Derek Maheux Program Manager
c/o Cellco Partnership d/b/a Verizon Wireless
Centerline Communications, LLC
750 West Center Street, Suite 301
West Bridgewater, MA 02379
Mobile: (508)649-3407
Dmaheux@clinellc.com

April 18, 2024

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

RE: Notice of Exempt Modification // Site: N BRIDGEPORT CT (ATC: 383598)
1000 Trumbull Avenue, Bridgeport, CT 06606
N 41.219528 // W -73.201779

Dear Ms. Bachman,

Cellco Partnership d/b/a Verizon Wireless currently maintains twelve (12) antenna at the 153-ft level on the existing 243 ft Tower, located at 1000 Trumbull Avenue, Bridgeport, CT. The tower is owned by American Tower. Verizon Wireless proposed modification involves the installation of a new mount modification and side by side mounts and reinstalling equipment on Verizon Wireless existing antenna platform and mounting assembly.

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 Bridgeport's Chief Elected Official and Land Use Officer.

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2). Enclosed to accommodate this filing are construction drawings dated April 11, 2024 by A.T Engineering Services, LLC, a structural analysis dated March 5, 2024, by American Tower Corp., and a structural mount analysis by Colliers Engineering and Design dated February 27, 2024, and Non-Ionizing Electromagnetic Radiation (NIER) Study dated April 2, 2024, by Tower Engineering Professionals.

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

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

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

4. The operation of the new antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications 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, as shown in the attached structural analysis and a structural mount analysis, pursuant to certain conditions defined therein. Design and engineering are fully illustrated within final construction drawings.

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

Sincerely,

Derek Maheux

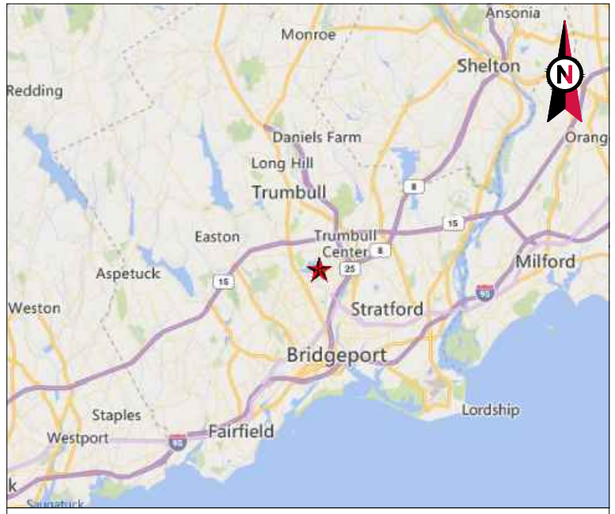
_____

Derek Maheux, Program Manager
c/o Cellco Partnership d/b/a Verizon Wireless
Centerline Communications, LLC
750 West Center Street, Suite 301
West Bridgewater, MA 02379
Mobile: (508) 649 2307
Dmaheux@clinellc.com

Attachments:
Exhibit 1 – Construction Drawings
Exhibit 2 – Property Card and GIS
Exhibit 3 – Structural Analysis
Exhibit 4 – Mount Analysis
Exhibit 5 – RF Emissions Analysis Report Evaluation
Exhibit 6 – Available Original Tower Approval Records
Exhibit 7 – Notice Deliver Confirmations

cc: Joseph P. Ganim – Mayor – Chief Elected Official
Tom Gill – Director of Planning - as P&Z official
American Tower Corporation - as tower owner and ground owner

EXHIBIT 1



VICINITY MAP

AMERICAN TOWER®

ATC SITE NAME: TARTAGLIA
ATC SITE NUMBER: 383598
VERIZON SITE NAME: N BRIDGEPORT CT
VERIZON FUZE PID: 16231899
SITE ADDRESS: 1000 TRUMBULL AVENUE
BRIDGEPORT, CT 06606

LOCATION MAP

VERIZON AMENDMENT DRAWINGS

COMPLIANCE CODE

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

1. 2020 NFPA 70, NATIONAL ELECTRIC CODE (NEC)
2. 2022 CONNECTICUT STATE BUILDING CODE
3. 2021 INTERNATIONAL BUILDING CODE (IBC)

DESIGN CRITERIA FROM TOWER STRUCTUAL ANALYSIS:

BASIC WIND SPEED:	119 MPH (3-SECOND GUST)
BASIC WIND SPEED W/ ICE:	50 MPH (3-SECOND GUST) W/ 1.00" RADIAL ICE CONCURRENT
CODE(S):	ANSI/TIA-222-H / 2021 IBC / 2022 CONNECTICUT STATE BUILDING CODE
EXPOSURE CATEGORY:	C
RISK CATEGORY:	II
TOPO FACTOR PROCEDURE:	METHOD 1
TOPOGRAPHIC CATEGORY:	1
FEATURE:	FLAT
SPECTRAL RESPONSE:	S_S=0.21, S_1=0.05
SITE CLASS:	D - STIFF SOIL - DEFAULT

INFORMATION TAKEN FROM STRUCTURAL ANALYSIS COMPLETED BY ATC, DATED 03/06/24.

UTILITY COMPANIES

POWER COMPANY: UNITED ILLUMINATING COMPANY
PHONE: (800) 722-5584

TELEPHONE COMPANY: UNKNOWN
PHONE: N/A

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

PROJECT SUMMARY

SITE ADDRESS:

1000 TRUMBULL AVENUE
BRIDGEPORT, CT 06606
COUNTY: FAIRFIELD

GEOGRAPHIC COORDINATES:

LATITUDE: 41° 13' 10.540" N

LONGITUDE: 73° 12' 4.618" W

GROUND ELEVATION: 212' AMSL

PROJECT TEAM

TOWER OWNER:

AMERICAN TOWER
10 PRESIDENTIAL WAY
WOBURN, MA 01801

APPLICANT:

VERIZON WIRELESS

ENGINEER:

A.T. ENGINEERING SERVICES LLC
1 FENTON MAIN, STE 300
CARY, NC 27511

PROPERTY OWNER:

AMERICAN TOWER
116 HUNTINGTON AVE
BOSTON, MA 02116

PROJECT DESCRIPTION

THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW:

REMOVE (3) ANTENNA(s) AND (6) 1 5/8" COAX CABLE(s)

INSTALL MOUNT MODIFICATIONS AND (3) ANTENNA(s)

EXISTING (9) ANTENNA(s), (6) RRH(s), (3) DIPLEXER(s), (3) OVP(s), AND (3) 1 5/8" HYBRID CABLE(s) TO REMAIN

PROJECT NOTES

1. THE FACILITY IS UNMANNED.
2. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE.
3. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE.
4. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED.
5. HANDICAP ACCESS IS NOT REQUIRED.
6. THE PROJECT DEPICTED IN THESE PLANS QUALIFIES AS AN ELIGIBLE FACILITIES REQUEST ENTITLED TO EXPEDITED REVIEW UNDER 47 U.S.C. § 1455(A) AS A MODIFICATION OF AN EXISTING WIRELESS TOWER THAT INVOLVES THE COLLOCATION, REMOVAL, AND/OR REPLACEMENT OF TRANSMISSION EQUIPMENT THAT IS NOT A SUBSTANTIAL CHANGE UNDER CFR § 1.61000 (B)(7).

PROJECT LOCATION DIRECTIONS

FROM DOWNTOWN NEW HAVEN CT START OUT GOING NORTHEAST ON CHURCH ST TOWARD WALL ST. TURN RIGHT ONTO TRUMBULL ST. SLIGHT LEFT TO MERGE ONTO I-91 S TOWARD I-95. KEEP RIGHT TOWARD NY CITY. MERGE ONTO I-95 S VIA THE EXIT ON THE LEFT TOWARD N Y CITY. TAKE EXIT 38 TOWARD CT-15. MERGE ONTO MILFORD PKWY. MERGE ONTO MERRITT PARKWAY VIA EXIT 3B ON THE LEFT TOWARD NY CITY. MERGE ONTO CT-8 S VIA EXIT 52 TOWARD BRIDGEPORT. TAKE THE EXIT 7. TURN SLIGHT LEFT ONTO OLD TOWN RD. TURN RIGHT ONTO CHOPSEY HILL RD. 1336 CHOPSEY HILL RD IS ON THE RIGHT. DRIVE BETWEEN HOUSES TO TOWER SITE.

SHEET INDEX

SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
G-001	TITLE SHEET	1	04/11/24	AP
G-002	GENERAL NOTES	0	04/08/24	AP
C-101	DETAILED SITE PLAN	1	04/11/24	AP
C-201	TOWER ELEVATION	1	04/11/24	AP
C-401	ANTENNA INFORMATION & SCHEDULE	1	04/11/24	AP
C-501	CONSTRUCTION DETAILS	0	04/08/24	AP
E-501	GROUNDING DETAILS	0	04/08/24	AP
R-601	SUPPLEMENTAL			
R-602	SUPPLEMENTAL			
R-603	SUPPLEMENTAL			

CONTRACTOR PMI REQUIREMENTS

PMI ACCESSED AT:	HTTPS://PMI.VZWSMART.COM
SMART TOOL VENDOR PROJECT NUMBER:	10221516
VZW LOCATION CODE (PSLC):	5000385395

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

MOUNT MODIFICATION REQUIRED:	YES
VZW APPROVED SMART KIT VENDORS:	REFER TO MOUNT MODIFICATION DRAWINGS PAGES FOR VZW SMART KIT APPROVED VENDORS

AMERICAN TOWER®
A.T. ENGINEERING SERVICES LLC
1 FENTON MAIN
SUITE 300
CARY, NC 27511
PHONE: (919) 468-0112
PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	AP	04/08/24
1	UPDATED CABLE COUNT	AP	04/11/24

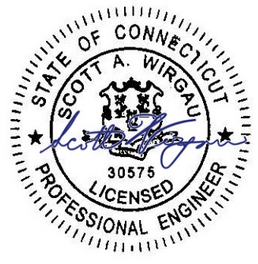
ATC SITE NUMBER:
383598

ATC SITE NAME:
TARTAGLIA

VERIZON SITE NAME:
N BRIDGEPORT CT

SITE ADDRESS:
1000 TRUMBULL AVENUE
BRIDGEPORT, CT 06606

SEAL:



verizon

ATC JOB NO:	14561406_G0
CUSTOMER ID:	N BRIDGEPORT CT
CUSTOMER #:	5000385395

TITLE SHEET

SHEET NUMBER:	REVISION:
G-001	1

GENERAL CONSTRUCTION NOTES:

1. OWNER FURNISHED MATERIALS, VERIZON "THE COMPANY" WILL PROVIDE AND THE CONTRACTOR WILL INSTALL
   - A. BTS EQUIPMENT FRAME (PLATFORM) AND ICEBRIDGE SHELTER (GROUND BUILD/CO-LOCATE ONLY)
   - B. AC/TELCO INTERFACE BOX (PPC)
   - C. ICE BRIDGE (CABLE TRAY WITH COVER) (GROUND BUILD/CO-LOCATE ONLY, GC TO FURNISH AND INSTALL FOR ROOFTOP INSTALLATION)
   - D. TOWERS, MONOPOLES
   - E. TOWER LIGHTING
   - F. GENERATORS & LIQUID PROPANE TANK
   - G. ANTENNA STANDARD BRACKETS, FRAMES AND PIPES FOR MOUNTING
   - H. ANTENNAS (INSTALLED BY OTHERS)
   - I. TRANSMISSION LINE
   - J. TRANSMISSION LINE JUMPERS
   - K. TRANSMISSION LINE CONNECTORS WITH WEATHERPROOFING KITS
   - L. TRANSMISSION LINE GROUND KITS
   - M. HANGERS
   - N. HOISTING GRIPS
   - O. BTS EQUIPMENT
2. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL OTHER MATERIALS FOR THE COMPLETE INSTALLATION OF THE SITE INCLUDING, BUT NOT LIMITED TO, SUCH MATERIALS AS FENCING, STRUCTURAL STEEL SUPPORTING SUB-FRAME FOR PLATFORM, ROOFING LABOR AND MATERIALS, GROUNDING RINGS, GROUNDING WIRES, COPPER-CLAD OR XIT CHEMICAL GROUND ROD(S), BUSS BARS, TRANSFORMERS AND DISCONNECT SWITCHES WHERE APPLICABLE, TEMPORARY ELECTRICAL POWER, CONDUIT, LANDSCAPING COMPOUND STONE, CRANES, CORE DRILLING, SLEEPERS AND RUBBER MATTING, REBAR, CONCRETE CAISSONS, PADS AND/OR AUGER MOUNTS, MISCELLANEOUS FASTENERS, CABLE TRAYS, NON-STANDARD ANTENNA FRAMES AND ALL OTHER MATERIAL AND LABOR REQUIRED TO COMPLETE THE JOB ACCORDING TO THE DRAWINGS AND SPECIFICATIONS. IT IS THE POSITION OF VERIZON TO APPLY FOR PERMITTING AND CONTRACTOR RESPONSIBLE FOR PICKUP AND PAYMENT OF REQUIRED PERMITS.
3. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS.
4. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
6. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
7. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
8. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
9. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
11. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
12. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE VERIZON REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE VERIZON REP PRIOR TO PROCEEDING.
13. EACH CONTRACTOR SHALL COOPERATE WITH THE VERIZON REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
14. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE VERIZON CONSTRUCTION MANAGER.
15. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
16. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE VERIZON REP AND ENGINEER OF RECORD IMMEDIATELY.
17. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
18. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
19. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH AMERICAN TOWER CORPORATION (ATC) AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
20. CONTRACTOR SHALL FURNISH VERIZON AND AMERICAN TOWER CORPORATION (ATC) WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
21. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH VERIZON REP TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED.
22. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH VERIZON REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY VERIZON MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH VERIZON SPECIFICATIONS AND REQUIREMENTS.
24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO VERIZON FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
25. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO VERIZON SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
26. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
27. CONTRACTOR SHALL NOTIFY VERIZON REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
28. WHEN THE PROJECT SCOPE REQUIRES THE USE OF THE SAFETY CLIMB, THE GENERAL CONTRACTOR SHALL ENSURE THE SAFETY CLIMB IS FREE OF OBSTRUCTIONS, NOT RUBBING ON OR TRAPPED BY ANY INSTALLED CUSTOMER EQUIPMENT, IS VISUALLY TAUT, MEETS MANUFACTURER INSTALLATION SPECIFICATIONS, AND IS FIRMLY SECURED AT ALL CABLE GUIDE LOCATIONS UPON PROJECT COMPLETION.
29. COMPLETION OF PROJECT SHALL NOT OBSTRUCT, TRAP, LOOSEN, OR OTHERWISE CAUSE FAILURE TO MEET MANUFACTURER INSTALLATION REQUIREMENTS FOR THE SAFETY CLIMB.
30. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.
31. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
32. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE VERIZON REP. ANY WORK FOUND BY THE VERIZON REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
33. IN ORDER TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE, ALL TYPES OF MATERIALS LISTED HEREINAFTER BY MANUFACTURER'S NAMES AND/OR MANUFACTURER'S CATALOG NUMBER SHALL BE PROVIDED BY THESE MANUFACTURERS AS SPECIFIED.
34. VERIZON FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE VERIZON WAREHOUSE, NO LATER THAN 48HR AFTER BEING NOTIFIED INSURED, STORED, UNCRATE, PROTECTED AND INSTALLED BY THE CONTRACTOR WITH ALL APPURTENANCES REQUIRED TO PLACE THE EQUIPMENT IN OPERATION, READY FOR USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPMENT AFTER PICKING IT UP.
35. VERIZON OR HIS ARCHITECT/ENGINEER RESERVES THE RIGHT TO REJECT ANY EQUIPMENT OR MATERIALS WHICH, IN HIS OWN OPINION ARE NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS, EITHER BEFORE OR AFTER INSTALLATION AND THE EQUIPMENT SHALL BE REPLACED WITH EQUIPMENT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE CONTRACTOR AT NO COST TO VERIZON OR THEIR ARCHITECT/ENGINEER.

SPECIAL CONSTRUCTION ANTENNA INSTALLATION NOTES:

1. WORK INCLUDED:
   - A. ANTENNA AND COAXIAL/HYBRID CABLES ARE FURNISHED BY VERIZON UNDER A SEPARATE CONTRACT. THE CONTRACTOR SHALL ASSIST ANTENNA INSTALLATION CONTRACTOR IN TERMS OF COORDINATION AND SITE ACCESS. ERECTION SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PERSONNEL.
   - B. INSTALL ANTENNAS AS INDICATED ON DRAWINGS AND VERIZON SPECIFICATIONS.
   - C. INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS.
   - D. INSTALL FURNISHED GALVANIZED STEEL OR ALUMINUM WAVEGUIDE.
   - E. INSTALL COAXIAL/HYBRID CABLES AND TERMINATING BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. WEATHERPROOF ALL CONNECTIONS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. TERMINATE ALL COAXIAL/HYBRID CABLE THREE (3) FEET IN EXCESS OF ENTRY PORT LOCATION UNLESS OTHERWISE STATED.
2. ANTENNA AND COAXIAL/HYBRID CABLE GROUNDING:
   - A. ALL EXTERIOR #6 GREEN GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH RFS CONNECTORS/SPLICE WEATHERPROOFING KIT #221213 OR EQUAL.
   - B. ALL COAXIAL/HYBRID CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL/HYBRID CABLE (NOT WITHIN BENDS)

ALL DISCREPANCIES FROM WHAT IS SHOWN ON THESE CONSTRUCTION DRAWINGS SHALL BE COMMUNICATED TO ATC ENGINEERING IMMEDIATELY FOR CORRECTION OR RE-DESIGN. FAILURE TO COMMUNICATE DIRECTLY WITH ATC ENGINEERING OR ANY CHANGES FROM THE DESIGN CONDUCTED WITHOUT PRIOR APPROVAL FROM ATC ENGINEERING SHALL BE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

AMERICAN TOWER®

A.T. ENGINEERING SERVICES LLC

1 FENTON MAIN
SUITE 300
CARY, NC 27511
PHONE: (919) 468-0112
PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	AP	04/08/24

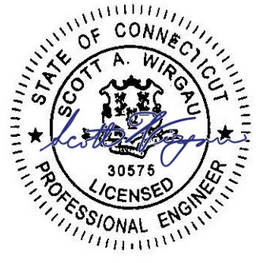
ATC SITE NUMBER:
383598

ATC SITE NAME:
TARTAGLIA

VERIZON SITE NAME:
N BRIDGEPORT CT

SITE ADDRESS:
1000 TRUMBULL AVENUE
BRIDGEPORT, CT 06606

SEAL:



Digitally Signed: 2024-04-11

verizon

ATC JOB NO:	14561406_G0
CUSTOMER ID:	N BRIDGEPORT CT
CUSTOMER #:	5000385395

GENERAL NOTES

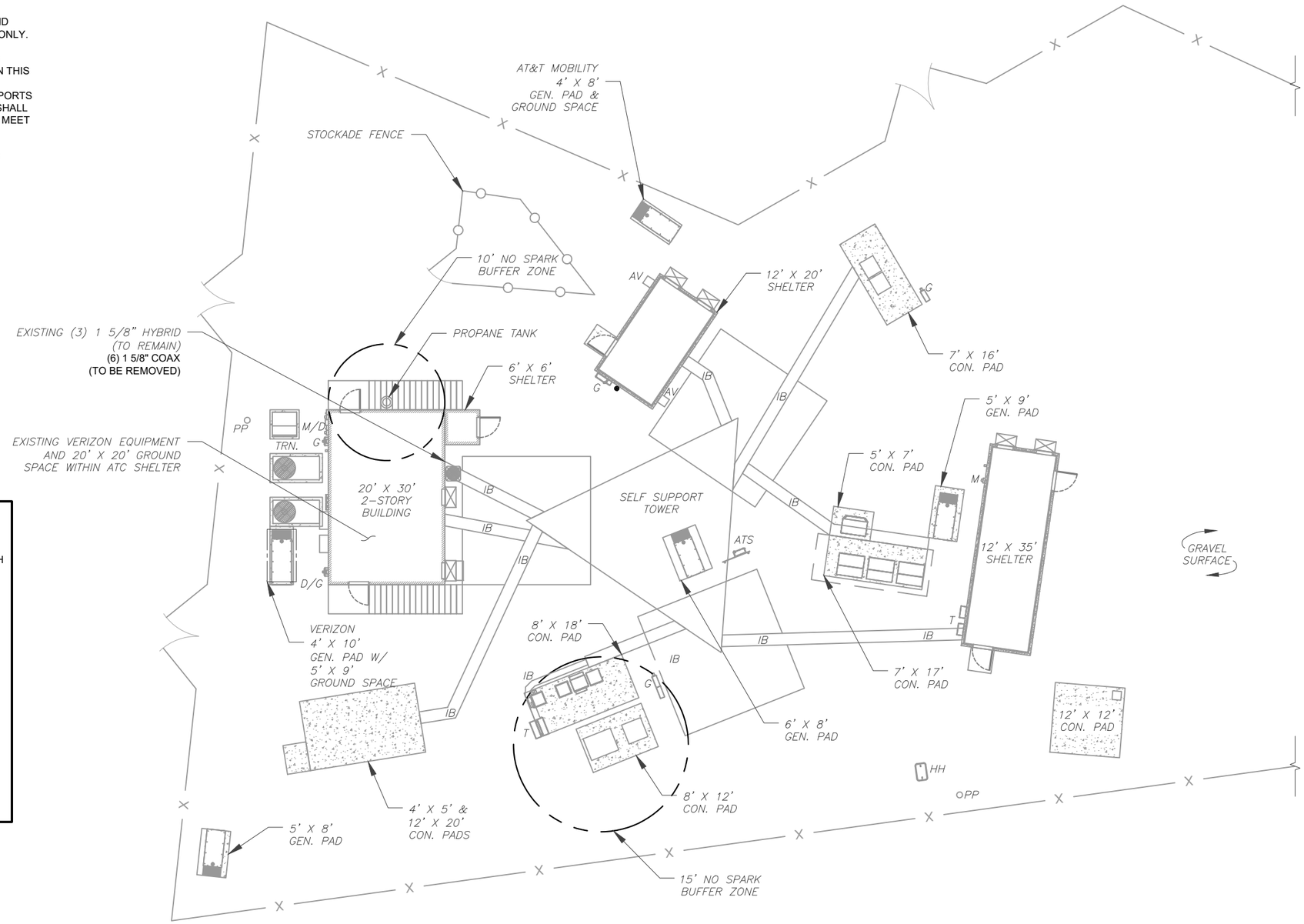
SHEET NUMBER:	REVISION:
G-002	0

SITE PLAN NOTES:

1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.

2. ICE BRIDGE, CABLE LADDER, COAX PORT, AND COAX CABLE ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL CONFIRM THE EXACT LOCATION OF ALL PROPOSED AND EXISTING EQUIPMENT AND STRUCTURES DEPICTED ON THIS PLAN. BEFORE UTILIZING EXISTING CABLE SUPPORTS, COAX PORTS, INSTALLING NEW PORTS OR ANY OTHER EQUIPMENT, CONTRACTOR SHALL VERIFY ALL ASPECTS OF THE COMPONENTS MEET THE ATC SPECIFICATIONS.

3. NO ELECTRICAL SCOPE IS INCLUDED IN THIS PROJECT.



LEGEND

⊗	GROUNDING TEST WELL
ATS	AUTOMATIC TRANSFER SWITCH
B	BOLLARD
CSC	CELL SITE CABINET
D	DISCONNECT
E	ELECTRICAL
F	FIBER
GEN	GENERATOR
G	GENERATOR RECEPTACLE
HH, V	HAND HOLE, VAULT
IB	ICE BRIDGE
K	KENTROX BOX
LC	LIGHTING CONTROL
M	METER
PB	PULL BOX
PP	POWER POLE
T	TELCO
TRN	TRANSFORMER
———	CHAINLINK FENCE

1 DETAILED SITE PLAN

GRAPHIC SCALE

20 0 10 20

(IN FEET)
1 UNIT = 20 FEET

AMERICAN TOWER®

A.T. ENGINEERING SERVICES LLC
1 FENTON MAIN
SUITE 300
CARY, NC 27511
PHONE: (919) 468-0112
PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	AP	04/08/24
1	UPDATED CABLE COUNT	AP	04/11/24

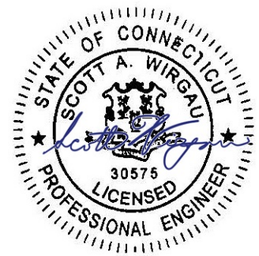
ATC SITE NUMBER:
383598

ATC SITE NAME:
TARTAGLIA

VERIZON SITE NAME:
N BRIDGEPORT CT

SITE ADDRESS:
1000 TRUMBULL AVENUE
BRIDGEPORT, CT 06606

SEAL:



Digitally Signed: 2024-04-11

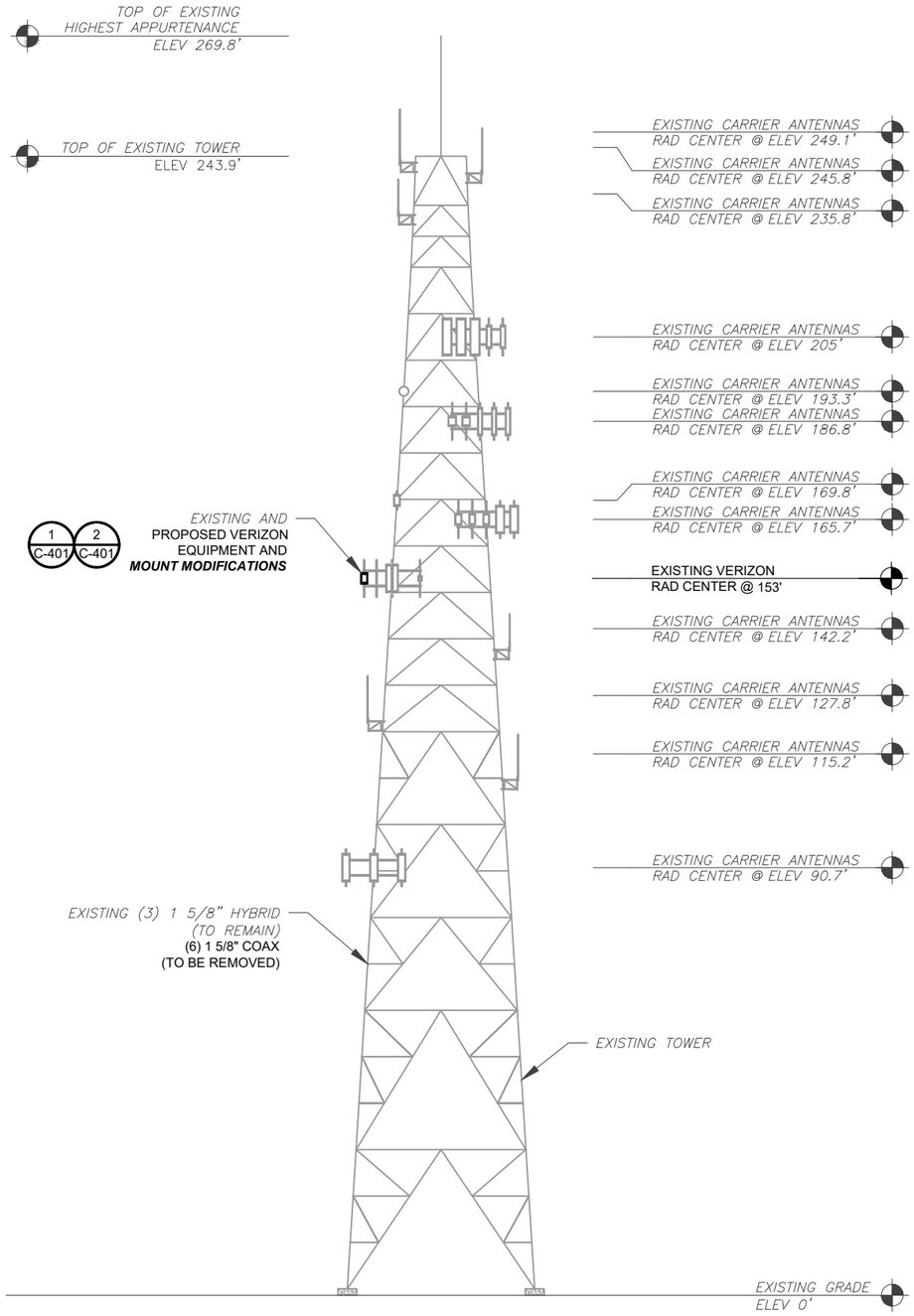
verizon

ATC JOB NO:	14561406_G0
CUSTOMER ID:	N BRIDGEPORT CT
CUSTOMER #:	5000385395

DETAILED SITE PLAN

SHEET NUMBER:	REVISION:
C-101	1

PER MOUNT ANALYSIS COMPLETED BY COLLIERS ENGINEERING & DESIGN, DATED 02/27/24, THE EXISTING MOUNT MUST BE MODIFIED TO ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT MODIFICATION DETAILED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT.



1 TOWER ELEVATION
SCALE: N.T.S.

ALL ELEVATIONS REFLECT ABOVE GROUND LEVEL (A.G.L.)

TOWER NOTE:

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE PROJECT MANAGER THAT THEY HAVE THE MOST RECENT VERSION OF THE STRUCTURAL ANALYSIS BEFORE COMMENCING WORK. EXISTING AND PROPOSED TOWER APPURTENANCES, MOUNTS, AND ANTENNAS ARE SHOWN BASED ON THE STRUCTURAL ANALYSIS.
2. WHERE APPLICABLE, ALL NEW ANTENNAS, EQUIPMENT, MOUNTS, CABLING, ETC. SHALL BE PAINTED/SOCKED TO MATCH EXISTING EQUIPMENT IN ACCORDANCE WITH FAA, JURISDICTION, AND/OR OTHER LOCAL REQUIREMENTS.
3. TOWER ELEVATION DEPICTION MAY NOT REFLECT ALL EQUIPMENT INCLUDED IN STRUCTURAL ANALYSIS. REFER TO STRUCTURAL ANALYSIS FOR FULL TOWER LOADING.

AMERICAN TOWER®
A.T. ENGINEERING SERVICES LLC
1 FENTON MAIN
SUITE 300
CARY, NC 27511
PHONE: (919) 468-0112
PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	AP	04/08/24
1	UPDATED CABLE COUNT	AP	04/11/24

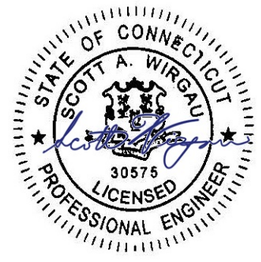
ATC SITE NUMBER:
383598

ATC SITE NAME:
TARTAGLIA

VERIZON SITE NAME:
N BRIDGEPORT CT

SITE ADDRESS:
1000 TRUMBULL AVENUE
BRIDGEPORT, CT 06606

SEAL:



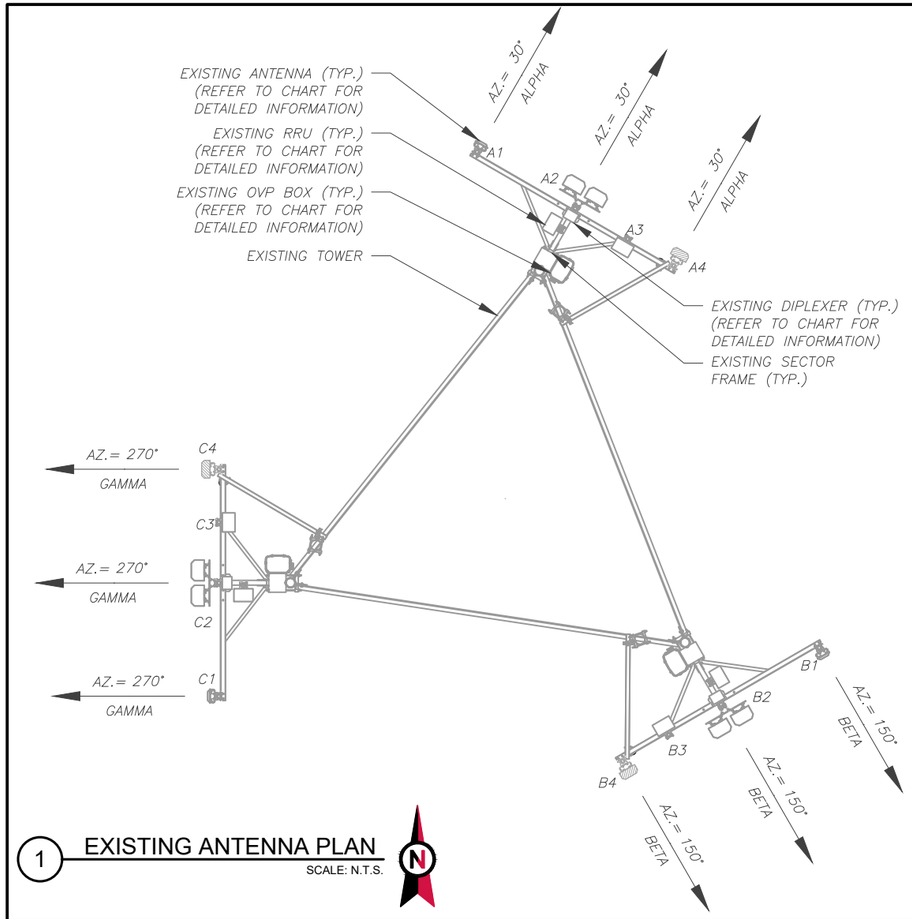
Digitally Signed: 2024-04-11

verizon

ATC JOB NO:	14561406_G0
CUSTOMER ID:	N BRIDGEPORT CT
CUSTOMER #:	5000385395

TOWER ELEVATION

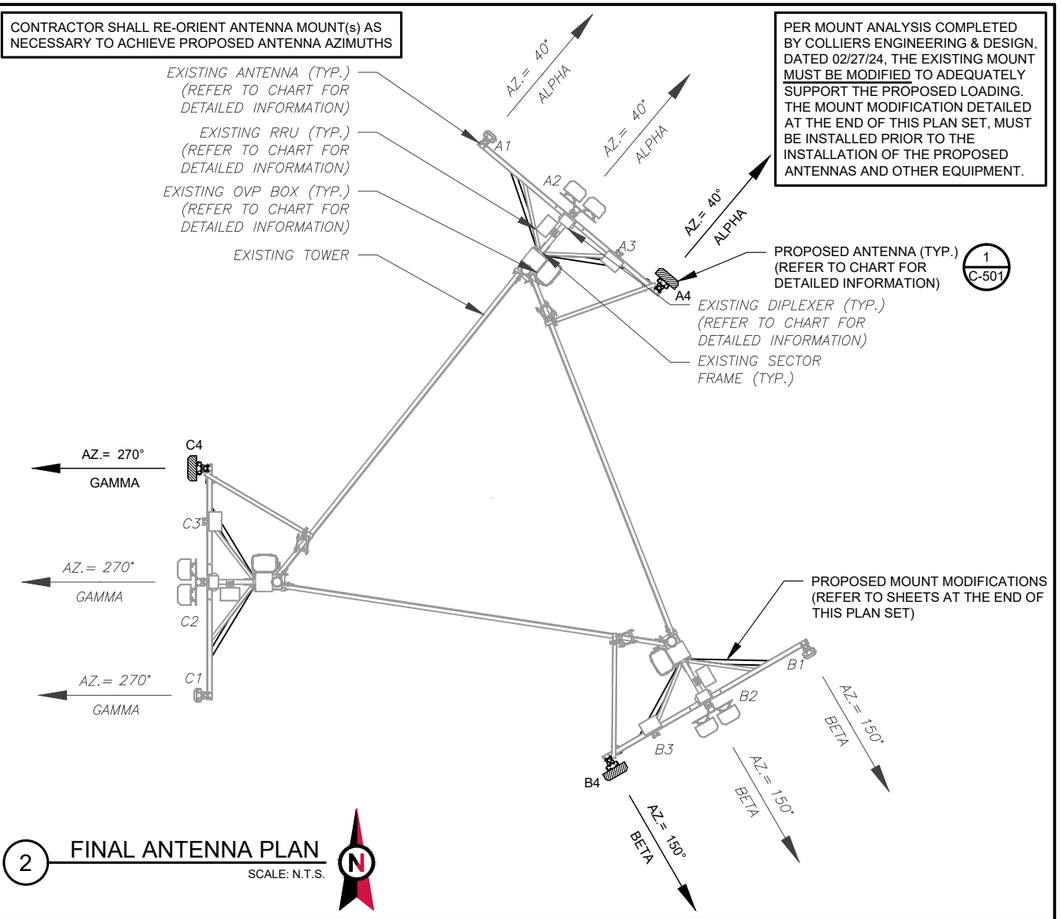
SHEET NUMBER:	REVISION:
C-201	1



1 EXISTING ANTENNA PLAN
SCALE: N.T.S.

CONTRACTOR SHALL RE-ORIENT ANTENNA MOUNT(s) AS NECESSARY TO ACHIEVE PROPOSED ANTENNA AZIMUTHS

PER MOUNT ANALYSIS COMPLETED BY COLLIERS ENGINEERING & DESIGN, DATED 02/27/24, THE EXISTING MOUNT MUST BE MODIFIED TO ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT MODIFICATION DETAILED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT.



2 FINAL ANTENNA PLAN
SCALE: N.T.S.

EXISTING ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	153'	30°	A1	OUTDOOR CBRS 20W RRH –CLIP–ON ANTENNA	LCBRS	RMN	–	–
			A2	(2) JAHH–65B–R3B	L700/L850/L1900/ LAWS/5G 850	RMN	B2/B66A RRH–BR049 CBC78T–DS–43–2X	RMN RMN
			A3	–	–	–	B5/B13 RRH–BR04C	RMN
			A4	BXA–80063–6BF–EDIN–X	–	RMV	–	–
BETA	153'	150°	B1	OUTDOOR CBRS 20W RRH –CLIP–ON ANTENNA	LCBRS	RMN	–	–
			B2	(2) JAHH–65B–R3B	L700/L850/L1900/ LAWS/5G 850	RMN	B2/B66A RRH–BR049 CBC78T–DS–43–2X	RMN RMN
			B3	–	–	–	B5/B13 RRH–BR04C	RMN
			B4	BXA–80063–6BF–EDIN–X	–	RMV	–	–
GAMMA	153'	270°	C1	OUTDOOR CBRS 20W RRH –CLIP–ON ANTENNA	LCBRS	RMN	–	–
			C2	(2) JAHH–65B–R3B	L700/L850/L1900/ LAWS/5G 850	RMN	B2/B66A RRH–BR049 CBC78T–DS–43–2X	RMN RMN
			C3	–	–	–	B5/B13 RRH–BR04C	RMN
			C4	BXA–80063–6BF–EDIN–X	–	RMV	–	–

NOTES

1. GC TO VERIFY THE FINAL RFDS MATCHES THE FINAL CONSTRUCTION DRAWINGS. GC TO NOTIFY ATC PM OF ANY DISCREPANCY PRIOR TO INSTALLING THE EQUIPMENT.
2. GC TO CAP ALL UNUSED PORTS.
3. GC TO CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.

STATUS ABBREVIATIONS

RMV: TO BE REMOVED
RMN: TO REMAIN
REL: TO BE RELOCATED
ADD: TO BE ADDED

CABLE LENGTHS FOR JUMPERS

JUNCTION BOX TO RRU: 15'
RRU TO ANTENNA: 10'

FINAL ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	153'	40°	A1	OUTDOOR CBRS 20W RRH –CLIP–ON ANTENNA	LCBRS	RMN	-	-
			A2	(2) JAHH–65B–R3B	L700/L850/L1900/ LAWS/5G 850	RMN	B2/B66A RRH–BR049 CBC78T–DS–43–2X	RMN RMN
			A3	-	-	-	B5/B13 RRH–BR04C	RMN
			A4	MT6413-77A	5G L-SUB6	ADD	-	-
BETA	153'	150°	B1	OUTDOOR CBRS 20W RRH –CLIP–ON ANTENNA	LCBRS	RMN	-	-
			B2	(2) JAHH–65B–R3B	L700/L850/L1900/ LAWS/5G 850	RMN	B2/B66A RRH–BR049 CBC78T–DS–43–2X	RMN RMN
			B3	-	-	-	B5/B13 RRH–BR04C	RMN
			B4	MT6413-77A	5G L-SUB6	ADD	-	-
GAMMA	153'	270°	C1	OUTDOOR CBRS 20W RRH –CLIP–ON ANTENNA	LCBRS	RMN	-	-
			C2	(2) JAHH–65B–R3B	L700/L850/L1900/ LAWS/5G 850	RMN	B2/B66A RRH–BR049 CBC78T–DS–43–2X	RMN RMN
			C3	-	-	-	B5/B13 RRH–BR04C	RMN
			C4	MT6413-77A	5G L-SUB6	ADD	-	-

EXISTING FIBER DISTRIBUTION / OVP BOX		EXISTING CABLING SUMMARY	
MODEL NUMBER	STATUS	CABLE QTY, SIZE, TYPE	STATUS
(3) RXXDC–3315–PF–48	RMN	(3) 1 5/8" HYBRID	RMN
–	–	(6) 1 5/8" COAX	RMV

3 EQUIPMENT SCHEDULES

FINAL FIBER DISTRIBUTION / OVP BOX		FINAL CABLING SUMMARY	
MODEL NUMBER	STATUS	CABLE QTY, SIZE, TYPE	STATUS
(3) RXXDC–3315–PF–48	RMN	(3) 1 5/8" HYBRID	RMN
-	-	-	-

AMERICAN TOWER®
A.T. ENGINEERING SERVICES LLC
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PEC.0001553

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0	FOR CONSTRUCTION	AP	04/08/24
1	UPDATED CABLE COUNT	AP	04/11/24

ATC SITE NUMBER:
383598
ATC SITE NAME:
TARTAGLIA
VERIZON SITE NAME:
N BRIDGEPORT CT
SITE ADDRESS:
1000 TRUMBULL AVENUE
BRIDGEPORT, CT 06606

SEAL:

Digitally Signed: 2024-04-11

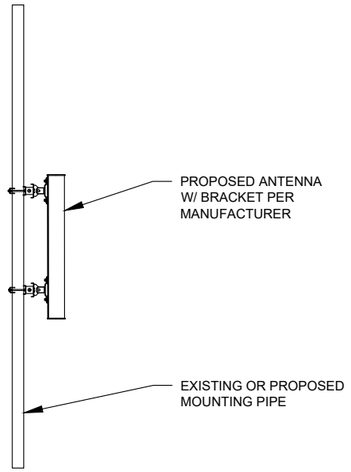
verizon

ATC JOB NO:	14561406_G0
CUSTOMER ID:	N BRIDGEPORT CT
CUSTOMER #:	5000385395

ANTENNA INFORMATION & SCHEDULE

SHEET NUMBER:	REVISION:
C-401	1

EXISTING/PROPOSED MOUNTS AND/OR MOUNT MODIFICATIONS NOT SHOWN FOR CLARITY. REFER TO ANTENNA PLANS, MOUNT ANALYSES AND/OR MOUNT MODIFICATION DOCUMENTS FOR ADDITIONAL DETAIL.



2 PROPOSED 5G ANTENNA MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.

AMERICAN TOWER®
A.T. ENGINEERING SERVICES LLC
1 FENTON MAIN
SUITE 300
CARY, NC 27511
PHONE: (919) 468-0112
PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	AP	04/08/24

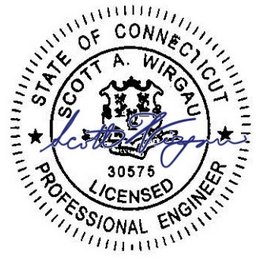
ATC SITE NUMBER:
383598

ATC SITE NAME:
TARTAGLIA

VERIZON SITE NAME:
N BRIDGEPORT CT

SITE ADDRESS:
1000 TRUMBULL AVENUE
BRIDGEPORT, CT 06606

SEAL:



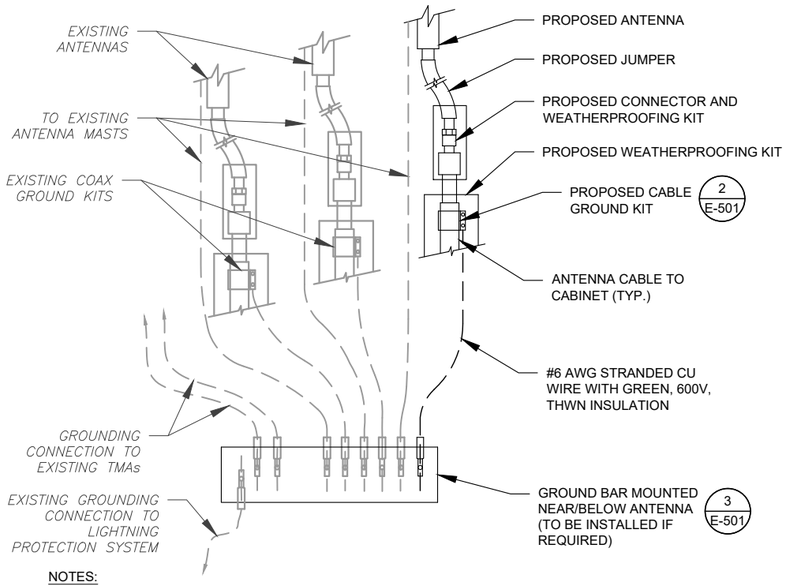
Digitally Signed: 2024-04-11

verizon

ATC JOB NO:	14561406_G0
CUSTOMER ID:	N BRIDGEPORT CT
CUSTOMER #:	5000385395

CONSTRUCTION DETAILS

SHEET NUMBER:	REVISION:
C-501	0

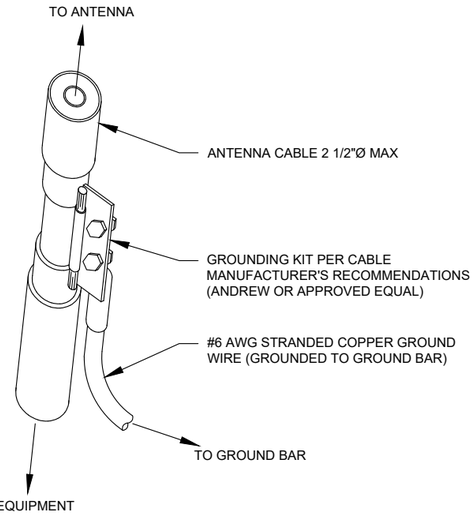


NOTES:

1. THIS DETAIL IS INTENDED TO SHOW THE GENERAL GROUNDING REQUIREMENTS. SLIGHT ADJUSTMENTS MAY BE REQUIRED BASED ON EXISTING SITE CONDITIONS. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NEEDED AND INFORM THE CONSTRUCTION MANAGER OF ANY CONFLICTS.
2. SITE GROUNDING SHALL COMPLY WITH VERIZON GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH VERIZON GROUNDING CHECKLIST, LATEST VERSION. WHEN NATIONAL AND LOCAL GROUNDING CODES ARE MORE STRINGENT THEY SHALL GOVERN.

1 TYPICAL ANTENNA GROUNDING DIAGRAM

SCALE: N.T.S.

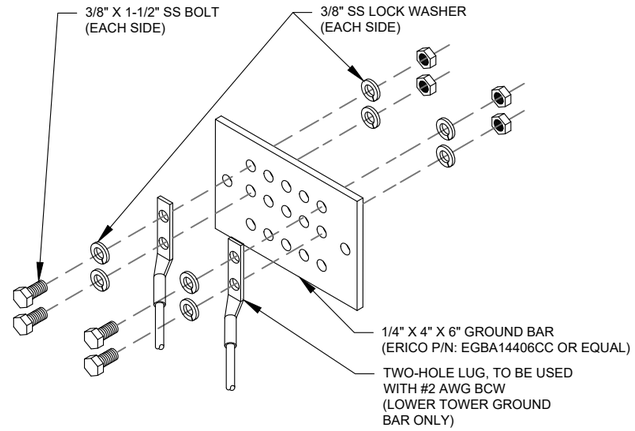


GROUND KIT NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. CONTRACTOR SHALL PROVIDE WEATHERPROOFING KIT (ANDREW PART NUMBER 221213) AND INSTALL/TAPE PER MANUFACTURER'S SPECIFICATIONS.

2 CABLE GROUND KIT CONNECTION DETAIL

SCALE: N.T.S.



GROUND BAR NOTES:

1. GROUND BAR KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
2. GROUND BAR TO BE BONDED DIRECTLY TO TOWER.

3 TOWER GROUND BAR DETAIL

SCALE: N.T.S.

AMERICAN TOWER®
A.T. ENGINEERING SERVICES LLC
1 FENTON MAIN
SUITE 300
CARY, NC 27511
PHONE: (919) 468-0112
PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	AP	04/08/24

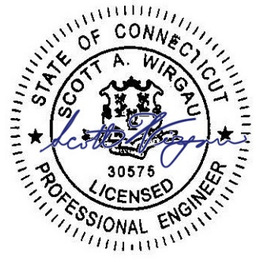
ATC SITE NUMBER:
383598

ATC SITE NAME:
TARTAGLIA

VERIZON SITE NAME:
N BRIDGEPORT CT

SITE ADDRESS:
1000 TRUMBULL AVENUE
BRIDGEPORT, CT 06606

SEAL:



Digitally Signed: 2024-04-11

verizon

ATC JOB NO:	14561406_G0
CUSTOMER ID:	N BRIDGEPORT CT
CUSTOMER #:	5000385395

GROUNDING DETAILS

SHEET NUMBER:	REVISION:
E-501	0

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 #: 10221516
Colliers Engineering & Design Project #: 21777438 (Rev 2)

February 27, 2024

Site Information

Site ID:	*5000385395-VZW / N BRIDGEPORT CT*
Site Name:	*N BRIDGEPORT CT*
Carrier Name:	*Verizon Wireless*
Address:	*1330 Chopsey Hill Rd* *Bridgeport, Connecticut 06606* *Fairfield County*
Latitude:	*41.219528°*
Longitude:	*-73.201779°*

Structure Information

Tower Type:	*154-Ft Self Support*
Mount Type:	*13.00-Ft T-Frame*

FUZE ID # 16231899

Analysis Results

T-Frame: **56.4% 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: Carol Luengas

STATE OF CONNECTICUT · DEJIAN XU · No. 33733 · LICENSED PROFESSIONAL ENGINEER

02/27/2024

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 A Top Reinforcement	156.5	N1	32	903	0.224	0.000	54	281	0.054	0.000
Sector A Bottom Reinforcement	151.5	N5	38	2965	0.207	0.000	60	2246	0.174	0.000
Sector A Top Standoff	155.5	N45	397	841	0.196	0.000	529	630	0.247	0.000
Sector A Bottom Standoff	152.5	N46	321	1223	0.143	0.000	375	998	0.170	0.000
Sector A Reinforcement	148.5	N73A	897	887	0.000	0.000	1632	1568	0.000	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	33.5	9.0	38.9	14.4
0.5	43.2	12.4	50.8	19.9
1	52.8	15.3	62.5	25.0

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

Requirements:

The existing mounts 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.

1 MOUNT ANALYSIS

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT. PLEASE REFERENCE THE MOUNT ANALYSIS REPORT FOR COMPLETE MOUNT ANALYSIS CALCULATIONS AND DETAILS. SUPPLEMENTAL PAGES INCLUDED IN THE CONSTRUCTION DRAWINGS ARE FOR REFERENCE ONLY. GENERAL CONTRACTOR IS TO VERYIFY THEY HAVE THE MOST RECENT MOUNT ANALYSIS PRIOR TO CONTRUCTION.

SUPPLEMENTAL

SHEET NUMBER: R-601

REVISION: 0

verizon

MOUNT MODIFICATION DRAWINGS
13.00' T-FRAME

TOWER OWNER: AMERICAN TOWER CORPORATION
TOWER OWNER SITE NUMBER: 383598

CARRIER SITE NAME: N BRIDGEPORT CT
CARRIER SITE NUMBER: 5000385395
FUZE ID: 16231899

1330 CHOPSEY HILL RD
BRIDGEPORT, CT 06606
FAIRFIELD COUNTY

LATITUDE: 41.219528° N
LONGITUDE: 73.201779° W

DESIGN CRITERIA

WIND LOADS
BASIC WIND SPEED (3 SECOND GUST), V = 120 MPH
EXPOSURE CATEGORY C
TOPOGRAPHIC CATEGORY: 1
TOPOGRAPHIC CONSIDERED: N/A
TOPOGRAPHIC METHOD: N/A
MEAN BASE ELEVATION (AMSL) = 202'

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 = .211
LONG TERM MCER GROUND MOTION, S_1 = .054

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 #: 10221516
VZW MDG #: 5000385395
ANALYSIS DATE: 2/6/2024

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

SITE NAME: N BRIDGEPORT CT 5000385395
1330 CHOPSEY HILL RD
BRIDGEPORT, CT 06606
FAIRFIELD COUNTY

TITLE SHEET
ST-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

BILL OF MATERIALS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
SECTION 1 - VZWSMART KITS						
6	VZWSMART	VZWSMART-MSK1	CROSSOVER PLATE		14	84
3	VZWSMART	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	VZWSMART-AL333	CLIP ANGLE		3	9
SECTION 2 - OTHER REQUIRED PARTS						
SECTION 3 - REQUIRED SAFETY CLIMB PARTS						
1	PERFECT VISON	PV-CLAMP-LW-0106	CLAMP BRACKET	OR EOR APPROVED EQUIVALENT	-	-
1	PERFECT VISION	PV-CMX-CG-SM	WIRE ROPE GUIDE	OR EOR APPROVED EQUIVALENT	-	-
					TOTAL:	459

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

BILL OF MATERIALS
SBOM-1

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

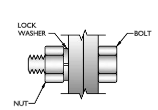
3. ALL SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE APPROVED IN WRITING BY THE ENGINEER. CONTRACTOR SHALL PROVIDE DOCUMENTATION TO ENGINEER FOR VERIFYING THE SUBSTITUTE IS SUITABLE FOR USE AND MEETS ORIGINAL DESIGN CRITERIA. DIFFERENCES FROM THE ORIGINAL DESIGN, INCLUDING MAINTENANCE, REPAIR AND 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

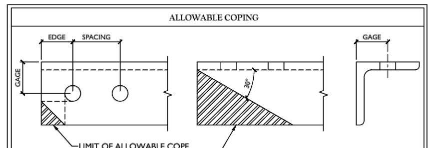


TYP. BOLT ASSEMBLY

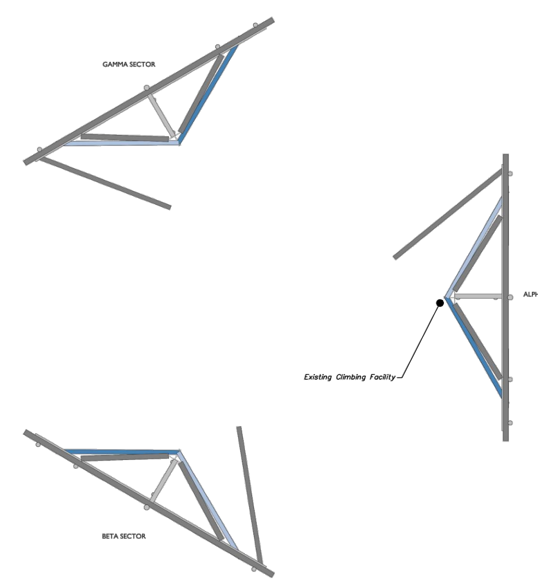
NOTES:

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



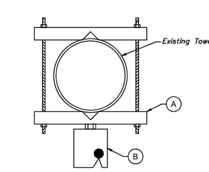
GENERAL NOTES
SGN-1



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

STRUCTURAL NOTES:

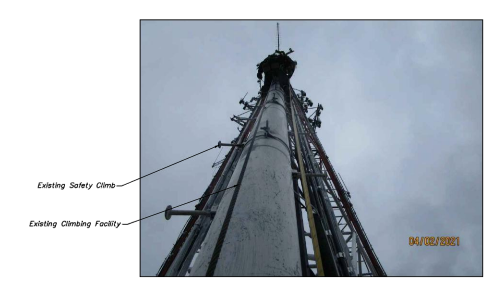
1. PER THE MOUNT MAPPING COMPLETED BY RKS DESIGN & ENGINEERING, LLC ON 4/2/2021, THE SAFETY CLIMB AND CLIMBING FACILITIES UP TO THE VERIZON MOUNT ELEVATION (153'-11") ARE IN GOOD CONDITION. COLLIERS ENGINEERING & DESIGN DOES NOT WARRANT THIS INFORMATION.
2. INSTALL SHALL NOT CAUSE HARM TO THE STRUCTURE, 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.



ITEM #	QTY	PART NUMBER	DESCRIPTIONS
A	1	PV-CLAMP-LW-0106	CLAMP BRACKET (PERFECT VISION OR EOR APPROVED EQ.)
B	1	PV-CMX-CG-SM	WIRE ROPE GUIDE (PERFECT VISION OR EOR APPROVED EQ.)

2 PROPOSED WIRE ROPE GUIDE ATTACHMENT - PLAN VIEW
SCALE : N.T.S.

NOTE: CONTRACTOR SHALL ENSURE THAT WIRE ROPE GUIDE DOES NOT PUSH THE WIRE ROPE OUTSIDE OF THE VERTICAL PLANE OF THE SAFETY CLIMB. CONTRACT EOR WITH PHOTOS OF SAFETY CLIMB AND COLLAR FOR FURTHER DIRECTION IF NEEDED.



CLIMBING FACILITY PHOTO

CLIMBING FACILITY DETAIL
SCF-1

1 MOUNT MODIFICATIONS

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT. PLEASE REFERENCE THE MOUNT ANALYSIS REPORT FOR COMPLETE MOUNT ANALYSIS CALCULATIONS AND DETAILS. SUPPLEMENTAL PAGES INCLUDED IN THE CONSTRUCTION DRAWINGS ARE FOR REFERENCE ONLY. GENERAL CONTRACTOR IS TO VERYIFY THEY HAVE THE MOST RECENT MOUNT ANALYSIS PRIOR TO CONTRUCTION.

SUPPLEMENTAL

SHEET NUMBER: R-602

REVISION: 0

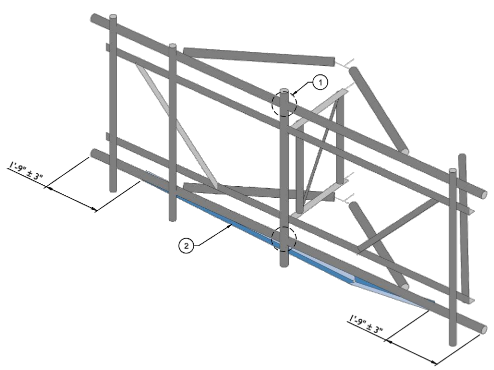
LEGEND:

- PROPOSED
- RELOCATED
- EXISTING

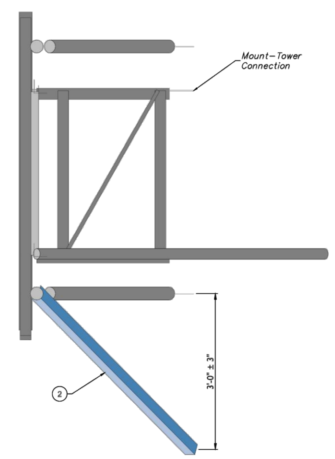
MOUNT MODIFICATION SCHEDULE				
NO.	ELEVATION	QUANTITY	DESCRIPTION	NOTES
1	153'-11"	6	PROPOSED CROSSOVER PLATE (PART #: VZWSMART-MSK1)	CONTRACTOR TO ATTACH EXISTING MOUNT PIPE TO ROUND FACE HORIZONTALS WITH CROSSOVER PLATES (PART #: VZWSMART-MSK1) IF NOT CURRENTLY ATTACHED.
2		3	PROPOSED V-BRACING KIT (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.

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 (TYP. ALL SECTORS)
SCALE: N.T.S.



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

Colliers Engineering & Design
www.colliersengineering.com
Doing Business as MASER

verizon

PROTECT YOURSELF
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:	JOB NUMBER:
AS SHOWN	21777438

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
1	2/6/24	ISSUED FOR CONSTRUCTION	VRD	DK
0	6/11/21	ISSUED FOR CONSTRUCTION	JRF	PMA

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:
N BRIDGEPORT CT
5000385395
1330 CHOPSEY HILL RD
BRIDGEPORT, CT 06606
FAIRFIELD COUNTY

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

Colliers Engineering & Design
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Doing Business as MASER
verizon
SITE NAME:
N BRIDGEPORT CT
5000385395
1330 CHOPSEY HILL RD
BRIDGEPORT, CT 06606
FAIRFIELD COUNTY

SHEET TITLE: MOUNT PHOTOS
SHEET NUMBER: SS-2

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT. PLEASE REFERENCE THE MOUNT ANALYSIS REPORT FOR COMPLETE MOUNT ANALYSIS CALCULATIONS AND DETAILS. SUPPLEMENTAL PAGES INCLUDED IN THE CONSTRUCTION DRAWINGS ARE FOR REFERENCE ONLY. GENERAL CONTRACTOR IS TO VERYIFY THEY HAVE THE MOST RECENT MOUNT ANALYSIS PRIOR TO CONTRUCTION.

1 MOUNT MODIFICATIONS

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-603	0

EXHIBIT 2

Property Location 1000 TRUMBULL AV | Map ID 82/ 2778/ 61/B / | Bldg Name | State Use 200V
Vision ID 32253 | Account # RT-0049550 | Bldg # 1 | Sec # 1 of 1 | Card # 1 of 1 | Print Date 2/13/2024 8:10:44 PM

CURRENT OWNER

GLOBAL TOWER ASSETS LLC

10 PRESIDENTIAL WAY

WOBURN MA 01801

TOPO	UTILITIES	STRT / ROAD	LOCATION

SUPPLEMENTAL DATA

Alt Prcl ID	2778--61B------		
Census Tr	CEN728		
Heart			
Abstract	200:200		
Freeze		Special Dis	
GIS ID	2778-61B	Assoc Pid#	

CURRENT ASSESSMENT

Total			

6015

VISION

RECORD OF OWNERSHIP

RECORD OF OWNERSHIP	BK-VOL/PAGE		SALE DATE	Q/U	V/I	SALE PRICE	VC
GLOBAL TOWER ASSETS LLC	9695	0074	09-13-2017	U	V	0	04
GLOBAL TOWER ASSETS LLC	9500	0294	09-14-2016	U	V	0	03
CELL TOWER LEASE ACQUISION LLC	7342	0302	01-23-2007	U	I	0	03
UNISON SITE MANAGEMENT LLC	7342	0299	01-23-2007	U	I	1,925,000	03
TARTAGLIA REMO	3018	0317	07-06-1992	U	V	700,000	

PREVIOUS ASSESSMENTS (HISTORY)

Year	Code	Assessed	Year	Code	Assessed V	Year	Code	Assessed
2023	2-5	54,650	2022	2-5	54,650	2021	2-5	54,650
	5-2	338,600		5-2	338,600		5-2	338,600
	Total	393,250		Total	393,250		Total	393,250

EXEMPTIONS

Year	Code	Description	Amount
		Total	0.00

OTHER ASSESSMENTS

Code	Description	Number	Amount	Comm Int

This signature acknowledges a visit by a Data Collector or Assessor

ASSESSING NEIGHBORHOOD

Nbhd	Nbhd Name	B	Tracing	Batch
021				

NOTES

CELL TOWER

ENTRANCE TO LOT OFF OF CHOPSEY HILL RD

APPRAISED VALUE SUMMARY

Appraised Bldg. Value (Card)	0
Appraised Xf (B) Value (Bldg)	0
Appraised Ob (B) Value (Bldg)	78,060
Appraised Land Value (Bldg)	483,710
Special Land Value	0
Total Appraised Parcel Value	561,770
Valuation Method	C
Total Appraised Parcel Value	561,770

BUILDING PERMIT RECORD

Permit Id	Issue Date	Type	Description	Amount	Insp Date	% Comp	Date Comp	Comments
6595-2022	12-12-2022	OT	Other	30,000	10-17-2022	0		DISH ANTENNA
6211-2022	11-02-2022	OT	Other	25,000	10-17-2022	0		REPLACE 12 ANTENNAS
1751-2021	08-03-2021	PT	Patio	20,000		0		T MOBILE UPGRADE
11322021	05-26-2021	NC	New Construct	65,000	06-23-2022	100	06-23-2022	REROOF PERSONAL PROPE
-188339	06-10-2020	OT	Other	20,000	10-15-2020	100	10-01-2020	REPLACE ANTENNAS
138719	06-12-2019	OT		26,000	06-07-2021	100	10-22-2020	COA Replace Antenna -Sprint
129619	05-14-2019	OT		25,000	09-15-2020	100	10-01-2020	Replace Antennas

VISIT / CHANGE HISTORY

Date	Id	Type	Is	Cd	Purpost/Result
06-23-2022	MJM	02		78	Permit - Drive By Visual In
04-05-2022	MJM	06	0	78	Permit - Drive By Visual In
10-29-2021	RK	02		P	Permit Activity
10-01-2020	MVS	01	6	33	DataMailer - Drive By revie
09-15-2020	RK	02		P	Permit Activity
07-21-2016	RK	02		P	Permit Activity
10-10-2014	RK	02		P	Permit Activity

LAND LINE VALUATION SECTION

B	Use Code	Description	Zone	Land Type	Land Units		Unit Price	Size Adj	Site Index	Cond.	Nbhd.	Nbhd. Adj	Notes	Location Adjustment	Adj Unit P	Land Value
1	200V	Commercial Lnd	RA		3.050	AC	101,500.00	1.00000	0	1.25	21	1.250	CU	1.0000	158,593.7	483,710
				Total Card Land Units	3.050	AC	Parcel Total Land Area	3.0500						Total Land Value		483,710

Property Location	1000 TRUMBULL AV		Map ID	82/ 2778/ 61/B /		Bldg Name	State Use 200V
Vision ID	32253	Account #	RT-0049550	Bldg #	1	Sec # 1 of 1	Card # 1 of 1 Print Date

CONSTRUCTION DETAIL

Element	Cd	Description
Style:	94	Outbuildings
Model	00	Vacant
Grade:		
Stories:		
Occupancy:		
Exterior Wall 1:		
Exterior Wall 2:		
Roof Structure:		
Roof Cover:		
Interior Wall 1:		
Interior Wall 2:		
Interior Flr 1:		
Interior Flr 2		
Heat Fuel:		
Heat Type:		
AC Type:		
Total Bedrooms		
Total Full Baths		
Total Half Baths		
Total Xtra Fixtrs		
Total Rooms		
Bath Style:		
Kitchen Style:		
Fireplaces		
Fin Bsmt Area		
Fin Bsmt Qualit		
Bsmt Garages		
.		

CONSTRUCTION DETAIL (CONTINUED)

Element	Cd	Description

CONDO DATA

Parcel Id		C		Owne	
		B		S	

Adjust Type	Code	Description	Factor%
Condo Flr			
Condo Unit			

COST / MARKET VALUATION

Building Value New	0
Year Built	0
Effective Year Built	
Depreciation Code	
Remodel Rating	
Year Remodeled	
Depreciation %	0
Functional Obsol	0
External Obsolescence	0
Trend Factor	1.000
Condition	
Condition %	100
Percent Good	
RCNLD	0
Dep % Ovr	
Dep Ovr Comment	
Misc Imp Ovr	
Misc Imp Ovr Comment	
Cost to Cure Ovr	
Cost to Cure Ovr Comment	

No Sketch

OB - OUTBUILDING & YARD ITEMS(L) / XF - BUILDING EXTRA FEATURES(B)

Code	Description	L/B	Units	Unit Price	Yr Blt	Cond. Cd	% Gd	Grade	Grade Adj.	Appr. Value
FN5	Fence 10'	L	616	21.00	2000		50		0.00	6,470
PAV2	Paving Conc	L	40	4.20	2009		70		0.00	120
TWR	Tower	L	240	208.00	2007		100		0.00	49,920
SHD1	Shed	L	1,200	17.00	1987	A	60	3	1.00	12,240
SHD1	Shed	L	432	17.00	2000	A	60	3	1.00	4,410
SHD1	Shed	L	240	17.00	2000	A	60	3	1.00	2,450
SHD1	Shed	L	240	17.00	2006	A	60	3	1.00	2,450

BUILDING SUB-AREA SUMMARY SECTION

Code	Description	Living Area	Floor Area	Eff Area	Unit Cost	Undeprec Value
	Ttl Gross Liv / Lease Area	0	0	0		0


Chopsey Hill Rd
Trumbull Ave
0
100
200ft
1:500
GBRC | City of Bridgeport, GBRC

EXHIBIT 3

AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure	:	240 ft Self Support Tower
ATC Asset Name	:	Tartaglia
ATC Asset Number	:	383598
Engineering Number	:	14561406_C3_02
Proposed Carrier	:	VERIZON WIRELESS
Carrier Site Name	:	N BRIDGEPORT CT
Carrier Site Number	:	5000385395
Site Location	:	1000 Trumbull Avenue Bridgeport, CT 06606 41.2196° N, 73.2013° W
County	:	Fairfield
Date	:	March 5, 2024
Max Usage	:	93%
Analysis Result	:	Pass

Created By:

Sarah Kramer
Structural Engineer I

Sarah D. Kramer

COA: PEC.0001553

Table of Contents

Introduction 3

Supporting Documents 3

Analysis 3

Conclusion 3

Structure Usages 4

Maximum Reactions 4

Tower Loading 5

Standard Conditions ..... Attached

Calculations ..... Attached

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 240 ft Self Support tower to reflect the change in loading by VERIZON WIRELESS.

Supporting Documents

Tower:	Rohn Drawing #C880400RI, dated March 3, 1988
Foundation:	Mapping by FDH Project #10-12269E N1, dated January 17, 2011
Geotechnical:	Soiltesting Job #G96-1987-87, dated January 6, 1988
Modification:	Centek Job #10001.CO78, dated December 6, 2010 GlenMartin Drawing #GM-07602, dated February 21, 2013

Analysis

The tower was analyzed using American Tower Corporation's tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

Basic Wind Speed:	119 mph (3-second gust)
Basic Wind Speed w/ Ice:	50 mph (3-second gust) w/ 1.00" radial ice concurrent
Code(s):	ANSI/TIA-222-H / 2021 IBC / 2022 Connecticut State Building Code
Exposure Category:	C
Risk Category:	II
Topographic Factor Procedure:	Method 1
Topographic Category:	1
Feature:	Flat
Spectral Response:	Ss = 0.21, S_1 = 0.05
Site Class:	D - Stiff Soil - Default

Wind load and Ice thickness have been reduced by applicable existing structure load modification factors in accordance with TIA-222-H, ANNEX-S

Conclusion

Based on the analysis results, the structure meets the requirements per the applicable codes listed above. The tower and foundation can support the equipment as described in this report.

If you have any questions or require additional information, please reach out to your American Tower contact. If you do not have an American Tower contact and have an Engineering question, please contact **Engineering@americantower.com** Please include the American Tower asset name, asset number, and engineering number in the subject line for any questions.

Structure Usages

Structural Component	Usage	Control	Location	Result
Leg	41.0%	Member X	Section 1	Pass
Diagonal	93.0%	Member X	Section 2	Pass
Horizontal	83.0%	Member X	Section 2	Pass
Bolt	33.1%	-	Section 2	Pass
Serviceability Usage	2.4%	Deflection	Elevation 240 ft	Pass
Mat & Pier	76.7%	Uplift [Soil]	Node 1	Pass
Mat & Pier	76.8%	Uplift [Soil]	Node 1a	Pass
Mat & Pier	76.8%	Uplift [Soil]	Node 1b	Pass

Maximum Reactions

Foundation	Moment (k-ft)	Axial (k)	Uplift (k)	Shear (k)
Self Support Base (Global)	9,917.3	113.7	-	76.0
Self Support Base (Local)	-	321.8	255.2	46.0

Reactions shown are maximum overall and not limited by Load Case

Structure base reactions were analyzed using available geotechnical and foundation information.

VERIZON WIRELESS Final Loading

Elev (ft)	Qty	Equipment	Lines
153.0	2	Raycap RxxDC-3315-PF-48	(2) 1 5/8" Hybriflex (1) Waveguide
	3	Commscope CBC78T-DS-43-2X	
	3	Light Sector Frame	
	3	Mount Reinforcement	
	3	Samsung B2/B66A RRH-BR049	
	3	Samsung B5/B13 RRH-BR04C	
	3	Samsung MT6413-77A	
	3	Samsung Outdoor CBRS 20W RRH	
	3	Samsung Outdoor CBRS 20W RRH –Clip-on Antenna	
	6	Commscope JAHH-65B-R3B	

Install proposed lines in the place of the existing VERIZON WIRELESS lines.

Other Existing/Reserved Loading

Elev (ft)	Qty	Equipment	Lines	Carrier
263.8	1	8' Yagi	-	UNKNOWN
249.1	1	12' Omni	-	UNKNOWN
248.2	1	Dielectric DCR-L1	-	RED WOLF BROADCASTING
245.8	1	10' Omni	-	UNKNOWN
240.0	2	Side Arm	-	OTHER
	1	Beacon	-	-
	1	Lightning Rod		
	1	Dielectric DCR-L1 w/ Radome	-	RED WOLF BROADCASTING
236.4	2	8' Omni	-	UNKNOWN
235.8	2	10' Omni	-	UNKNOWN
230.0	1	Side Arm	-	-
223.0	1	Side Arm	-	-
	1	Side Arm		
208.0	3	Ericsson Radio 4449 B71 B85A	-	T-MOBILE
207.6	3	Ericsson Air6449 B41	-	T-MOBILE
202.0	3	Ericsson AIR 32 B66AA B2P	(2) 1 1/4" Hybriflex Cable (3) 1 5/8" Hybriflex	T-MOBILE
	3	Ericsson RRUS 4415 B25		
	3	Mount Reinforcement		
	3	Sector Frame		
	3	RFS APXVAARR24_43-U-NA20		

Elev (ft)	Qty	Equipment	Lines	Carrier
194.0	1	3' HP Dish	(3) 1/2" Coax	SPRINT NEXTEL
193.3	2	2' Std. Dish	-	SPRINT NEXTEL
187.8	3	Nokia 2.5G MAA - AAHC(64T64R)	-	SPRINT NEXTEL
187.7	3	Argus LLPX310R	-	SPRINT NEXTEL
187.6	2	RFS APXVSPP18-C-A20	-	SPRINT NEXTEL
187.2	3	Motorola DAP Vx	-	SPRINT NEXTEL
187.0	1	RFS APXV9ERR18-C-A20	(1) 1.7" (43.2mm) Hybrid (6) 5/16" (0.31"-7.9mm) Coax	SPRINT NEXTEL
184.4	1	24" x 24" Junction Box	-	SPRINT NEXTEL
181.7	6	Alcatel-Lucent 1900MHz RRH	-	SPRINT NEXTEL
180.1	3	Alcatel-Lucent 800 MHz RRH	-	SPRINT NEXTEL
180.0	3	Sector Frame	(4) 1 1/4" Hybriflex Cable (2) 2" conduit	SPRINT NEXTEL
171.4	1	Raycap DC9-48-60-24-8C-EV (Enclosure)	-	AT&T MOBILITY
170.2	3	Ericsson RRUS 4478 B14	-	AT&T MOBILITY
	6	Kaelus DBC0051F3V51-2		
170.1	2	Raycap DC6-48-60-18-8F (23.5" Height)	-	AT&T MOBILITY
170.0	3	Ericsson RRUS 32 B66	(4) 0.39" (10mm) Fiber (3) 0.41" (10.3mm) Fiber (2) 0.78" (19.7mm) 8 AWG 6 (7) 0.92" (23.4mm) Cable (1) 2" conduit	AT&T MOBILITY
	4	Ericsson RRUS 4449 B5, B12		
167.0	3	Ericsson AIR 6419 N77G	-	AT&T MOBILITY
165.0	1	Matsing MS-MBA-3.2-H4-L4 *	(6) 1 5/8" Coax	AT&T MOBILITY
	2	CCI DMP65R-BU6DA		
	2	Ericsson RRUS 32 B2		
	2	Ericsson RRUS 32 B30		
	3	Ericsson RRUS 8843 B2, B66A		
	3	Sector Frame		
	3	Quintel QD6616-7		
163.0	3	Ericsson AIR 6449 n77D	-	AT&T MOBILITY
140.0	3	Small Side Lights	-	-
134.2	1	2' Yagi	-	UNKNOWN
132.0	1	Side Arm	-	-
127.8	1	10' Omni	-	UNKNOWN
118.0	1	Side Arm	-	-
108.0	1	Side Arm	-	-
99.6	1	4' Yagi	-	UNKNOWN
98.0	1	Side Arm	-	-
95.1	3	Fujitsu TA08025-B604	-	DISH WIRELESS L.L.C.
	3	Fujitsu TA08025-B605		
94.1	1	Commscope RDIDC-9181-PF-48	-	DISH WIRELESS L.L.C.
92.0	3	Sector Frame	(1) 1.75" (44.5mm) Hybrid	DISH WIRELESS L.L.C.
	3	JMA Wireless MX08FRO665-21		
80.0	1	Side Arm	-	-

(If table breaks across pages, please see previous page for data in merged cells)

Standard Conditions

All engineering services performed by A.T. Engineering Services LLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

- Information supplied by the client regarding antenna, mounts, and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Services LLC

It is the responsibility of the client to ensure that the information provided to A.T. Engineering Services LLC and used in the performance of our engineering services is correct and complete.

All assets of American Tower Corporation, its affiliates, and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with the drawings and specifications.

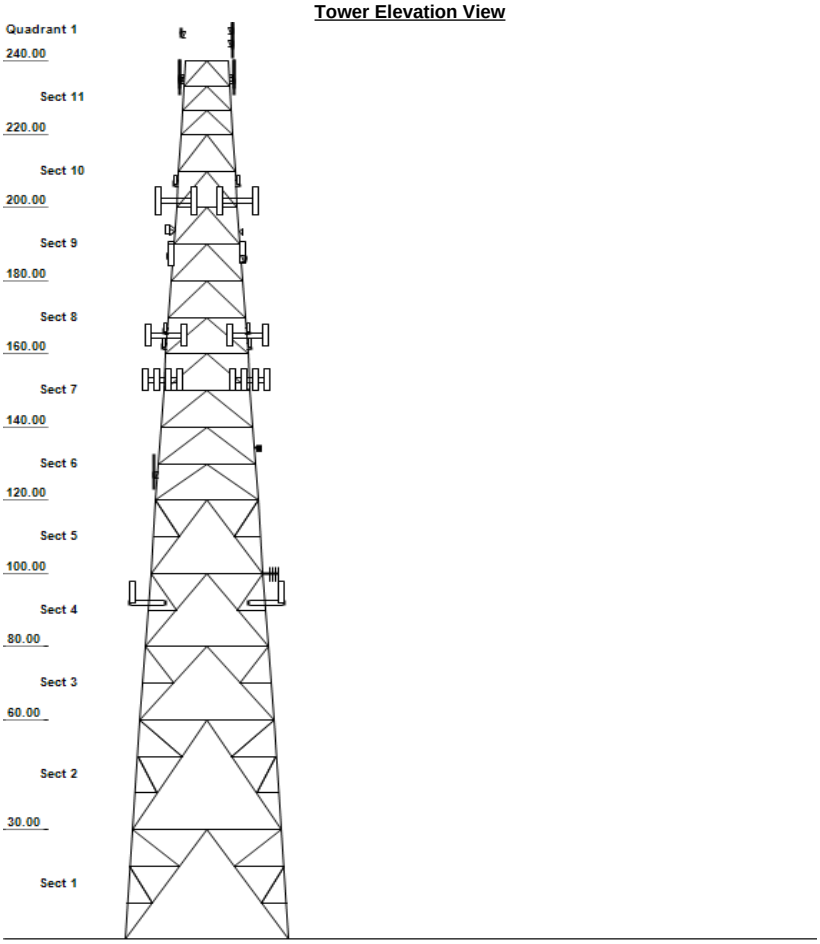
Unless explicitly agreed by both the client and A.T. Engineering Services LLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. A.T. Engineering Services LLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.

ANALYSIS PARAMETERS

Nominal Wind:	116 mph	**Ice Wind:**	49 mph w/ 0.85" ice	**Service Wind:**	60 mph
Risk Category:	II	**Exposure:**	C	**S_s:** 0.211	**S_1:** 0.054
Topo Category:	1	**Topo Factor:**	Method 1	**Topo Feature:**	
Structure Height:	240 ft	**Base Elevation:**	0 ft	**Shape:**	Triangle
Base Width:	40.33 ft	**Top Width:**	10.93 ft		

Tower Elevation View



GLOBAL BASE REACTIONS

	DL+WL	DL+WL+IL
Moment (k-ft):	9917.27	3316.81
Axial (k):	113.68	187.90
Shear (k):	76.03	26.24

INDIVIDUAL BASE REACTIONS

Comp (k):	321.82
Uplift (k):	255.17
Shear (k):	45.95

TOWER SECTION PROPERTIES

Section	Leg Members	Diagonal Members	Horizontal Members
1	PX 50 ksi 10" DIA PIP	PST 50 ksi 3" DIA PIPE	PST 50 ksi 3-1/2" DIA PIPE
2-3	PX 50 ksi 10" DIA PIP	PST 50 ksi 3" DIA PIPE	PST 50 ksi 3" DIA PIPE
4	PX 50 ksi 8" DIA PIPE	PST 50 ksi 3" DIA PIPE	PST 50 ksi 3" DIA PIPE
5	PX 50 ksi 8" DIA PIPE	PST 50 ksi 2-1/2" DIA PIPE	PST 50 ksi 2-1/2" DIA PIPE
6	PX 50 ksi 8" DIA PIPE	PST 50 ksi 3" DIA PIPE	PST 50 ksi 2-1/2" DIA PIPE
7-8	PX 50 ksi 8" DIA PIPE	PST 50 ksi 2-1/2" DIA PIPE	PST 50 ksi 2-1/2" DIA PIPE
9-10	PX 50 ksi 8" DIA PIPE	PST 50 ksi 2-1/2" DIA PIPE	PST 50 ksi 2" DIA PIPE
11	PX 50 ksi 8" DIA PIPE	PST 50 ksi 2" DIA PIPE	PST 50 ksi 2" DIA PIPE

SECONDARY BRACING MEMBERS

Section	Sub Diagonal 1	Sub Diagonal 2	Sub Diagonal 3
1	P1-1/2" DIA PIPE	P2-1/2" DIA PIPE	-
2	P1-1/2" DIA PIPE	P2" DIA PIPE	-
3 - 4	P2" DIA PIPE	-	-
5	P1-1/2" DIA PIPE	-	-

Section	Sub Horizontal 1	Sub Horizontal 2	Sub Horizontal 3
1	P1-1/2" DIA PI	P2" DIA PIPE	-
2	P1-1/2" DIA PI	P2" DIA PIPE	-
3 - 4	P1-1/2" DIA PI	-	-
5	P1-1/2" DIA PI	-	-

DISCRETE APPURTENANCE

Elev (ft)	Description
263.8	(1) Generic 8' Yagi
249.1	(1) Generic 12' Omni
248.2	(1) Dielectric DCR-L1
245.8	(1) Generic 10' Omni
240.0	(2) Generic Round Side Arm
240.0	(1) Generic Beacon
240.0	(1) Generic Lightning Rod
240.0	(1) Dielectric DCR-L1 w/ Radome
236.4	(2) Generic 8' Omni
235.8	(2) Generic 10' Omni
230.0	(1) Generic Round Side Arm
223.0	(1) Generic Flat Side Arm
223.0	(1) Generic Round Side Arm
208.0	(3) Ericsson Radio 4449 B71 B85A
207.6	(3) Ericsson Air6449 B41
202.0	(3) Ericsson AIR 32 B66AA B2P
202.0	(3) Ericsson RRUS 4415 B25
202.0	(3) Generic Round Sector Frame
202.0	(3) RFS APXVAARR24_43-U-NA20
202.0	(3) Generic Mount Reinforcement
194.0	(1) Generic 3' HP Dish
193.3	(2) Generic 2' Std. Dish
187.8	(3) Nokia 2.5G MAA - AAHC(64T64R)
187.7	(3) Argus LLPX310R
187.6	(2) RFS APXVSPP18-C-A20
187.2	(3) Motorola DAP Vx
187.0	(1) RFS APXV9ERR18-C-A20
184.4	(1) Generic 24" x 24" Junction Box
181.7	(6) Alcatel-Lucent 1900MHz RRH
180.1	(3) Alcatel-Lucent 800 MHz RRH
180.0	(3) Generic Round Sector Frame
171.4	(1) Raycap DC9-48-60-24-8C-EV (Enc
171.4	(1) Raycap DC9-48-60-24-8C-EV (Enc
170.2	(6) Kaelus DBC0051F3V51-2
170.2	(3) Ericsson RRUS 4478 B14
170.1	(2) Raycap DC6-48-60-18-8F (23.5"
170.0	(4) Ericsson RRUS 4449 B5, B12
170.0	(3) Ericsson RRUS 32 B66
167.0	(3) Ericsson AIR 6419 N77G
165.0	(3) Ericsson RRUS 8843 B2, B66A
165.0	(3) Quintel QD6616-7
165.0	(3) Generic Round Sector Frame
165.0	(2) Ericsson RRUS 32 B30
165.0	(2) Ericsson RRUS 32 B2
165.0	(2) CCI DMP65R-BU6DA
165.0	(1) Matsing MS-MBA-3.2-H4-L4 *
163.0	(3) Ericsson AIR 6449 n77D
153.0	(6) Commscope JAHH-65B-R3B
153.0	(3) Commscope CBC78T-DS-43-2X

LINEAR APPURTENANCE

Elev To (ft)	Description
245.0	(1) 1 1/4" Coax
243.0	(1) 1 5/8" Coax
240.0	(1) Waveguide
205.0	(6) 1 5/8" Coax
205.0	(1) 1 1/4" Hybriflex Cable
202.0	(3) 1 5/8" Hybriflex
202.0	(2) 1 1/4" Hybriflex Cable
202.0	(1) Waveguide
194.0	(3) 1/2" Coax
194.0	(1) Waveguide
187.0	(6) 5/16" (0.31"-7.9mm) Coax
187.0	(1) 1.7" (43.2mm) Hybrid
180.0	(4) 1 1/4" Hybriflex Cable
180.0	(2) 2" conduit
170.0	(7) 0.92" (23.4mm) Cable
170.0	(4) 0.39" (10mm) Fiber
170.0	(3) 0.41" (10.3mm) Fiber
170.0	(2) 0.78" (19.7mm) 8 AWG 6
170.0	(1) 2" conduit
165.0	(6) 1 5/8" Coax
165.0	(1) Waveguide
153.0	(2) 1 5/8" Hybriflex
153.0	(1) Waveguide
128.0	(1) 1 1/4" Coax
115.0	(1) 7/8" Coax
100.0	(1) 1 1/4" Coax
92.0	(1) 1.75" (44.5mm) Hybrid

DISCRETE APPURTENANCE

Elev (ft)	Description
153.0	(3) Generic Mount Reinforcement
153.0	(3) Generic Flat Light Sector Fram
153.0	(3) Samsung MT6413-77A
153.0	(3) Samsung B2/B66A RRH-BR049
153.0	(3) Samsung B5/B13 RRH-BR04C
153.0	(3) Samsung Outdoor CBRS 20W RRH –
153.0	(3) Samsung Outdoor CBRS 20W RRH
153.0	(2) Raycap RxxDC-3315-PF-48
140.0	(3) Generic Small Side Lights
134.2	(1) Generic 2' Yagi
132.0	(1) Generic Flat Side Arm
127.8	(1) Generic 10' Omni
118.0	(1) Generic Round Side Arm
108.0	(1) Generic Round Side Arm
99.6	(1) Generic 4' Yagi
98.0	(1) Generic Round Side Arm
95.1	(3) Fujitsu TA08025-B605
95.1	(3) Fujitsu TA08025-B604
94.1	(1) Commscope RDIDC-9181-PF-48
92.0	(3) Generic Round Sector Frame
92.0	(3) JMA Wireless MX08FRO665-21
80.0	(1) Generic Round Side Arm

ANALYSIS PARAMETERS

Location:	Fairfield County, CT	**Height:**	240 ft
Type and Shape:	Self Support, Triangle	**Base Elevation:**	0.00 ft
Manufacturer:	Rohn	**Bottom Face Width:**	40.33 ft
Kd	0.85	**Top Face Width:**	10.93 ft
Ke:	0.99	**Anchor Bolt Detail Type:**	c

ICE & WIND PARAMETERS

Exposure Category:	C	**Design Wind Speed Without Ice:**	116 mph
Risk Category:	II	**Design Wind Speed with Ice:**	49 mph
Topographic Factor Procedure:	Method 1	**Operational Windspeed:**	60 mph
Topographic Category:	Flat	**Design Ice Thickness:**	0.85 in
Crest Height:	0 ft	**HMSL:**	212 ft

SEISMIC PARAMETERS

Analysis Method:	Equivalent Lateral Force Method				
Site Class:	D - Stiff Soil			**Period Based on Rayleigh Method (sec):**	0.72
T_L (sec):	6	**P:**	1.3	**C_s:**	0.040
S_s:	0.211	**S_1:**	0.054	**C_s Max:**	0.040
F_a:	1.600	**F_v:**	2.400	**C_s Min:**	0.030
S_{ds}:	0.225	**S_{d1}:**	0.086		

LOAD CASES

1.2D + 1.0W Normal	1.2D + 1.0W Normal - 115.99 mph Wind with No Ice
1.2D + 1.0W 60°	1.2D + 1.0W 60° - 115.99 mph Wind with No Ice
1.2D + 1.0W 90°	1.2D + 1.0W 90° - 115.99 mph Wind with No Ice
1.2D + 1.0W 120°	1.2D + 1.0W 120° - 115.99 mph Wind with No Ice
1.2D + 1.0W 180°	1.2D + 1.0W 180° - 115.99 mph Wind with No Ice
1.2D + 1.0W 210°	1.2D + 1.0W 210° - 115.99 mph Wind with No Ice
1.2D + 1.0W 240°	1.2D + 1.0W 240° - 115.99 mph Wind with No Ice
1.2D + 1.0W 300°	1.2D + 1.0W 300° - 115.99 mph Wind with No Ice
1.2D + 1.0W 330°	1.2D + 1.0W 330° - 115.99 mph Wind with No Ice
0.9D + 1.0W Normal	0.9D + 1.0W Normal - 115.99 mph Wind with No Ice (Reduced DL)
0.9D + 1.0W 60°	0.9D + 1.0W 60° - 115.99 mph Wind with No Ice (Reduced DL)
0.9D + 1.0W 90°	0.9D + 1.0W 90° - 115.99 mph Wind with No Ice (Reduced DL)
0.9D + 1.0W 120°	0.9D + 1.0W 120° - 115.99 mph Wind with No Ice (Reduced DL)
0.9D + 1.0W 180°	0.9D + 1.0W 180° - 115.99 mph Wind with No Ice (Reduced DL)
0.9D + 1.0W 210°	0.9D + 1.0W 210° - 115.99 mph Wind with No Ice (Reduced DL)
0.9D + 1.0W 240°	0.9D + 1.0W 240° - 115.99 mph Wind with No Ice (Reduced DL)
0.9D + 1.0W 300°	0.9D + 1.0W 300° - 115.99 mph Wind with No Ice (Reduced DL)
0.9D + 1.0W 330°	0.9D + 1.0W 330° - 115.99 mph Wind with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi Normal	1.2D + 1.0Di + 1.0Wi Normal - 48.73 mph Wind with 0.85" Radial Ice
1.2D + 1.0Di + 1.0Wi 60°	1.2D + 1.0Di + 1.0Wi 60° - 48.73 mph Wind with 0.85" Radial Ice
1.2D + 1.0Di + 1.0Wi 90°	1.2D + 1.0Di + 1.0Wi 90° - 48.73 mph Wind with 0.85" Radial Ice
1.2D + 1.0Di + 1.0Wi 120°	1.2D + 1.0Di + 1.0Wi 120° - 48.73 mph Wind with 0.85" Radial Ice
1.2D + 1.0Di + 1.0Wi 180°	1.2D + 1.0Di + 1.0Wi 180° - 48.73 mph Wind with 0.85" Radial Ice
1.2D + 1.0Di + 1.0Wi 210°	1.2D + 1.0Di + 1.0Wi 210° - 48.73 mph Wind with 0.85" Radial Ice
1.2D + 1.0Di + 1.0Wi 240°	1.2D + 1.0Di + 1.0Wi 240° - 48.73 mph Wind with 0.85" Radial Ice
1.2D + 1.0Di + 1.0Wi 300°	1.2D + 1.0Di + 1.0Wi 300° - 48.73 mph Wind with 0.85" Radial Ice

LOAD CASES	
1.2D + 1.0Di + 1.0Wi 330°	1.2D + 1.0Di + 1.0Wi 330° - 48.73 mph Wind with 0.85" Radial Ice
1.2D + 1.0Ev + 1.0Eh Normal	1.2D + 1.0Ev + 1.0Eh Normal - Seismic
1.2D + 1.0Ev + 1.0Eh 60°	1.2D + 1.0Ev + 1.0Eh 60° - Seismic
1.2D + 1.0Ev + 1.0Eh 90°	1.2D + 1.0Ev + 1.0Eh 90° - Seismic
1.2D + 1.0Ev + 1.0Eh 120°	1.2D + 1.0Ev + 1.0Eh 120° - Seismic
1.2D + 1.0Ev + 1.0Eh 180°	1.2D + 1.0Ev + 1.0Eh 180° - Seismic
1.2D + 1.0Ev + 1.0Eh 210°	1.2D + 1.0Ev + 1.0Eh 210° - Seismic
1.2D + 1.0Ev + 1.0Eh 240°	1.2D + 1.0Ev + 1.0Eh 240° - Seismic
1.2D + 1.0Ev + 1.0Eh 300°	1.2D + 1.0Ev + 1.0Eh 300° - Seismic
1.2D + 1.0Ev + 1.0Eh 330°	1.2D + 1.0Ev + 1.0Eh 330° - Seismic
0.9D - 1.0Ev + 1.0Eh Normal	0.9D - 1.0Ev + 1.0Eh Normal - Seismic (Reduced DL)
0.9D - 1.0Ev + 1.0Eh 60°	0.9D - 1.0Ev + 1.0Eh 60° - Seismic (Reduced DL)
0.9D - 1.0Ev + 1.0Eh 90°	0.9D - 1.0Ev + 1.0Eh 90° - Seismic (Reduced DL)
0.9D - 1.0Ev + 1.0Eh 120°	0.9D - 1.0Ev + 1.0Eh 120° - Seismic (Reduced DL)
0.9D - 1.0Ev + 1.0Eh 180°	0.9D - 1.0Ev + 1.0Eh 180° - Seismic (Reduced DL)
0.9D - 1.0Ev + 1.0Eh 210°	0.9D - 1.0Ev + 1.0Eh 210° - Seismic (Reduced DL)
0.9D - 1.0Ev + 1.0Eh 240°	0.9D - 1.0Ev + 1.0Eh 240° - Seismic (Reduced DL)
0.9D - 1.0Ev + 1.0Eh 300°	0.9D - 1.0Ev + 1.0Eh 300° - Seismic (Reduced DL)
0.9D - 1.0Ev + 1.0Eh 330°	0.9D - 1.0Ev + 1.0Eh 330° - Seismic (Reduced DL)
1.0D + 1.0W Service Normal	1.0D + 1.0W Service Normal - 60 mph Wind with No Ice
1.0D + 1.0W Service 60°	1.0D + 1.0W Service 60° - 60 mph Wind with No Ice
1.0D + 1.0W Service 90°	1.0D + 1.0W Service 90° - 60 mph Wind with No Ice
1.0D + 1.0W Service 120°	1.0D + 1.0W Service 120° - 60 mph Wind with No Ice
1.0D + 1.0W Service 180°	1.0D + 1.0W Service 180° - 60 mph Wind with No Ice
1.0D + 1.0W Service 210°	1.0D + 1.0W Service 210° - 60 mph Wind with No Ice
1.0D + 1.0W Service 240°	1.0D + 1.0W Service 240° - 60 mph Wind with No Ice
1.0D + 1.0W Service 300°	1.0D + 1.0W Service 300° - 60 mph Wind with No Ice
1.0D + 1.0W Service 330°	1.0D + 1.0W Service 330° - 60 mph Wind with No Ice

TOWER LOADING – DISCRETE APPURTENANCE

Discrete Appurtenance Properties for LC: **1.2D + 1.0W**

Elev (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc. (ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
263.8	Generic 8' Yagi	1	30	12.0	8.0	60.0	3.0	1.00	1.00	0.0	0.00	45.10	460	36
249.1	Generic 12' Omni	1	40	3.6	12.0	3.0	3.0	1.00	1.00	0.0	0.00	44.56	136	48
248.2	Dielectric DCR-L1	1	8	1.2	2.0	14.0	36.0	1.00	1.00	0.0	0.00	44.52	45	10
245.8	Generic 10' Omni	1	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.00	44.43	113	30
240.0	Generic Lightning Rod	1	10	0.8	0.3	2.0	2.0	1.00	1.00	0.0	0.00	44.21	30	12
240.0	Dielectric DCR-L1 w/ Radome	1	18	1.8	0.0	0.0	0.0	1.00	1.00	3.0	203.45	44.33	68	22
240.0	Generic Beacon	1	70	4.5	0.3	18.0	18.0	1.00	1.00	0.0	0.00	44.21	169	84
240.0	Generic Round Side Arm	2	188	5.2	0.0	0.0	0.0	0.90	0.90	0.0	0.00	44.21	317	450
236.4	Generic 8' Omni	2	25	2.4	8.0	3.0	3.0	1.00	1.00	0.0	0.00	44.07	180	60
235.8	Generic 10' Omni	2	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.00	44.05	225	60
230.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	43.82	194	225
223.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	43.53	192	225
223.0	Generic Flat Side Arm	1	188	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.00	43.53	233	225
208.0	Ericsson Radio 4449 B71 B85A	3	75	1.6	1.3	13.2	10.5	0.80	0.50	0.0	0.00	42.90	72	270
207.6	Ericsson Air6449 B41	3	104	5.7	2.8	20.6	8.6	0.80	0.63	0.0	0.00	42.88	313	374
202.0	Ericsson RRUS 4415 B25	3	46	1.8	1.4	13.4	5.9	0.80	0.50	0.0	0.00	42.63	80	166
202.0	Ericsson AIR 32 B66AA B2P	3	109	6.9	4.9	12.9	8.7	0.80	0.71	0.0	0.00	42.63	424	392
202.0	Generic Mount Reinforcement	3	200	7.5	0.0	0.0	0.0	0.75	0.75	0.0	0.00	42.63	459	720
202.0	Generic Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.00	42.63	787	1080
202.0	RFS APXVAARR24_43-U-NA20	3	128	20.2	8.0	24.0	8.7	0.80	0.63	0.0	0.00	42.63	1109	460
194.0	Generic 3' HP Dish	1	140	8.9	3.0	36.0	0.0	1.00	1.00	0.0	0.00	42.27	320	168
193.3	Generic 2' Std. Dish	2	14	5.2	2.0	24.0	0.0	1.00	1.00	0.0	0.00	42.24	375	34
187.8	Nokia 2.5G MAA - AAHC(64T64R)	3	104	4.2	2.1	19.7	9.6	0.80	0.64	0.0	0.00	41.98	230	373
187.7	Argus LLPX310R	3	29	4.3	3.5	11.8	4.5	0.80	0.63	0.0	0.00	41.98	232	103
187.6	RFS APXVSPP18-C-A20	2	57	8.0	6.0	11.8	7.0	0.80	0.77	0.0	0.00	41.98	353	137
187.2	Motorola DAP Vx	3	27	1.6	2.1	7.6	5.5	0.80	0.50	0.0	0.00	41.96	70	95
187.0	RFS APXV9ERR18-C-A20	1	62	8.0	6.0	11.8	7.9	0.80	1.00	0.0	0.00	41.95	229	74
184.4	Generic 24" x 24" Junction Box	1	20	4.8	2.0	24.0	8.0	0.80	1.00	0.0	0.00	41.82	137	24
181.7	Alcatel-Lucent 1900MHz RRH	6	44	3.3	1.9	13.0	17.0	0.80	0.72	0.0	0.00	41.69	399	317
180.1	Alcatel-Lucent 800 MHz RRH	3	53	2.1	1.6	13.0	10.8	0.80	0.67	0.0	0.00	41.62	121	191
180.0	Generic Round Sector Frame	3	700	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.00	41.61	859	2520
171.4	Raycap DC9-48-60-24-8C-EV (Enc	1	19	2.7	2.2	12.4	9.7	0.80	0.50	0.0	0.00	41.18	37	22
171.4	Raycap DC9-48-60-24-8C-EV (Enc	1	19	2.7	2.2	12.4	9.7	0.80	0.50	0.0	0.00	41.18	37	22
170.2	Kaelus DBC0051F3V51-2	6	12	0.4	0.7	6.2	4.4	0.80	0.50	0.0	0.00	41.12	35	89
170.2	Ericsson RRUS 4478 B14	3	60	1.8	1.4	13.4	7.7	0.80	0.50	0.0	0.00	41.12	77	216
170.1	Raycap DC6-48-60-18-8F (23.5"	2	20	1.3	2.0	9.7	9.7	0.80	0.50	0.0	0.00	41.12	35	48
170.0	Ericsson RRUS 4449 B5, B12	4	71	2.0	1.5	13.2	9.4	0.80	0.50	0.0	0.00	41.11	110	341
170.0	Ericsson RRUS 32 B66	3	53	2.7	2.3	12.1	7.0	0.80	0.50	0.0	0.00	41.11	115	191
167.0	Ericsson AIR 6419 N77G	3	70	3.9	2.5	15.7	6.7	0.80	0.57	0.0	0.00	40.96	187	252
165.0	Ericsson RRUS 8843 B2, B66A	3	72	1.6	1.2	13.2	10.9	0.80	0.50	0.0	0.00	40.86	68	259
165.0	Ericsson RRUS 32 B30	2	60	2.7	2.3	12.1	7.0	0.80	0.50	0.0	0.00	40.86	76	144
165.0	Ericsson RRUS 32 B2	2	53	2.7	2.3	12.1	7.0	0.80	0.50	0.0	0.00	40.86	76	127
165.0	CCI DMP65R-BU6DA	2	79	12.7	5.9	20.7	7.7	0.80	0.63	0.0	0.00	40.86	445	191
165.0	Quintel QD6616-7	3	130	13.6	6.0	22.0	9.6	0.80	0.64	0.0	0.00	40.86	724	468
165.0	Generic Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.00	40.86	754	1080
165.0	Matsing MS-MBA-3.2-H4-L4 *	1	130	15.8	6.0	24.0	26.0	0.80	1.00	0.0	0.00	40.86	438	156
163.0	Ericsson AIR 6449 n77D	3	82	4.0	2.5	15.9	8.1	0.80	0.65	0.0	0.00	40.75	218	294
153.0	Commscope CBC78T-DS-43-2X	3	21	0.6	0.8	6.9	6.4	0.80	0.50	0.0	0.00	40.21	23	75
153.0	Samsung Outdoor CBRS 20W RRH	3	19	0.9	1.0	8.5	4.1	0.80	0.50	0.0	0.00	40.21	35	67
153.0	Samsung Outdoor CBRS 20W RRH –	3	4	0.9	1.0	8.7	1.4	0.80	0.50	0.0	0.00	40.21	37	16
153.0	Samsung B5/B13 RRH-BR04C	3	70	1.9	1.3	15.0	8.1	0.80	0.50	0.0	0.00	40.21	77	253
153.0	Samsung B2/B66A RRH-BR049	3	84	1.9	1.3	15.0	10.0	0.80	0.50	0.0	0.00	40.21	77	304
153.0	Raycap RxxDC-3315-PF-48	2	21	2.5	1.6	15.7	10.3	0.80	0.50	0.0	0.00	40.21	69	51
153.0	Samsung MT6413-77A	3	57	3.8	2.4	15.8	5.5	0.80	0.61	0.0	0.00	40.21	190	206
153.0	Generic Mount Reinforcement	3	200	7.5	0.0	0.0	0.0	0.75	0.67	0.0	0.00	40.21	386	720
153.0	Commscope JAHH-65B-R3B	6	61	9.1	6.0	13.8	8.2	0.80	0.69	0.0	0.00	40.21	1032	436
153.0	Generic Flat Light Sector Fram	3	800	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.00	40.21	922	2880
140.0	Generic Small Side Lights	3	45	2.0	0.1	8.0	8.0	1.00	1.00	0.0	0.00	39.47	201	162
134.2	Generic 2' Yagi	1	5	1.3	2.0	24.0	2.0	1.00	1.00	0.0	0.00	39.12	44	6
132.0	Generic Flat Side Arm	1	188	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.00	38.98	209	225
127.8	Generic 10' Omni	1	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.00	38.72	99	30
118.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	38.07	168	225
108.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	37.37	165	225
99.6	Generic 4' Yagi	1	15	4.9	4.0	48.0	3.0	1.00	1.00	0.0	0.00	36.74	153	18
98.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	36.61	162	225
95.1	Fujitsu TA08025-B604	3	64	2.0	1.3	15.0	7.9	0.80	0.50	0.0	0.00	36.38	73	230
95.1	Fujitsu TA08025-B605	3	75	2.0	1.3	15.0	9.1	0.80	0.50	0.0	0.00	36.38	73	270
94.1	Commscope RDIDC-9181-PF-48	1	22	1.9	1.3	14.0	8.0	0.80	1.00	0.0	0.00	36.30	46	26
92.0	JMA Wireless MX08FRO665-21	3	65	12.5	6.0	20.0	8.0	0.80	0.64	1.3	768.09	36.24	591	232
92.0	Generic Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.00	36.13	746	1080
80.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	35.08	155	225
	Totals	**163**	**17,560**	**886.1**									18,098	21,072

Discrete Appurtenance Properties for LC: **0.9D + 1.0W**

Elev (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc. (ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
263.8	Generic 8' Yagi	1	30	12.0	8.0	60.0	3.0	1.00	1.00	0.0	0.00	45.10	460	27
249.1	Generic 12' Omni	1	40	3.6	12.0	3.0	3.0	1.00	1.00	0.0	0.00	44.56	136	36
248.2	Dielectric DCR-L1	1	8	1.2	2.0	14.0	36.0	1.00	1.00	0.0	0.00	44.52	45	7
245.8	Generic 10' Omni	1	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.00	44.43	113	22
240.0	Generic Lightning Rod	1	10	0.8	0.3	2.0	2.0	1.00	1.00	0.0	0.00	44.21	30	9
240.0	Dielectric DCR-L1 w/ Radome	1	18	1.8	0.0	0.0	0.0	1.00	1.00	3.0	203.45	44.33	68	16
240.0	Generic Beacon	1	70	4.5	0.3	18.0	18.0	1.00	1.00	0.0	0.00	44.21	169	63
240.0	Generic Round Side Arm	2	188	5.2	0.0	0.0	0.0	0.90	0.90	0.0	0.00	44.21	317	338
236.4	Generic 8' Omni	2	25	2.4	8.0	3.0	3.0	1.00	1.00	0.0	0.00	44.07	180	45
235.8	Generic 10' Omni	2	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.00	44.05	225	45
230.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	43.82	194	169
223.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	43.53	192	169
223.0	Generic Flat Side Arm	1	188	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.00	43.53	233	169
208.0	Ericsson Radio 4449 B71 B85A	3	75	1.6	1.3	13.2	10.5	0.80	0.50	0.0	0.00	42.90	72	202
207.6	Ericsson Air6449 B41	3	104	5.7	2.8	20.6	8.6	0.80	0.63	0.0	0.00	42.88	313	281
202.0	Ericsson RRUS 4415 B25	3	46	1.8	1.4	13.4	5.9	0.80	0.50	0.0	0.00	42.63	80	124
202.0	Ericsson AIR 32 B66AA B2P	3	109	6.9	4.9	12.9	8.7	0.80	0.71	0.0	0.00	42.63	424	294
202.0	Generic Mount Reinforcement	3	200	7.5	0.0	0.0	0.0	0.75	0.75	0.0	0.00	42.63	459	540
202.0	Generic Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.00	42.63	787	810
202.0	RFS APXVAARR24_43-U-NA20	3	128	20.2	8.0	24.0	8.7	0.80	0.63	0.0	0.00	42.63	1109	345
194.0	Generic 3' HP Dish	1	140	8.9	3.0	36.0	0.0	1.00	1.00	0.0	0.00	42.27	320	126
193.3	Generic 2' Std. Dish	2	14	5.2	2.0	24.0	0.0	1.00	1.00	0.0	0.00	42.24	375	25
187.8	Nokia 2.5G MAA - AAHC(64T64R)	3	104	4.2	2.1	19.7	9.6	0.80	0.64	0.0	0.00	41.98	230	280
187.7	Argus LLPX310R	3	29	4.3	3.5	11.8	4.5	0.80	0.63	0.0	0.00	41.98	232	77
187.6	RFS APXVSPP18-C-A20	2	57	8.0	6.0	11.8	7.0	0.80	0.77	0.0	0.00	41.98	353	103
187.2	Motorola DAP Vx	3	27	1.6	2.1	7.6	5.5	0.80	0.50	0.0	0.00	41.96	70	72
187.0	RFS APXV9ERR18-C-A20	1	62	8.0	6.0	11.8	7.9	0.80	1.00	0.0	0.00	41.95	229	56
184.4	Generic 24" x 24" Junction Box	1	20	4.8	2.0	24.0	8.0	0.80	1.00	0.0	0.00	41.82	137	18
181.7	Alcatel-Lucent 1900MHz RRH	6	44	3.3	1.9	13.0	17.0	0.80	0.72	0.0	0.00	41.69	399	238
180.1	Alcatel-Lucent 800 MHz RRH	3	53	2.1	1.6	13.0	10.8	0.80	0.67	0.0	0.00	41.62	121	143
180.0	Generic Round Sector Frame	3	700	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.00	41.61	859	1890
171.4	Raycap DC9-48-60-24-8C-EV (Enc	1	19	2.7	2.2	12.4	9.7	0.80	0.50	0.0	0.00	41.18	37	17
171.4	Raycap DC9-48-60-24-8C-EV (Enc	1	19	2.7	2.2	12.4	9.7	0.80	0.50	0.0	0.00	41.18	37	17
170.2	Kaelus DBC0051F3V51-2	6	12	0.4	0.7	6.2	4.4	0.80	0.50	0.0	0.00	41.12	35	67
170.2	Ericsson RRUS 4478 B14	3	60	1.8	1.4	13.4	7.7	0.80	0.50	0.0	0.00	41.12	77	162
170.1	Raycap DC6-48-60-18-8F (23.5"	2	20	1.3	2.0	9.7	9.7	0.80	0.50	0.0	0.00	41.12	35	36
170.0	Ericsson RRUS 4449 B5, B12	4	71	2.0	1.5	13.2	9.4	0.80	0.50	0.0	0.00	41.11	110	256
170.0	Ericsson RRUS 32 B66	3	53	2.7	2.3	12.1	7.0	0.80	0.50	0.0	0.00	41.11	115	143
167.0	Ericsson AIR 6419 N77G	3	70	3.9	2.5	15.7	6.7	0.80	0.57	0.0	0.00	40.96	187	189
165.0	Ericsson RRUS 8843 B2, B66A	3	72	1.6	1.2	13.2	10.9	0.80	0.50	0.0	0.00	40.86	68	194
165.0	Ericsson RRUS 32 B30	2	60	2.7	2.3	12.1	7.0	0.80	0.50	0.0	0.00	40.86	76	108
165.0	Ericsson RRUS 32 B2	2	53	2.7	2.3	12.1	7.0	0.80	0.50	0.0	0.00	40.86	76	95
165.0	CCI DMP65R-BU6DA	2	79	12.7	5.9	20.7	7.7	0.80	0.63	0.0	0.00	40.86	445	143
165.0	Quintel QD6616-7	3	130	13.6	6.0	22.0	9.6	0.80	0.64	0.0	0.00	40.86	724	351
165.0	Generic Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.00	40.86	754	810
165.0	Matsing MS-MBA-3.2-H4-L4 *	1	130	15.8	6.0	24.0	26.0	0.80	1.00	0.0	0.00	40.86	438	117
163.0	Ericsson AIR 6449 n77D	3	82	4.0	2.5	15.9	8.1	0.80	0.65	0.0	0.00	40.75	218	220
153.0	Commscope CBC78T-DS-43-2X	3	21	0.6	0.8	6.9	6.4	0.80	0.50	0.0	0.00	40.21	23	56
153.0	Samsung Outdoor CBRS 20W RRH	3	19	0.9	1.0	8.5	4.1	0.80	0.50	0.0	0.00	40.21	35	50
153.0	Samsung Outdoor CBRS 20W RRH –	3	4	0.9	1.0	8.7	1.4	0.80	0.50	0.0	0.00	40.21	37	12
153.0	Samsung B5/B13 RRH-BR04C	3	70	1.9	1.3	15.0	8.1	0.80	0.50	0.0	0.00	40.21	77	190
153.0	Samsung B2/B66A RRH-BR049	3	84	1.9	1.3	15.0	10.0	0.80	0.50	0.0	0.00	40.21	77	228
153.0	Raycap RxxDC-3315-PF-48	2	21	2.5	1.6	15.7	10.3	0.80	0.50	0.0	0.00	40.21	69	39
153.0	Samsung MT6413-77A	3	57	3.8	2.4	15.8	5.5	0.80	0.61	0.0	0.00	40.21	190	155
153.0	Generic Mount Reinforcement	3	200	7.5	0.0	0.0	0.0	0.75	0.67	0.0	0.00	40.21	386	540
153.0	Commscope JAHH-65B-R3B	6	61	9.1	6.0	13.8	8.2	0.80	0.69	0.0	0.00	40.21	1032	327
153.0	Generic Flat Light Sector Fram	3	800	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.00	40.21	922	2160
140.0	Generic Small Side Lights	3	45	2.0	0.1	8.0	8.0	1.00	1.00	0.0	0.00	39.47	201	122
134.2	Generic 2' Yagi	1	5	1.3	2.0	24.0	2.0	1.00	1.00	0.0	0.00	39.12	44	4
132.0	Generic Flat Side Arm	1	188	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.00	38.98	209	169
127.8	Generic 10' Omni	1	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.00	38.72	99	22
118.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	38.07	168	169
108.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	37.37	165	169
99.6	Generic 4' Yagi	1	15	4.9	4.0	48.0	3.0	1.00	1.00	0.0	0.00	36.74	153	14
98.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	36.61	162	169
95.1	Fujitsu TA08025-B604	3	64	2.0	1.3	15.0	7.9	0.80	0.50	0.0	0.00	36.38	73	173
95.1	Fujitsu TA08025-B605	3	75	2.0	1.3	15.0	9.1	0.80	0.50	0.0	0.00	36.38	73	202
94.1	Commscope RDIDC-9181-PF-48	1	22	1.9	1.3	14.0	8.0	0.80	1.00	0.0	0.00	36.30	46	20
92.0	JMA Wireless MX08FRO665-21	3	65	12.5	6.0	20.0	8.0	0.80	0.64	1.3	768.09	36.24	591	174
92.0	Generic Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.00	36.13	746	810
80.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	35.08	155	169
	Totals	**163**	**17,560**	**886.1**									18,098	15,804

Discrete Appurtenance Properties for LC: **1.2D + 1.0Di + 1.0Wi**

Elev (ft)	Description	Qty	Ice Wt (lb)	Ice EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc. (ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
263.8	Generic 8' Yagi	1	231	31.8	8.0	60.0	3.0	1.00	1.00	0.0	0.00	7.96	215	237
249.1	Generic 12' Omni	1	94	6.1	12.0	3.0	3.0	1.00	1.00	0.0	0.00	7.86	41	102

Elev (ft)	Description	Qty	Ice Wt (lb)	Ice EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc. (ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
248.2	Dielectric DCR-L1	1	27	2.4	2.0	14.0	36.0	1.00	1.00	0.0	0.00	7.86	16	29
245.8	Generic 10' Omni	1	70	5.1	10.0	3.0	3.0	1.00	1.00	0.0	0.00	7.84	34	75
240.0	Generic Lightning Rod	1	23	1.3	0.3	2.0	2.0	1.00	1.00	0.0	0.00	7.80	9	25
240.0	Dielectric DCR-L1 w/ Radome	1	62	3.7	0.0	0.0	0.0	1.00	1.00	3.0	73.12	7.82	24	65
240.0	Generic Beacon	1	174	5.4	0.3	18.0	18.0	1.00	1.00	0.0	0.00	7.80	36	188
240.0	Generic Round Side Arm	2	242	6.8	0.0	0.0	0.0	0.90	0.90	0.0	0.00	7.80	73	558
236.4	Generic 8' Omni	2	61	4.0	8.0	3.0	3.0	1.00	1.00	0.0	0.00	7.78	53	132
235.8	Generic 10' Omni	2	70	5.1	10.0	3.0	3.0	1.00	1.00	0.0	0.00	7.77	68	150
230.0	Generic Round Side Arm	1	242	6.8	0.0	0.0	0.0	1.00	1.00	0.0	0.00	7.73	45	279
223.0	Generic Round Side Arm	1	241	6.8	0.0	0.0	0.0	1.00	1.00	0.0	0.00	7.68	44	279
223.0	Generic Flat Side Arm	1	266	8.1	0.0	0.0	0.0	1.00	1.00	0.0	0.00	7.68	53	303
208.0	Ericsson Radio 4449 B71 B85A	3	110	2.1	1.3	13.2	10.5	0.80	0.50	0.0	0.00	7.57	17	376
207.6	Ericsson Air6449 B41	3	184	6.6	2.8	20.6	8.6	0.80	0.63	0.0	0.00	7.57	64	615
202.0	Ericsson RRUS 4415 B25	3	75	2.4	1.4	13.4	5.9	0.80	0.50	0.0	0.00	7.52	18	251
202.0	Ericsson AIR 32 B66AA B2P	3	206	8.2	4.9	12.9	8.7	0.80	0.71	0.0	0.00	7.52	89	683
202.0	Generic Mount Reinforcement	3	313	11.9	0.0	0.0	0.0	0.75	0.75	0.0	0.00	7.52	128	1058
202.0	Generic Round Sector Frame	3	514	24.0	0.0	0.0	0.0	0.75	0.67	0.0	0.00	7.52	232	1722
202.0	RFS APXVAARR24_43-U-NA20	3	356	22.4	8.0	24.0	8.7	0.80	0.63	0.0	0.00	7.52	217	1145
194.0	Generic 3' HP Dish	1	246	9.9	3.0	36.0	0.0	1.00	1.00	0.0	0.00	7.46	63	274
193.3	Generic 2' Std. Dish	2	46	6.1	2.0	24.0	0.0	1.00	1.00	0.0	0.00	7.46	78	98
187.8	Nokia 2.5G MAA - AAHC(64T64R)	3	169	5.0	2.1	19.7	9.6	0.80	0.64	0.0	0.00	7.41	48	570
187.7	Argus LLPX310R	3	81	5.3	3.5	11.8	4.5	0.80	0.63	0.0	0.00	7.41	50	260
187.6	RFS APXVSPP18-C-A20	2	157	9.6	6.0	11.8	7.0	0.80	0.77	0.0	0.00	7.41	75	337
187.2	Motorola DAP Vx	3	53	2.2	2.1	7.6	5.5	0.80	0.50	0.0	0.00	7.41	17	176
187.0	RFS APXV9ERR18-C-A20	1	167	9.6	6.0	11.8	7.9	0.80	1.00	0.0	0.00	7.40	49	180
184.4	Generic 24" x 24" Junction Box	1	86	5.6	2.0	24.0	8.0	0.80	1.00	0.0	0.00	7.38	28	90
181.7	Alcatel-Lucent 1900MHz RRH	6	107	3.9	1.9	13.0	17.0	0.80	0.72	0.0	0.00	7.36	85	693
180.1	Alcatel-Lucent 800 MHz RRH	3	95	2.7	1.6	13.0	10.8	0.80	0.67	0.0	0.00	7.35	27	318
180.0	Generic Round Sector Frame	3	1261	23.9	0.0	0.0	0.0	0.75	0.75	0.0	0.00	7.34	252	4202
171.4	Raycap DC9-48-60-24-8C-EV (Enc	1	67	3.3	2.2	12.4	9.7	0.80	0.50	0.0	0.00	7.27	8	70
171.4	Raycap DC9-48-60-24-8C-EV (Enc	1	67	3.3	2.2	12.4	9.7	0.80	0.50	0.0	0.00	7.27	8	70
170.2	Kaelus DBC0051F3V51-2	6	21	0.7	0.7	6.2	4.4	0.80	0.50	0.0	0.00	7.26	10	141
170.2	Ericsson RRUS 4478 B14	3	92	2.4	1.4	13.4	7.7	0.80	0.50	0.0	0.00	7.26	17	311
170.1	Raycap DC6-48-60-18-8F (23.5"	2	50	1.6	2.0	9.7	9.7	0.80	0.50	0.0	0.00	7.26	8	109
170.0	Ericsson RRUS 4449 B5, B12	4	108	2.5	1.5	13.2	9.4	0.80	0.50	0.0	0.00	7.26	25	489
170.0	Ericsson RRUS 32 B66	3	95	3.4	2.3	12.1	7.0	0.80	0.50	0.0	0.00	7.26	25	318
167.0	Ericsson AIR 6419 N77G	3	124	4.7	2.5	15.7	6.7	0.80	0.57	0.0	0.00	7.23	40	414
165.0	Ericsson RRUS 8843 B2, B66A	3	107	2.1	1.2	13.2	10.9	0.80	0.50	0.0	0.00	7.21	16	364
165.0	Ericsson RRUS 32 B30	2	102	3.4	2.3	12.1	7.0	0.80	0.50	0.0	0.00	7.21	17	228
165.0	Ericsson RRUS 32 B2	2	95	3.4	2.3	12.1	7.0	0.80	0.50	0.0	0.00	7.21	17	211
165.0	CCI DMP65R-BU6DA	2	226	14.3	5.9	20.7	7.7	0.80	0.63	0.0	0.00	7.21	88	483
165.0	Quintel QD6616-7	3	296	15.2	6.0	22.0	9.6	0.80	0.64	0.0	0.00	7.21	143	966
165.0	Generic Round Sector Frame	3	509	23.8	0.0	0.0	0.0	0.75	0.67	0.0	0.00	7.21	220	1707
165.0	Matsing MS-MBA-3.2-H4-L4 *	1	409	17.4	6.0	24.0	26.0	0.80	1.00	0.0	0.00	7.21	85	435
163.0	Ericsson AIR 6449 n77D	3	140	4.8	2.5	15.9	8.1	0.80	0.65	0.0	0.00	7.19	46	470
153.0	Commscope CBC78T-DS-43-2X	3	33	0.8	0.8	6.9	6.4	0.80	0.50	0.0	0.00	7.10	6	112
153.0	Samsung Outdoor CBRS 20W RRH	3	32	1.2	1.0	8.5	4.1	0.80	0.50	0.0	0.00	7.10	9	108
153.0	Samsung Outdoor CBRS 20W RRH –	3	15	1.3	1.0	8.7	1.4	0.80	0.50	0.0	0.00	7.10	9	47
153.0	Samsung B5/B13 RRH-BR04C	3	103	2.4	1.3	15.0	8.1	0.80	0.50	0.0	0.00	7.10	17	351
153.0	Samsung B2/B66A RRH-BR049	3	121	2.4	1.3	15.0	10.0	0.80	0.50	0.0	0.00	7.10	17	413
153.0	Raycap RxxDC-3315-PF-48	2	67	3.1	1.6	15.7	10.3	0.80	0.50	0.0	0.00	7.10	15	142
153.0	Samsung MT6413-77A	3	106	4.6	2.4	15.8	5.5	0.80	0.61	0.0	0.00	7.10	40	351
153.0	Generic Mount Reinforcement	3	310	11.8	0.0	0.0	0.0	0.75	0.67	0.0	0.00	7.10	107	1050
153.0	Commscope JAHH-65B-R3B	6	175	10.7	6.0	13.8	8.2	0.80	0.69	0.0	0.00	7.10	214	1126
153.0	Generic Flat Light Sector Fram	3	1433	26.5	0.0	0.0	0.0	0.75	0.67	0.0	0.00	7.10	241	4779
140.0	Generic Small Side Lights	3	229	5.9	0.1	8.0	8.0	1.00	1.00	0.0	0.00	6.97	105	715
134.2	Generic 2' Yagi	1	28	2.7	2.0	24.0	2.0	1.00	1.00	0.0	0.00	6.90	16	29
132.0	Generic Flat Side Arm	1	262	8.0	0.0	0.0	0.0	1.00	1.00	0.0	0.00	6.88	47	300
127.8	Generic 10' Omni	1	67	5.0	10.0	3.0	3.0	1.00	1.00	0.0	0.00	6.83	29	72
118.0	Generic Round Side Arm	1	238	6.7	0.0	0.0	0.0	1.00	1.00	0.0	0.00	6.72	38	275
108.0	Generic Round Side Arm	1	237	6.7	0.0	0.0	0.0	1.00	1.00	0.0	0.00	6.60	37	274
99.6	Generic 4' Yagi	1	93	11.9	4.0	48.0	3.0	1.00	1.00	0.0	0.00	6.48	66	96
98.0	Generic Round Side Arm	1	237	6.7	0.0	0.0	0.0	1.00	1.00	0.0	0.00	6.46	37	274
95.1	Fujitsu TA08025-B604	3	95	2.5	1.3	15.0	7.9	0.80	0.50	0.0	0.00	6.42	16	324
95.1	Fujitsu TA08025-B605	3	109	2.5	1.3	15.0	9.1	0.80	0.50	0.0	0.00	6.42	16	371
94.1	Commscope RDIDC-9181-PF-48	1	53	2.4	1.3	14.0	8.0	0.80	1.00	0.0	0.00	6.41	10	57
92.0	JMA Wireless MX08FRO665-21	3	203	14.0	6.0	20.0	8.0	0.80	0.64	1.3	152.03	6.40	117	648
92.0	Generic Round Sector Frame	3	498	23.3	0.0	0.0	0.0	0.75	0.75	0.0	0.00	6.38	213	1675
80.0	Generic Round Side Arm	1	236	6.6	0.0	0.0	0.0	1.00	1.00	0.0	0.00	6.19	35	273
	Totals	**163**	**32,603**	**1216.8**									4479	36,115

Discrete Appurtenance Properties for LC: **1.0D + 1.0W Service**

Elev (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc. (ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
263.8	Generic 8' Yagi	1	30	12.0	8.0	60.0	3.0	1.00	1.00	0.0	0.00	12.07	123	30
249.1	Generic 12' Omni	1	40	3.6	12.0	3.0	3.0	1.00	1.00	0.0	0.00	11.92	36	40
248.2	Dielectric DCR-L1	1	8	1.2	2.0	14.0	36.0	1.00	1.00	0.0	0.00	11.91	12	8
245.8	Generic 10' Omni	1	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.00	11.89	30	25
240.0	Generic Lightning Rod	1	10	0.8	0.3	2.0	2.0	1.00	1.00	0.0	0.00	11.83	8	10

Elev (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc. (ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
240.0	Dielectric DCR-L1 w/ Radome	1	18	1.8	0.0	0.0	0.0	1.00	1.00	3.0	54.44	11.86	18	18
240.0	Generic Beacon	1	70	4.5	0.3	18.0	18.0	1.00	1.00	0.0	0.00	11.83	45	70
240.0	Generic Round Side Arm	2	188	5.2	0.0	0.0	0.0	0.90	0.90	0.0	0.00	11.83	85	375
236.4	Generic 8' Omni	2	25	2.4	8.0	3.0	3.0	1.00	1.00	0.0	0.00	11.79	48	50
235.8	Generic 10' Omni	2	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.00	11.79	60	50
230.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	11.72	52	188
223.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	11.65	51	188
223.0	Generic Flat Side Arm	1	188	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.00	11.65	62	188
208.0	Ericsson Radio 4449 B71 B85A	3	75	1.6	1.3	13.2	10.5	0.80	0.50	0.0	0.00	11.48	19	225
207.6	Ericsson Air6449 B41	3	104	5.7	2.8	20.6	8.6	0.80	0.63	0.0	0.00	11.47	84	312
202.0	Ericsson RRUS 4415 B25	3	46	1.8	1.4	13.4	5.9	0.80	0.50	0.0	0.00	11.41	21	138
202.0	Ericsson AIR 32 B66AA B2P	3	109	6.9	4.9	12.9	8.7	0.80	0.71	0.0	0.00	11.41	114	327
202.0	Generic Mount Reinforcement	3	200	7.5	0.0	0.0	0.0	0.75	0.75	0.0	0.00	11.41	123	600
202.0	Generic Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.00	11.41	211	900
202.0	RFS APXVAARR24_43-U-NA20	3	128	20.2	8.0	24.0	8.7	0.80	0.63	0.0	0.00	11.41	297	384
194.0	Generic 3' HP Dish	1	140	8.9	3.0	36.0	0.0	1.00	1.00	0.0	0.00	11.31	86	140
193.3	Generic 2' Std. Dish	2	14	5.2	2.0	24.0	0.0	1.00	1.00	0.0	0.00	11.30	100	28
187.8	Nokia 2.5G MAA - AAHC(64T64R)	3	104	4.2	2.1	19.7	9.6	0.80	0.64	0.0	0.00	11.23	62	311
187.7	Argus LLPX310R	3	29	4.3	3.5	11.8	4.5	0.80	0.63	0.0	0.00	11.23	62	86
187.6	RFS APXVSPP18-C-A20	2	57	8.0	6.0	11.8	7.0	0.80	0.77	0.0	0.00	11.23	94	114
187.2	Motorola DAP Vx	3	27	1.6	2.1	7.6	5.5	0.80	0.50	0.0	0.00	11.23	19	80
187.0	RFS APXV9ERR18-C-A20	1	62	8.0	6.0	11.8	7.9	0.80	1.00	0.0	0.00	11.22	61	62
184.4	Generic 24" x 24" Junction Box	1	20	4.8	2.0	24.0	8.0	0.80	1.00	0.0	0.00	11.19	37	20
181.7	Alcatel-Lucent 1900MHz RRH	6	44	3.3	1.9	13.0	17.0	0.80	0.72	0.0	0.00	11.16	107	264
180.1	Alcatel-Lucent 800 MHz RRH	3	53	2.1	1.6	13.0	10.8	0.80	0.67	0.0	0.00	11.14	32	159
180.0	Generic Round Sector Frame	3	700	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.00	11.13	230	2100
171.4	Raycap DC9-48-60-24-8C-EV (Enc	1	19	2.7	2.2	12.4	9.7	0.80	0.50	0.0	0.00	11.02	10	18
171.4	Raycap DC9-48-60-24-8C-EV (Enc	1	19	2.7	2.2	12.4	9.7	0.80	0.50	0.0	0.00	11.02	10	18
170.2	Kaelus DBC0051F3V51-2	6	12	0.4	0.7	6.2	4.4	0.80	0.50	0.0	0.00	11.00	9	74
170.2	Ericsson RRUS 4478 B14	3	60	1.8	1.4	13.4	7.7	0.80	0.50	0.0	0.00	11.00	21	180
170.1	Raycap DC6-48-60-18-8F (23.5"	2	20	1.3	2.0	9.7	9.7	0.80	0.50	0.0	0.00	11.00	9	40
170.0	Ericsson RRUS 4449 B5, B12	4	71	2.0	1.5	13.2	9.4	0.80	0.50	0.0	0.00	11.00	29	284
170.0	Ericsson RRUS 32 B66	3	53	2.7	2.3	12.1	7.0	0.80	0.50	0.0	0.00	11.00	31	159
167.0	Ericsson AIR 6419 N77G	3	70	3.9	2.5	15.7	6.7	0.80	0.57	0.0	0.00	10.96	50	210
165.0	Ericsson RRUS 8843 B2, B66A	3	72	1.6	1.2	13.2	10.9	0.80	0.50	0.0	0.00	10.93	18	216
165.0	Ericsson RRUS 32 B30	2	60	2.7	2.3	12.1	7.0	0.80	0.50	0.0	0.00	10.93	20	120
165.0	Ericsson RRUS 32 B2	2	53	2.7	2.3	12.1	7.0	0.80	0.50	0.0	0.00	10.93	20	106
165.0	CCI DMP65R-BU6DA	2	79	12.7	5.9	20.7	7.7	0.80	0.63	0.0	0.00	10.93	119	159
165.0	Quintel QD6616-7	3	130	13.6	6.0	22.0	9.6	0.80	0.64	0.0	0.00	10.93	194	390
165.0	Generic Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.00	10.93	202	900
165.0	Matsing MS-MBA-3.2-H4-L4 *	1	130	15.8	6.0	24.0	26.0	0.80	1.00	0.0	0.00	10.93	117	130
163.0	Ericsson AIR 6449 n77D	3	82	4.0	2.5	15.9	8.1	0.80	0.65	0.0	0.00	10.90	58	245
153.0	Commscope CBC78T-DS-43-2X	3	21	0.6	0.8	6.9	6.4	0.80	0.50	0.0	0.00	10.76	6	62
153.0	Samsung Outdoor CBRS 20W RRH	3	19	0.9	1.0	8.5	4.1	0.80	0.50	0.0	0.00	10.76	9	56
153.0	Samsung Outdoor CBRS 20W RRH –	3	4	0.9	1.0	8.7	1.4	0.80	0.50	0.0	0.00	10.76	10	13
153.0	Samsung B5/B13 RRH-BR04C	3	70	1.9	1.3	15.0	8.1	0.80	0.50	0.0	0.00	10.76	21	211
153.0	Samsung B2/B66A RRH-BR049	3	84	1.9	1.3	15.0	10.0	0.80	0.50	0.0	0.00	10.76	21	253
153.0	Raycap RxxDC-3315-PF-48	2	21	2.5	1.6	15.7	10.3	0.80	0.50	0.0	0.00	10.76	18	43
153.0	Samsung MT6413-77A	3	57	3.8	2.4	15.8	5.5	0.80	0.61	0.0	0.00	10.76	51	172
153.0	Generic Mount Reinforcement	3	200	7.5	0.0	0.0	0.0	0.75	0.67	0.0	0.00	10.76	103	600
153.0	Commscope JAHH-65B-R3B	6	61	9.1	6.0	13.8	8.2	0.80	0.69	0.0	0.00	10.76	276	364
153.0	Generic Flat Light Sector Fram	3	800	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.00	10.76	247	2400
140.0	Generic Small Side Lights	3	45	2.0	0.1	8.0	8.0	1.00	1.00	0.0	0.00	10.56	54	135
134.2	Generic 2' Yagi	1	5	1.3	2.0	24.0	2.0	1.00	1.00	0.0	0.00	10.47	12	5
132.0	Generic Flat Side Arm	1	188	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.00	10.43	56	188
127.8	Generic 10' Omni	1	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.00	10.36	26	25
118.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	10.19	45	188
108.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	10.00	44	188
99.6	Generic 4' Yagi	1	15	4.9	4.0	48.0	3.0	1.00	1.00	0.0	0.00	9.83	41	15
98.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	9.80	43	188
95.1	Fujitsu TA08025-B604	3	64	2.0	1.3	15.0	7.9	0.80	0.50	0.0	0.00	9.74	19	192
95.1	Fujitsu TA08025-B605	3	75	2.0	1.3	15.0	9.1	0.80	0.50	0.0	0.00	9.74	19	225
94.1	Commscope RDIDC-9181-PF-48	1	22	1.9	1.3	14.0	8.0	0.80	1.00	0.0	0.00	9.71	12	22
92.0	JMA Wireless MX08FRO665-21	3	65	12.5	6.0	20.0	8.0	0.80	0.64	1.3	205.53	9.70	158	194
92.0	Generic Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.00	9.67	200	900
80.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	9.39	41	188
	Totals	**163**	**17,560**	**886.1**									4,843	17,560

TOWER LOADING – LINEAR APPURTENANCE

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	% In Wind	Spread On Faces	Bundling	Cluster Dia (in)	Out of Zone	Spacing (in)	Orient. Factor	K_a Override
0.0	245.0	1 1/4" Coax	1	1.55	0.63	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	243.0	1 5/8" Coax	1	1.98	0.82	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	240.0	Waveguide	1	2.00	6.00	100	1	Individual	0.00	N	1.00	1.00	0.00
0.0	205.0	1 5/8" Coax	6	1.98	0.82	50	1	Block	0.00	N	1.00	1.00	0.00
0.0	205.0	1 1/4" Hybriflex Cable	1	1.54	1.00	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	202.0	1 1/4" Hybriflex Cable	2	1.54	1.00	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	202.0	Waveguide	1	2.00	6.00	100	1	Individual	0.00	N	1.00	1.00	0.00
0.0	202.0	1 5/8" Hybriflex	3	1.98	1.30	100	3	Individual	0.00	N	1.00	1.00	0.01
0.0	194.0	1/2" Coax	3	0.63	0.15	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	194.0	Waveguide	1	2.00	6.00	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	187.0	5/16" (0.31"-7.9mm) Coax	6	0.31	0.05	50	2	Block	0.00	N	1.00	1.00	0.00
0.0	187.0	1.7" (43.2mm) Hybrid	1	1.70	1.78	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	180.0	2" conduit	2	2.38	3.65	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	180.0	1 1/4" Hybriflex Cable	4	1.54	1.00	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	170.0	0.41" (10.3mm) Fiber	3	0.41	0.09	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	170.0	0.78" (19.7mm) 8 AWG 6	2	0.78	0.59	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	170.0	2" conduit	1	2.38	3.65	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	170.0	0.92" (23.4mm) Cable	7	0.92	0.89	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	170.0	0.39" (10mm) Fiber	4	0.39	0.06	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	165.0	1 5/8" Coax	6	1.98	0.82	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	165.0	Waveguide	1	2.00	6.00	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	153.0	1 5/8" Hybriflex	2	1.98	1.30	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	153.0	Waveguide	1	2.00	6.00	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	128.0	1 1/4" Coax	1	1.55	0.63	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	115.0	7/8" Coax	1	1.09	0.33	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	100.0	1 1/4" Coax	1	1.55	0.63	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	92.0	1.75" (44.5mm) Hybrid	1	1.75	2.72	100	1	Individual	0.00	N	1.00	1.00	0.00

SECTION FORCES

1.2D + 1.0W Normal — Gust Response Factor (Gh): 0.85
115.99 mph Wind with No Ice — Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230	43.82	0.000	45.353	0.00	0.179	2.67	1.00	1.00	0.0	22.58	60.21	0.00	4712	0	2242	307	2549
10	210	42.98	0.000	45.187	0.00	0.153	2.76	1.00	1.00	0.0	21.88	60.41	0.00	4940	0	2207	455	2662
9	190	42.09	0.000	46.842	0.00	0.137	2.82	1.00	1.00	0.0	22.55	63.63	0.00	5585	0	2277	1277	3553
8	170	41.11	0.000	50.084	0.00	0.128	2.86	1.00	1.00	0.0	24.29	69.39	0.00	6730	0	2425	2304	4728
7	150	40.04	0.000	57.359	0.00	0.130	2.85	1.00	1.00	0.0	28.04	79.87	0.00	7998	0	2718	3172	5891
6	130	38.86	0.000	57.395	0.00	0.116	2.90	1.00	1.00	0.0	28.35	82.18	0.00	8153	0	2714	3204	5918
5	110	37.51	0.000	63.059	0.00	0.116	2.90	1.00	1.00	0.0	30.75	89.19	0.00	8043	0	2844	3160	6004
4	90	35.96	0.000	57.777	0.00	0.097	2.98	1.00	1.00	0.0	28.05	83.46	0.00	7989	0	2551	3135	5686
3	70	34.11	0.000	66.406	0.00	0.102	2.96	1.00	1.00	0.0	31.82	94.04	0.00	9007	0	2726	2998	5724
2	45	31.08	0.000	113.831	0.00	0.107	2.94	1.00	1.00	0.0	55.68	163.56	0.00	14072	0	4321	4097	8418
1	15	24.69	0.000	120.618	0.00	0.102	2.96	1.00	1.00	0.0	57.80	170.80	0.00	15378	0	3585	3255	6840
													Totals	**92,608**	**0**			**57,974**

1.2D + 1.0W 60° — Gust Response Factor (Gh): 0.85
115.99 mph Wind with No Ice — Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230	43.82	0.000	45.353	0.00	0.179	2.67	0.80	1.00	0.0	22.58	60.21	0.00	4712	0	2242	307	2549
10	210	42.98	0.000	45.187	0.00	0.153	2.76	0.80	1.00	0.0	21.88	60.41	0.00	4940	0	2207	455	2662
9	190	42.09	0.000	46.842	0.00	0.137	2.82	0.80	1.00	0.0	22.55	63.63	0.00	5585	0	2277	1277	3553
8	170	41.11	0.000	50.084	0.00	0.128	2.86	0.80	1.00	0.0	24.29	69.39	0.00	6730	0	2425	2304	4728
7	150	40.04	0.000	57.359	0.00	0.130	2.85	0.80	1.00	0.0	28.04	79.87	0.00	7998	0	2718	3172	5891
6	130	38.86	0.000	57.395	0.00	0.116	2.90	0.80	1.00	0.0	28.35	82.18	0.00	8153	0	2714	3204	5918
5	110	37.51	0.000	63.059	0.00	0.116	2.90	0.80	1.00	0.0	30.75	89.19	0.00	8043	0	2844	3160	6004
4	90	35.96	0.000	57.777	0.00	0.097	2.98	0.80	1.00	0.0	28.05	83.46	0.00	7989	0	2551	3135	5686
3	70	34.11	0.000	66.406	0.00	0.102	2.96	0.80	1.00	0.0	31.82	94.04	0.00	9007	0	2726	2998	5724
2	45	31.08	0.000	113.831	0.00	0.107	2.94	0.80	1.00	0.0	55.68	163.56	0.00	14072	0	4321	4097	8418
1	15	24.69	0.000	120.618	0.00	0.102	2.96	0.80	1.00	0.0	58.37	172.51	0.00	15378	0	3621	3255	6876
													Totals	**92,608**	**0**			**58,010**

1.2D + 1.0W 90° — Gust Response Factor (Gh): 0.85
115.99 mph Wind with No Ice — Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230	43.82	0.000	45.353	0.00	0.179	2.67	0.85	1.00	0.0	22.58	60.21	0.00	4712	0	2242	307	2549
10	210	42.98	0.000	45.187	0.00	0.153	2.76	0.85	1.00	0.0	21.88	60.41	0.00	4940	0	2207	455	2662
9	190	42.09	0.000	46.842	0.00	0.137	2.82	0.85	1.00	0.0	22.55	63.63	0.00	5585	0	2277	1277	3553
8	170	41.11	0.000	50.084	0.00	0.128	2.86	0.85	1.00	0.0	24.29	69.39	0.00	6730	0	2425	2304	4728
7	150	40.04	0.000	57.359	0.00	0.130	2.85	0.85	1.00	0.0	28.04	79.87	0.00	7998	0	2718	3172	5891
6	130	38.86	0.000	57.395	0.00	0.116	2.90	0.85	1.00	0.0	28.35	82.18	0.00	8153	0	2714	3204	5918
5	110	37.51	0.000	63.059	0.00	0.116	2.90	0.85	1.00	0.0	30.75	89.19	0.00	8043	0	2844	3160	6004
4	90	35.96	0.000	57.777	0.00	0.097	2.98	0.85	1.00	0.0	28.05	83.46	0.00	7989	0	2551	3135	5686
3	70	34.11	0.000	66.406	0.00	0.102	2.96	0.85	1.00	0.0	31.82	94.04	0.00	9007	0	2726	2998	5724
2	45	31.08	0.000	113.831	0.00	0.107	2.94	0.85	1.00	0.0	55.68	163.56	0.00	14072	0	4321	4097	8418
1	15	24.69	0.000	120.618	0.00	0.102	2.96	0.85	1.00	0.0	58.37	172.51	0.00	15378	0	3621	3255	6876
													Totals	**92,608**	**0**			**58,010**

1.2D + 1.0W 120° — Gust Response Factor (Gh): 0.85
115.99 mph Wind with No Ice — Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230	43.82	0.000	45.353	0.00	0.179	2.67	1.00	1.00	0.0	22.58	60.21	0.00	4712	0	2242	307	2549
10	210	42.98	0.000	45.187	0.00	0.153	2.76	1.00	1.00	0.0	21.88	60.41	0.00	4940	0	2207	455	2662
9	190	42.09	0.000	46.842	0.00	0.137	2.82	1.00	1.00	0.0	22.55	63.63	0.00	5585	0	2277	1277	3553
8	170	41.11	0.000	50.084	0.00	0.128	2.86	1.00	1.00	0.0	24.29	69.39	0.00	6730	0	2425	2304	4728
7	150	40.04	0.000	57.359	0.00	0.130	2.85	1.00	1.00	0.0	28.04	79.87	0.00	7998	0	2718	3172	5891
6	130	38.86	0.000	57.395	0.00	0.116	2.90	1.00	1.00	0.0	28.35	82.18	0.00	8153	0	2714	3204	5918
5	110	37.51	0.000	63.059	0.00	0.116	2.90	1.00	1.00	0.0	30.75	89.19	0.00	8043	0	2844	3160	6004
4	90	35.96	0.000	57.777	0.00	0.097	2.98	1.00	1.00	0.0	28.05	83.46	0.00	7989	0	2551	3135	5686
3	70	34.11	0.000	66.406	0.00	0.102	2.96	1.00	1.00	0.0	31.82	94.04	0.00	9007	0	2726	2998	5724
2	45	31.08	0.000	113.831	0.00	0.107	2.94	1.00	1.00	0.0	55.68	163.56	0.00	14072	0	4321	4097	8418
1	15	24.69	0.000	120.618	0.00	0.102	2.96	1.00	1.00	0.0	58.37	172.51	0.00	15378	0	3621	3255	6876
													Totals	**92,608**	**0**			**58,010**

1.2D + 1.0W 180° — Gust Response Factor (Gh): 0.85
115.99 mph Wind with No Ice — Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230	43.82	0.000	45.353	0.00	0.179	2.67	0.80	1.00	0.0	22.58	60.21	0.00	4712	0	2242	307	2549
10	210	42.98	0.000	45.187	0.00	0.153	2.76	0.80	1.00	0.0	21.88	60.41	0.00	4940	0	2207	455	2662
9	190	42.09	0.000	46.842	0.00	0.137	2.82	0.80	1.00	0.0	22.55	63.63	0.00	5585	0	2277	1277	3553
8	170	41.11	0.000	50.084	0.00	0.128	2.86	0.80	1.00	0.0	24.29	69.39	0.00	6730	0	2425	2304	4728
7	150	40.04	0.000	57.359	0.00	0.130	2.85	0.80	1.00	0.0	28.04	79.87	0.00	7998	0	2718	3172	5891

SECTION FORCES

1.2D + 1.0W 180° Gust Response Factor (Gh): 0.85
115.99 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
6	130	38.86	0.000	57.395	0.00	0.116	2.90	0.80	1.00	0.0	28.35	82.18	0.00	8153	0	2714	3204	5918
5	110	37.51	0.000	63.059	0.00	0.116	2.90	0.80	1.00	0.0	30.75	89.19	0.00	8043	0	2844	3160	6004
4	90	35.96	0.000	57.777	0.00	0.097	2.98	0.80	1.00	0.0	28.05	83.46	0.00	7989	0	2551	3135	5686
3	70	34.11	0.000	66.406	0.00	0.102	2.96	0.80	1.00	0.0	31.82	94.04	0.00	9007	0	2726	2998	5724
2	45	31.08	0.000	113.831	0.00	0.107	2.94	0.80	1.00	0.0	55.68	163.56	0.00	14072	0	4321	4097	8418
1	15	24.69	0.000	120.618	0.00	0.102	2.96	0.80	1.00	0.0	58.37	172.51	0.00	15378	0	3621	3255	6876
													Totals	**92,608**	**0**			**58,010**

1.2D + 1.0W 210° Gust Response Factor (Gh): 0.85
115.99 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230	43.82	0.000	45.353	0.00	0.179	2.67	0.85	1.00	0.0	22.58	60.21	0.00	4712	0	2242	307	2549
10	210	42.98	0.000	45.187	0.00	0.153	2.76	0.85	1.00	0.0	21.88	60.41	0.00	4940	0	2207	455	2662
9	190	42.09	0.000	46.842	0.00	0.137	2.82	0.85	1.00	0.0	22.55	63.63	0.00	5585	0	2277	1277	3553
8	170	41.11	0.000	50.084	0.00	0.128	2.86	0.85	1.00	0.0	24.29	69.39	0.00	6730	0	2425	2304	4728
7	150	40.04	0.000	57.359	0.00	0.130	2.85	0.85	1.00	0.0	28.04	79.87	0.00	7998	0	2718	3172	5891
6	130	38.86	0.000	57.395	0.00	0.116	2.90	0.85	1.00	0.0	28.35	82.18	0.00	8153	0	2714	3204	5918
5	110	37.51	0.000	63.059	0.00	0.116	2.90	0.85	1.00	0.0	30.75	89.19	0.00	8043	0	2844	3160	6004
4	90	35.96	0.000	57.777	0.00	0.097	2.98	0.85	1.00	0.0	28.05	83.46	0.00	7989	0	2551	3135	5686
3	70	34.11	0.000	66.406	0.00	0.102	2.96	0.85	1.00	0.0	31.82	94.04	0.00	9007	0	2726	2998	5724
2	45	31.08	0.000	113.831	0.00	0.107	2.94	0.85	1.00	0.0	55.68	163.56	0.00	14072	0	4321	4097	8418
1	15	24.69	0.000	120.618	0.00	0.102	2.96	0.85	1.00	0.0	58.37	172.51	0.00	15378	0	3621	3255	6876
													Totals	**92,608**	**0**			**58,010**

1.2D + 1.0W 240° Gust Response Factor (Gh): 0.85
115.99 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230	43.82	0.000	45.353	0.00	0.179	2.67	1.00	1.00	0.0	22.58	60.21	0.00	4712	0	2242	307	2549
10	210	42.98	0.000	45.187	0.00	0.153	2.76	1.00	1.00	0.0	21.88	60.41	0.00	4940	0	2207	455	2662
9	190	42.09	0.000	46.842	0.00	0.137	2.82	1.00	1.00	0.0	22.55	63.63	0.00	5585	0	2277	1277	3553
8	170	41.11	0.000	50.084	0.00	0.128	2.86	1.00	1.00	0.0	24.29	69.39	0.00	6730	0	2425	2304	4728
7	150	40.04	0.000	57.359	0.00	0.130	2.85	1.00	1.00	0.0	28.04	79.87	0.00	7998	0	2718	3172	5891
6	130	38.86	0.000	57.395	0.00	0.116	2.90	1.00	1.00	0.0	28.35	82.18	0.00	8153	0	2714	3204	5918
5	110	37.51	0.000	63.059	0.00	0.116	2.90	1.00	1.00	0.0	30.75	89.19	0.00	8043	0	2844	3160	6004
4	90	35.96	0.000	57.777	0.00	0.097	2.98	1.00	1.00	0.0	28.05	83.46	0.00	7989	0	2551	3135	5686
3	70	34.11	0.000	66.406	0.00	0.102	2.96	1.00	1.00	0.0	31.82	94.04	0.00	9007	0	2726	2998	5724
2	45	31.08	0.000	113.831	0.00	0.107	2.94	1.00	1.00	0.0	55.68	163.56	0.00	14072	0	4321	4097	8418
1	15	24.69	0.000	120.618	0.00	0.102	2.96	1.00	1.00	0.0	58.37	172.51	0.00	15378	0	3621	3255	6876
													Totals	**92,608**	**0**			**58,010**

1.2D + 1.0W 300° Gust Response Factor (Gh): 0.85
115.99 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230	43.82	0.000	45.353	0.00	0.179	2.67	0.80	1.00	0.0	22.58	60.21	0.00	4712	0	2242	307	2549
10	210	42.98	0.000	45.187	0.00	0.153	2.76	0.80	1.00	0.0	21.88	60.41	0.00	4940	0	2207	455	2662
9	190	42.09	0.000	46.842	0.00	0.137	2.82	0.80	1.00	0.0	22.55	63.63	0.00	5585	0	2277	1277	3553
8	170	41.11	0.000	50.084	0.00	0.128	2.86	0.80	1.00	0.0	24.29	69.39	0.00	6730	0	2425	2304	4728
7	150	40.04	0.000	57.359	0.00	0.130	2.85	0.80	1.00	0.0	28.04	79.87	0.00	7998	0	2718	3172	5891
6	130	38.86	0.000	57.395	0.00	0.116	2.90	0.80	1.00	0.0	28.35	82.18	0.00	8153	0	2714	3204	5918
5	110	37.51	0.000	63.059	0.00	0.116	2.90	0.80	1.00	0.0	30.75	89.19	0.00	8043	0	2844	3160	6004
4	90	35.96	0.000	57.777	0.00	0.097	2.98	0.80	1.00	0.0	28.05	83.46	0.00	7989	0	2551	3135	5686
3	70	34.11	0.000	66.406	0.00	0.102	2.96	0.80	1.00	0.0	31.82	94.04	0.00	9007	0	2726	2998	5724
2	45	31.08	0.000	113.831	0.00	0.107	2.94	0.80	1.00	0.0	55.68	163.56	0.00	14072	0	4321	4097	8418
1	15	24.69	0.000	120.618	0.00	0.102	2.96	0.80	1.00	0.0	58.37	172.51	0.00	15378	0	3621	3255	6876
													Totals	**92,608**	**0**			**58,010**

1.2D + 1.0W 330° Gust Response Factor (Gh): 0.85
115.99 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230	43.82	0.000	45.353	0.00	0.179	2.67	0.85	1.00	0.0	22.58	60.21	0.00	4712	0	2242	307	2549
10	210	42.98	0.000	45.187	0.00	0.153	2.76	0.85	1.00	0.0	21.88	60.41	0.00	4940	0	2207	455	2662
9	190	42.09	0.000	46.842	0.00	0.137	2.82	0.85	1.00	0.0	22.55	63.63	0.00	5585	0	2277	1277	3553
8	170	41.11	0.000	50.084	0.00	0.128	2.86	0.85	1.00	0.0	24.29	69.39	0.00	6730	0	2425	2304	4728
7	150	40.04	0.000	57.359	0.00	0.130	2.85	0.85	1.00	0.0	28.04	79.87	0.00	7998	0	2718	3172	5891
6	130	38.86	0.000	57.395	0.00	0.116	2.90	0.85	1.00	0.0	28.35	82.18	0.00	8153	0	2714	3204	5918
5	110	37.51	0.000	63.059	0.00	0.116	2.90	0.85	1.00	0.0	30.75	89.19	0.00	8043	0	2844	3160	6004
4	90	35.96	0.000	57.777	0.00	0.097	2.98	0.85	1.00	0.0	28.05	83.46	0.00	7989	0	2551	3135	5686
3	70	34.11	0.000	66.406	0.00	0.102	2.96	0.85	1.00	0.0	31.82	94.04	0.00	9007	0	2726	2998	5724
2	45	31.08	0.000	113.831	0.00	0.107	2.94	0.85	1.00	0.0	55.68	163.56	0.00	14072	0	4321	4097	8418

SECTION FORCES

1.2D + 1.0W 330° Gust Response Factor (Gh): 0.85
115.99 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
1	15	24.69	0.000	120.618	0.00	0.102	2.96	0.85	1.00	0.0	58.37	172.51	0.00	15378	0	3621	3255	6876
													Totals	**92,608**	**0**			**58,010**

0.9D + 1.0W Normal Gust Response Factor (Gh): 0.85
115.99 mph Wind with No Ice (Reduced DL) Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230	43.82	0.000	45.353	0.00	0.179	2.67	1.00	1.00	0.0	22.58	60.21	0.00	3534	0	2242	307	2549
10	210	42.98	0.000	45.187	0.00	0.153	2.76	1.00	1.00	0.0	21.88	60.41	0.00	3705	0	2207	455	2662
9	190	42.09	0.000	46.842	0.00	0.137	2.82	1.00	1.00	0.0	22.55	63.63	0.00	4189	0	2277	1277	3553
8	170	41.11	0.000	50.084	0.00	0.128	2.86	1.00	1.00	0.0	24.29	69.39	0.00	5047	0	2425	2304	4728
7	150	40.04	0.000	57.359	0.00	0.130	2.85	1.00	1.00	0.0	28.04	79.87	0.00	5999	0	2718	3172	5891
6	130	38.86	0.000	57.395	0.00	0.116	2.90	1.00	1.00	0.0	28.35	82.18	0.00	6115	0	2714	3204	5918
5	110	37.51	0.000	63.059	0.00	0.116	2.90	1.00	1.00	0.0	30.75	89.19	0.00	6033	0	2844	3160	6004
4	90	35.96	0.000	57.777	0.00	0.097	2.98	1.00	1.00	0.0	28.05	83.46	0.00	5992	0	2551	3135	5686
3	70	34.11	0.000	66.406	0.00	0.102	2.96	1.00	1.00	0.0	31.82	94.04	0.00	6756	0	2726	2998	5724
2	45	31.08	0.000	113.831	0.00	0.107	2.94	1.00	1.00	0.0	55.68	163.56	0.00	10554	0	4321	4097	8418
1	15	24.69	0.000	120.618	0.00	0.102	2.96	1.00	1.00	0.0	58.37	172.51	0.00	11533	0	3621	3255	6876
													Totals	**69,456**	**0**			**58,010**

0.9D + 1.0W 60° Gust Response Factor (Gh): 0.85
115.99 mph Wind with No Ice (Reduced DL) Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230	43.82	0.000	45.353	0.00	0.179	2.67	0.80	1.00	0.0	22.58	60.21	0.00	3534	0	2242	307	2549
10	210	42.98	0.000	45.187	0.00	0.153	2.76	0.80	1.00	0.0	21.88	60.41	0.00	3705	0	2207	455	2662
9	190	42.09	0.000	46.842	0.00	0.137	2.82	0.80	1.00	0.0	22.55	63.63	0.00	4189	0	2277	1277	3553
8	170	41.11	0.000	50.084	0.00	0.128	2.86	0.80	1.00	0.0	24.29	69.39	0.00	5047	0	2425	2304	4728
7	150	40.04	0.000	57.359	0.00	0.130	2.85	0.80	1.00	0.0	28.04	79.87	0.00	5999	0	2718	3172	5891
6	130	38.86	0.000	57.395	0.00	0.116	2.90	0.80	1.00	0.0	28.35	82.18	0.00	6115	0	2714	3204	5918
5	110	37.51	0.000	63.059	0.00	0.116	2.90	0.80	1.00	0.0	30.75	89.19	0.00	6033	0	2844	3160	6004
4	90	35.96	0.000	57.777	0.00	0.097	2.98	0.80	1.00	0.0	28.05	83.46	0.00	5992	0	2551	3135	5686
3	70	34.11	0.000	66.406	0.00	0.102	2.96	0.80	1.00	0.0	31.82	94.04	0.00	6756	0	2726	2998	5724
2	45	31.08	0.000	113.831	0.00	0.107	2.94	0.80	1.00	0.0	55.68	163.56	0.00	10554	0	4321	4097	8418
1	15	24.69	0.000	120.618	0.00	0.102	2.96	0.80	1.00	0.0	58.37	172.51	0.00	11533	0	3621	3255	6876
													Totals	**69,456**	**0**			**58,010**

0.9D + 1.0W 90° Gust Response Factor (Gh): 0.85
115.99 mph Wind with No Ice (Reduced DL) Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230	43.82	0.000	45.353	0.00	0.179	2.67	0.85	1.00	0.0	22.58	60.21	0.00	3534	0	2242	307	2549
10	210	42.98	0.000	45.187	0.00	0.153	2.76	0.85	1.00	0.0	21.88	60.41	0.00	3705	0	2207	455	2662
9	190	42.09	0.000	46.842	0.00	0.137	2.82	0.85	1.00	0.0	22.55	63.63	0.00	4189	0	2277	1277	3553
8	170	41.11	0.000	50.084	0.00	0.128	2.86	0.85	1.00	0.0	24.29	69.39	0.00	5047	0	2425	2304	4728
7	150	40.04	0.000	57.359	0.00	0.130	2.85	0.85	1.00	0.0	28.04	79.87	0.00	5999	0	2718	3172	5891
6	130	38.86	0.000	57.395	0.00	0.116	2.90	0.85	1.00	0.0	28.35	82.18	0.00	6115	0	2714	3204	5918
5	110	37.51	0.000	63.059	0.00	0.116	2.90	0.85	1.00	0.0	30.75	89.19	0.00	6033	0	2844	3160	6004
4	90	35.96	0.000	57.777	0.00	0.097	2.98	0.85	1.00	0.0	28.05	83.46	0.00	5992	0	2551	3135	5686
3	70	34.11	0.000	66.406	0.00	0.102	2.96	0.85	1.00	0.0	31.82	94.04	0.00	6756	0	2726	2998	5724
2	45	31.08	0.000	113.831	0.00	0.107	2.94	0.85	1.00	0.0	55.68	163.56	0.00	10554	0	4321	4097	8418
1	15	24.69	0.000	120.618	0.00	0.102	2.96	0.85	1.00	0.0	58.37	172.51	0.00	11533	0	3621	3255	6876
													Totals	**69,456**	**0**			**58,010**

0.9D + 1.0W 120° Gust Response Factor (Gh): 0.85
115.99 mph Wind with No Ice (Reduced DL) Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230	43.82	0.000	45.353	0.00	0.179	2.67	1.00	1.00	0.0	22.58	60.21	0.00	3534	0	2242	307	2549
10	210	42.98	0.000	45.187	0.00	0.153	2.76	1.00	1.00	0.0	21.88	60.41	0.00	3705	0	2207	455	2662
9	190	42.09	0.000	46.842	0.00	0.137	2.82	1.00	1.00	0.0	22.55	63.63	0.00	4189	0	2277	1277	3553
8	170	41.11	0.000	50.084	0.00	0.128	2.86	1.00	1.00	0.0	24.29	69.39	0.00	5047	0	2425	2304	4728
7	150	40.04	0.000	57.359	0.00	0.130	2.85	1.00	1.00	0.0	28.04	79.87	0.00	5999	0	2718	3172	5891
6	130	38.86	0.000	57.395	0.00	0.116	2.90	1.00	1.00	0.0	28.35	82.18	0.00	6115	0	2714	3204	5918
5	110	37.51	0.000	63.059	0.00	0.116	2.90	1.00	1.00	0.0	30.75	89.19	0.00	6033	0	2844	3160	6004
4	90	35.96	0.000	57.777	0.00	0.097	2.98	1.00	1.00	0.0	28.05	83.46	0.00	5992	0	2551	3135	5686
3	70	34.11	0.000	66.406	0.00	0.102	2.96	1.00	1.00	0.0	31.82	94.04	0.00	6756	0	2726	2998	5724
2	45	31.08	0.000	113.831	0.00	0.107	2.94	1.00	1.00	0.0	55.68	163.56	0.00	10554	0	4321	4097	8418
1	15	24.69	0.000	120.618	0.00	0.102	2.96	1.00	1.00	0.0	58.37	172.51	0.00	11533	0	3621	3255	6876
													Totals	**69,456**	**0**			**58,010**

SECTION FORCES

0.9D + 1.0W 180° Gust Response Factor (Gh): 0.85
115.99 mph Wind with No Ice (Reduced DL) Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230	43.82	0.000	45.353	0.00	0.179	2.67	0.80	1.00	0.0	22.58	60.21	0.00	3534	0	2242	307	2549
10	210	42.98	0.000	45.187	0.00	0.153	2.76	0.80	1.00	0.0	21.88	60.41	0.00	3705	0	2207	455	2662
9	190	42.09	0.000	46.842	0.00	0.137	2.82	0.80	1.00	0.0	22.55	63.63	0.00	4189	0	2277	1277	3553
8	170	41.11	0.000	50.084	0.00	0.128	2.86	0.80	1.00	0.0	24.29	69.39	0.00	5047	0	2425	2304	4728
7	150	40.04	0.000	57.359	0.00	0.130	2.85	0.80	1.00	0.0	28.04	79.87	0.00	5999	0	2718	3172	5891
6	130	38.86	0.000	57.395	0.00	0.116	2.90	0.80	1.00	0.0	28.35	82.18	0.00	6115	0	2714	3204	5918
5	110	37.51	0.000	63.059	0.00	0.116	2.90	0.80	1.00	0.0	30.75	89.19	0.00	6033	0	2844	3160	6004
4	90	35.96	0.000	57.777	0.00	0.097	2.98	0.80	1.00	0.0	28.05	83.46	0.00	5992	0	2551	3135	5686
3	70	34.11	0.000	66.406	0.00	0.102	2.96	0.80	1.00	0.0	31.82	94.04	0.00	6756	0	2726	2998	5724
2	45	31.08	0.000	113.831	0.00	0.107	2.94	0.80	1.00	0.0	55.68	163.56	0.00	10554	0	4321	4097	8418
1	15	24.69	0.000	120.618	0.00	0.102	2.96	0.80	1.00	0.0	58.37	172.51	0.00	11533	0	3621	3255	6876
													Totals	**69,456**	**0**			**58,010**

0.9D + 1.0W 210° Gust Response Factor (Gh): 0.85
115.99 mph Wind with No Ice (Reduced DL) Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230	43.82	0.000	45.353	0.00	0.179	2.67	0.85	1.00	0.0	22.58	60.21	0.00	3534	0	2242	307	2549
10	210	42.98	0.000	45.187	0.00	0.153	2.76	0.85	1.00	0.0	21.88	60.41	0.00	3705	0	2207	455	2662
9	190	42.09	0.000	46.842	0.00	0.137	2.82	0.85	1.00	0.0	22.55	63.63	0.00	4189	0	2277	1277	3553
8	170	41.11	0.000	50.084	0.00	0.128	2.86	0.85	1.00	0.0	24.29	69.39	0.00	5047	0	2425	2304	4728
7	150	40.04	0.000	57.359	0.00	0.130	2.85	0.85	1.00	0.0	28.04	79.87	0.00	5999	0	2718	3172	5891
6	130	38.86	0.000	57.395	0.00	0.116	2.90	0.85	1.00	0.0	28.35	82.18	0.00	6115	0	2714	3204	5918
5	110	37.51	0.000	63.059	0.00	0.116	2.90	0.85	1.00	0.0	30.75	89.19	0.00	6033	0	2844	3160	6004
4	90	35.96	0.000	57.777	0.00	0.097	2.98	0.85	1.00	0.0	28.05	83.46	0.00	5992	0	2551	3135	5686
3	70	34.11	0.000	66.406	0.00	0.102	2.96	0.85	1.00	0.0	31.82	94.04	0.00	6756	0	2726	2998	5724
2	45	31.08	0.000	113.831	0.00	0.107	2.94	0.85	1.00	0.0	55.68	163.56	0.00	10554	0	4321	4097	8418
1	15	24.69	0.000	120.618	0.00	0.102	2.96	0.85	1.00	0.0	58.37	172.51	0.00	11533	0	3621	3255	6876
													Totals	**69,456**	**0**			**58,010**

0.9D + 1.0W 240° Gust Response Factor (Gh): 0.85
115.99 mph Wind with No Ice (Reduced DL) Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230	43.82	0.000	45.353	0.00	0.179	2.67	1.00	1.00	0.0	22.58	60.21	0.00	3534	0	2242	307	2549
10	210	42.98	0.000	45.187	0.00	0.153	2.76	1.00	1.00	0.0	21.88	60.41	0.00	3705	0	2207	455	2662
9	190	42.09	0.000	46.842	0.00	0.137	2.82	1.00	1.00	0.0	22.55	63.63	0.00	4189	0	2277	1277	3553
8	170	41.11	0.000	50.084	0.00	0.128	2.86	1.00	1.00	0.0	24.29	69.39	0.00	5047	0	2425	2304	4728
7	150	40.04	0.000	57.359	0.00	0.130	2.85	1.00	1.00	0.0	28.04	79.87	0.00	5999	0	2718	3172	5891
6	130	38.86	0.000	57.395	0.00	0.116	2.90	1.00	1.00	0.0	28.35	82.18	0.00	6115	0	2714	3204	5918
5	110	37.51	0.000	63.059	0.00	0.116	2.90	1.00	1.00	0.0	30.75	89.19	0.00	6033	0	2844	3160	6004
4	90	35.96	0.000	57.777	0.00	0.097	2.98	1.00	1.00	0.0	28.05	83.46	0.00	5992	0	2551	3135	5686
3	70	34.11	0.000	66.406	0.00	0.102	2.96	1.00	1.00	0.0	31.82	94.04	0.00	6756	0	2726	2998	5724
2	45	31.08	0.000	113.831	0.00	0.107	2.94	1.00	1.00	0.0	55.68	163.56	0.00	10554	0	4321	4097	8418
1	15	24.69	0.000	120.618	0.00	0.102	2.96	1.00	1.00	0.0	58.37	172.51	0.00	11533	0	3621	3255	6876
													Totals	**69,456**	**0**			**58,010**

0.9D + 1.0W 300° Gust Response Factor (Gh): 0.85
115.99 mph Wind with No Ice (Reduced DL) Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230	43.82	0.000	45.353	0.00	0.179	2.67	0.80	1.00	0.0	22.58	60.21	0.00	3534	0	2242	307	2549
10	210	42.98	0.000	45.187	0.00	0.153	2.76	0.80	1.00	0.0	21.88	60.41	0.00	3705	0	2207	455	2662
9	190	42.09	0.000	46.842	0.00	0.137	2.82	0.80	1.00	0.0	22.55	63.63	0.00	4189	0	2277	1277	3553
8	170	41.11	0.000	50.084	0.00	0.128	2.86	0.80	1.00	0.0	24.29	69.39	0.00	5047	0	2425	2304	4728
7	150	40.04	0.000	57.359	0.00	0.130	2.85	0.80	1.00	0.0	28.04	79.87	0.00	5999	0	2718	3172	5891
6	130	38.86	0.000	57.395	0.00	0.116	2.90	0.80	1.00	0.0	28.35	82.18	0.00	6115	0	2714	3204	5918
5	110	37.51	0.000	63.059	0.00	0.116	2.90	0.80	1.00	0.0	30.75	89.19	0.00	6033	0	2844	3160	6004
4	90	35.96	0.000	57.777	0.00	0.097	2.98	0.80	1.00	0.0	28.05	83.46	0.00	5992	0	2551	3135	5686
3	70	34.11	0.000	66.406	0.00	0.102	2.96	0.80	1.00	0.0	31.82	94.04	0.00	6756	0	2726	2998	5724
2	45	31.08	0.000	113.831	0.00	0.107	2.94	0.80	1.00	0.0	55.68	163.56	0.00	10554	0	4321	4097	8418
1	15	24.69	0.000	120.618	0.00	0.102	2.96	0.80	1.00	0.0	58.37	172.51	0.00	11533	0	3621	3255	6876
													Totals	**69,456**	**0**			**58,010**

0.9D + 1.0W 330° Gust Response Factor (Gh): 0.85
115.99 mph Wind with No Ice (Reduced DL) Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230	43.82	0.000	45.353	0.00	0.179	2.67	0.85	1.00	0.0	22.58	60.21	0.00	3534	0	2242	307	2549
10	210	42.98	0.000	45.187	0.00	0.153	2.76	0.85	1.00	0.0	21.88	60.41	0.00	3705	0	2207	455	2662
9	190	42.09	0.000	46.842	0.00	0.137	2.82	0.85	1.00	0.0	22.55	63.63	0.00	4189	0	2277	1277	3553
8	170	41.11	0.000	50.084	0.00	0.128	2.86	0.85	1.00	0.0	24.29	69.39	0.00	5047	0	2425	2304	4728
7	150	40.04	0.000	57.359	0.00	0.130	2.85	0.85	1.00	0.0	28.04	79.87	0.00	5999	0	2718	3172	5891

SECTION FORCES

0.9D + 1.0W 330° Gust Response Factor (Gh): 0.85
115.99 mph Wind with No Ice (Reduced DL) Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
6	130	38.86	0.000	57.395	0.00	0.116	2.90	0.85	1.00	0.0	28.35	82.18	0.00	6115	0	2714	3204	5918
5	110	37.51	0.000	63.059	0.00	0.116	2.90	0.85	1.00	0.0	30.75	89.19	0.00	6033	0	2844	3160	6004
4	90	35.96	0.000	57.777	0.00	0.097	2.98	0.85	1.00	0.0	28.05	83.46	0.00	5992	0	2551	3135	5686
3	70	34.11	0.000	66.406	0.00	0.102	2.96	0.85	1.00	0.0	31.82	94.04	0.00	6756	0	2726	2998	5724
2	45	31.08	0.000	113.831	0.00	0.107	2.94	0.85	1.00	0.0	55.68	163.56	0.00	10554	0	4321	4097	8418
1	15	24.69	0.000	120.618	0.00	0.102	2.96	0.85	1.00	0.0	58.37	172.51	0.00	11533	0	3621	3255	6876
													Totals	**69,456**	**0**			**58,010**

1.2D + 1.0Di + 1.0Wi Normal Gust Response Factor (Gh): 0.85 Ice Importance Factor: 1.00
48.73 mph Wind with 0.85" Radial Ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230	7.73	0.000	67.581	22.23	0.264	2.40	1.00	1.00	1.0	40.41	96.87	22.23	7034	2323	637	128	764
10	210	7.59	0.000	65.068	19.88	0.218	2.54	1.00	1.00	1.0	38.08	96.64	19.88	7259	2319	623	175	798
9	190	7.43	0.000	67.820	20.98	0.196	2.61	1.00	1.00	1.0	39.39	102.82	20.98	8871	3286	649	505	1154
8	170	7.26	0.000	72.228	22.14	0.182	2.66	1.00	1.00	1.0	41.81	111.06	22.14	11289	4559	685	1130	1815
7	150	7.07	0.000	77.759	25.61	0.174	2.68	1.00	1.00	1.0	47.91	128.60	25.61	14073	6075	773	1627	2400
6	130	6.86	0.000	81.778	24.38	0.165	2.72	1.00	1.00	1.0	47.16	128.17	24.38	13970	5817	747	1637	2384
5	110	6.62	0.000	78.482	20.03	0.144	2.79	1.00	1.00	1.0	47.39	132.45	20.03	14325	6282	745	1638	2384
4	90	6.35	0.000	76.261	18.48	0.128	2.86	1.00	1.00	0.9	43.50	124.22	18.48	13636	5647	670	1636	2306
3	70	6.02	0.000	85.071	18.66	0.130	2.85	1.00	1.00	0.9	48.53	138.07	18.66	14747	5739	707	1539	2246
2	45	5.49	0.000	137.693	23.86	0.128	2.85	1.00	1.00	0.9	78.28	223.32	23.86	22912	8840	1041	2058	3099
1	15	4.36	0.000	136.326	24.35	0.115	2.90	1.00	1.00	0.8	82.37	239.22	24.35	23666	8289	886	1563	2449
													Totals	**151,782**	**59,174**			**21,800**

1.2D + 1.0Di + 1.0Wi 60° Gust Response Factor (Gh): 0.85 Ice Importance Factor: 1.00
48.73 mph Wind with 0.85" Radial Ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230	7.73	0.000	67.581	22.23	0.264	2.40	0.80	1.00	1.0	40.41	96.87	22.23	7034	2323	637	128	764
10	210	7.59	0.000	65.068	19.88	0.218	2.54	0.80	1.00	1.0	38.08	96.64	19.88	7259	2319	623	175	798
9	190	7.43	0.000	67.820	20.98	0.196	2.61	0.80	1.00	1.0	39.39	102.82	20.98	8871	3286	649	505	1154
8	170	7.26	0.000	72.228	22.14	0.182	2.66	0.80	1.00	1.0	41.81	111.06	22.14	11289	4559	685	1130	1815
7	150	7.07	0.000	77.759	25.61	0.174	2.68	0.80	1.00	1.0	47.91	128.60	25.61	14073	6075	773	1627	2400
6	130	6.86	0.000	81.778	24.38	0.165	2.72	0.80	1.00	1.0	47.16	128.17	24.38	13970	5817	747	1637	2384
5	110	6.62	0.000	78.482	20.03	0.144	2.79	0.80	1.00	1.0	47.39	132.45	20.03	14325	6282	745	1638	2384
4	90	6.35	0.000	76.261	18.48	0.128	2.86	0.80	1.00	0.9	43.50	124.22	18.48	13636	5647	670	1636	2306
3	70	6.02	0.000	85.071	18.66	0.130	2.85	0.80	1.00	0.9	48.53	138.07	18.66	14747	5739	707	1539	2246
2	45	5.49	0.000	137.693	23.86	0.128	2.85	0.80	1.00	0.9	78.28	223.32	23.86	22912	8840	1041	2058	3099
1	15	4.36	0.000	136.326	24.35	0.115	2.90	0.80	1.00	0.8	82.37	239.22	24.35	23666	8289	886	1563	2449
													Totals	**151,782**	**59,174**			**21,800**

1.2D + 1.0Di + 1.0Wi 90° Gust Response Factor (Gh): 0.85 Ice Importance Factor: 1.00
48.73 mph Wind with 0.85" Radial Ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230	7.73	0.000	67.581	22.23	0.264	2.40	0.85	1.00	1.0	40.41	96.87	22.23	7034	2323	637	128	764
10	210	7.59	0.000	65.068	19.88	0.218	2.54	0.85	1.00	1.0	38.08	96.64	19.88	7259	2319	623	175	798
9	190	7.43	0.000	67.820	20.98	0.196	2.61	0.85	1.00	1.0	39.39	102.82	20.98	8871	3286	649	505	1154
8	170	7.26	0.000	72.228	22.14	0.182	2.66	0.85	1.00	1.0	41.81	111.06	22.14	11289	4559	685	1130	1815
7	150	7.07	0.000	77.759	25.61	0.174	2.68	0.85	1.00	1.0	47.91	128.60	25.61	14073	6075	773	1627	2400
6	130	6.86	0.000	81.778	24.38	0.165	2.72	0.85	1.00	1.0	47.16	128.17	24.38	13970	5817	747	1637	2384
5	110	6.62	0.000	78.482	20.03	0.144	2.79	0.85	1.00	1.0	47.39	132.45	20.03	14325	6282	745	1638	2384
4	90	6.35	0.000	76.261	18.48	0.128	2.86	0.85	1.00	0.9	43.50	124.22	18.48	13636	5647	670	1636	2306
3	70	6.02	0.000	85.071	18.66	0.130	2.85	0.85	1.00	0.9	48.53	138.07	18.66	14747	5739	707	1539	2246
2	45	5.49	0.000	137.693	23.86	0.128	2.85	0.85	1.00	0.9	78.28	223.32	23.86	22912	8840	1041	2058	3099
1	15	4.36	0.000	136.326	24.35	0.115	2.90	0.85	1.00	0.8	82.37	239.22	24.35	23666	8289	886	1563	2449
													Totals	**151,782**	**59,174**			**21,800**

1.2D + 1.0Di + 1.0Wi 120° Gust Response Factor (Gh): 0.85 Ice Importance Factor: 1.00
48.73 mph Wind with 0.85" Radial Ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230	7.73	0.000	67.581	22.23	0.264	2.40	1.00	1.00	1.0	40.41	96.87	22.23	7034	2323	637	128	764
10	210	7.59	0.000	65.068	19.88	0.218	2.54	1.00	1.00	1.0	38.08	96.64	19.88	7259	2319	623	175	798
9	190	7.43	0.000	67.820	20.98	0.196	2.61	1.00	1.00	1.0	39.39	102.82	20.98	8871	3286	649	505	1154
8	170	7.26	0.000	72.228	22.14	0.182	2.66	1.00	1.00	1.0	41.81	111.06	22.14	11289	4559	685	1130	1815
7	150	7.07	0.000	77.759	25.61	0.174	2.68	1.00	1.00	1.0	47.91	128.60	25.61	14073	6075	773	1627	2400
6	130	6.86	0.000	81.778	24.38	0.165	2.72	1.00	1.00	1.0	47.16	128.17	24.38	13970	5817	747	1637	2384
5	110	6.62	0.000	78.482	20.03	0.144	2.79	1.00	1.00	1.0	47.39	132.45	20.03	14325	6282	745	1638	2384
4	90	6.35	0.000	76.261	18.48	0.128	2.86	1.00	1.00	0.9	43.50	124.22	18.48	13636	5647	670	1636	2306
3	70	6.02	0.000	85.071	18.66	0.130	2.85	1.00	1.00	0.9	48.53	138.07	18.66	14747	5739	707	1539	2246
2	45	5.49	0.000	137.693	23.86	0.128	2.85	1.00	1.00	0.9	78.28	223.32	23.86	22912	8840	1041	2058	3099

SECTION FORCES

1.2D + 1.0Di + 1.0Wi 120° | Gust Response Factor (Gh): 0.85 | Ice Importance Factor: 1.00
48.73 mph Wind with 0.85" Radial Ice | Wind Importance Factor (Iw): 1.00 | Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
1	15	4.36	0.000	136.326	24.35	0.115	2.90	1.00	1.00	0.8	82.37	239.22	24.35	23666	8289	886	1563	2449
													Totals	**151,782**	**59,174**			**21,800**

1.2D + 1.0Di + 1.0Wi 180° | Gust Response Factor (Gh): 0.85 | Ice Importance Factor: 1.00
48.73 mph Wind with 0.85" Radial Ice | Wind Importance Factor (Iw): 1.00 | Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230	7.73	0.000	67.581	22.23	0.264	2.40	0.80	1.00	1.0	40.41	96.87	22.23	7034	2323	637	128	764
10	210	7.59	0.000	65.068	19.88	0.218	2.54	0.80	1.00	1.0	38.08	96.64	19.88	7259	2319	623	175	798
9	190	7.43	0.000	67.820	20.98	0.196	2.61	0.80	1.00	1.0	39.39	102.82	20.98	8871	3286	649	505	1154
8	170	7.26	0.000	72.228	22.14	0.182	2.66	0.80	1.00	1.0	41.81	111.06	22.14	11289	4559	685	1130	1815
7	150	7.07	0.000	77.759	25.61	0.174	2.68	0.80	1.00	1.0	47.91	128.60	25.61	14073	6075	773	1627	2400
6	130	6.86	0.000	81.778	24.38	0.165	2.72	0.80	1.00	1.0	47.16	128.17	24.38	13970	5817	747	1637	2384
5	110	6.62	0.000	78.482	20.03	0.144	2.79	0.80	1.00	1.0	47.39	132.45	20.03	14325	6282	745	1638	2384
4	90	6.35	0.000	76.261	18.48	0.128	2.86	0.80	1.00	0.9	43.50	124.22	18.48	13636	5647	670	1636	2306
3	70	6.02	0.000	85.071	18.66	0.130	2.85	0.80	1.00	0.9	48.53	138.07	18.66	14747	5739	707	1539	2246
2	45	5.49	0.000	137.693	23.86	0.128	2.85	0.80	1.00	0.9	78.28	223.32	23.86	22912	8840	1041	2058	3099
1	15	4.36	0.000	136.326	24.35	0.115	2.90	0.80	1.00	0.8	82.37	239.22	24.35	23666	8289	886	1563	2449
													Totals	**151,782**	**59,174**			**21,800**

1.2D + 1.0Di + 1.0Wi 210° | Gust Response Factor (Gh): 0.85 | Ice Importance Factor: 1.00
48.73 mph Wind with 0.85" Radial Ice | Wind Importance Factor (Iw): 1.00 | Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230	7.73	0.000	67.581	22.23	0.264	2.40	0.85	1.00	1.0	40.41	96.87	22.23	7034	2323	637	128	764
10	210	7.59	0.000	65.068	19.88	0.218	2.54	0.85	1.00	1.0	38.08	96.64	19.88	7259	2319	623	175	798
9	190	7.43	0.000	67.820	20.98	0.196	2.61	0.85	1.00	1.0	39.39	102.82	20.98	8871	3286	649	505	1154
8	170	7.26	0.000	72.228	22.14	0.182	2.66	0.85	1.00	1.0	41.81	111.06	22.14	11289	4559	685	1130	1815
7	150	7.07	0.000	77.759	25.61	0.174	2.68	0.85	1.00	1.0	47.91	128.60	25.61	14073	6075	773	1627	2400
6	130	6.86	0.000	81.778	24.38	0.165	2.72	0.85	1.00	1.0	47.16	128.17	24.38	13970	5817	747	1637	2384
5	110	6.62	0.000	78.482	20.03	0.144	2.79	0.85	1.00	1.0	47.39	132.45	20.03	14325	6282	745	1638	2384
4	90	6.35	0.000	76.261	18.48	0.128	2.86	0.85	1.00	0.9	43.50	124.22	18.48	13636	5647	670	1636	2306
3	70	6.02	0.000	85.071	18.66	0.130	2.85	0.85	1.00	0.9	48.53	138.07	18.66	14747	5739	707	1539	2246
2	45	5.49	0.000	137.693	23.86	0.128	2.85	0.85	1.00	0.9	78.28	223.32	23.86	22912	8840	1041	2058	3099
1	15	4.36	0.000	136.326	24.35	0.115	2.90	0.85	1.00	0.8	82.37	239.22	24.35	23666	8289	886	1563	2449
													Totals	**151,782**	**59,174**			**21,800**

1.2D + 1.0Di + 1.0Wi 240° | Gust Response Factor (Gh): 0.85 | Ice Importance Factor: 1.00
48.73 mph Wind with 0.85" Radial Ice | Wind Importance Factor (Iw): 1.00 | Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230	7.73	0.000	67.581	22.23	0.264	2.40	1.00	1.00	1.0	40.41	96.87	22.23	7034	2323	637	128	764
10	210	7.59	0.000	65.068	19.88	0.218	2.54	1.00	1.00	1.0	38.08	96.64	19.88	7259	2319	623	175	798
9	190	7.43	0.000	67.820	20.98	0.196	2.61	1.00	1.00	1.0	39.39	102.82	20.98	8871	3286	649	505	1154
8	170	7.26	0.000	72.228	22.14	0.182	2.66	1.00	1.00	1.0	41.81	111.06	22.14	11289	4559	685	1130	1815
7	150	7.07	0.000	77.759	25.61	0.174	2.68	1.00	1.00	1.0	47.91	128.60	25.61	14073	6075	773	1627	2400
6	130	6.86	0.000	81.778	24.38	0.165	2.72	1.00	1.00	1.0	47.16	128.17	24.38	13970	5817	747	1637	2384
5	110	6.62	0.000	78.482	20.03	0.144	2.79	1.00	1.00	1.0	47.39	132.45	20.03	14325	6282	745	1638	2384
4	90	6.35	0.000	76.261	18.48	0.128	2.86	1.00	1.00	0.9	43.50	124.22	18.48	13636	5647	670	1636	2306
3	70	6.02	0.000	85.071	18.66	0.130	2.85	1.00	1.00	0.9	48.53	138.07	18.66	14747	5739	707	1539	2246
2	45	5.49	0.000	137.693	23.86	0.128	2.85	1.00	1.00	0.9	78.28	223.32	23.86	22912	8840	1041	2058	3099
1	15	4.36	0.000	136.326	24.35	0.115	2.90	1.00	1.00	0.8	82.37	239.22	24.35	23666	8289	886	1563	2449
													Totals	**151,782**	**59,174**			**21,800**

1.2D + 1.0Di + 1.0Wi 300° | Gust Response Factor (Gh): 0.85 | Ice Importance Factor: 1.00
48.73 mph Wind with 0.85" Radial Ice | Wind Importance Factor (Iw): 1.00 | Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230	7.73	0.000	67.581	22.23	0.264	2.40	0.80	1.00	1.0	40.41	96.87	22.23	7034	2323	637	128	764
10	210	7.59	0.000	65.068	19.88	0.218	2.54	0.80	1.00	1.0	38.08	96.64	19.88	7259	2319	623	175	798
9	190	7.43	0.000	67.820	20.98	0.196	2.61	0.80	1.00	1.0	39.39	102.82	20.98	8871	3286	649	505	1154
8	170	7.26	0.000	72.228	22.14	0.182	2.66	0.80	1.00	1.0	41.81	111.06	22.14	11289	4559	685	1130	1815
7	150	7.07	0.000	77.759	25.61	0.174	2.68	0.80	1.00	1.0	47.91	128.60	25.61	14073	6075	773	1627	2400
6	130	6.86	0.000	81.778	24.38	0.165	2.72	0.80	1.00	1.0	47.16	128.17	24.38	13970	5817	747	1637	2384
5	110	6.62	0.000	78.482	20.03	0.144	2.79	0.80	1.00	1.0	47.39	132.45	20.03	14325	6282	745	1638	2384
4	90	6.35	0.000	76.261	18.48	0.128	2.86	0.80	1.00	0.9	43.50	124.22	18.48	13636	5647	670	1636	2306
3	70	6.02	0.000	85.071	18.66	0.130	2.85	0.80	1.00	0.9	48.53	138.07	18.66	14747	5739	707	1539	2246
2	45	5.49	0.000	137.693	23.86	0.128	2.85	0.80	1.00	0.9	78.28	223.32	23.86	22912	8840	1041	2058	3099
1	15	4.36	0.000	136.326	24.35	0.115	2.90	0.80	1.00	0.8	82.37	239.22	24.35	23666	8289	886	1563	2449
													Totals	**151,782**	**59,174**			**21,800**

SECTION FORCES

1.2D + 1.0Di + 1.0Wi 330° Gust Response Factor (Gh): 0.85 Ice Importance Factor: 1.00
48.73 mph Wind with 0.85" Radial Ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230	7.73	0.000	67.581	22.23	0.264	2.40	0.85	1.00	1.0	40.41	96.87	22.23	7034	2323	637	128	764
10	210	7.59	0.000	65.068	19.88	0.218	2.54	0.85	1.00	1.0	38.08	96.64	19.88	7259	2319	623	175	798
9	190	7.43	0.000	67.820	20.98	0.196	2.61	0.85	1.00	1.0	39.39	102.82	20.98	8871	3286	649	505	1154
8	170	7.26	0.000	72.228	22.14	0.182	2.66	0.85	1.00	1.0	41.81	111.06	22.14	11289	4559	685	1130	1815
7	150	7.07	0.000	77.759	25.61	0.174	2.68	0.85	1.00	1.0	47.91	128.60	25.61	14073	6075	773	1627	2400
6	130	6.86	0.000	81.778	24.38	0.165	2.72	0.85	1.00	1.0	47.16	128.17	24.38	13970	5817	747	1637	2384
5	110	6.62	0.000	78.482	20.03	0.144	2.79	0.85	1.00	1.0	47.39	132.45	20.03	14325	6282	745	1638	2384
4	90	6.35	0.000	76.261	18.48	0.128	2.86	0.85	1.00	0.9	43.50	124.22	18.48	13636	5647	670	1636	2306
3	70	6.02	0.000	85.071	18.66	0.130	2.85	0.85	1.00	0.9	48.53	138.07	18.66	14747	5739	707	1539	2246
2	45	5.49	0.000	137.693	23.86	0.128	2.85	0.85	1.00	0.9	78.28	223.32	23.86	22912	8840	1041	2058	3099
1	15	4.36	0.000	136.326	24.35	0.115	2.90	0.85	1.00	0.8	82.37	239.22	24.35	23666	8289	886	1563	2449
													Totals	**151,782**	**59,174**			**21,800**

1.0D + 1.0W Service Normal Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230	11.72	0.000	45.353	0.00	0.179	2.67	1.00	1.00	0.0	25.16	67.10	0.00	3927	0	669	82	751
10	210	11.50	0.000	45.187	0.00	0.153	2.76	1.00	1.00	0.0	24.73	68.26	0.00	4117	0	667	122	789
9	190	11.26	0.000	46.842	0.00	0.137	2.82	1.00	1.00	0.0	25.60	72.23	0.00	4654	0	691	342	1033
8	170	11.00	0.000	50.084	0.00	0.128	2.86	1.00	1.00	0.0	27.49	78.52	0.00	5608	0	734	616	1351
7	150	10.72	0.000	57.359	0.00	0.130	2.85	1.00	1.00	0.0	31.63	90.10	0.00	6665	0	821	849	1670
6	130	10.40	0.000	57.395	0.00	0.116	2.90	1.00	1.00	0.0	31.83	92.28	0.00	6794	0	815	857	1673
5	110	10.04	0.000	63.059	0.00	0.116	2.90	1.00	1.00	0.0	34.72	100.70	0.00	6703	0	859	846	1705
4	90	9.62	0.000	57.777	0.00	0.097	2.98	1.00	1.00	0.0	31.99	95.18	0.00	6658	0	779	839	1617
3	70	9.13	0.000	66.406	0.00	0.102	2.96	1.00	1.00	0.0	35.30	104.31	0.00	7506	0	809	802	1611
2	45	8.32	0.000	113.831	0.00	0.107	2.94	1.00	1.00	0.0	62.23	182.80	0.00	11727	0	1292	1096	2388
1	15	6.61	0.000	120.618	0.00	0.102	2.96	1.00	1.00	0.0	63.42	187.43	0.00	12815	0	1053	871	1924
													Totals	**77,173**	**0**			**16,512**

1.0D + 1.0W Service 60° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230	11.72	0.000	45.353	0.00	0.179	2.67	0.80	1.00	0.0	25.16	67.10	0.00	3927	0	669	82	751
10	210	11.50	0.000	45.187	0.00	0.153	2.76	0.80	1.00	0.0	24.73	68.26	0.00	4117	0	667	122	789
9	190	11.26	0.000	46.842	0.00	0.137	2.82	0.80	1.00	0.0	25.60	72.23	0.00	4654	0	691	342	1033
8	170	11.00	0.000	50.084	0.00	0.128	2.86	0.80	1.00	0.0	27.49	78.52	0.00	5608	0	734	616	1351
7	150	10.72	0.000	57.359	0.00	0.130	2.85	0.80	1.00	0.0	31.63	90.10	0.00	6665	0	821	849	1670
6	130	10.40	0.000	57.395	0.00	0.116	2.90	0.80	1.00	0.0	31.83	92.28	0.00	6794	0	815	857	1673
5	110	10.04	0.000	63.059	0.00	0.116	2.90	0.80	1.00	0.0	34.72	100.70	0.00	6703	0	859	846	1705
4	90	9.62	0.000	57.777	0.00	0.097	2.98	0.80	1.00	0.0	31.99	95.18	0.00	6658	0	779	839	1617
3	70	9.13	0.000	66.406	0.00	0.102	2.96	0.80	1.00	0.0	35.30	104.31	0.00	7506	0	809	802	1611
2	45	8.32	0.000	113.831	0.00	0.107	2.94	0.80	1.00	0.0	62.23	182.80	0.00	11727	0	1292	1096	2388
1	15	6.61	0.000	120.618	0.00	0.102	2.96	0.80	1.00	0.0	63.42	187.43	0.00	12815	0	1053	871	1924
													Totals	**77,173**	**0**			**16,512**

1.0D + 1.0W Service 90° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230	11.72	0.000	45.353	0.00	0.179	2.67	0.85	1.00	0.0	25.16	67.10	0.00	3927	0	669	82	751
10	210	11.50	0.000	45.187	0.00	0.153	2.76	0.85	1.00	0.0	24.73	68.26	0.00	4117	0	667	122	789
9	190	11.26	0.000	46.842	0.00	0.137	2.82	0.85	1.00	0.0	25.60	72.23	0.00	4654	0	691	342	1033
8	170	11.00	0.000	50.084	0.00	0.128	2.86	0.85	1.00	0.0	27.49	78.52	0.00	5608	0	734	616	1351
7	150	10.72	0.000	57.359	0.00	0.130	2.85	0.85	1.00	0.0	31.63	90.10	0.00	6665	0	821	849	1670
6	130	10.40	0.000	57.395	0.00	0.116	2.90	0.85	1.00	0.0	31.83	92.28	0.00	6794	0	815	857	1673
5	110	10.04	0.000	63.059	0.00	0.116	2.90	0.85	1.00	0.0	34.72	100.70	0.00	6703	0	859	846	1705
4	90	9.62	0.000	57.777	0.00	0.097	2.98	0.85	1.00	0.0	31.99	95.18	0.00	6658	0	779	839	1617
3	70	9.13	0.000	66.406	0.00	0.102	2.96	0.85	1.00	0.0	35.30	104.31	0.00	7506	0	809	802	1611
2	45	8.32	0.000	113.831	0.00	0.107	2.94	0.85	1.00	0.0	62.23	182.80	0.00	11727	0	1292	1096	2388
1	15	6.61	0.000	120.618	0.00	0.102	2.96	0.85	1.00	0.0	63.42	187.43	0.00	12815	0	1053	871	1924
													Totals	**77,173**	**0**			**16,512**

1.0D + 1.0W Service 120° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230	11.72	0.000	45.353	0.00	0.179	2.67	1.00	1.00	0.0	25.16	67.10	0.00	3927	0	669	82	751
10	210	11.50	0.000	45.187	0.00	0.153	2.76	1.00	1.00	0.0	24.73	68.26	0.00	4117	0	667	122	789
9	190	11.26	0.000	46.842	0.00	0.137	2.82	1.00	1.00	0.0	25.60	72.23	0.00	4654	0	691	342	1033
8	170	11.00	0.000	50.084	0.00	0.128	2.86	1.00	1.00	0.0	27.49	78.52	0.00	5608	0	734	616	1351
7	150	10.72	0.000	57.359	0.00	0.130	2.85	1.00	1.00	0.0	31.63	90.10	0.00	6665	0	821	849	1670

SECTION FORCES

1.0D + 1.0W Service 120° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
6	130	10.40	0.000	57.395	0.00	0.116	2.90	1.00	1.00	0.0	31.83	92.28	0.00	6794	0	815	857	1673
5	110	10.04	0.000	63.059	0.00	0.116	2.90	1.00	1.00	0.0	34.72	100.70	0.00	6703	0	859	846	1705
4	90	9.62	0.000	57.777	0.00	0.097	2.98	1.00	1.00	0.0	31.99	95.18	0.00	6658	0	779	839	1617
3	70	9.13	0.000	66.406	0.00	0.102	2.96	1.00	1.00	0.0	35.30	104.31	0.00	7506	0	809	802	1611
2	45	8.32	0.000	113.831	0.00	0.107	2.94	1.00	1.00	0.0	62.23	182.80	0.00	11727	0	1292	1096	2388
1	15	6.61	0.000	120.618	0.00	0.102	2.96	1.00	1.00	0.0	63.42	187.43	0.00	12815	0	1053	871	1924
													Totals	**77,173**	**0**			**16,512**

1.0D + 1.0W Service 180° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230	11.72	0.000	45.353	0.00	0.179	2.67	0.80	1.00	0.0	25.16	67.10	0.00	3927	0	669	82	751
10	210	11.50	0.000	45.187	0.00	0.153	2.76	0.80	1.00	0.0	24.73	68.26	0.00	4117	0	667	122	789
9	190	11.26	0.000	46.842	0.00	0.137	2.82	0.80	1.00	0.0	25.60	72.23	0.00	4654	0	691	342	1033
8	170	11.00	0.000	50.084	0.00	0.128	2.86	0.80	1.00	0.0	27.49	78.52	0.00	5608	0	734	616	1351
7	150	10.72	0.000	57.359	0.00	0.130	2.85	0.80	1.00	0.0	31.63	90.10	0.00	6665	0	821	849	1670
6	130	10.40	0.000	57.395	0.00	0.116	2.90	0.80	1.00	0.0	31.83	92.28	0.00	6794	0	815	857	1673
5	110	10.04	0.000	63.059	0.00	0.116	2.90	0.80	1.00	0.0	34.72	100.70	0.00	6703	0	859	846	1705
4	90	9.62	0.000	57.777	0.00	0.097	2.98	0.80	1.00	0.0	31.99	95.18	0.00	6658	0	779	839	1617
3	70	9.13	0.000	66.406	0.00	0.102	2.96	0.80	1.00	0.0	35.30	104.31	0.00	7506	0	809	802	1611
2	45	8.32	0.000	113.831	0.00	0.107	2.94	0.80	1.00	0.0	62.23	182.80	0.00	11727	0	1292	1096	2388
1	15	6.61	0.000	120.618	0.00	0.102	2.96	0.80	1.00	0.0	63.42	187.43	0.00	12815	0	1053	871	1924
													Totals	**77,173**	**0**			**16,512**

1.0D + 1.0W Service 210° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230	11.72	0.000	45.353	0.00	0.179	2.67	0.85	1.00	0.0	25.16	67.10	0.00	3927	0	669	82	751
10	210	11.50	0.000	45.187	0.00	0.153	2.76	0.85	1.00	0.0	24.73	68.26	0.00	4117	0	667	122	789
9	190	11.26	0.000	46.842	0.00	0.137	2.82	0.85	1.00	0.0	25.60	72.23	0.00	4654	0	691	342	1033
8	170	11.00	0.000	50.084	0.00	0.128	2.86	0.85	1.00	0.0	27.49	78.52	0.00	5608	0	734	616	1351
7	150	10.72	0.000	57.359	0.00	0.130	2.85	0.85	1.00	0.0	31.63	90.10	0.00	6665	0	821	849	1670
6	130	10.40	0.000	57.395	0.00	0.116	2.90	0.85	1.00	0.0	31.83	92.28	0.00	6794	0	815	857	1673
5	110	10.04	0.000	63.059	0.00	0.116	2.90	0.85	1.00	0.0	34.72	100.70	0.00	6703	0	859	846	1705
4	90	9.62	0.000	57.777	0.00	0.097	2.98	0.85	1.00	0.0	31.99	95.18	0.00	6658	0	779	839	1617
3	70	9.13	0.000	66.406	0.00	0.102	2.96	0.85	1.00	0.0	35.30	104.31	0.00	7506	0	809	802	1611
2	45	8.32	0.000	113.831	0.00	0.107	2.94	0.85	1.00	0.0	62.23	182.80	0.00	11727	0	1292	1096	2388
1	15	6.61	0.000	120.618	0.00	0.102	2.96	0.85	1.00	0.0	63.42	187.43	0.00	12815	0	1053	871	1924
													Totals	**77,173**	**0**			**16,512**

1.0D + 1.0W Service 240° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230	11.72	0.000	45.353	0.00	0.179	2.67	1.00	1.00	0.0	25.16	67.10	0.00	3927	0	669	82	751
10	210	11.50	0.000	45.187	0.00	0.153	2.76	1.00	1.00	0.0	24.73	68.26	0.00	4117	0	667	122	789
9	190	11.26	0.000	46.842	0.00	0.137	2.82	1.00	1.00	0.0	25.60	72.23	0.00	4654	0	691	342	1033
8	170	11.00	0.000	50.084	0.00	0.128	2.86	1.00	1.00	0.0	27.49	78.52	0.00	5608	0	734	616	1351
7	150	10.72	0.000	57.359	0.00	0.130	2.85	1.00	1.00	0.0	31.63	90.10	0.00	6665	0	821	849	1670
6	130	10.40	0.000	57.395	0.00	0.116	2.90	1.00	1.00	0.0	31.83	92.28	0.00	6794	0	815	857	1673
5	110	10.04	0.000	63.059	0.00	0.116	2.90	1.00	1.00	0.0	34.72	100.70	0.00	6703	0	859	846	1705
4	90	9.62	0.000	57.777	0.00	0.097	2.98	1.00	1.00	0.0	31.99	95.18	0.00	6658	0	779	839	1617
3	70	9.13	0.000	66.406	0.00	0.102	2.96	1.00	1.00	0.0	35.30	104.31	0.00	7506	0	809	802	1611
2	45	8.32	0.000	113.831	0.00	0.107	2.94	1.00	1.00	0.0	62.23	182.80	0.00	11727	0	1292	1096	2388
1	15	6.61	0.000	120.618	0.00	0.102	2.96	1.00	1.00	0.0	63.42	187.43	0.00	12815	0	1053	871	1924
													Totals	**77,173**	**0**			**16,512**

1.0D + 1.0W Service 300° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230	11.72	0.000	45.353	0.00	0.179	2.67	0.80	1.00	0.0	25.16	67.10	0.00	3927	0	669	82	751
10	210	11.50	0.000	45.187	0.00	0.153	2.76	0.80	1.00	0.0	24.73	68.26	0.00	4117	0	667	122	789
9	190	11.26	0.000	46.842	0.00	0.137	2.82	0.80	1.00	0.0	25.60	72.23	0.00	4654	0	691	342	1033
8	170	11.00	0.000	50.084	0.00	0.128	2.86	0.80	1.00	0.0	27.49	78.52	0.00	5608	0	734	616	1351
7	150	10.72	0.000	57.359	0.00	0.130	2.85	0.80	1.00	0.0	31.63	90.10	0.00	6665	0	821	849	1670
6	130	10.40	0.000	57.395	0.00	0.116	2.90	0.80	1.00	0.0	31.83	92.28	0.00	6794	0	815	857	1673
5	110	10.04	0.000	63.059	0.00	0.116	2.90	0.80	1.00	0.0	34.72	100.70	0.00	6703	0	859	846	1705
4	90	9.62	0.000	57.777	0.00	0.097	2.98	0.80	1.00	0.0	31.99	95.18	0.00	6658	0	779	839	1617
3	70	9.13	0.000	66.406	0.00	0.102	2.96	0.80	1.00	0.0	35.30	104.31	0.00	7506	0	809	802	1611
2	45	8.32	0.000	113.831	0.00	0.107	2.94	0.80	1.00	0.0	62.23	182.80	0.00	11727	0	1292	1096	2388

SECTION FORCES

1.0D + 1.0W Service 300° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
1	15	6.61	0.000	120.618	0.00	0.102	2.96	0.80	1.00	0.0	63.42	187.43	0.00	12815	0	1053	871	1924
													Totals	**77,173**	**0**			**16,512**

1.0D + 1.0W Service 330° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	230	11.72	0.000	45.353	0.00	0.179	2.67	0.85	1.00	0.0	25.16	67.10	0.00	3927	0	669	82	751
10	210	11.50	0.000	45.187	0.00	0.153	2.76	0.85	1.00	0.0	24.73	68.26	0.00	4117	0	667	122	789
9	190	11.26	0.000	46.842	0.00	0.137	2.82	0.85	1.00	0.0	25.60	72.23	0.00	4654	0	691	342	1033
8	170	11.00	0.000	50.084	0.00	0.128	2.86	0.85	1.00	0.0	27.49	78.52	0.00	5608	0	734	616	1351
7	150	10.72	0.000	57.359	0.00	0.130	2.85	0.85	1.00	0.0	31.63	90.10	0.00	6665	0	821	849	1670
6	130	10.40	0.000	57.395	0.00	0.116	2.90	0.85	1.00	0.0	31.83	92.28	0.00	6794	0	815	857	1673
5	110	10.04	0.000	63.059	0.00	0.116	2.90	0.85	1.00	0.0	34.72	100.70	0.00	6703	0	859	846	1705
4	90	9.62	0.000	57.777	0.00	0.097	2.98	0.85	1.00	0.0	31.99	95.18	0.00	6658	0	779	839	1617
3	70	9.13	0.000	66.406	0.00	0.102	2.96	0.85	1.00	0.0	35.30	104.31	0.00	7506	0	809	802	1611
2	45	8.32	0.000	113.831	0.00	0.107	2.94	0.85	1.00	0.0	62.23	182.80	0.00	11727	0	1292	1096	2388
1	15	6.61	0.000	120.618	0.00	0.102	2.96	0.85	1.00	0.0	63.42	187.43	0.00	12815	0	1053	871	1924
													Totals	**77,173**	**0**			**16,512**

EQUIVALENT LATERAL FORCE METHOD

Spectral Response Acceleration for Short Period (S_S):	0.21
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.05
Long-Period Transition Period (T_L – Seconds):	6
Importance Factor (I_e):	1.00
Site Coefficient F_a:	1.60
Site Coefficient F_v:	2.40
Response Modification Coefficient (R):	3.00
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.22
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.09
Seismic Response Coefficient (C_s):	0.04
Upper Limit C_S:	0.04
Lower Limit C_S:	0.03
Period based on Rayleigh Method (sec):	0.72
Redundancy Factor (p):	1.30
Seismic Force Distribution Exponent (k):	1.11
Total Unfactored Dead Load:	94.73 k
Seismic Base Shear (E):	4.90 k

SEISMIC FORCES

0.9D - 1.0Ev + 1.0Eh

Section/Appurtenance	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	Cvx	Horizontal Force (lb)	Vertical Force (lb)
11	230.00	3,927	1,659,582	0.087	424	3,357
10	210.00	4,117	1,572,538	0.082	402	3,520
9	190.00	4,654	1,590,764	0.083	407	3,980
8	170.00	5,608	1,693,768	0.088	433	4,795
7	150.00	6,665	1,751,467	0.091	448	5,699
6	130.00	6,794	1,522,670	0.080	389	5,809
5	110.00	6,703	1,247,590	0.065	319	5,731
4	90.00	6,658	991,342	0.052	254	5,692
3	70.00	7,506	845,234	0.044	216	6,418
2	45.00	11,727	807,925	0.042	207	10,026
1	15.00	12,815	260,256	0.014	67	10,956
Generic 8' Yagi	240.00	30	13,294	0.001	3	26
Generic 12' Omni	240.00	40	17,726	0.001	5	34
Dielectric DCR-L1	240.00	8	3,545	0.000	1	7
Generic 10' Omni	240.00	25	11,079	0.001	3	21
Generic Lightning Rod	240.00	10	4,431	0.000	1	9
Dielectric DCR-L1 w/ Radome	240.00	18	7,977	0.000	2	15
Generic Beacon	240.00	70	31,020	0.002	8	60
Generic Round Side Arm	240.00	375	166,178	0.009	43	321
Generic 8' Omni	236.40	50	21,788	0.001	6	43
Generic 10' Omni	235.80	50	21,726	0.001	6	43
Generic Round Side Arm	230.00	188	79,249	0.004	20	160
Generic Round Side Arm	223.00	188	76,572	0.004	20	160
Generic Flat Side Arm	223.00	188	76,572	0.004	20	160
Ericsson Radio 4449 B71 B85A	208.00	225	85,040	0.004	22	192
Ericsson Air6449 B41	207.60	312	117,670	0.006	30	267
Ericsson RRUS 4415 B25	202.00	138	50,488	0.003	13	118
Ericsson AIR 32 B66AA B2P	202.00	327	119,634	0.006	31	280
Generic Mount Reinforcement	202.00	600	219,512	0.012	56	513
Generic Round Sector Frame	202.00	900	329,268	0.017	84	769
RFS APXVAARR24_43-U-NA20	202.00	384	140,378	0.007	36	328
Generic 3' HP Dish	194.00	140	48,969	0.003	13	120
Generic 2' Std. Dish	193.30	28	9,755	0.000	2	24
Nokia 2.5G MAA - AAHC(64T64R)	187.80	311	104,855	0.006	27	266
Argus LLPX310R	187.70	86	28,929	0.002	7	73
RFS APXVSPP18-C-A20	187.60	114	38,415	0.002	10	97
Motorola DAP Vx	187.20	80	26,726	0.001	7	68
RFS APXV9ERR18-C-A20	187.00	62	20,818	0.001	5	53
Generic 24" x 24" Junction Box	184.40	20	6,612	0.000	2	17
Alcatel-Lucent 1900MHz RRH	181.70	264	85,855	0.004	22	226
Alcatel-Lucent 800 MHz RRH	180.10	159	51,202	0.003	13	136
Generic Round Sector Frame	180.00	2,100	675,840	0.035	173	1,795

Raycap DC9-48-60-24-8C-EV (Enclosure)	171.40	18	5,638	0.000	1	16
Raycap DC9-48-60-24-8C-EV (Enclosure)	171.40	18	5,638	0.000	1	16
Kaelus DBC0051F3V51-2	170.20	74	22,499	0.001	6	64
Ericsson RRUS 4478 B14	170.20	180	54,342	0.003	14	154
Raycap DC6-48-60-18-8F (23.5" Height)	170.10	40	12,088	0.001	3	34
Ericsson RRUS 4449 B5, B12	170.00	284	85,771	0.004	22	243
Ericsson RRUS 32 B66	170.00	159	48,020	0.002	12	136
Ericsson AIR 6419 N77G	167.00	210	62,179	0.003	16	180
Ericsson RRUS 8843 B2, B66A	165.00	216	63,105	0.003	16	185
Ericsson RRUS 32 B30	165.00	120	35,058	0.002	9	103
Ericsson RRUS 32 B2	165.00	106	30,968	0.002	8	91
CCI DMP65R-BU6DA	165.00	159	46,394	0.002	12	136
Quintel QD6616-7	165.00	390	113,939	0.006	29	333
Generic Round Sector Frame	165.00	900	262,936	0.014	67	769
Matsing MS-MBA-3.2-H4-L4 *	165.00	130	37,980	0.002	10	111
Ericsson AIR 6449 n77D	163.00	245	70,555	0.004	18	209
Commscope CBC78T-DS-43-2X	153.00	62	16,682	0.001	4	53
Samsung Outdoor CBRS 20W RRH	153.00	56	14,989	0.001	4	48
Samsung Outdoor CBRS 20W RRH –Clip-on Antenna	153.00	13	3,546	0.000	1	11
Samsung B5/B13 RRH-BR04C	153.00	211	56,653	0.003	14	180
Samsung B2/B66A RRH-BR049	153.00	253	68,016	0.004	17	216
Raycap RxxDC-3315-PF-48	153.00	43	11,497	0.001	3	37
Samsung MT6413-77A	153.00	172	46,177	0.002	12	147
Generic Mount Reinforcement	153.00	600	161,175	0.008	41	513
Commscope JAHH-65B-R3B	153.00	364	97,672	0.005	25	311
Generic Flat Light Sector Frame	153.00	2,400	644,699	0.034	165	2,052
Generic Small Side Lights	140.00	135	32,855	0.002	8	115
Generic 2' Yagi	134.20	5	1,161	0.000	0	4
Generic Flat Side Arm	132.00	188	42,742	0.002	11	160
Generic 10' Omni	127.80	25	5,498	0.000	1	21
Generic Round Side Arm	118.00	188	37,732	0.002	10	160
Generic Round Side Arm	108.00	188	34,194	0.002	9	160
Generic 4' Yagi	99.60	15	2,500	0.000	1	13
Generic Round Side Arm	98.00	188	30,693	0.002	8	160
Fujitsu TA08025-B604	95.10	192	30,349	0.002	8	164
Fujitsu TA08025-B605	95.10	225	35,621	0.002	9	192
Commscope RDIDC-9181-PF-48	94.10	22	3,427	0.000	1	19
JMA Wireless MX08FRO665-21	92.00	194	29,526	0.002	8	165
Generic Round Sector Frame	92.00	900	137,330	0.007	35	769
Generic Round Side Arm	80.00	188	24,493	0.001	6	160
Totals		**94,733**	**19,160,592**	**1.000**	**4,900**	**80,996**

1.2D + 1.0Ev + 1.0Eh

Section/Appurtenance	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	Cvx	Horizontal Force (lb)	Vertical Force (lb)
11	230.00	3,927	1,659,582	0.087	424	4,889
10	210.00	4,117	1,572,538	0.082	402	5,125
9	190.00	4,654	1,590,764	0.083	407	5,795
8	170.00	5,608	1,693,768	0.088	433	6,982
7	150.00	6,665	1,751,467	0.091	448	8,298
6	130.00	6,794	1,522,670	0.080	389	8,459
5	110.00	6,703	1,247,590	0.065	319	8,345
4	90.00	6,658	991,342	0.052	254	8,289
3	70.00	7,506	845,234	0.044	216	9,345
2	45.00	11,727	807,925	0.042	207	14,600
1	15.00	12,815	260,256	0.014	67	15,955
Generic 8' Yagi	240.00	30	13,294	0.001	3	37
Generic 12' Omni	240.00	40	17,726	0.001	5	50
Dielectric DCR-L1	240.00	8	3,545	0.000	1	10
Generic 10' Omni	240.00	25	11,079	0.001	3	31
Generic Lightning Rod	240.00	10	4,431	0.000	1	12
Dielectric DCR-L1 w/ Radome	240.00	18	7,977	0.000	2	22
Generic Beacon	240.00	70	31,020	0.002	8	87
Generic Round Side Arm	240.00	375	166,178	0.009	43	467
Generic 8' Omni	236.40	50	21,788	0.001	6	62
Generic 10' Omni	235.80	50	21,726	0.001	6	62
Generic Round Side Arm	230.00	188	79,249	0.004	20	233
Generic Round Side Arm	223.00	188	76,572	0.004	20	233
Generic Flat Side Arm	223.00	188	76,572	0.004	20	233
Ericsson Radio 4449 B71 B85A	208.00	225	85,040	0.004	22	280
Ericsson Air6449 B41	207.60	312	117,670	0.006	30	388
Ericsson RRUS 4415 B25	202.00	138	50,488	0.003	13	172
Ericsson AIR 32 B66AA B2P	202.00	327	119,634	0.006	31	407
Generic Mount Reinforcement	202.00	600	219,512	0.012	56	747
Generic Round Sector Frame	202.00	900	329,268	0.017	84	1,121
RFS APXVAARR24_43-U-NA20	202.00	384	140,378	0.007	36	478
Generic 3' HP Dish	194.00	140	48,969	0.003	13	174
Generic 2' Std. Dish	193.30	28	9,755	0.000	2	35
Nokia 2.5G MAA - AAHC(64T64R)	187.80	311	104,855	0.006	27	387
Argus LLPX310R	187.70	86	28,929	0.002	7	107
RFS APXVSPP18-C-A20	187.60	114	38,415	0.002	10	142
Motorola DAP Vx	187.20	80	26,726	0.001	7	99

RFS APXV9ERR18-C-A20	187.00	62	20,818	0.001	5	77
Generic 24" x 24" Junction Box	184.40	20	6,612	0.000	2	25
Alcatel-Lucent 1900MHz RRH	181.70	264	85,855	0.004	22	329
Alcatel-Lucent 800 MHz RRH	180.10	159	51,202	0.003	13	198
Generic Round Sector Frame	180.00	2,100	675,840	0.035	173	2,615
Raycap DC9-48-60-24-8C-EV (Enclosure)	171.40	18	5,638	0.000	1	23
Raycap DC9-48-60-24-8C-EV (Enclosure)	171.40	18	5,638	0.000	1	23
Kaelus DBC0051F3V51-2	170.20	74	22,499	0.001	6	93
Ericsson RRUS 4478 B14	170.20	180	54,342	0.003	14	224
Raycap DC6-48-60-18-8F (23.5" Height)	170.10	40	12,088	0.001	3	50
Ericsson RRUS 4449 B5, B12	170.00	284	85,771	0.004	22	354
Ericsson RRUS 32 B66	170.00	159	48,020	0.002	12	198
Ericsson AIR 6419 N77G	167.00	210	62,179	0.003	16	261
Ericsson RRUS 8843 B2, B66A	165.00	216	63,105	0.003	16	269
Ericsson RRUS 32 B30	165.00	120	35,058	0.002	9	149
Ericsson RRUS 32 B2	165.00	106	30,968	0.002	8	132
CCI DMP65R-BU6DA	165.00	159	46,394	0.002	12	198
Quintel QD6616-7	165.00	390	113,939	0.006	29	486
Generic Round Sector Frame	165.00	900	262,936	0.014	67	1,121
Matsing MS-MBA-3.2-H4-L4 *	165.00	130	37,980	0.002	10	162
Ericsson AIR 6449 n77D	163.00	245	70,555	0.004	18	305
Commscope CBC78T-DS-43-2X	153.00	62	16,682	0.001	4	77
Samsung Outdoor CBRS 20W RRH	153.00	56	14,989	0.001	4	69
Samsung Outdoor CBRS 20W RRH –Clip-on Antenna	153.00	13	3,546	0.000	1	16
Samsung B5/B13 RRH-BR04C	153.00	211	56,653	0.003	14	263
Samsung B2/B66A RRH-BR049	153.00	253	68,016	0.004	17	315
Raycap RxxDC-3315-PF-48	153.00	43	11,497	0.001	3	53
Samsung MT6413-77A	153.00	172	46,177	0.002	12	214
Generic Mount Reinforcement	153.00	600	161,175	0.008	41	747
Commscope JAHH-65B-R3B	153.00	364	97,672	0.005	25	453
Generic Flat Light Sector Frame	153.00	2,400	644,699	0.034	165	2,988
Generic Small Side Lights	140.00	135	32,855	0.002	8	168
Generic 2' Yagi	134.20	5	1,161	0.000	0	6
Generic Flat Side Arm	132.00	188	42,742	0.002	11	233
Generic 10' Omni	127.80	25	5,498	0.000	1	31
Generic Round Side Arm	118.00	188	37,732	0.002	10	233
Generic Round Side Arm	108.00	188	34,194	0.002	9	233
Generic 4' Yagi	99.60	15	2,500	0.000	1	19
Generic Round Side Arm	98.00	188	30,693	0.002	8	233
Fujitsu TA08025-B604	95.10	192	30,349	0.002	8	239
Fujitsu TA08025-B605	95.10	225	35,621	0.002	9	280
Commscope RDIDC-9181-PF-48	94.10	22	3,427	0.000	1	27
JMA Wireless MX08FRO665-21	92.00	194	29,526	0.002	8	241
Generic Round Sector Frame	92.00	900	137,330	0.007	35	1,121
Generic Round Side Arm	80.00	188	24,493	0.001	6	233
Totals		**94,733**	**19,160,592**	**1.000**	**4,900**	**117,944**

FORCE/STRESS SUMMARY

Section 1 – 0.0' to 30.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L PX - 10" DIA PIPE	-278.61	1.2D + 1.0W N	30.078	33	33	33	32.81	50.00	669.65	0.00	0.00	0	0	41	Member X
H PST - 3-1/2" DIA PIPE	-14.94	0.9D + 1.0W 330°	18.292	100	100	100	163.80	50.00	22.56	0.00	42.31	2	0	66	Member X
D PST - 3" DIA PIPE	-29.49	1.2D + 1.0W 210°	36.164	33	33	33	0.00	0.00	41.40	0.00	60.65	3	0	71	User Input

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L PX - 10" DIA PIPE	217.81	0.9D + 1.0W 60°	50.0	65	724.50	0.00	0.00		0	0	30	Member
H PST - 3-1/2" DIA PIPE	15.63	1.2D + 1.0W 330°	50.0	65	120.60	0.00	33.93	0.00	2	0	46	Bolt Bear
D PST - 3" DIA PIPE	27.43	1.2D + 1.0W 210°	50.0	65	100.35	0.00	52.65	0.00	3	0	52	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	258.65	0.9D + 1.0W 60°	681.46	15	12	1" A193-B7
Bot Compression	322.52	1.2D + 1.0W N	763.24	1	0	

Section 2 – 30.0' to 60.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L PX - 10" DIA PIPE	-229.06	1.2D + 1.0W N	30.078	33	33	33	32.81	50.00	669.65	0.00	0.00	0	0	34	Member X
H PST - 3" DIA PIPE	-14.52	0.9D + 1.0W 330°	16.417	100	100	100	169.83	50.00	17.47	0.00	40.44	2	0	83	Member X
D PST - 3" DIA PIPE	-32.62	1.2D + 1.0W 330°	35.153	33	33	33	120.01	50.00	34.98	0.00	60.65	3	0	93	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L PX - 10" DIA PIPE	175.39	0.9D + 1.0W 60°	50.0	65	724.50	0.00	0.00		0	0	24	Member
H PST - 3" DIA PIPE	15.30	1.2D + 1.0W 330°	50.0	65	100.35	0.00	32.43	0.00	2	0	47	Bolt Bear
D PST - 3" DIA PIPE	30.21	0.9D + 1.0W 330°	50.0	65	100.35	0.00	52.65	0.00	3	0	57	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	216.26	0.9D + 1.0W 60°	654.20	33	12	1 A325

Section 3 – 60.0' to 80.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L PX - 10" DIA PIPE	-195.07	1.2D + 1.0W N	20.052	50	50	50	33.14	50.00	668.58	0.00	0.00	0	0	29	Member X
H PST - 3" DIA PIPE	-13.18	1.2D + 1.0W 330°	15.167	100	100	100	156.89	50.00	20.47	0.00	40.44	2	0	64	Member X
D PST - 3" DIA PIPE	-23.93	1.2D + 1.0W 330°	25.885	50	50	50	133.89	50.00	28.10	0.00	50.54	3	0	85	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L PX - 10" DIA PIPE	148.15	0.9D + 1.0W 60°	50.0	65	724.50	0.00	0.00		0	0	20	Member
H PST - 3" DIA PIPE	14.03	1.2D + 1.0W 330°	50.0	65	100.35	0.00	32.43	0.00	2	0	43	Bolt Bear
D PST - 3" DIA PIPE	21.99	1.2D + 1.0W 330°	50.0	65	100.35	0.00	43.80	0.00	3	0	50	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	173.91	0.9D + 1.0W 60°	654.20	27	12	1 A325

Section 4 – 80.0' to 100.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L PX - 8" DIA PIPE	-162.19	1.2D + 1.0W N	20.059	50	50	50	41.79	50.00	506.95	0.00	0.00	0	0	31	Member X
H PST - 3" DIA PIPE	-12.30	0.9D + 1.0W 210°	13.839	100	100	100	143.16	50.00	24.58	0.00	40.44	2	0	50	Member X
D PST - 3" DIA PIPE	-23.11	1.2D + 1.0W 330°	25.112	50	50	50	129.89	50.00	29.86	0.00	50.54	3	0	77	Member X

FORCE/STRESS SUMMARY

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L PX - 8" DIA PIPE	120.39	0.9D + 1.0W 60°	50.0	65	576.00	0.00	0.00		0	0	20	Member
H PST - 3" DIA PIPE	12.81	1.2D + 1.0W 330°	50.0	65	100.35	0.00	32.43	0.00	2	0	39	Bolt Bear
D PST - 3" DIA PIPE	21.64	0.9D + 1.0W 330°	50.0	65	100.35	0.00	43.80	0.00	3	0	49	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	146.77	0.9D + 1.0W 60°	654.20	22	12	1 A325

FORCE/STRESS SUMMARY

Section 5 – 100.0' to 120.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L PX - 8" DIA PIPE	-129.03	1.2D + 1.0W N	20.052	50	50	50	41.78	50.00	507.00	0.00	0.00	0	0	25	Member X
H PST - 2-1/2" DIA PIPE	-10.79	1.2D + 1.0W 330°	12.589	100	100	100	159.52	50.00	15.13	0.00	38.00	2	0	71	Member X
D PST - 2-1/2" DIA PIPE	-22.17	1.2D + 1.0W 330°	24.332	50	50	50	0.00	0.00	28.20	0.00	47.50	3	0	78	User Input

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L PX - 8" DIA PIPE	93.35	0.9D + 1.0W 60°	50.0	65	576.00	0.00	0.00		0	0	16	Member
H PST - 2-1/2" DIA PIPE	11.34	1.2D + 1.0W 210°	50.0	65	76.68	0.00	30.48	0.00	2	0	37	Bolt Bear
D PST - 2-1/2" DIA PIPE	20.74	0.9D + 1.0W 330°	50.0	65	76.68	0.00	41.17	0.00	3	0	50	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	119.10	0.9D + 1.0W 60°	436.14	27	8	1 A325

Section 6 – 120.0' to 140.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L PX - 8" DIA PIPE	-112.56	1.2D + 1.0W N	10.026	100	100	100	41.78	50.00	507.00	0.00	0.00	0	0	22	Member X
H PST - 2-1/2" DIA PIPE	-9.91	0.9D + 1.0W 210°	11.964	100	100	100	151.60	50.00	16.75	0.00	31.67	2	0	59	Member X
D PST - 3" DIA PIPE	-14.32	1.2D + 1.0W 330°	16.081	100	100	100	166.36	50.00	18.20	0.00	50.54	3	0	78	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L PX - 8" DIA PIPE	76.16	1.2D + 1.0W 60°	50.0	65	576.00	0.00	0.00		0	0	13	Member
H PST - 2-1/2" DIA PIPE	10.70	1.2D + 1.0W 330°	50.0	65	76.68	0.00	25.33	0.00	2	0	42	Bolt Bear
D PST - 3" DIA PIPE	13.23	1.2D + 1.0W 330°	50.0	65	100.35	0.00	43.80	0.00	3	0	30	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	92.25	0.9D + 1.0W 60°	436.14	21	8	1 A325

Section 7 – 140.0' to 160.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L PX - 8" DIA PIPE	-81.57	1.2D + 1.0W N	10.026	100	100	100	41.78	50.00	507.00	0.00	0.00	0	0	16	Member X
H PST - 2-1/2" DIA PIPE	-8.79	0.9D + 1.0W 330°	10.714	100	100	100	135.76	50.00	20.89	0.00	31.67	2	0	42	Member X
D PST - 2-1/2" DIA PIPE	-13.15	1.2D + 1.0W 330°	15.123	100	100	100	0.00	0.00	23.40	0.00	47.50	3	0	56	User Input

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L PX - 8" DIA PIPE	54.57	0.9D + 1.0W 60°	50.0	65	576.00	0.00	0.00		0	0	9	Member
H PST - 2-1/2" DIA PIPE	9.24	1.2D + 1.0W 330°	50.0	65	76.68	0.00	25.33	0.00	2	0	36	Bolt Bear
D PST - 2-1/2" DIA PIPE	12.15	1.2D + 1.0W 330°	50.0	65	76.68	0.00	41.17	0.00	3	0	29	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	66.50	0.9D + 1.0W 60°	436.14	15	8	1 A325

Section 8 – 160.0' to 180.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L PX - 8" DIA PIPE	-53.19	1.2D + 1.0W N	10.026	100	100	100	41.78	50.00	507.00	0.00	0.00	0	0	10	Member X
H PST - 2-1/2" DIA PIPE	-5.92	0.9D + 1.0W 330°	9.464	100	100	100	119.92	50.00	26.77	0.00	31.67	2	0	22	Member X
D PST - 2-1/2" DIA PIPE	-9.58	1.2D + 1.0W 330°	14.209	100	100	100	180.06	50.00	11.87	0.00	47.50	3	0	80	Member X

FORCE/STRESS SUMMARY

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L PX - 8" DIA PIPE	35.23	0.9D + 1.0W 60°	50.0	65	576.00	0.00	0.00		0	0	6	Member
H PST - 2-1/2" DIA PIPE	6.37	1.2D + 1.0W 330°	50.0	65	76.68	0.00	25.33	0.00	2	0	25	Bolt Bear
D PST - 2-1/2" DIA PIPE	8.78	1.2D + 1.0W 330°	50.0	65	76.68	0.00	41.17	0.00	3	0	21	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	43.64	0.9D + 1.0W 60°	436.14	10	8	1 A325

Section 9 – 180.0' to 200.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L PX - 8" DIA PIPE	-30.55	1.2D + 1.0W N	10.026	100	100	100	41.78	50.00	507.00	0.00	0.00	0	0	6	Member X
H PST - 2" DIA PIPE	-4.65	0.9D + 1.0W 210°	8.214	100	100	100	125.24	50.00	15.41	0.00	24.02	2	0	30	Member X
D PST - 2-1/2" DIA PIPE	-7.65	1.2D + 1.0W 330°	13.351	100	100	100	169.18	50.00	13.45	0.00	47.50	3	0	56	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L PX - 8" DIA PIPE	17.29	1.2D + 1.0W 60°	50.0	65	576.00	0.00	0.00		0	0	3	Member
H PST - 2" DIA PIPE	4.96	1.2D + 1.0W 330°	50.0	65	48.15	0.00	19.22	0.00	2	0	25	Bolt Bear
D PST - 2-1/2" DIA PIPE	7.03	1.2D + 1.0W 330°	50.0	65	76.68	0.00	41.17	0.00	3	0	17	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	25.72	0.9D + 1.0W 60°	436.14	6	8	1 A325

Section 10 – 200.0' to 220.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L PX - 8" DIA PIPE	-14.31	1.2D + 1.0W N	10.021	100	100	100	41.75	50.00	507.06	0.00	0.00	0	0	2	Member X
H PST - 2" DIA PIPE	-2.17	1.2D + 1.0W 330°	7.026	100	100	100	107.13	50.00	20.80	0.00	24.02	2	0	10	Member X
D PST - 2-1/2" DIA PIPE	-4.38	1.2D + 1.0W 330°	12.558	100	100	100	159.12	50.00	15.20	0.00	47.50	3	0	28	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L PX - 8" DIA PIPE	7.23	1.2D + 1.0W 60°	50.0	65	576.00	0.00	0.00		0	0	1	Member
H PST - 2" DIA PIPE	2.31	1.2D + 1.0W 210°	50.0	65	48.15	0.00	19.22	0.00	2	0	12	Bolt Bear
D PST - 2-1/2" DIA PIPE	3.74	1.2D + 1.0W 210°	50.0	65	76.68	0.00	41.17	0.00	3	0	9	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	11.77	0.9D + 1.0W 60°	436.14	3	8	1 A325

Section 11 – 220.0' to 240.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L PX - 8" DIA PIPE	-5.34	1.2D + 1.0W N	6.678	100	100	100	27.82	50.00	544.30	0.00	0.00	0	0	0	Member X
H PST - 2" DIA PIPE	-1.31	1.2D + 1.0W 330°	6.13	100	100	100	93.47	50.00	25.42	0.00	24.02	2	0	5	Member X
D PST - 2" DIA PIPE	-2.40	1.2D + 1.0W 330°	9.288	100	100	100	141.61	50.00	12.05	0.00	36.04	3	0	19	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L PX - 8" DIA PIPE	0.16	1.2D + 1.0W N	50.0	65	576.00	0.00	0.00		0	0	0	Member
H PST - 2" DIA PIPE	1.42	1.2D + 1.0W 60°	50.0	65	48.15	0.00	19.22	0.00	2	0	7	Bolt Bear
D PST - 2" DIA PIPE	1.88	1.2D + 1.0W 120°	50.0	65	48.15	0.00	31.23	0.00	3	0	6	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	4.08	0.9D + 1.0W 60°	436.14	1	8	1 A325

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	80.00	0.0362	-0.0020	0.0339	0.0339
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	100.00	0.0494	-0.0025	0.0439	0.044
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	120.00	0.066	-0.0028	0.0472	0.0472
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	130.00	0.0741	-0.0028	0.0464	0.0464
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	140.00	0.0825	-0.0030	0.0499	0.0499
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	150.00	0.0914	-0.0032	0.0517	0.0517
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	160.00	0.1003	-0.0031	0.0509	0.0509
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	170.00	0.1092	-0.0032	0.0511	0.0511
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	180.00	0.1181	-0.0032	0.0517	0.0517
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	190.00	0.1272	-0.0033	0.0517	0.0517
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	200.00	0.1361	-0.0032	0.0506	0.0507
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	210.00	0.1448	-0.0032	0.0495	0.0496
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	220.00	0.1535	-0.0032	0.0497	0.0497
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	226.67	0.1592	-0.0031	0.0494	0.0494
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	233.33	0.1649	0.0026	0.0486	0.0486
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	240.00	0.1705	-0.0031	0.0485	0.0486
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	80.00	0.0368	0.0028	0.0339	0.034
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	100.00	0.0501	0.0038	0.0435	0.0437
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	120.00	0.0669	0.0041	0.0472	0.0474
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	130.00	0.075	0.0040	0.0461	0.0462
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	140.00	0.0833	0.0043	0.0496	0.0498
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	150.00	0.0923	0.0045	0.0516	0.0518
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	160.00	0.1013	0.0044	0.0506	0.0507
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	170.00	0.1101	0.0045	0.0508	0.0508
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	180.00	0.1191	0.0046	0.0516	0.0518
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	190.00	0.1282	0.0046	0.0514	0.0515
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	200.00	0.137	0.0045	0.0504	0.0505
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	210.00	0.1456	0.0045	0.0495	0.0495
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	220.00	0.1542	0.0046	0.0495	0.0495
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	226.67	0.1599	0.0046	0.0492	0.0492
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	233.33	0.1656	0.0046	0.0485	0.0485
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	240.00	0.1712	0.0046	0.0479	0.0481
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	80.00	0.0365	0.0028	0.0341	0.0342
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	100.00	0.0498	0.0038	0.0435	0.0437
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	120.00	0.0664	0.0041	0.0470	0.0472
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	130.00	0.0745	0.0041	0.0459	0.0461
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	140.00	0.0828	0.0043	0.0495	0.0497
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	150.00	0.0917	0.0045	0.0514	0.0516
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	160.00	0.1006	0.0045	0.0501	0.0503
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	170.00	0.1094	0.0045	0.0501	0.0502
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	180.00	0.1183	0.0046	0.0511	0.0513
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	190.00	0.1272	0.0046	0.0510	0.0511
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	200.00	0.136	0.0046	0.0498	0.0499
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	210.00	0.1445	0.0046	0.0490	0.049
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	220.00	0.153	0.0046	0.0489	0.0489
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	226.67	0.1587	0.0046	0.0486	0.0486
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	233.33	0.1643	0.0046	0.0479	0.0481
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	240.00	0.1699	0.0046	0.0475	0.0477
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	80.00	0.036	-0.0020	0.0336	0.0337
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	100.00	0.0491	-0.0025	0.0435	0.0436
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	120.00	0.0656	-0.0027	0.0467	0.0468
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	130.00	0.0736	-0.0027	0.0458	0.0459
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	140.00	0.0818	-0.0029	0.0492	0.0493
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	150.00	0.0907	-0.0031	0.0511	0.0511
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	160.00	0.0995	-0.0030	0.0501	0.0502
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	170.00	0.1082	-0.0030	0.0501	0.0502
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	180.00	0.117	-0.0031	0.0509	0.051
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	190.00	0.1259	-0.0031	0.0509	0.051
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	200.00	0.1347	-0.0030	0.0496	0.0496

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	210.00	0.1433	-0.0030	0.0487	0.0488
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	220.00	0.1518	-0.0030	0.0487	0.0488
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	226.67	0.1574	-0.0029	0.0485	0.0485
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	233.33	0.163	-0.0029	0.0478	0.0479
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	240.00	0.1686	-0.0028	0.0476	0.0477
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	80.00	0.036	0.0014	0.0335	0.0335
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	100.00	0.0491	0.0016	0.0437	0.0437
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	120.00	0.0656	0.0018	0.0466	0.0466
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	130.00	0.0736	0.0018	0.0458	0.0458
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	140.00	0.0819	0.0020	0.0492	0.0492
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	150.00	0.0907	0.0021	0.0510	0.051
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	160.00	0.0995	0.0020	0.0502	0.0502
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	170.00	0.1083	0.0020	0.0502	0.0502
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	180.00	0.1171	0.0021	0.0509	0.0509
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	190.00	0.126	0.0021	0.0509	0.0509
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	200.00	0.1348	0.0020	0.0497	0.0497
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	210.00	0.1434	0.0019	0.0489	0.0489
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	220.00	0.1519	0.0019	0.0488	0.0488
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	226.67	0.1575	0.0019	0.0485	0.0485
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	233.33	0.1631	-0.0017	0.0478	0.0478
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	240.00	0.1686	0.0018	0.0477	0.0477
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	80.00	0.0367	-0.0028	0.0342	0.0343
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	100.00	0.0501	-0.0038	0.0437	0.0439
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	120.00	0.0667	-0.0041	0.0472	0.0474
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	130.00	0.0748	-0.0041	0.0461	0.0463
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	140.00	0.0832	-0.0043	0.0497	0.0499
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	150.00	0.0922	-0.0045	0.0517	0.0519
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	160.00	0.1011	-0.0045	0.0504	0.0506
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	170.00	0.1099	-0.0045	0.0503	0.0505
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	180.00	0.1188	-0.0046	0.0514	0.0516
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	190.00	0.1279	-0.0046	0.0512	0.0513
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	200.00	0.1366	-0.0046	0.0502	0.0503
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	210.00	0.1452	-0.0046	0.0492	0.0492
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	220.00	0.1537	-0.0046	0.0491	0.0492
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	226.67	0.1594	-0.0046	0.0489	0.0489
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	233.33	0.1651	-0.0046	0.0480	0.0482
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	240.00	0.1706	-0.0046	0.0478	0.048
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	80.00	0.0369	-0.0033	0.0343	0.0344
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	100.00	0.0504	-0.0044	0.0436	0.0438
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	120.00	0.0671	-0.0047	0.0474	0.0476
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	130.00	0.0752	-0.0047	0.0461	0.0464
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	140.00	0.0836	-0.0050	0.0498	0.05
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	150.00	0.0926	-0.0052	0.0518	0.0521
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	160.00	0.1016	-0.0052	0.0505	0.0507
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	170.00	0.1105	-0.0052	0.0506	0.0506
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	180.00	0.1194	-0.0053	0.0516	0.0519
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	190.00	0.1285	-0.0054	0.0514	0.0515
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	200.00	0.1373	-0.0053	0.0505	0.0506
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	210.00	0.1459	-0.0053	0.0495	0.0496
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	220.00	0.1544	-0.0053	0.0494	0.0495
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	226.67	0.1602	-0.0053	0.0491	0.0491
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	233.33	0.1658	-0.0053	0.0483	0.0486
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	240.00	0.1715	-0.0053	0.0480	0.0481
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	80.00	0.0366	-0.0028	0.0339	0.034
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	100.00	0.0499	-0.0038	0.0434	0.0436
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	120.00	0.0666	-0.0041	0.0471	0.0473
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	130.00	0.0747	-0.0040	0.0462	0.0462
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	140.00	0.0831	-0.0043	0.0496	0.0498
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	150.00	0.0921	-0.0045	0.0516	0.0518

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	160.00	0.101	-0.0044	0.0507	0.0508
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	170.00	0.1099	-0.0045	0.0510	0.051
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	180.00	0.1188	-0.0046	0.0516	0.0518
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	190.00	0.1279	-0.0046	0.0516	0.0517
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	200.00	0.1368	-0.0045	0.0507	0.0507
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	210.00	0.1454	-0.0045	0.0497	0.0497
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	220.00	0.1541	-0.0046	0.0497	0.0497
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	226.67	0.1598	-0.0046	0.0494	0.0494
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	233.33	0.1655	-0.0046	0.0486	0.0488
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	240.00	0.1712	-0.0046	0.0483	0.0483
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	80.00	0.0359	0.0014	0.0338	0.0338
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	100.00	0.0491	-0.0017	0.0442	0.0442
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	120.00	0.0657	0.0018	0.0469	0.047
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	130.00	0.0737	-0.0018	0.0463	0.0463
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	140.00	0.0821	0.0020	0.0499	0.0499
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	150.00	0.0911	0.0021	0.0516	0.0517
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	160.00	0.1	0.0020	0.0507	0.0508
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	170.00	0.1089	-0.0021	0.0510	0.051
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	180.00	0.1179	0.0021	0.0518	0.0518
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	190.00	0.127	0.0021	0.0519	0.0519
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	200.00	0.1359	-0.0021	0.0507	0.0508
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	210.00	0.1446	-0.0020	0.0499	0.0499
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	220.00	0.1533	-0.0019	0.0498	0.0498
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	226.67	0.1591	-0.0019	0.0496	0.0496
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	233.33	0.1648	0.0018	0.0487	0.0487
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	240.00	0.1704	-0.0018	0.0487	0.0488
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	80.00	0.0091	-0.0007	0.0103	0.0103
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	100.00	0.0131	-0.0009	0.0138	0.0138
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	120.00	0.0185	-0.0011	0.0158	0.0158
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	130.00	0.0212	-0.0011	0.0158	0.0158
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	140.00	0.0241	-0.0012	0.0172	0.0172
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	150.00	0.0272	-0.0013	0.0182	0.0182
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	160.00	0.0304	-0.0013	0.0184	0.0184
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	170.00	0.0336	-0.0013	0.0187	0.0187
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	180.00	0.0368	-0.0013	0.0188	0.0188
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	190.00	0.0401	-0.0013	0.0189	0.0189
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	200.00	0.0434	-0.0013	0.0190	0.019
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	210.00	0.0467	-0.0013	0.0188	0.0188
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	220.00	0.0499	-0.0013	0.0185	0.0185
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	226.67	0.052	-0.0013	0.0182	0.0182
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	233.33	0.0541	0.0006	0.0178	0.0178
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	240.00	0.0562	-0.0013	0.0177	0.0177
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	80.00	0.0091	0.0006	0.0103	0.0103
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	100.00	0.0131	0.0008	0.0138	0.0138
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	120.00	0.0184	0.0009	0.0158	0.0158
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	130.00	0.0212	0.0010	0.0158	0.0158
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	140.00	0.0241	0.0010	0.0172	0.0172
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	150.00	0.0272	0.0011	0.0182	0.0182
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	160.00	0.0303	0.0011	0.0184	0.0184
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	170.00	0.0335	0.0011	0.0187	0.0187
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	180.00	0.0368	0.0011	0.0188	0.0188
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	190.00	0.0401	0.0012	0.0188	0.0189
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	200.00	0.0434	0.0012	0.0190	0.019
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	210.00	0.0467	0.0012	0.0189	0.0189
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	220.00	0.0499	0.0011	0.0185	0.0185
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	226.67	0.052	0.0011	0.0182	0.0182
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	233.33	0.0541	0.0011	0.0178	0.0178
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	240.00	0.0561	0.0011	0.0177	0.0177
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	80.00	0.0091	0.0006	0.0102	0.0103

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	100.00	0.0131	0.0008	0.0137	0.0138
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	120.00	0.0185	0.0009	0.0157	0.0157
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	130.00	0.0212	0.0010	0.0158	0.0158
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	140.00	0.0241	0.0010	0.0172	0.0172
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	150.00	0.0272	0.0011	0.0181	0.0182
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	160.00	0.0304	0.0011	0.0183	0.0183
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	170.00	0.0336	0.0011	0.0186	0.0186
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	180.00	0.0368	0.0011	0.0187	0.0187
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	190.00	0.0401	0.0012	0.0189	0.0189
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	200.00	0.0434	0.0012	0.0189	0.0189
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	210.00	0.0467	0.0012	0.0188	0.0188
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	220.00	0.0499	0.0011	0.0184	0.0184
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	226.67	0.052	0.0011	0.0182	0.0182
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	233.33	0.0541	0.0011	0.0177	0.0178
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	240.00	0.0562	0.0011	0.0176	0.0176
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	80.00	0.0091	-0.0007	0.0103	0.0103
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	100.00	0.0131	-0.0009	0.0138	0.0138
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	120.00	0.0185	-0.0011	0.0158	0.0158
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	130.00	0.0212	-0.0011	0.0158	0.0158
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	140.00	0.0241	-0.0012	0.0172	0.0172
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	150.00	0.0272	-0.0013	0.0182	0.0182
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	160.00	0.0304	-0.0013	0.0184	0.0184
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	170.00	0.0336	-0.0013	0.0187	0.0187
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	180.00	0.0368	-0.0013	0.0188	0.0188
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	190.00	0.0401	-0.0013	0.0189	0.0189
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	200.00	0.0434	-0.0013	0.0190	0.019
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	210.00	0.0467	-0.0013	0.0188	0.0188
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	220.00	0.0499	-0.0013	0.0185	0.0185
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	226.67	0.052	-0.0013	0.0182	0.0182
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	233.33	0.0541	-0.0013	0.0178	0.0178
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	240.00	0.0562	-0.0013	0.0177	0.0177
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	80.00	0.0091	0.0006	0.0103	0.0103
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	100.00	0.0131	0.0008	0.0138	0.0138
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	120.00	0.0184	0.0009	0.0158	0.0158
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	130.00	0.0212	0.0010	0.0158	0.0158
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	140.00	0.0241	0.0010	0.0172	0.0172
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	150.00	0.0272	0.0011	0.0182	0.0182
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	160.00	0.0303	0.0011	0.0184	0.0184
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	170.00	0.0335	0.0011	0.0187	0.0187
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	180.00	0.0368	0.0011	0.0188	0.0188
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	190.00	0.0401	0.0012	0.0188	0.0189
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	200.00	0.0434	0.0012	0.0190	0.019
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	210.00	0.0467	0.0012	0.0189	0.0189
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	220.00	0.0499	0.0011	0.0185	0.0185
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	226.67	0.052	0.0011	0.0182	0.0182
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	233.33	0.0541	-0.0011	0.0178	0.0178
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	240.00	0.0561	0.0011	0.0177	0.0177
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	80.00	0.0091	0.0006	0.0102	0.0103
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	100.00	0.0131	0.0008	0.0137	0.0138
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	120.00	0.0185	0.0009	0.0157	0.0157
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	130.00	0.0212	0.0010	0.0158	0.0158
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	140.00	0.0241	0.0010	0.0172	0.0172
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	150.00	0.0272	0.0011	0.0181	0.0182
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	160.00	0.0304	0.0011	0.0183	0.0183
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	170.00	0.0336	0.0011	0.0186	0.0186
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	180.00	0.0368	0.0011	0.0187	0.0187
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	190.00	0.0401	0.0012	0.0189	0.0189
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	200.00	0.0434	0.0012	0.0189	0.0189
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	210.00	0.0467	0.0012	0.0188	0.0188

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	220.00	0.0499	0.0011	0.0184	0.0184
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	226.67	0.052	0.0011	0.0182	0.0182
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	233.33	0.0541	-0.0011	0.0177	0.0178
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	240.00	0.0562	0.0011	0.0176	0.0176
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	80.00	0.0091	-0.0007	0.0103	0.0103
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	100.00	0.0131	-0.0009	0.0138	0.0138
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	120.00	0.0185	-0.0011	0.0158	0.0158
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	130.00	0.0212	-0.0011	0.0158	0.0158
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	140.00	0.0241	-0.0012	0.0172	0.0172
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	150.00	0.0272	-0.0013	0.0182	0.0182
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	160.00	0.0304	-0.0013	0.0184	0.0184
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	170.00	0.0336	-0.0013	0.0187	0.0187
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	180.00	0.0368	-0.0013	0.0188	0.0188
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	190.00	0.0401	-0.0013	0.0189	0.0189
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	200.00	0.0434	-0.0013	0.0190	0.019
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	210.00	0.0467	-0.0013	0.0188	0.0188
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	220.00	0.0499	-0.0013	0.0185	0.0185
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	226.67	0.052	-0.0013	0.0182	0.0182
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	233.33	0.0541	-0.0013	0.0177	0.0177
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	240.00	0.0562	-0.0013	0.0177	0.0177
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	80.00	0.0091	0.0006	0.0103	0.0103
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	100.00	0.0131	0.0008	0.0138	0.0138
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	120.00	0.0184	0.0009	0.0158	0.0158
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	130.00	0.0212	0.0010	0.0158	0.0158
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	140.00	0.0241	0.0010	0.0172	0.0172
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	150.00	0.0272	0.0011	0.0182	0.0182
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	160.00	0.0303	0.0011	0.0184	0.0184
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	170.00	0.0335	0.0011	0.0187	0.0187
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	180.00	0.0368	0.0011	0.0188	0.0188
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	190.00	0.0401	0.0012	0.0188	0.0189
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	200.00	0.0434	0.0012	0.0190	0.019
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	210.00	0.0467	0.0012	0.0189	0.0189
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	220.00	0.0499	0.0011	0.0185	0.0185
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	226.67	0.052	0.0011	0.0182	0.0182
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	233.33	0.0541	0.0011	0.0176	0.0177
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	240.00	0.0561	0.0011	0.0177	0.0177
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	80.00	0.0091	0.0006	0.0102	0.0103
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	100.00	0.0131	0.0008	0.0137	0.0138
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	120.00	0.0185	0.0009	0.0157	0.0157
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	130.00	0.0212	0.0010	0.0158	0.0158
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	140.00	0.0241	0.0010	0.0172	0.0172
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	150.00	0.0272	0.0011	0.0181	0.0182
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	160.00	0.0304	0.0011	0.0183	0.0183
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	170.00	0.0336	0.0011	0.0186	0.0186
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	180.00	0.0368	0.0011	0.0187	0.0187
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	190.00	0.0401	0.0012	0.0189	0.0189
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	200.00	0.0434	0.0012	0.0189	0.0189
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	210.00	0.0467	0.0012	0.0188	0.0188
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	220.00	0.0499	0.0011	0.0184	0.0184
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	226.67	0.052	0.0011	0.0182	0.0182
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	233.33	0.0541	0.0011	0.0177	0.0178
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	240.00	0.0562	0.0011	0.0176	0.0176
1.2D + 1.0Ev + 1.0Eh 330° Seismic	80.00	0.0092	-0.0007	0.0104	0.0104
1.2D + 1.0Ev + 1.0Eh 330° Seismic	100.00	0.0131	-0.0009	0.0139	0.0139
1.2D + 1.0Ev + 1.0Eh 330° Seismic	120.00	0.0185	-0.0011	0.0158	0.0158
1.2D + 1.0Ev + 1.0Eh 330° Seismic	130.00	0.0212	-0.0011	0.0159	0.0159
1.2D + 1.0Ev + 1.0Eh 330° Seismic	140.00	0.0242	-0.0012	0.0172	0.0172
1.2D + 1.0Ev + 1.0Eh 330° Seismic	150.00	0.0273	-0.0013	0.0183	0.0183
1.2D + 1.0Ev + 1.0Eh 330° Seismic	160.00	0.0304	-0.0013	0.0184	0.0184

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Ev + 1.0Eh 330° Seismic	170.00	0.0336	-0.0013	0.0188	0.0188
1.2D + 1.0Ev + 1.0Eh 330° Seismic	180.00	0.0368	-0.0013	0.0188	0.0189
1.2D + 1.0Ev + 1.0Eh 330° Seismic	190.00	0.0401	-0.0013	0.0189	0.0189
1.2D + 1.0Ev + 1.0Eh 330° Seismic	200.00	0.0434	-0.0014	0.0190	0.019
1.2D + 1.0Ev + 1.0Eh 330° Seismic	210.00	0.0467	-0.0013	0.0189	0.0189
1.2D + 1.0Ev + 1.0Eh 330° Seismic	220.00	0.05	-0.0013	0.0185	0.0185
1.2D + 1.0Ev + 1.0Eh 330° Seismic	226.67	0.0521	-0.0013	0.0182	0.0182
1.2D + 1.0Ev + 1.0Eh 330° Seismic	233.33	0.0542	0.0006	0.0179	0.0179
1.2D + 1.0Ev + 1.0Eh 330° Seismic	240.00	0.0562	-0.0013	0.0178	0.0178
1.2D + 1.0Ev + 1.0Eh 300° Seismic	80.00	0.0091	0.0006	0.0104	0.0104
1.2D + 1.0Ev + 1.0Eh 300° Seismic	100.00	0.0131	0.0008	0.0139	0.0139
1.2D + 1.0Ev + 1.0Eh 300° Seismic	120.00	0.0185	0.0009	0.0159	0.0159
1.2D + 1.0Ev + 1.0Eh 300° Seismic	130.00	0.0212	0.0010	0.0159	0.0159
1.2D + 1.0Ev + 1.0Eh 300° Seismic	140.00	0.0241	0.0010	0.0172	0.0172
1.2D + 1.0Ev + 1.0Eh 300° Seismic	150.00	0.0272	0.0011	0.0184	0.0184
1.2D + 1.0Ev + 1.0Eh 300° Seismic	160.00	0.0304	0.0011	0.0185	0.0185
1.2D + 1.0Ev + 1.0Eh 300° Seismic	170.00	0.0336	0.0011	0.0189	0.0189
1.2D + 1.0Ev + 1.0Eh 300° Seismic	180.00	0.0368	0.0011	0.0189	0.0189
1.2D + 1.0Ev + 1.0Eh 300° Seismic	190.00	0.0401	0.0012	0.0189	0.0189
1.2D + 1.0Ev + 1.0Eh 300° Seismic	200.00	0.0434	0.0012	0.0190	0.019
1.2D + 1.0Ev + 1.0Eh 300° Seismic	210.00	0.0467	0.0012	0.0189	0.0189
1.2D + 1.0Ev + 1.0Eh 300° Seismic	220.00	0.05	0.0011	0.0186	0.0186
1.2D + 1.0Ev + 1.0Eh 300° Seismic	226.67	0.0521	0.0011	0.0182	0.0182
1.2D + 1.0Ev + 1.0Eh 300° Seismic	233.33	0.0542	0.0011	0.0179	0.0179
1.2D + 1.0Ev + 1.0Eh 300° Seismic	240.00	0.0562	0.0011	0.0178	0.0178
1.2D + 1.0Ev + 1.0Eh 240° Seismic	80.00	0.0092	0.0006	0.0103	0.0103
1.2D + 1.0Ev + 1.0Eh 240° Seismic	100.00	0.0132	0.0008	0.0138	0.0138
1.2D + 1.0Ev + 1.0Eh 240° Seismic	120.00	0.0185	0.0009	0.0157	0.0158
1.2D + 1.0Ev + 1.0Eh 240° Seismic	130.00	0.0213	0.0010	0.0158	0.0159
1.2D + 1.0Ev + 1.0Eh 240° Seismic	140.00	0.0242	0.0010	0.0172	0.0172
1.2D + 1.0Ev + 1.0Eh 240° Seismic	150.00	0.0273	0.0011	0.0182	0.0182
1.2D + 1.0Ev + 1.0Eh 240° Seismic	160.00	0.0304	0.0011	0.0184	0.0184
1.2D + 1.0Ev + 1.0Eh 240° Seismic	170.00	0.0336	0.0011	0.0187	0.0187
1.2D + 1.0Ev + 1.0Eh 240° Seismic	180.00	0.0368	0.0011	0.0187	0.0188
1.2D + 1.0Ev + 1.0Eh 240° Seismic	190.00	0.0401	0.0012	0.0189	0.0189
1.2D + 1.0Ev + 1.0Eh 240° Seismic	200.00	0.0434	0.0012	0.0189	0.019
1.2D + 1.0Ev + 1.0Eh 240° Seismic	210.00	0.0467	0.0012	0.0188	0.0188
1.2D + 1.0Ev + 1.0Eh 240° Seismic	220.00	0.05	0.0011	0.0184	0.0185
1.2D + 1.0Ev + 1.0Eh 240° Seismic	226.67	0.0521	0.0011	0.0182	0.0182
1.2D + 1.0Ev + 1.0Eh 240° Seismic	233.33	0.0542	0.0011	0.0178	0.0178
1.2D + 1.0Ev + 1.0Eh 240° Seismic	240.00	0.0562	0.0011	0.0176	0.0177
1.2D + 1.0Ev + 1.0Eh 210° Seismic	80.00	0.0092	-0.0007	0.0104	0.0104
1.2D + 1.0Ev + 1.0Eh 210° Seismic	100.00	0.0131	-0.0009	0.0139	0.0139
1.2D + 1.0Ev + 1.0Eh 210° Seismic	120.00	0.0185	-0.0011	0.0158	0.0158
1.2D + 1.0Ev + 1.0Eh 210° Seismic	130.00	0.0212	-0.0011	0.0159	0.0159
1.2D + 1.0Ev + 1.0Eh 210° Seismic	140.00	0.0242	-0.0012	0.0172	0.0172
1.2D + 1.0Ev + 1.0Eh 210° Seismic	150.00	0.0273	-0.0013	0.0183	0.0183
1.2D + 1.0Ev + 1.0Eh 210° Seismic	160.00	0.0304	-0.0013	0.0184	0.0184
1.2D + 1.0Ev + 1.0Eh 210° Seismic	170.00	0.0336	-0.0013	0.0188	0.0188
1.2D + 1.0Ev + 1.0Eh 210° Seismic	180.00	0.0368	-0.0013	0.0188	0.0189
1.2D + 1.0Ev + 1.0Eh 210° Seismic	190.00	0.0401	-0.0013	0.0189	0.0189
1.2D + 1.0Ev + 1.0Eh 210° Seismic	200.00	0.0434	-0.0014	0.0190	0.019
1.2D + 1.0Ev + 1.0Eh 210° Seismic	210.00	0.0467	-0.0013	0.0189	0.0189
1.2D + 1.0Ev + 1.0Eh 210° Seismic	220.00	0.05	-0.0013	0.0185	0.0185
1.2D + 1.0Ev + 1.0Eh 210° Seismic	226.67	0.0521	-0.0013	0.0182	0.0182
1.2D + 1.0Ev + 1.0Eh 210° Seismic	233.33	0.0542	-0.0013	0.0179	0.0179
1.2D + 1.0Ev + 1.0Eh 210° Seismic	240.00	0.0562	-0.0013	0.0178	0.0178
1.2D + 1.0Ev + 1.0Eh 180° Seismic	80.00	0.0091	0.0006	0.0104	0.0104
1.2D + 1.0Ev + 1.0Eh 180° Seismic	100.00	0.0131	0.0008	0.0139	0.0139

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Ev + 1.0Eh 180° Seismic	120.00	0.0185	0.0009	0.0159	0.0159
1.2D + 1.0Ev + 1.0Eh 180° Seismic	130.00	0.0212	0.0010	0.0159	0.0159
1.2D + 1.0Ev + 1.0Eh 180° Seismic	140.00	0.0241	0.0010	0.0172	0.0172
1.2D + 1.0Ev + 1.0Eh 180° Seismic	150.00	0.0272	0.0011	0.0184	0.0184
1.2D + 1.0Ev + 1.0Eh 180° Seismic	160.00	0.0304	0.0011	0.0185	0.0185
1.2D + 1.0Ev + 1.0Eh 180° Seismic	170.00	0.0336	0.0011	0.0189	0.0189
1.2D + 1.0Ev + 1.0Eh 180° Seismic	180.00	0.0368	0.0011	0.0189	0.0189
1.2D + 1.0Ev + 1.0Eh 180° Seismic	190.00	0.0401	0.0012	0.0189	0.0189
1.2D + 1.0Ev + 1.0Eh 180° Seismic	200.00	0.0434	0.0012	0.0190	0.019
1.2D + 1.0Ev + 1.0Eh 180° Seismic	210.00	0.0467	0.0012	0.0189	0.0189
1.2D + 1.0Ev + 1.0Eh 180° Seismic	220.00	0.05	0.0011	0.0186	0.0186
1.2D + 1.0Ev + 1.0Eh 180° Seismic	226.67	0.0521	0.0011	0.0182	0.0182
1.2D + 1.0Ev + 1.0Eh 180° Seismic	233.33	0.0542	-0.0011	0.0179	0.0179
1.2D + 1.0Ev + 1.0Eh 180° Seismic	240.00	0.0562	0.0011	0.0178	0.0178
1.2D + 1.0Ev + 1.0Eh 120° Seismic	80.00	0.0092	0.0006	0.0103	0.0103
1.2D + 1.0Ev + 1.0Eh 120° Seismic	100.00	0.0132	0.0008	0.0138	0.0138
1.2D + 1.0Ev + 1.0Eh 120° Seismic	120.00	0.0185	0.0009	0.0157	0.0158
1.2D + 1.0Ev + 1.0Eh 120° Seismic	130.00	0.0213	0.0010	0.0158	0.0159
1.2D + 1.0Ev + 1.0Eh 120° Seismic	140.00	0.0242	0.0010	0.0172	0.0172
1.2D + 1.0Ev + 1.0Eh 120° Seismic	150.00	0.0273	0.0011	0.0182	0.0182
1.2D + 1.0Ev + 1.0Eh 120° Seismic	160.00	0.0304	0.0011	0.0184	0.0184
1.2D + 1.0Ev + 1.0Eh 120° Seismic	170.00	0.0336	0.0011	0.0187	0.0187
1.2D + 1.0Ev + 1.0Eh 120° Seismic	180.00	0.0368	0.0011	0.0187	0.0188
1.2D + 1.0Ev + 1.0Eh 120° Seismic	190.00	0.0401	0.0012	0.0189	0.0189
1.2D + 1.0Ev + 1.0Eh 120° Seismic	200.00	0.0434	0.0012	0.0189	0.019
1.2D + 1.0Ev + 1.0Eh 120° Seismic	210.00	0.0467	0.0012	0.0188	0.0188
1.2D + 1.0Ev + 1.0Eh 120° Seismic	220.00	0.05	0.0011	0.0184	0.0185
1.2D + 1.0Ev + 1.0Eh 120° Seismic	226.67	0.0521	0.0011	0.0182	0.0182
1.2D + 1.0Ev + 1.0Eh 120° Seismic	233.33	0.0542	-0.0011	0.0178	0.0178
1.2D + 1.0Ev + 1.0Eh 120° Seismic	240.00	0.0562	0.0011	0.0176	0.0177
1.2D + 1.0Ev + 1.0Eh 90° Seismic	80.00	0.0092	-0.0007	0.0104	0.0104
1.2D + 1.0Ev + 1.0Eh 90° Seismic	100.00	0.0131	-0.0009	0.0139	0.0139
1.2D + 1.0Ev + 1.0Eh 90° Seismic	120.00	0.0185	-0.0011	0.0158	0.0158
1.2D + 1.0Ev + 1.0Eh 90° Seismic	130.00	0.0212	-0.0011	0.0159	0.0159
1.2D + 1.0Ev + 1.0Eh 90° Seismic	140.00	0.0242	-0.0012	0.0172	0.0172
1.2D + 1.0Ev + 1.0Eh 90° Seismic	150.00	0.0273	-0.0013	0.0183	0.0183
1.2D + 1.0Ev + 1.0Eh 90° Seismic	160.00	0.0304	-0.0013	0.0184	0.0184
1.2D + 1.0Ev + 1.0Eh 90° Seismic	170.00	0.0336	-0.0013	0.0188	0.0188
1.2D + 1.0Ev + 1.0Eh 90° Seismic	180.00	0.0368	-0.0013	0.0188	0.0189
1.2D + 1.0Ev + 1.0Eh 90° Seismic	190.00	0.0401	-0.0013	0.0189	0.0189
1.2D + 1.0Ev + 1.0Eh 90° Seismic	200.00	0.0434	-0.0014	0.0190	0.019
1.2D + 1.0Ev + 1.0Eh 90° Seismic	210.00	0.0467	-0.0013	0.0189	0.0189
1.2D + 1.0Ev + 1.0Eh 90° Seismic	220.00	0.05	-0.0013	0.0185	0.0185
1.2D + 1.0Ev + 1.0Eh 90° Seismic	226.67	0.0521	-0.0013	0.0182	0.0182
1.2D + 1.0Ev + 1.0Eh 90° Seismic	233.33	0.0542	-0.0013	0.0177	0.0177
1.2D + 1.0Ev + 1.0Eh 90° Seismic	240.00	0.0562	-0.0013	0.0178	0.0178
1.2D + 1.0Ev + 1.0Eh 60° Seismic	80.00	0.0091	0.0006	0.0104	0.0104
1.2D + 1.0Ev + 1.0Eh 60° Seismic	100.00	0.0131	0.0008	0.0139	0.0139
1.2D + 1.0Ev + 1.0Eh 60° Seismic	120.00	0.0185	0.0009	0.0159	0.0159
1.2D + 1.0Ev + 1.0Eh 60° Seismic	130.00	0.0212	0.0010	0.0159	0.0159
1.2D + 1.0Ev + 1.0Eh 60° Seismic	140.00	0.0241	0.0010	0.0172	0.0172
1.2D + 1.0Ev + 1.0Eh 60° Seismic	150.00	0.0272	0.0011	0.0184	0.0184
1.2D + 1.0Ev + 1.0Eh 60° Seismic	160.00	0.0304	0.0011	0.0185	0.0185
1.2D + 1.0Ev + 1.0Eh 60° Seismic	170.00	0.0336	0.0011	0.0189	0.0189
1.2D + 1.0Ev + 1.0Eh 60° Seismic	180.00	0.0368	0.0011	0.0189	0.0189
1.2D + 1.0Ev + 1.0Eh 60° Seismic	190.00	0.0401	0.0012	0.0189	0.0189
1.2D + 1.0Ev + 1.0Eh 60° Seismic	200.00	0.0434	0.0012	0.0190	0.019
1.2D + 1.0Ev + 1.0Eh 60° Seismic	210.00	0.0467	0.0012	0.0189	0.0189
1.2D + 1.0Ev + 1.0Eh 60° Seismic	220.00	0.05	0.0011	0.0186	0.0186

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Ev + 1.0Eh 60° Seismic	226.67	0.0521	0.0011	0.0182	0.0182
1.2D + 1.0Ev + 1.0Eh 60° Seismic	233.33	0.0542	0.0011	0.0176	0.0177
1.2D + 1.0Ev + 1.0Eh 60° Seismic	240.00	0.0562	0.0011	0.0178	0.0178
1.2D + 1.0Ev + 1.0Eh Normal Seismic	80.00	0.0092	0.0006	0.0103	0.0103
1.2D + 1.0Ev + 1.0Eh Normal Seismic	100.00	0.0132	0.0008	0.0138	0.0138
1.2D + 1.0Ev + 1.0Eh Normal Seismic	120.00	0.0185	0.0009	0.0158	0.0158
1.2D + 1.0Ev + 1.0Eh Normal Seismic	130.00	0.0213	0.0010	0.0158	0.0159
1.2D + 1.0Ev + 1.0Eh Normal Seismic	140.00	0.0242	0.0010	0.0172	0.0172
1.2D + 1.0Ev + 1.0Eh Normal Seismic	150.00	0.0273	0.0011	0.0182	0.0182
1.2D + 1.0Ev + 1.0Eh Normal Seismic	160.00	0.0304	0.0011	0.0184	0.0184
1.2D + 1.0Ev + 1.0Eh Normal Seismic	170.00	0.0336	0.0011	0.0187	0.0187
1.2D + 1.0Ev + 1.0Eh Normal Seismic	180.00	0.0368	0.0011	0.0187	0.0188
1.2D + 1.0Ev + 1.0Eh Normal Seismic	190.00	0.0401	0.0012	0.0189	0.0189
1.2D + 1.0Ev + 1.0Eh Normal Seismic	200.00	0.0434	0.0012	0.0189	0.019
1.2D + 1.0Ev + 1.0Eh Normal Seismic	210.00	0.0467	0.0012	0.0188	0.0188
1.2D + 1.0Ev + 1.0Eh Normal Seismic	220.00	0.05	0.0011	0.0184	0.0185
1.2D + 1.0Ev + 1.0Eh Normal Seismic	226.67	0.0521	0.0011	0.0182	0.0182
1.2D + 1.0Ev + 1.0Eh Normal Seismic	233.33	0.0542	0.0011	0.0178	0.0178
1.2D + 1.0Ev + 1.0Eh Normal Seismic	240.00	0.0562	0.0011	0.0176	0.0177
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph Wind with 0.85" Radial Ice	80.00	0.0467	-0.0025	0.0408	0.0408
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph Wind with 0.85" Radial Ice	100.00	0.062	-0.0031	0.0515	0.0515
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph Wind with 0.85" Radial Ice	120.00	0.0811	-0.0033	0.0543	0.0543
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph Wind with 0.85" Radial Ice	130.00	0.0902	-0.0032	0.0527	0.0527
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph Wind with 0.85" Radial Ice	140.00	0.0996	-0.0035	0.0563	0.0563
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph Wind with 0.85" Radial Ice	150.00	0.1095	-0.0036	0.0579	0.0579
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph Wind with 0.85" Radial Ice	160.00	0.1194	-0.0036	0.0568	0.0568
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph Wind with 0.85" Radial Ice	170.00	0.1291	-0.0036	0.0569	0.0569
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph Wind with 0.85" Radial Ice	180.00	0.139	-0.0036	0.0572	0.0572
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph Wind with 0.85" Radial Ice	190.00	0.1489	-0.0037	0.0572	0.0572
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph Wind with 0.85" Radial Ice	200.00	0.1587	-0.0036	0.0563	0.0563
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph Wind with 0.85" Radial Ice	210.00	0.1683	-0.0035	0.0554	0.0554
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph Wind with 0.85" Radial Ice	220.00	0.1779	-0.0035	0.0557	0.0557
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph Wind with 0.85" Radial Ice	226.67	0.1843	-0.0035	0.0555	0.0555
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph Wind with 0.85" Radial Ice	233.33	0.1906	0.0027	0.0548	0.0548
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph Wind with 0.85" Radial Ice	240.00	0.1969	-0.0034	0.0543	0.0544
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph Wind with 0.85" Radial Ice	80.00	0.0467	0.0031	0.0406	0.0406
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph Wind with 0.85" Radial Ice	100.00	0.0619	0.0040	0.0509	0.0511
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph Wind with 0.85" Radial Ice	120.00	0.0807	0.0043	0.0540	0.0541
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph Wind with 0.85" Radial Ice	130.00	0.0897	0.0042	0.0523	0.0523
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph Wind with 0.85" Radial Ice	140.00	0.099	0.0045	0.0558	0.0558
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph Wind with 0.85" Radial Ice	150.00	0.1088	0.0047	0.0574	0.0574
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph Wind with 0.85" Radial Ice	160.00	0.1186	0.0046	0.0563	0.0563
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph Wind with 0.85" Radial Ice	170.00	0.1282	0.0046	0.0563	0.0563
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph Wind with 0.85" Radial Ice	180.00	0.138	0.0047	0.0566	0.0568
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph Wind with 0.85" Radial Ice	190.00	0.1477	0.0048	0.0565	0.0566
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph Wind with 0.85" Radial Ice	200.00	0.1574	0.0047	0.0557	0.0557
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph Wind with 0.85" Radial Ice	210.00	0.1668	0.0047	0.0548	0.0548
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph Wind with 0.85" Radial Ice	220.00	0.1763	0.0048	0.0549	0.055
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph Wind with 0.85" Radial Ice	226.67	0.1826	0.0048	0.0547	0.0549
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph Wind with 0.85" Radial Ice	233.33	0.189	0.0048	0.0540	0.0542
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph Wind with 0.85" Radial Ice	240.00	0.1953	0.0048	0.0535	0.0537
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph Wind with 0.85" Radial Ice	80.00	0.0461	0.0031	0.0405	0.0406
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph Wind with 0.85" Radial Ice	100.00	0.0615	0.0040	0.0508	0.051
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph Wind with 0.85" Radial Ice	120.00	0.0805	0.0043	0.0535	0.0537
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph Wind with 0.85" Radial Ice	130.00	0.0895	0.0042	0.0515	0.0517
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph Wind with 0.85" Radial Ice	140.00	0.0987	0.0045	0.0550	0.0552
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph Wind with 0.85" Radial Ice	150.00	0.1085	0.0047	0.0566	0.0568
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph Wind with 0.85" Radial Ice	160.00	0.1182	0.0046	0.0550	0.0552
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph Wind with 0.85" Radial Ice	170.00	0.1278	0.0047	0.0547	0.0549

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph Wind with 0.85" Radial Ice	180.00	0.1373	0.0048	0.0553	0.0555
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph Wind with 0.85" Radial Ice	190.00	0.147	0.0048	0.0550	0.0551
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph Wind with 0.85" Radial Ice	200.00	0.1564	0.0048	0.0538	0.0539
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph Wind with 0.85" Radial Ice	210.00	0.1656	0.0048	0.0532	0.0532
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph Wind with 0.85" Radial Ice	220.00	0.1748	0.0048	0.0532	0.0534
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph Wind with 0.85" Radial Ice	226.67	0.181	0.0049	0.0530	0.0532
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph Wind with 0.85" Radial Ice	233.33	0.1871	0.0049	0.0526	0.0528
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph Wind with 0.85" Radial Ice	240.00	0.1932	0.0049	0.0522	0.0524
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph Wind with 0.85" Radial Ice	80.00	0.0465	-0.0024	0.0403	0.0403
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph Wind with 0.85" Radial Ice	100.00	0.0617	-0.0031	0.0507	0.0507
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph Wind with 0.85" Radial Ice	120.00	0.0804	-0.0032	0.0532	0.0533
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph Wind with 0.85" Radial Ice	130.00	0.0893	-0.0031	0.0514	0.0514
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph Wind with 0.85" Radial Ice	140.00	0.0984	-0.0034	0.0547	0.0548
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph Wind with 0.85" Radial Ice	150.00	0.108	-0.0035	0.0563	0.0563
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph Wind with 0.85" Radial Ice	160.00	0.1176	-0.0034	0.0548	0.0549
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph Wind with 0.85" Radial Ice	170.00	0.127	-0.0034	0.0546	0.0546
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph Wind with 0.85" Radial Ice	180.00	0.1365	-0.0034	0.0549	0.055
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph Wind with 0.85" Radial Ice	190.00	0.1459	-0.0034	0.0546	0.0547
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph Wind with 0.85" Radial Ice	200.00	0.1553	-0.0033	0.0534	0.0535
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph Wind with 0.85" Radial Ice	210.00	0.1644	-0.0032	0.0527	0.0527
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph Wind with 0.85" Radial Ice	220.00	0.1735	-0.0032	0.0528	0.0528
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph Wind with 0.85" Radial Ice	226.67	0.1796	-0.0032	0.0526	0.0526
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph Wind with 0.85" Radial Ice	233.33	0.1856	-0.0031	0.0520	0.0521
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph Wind with 0.85" Radial Ice	240.00	0.1916	-0.0031	0.0519	0.0519
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph Wind with 0.85" Radial Ice	80.00	0.0466	0.0018	0.0402	0.0402
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph Wind with 0.85" Radial Ice	100.00	0.0617	0.0022	0.0507	0.0507
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph Wind with 0.85" Radial Ice	120.00	0.0804	0.0023	0.0531	0.0531
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph Wind with 0.85" Radial Ice	130.00	0.0892	0.0022	0.0514	0.0514
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph Wind with 0.85" Radial Ice	140.00	0.0983	0.0024	0.0547	0.0547
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph Wind with 0.85" Radial Ice	150.00	0.1079	0.0025	0.0562	0.0562
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph Wind with 0.85" Radial Ice	160.00	0.1175	0.0024	0.0549	0.0549
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph Wind with 0.85" Radial Ice	170.00	0.1269	0.0023	0.0547	0.0547
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph Wind with 0.85" Radial Ice	180.00	0.1363	0.0023	0.0549	0.0549
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph Wind with 0.85" Radial Ice	190.00	0.1457	0.0023	0.0546	0.0546
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph Wind with 0.85" Radial Ice	200.00	0.155	0.0023	0.0536	0.0536
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph Wind with 0.85" Radial Ice	210.00	0.1641	0.0022	0.0527	0.0527
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph Wind with 0.85" Radial Ice	220.00	0.1732	0.0021	0.0528	0.0528
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph Wind with 0.85" Radial Ice	226.67	0.1793	0.0021	0.0525	0.0525
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph Wind with 0.85" Radial Ice	233.33	0.1853	-0.0019	0.0519	0.0519
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph Wind with 0.85" Radial Ice	240.00	0.1912	0.0020	0.0518	0.0518
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph Wind with 0.85" Radial Ice	80.00	0.0462	-0.0031	0.0406	0.0407
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph Wind with 0.85" Radial Ice	100.00	0.0618	-0.0040	0.0511	0.0512
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph Wind with 0.85" Radial Ice	120.00	0.0809	-0.0043	0.0538	0.054
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph Wind with 0.85" Radial Ice	130.00	0.0899	-0.0043	0.0518	0.052
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph Wind with 0.85" Radial Ice	140.00	0.0992	-0.0045	0.0554	0.0556
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph Wind with 0.85" Radial Ice	150.00	0.109	-0.0047	0.0571	0.0573
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph Wind with 0.85" Radial Ice	160.00	0.1188	-0.0047	0.0555	0.0557
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph Wind with 0.85" Radial Ice	170.00	0.1284	-0.0047	0.0552	0.0554
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph Wind with 0.85" Radial Ice	180.00	0.1381	-0.0048	0.0559	0.0561
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph Wind with 0.85" Radial Ice	190.00	0.1478	-0.0048	0.0555	0.0557
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph Wind with 0.85" Radial Ice	200.00	0.1574	-0.0048	0.0545	0.0547
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph Wind with 0.85" Radial Ice	210.00	0.1667	-0.0048	0.0538	0.0538
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph Wind with 0.85" Radial Ice	220.00	0.176	-0.0049	0.0538	0.054
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph Wind with 0.85" Radial Ice	226.67	0.1822	-0.0049	0.0536	0.0539
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph Wind with 0.85" Radial Ice	233.33	0.1885	-0.0049	0.0531	0.0534
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph Wind with 0.85" Radial Ice	240.00	0.1946	-0.0049	0.0528	0.053
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph Wind with 0.85" Radial Ice	80.00	0.0457	-0.0036	0.0404	0.0406
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph Wind with 0.85" Radial Ice	100.00	0.0608	-0.0047	0.0511	0.0513
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph Wind with 0.85" Radial Ice	120.00	0.0801	-0.0050	0.0540	0.0543

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph Wind with 0.85" Radial Ice	130.00	0.0893	-0.0049	0.0520	0.0522
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph Wind with 0.85" Radial Ice	140.00	0.0987	-0.0052	0.0556	0.0558
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph Wind with 0.85" Radial Ice	150.00	0.1087	-0.0054	0.0574	0.0576
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph Wind with 0.85" Radial Ice	160.00	0.1187	-0.0054	0.0558	0.0561
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph Wind with 0.85" Radial Ice	170.00	0.1284	-0.0054	0.0559	0.056
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph Wind with 0.85" Radial Ice	180.00	0.1382	-0.0055	0.0565	0.0567
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph Wind with 0.85" Radial Ice	190.00	0.1482	-0.0056	0.0563	0.0564
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph Wind with 0.85" Radial Ice	200.00	0.1579	-0.0055	0.0555	0.0556
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph Wind with 0.85" Radial Ice	210.00	0.1674	-0.0055	0.0545	0.0546
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph Wind with 0.85" Radial Ice	220.00	0.1769	-0.0056	0.0546	0.0548
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph Wind with 0.85" Radial Ice	226.67	0.1833	-0.0056	0.0545	0.0548
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph Wind with 0.85" Radial Ice	233.33	0.1897	-0.0056	0.0541	0.0544
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph Wind with 0.85" Radial Ice	240.00	0.196	-0.0056	0.0536	0.0539
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph Wind with 0.85" Radial Ice	80.00	0.0467	-0.0031	0.0407	0.0407
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph Wind with 0.85" Radial Ice	100.00	0.0619	-0.0040	0.0509	0.051
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph Wind with 0.85" Radial Ice	120.00	0.0808	-0.0043	0.0542	0.0542
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph Wind with 0.85" Radial Ice	130.00	0.0898	-0.0042	0.0525	0.0525
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph Wind with 0.85" Radial Ice	140.00	0.0992	-0.0045	0.0561	0.0561
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph Wind with 0.85" Radial Ice	150.00	0.109	-0.0047	0.0576	0.0576
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph Wind with 0.85" Radial Ice	160.00	0.1188	-0.0046	0.0566	0.0566
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph Wind with 0.85" Radial Ice	170.00	0.1286	-0.0047	0.0567	0.0568
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph Wind with 0.85" Radial Ice	180.00	0.1383	-0.0048	0.0569	0.0571
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph Wind with 0.85" Radial Ice	190.00	0.1481	-0.0048	0.0570	0.0571
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph Wind with 0.85" Radial Ice	200.00	0.1579	-0.0048	0.0563	0.0564
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph Wind with 0.85" Radial Ice	210.00	0.1675	-0.0048	0.0553	0.0553
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph Wind with 0.85" Radial Ice	220.00	0.1771	-0.0048	0.0556	0.0556
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph Wind with 0.85" Radial Ice	226.67	0.1834	-0.0049	0.0553	0.0555
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph Wind with 0.85" Radial Ice	233.33	0.1896	-0.0049	0.0548	0.055
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph Wind with 0.85" Radial Ice	240.00	0.196	-0.0049	0.0543	0.0545
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph Wind with 0.85" Radial Ice	80.00	0.0455	0.0018	0.0404	0.0404
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph Wind with 0.85" Radial Ice	100.00	0.0609	-0.0023	0.0516	0.0517
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph Wind with 0.85" Radial Ice	120.00	0.08	-0.0024	0.0541	0.0541
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph Wind with 0.85" Radial Ice	130.00	0.0891	-0.0023	0.0527	0.0527
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph Wind with 0.85" Radial Ice	140.00	0.0986	-0.0025	0.0563	0.0564
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph Wind with 0.85" Radial Ice	150.00	0.1086	0.0025	0.0579	0.058
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph Wind with 0.85" Radial Ice	160.00	0.1185	-0.0025	0.0567	0.0568
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph Wind with 0.85" Radial Ice	170.00	0.1283	-0.0025	0.0569	0.057
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph Wind with 0.85" Radial Ice	180.00	0.1383	-0.0025	0.0574	0.0574
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph Wind with 0.85" Radial Ice	190.00	0.1482	-0.0025	0.0575	0.0576
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph Wind with 0.85" Radial Ice	200.00	0.1582	-0.0024	0.0566	0.0566
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph Wind with 0.85" Radial Ice	210.00	0.1678	-0.0023	0.0559	0.0559
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph Wind with 0.85" Radial Ice	220.00	0.1775	-0.0023	0.0559	0.0559
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph Wind with 0.85" Radial Ice	226.67	0.184	0.0022	0.0558	0.0558
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph Wind with 0.85" Radial Ice	233.33	0.1904	0.0021	0.0550	0.055
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph Wind with 0.85" Radial Ice	240.00	0.1968	0.0021	0.0551	0.0551
0.9D + 1.0W 330° 115.99 mph Wind with No Ice (Reduced DL)	80.00	0.1289	-0.0072	0.1203	0.1204
0.9D + 1.0W 330° 115.99 mph Wind with No Ice (Reduced DL)	100.00	0.1761	-0.0091	0.1564	0.1564
0.9D + 1.0W 330° 115.99 mph Wind with No Ice (Reduced DL)	120.00	0.2355	-0.0100	0.1681	0.1681
0.9D + 1.0W 330° 115.99 mph Wind with No Ice (Reduced DL)	130.00	0.2643	-0.0099	0.1650	0.165
0.9D + 1.0W 330° 115.99 mph Wind with No Ice (Reduced DL)	140.00	0.2941	-0.0109	0.1775	0.1775
0.9D + 1.0W 330° 115.99 mph Wind with No Ice (Reduced DL)	150.00	0.326	-0.0114	0.1836	0.1836
0.9D + 1.0W 330° 115.99 mph Wind with No Ice (Reduced DL)	160.00	0.3579	-0.0112	0.1808	0.1809
0.9D + 1.0W 330° 115.99 mph Wind with No Ice (Reduced DL)	170.00	0.3894	-0.0114	0.1813	0.1813
0.9D + 1.0W 330° 115.99 mph Wind with No Ice (Reduced DL)	180.00	0.4213	-0.0116	0.1837	0.1839
0.9D + 1.0W 330° 115.99 mph Wind with No Ice (Reduced DL)	190.00	0.4535	-0.0118	0.1835	0.1837
0.9D + 1.0W 330° 115.99 mph Wind with No Ice (Reduced DL)	200.00	0.4851	-0.0116	0.1795	0.1798
0.9D + 1.0W 330° 115.99 mph Wind with No Ice (Reduced DL)	210.00	0.5159	-0.0113	0.1756	0.1757
0.9D + 1.0W 330° 115.99 mph Wind with No Ice (Reduced DL)	220.00	0.5466	-0.0113	0.1760	0.1761
0.9D + 1.0W 330° 115.99 mph Wind with No Ice (Reduced DL)	226.67	0.567	-0.0111	0.1753	0.1753

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
0.9D + 1.0W 330° 115.99 mph Wind with No Ice (Reduced DL)	233.33	0.5873	0.0094	0.1723	0.1726
0.9D + 1.0W 330° 115.99 mph Wind with No Ice (Reduced DL)	240.00	0.6072	-0.0109	0.1720	0.1724
0.9D + 1.0W 300° 115.99 mph Wind with No Ice (Reduced DL)	80.00	0.1312	0.0102	0.1217	0.1221
0.9D + 1.0W 300° 115.99 mph Wind with No Ice (Reduced DL)	100.00	0.1791	0.0136	0.1559	0.1565
0.9D + 1.0W 300° 115.99 mph Wind with No Ice (Reduced DL)	120.00	0.2388	0.0147	0.1690	0.1696
0.9D + 1.0W 300° 115.99 mph Wind with No Ice (Reduced DL)	130.00	0.2678	0.0146	0.1647	0.1654
0.9D + 1.0W 300° 115.99 mph Wind with No Ice (Reduced DL)	140.00	0.2977	0.0155	0.1776	0.1783
0.9D + 1.0W 300° 115.99 mph Wind with No Ice (Reduced DL)	150.00	0.3299	0.0162	0.1847	0.1854
0.9D + 1.0W 300° 115.99 mph Wind with No Ice (Reduced DL)	160.00	0.362	0.0160	0.1803	0.181
0.9D + 1.0W 300° 115.99 mph Wind with No Ice (Reduced DL)	170.00	0.3934	0.0161	0.1807	0.1808
0.9D + 1.0W 300° 115.99 mph Wind with No Ice (Reduced DL)	180.00	0.4254	0.0165	0.1839	0.1847
0.9D + 1.0W 300° 115.99 mph Wind with No Ice (Reduced DL)	190.00	0.4577	0.0166	0.1830	0.1835
0.9D + 1.0W 300° 115.99 mph Wind with No Ice (Reduced DL)	200.00	0.4891	0.0163	0.1794	0.1799
0.9D + 1.0W 300° 115.99 mph Wind with No Ice (Reduced DL)	210.00	0.5197	0.0162	0.1760	0.1761
0.9D + 1.0W 300° 115.99 mph Wind with No Ice (Reduced DL)	220.00	0.5502	0.0164	0.1760	0.1761
0.9D + 1.0W 300° 115.99 mph Wind with No Ice (Reduced DL)	226.67	0.5706	0.0165	0.1751	0.1752
0.9D + 1.0W 300° 115.99 mph Wind with No Ice (Reduced DL)	233.33	0.5908	0.0165	0.1723	0.1726
0.9D + 1.0W 300° 115.99 mph Wind with No Ice (Reduced DL)	240.00	0.6108	0.0164	0.1710	0.1715
0.9D + 1.0W 240° 115.99 mph Wind with No Ice (Reduced DL)	80.00	0.1304	0.0104	0.1215	0.122
0.9D + 1.0W 240° 115.99 mph Wind with No Ice (Reduced DL)	100.00	0.1782	0.0138	0.1553	0.1559
0.9D + 1.0W 240° 115.99 mph Wind with No Ice (Reduced DL)	120.00	0.2376	0.0150	0.1683	0.169
0.9D + 1.0W 240° 115.99 mph Wind with No Ice (Reduced DL)	130.00	0.2665	0.0149	0.1644	0.1651
0.9D + 1.0W 240° 115.99 mph Wind with No Ice (Reduced DL)	140.00	0.2963	0.0159	0.1771	0.1778
0.9D + 1.0W 240° 115.99 mph Wind with No Ice (Reduced DL)	150.00	0.3284	0.0165	0.1841	0.1848
0.9D + 1.0W 240° 115.99 mph Wind with No Ice (Reduced DL)	160.00	0.3603	0.0163	0.1797	0.1803
0.9D + 1.0W 240° 115.99 mph Wind with No Ice (Reduced DL)	170.00	0.3916	0.0165	0.1801	0.1802
0.9D + 1.0W 240° 115.99 mph Wind with No Ice (Reduced DL)	180.00	0.4234	0.0169	0.1831	0.1839
0.9D + 1.0W 240° 115.99 mph Wind with No Ice (Reduced DL)	190.00	0.4556	0.0170	0.1829	0.1833
0.9D + 1.0W 240° 115.99 mph Wind with No Ice (Reduced DL)	200.00	0.487	0.0167	0.1788	0.1789
0.9D + 1.0W 240° 115.99 mph Wind with No Ice (Reduced DL)	210.00	0.5175	0.0167	0.1755	0.1756
0.9D + 1.0W 240° 115.99 mph Wind with No Ice (Reduced DL)	220.00	0.548	0.0169	0.1755	0.1756
0.9D + 1.0W 240° 115.99 mph Wind with No Ice (Reduced DL)	226.67	0.5683	0.0170	0.1745	0.1746
0.9D + 1.0W 240° 115.99 mph Wind with No Ice (Reduced DL)	233.33	0.5885	0.0170	0.1718	0.1726
0.9D + 1.0W 240° 115.99 mph Wind with No Ice (Reduced DL)	240.00	0.6085	0.0170	0.1703	0.1712
0.9D + 1.0W 210° 115.99 mph Wind with No Ice (Reduced DL)	80.00	0.1282	-0.0069	0.1198	0.1199
0.9D + 1.0W 210° 115.99 mph Wind with No Ice (Reduced DL)	100.00	0.1752	-0.0087	0.1552	0.1554
0.9D + 1.0W 210° 115.99 mph Wind with No Ice (Reduced DL)	120.00	0.2342	-0.0095	0.1671	0.1673
0.9D + 1.0W 210° 115.99 mph Wind with No Ice (Reduced DL)	130.00	0.2629	-0.0094	0.1640	0.1642
0.9D + 1.0W 210° 115.99 mph Wind with No Ice (Reduced DL)	140.00	0.2926	-0.0103	0.1762	0.1763
0.9D + 1.0W 210° 115.99 mph Wind with No Ice (Reduced DL)	150.00	0.3243	-0.0108	0.1827	0.183
0.9D + 1.0W 210° 115.99 mph Wind with No Ice (Reduced DL)	160.00	0.3561	-0.0106	0.1796	0.1798
0.9D + 1.0W 210° 115.99 mph Wind with No Ice (Reduced DL)	170.00	0.3874	-0.0107	0.1800	0.1801
0.9D + 1.0W 210° 115.99 mph Wind with No Ice (Reduced DL)	180.00	0.4191	-0.0109	0.1827	0.1829
0.9D + 1.0W 210° 115.99 mph Wind with No Ice (Reduced DL)	190.00	0.4511	-0.0110	0.1830	0.1833
0.9D + 1.0W 210° 115.99 mph Wind with No Ice (Reduced DL)	200.00	0.4826	-0.0106	0.1785	0.1785
0.9D + 1.0W 210° 115.99 mph Wind with No Ice (Reduced DL)	210.00	0.5133	-0.0104	0.1749	0.1751
0.9D + 1.0W 210° 115.99 mph Wind with No Ice (Reduced DL)	220.00	0.5439	-0.0103	0.1753	0.1753
0.9D + 1.0W 210° 115.99 mph Wind with No Ice (Reduced DL)	226.67	0.5642	-0.0102	0.1743	0.1745
0.9D + 1.0W 210° 115.99 mph Wind with No Ice (Reduced DL)	233.33	0.5844	-0.0100	0.1720	0.1723
0.9D + 1.0W 210° 115.99 mph Wind with No Ice (Reduced DL)	240.00	0.6044	0.0099	0.1710	0.1713
0.9D + 1.0W 180° 115.99 mph Wind with No Ice (Reduced DL)	80.00	0.1282	0.0047	0.1197	0.1198
0.9D + 1.0W 180° 115.99 mph Wind with No Ice (Reduced DL)	100.00	0.1754	0.0057	0.1570	0.1571
0.9D + 1.0W 180° 115.99 mph Wind with No Ice (Reduced DL)	120.00	0.2344	0.0063	0.1668	0.1669
0.9D + 1.0W 180° 115.99 mph Wind with No Ice (Reduced DL)	130.00	0.263	0.0062	0.1641	0.1642
0.9D + 1.0W 180° 115.99 mph Wind with No Ice (Reduced DL)	140.00	0.2928	0.0069	0.1769	0.177
0.9D + 1.0W 180° 115.99 mph Wind with No Ice (Reduced DL)	150.00	0.3246	0.0073	0.1829	0.183
0.9D + 1.0W 180° 115.99 mph Wind with No Ice (Reduced DL)	160.00	0.3563	0.0070	0.1799	0.1799
0.9D + 1.0W 180° 115.99 mph Wind with No Ice (Reduced DL)	170.00	0.3877	0.0071	0.1800	0.1802
0.9D + 1.0W 180° 115.99 mph Wind with No Ice (Reduced DL)	180.00	0.4194	0.0072	0.1829	0.183

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
0.9D + 1.0W 180° 115.99 mph Wind with No Ice (Reduced DL)	190.00	0.4515	0.0073	0.1829	0.1831
0.9D + 1.0W 180° 115.99 mph Wind with No Ice (Reduced DL)	200.00	0.4831	0.0070	0.1785	0.1786
0.9D + 1.0W 180° 115.99 mph Wind with No Ice (Reduced DL)	210.00	0.5137	0.0067	0.1756	0.1756
0.9D + 1.0W 180° 115.99 mph Wind with No Ice (Reduced DL)	220.00	0.5443	0.0066	0.1754	0.1754
0.9D + 1.0W 180° 115.99 mph Wind with No Ice (Reduced DL)	226.67	0.5646	0.0065	0.1745	0.1745
0.9D + 1.0W 180° 115.99 mph Wind with No Ice (Reduced DL)	233.33	0.5848	-0.0059	0.1720	0.172
0.9D + 1.0W 180° 115.99 mph Wind with No Ice (Reduced DL)	240.00	0.6045	0.0062	0.1711	0.1711
0.9D + 1.0W 120° 115.99 mph Wind with No Ice (Reduced DL)	80.00	0.1311	-0.0104	0.1219	0.1224
0.9D + 1.0W 120° 115.99 mph Wind with No Ice (Reduced DL)	100.00	0.179	-0.0138	0.1560	0.1566
0.9D + 1.0W 120° 115.99 mph Wind with No Ice (Reduced DL)	120.00	0.2387	-0.0150	0.1689	0.1696
0.9D + 1.0W 120° 115.99 mph Wind with No Ice (Reduced DL)	130.00	0.2677	-0.0149	0.1648	0.1655
0.9D + 1.0W 120° 115.99 mph Wind with No Ice (Reduced DL)	140.00	0.2976	-0.0159	0.1776	0.1783
0.9D + 1.0W 120° 115.99 mph Wind with No Ice (Reduced DL)	150.00	0.3297	-0.0165	0.1847	0.1855
0.9D + 1.0W 120° 115.99 mph Wind with No Ice (Reduced DL)	160.00	0.3618	-0.0164	0.1802	0.1809
0.9D + 1.0W 120° 115.99 mph Wind with No Ice (Reduced DL)	170.00	0.3932	-0.0165	0.1802	0.1804
0.9D + 1.0W 120° 115.99 mph Wind with No Ice (Reduced DL)	180.00	0.4251	-0.0169	0.1837	0.1845
0.9D + 1.0W 120° 115.99 mph Wind with No Ice (Reduced DL)	190.00	0.4574	-0.0170	0.1829	0.1833
0.9D + 1.0W 120° 115.99 mph Wind with No Ice (Reduced DL)	200.00	0.4888	-0.0167	0.1793	0.1797
0.9D + 1.0W 120° 115.99 mph Wind with No Ice (Reduced DL)	210.00	0.5193	-0.0167	0.1757	0.1758
0.9D + 1.0W 120° 115.99 mph Wind with No Ice (Reduced DL)	220.00	0.5498	-0.0169	0.1756	0.1758
0.9D + 1.0W 120° 115.99 mph Wind with No Ice (Reduced DL)	226.67	0.5702	-0.0169	0.1748	0.1749
0.9D + 1.0W 120° 115.99 mph Wind with No Ice (Reduced DL)	233.33	0.5903	-0.0169	0.1718	0.1724
0.9D + 1.0W 120° 115.99 mph Wind with No Ice (Reduced DL)	240.00	0.6103	-0.0169	0.1709	0.1713
0.9D + 1.0W 90° 115.99 mph Wind with No Ice (Reduced DL)	80.00	0.1319	-0.0119	0.1226	0.1231
0.9D + 1.0W 90° 115.99 mph Wind with No Ice (Reduced DL)	100.00	0.1801	-0.0158	0.1557	0.1565
0.9D + 1.0W 90° 115.99 mph Wind with No Ice (Reduced DL)	120.00	0.2399	-0.0172	0.1693	0.1702
0.9D + 1.0W 90° 115.99 mph Wind with No Ice (Reduced DL)	130.00	0.269	-0.0170	0.1649	0.1657
0.9D + 1.0W 90° 115.99 mph Wind with No Ice (Reduced DL)	140.00	0.2989	-0.0182	0.1780	0.1789
0.9D + 1.0W 90° 115.99 mph Wind with No Ice (Reduced DL)	150.00	0.3312	-0.0189	0.1852	0.1861
0.9D + 1.0W 90° 115.99 mph Wind with No Ice (Reduced DL)	160.00	0.3633	-0.0187	0.1800	0.181
0.9D + 1.0W 90° 115.99 mph Wind with No Ice (Reduced DL)	170.00	0.3947	-0.0188	0.1798	0.1803
0.9D + 1.0W 90° 115.99 mph Wind with No Ice (Reduced DL)	180.00	0.4267	-0.0193	0.1839	0.1849
0.9D + 1.0W 90° 115.99 mph Wind with No Ice (Reduced DL)	190.00	0.459	-0.0194	0.1830	0.1833
0.9D + 1.0W 90° 115.99 mph Wind with No Ice (Reduced DL)	200.00	0.4904	-0.0191	0.1796	0.1799
0.9D + 1.0W 90° 115.99 mph Wind with No Ice (Reduced DL)	210.00	0.5208	-0.0190	0.1760	0.1763
0.9D + 1.0W 90° 115.99 mph Wind with No Ice (Reduced DL)	220.00	0.5513	-0.0193	0.1759	0.1762
0.9D + 1.0W 90° 115.99 mph Wind with No Ice (Reduced DL)	226.67	0.5717	-0.0193	0.1747	0.175
0.9D + 1.0W 90° 115.99 mph Wind with No Ice (Reduced DL)	233.33	0.592	-0.0193	0.1721	0.173
0.9D + 1.0W 90° 115.99 mph Wind with No Ice (Reduced DL)	240.00	0.612	-0.0193	0.1704	0.1712
0.9D + 1.0W 60° 115.99 mph Wind with No Ice (Reduced DL)	80.00	0.1305	-0.0102	0.1213	0.1218
0.9D + 1.0W 60° 115.99 mph Wind with No Ice (Reduced DL)	100.00	0.1782	-0.0135	0.1553	0.1559
0.9D + 1.0W 60° 115.99 mph Wind with No Ice (Reduced DL)	120.00	0.2378	-0.0147	0.1685	0.1691
0.9D + 1.0W 60° 115.99 mph Wind with No Ice (Reduced DL)	130.00	0.2667	-0.0146	0.1645	0.1651
0.9D + 1.0W 60° 115.99 mph Wind with No Ice (Reduced DL)	140.00	0.2966	-0.0155	0.1772	0.1779
0.9D + 1.0W 60° 115.99 mph Wind with No Ice (Reduced DL)	150.00	0.3286	-0.0161	0.1843	0.185
0.9D + 1.0W 60° 115.99 mph Wind with No Ice (Reduced DL)	160.00	0.3606	-0.0160	0.1803	0.1806
0.9D + 1.0W 60° 115.99 mph Wind with No Ice (Reduced DL)	170.00	0.3921	-0.0161	0.1809	0.181
0.9D + 1.0W 60° 115.99 mph Wind with No Ice (Reduced DL)	180.00	0.4239	-0.0165	0.1836	0.1844
0.9D + 1.0W 60° 115.99 mph Wind with No Ice (Reduced DL)	190.00	0.4562	-0.0166	0.1834	0.1838
0.9D + 1.0W 60° 115.99 mph Wind with No Ice (Reduced DL)	200.00	0.4877	-0.0163	0.1796	0.1797
0.9D + 1.0W 60° 115.99 mph Wind with No Ice (Reduced DL)	210.00	0.5183	-0.0163	0.1761	0.1762
0.9D + 1.0W 60° 115.99 mph Wind with No Ice (Reduced DL)	220.00	0.5489	-0.0165	0.1762	0.1763
0.9D + 1.0W 60° 115.99 mph Wind with No Ice (Reduced DL)	226.67	0.5693	-0.0165	0.1752	0.1753
0.9D + 1.0W 60° 115.99 mph Wind with No Ice (Reduced DL)	233.33	0.5896	-0.0165	0.1724	0.1732
0.9D + 1.0W 60° 115.99 mph Wind with No Ice (Reduced DL)	240.00	0.6097	-0.0165	0.1709	0.1717
0.9D + 1.0W Normal 115.99 mph Wind with No Ice (Reduced DL)	80.00	0.1282	0.0047	0.1201	0.1202
0.9D + 1.0W Normal 115.99 mph Wind with No Ice (Reduced DL)	100.00	0.1754	0.0057	0.1573	0.1574
0.9D + 1.0W Normal 115.99 mph Wind with No Ice (Reduced DL)	120.00	0.2344	-0.0063	0.1672	0.1673
0.9D + 1.0W Normal 115.99 mph Wind with No Ice (Reduced DL)	130.00	0.2632	-0.0062	0.1647	0.1648

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
0.9D + 1.0W Normal 115.99 mph Wind with No Ice (Reduced DL)	140.00	0.293	-0.0070	0.1775	0.1776
0.9D + 1.0W Normal 115.99 mph Wind with No Ice (Reduced DL)	150.00	0.3249	-0.0073	0.1835	0.1837
0.9D + 1.0W Normal 115.99 mph Wind with No Ice (Reduced DL)	160.00	0.3567	-0.0071	0.1803	0.1803
0.9D + 1.0W Normal 115.99 mph Wind with No Ice (Reduced DL)	170.00	0.3882	-0.0071	0.1809	0.181
0.9D + 1.0W Normal 115.99 mph Wind with No Ice (Reduced DL)	180.00	0.4201	-0.0072	0.1836	0.1838
0.9D + 1.0W Normal 115.99 mph Wind with No Ice (Reduced DL)	190.00	0.4523	-0.0073	0.1838	0.1839
0.9D + 1.0W Normal 115.99 mph Wind with No Ice (Reduced DL)	200.00	0.4841	-0.0071	0.1795	0.1796
0.9D + 1.0W Normal 115.99 mph Wind with No Ice (Reduced DL)	210.00	0.5148	-0.0067	0.1765	0.1765
0.9D + 1.0W Normal 115.99 mph Wind with No Ice (Reduced DL)	220.00	0.5455	-0.0066	0.1763	0.1763
0.9D + 1.0W Normal 115.99 mph Wind with No Ice (Reduced DL)	226.67	0.566	-0.0065	0.1755	0.1755
0.9D + 1.0W Normal 115.99 mph Wind with No Ice (Reduced DL)	233.33	0.5862	0.0059	0.1728	0.1728
0.9D + 1.0W Normal 115.99 mph Wind with No Ice (Reduced DL)	240.00	0.6061	-0.0062	0.1722	0.1723
1.2D + 1.0W 330° 115.99 mph Wind with No Ice	80.00	0.129	-0.0072	0.1205	0.1205
1.2D + 1.0W 330° 115.99 mph Wind with No Ice	100.00	0.1763	-0.0091	0.1566	0.1566
1.2D + 1.0W 330° 115.99 mph Wind with No Ice	120.00	0.2357	-0.0100	0.1683	0.1683
1.2D + 1.0W 330° 115.99 mph Wind with No Ice	130.00	0.2646	-0.0099	0.1652	0.1652
1.2D + 1.0W 330° 115.99 mph Wind with No Ice	140.00	0.2944	-0.0109	0.1778	0.1778
1.2D + 1.0W 330° 115.99 mph Wind with No Ice	150.00	0.3263	-0.0114	0.1839	0.1839
1.2D + 1.0W 330° 115.99 mph Wind with No Ice	160.00	0.3582	-0.0112	0.1811	0.1811
1.2D + 1.0W 330° 115.99 mph Wind with No Ice	170.00	0.3898	-0.0114	0.1816	0.1816
1.2D + 1.0W 330° 115.99 mph Wind with No Ice	180.00	0.4217	-0.0116	0.1839	0.1842
1.2D + 1.0W 330° 115.99 mph Wind with No Ice	190.00	0.454	-0.0118	0.1838	0.184
1.2D + 1.0W 330° 115.99 mph Wind with No Ice	200.00	0.4856	-0.0116	0.1798	0.1801
1.2D + 1.0W 330° 115.99 mph Wind with No Ice	210.00	0.5165	-0.0113	0.1759	0.176
1.2D + 1.0W 330° 115.99 mph Wind with No Ice	220.00	0.5472	-0.0113	0.1764	0.1764
1.2D + 1.0W 330° 115.99 mph Wind with No Ice	226.67	0.5677	-0.0112	0.1756	0.1756
1.2D + 1.0W 330° 115.99 mph Wind with No Ice	233.33	0.588	0.0094	0.1726	0.1728
1.2D + 1.0W 330° 115.99 mph Wind with No Ice	240.00	0.608	-0.0109	0.1723	0.1727
1.2D + 1.0W 300° 115.99 mph Wind with No Ice	80.00	0.1313	0.0102	0.1218	0.1222
1.2D + 1.0W 300° 115.99 mph Wind with No Ice	100.00	0.1792	0.0136	0.1560	0.1566
1.2D + 1.0W 300° 115.99 mph Wind with No Ice	120.00	0.239	0.0147	0.1691	0.1698
1.2D + 1.0W 300° 115.99 mph Wind with No Ice	130.00	0.268	0.0146	0.1649	0.1655
1.2D + 1.0W 300° 115.99 mph Wind with No Ice	140.00	0.298	0.0156	0.1778	0.1785
1.2D + 1.0W 300° 115.99 mph Wind with No Ice	150.00	0.3302	0.0162	0.1849	0.1856
1.2D + 1.0W 300° 115.99 mph Wind with No Ice	160.00	0.3623	0.0160	0.1805	0.1812
1.2D + 1.0W 300° 115.99 mph Wind with No Ice	170.00	0.3938	0.0161	0.1810	0.181
1.2D + 1.0W 300° 115.99 mph Wind with No Ice	180.00	0.4258	0.0165	0.1842	0.1849
1.2D + 1.0W 300° 115.99 mph Wind with No Ice	190.00	0.4582	0.0166	0.1833	0.1837
1.2D + 1.0W 300° 115.99 mph Wind with No Ice	200.00	0.4896	0.0163	0.1796	0.1801
1.2D + 1.0W 300° 115.99 mph Wind with No Ice	210.00	0.5202	0.0163	0.1762	0.1763
1.2D + 1.0W 300° 115.99 mph Wind with No Ice	220.00	0.5508	0.0164	0.1762	0.1763
1.2D + 1.0W 300° 115.99 mph Wind with No Ice	226.67	0.5712	0.0165	0.1753	0.1754
1.2D + 1.0W 300° 115.99 mph Wind with No Ice	233.33	0.5914	0.0165	0.1725	0.1728
1.2D + 1.0W 300° 115.99 mph Wind with No Ice	240.00	0.6114	0.0164	0.1712	0.1717
1.2D + 1.0W 240° 115.99 mph Wind with No Ice	80.00	0.1305	0.0104	0.1217	0.1221
1.2D + 1.0W 240° 115.99 mph Wind with No Ice	100.00	0.1783	0.0138	0.1555	0.1561
1.2D + 1.0W 240° 115.99 mph Wind with No Ice	120.00	0.2378	0.0150	0.1685	0.1692
1.2D + 1.0W 240° 115.99 mph Wind with No Ice	130.00	0.2667	0.0149	0.1645	0.1652
1.2D + 1.0W 240° 115.99 mph Wind with No Ice	140.00	0.2965	0.0159	0.1772	0.178
1.2D + 1.0W 240° 115.99 mph Wind with No Ice	150.00	0.3286	0.0165	0.1842	0.185
1.2D + 1.0W 240° 115.99 mph Wind with No Ice	160.00	0.3605	0.0164	0.1798	0.1804
1.2D + 1.0W 240° 115.99 mph Wind with No Ice	170.00	0.3919	0.0165	0.1802	0.1802
1.2D + 1.0W 240° 115.99 mph Wind with No Ice	180.00	0.4237	0.0169	0.1833	0.184
1.2D + 1.0W 240° 115.99 mph Wind with No Ice	190.00	0.4559	0.0170	0.1830	0.1834
1.2D + 1.0W 240° 115.99 mph Wind with No Ice	200.00	0.4873	0.0167	0.1789	0.179
1.2D + 1.0W 240° 115.99 mph Wind with No Ice	210.00	0.5178	0.0167	0.1756	0.1756
1.2D + 1.0W 240° 115.99 mph Wind with No Ice	220.00	0.5483	0.0169	0.1755	0.1756
1.2D + 1.0W 240° 115.99 mph Wind with No Ice	226.67	0.5687	0.0170	0.1745	0.1746
1.2D + 1.0W 240° 115.99 mph Wind with No Ice	233.33	0.5889	0.0170	0.1718	0.1727

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0W 240° 115.99 mph Wind with No Ice	240.00	0.6089	0.0170	0.1704	0.1713
1.2D + 1.0W 210° 115.99 mph Wind with No Ice	80.00	0.1283	-0.0069	0.1199	0.1201
1.2D + 1.0W 210° 115.99 mph Wind with No Ice	100.00	0.1753	-0.0087	0.1554	0.1556
1.2D + 1.0W 210° 115.99 mph Wind with No Ice	120.00	0.2344	-0.0095	0.1673	0.1675
1.2D + 1.0W 210° 115.99 mph Wind with No Ice	130.00	0.2631	-0.0094	0.1641	0.1644
1.2D + 1.0W 210° 115.99 mph Wind with No Ice	140.00	0.2928	-0.0103	0.1763	0.1765
1.2D + 1.0W 210° 115.99 mph Wind with No Ice	150.00	0.3245	-0.0108	0.1829	0.1831
1.2D + 1.0W 210° 115.99 mph Wind with No Ice	160.00	0.3563	-0.0106	0.1797	0.1799
1.2D + 1.0W 210° 115.99 mph Wind with No Ice	170.00	0.3876	-0.0107	0.1801	0.1801
1.2D + 1.0W 210° 115.99 mph Wind with No Ice	180.00	0.4193	-0.0109	0.1828	0.183
1.2D + 1.0W 210° 115.99 mph Wind with No Ice	190.00	0.4514	-0.0110	0.1831	0.1834
1.2D + 1.0W 210° 115.99 mph Wind with No Ice	200.00	0.4828	-0.0106	0.1785	0.1785
1.2D + 1.0W 210° 115.99 mph Wind with No Ice	210.00	0.5135	-0.0104	0.1750	0.1752
1.2D + 1.0W 210° 115.99 mph Wind with No Ice	220.00	0.5441	-0.0103	0.1753	0.1753
1.2D + 1.0W 210° 115.99 mph Wind with No Ice	226.67	0.5645	-0.0102	0.1744	0.1745
1.2D + 1.0W 210° 115.99 mph Wind with No Ice	233.33	0.5847	-0.0100	0.1720	0.1723
1.2D + 1.0W 210° 115.99 mph Wind with No Ice	240.00	0.6046	0.0100	0.1711	0.1714
1.2D + 1.0W 180° 115.99 mph Wind with No Ice	80.00	0.1283	0.0047	0.1197	0.1198
1.2D + 1.0W 180° 115.99 mph Wind with No Ice	100.00	0.1755	0.0057	0.1571	0.1572
1.2D + 1.0W 180° 115.99 mph Wind with No Ice	120.00	0.2345	0.0063	0.1669	0.167
1.2D + 1.0W 180° 115.99 mph Wind with No Ice	130.00	0.2632	0.0062	0.1641	0.1643
1.2D + 1.0W 180° 115.99 mph Wind with No Ice	140.00	0.293	0.0070	0.1769	0.1771
1.2D + 1.0W 180° 115.99 mph Wind with No Ice	150.00	0.3248	0.0073	0.1829	0.1831
1.2D + 1.0W 180° 115.99 mph Wind with No Ice	160.00	0.3565	0.0070	0.1800	0.18
1.2D + 1.0W 180° 115.99 mph Wind with No Ice	170.00	0.3879	0.0071	0.1801	0.1802
1.2D + 1.0W 180° 115.99 mph Wind with No Ice	180.00	0.4197	0.0072	0.1829	0.183
1.2D + 1.0W 180° 115.99 mph Wind with No Ice	190.00	0.4518	0.0073	0.1830	0.1831
1.2D + 1.0W 180° 115.99 mph Wind with No Ice	200.00	0.4834	0.0070	0.1785	0.1787
1.2D + 1.0W 180° 115.99 mph Wind with No Ice	210.00	0.514	0.0067	0.1756	0.1756
1.2D + 1.0W 180° 115.99 mph Wind with No Ice	220.00	0.5446	0.0066	0.1755	0.1755
1.2D + 1.0W 180° 115.99 mph Wind with No Ice	226.67	0.5649	0.0065	0.1745	0.1745
1.2D + 1.0W 180° 115.99 mph Wind with No Ice	233.33	0.585	-0.0059	0.1720	0.172
1.2D + 1.0W 180° 115.99 mph Wind with No Ice	240.00	0.6048	0.0062	0.1712	0.1712
1.2D + 1.0W 120° 115.99 mph Wind with No Ice	80.00	0.1312	-0.0104	0.1221	0.1225
1.2D + 1.0W 120° 115.99 mph Wind with No Ice	100.00	0.1791	-0.0139	0.1561	0.1567
1.2D + 1.0W 120° 115.99 mph Wind with No Ice	120.00	0.2389	-0.0150	0.1691	0.1698
1.2D + 1.0W 120° 115.99 mph Wind with No Ice	130.00	0.2679	-0.0149	0.1650	0.1657
1.2D + 1.0W 120° 115.99 mph Wind with No Ice	140.00	0.2978	-0.0159	0.1778	0.1785
1.2D + 1.0W 120° 115.99 mph Wind with No Ice	150.00	0.33	-0.0165	0.1849	0.1857
1.2D + 1.0W 120° 115.99 mph Wind with No Ice	160.00	0.3621	-0.0164	0.1803	0.1811
1.2D + 1.0W 120° 115.99 mph Wind with No Ice	170.00	0.3935	-0.0165	0.1803	0.1806
1.2D + 1.0W 120° 115.99 mph Wind with No Ice	180.00	0.4255	-0.0170	0.1839	0.1847
1.2D + 1.0W 120° 115.99 mph Wind with No Ice	190.00	0.4578	-0.0170	0.1830	0.1834
1.2D + 1.0W 120° 115.99 mph Wind with No Ice	200.00	0.4892	-0.0167	0.1794	0.1799
1.2D + 1.0W 120° 115.99 mph Wind with No Ice	210.00	0.5197	-0.0167	0.1759	0.176
1.2D + 1.0W 120° 115.99 mph Wind with No Ice	220.00	0.5502	-0.0169	0.1758	0.176
1.2D + 1.0W 120° 115.99 mph Wind with No Ice	226.67	0.5706	-0.0170	0.1750	0.1751
1.2D + 1.0W 120° 115.99 mph Wind with No Ice	233.33	0.5908	-0.0169	0.1719	0.1726
1.2D + 1.0W 120° 115.99 mph Wind with No Ice	240.00	0.6108	-0.0169	0.1711	0.1715
1.2D + 1.0W 90° 115.99 mph Wind with No Ice	80.00	0.132	-0.0119	0.1227	0.1232
1.2D + 1.0W 90° 115.99 mph Wind with No Ice	100.00	0.1802	-0.0158	0.1559	0.1567
1.2D + 1.0W 90° 115.99 mph Wind with No Ice	120.00	0.2401	-0.0172	0.1695	0.1704
1.2D + 1.0W 90° 115.99 mph Wind with No Ice	130.00	0.2692	-0.0170	0.1650	0.1659
1.2D + 1.0W 90° 115.99 mph Wind with No Ice	140.00	0.2992	-0.0182	0.1782	0.1791
1.2D + 1.0W 90° 115.99 mph Wind with No Ice	150.00	0.3315	-0.0189	0.1854	0.1864
1.2D + 1.0W 90° 115.99 mph Wind with No Ice	160.00	0.3636	-0.0187	0.1802	0.1812
1.2D + 1.0W 90° 115.99 mph Wind with No Ice	170.00	0.3951	-0.0188	0.1801	0.1805
1.2D + 1.0W 90° 115.99 mph Wind with No Ice	180.00	0.4271	-0.0193	0.1841	0.1851
1.2D + 1.0W 90° 115.99 mph Wind with No Ice	190.00	0.4595	-0.0194	0.1832	0.1835

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0W 90° 115.99 mph Wind with No Ice	200.00	0.4909	-0.0191	0.1798	0.1801
1.2D + 1.0W 90° 115.99 mph Wind with No Ice	210.00	0.5213	-0.0191	0.1762	0.1765
1.2D + 1.0W 90° 115.99 mph Wind with No Ice	220.00	0.5519	-0.0193	0.1761	0.1764
1.2D + 1.0W 90° 115.99 mph Wind with No Ice	226.67	0.5723	-0.0194	0.1749	0.1752
1.2D + 1.0W 90° 115.99 mph Wind with No Ice	233.33	0.5926	-0.0193	0.1722	0.1732
1.2D + 1.0W 90° 115.99 mph Wind with No Ice	240.00	0.6126	-0.0193	0.1707	0.1714
1.2D + 1.0W 60° 115.99 mph Wind with No Ice	80.00	0.1306	-0.0102	0.1214	0.1218
1.2D + 1.0W 60° 115.99 mph Wind with No Ice	100.00	0.1784	-0.0135	0.1554	0.156
1.2D + 1.0W 60° 115.99 mph Wind with No Ice	120.00	0.238	-0.0147	0.1687	0.1693
1.2D + 1.0W 60° 115.99 mph Wind with No Ice	130.00	0.2669	-0.0146	0.1646	0.1653
1.2D + 1.0W 60° 115.99 mph Wind with No Ice	140.00	0.2968	-0.0156	0.1774	0.1781
1.2D + 1.0W 60° 115.99 mph Wind with No Ice	150.00	0.329	-0.0162	0.1845	0.1852
1.2D + 1.0W 60° 115.99 mph Wind with No Ice	160.00	0.361	-0.0160	0.1806	0.1808
1.2D + 1.0W 60° 115.99 mph Wind with No Ice	170.00	0.3925	-0.0161	0.1812	0.1813
1.2D + 1.0W 60° 115.99 mph Wind with No Ice	180.00	0.4244	-0.0166	0.1839	0.1846
1.2D + 1.0W 60° 115.99 mph Wind with No Ice	190.00	0.4567	-0.0166	0.1837	0.1841
1.2D + 1.0W 60° 115.99 mph Wind with No Ice	200.00	0.4882	-0.0163	0.1800	0.1801
1.2D + 1.0W 60° 115.99 mph Wind with No Ice	210.00	0.5189	-0.0163	0.1764	0.1765
1.2D + 1.0W 60° 115.99 mph Wind with No Ice	220.00	0.5496	-0.0165	0.1765	0.1766
1.2D + 1.0W 60° 115.99 mph Wind with No Ice	226.67	0.57	-0.0166	0.1755	0.1756
1.2D + 1.0W 60° 115.99 mph Wind with No Ice	233.33	0.5903	-0.0166	0.1727	0.1735
1.2D + 1.0W 60° 115.99 mph Wind with No Ice	240.00	0.6104	-0.0165	0.1712	0.172
1.2D + 1.0W Normal 115.99 mph Wind with No Ice	80.00	0.1282	0.0047	0.1203	0.1204
1.2D + 1.0W Normal 115.99 mph Wind with No Ice	100.00	0.1756	-0.0058	0.1575	0.1576
1.2D + 1.0W Normal 115.99 mph Wind with No Ice	120.00	0.2346	-0.0063	0.1674	0.1675
1.2D + 1.0W Normal 115.99 mph Wind with No Ice	130.00	0.2634	-0.0062	0.1650	0.1651
1.2D + 1.0W Normal 115.99 mph Wind with No Ice	140.00	0.2933	-0.0070	0.1778	0.1779
1.2D + 1.0W Normal 115.99 mph Wind with No Ice	150.00	0.3252	-0.0073	0.1839	0.184
1.2D + 1.0W Normal 115.99 mph Wind with No Ice	160.00	0.3571	-0.0071	0.1805	0.1805
1.2D + 1.0W Normal 115.99 mph Wind with No Ice	170.00	0.3886	-0.0071	0.1812	0.1813
1.2D + 1.0W Normal 115.99 mph Wind with No Ice	180.00	0.4206	-0.0073	0.1840	0.1841
1.2D + 1.0W Normal 115.99 mph Wind with No Ice	190.00	0.4528	-0.0073	0.1842	0.1843
1.2D + 1.0W Normal 115.99 mph Wind with No Ice	200.00	0.4847	-0.0071	0.1798	0.18
1.2D + 1.0W Normal 115.99 mph Wind with No Ice	210.00	0.5155	-0.0067	0.1768	0.1768
1.2D + 1.0W Normal 115.99 mph Wind with No Ice	220.00	0.5462	-0.0067	0.1766	0.1766
1.2D + 1.0W Normal 115.99 mph Wind with No Ice	226.67	0.5667	-0.0065	0.1758	0.1758
1.2D + 1.0W Normal 115.99 mph Wind with No Ice	233.33	0.587	0.0059	0.1731	0.1731
1.2D + 1.0W Normal 115.99 mph Wind with No Ice	240.00	0.607	-0.0063	0.1726	0.1727

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	FX* (kip)	FY* (kip)	FZ* (kip)
					*(-) Uplift and (+) Down		
	23.29	0.00	0	1	0.06	321.82	-45.94
1.2D + 1.0W Normal	23.29	0.00	120	1a	11.96	-104.03	-15.10
	23.29	0.00	240	1b	-12.02	-104.11	-14.99
	23.29	0.00	0	1	-7.06	179.98	-24.81
1.2D + 1.0W 60°	23.29	0.00	120	1a	-24.74	179.64	6.77
	23.29	0.00	240	1b	-34.06	-245.94	-19.99
	23.29	0.00	0	1	-8.34	38.12	-3.51
1.2D + 1.0W 90°	23.29	0.00	120	1a	-36.66	283.48	17.11
	23.29	0.00	240	1b	-31.06	-207.92	-13.60
	23.29	0.00	0	1	-7.39	-103.74	17.92
1.2D + 1.0W 120°	23.29	0.00	120	1a	-39.63	321.50	23.27
	23.29	0.00	240	1b	-18.86	-104.08	-3.15
	23.29	0.00	0	1	-0.07	-245.61	39.49
1.2D + 1.0W 180°	23.29	0.00	120	1a	-18.05	179.68	18.34
	23.29	0.00	240	1b	18.12	179.60	18.23
	23.29	0.00	0	1	4.25	-207.59	33.69
1.2D + 1.0W 210°	23.29	0.00	120	1a	0.88	37.85	8.57
	23.29	0.00	240	1b	32.90	283.43	23.60
	23.29	0.00	0	1	7.33	-103.74	17.92
1.2D + 1.0W 240°	23.29	0.00	120	1a	18.89	-104.00	-3.10
	23.29	0.00	240	1b	39.66	321.42	23.21
	23.29	0.00	0	1	7.13	179.98	-24.81
1.2D + 1.0W 300°	23.29	0.00	120	1a	34.03	-245.86	-20.05
	23.29	0.00	240	1b	24.71	179.56	6.82
	23.29	0.00	0	1	4.10	283.83	-40.30
1.2D + 1.0W 330°	23.29	0.00	120	1a	27.01	-207.86	-20.62
	23.29	0.00	240	1b	6.92	37.72	-4.95
	23.29	0.00	0	1	0.06	312.10	-45.07
0.9D + 1.0W Normal	23.29	0.00	120	1a	12.72	-113.39	-15.55
	23.29	0.00	240	1b	-12.78	-113.45	-15.44
	23.29	0.00	0	1	-7.07	170.35	-23.92
0.9D + 1.0W 60°	23.29	0.00	120	1a	-23.98	170.08	6.32
	23.29	0.00	240	1b	-34.81	-255.17	-20.43
	23.29	0.00	0	1	-8.35	28.59	-2.64
0.9D + 1.0W 90°	23.29	0.00	120	1a	-35.90	273.85	16.66
	23.29	0.00	240	1b	-31.81	-217.18	-14.03
	23.29	0.00	0	1	-7.40	-113.17	18.79
0.9D + 1.0W 120°	23.29	0.00	120	1a	-38.86	311.84	22.82
	23.29	0.00	240	1b	-19.62	-113.41	-3.59
	23.29	0.00	0	1	-0.07	-254.93	40.36
0.9D + 1.0W 180°	23.29	0.00	120	1a	-17.29	170.13	17.91
	23.29	0.00	240	1b	17.35	170.06	17.80
	23.29	0.00	0	1	4.25	-216.95	34.57
0.9D + 1.0W 210°	23.29	0.00	120	1a	1.65	28.39	8.14
	23.29	0.00	240	1b	32.13	273.81	23.16
	23.29	0.00	0	1	7.33	-113.17	18.79
0.9D + 1.0W 240°	23.29	0.00	120	1a	19.65	-113.35	-3.53
	23.29	0.00	240	1b	38.89	311.78	22.77
	23.29	0.00	0	1	7.14	170.35	-23.92
0.9D + 1.0W 300°	23.29	0.00	120	1a	34.78	-255.11	-20.48
	23.29	0.00	240	1b	23.95	170.02	6.37
	23.29	0.00	0	1	4.10	274.12	-39.42
0.9D + 1.0W 330°	23.29	0.00	120	1a	27.76	-217.14	-21.06
	23.29	0.00	240	1b	6.17	28.28	-5.39
	23.29	0.00	0	1	0.02	157.59	-20.33
1.2D + 1.0Di + 1.0Wi Normal	23.29	0.00	120	1a	0.22	15.24	-2.96
	23.29	0.00	240	1b	-0.23	15.06	-2.94
	23.29	0.00	0	1	-2.50	110.41	-13.02
1.2D + 1.0Di + 1.0Wi 60°	23.29	0.00	120	1a	-12.43	109.60	4.48

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	FX* (kip)	FY* (kip)	FZ* (kip)
	23.29	0.00	240	1b	-7.79	-32.11	-4.58
	23.29	0.00	0	1	-2.91	63.22	-5.69
1.2D + 1.0Di + 1.0Wi 90°	23.29	0.00	120	1a	-16.54	144.14	8.07
	23.29	0.00	240	1b	-6.78	-19.47	-2.38
	23.29	0.00	0	1	-2.54	16.04	1.66
1.2D + 1.0Di + 1.0Wi 120°	23.29	0.00	120	1a	-17.55	156.79	10.25
	23.29	0.00	240	1b	-2.63	15.07	1.21
	23.29	0.00	0	1	-0.01	-31.14	9.02
1.2D + 1.0Di + 1.0Wi 180°	23.29	0.00	120	1a	-10.04	109.61	8.62
	23.29	0.00	240	1b	10.05	109.43	8.59
	23.29	0.00	0	1	1.46	-18.50	7.04
1.2D + 1.0Di + 1.0Wi 210°	23.29	0.00	120	1a	-3.52	62.43	5.25
	23.29	0.00	240	1b	15.18	143.96	10.42
	23.29	0.00	0	1	2.53	16.04	1.66
1.2D + 1.0Di + 1.0Wi 240°	23.29	0.00	120	1a	2.64	15.25	1.23
	23.29	0.00	240	1b	17.55	156.60	10.23
	23.29	0.00	0	1	2.52	110.41	-13.02
1.2D + 1.0Di + 1.0Wi 300°	23.29	0.00	120	1a	7.78	-31.93	-4.59
	23.29	0.00	240	1b	12.42	109.42	4.49
	23.29	0.00	0	1	1.46	144.95	-18.38
1.2D + 1.0Di + 1.0Wi 330°	23.29	0.00	120	1a	5.38	-19.29	-4.81
	23.29	0.00	240	1b	6.29	62.24	0.46
	23.29	0.00	0	1	0.00	60.30	-6.48
1.2D + 1.0Ev + 1.0Eh Normal	23.29	0.00	120	1a	-2.10	26.16	0.81
	23.29	0.00	240	1b	2.10	26.16	0.81
	23.29	0.00	0	1	-0.34	48.92	-5.06
1.2D + 1.0Ev + 1.0Eh 60°	23.29	0.00	120	1a	-4.56	48.92	2.23
	23.29	0.00	240	1b	0.70	14.79	0.41
	23.29	0.00	0	1	-0.40	37.54	-3.65
1.2D + 1.0Ev + 1.0Eh 90°	23.29	0.00	120	1a	-5.38	57.25	2.88
	23.29	0.00	240	1b	0.93	17.84	0.77
	23.29	0.00	0	1	-0.35	26.16	-2.23
1.2D + 1.0Ev + 1.0Eh 120°	23.29	0.00	120	1a	-5.61	60.30	3.24
	23.29	0.00	240	1b	1.76	26.16	1.41
	23.29	0.00	0	1	0.00	14.79	-0.81
1.2D + 1.0Ev + 1.0Eh 180°	23.29	0.00	120	1a	-4.21	48.92	2.83
	23.29	0.00	240	1b	4.21	48.92	2.83
	23.29	0.00	0	1	0.20	17.84	-1.19
1.2D + 1.0Ev + 1.0Eh 210°	23.29	0.00	120	1a	-2.96	37.54	2.17
	23.29	0.00	240	1b	5.18	57.25	3.22
	23.29	0.00	0	1	0.35	26.16	-2.23
1.2D + 1.0Ev + 1.0Eh 240°	23.29	0.00	120	1a	-1.76	26.16	1.41
	23.29	0.00	240	1b	5.61	60.30	3.24
	23.29	0.00	0	1	0.34	48.92	-5.06
1.2D + 1.0Ev + 1.0Eh 300°	23.29	0.00	120	1a	-0.70	14.79	0.41
	23.29	0.00	240	1b	4.56	48.92	2.23
	23.29	0.00	0	1	0.20	57.25	-6.10
1.2D + 1.0Ev + 1.0Eh 330°	23.29	0.00	120	1a	-1.13	17.84	0.42
	23.29	0.00	240	1b	3.36	37.54	1.48
	23.29	0.00	0	1	0.00	48.51	-5.34
0.9D - 1.0Ev + 1.0Eh Normal	23.29	0.00	120	1a	-1.11	14.41	0.24
	23.29	0.00	240	1b	1.11	14.41	0.24
	23.29	0.00	0	1	-0.35	37.15	-3.92
0.9D - 1.0Ev + 1.0Eh 60°	23.29	0.00	120	1a	-3.57	37.15	1.66
	23.29	0.00	240	1b	-0.29	3.05	-0.17
	23.29	0.00	0	1	-0.40	25.78	-2.50
0.9D - 1.0Ev + 1.0Eh 90°	23.29	0.00	120	1a	-4.39	45.47	2.31
	23.29	0.00	240	1b	-0.06	6.09	0.20
0.9D - 1.0Ev + 1.0Eh 120°	23.29	0.00	0	1	-0.35	14.41	-1.09

*(-) Uplift and (+) Down

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	FX* (kip)	FY* (kip)	FZ* (kip)
					*(-) Uplift and (+) Down		
	23.29	0.00	120	1a	-4.62	48.51	2.67
	23.29	0.00	240	1b	0.77	14.41	0.84
	23.29	0.00	0	1	0.00	3.05	0.33
0.9D - 1.0Ev + 1.0Eh 180°	23.29	0.00	120	1a	-3.22	37.15	2.26
	23.29	0.00	240	1b	3.22	37.15	2.26
	23.29	0.00	0	1	0.20	6.09	-0.05
0.9D - 1.0Ev + 1.0Eh 210°	23.29	0.00	120	1a	-1.97	25.78	1.60
	23.29	0.00	240	1b	4.19	45.47	2.65
	23.29	0.00	0	1	0.35	14.41	-1.09
0.9D - 1.0Ev + 1.0Eh 240°	23.29	0.00	120	1a	-0.77	14.41	0.84
	23.29	0.00	240	1b	4.62	48.51	2.67
	23.29	0.00	0	1	0.35	37.15	-3.92
0.9D - 1.0Ev + 1.0Eh 300°	23.29	0.00	120	1a	0.29	3.05	-0.17
	23.29	0.00	240	1b	3.57	37.15	1.66
	23.29	0.00	0	1	0.20	45.47	-4.96
0.9D - 1.0Ev + 1.0Eh 330°	23.29	0.00	120	1a	-0.14	6.09	-0.15
	23.29	0.00	240	1b	2.37	25.78	0.91
	23.29	0.00	0	1	0.02	111.18	-14.88
1.0D + 1.0W Service Normal	23.29	0.00	120	1a	1.67	-8.19	-3.23
	23.29	0.00	240	1b	-1.69	-8.26	-3.20
	23.29	0.00	0	1	-2.00	71.47	-8.91
1.0D + 1.0W Service 60°	23.29	0.00	120	1a	-8.64	71.21	2.85
	23.29	0.00	240	1b	-7.82	-47.95	-4.60
	23.29	0.00	0	1	-2.34	31.76	-2.93
1.0D + 1.0W Service 90°	23.29	0.00	120	1a	-12.01	100.28	5.76
	23.29	0.00	240	1b	-6.98	-37.31	-2.83
	23.29	0.00	0	1	-2.04	-7.94	3.06
1.0D + 1.0W Service 120°	23.29	0.00	120	1a	-12.84	110.92	7.52
	23.29	0.00	240	1b	-3.58	-8.24	0.08
	23.29	0.00	0	1	-0.02	-47.65	9.06
1.0D + 1.0W Service 180°	23.29	0.00	120	1a	-6.74	71.23	6.14
	23.29	0.00	240	1b	6.76	71.16	6.11
	23.29	0.00	0	1	1.16	-37.01	7.45
1.0D + 1.0W Service 210°	23.29	0.00	120	1a	-1.43	31.53	3.38
	23.29	0.00	240	1b	10.93	100.22	7.63
	23.29	0.00	0	1	2.03	-7.94	3.06
1.0D + 1.0W Service 240°	23.29	0.00	120	1a	3.59	-8.18	0.10
	23.29	0.00	240	1b	12.84	110.85	7.50
	23.29	0.00	0	1	2.02	71.47	-8.91
1.0D + 1.0W Service 300°	23.29	0.00	120	1a	7.81	-47.88	-4.61
	23.29	0.00	240	1b	8.63	71.14	2.86
	23.29	0.00	0	1	1.17	100.54	-13.28
1.0D + 1.0W Service 330°	23.29	0.00	120	1a	5.86	-37.25	-4.76
	23.29	0.00	240	1b	3.62	31.44	-0.42

MAXIMUM REACTIONS SUMMARY

Individual		Global (DL+WL+IL)		Global (DL+WL)	
Max Uplift:	255.17 (kip)	Moment Ice:	3316.81 (kip-ft)	Moment:	9917.27 (kip-ft)
Max Down:	321.82 (kip)	Total Down Ice:	187.9 (kip)	Total Down:	113.68 (kip)
Max Shear:	45.95 (kip)	Total Shear Ice:	26.24 (kip)	Total Shear:	76.03 (kip)

1.2D + 1.0W Normal

MAT & PIER FOUNDATION ANALYSIS (NODE 1b)

APPLIED LOCAL REACTIONS

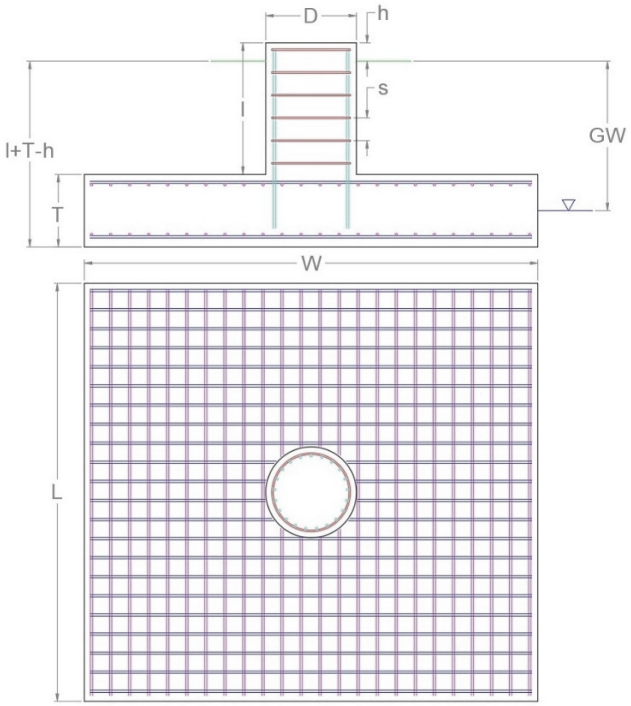
Axial (k)	Uplift (k)	Shear (k)
321.42	255.17	45.95

FOUNDATION PARAMETERS

Mat Length:	L	22	ft
Mat Width:	W	22	ft
Mat Thickness:	T	6.1	ft
Base Depth:	L+T-h	5.6	ft
Pier Shape:		Round	
Pier Diameter:	D	1	ft
Pier Height above Grade:	h	0.5	ft
Tower Eccentricity:	ecc		ft
Tower Leg Count		1	

SOIL PARAMETERS

Water Table Depth [BGL]:	GW	-	ft
Soil Unit Weight:		140	pcf
Ultimate Skin Friction:		0	psf
Ultimate Bearing Pressure:		95,574	psf
Bearing Pressure Type:		Gross	
Coefficient of Shear Friction:		0.1	
Uplift Pullout Angle:		30	°
Uplift at ____ of Mat:		Top	



SOIL STRENGTH ANALYSIS

Soil Strength Reduction Factor, Φ_s	Uplift Strength Reduction Factor, Φ_s	Asset Dead Load Factor	Dead Load Factor
0.75	0.75	0.9	1.2

SOIL OVERTURNING ANALYSIS

Design Moment, $M_{u,Design}$ (k-ft)	Nominal Overturning Capacity, $\Phi_m M_n$ (k-ft)	Soil Overturning Usage, $M_{u,Design} / \Phi_m M_n$	
280.30	4,712.86	**5.9%**	✓

SOIL BEARING ANALYSIS

Net Bearing Pressure, $P_{u,Net}$ (psf)	Nominal Bearing Capacity, $\Phi_b P_n$ (k-ft)	Bearing Pressure Controlling Load Direction	Soil Bearing Usage, $P_{u,net} / \Phi_b P_n$	
850.00	71,047.00	Parallel to Pad Edge	**1.2%**	✓

SOIL SLIDING SHEAR ANALYSIS

Applied Shear Force, V_u (k)	Friction Resistance (k)	Passive Pressure (psf)	Passive Pressure Resistance (k)	Nominal Shear Capacity, $\Phi_s V_n$ (k)	Soil Sliding Shear Usage, $V_u / \Phi_s V_n$	
45.95	0.00	357.0	47.91	69.15	**66.0%**	✓

SOIL UPLIFT ANALYSIS

Applied Uplift Force, T_u (k)	Skin Friction Resistance (k)	Nominal Uplift Capacity, $\Phi_s T_n$ (k)	Soil Uplift Usage, $T_u / \Phi_s T_n$	
255.17	0.00	332.19	**76.8%**	✓

MAT & PIER FOUNDATION ANALYSIS (NODE 1)

APPLIED LOCAL REACTIONS

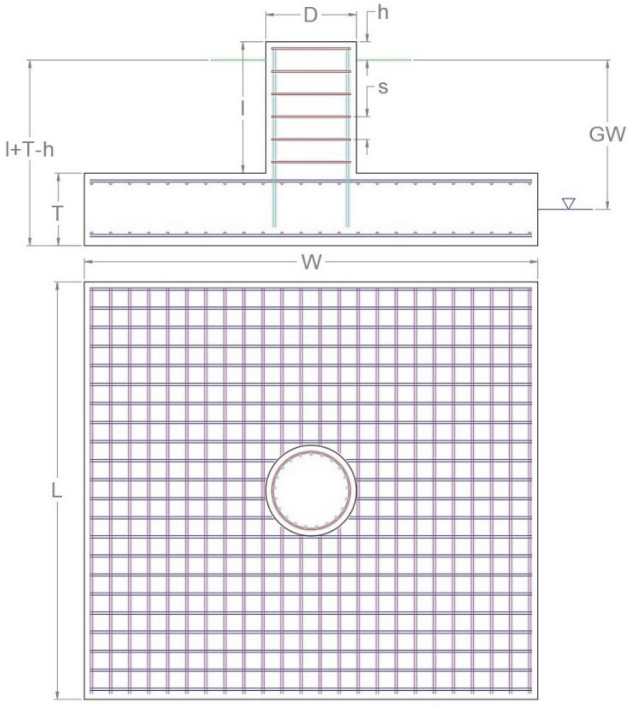
Axial (k)	Uplift (k)	Shear (k)
321.82	254.93	45.94

FOUNDATION PARAMETERS

Mat Length:	L	22	ft
Mat Width:	W	22	ft
Mat Thickness:	T	6.1	ft
Base Depth:	L+T-h	5.6	ft
Pier Shape:		Round	
Pier Diameter:	D	1	ft
Pier Height above Grade:	h	0.5	ft
Tower Eccentricity:	ecc		ft
Tower Leg Count		1	

SOIL PARAMETERS

Water Table Depth [BGL]:	GW	-	ft
Soil Unit Weight:		140	pcf
Ultimate Skin Friction:		0	psf
Ultimate Bearing Pressure:		95,574	psf
Bearing Pressure Type:		Gross	
Coefficient of Shear Friction:		0.1	
Uplift Pullout Angle:		30	°
Uplift at ____ of Mat:		Top	



SOIL STRENGTH ANALYSIS

Soil Strength Reduction Factor, Φ_s	Uplift Strength Reduction Factor, Φ_s	Asset Dead Load Factor	Dead Load Factor
0.75	0.75	0.9	1.2

SOIL OVERTURNING ANALYSIS

Design Moment, $M_{u,Design}$ (k-ft)	Nominal Overturning Capacity, $\Phi_m M_n$ (k-ft)	Soil Overturning Usage, $M_{u,Design} / \Phi_m M_n$	
280.23	4,712.86	**5.9%**	✓

SOIL BEARING ANALYSIS

Net Bearing Pressure, $P_{u,Net}$ (psf)	Nominal Bearing Capacity, $\Phi_b P_n$ (k-ft)	Bearing Pressure Controlling Load Direction	Soil Bearing Usage, $P_{u,net} / \Phi_b P_n$	
850.00	71,047.00	Parallel to Pad Edge	**1.2%**	✓

SOIL SLIDING SHEAR ANALYSIS

Applied Shear Force, V_u (k)	Friction Resistance (k)	Passive Pressure (psf)	Passive Pressure Resistance (k)	Nominal Shear Capacity, $\Phi_s V_n$ (k)	Soil Sliding Shear Usage, $V_u / \Phi_s V_n$	
45.94	0.00	357.0	47.91	69.15	**66.0%**	✓

SOIL UPLIFT ANALYSIS

Applied Uplift Force, T_u (k)	Skin Friction Resistance (k)	Nominal Uplift Capacity, $\Phi_s T_n$ (k)	Soil Uplift Usage, $T_u / \Phi_s T_n$	
254.93	0.00	332.19	**76.7%**	✓

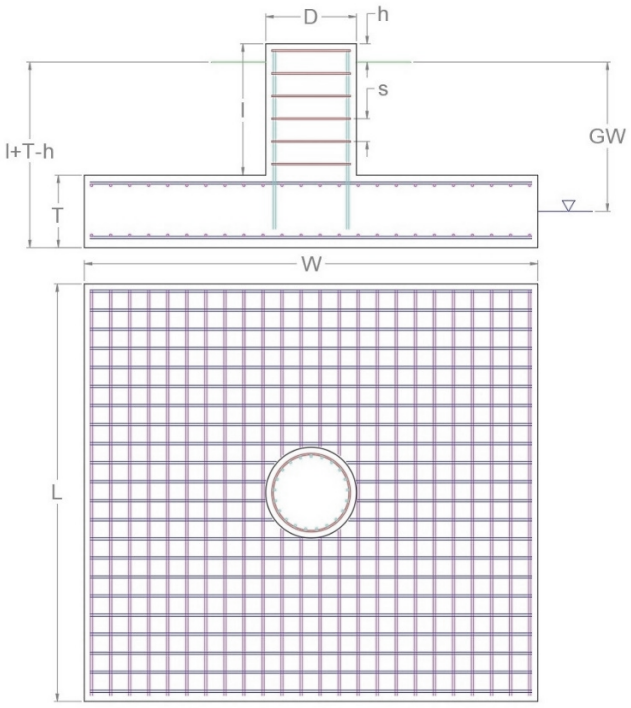
MAT & PIER FOUNDATION ANALYSIS (NODE 1a)

APPLIED LOCAL REACTIONS

Axial (k)	Uplift (k)	Shear (k)
321.50	255.11	45.95

FOUNDATION PARAMETERS

Mat Length:	L	22	ft
Mat Width:	W	22	ft
Mat Thickness:	T	6.1	ft
Base Depth:	L+T-h	5.6	ft
Pier Shape:		Round	
Pier Diameter:	D	1	ft
Pier Height above Grade:	h	0.5	ft
Tower Eccentricity:	ecc		ft
Tower Leg Count		1	



SOIL PARAMETERS

Water Table Depth [BGL]:	GW	-	ft
Soil Unit Weight:		140	pcf
Ultimate Skin Friction:		0	psf
Ultimate Bearing Pressure:		95,574	psf
Bearing Pressure Type:		Gross	
Coefficient of Shear Friction:		0.1	
Uplift Pullout Angle:		30	°
Uplift at ____ of Mat:		Top	

SOIL STRENGTH ANALYSIS

Soil Strength Reduction Factor, Φ_s	Uplift Strength Reduction Factor, Φ_s	Asset Dead Load Factor	Dead Load Factor
0.75	0.75	0.9	1.2

SOIL OVERTURNING ANALYSIS

Design Moment, $M_{u,Design}$ (k-ft)	Nominal Overturning Capacity, $\Phi_m M_n$ (k-ft)	Soil Overturning Usage, $M_{u,Design} / \Phi_m M_n$	
280.30	4,712.86	**5.9%**	✓

SOIL BEARING ANALYSIS

Net Bearing Pressure, $P_{u,Net}$ (psf)	Nominal Bearing Capacity, $\Phi_b P_n$ (k-ft)	Bearing Pressure Controlling Load Direction	Soil Bearing Usage, $P_{u,net} / \Phi_b P_n$	
850.00	71,047.00	Parallel to Pad Edge	**1.2%**	✓

SOIL SLIDING SHEAR ANALYSIS

Applied Shear Force, V_u (k)	Friction Resistance (k)	Passive Pressure (psf)	Passive Pressure Resistance (k)	Nominal Shear Capacity, $\Phi_s V_n$ (k)	Soil Sliding Shear Usage, $V_u / \Phi_s V_n$	
45.95	0.00	357.0	47.91	69.15	**66.0%**	✓

SOIL UPLIFT ANALYSIS

Applied Uplift Force, T_u (k)	Skin Friction Resistance (k)	Nominal Uplift Capacity, $\Phi_s T_n$ (k)	Soil Uplift Usage, $T_u / \Phi_s T_n$	
255.11	0.00	332.19	**76.8%**	✓

EXHIBIT 4

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 #: 10221516
Colliers Engineering & Design Project #: 21777438 (Rev 2)

February 27, 2024

Site Information	*Site ID:*	*5000385395-VZW / N BRIDGEPORT CT*
	Site Name:	*N BRIDGEPORT CT*
	Carrier Name:	*Verizon Wireless*
	Address:	*1330 Chopsey Hill Rd* *Bridgeport, Connecticut 06606* *Fairfield County*
	Latitude:	*41.219528°*
	Longitude:	*-73.201779°*
Structure Information	*Tower Type:*	*154-Ft Self Support*
	Mount Type:	*13.00-Ft T-Frame*

FUZE ID # 16231899

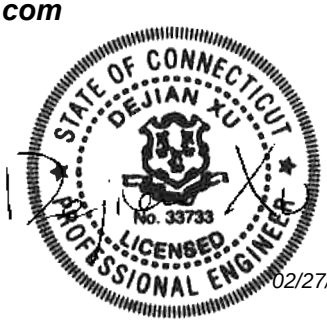
Analysis Results

T-Frame: **56.4% 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: Carol Luengas



02/27/2024

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: 324428* *Dated February 15, 2024*
Mount Mapping Report	*RKS Design & Engineering LLC. Site ID: VZW:467325* *Dated April 02, 2021*
Failing Mount Analysis	*Colliers Engineering & Design Project #: 21777438, Rev 1* *Dated January 23, 2024*
Mount Modification Drawings	*Colliers Engineering & Design Project #: 21777438, Rev 1* *Dated February 6, 2024*

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H 2022 Connecticut State Building Code (CSBC), Effective October 1, 2022	
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), V_{ULT}:	120 mph
	Ice Wind Speed (3-sec. Gust):	50 mph
	Design Ice Thickness:	1.00 in
	Risk Category:	II
	Exposure Category:	C
	Topographic Category:	1
	Topographic Feature Considered:	N/A
	Topographic Method:	N/A
	Ground Elevation Factor, K_e:	0.993
Seismic Parameters:	S_S:	0.211 g
	S_1:	0.054 g
Maintenance Parameters:	Wind Speed (3-sec. Gust):	30 mph
	Maintenance Load, Lv:	250 lbs.
	Maintenance Load, Lm:	500 lbs.
Analysis Software:	RISA-3D (V17)	

Final Loading Configuration:

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

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
153.90	155.00	3	Samsung	MT6413-77A	Added
		6	Commscope	JAHH-65B-R3B	Retained
		3	Samsung	B2/B66 RRH-BR049	
		3	Samsung	B5/B13 RRH-BR04C	
		2	Raycap	RC3DC-3315-PF-48	
		3	Samsung	XXDWMM-12.5-65-8T-CBRS	
		3	Commscope	CBC78T-DS-43-2X	

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
Mount Pipe	*40.7*	*Pass*
Pipe Standoff Horizontal	*8.8*	*Pass*
Standoff Vertical	*12.3*	*Pass*
Standoff Horizontal	*26.7*	*Pass*
Standoff Diagonal	*6.2*	*Pass*
Face Diagonal	*6.6*	*Pass*
Face Horizontal	*46.2*	*Pass*
Tieback	*9.0*	*Pass*
Pipe Face Horizontal	*56.4*	*Pass*
V-Brace	*26.0*	*Pass*
Mount Connection	*15.7*	*Pass*

Structure Rating – *(Controlling Utilization of all Components)*	**56.4%**

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 A Top Reinforcement	156.5	N1	32	903	0.224	0.000	54	281	0.054	0.000
Sector A Bottom Reinforcement	151.5	N5	38	2965	0.207	0.000	60	2246	0.174	0.000
Sector A Top Standoff	155.5	N45	397	841	0.196	0.000	529	630	0.247	0.000
Sector A Bottom Standoff	152.5	N46	321	1223	0.143	0.000	375	998	0.170	0.000
Sector A Reinforcement	148.5	N73A	897	887	0.000	0.000	1632	1568	0.000	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	33.5	9.0	38.9	14.4
0.5	43.2	12.4	50.8	19.9
1	52.8	15.3	62.5	25.0

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

Requirements:

The existing mounts 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 #: 5000385395 SMART Project #: 10221516 Fuze Project ID: 16231899

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:

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:	

Structure: 5000385395-VZW - N BRIDGEPORT CT

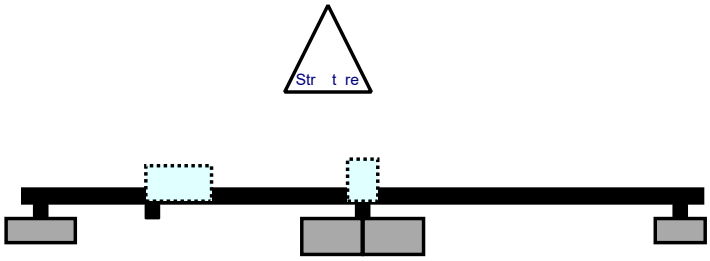
Se tor: **A** 2/27/2024

Str t re Type: Sel S pport 10221516

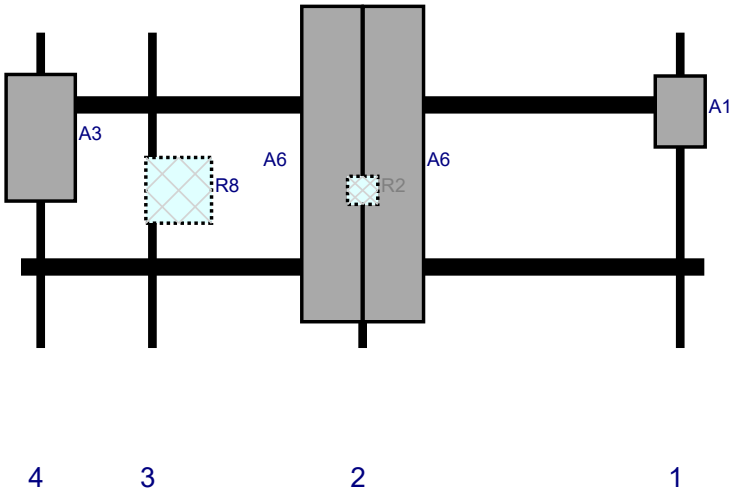
Mo t Elev: 153.90 P ge: 1

Colliers Engineering & Design

Plan View

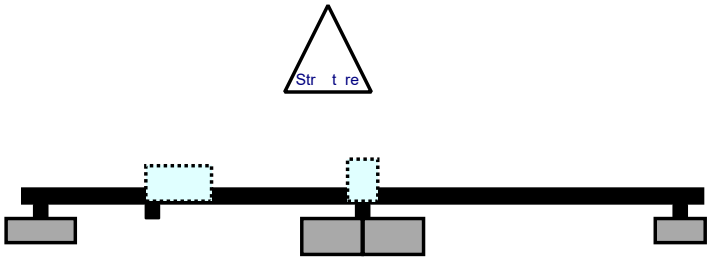


Front View - Loo i g t Str t re

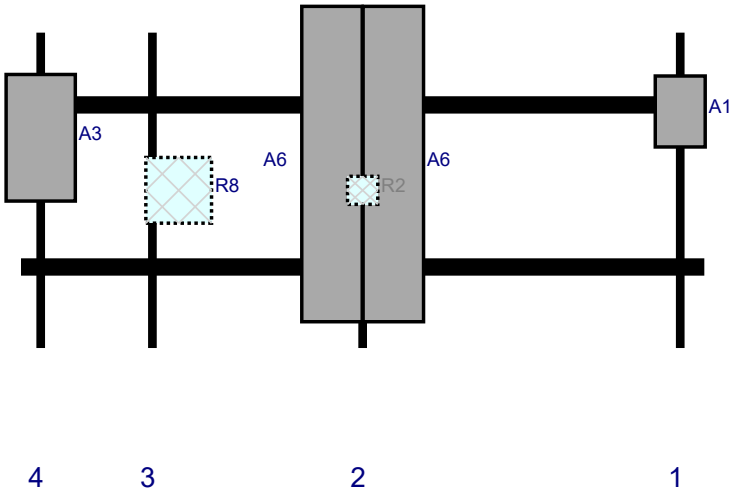


Re #	Model	Height (i)	Width (i)	H Dist Fr L.	Pipe #	Pipe Pos V	A t Pos	C. A t Fr T.	A t H O	St t s	V lid tio
A1	XXDWMM-12.5-65-8T-CBRS	16.2	11.4	150.5	1		Fro t	18	0	Ret i ed	04/02/2021
A6	JAHH-65B-R3B	72	13.8	78	2		Fro t	30	-7	Ret i ed	04/02/2021
A6	JAHH-65B-R3B	72	13.8	78	2		Fro t	30	7	Ret i ed	04/02/2021
R2	CBC78T-DS-43-2X	6.4	6.9	78	2		Behi d	36	0	Ret i ed	04/02/2021
R8	B5/B13 RRH-BR04C	15	15	30	3		Behi d	36	6	Ret i ed	04/02/2021
A3	MT6413-77A	28.9	15.8	4.5	4		Fro t	24	0	Added	
M22	B2/B66 RRH-BR049	15	15		Me er					Ret i ed	04/02/2021
M23	RC3DC-3315-PF-48	23	15.7		Me er					Ret i ed	04/02/2021

Plan View

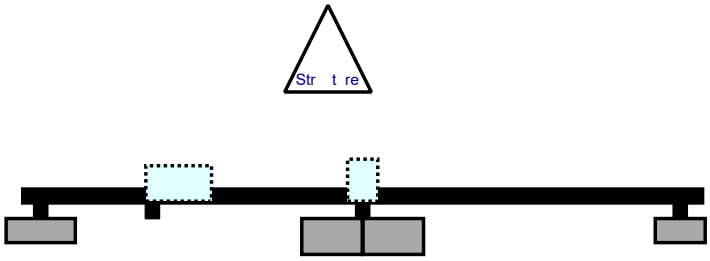


Front View - Loo i g t Str t re

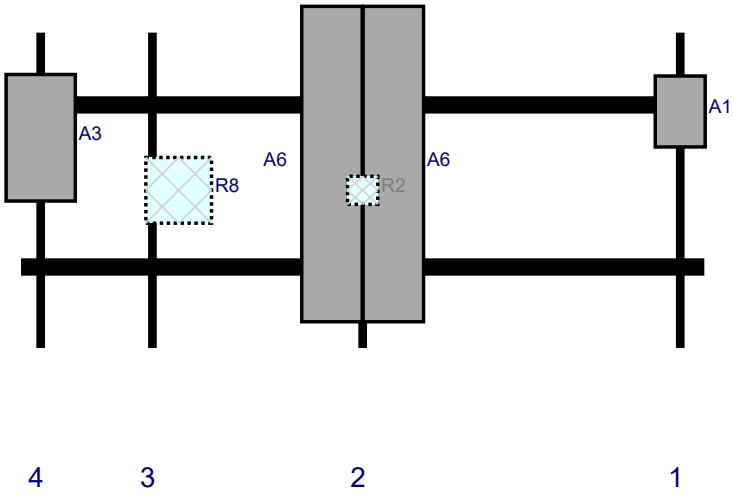


Re #	Model	Height (i)	Width (i)	H Dist Fr L.	Pipe #	Pipe Pos V	A t Pos	C. A t Fr T.	A t H O	St t s	V lid tio
A1	XXDWMM-12.5-65-8T-CBRS	16.2	11.4	150.5	1		Fro t	18	0	Ret i ed	04/02/2021
A6	JAHH-65B-R3B	72	13.8	78	2		Fro t	30	-7	Ret i ed	04/02/2021
A6	JAHH-65B-R3B	72	13.8	78	2		Fro t	30	7	Ret i ed	04/02/2021
R2	CBC78T-DS-43-2X	6.4	6.9	78	2		Behi d	36	0	Ret i ed	04/02/2021
R8	B5/B13 RRH-BR04C	15	15	30	3		Behi d	36	6	Ret i ed	04/02/2021
A3	MT6413-77A	28.9	15.8	4.5	4		Fro t	24	0	Added	

Plan View



Front View - Loo i g t Str t re



Re #	Model	Height (i)	Width (i)	H Dist Fr L.	Pipe #	Pipe Pos V	A t Pos	C. A t Fr T.	A t H O	St t s	V lid tio
A1	XXDWMM-12.5-65-8T-CBRS	16.2	11.4	150.5	1		Fro t	18	0	Ret i ed	04/02/2021
A6	JAHH-65B-R3B	72	13.8	78	2		Fro t	30	-7	Ret i ed	04/02/2021
A6	JAHH-65B-R3B	72	13.8	78	2		Fro t	30	7	Ret i ed	04/02/2021
R2	CBC78T-DS-43-2X	6.4	6.9	78	2		Behi d	36	0	Ret i ed	04/02/2021
R8	B5/B13 RRH-BR04C	15	15	30	3		Behi d	36	6	Ret i ed	04/02/2021
A3	MT6413-77A	28.9	15.8	4.5	4		Fro t	24	0	Added	

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MOUNT MODIFICATION DRAWINGS
13.00' T-FRAME

TOWER OWNER: AMERICAN TOWER CORPORATION
TOWER OWNER SITE NUMBER: 383598

CARRIER SITE NAME: N BRIDGEPORT CT
CARRIER SITE NUMBER: 5000385395
FUZE ID: 16231899

1330 CHOPSEY HILL RD
BRIDGEPORT, CT 06606
FAIRFIELD COUNTY

LATITUDE: 41.219528° N
LONGITUDE: 73.201779° W

DESIGN CRITERIA

WIND LOADS

BASIC WIND SPEED (3 SECOND GUST), V = 120 MPH
EXPOSURE CATEGORY C
TOPOGRAPHIC CATEGORY: 1
TOPOGRAPHIC CONSIDERED: N/A
TOPOGRAPHIC METHOD: N/A
MEAN BASE ELEVATION (AMSL) = 202'

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 = .211
LONG TERM MCER GROUND MOTION, S_1 = .054

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 #: 10221516
VZW MDG #: 5000385395
ANALYSIS DATE: 2/6/2024

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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SCALE: AS SHOWN
JOB NUMBER: 21777438

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
.	.	.	.	.
.	.	.	.	.
1	2/6/24	ISSUED FOR CONSTRUCTION	VRD	DX
0	6/11/21	ISSUED FOR CONSTRUCTION	JRF	PMA

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SITE NAME:

N BRIDGEPORT CT
5000385395

1330 CHOPSEY HILL RD
BRIDGEPORT, CT 06606
FAIRFIELD COUNTY

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

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	PV-CLAMP-LW-0106	CLAMP BRACKET	OR EOR APPROVED EQUIVALENT	-	-
1	PERFECT VISION	PV-CMX-CG-SM	WIRE ROPE GUIDE	OR EOR APPROVED EQUIVALENT	-	-
					TOTAL:	459

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

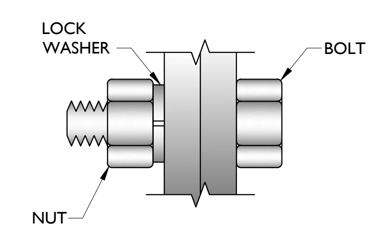
3. ALL SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE APPROVED IN WRITING BY THE ENGINEER. CONTRACTOR SHALL PROVIDE DOCUMENTATION TO ENGINEER FOR VERIFYING THE SUBSTITUTE IS SUITABLE FOR USE AND MEETS ORIGINAL DESIGN CRITERIA. DIFFERENCES FROM THE ORIGINAL DESIGN, INCLUDING MAINTENANCE, REPAIR AND 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

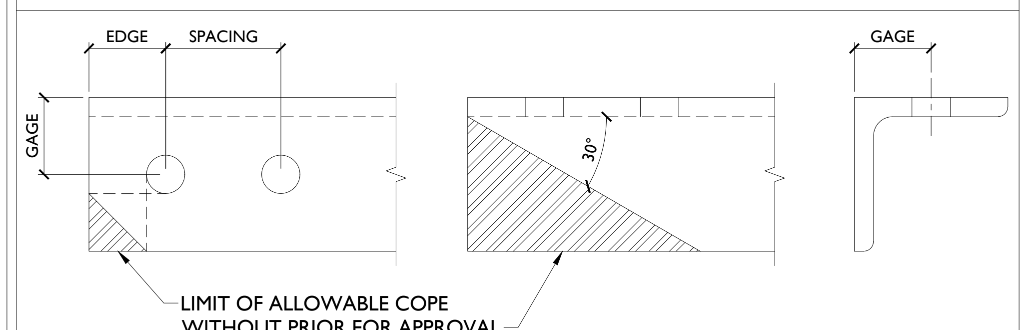


TYP. BOLT ASSEMBLY

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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1055 Washington Boulevard
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Phone: 203.324.0800
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SHEET TITLE :
GENERAL NOTES

SHEET NUMBER :
SGN-1

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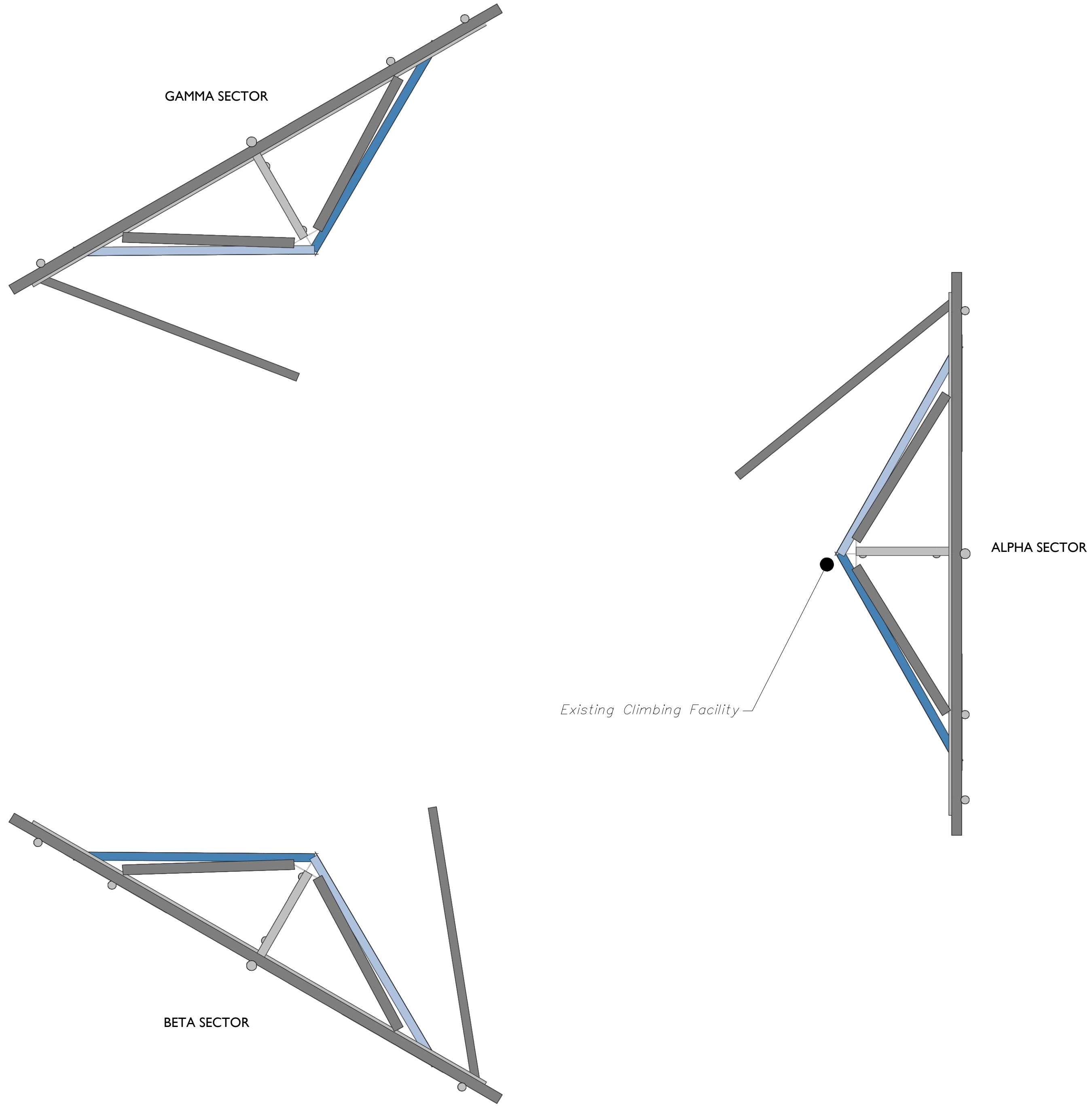
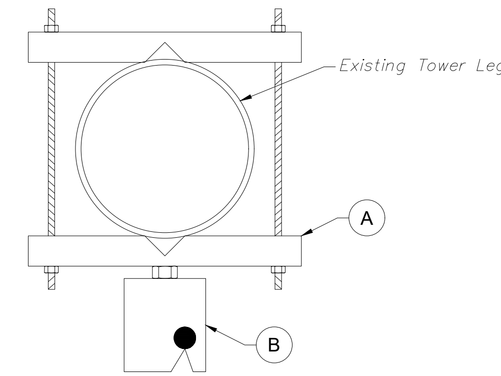


1 CLIMBING FACILITY LOCATION
SCALE : N.T.S.



ITEM #	QTY	PART NUMBER	DESCRIPTIONS
A	1	PV-CLAMP-LW-0106	CLAMP BRACKET (PERFECT VISION OR EOR APPROVED EQ.)
B	1	PV-CMX-CG-SM	WIRE ROPE GUIDE (PERFECT VISION OR EOR APPROVED EQ.)

2 PROPOSED WIRE ROPE GUIDE ATTACHMENT - PLAN VIEW
SCALE : N.T.S.

NOTE: CONTRACTOR SHALL ENSURE THAT WIRE ROPE GUIDE DOES NOT PUSH THE WIRE ROPE OUTSIDE OF THE VERTICAL PLANE OF THE SAFETY CLIMB. CONTRACT EOR WITH PHOTOS OF SAFETY CLIMB AND COLLAR FOR FURTHER DIRECTION IF NEEDED.

Existing Safety Climb

Existing Climbing Facility

CLIMBING FACILITY PHOTO

STRUCTURAL NOTES:

1. PER THE MOUNT MAPPING COMPLETED BY RKS DESIGN & ENGINEERING, LLC ON 4/2/2021, THE SAFETY CLIMB AND CLIMBING FACILITIES UP TO THE VERIZON MOUNT ELEVATION (153'-11") 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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COLLIERS ENGINEERING & DESIGN CT, P.C.
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SHEET TITLE : CLIMBING FACILITY DETAIL

SHEET NUMBER : SCF-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

LEGEND:

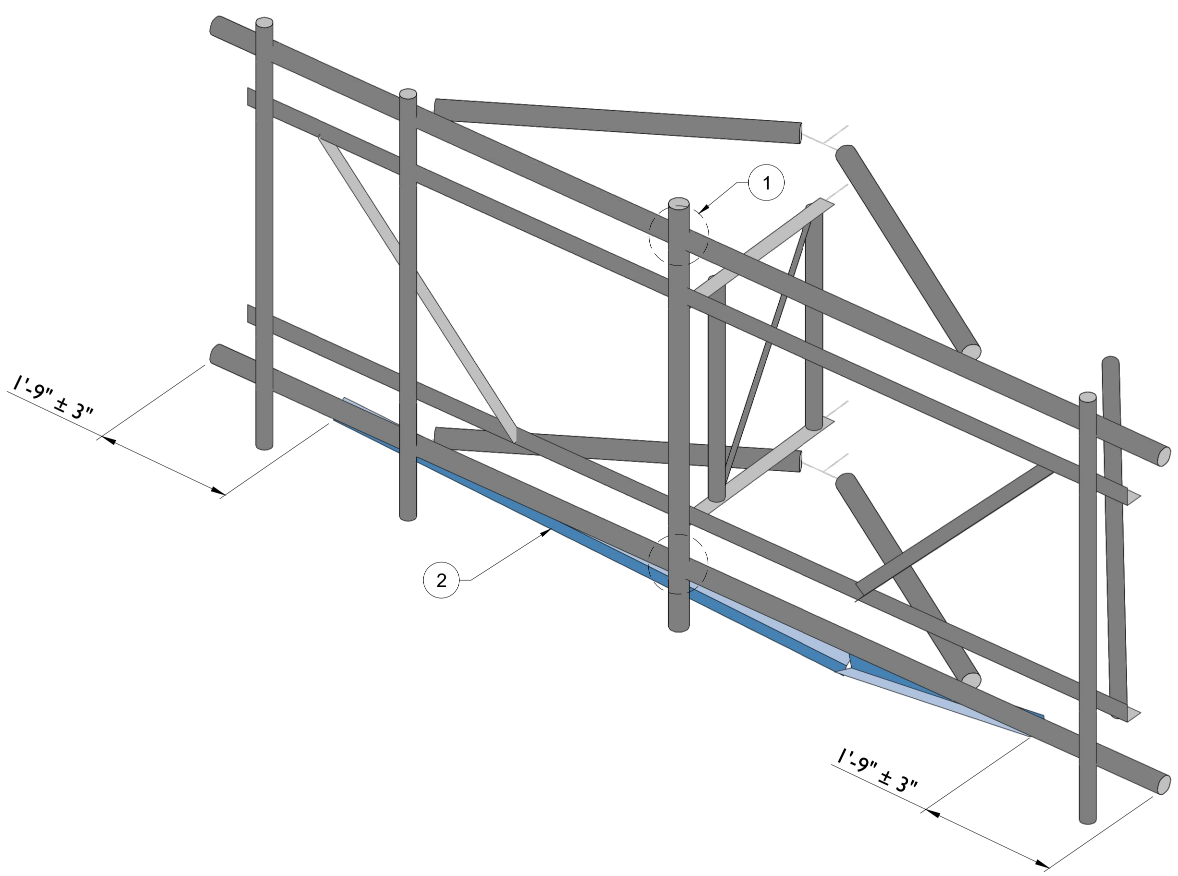
- PROPOSED
- RELOCATED
- EXISTING

MOUNT MODIFICATION SCHEDULE

NO.	ELEVATION	QUANTITY	DESCRIPTION	NOTES
1	153'-11"	6	PROPOSED CROSSOVER PLATE (PART #: VZWSMART-MSK1)	CONTRACTOR TO ATTACH EXISTING MOUNT PIPE TO ROUND FACE HORIZONTALS WITH CROSSOVER PLATES (PART #: VZWSMART-MSK1) IF NOT CURRENTLY ATTACHED.
2		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.

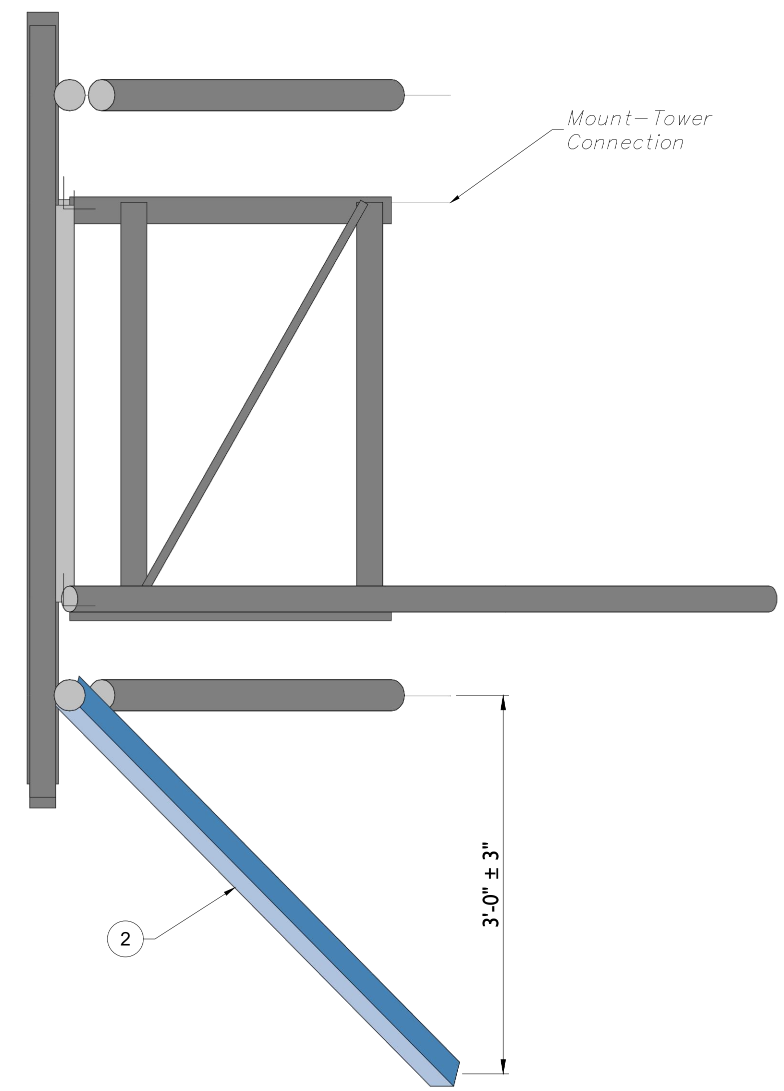
GENERAL NOTES:

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 (TYP. ALL SECTORS)

SCALE : N.T.S.



2 PROPOSED SIDE ELEVATION VIEW (TYP. ALL SECTORS)

SCALE : N.T.S.

Colliers Engineering & Design

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

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

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

SCALE : AS SHOWN

JOB NUMBER : 21777438

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
.	.	.	.	.
.	.	.	.	.
1	2/6/24	ISSUED FOR CONSTRUCTION	VRD	DX
0	6/11/21	ISSUED FOR CONSTRUCTION	JRF	PMA

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:

N BRIDGEPORT CT
5000385395

1330 CHOPSEY HILL RD
BRIDGEPORT, CT 06606
FAIRFIELD 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

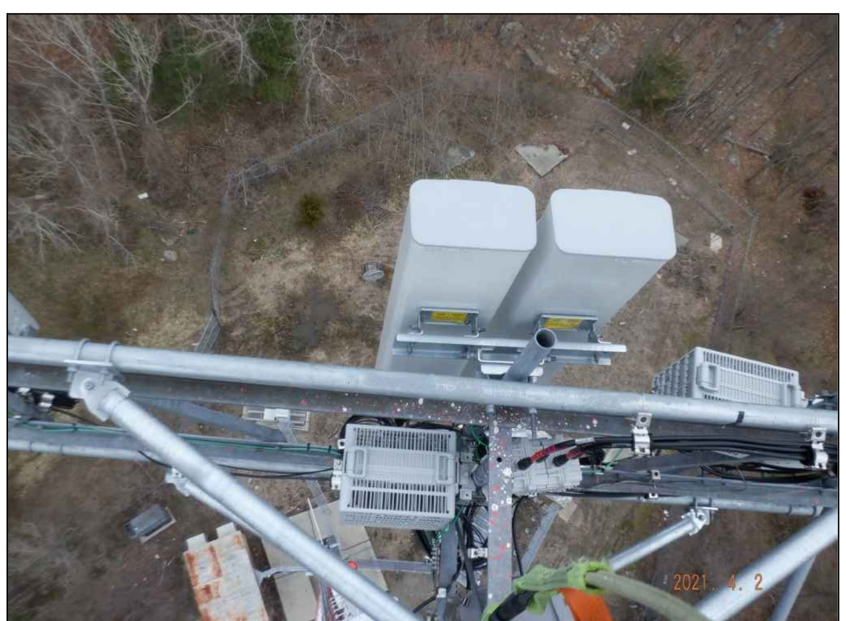
SHEET TITLE : MODIFICATION DETAILS

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 : 21777438

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
.	.	.	.	.
.	.	.	.	.
1	2/6/24	ISSUED FOR CONSTRUCTION	VRD	DX
0	6/11/21	ISSUED FOR CONSTRUCTION	JRF	PMA

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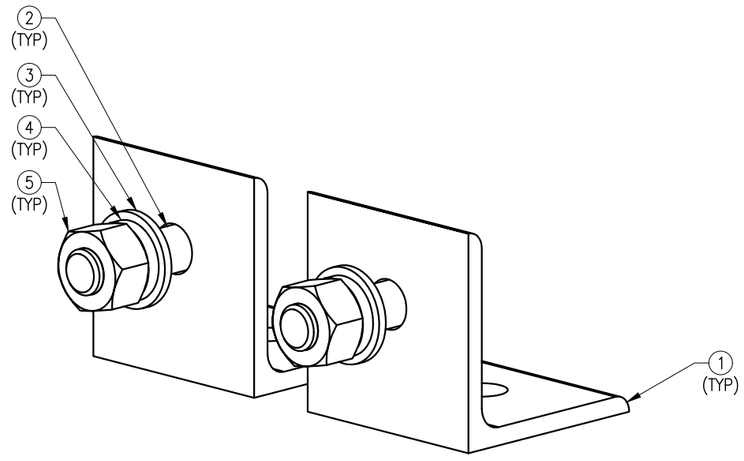
1055 Washington Boulevard
Stamford, CT 06901
Phone: 203.324.0800
COLLIERS ENGINEERING & DESIGN CT, P.C.
DOING BUSINESS AS MASER CONSULTING

SHEET TITLE : MOUNT PHOTOS

SHEET NUMBER : SS-2

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



CLIP ANGLE
ISOMETRIC VIEW

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

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

VzW
SMART Tool©
Vendor

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FOR REFERENCE ONLY

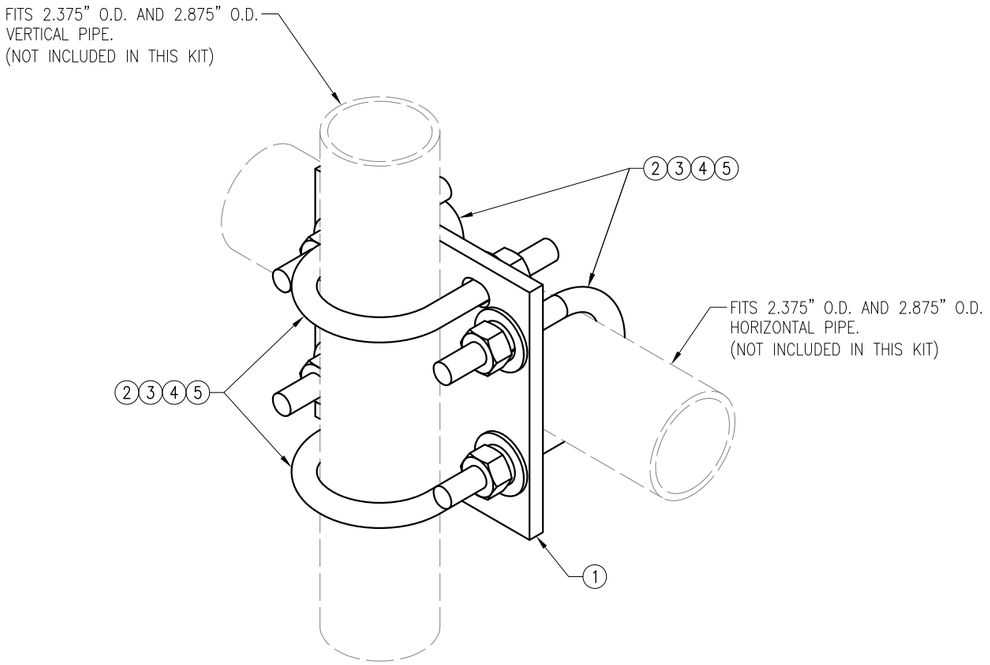
DRAWN BY: JBM | CHECKED BY: ----

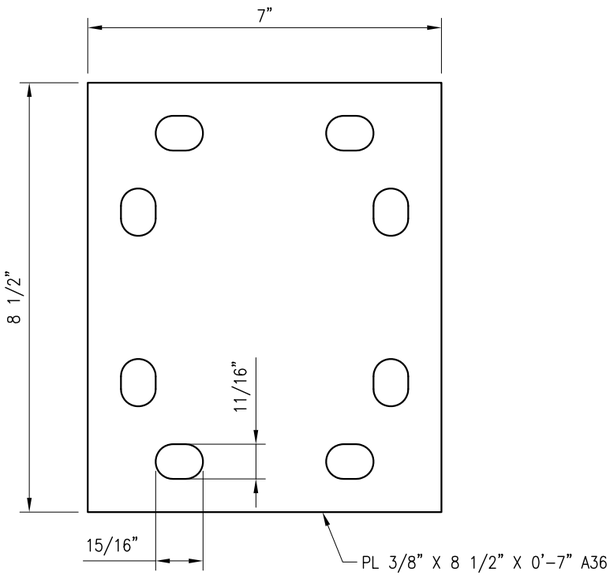
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	JBM	10/08/21

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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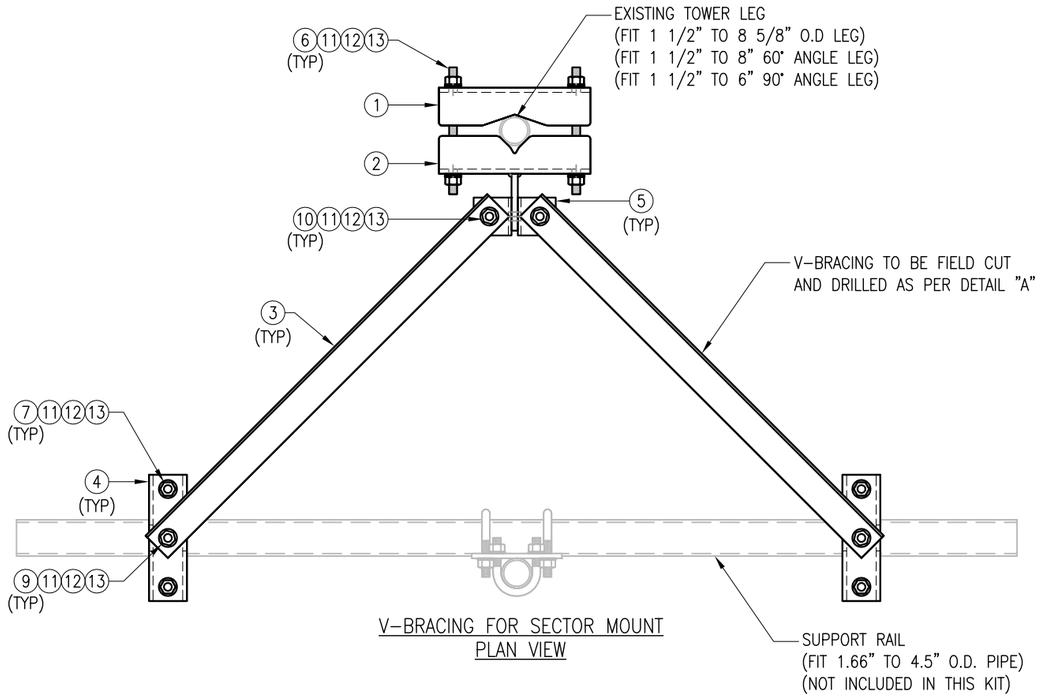
DRAWN BY: H.R | CHECKED BY: HMA

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

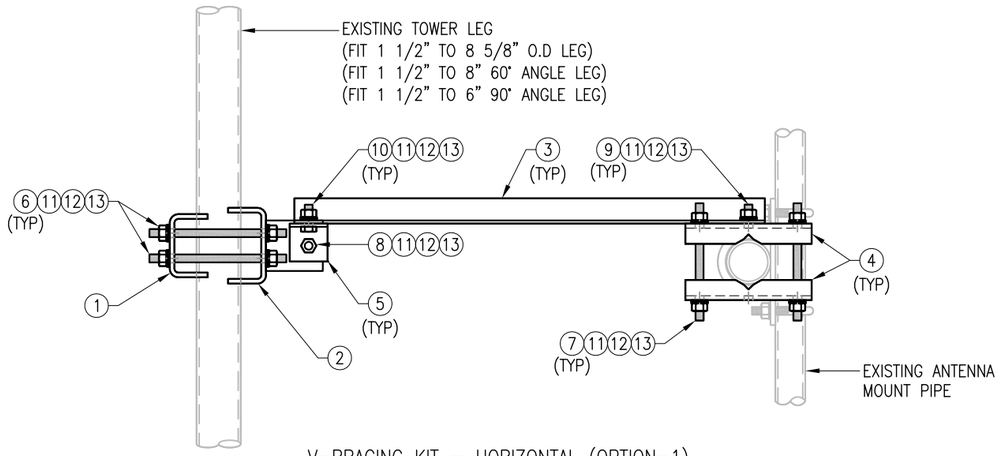
SHEET TITLE:
VZWSMART-MSK1
CROSSOVER PLATE

SHEET NUMBER: VZWSMART-MSK1

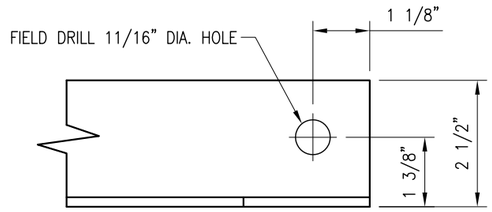
REV #: 0



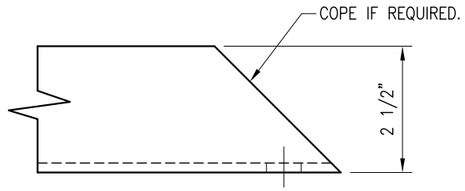
V-BRACING FOR SECTOR MOUNT
PLAN VIEW



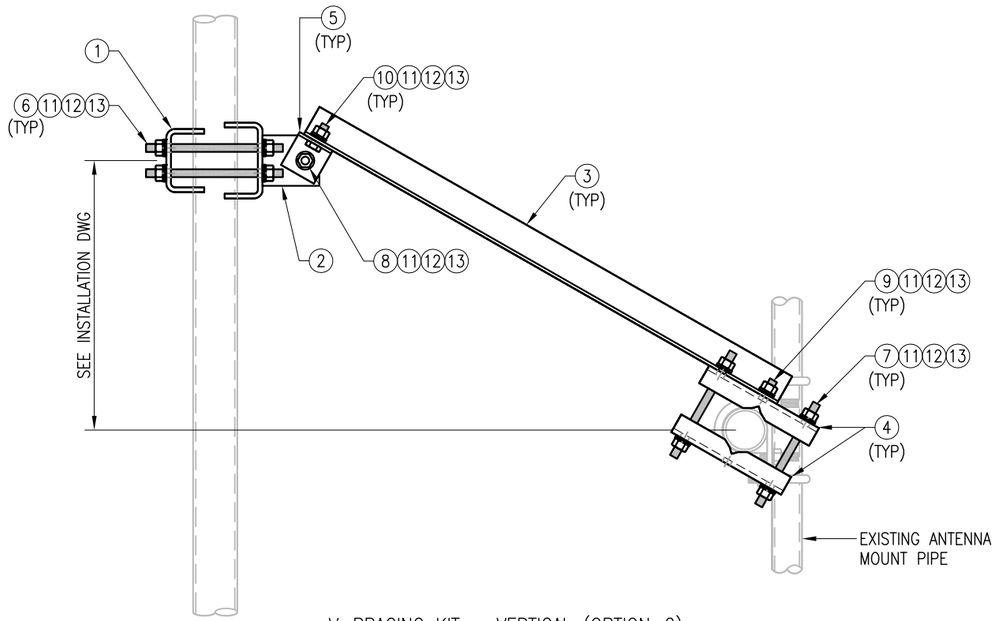
V-BRACING KIT - HORIZONTAL (OPTION-1)
SIDE VIEW



PLAN VIEW



FRONT VIEW
DETAIL "A"



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

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

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-SFK3
V-BRACING KIT

SHEET NUMBER: VZWSMART-SFK3

REV #: 0


04/02/2021


2021. 4. 2

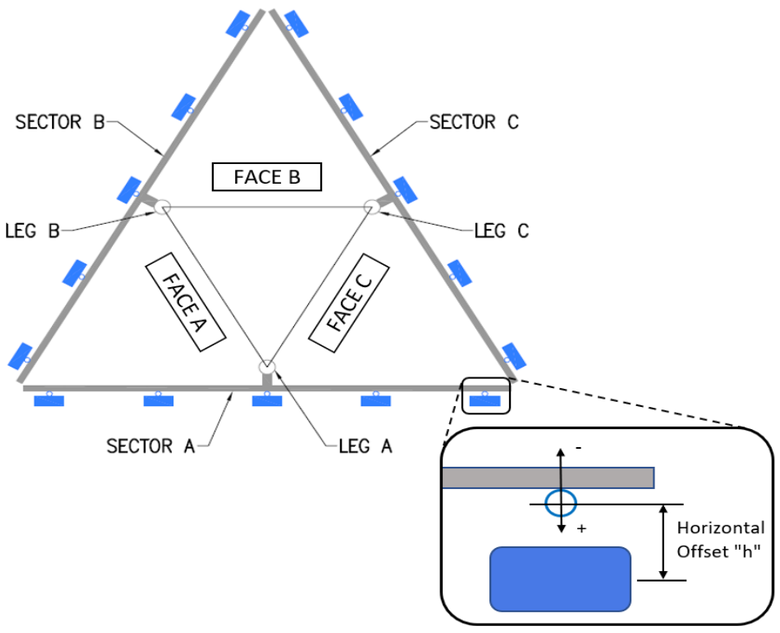
V3.0 Updated on 8-31-2020

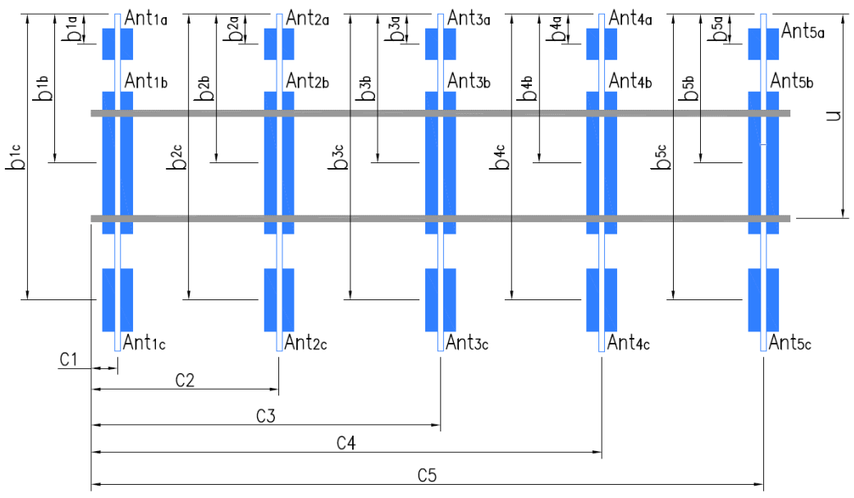
Antenna Mount Mapping Form (PATENT PENDING)

FCC #
1203184

Tower Owner:	ATC	**Mapping Date:**	4/2/2021
Site Name:	ATC: Tartaglia VZW: N Bridgeport CT	**Tower Type:**	Self Support
Site Number or ID:	ATC:383598, VZW:467325	**Tower Height (Ft.):**	UNKNOWN
Mapping Contractor:	RKS Design & Engineering LLC.	**Mount Elevation (Ft.):**	150.9

Please insert the sketches of the antenna mount from the "Sketches" tab with dimensions and members here.





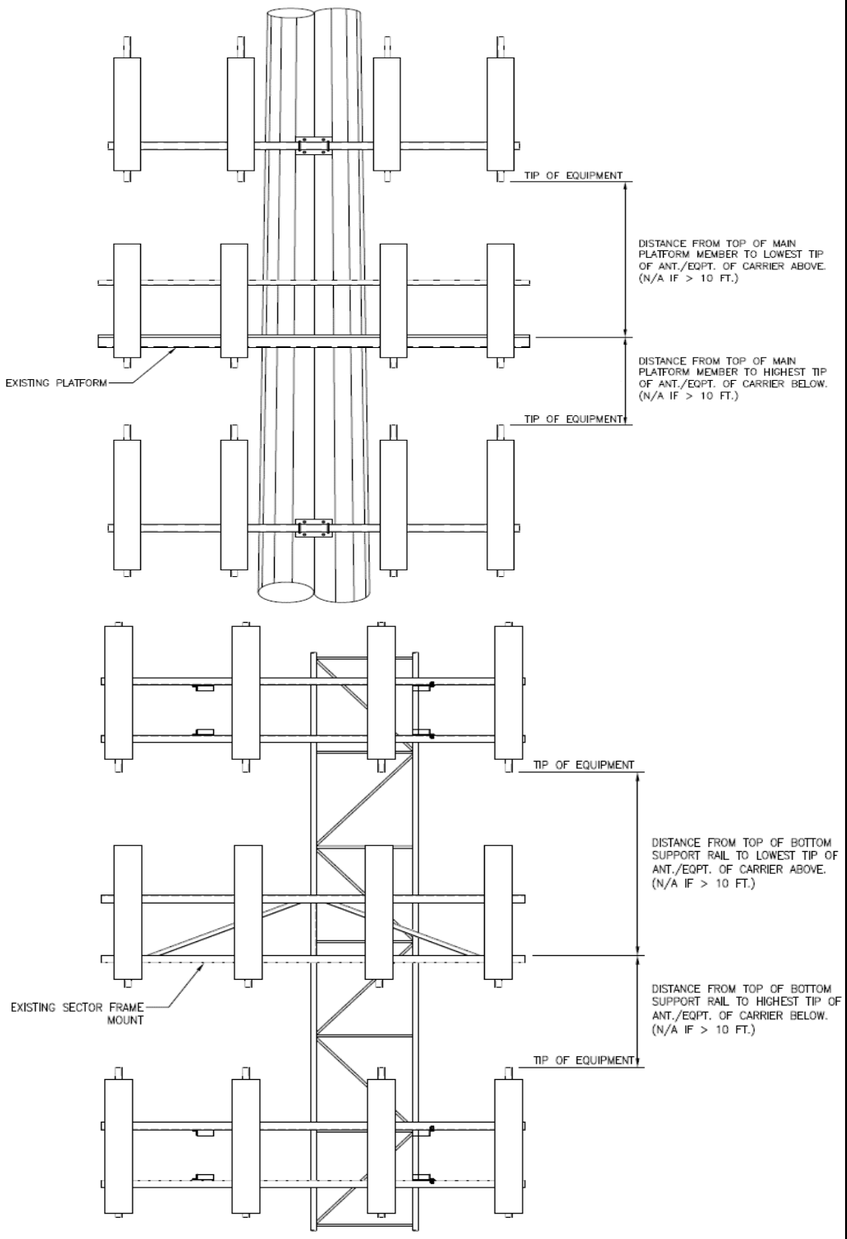
Antenna Layout (Looking Out From Tower)

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 2.375"Ø X 0.15" X 72" LONG	64.50	11.50	C1	PIPE 2.375"Ø X 0.15" X 72" LONG	64.50	11.50
A2	PIPE 2.375"Ø X 0.15" X 72" LONG	65.75	84.00	C2	PIPE 2.375"Ø X 0.15" X 72" LONG	65.75	84.00
A3	PIPE 2.375"Ø X 0.15" X 72" LONG	63.50	132.00	C3	PIPE 2.375"Ø X 0.15" X 72" LONG	63.50	132.00
A4	PIPE 2.375"Ø X 0.15" X 72" LONG	64.50	157.50	C4	PIPE 2.375"Ø X 0.15" X 72" LONG	64.50	157.50
A5				C5			
A6				C6			
B1	PIPE 2.375"Ø X 0.15" X 72" LONG	64.50	11.50	D1			
B2	PIPE 2.375"Ø X 0.15" X 72" LONG	65.75	84.00	D2			
B3	PIPE 2.375"Ø X 0.15" X 72" LONG	63.50	132.00	D3			
B4	PIPE 2.375"Ø X 0.15" X 72" LONG	64.50	157.50	D4			
B5				D5			
B6				D6			
Distance between bottom rail and mount CL elevation (dim d). Unit is inches. See 'Mount Elev Ref' tab for details. :							18.00
Distance from top of bottom support rail to lowest tip of ant./eqpt. of Carrier above. (N/A if > 10 ft.) :							
Distance from top of bottom support rail to highest tip of ant./eqpt. of Carrier below. (N/A if > 10 ft.) :							
Please enter additional infomation or comments below.							
Tower Face Width at Mount Elev. (ft.):		15	Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.):				9

	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}	RT4401-48A	12.00	8.25	12.00		152.942	22.00	-8.25		11, 295
Ant_{1b}										
Ant_{1c}										
Ant_{2a}	CBC78T-DS-43-2X	9.50	6.25	6.75		152.879	24.00	-6.50		11
Ant_{2b}	(2) JAHH-65B-R3B	13.75	8.25	72.00		152.108	33.25	12.00	50.00	11
Ant_{2c}	RFV01U-D1A	15.00	10.00	15.00		152.025	34.25	-8.50		11
Ant_{3a}	RFV01U-D2A	15.00	8.00	15.00		152.088	31.25	-7.75		11
Ant_{3b}										
Ant_{3c}										
Ant_{4a}										
Ant_{4b}	BXA-80063-6BF-EDIN-	11.25	5.25	68.00		152.025	33.00	10.25	50.00	11
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										

Mount Azimuth (Degree) for Each Sector				Tower Leg Azimuth (Degree) for Each Sector	
Sector A:	50.00	Deg	Leg A:	50.00	Deg
Sector B:	170.00	Deg	Leg B:	170.00	Deg
Sector C:	290.00	Deg	Leg C:	290.00	Deg
Sector D:		Deg	Leg D:		Deg

Climbing Facility Information			
Location:	50.00	Deg	Sector A
Climbing Facility	Corrosion Type:		N/A
	Access:		Climbing path was unobstructed.
	Condition:		Good condition.



Sector B										
Ant_{1a}	RT4401-48A	12.00	8.25	12.00		152.942	22.00	-8.25		19, 416
Ant_{1b}										
Ant_{1c}										
Ant_{2a}	CBC78T-DS-43-2X	9.50	6.25	6.75		152.879	24.00	-6.50		19, 416
Ant_{2b}	(2) JAHH-65B-R3B	13.75	8.25	72.00		152.108	33.25	12.00	170.00	19, 416
Ant_{2c}	RFV01U-D1A	15.00	10.00	15.00		152.025	34.25	-8.50		19, 416
Ant_{3a}	RFV01U-D2A	15.00	8.00	15.00		152.088	31.25	-7.75		19, 416
Ant_{3b}										
Ant_{3c}										
Ant_{4a}										
Ant_{4b}	BXA-80063-6BF-EDIN-	11.25	5.25	68.00		152.025	33.00	10.25	170.00	19, 416
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff	RC3DC-3315-PF-48	15.00	10.00	28.00			30.00	8.00		422
Ant on Standoff										
Ant on Tower										
Ant on Tower										
Sector C										
Ant_{1a}	RT4401-48A	12.00	8.25	12.00		152.942	22.00	-8.25		25
Ant_{1b}										
Ant_{1c}										
Ant_{2a}	CBC78T-DS-43-2X	9.50	6.25	6.75		152.879	24.00	-6.50		25
Ant_{2b}	(2) JAHH-65B-R3B	13.75	8.25	72.00		152.108	33.25	12.00	290.00	25
Ant_{2c}	RFV01U-D1A	15.00	10.00	15.00		152.025	34.25	-8.50		25
Ant_{3a}	RFV01U-D2A	15.00	8.00	15.00		152.088	31.25	-7.75		25
Ant_{3b}										
Ant_{3c}										
Ant_{4a}										
Ant_{4b}	BXA-80063-6BF-EDIN-	11.25	5.25	68.00		152.025	33.00	10.25	290.00	25
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										
Sector D										
Ant_{1a}										
Ant_{1b}										
Ant_{1c}										
Ant_{2a}										
Ant_{2b}										
Ant_{2c}										
Ant_{3a}										
Ant_{3b}										
Ant_{3c}										
Ant_{4a}										
Ant_{4b}										
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										

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

1	TOTAL COAX(9):(3)1.5"Ø HYBRID, (6) FH 1 5/8	76
2		
3		
4		
5		
6		
7		
8		

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

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

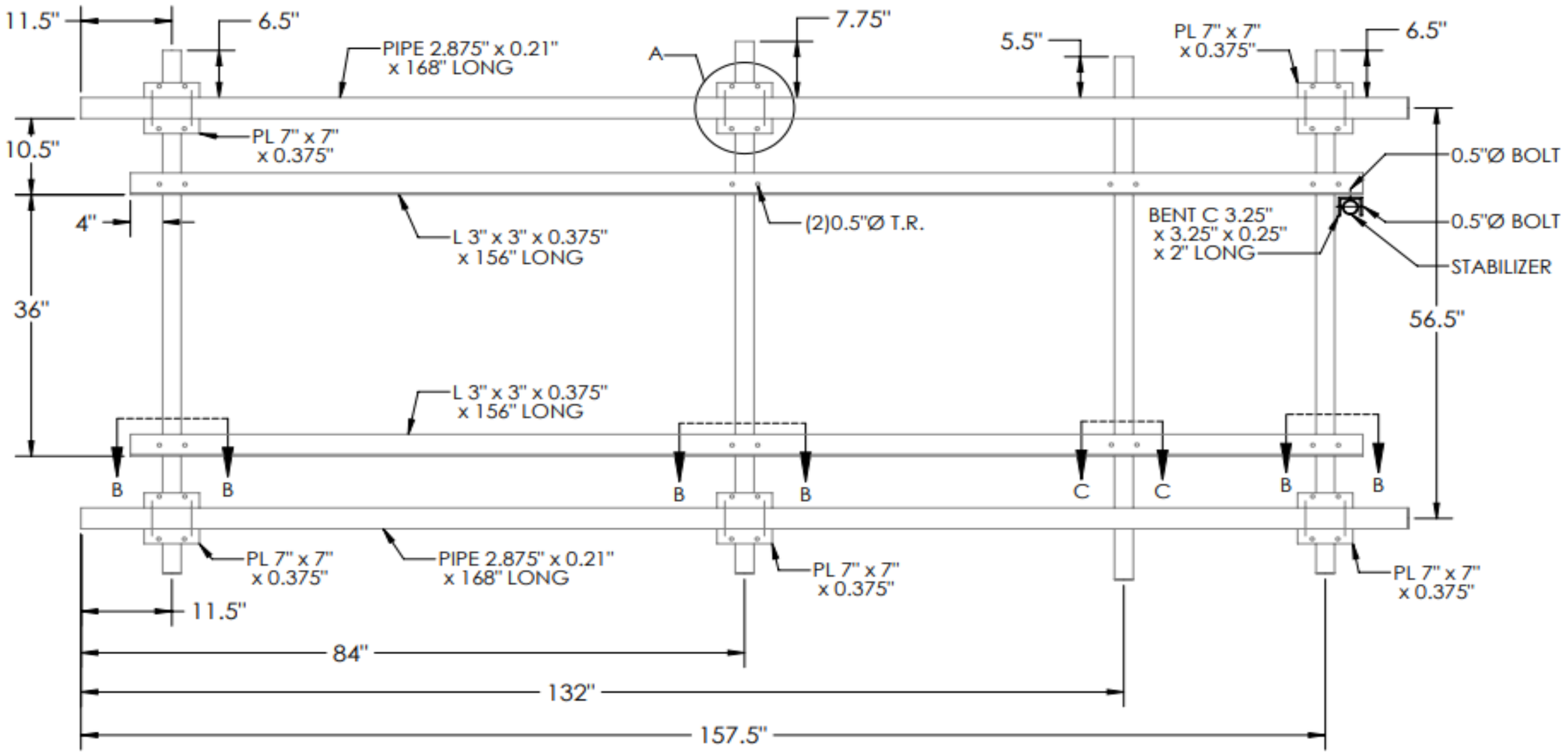
V3.0 Updated on 8-31-2020

Antenna Mount Mapping Form (PATENT PENDING)

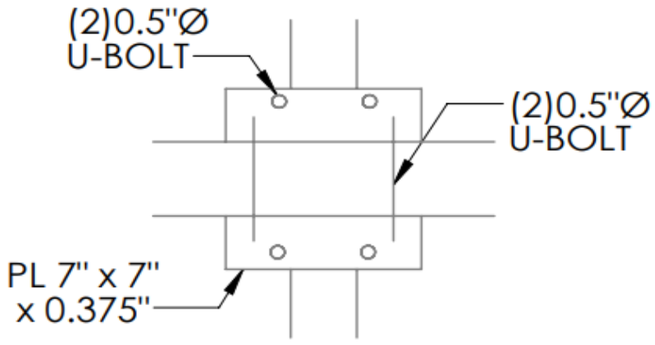
FCC #
1203184

Tower Owner:	ATC	**Mapping Date:**	4/2/2021
Site Name:	ATC: Tartaglia VZW: N Bridgeport CT	**Tower Type:**	Self Support
Site Number or ID:	ATC:383598, VZW:467325	**Tower Height (Ft.):**	UNKNOWN
Mapping Contractor:	RKS Design & Engineering LLC.	**Mount Elevation (Ft.):**	150.9

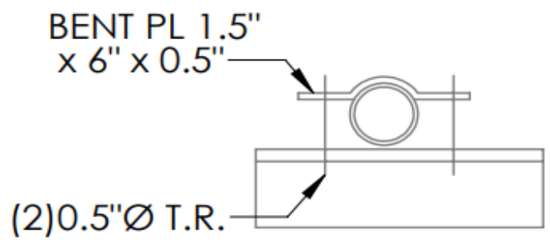
Please Insert Sketches of the Antenna Mount



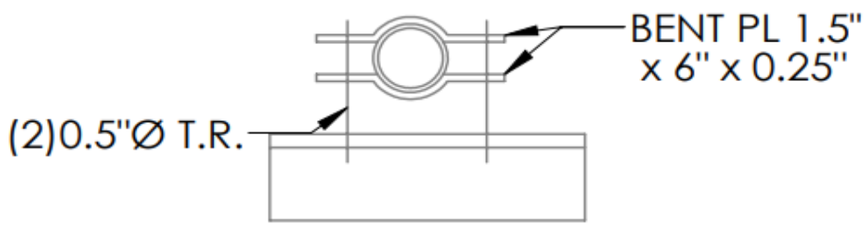
SECTION A & C



DETAIL A

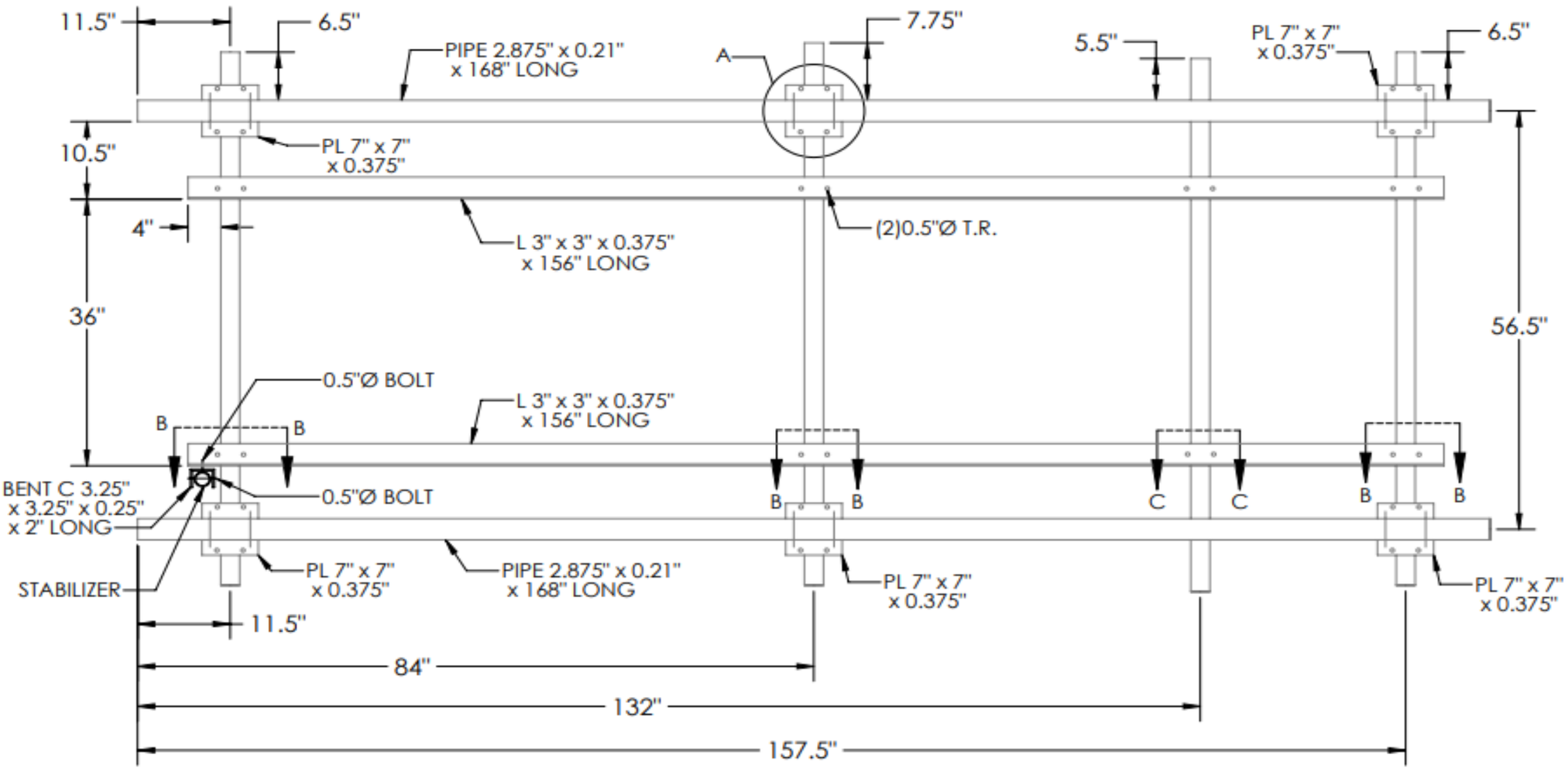


SECTION B-B

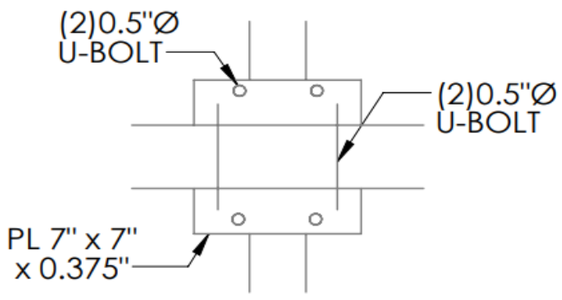


SECTION C-C

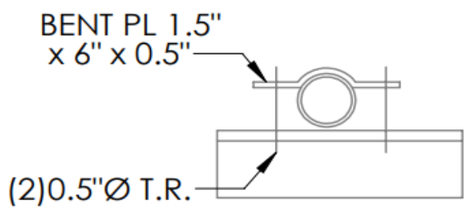
Please Insert Sketches of the Antenna Mount, cont'd



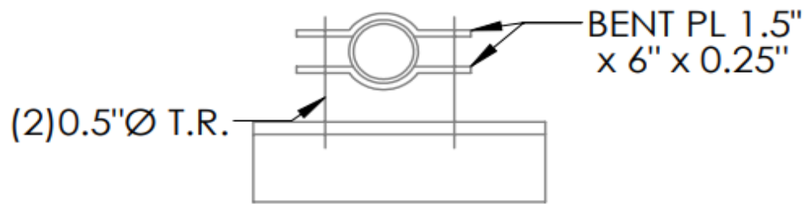
SECTOR B



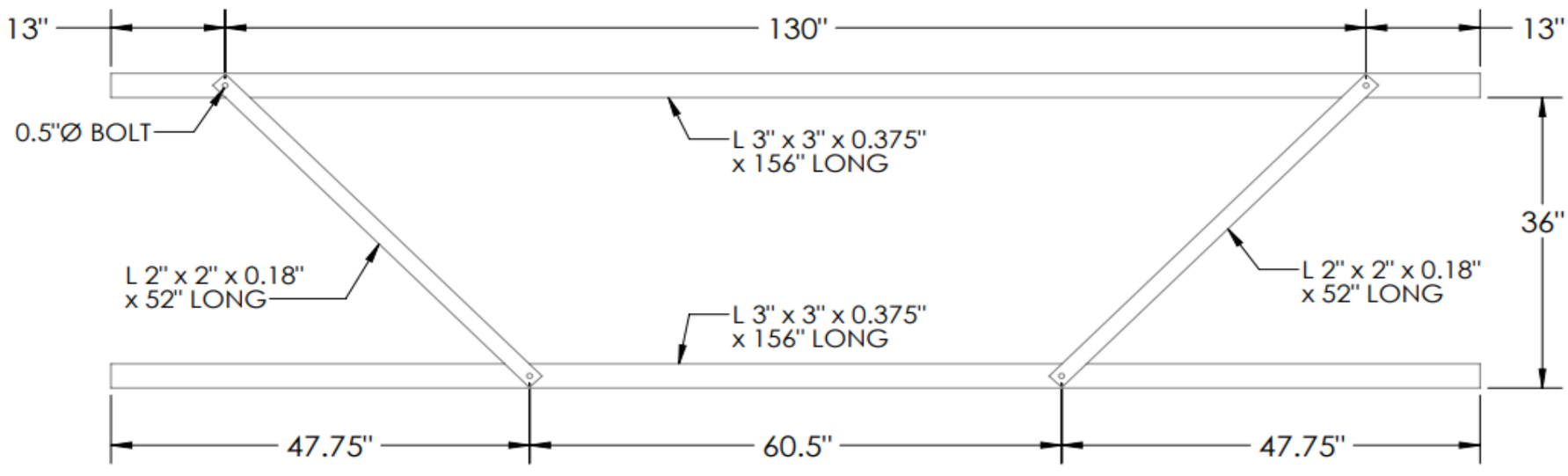
DETAIL A



SECTION B-B

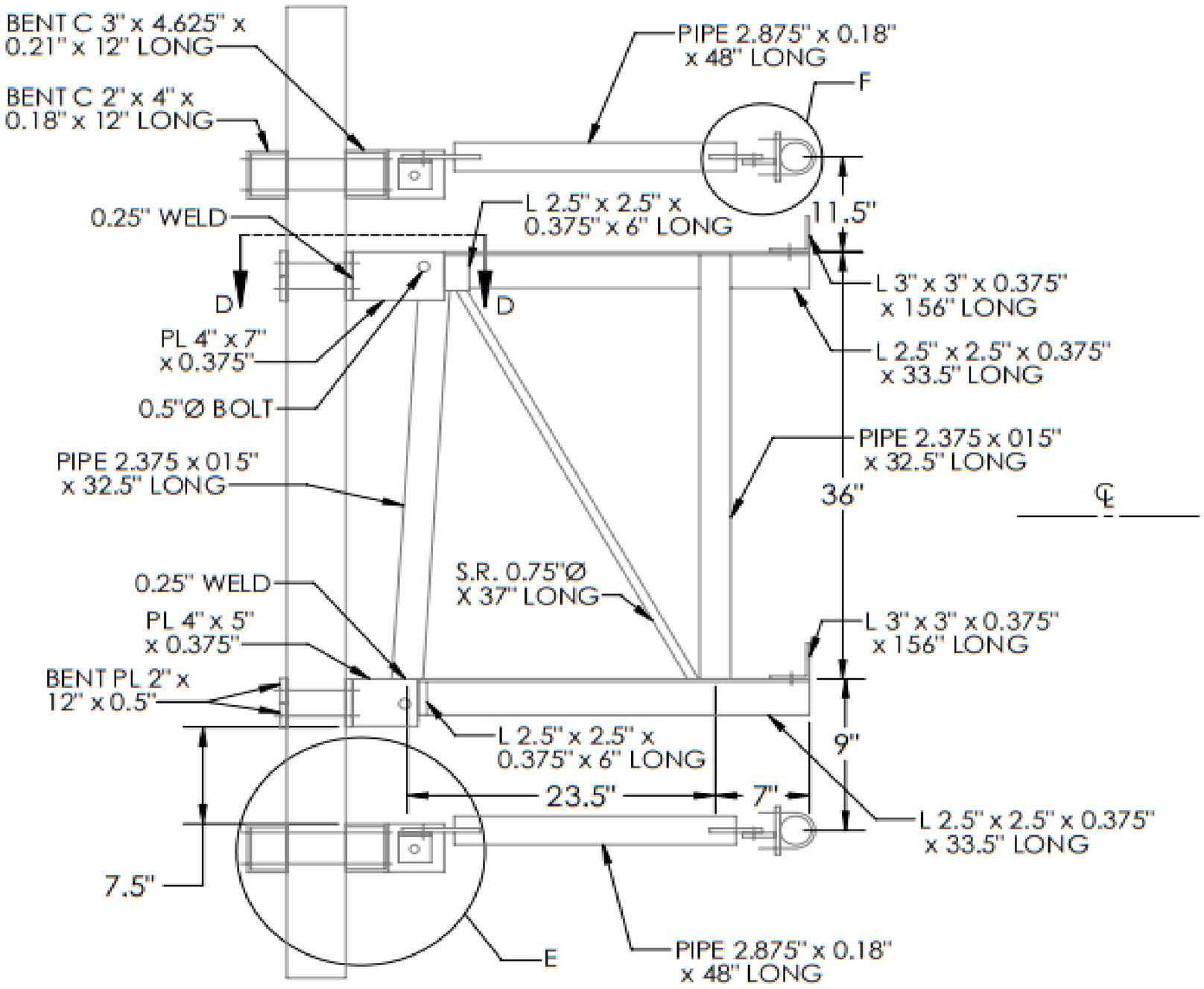


SECTION C-C

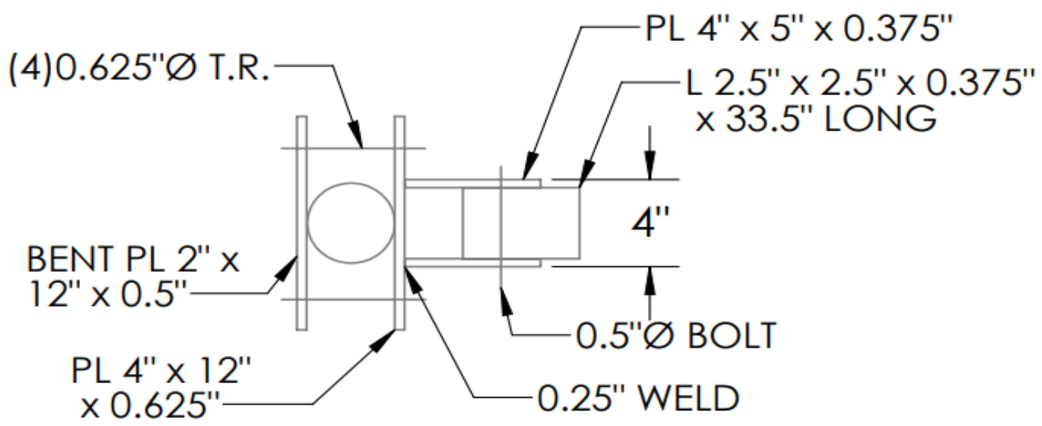


SECTOR VIEW

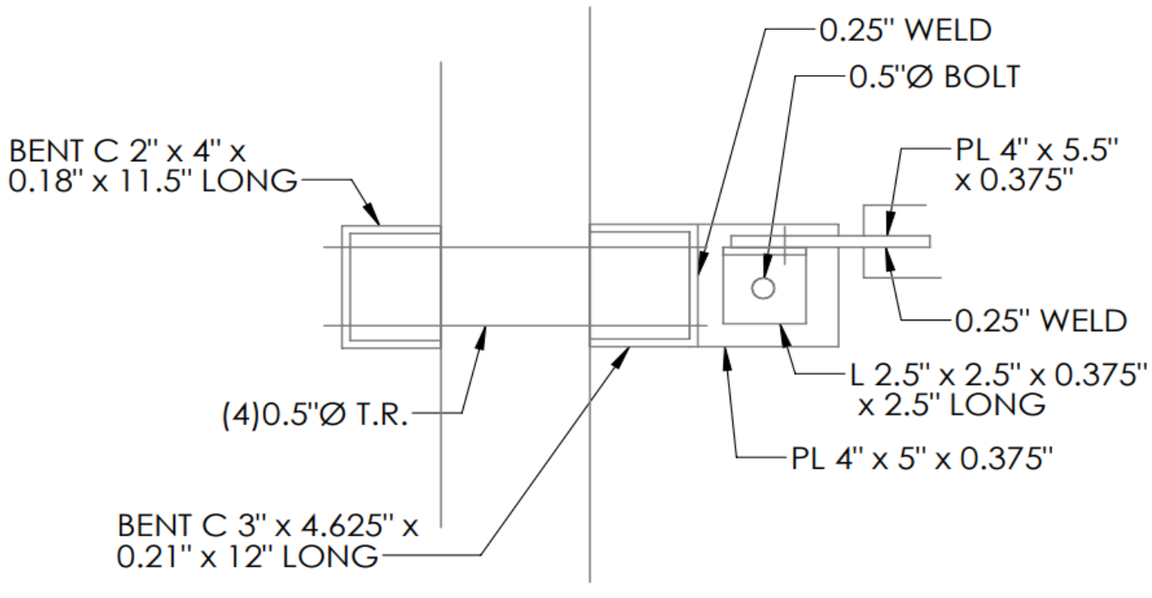
Please Insert Sketches of the Antenna Mount, cont'd



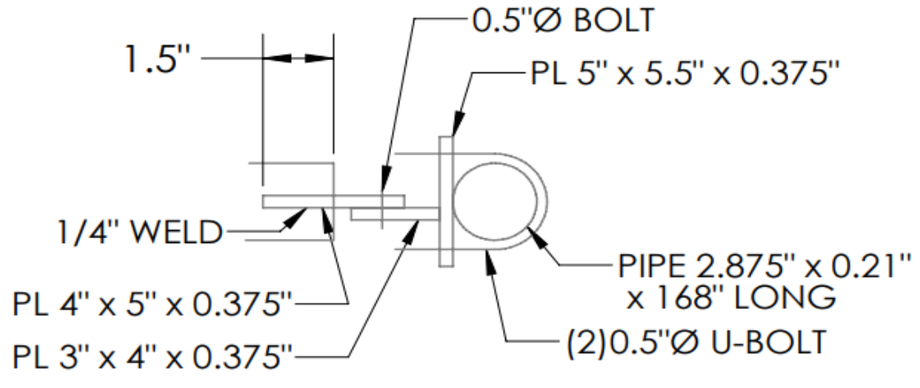
STAND OFF VIEW



SECTION D-D

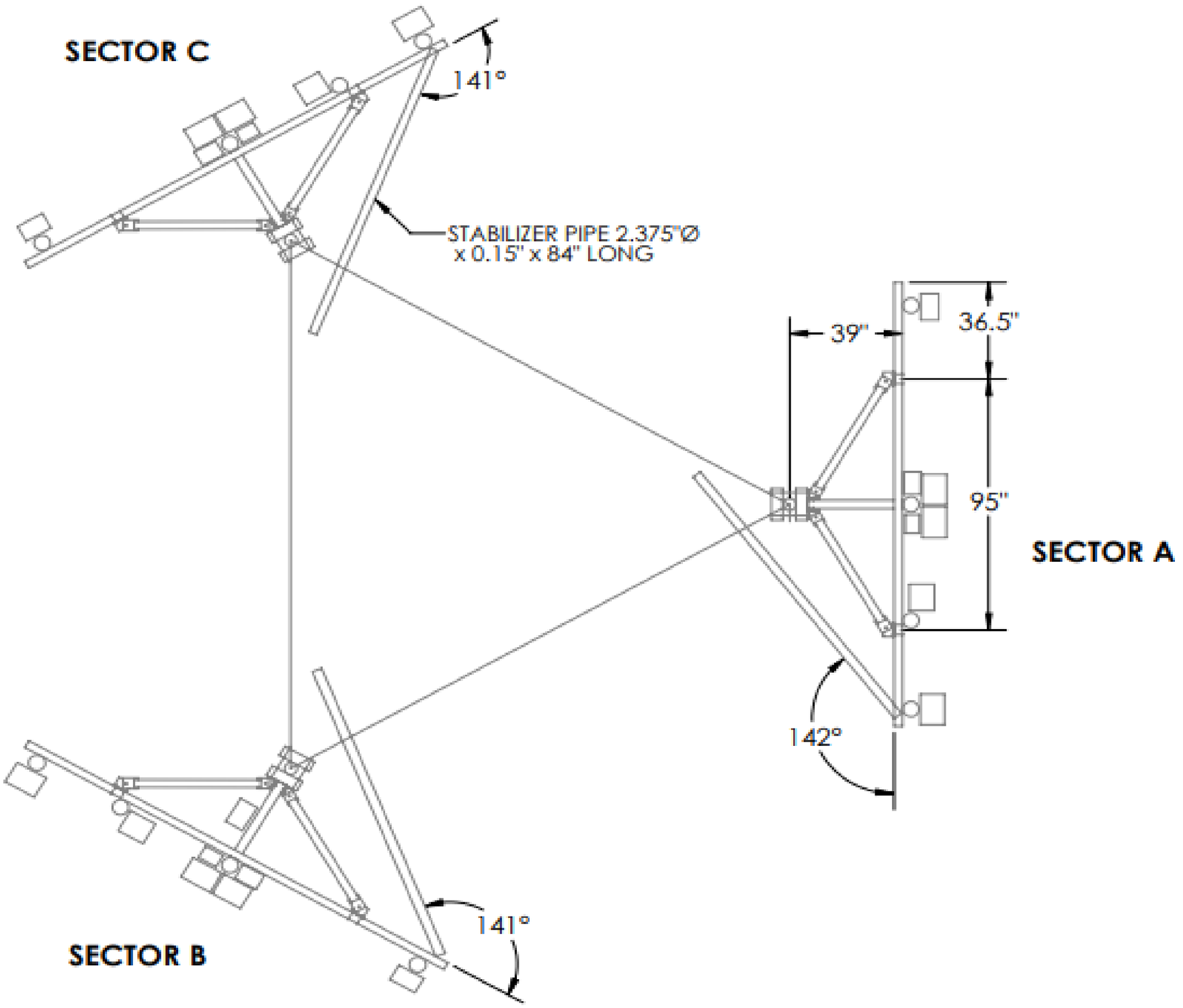


DETAIL E

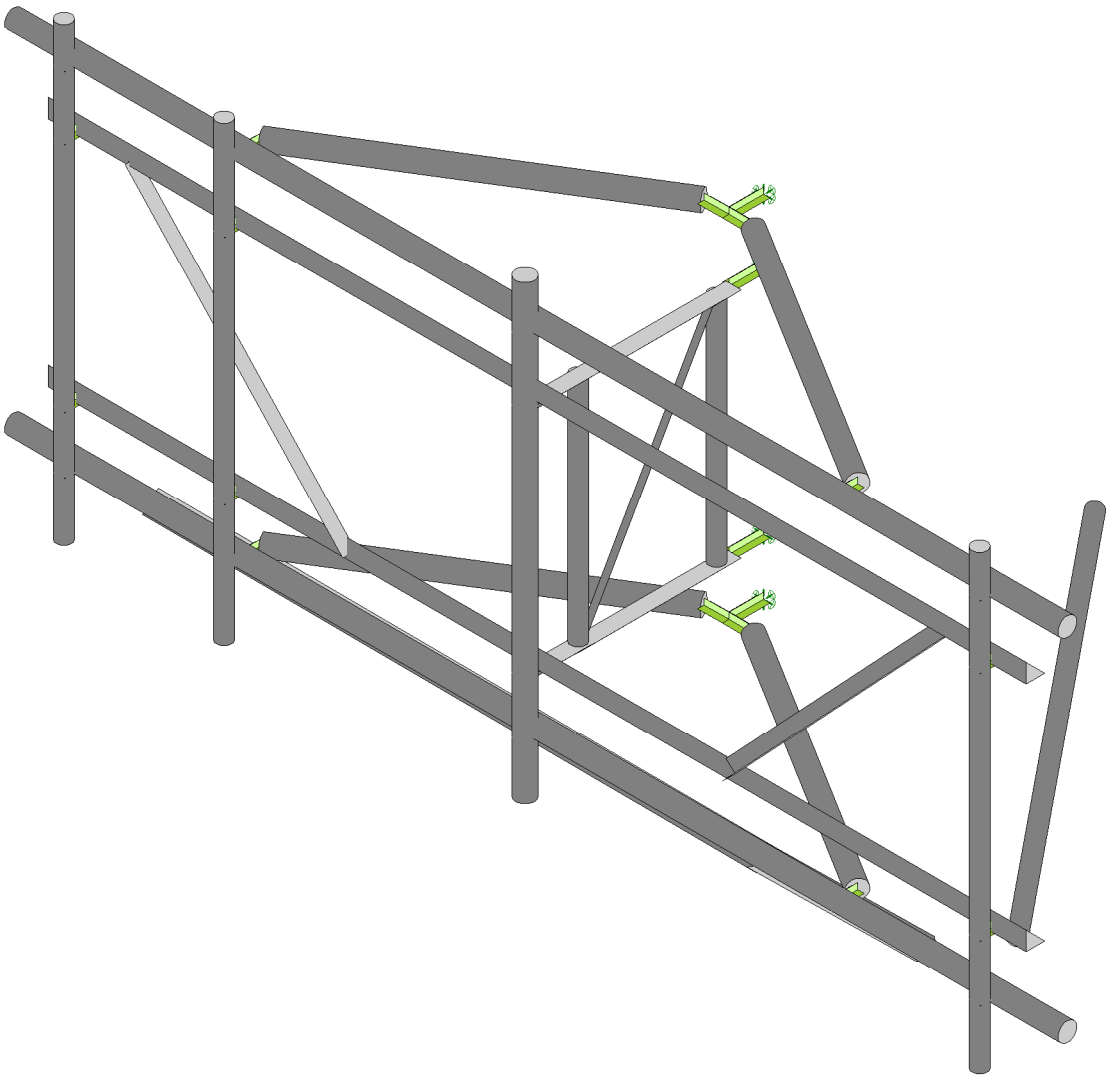


DETAIL F

Please Insert Sketches of the Antenna Mount, cont'd

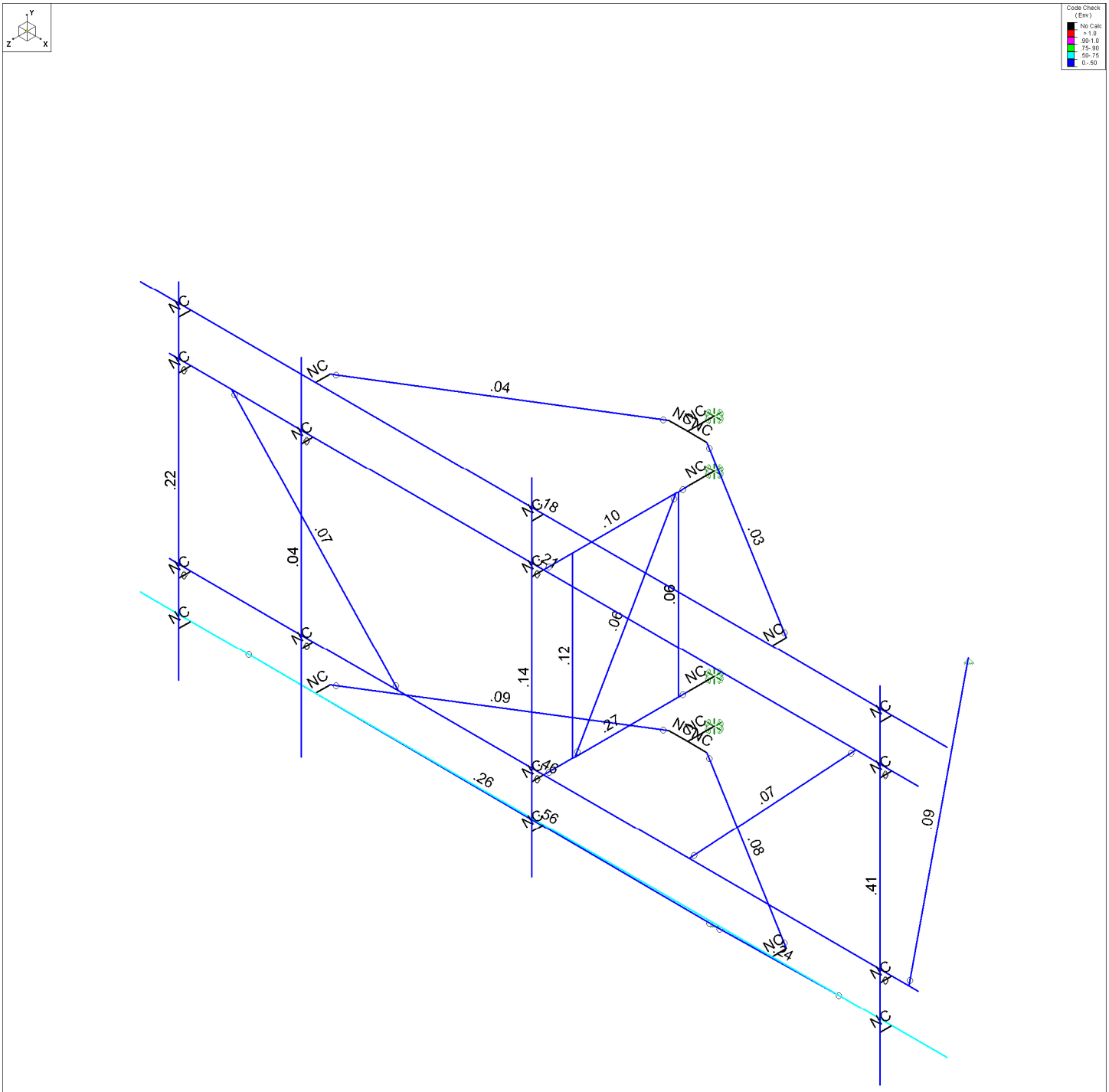


ANTENNA PLAN VIEW



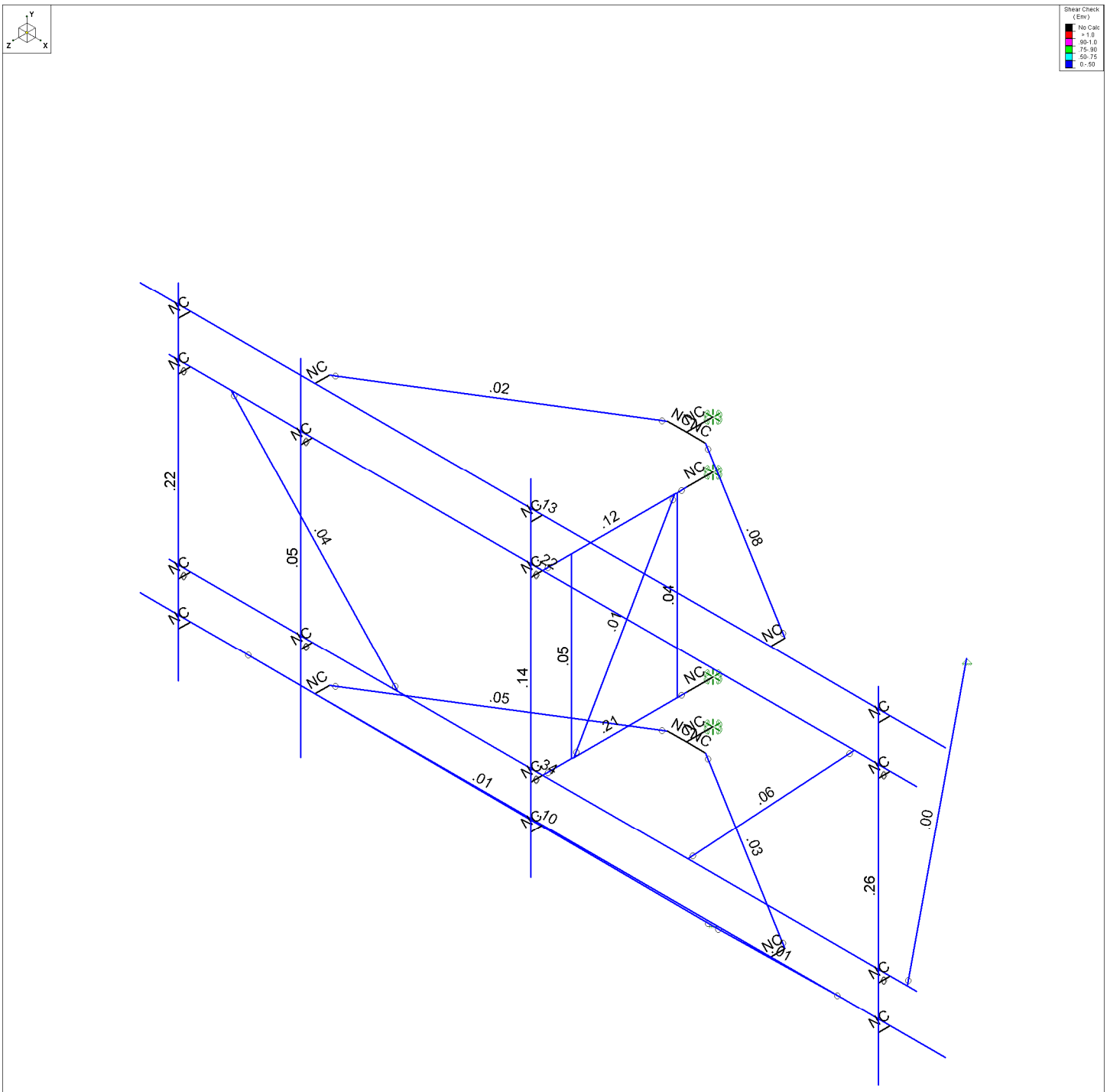
Envelope Only Solution

		SK - 1
		Feb 26, 2024 at 8:51 AM
		5000385395-VZW_MT_LOT_A_H.r3d



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

		SK - 2
		Feb 26, 2024 at 8:51 AM
		5000385395-VZW_MT_LOT_A_H.r3d



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

		SK - 3
		Feb 26, 2024 at 8:51 AM
		5000385395-VZW_MT_LOT_A_H.r3d

Basic Load Cases

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

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(...
54	Structure Wi (30 Deg)	None						44		
55	Structure Wi (60 Deg)	None						44		
56	Structure Wi (90 Deg)	None						44		
57	Structure Wi (120 Deg)	None						44		
58	Structure Wi (150 Deg)	None						44		
59	Structure Wi (180 Deg)	None						44		
60	Structure Wi (210 Deg)	None						44		
61	Structure Wi (240 Deg)	None						44		
62	Structure Wi (270 Deg)	None						44		
63	Structure Wi (300 Deg)	None						44		
64	Structure Wi (330 Deg)	None						44		
65	Structure Wm (0 Deg)	None						44		
66	Structure Wm (30 Deg)	None						44		
67	Structure Wm (60 Deg)	None						44		
68	Structure Wm (90 Deg)	None						44		
69	Structure Wm (120 Deg)	None						44		
70	Structure Wm (150 Deg)	None						44		
71	Structure Wm (180 Deg)	None						44		
72	Structure Wm (210 Deg)	None						44		
73	Structure Wm (240 Deg)	None						44		
74	Structure Wm (270 Deg)	None						44		
75	Structure Wm (300 Deg)	None						44		
76	Structure Wm (330 Deg)	None						44		
77	Lm1	None					1			
78	Lm2	None					1			
79	Lv1	None					1			
80	Lv2	None					1			
81	Antenna Ev	None					33			
82	Antenna Eh (0 Deg)	None					22			
83	Antenna Eh (90 Deg)	None					22			
84	Structure Ev	ELY		-.045						
85	Structure Eh (0 Deg)	ELZ			-.113					
86	Structure Eh (90 Deg)	ELX	.113							

Load Combinations

	Description	S...	PDelta	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...	Yes	Y		1	1.2	39	1.2	2	1	40	1	15	1	53	1										
14	1.2D + 1.0Di + 1.0Wi (3...	Yes	Y		1	1.2	39	1.2	2	1	40	1	16	1	54	1										
15	1.2D + 1.0Di + 1.0Wi (6...	Yes	Y		1	1.2	39	1.2	2	1	40	1	17	1	55	1										
16	1.2D + 1.0Di + 1.0Wi (9...	Yes	Y		1	1.2	39	1.2	2	1	40	1	18	1	56	1										
17	1.2D + 1.0Di + 1.0Wi (1...	Yes	Y		1	1.2	39	1.2	2	1	40	1	19	1	57	1										
18	1.2D + 1.0Di + 1.0Wi (1...	Yes	Y		1	1.2	39	1.2	2	1	40	1	20	1	58	1										
19	1.2D + 1.0Di + 1.0Wi (1...	Yes	Y		1	1.2	39	1.2	2	1	40	1	21	1	59	1										

Load Combinations (Continued)

	Description	S...	PDelta	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 (2..	Yes	Y		1	1.2	39	1.2	2	1	40	1	22	1	60	1								
21	1.2D + 1.0Di + 1.0Wi (2..	Yes	Y		1	1.2	39	1.2	2	1	40	1	23	1	61	1								
22	1.2D + 1.0Di + 1.0Wi (2..	Yes	Y		1	1.2	39	1.2	2	1	40	1	24	1	62	1								
23	1.2D + 1.0Di + 1.0Wi (3..	Yes	Y		1	1.2	39	1.2	2	1	40	1	25	1	63	1								
24	1.2D + 1.0Di + 1.0Wi (3..	Yes	Y		1	1.2	39	1.2	2	1	40	1	26	1	64	1								
25	1.2D + 1.5Lm1 + 1.0W...	Yes	Y		1	1.2	39	1.2	77	1.5	27	1	65	1										
26	1.2D + 1.5Lm1 + 1.0W...	Yes	Y		1	1.2	39	1.2	77	1.5	28	1	66	1										
27	1.2D + 1.5Lm1 + 1.0W...	Yes	Y		1	1.2	39	1.2	77	1.5	29	1	67	1										
28	1.2D + 1.5Lm1 + 1.0W...	Yes	Y		1	1.2	39	1.2	77	1.5	30	1	68	1										
29	1.2D + 1.5Lm1 + 1.0W...	Yes	Y		1	1.2	39	1.2	77	1.5	31	1	69	1										
30	1.2D + 1.5Lm1 + 1.0W...	Yes	Y		1	1.2	39	1.2	77	1.5	32	1	70	1										
31	1.2D + 1.5Lm1 + 1.0W...	Yes	Y		1	1.2	39	1.2	77	1.5	33	1	71	1										
32	1.2D + 1.5Lm1 + 1.0W...	Yes	Y		1	1.2	39	1.2	77	1.5	34	1	72	1										
33	1.2D + 1.5Lm1 + 1.0W...	Yes	Y		1	1.2	39	1.2	77	1.5	35	1	73	1										
34	1.2D + 1.5Lm1 + 1.0W...	Yes	Y		1	1.2	39	1.2	77	1.5	36	1	74	1										
35	1.2D + 1.5Lm1 + 1.0W...	Yes	Y		1	1.2	39	1.2	77	1.5	37	1	75	1										
36	1.2D + 1.5Lm1 + 1.0W...	Yes	Y		1	1.2	39	1.2	77	1.5	38	1	76	1										
37	1.2D + 1.5Lm2 + 1.0W...	Yes	Y		1	1.2	39	1.2	78	1.5	27	1	65	1										
38	1.2D + 1.5Lm2 + 1.0W...	Yes	Y		1	1.2	39	1.2	78	1.5	28	1	66	1										
39	1.2D + 1.5Lm2 + 1.0W...	Yes	Y		1	1.2	39	1.2	78	1.5	29	1	67	1										
40	1.2D + 1.5Lm2 + 1.0W...	Yes	Y		1	1.2	39	1.2	78	1.5	30	1	68	1										
41	1.2D + 1.5Lm2 + 1.0W...	Yes	Y		1	1.2	39	1.2	78	1.5	31	1	69	1										
42	1.2D + 1.5Lm2 + 1.0W...	Yes	Y		1	1.2	39	1.2	78	1.5	32	1	70	1										
43	1.2D + 1.5Lm2 + 1.0W...	Yes	Y		1	1.2	39	1.2	78	1.5	33	1	71	1										
44	1.2D + 1.5Lm2 + 1.0W...	Yes	Y		1	1.2	39	1.2	78	1.5	34	1	72	1										
45	1.2D + 1.5Lm2 + 1.0W...	Yes	Y		1	1.2	39	1.2	78	1.5	35	1	73	1										
46	1.2D + 1.5Lm2 + 1.0W...	Yes	Y		1	1.2	39	1.2	78	1.5	36	1	74	1										
47	1.2D + 1.5Lm2 + 1.0W...	Yes	Y		1	1.2	39	1.2	78	1.5	37	1	75	1										
48	1.2D + 1.5Lm2 + 1.0W...	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..	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	1	83		ELZ	1	E...					
53	1.2D + 1.0Ev + 1.0Eh (3..	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	.866	83	.5	ELZ	.866	E...	.5				
54	1.2D + 1.0Ev + 1.0Eh (6..	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	.5	83	.866	ELZ	.5	E...	.866				
55	1.2D + 1.0Ev + 1.0Eh (9..	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82		83	1	ELZ		E...	1				
56	1.2D + 1.0Ev + 1.0Eh (1..	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-.5	83	.866	ELZ	-.5	E...	.866				
57	1.2D + 1.0Ev + 1.0Eh (1..	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-.866	83	.5	ELZ	-.866	E...	.5				
58	1.2D + 1.0Ev + 1.0Eh (1..	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-1	83		ELZ	-1	E...					
59	1.2D + 1.0Ev + 1.0Eh (2..	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-.866	83	-.5	ELZ	-.866	E...	-.5				
60	1.2D + 1.0Ev + 1.0Eh (2..	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-.5	83	-.866	ELZ	-.5	E...	-.866				
61	1.2D + 1.0Ev + 1.0Eh (2..	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82		83	-1	ELZ		E...	-1				
62	1.2D + 1.0Ev + 1.0Eh (3..	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	.5	83	-.866	ELZ	.5	E...	-.866				
63	1.2D + 1.0Ev + 1.0Eh (3..	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	.866	83	-.5	ELZ	.866	E...	-.5				
64	0.9D - 1.0Ev + 1.0Eh (0..	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	1	83		ELZ	1	E...					
65	0.9D - 1.0Ev + 1.0Eh (3..	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	.866	83	.5	ELZ	.866	E...	.5				
66	0.9D - 1.0Ev + 1.0Eh (6..	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	.5	83	.866	ELZ	.5	E...	.866				
67	0.9D - 1.0Ev + 1.0Eh (9..	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82		83	1	ELZ		E...	1				
68	0.9D - 1.0Ev + 1.0Eh (1..	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-.5	83	.866	ELZ	-.5	E...	.866				
69	0.9D - 1.0Ev + 1.0Eh (1..	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-.866	83	.5	ELZ	-.866	E...	.5				
70	0.9D - 1.0Ev + 1.0Eh (1..	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-1	83		ELZ	-1	E...					
71	0.9D - 1.0Ev + 1.0Eh (2..	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-.866	83	-.5	ELZ	-.866	E...	-.5				
72	0.9D - 1.0Ev + 1.0Eh (2..	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-.5	83	-.866	ELZ	-.5	E...	-.866				
73	0.9D - 1.0Ev + 1.0Eh (2..	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82		83	-1	ELZ		E...	-1				
74	0.9D - 1.0Ev + 1.0Eh (3..	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	.5	83	-.866	ELZ	.5	E...	-.866				
75	0.9D - 1.0Ev + 1.0Eh (3..	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	.866	83	-.5	ELZ	.866	E...	-.5				

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Dual Mount Pipe	PIPE_2.5	Column	Pipe	A53 Gr. B	Typical	1.61	1.45	1.45	2.89
2	Mount Pipe	PIPE_2.0	Column	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
3	Connection Angle	L2.5x2.5x4	Beam	Single Angle	A36 Gr.36	Typical	1.19	.692	.692	.026
4	Standoff Plate	PL3/8x5	Beam	RECT	A36 Gr.36	Typical	1.875	.022	3.906	.084
5	Pipe Standoff Horizontal	PIPE_2.5	Beam	Pipe	A53 Gr. B	Typical	1.61	1.45	1.45	2.89
6	Standoff Vertical	PIPE_2.0	Column	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
7	Standoff Horizontal	L2.5x2.5x6	Beam	Single Angle	A36 Gr.36	Typical	1.73	.972	.972	.083
8	Standoff Diagonal	SR_0.75	Column	BAR	A36 Gr.36	Typical	.442	.016	.016	.031
9	Face Diagonal	L2x2x3	Column	Single Angle	A36 Gr.36	Typical	.722	.271	.271	.009
10	Face Horizontal	L3X3X4	Beam	Single Angle	A36 Gr.36	Typical	1.44	1.23	1.23	.031
11	Tieback	PIPE_2.0	Beam	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
12	Pipe Face Horizontal	PIPE_2.5	Beam	Pipe	A53 Gr. B	Typical	1.61	1.45	1.45	2.89
13	V-Brace	L2.5x2.5x4	Beam	Single Angle	A36 Gr.36	Typical	1.19	.692	.692	.026

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/1...	Density[k/ft^3]	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	M2	N2	N1			RIGID	None	None	RIGID	Typical
2	M4	N6	N5			RIGID	None	None	RIGID	Typical
3	M5	N4	N10		180	Pipe Standoff ...	Beam	Pipe	A53 Gr. B	Typical
4	M6	N3	N9		90	Pipe Standoff ...	Beam	Pipe	A53 Gr. B	Typical
5	M7	N7	N11			Pipe Standoff ...	Beam	Pipe	A53 Gr. B	Typical
6	M8	N13	N15		270	Face Horizontal	Beam	Single Angle	A36 Gr.36	Typical
7	M9	N14	N16		270	Face Horizontal	Beam	Single Angle	A36 Gr.36	Typical
8	M10	N23	N25		90	Face Diagonal	Column	Single Angle	A36 Gr.36	Typical
9	M11	N17	N18			RIGID	None	None	RIGID	Typical
10	M12	N19	N20			RIGID	None	None	RIGID	Typical
11	MP1A	N21	N22			Mount Pipe	Column	Pipe	A53 Gr. B	Typical
12	M14	N8	N12		270	Pipe Standoff ...	Beam	Pipe	A53 Gr. B	Typical
13	M15	N24	N26		270	Face Diagonal	Column	Single Angle	A36 Gr.36	Typical
14	M16	N29	N30			RIGID	None	None	RIGID	Typical
15	M17	N27	N28			Pipe Face Hori...	Beam	Pipe	A53 Gr. B	Typical
16	M18	N33	N34			RIGID	None	None	RIGID	Typical
17	M19	N31	N32			Pipe Face Hori...	Beam	Pipe	A53 Gr. B	Typical
18	M20	N35	N37		90	Standoff Horiz...	Beam	Single Angle	A36 Gr.36	Typical
19	M21	N36	N38		90	Standoff Horiz...	Beam	Single Angle	A36 Gr.36	Typical
20	M22	N39	N40			Standoff Vertical	Column	Pipe	A53 Gr. B	Typical
21	M23	N41	N42			Standoff Vertical	Column	Pipe	A53 Gr. B	Typical
22	M24	N44	N43			Standoff Diago...	Column	BAR	A36 Gr.36	Typical
23	M25	N37	N45			RIGID	None	None	RIGID	Typical
24	M26	N38	N46			RIGID	None	None	RIGID	Typical
25	M27	N10	N48			RIGID	None	None	RIGID	Typical
26	M28	N12	N50			RIGID	None	None	RIGID	Typical
27	M29	N9	N47			RIGID	None	None	RIGID	Typical
28	M30	N11	N49			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
29	M31	N35	N51			RIGID	None	None	RIGID	Typical
30	M32	N36	N52			RIGID	None	None	RIGID	Typical
31	MP2A	N53	N54			Dual Mount Pipe	Column	Pipe	A53 Gr. B	Typical
32	M36	N59	N60			RIGID	None	None	RIGID	Typical
33	M37	N61	N62			RIGID	None	None	RIGID	Typical
34	MP3A	N63	N64			Mount Pipe	Column	Pipe	A53 Gr. B	Typical
35	M41	N69	N70			RIGID	None	None	RIGID	Typical
36	M42	N71	N72			RIGID	None	None	RIGID	Typical
37	MP4A	N73	N74			Mount Pipe	Column	Pipe	A53 Gr. B	Typical
38	M44	N75	N76			RIGID	None	None	RIGID	Typical
39	M45	N77	N78			RIGID	None	None	RIGID	Typical
40	M46	N79	N80			Tieback	Beam	Pipe	A53 Gr. B	Typical
41	M45A	N8	N6			RIGID	None	None	RIGID	Typical
42	M46A	N7	N6			RIGID	None	None	RIGID	Typical
43	M47	N3	N2			RIGID	None	None	RIGID	Typical
44	M48	N4	N2			RIGID	None	None	RIGID	Typical
45	M45B	N74A	N73A			V-Brace	Beam	Single Angle	A36 Gr.36	Typical
46	M46B	N75A	N73A		270	V-Brace	Beam	Single Angle	A36 Gr.36	Typical
47	M49	N80A	N81			RIGID	None	None	RIGID	Typical
48	M50	N82	N83			RIGID	None	None	RIGID	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	M2						Yes	** NA **			None
2	M4						Yes	** NA **			None
3	M5	OOOOOX	BenPIN				Yes	Default			None
4	M6	OOOOXO	BenPIN				Yes	Default			None
5	M7	OOOOOX	BenPIN				Yes	Default			None
6	M8						Yes	Default			None
7	M9						Yes	Default			None
8	M10	BenPIN	BenPIN				Yes	** NA **			None
9	M11		OOOXOO				Yes	** NA **			None
10	M12		OOOXOO				Yes	** NA **			None
11	MP1A						Yes	** NA **			None
12	M14	OOOOXO	BenPIN				Yes	Default			None
13	M15	BenPIN	BenPIN				Yes	** NA **			None
14	M16						Yes	** NA **			None
15	M17						Yes				None
16	M18						Yes	** NA **			None
17	M19						Yes				None
18	M20	BenPIN	OOOOXX				Yes	Default			None
19	M21	BenPIN	OOOOXX				Yes	Default			None
20	M22						Yes	** NA **			None
21	M23						Yes	** NA **			None
22	M24	BenPIN	BenPIN				Yes	** NA **			None
23	M25						Yes	** NA **			None
24	M26						Yes	** NA **			None
25	M27						Yes	** NA **			None
26	M28						Yes	** NA **			None
27	M29						Yes	** NA **			None
28	M30						Yes	** NA **			None
29	M31		OOOXOO				Yes	** NA **			None
30	M32		OOOXOO				Yes	** NA **			None
31	MP2A						Yes	** NA **			None
32	M36		OOOXOO				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...
33	M37		OOOXOO				Yes	** NA **			None
34	MP3A						Yes	** NA **			None
35	M41		OOOXOO				Yes	** NA **			None
36	M42		OOOXOO				Yes	** NA **			None
37	MP4A						Yes	** NA **			None
38	M44						Yes	** NA **			None
39	M45						Yes	** NA **			None
40	M46	BenPIN					Yes	Default			None
41	M45A						Yes	** NA **			None
42	M46A						Yes	** NA **			None
43	M47						Yes	** NA **			None
44	M48						Yes	** NA **			None
45	M45B	BenPIN	BenPIN				Yes				None
46	M46B	BenPIN	BenPIN				Yes				None
47	M49						Yes	** NA **			None
48	M50						Yes	** NA **			None

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	Y	-28.65	1
2	MP4A	My	.01	1
3	MP4A	Mz	.017	1
4	MP4A	Y	-28.65	3
5	MP4A	My	.01	3
6	MP4A	Mz	.017	3
7	MP2A	Y	-31.65	.5
8	MP2A	My	-.005	.5
9	MP2A	Mz	.028	.5
10	MP2A	Y	-31.65	4.5
11	MP2A	My	-.005	4.5
12	MP2A	Mz	.028	4.5
13	MP2A	Y	-31.65	.5
14	MP2A	My	.027	.5
15	MP2A	Mz	.009	.5
16	MP2A	Y	-31.65	4.5
17	MP2A	My	.027	4.5
18	MP2A	Mz	.009	4.5
19	M22	Y	-84.4	2.5
20	M22	My	0	2.5
21	M22	Mz	0	2.5
22	MP3A	Y	-70.3	3
23	MP3A	My	.013	3
24	MP3A	Mz	-.048	3
25	M23	Y	-32	1.5
26	M23	My	0	1.5
27	M23	Mz	0	1.5
28	MP1A	Y	-23.2	1.5
29	MP1A	My	.008	1.5
30	MP1A	Mz	.013	1.5
31	MP2A	Y	-20.8	3
32	MP2A	My	-.003	3
33	MP2A	Mz	-.005	3

Member Point Loads (BLC 2 : Antenna Di)

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

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	Y	-30.164	1
2	MP4A	My	.01	1
3	MP4A	Mz	.017	1
4	MP4A	Y	-30.164	3
5	MP4A	My	.01	3
6	MP4A	Mz	.017	3
7	MP2A	Y	-70.83	.5
8	MP2A	My	-.012	.5
9	MP2A	Mz	.062	.5
10	MP2A	Y	-70.83	4.5
11	MP2A	My	-.012	4.5
12	MP2A	Mz	.062	4.5
13	MP2A	Y	-70.83	.5
14	MP2A	My	.059	.5
15	MP2A	Mz	.02	.5
16	MP2A	Y	-70.83	4.5
17	MP2A	My	.059	4.5
18	MP2A	Mz	.02	4.5
19	M22	Y	-45.486	2.5
20	M22	My	0	2.5
21	M22	Mz	0	2.5
22	MP3A	Y	-40.909	3
23	MP3A	My	.007	3
24	MP3A	Mz	-.028	3
25	M23	Y	-64.492	1.5
26	M23	My	0	1.5
27	M23	Mz	0	1.5
28	MP1A	Y	-30.265	1.5
29	MP1A	My	.01	1.5
30	MP1A	Mz	.017	1.5
31	MP2A	Y	-16.38	3
32	MP2A	My	-.002	3
33	MP2A	Mz	-.004	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	0	1
2	MP4A	Z	-35.231	1
3	MP4A	Mx	-.02	1
4	MP4A	X	0	3
5	MP4A	Z	-35.231	3
6	MP4A	Mx	-.02	3
7	MP2A	X	0	.5
8	MP2A	Z	-146.894	.5
9	MP2A	Mx	-.128	.5
10	MP2A	X	0	4.5
11	MP2A	Z	-146.894	4.5
12	MP2A	Mx	-.128	4.5
13	MP2A	X	0	.5
14	MP2A	Z	-146.894	.5
15	MP2A	Mx	-.042	.5
16	MP2A	X	0	4.5
17	MP2A	Z	-146.894	4.5
18	MP2A	Mx	-.042	4.5
19	M22	X	0	2.5
20	M22	Z	-61.776	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
21	M22	Mx	0	2.5
22	MP3A	X	0	3
23	MP3A	Z	-44.513	3
24	MP3A	Mx	.03	3
25	M23	X	0	1.5
26	M23	Z	-129.414	1.5
27	M23	Mx	0	1.5
28	MP1A	X	0	1.5
29	MP1A	Z	-41.194	1.5
30	MP1A	Mx	-.024	1.5
31	MP2A	X	0	3
32	MP2A	Z	-20.662	3
33	MP2A	Mx	.004	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	28.744	1
2	MP4A	Z	-49.785	1
3	MP4A	Mx	-.019	1
4	MP4A	X	28.744	3
5	MP4A	Z	-49.785	3
6	MP4A	Mx	-.019	3
7	MP2A	X	90.42	.5
8	MP2A	Z	-156.611	.5
9	MP2A	Mx	-.152	.5
10	MP2A	X	90.42	4.5
11	MP2A	Z	-156.611	4.5
12	MP2A	Mx	-.152	4.5
13	MP2A	X	90.42	.5
14	MP2A	Z	-156.611	.5
15	MP2A	Mx	.031	.5
16	MP2A	X	90.42	4.5
17	MP2A	Z	-156.611	4.5
18	MP2A	Mx	.031	4.5
19	M22	X	33.656	2.5
20	M22	Z	-58.294	2.5
21	M22	Mx	0	2.5
22	MP3A	X	29.856	3
23	MP3A	Z	-51.713	3
24	MP3A	Mx	.041	3
25	M23	X	68.833	1.5
26	M23	Z	-119.222	1.5
27	M23	Mx	0	1.5
28	MP1A	X	29.014	1.5
29	MP1A	Z	-50.253	1.5
30	MP1A	Mx	-.019	1.5
31	MP2A	X	8.792	3
32	MP2A	Z	-15.228	3
33	MP2A	Mx	.002	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	59.423	1
2	MP4A	Z	-34.308	1
3	MP4A	Mx	0	1
4	MP4A	X	59.423	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
5	MP4A	Z	-34.308	3
6	MP4A	Mx	0	3
7	MP2A	X	171.31	.5
8	MP2A	Z	-98.906	.5
9	MP2A	Mx	-.115	.5
10	MP2A	X	171.31	4.5
11	MP2A	Z	-98.906	4.5
12	MP2A	Mx	-.115	4.5
13	MP2A	X	171.31	.5
14	MP2A	Z	-98.906	.5
15	MP2A	Mx	.115	.5
16	MP2A	X	171.31	4.5
17	MP2A	Z	-98.906	4.5
18	MP2A	Mx	.115	4.5
19	M22	X	53.499	2.5
20	M22	Z	-30.888	2.5
21	M22	Mx	0	2.5
22	MP3A	X	58.294	3
23	MP3A	Z	-33.656	3
24	MP3A	Mx	.034	3
25	M23	X	112.076	1.5
26	M23	Z	-64.707	1.5
27	M23	Mx	0	1.5
28	MP1A	X	57.542	1.5
29	MP1A	Z	-33.222	1.5
30	MP1A	Mx	0	1.5
31	MP2A	X	13.895	3
32	MP2A	Z	-8.022	3
33	MP2A	Mx	0	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	57.487	1
2	MP4A	Z	0	1
3	MP4A	Mx	.019	1
4	MP4A	X	57.487	3
5	MP4A	Z	0	3
6	MP4A	Mx	.019	3
7	MP2A	X	180.839	.5
8	MP2A	Z	0	.5
9	MP2A	Mx	-.031	.5
10	MP2A	X	180.839	4.5
11	MP2A	Z	0	4.5
12	MP2A	Mx	-.031	4.5
13	MP2A	X	180.839	.5
14	MP2A	Z	0	.5
15	MP2A	Mx	.152	.5
16	MP2A	X	180.839	4.5
17	MP2A	Z	0	4.5
18	MP2A	Mx	.152	4.5
19	M22	X	50.702	2.5
20	M22	Z	0	2.5
21	M22	Mx	0	2.5
22	MP3A	X	59.713	3
23	MP3A	Z	0	3
24	MP3A	Mx	.011	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
25	M23	X	112.911	1.5
26	M23	Z	0	1.5
27	M23	Mx	0	1.5
28	MP1A	X	58.027	1.5
29	MP1A	Z	0	1.5
30	MP1A	Mx	.019	1.5
31	MP2A	X	17.583	3
32	MP2A	Z	0	3
33	MP2A	Mx	-.002	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	30.511	1
2	MP4A	Z	17.615	1
3	MP4A	Mx	.02	1
4	MP4A	X	30.511	3
5	MP4A	Z	17.615	3
6	MP4A	Mx	.02	3
7	MP2A	X	127.214	.5
8	MP2A	Z	73.447	.5
9	MP2A	Mx	.042	.5
10	MP2A	X	127.214	4.5
11	MP2A	Z	73.447	4.5
12	MP2A	Mx	.042	4.5
13	MP2A	X	127.214	.5
14	MP2A	Z	73.447	.5
15	MP2A	Mx	.128	.5
16	MP2A	X	127.214	4.5
17	MP2A	Z	73.447	4.5
18	MP2A	Mx	.128	4.5
19	M22	X	39.114	2.5
20	M22	Z	22.582	2.5
21	M22	Mx	0	2.5
22	MP3A	X	38.55	3
23	MP3A	Z	22.257	3
24	MP3A	Mx	-.008	3
25	M23	X	90.638	1.5
26	M23	Z	52.33	1.5
27	M23	Mx	0	1.5
28	MP1A	X	35.675	1.5
29	MP1A	Z	20.597	1.5
30	MP1A	Mx	.024	1.5
31	MP2A	X	17.894	3
32	MP2A	Z	10.331	3
33	MP2A	Mx	-.004	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	12.051	1
2	MP4A	Z	20.873	1
3	MP4A	Mx	.016	1
4	MP4A	X	12.051	3
5	MP4A	Z	20.873	3
6	MP4A	Mx	.016	3
7	MP2A	X	64.96	.5
8	MP2A	Z	112.515	.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
9	MP2A	Mx	.087	.5
10	MP2A	X	64.96	4.5
11	MP2A	Z	112.515	4.5
12	MP2A	Mx	.087	4.5
13	MP2A	X	64.96	.5
14	MP2A	Z	112.515	.5
15	MP2A	Mx	.087	.5
16	MP2A	X	64.96	4.5
17	MP2A	Z	112.515	4.5
18	MP2A	Mx	.087	4.5
19	M22	X	25.351	2.5
20	M22	Z	43.909	2.5
21	M22	Mx	0	2.5
22	MP3A	X	18.457	3
23	MP3A	Z	31.968	3
24	MP3A	Mx	-.018	3
25	M23	X	56.456	1.5
26	M23	Z	97.784	1.5
27	M23	Mx	0	1.5
28	MP1A	X	16.388	1.5
29	MP1A	Z	28.386	1.5
30	MP1A	Mx	.022	1.5
31	MP2A	X	11.101	3
32	MP2A	Z	19.227	3
33	MP2A	Mx	-.006	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	0	1
2	MP4A	Z	35.231	1
3	MP4A	Mx	.02	1
4	MP4A	X	0	3
5	MP4A	Z	35.231	3
6	MP4A	Mx	.02	3
7	MP2A	X	0	.5
8	MP2A	Z	146.894	.5
9	MP2A	Mx	.128	.5
10	MP2A	X	0	4.5
11	MP2A	Z	146.894	4.5
12	MP2A	Mx	.128	4.5
13	MP2A	X	0	.5
14	MP2A	Z	146.894	.5
15	MP2A	Mx	.042	.5
16	MP2A	X	0	4.5
17	MP2A	Z	146.894	4.5
18	MP2A	Mx	.042	4.5
19	M22	X	0	2.5
20	M22	Z	61.776	2.5
21	M22	Mx	0	2.5
22	MP3A	X	0	3
23	MP3A	Z	44.513	3
24	MP3A	Mx	-.03	3
25	M23	X	0	1.5
26	M23	Z	129.414	1.5
27	M23	Mx	0	1.5
28	MP1A	X	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
29	MP1A	Z	41.194	1.5
30	MP1A	Mx	.024	1.5
31	MP2A	X	0	3
32	MP2A	Z	20.662	3
33	MP2A	Mx	-.004	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-28.744	1
2	MP4A	Z	49.785	1
3	MP4A	Mx	.019	1
4	MP4A	X	-28.744	3
5	MP4A	Z	49.785	3
6	MP4A	Mx	.019	3
7	MP2A	X	-90.42	.5
8	MP2A	Z	156.611	.5
9	MP2A	Mx	.152	.5
10	MP2A	X	-90.42	4.5
11	MP2A	Z	156.611	4.5
12	MP2A	Mx	.152	4.5
13	MP2A	X	-90.42	.5
14	MP2A	Z	156.611	.5
15	MP2A	Mx	-.031	.5
16	MP2A	X	-90.42	4.5
17	MP2A	Z	156.611	4.5
18	MP2A	Mx	-.031	4.5
19	M22	X	-33.656	2.5
20	M22	Z	58.294	2.5
21	M22	Mx	0	2.5
22	MP3A	X	-29.856	3
23	MP3A	Z	51.713	3
24	MP3A	Mx	-.041	3
25	M23	X	-68.833	1.5
26	M23	Z	119.222	1.5
27	M23	Mx	0	1.5
28	MP1A	X	-29.014	1.5
29	MP1A	Z	50.253	1.5
30	MP1A	Mx	.019	1.5
31	MP2A	X	-8.792	3
32	MP2A	Z	15.228	3
33	MP2A	Mx	-.002	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-59.423	1
2	MP4A	Z	34.308	1
3	MP4A	Mx	0	1
4	MP4A	X	-59.423	3
5	MP4A	Z	34.308	3
6	MP4A	Mx	0	3
7	MP2A	X	-171.31	.5
8	MP2A	Z	98.906	.5
9	MP2A	Mx	.115	.5
10	MP2A	X	-171.31	4.5
11	MP2A	Z	98.906	4.5
12	MP2A	Mx	.115	4.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
13	MP2A	X	-171.31	.5
14	MP2A	Z	98.906	.5
15	MP2A	Mx	-.115	.5
16	MP2A	X	-171.31	4.5
17	MP2A	Z	98.906	4.5
18	MP2A	Mx	-.115	4.5
19	M22	X	-53.499	2.5
20	M22	Z	30.888	2.5
21	M22	Mx	0	2.5
22	MP3A	X	-58.294	3
23	MP3A	Z	33.656	3
24	MP3A	Mx	-.034	3
25	M23	X	-112.076	1.5
26	M23	Z	64.707	1.5
27	M23	Mx	0	1.5
28	MP1A	X	-57.542	1.5
29	MP1A	Z	33.222	1.5
30	MP1A	Mx	0	1.5
31	MP2A	X	-13.895	3
32	MP2A	Z	8.022	3
33	MP2A	Mx	0	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-57.487	1
2	MP4A	Z	0	1
3	MP4A	Mx	-.019	1
4	MP4A	X	-57.487	3
5	MP4A	Z	0	3
6	MP4A	Mx	-.019	3
7	MP2A	X	-180.839	.5
8	MP2A	Z	0	.5
9	MP2A	Mx	.031	.5
10	MP2A	X	-180.839	4.5
11	MP2A	Z	0	4.5
12	MP2A	Mx	.031	4.5
13	MP2A	X	-180.839	.5
14	MP2A	Z	0	.5
15	MP2A	Mx	-.152	.5
16	MP2A	X	-180.839	4.5
17	MP2A	Z	0	4.5
18	MP2A	Mx	-.152	4.5
19	M22	X	-50.702	2.5
20	M22	Z	0	2.5
21	M22	Mx	0	2.5
22	MP3A	X	-59.713	3
23	MP3A	Z	0	3
24	MP3A	Mx	-.011	3
25	M23	X	-112.911	1.5
26	M23	Z	0	1.5
27	M23	Mx	0	1.5
28	MP1A	X	-58.027	1.5
29	MP1A	Z	0	1.5
30	MP1A	Mx	-.019	1.5
31	MP2A	X	-17.583	3
32	MP2A	Z	0	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
33	MP2A	Mx	.002	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-30.511	1
2	MP4A	Z	-17.615	1
3	MP4A	Mx	-.02	1
4	MP4A	X	-30.511	3
5	MP4A	Z	-17.615	3
6	MP4A	Mx	-.02	3
7	MP2A	X	-127.214	.5
8	MP2A	Z	-73.447	.5
9	MP2A	Mx	-.042	.5
10	MP2A	X	-127.214	4.5
11	MP2A	Z	-73.447	4.5
12	MP2A	Mx	-.042	4.5
13	MP2A	X	-127.214	.5
14	MP2A	Z	-73.447	.5
15	MP2A	Mx	-.128	.5
16	MP2A	X	-127.214	4.5
17	MP2A	Z	-73.447	4.5
18	MP2A	Mx	-.128	4.5
19	M22	X	-39.114	2.5
20	M22	Z	-22.582	2.5
21	M22	Mx	0	2.5
22	MP3A	X	-38.55	3
23	MP3A	Z	-22.257	3
24	MP3A	Mx	.008	3
25	M23	X	-90.638	1.5
26	M23	Z	-52.33	1.5
27	M23	Mx	0	1.5
28	MP1A	X	-35.675	1.5
29	MP1A	Z	-20.597	1.5
30	MP1A	Mx	-.024	1.5
31	MP2A	X	-17.894	3
32	MP2A	Z	-10.331	3
33	MP2A	Mx	.004	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-12.051	1
2	MP4A	Z	-20.873	1
3	MP4A	Mx	-.016	1
4	MP4A	X	-12.051	3
5	MP4A	Z	-20.873	3
6	MP4A	Mx	-.016	3
7	MP2A	X	-64.96	.5
8	MP2A	Z	-112.515	.5
9	MP2A	Mx	-.087	.5
10	MP2A	X	-64.96	4.5
11	MP2A	Z	-112.515	4.5
12	MP2A	Mx	-.087	4.5
13	MP2A	X	-64.96	.5
14	MP2A	Z	-112.515	.5
15	MP2A	Mx	-.087	.5
16	MP2A	X	-64.96	4.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP2A	Z	-112.515	4.5
18	MP2A	Mx	-.087	4.5
19	M22	X	-25.351	2.5
20	M22	Z	-43.909	2.5
21	M22	Mx	0	2.5
22	MP3A	X	-18.457	3
23	MP3A	Z	-31.968	3
24	MP3A	Mx	.018	3
25	M23	X	-56.456	1.5
26	M23	Z	-97.784	1.5
27	M23	Mx	0	1.5
28	MP1A	X	-16.388	1.5
29	MP1A	Z	-28.386	1.5
30	MP1A	Mx	-.022	1.5
31	MP2A	X	-11.101	3
32	MP2A	Z	-19.227	3
33	MP2A	Mx	.006	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	0	1
2	MP4A	Z	-9.275	1
3	MP4A	Mx	-.005	1
4	MP4A	X	0	3
5	MP4A	Z	-9.275	3
6	MP4A	Mx	-.005	3
7	MP2A	X	0	.5
8	MP2A	Z	-28.7	.5
9	MP2A	Mx	-.025	.5
10	MP2A	X	0	4.5
11	MP2A	Z	-28.7	4.5
12	MP2A	Mx	-.025	4.5
13	MP2A	X	0	.5
14	MP2A	Z	-28.7	.5
15	MP2A	Mx	-.008	.5
16	MP2A	X	0	4.5
17	MP2A	Z	-28.7	4.5
18	MP2A	Mx	-.008	4.5
19	M22	X	0	2.5
20	M22	Z	-15.618	2.5
21	M22	Mx	0	2.5
22	MP3A	X	0	3
23	MP3A	Z	-11.583	3
24	MP3A	Mx	.008	3
25	M23	X	0	1.5
26	M23	Z	-24.132	1.5
27	M23	Mx	0	1.5
28	MP1A	X	0	1.5
29	MP1A	Z	-9.282	1.5
30	MP1A	Mx	-.005	1.5
31	MP2A	X	0	3
32	MP2A	Z	-5.091	3
33	MP2A	Mx	.001	3

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

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

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	6.998	1
2	MP4A	Z	-12.121	1
3	MP4A	Mx	-.005	1
4	MP4A	X	6.998	3
5	MP4A	Z	-12.121	3
6	MP4A	Mx	-.005	3
7	MP2A	X	17.341	.5
8	MP2A	Z	-30.035	.5
9	MP2A	Mx	-.029	.5
10	MP2A	X	17.341	4.5
11	MP2A	Z	-30.035	4.5
12	MP2A	Mx	-.029	4.5
13	MP2A	X	17.341	.5
14	MP2A	Z	-30.035	.5
15	MP2A	Mx	.006	.5
16	MP2A	X	17.341	4.5
17	MP2A	Z	-30.035	4.5
18	MP2A	Mx	.006	4.5
19	M22	X	8.452	2.5
20	M22	Z	-14.639	2.5
21	M22	Mx	0	2.5
22	MP3A	X	7.565	3
23	MP3A	Z	-13.103	3
24	MP3A	Mx	.01	3
25	M23	X	13.099	1.5
26	M23	Z	-22.689	1.5
27	M23	Mx	0	1.5
28	MP1A	X	6.269	1.5
29	MP1A	Z	-10.857	1.5
30	MP1A	Mx	-.004	1.5
31	MP2A	X	2.217	3
32	MP2A	Z	-3.84	3
33	MP2A	Mx	.000554	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	14.165	1
2	MP4A	Z	-8.178	1
3	MP4A	Mx	0	1
4	MP4A	X	14.165	3
5	MP4A	Z	-8.178	3
6	MP4A	Mx	0	3
7	MP2A	X	32.625	.5
8	MP2A	Z	-18.836	.5
9	MP2A	Mx	-.022	.5
10	MP2A	X	32.625	4.5
11	MP2A	Z	-18.836	4.5
12	MP2A	Mx	-.022	4.5
13	MP2A	X	32.625	.5
14	MP2A	Z	-18.836	.5
15	MP2A	Mx	.022	.5
16	MP2A	X	32.625	4.5
17	MP2A	Z	-18.836	4.5
18	MP2A	Mx	.022	4.5
19	M22	X	13.526	2.5
20	M22	Z	-7.809	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
21	M22	Mx	0	2.5
22	MP3A	X	14.639	3
23	MP3A	Z	-8.452	3
24	MP3A	Mx	.008	3
25	M23	X	20.899	1.5
26	M23	Z	-12.066	1.5
27	M23	Mx	0	1.5
28	MP1A	X	12.267	1.5
29	MP1A	Z	-7.082	1.5
30	MP1A	Mx	0	1.5
31	MP2A	X	3.555	3
32	MP2A	Z	-2.053	3
33	MP2A	Mx	0	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	13.996	1
2	MP4A	Z	0	1
3	MP4A	Mx	.005	1
4	MP4A	X	13.996	3
5	MP4A	Z	0	3
6	MP4A	Mx	.005	3
7	MP2A	X	34.681	.5
8	MP2A	Z	0	.5
9	MP2A	Mx	-.006	.5
10	MP2A	X	34.681	4.5
11	MP2A	Z	0	4.5
12	MP2A	Mx	-.006	4.5
13	MP2A	X	34.681	.5
14	MP2A	Z	0	.5
15	MP2A	Mx	.029	.5
16	MP2A	X	34.681	4.5
17	MP2A	Z	0	4.5
18	MP2A	Mx	.029	4.5
19	M22	X	13.048	2.5
20	M22	Z	0	2.5
21	M22	Mx	0	2.5
22	MP3A	X	15.13	3
23	MP3A	Z	0	3
24	MP3A	Mx	.003	3
25	M23	X	20	1.5
26	M23	Z	0	1.5
27	M23	Mx	0	1.5
28	MP1A	X	12.537	1.5
29	MP1A	Z	0	1.5
30	MP1A	Mx	.004	1.5
31	MP2A	X	4.434	3
32	MP2A	Z	0	3
33	MP2A	Mx	-.000554	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	8.032	1
2	MP4A	Z	4.637	1
3	MP4A	Mx	.005	1
4	MP4A	X	8.032	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
5	MP4A	Z	4.637	3
6	MP4A	Mx	.005	3
7	MP2A	X	24.855	.5
8	MP2A	Z	14.35	.5
9	MP2A	Mx	.008	.5
10	MP2A	X	24.855	4.5
11	MP2A	Z	14.35	4.5
12	MP2A	Mx	.008	4.5
13	MP2A	X	24.855	.5
14	MP2A	Z	14.35	.5
15	MP2A	Mx	.025	.5
16	MP2A	X	24.855	4.5
17	MP2A	Z	14.35	4.5
18	MP2A	Mx	.025	4.5
19	M22	X	10.187	2.5
20	M22	Z	5.882	2.5
21	M22	Mx	0	2.5
22	MP3A	X	10.031	3
23	MP3A	Z	5.792	3
24	MP3A	Mx	-.002	3
25	M23	X	15.531	1.5
26	M23	Z	8.967	1.5
27	M23	Mx	0	1.5
28	MP1A	X	8.039	1.5
29	MP1A	Z	4.641	1.5
30	MP1A	Mx	.005	1.5
31	MP2A	X	4.409	3
32	MP2A	Z	2.545	3
33	MP2A	Mx	-.001	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	3.457	1
2	MP4A	Z	5.988	1
3	MP4A	Mx	.005	1
4	MP4A	X	3.457	3
5	MP4A	Z	5.988	3
6	MP4A	Mx	.005	3
7	MP2A	X	12.855	.5
8	MP2A	Z	22.265	.5
9	MP2A	Mx	.017	.5
10	MP2A	X	12.855	4.5
11	MP2A	Z	22.265	4.5
12	MP2A	Mx	.017	4.5
13	MP2A	X	12.855	.5
14	MP2A	Z	22.265	.5
15	MP2A	Mx	.017	.5
16	MP2A	X	12.855	4.5
17	MP2A	Z	22.265	4.5
18	MP2A	Mx	.017	4.5
19	M22	X	6.524	2.5
20	M22	Z	11.3	2.5
21	M22	Mx	0	2.5
22	MP3A	X	4.905	3
23	MP3A	Z	8.496	3
24	MP3A	Mx	-.005	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
25	M23	X	10	1.5
26	M23	Z	17.32	1.5
27	M23	Mx	0	1.5
28	MP1A	X	3.827	1.5
29	MP1A	Z	6.629	1.5
30	MP1A	Mx	.005	1.5
31	MP2A	X	2.71	3
32	MP2A	Z	4.694	3
33	MP2A	Mx	-.001	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	0	1
2	MP4A	Z	9.275	1
3	MP4A	Mx	.005	1
4	MP4A	X	0	3
5	MP4A	Z	9.275	3
6	MP4A	Mx	.005	3
7	MP2A	X	0	.5
8	MP2A	Z	28.7	.5
9	MP2A	Mx	.025	.5
10	MP2A	X	0	4.5
11	MP2A	Z	28.7	4.5
12	MP2A	Mx	.025	4.5
13	MP2A	X	0	.5
14	MP2A	Z	28.7	.5
15	MP2A	Mx	.008	.5
16	MP2A	X	0	4.5
17	MP2A	Z	28.7	4.5
18	MP2A	Mx	.008	4.5
19	M22	X	0	2.5
20	M22	Z	15.618	2.5
21	M22	Mx	0	2.5
22	MP3A	X	0	3
23	MP3A	Z	11.583	3
24	MP3A	Mx	-.008	3
25	M23	X	0	1.5
26	M23	Z	24.132	1.5
27	M23	Mx	0	1.5
28	MP1A	X	0	1.5
29	MP1A	Z	9.282	1.5
30	MP1A	Mx	.005	1.5
31	MP2A	X	0	3
32	MP2A	Z	5.091	3
33	MP2A	Mx	-.001	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-6.998	1
2	MP4A	Z	12.121	1
3	MP4A	Mx	.005	1
4	MP4A	X	-6.998	3
5	MP4A	Z	12.121	3
6	MP4A	Mx	.005	3
7	MP2A	X	-17.341	.5
8	MP2A	Z	30.035	.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
9	MP2A	Mx	.029	.5
10	MP2A	X	-17.341	4.5
11	MP2A	Z	30.035	4.5
12	MP2A	Mx	.029	4.5
13	MP2A	X	-17.341	.5
14	MP2A	Z	30.035	.5
15	MP2A	Mx	-.006	.5
16	MP2A	X	-17.341	4.5
17	MP2A	Z	30.035	4.5
18	MP2A	Mx	-.006	4.5
19	M22	X	-8.452	2.5
20	M22	Z	14.639	2.5
21	M22	Mx	0	2.5
22	MP3A	X	-7.565	3
23	MP3A	Z	13.103	3
24	MP3A	Mx	-.01	3
25	M23	X	-13.099	1.5
26	M23	Z	22.689	1.5
27	M23	Mx	0	1.5
28	MP1A	X	-6.269	1.5
29	MP1A	Z	10.857	1.5
30	MP1A	Mx	.004	1.5
31	MP2A	X	-2.217	3
32	MP2A	Z	3.84	3
33	MP2A	Mx	-.000554	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-14.165	1
2	MP4A	Z	8.178	1
3	MP4A	Mx	0	1
4	MP4A	X	-14.165	3
5	MP4A	Z	8.178	3
6	MP4A	Mx	0	3
7	MP2A	X	-32.625	.5
8	MP2A	Z	18.836	.5
9	MP2A	Mx	.022	.5
10	MP2A	X	-32.625	4.5
11	MP2A	Z	18.836	4.5
12	MP2A	Mx	.022	4.5
13	MP2A	X	-32.625	.5
14	MP2A	Z	18.836	.5
15	MP2A	Mx	-.022	.5
16	MP2A	X	-32.625	4.5
17	MP2A	Z	18.836	4.5
18	MP2A	Mx	-.022	4.5
19	M22	X	-13.526	2.5
20	M22	Z	7.809	2.5
21	M22	Mx	0	2.5
22	MP3A	X	-14.639	3
23	MP3A	Z	8.452	3
24	MP3A	Mx	-.008	3
25	M23	X	-20.899	1.5
26	M23	Z	12.066	1.5
27	M23	Mx	0	1.5
28	MP1A	X	-12.267	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
29	MP1A	Z	7.082	1.5
30	MP1A	Mx	0	1.5
31	MP2A	X	-3.555	3
32	MP2A	Z	2.053	3
33	MP2A	Mx	0	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-13.996	1
2	MP4A	Z	0	1
3	MP4A	Mx	-.005	1
4	MP4A	X	-13.996	3
5	MP4A	Z	0	3
6	MP4A	Mx	-.005	3
7	MP2A	X	-34.681	.5
8	MP2A	Z	0	.5
9	MP2A	Mx	.006	.5
10	MP2A	X	-34.681	4.5
11	MP2A	Z	0	4.5
12	MP2A	Mx	.006	4.5
13	MP2A	X	-34.681	.5
14	MP2A	Z	0	.5
15	MP2A	Mx	-.029	.5
16	MP2A	X	-34.681	4.5
17	MP2A	Z	0	4.5
18	MP2A	Mx	-.029	4.5
19	M22	X	-13.048	2.5
20	M22	Z	0	2.5
21	M22	Mx	0	2.5
22	MP3A	X	-15.13	3
23	MP3A	Z	0	3
24	MP3A	Mx	-.003	3
25	M23	X	-20	1.5
26	M23	Z	0	1.5
27	M23	Mx	0	1.5
28	MP1A	X	-12.537	1.5
29	MP1A	Z	0	1.5
30	MP1A	Mx	-.004	1.5
31	MP2A	X	-4.434	3
32	MP2A	Z	0	3
33	MP2A	Mx	.000554	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-8.032	1
2	MP4A	Z	-4.637	1
3	MP4A	Mx	-.005	1
4	MP4A	X	-8.032	3
5	MP4A	Z	-4.637	3
6	MP4A	Mx	-.005	3
7	MP2A	X	-24.855	.5
8	MP2A	Z	-14.35	.5
9	MP2A	Mx	-.008	.5
10	MP2A	X	-24.855	4.5
11	MP2A	Z	-14.35	4.5
12	MP2A	Mx	-.008	4.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
13	MP2A	X	-24.855	.5
14	MP2A	Z	-14.35	.5
15	MP2A	Mx	-.025	.5
16	MP2A	X	-24.855	4.5
17	MP2A	Z	-14.35	4.5
18	MP2A	Mx	-.025	4.5
19	M22	X	-10.187	2.5
20	M22	Z	-5.882	2.5
21	M22	Mx	0	2.5
22	MP3A	X	-10.031	3
23	MP3A	Z	-5.792	3
24	MP3A	Mx	.002	3
25	M23	X	-15.531	1.5
26	M23	Z	-8.967	1.5
27	M23	Mx	0	1.5
28	MP1A	X	-8.039	1.5
29	MP1A	Z	-4.641	1.5
30	MP1A	Mx	-.005	1.5
31	MP2A	X	-4.409	3
32	MP2A	Z	-2.545	3
33	MP2A	Mx	.001	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-3.457	1
2	MP4A	Z	-5.988	1
3	MP4A	Mx	-.005	1
4	MP4A	X	-3.457	3
5	MP4A	Z	-5.988	3
6	MP4A	Mx	-.005	3
7	MP2A	X	-12.855	.5
8	MP2A	Z	-22.265	.5
9	MP2A	Mx	-.017	.5
10	MP2A	X	-12.855	4.5
11	MP2A	Z	-22.265	4.5
12	MP2A	Mx	-.017	4.5
13	MP2A	X	-12.855	.5
14	MP2A	Z	-22.265	.5
15	MP2A	Mx	-.017	.5
16	MP2A	X	-12.855	4.5
17	MP2A	Z	-22.265	4.5
18	MP2A	Mx	-.017	4.5
19	M22	X	-6.524	2.5
20	M22	Z	-11.3	2.5
21	M22	Mx	0	2.5
22	MP3A	X	-4.905	3
23	MP3A	Z	-8.496	3
24	MP3A	Mx	.005	3
25	M23	X	-10	1.5
26	M23	Z	-17.32	1.5
27	M23	Mx	0	1.5
28	MP1A	X	-3.827	1.5
29	MP1A	Z	-6.629	1.5
30	MP1A	Mx	-.005	1.5
31	MP2A	X	-2.71	3
32	MP2A	Z	-4.694	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
33	MP2A	Mx	.001	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	0	1
2	MP4A	Z	-2.202	1
3	MP4A	Mx	-.001	1
4	MP4A	X	0	3
5	MP4A	Z	-2.202	3
6	MP4A	Mx	-.001	3
7	MP2A	X	0	.5
8	MP2A	Z	-9.181	.5
9	MP2A	Mx	-.008	.5
10	MP2A	X	0	4.5
11	MP2A	Z	-9.181	4.5
12	MP2A	Mx	-.008	4.5
13	MP2A	X	0	.5
14	MP2A	Z	-9.181	.5
15	MP2A	Mx	-.003	.5
16	MP2A	X	0	4.5
17	MP2A	Z	-9.181	4.5
18	MP2A	Mx	-.003	4.5
19	M22	X	0	2.5
20	M22	Z	-3.861	2.5
21	M22	Mx	0	2.5
22	MP3A	X	0	3
23	MP3A	Z	-2.782	3
24	MP3A	Mx	.002	3
25	M23	X	0	1.5
26	M23	Z	-8.088	1.5
27	M23	Mx	0	1.5
28	MP1A	X	0	1.5
29	MP1A	Z	-2.575	1.5
30	MP1A	Mx	-.001	1.5
31	MP2A	X	0	3
32	MP2A	Z	-1.291	3
33	MP2A	Mx	.00028	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	1.796	1
2	MP4A	Z	-3.112	1
3	MP4A	Mx	-.001	1
4	MP4A	X	1.796	3
5	MP4A	Z	-3.112	3
6	MP4A	Mx	-.001	3
7	MP2A	X	5.651	.5
8	MP2A	Z	-9.788	.5
9	MP2A	Mx	-.009	.5
10	MP2A	X	5.651	4.5
11	MP2A	Z	-9.788	4.5
12	MP2A	Mx	-.009	4.5
13	MP2A	X	5.651	.5
14	MP2A	Z	-9.788	.5
15	MP2A	Mx	.002	.5
16	MP2A	X	5.651	4.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP2A	Z	-9.788	4.5
18	MP2A	Mx	.002	4.5
19	M22	X	2.104	2.5
20	M22	Z	-3.643	2.5
21	M22	Mx	0	2.5
22	MP3A	X	1.866	3
23	MP3A	Z	-3.232	3
24	MP3A	Mx	.003	3
25	M23	X	4.302	1.5
26	M23	Z	-7.451	1.5
27	M23	Mx	0	1.5
28	MP1A	X	1.813	1.5
29	MP1A	Z	-3.141	1.5
30	MP1A	Mx	-.001	1.5
31	MP2A	X	.549	3
32	MP2A	Z	-.952	3
33	MP2A	Mx	.000137	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	3.714	1
2	MP4A	Z	-2.144	1
3	MP4A	Mx	0	1
4	MP4A	X	3.714	3
5	MP4A	Z	-2.144	3
6	MP4A	Mx	0	3
7	MP2A	X	10.707	.5
8	MP2A	Z	-6.182	.5
9	MP2A	Mx	-.007	.5
10	MP2A	X	10.707	4.5
11	MP2A	Z	-6.182	4.5
12	MP2A	Mx	-.007	4.5
13	MP2A	X	10.707	.5
14	MP2A	Z	-6.182	.5
15	MP2A	Mx	.007	.5
16	MP2A	X	10.707	4.5
17	MP2A	Z	-6.182	4.5
18	MP2A	Mx	.007	4.5
19	M22	X	3.344	2.5
20	M22	Z	-1.93	2.5
21	M22	Mx	0	2.5
22	MP3A	X	3.643	3
23	MP3A	Z	-2.104	3
24	MP3A	Mx	.002	3
25	M23	X	7.005	1.5
26	M23	Z	-4.044	1.5
27	M23	Mx	0	1.5
28	MP1A	X	3.596	1.5
29	MP1A	Z	-2.076	1.5
30	MP1A	Mx	0	1.5
31	MP2A	X	.868	3
32	MP2A	Z	-.501	3
33	MP2A	Mx	0	3

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

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

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	3.593	1
2	MP4A	Z	0	1
3	MP4A	Mx	.001	1
4	MP4A	X	3.593	3
5	MP4A	Z	0	3
6	MP4A	Mx	.001	3
7	MP2A	X	11.302	.5
8	MP2A	Z	0	.5
9	MP2A	Mx	-.002	.5
10	MP2A	X	11.302	4.5
11	MP2A	Z	0	4.5
12	MP2A	Mx	-.002	4.5
13	MP2A	X	11.302	.5
14	MP2A	Z	0	.5
15	MP2A	Mx	.009	.5
16	MP2A	X	11.302	4.5
17	MP2A	Z	0	4.5
18	MP2A	Mx	.009	4.5
19	M22	X	3.169	2.5
20	M22	Z	0	2.5
21	M22	Mx	0	2.5
22	MP3A	X	3.732	3
23	MP3A	Z	0	3
24	MP3A	Mx	.000683	3
25	M23	X	7.057	1.5
26	M23	Z	0	1.5
27	M23	Mx	0	1.5
28	MP1A	X	3.627	1.5
29	MP1A	Z	0	1.5
30	MP1A	Mx	.001	1.5
31	MP2A	X	1.099	3
32	MP2A	Z	0	3
33	MP2A	Mx	-.000137	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	1.907	1
2	MP4A	Z	1.101	1
3	MP4A	Mx	.001	1
4	MP4A	X	1.907	3
5	MP4A	Z	1.101	3
6	MP4A	Mx	.001	3
7	MP2A	X	7.951	.5
8	MP2A	Z	4.59	.5
9	MP2A	Mx	.003	.5
10	MP2A	X	7.951	4.5
11	MP2A	Z	4.59	4.5
12	MP2A	Mx	.003	4.5
13	MP2A	X	7.951	.5
14	MP2A	Z	4.59	.5
15	MP2A	Mx	.008	.5
16	MP2A	X	7.951	4.5
17	MP2A	Z	4.59	4.5
18	MP2A	Mx	.008	4.5
19	M22	X	2.445	2.5
20	M22	Z	1.411	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
21	M22	Mx	0	2.5
22	MP3A	X	2.409	3
23	MP3A	Z	1.391	3
24	MP3A	Mx	-.000509	3
25	M23	X	5.665	1.5
26	M23	Z	3.271	1.5
27	M23	Mx	0	1.5
28	MP1A	X	2.23	1.5
29	MP1A	Z	1.287	1.5
30	MP1A	Mx	.001	1.5
31	MP2A	X	1.118	3
32	MP2A	Z	.646	3
33	MP2A	Mx	-.00028	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	.753	1
2	MP4A	Z	1.305	1
3	MP4A	Mx	.001	1
4	MP4A	X	.753	3
5	MP4A	Z	1.305	3
6	MP4A	Mx	.001	3
7	MP2A	X	4.06	.5
8	MP2A	Z	7.032	.5
9	MP2A	Mx	.005	.5
10	MP2A	X	4.06	4.5
11	MP2A	Z	7.032	4.5
12	MP2A	Mx	.005	4.5
13	MP2A	X	4.06	.5
14	MP2A	Z	7.032	.5
15	MP2A	Mx	.005	.5
16	MP2A	X	4.06	4.5
17	MP2A	Z	7.032	4.5
18	MP2A	Mx	.005	4.5
19	M22	X	1.584	2.5
20	M22	Z	2.744	2.5
21	M22	Mx	0	2.5
22	MP3A	X	1.154	3
23	MP3A	Z	1.998	3
24	MP3A	Mx	-.001	3
25	M23	X	3.528	1.5
26	M23	Z	6.112	1.5
27	M23	Mx	0	1.5
28	MP1A	X	1.024	1.5
29	MP1A	Z	1.774	1.5
30	MP1A	Mx	.001	1.5
31	MP2A	X	.694	3
32	MP2A	Z	1.202	3
33	MP2A	Mx	-.000347	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	0	1
2	MP4A	Z	2.202	1
3	MP4A	Mx	.001	1
4	MP4A	X	0	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
5	MP4A	Z	2.202	3
6	MP4A	Mx	.001	3
7	MP2A	X	0	.5
8	MP2A	Z	9.181	.5
9	MP2A	Mx	.008	.5
10	MP2A	X	0	4.5
11	MP2A	Z	9.181	4.5
12	MP2A	Mx	.008	4.5
13	MP2A	X	0	.5
14	MP2A	Z	9.181	.5
15	MP2A	Mx	.003	.5
16	MP2A	X	0	4.5
17	MP2A	Z	9.181	4.5
18	MP2A	Mx	.003	4.5
19	M22	X	0	2.5
20	M22	Z	3.861	2.5
21	M22	Mx	0	2.5
22	MP3A	X	0	3
23	MP3A	Z	2.782	3
24	MP3A	Mx	-.002	3
25	M23	X	0	1.5
26	M23	Z	8.088	1.5
27	M23	Mx	0	1.5
28	MP1A	X	0	1.5
29	MP1A	Z	2.575	1.5
30	MP1A	Mx	.001	1.5
31	MP2A	X	0	3
32	MP2A	Z	1.291	3
33	MP2A	Mx	-.00028	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-1.796	1
2	MP4A	Z	3.112	1
3	MP4A	Mx	.001	1
4	MP4A	X	-1.796	3
5	MP4A	Z	3.112	3
6	MP4A	Mx	.001	3
7	MP2A	X	-5.651	.5
8	MP2A	Z	9.788	.5
9	MP2A	Mx	.009	.5
10	MP2A	X	-5.651	4.5
11	MP2A	Z	9.788	4.5
12	MP2A	Mx	.009	4.5
13	MP2A	X	-5.651	.5
14	MP2A	Z	9.788	.5
15	MP2A	Mx	-.002	.5
16	MP2A	X	-5.651	4.5
17	MP2A	Z	9.788	4.5
18	MP2A	Mx	-.002	4.5
19	M22	X	-2.104	2.5
20	M22	Z	3.643	2.5
21	M22	Mx	0	2.5
22	MP3A	X	-1.866	3
23	MP3A	Z	3.232	3
24	MP3A	Mx	-.003	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
25	M23	X	-4.302	1.5
26	M23	Z	7.451	1.5
27	M23	Mx	0	1.5
28	MP1A	X	-1.813	1.5
29	MP1A	Z	3.141	1.5
30	MP1A	Mx	.001	1.5
31	MP2A	X	-.549	3
32	MP2A	Z	.952	3
33	MP2A	Mx	-.000137	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-3.714	1
2	MP4A	Z	2.144	1
3	MP4A	Mx	0	1
4	MP4A	X	-3.714	3
5	MP4A	Z	2.144	3
6	MP4A	Mx	0	3
7	MP2A	X	-10.707	.5
8	MP2A	Z	6.182	.5
9	MP2A	Mx	.007	.5
10	MP2A	X	-10.707	4.5
11	MP2A	Z	6.182	4.5
12	MP2A	Mx	.007	4.5
13	MP2A	X	-10.707	.5
14	MP2A	Z	6.182	.5
15	MP2A	Mx	-.007	.5
16	MP2A	X	-10.707	4.5
17	MP2A	Z	6.182	4.5
18	MP2A	Mx	-.007	4.5
19	M22	X	-3.344	2.5
20	M22	Z	1.93	2.5
21	M22	Mx	0	2.5
22	MP3A	X	-3.643	3
23	MP3A	Z	2.104	3
24	MP3A	Mx	-.002	3
25	M23	X	-7.005	1.5
26	M23	Z	4.044	1.5
27	M23	Mx	0	1.5
28	MP1A	X	-3.596	1.5
29	MP1A	Z	2.076	1.5
30	MP1A	Mx	0	1.5
31	MP2A	X	-.868	3
32	MP2A	Z	.501	3
33	MP2A	Mx	0	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-3.593	1
2	MP4A	Z	0	1
3	MP4A	Mx	-.001	1
4	MP4A	X	-3.593	3
5	MP4A	Z	0	3
6	MP4A	Mx	-.001	3
7	MP2A	X	-11.302	.5
8	MP2A	Z	0	.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
9	MP2A	Mx	.002	.5
10	MP2A	X	-11.302	4.5
11	MP2A	Z	0	4.5
12	MP2A	Mx	.002	4.5
13	MP2A	X	-11.302	.5
14	MP2A	Z	0	.5
15	MP2A	Mx	-.009	.5
16	MP2A	X	-11.302	4.5
17	MP2A	Z	0	4.5
18	MP2A	Mx	-.009	4.5
19	M22	X	-3.169	2.5
20	M22	Z	0	2.5
21	M22	Mx	0	2.5
22	MP3A	X	-3.732	3
23	MP3A	Z	0	3
24	MP3A	Mx	-.000683	3
25	M23	X	-7.057	1.5
26	M23	Z	0	1.5
27	M23	Mx	0	1.5
28	MP1A	X	-3.627	1.5
29	MP1A	Z	0	1.5
30	MP1A	Mx	-.001	1.5
31	MP2A	X	-1.099	3
32	MP2A	Z	0	3
33	MP2A	Mx	.000137	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-1.907	1
2	MP4A	Z	-1.101	1
3	MP4A	Mx	-.001	1
4	MP4A	X	-1.907	3
5	MP4A	Z	-1.101	3
6	MP4A	Mx	-.001	3
7	MP2A	X	-7.951	.5
8	MP2A	Z	-4.59	.5
9	MP2A	Mx	-.003	.5
10	MP2A	X	-7.951	4.5
11	MP2A	Z	-4.59	4.5
12	MP2A	Mx	-.003	4.5
13	MP2A	X	-7.951	.5
14	MP2A	Z	-4.59	.5
15	MP2A	Mx	-.008	.5
16	MP2A	X	-7.951	4.5
17	MP2A	Z	-4.59	4.5
18	MP2A	Mx	-.008	4.5
19	M22	X	-2.445	2.5
20	M22	Z	-1.411	2.5
21	M22	Mx	0	2.5
22	MP3A	X	-2.409	3
23	MP3A	Z	-1.391	3
24	MP3A	Mx	.000509	3
25	M23	X	-5.665	1.5
26	M23	Z	-3.271	1.5
27	M23	Mx	0	1.5
28	MP1A	X	-2.23	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
29	MP1A	Z	-1.287	1.5
30	MP1A	Mx	-.001	1.5
31	MP2A	X	-1.118	3
32	MP2A	Z	-.646	3
33	MP2A	Mx	.00028	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-.753	1
2	MP4A	Z	-1.305	1
3	MP4A	Mx	-.001	1
4	MP4A	X	-.753	3
5	MP4A	Z	-1.305	3
6	MP4A	Mx	-.001	3
7	MP2A	X	-4.06	.5
8	MP2A	Z	-7.032	.5
9	MP2A	Mx	-.005	.5
10	MP2A	X	-4.06	4.5
11	MP2A	Z	-7.032	4.5
12	MP2A	Mx	-.005	4.5
13	MP2A	X	-4.06	.5
14	MP2A	Z	-7.032	.5
15	MP2A	Mx	-.005	.5
16	MP2A	X	-4.06	4.5
17	MP2A	Z	-7.032	4.5
18	MP2A	Mx	-.005	4.5
19	M22	X	-1.584	2.5
20	M22	Z	-2.744	2.5
21	M22	Mx	0	2.5
22	MP3A	X	-1.154	3
23	MP3A	Z	-1.998	3
24	MP3A	Mx	.001	3
25	M23	X	-3.528	1.5
26	M23	Z	-6.112	1.5
27	M23	Mx	0	1.5
28	MP1A	X	-1.024	1.5
29	MP1A	Z	-1.774	1.5
30	MP1A	Mx	-.001	1.5
31	MP2A	X	-.694	3
32	MP2A	Z	-1.202	3
33	MP2A	Mx	.000347	3

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M32	Y	-500	0

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M37	Y	-500	0

Member Point Loads (BLC 79 : Lv1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M9	Y	-250	%100

Member Point Loads (BLC 80 : Lv2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M9	Y	-250	%50

Member Point Loads (BLC 81 : Antenna Ev)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	Y	-1.29	1
2	MP4A	My	.00043	1
3	MP4A	Mz	.000745	1
4	MP4A	Y	-1.29	3
5	MP4A	My	.00043	3
6	MP4A	Mz	.000745	3
7	MP2A	Y	-1.425	.5
8	MP2A	My	-.000245	.5
9	MP2A	Mz	.001	.5
10	MP2A	Y	-1.425	4.5
11	MP2A	My	-.000245	4.5
12	MP2A	Mz	.001	4.5
13	MP2A	Y	-1.425	.5
14	MP2A	My	.001	.5
15	MP2A	Mz	.000407	.5
16	MP2A	Y	-1.425	4.5
17	MP2A	My	.001	4.5
18	MP2A	Mz	.000407	4.5
19	M22	Y	-3.799	2.5
20	M22	My	0	2.5
21	M22	Mz	0	2.5
22	MP3A	Y	-3.164	3
23	MP3A	My	.000579	3
24	MP3A	Mz	-.002	3
25	M23	Y	-1.44	1.5
26	M23	My	0	1.5
27	M23	Mz	0	1.5
28	MP1A	Y	-1.044	1.5
29	MP1A	My	.000348	1.5
30	MP1A	Mz	.000603	1.5
31	MP2A	Y	-.936	3
32	MP2A	My	-.000117	3
33	MP2A	Mz	-.000203	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	Z	-3.224	1
2	MP4A	Mx	-.002	1
3	MP4A	Z	-3.224	3
4	MP4A	Mx	-.002	3
5	MP2A	Z	-3.562	.5
6	MP2A	Mx	-.003	.5
7	MP2A	Z	-3.562	4.5
8	MP2A	Mx	-.003	4.5
9	MP2A	Z	-3.562	.5
10	MP2A	Mx	-.001	.5
11	MP2A	Z	-3.562	4.5
12	MP2A	Mx	-.001	4.5
13	M22	Z	-9.498	2.5
14	M22	Mx	0	2.5
15	MP3A	Z	-7.911	3
16	MP3A	Mx	.005	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	M23	Z	-3.601	1.5
18	M23	Mx	0	1.5
19	MP1A	Z	-2.611	1.5
20	MP1A	Mx	-.002	1.5
21	MP2A	Z	-2.341	3
22	MP2A	Mx	.000507	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	3.224	1
2	MP4A	Mx	.001	1
3	MP4A	X	3.224	3
4	MP4A	Mx	.001	3
5	MP2A	X	3.562	.5
6	MP2A	Mx	-.000612	.5
7	MP2A	X	3.562	4.5
8	MP2A	Mx	-.000612	4.5
9	MP2A	X	3.562	.5
10	MP2A	Mx	.003	.5
11	MP2A	X	3.562	4.5
12	MP2A	Mx	.003	4.5
13	M22	X	9.498	2.5
14	M22	Mx	0	2.5
15	MP3A	X	7.911	3
16	MP3A	Mx	.001	3
17	M23	X	3.601	1.5
18	M23	Mx	0	1.5
19	MP1A	X	2.611	1.5
20	MP1A	Mx	.00087	1.5
21	MP2A	X	2.341	3
22	MP2A	Mx	-.000293	3

Joint Loads and Enforced Displacements

Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2/...
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 [...	LC
1	N1	m...	872.281	9	53.896	18	726.934	12	.149	5	0	75	.154	3
2		m...	-865.887	3	19.954	75	-751.322	6	-.16	11	0	1	-.162	9
3	N5	m...	2177.405	9	60.532	17	707.202	12	.071	11	0	75	.038	4
4		m...	-1899.998	3	20.428	74	-2465.682	5	-.212	5	0	1	-.039	10
5	N45	m...	110.363	10	615.589	43	409.38	2	-.012	12	0	75	.007	10
6		m...	-109.394	4	75.14	1	-879.86	32	-.285	42	0	1	-.007	4
7	N46	m...	51.063	10	626.04	36	1232.863	2	.009	6	0	75	.03	3
8		m...	-42.567	4	-35.46	6	-491.207	8	-.287	25	0	1	-.03	9
9	N80	m...	996.407	3	32.244	19	1273.118	3	0	75	0	75	0	75
10		m...	-974.805	9	10.371	73	-1269.108	9	0	1	0	1	0	1

Envelope Joint Reactions (Continued)

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [...	LC
11	N73A	m...	565.322	49	1676.925	15	1597.995	14	0	3	0	3	0	3
12		m...	-1136.369	46	554.363	73	522.202	71	0	9	0	9	0	9
13	Totals:	m...	1919.152	9	2621.845	15	2668.524	1						
14		m...	-1919.146	3	888.965	73	-2668.499	7						

Joint Reactions

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
1	1	N1	10.11	27.441	708.034	-.05	0	-.005
2	1	N5	186.805	28.166	-111.935	-.006	0	-.005
3	1	N45	-1.499	75.14	347.174	-.035	0	0
4	1	N46	.921	311.932	906.114	-.142	0	0
5	1	N80	-32.351	14.565	-25.698	0	0	0
6	1	N73A	-163.988	790.445	844.834	0	0	0
7	1	Totals:	-.002	1247.689	2668.524			
8	1	COG (ft):	X: -.375	Y: -.13	Z: 4.627			
9	2	N1	-606.787	27.728	333.79	.085	0	.109
10	2	N5	-1296.033	33.126	-1504.49	-.127	0	.021
11	2	N45	-58.517	108.313	409.38	-.078	0	-.003
12	2	N46	-10.365	209.042	1232.863	-.104	0	.019
13	2	N80	729.321	13.921	941.056	0	0	0
14	2	N73A	-85.841	855.572	888.099	0	0	0
15	2	Totals:	-1328.222	1247.702	2300.698			
16	2	COG (ft):	X: -.375	Y: -.13	Z: 4.627			
17	3	N1	-865.887	30.197	-85.377	.146	0	.154
18	3	N5	-1899.998	38.874	-2347.166	-.203	0	.037
19	3	N45	-100.861	162.506	256.442	-.122	0	-.006
20	3	N46	-30.564	63.836	1084.209	-.048	0	.03
21	3	N80	996.407	14.601	1273.118	0	0	0
22	3	N73A	-18.244	937.695	926.991	0	0	0
23	3	Totals:	-1919.146	1247.708	1108.216			
24	3	COG (ft):	X: -.375	Y: -.13	Z: 4.627			
25	4	N1	-789.935	31.093	-326.631	.147	0	.14
26	4	N5	-1748.192	38.312	-2386.505	-.207	0	.038
27	4	N45	-109.394	258.548	-81.151	-.168	0	-.007
28	4	N46	-42.567	16.953	808.55	-.031	0	.03
29	4	N80	908.366	14.232	1137.783	0	0	0
30	4	N73A	-5.966	888.57	848.124	0	0	0
31	4	Totals:	-1787.688	1247.707	.169			
32	4	COG (ft):	X: -.375	Y: -.13	Z: 4.627			
33	5	N1	-694.47	31.78	-523.765	.149	0	.124
34	5	N5	-1558.693	38.106	-2465.682	-.212	0	.032
35	5	N45	-89.657	326.313	-354.28	-.189	0	-.005
36	5	N46	-31.88	-20.817	587.308	-.007	0	.025
37	5	N80	871.077	14.062	1068.423	0	0	0
38	5	N73A	-54.997	858.261	788.274	0	0	0
39	5	Totals:	-1558.619	1247.705	-899.723			
40	5	COG (ft):	X: -.375	Y: -.13	Z: 4.627			
41	6	N1	-507.846	32.196	-751.322	.141	0	.091
42	6	N5	-1121.13	36.687	-2452.659	-.202	0	.022
43	6	N45	-54.287	378.462	-601.359	-.196	0	-.002
44	6	N46	-14.627	-35.46	318.872	.009	0	.016
45	6	N80	684.04	14.027	837.864	0	0	0
46	6	N73A	-106.211	821.79	708.689	0	0	0
47	6	Totals:	-1120.061	1247.702	-1939.915			
48	6	COG (ft):	X: -.375	Y: -.13	Z: 4.627			

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
49	7	N1	7.607	30.216	-742.999	.052	0	-.005
50	7	N5	117.302	31.11	-1620.727	-.122	0	0
51	7	N45	-.482	398.882	-829.82	-.182	0	0
52	7	N46	-1.177	7.054	-123.734	-.004	0	0
53	7	N80	28.547	14.574	20.898	0	0	0
54	7	N73A	-151.791	765.855	627.884	0	0	0
55	7	Totals:	.007	1247.692	-2668.499			
56	7	COG (ft):	X: -.375	Y: -.13	Z: 4.627			
57	8	N1	616.543	29.115	-367.753	-.086	0	-.116
58	8	N5	1565.633	29.58	-303.358	-.013	0	-.023
59	8	N45	64.151	341.598	-850.991	-.129	0	.003
60	8	N46	20.23	76.454	-491.207	-.027	0	-.019
61	8	N80	-710.169	13.187	-927.979	0	0	0
62	8	N73A	-228.162	757.747	640.618	0	0	0
63	8	Totals:	1328.228	1247.68	-2300.67			
64	8	COG (ft):	X: -.375	Y: -.13	Z: 4.627			
65	9	N1	872.281	29.853	64.344	-.16	0	-.162
66	9	N5	2177.405	31.097	467.942	.049	0	-.037
67	9	N45	106.798	247.541	-627.846	-.067	0	.006
68	9	N46	43.977	159.29	-436.012	-.054	0	-.03
69	9	N80	-974.805	11.613	-1269.108	0	0	0
70	9	N73A	-306.504	768.281	692.494	0	0	0
71	9	Totals:	1919.152	1247.675	-1108.187			
72	9	COG (ft):	X: -.375	Y: -.13	Z: 4.627			
73	10	N1	800.996	29.796	306.045	-.158	0	-.149
74	10	N5	2042.901	30.766	566.544	.061	0	-.039
75	10	N45	110.363	170.641	-323.829	-.029	0	.007
76	10	N46	51.063	231.608	-131.222	-.083	0	-.03
77	10	N80	-898.003	12.017	-1144.714	0	0	0
78	10	N73A	-319.626	772.848	727.032	0	0	0
79	10	Totals:	1787.694	1247.676	-.143			
80	10	COG (ft):	X: -.375	Y: -.13	Z: 4.627			
81	11	N1	708.777	29.744	502.658	-.16	0	-.135
82	11	N5	1867.001	30.479	683.502	.071	0	-.034
83	11	N45	86.904	114.671	-69.524	-.013	0	.005
84	11	N46	36.862	284.563	107.214	-.113	0	-.025
85	11	N80	-869.327	12.231	-1084.398	0	0	0
86	11	N73A	-271.593	775.99	760.295	0	0	0
87	11	Totals:	1558.624	1247.677	899.747			
88	11	COG (ft):	X: -.375	Y: -.13	Z: 4.627			
89	12	N1	525.839	29.346	726.934	-.149	0	-.102
90	12	N5	1440.462	29.564	707.202	.067	0	-.024
91	12	N45	49.189	76	154.27	-.012	0	.002
92	12	N46	15.332	320.881	404.594	-.139	0	-.017
93	12	N80	-692.394	13.037	-860.241	0	0	0
94	12	N73A	-218.363	778.852	807.179	0	0	0
95	12	Totals:	1120.066	1247.679	1939.938			
96	12	COG (ft):	X: -.375	Y: -.13	Z: 4.627			
97	13	N1	3.706	51.991	173.694	-.017	0	-.007
98	13	N5	239.512	57.029	-1603.112	-.123	0	-.003
99	13	N45	-1.985	463.87	-358.853	-.213	0	0
100	13	N46	2.669	361.968	923.465	-.165	0	0
101	13	N80	-17.292	32.237	-16.411	0	0	0
102	13	N73A	-226.605	1654.745	1585.977	0	0	0
103	13	Totals:	.005	2621.84	704.76			
104	13	COG (ft):	X: -.26	Y: -.115	Z: 4.622			
105	14	N1	-152.496	52.395	67.888	.018	0	.022

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
106	14	N5	-144.011	59.006	-1973.97	-.155	0	.004
107	14	N45	-17.252	470.964	-343.769	-.223	0	0
108	14	N46	.598	335.346	1006.127	-.155	0	.004
109	14	N80	180.322	32.234	237.954	0	0	0
110	14	N73A	-209.04	1671.899	1597.995	0	0	0
111	14	Totals:	-341.879	2621.843	592.224			
112	14	COG (ft):	X: -.26	Y: -.115	Z: 4.622			
113	15	N1	-207.771	52.973	-47.945	.035	0	.033
114	15	N5	-284.652	60.171	-2177.085	-.172	0	.007
115	15	N45	-27.973	487.486	-387.605	-.236	0	0
116	15	N46	-4.318	312.081	982.554	-.147	0	.007
117	15	N80	239.956	32.207	314.045	0	0	0
118	15	N73A	-192.852	1676.925	1591.86	0	0	0
119	15	Totals:	-477.611	2621.845	275.825			
120	15	COG (ft):	X: -.26	Y: -.115	Z: 4.622			
121	16	N1	-186.549	53.272	-113.444	.037	0	.029
122	16	N5	-248.539	60.232	-2204.534	-.175	0	.008
123	16	N45	-29.919	505.59	-456.053	-.245	0	0
124	16	N46	-6.708	300.676	917.432	-.142	0	.006
125	16	N80	220.097	32.211	279.918	0	0	0
126	16	N73A	-188.58	1669.863	1576.749	0	0	0
127	16	Totals:	-440.197	2621.845	.068			
128	16	COG (ft):	X: -.26	Y: -.115	Z: 4.622			
129	17	N1	-172.915	53.578	-175.637	.042	0	.028
130	17	N5	-233.133	60.532	-2265.151	-.181	0	.008
131	17	N45	-25.202	518.104	-512.343	-.248	0	0
132	17	N46	-3.043	291.193	873.028	-.136	0	.006
133	17	N80	230.51	32.205	284.378	0	0	0
134	17	N73A	-195.592	1666.232	1565.208	0	0	0
135	17	Totals:	-399.375	2621.845	-230.517			
136	17	COG (ft):	X: -.26	Y: -.115	Z: 4.622			
137	18	N1	-131.173	53.896	-247.832	.042	0	.021
138	18	N5	-139.41	60.529	-2293.213	-.181	0	.006
139	18	N45	-16.405	527.013	-567.467	-.248	0	0
140	18	N46	1.516	286.998	807.652	-.132	0	.004
141	18	N80	194.002	32.218	238.559	0	0	0
142	18	N73A	-205.238	1661.19	1548.433	0	0	0
143	18	Totals:	-296.707	2621.844	-513.868			
144	18	COG (ft):	X: -.26	Y: -.115	Z: 4.622			
145	19	N1	5.597	53.717	-246.022	.018	0	-.004
146	19	N5	194.113	58.998	-2068.608	-.159	0	0
147	19	N45	-3.001	531.123	-623.03	-.244	0	0
148	19	N46	3.213	300.466	691.923	-.137	0	0
149	19	N80	16.82	32.244	15.809	0	0	0
150	19	N73A	-216.734	1645.293	1525.228	0	0	0
151	19	Totals:	.008	2621.841	-704.7			
152	19	COG (ft):	X: -.26	Y: -.115	Z: 4.622			
153	20	N1	161.333	53.213	-140.18	-.017	0	-.033
154	20	N5	575.411	57.22	-1702.974	-.127	0	-.006
155	20	N45	12.704	522.486	-635.343	-.234	0	0
156	20	N46	5.896	324.781	606.595	-.146	0	-.004
157	20	N80	-179.261	32.144	-237.294	0	0	0
158	20	N73A	-234.191	1631.994	1517.032	0	0	0
159	20	Totals:	341.892	2621.838	-592.164			
160	20	COG (ft):	X: -.26	Y: -.115	Z: 4.622			
161	21	N1	216.484	52.822	-23.743	-.035	0	-.044
162	21	N5	716.3	56.484	-1502.561	-.111	0	-.01

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
163	21	N45	23.445	504.236	-588.446	-.221	0	0
164	21	N46	11.001	345.323	625.91	-.153	0	-.007
165	21	N80	-238.783	32.065	-313.949	0	0	0
166	21	N73A	-250.824	1630.907	1527.025	0	0	0
167	21	Totals:	477.623	2621.837	-275.765			
168	21	COG (ft):	X: -.26	Y: -.115	Z: 4.622			
169	22	N1	195.465	52.583	41.826	-.037	0	-.041
170	22	N5	681.26	56.385	-1472.524	-.107	0	-.01
171	22	N45	25.146	486.866	-521.296	-.212	0	0
172	22	N46	13.128	357.696	692.044	-.158	0	-.006
173	22	N80	-219.558	32.085	-280.441	0	0	0
174	22	N73A	-255.231	1636.221	1540.383	0	0	0
175	22	Totals:	440.21	2621.837	-.008			
176	22	COG (ft):	X: -.26	Y: -.115	Z: 4.622			
177	23	N1	181.946	52.375	104.156	-.042	0	-.04
178	23	N5	666.756	56.166	-1410.567	-.102	0	-.01
179	23	N45	20.235	474.51	-465.181	-.208	0	0
180	23	N46	9.318	367.261	736.219	-.164	0	-.006
181	23	N80	-230.444	32.075	-285.575	0	0	0
182	23	N73A	-248.425	1639.45	1551.524	0	0	0
183	23	Totals:	399.387	2621.837	230.577			
184	23	COG (ft):	X: -.26	Y: -.115	Z: 4.622			
185	24	N1	140.416	52.112	176.29	-.042	0	-.033
186	24	N5	574.036	56.074	-1380.447	-.101	0	-.008
187	24	N45	11.271	466.156	-411.039	-.209	0	0
188	24	N46	4.484	372.38	802.664	-.168	0	-.004
189	24	N80	-194.702	32.113	-240.386	0	0	0
190	24	N73A	-238.785	1643.002	1566.846	0	0	0
191	24	Totals:	296.72	2621.837	513.928			
192	24	COG (ft):	X: -.26	Y: -.115	Z: 4.622			
193	25	N1	8.32	28.016	20.802	0	0	-.005
194	25	N5	150.455	29.108	-821.65	-.059	0	-.002
195	25	N45	.449	520.354	-804.823	-.238	0	0
196	25	N46	-.308	625.293	1029.406	-.287	0	0
197	25	N80	-1.954	14.578	-1.519	0	0	0
198	25	N73A	-156.959	780.339	744.579	0	0	0
199	25	Totals:	.003	1997.689	166.795			
200	25	COG (ft):	X: -.203	Y: -.644	Z: 4.766			
201	26	N1	-29.947	28.06	-2.704	.01	0	.002
202	26	N5	58.648	29.304	-905.044	-.066	0	0
203	26	N45	-3.574	523.657	-803.206	-.241	0	0
204	26	N46	-1.083	620.762	1052.137	-.285	0	.001
205	26	N80	44.96	14.561	58.363	0	0	0
206	26	N73A	-152.012	781.345	744.261	0	0	0
207	26	Totals:	-83.009	1997.69	143.806			
208	26	COG (ft):	X: -.203	Y: -.644	Z: 4.766			
209	27	N1	-45.959	28.118	-29.459	.014	0	.005
210	27	N5	20.319	29.421	-953.322	-.07	0	0
211	27	N45	-6.339	529.121	-816.567	-.245	0	0
212	27	N46	-2.333	615.029	1047.514	-.283	0	.002
213	27	N80	61.58	14.552	79.38	0	0	0
214	27	N73A	-147.212	781.45	741.73	0	0	0
215	27	Totals:	-119.944	1997.69	69.276			
216	27	COG (ft):	X: -.203	Y: -.644	Z: 4.766			
217	28	N1	-41.376	28.149	-44.482	.014	0	.004
218	28	N5	29.406	29.427	-958.6	-.071	0	0
219	28	N45	-6.71	534.13	-835.87	-.248	0	0

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
220	28	N46	-2.951	610.691	1028.586	-.282	0	.002
221	28	N80	56.413	14.554	71.243	0	0	0
222	28	N73A	-146.509	780.739	739.146	0	0	0
223	28	Totals:	-111.727	1997.69	.023			
224	28	COG (ft):	X: -.203	Y: -.644	Z: 4.766			
225	29	N1	-35.52	28.173	-56.751	.014	0	.003
226	29	N5	40.907	29.437	-965.233	-.072	0	0
227	29	N45	-5.356	537.799	-851.952	-.249	0	0
228	29	N46	-2.19	607.523	1013.801	-.28	0	.002
229	29	N80	54.341	14.556	67.175	0	0	0
230	29	N73A	-149.593	780.2	736.741	0	0	0
231	29	Totals:	-97.412	1997.69	-56.218			
232	29	COG (ft):	X: -.203	Y: -.644	Z: 4.766			
233	30	N1	-23.998	28.2	-70.81	.013	0	.001
234	30	N5	68.078	29.428	-966.322	-.071	0	0
235	30	N45	-3.033	540.354	-866.068	-.249	0	0
236	30	N46	-1.033	605.408	995.464	-.278	0	.001
237	30	N80	42.946	14.562	52.95	0	0	0
238	30	N73A	-152.96	779.739	733.553	0	0	0
239	30	Totals:	-70	1997.69	-121.233			
240	30	COG (ft):	X: -.203	Y: -.644	Z: 4.766			
241	31	N1	8.171	28.19	-69.892	.007	0	-.005
242	31	N5	146.109	29.292	-915.955	-.067	0	-.002
243	31	N45	.422	540.612	-878.354	-.247	0	0
244	31	N46	-.35	606.243	965.052	-.278	0	0
245	31	N80	1.847	14.577	1.387	0	0	0
246	31	N73A	-156.196	778.776	730.994	0	0	0
247	31	Totals:	.003	1997.689	-166.769			
248	31	COG (ft):	X: -.203	Y: -.644	Z: 4.766			
249	32	N1	46.409	28.143	-46.386	-.001	0	-.012
250	32	N5	237.773	29.109	-832.789	-.06	0	-.003
251	32	N45	4.474	537.241	-879.86	-.244	0	0
252	32	N46	.465	610.684	942.214	-.28	0	-.001
253	32	N80	-44.977	14.584	-58.425	0	0	0
254	32	N73A	-161.129	777.928	731.466	0	0	0
255	32	Totals:	83.015	1997.688	-143.779			
256	32	COG (ft):	X: -.203	Y: -.644	Z: 4.766			
257	33	N1	62.415	28.097	-19.597	-.006	0	-.015
258	33	N5	276.1	29.018	-784.589	-.056	0	-.004
259	33	N45	7.24	531.703	-866.377	-.241	0	0
260	33	N46	1.729	616.305	946.641	-.282	0	-.002
261	33	N80	-61.588	14.583	-79.478	0	0	0
262	33	N73A	-165.947	777.982	734.15	0	0	0
263	33	Totals:	119.95	1997.688	-69.249			
264	33	COG (ft):	X: -.203	Y: -.644	Z: 4.766			
265	34	N1	57.848	28.07	-4.566	-.006	0	-.014
266	34	N5	267.092	29.01	-779.17	-.055	0	-.004
267	34	N45	7.591	526.731	-847.137	-.238	0	0
268	34	N46	2.328	620.686	965.611	-.283	0	-.002
269	34	N80	-56.465	14.583	-71.384	0	0	0
270	34	N73A	-166.662	778.609	736.65	0	0	0
271	34	Totals:	111.732	1997.688	.004			
272	34	COG (ft):	X: -.203	Y: -.644	Z: 4.766			
273	35	N1	52.003	28.047	7.704	-.006	0	-.013
274	35	N5	255.651	28.998	-772.435	-.055	0	-.004
275	35	N45	6.224	523.09	-831.096	-.237	0	0
276	35	N46	1.552	623.885	980.428	-.285	0	-.002

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
277	35	N80	-54.426	14.583	-67.351	0	0	0
278	35	N73A	-163.587	779.085	738.995	0	0	0
279	35	Totals:	97.417	1997.688	56.245			
280	35	COG (ft):	X: -.203	Y: -.644	Z: 4.766			
281	36	N1	40.493	28.021	21.756	-.005	0	-.011
282	36	N5	228.535	28.999	-771.271	-.055	0	-.003
283	36	N45	3.892	520.561	-817.019	-.237	0	0
284	36	N46	.378	626.04	998.819	-.287	0	-.001
285	36	N80	-43.07	14.583	-53.15	0	0	0
286	36	N73A	-160.222	779.485	742.124	0	0	0
287	36	Totals:	70.006	1997.688	121.259			
288	36	COG (ft):	X: -.203	Y: -.644	Z: 4.766			
289	37	N1	28.1	28.135	-52.855	.066	0	-.017
290	37	N5	1100.613	28.678	-882.406	-.02	0	0
291	37	N45	-3.7	595.453	-776.912	-.275	0	.003
292	37	N46	3.705	567.189	1151.662	-.258	0	.003
293	37	N80	-2.024	14.577	-1.607	0	0	0
294	37	N73A	-1126.694	763.64	728.904	0	0	0
295	37	Totals:	0	1997.672	166.787			
296	37	COG (ft):	X: -1.705	Y: -.644	Z: 4.766			
297	38	N1	-10.334	28.153	-76.395	.075	0	-.01
298	38	N5	1008.984	28.733	-965.326	-.026	0	.002
299	38	N45	-7.695	599.038	-775.893	-.278	0	.003
300	38	N46	2.95	563.227	1175.002	-.257	0	.004
301	38	N80	44.856	14.587	58.276	0	0	0
302	38	N73A	-1121.771	763.935	728.133	0	0	0
303	38	Totals:	-83.011	1997.673	143.797			
304	38	COG (ft):	X: -1.705	Y: -.644	Z: 4.766			
305	39	N1	-26.41	28.189	-103.187	.079	0	-.007
306	39	N5	970.694	28.782	-1013.487	-.03	0	.003
307	39	N45	-10.441	604.565	-789.505	-.282	0	.003
308	39	N46	1.711	557.819	1170.728	-.255	0	.005
309	39	N80	61.472	14.588	79.304	0	0	0
310	39	N73A	-1116.972	763.729	725.413	0	0	0
311	39	Totals:	-119.946	1997.673	69.267			
312	39	COG (ft):	X: -1.705	Y: -.644	Z: 4.766			
313	40	N1	-21.804	28.212	-118.216	.079	0	-.008
314	40	N5	979.72	28.796	-1019.474	-.031	0	.003
315	40	N45	-10.806	609.232	-808.34	-.284	0	.003
316	40	N46	1.098	553.231	1151.449	-.253	0	.005
317	40	N80	56.32	14.588	71.18	0	0	0
318	40	N73A	-1116.257	763.614	723.415	0	0	0
319	40	Totals:	-111.729	1997.673	.014			
320	40	COG (ft):	X: -1.705	Y: -.644	Z: 4.766			
321	41	N1	-15.921	28.233	-130.491	.079	0	-.009
322	41	N5	991.169	28.811	-1026.602	-.032	0	.002
323	41	N45	-9.448	612.663	-824.11	-.285	0	.003
324	41	N46	1.863	549.908	1136.446	-.251	0	.004
325	41	N80	54.262	14.588	67.126	0	0	0
326	41	N73A	-1119.337	763.47	721.404	0	0	0
327	41	Totals:	-97.414	1997.673	-56.227			
328	41	COG (ft):	X: -1.705	Y: -.644	Z: 4.766			
329	42	N1	-4.344	28.256	-144.584	.079	0	-.011
330	42	N5	1018.253	28.821	-1027.389	-.031	0	.002
331	42	N45	-7.12	615.323	-838.468	-.285	0	.003
332	42	N46	3.015	548.028	1118.439	-.25	0	.004
333	42	N80	42.893	14.587	52.923	0	0	0

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
334	42	N73A	-1122.699	762.658	717.839	0	0	0
335	42	Totals:	-70.002	1997.673	-121.241			
336	42	COG (ft):	X: -1.705	Y: -.644	Z: 4.766			
337	43	N1	27.972	28.258	-143.684	.073	0	-.017
338	43	N5	1096.1	28.788	-976.842	-.027	0	0
339	43	N45	-3.675	615.589	-850.743	-.284	0	.003
340	43	N46	3.68	548.827	1088.085	-.25	0	.003
341	43	N80	1.837	14.578	1.376	0	0	0
342	43	N73A	-1125.913	761.632	715.031	0	0	0
343	43	Totals:	.001	1997.672	-166.778			
344	43	COG (ft):	X: -1.705	Y: -.644	Z: 4.766			
345	44	N1	66.377	28.238	-120.144	.064	0	-.024
346	44	N5	1187.587	28.745	-894.151	-.02	0	0
347	44	N45	.349	611.935	-851.65	-.28	0	.003
348	44	N46	4.475	552.699	1064.635	-.251	0	.002
349	44	N80	-44.954	14.558	-58.437	0	0	0
350	44	N73A	-1130.822	761.497	715.959	0	0	0
351	44	Totals:	83.013	1997.671	-143.788			
352	44	COG (ft):	X: -1.705	Y: -.644	Z: 4.766			
353	45	N1	82.446	28.214	-93.315	.059	0	-.026
354	45	N5	1225.88	28.721	-846.092	-.016	0	-.002
355	45	N45	3.095	606.323	-837.899	-.277	0	.004
356	45	N46	5.729	557.98	1068.695	-.253	0	0
357	45	N80	-61.561	14.547	-79.502	0	0	0
358	45	N73A	-1135.641	761.886	718.855	0	0	0
359	45	Totals:	119.948	1997.671	-69.258			
360	45	COG (ft):	X: -1.705	Y: -.644	Z: 4.766			
361	46	N1	77.855	28.193	-78.278	.06	0	-.026
362	46	N5	1216.931	28.706	-839.982	-.015	0	-.002
363	46	N45	3.442	601.687	-819.113	-.274	0	.004
364	46	N46	6.323	562.601	1088.002	-.255	0	0
365	46	N80	-56.452	14.55	-71.419	0	0	0
366	46	N73A	-1136.369	761.934	720.786	0	0	0
367	46	Totals:	111.731	1997.671	-.005			
368	46	COG (ft):	X: -1.705	Y: -.644	Z: 4.766			
369	47	N1	71.984	28.175	-66.001	.06	0	-.025
370	47	N5	1205.543	28.69	-832.755	-.015	0	-.001
371	47	N45	2.07	598.283	-803.381	-.273	0	.004
372	47	N46	5.544	565.953	1103.034	-.257	0	.001
373	47	N80	-54.427	14.552	-67.401	0	0	0
374	47	N73A	-1133.298	762.019	722.74	0	0	0
375	47	Totals:	97.416	1997.671	56.236			
376	47	COG (ft):	X: -1.705	Y: -.644	Z: 4.766			
377	48	N1	60.419	28.152	-51.916	.06	0	-.023
378	48	N5	1178.511	28.671	-831.883	-.015	0	0
379	48	N45	-.268	595.652	-789.069	-.273	0	.003
380	48	N46	4.375	567.878	1121.104	-.258	0	.002
381	48	N80	-43.097	14.559	-53.222	0	0	0
382	48	N73A	-1129.936	762.759	726.236	0	0	0
383	48	Totals:	70.004	1997.671	121.25			
384	48	COG (ft):	X: -1.705	Y: -.644	Z: 4.766			
385	49	N1	-44.791	28.192	-88.495	.064	0	.011
386	49	N5	-521.022	28.81	-918.027	-.022	0	.005
387	49	N45	1.349	377.759	-508.83	-.172	0	-.002
388	49	N46	-.81	401.323	785.837	-.185	0	-.001
389	49	N80	-.04	14.578	-.05	0	0	0
390	49	N73A	565.322	772.024	729.593	0	0	0

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
391	49	Totals:	.007	1622.685	.029			
392	49	COG (ft):	X: 1.233	Y: -.447	Z: 4.713			
393	50	N1	8.263	28.094	-21.377	.003	0	-.005
394	50	N5	148.697	29.213	-870.763	-.064	0	-.002
395	50	N45	.011	383.156	-540.695	-.175	0	0
396	50	N46	.108	387.42	694.45	-.178	0	0
397	50	N80	-.04	14.578	-.049	0	0	0
398	50	N73A	-157.035	780.229	738.447	0	0	0
399	50	Totals:	.003	1622.69	.013			
400	50	COG (ft):	X: -.269	Y: -.447	Z: 4.713			
401	51	N1	9.648	32.777	-21.156	.002	0	-.006
402	51	N5	173.876	34.33	-1019.023	-.076	0	-.002
403	51	N45	-.475	275.045	-279.111	-.126	0	0
404	51	N46	.639	184.79	456.21	-.085	0	0
405	51	N80	-.044	17.007	-.054	0	0	0
406	51	N73A	-183.64	911.69	863.148	0	0	0
407	51	Totals:	.003	1455.639	.015			
408	51	COG (ft):	X: -.375	Y: -.13	Z: 4.627			
409	52	N1	7.953	29.071	19.495	-.003	0	-.006
410	52	N5	167.985	30.268	-856.235	-.063	0	-.003
411	52	N45	-.146	241.033	-229.579	-.11	0	0
412	52	N46	.276	168.52	424.203	-.077	0	0
413	52	N80	-10.019	15.123	-10.996	0	0	0
414	52	N73A	-166.046	810.478	770.128	0	0	0
415	52	Totals:	.002	1294.492	117.016			
416	52	COG (ft):	X: -.375	Y: -.13	Z: 4.627			
417	53	N1	-17.738	29.1	3.813	.003	0	-.001
418	53	N5	103.895	30.399	-910.854	-.068	0	-.002
419	53	N45	-2.746	243.11	-228.973	-.113	0	0
420	53	N46	-.702	165.228	438.23	-.076	0	0
421	53	N80	21.256	15.126	28.248	0	0	0
422	53	N73A	-162.465	811.53	770.88	0	0	0
423	53	Totals:	-58.499	1294.493	101.343			
424	53	COG (ft):	X: -.375	Y: -.13	Z: 4.627			
425	54	N1	-36.374	29.146	-17.932	.008	0	.003
426	54	N5	53.431	30.533	-964.087	-.073	0	0
427	54	N45	-4.718	245.608	-233.59	-.115	0	0
428	54	N46	-1.345	161.762	443.593	-.075	0	0
429	54	N80	46.823	15.126	59.888	0	0	0
430	54	N73A	-159.14	812.318	770.652	0	0	0
431	54	Totals:	-101.322	1294.493	58.524			
432	54	COG (ft):	X: -.375	Y: -.13	Z: 4.627			
433	55	N1	-42.962	29.196	-39.925	.012	0	.004
434	55	N5	30.119	30.628	-1001.635	-.076	0	0
435	55	N45	-5.536	247.881	-242.237	-.116	0	0
436	55	N46	-1.49	159.089	438.915	-.074	0	.001
437	55	N80	59.825	15.124	75.454	0	0	0
438	55	N73A	-156.955	812.577	769.451	0	0	0
439	55	Totals:	-117	1294.493	.024			
440	55	COG (ft):	X: -.375	Y: -.13	Z: 4.627			
441	56	N1	-35.732	29.23	-56.278	.013	0	.004
442	56	N5	40.205	30.649	-1013.411	-.077	0	0
443	56	N45	-4.98	249.341	-252.635	-.116	0	0
444	56	N46	-1.099	157.959	425.507	-.073	0	0
445	56	N80	56.774	15.124	70.783	0	0	0
446	56	N73A	-156.491	812.19	767.555	0	0	0
447	56	Totals:	-101.322	1294.493	-58.479			

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
448	56	COG (ft):	X: -.375	Y: -.13	Z: 4.627			
449	57	N1	-16.627	29.238	-62.614	.011	0	0
450	57	N5	80.955	30.59	-996.297	-.075	0	0
451	57	N45	-3.194	249.594	-261.991	-.116	0	0
452	57	N46	-.272	158.67	406.964	-.073	0	0
453	57	N80	38.507	15.126	47.148	0	0	0
454	57	N73A	-157.866	811.275	765.483	0	0	0
455	57	Totals:	-58.498	1294.493	-101.306			
456	57	COG (ft):	X: -.375	Y: -.13	Z: 4.627			
457	58	N1	9.231	29.221	-57.229	.006	0	-.004
458	58	N5	141.444	30.476	-954.923	-.072	0	-.001
459	58	N45	-.655	248.547	-267.754	-.114	0	0
460	58	N46	.776	160.991	388.191	-.074	0	0
461	58	N80	9.926	15.125	10.878	0	0	0
462	58	N73A	-160.718	810.132	763.847	0	0	0
463	58	Totals:	.003	1294.493	-116.989			
464	58	COG (ft):	X: -.375	Y: -.13	Z: 4.627			
465	59	N1	34.913	29.188	-41.554	0	0	-.009
466	59	N5	205.472	30.343	-900.385	-.067	0	-.002
467	59	N45	1.954	246.461	-268.342	-.112	0	0
468	59	N46	1.766	164.269	374.164	-.075	0	0
469	59	N80	-21.311	15.12	-28.325	0	0	0
470	59	N73A	-164.29	809.111	763.126	0	0	0
471	59	Totals:	58.505	1294.492	-101.316			
472	59	COG (ft):	X: -.375	Y: -.13	Z: 4.627			
473	60	N1	53.539	29.148	-19.791	-.005	0	-.012
474	60	N5	255.901	30.229	-847.271	-.062	0	-.004
475	60	N45	3.932	243.899	-263.609	-.11	0	0
476	60	N46	2.429	167.633	368.642	-.076	0	-.001
477	60	N80	-46.846	15.112	-59.967	0	0	0
478	60	N73A	-167.626	808.471	763.499	0	0	0
479	60	Totals:	101.328	1294.492	-58.497			
480	60	COG (ft):	X: -.375	Y: -.13	Z: 4.627			
481	61	N1	60.125	29.11	2.226	-.009	0	-.014
482	61	N5	279.24	30.155	-809.76	-.059	0	-.004
483	61	N45	4.746	241.571	-254.863	-.109	0	0
484	61	N46	2.58	170.218	373.162	-.077	0	-.002
485	61	N80	-59.854	15.107	-75.576	0	0	0
486	61	N73A	-169.831	808.33	764.813	0	0	0
487	61	Totals:	117.006	1294.492	.003			
488	61	COG (ft):	X: -.375	Y: -.13	Z: 4.627			
489	62	N1	52.903	29.08	18.587	-.009	0	-.013
490	62	N5	269.215	30.135	-797.902	-.058	0	-.004
491	62	N45	4.18	240.12	-244.482	-.108	0	0
492	62	N46	2.175	171.362	386.572	-.078	0	-.001
493	62	N80	-56.841	15.108	-70.946	0	0	0
494	62	N73A	-170.304	808.685	766.678	0	0	0
495	62	Totals:	101.328	1294.492	58.506			
496	62	COG (ft):	X: -.375	Y: -.13	Z: 4.627			
497	63	N1	33.809	29.065	24.905	-.007	0	-.01
498	63	N5	228.5	30.174	-814.897	-.059	0	-.004
499	63	N45	2.389	239.932	-235.243	-.109	0	0
500	63	N46	1.33	170.754	405.273	-.078	0	-.001
501	63	N80	-38.606	15.115	-47.31	0	0	0
502	63	N73A	-168.918	809.452	768.605	0	0	0
503	63	Totals:	58.504	1294.492	101.333			
504	63	COG (ft):	X: -.375	Y: -.13	Z: 4.627			

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
505	64	N1	5.289	19.956	25.321	-.003	0	-.004
506	64	N5	119.627	20.511	-571.385	-.042	0	-.002
507	64	N45	.007	164.709	-152.466	-.075	0	0
508	64	N46	.053	117.611	297.762	-.054	0	0
509	64	N80	-10.022	10.385	-11.003	0	0	0
510	64	N73A	-114.953	555.794	528.783	0	0	0
511	64	Totals:	.002	888.966	117.012			
512	64	COG (ft):	X: -.375	Y: -.13	Z: 4.627			
513	65	N1	-20.413	19.975	9.612	.002	0	0
514	65	N5	55.616	20.6	-625.643	-.046	0	0
515	65	N45	-2.569	166.92	-152.145	-.078	0	0
516	65	N46	-.965	114.573	312.107	-.053	0	0
517	65	N80	21.246	10.387	28.243	0	0	0
518	65	N73A	-111.415	556.511	529.165	0	0	0
519	65	Totals:	-58.5	888.966	101.339			
520	65	COG (ft):	X: -.375	Y: -.13	Z: 4.627			
521	66	N1	-39.059	20.008	-12.158	.008	0	.004
522	66	N5	5.214	20.694	-678.629	-.051	0	0
523	66	N45	-4.521	169.512	-156.975	-.08	0	0
524	66	N46	-1.642	111.305	317.723	-.052	0	0
525	66	N80	46.811	10.385	59.891	0	0	0
526	66	N73A	-108.128	557.062	528.667	0	0	0
527	66	Totals:	-101.323	888.967	58.519			
528	66	COG (ft):	X: -.375	Y: -.13	Z: 4.627			
529	67	N1	-45.654	20.044	-34.164	.012	0	.006
530	67	N5	-18.069	20.762	-716.117	-.054	0	0
531	67	N45	-5.326	171.812	-165.702	-.081	0	0
532	67	N46	-1.803	108.717	313.161	-.051	0	.001
533	67	N80	59.818	10.382	75.467	0	0	0
534	67	N73A	-105.968	557.25	527.375	0	0	0
535	67	Totals:	-117.001	888.967	.019			
536	67	COG (ft):	X: -.375	Y: -.13	Z: 4.627			
537	68	N1	-38.424	20.068	-50.517	.012	0	.005
538	68	N5	-7.992	20.777	-728.042	-.055	0	0
539	68	N45	-4.768	173.222	-176.022	-.081	0	0
540	68	N46	-1.407	107.532	299.695	-.05	0	.001
541	68	N80	56.777	10.383	70.807	0	0	0
542	68	N73A	-105.507	556.985	525.595	0	0	0
543	68	Totals:	-101.323	888.967	-58.483			
544	68	COG (ft):	X: -.375	Y: -.13	Z: 4.627			
545	69	N1	-19.316	20.072	-56.837	.01	0	.002
546	69	N5	32.711	20.735	-711.244	-.054	0	0
547	69	N45	-2.993	173.362	-185.163	-.081	0	0
548	69	N46	-.557	108.064	280.938	-.05	0	0
549	69	N80	38.522	10.386	47.181	0	0	0
550	69	N73A	-106.866	556.347	523.814	0	0	0
551	69	Totals:	-58.499	888.966	-101.31			
552	69	COG (ft):	X: -.375	Y: -.13	Z: 4.627			
553	70	N1	6.552	20.059	-51.428	.006	0	-.002
554	70	N5	93.128	20.654	-670.259	-.05	0	0
555	70	N45	-.475	172.172	-190.639	-.079	0	0
556	70	N46	.529	110.136	261.858	-.05	0	0
557	70	N80	9.953	10.387	10.915	0	0	0
558	70	N73A	-109.684	555.558	522.559	0	0	0
559	70	Totals:	.003	888.966	-116.994			
560	70	COG (ft):	X: -.375	Y: -.13	Z: 4.627			
561	71	N1	32.245	20.035	-35.725	0	0	-.007

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
562	71	N5	157.078	20.564	-616.078	-.045	0	-.002
563	71	N45	2.111	169.953	-190.946	-.077	0	0
564	71	N46	1.56	113.164	247.516	-.051	0	0
565	71	N80	-21.276	10.383	-28.29	0	0	0
566	71	N73A	-113.213	554.867	522.202	0	0	0
567	71	Totals:	58.504	888.965	-101.32			
568	71	COG (ft):	X: -.375	Y: -.13	Z: 4.627			
569	72	N1	50.882	20.009	-13.94	-.005	0	-.011
570	72	N5	207.442	20.489	-563.193	-.041	0	-.003
571	72	N45	4.068	167.303	-186.013	-.075	0	0
572	72	N46	2.255	116.341	241.756	-.052	0	-.001
573	72	N80	-46.81	10.376	-59.939	0	0	0
574	72	N73A	-116.51	554.447	522.828	0	0	0
575	72	Totals:	101.327	888.965	-58.501			
576	72	COG (ft):	X: -.375	Y: -.13	Z: 4.627			
577	73	N1	57.475	19.985	8.09	-.009	0	-.013
578	73	N5	230.75	20.442	-525.729	-.037	0	-.004
579	73	N45	4.869	164.953	-177.197	-.073	0	0
580	73	N46	2.422	118.85	246.172	-.053	0	-.001
581	73	N80	-59.822	10.371	-75.558	0	0	0
582	73	N73A	-118.688	554.363	524.221	0	0	0
583	73	Totals:	117.005	888.965	0			
584	73	COG (ft):	X: -.375	Y: -.13	Z: 4.627			
585	74	N1	50.254	19.965	24.45	-.01	0	-.012
586	74	N5	220.734	20.428	-513.728	-.036	0	-.004
587	74	N45	4.302	163.551	-166.891	-.073	0	0
588	74	N46	2.014	120.045	259.635	-.054	0	-.001
589	74	N80	-56.819	10.372	-70.94	0	0	0
590	74	N73A	-119.158	554.603	525.975	0	0	0
591	74	Totals:	101.327	888.965	58.502			
592	74	COG (ft):	X: -.375	Y: -.13	Z: 4.627			
593	75	N1	31.155	19.954	30.755	-.008	0	-.009
594	75	N5	180.068	20.451	-530.426	-.038	0	-.003
595	75	N45	2.522	163.469	-157.852	-.074	0	0
596	75	N46	1.144	119.604	278.535	-.054	0	0
597	75	N80	-38.596	10.379	-47.312	0	0	0
598	75	N73A	-117.79	555.11	527.629	0	0	0
599	75	Totals:	58.503	888.965	101.329			
600	75	COG (ft):	X: -.375	Y: -.13	Z: 4.627			

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

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	L...	Dir	LC	phi*Pn...	phi*P...	phi*Mn y...	phi*Mn	Eqn
1	M5	PIPE_...	.040	0	3	.024	4...		9	43695...	50715	3.596	3.596	...H1-...
2	M6	PIPE_...	.032	0	11	.078	4...		9	43695...	50715	3.596	3.596	...H1-...
3	M7	PIPE_...	.082	0	9	.030	0		6	43695...	50715	3.596	3.596	...H1-...
4	M8	L3X3X4	.214	6.5	44	.223	1...	z	43	15778...	46656	1.688	2.257	1 H2-1
5	M9	L3X3X4	.455	6.5	45	.339	3...	z	42	35548...	46656	1.688	2.257	1 H2-1
6	M10	L2x2x3	.066	2.115	7	.035	0	z	23	15077...	23392...	.558	1.07	...H2-1
7	MP1A	PIPE_...	.411	4.438	3	.265	5...		3	20866...	32130	1.872	1.872	...H1-...
8	M14	PIPE_...	.088	0	9	.050	4...		4	43695...	50715	3.596	3.596	...H1-...
9	M15	L2x2x3	.066	2.115	1	.057	4...	z	49	15077...	23392...	.558	1.07	...H2-1
10	M17	PIPE_...	.185	11.083	5	.132	1...		4	11606...	50715	3.596	3.596	...H1-...
11	M19	PIPE_...	.564	11.083	3	.095	1...		5	11606...	50715	3.596	3.596	...H1-...
12	M20	L2.5x2...	.098	.495	21	.122	....	z	39	45672...	56052	1.512	3.537	...H2-1
13	M21	L2.5x2...	.266	.495	26	.214	....	z	39	45672...	56052	1.512	3.537	...H2-1

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

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	L...	Dir	LC	phi*Pn...	phi*P...	phi*Mn y...	phi*Mn ...	...	Eqn
14	M22	PIPE_...	.122	3.083	38	.046	3...		3	30384...	32130	1.872	1.872	...	H1-...
15	M23	PIPE_...	.065	0	32	.042	3...		3	30384...	32130	1.872	1.872	...	H1-...
16	M24	SR_0....	.062	1.773	24	.007	0		3	3956.3...	14313...	.179	.179	...	H1-...
17	MP2A	PIPE_...	.142	5.313	3	.139	5...		10	37773...	50715	3.596	3.596	...	H1-...
18	MP3A	PIPE_...	.041	2.938	9	.052	1...		9	20866...	32130	1.872	1.872	...	H1-...
19	MP4A	PIPE_...	.219	5.188	39	.217	5...		42	20866...	32130	1.872	1.872	...	H1-...
20	M46	PIPE_...	.091	0	3	.004	7		9	17855...	32130	1.872	1.872	...	H1-...
21	M45B	L2.5x2...	.265	3.35	23	.008	6...	z	6	9664.5...	38556	1.114	2.092	...	H2-1
22	M46B	L2.5x2...	.240	3.35	15	.008	0	y	2	9664.5...	38556	1.114	2.092	...	H2-1

VzW SMART Tool© Vendor

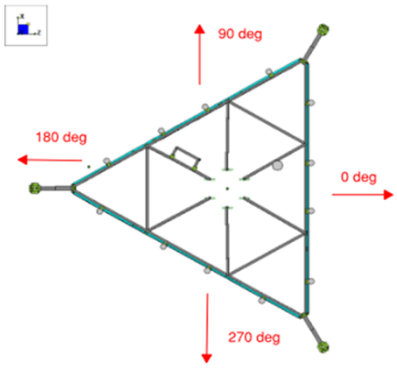
Client:	Verizon Wireless	Date:	2/26/2024
Site Name:	N BRIDGEPORT CT		
MDG #:	5000385395		
Fuze ID #:	16231899	Page:	1

Version 2.00

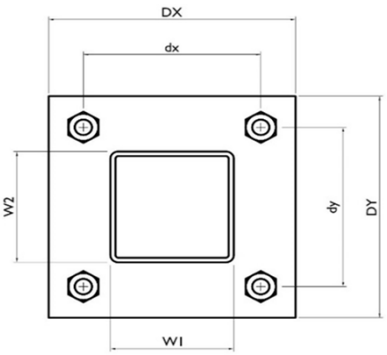
I. Mount-to-Tower Connection Check

Custom Orientation Required	Yes

Nodes (labeled per Risa)	Orientation (per graphic of typical platform)
N46	0
N45	0



Tower Connection Bolt Checks	Yes
Bolt Orientation	Parallel
Bolt Quantity per Reaction:	4
d_x (in) *(Delta X of typ. bolt config. sketch)* :	6
d_y (in) *(Delta Y of typ. bolt config. sketch)* :	3
Bolt Type:	A307
Bolt Diameter (in):	0.625
Required Tensile Strength / bolt (kips):	1.0
Required Shear Strength / bolt (kips):	0.5
Tensile Capacity / bolt (kips):	10.4
Shear Capacity / bolt (kips):	6.2
Bolt Overall Utilization:	**10.2%**
Tower Connection Baseplate Checks	No



VzW SMART Tool© Vendor

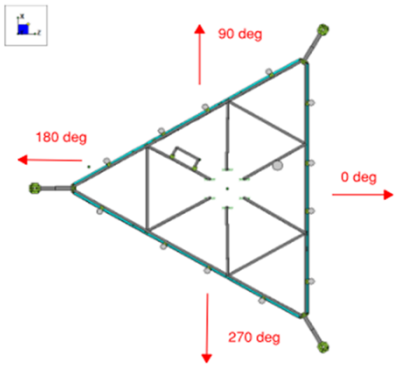
Client:	Verizon Wireless	Date:	2/26/2024
Site Name:	N BRIDGEPORT CT		
MDG #:	5000385395		
Fuze ID #:	16231899	Page:	1

Version 2.00

I. Mount-to-Tower Connection Check - Kicker

Custom Orientation Required	Yes

Nodes (labeled per Risa)	Orientation (per graphic of typical platform)
N1	0
N5	0



Tower Connection Bolt Checks	Yes
Bolt Orientation	Parallel
Bolt Quantity per Reaction:	4
d_x (in) *(Delta X of typ. bolt config. sketch)* :	6
d_y (in) *(Delta Y of typ. bolt config. sketch)* :	3
Bolt Type:	A307
Bolt Diameter (in):	0.5
Required Tensile Strength / bolt (kips):	1.0
Required Shear Strength / bolt (kips):	0.5
Tensile Capacity / bolt (kips):	6.6
Shear Capacity / bolt (kips):	4.0
Bolt Overall Utilization:	**15.7%**
Tower Connection Baseplate Checks	No

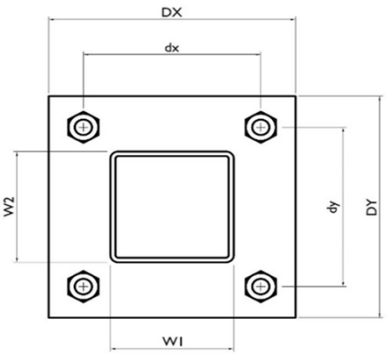


EXHIBIT 5

RF Design and Services
326 Tyron Road
Raliegh, North Carolina 27603
(612)965-8225
WWW.TEPGROUP.NET

Non-Ionizing Electromagnetic Radiation (NIER) Study

Site Number:

383598

Site Name:

Tartaglia

Location:

Bridgeport, Connecticut

Tenants:

Red Wolf Broadcasting, AT&T Mobility, T-Mobile,
Dish Wireless, & Verizon Wireless

Prepared For:

American Tower, Inc.
Woburn, Massachusetts

April 2nd, 2024

193418 P-4234153

Prepared By:

Adam Carlson MS, CBRE, CPI
Program Manager RF Design & Service
Tower Engineering Professionals

Approved By:

04/05/24

RF Design and Services
326 Tyron Road
Raliegh, North Carolina 27603
(612)965-8225
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Non-Ionizing Electromagnetic Radiation (NIER) Study

383598 Tartaglia
Bridgeport, Connecticut

INTRODUCTION

Tower Engineering Professionals RF Design & Services Division (TEP-RF) of Raleigh, North Carolina, has been retained by American Tower, Inc. (ATC), of Woburn, Massachusetts to evaluate the RF emissions compared to the Maximum Permissible Exposure (MPE) limit for facilities at this location. This evaluation uses compliance standards as outlined in Federal Communications Commission (FCC) document OET-65.

SITE AND FACILITY CONSIDERATIONS

Site 383598 Tartaglia is located at 1000 Trumbull Ave., in Bridgeport, Connecticut at coordinates 41.219595, -73.201283. The support structure is a 244' self-support tower. An aerial view of the tower can be found in Appendix 1, Site Photos. The tenants are Red Wolf Broadcasting (Red Wolf), AT&T Mobility (AT&T), T-Mobile (T-Mobile), Dish Wireless (Dish), & Verizon Wireless (VZW). A table listing all antennae and effective radiated power (ERP) levels that were used in this study may be found in Appendix 2, Antenna Inventory.

POWER DENSITY CALCULATIONS

Power densities were calculated based on FCC MPE limits for both General Population/Uncontrolled and Occupational/Controlled environments.

For the purpose of this study, a radius of 100' from the base of the tower with a height of 6' above ground level was used, beyond 100' the MPE levels become *di minimus*. This study utilized FCC recognized and accepted software programs using the maximum ERP levels for the antenna models provided by ATC. Diagrams depicting the predicted spatial average power density level at any specific location may be found in Appendix 3, MPE Limit Study. A discussion regarding the FCC limits may be found in Appendix 4, Information Pertaining to MPE Studies. Study methodology describing Non-ionizing Radiation Prediction Models used in this study may be found in Appendix 5, MPE Standards Methodology.

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All data used in this study was collected from one or more of the following sources:

- ATC furnished data and does not include other unidentified communication facilities.
- Load List at 383598 Tartaglia.RF NIER Study 03/19/24.
- FCC databases.
- Carrier standard configurations.
- Empirical data collected by TEP.

SITE MITIGATION & CONTROL

In order to comply with FCC, tenant, & ATC requirements, TEP recommends the placement of signage at the base of the tower and all compound access points to alert workers of potential exposure to RF fields while working on or near the antennae.

TEP recommends that all personnel working on this tower be trained in RF safety procedures and carry a personal RF monitor at all times.

COMPLIANCE DETERMINATION

This installation ***WILL BE*** in compliance with current FCC MPE limits as described in FCC OET-65.

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Appendix 1 Site Photos

Aerial View of Site

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Appendix 2.1 Antenna Inventory

383598 Tartaglia							
Antenna Inventory							
Antenna #	Carrier	Antenna Manufacturer	Antenna Model	Frequency Band (MHz)	Azmiuth (°)	Effective Radiated Power (W)	Radiation Center (ft)
1	Unknown	Generic	8' Yagi	Unknown	032	4000.00	263.8
2	Unknown	Generic	12' Omni	Unknown	195	1200.00	249.1
3	Red Wolf	Dielectric	DCR-L1	104.5	033	6000.00	248.2
4	Unknown	Generic	10' Omni	Unknown	017	1100.00	245.8
5	Unknown	Generic	8'Omni	Unknown	141	1000.00	236.4
6	Unknown	Generic	10' Omni	Unknown	266	1100.00	235.8
7	T-Mobile	Ericsson	Air 32	1900	090	36080.00	202.0
8	T-Mobile	Ericsson	Air 32	1900	210	36080.00	202.0
9	T-Mobile	Ericsson	Air 32	1900	340	36080.00	202.0
10	T-Mobile	Ericsson	Air6449 B41	2500	090	14356.00	202.0
11	T-Mobile	Ericsson	Air6449 B41	2500	210	14356.00	202.0
12	T-Mobile	Ericsson	Air6449 B41	2500	340	14356.00	202.0
13	T-Mobile	RFS	APXVAARR24	600/700/1900	090	36367.00	202.0
14	T-Mobile	RFS	APXVAARR24	600/700/1900	210	36367.00	202.0
15	T-Mobile	RFS	APXVAARR24	600/700/1900	340	36367.00	202.0
16	AT&T	Ericsson	6419	3700-3900	030	71639.00	167.0
17	AT&T	Ericsson	6419	3700-3900	150	71639.00	167.0
18	AT&T	Ericsson	6419	3700-3900	270	71639.00	167.0
19	AT&T	CCI	DMP65R-BU8D	700/800/2300	030	36002.00	165.0
20	AT&T	CCI	DMP65R-BU8D	700/800/2300	150	36002.00	165.0
21	AT&T	CCI	DMP65R-BU8D	700/800/2300	270	36002.00	165.0

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Appendix 2.2 Antenna Inventory

383598 Tartaglia							
Antenna Inventory							
Antenna #	Carrier	Antenna Manufacturer	Antenna Model	Frequency Band (MHz)	Azmiuth (°)	Effective Radiated Power (W)	Radiation Center (ft)
22	AT&T	Quintel	QD8616-7	700/1900/2100	030	42370.00	165.0
23	AT&T	Matsing	MS-MBA-3.2-H4-L4	700/1900/2100	150	24925.00	165.0
24	AT&T	Quintel	QD8616-7	700/1900/2100	270	42370.00	165.0
25	AT&T	Ericsson	6449	3700-3900	030	71639.00	163.0
26	AT&T	Ericsson	6449	3700-3900	150	71639.00	163.0
27	AT&T	Ericsson	6449	3700-3900	270	71639.00	163.0
28	VZW	Samsung	MT6413-77A	3700-3900	015	18286.00	153.0
29	VZW	Samsung	MT6413-77A	3700-3900	110	18286.00	153.0
30	VZW	Samsung	MT6413-77A	3700-3900	190	18286.00	153.0
32	VZW	Commscope	JAHH-65B-R3B	700/800/1900/2100	040	32167.00	153.0
33	VZW	Commscope	JAHH-65B-R3B	700/800/1900/2100	130	32167.00	153.0
34	VZW	Commscope	JAHH-65B-R3B	700/800/1900/2100	270	32167.00	153.0
35	VZW	Commscope	JAHH-65B-R3B	700/800/1900/2100	040	32167.00	153.0
36	VZW	Commscope	JAHH-65B-R3B	700/800/1900/2100	130	32167.00	153.0
37	VZW	Commscope	JAHH-65B-R3B	700/800/1900/2100	270	32167.00	153.0
38	VZW	Samsung	CBRS 20W	3500-3600	015	1219.00	153.0
39	VZW	Samsung	CBRS 20W	3500-3600	110	1219.00	153.0
40	VZW	Samsung	CBRS 20W	3500-3600	190	1219.00	153.0
41	Unknown	Generic	8'Omni	Unknown	141	1000.00	142.2
42	Unknown	Generic	10' Omni	Unknown	266	1100.00	127.8
43	Dish	JMA	MX08FRO665-21	600/1900/2000/2100	000	40000.00	97.0
44	Dish	JMA	MX08FRO665-21	600/1900/2000/2100	120	40000.00	97.0
45	Dish	JMA	MX08FRO665-21	600/1900/2000/2100	240	40000.00	97.0

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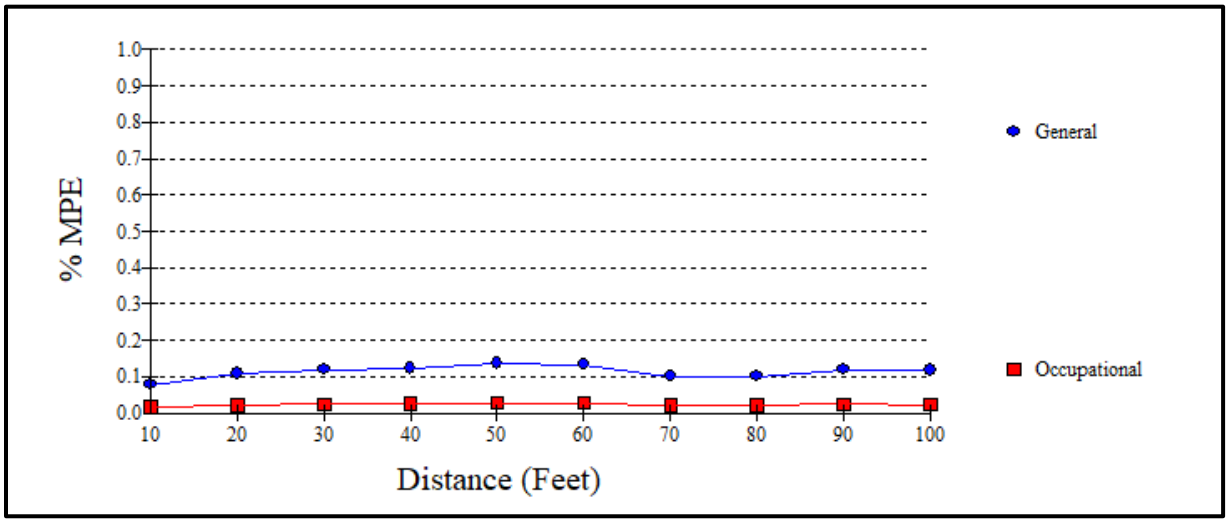
Appendix 3.1 MPE Limit Study



Maximum Power Density (@50'):	0.0010 mW/cm²
General Population MPE (@50'):	0.1396%
Occupational MPE (@50'):	0.0274%

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Appendix 3.2 MPE Limit Study

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Appendix 4 Information Pertaining to MPE Studies

In 1985, the FCC first adopted guidelines to be used for evaluating human exposure to RF emissions. The FCC revised and updated these guidelines on August 1, 1996, as a result of a rule-making proceeding initiated in 1993. The new guidelines incorporate limits for Maximum Permissible Exposure (MPE) in terms of electric and magnetic field strength and power density for transmitters operating at frequencies between 300 kHz and 100 GHz.

The FCC's MPE limits are based on exposure limits recommended by the National Council on Radiation Protection and Measurements (NCRP), and, over a wide range of frequencies, the exposure limits were developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI) to replace the 1982 ANSI guidelines. Limits for localized absorption are based on recommendations of both ANSI/IEEE and NCRP.

The FCC's limits, and the NCRP and ANSI/IEEE limits on which they are based, are derived from exposure criteria quantified in terms of specific absorption rate (SAR). The basis for these limits is a whole-body averaged SAR threshold level of 4 watts per kilogram (4 W/kg), as averaged over the entire mass of the body, above which expert organizations have determined that potentially hazardous exposures may occur. The MPE limits are derived by incorporating safety factors that lead, in some cases, to limits that are more conservative than the limits originally adopted by the FCC in 1985. Where more conservative limits exist, they do not arise from a fundamental change in the RF safety criteria for whole-body averaged SAR, but from a precautionary desire to protect subgroups of the general population who, potentially, may be more at risk.

The FCC exposure limits are also based on data showing that the human body absorbs RF energy at some frequencies more efficiently than at others. The most restrictive limits occur in the frequency range of 30-300 MHz where whole-body absorption of RF energy by human beings is most efficient. At other frequencies, whole-body absorption is less efficient, and consequently, the MPE limits are less restrictive.

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MPE limits are defined in terms of power density (units of milliwatts per centimeter squared: mW/cm^2), electric field strength (units of volts per meter: V/m) and magnetic field strength (units of amperes per meter: A/m). The far-field of a transmitting antenna is where the electric field vector (E), the magnetic field vector (H), and the direction of propagation can be considered to be all mutually orthogonal ("plane-wave" conditions).

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.

General population/uncontrolled exposure limits apply to situations in which the general public 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 public 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. Additional details can be found in FCC OET 65.

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Appendix 5 MPE Standards Methodology

This study predicts RF field strength and power density levels that emanate from communications system antennae. It considers all transmitter power levels (less filter and line losses) delivered to each active transmitting antenna at the communications site. Calculations are performed to determine power density and MPE levels for each antenna as well as composite levels from all antennas. The calculated levels are based on where a human (Observer) would be standing at various locations at the site. The point of interest where the MPE level is predicted is based on the height of the Observer.

Compliance with the FCC limits on RF emissions are determined by spatially averaging a person's exposure over the projected area of an adult human body, that is approximately six-feet or two-meters, as defined in the ANSI/IEEE C95.1 standard. The MPE limits are specified as time-averaged exposure limits. This means that exposure is averaged over an identifiable time interval. It is 30 minutes for the general population/uncontrolled RF environment and 6 minutes for the occupational/controlled RF environment. However, in the case of the general public, time averaging should not be applied because the general public is typically not aware of RF exposure, and they do not have control of their exposure time. Therefore, it should be assumed that any RF exposure to the general public will be continuous.

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The FCC's limits for exposure at different frequencies are shown in the following Tables.

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

f = frequency

* = Plane-wave equivalent power density

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

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

f = frequency

* = Plane-wave equivalent power density

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

It is important to understand that these limits apply cumulatively to all sources of RF emissions affecting a given area. For example, if several different communications system antennas occupy a shared facility such as a tower or rooftop, then the total exposure from all systems at the facility must be within compliance of the FCC guidelines.

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The field strength emanating from an antenna can be estimated based on the characteristics of an antenna radiating in free space. There are basically two field areas associated with a radiating antenna. When close to the antenna, the region is known as the Near Field. Within this region, the characteristics of the RF fields are very complex, and the wave front is extremely curved. As you move further from the antenna, the wave front has less curvature and becomes planar. The wave front still has a curvature, but it appears to occupy a flat plane in space (plane-wave radiation). This region is known as the Far Field.

Two models are utilized to predict Near and Far field power densities. They are based on the formulae in FCC OET 65.

Cylindrical Model (Near Field Predictions)

Spatially averaged plane-wave equivalent power densities parallel to the antenna may be estimated by dividing the antenna input power by the surface area of an imaginary cylinder surrounding the length of the radiating antenna. While the actual power density will vary along the height of the antenna, the average value along its length will closely follow the relation given by the following equation:

$$S = P \div 2\pi RL$$

Where:

S = Power Density

P = Total Power into antenna

R = Distance from the antenna

L = Antenna aperture length

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For directional-type antennas, power densities can be estimated by dividing the input power by that portion of a cylindrical surface area corresponding to the angular beam width of the antenna. For example, for the case of a 120-degree azimuthal beam width, the surface area should correspond to 1/3 that of a full cylinder. This would increase the power density near the antenna by a factor of three over that for a purely omni-directional antenna. Mathematically, this can be represented by the following formula:

$$S = (180 / \theta_{BW}) P \div \pi RL$$

Where:

S = Power Density

θ_{BW} = Beam width of antenna in degrees (3 dB half-power point)

P = Total Power into antenna

R = Distance from the antenna

L = Antenna aperture length

If the antenna is a 360-degree omni-directional antenna, this formula would be equivalent to the previous formula.

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Spherical Model (Far Field Predictions)

Spatially averaged plane-wave power densities in the Far Field of an antenna may be estimated by considering the additional factors of antenna gain and reflective waves that would contribute to exposure.

The radiation pattern of an antenna has developed in the Far Field region and the power gain needs to be considered in exposure predictions. Also, if the vertical radiation pattern of the antenna is considered, the exposure predictions would most likely be reduced significantly at ground level, resulting in a more realistic estimate of the actual exposure levels.

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 four-fold increase in power density.

These additional factors are considered, and the Far Field prediction model is determined by the following equation:

$$S = EIRP \times Rc \div 4\pi R^2$$

Where:

S = Power Density

EIRP = Effective Radiated Power from antenna

Rc = Reflection Coefficient (2.56)

R = Distance from the antenna

The EIRP includes the antenna gain. If the antenna pattern is considered, the antenna gain is relative based on the horizontal and vertical pattern gain values at that particular location in space, on a rooftop or on the ground. However, it is recommended that the antenna radiation pattern characteristics not be considered to provide a conservative "worst case" prediction. This is the equation is utilized for the Far Field exposure predictions herein.

EXHIBIT 6

ATTACHMENT 1

BUILDING PERMIT

Building Department

City of Bridgeport, Connecticut

Nº 12165

DEC 2 7 1989 ....., 19.....

Permission is hereby granted to CHOPSEY HILL ASSOCIATES & E. & F. DEVELOPMENT

to erect TWO STORY ADDITION TO MASONRY BUILDING AND ANTENNA

Located at No. 1330 CHOPSEY HILL ROAD Street

THIS PERMIT IS GRANTED ON CONDITION THAT ALL CITY, STATE AND FEDERAL RULES REGULATIONS AND LAWS ARE COMPLIED WITH.

A CERTIFICATE OF OCCUPANCY MUST BE GRANTED BEFORE BUILDING OR ADDITIONS IS OCCUPIED.

THIS PERMIT EXPIRES SIX (6) MONTHS FROM DATE IF WORK IS NOT COMMENCED.

CALL OFFICE WHEN WORK IS STARTED, Telephone 576-7225, Building Department.

Special Conditions: .....

Building fee	$ 410
Occupancy fee	$ 3
Total	$ 413

PETER J. PAAJANEN, *Deputy Building Official*

FRANK A. MERCALDI, *Building Official*

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Form 1209

ATTACHMENT 2

BRIDGEPORT ZONING BOARD OF APPEALS

Room 206 — 45 Lyon Terrace — Bridgeport, Connecticut 06604

At a meeting held in City Hall, on Tuesday, November 14 and Tuesday, November 21, 1989

RE: 1330 Chopsey Hill Rd. & 800 Trumbull Avenue

Petition of Metro-Mobile Cts of Fairfield County, Inc., lessee, waive regulation prohibiting the extension and enlargement of an existing nonconforming use in an A-RESIDENCE ZONE to permit the construction of a 2-sty. masonry addition to the existing nonconforming transmission equipment building. (CONTINUED from 10/10/89)

PUBLIC HEARING, Tuesday, November 14 and Tuesday, November 21, 1989 - Variance of Chap. 20 Sec. 3 GRANTED, subject to the following conditions:

1. The development of the subject property shall be substantially in accord with the plans submitted.
2. The petitioner shall file plans and applications for the issuance of a Certificate of Zoning Compliance and a Building permit.

(over)

NOTE—Unless acted upon within six months this grant becomes void. Your failure to comply with any conditions applicable to this action will also void the rights and privileges granted hereby. This is not a Building Permit and any structure or building contemplated by this action can only be started after proper application to and issuance of such permit by the Building Official. Other approvals or permits, required by law, should be sought from the proper authorities before exercising any part of this grant.

William A. Shaw ..... Clerk

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Form 2113

(over)

3. All construction shall conform with the requirements of the Basic Building Code of the State of CT.

The "Board" assigned the following reason for its action:

1. The development, as proposed, would not create any adverse effects on the immediate area.

The "Board" assigned the following reason for its action:

1. The granting of this petition would not create any detrimental effects and provides a service to the neighborhood as well as the general public.

3) Petition of E & F Development Company, owner, 1330 Chopsey Hill Rd. & 800 Trumbull Avenue, N/E corner, lot: 481.56' x 459.47' x 711.29' x 419.5', waive regulation prohibiting the business use of property in an A-RESIDENCE ZONE & waive regulation prohibiting a structure exceeding 35' in height to permit the erection of a 250' high radio station tower & accessory transmission equipment building.
One person appeared in favor.
Exhibit 1 - Copy of prior approval submitted in favor.
Exhibit 2 - Real Estate Appraisal submitted in favor.
Exhibit 3 - Qualification and Report of C Thomas Jones, P.E. submitted in favor.
No one appeared in opposition.
Motion made by Mr. Lunin, seconded by Ms. Gamble that this petition be granted conditionally, subject to the following:

1. The development of the subject property shall be substantially in accord with the plans submitted.

2. The petitioner shall file plans & applications for the issuance of a Certificate of Zoning Compliance and a Building Permit.

3. All construction shall conform with the requirements of the Basic Building Code of the State of Connecticut.

Unanimously approved.

4) Petition of Joseph Ortiz, owner, 29 Harvard Street, west side 140' north of Wheeler Avenue & 32 Rosinoff Place, east side 140' north of Wheeler Avenue, lot: 70' x 95' x 5' x 94.2' x 70' x 94.4' x 5' x 95', waive 2'9" of the setback requirement of 16'9" in a C-RESIDENCE ZONE & waive 7'8" of the accumulative side yard requirement of 23'4" to permit the construction of a 3½-sty. 16 unit apartment building with 32 on-site parking spaces.
Two persons appeared in favor.
Letter from City Engineer Department, regarding sewers, read by Chairman Neary.
Copy of Tax Assessor's Map submitted in favor.
No one appeared in opposition.
Motion made by Ms. Gamble, seconded by Mr. LaChioma that this petition be granted.

UPON A ROLL CALL OF VOTES, THOSE VOTING

In Favor	Against
Gamble	Lunin
LaChioma	Bopko
	Neary

Motion to grant failed to pass.

Reason assigned by those in favor.

1. The granting of this petition will provide needed residential rental units without creating any detrimental effects on the immediate area.

Reasons assigned by those in opposition.

1. The petitioner failed to present an exceptional difficulty or unusual hardship owing to conditions directly affecting this parcel of land.

2. The granting of this petition would result in an overuse of the subject property.

5) Petition of Jack Rodrigues, owner, 94 Center Street, north side 340' east of Harral Avenue, lot: 50' x 113', waive 3'6" of the setback requirement of 16'6" in a C-RESIDENCE ZONE, waive 4'8" of the accumulative side yard requirement of 16'8" & waive 2' of the rear yard requirement of 16' to permit the construction of a 3½-sty. 5 unit residential building with 10 on-site parking spaces.
Two persons appeared in favor.
No one appeared in opposition.
Motion made by Ms. Gamble, seconded by Mr. LaChioma that this petition be granted conditionally subject to the following:

EXHIBIT 7

Hello, your package has been delivered.

Delivery Date: Monday, 04/22/2024
Delivery Time: 12:46 PM
Signed by: LONG

CENTERLINE SITE ACQUISITION

Tracking Number:	1Z9Y45030333771977
Ship To:	AMERICAN TOWER CORPORATION 10 PRESIDENTIAL WAY WOBURN, MA 018011053 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.0 LBS
Reference Number:	14561406

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Read Compass Online

UPS Delivery Notification, Tracking Number 1Z9Y45030324084361

UPS <pkginfo@ups.com>
Mon 4/22/2024 11:38 AM
To:Barbara Kassabian <BKASSABIAN@CLINELLC.COM>

Hello, your package has been delivered.

Delivery Date: Monday, 04/22/2024
Delivery Time: 11:36 AM
Signed by: LICET

CENTERLINE SITE ACQUISITION

Tracking Number:	1Z9Y45030324084361
Ship To:	TOM GILL DIRECTOR OF PLANNING 999 BROAD STREET MARGARET MORTON GOVERNMENT CENTER BRIDGEPORT, CT 066044320 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.0 LBS
Reference Number:	14561406

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Read Compass Online

UPS Delivery Notification, Tracking Number 1Z9Y45030337389759

UPS <pkginfo@ups.com>
Mon 4/22/2024 11:38 AM
To:Barbara Kassabian <BKASSABIAN@CLINELLC.COM>

Hello, your package has been delivered.

Delivery Date: Monday, 04/22/2024
Delivery Time: 11:37 AM
Signed by: RAQUEL

CENTERLINE SITE ACQUISITION

Tracking Number:	1Z9Y45030337389759
Ship To:	JOSEPH P. GANIM MAYOR 999 BROAD STREET CITY OF BRIDGEPORT BRIDGEPORT, CT 066044320 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.0 LBS
Reference Number:	14561406

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