75	N248A	1802.601	419.691	-585.005	-.037	0	-.099
1043	75	N252	-1539.904	395.475	592.759	-.036	0	-.091
1044	75	N261	-1347.358	389.338	-991.122	-.057	0	.079
1045	75	N265	1261.666	369.015	864.723	-.052	0	.074
1046	75	N307	-102.902	91.529	19.562	0	0	0

Joint Reactions (By Combination) (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
1047	75	N308	40.006	94.467	143.938	0	0	0
1048	75	N309	93.438	76.196	-72.059	0	0	0
1049	75	Totals:	179.613	2689.055	311.095			
1050	75	COG (ft):	X: -.13	Y: -.11	Z: -.029			

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

	Member	Shape	Code Check	L...	LC	Shear Check	Loc[..Dir	LC	phi*Pn...	phi*Pnt..	phi*Mn...	phi*Mn...	Cb	Eqn
1	M1	PIPE_2.5	.232	1...	6	.190	13.6...	7	7871.3...	50715	3.596	3.596	2...	H1-1b
2	M2	PIPE_2.5	.422	1...	7	.213	15.4...	7	7871.3...	50715	3.596	3.596	1...	H1-1b
3	MP1A	PIPE_2.0	.320	1...	7	.104	1.25	1	23808....	32130	1.872	1.872	1...	H1-1b
4	MP2A	PIPE_2.5	.289	4...	7	.107	7.583	6	30038....	50715	3.596	3.596	4...	H1-1b
5	MP3A	PIPE_2.0	.189	6...	9	.087	6.009	7	14559....	32130	1.872	1.872	3...	H1-1b
6	MP4A	PIPE_2.0	.192	7...	7	.121	3.917	7	14916....	32130	1.872	1.872	1...	H1-1b
7	MP5A	PIPE_2.0	.163	1...	7	.095	1.25	4	23808....	32130	1.872	1.872	1...	H1-1b
8	M22	PIPE_2.0	.689	2...	4	.337	2.5	10	23808....	32130	1.872	1.872	1...	H1-1b
9	M23	PIPE_2.0	.376	1...	7	.166	1.979	7	23808....	32130	1.872	1.872	2...	H1-1b
10	M24	PIPE_2.0	.396	0	11	.174	.438	10	17855....	32130	1.872	1.872	3...	H1-1b
11	M25	PIPE_2.0	.498	6...	18	.173	.438	5	17855....	32130	1.872	1.872	2...	H1-1a
12	M26	PIPE_1.0	.095	2...	11	.023	2.667	4	10986....	14773.5	.465	.465	1...	H1-1b*
13	M27	PIPE_1.0	.082	2...	15	.022	0	3	7394.6...	14773.5	.465	.465	1...	H1-1b
14	M28	PIPE_1.0	.143	2...	18	.007	2.667	7	10986....	14773.5	.465	.465	1...	H1-1b*
15	M29	PIPE_1.0	.113	1...	15	.019	0	2	7709.1...	14773.5	.465	.465	1...	H1-1b
16	M30	PIPE_1.0	.084	2...	18	.017	2.667	2	10986....	14773.5	.465	.465	1...	H1-1b*
17	M33	PIPE_2.0	.064	2	4	.025	2	4	20866....	32130	1.872	1.872	2...	H1-1b
18	M34	PIPE_2.0	.282	6...	19	.063	7	19	17855....	32130	1.872	1.872	2...	H1-1b
19	M35	PIPE_2.0	.326	6...	19	.096	.438	7	17855....	32130	1.872	1.872	2...	H1-1b
20	M36	PIPE_1.0	.041	2...	1	.011	2.667	3	10986....	14773.5	.465	.465	1	H1-1b*
21	M37	PIPE_1.0	.068	2...	16	.013	0	11	7394.6...	14773.5	.465	.465	1...	H1-1b
22	M38	PIPE_1.0	.113	2...	43	.009	2.667	3	10986....	14773.5	.465	.465	1	H1-1b*
23	M39	PIPE_1.0	.089	1...	16	.018	3.952	1	7709.1...	14773.5	.465	.465	1...	H1-1b
24	M40	PIPE_1.0	.063	2...	19	.020	2.667	6	10986....	14773.5	.465	.465	1	H1-1b*
25	M45	PIPE_2.0	.605	6...	10	.007	0	14	7110.1...	32130	1.872	1.872	1...	H1-1a
26	M47	PIPE_2.5	.230	1...	2	.190	13.6...	3	7871.3...	50715	3.596	3.596	2...	H1-1b
27	M48	PIPE_2.5	.421	1...	3	.213	15.4...	3	7871.3...	50715	3.596	3.596	1...	H1-1b
28	MP1C	PIPE_2.0	.320	1...	3	.104	1.25	9	23808....	32130	1.872	1.872	1...	H1-1b
29	MP4C	PIPE_2.0	.191	7...	3	.121	3.917	3	14916....	32130	1.872	1.872	1...	H1-1b
30	MP5C	PIPE_2.0	.163	1...	3	.095	1.25	12	23808....	32130	1.872	1.872	1...	H1-1b
31	M68	PIPE_2.0	.696	2...	12	.344	2.5	6	23808....	32130	1.872	1.872	2...	H1-1b
32	M69	PIPE_2.0	.375	1...	3	.165	1.979	3	23808....	32130	1.872	1.872	2...	H1-1b
33	M70	PIPE_2.0	.398	0	7	.182	.438	6	17855....	32130	1.872	1.872	3...	H1-1b
34	OVP1	PIPE_2.0	.513	6...	14	.177	.438	1	17855....	32130	1.872	1.872	2...	H1-1a
35	M72	PIPE_1.0	.093	2...	7	.025	2.667	12	10986....	14773.5	.465	.465	1	H1-1b*
36	M73	PIPE_1.0	.082	2...	23	.024	4.077	11	7394.6...	14773.5	.465	.465	1...	H1-1b
37	M74	PIPE_1.0	.147	2...	14	.006	2.667	3	10986....	14773.5	.465	.465	1...	H1-1b*
38	M75	PIPE_1.0	.215	2...	14	.019	0	10	7709.1...	14773.5	.465	.465	1...	H1-1a
39	M76	PIPE_1.0	.087	2...	14	.017	2.667	10	10986....	14773.5	.465	.465	1...	H1-1b*
40	O	PIPE_2.0	.043	2	12	.021	2	12	20866....	32130	1.872	1.872	1...	H1-1b
41	M80	PIPE_2.0	.282	6...	15	.063	7	15	17855....	32130	1.872	1.872	2...	H1-1b
42	M81	PIPE_2.0	.325	6...	15	.097	.438	3	17855....	32130	1.872	1.872	2...	H1-1b
43	M82	PIPE_1.0	.041	2...	9	.010	2.667	11	10986....	14773.5	.465	.465	1...	H1-1b*
44	M83	PIPE_1.0	.068	2...	24	.013	0	7	7394.6...	14773.5	.465	.465	1...	H1-1b
45	M84	PIPE_1.0	.111	2...	15	.008	2.667	12	10986....	14773.5	.465	.465	1...	H1-1b*
46	M85	PIPE_1.0	.089	1...	24	.014	3.952	9	7709.1...	14773.5	.465	.465	1...	H1-1b
47	M86	PIPE_1.0	.063	2...	15	.016	2.667	8	10986....	14773.5	.465	.465	1...	H1-1b*
48	M87	PL3/8X3	.883	0	14	.061	.305 y	4	34298....	36450	.284	2.279	1...	H1-1b

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

	Member	Shape	Code Check	L...	LC	Shear Check	Loc[..	Dir	LC	phi*Pn...	phi*Pnt...	phi*Mn...	phi*Mn...	Cb	Eqn
49	M91	PIPE_2.0	.615	6...	6	.007	0		22	7110.1...	32130	1.872	1.872	1...	H1-1a
50	M93	PIPE_2.5	.230	1...	10	.190	13.6...		5	7871.3...	50715	3.596	3.596	2...	H1-1b
51	M94	PIPE_2.5	.422	1...	11	.213	15.4...		11	7871.3...	50715	3.596	3.596	1...	H1-1b
52	MP1B	PIPE_2.0	.320	1...	11	.105	1.25		5	23808....	32130	1.872	1.872	1...	H1-1b
53	MP4B	PIPE_2.0	.193	7...	11	.121	3.917		11	14916....	32130	1.872	1.872	1...	H1-1b
54	MP5B	PIPE_2.0	.163	1...	11	.095	1.25		8	23808....	32130	1.872	1.872	1...	H1-1b
55	M114	PIPE_2.0	.713	2...	8	.353	2.5		2	23808....	32130	1.872	1.872	1...	H1-1b
56	M115	PIPE_2.0	.375	1...	11	.165	1.979		11	23808....	32130	1.872	1.872	1...	H1-1b
57	M116	PIPE_2.0	.406	6...	23	.169	.437		3	17855....	32130	1.872	1.872	2...	H1-1b
58	M117	PIPE_2.0	.542	6...	22	.188	.437		9	17855....	32130	1.872	1.872	2...	H1-1a
59	M118	PIPE_1.0	.094	2...	3	.045	2.667		7	10986....	14773.5	.465	.465	1...	H1-1b*
60	M119	PIPE_1.0	.085	2...	19	.033	0		7	7394.6...	14773.5	.465	.465	1...	H1-1b
61	M120	PIPE_1.0	.155	2...	22	.009	2.667		12	10986....	14773.5	.465	.465	1...	H1-1b*
62	M121	PIPE_1.0	.229	2...	22	.023	3.952		6	7709.1...	14773.5	.465	.465	1...	H1-1a
63	M122	PIPE_1.0	.093	2...	22	.025	2.667		6	10986....	14773.5	.465	.465	1...	H1-1b*
64	OVP2	PIPE_2.0	.045	2	8	.039	2		7	20866....	32130	1.872	1.872	2...	H1-1b
65	M126	PIPE_2.0	.282	6...	23	.063	7		23	17855....	32130	1.872	1.872	2...	H1-1b
66	M127	PIPE_2.0	.325	6...	23	.097	.438		11	17855....	32130	1.872	1.872	2...	H1-1b
67	M128	PIPE_1.0	.041	2...	5	.010	2.667		7	10986....	14773.5	.465	.465	1...	H1-1b*
68	M129	PIPE_1.0	.068	2...	20	.013	4.077		3	7394.6...	14773.5	.465	.465	1...	H1-1b
69	M130	PIPE_1.0	.111	2...	23	.009	2.667		8	10986....	14773.5	.465	.465	1...	H1-1b*
70	M131	PIPE_1.0	.089	1...	20	.015	3.952		5	7709.1...	14773.5	.465	.465	1...	H1-1b
71	M132	PIPE_1.0	.063	2...	23	.016	2.667		4	10986....	14773.5	.465	.465	1...	H1-1b*
72	M136	PL3/8X3	.661	0	23	.056	.304	y	8	34300....	36450	.284	2.279	1...	H1-1b
73	M137	PIPE_2.0	.633	6...	2	.007	0		18	7110.1...	32130	1.872	1.872	1...	H1-1a
74	M144	PIPE_2.0	.043	2	12	.021	2		12	20866....	32130	1.872	1.872	1...	H1-1b
75	M147	PIPE_2.0	.044	2	8	.030	2		8	20866....	32130	1.872	1.872	2...	H1-1b
76	M146A	PL3/8X3	.915	0	14	.057	.305	z	3	34298....	36450	.284	2.279	1...	H1-1b
77	M147A	PL3/8X3	.673	0	23	.077	.304	y	10	34300....	36450	.284	2.279	1...	H1-1b
78	M138	PL3/8X3	.939	0	22	.094	.305	y	6	34298....	36450	.284	2.279	1...	H1-1b
79	M139	PL3/8X3	.665	0	19	.053	.304	y	4	34300....	36450	.284	2.279	1...	H1-1b
80	M142A	PL3/8X3	.971	0	22	.076	.305	y	6	34298....	36450	.284	2.279	1...	H1-1b
81	M143A	PL3/8X3	.673	0	19	.077	.304	y	6	34300....	36450	.284	2.279	1...	H1-1b
82	M146B	PL3/8X3	.852	0	18	.068	.305	y	8	34298....	36450	.284	2.279	1...	H1-1b
83	M147B	PL3/8X3	.659	0	15	.054	.304	y	1	34300....	36450	.284	2.279	1...	H1-1b
84	M150	PL3/8X3	.884	0	18	.058	.305	z	7	34298....	36450	.284	2.279	1...	H1-1b
85	M151	PL3/8X3	.671	0	15	.076	.304	y	2	34300....	36450	.284	2.279	1...	H1-1b
86	MP2C	PIPE_2.5	.282	4...	3	.107	7.583		2	30038....	50715	3.596	3.596	1...	H1-1b
87	MP3C	PIPE_2.0	.188	6...	5	.087	6.009		3	14559....	32130	1.872	1.872	3...	H1-1b
88	MP2B	PIPE_2.5	.282	4...	11	.108	7.583		10	30038....	50715	3.596	3.596	1...	H1-1b
89	MP3B	PIPE_2.0	.195	6...	1	.087	6.009		11	14559....	32130	1.872	1.872	2...	H1-1b
90	M181	L2.5x2.5x4	.152	4...	11	.009	0	z	19	6862.9...	38556	1.114	1.989	1...	H2-1
91	M182	L2.5x2.5x4	.187	4...	2	.011	7.95	y	23	6862.08	38556	1.114	1.989	1...	H2-1
92	M183	L2.5x2.5x4	.187	4...	10	.011	7.95	y	19	6862.08	38556	1.114	1.989	1...	H2-1
93	M184	L2.5x2.5x4	.152	4...	7	.009	7.95	z	15	6862.9...	38556	1.114	1.989	1...	H2-1
94	M185	L2.5x2.5x4	.187	4...	6	.011	7.95	y	15	6862.08	38556	1.114	1.989	1...	H2-1
95	M186	L2.5x2.5x4	.152	4...	3	.009	7.95	z	23	6862.9...	38556	1.114	1.989	1...	H2-1

VzW SMART Tool© Vendor

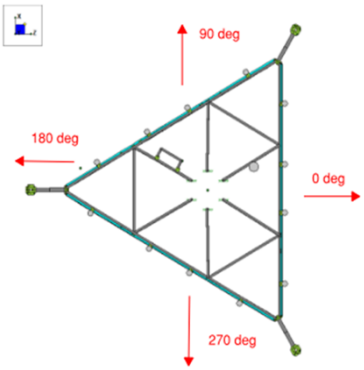
Client:	VERIZON WIRELESS	Date:	1/23/2024
Site Name:	HADDAM CT		
MDG #:	5000245769		
Fuze ID #:	16271944	Page:	1

Version 2.00

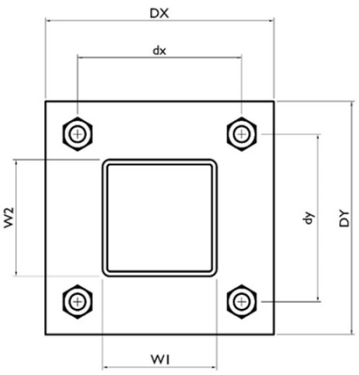
I. Mount-to-Tower Connection Check

Custom Orientation Required	Yes

Nodes (labeled per Risa)	Orientation (per graphic of typical platform)
N248A	300
N252	300
N261	60
N265	60
N245	180
N249	180



Tower Connection Bolt Checks	Yes
Bolt Orientation	Parallel
Bolt Quantity per Reaction:	4
d_x (in) *(Delta X of typ. bolt config. sketch)* :	2.5
d_y (in) *(Delta Y of typ. bolt config. sketch)* :	2
Bolt Type:	J429 Gr.2
Bolt Diameter (in):	0.375
Required Tensile Strength / bolt (kips):	2.7
Required Shear Strength / bolt (kips):	0.6
Tensile Capacity / bolt (kips):	4.6
Shear Capacity / bolt (kips):	2.8
Bolt Overall Utilization:	**57.9%**
Tower Connection Baseplate Checks	No



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MOUNT MODIFICATION DRAWINGS
17.00' SECTOR FRAME

TOWER OWNER: CROWN CASTLE
TOWER OWNER SITE NUMBER: 806478

CARRIER SITE NAME: HADDAM CT
CARRIER SITE NUMBER: 5000245769
FUZE ID: 16271944

539 PLAINS RD
HADDAM, CT 06438
MIDDLESEX COUNTY

LATITUDE: 41.443056° N
LONGITUDE: 72.506222° W

DESIGN CRITERIA

WIND LOADS

BASIC WIND SPEED (3 SECOND GUST), V = 125 MPH
EXPOSURE CATEGORY B
TOPOGRAPHIC CATEGORY: 1
TOPOGRAPHIC CONSIDERED: N/A
TOPOGRAPHIC METHOD: N/A
MEAN BASE ELEVATION (AMSL) = 504.12'

ICE LOADS

ICE WIND SPEED (3 SECOND GUST), V = 50 MPH
ICE THICKNESS = 1.00 IN

SEISMIC LOADS

SEISMIC DESIGN CATEGORY B
SHORT TERM MCER GROUND MOTION, S_S = .214
LONG TERM MCER GROUND MOTION, S_1 = .055

PROJECT INFORMATION

APPLICANT/LESSEE

COMPANY: VERIZON WIRELESS

CLIENT REPRESENTATIVE

COMPANY: VERIZON WIRELESS

PROJECT MANAGER

COMPANY: COLLIERS ENGINEERING & DESIGN
CONTACT: PETER ALBANO
PHONE: 856.797.0412
E-MAIL: PETER.ALBANO@COLLIERSENG.COM

CONTRACTOR PMI REQUIREMENTS

PMI LOCATION:	HTTPS://PMI.VZWSMART.COM
SMART TOOL PROJECT #:	10219426
VZW MDG #:	5000245769
ANALYSIS DATE:	1/23/2024

PMI REQUIREMENTS EMBEDDED WITHIN MOUNT MODIFICATION REPORT

SHEET INDEX

SHEET	DESCRIPTION
ST-1	TITLE SHEET
SBOM-1	BILL OF MATERIALS
SGN-1	GENERAL NOTES
SCF-1	CLIMBING FACILITY DETAIL
SS-1	MODIFICATION DETAILS
SS-2	MOUNT PHOTOS
	SPECIFICATION SHEETS

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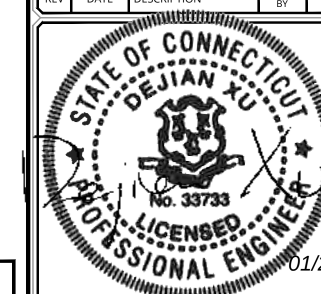
FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

SCALE :	JOB NUMBER :
AS SHOWN	21777316

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
.	.	.	.	.
.	.	.	.	.
1	1/23/24	ISSUED FOR CONSTRUCTION	VRD	DX
0	6/15/21	ISSUED FOR CONSTRUCTION	FAC	PET



01/23/2024

COLLIERS ENGINEERING & DESIGN CT, P.C.
C.T. JPC.0000131

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SITE NAME:

HADDAM CT
5000245769

539 PLAINS RD
HADDAM, CT 06438
MIDDLESEX COUNTY

Colliers Engineering & Design

STAMFORD
1055 Washington Boulevard
Stamford, CT 06901
Phone: 203.324.0800
COLLIERS ENGINEERING & DESIGN CT, P.C.
DOING BUSINESS AS MASER CONSULTING

SHEET TITLE :
TITLE SHEET

SHEET NUMBER :
ST-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

BILL OF MATERIALS

SECTION 1 - VZWSMART KITS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
6	VZWSMART	VZWSMART-MSK1	CROSSOVER PLATE		14	84
3		VZWSMART-SFK3	V-BRACING KIT	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1.	122	366
3		VZWSMART-AL333	CLIP ANGLE		3	9
3		VZWSMART-P40-278X096	96" LONG, PIPE 2.5 SCH40 (2.875"OD X 0.203" THK)		46	138

SECTION 2 - OTHER REQUIRED PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)

SECTION 3 - REQUIRED SAFETY CLIMB PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
1	PERFECT VISON	H42-0501-06	STANDOFF CLAMP BRACKET	OR EOR APPROVED EQUIVALENT	-	-
1	PERFECT VISION	PV-CMX-CG-BO	WIRE ROPE GUIDE	OR EOR APPROVED EQUIVALENT	-	-
					TOTAL:	597

NOTES:

1. THE MANUFACTURERS LISTED ARE THE APPROVED VENDORS FOR THE VZW MOUNT KITS. EACH MANUFACTURER WILL BE AWARE OF WHICH KITS HAVE BEEN THROUGH THE VZW APPROVAL PROCESS AND THEY ARE IN TURN APPROVED TO SELL. PLEASE NOTE THAT THE MATERIAL UTILIZED ON THE MOUNT MODIFICATIONS WILL BE REVIEWED AS A PART OF THE DESKTOP PMI COMPLETED BY THE SMART TOOL VENDOR. IT WILL BE REQUIRED THAT THE VZW KITS SPECIFIED ARE UTILIZED IN THE MODIFICATIONS.
2. ALL MATERIALS REQUIRED FOR THE DESIGNED MODIFICATIONS BUT NOT LISTED IN THIS SHEET ARE ASSUMED TO BE PROVIDED BY THE CONTRACTOR.

VZWSMART KITS - APPROVED VENDORS

COMMSCOPE	
CONTACT	SALVADOR ANGUIANO
PHONE	(817) 304-7492
EMAIL	SALVADOR.ANGUIANO@COMMSCOPE.COM
WEBSITE	WWW.COMMSCOPE.COM

METROSITE FABRICATORS, LLC	
CONTACT	KENT RAMEY
PHONE	(706) 335-7045 (O), (706) 982-9788 (M)
EMAIL	KENT@METROSITELLC.COM
WEBSITE	METROSITEFABRICATORS.COM

PERFECTVISION	
CONTACT	WIRELESS SALES
PHONE	(844) 887-6723
EMAIL	WWW.PERFECT-VISION.COM
WEBSITE	WIRELESSSALES@PERFECT-VISION.COM

SABRE INDUSTRIES, INC.	
CONTACT	ANGIE WELCH
PHONE	(866) 428-6937
EMAIL	AKWELCH@SABREINDUSTRIES.COM
WEBSITE	WWW.SABRESITESOLUTIONS.COM

SITE PRO 1	
CONTACT	PAULA BOSWELL
PHONE	(972) 236-9843
EMAIL	PAULA.BOSWELL@VALMONT.COM
WEBSITE	WWW.SITEPRO1.COM

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1	1/23/24	ISSUED FOR CONSTRUCTION	VRD	DX
0	6/15/21	ISSUED FOR CONSTRUCTION	FAC	PET

STATE OF CONNECTICUT DEJIAN XU No. 33733 LICENSED PROFESSIONAL ENGINEER 01/23/2024

COLLIERS ENGINEERING & DESIGN CT, P.C. C.T. JPC.0000131

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Stamford, CT 06901
Phone: 203.324.0800
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SHEET TITLE: BILL OF MATERIALS

SHEET NUMBER: SBOM-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

GENERAL NOTES

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

STRUCTURAL STEEL

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

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

3. ALL SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE APPROVED IN WRITING BY THE ENGINEER. CONTRACTOR SHALL PROVIDE DOCUMENTATION TO ENGINEER FOR VERIFYING THE SUBSTITUTE IS SUITABLE FOR USE AND MEETS ORIGINAL DESIGN CRITERIA. DIFFERENCES FROM THE ORIGINAL DESIGN, INCLUDING MAINTENANCE, REPAIR AND REPLACEMENT, SHALL BE NOTED. ESTIMATES OF COSTS/CREDITS ASSOCIATED WITH THE SUBSTITUTION (INCLUDING RE-DESIGN COSTS AND COSTS TO SUB-CONTRACTORS) SHALL BE PROVIDED TO THE ENGINEER. CONTRACTOR SHALL PROVIDE ADDITIONAL DOCUMENTATION AND/OR SPECIFICATIONS TO THE ENGINEER AS REQUESTED.
4. PROVIDE STRUCTURAL STEEL SHOP DRAWINGS TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
   a. SUBMIT SHOP DRAWINGS TO

      PETER.ALBANO@COLLIERSENG.COM

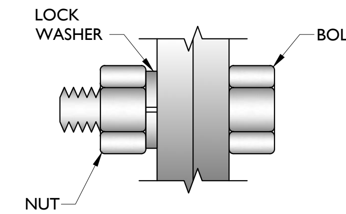
   b. PROVIDE COLLIERS ENGINEERING & DESIGN PROJECT # AND COLLIERS ENGINEERING & DESIGN PROJECT ENGINEER CONTACT IN THE BODY OF THE EMAIL.
5. DRILL NO HOLES IN ANY NEW OR EXISTING STRUCTURAL STEEL MEMBERS OTHER THAN THOSE SHOWN ON STRUCTURAL DRAWINGS WITHOUT THE APPROVAL OF THE ENGINEER OF RECORD.
6. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
7. ALL NEW STEEL SHALL BE HOT BE DIPPED GALVANIZED FOR FULL WEATHER PROTECTION. IN ADDITION ALL NEW STEEL SHALL BE PAINTED TO MATCH EXISTING STEEL. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.
8. ALL BOLT ASSEMBLIES FOR STRUCTURAL MEMBERS REPRESENTED IN THIS DRAWING REQUIRE LOCKING DEVICES TO BE INSTALLED IN ACCORDANCE WITH TIA-222-H SECTION 4.9.2 REQUIREMENTS.
9. WHERE CONNECTIONS ARE NOT FULLY DETAILED ON THESE DRAWINGS, FABRICATOR SHALL DESIGN CONNECTIONS TO RESIST LOADS AND FORCES WHERE SHOWN ON DRAWINGS AND AS OUTLINED IN SPECIFICATIONS.
10. FOR MEMBERS BEING REPLACED, PROVIDE NEW BOLTS AND MATCH EXISTING SIZE AND GRADE. MAINTAIN AISC REQUIREMENTS FOR MINIMUM BOLT DISTANCE AND SPACING.
11. ALL PROPOSED AND/OR REPLACED BOLTS SHALL BE OF SUFFICIENT LENGTH SUCH THAT THE END OF THE BOLT IS AT LEAST FLUSH WITH THE FACE OF THE NUT. IT IS NOT PERMITTED FOR THE BOLT END TO BE BELOW THE FACE OF THE NUT AFTER TIGHTENING IS COMPLETED.
12. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
13. ALL NEW STEEL SHALL BE HOT BE DIPPED GALVANIZED FOR FULL WEATHER PROTECTION. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.
14. ALL EXISTING PAINTED/GALVANIZED SURFACES DAMAGED DURING REHAB INCLUDING AREAS UNDER STIFFENER PLATES SHALL BE WIRE BRUSHED CLEAN, REPAIRED BY COLD GALVANIZING (ZINC COTE, OR EOR APPROVED EQUAL), AND REPAINTED TO MATCH THE EXISTING FINISH (IF APPLICABLE).
15. ALL HOLES IN STEEL MEMBERS SHALL BE SIZED 1/16" LARGER THAN THE BOLT DIAMETER. STANDARD HOLES SHALL BE USED UNLESS NOTED OTHERWISE.

BOLT SCHEDULE (IN.)

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

WORKABLE GAGES (IN.)

LEG	GAGE
4	2 1/2
3 1/2	2
3	1 3/4
2 1/2	1 3/8
2	1 1/8

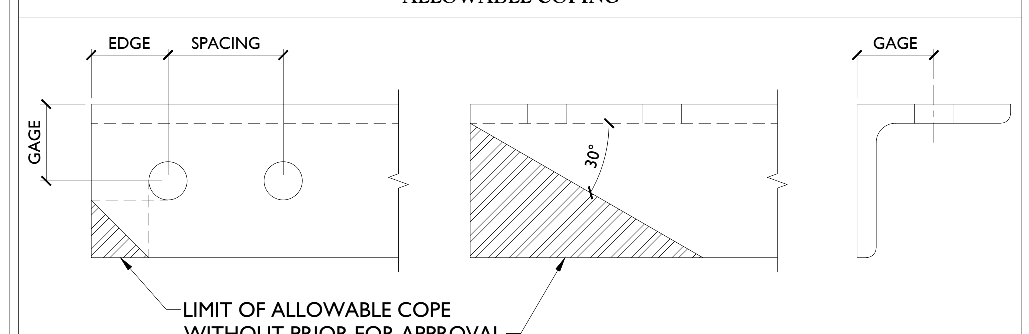


TYP. BOLT ASSEMBLY

NOTES:

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

ALLOWABLE COPING



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SCALE :	JOB NUMBER :
AS SHOWN	21777316

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
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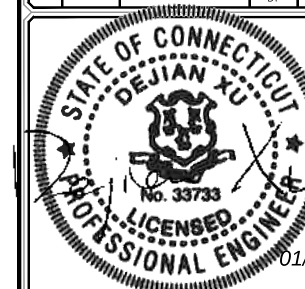
1	1/23/24	ISSUED FOR CONSTRUCTION	VRD	DX
0	6/15/21	ISSUED FOR CONSTRUCTION	FAC	PET



01/23/2024

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5000245769

539 PLAINS RD
HADDAM, CT 06438
MIDDLESEX COUNTY

Colliers Engineering & Design

STAMFORD
1055 Washington Boulevard
Stamford, CT 06901
Phone: 203.324.0800
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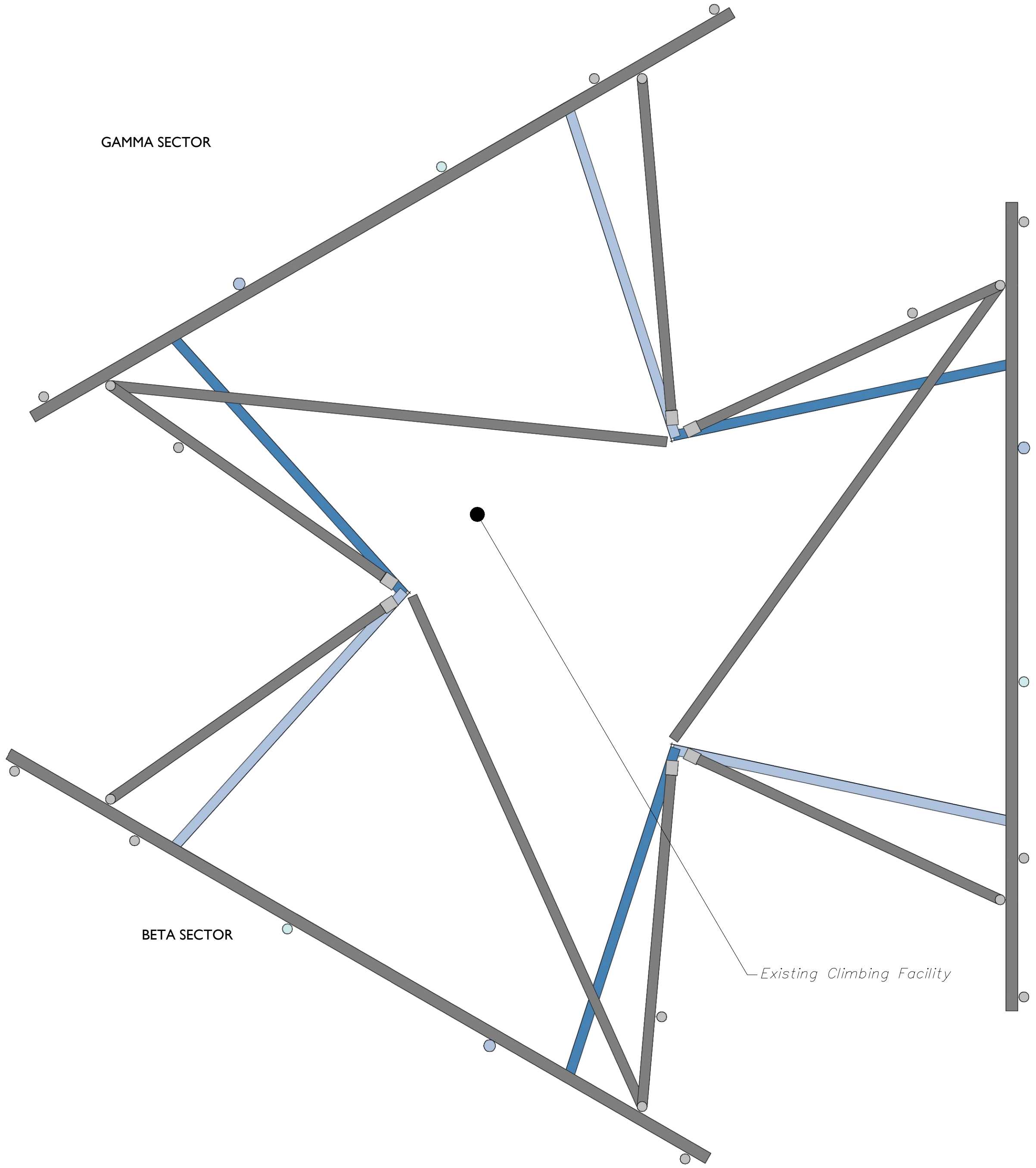
SHEET TITLE :
GENERAL NOTES

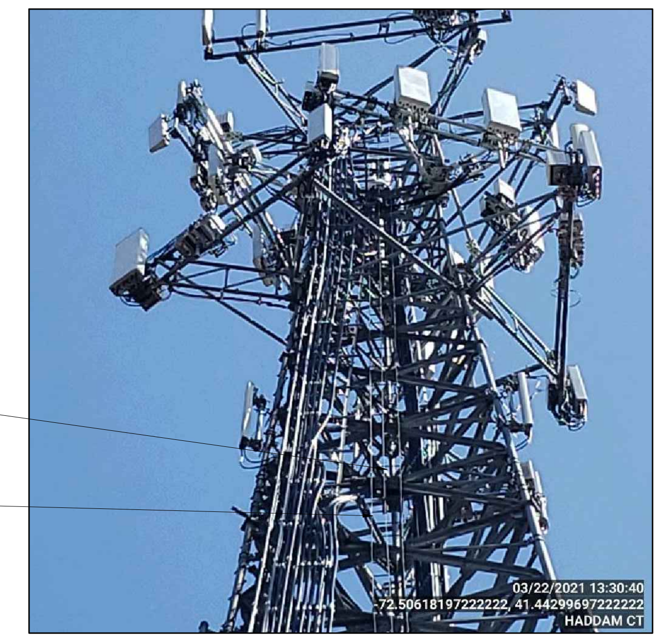
SHEET NUMBER :
SGN-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



1 CLIMBING FACILITY LOCATION

SCALE : N.T.S.



CLIMBING FACILITY PHOTO

STRUCTURAL NOTES:

1. PER THE MOUNT MAPPING COMPLETED BY ROAMING NETWORKS, INC. ON 3/22/2021, THE SAFETY CLIMB AND CLIMBING FACILITIES UP TO THE VERIZON MOUNT ELEVATION (177'-9") ARE IN GOOD CONDITION. COLLIERS ENGINEERING & DESIGN DOES NOT WARRANT THIS INFORMATION.

2. INSTALL SHALL NOT CAUSE HARM TO THE STRUCTURE, CLIMBING FACILITY, SAFETY CLIMB, OR ANY SYSTEM INSTALLED ON THE STRUCTURE. TIMELY NOTICE AND DOCUMENTATION SHALL BE PROVIDED BY CONTRACTORS TO THE EOR (OF STRUCTURAL DESIGN) IF AN OBSTRUCTION WAS REQUIRED TO MEET THE RF SYSTEM DESIGN REQUIREMENTS AND PERFORMANCES.

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STATE OF CONNECTICUT · DEJIAN XU · No. 33733 · LICENSED · PROFESSIONAL ENGINEER

01/23/2024

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SHEET TITLE : CLIMBING FACILITY DETAIL

SHEET NUMBER : SCF-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

LEGEND:

- PROPOSED
- RELOCATED
- EXISTING

MOUNT MODIFICATION SCHEDULE

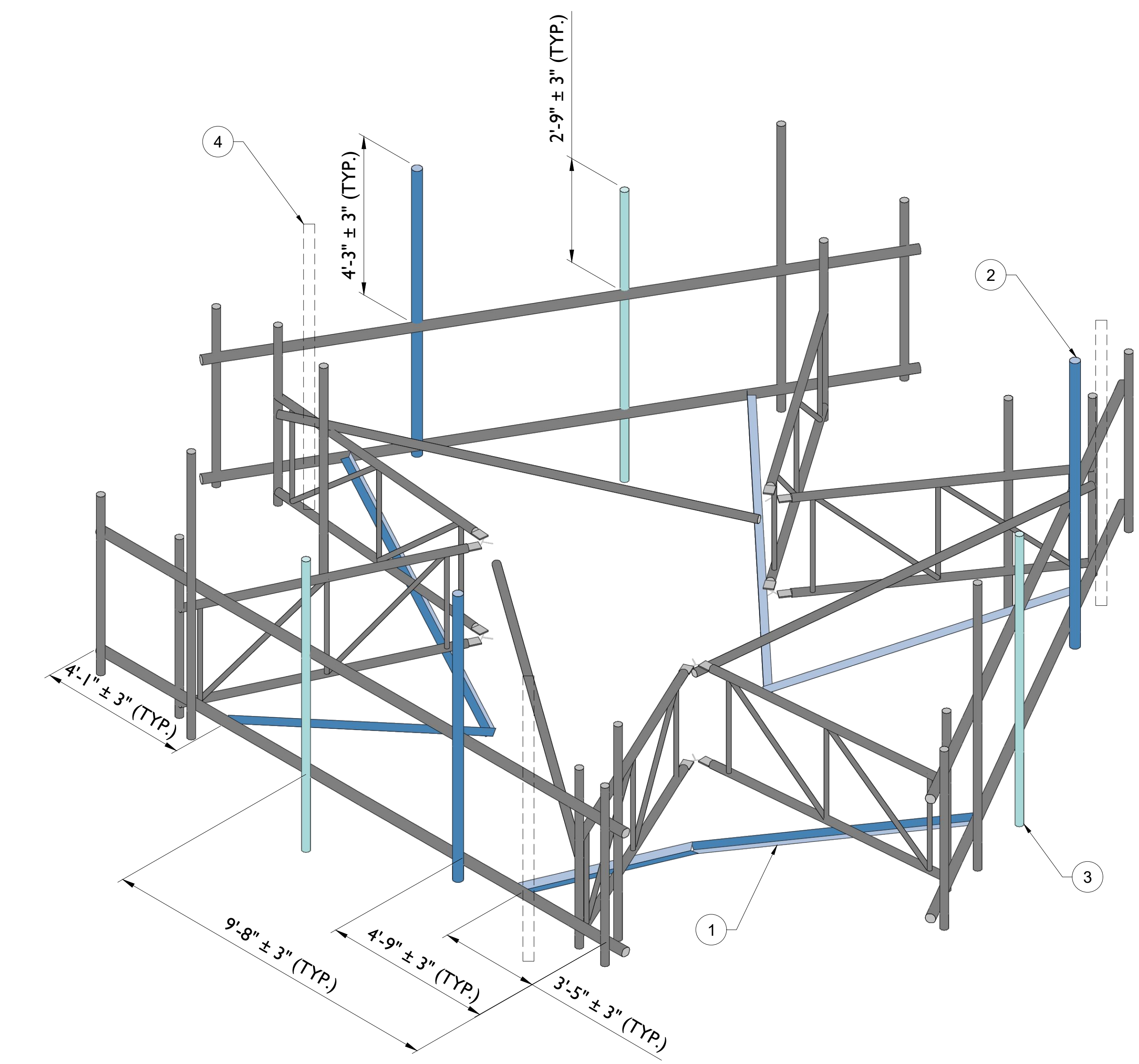
NO.	ELEVATION	QUANTITY	DESCRIPTION	NOTES
1	177'-9"	3	PROPOSED V-BRACING KIT (PART #: VZWSMART-SFK3)	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1. CONTRACTOR SHALL INSTALL ONE PROPOSED CLIP ANGLE (PART #:VZWSMART-AL333) AT EITHER END OF EACH LONG ANGLE IN THE SFK3 KIT.
2		3	PROPOSED 96" LONG, PIPE 2.5 SCH40 (PART #: VZWSMART-P40-278X096)	CONNECT NEW MOUNT PIPE TO EXISTING HORIZONTAL WITH CROSSOVER PLATES (PART #: VZWSMART-MSK1).
3		3	RELOCATED MOUNT PIPE	CONTRACTOR SHALL RELOCATE EXISTING MOUNT PIPE AND CONNECT TO EXISTING HORIZONTALS WITH CROSSOVER PLATES (PAR #: VZWSMART-MSK1).
4		3	EXISTING MOUNT PIPE TO BE REMOVED	CONTRACTOR SHALL REMOVE EXISTING MOUNT PIPE AND ASSOCIATED HARDWARE.

GENERAL NOTES:

A. CONTRACTOR SHALL VERIFY THAT NEW & EXISTING STEEL IS FREE OF CORROSION. VISIBLE MINOR CORROSION SHALL BE WIRE BRUSHED CLEAN AND TREATED WITH COLD GALVANIZATION. REPORT ANY SIGNIFICANT CORROSION TO EOR

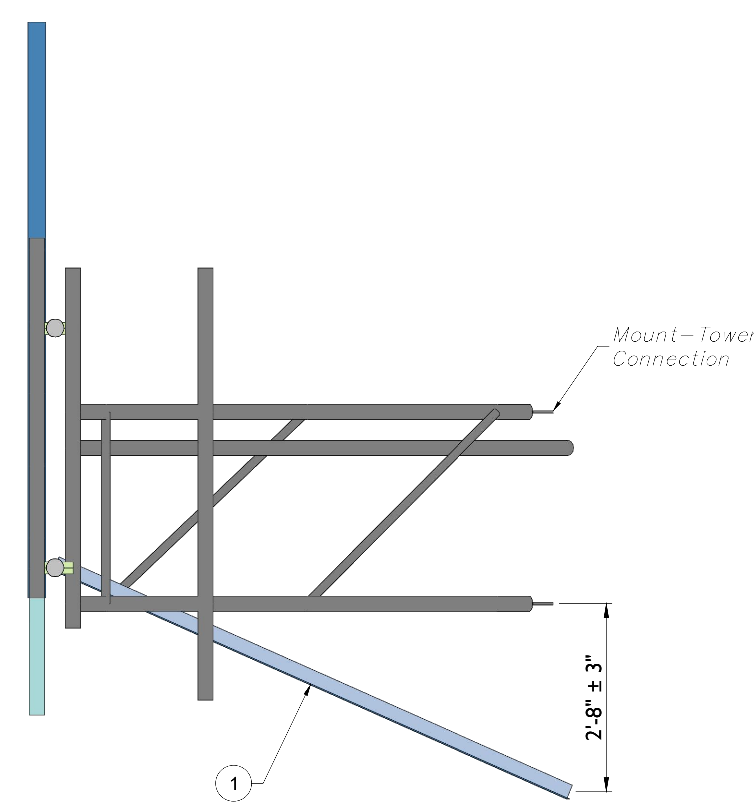
B. THREADED ROD FROM PROPOSED KITS SHALL BE TRIMMED TO EXTEND NO MORE THAN 3" BEYOND THE LOCK NUT. TREAT ALL CUT ENDS WITH (2) COATS OF COLD GALVANIZATION (ZINC KOTE, OR EOR APPROVED EQUAL).

C. MOUNT MEMBERS NOT SHOWN FOR CLARITY U.N.O.



1 PROPOSED ISOMETRIC VIEW

SCALE : N.T.S.



2 PROPOSED SIDE ELEVATION VIEW (TYP. ALL SECTORS)

SCALE : N.T.S.

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0	6/15/21	ISSUED FOR CONSTRUCTION	FAC	PET

STATE OF CONNECTICUT DEJIAN XU No. 33733 LICENSED PROFESSIONAL ENGINEER

01/23/2024

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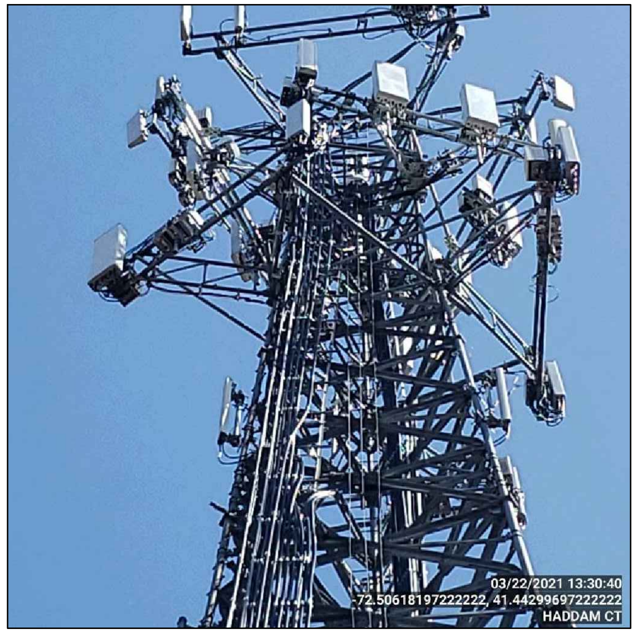
SHEET TITLE : MODIFICATION DETAILS

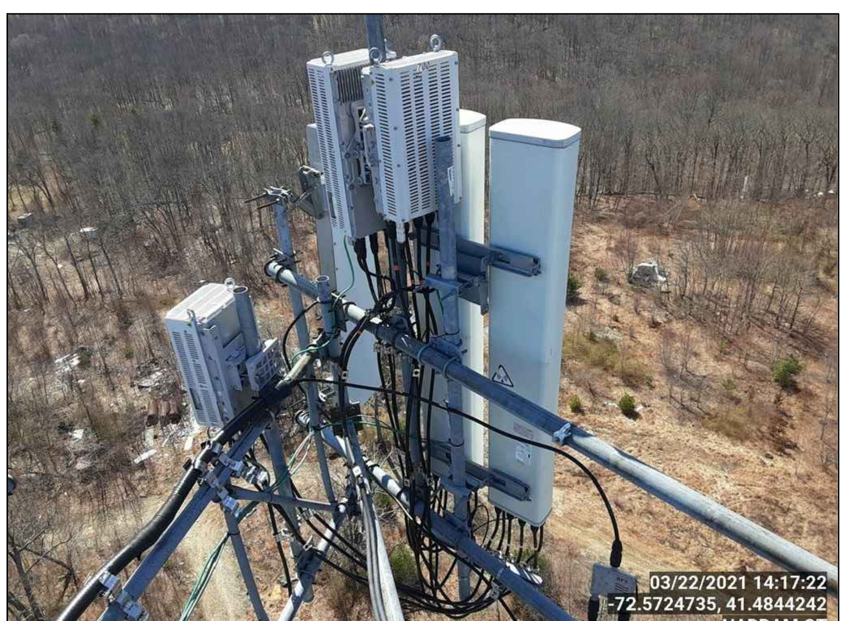
SHEET NUMBER : SS-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

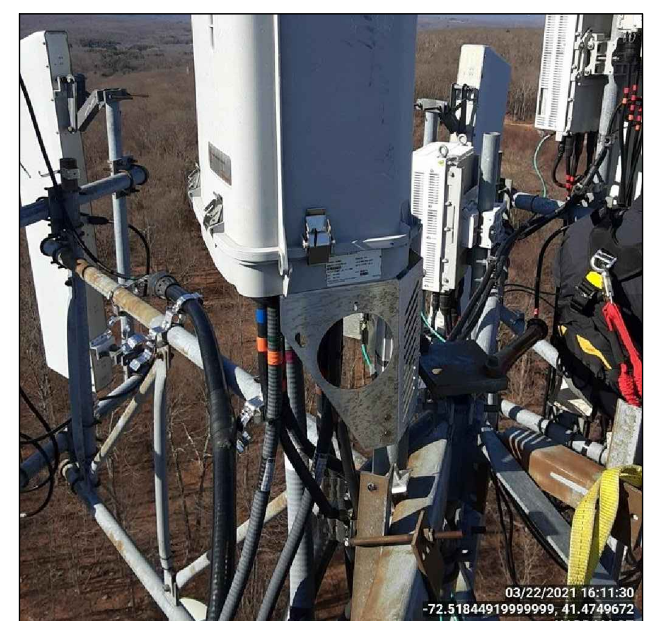


MOUNT PHOTO 1

MOUNT PHOTO 2



MOUNT PHOTO 3



MOUNT PHOTO 4

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SCALE:	JOB NUMBER:
AS SHOWN	21777316

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
-	-		-	-
-	-		-	-
1	1/23/24	ISSUED FOR CONSTRUCTION	VRD	DX
0	6/15/21	ISSUED FOR CONSTRUCTION	FAC	PET

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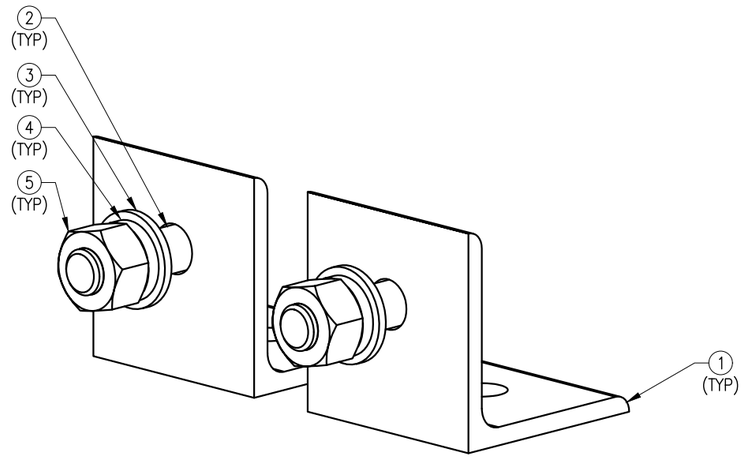
SHEET TITLE:
MOUNT PHOTOS

SHEET NUMBER:
SS-2

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



CLIP ANGLE
ISOMETRIC VIEW

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

VZWSMART-AL333 (CLIP ANGLE)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	2	AL-333	L 3" X 3" X 1/4" X 3" A36	AL333-F1	2.50
2	2	---	BOLT 5/8" X 2" FULL THREAD SAE GR-5	---	0.77
3	2	FW-625	5/8" HDG USS FLAT WASHER	---	0
4	2	LW-625	5/8" HDG LOCK WASHER	---	0
5	2	NUT-625	5/8" HDG HEX NUT	---	0
				GALVANIZED WT	3.27

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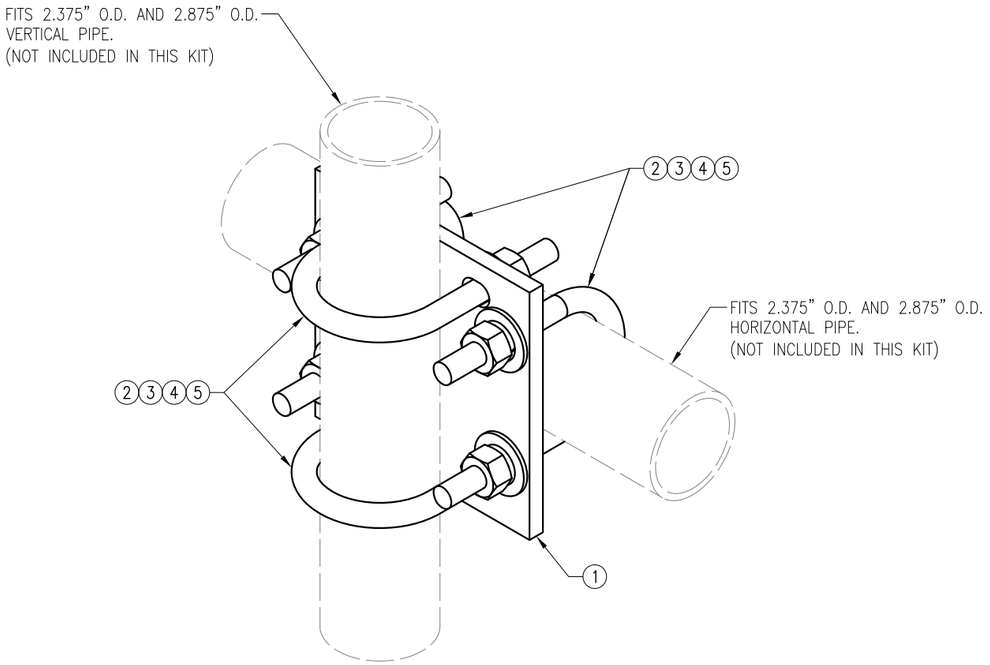
DRAWN BY: JBM | CHECKED BY: ----

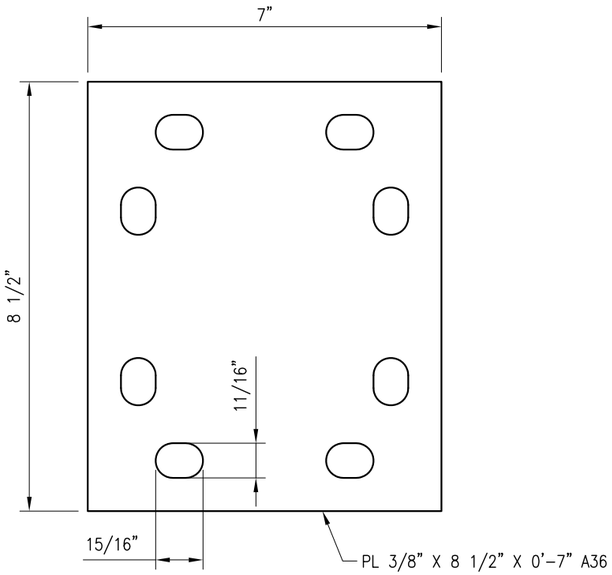
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	JBM	10/08/21

SHEET TITLE:
VZWSMART-AL333
CLIP ANGLE

SHEET NUMBER: VZWSMART-AL333

REV #: 0





PL375-857

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

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

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DRAWN BY: H.R | CHECKED BY: HMA

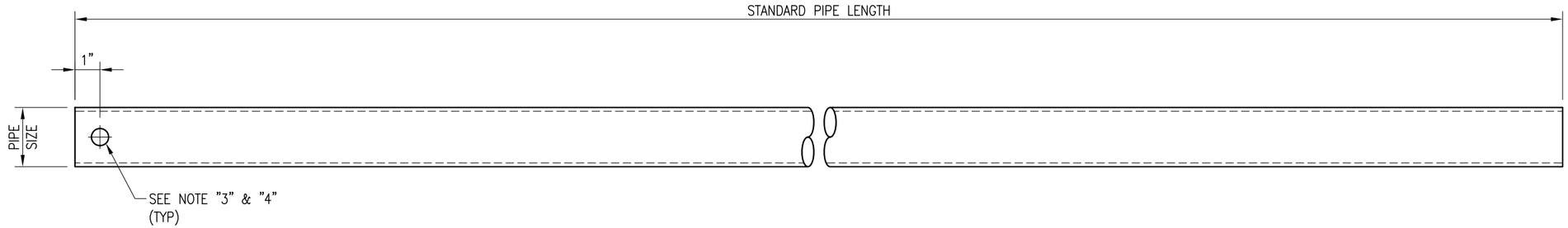
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	H.R	05/08/20

SHEET TITLE:

VZWSMART-MSK1
CROSSOVER PLATE

SHEET NUMBER: VZWSMART-MSK1

REV #: 0



VZWSMART Standard Pipe		
VZWSMART Number	Size	Length
P40-238X048	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	48"
P40-238X072	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	72"
P40-238X096	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	96"
P40-238X120	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	120"
P40-238X126	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	126"
P40-238X150	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	150"
P40-238X174	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	174"
P40-278X048	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	48"
P40-278X072	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	72"
P40-278X096	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	96"
P40-278X120	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	120"
P40-278X126	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	126"
P40-278X150	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	150"
P40-278X174	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	174"
P40-312X048	PIPE 3 SCH40 (3.5" OD x 0.216" THK)	48"
P40-312X072	PIPE 3 SCH40 (3.5" OD x 0.216" THK)	72"
P40-312X126	PIPE 3 SCH40 (3.5" OD x 0.216" THK)	126"
P40-312X150	PIPE 3 SCH40 (3.5" OD x 0.216" THK)	150"
P40-312X174	PIPE 3 SCH40 (3.5" OD x 0.216" THK)	174"

NOTE:
APPROVED SMART KIT VENDORS ARE ALLOWED TO SUBSTITUTE AT THEIR DISCRETION PIPES LISTED ON THIS PAGE FOR CUSTOM LENGTH COMPONENTS OF MATCHING SIZE. SUBSTITUTIONS SHALL MEET THE ORIGINAL STRUCTURAL INTENT.

NOTES:
1. ALL PIPE GRADE A53-B OR BETTER.
2. HOT-DIPPED GALVANIZED PER ASTM A123.
3. ALL HOLES ARE 11/16" DIA. U.N.O
4. HOLES MAY OR MAY NOT BE PRESENT, DEPEND UPON MANUFACTURE DISCRETION.
5. ALL FIELD CUT AND DRILLED SURFACES SHALL BE REPAIRED WITH A MINIMUM OF TWO COATS OF ZINGA OR ZINC COTE PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS.

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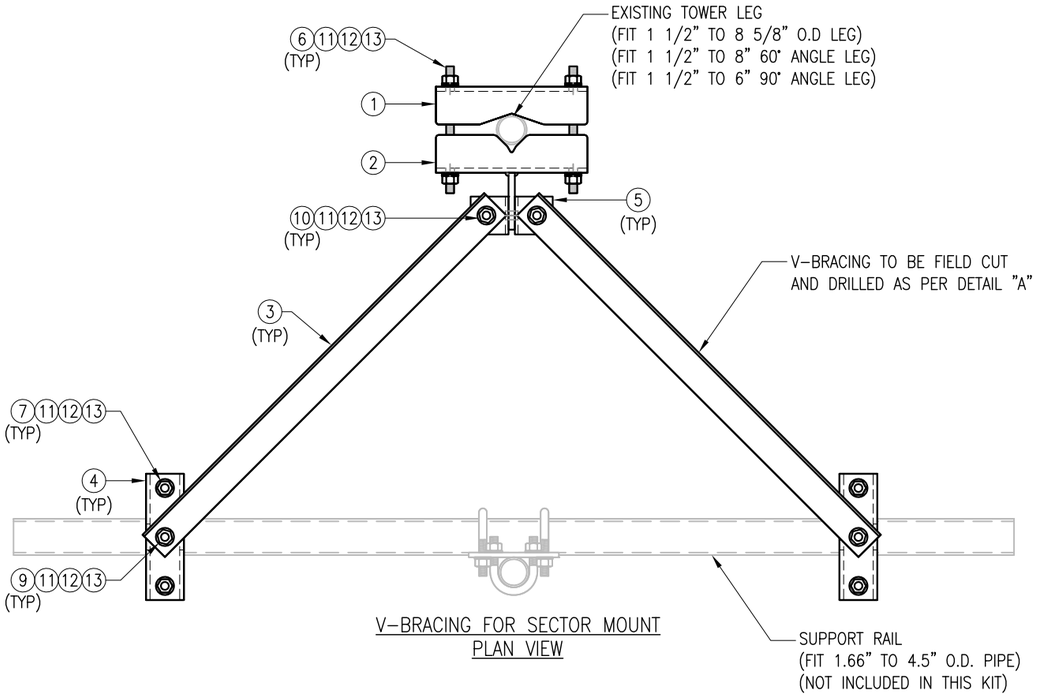
DRAWN BY: BT | CHECKED BY: HMA/KW

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	BT	08/04/21

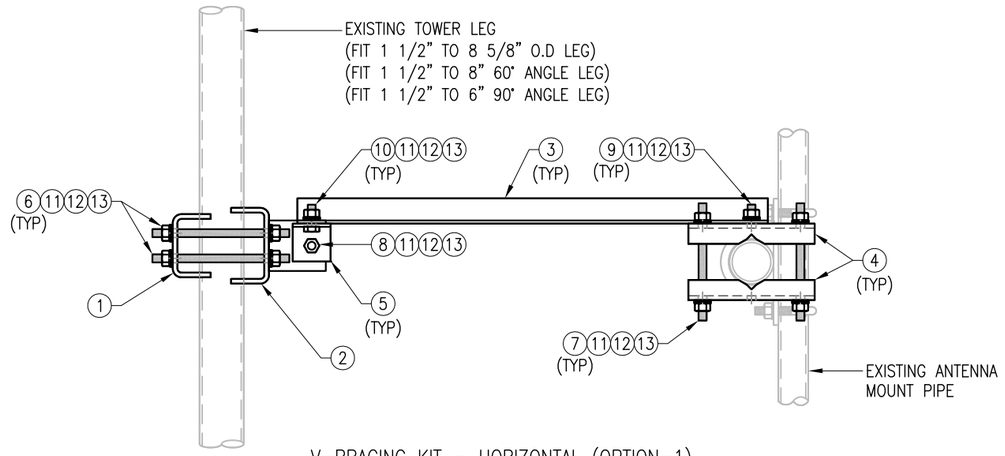
SHEET TITLE:
VZWSMART STANDARD PIPE

SHEET NUMBER: VZWSMART-PIPE

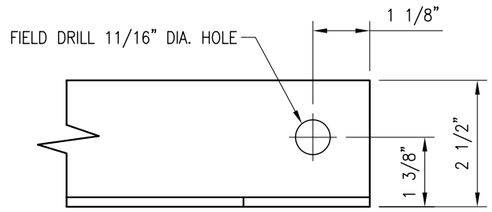
REV #: 0



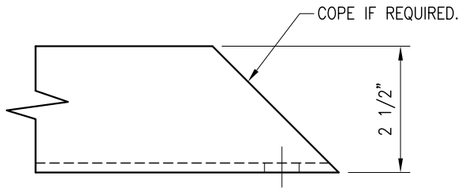
V-BRACING FOR SECTOR MOUNT
PLAN VIEW



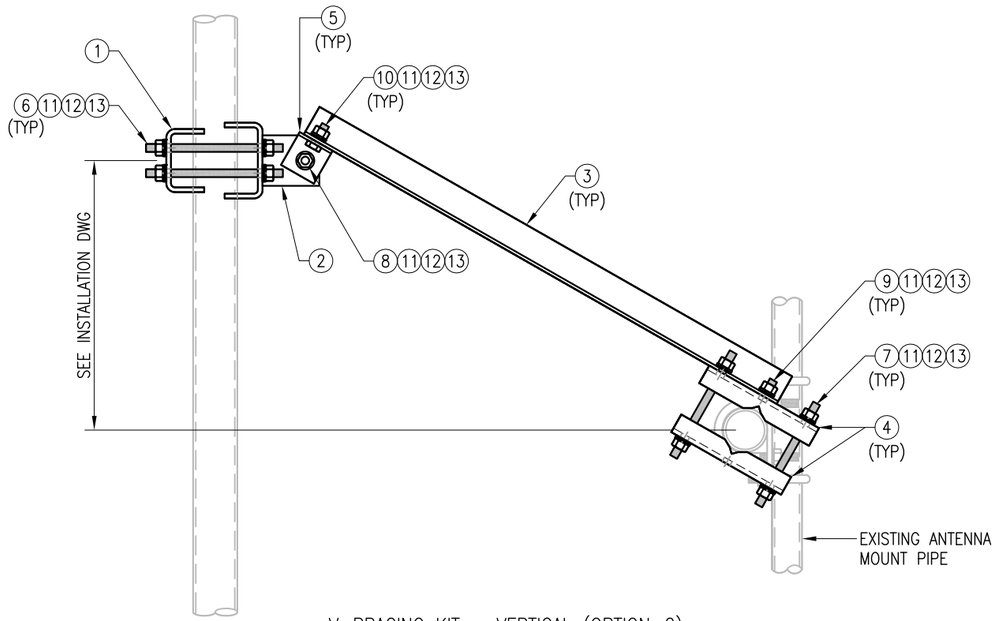
V-BRACING KIT - HORIZONTAL (OPTION-1)
SIDE VIEW



PLAN VIEW



FRONT VIEW
DETAIL "A"



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

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

VZWSMART-SFK3 (V-BRACING KIT)

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

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

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

SHEET TITLE:
VZWSMART-SFK3
V-BRACING KIT

SHEET NUMBER: VZWSMART-SFK3

REV #: 0

EXHIBIT G

Power Density / RF Emissions Report

FOX HILL TELECOM

Radio Frequency Emissions Analysis Report

Prepared for:

Crown Site ID: 806478_HRT 080 953381

Verizon Wireless Site Name: Haddam CT

Verizon Wireless FUZE ID: 16271944

Site Address:

539 Plains Road

Haddam, CT 06438

May 19, 2024

Fox Hill Telecom Project Number: 240133

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	10.62 %

FOX HILL TELECOM

May 19, 2024

Crown Castle
1800 W. Park Drive
Westborough, MA 01581

Emissions Analysis for:

Crown Castle Site: **806478 – HRT 080 953381**

Verizon Wireless Site: Haddam CT

Fox Hill Telecom, Inc ("Fox Hill") was directed to analyze the proposed upgrades for Verizon Wireless to the Crown Castle facility located at **539 Plains Road, Haddam, CT**, for the purpose of determining whether the emissions from the Proposed Verizon Wireless Antenna Installation, in addition to all existing radio systems located on this property, are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter (μW/cm2). The number of $\mu W/cm^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general population may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general population would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

General population exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu W/cm^2$). The general population exposure limits for the 700 MHz band & the 850 MHz cellular band are approximately 497 $\mu W/cm^2$ and 586 $\mu W/cm^2$ respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS) and 3700 MHz (C band) frequency bands is 1000 $\mu W/cm^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report the percentage of MPE rather than power density.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were performed for the proposed upgrades to the Crown Castle facility for Verizon Wireless located at **539 Plains Road, Haddam, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65 for far field modeling calculations.

In OET-65, plane wave power densities in the far field of an antenna are calculated by considering antenna gain and reflective waves that would contribute to exposure.

Since the radiation pattern of an antenna has developed in the **far field** region the power gain in specific directions needs to be considered in exposure predictions to yield an Effective Radiated Power (ERP) in each specific direction from the antenna. Also, since the vertical radiation pattern of the antenna is considered, the exposure calculations would most likely be reduced significantly at ground level, resulting in a more realistic estimate of the actual exposure levels. To determine a worst-case scenario at each point along the calculation radials, each point was calculated using the antenna gain value at each angle of incident and compared against the result using an isotropic radiator at the antenna height with the greater of the two used to yield the more pessimistic far field value for each point along the calculation radial.

Additionally, to model a truly "worst case" prediction of exposure levels at or near a surface, such as at ground-level or on a rooftop, reflection off the surface of antenna radiation power can be assumed, resulting in a potential 1.6 times increase in power density in calculating far field power density values.

With these factors considered, the worst case **far field prediction model** utilized in this analysis is determined by the following equation:

Equation 9 per FCC OET65 for Far Field Modeling

$$S = \frac{33.4\ ERP}{R^2}$$

S = Power Density (in μw/cm^2)
ERP = Effective Radiated Power from antenna (watts)
R = Distance from the antenna (meters)

Predicted far field power density values for all carriers identified in this report were calculated 6 feet above the ground level and are displayed as a percentage of the applicable FCC standards. All emissions values for other carriers were calculated using the same Far Field model outlined above, using industry standard radio configurations and frequency band selection based upon available licenses in this geographic area for emissions contribution estimates.

For each Verizon Wireless sector, the following channel counts, frequency bands and power levels were utilized as shown in *Table 1*:

Technology	Frequency Band	Channel Count	Transmit Power per Channel (W)
LTE	700 MHz	4	40
LTE / 5G	850 MHz	4	40
LTE	1900 MHz (PCS)	4	40
LTE	2100 MHz (AWS)	4	40
5G	3700 MHz (C Band)	2	160

Table 1: Channel Data Table

The following **Verizon Wireless** antennas listed in *Table 2 – Antenna Data* were used in the modeling for transmission in the 700 MHz, 850 MHz, 1900 MHz (PCS), 2100 MHz (AWS) and 3700 MHz (C Band) frequency bands. This is based on feedback from Verizon Wireless regarding anticipated antenna selection. Maximum gain values for all antennas are listed in *Table 3 – Verizon Wireless Inventory and Power Data* below.

Sector	Antenna Number	Antenna Make / Model	Antenna Centerline (ft)
A	1	Commscope JAHH-65B-R3B	179
A	2	Commscope JAHH-65B-R3B	179
A	3	Samsung MT6413-77A	179
A	4	Antel LPA-80080/6CF (Dormant)	179
A	5	Antel LPA-80080/6CF (Dormant)	179
B	1	Commscope JAHH-65B-R3B	179
B	2	Commscope JAHH-65B-R3B	179
B	3	Samsung MT6413-77A	179
B	4	Antel LPA-80080/6CF (Dormant)	179
B	5	Antel LPA-80080/6CF (Dormant)	179
C	1	Commscope JAHH-65B-R3B	179
C	2	Commscope JAHH-65B-R3B	179
C	3	Samsung MT6413-77A	179
C	4	Antel LPA-80080/6CF (Dormant)	179
C	5	Antel LPA-80080/6CF (Dormant)	179

Table 2: Antenna Data

All calculations were done with respect to uncontrolled / general population threshold limits.

RESULTS

Per the calculations completed for the proposed Verizon Wireless configurations *Table 3* shows resulting emissions power levels and percentages of the FCC's allowable general population limit.

Antenna ID	Antenna Make / Model	Frequency Bands	Antenna Gain (dBd)	Channel Count	Total TX Power (W)	ERP (W)	MPE %
Antenna A1	Commscope JAHH-65B-R3B	700 MHz / 850 MHz	12.35 / 13.65	8	320	6,456.48	0.75
Antenna A2	Commscope JAHH-65B-R3B	1900 MHz (PCS) / 2100 MHz (AWS)	16.25 / 16.35	8	320	13,651.45	0.38
Antenna A3	Samsung MT6413-77A	3700 MHz (C Band)	23.15	2	320	66,092.16	1.63
Antenna A4	Antel LPA-80080/6CF (Dormant)	NA	NA	0	0	0.00	0.00
Antenna A4	Antel LPA-80080/6CF (Dormant)	NA	NA	0	0	0.00	0.00
						Sector A Composite MPE%	**2.76**
Antenna B1	Commscope JAHH-65B-R3B	700 MHz / 850 MHz	12.35 / 13.65	8	320	6,456.48	0.75
Antenna B2	Commscope JAHH-65B-R3B	1900 MHz (PCS) / 2100 MHz (AWS)	16.25 / 16.35	8	320	13,651.45	0.38
Antenna B3	Samsung MT6413-77A	3700 MHz (C Band)	23.15	2	320	66,092.16	1.63
Antenna B4	Antel LPA-80080/6CF (Dormant)	NA	NA	0	0	0.00	0.00
Antenna B4	Antel LPA-80080/6CF (Dormant)	NA	NA	0	0	0.00	0.00
						Sector B Composite MPE%	**2.76**
Antenna C1	Commscope JAHH-65B-R3B	700 MHz / 850 MHz	12.35 / 13.65	8	320	6,456.48	0.75
Antenna C2	Commscope JAHH-65B-R3B	1900 MHz (PCS) / 2100 MHz (AWS)	16.25 / 16.35	8	320	13,651.45	0.38
Antenna C3	Samsung MT6413-77A	3700 MHz (C Band)	23.15	2	320	66,092.16	1.63
Antenna C4	Antel LPA-80080/6CF (Dormant)	NA	NA	0	0	0.00	0.00
Antenna C4	Antel LPA-80080/6CF (Dormant)	NA	NA	0	0	0.00	0.00
						Sector C Composite MPE%	**2.76**

Table 3: Verizon Wireless Inventory and Power Data table

Table 4: All Carrier MPE Contributions shows all additional identified carriers on site and their emissions contribution estimates, along with the newly calculated maximum Verizon Wireless far field emissions contributions per this report. FCC OET 65 specifies that for carriers utilizing directional antennas the highest recorded sector value be used for composite site emissions values due to their greatly reduced emissions contributions in the directions of the adjacent sectors. For this site, all three Verizon Wireless sectors have the same configuration yielding the same results for all three sectors. *Table 5* below shows a summary for each Verizon Wireless Sector as well as the composite estimated emissions value for the site.

Site Composite MPE%	
Carrier	**MPE%**
Verizon Wireless – Max Per Sector Value	**2.76 %**
T-Mobile	1.39 %
AT&T	3.49 %
Sprint	1.09 %
Dish Wireless	1.89 %
Site Total MPE %:	**10.62 %**

Table 4: All Carrier MPE Contributions

Verizon Wireless Sector A Total:	2.76 %
Verizon Wireless Sector B Total:	2.76 %
Verizon Wireless Sector C Total:	2.76 %
Site Total:	10.62 %

Table 5: Site MPE Summary

Table 6 below details a breakdown by frequency band and technology for the MPE power values for the maximum calculated Verizon sector(s). For this site, all three Verizon Wireless sectors have the same configuration yielding the same results for all three sectors.

Verizon Wireless _ Frequency Band / Technology Max Power Values (Per Sector)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu W/cm^2$)	Frequency (MHz)	Allowable MPE ($\mu W/cm^2$)	Calculated % MPE
Verizon Wireless 700 MHz LTE	4	687.16	179	2.04	700 MHz	497	0.41%
Verizon Wireless 850 MHz LTE / 5G	4	926.96	179	1.99	850 MHz	586	0.34%
Verizon Wireless 1900 MHz (PCS) LTE	4	1,686.79	179	1.90	1900 MHz (PCS)	1000	0.19%
Verizon Wireless 2100 MHz (AWS) LTE	4	1,726.08	179	1.90	2100 MHz (AWS)	1000	0.19%
Verizon Wireless 3700 MHz (C Band) 5G	2	33,046.08	179	16.30	3700 MHz (C Band)	1000	1.63%
						Total:	**2.76 %**

Table 6: Verizon Wireless Maximum Sector MPE Power Values

Summary

All calculations performed for this analysis yielded results that were **within** the allowable limits for general population exposure to RF Emissions.

The anticipated maximum composite contributions from the Verizon Wireless facility as well as the site composite emissions estimates value with regards to compliance with FCC's allowable limits for general population exposure to RF Emissions are shown here:

Verizon Wireless Sector	Power Density Value (%)
Sector A:	2.76 %
Sector B:	2.76 %
Sector C:	2.76 %
Verizon Wireless Maximum Total (per sector):	2.76 %
Site Total:	10.62 %
Site Compliance Status:	**COMPLIANT**

The estimated composite emissions value for this site, assuming all carriers present, is **10.62 %** of the allowable FCC established general population limit sampled at the ground level. This is based upon the far field calculations performed for all carriers identified in this report.

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite estimated values calculated were well within the allowable 100% threshold standard per the federal government.

Scott Heffernan
Principal RF Engineer
Fox Hill Telecom, Inc
Worcester, MA 01609
(978)660-3998

EXHIBIT H

Recipient Mailing Records

Bachi, Jenifer

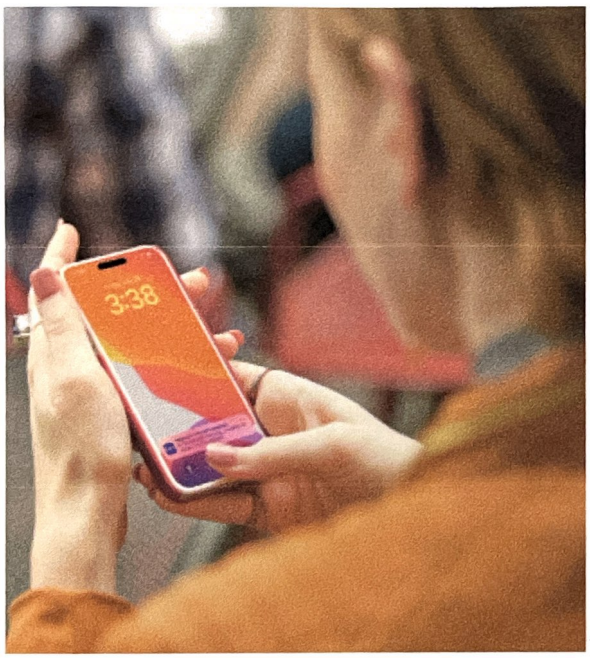
From: TrackingUpdates@fedex.com
Sent: Wednesday, July 3, 2024 10:34 AM
To: Bachi, Jenifer
Subject: FedEx Shipment 777185748430: Your package has been delivered / FE to 1st Selectman

Hi. Your package was delivered Wed, 07/03/2024 at 10:25am.

OBTAIN PROOF OF DELIVERY

How was your delivery ?

TRACKING NUMBER	777185748430
FROM	KING OF PRUSSIA, PA, US
TO	HADDAM, CT, US
SHIP DATE	Tue 7/02/2024 07:40 PM
DELIVERED TO	Receptionist/Front Desk
PACKAGING TYPE	FedEx Pak
ORIGIN	KING OF PRUSSIA, PA, US
DESTINATION	HADDAM, CT, US
SPECIAL HANDLING	Deliver Weekday
NUMBER OF PIECES	1
TOTAL SHIPMENT WEIGHT	1.00 LB
SERVICE TYPE	FedEx Priority Overnight



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Please do not respond to this message. This email was sent from an unattended mailbox. This report was generated at approximately 9:34 AM CDT 07/03/2024.

Bachi, Jenifer

From: TrackingUpdates@fedex.com
Sent: Wednesday, July 3, 2024 10:34 AM
To: Bachi, Jenifer
Subject: FedEx Shipment 777185823954: Your package has been delivered / FE to ZEO

Hi. Your package was delivered Wed, 07/03/2024 at 10:25am.

OBTAIN PROOF OF DELIVERY

How was your delivery ?

TRACKING NUMBER	777185823954
FROM	KING OF PRUSSIA, PA, US
TO	HADDAM, CT, US
SHIP DATE	Tue 7/02/2024 07:40 PM
DELIVERED TO	Receptionist/Front Desk
PACKAGING TYPE	FedEx Pak
ORIGIN	KING OF PRUSSIA, PA, US
DESTINATION	HADDAM, CT, US
SPECIAL HANDLING	Deliver Weekday
NUMBER OF PIECES	1
TOTAL SHIPMENT WEIGHT	1.00 LB
SERVICE TYPE	FedEx Priority Overnight

Please do not respond to this message. This email was sent from an unattended mailbox. This report was generated at approximately 9:34 AM CDT 07/03/2024.

Bachi, Jenifer

From: TrackingUpdates@fedex.com
Sent: Wednesday, July 3, 2024 11:52 AM
To: Bachi, Jenifer
Subject: FedEx Shipment 777185853843: Your package has been delivered / FE to LL
Attachments: DeliveryPicture.jpeg

Hi. Your package was delivered Wed, 07/03/2024 at 11:45am.

OBTAIN PROOF OF DELIVERY

Delivery picture not showing? View in browser.

How was your delivery ?

TRACKING NUMBER	777185853843
FROM	KING OF PRUSSIA, PA, US
TO	ROCKY HILL, CT, US
SHIP DATE	Tue 7/02/2024 06:04 PM
DELIVERED TO	Residence
PACKAGING TYPE	FedEx Pak
ORIGIN	KING OF PRUSSIA, PA, US
DESTINATION	ROCKY HILL, CT, US
SPECIAL HANDLING	Deliver Weekday
NUMBER OF PIECES	1
TOTAL SHIPMENT WEIGHT	1.00 LB
SERVICE TYPE	FedEx Priority Overnight

ORIGIN ID:KPDA (610) 635-3221
JENIFER BACHI
CROWN CASTLE
3200 HORIZON DRIVE
SUITE 150
KING OF PRUSSIA, PA 19406
UNITED STATES US

SHIP DATE: 03JUL24
ACTWGT: 2.00 LB
CAD: 104924192/INET4730

BILL SENDER

TO MELANIE A. BACHMAN, EXEC DIRECTOR
CONNECTICUT SITING COUNCIL
10 FRANKLIN SQUARE

NEW BRITA N CT 06051
(860) 827-2935 REF: 1766 668
INV:
PO: 806478_VERIZON DEPT

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FRI - 05 JUL 10:30A
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