Robinson+Cole

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Also admitted in Massachusetts
and New York

October 25, 2021

Via Electronic Mail

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

Re: **Notice of Exempt Modification – Facility Modification**
6 Shirley Street, Norwalk, Connecticut

Dear Attorney Bachman:

Cellco Partnership d/b/a Verizon Wireless ("Cellco") currently maintains an existing wireless telecommunications facility at the above-referenced property address (the "Property"). The facility consists of antennas and remote radio heads attached to the existing tower and associated equipment on the ground adjacent to the tower. According to previous Siting Council filings, the tower was originally approved by the City of Norwalk in 1984. Cellco's site acquisition consultant did reach out to the City Officials in advance of this filing in an effort to obtain a copy of the Town original approval but was told that no copy of the City's approval could be located. Cellco's use of the tower was approved by the Siting Council ("Council") in May of 2014 (TS-VER-103-140416). A copy of the Council's TS-VER-103-140416 approval is included in Attachment 1.

Cellco now intends to modify its facility by replacing nine (9) antennas with three (3) new Samsung MT6407-77A antennas and six (6) MX06FRO660-03 antennas on Cellco's antenna mounting structure. Cellco also intends to replace six (6) remote radio heads ("RRHs") with six (6) new RRHs behind its antennas. A set of project plans showing Cellco's proposed facility modifications and specifications for Cellco's new antennas and RRHs are included in Attachment 2.

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

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2).

1. The proposed modifications will not result in an increase in the height of the existing tower. Cellco's replacement antennas will be installed on Cellco's existing antenna mounting structure.

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

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

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

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

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

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

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

Sincerely,

Kenneth C. Baldwin

Enclosures
Copy to:
Harry Rilling, Norwalk Mayor
Steven Kleppin, Director of Planning and Zoning
CTI Towers Assets II, LLC, Property Owner
Alex Tyurin

ATTACHMENT 1

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

May 16, 2014

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

RE: **TS-VER-103-140416** - Cellco Partnership d/b/a Verizon Wireless request for an order to approve tower sharing at an existing telecommunications facility located at 6 Shirley Street, Norwalk, Connecticut.

Dear Attorney Baldwin:

At a public meeting held May 15, 2014, the Connecticut Siting Council (Council) ruled that the shared use of this existing tower site is technically, legally, environmentally, and economically feasible and meets public safety concerns, and therefore, in compliance with General Statutes § 16-50aa, the Council has ordered the shared use of this facility to avoid the unnecessary proliferation of tower structures with the following conditions:

- Perform the reinforcements prior to antenna installation in accordance with the structural analysis report prepared by URS Corporation dated April 9, 2014, and stamped by Richard Sambor;
- Within 45 days following completion of the antenna installation, Cellco shall provide documentation certified by a professional engineer that its installation complied with the requirements of the structural analysis;
- Any deviation from the proposed installation as specified in the original tower share request and supporting materials with the Council shall render this decision invalid;
- Any material changes to the proposed installation as specified in the original tower share request and supporting materials filed with the Council shall require an explicit request for modification to the Council pursuant to Connecticut General Statutes § 16-50aa, including all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65;
- Not less than 45 days after completion of the proposed installation, the Council shall be notified in writing that the installation has been completed;
- The validity of this action shall expire one year from the date of this letter; and
- The applicant may file a request for an extension of time beyond the one year deadline provided that such request is submitted to the Council not less than 60 days prior to the expiration.

This decision is under the exclusive jurisdiction of the Council and applies only to this request for tower sharing dated April 16, 2014. This facility has been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower. Any deviation from the approved tower sharing request is enforceable under the provisions of Connecticut General Statutes § 16-50u.

The proposed shared use is to be implemented as specified in your letter dated April 16, 2014, including the placement of all necessary equipment and shelters within the tower compound.

Please be advised that the validity of this action shall expire one year from the date of this letter.

Thank you for your attention and cooperation.

Very truly yours,

Robert Stein

Robert Stein
Chairman

RS/MP/jb

c: The Honorable Harry W. Rilling, Mayor, City of Norwalk
Michael Greene, Director of Planning and Zoning, City of Norwalk
Connoisseur Media of Connecticut LLC

ATTACHMENT 2

verizon

WIRELESS COMMUNICATIONS FACILITY UPGRADE

NORWALK 9 CT

6 SHIRLEY ST.

NORWALK, CT 06850

GENERAL NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE 2015 INTERNATIONAL BUILDING CODE AS MODIFIED BY THE 2018 CONNECTICUT SUPPLEMENT, INCLUDING THE TIA/EIA-222 REVISION "G" STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND SUPPORTING STRUCTURES, 2017 CONNECTICUT FIRE SAFETY CODE, NATIONAL ELECTRICAL CODE, AND LOCAL CODES.
2. SHOULD ANY FIELD CONDITIONS PRECLUDE COMPLIANCE WITH THE DRAWINGS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND SHALL NOT PROCEED WITH ANY AFFECTED WORK.
3. CONTRACTOR SHALL REVIEW ALL DRAWINGS AND SPECIFICATIONS IN THE CONTRACT DOCUMENT SET. CONTRACTOR SHALL COORDINATE ALL WORK SHOWN IN THE SET OF DRAWINGS. THE CONTRACTOR SHALL PROVIDE A COMPLETE SET OF DRAWINGS TO ALL SUBCONTRACTORS AND ALL RELATED PARTIES. THE SUBCONTRACTORS SHALL EXAMINE ALL THE DRAWINGS AND SPECIFICATIONS FOR THE INFORMATION THAT AFFECTS THEIR WORK.
4. CONTRACTOR SHALL PROVIDE A COMPLETE BUILD-OUT WITH ALL FINISHES, STRUCTURAL, MECHANICAL, AND ELECTRICAL COMPONENTS AND PROVIDE ALL ITEMS AS SHOWN OR INDICATED ON THE DRAWINGS OR IN THE WRITTEN SPECIFICATIONS.
5. CONTRACTOR SHALL FURNISH ALL MATERIAL, LABOR AND EQUIPMENT TO COMPLETE THE WORK AND FURNISH A COMPLETED JOB ALL IN ACCORDANCE WITH LOCAL AND STATE GOVERNING AUTHORITIES AND OTHER AUTHORITIES HAVING LAWFUL JURISDICTION OVER THE WORK.
6. CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS AND ALL INSPECTIONS REQUIRED AND SHALL ALSO PAY FEES REQUIRED FOR THE GENERAL CONSTRUCTION, AND ALL TRADES AS APPLICABLE. PERMITS SHALL BE PAID FOR BY THE RESPECTIVE SUBCONTRACTORS.
7. CONTRACTOR SHALL MAINTAIN A CURRENT SET OF DRAWINGS AND SPECIFICATIONS ON SITE AT ALL TIMES AND INSURE DISTRIBUTION OF NEW DRAWINGS TO SUBCONTRACTORS AND OTHER RELEVANT PARTIES AS SOON AS THEY ARE MADE AVAILABLE. ALL OLD DRAWINGS SHALL BE MARKED VOID AND REMOVED FROM THE CONTRACT AREA. THE CONTRACTOR SHALL FURNISH AN "AS-BUILT" SET OF DRAWINGS TO OWNER UPON COMPLETION OF PROJECT.
8. LOCATION OF EQUIPMENT, AND WORK SUPPLIED BY OTHERS THAT IS DIAGRAMMATICALLY INDICATED ON THE DRAWINGS SHALL BE DETERMINED BY THE CONTRACTOR. THE CONTRACTOR SHALL DETERMINE LOCATIONS AND DIMENSIONS SUBJECT TO STRUCTURAL CONDITIONS AND WORK OF THE SUBCONTRACTORS.
9. THE CONTRACTOR IS SOLELY RESPONSIBLE TO DETERMINE CONSTRUCTION PROCEDURE AND SEQUENCE, AND TO ENSURE THE SAFETY OF THE EXISTING STRUCTURES AND ITS COMPONENT PARTS DURING CONSTRUCTION. THIS INCLUDES THE ADDITION OF WHATEVER SHORING, BRACING, UNDERPINNING, ETC. THAT MAY BE NECESSARY. MAINTAIN EXISTING BUILDING'S/PROPERTY'S OPERATIONS, COORDINATE WORK WITH BUILDING/PROPERTY OWNER.
10. DRAWINGS INDICATE THE MINIMUM STANDARDS, BUT IF ANY WORK SHOULD BE INDICATED TO BE SUBSTANDARD TO ANY ORDINANCES, LAWS, CODES, RULES, OR REGULATIONS BEARING ON THE WORK, THE CONTRACTOR SHALL INCLUDE IN HIS WORK AND SHALL EXECUTE THE WORK CORRECTLY IN ACCORDANCE WITH SUCH ORDINANCES, LAWS, CODES, RULES OR REGULATIONS WITH NO INCREASE IN COSTS.
11. ALL UTILITY WORK SHALL BE IN ACCORDANCE WITH LOCAL UTILITY COMPANY REQUIREMENTS AND SPECIFICATIONS.
12. ALL EQUIPMENT AND PRODUCTS PURCHASED ARE TO BE REVIEWED BY CONTRACTOR AND ALL APPLICABLE SUBCONTRACTORS FOR ANY CONDITION PER MFR.'S RECOMMENDATIONS. CONTRACTOR TO SUPPLY THESE ITEMS AT NO COST TO OWNER OR CONSTRUCTION MANAGER.
13. ANY AND ALL ERRORS, DISCREPANCIES, AND "MISSED" ITEMS ARE TO BE BROUGHT TO THE ATTENTION OF THE VERIZON WIRELESS CONSTRUCTION MANAGER DURING THE BIDDING PROCESS BY THE CONTRACTOR. ALL THESE ITEMS ARE TO BE INCLUDED IN THE BID. NO "EXTRA" WILL BE ALLOWED FOR MISSED ITEMS.
14. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ON-SITE SAFETY FROM THE TIME THE JOB IS AWARDED UNTIL ALL WORK IS COMPLETE AND ACCEPTED BY THE OWNER.
15. CONTRACTOR TO REVIEW ALL SHOP DRAWINGS AND SUBMIT COPY TO ENGINEER FOR APPROVAL. DRAWINGS MUST BEAR THE CHECKER'S INITIALS BEFORE SUBMITTING TO THE CONSTRUCTION MANAGER FOR REVIEW.
16. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, ELEVATIONS, ANGLES, AND EXISTING CONDITIONS AT THE SITE, PRIOR TO FABRICATION AND/OR INSTALLATION OF ANY WORK IN THE CONTRACT AREA.
17. COORDINATION, LAYOUT, FURNISHING AND INSTALLATION OF CONDUIT AND ALL APPURTENANCES REQUIRED FOR PROPER INSTALLATION OF ELECTRICAL AND TELECOMMUNICATION SERVICE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
18. ALL EQUIPMENT AND PRODUCTS PURCHASED ARE TO BE REVIEWED BY CONTRACTOR AND ALL APPLICABLE SUB- CONTRACTORS FOR ANY CONDITION PER THE MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR TO SUPPLY THESE ITEMS AT NO COST TO OWNER OR CONSTRUCTION MANAGER.
19. ALL DAMAGE CAUSED TO ANY EXISTING STRUCTURE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL BE HELD LIABLE FOR ALL REPAIRS REQUIRED FOR EXISTING STRUCTURES IF DAMAGED DURING CONSTRUCTION ACTIVITIES.
20. THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" AT LEAST 48 HOURS PRIOR TO ANY EXCAVATIONS AT 1-800-922-4455. ALL UTILITIES SHALL BE IDENTIFIED AND CLEARLY MARKED PRIOR TO ANY EXCAVATION WORK. CONTRACTOR SHALL MAINTAIN AND PROTECT MARKED UTILITIES THROUGHOUT PROJECT COMPLETION.

SITE DIRECTIONS

FROM: 20 ALEXANDER DRIVE, WALLINGFORD, CONNECTICUT **TO:** 6 SHIRLEY ST, NORWALK, CT 06850

1. HEAD NORTH ON ALEXANDER DR. TOWARDS BARNES INDUSTRIAL RD;	0.18 MI
2. TURN RIGHT ONTO BARNES INDUSTRIAL RD;	0.11 MI
3. TAKE FIRST LEFT ONTO CT-68;	0.35 MI
4. TURN RIGHT ONTO RAMP;	0.17 MI
5. TURN RIGHT ONTO N COLONY RD/ US-5 N;	0.39 MI
6. MERGE ONTO CT-15 S VIA THE RAMP ON THE LEFT.	43.55 MI
7. TAKE EXIT 40A TOWARD US-7 S/NORWALK.	0.09 MI
8. MERGE ONTO MAIN AVE.	0.84 MI
9. MAIN AVE BECOMES MAIN ST.	0.31 MI
10. TURN RIGHT ONTO NEW CANAAN AVE/CT-123.	0.28 MI
11. MERGE ONTO US-7 S VIA THE RAMP ON THE LEFT TOWARD I-95.	0.56 MI
12. TAKE THE US-1 EXIT, EXIT 1, TOWARD NORWALK.	0.19 MI
13. KEEP LEFT AT THE FORK IN THE RAMP.	0.03 MI
14. TURN SLIGHT RIGHT ONTO GRANDVIEW AVE.	0.46 MI
15. TURN LEFT ONTO STUART AVE.	0.17 MI
16. TURN RIGHT ONTO NOSTRUM RD.	0.24 MI
17. TURN RIGHT ONTO EAGLE RD.	0.06 MI
18. TAKE THE 1ST LEFT ONTO SHIRLEY ST.	0.03 MI
19. 6 SHIRLEY ST, NORWALK, CT 06850-2818, 6 SHIRLEY ST IS ON THE RIGHT.	

VICINITY MAP

SCALE: 1" = 1000'

PROJECT SUMMARY

1. THE PROPOSED UPGRADE SCOPE OF WORK AT THE EXISTING UNMANNED TELECOMMUNICATIONS FACILITY GENERALLY INCLUDES THE FOLLOWING:

A. AT THE EXISTING TOWER MOUNTED ANTENNA SECTORS:

- REMOVE (9) EXISTING ANTENNAS AND RETAIN (3) SPARE ANTENNAS.
- REMOVE (6) EXISTING NOKIA RRHs FROM TOWER AND INSTALL (3) NEW SAMSUNG B5/B13 RRH-BR04C AND INSTALL (3) NEW SAMSUNG B2/B66A RRH-BR049 TO TOWER.
- INSTALL (6) NEW JMA MX06FRO660-03 ANTENNAS ON NEW JMA 91900314-02 SIDE-BY-SIDE MOUNTS.
- INSTALL (3) MT6407-77A ALL-IN-ONE ANTENNA/RRHs.
- REPLACE EXISTING HYBRIFLEX FOR (2) 6X12 HYBRIFLEX LI.
- PLUMB 700/850/PCS/AWS/L-SUB6 ACCORDING TO THE PLUMBING DIAGRAM.
- USE RF PORTS ON DUAL BAND RRHs TO COMMUNICATE WITH RETs VIA SMART BIAS-T BUILT INTO THE ANTENNA.
- CAP AND WEATHERPROOF UNUSED PORTS/CONNECTORS.

PROJECT INFORMATION

SITE NAME:	NORWALK 9 CT
SITE ADDRESS:	6 SHIRLEY ST. NORWALK, CT 06850
LESSEE/TENANT:	CELLCO PARTNERSHIP d.b.a. VERIZON WIRELESS 20 ALEXANDER DRIVE WALLINGFORD, CT 06492
CONTACT PERSON:	WALTER CHARCZNSKI (CONSTRUCTION MANAGER) VERIZON WIRELESS (860) 306-1806
ENGINEER:	CENTEK ENGINEERING, INC. 63-2 NORTH BRANFORD RD. BRANFORD, CT. 06405 (203) 488-0580
PROJECT COORDINATES:	LATITUDE: 41°-06'-56.0016"N LONGITUDE: 73°-26'-32.9984"W (COORDINATES REFERENCED FROM VERIZON WIRELESS RFDS, DATED 11/17/2020)

SHEET INDEX

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
1	11/08/21	ANC	DMD	CONSTRUCTION DRAWINGS - ISSUED PER REVISED SA DATE
0	07/19/21	DMD	T.L.	CONSTRUCTION DRAWINGS - ISSUED FOR CONSTRUCTION
A	05/04/21	ANC	DMD	PRELIMINARY CONSTRUCTION DRAWINGS - REVISED PER CLIENT COMMENTS
	05/03/21	ANC	DMD	PRELIMINARY CONSTRUCTION DRAWINGS - ISSUED FOR CLIENT REVIEW

PROFESSIONAL ENGINEER SEAL

verizon

CENTEK engineering
Centered on Solutions
(203) 488-0580
(203) 488-8587 Fax
63-2 North Branford Road
Branford, CT 06405
www.CentekEng.com

Cellco Partnership d/b/a Verizon Wireless

NORWALK 9 CT

6 SHIRLEY ST.
NORWALK, CT 06850

DATE: 06/02/21
SCALE: AS NOTED
JOB NO. 20150.05

TITLE SHEET

T-1

Sheet No. 1 of 6

NOTES AND SPECIFICATIONS

DESIGN BASIS:

GOVERNING CODE: 2015 INTERNATIONAL BUILDING (IBC) AS MODIFIED BY THE 2018 CT STATE BUILDING CODE AND AMENDMENTS.

1. DESIGN CRITERIA:

- RISK CATEGORY: II (BASED ON TABLE 1604.5 OF THE 2015 IBC)
- ULTIMATE DESIGN SPEED (BUILDING): 120 MPH (Vasd) (EXPOSURE C/IMPORTANCE FACTOR 1.0 BASED ON ASCE 7-10) PER 2015 INTERNATIONAL BUILDING CODE (IBC) AS MODIFIED BY THE 2018 CONNECTICUT STATE BUILDING CODE.
- SEISMIC LOAD (DOES NOT CONTROL): PER ASCE 7-10 MINIMUM DESIGN LOADS FOR BUILDING AND OTHER STRUCTURES.

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE IN COMPLIANCE WITH THE GOVERNING BUILDING CODE.
2. DRAWINGS INDICATE THE MINIMUM STANDARDS, BUT IF ANY WORK SHOULD BE INDICATED TO BE SUBSTANDARD TO ANY ORDINANCES, LAWS, CODES, RULES, OR REGULATIONS BEARING ON THE WORK, THE CONTRACTOR SHALL INCLUDE IN HIS WORK AND SHALL EXECUTE THE WORK CORRECTLY IN ACCORDANCE WITH SUCH ORDINANCES, LAWS, CODES, RULES OR REGULATIONS WITH NO INCREASE IN COSTS.
3. BEFORE BEGINNING THE WORK, THE CONTRACTOR IS RESPONSIBLE FOR MAKING SUCH INVESTIGATIONS CONCERNING PHYSICAL CONDITIONS (SURFACE AND SUBSURFACE) AT OR CONTIGUOUS TO THE SITE WHICH MAY AFFECT PERFORMANCE AND COST OF THE WORK.
4. DIMENSIONS AND DETAILS SHALL BE CHECKED AGAINST EXISTING FIELD CONDITIONS.
5. THE CONTRACTOR SHALL VERIFY AND COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS, SLEEVES AND ANCHOR BOLTS AS REQUIRED BY ALL TRADES.
6. ALL DIMENSIONS, ELEVATIONS, AND OTHER REFERENCES TO EXISTING STRUCTURES, SURFACE, AND SUBSURFACE CONDITIONS ARE APPROXIMATE. NO GUARANTEE IS MADE FOR THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS, ELEVATIONS, ANGLES WITH EXISTING CONDITIONS AND WITH ARCHITECTURAL AND SITE DRAWINGS BEFORE PROCEEDING WITH ANY WORK.
7. AS THE WORK PROGRESSES, THE CONTRACTOR SHALL NOTIFY THE OWNER OF ANY CONDITIONS WHICH ARE IN CONFLICT OR OTHERWISE NOT CONSISTENT WITH THE CONSTRUCTION DOCUMENTS AND SHALL NOT PROCEED WITH SUCH WORK UNTIL THE CONFLICT IS SATISFACTORILY RESOLVED.
8. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE SAFETY CODES AND REGULATIONS DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PROVIDING AND MAINTAINING ADEQUATE SHORING, BRACING, AND BARRICADES AS MAY BE REQUIRED FOR THE PROTECTION OF EXISTING PROPERTY, CONSTRUCTION WORKERS, AND FOR PUBLIC SAFETY.
9. THE CONTRACTOR IS SOLELY RESPONSIBLE TO DETERMINE CONSTRUCTION PROCEDURE AND SEQUENCE, AND TO ENSURE THE SAFETY OF THE EXISTING STRUCTURES AND ITS COMPONENT PARTS DURING CONSTRUCTION. THIS INCLUDES THE ADDITION OF WHATEVER SHORING, BRACING, UNDERPINNING, ETC. THAT MAY BE NECESSARY. MAINTAIN EXISTING SITE OPERATIONS, COORDINATE WORK WITH NORTHEAST UTILITIES
10. ALL DAMAGE CAUSED TO ANY EXISTING STRUCTURE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL BE HELD LIABLE FOR ALL REPAIRS REQUIRED FOR EXISTING STRUCTURES IF DAMAGED DURING CONSTRUCTION ACTIVITIES.
11. REFER TO DRAWING T1 FOR ADDITIONAL NOTES AND REQUIREMENTS.

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
1	11/08/21	ANC	DMD	CONSTRUCTION DRAWINGS – ISSUED PER REVISED SA DATE
0	07/07/21	DMD	TJL	CONSTRUCTION DRAWINGS – ISSUED FOR CONSTRUCTION
B	06/14/21	ANC	DMD	PRELIMINARY CONSTRUCTION DRAWINGS – REVISED PER CLIENT COMMENTS
A	05/12/21	ANC	DMD	PRELIMINARY CONSTRUCTION DRAWINGS – ISSUED FOR CLIENT REVIEW

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NOTES AND SPECIFICATIONS

N-1

Sheet No. 2 of 6

PLUMBING DIAGRAM NOTES:

1. PORTS 1 & 2 ARE FOR LOW BAND (698–896 MHz).
2. PORTS 3, 4, 5 & 6 ARE FOR HIGH BAND (1695–2360 MHz).
3. SMART BIAS TEE (SBT) IS THROUGH ANTENNA PORTS 1 & 3 (1 FOR LOW BAND AND 3 FOR HIGH BAND).
4. AISG CABLE IS ONLY NEEDED WHEN DRAWN IN THE DIAGRAMS ABOVE. IF IT IS NOT DRAWN THEN SBT IS ENOUGH TO CONTROL ALL RET MOTORS.
5. NOT ALL SBT PORTS ARE NEEDED TO CONTROL RET. ONLY GREEN PORT CONNECTION TO GREEN PORT WILL CONTROL RET.

RET DC SIGNAL PASS FOR RET (PORT THAT WILL CONTROL RET)

PLUMBING DIAGRAM COMMENTS:

A. DIAGRAMS SHOW ANTENNA PORT CONFIGURATIONS AS VIEWED FROM BELOW ANTENNAS.

B. ANTENNA POSITIONS ARE INDICATED AS VIEWED FROM IN FRONT OF ANTENNAS.

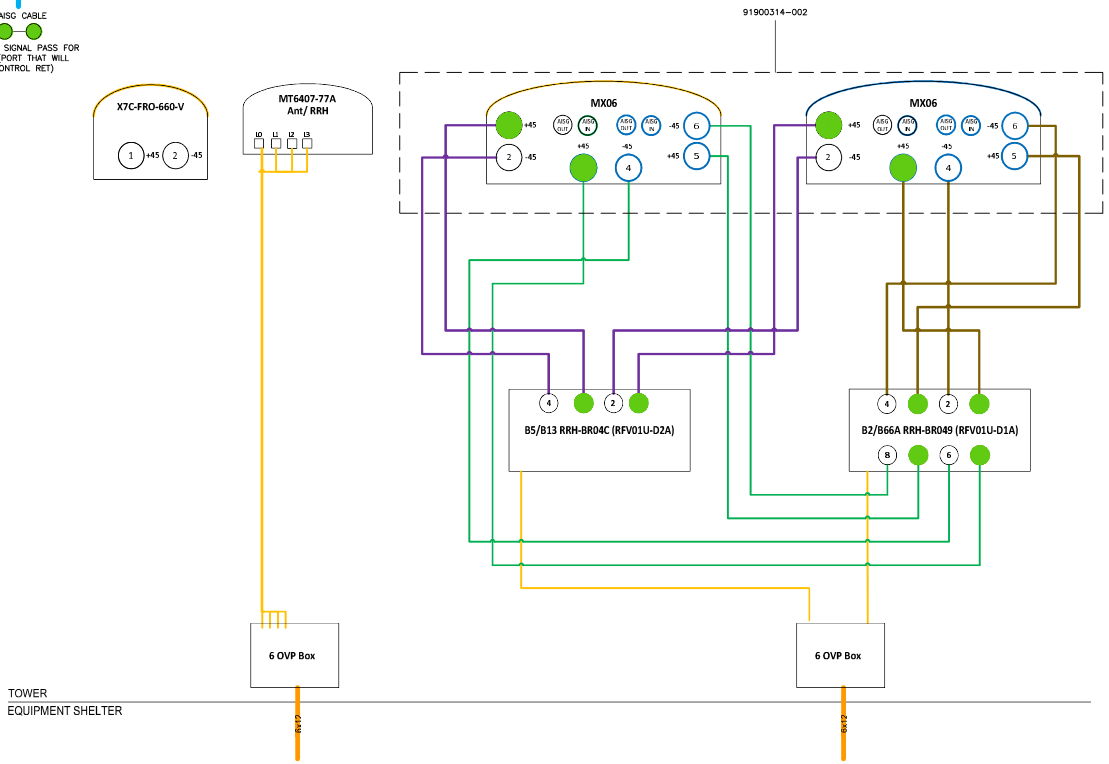
C. CAP AND WEATHERPROOF UNUSED ANTENNA PORTS.

D. ALL PLUMBING DIAGRAM COLORS ARE IRRELEVANT EXCEPT FOR AISG AND HYBRIFLEX CABLE. (FOR THE COAX COLORS, FOLLOW COAX COLORS GUIDE ABOVE)

DC SIGNAL CAPABLE PORT

AISG CABLE

RET DC SIGNAL PASS FOR RET (PORT THAT WILL CONTROL RET)



NOTES:

1. INFORMATION SHOWN HEREIN IS FOR USE BY VERIZON WIRELESS EQUIPMENT OPERATIONS.
2. THIS B.OM. DRAWING IS BASED ON FACILITY UPGRADE DESIGN DRAWINGS PREPARED BY CENTEK ENGINEERING (REV.1 DATED: 10.06.21), & VERIZON WIRELESS RF ANTENNA EQUIPMENT RECOMMENDATION (DATED 11.17.20).

BILL OF MATERIALS		
TECHNOLOGY	QUANTITY	ANTENNA
LTE 700 LTE 850 LTE PCS 1900 LTE AWS 2100	6	JMA ANTENNA MODEL: MX06FRO660-03
5G	3	SAMSUNG ANTENNA MODEL: MT6407-77A

CABLES	QUANTITY	LENGTH EA	COMMENTS
HYBRID CABLE	2	280FT EA	6X12 HYBRIFLEX LI

RADIOS	QUANTITY	COMMENTS
LTE 700 LTE 850 LTE PCS 1900	3	SAMSUNG MODEL: B5/B13 RRH-BR04C
LTE AWS 2100 5G	3	SAMSUNG MODEL: B2/B66A RRH-BR049 INTEGRATED INTO MT6407-77A ANTENNA

DIPLEXERS	QUANTITY	COMMENTS
–	0	–

OVP BOXES	QUANTITY	COMMENTS
–	–	–

ANTENNA MOUNT	QUANTITY	COMMENTS
SIDE-BY-SIDE MOUNTING KIT	3	JMA MOUNT MODEL: 91900314-02

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
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A	05/04/21	ANC	DMD	PRELIMINARY CONSTRUCTION DRAWINGS – REVISED PER CLIENT COMMENTS
A	05/03/21	ANC	DMD	PRELIMINARY CONSTRUCTION DRAWINGS – ISSUED FOR CLIENT REVIEW

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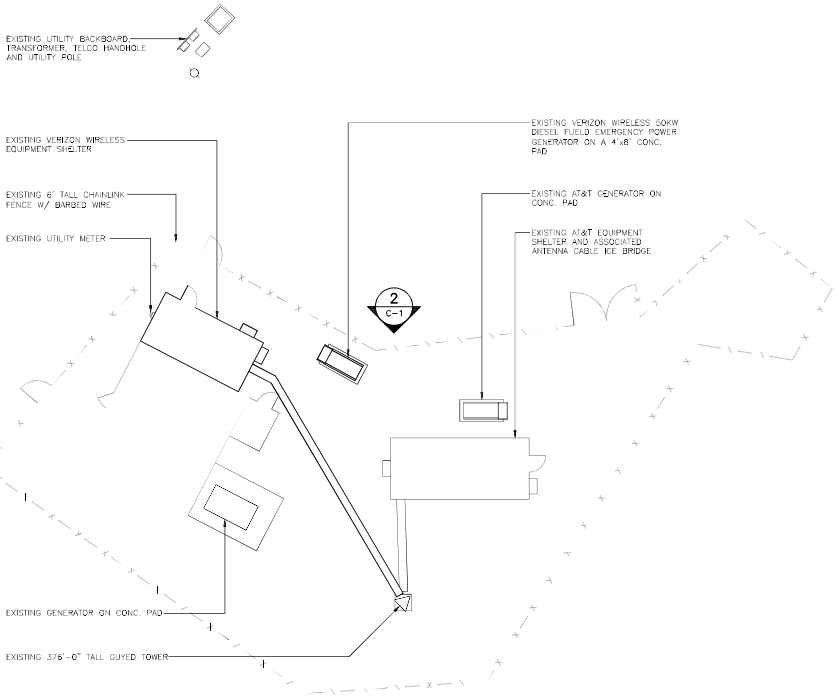
RF BILL OF MATERIALS

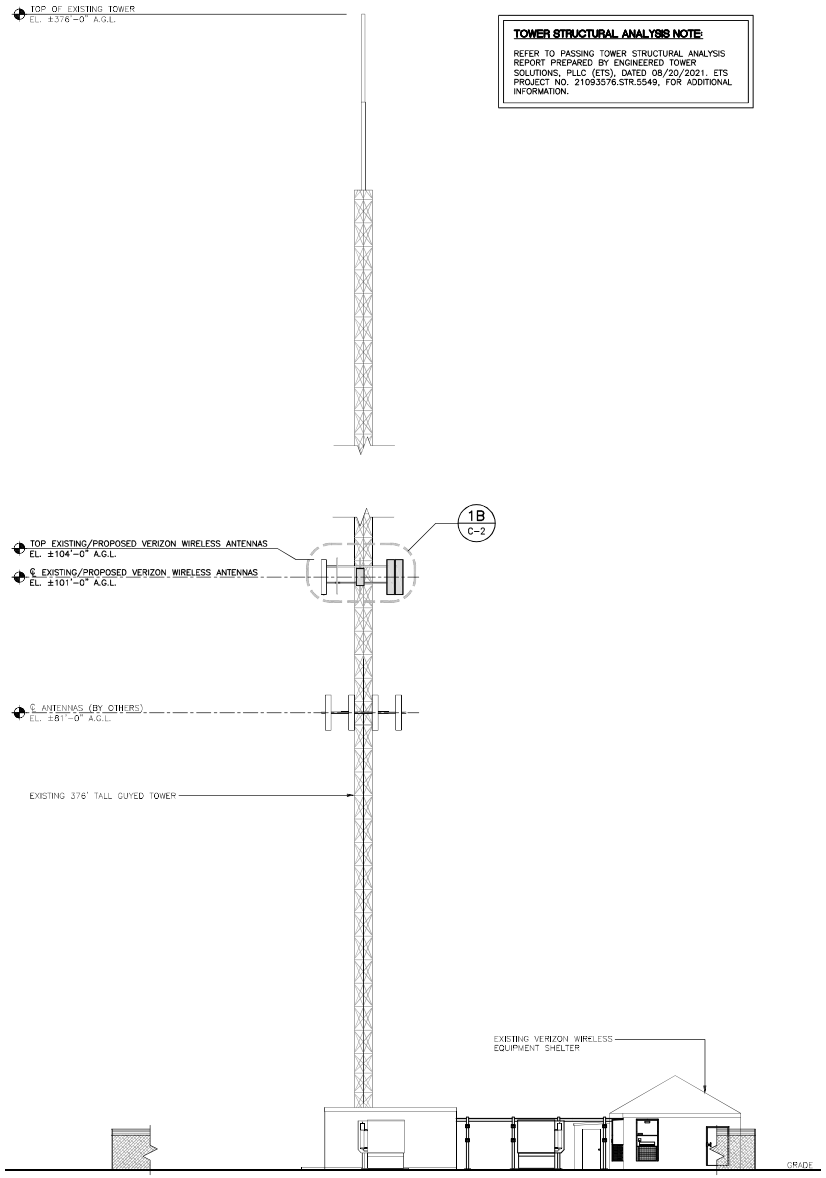
B-1

Sheet No. 3 of 6



1 C-1 **COMPOUND PARTIAL SITE PLAN**
SCALE: 3/32" = 1'- 0"

APPROXIMATE NORTH



TOWER STRUCTURAL ANALYSIS NOTE:

REFER TO PASSING TOWER STRUCTURAL ANALYSIS REPORT PREPARED BY ENGINEERED TOWER SOLUTIONS, PLLC (ETS), DATED 08/20/2021, ETS PROJECT NO. 21093576.STR.5549, FOR ADDITIONAL INFORMATION.

2 C-1 **ELEVATION - PROPOSED**
SCALE: 1" = 10'-0"

GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 inch = 10 ft.

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
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PROFESSIONAL ENGINEER SEAL

verizon

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Cellco Partnership d/b/a Verizon Wireless

NORWALK 9 CT

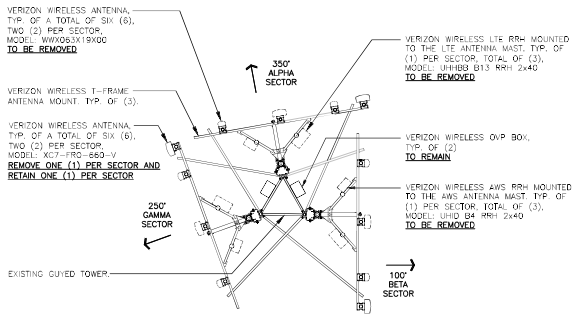
6 SHIRLEY ST.
NORWALK, CT 06850

DATE: 06/02/21
SCALE: AS NOTED
JOB NO. 20150.05

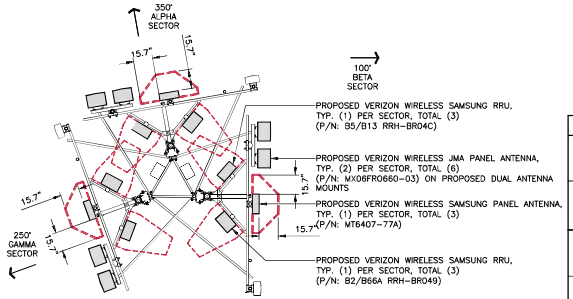
ROOF/ PARTIAL SITE PLAN AND ELEVATION

C-1

Sheet No. 4 of 6



1 / C-2 **EXISTING SECTOR CONFIGURATION PLAN**
SCALE: 1/4" = 1'-0"



1B / C-2

1A / C-2 **PROPOSED SECTOR CONFIGURATION PLAN**
SCALE: 1/4" = 1'-0"

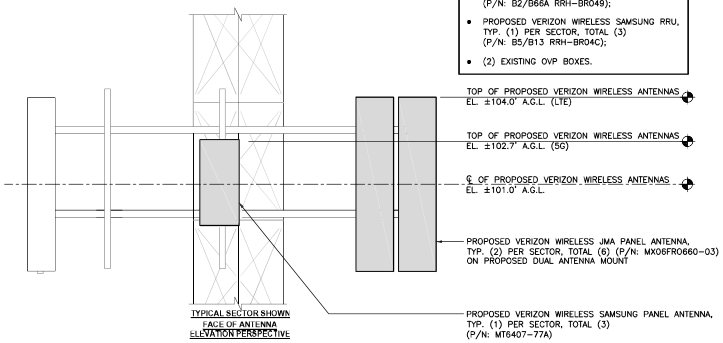
ANTENNA MOUNT ANALYSIS NOTE:

1. REFER TO PASSING VERIZON WIRELESS MOUNT ANALYSIS REPORT PREPARED BY MASER CONSULTING CONNECTICUT DATED 05/21/2021 FOR ADDITIONAL INFORMATION.

LEGEND		
- - - -	VERIZON WIRELESS MT6407-77A REQUIRED ANTENNA CLEARANCE LIMITS (PER DETAILS ON SHEET C-2)	
ANTENNA CLEARANCE STATUS	ALPHA SECTOR: COMPLIANT BETA SECTOR: COMPLIANT GAMMA SECTOR: COMPLIANT	
- - - - - -	VERIZON WIRELESS RRU REQUIRED CLEARANCE LIMITS (PER DETAILS ON SHEET C-2)	
RRU CLEARANCE STATUS	ALPHA SECTOR: COMPLIANT BETA SECTOR: COMPLIANT GAMMA SECTOR: COMPLIANT	

NOT SHOWN IN ELEVATION VIEW FOR CLARITY:

- PROPOSED VERIZON WIRELESS SAMSUNG RRU, TYP. (1) PER SECTOR, TOTAL (3) (P/N: B2/B66A RRH-BR04B);
- PROPOSED VERIZON WIRELESS SAMSUNG RRU, TYP. (1) PER SECTOR, TOTAL (3) (P/N: B5/B13 RRH-BR04C);
- (2) EXISTING OVP BOXES.



1B / C-2 **PROPOSED SECTOR CONFIGURATION ELEVATION**
SCALE: 1/2" = 1'-0"

ELEVATION - ISOMETRIC

BOTTOM

8-PORT SECTOR ANTENNA		
EQUIPMENT	DIMENSIONS	WEIGHT
MAKE: JMA MODEL: MX06FRO660-03	71.3"L x 15.4"W x 10.7"D	60.0 LBS. (W/OUT MOUNT KIT)

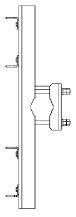
2 / C-2 **SECTOR ANTENNA DETAIL**
NOT TO SCALE

ANTENNA FRONT

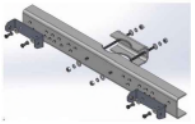
SECTOR ANTENNA		
EQUIPMENT	DIMENSIONS	WEIGHT
MAKE: SAMSUNG MODEL: MT6407-77A	35.1"h x 16.1"W x 5.5"D (NOT TO EXCEED)	87 LBS. (NOT TO EXCEED)
CLEARANCES AND SERVICE AREA		
TOP: 31.5"	HORIZONTAL DISTANCE: 31.5" (ANT. TO ANT.)	
FRONT, SIDES & BOTTOM: 15.7"	VERTICAL DISTANCE: 63.0" (ANT. TO ANT.)	

NOTES:
1. THIS ANTENNA HAS ITS OWN BUILT-IN RRH.

3 / C-2 **SECTOR ANTENNA DETAIL**
NOT TO SCALE



PLAN VIEW



ANTENNA MOUNT ISOMETRIC

DUAL ANTENNA MOUNTING KIT	
EQUIPMENT	DESCRIPTION
MOUNT MAKE: JMA MODEL: 919003314-02	• SIDE-BY-SIDE MOUNTING KIT, ACCOMMODATES (2) COMPATABLE ANTENNAS • 2 BRACKETS REQUIRED FOR 4'-6' ANTENNAS • 3 BRACKETS REQUIRED FOR 6'-8' ANTENNAS

4 / C-2 **DUAL ANTENNA MOUNT DETAIL**
NOT TO SCALE

DUAL BAND RRU (REMOTE RADIO UNIT)			
EQUIPMENT	BANDS	DIMENSIONS	WEIGHT
MAKE: SAMSUNG MODEL: B2/B66A RRH-BR049 (RFV01U-D1A)	B2: PCS (1900 MHz) B66: AWS (2100 MHz)	15.0"H x 15.0"W x 10.0"D	84.4 LBS.
MAKE: SAMSUNG MODEL: B5/B13 RRH-BR04C (RFV01U-D2A)	B5: 850 MHz B13: 700 MHz	15.0"H x 15.0"W x 8.1"D	70.3 LBS.

NOTES:
1. CONTRACTOR TO COORDINATE FINAL EQUIPMENT MODEL SELECTION WITH VERIZON WIRELESS CONSTRUCTION MANAGER PRIOR TO ORDERING.

5 / C-2 **PROPOSED RADIO DETAILS**
NOT TO SCALE

REV	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
A	05/07/21	ANC	DMD	PRELIMINARY CONSTRUCTION DRAWINGS - ISSUED FOR CLIENT REVIEW
0	05/17/21	ANC	DMD	PRELIMINARY CONSTRUCTION DRAWINGS - REVISED PER CLIENT COMMENTS
1	07/07/21	T.L.	DMD	CONSTRUCTION DRAWINGS - ISSUED FOR CONSTRUCTION
2	07/30/21	ANC	DMD	CONSTRUCTION DRAWINGS - ISSUED PER REVISED SA DATE

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Cellco Partnership d/b/a Verizon Wireless

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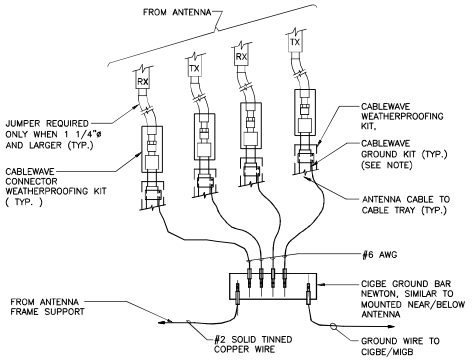
DATE: 06/02/21
SCALE: AS NOTED
JOB NO. 20150.05

ANTENNA CONFIGURATION AND RF DETAILS

C-2
Sheet No. 5 of 6

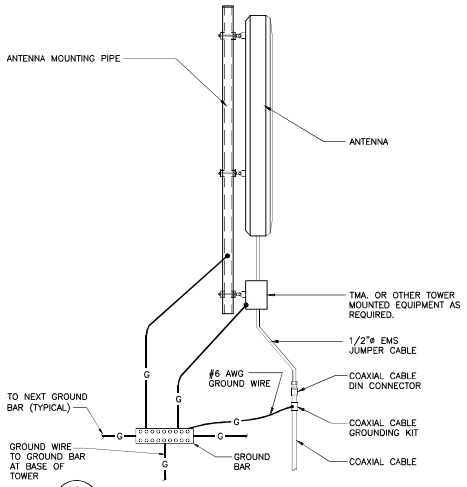


NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO CIGBE

1 / E-1 CONNECTION OF GROUND WIRES TO GROUND BAR

NOT TO SCALE

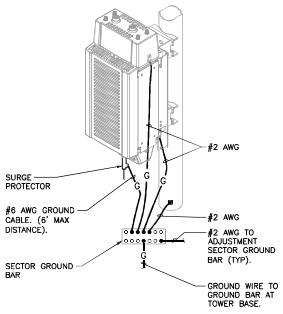


4 / E-1 TYPICAL ANTENNA GROUNDING DETAIL

NOT TO SCALE

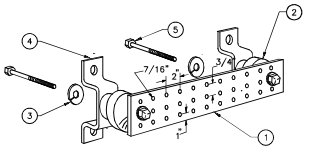
EACH RRH CABINET SHALL BE GROUNDED IN THE FOLLOWING MANNER:

1. AT TOP OF THE CABINET
2. AT RIGHT SIDE OF THE CABINET.



2 / E-1 RRH POLE MOUNT GROUNDING

NOT TO SCALE

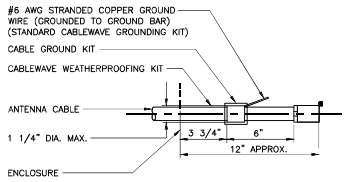


NOTES

1. TINNED COPPER GROUND BAR, 1/4" x 4" x 20", NEWTON INSTRUMENT CO. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION.
2. INSULATORS, NEWTON INSTRUMENT CAT. NO. 3061-4.
3. 5/8" LOCK WASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-8.
4. WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT NO. A-6056.
5. 5/8-11 x 1" STAINLESS STEEL TRUSS SPANNER MACHINE SCREWS.

5 / E-1 GROUND BAR DETAIL

NOT TO SCALE



NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.

3 / E-1 ANTENNA CABLE GROUNDING DETAIL

NOT TO SCALE

ELECTRICAL SPECIFICATIONS

SECTION 16010

1.01. SCOPE OF WORK

A. WORK SHALL INCLUDE ALL LABOR, EQUIPMENT AND SERVICES REQUIRED TO COMPLETE (MAKE READY FOR OPERATION) ALL THE ELECTRICAL WORK INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING:

1. CELLULAR GROUNDING SYSTEMS CONSISTING OF ANTENNA GROUNDING, GROUND BARS, ETC.

1.02. GENERAL REQUIREMENTS

A. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE MADE IN STRICT ACCORDANCE WITH ALL LOCAL, STATE AND NATIONAL CODES AND REGULATIONS WHICH MAY APPLY AND NOTHING IN THE DRAWINGS OR SPECIFICATIONS SHALL BE INTERPRETED AS AN INFRINGEMENT OF SUCH CODES OR REGULATIONS.

B. THE ELECTRICAL CONTRACTOR IS TO BE RESPONSIBLE FOR THE COMPLETE INSTALLATION AND COORDINATION OF THE ENTIRE ELECTRICAL SERVICE. ALL ACTIVITIES TO BE COORDINATED THROUGH OWNERS REPRESENTATIVE, DESIGN ENGINEER AND OTHER AUTHORITIES HAVING JURISDICTION OF TRADES.

C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND PAY ALL FEES THAT MAY BE REQUIRED FOR THE ELECTRICAL WORK AND FOR SCHEDULING OF ALL INSPECTIONS THAT MAY BE REQUIRED BY THE LOCAL AUTHORITY.

D. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE BUILDING OWNER FOR NEW AND/OR DEMOLITION WORK INVOLVED.

E. NO MATERIAL OTHER THAN THAT CONTAINED IN THE "LATEST LIST OF ELECTRICAL FITTINGS" APPROVED BY THE UNDERWRITERS' LABORATORIES, SHALL BE USED IN ANY PART OF THE WORK. ALL MATERIAL FOR WHICH LABEL SERVICE HAS BEEN ESTABLISHED SHALL BEAR THE U.L. LABEL.

F. THE CONTRACTOR SHALL GUARANTEE ALL NEW WORK FOR A PERIOD OF ONE YEAR FROM THE ACCEPTANCE DATE BY THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING WARRANTIES FROM ALL EQUIPMENT MANUFACTURERS FOR SUBMISSION TO THE OWNER.

G. DRAWINGS INDICATE GENERAL ARRANGEMENT OF WORK INCLUDED IN CONTRACT. CONTRACTOR SHALL, WITHOUT EXTRA CHARGE, MAKE MODIFICATIONS TO THE LAYOUT OF THE WORK TO PREVENT CONFLICT WITH WORK OF OTHER TRADES AND FOR THE PROPER INSTALLATION OF WORK. CHECK ALL DRAWINGS AND VISIT JOB SITE TO VERIFY SPACE AND TYPE OF EXISTING CONDITIONS IN WHICH WORK WILL BE DONE, PRIOR TO SUBMITTAL OF BID.

H. THE ELECTRICAL CONTRACTOR SHALL SUPPLY THREE (3) COMPLETE SETS OF APPROVED DRAWINGS, ENGINEERING DATA SHEETS, MAINTENANCE AND OPERATING INSTRUCTION MANUALS FOR ALL SYSTEMS AND THEIR RESPECTIVE EQUIPMENT. THESE MANUALS SHALL BE INSERTED IN VINYL COVERED 3-RING BINDERS AND TURNED OVER TO OWNER'S REPRESENTATIVE ONE (1) WEEK PRIOR TO FINAL PUNCH LIST.

I. ALL WORK SHALL BE INSTALLED IN A NEAT AND WORKMAN LIKE MANNER AND WILL BE SUBJECT TO THE APPROVAL OF THE OWNER'S REPRESENTATIVE.

J. ALL EQUIPMENT AND MATERIALS TO BE INSTALLED SHALL BE NEW, UNLESS OTHERWISE NOTED.

K. BEFORE FINAL PAYMENT, THE CONTRACTOR SHALL PROVIDE A COMPLETE SET OF PRINTS (AS-BUILTS), LEGIBLY MARKED IN RED PENCIL TO SHOW ALL CHANGES FROM THE ORIGINAL PLANS.

L. ENTIRE ELECTRICAL INSTALLATION SHALL BE IN ACCORDANCE WITH OWNER'S SPECIFICATIONS, AND REQUIREMENTS OF ALL LOCAL AUTHORITIES HAVING JURISDICTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH APPROPRIATE INDIVIDUALS TO OBTAIN ALL SUCH SPECIFICATIONS AND REQUIREMENTS. NOTHING CONTAINED IN, OR OMITTED FROM, THESE DOCUMENTS SHALL RELIEVE CONTRACTOR FROM THIS OBLIGATION.

SECTION 16450

1.01. GROUNDING

A. ALL NON-CURRENT CARRYING PARTS OF THE ELECTRICAL AND TELEPHONE CONDUIT SYSTEMS SHALL BE MECHANICALLY AND ELECTRICALLY CONNECTED TO PROVIDE AN INDEPENDENT RETURN PATH TO THE EQUIPMENT GROUNDING SOURCES.

B. GROUNDING SYSTEM WILL BE IN ACCORDANCE WITH THE LATEST ACCEPTABLE EDITION OF THE NATIONAL ELECTRICAL CODE AND REQUIREMENTS PER LOCAL INSPECTOR HAVING JURISDICTION.

C. EQUIPMENT GROUNDING CONDUCTOR:

1. EACH EQUIPMENT GROUND CONDUCTOR SHALL BE SIZED IN ACCORDANCE WITH THE N.E.C. ARTICLE 250-122.

2. THE MINIMUM SIZE OF EQUIPMENT GROUND CONDUCTOR SHALL BE #12 AWG COPPER.

D. CELLULAR GROUNDING SYSTEM:

PROVIDE THE CELLULAR GROUNDING SYSTEM AS SPECIFIED ON DRAWINGS, INCLUDING, BUT NOT LIMITED TO:

1. GROUND BARS
2. ANTENNA GROUND CONNECTIONS AND PLATES.

E. ALL EQUIPMENT SHALL BE BONDED TO GROUND AS REQUIRED BY N.E.C., MFG. SPECIFICATIONS, AND OWNER'S SPECIFICATIONS.

REV	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
A	05/03/21	ANC	DMD	PRELIMINARY CONSTRUCTION DRAWINGS - ISSUED FOR CLIENT REVIEW
B	05/04/21	ANC	DMD	PRELIMINARY CONSTRUCTION DRAWINGS - REVISED PER CLIENT COMMENTS
0	07/07/21	T.L.	DMD	CONSTRUCTION DRAWINGS - ISSUED FOR CONSTRUCTION
1	07/08/21	ANC	DMD	CONSTRUCTION DRAWINGS - ISSUED PER REVISED SA DATE

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ELECTRICAL DETAILS AND SPECIFICATIONS

E-1

Sheet No. 6 of 6

SAMSUNG

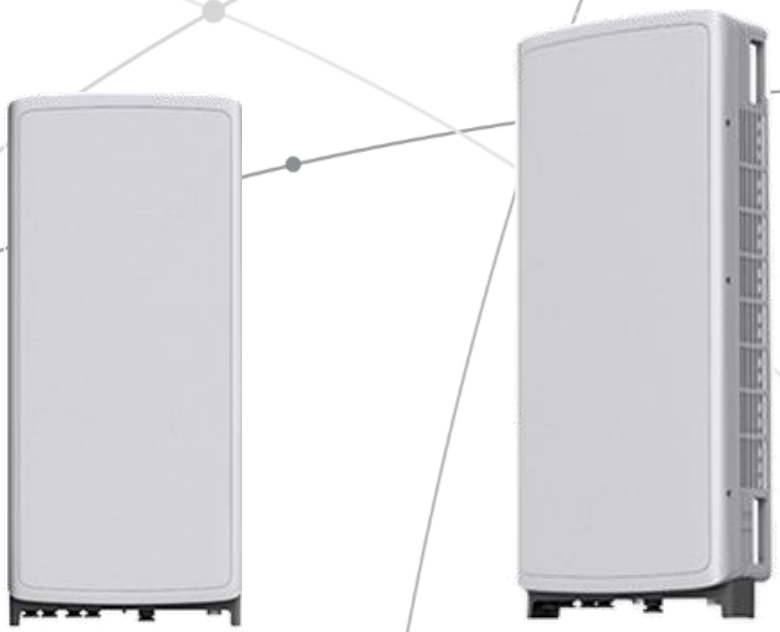
SAMSUNG

C-Band 64T64R Massive MIMO Radio

for High Capacity and Wide Coverage

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

Model Code : MT6407-77A

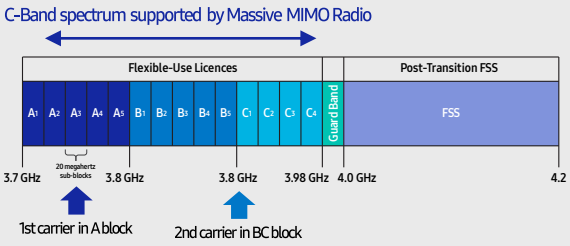


Points of Differentiation

Wide Bandwidth

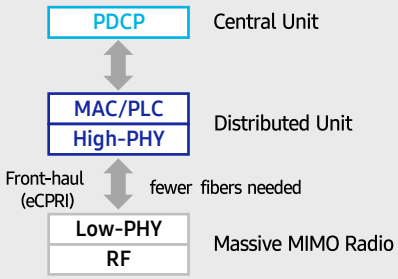
With capability to support up to 2 CC carrier configuration, Samsung C-Band massive MIMO Radio supports 200 MHz bandwidth in the C-Band spectrum.

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



Future Proof Product

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



Enhanced Performance

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

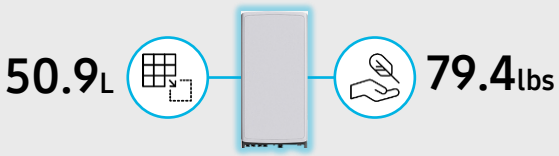
This helps operators reduce their CAPEX as they now need less products to cover the same area than before.

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

Well Matched Design

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

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



Technical Specifications

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

SAMSUNG

About Samsung Electronics Co., Ltd.

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

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SAMSUNG

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

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

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

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

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

Features and Benefits

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

Key Technical Specifications

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

SAMSUNG

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

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

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

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

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

Features and Benefits

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

Key Technical Specifications

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

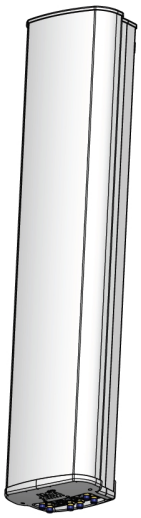
MX06FRO660-03

NWAV™ X-Pol Hex-Port Antenna

X-Pol Hex-Port 6 ft 60° Fast Roll Off antenna with independent tilt on 700 & 850 MHz:

2 ports 698-798, 824-894 MHz and 4 ports 1695-2180 MHz

- Fast Roll Off (FRO™) azimuth beam pattern improves Intra- and Inter-cell SINR
- Compatible with dual band 700/850 MHz radios with independent low band EDT without external diplexers
- Fully integrated (iRETs) with independent RET control for low and high bands for ease of network optimization
- SON-Ready array spacing supports beamforming capabilities
- Suitable for LTE/CDMA/PCS/UMTS/GSM air interface technologies
- Integrated Smart Bias-Ts reduce leasing costs

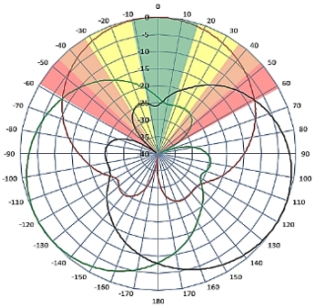


nwav

Fast Roll-Off antennas increase data throughput without compromising coverage

The horizontal beam produced by Fast Roll-Off (FRO) technology increases the Signal to Interference & Noise Ratio (SINR) by eliminating overlap between sectors .

Non-FRO antenna



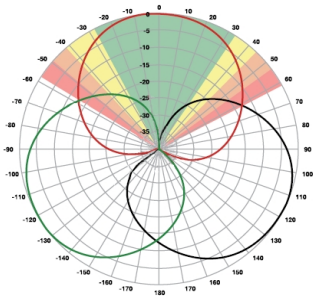
Large traditional antenna pattern overlap creates harmful interference.

JMA's FRO antenna pattern minimizes overlap, thereby minimizing interference.

LTE throughput	SINR	Speed (bps/Hz)	Speed increase	CQI
Excellent	>18	>4.5	333+%	8-10
Good	15-18	3.3-4.5	277%	6-7
Fair	10-15	2-3.3	160%	4-6
Poor	<10	<2	0%	1-3

The LTE radio automatically selects the best throughput based on measured SINR.

JMA FRO antenna



Electrical specification (minimum/maximum)	Ports 1, 2		Ports 3, 4, 5, 6		
Frequency bands, MHz	698-798	824-894	1695-1880	1850-1990	1920-2180
Polarization	± 45°		± 45°		
Average gain over all tilts, dBi	14.4	14.0	17.6	18.0	18.2
Horizontal beamwidth (HBW), degrees	60.5	53.0	55.0	55.0	55.5
Front-to-back ratio, co-polar power @180°± 30°, dB	>24	>24.0	>25.0	>25.0	>25.0
X-Pol discrimination (CPR) at boresight, dB	>15.0	>14.2	>18	>18	>15
Sector power ratio, percent	<3.5	<3.0	<3.7	<3.8	<3.6
Vertical beamwidth (VBW), degrees[1]	13.1	11.8	6.0	5.5	5.5
Electrical downtilt (EDT) range, degrees	2-14	2-14	0-9		
First upper side lobe (USLS) suppression, dB[1]	≤-15.0	≤-16.5	≤-16.0	≤-16.0	≤-16.0
Cross-polar isolation, port-to-port, dB[1]	25	25	25	25	25
Max VSWR / return loss, dB	1.5:1 / -14.0		1.5:1 / -14.0		
Max passive intermodulation (PIM), 2x20W carrier, dBc	-153		-153		
Max input power per any port, watts	300		250		
Total composite power all ports, watts	1500				

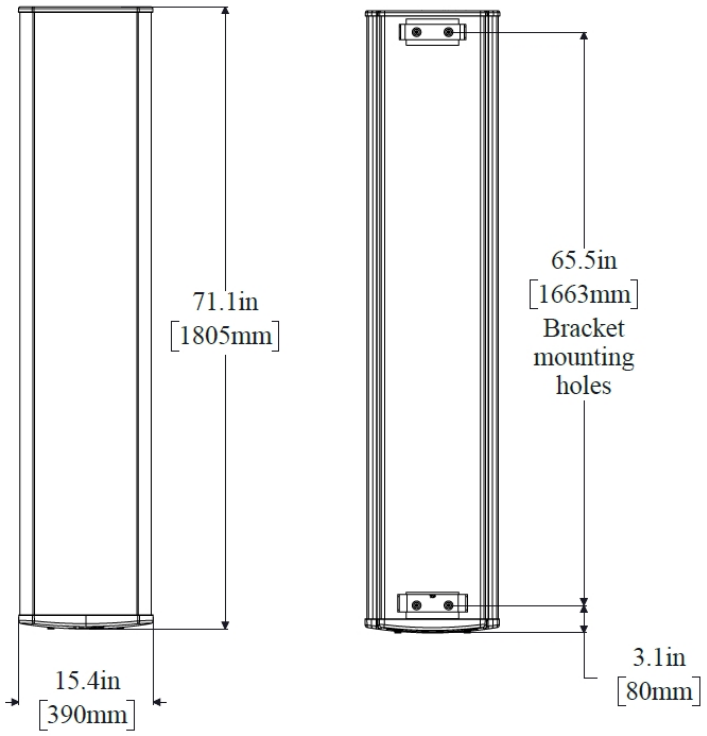
[1] Typical value over frequency and tilt

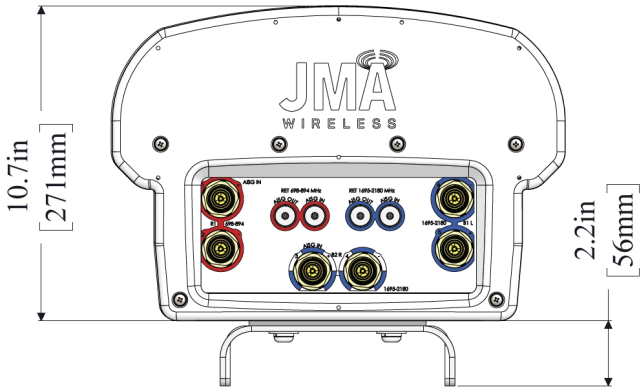
MX06FRO660-03

NWAV™ X-Pol Hex-Port Antenna

Mechanical specifications	
Dimensions height/width/depth, inches (mm)	71.3/ 15.4/ 10.7 (1811/ 392/ 273)
Shipping dimensions length/width/height, inches (mm)	82/ 20/ 15 (2083/ 508/ 381)
No. of RF input ports, connector type, and location	6 x 4.3-10 female, bottom
RF connector torque	96 lbf·in (10.85 N·m or 8 lbf·ft)
Net antenna weight, lb (kg)	60 (27.0)
Shipping weight, lb (kg)	90 (41.0)
Antenna mounting and downtilt kit included with antenna	91900318
Net weight of the mounting and downtilt kit, lb (kg)	18 (8.18)
Range of mechanical up/down tilt	-2° to 14°
Rated wind survival speed, mph (km/h)	150 (241)
Frontal, lateral, and rear wind loading @ 150 km/h, lbf (N)	154 (685), 73 (325), 158 (703)
Equivalent flat plate @ 100 mph and Cd=2, sq ft	2.6

Front view | **Back view** | **Bottom view**





Ordering information	
Antenna model	**Description**
MX06FRO660-03	6F X-Pol HEX FRO 60° independent tilt 700/850 RET, 4.3-10 & SBT
Optional accessories	
AISG cables	M/F cables for AISG connections
PCU-1000 RET controller	Stand-alone controller for RET control and configurations

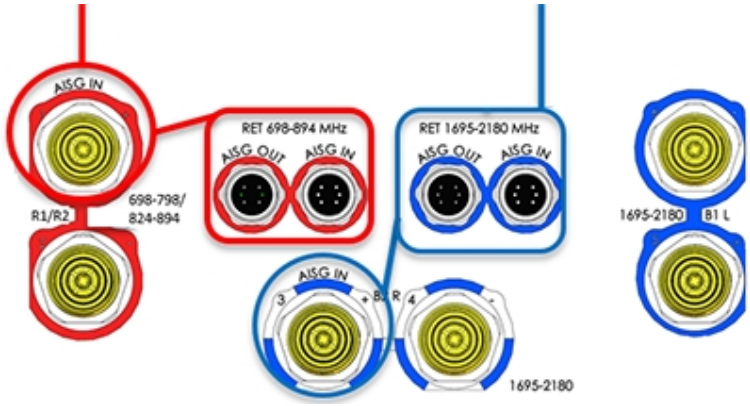
Remote electrical tilt (RET 1000) information	
RET location	Integrated into antenna
RET interface connector type	8-pin AISG connector per IEC 60130-9
RET connector torque	Min 0.5 N·m to max 1.0 N·m (hand pressure & finger tight)
RET interface connector quantity	2 pairs of AISG male/female connectors
RET interface connector location	Bottom of the antenna
Total no. of internal RETs (low bands)	2
Total no. of internal RETs (high bands)	1
RET input operating voltage, vdc	10-30
RET max power consumption, idle state, W	≤ 2.0
RET max power consumption, normal operating conditions, W	≤ 13.0
RET communication protocol	AISG 2.0 / 3GPP

RET and RF connector topology

Each RET device can be controlled either via the designated external AISG connector or RF port as shown below:

RET device	Band	RF port
R1	698-798	1-2
R2	824-894	1-2

RET device	Band	RF port
B1/B2	1695-2180	3-6

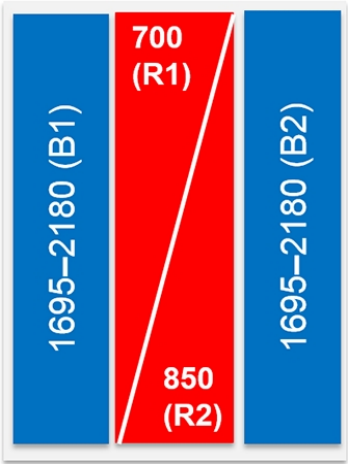


Array topology

3 sets of radiating arrays

R1/R2: 698-894 MHz
B1: 1695-2180 MHz
B2: 1695-2180 MHz

Band	RF port
1695-2180	3-4
698-894	1-2
1695-2180	5-6



ATTACHMENT 3

	General	Power	Density					
Site Name: Norwalk 9								
Tower Height: Verizon @ 101ft								
CARRIER	**# OF CHAN.**	**WATTS ERP**	**HEIGHT**	**FREQ.**	**CALC. POWER DENS**	**MAX. PERMISS. EXP.**	**FRACTION MPE**	**Total**
*AT&T-UMTS	1	325	81	880	0.0208	0.5867	0.35%	
*AT&T-LTE	2	1476	81	740	0.1887	0.4933	3.83%	
*AT&T-LTE	2	4842	81	1900	0.6191	1.0000	6.19%	
*AT&T-LTE	1	1285	81	2300	0.0822	1.0000	0.82%	
*Nextel	9	100	233	851	0.0063	0.5673	0.11%	
*Clearwire	2	153	155	2496	0.0050	1.0000	0.05%	
*Clearwire	1	500	205	11 GHz	0.0045	1.0000	0.05%	
VZW 700	**4**	**623**	**101**	**751**	**0.0088**	**0.5007**	**1.76%**	
VZW Cellular	**4**	**638**	**101**	**874**	**0.0090**	**0.5827**	**1.54%**	
VZW PCS	**4**	**1462**	**101**	**1980**	**0.0206**	**1.0000**	**2.06%**	
VZW AWS	**4**	**1566**	**101**	**2120**	**0.0221**	**1.0000**	**2.21%**	
VZW CBAND	**4**	**6531**	**101**	**3730.08**	**0.0921**	**1.0000**	**9.21%**	
								28.18%
* Source: Siting Council								

ATTACHMENT 4

Date: **August 20, 2021**

Jennifer Boccella
Operations Coordinator
CTI Towers, Inc.
(919) 893-2841 ext. 430

Engineered Tower Solutions, PLLC
3227 Wellington Court
Raleigh, NC 27615
(919) 782-2710

Subject:	**Structural Modification Analysis Report**	
Carrier Designation:	***Verizon Wireless* Co-Locate**	
	Carrier Site Number:	469061
	Carrier Site Name:	Norwalk 9 CT
CTI Towers Designation:	***CTI Towers* Site Number:**	52010
	***CTI Towers* Site Name:**	Norwalk 1
Engineering Firm Designation:	**ETS, PLLC Job Number:**	21093576.STR.5549
Site Data:	**6 Shirley Street, Norwalk, Fairfield County, CT 06850** **Latitude *41° 06' 56"*, Longitude *-73° 26' 04"*** **341.5 Foot - Guyed Tower**	

Dear Jennifer Boccella,

Engineered Tower Solutions is pleased to submit this **"Structural Modification Analysis Report"** to determine the structural integrity of the above-mentioned tower.

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

Modified Structure w/ Existing + Proposed Equipment Configuration **Tower: 98.6% Sufficient Capacity**
Foundation: 28.4% Sufficient Capacity

This analysis utilizes an ultimate 3-second gust wind speed of 120 mph as required by the 2018 Connecticut State Building Code (2015 IBC). Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Structural analysis prepared by:

Brent Sanders, PE
Structural Engineer III

Respectfully submitted by:

F. Geoffrey Bost, PE
President/Owner
CT License #: PEN.0029529

STATE OF CONNECTICUT
FREDERICK GEOFFREY BOST
PEN.0029529
LICENSED PROFESSIONAL ENGINEER
8/20/21

TABLE OF CONTENTS

1) INTRODUCTION

This tower is a 341.5 ft Guyed tower mapped by Delta Oaks Group in May of 2017. The original design code and wind speed are unknown.

The modification drawings included in Appendix D of this report, have also been considered in the is analysis.

2) ANALYSIS CRITERIA

TIA-222 Revision:	TIA-222-H
Risk Category:	II
Wind Speed:	120 mph
Exposure Category:	B
Topographic Factor:	1
Ice Thickness:	1.5 in
Wind Speed with Ice:	50 mph
Service Wind Speed:	60 mph

Table 1 - Proposed Equipment Configuration

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
101.0 (Verizon)	102.5	3	CSS	X7C-FRO-660-V	2 13 *	1-5/8 1-1/4
	101.0	6	JMA	MX06FRO-660-03		
		3	Samsung	MT6407-77A		
		3	Samsung	RFV01U-D1A		
		3	Samsung	RFV01U-D2A		
		1	Raycap	RRFDC-3315-PF-48		
		6 *	-	6' x 1' Panel Antennas (Assumed)		
		3	Tower Mounts	12.5' Sector Mounts		
		3	JMA	91900314-02 Mounts		

* Note: (18) total leased antennas and (15) total leased coax have been considered for Verizon to 101-ft in this analysis.

Table 2 - Other Considered Equipment

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
330.0	330.0	1	Shively	6810 Broadcast Antenna	1	1-5/8"
303.0	303.0	1	Scala	3' x 5.5' Grid Dish	1	7/16"
		1	Tower Mounts	2.38" Dia x 5' Pipe		
287.0	290.0	1	-	7.5" Dia x 3.5' Omni	1 1	7/8 3/8
	287.0	1	-	10" x 8" x 4.25" Box		
		1	Tower Mounts	5.5-ft Side Arm		
288.0	290.0	1	-	20' x 2.36" Dia Dipole	1	7/8
273.0	280.0	1	Andrew	DB413-B	1	1-5/8"
	273.0	1	Tower Mount	15" Standoff		
260.0	260.0	-	-	1.62" Dia x 25' Broadcast Antenna	1	1-5/8"
239.0	246.0	1	-	2.3" Dia x 20' Omni	1	7/8"

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
	239.0	1	Tower Mount	3.5' Standoff		
237.0	245.0	1	-	2.3" Dia x 20' Omni	1	7/8"
	237.0	1	Tower Mount	3' Standoff		
183.0	183.0	1	-	15" x 26.5" Conduit Box	1	7/16
169.0	169.0	1	-	10"x10"x1.25" Detuner Box	1	7/16
145.5	145.5	1	-	14.875"x15.125"x0.5" Flat Panel	1	1/4"
141.0	141.0	1	-	4' Gird Dish	1	7/8"
		1	Tower Mounts	2.38" Dia x 3.5' Pipe Mount		
80.0	81.5	3	CCI	HPA-65R-BUU-H6	12 1 2	7/8" 10mm 0.795"
		6	CCI	OPA-65R-LCUU-H6		
		3	CCI	DTMABP7819VG12A		
		3	Ericsson	RRUS-11		
		3	Ericsson	RRUS-32		
		3	Ericsson	RRUS-E2		
		1	Raycap	DC6-48-60-18-8C		
	80.0	3	Tower Mounts	9' Sector Frames		
33.0	33.0	1	-	26.5" x 15" Conduit Box	1	7/16
8.5	8.5	1	-	15"x15"x6.5" Detuner Box	1	7/16

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Remarks	Reference	Source
Previous Rigorous Structural Analysis Report	Delta Oaks Group (Proj No. STR17-00909-02)	05/08/2017	CTI Towers
Tower Mapping Report	Delta Oaks Group (Proj. No. AGI17-00909-03	05/04/2017	CTI Towers
Geotechnical Investigation Report	Delta Oaks Group (Proj No. GEO17-00909-03)	05/04/2017	CTI Towers
Foundation Investigation Report	Delta Oaks Group (Proj No. BGI17-00909-03)	05/04/2017	CTI Towers
Mount Analysis Report	Maser Consulting (Proj. No. 20777331A)	05/21/2021	CTI Towers
Previous Structural Analysis	ETS, PLLC (Job No. 21093576.STR.0367)	06/07/2021	ETS, PLLC
Tower Modification Drawings	ETS, PLLC (Job No. 21093576.STR.5549)	08/18/2021	Appendix D

3.1) Analysis Method

tnxTower (version 8.1.1), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A.

3.2) Assumptions

1) Tower and structures were built and have been maintained in accordance with the manufacturer's specifications.
2) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.
3) Tower geometry has been assumed accurate per Previous Tower Analysis Report listed above. If new information shows that these assumptions are inaccurate, ETS must be notified immediately to complete a reanalysis study.

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

4) ANALYSIS RESULTS

Table 4 - Section Capacity (Summary)

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
L1	341.5 - 314.5	Pole	P8x.322	1	-1.34	264.58	51.9	Pass
T1	314.5 - 310.5	Leg	2 1/2	4	-13.73	143.51	9.6	Pass
T2	310.5 - 306.5	Leg	2 1/2	12	-17.15	143.51	11.9 41.7 (b)	Pass
T3	306.5 - 281.5	Leg	2 1/2	20	-22.21	112.60	19.7	Pass
T4	281.5 - 276.5	Leg	2 1/2	54	-24.38	186.65	13.1	Pass
T5	276.5 - 271.5	Leg	2 1/2	65	-26.59	186.65	14.2	Pass
T6	271.5 - 266.5	Leg	2 1/2	78	-30.19	112.60	26.8	Pass
T7	266.5 - 261.5	Leg	2 1/2	86	-33.23	112.60	29.5	Pass
T8	261.5 - 256.5	Leg	2 1/2	96	-37.78	112.60	33.6 34.9 (b)	Pass
T9	256.5 - 251.5	Leg	2 1/2	104	-41.72	112.60	37.1	Pass
T10	251.5 - 246.5	Leg	2 1/2	114	-47.65	112.60	42.3	Pass
T11	246.5 - 241.5	Leg	2 1/2	122	-48.70	186.65	26.1	Pass
T12	241.5 - 236.5	Leg	2 1/2	135	-45.37	186.65	24.3	Pass
T13	236.5 - 231.5	Leg	2 1/2	147	-41.58	186.65	22.3 36.2 (b)	Pass
T14	231.5 - 226.5	Leg	2 1/2	159	-38.52	186.65	20.6	Pass
T15	226.5 - 221.5	Leg	2 1/2	171	-36.67	186.65	19.6	Pass
T16	221.5 - 216.5	Leg	2 1/2	183	-34.68	186.65	18.6	Pass
T17	216.5 - 211.5	Leg	2 1/2	195	-34.18	186.65	18.3	Pass
T18	211.5 - 206.5	Leg	2 1/2	208	-33.20	186.65	17.8 28.9 (b)	Pass
T19	206.5 - 201.5	Leg	2 1/2	219	-34.03	186.65	18.2	Pass
T20	201.5 - 196.5	Leg	2 1/2	232	-34.24	186.65	18.3	Pass
T21	196.5 - 191.5	Leg	2 1/2	243	-36.19	186.65	19.4	Pass
T22	191.5 - 186.5	Leg	2 1/2	256	-37.54	186.65	20.1	Pass
T23	186.5 - 181.5	Leg	2 1/2	268	-39.93	186.65	21.4 34.7 (b)	Pass
T24	181.5 - 176.5	Leg	2 1/4	280	-38.64	77.87	49.6	Pass
T25	176.5 - 171.5	Leg	2 1/4	289	-38.37	77.87	49.3	Pass
T26	171.5 - 166.5	Leg	2 1/4	296	-39.03	77.87	50.1	Pass
T27	166.5 - 161.5	Leg	2 1/4	307	-39.98	77.87	51.3	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
T28	161.5 - 156.5	Leg	2 1/4	315	-41.30	77.87	53.0	Pass
T29	156.5 - 151.5	Leg	2 1/4	324	-41.98	145.33	28.9	Pass
T30	151.5 - 146.5	Leg	2 1/4	336	-43.10	145.33	29.7	Pass
T31	146.5 - 141.5	Leg	2 1/4	348	-43.23	77.87	55.5	Pass
T32	141.5 - 136.5	Leg	2 1/4	357	-43.66	77.87	56.1	Pass
T33	136.5 - 131.5	Leg	2 1/4	366	-43.29	77.87	55.6	Pass
T34	131.5 - 106.5	Leg	2 1/4	375	-61.76	77.87	79.3	Pass
T35	106.5 - 101.5	Leg	2 1/4	409	-67.04	77.87	86.1	Pass
T36	101.5 - 96.5	Leg	2 1/4	417	-70.20	145.33	48.3	Pass
T37	96.5 - 91.5	Leg	2 1/4	430	-66.34	77.87	85.2	Pass
T38	91.5 - 86.5	Leg	2 1/4	438	-61.99	77.87	79.6	Pass
T39	86.5 - 81.5	Leg	2 1/4	446	-60.05	77.87	77.1	Pass
T40	81.5 - 76.5	Leg	2 1/4	456	-60.45	77.87	77.6	Pass
T41	76.5 - 71.5	Leg	2 1/4	464	-59.54	145.33	41.0	Pass
T42	71.5 - 66.5	Leg	2 1/4	476	-62.97	145.33	43.3	Pass
T43	66.5 - 61.5	Leg	2 1/4	488	-68.65	145.33	47.2	Pass
T44	61.5 - 56.5	Leg	2 1/4	500	-73.79	145.33	50.8 64.2 (b)	Pass
T45	56.5 - 51.5	Leg	2 1/4	512	-73.60	145.33	50.6	Pass
T46	51.5 - 46.5	Leg	2 1/4	524	-73.08	145.33	50.3	Pass
T47	46.5 - 41.5	Leg	2 1/4	536	-73.29	145.33	50.4	Pass
T48	41.5 - 36.5	Leg	2 1/4	548	-73.09	145.33	50.3	Pass
T49	36.5 - 31.5	Leg	2 1/4	560	-73.59	145.33	50.6 64.0 (b)	Pass
T50	31.5 - 6.5	Leg	2.25SR + BP9.5x0.25 (Norwalk)	574	-81.38	125.58	64.8	Pass
T51	6.5 - 0	Leg	W8x40	607	-93.38	351.00	32.8	Pass
T1	314.5 - 310.5	Diagonal	2L2x2x1/4x3/8	8	-2.55	42.20	6.0 14.1 (b)	Pass
T2	310.5 - 306.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	19	-2.57	8.85	29.0	Pass
T3	306.5 - 281.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	26	-1.89	6.65	28.4	Pass
T4	281.5 - 276.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	61	-1.87	6.65	28.2	Pass
T5	276.5 - 271.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	71	-2.40	6.65	36.1	Pass
T6	271.5 - 266.5	Diagonal	P1.5 STD	83	-2.92	15.44	18.9 21.9 (b)	Pass
T7	266.5 - 261.5	Diagonal	P1.5 STD	92	-3.10	15.44	20.1 23.7 (b)	Pass
T8	261.5 - 256.5	Diagonal	P1.5 STD	101	-3.38	15.44	21.9 25.6 (b)	Pass
T9	256.5 - 251.5	Diagonal	P1.5x.2	110	-3.65	19.83	18.4 26.4 (b)	Pass
T10	251.5 - 246.5	Diagonal	P1.5x.2	119	-3.83	19.83	19.3 27.8 (b)	Pass
T11	246.5 - 241.5	Diagonal	2L2x2x1/4x3/8	129	-4.37	39.76	11.0 22.2 (b)	Pass
T12	241.5 - 236.5	Diagonal	2L2x2x1/4x3/8	141	-3.59	39.76	9.0 17.2 (b)	Pass
T13	236.5 - 231.5	Diagonal	2L2x2x1/4x3/8	154	-2.36	39.76	5.9 10.1 (b)	Pass
T14	231.5 - 226.5	Diagonal	2L2x2x1/4x3/8	166	-2.04	39.76	5.1 8.4 (b)	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
T15	226.5 - 221.5	Diagonal	P1.5 STD	178	-1.67	15.44	10.8 12.1 (b)	Pass
T16	221.5 - 216.5	Diagonal	P1.5 STD	188	-1.38	15.44	9.0 10.0 (b)	Pass
T17	216.5 - 211.5	Diagonal	P1.5 STD	202	-1.00	15.44	6.5 7.3 (b)	Pass
T18	211.5 - 206.5	Diagonal	P1.5 STD	212	-0.81	15.44	5.2 5.8 (b)	Pass
T19	206.5 - 201.5	Diagonal	P1.5 STD	225	-1.01	15.44	6.5 7.3 (b)	Pass
T20	201.5 - 196.5	Diagonal	P1.5 STD	237	-1.41	15.44	9.1 10.2 (b)	Pass
T21	196.5 - 191.5	Diagonal	P1.5 STD	249	-1.82	15.44	11.8 13.2 (b)	Pass
T22	191.5 - 186.5	Diagonal	P1.5 STD	261	-2.15	15.44	13.9 15.6 (b)	Pass
T23	186.5 - 181.5	Diagonal	P1.5 STD	272	-3.76	15.44	24.3 27.2 (b)	Pass
T24	181.5 - 176.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	284	-3.32	6.55	50.6	Pass
T25	176.5 - 171.5	Diagonal	P1.5 STD	293	-3.14	15.28	20.6 22.8 (b)	Pass
T26	171.5 - 166.5	Diagonal	P1.5 STD	302	-2.81	15.28	18.4 20.4 (b)	Pass
T27	166.5 - 161.5	Diagonal	2L2x2x1/4x3/8	311	-2.52	39.63	6.4 11.5 (b)	Pass
T28	161.5 - 156.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	320	-2.24	6.55	34.2	Pass
T29	156.5 - 151.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	329	-1.88	6.55	28.7	Pass
T30	151.5 - 146.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	341	-1.72	6.55	26.2	Pass
T31	146.5 - 141.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	353	-1.26	6.55	19.3	Pass
T32	141.5 - 136.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	364	-1.23	6.55	18.7	Pass
T33	136.5 - 131.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	372	-1.61	6.55	24.6	Pass
T34	131.5 - 106.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	398	-5.67	6.55	86.6	Pass
T35	106.5 - 101.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	413	-4.46	6.55	68.1	Pass
T36	101.5 - 96.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	423	-2.80	6.55	42.7	Pass
T37	96.5 - 91.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	435	-3.99	6.55	61.0	Pass
T38	91.5 - 86.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	444	-4.33	6.55	66.0	Pass
T39	86.5 - 81.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	453	-4.46	6.55	68.0	Pass
T40	81.5 - 76.5	Diagonal	P1.5 STD	463	-8.23	15.28	53.8 63.9 (b)	Pass
T41	76.5 - 71.5	Diagonal	P1.5 STD	471	-10.33	25.48	40.5 79.4 (b)	Pass
T42	71.5 - 66.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	483	-10.37	14.93	69.4 98.6 (b)	Pass
T43	66.5 - 61.5	Diagonal	L2x2x3/8	495	-11.08	38.02	29.1 80.2 (b)	Pass
T44	61.5 - 56.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	506	-2.56	6.55	39.1	Pass
T45	56.5 - 51.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	518	-2.34	6.55	35.8	Pass
T46	51.5 - 46.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	530	-1.91	6.55	29.2	Pass
T47	46.5 - 41.5	Diagonal	P1.5 STD	542	-1.70	15.28	11.1 12.3 (b)	Pass
T48	41.5 - 36.5	Diagonal	P1.5 STD	554	-1.25	15.28	8.2 9.1 (b)	Pass
T49	36.5 - 31.5	Diagonal	P1.5 STD	567	-1.40	15.28	9.1 10.1 (b)	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
T50	31.5 - 6.5	Diagonal	P1.5 STD	579	-4.37	17.16	25.5 31.7 (b)	Pass
T2	310.5 - 306.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	14	-0.35	14.75	2.4 3.5 (b)	Pass
T3	306.5 - 281.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	25	3.74	19.67	19.0 37.3 (b)	Pass
T4	281.5 - 276.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	56	-0.59	14.75	4.0 5.9 (b)	Pass
T5	276.5 - 271.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	70	-0.64	14.75	4.4 6.4 (b)	Pass
T6	271.5 - 266.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	80	-0.73	14.75	5.0 7.3 (b)	Pass
T7	266.5 - 261.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	91	-0.81	14.75	5.5 8.0 (b)	Pass
T8	261.5 - 256.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	98	-0.92	14.75	6.2 9.1 (b)	Pass
T9	256.5 - 251.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	109	-1.01	14.75	6.9 10.1 (b)	Pass
T10	251.5 - 246.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	116	-1.16	14.75	7.8 11.5 (b)	Pass
T11	246.5 - 241.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	127	5.46	19.67	27.8 54.5 (b)	Pass
T12	241.5 - 236.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	137	-1.10	14.75	7.5 11.0 (b)	Pass
T13	236.5 - 231.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	149	-1.01	14.75	6.8 10.1 (b)	Pass
T14	231.5 - 226.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	161	-0.93	14.75	6.3 9.3 (b)	Pass
T15	226.5 - 221.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	173	-0.89	14.75	6.0 8.9 (b)	Pass
T16	221.5 - 216.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	185	-0.84	14.75	5.7 8.4 (b)	Pass
T17	216.5 - 211.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	197	-0.83	14.75	5.6 8.3 (b)	Pass
T18	211.5 - 206.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	210	-0.81	14.75	5.5 8.0 (b)	Pass
T19	206.5 - 201.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	221	-0.83	14.75	5.6 8.2 (b)	Pass
T20	201.5 - 196.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	234	-0.83	14.75	5.6 8.3 (b)	Pass
T21	196.5 - 191.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	245	-0.88	14.75	5.9 8.8 (b)	Pass
T22	191.5 - 186.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	258	-0.91	14.75	6.2 9.1 (b)	Pass
T23	186.5 - 181.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	271	3.44	19.67	17.5 34.3 (b)	Pass
T24	181.5 - 176.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	282	-1.02	14.69	6.9 10.1 (b)	Pass
T25	176.5 - 171.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	291	-1.01	14.69	6.9 10.1 (b)	Pass
T26	171.5 - 166.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	301	-1.03	14.69	7.0 10.2 (b)	Pass
T27	166.5 - 161.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	309	-1.05	14.69	7.2 10.5 (b)	Pass
T28	161.5 - 156.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	317	-1.09	14.69	7.4 10.8 (b)	Pass
T29	156.5 - 151.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	326	-1.10	14.69	7.5 11.0 (b)	Pass
T30	151.5 - 146.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	338	-1.13	14.69	7.7 11.3 (b)	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
T31	146.5 - 141.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	350	-1.14	14.69	7.7 11.3 (b)	Pass
T32	141.5 - 136.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	359	-1.15	14.69	7.8 11.5 (b)	Pass
T33	136.5 - 131.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	368	-1.14	14.69	7.8 11.4 (b)	Pass
T34	131.5 - 106.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	402	3.82	19.67	19.4 38.1 (b)	Pass
T35	106.5 - 101.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	411	-1.76	14.69	12.0 17.6 (b)	Pass
T36	101.5 - 96.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	419	-1.85	14.69	12.6 18.8 (b)	Pass
T37	96.5 - 91.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	432	-1.74	14.69	11.9 17.4 (b)	Pass
T38	91.5 - 86.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	440	-1.63	14.69	11.1 16.3 (b)	Pass
T39	86.5 - 81.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	451	-1.58	14.69	10.8 15.8 (b)	Pass
T40	81.5 - 76.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	458	-1.59	14.69	10.8 15.9 (b)	Pass
T41	76.5 - 71.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	469	-1.57	14.69	10.7 15.6 (b)	Pass
T42	71.5 - 66.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	481	-1.66	14.69	11.3 16.5 (b)	Pass
T43	66.5 - 61.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	493	-1.81	14.69	12.3 18.0 (b)	Pass
T44	61.5 - 56.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	503	6.65	19.67	33.8 66.3 (b)	Pass
T45	56.5 - 51.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	517	-1.94	14.69	13.2 19.3 (b)	Pass
T46	51.5 - 46.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	529	-1.92	14.69	13.1 19.2 (b)	Pass
T47	46.5 - 41.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	541	-1.93	14.69	13.1 19.2 (b)	Pass
T48	41.5 - 36.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	553	-1.92	14.69	13.1 19.2 (b)	Pass
T49	36.5 - 31.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	565	-1.94	14.69	13.2 19.3 (b)	Pass
T50	31.5 - 6.5	Horizontal	P1.5x0.13	588	-1.56	16.55	9.4 14.4 (b)	Pass
T4	281.5 - 276.5	Secondary Horizontal	1	62	-0.59	16.01	3.7 6.7 (b)	Pass
T5	276.5 - 271.5	Secondary Horizontal	1	76	-0.64	16.01	4.0	Pass
T11	246.5 - 241.5	Secondary Horizontal	L2 1/2x2x1/4	133	-1.18	30.67	3.9 14.3 (b)	Pass
T12	241.5 - 236.5	Secondary Horizontal	2L2 1/2x2x1/4x3/8	143	-1.10	56.86	1.9 6.7 (b)	Pass
T13	236.5 - 231.5	Secondary Horizontal	2L2 1/2x2x1/4x3/8	155	-1.01	56.86	1.8 6.1 (b)	Pass
T14	231.5 - 226.5	Secondary Horizontal	L2 1/2x2x1/4	167	-0.93	30.67	3.0 11.3 (b)	Pass
T15	226.5 - 221.5	Secondary Horizontal	L2 1/2x2x1/4	179	-0.89	30.67	2.9 10.8 (b)	Pass
T16	221.5 - 216.5	Secondary Horizontal	L2 1/2x2x1/4	191	-0.84	30.67	2.7 10.2 (b)	Pass
T17	216.5 - 211.5	Secondary Horizontal	L2 1/2x2x1/4	203	-0.83	30.67	2.7 10.0 (b)	Pass
T18	211.5 - 206.5	Secondary Horizontal	L2 1/2x2x1/4	216	-0.81	30.67	2.6 9.7 (b)	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
T19	206.5 - 201.5	Secondary Horizontal	L2 1/2x2x1/4	227	-0.83	30.67	2.7 10.0 (b)	Pass
T20	201.5 - 196.5	Secondary Horizontal	L2 1/2x2x1/4	240	-0.83	30.67	2.7 10.0 (b)	Pass
T21	196.5 - 191.5	Secondary Horizontal	L2 1/2x2x1/4	251	-0.88	30.67	2.9 10.6 (b)	Pass
T22	191.5 - 186.5	Secondary Horizontal	L2 1/2x2x1/4	264	-0.91	30.67	3.0 11.0 (b)	Pass
T23	186.5 - 181.5	Secondary Horizontal	L2 1/2x2x1/4	276	-0.97	30.67	3.2	Pass
T29	156.5 - 151.5	Secondary Horizontal	1	332	-1.10	15.90	6.9 12.5 (b)	Pass
T30	151.5 - 146.5	Secondary Horizontal	1	344	-1.13	15.90	7.1	Pass
T36	101.5 - 96.5	Secondary Horizontal	1	425	-1.85	15.90	11.6	Pass
T41	76.5 - 71.5	Secondary Horizontal	L2 1/2x2x1/4	475	-1.57	30.56	5.1	Pass
T42	71.5 - 66.5	Secondary Horizontal	L2 1/2x2x1/4	487	-1.66	26.21	6.3	Pass
T43	66.5 - 61.5	Secondary Horizontal	L2 1/2x2x1/4	499	-1.81	30.56	5.9 21.8 (b)	Pass
T44	61.5 - 56.5	Secondary Horizontal	1	511	-1.94	15.90	12.2 22.0 (b)	Pass
T45	56.5 - 51.5	Secondary Horizontal	1	523	-1.94	15.90	12.2 21.9 (b)	Pass
T46	51.5 - 46.5	Secondary Horizontal	1	535	-1.92	15.90	12.1 21.8 (b)	Pass
T47	46.5 - 41.5	Secondary Horizontal	1	547	-1.93	15.90	12.1 21.8 (b)	Pass
T48	41.5 - 36.5	Secondary Horizontal	1	559	-1.92	15.90	12.1 21.8 (b)	Pass
T49	36.5 - 31.5	Secondary Horizontal	1	571	-1.94	15.90	12.2	Pass
T1	314.5 - 310.5	Top Girt	L2x2x1/4	6	-0.28	25.97	1.1	Pass
T51	6.5 - 0	Top Girt	W16x50	609	-1.62	468.70	4.4	Pass
T3	306.5 - 281.5	Guy A@306.5	11/16 (24000)	613	14.19	30.00	47.3	Pass
T11	246.5 - 241.5	Guy A@246.5	7/8 (19000)	616	17.43	47.82	36.5	Pass
T23	186.5 - 181.5	Guy A@186.5	9/16 (23000)	619	9.27	21.00	44.1	Pass
T34	131.5 - 106.5	Guy A@126.5	5/8 (23000)	622	12.60	25.44	49.5	Pass
T44	61.5 - 56.5	Guy A@61.5	11/16 (24000)	625	14.70	30.00	49.0	Pass
T3	306.5 - 281.5	Guy B@306.5	11/16 (24000)	612	14.24	30.00	47.5	Pass
T11	246.5 - 241.5	Guy B@246.5	7/8 (19000)	615	17.46	47.82	36.5	Pass
T23	186.5 - 181.5	Guy B@186.5	9/16 (23000)	618	9.30	21.00	44.3	Pass
T34	131.5 - 106.5	Guy B@126.5	5/8 (23000)	621	12.59	25.44	49.5	Pass
T44	61.5 - 56.5	Guy B@61.5	11/16 (24000)	624	14.99	30.00	50.0	Pass
T3	306.5 - 281.5	Guy C@306.5	11/16 (24000)	611	14.15	30.00	47.2	Pass
T11	246.5 - 241.5	Guy C@246.5	7/8 (19000)	614	17.40	47.82	36.4	Pass
T23	186.5 - 181.5	Guy C@186.5	9/16 (23000)	617	9.25	21.00	44.0	Pass
T34	131.5 - 106.5	Guy C@126.5	5/8 (23000)	620	12.52	25.44	49.2	Pass
T44	61.5 - 56.5	Guy C@61.5	11/16 (24000)	623	14.74	30.00	49.2	Pass
							Summary	
						Pole (L1)	51.9	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
						Leg (T35)	86.1	Pass
						Diagonal (T42)	98.6	Pass
						Horizontal (T44)	66.3	Pass
						Secondary Horizontal (T44)	22.0	Pass
						Top Girt (T51)	4.4	Pass
						Guy A (T34)	49.5	Pass
						Guy B (T44)	50.0	Pass
						Guy C (T34)	49.2	Pass
						Bolt Checks	98.6	Pass
						RATING =	**98.6**	**Pass**

Table 5 - Tower Component Stresses vs. Capacity

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1,2	Base Foundation Structural	0	6.1	Pass
1	Base Foundation Soil Interaction	0	8.5	Pass
1	Outer Guy Anchor Foundation Soil Interaction	0	21.6	Pass
1	Inner Guy Anchor Foundation Soil Interaction	0	28.4	Pass

Structure Rating (max from all components) =	**98.6%**

Notes:
1) See additional documentation in “Appendix C – Additional Calculations” for calculations supporting the % capacity consumed.
2) Base foundation pier minimum steel reinforcement area was assumed per ACI 318-14 Section 16.3.4.1. Base foundation pad minimum steel reinforcement area was assumed per ACI 318-14 Section 7.6.1.1.

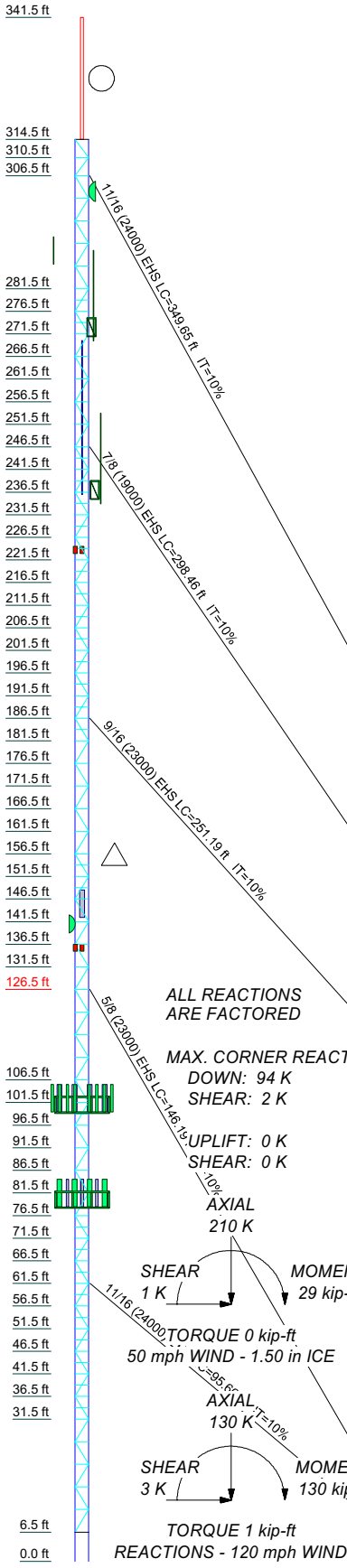
4.1) Recommendations

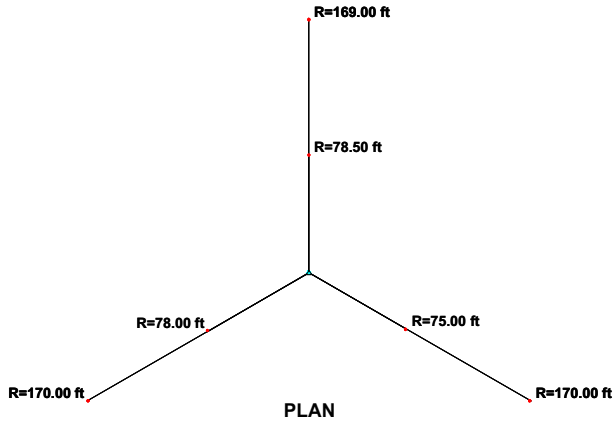
The tower and its foundations have sufficient capacity to carry the proposed load configuration once the proposed modifications are installed.

APPENDIX A

TNXTOWER OUTPUT

Section	L1	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13	T14	T15	T16	T17	T18	T19	T20	T21	T22	T23	T24	T25	T26	T27	T28	T29	T30	T31	T32	T33	T34	T35	T36	T37	T38	T39	T40	T41	T42	T43	T44	T45	T46	T47	T48	T49	T50	T51
Legs	P8x.322			SR 2 1/2																															SR 2 1/4																A	
Leg Grade	A53-B-35			A572-50																																																	A36
Diagonals	N.A.	C	2 @ 4	1.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.2	1.2	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	1.3	N
Diagonal Grade	N.A.	H																																																			
Top Girts	N.A.	I																																																			
Horizontals	N.A.			P1.5x0.13																																																	
Sec. Horizontals	N.A.			SR 1																																																
Face Width (ft)	0.71875			N.A.																																																
# Panels @ (ft)	N.A.	2 @ 4		1.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.2	1.2	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	1.3	N
Weight (K)	0.8	0.3	0.2																																																	20.5





DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Shively 68010	325	RFV01U-D1A	101
2SCH40x60"	303	RFV01U-D1A	101
3' x 5.5' Grid Dish	303	RFV01U-D2A	101
2.36" Dia. x 20' (4) Element Dipole	288	RFV01U-D2A	101
Stand-off Arm	287	RFV01U-D2A	101
7.5" Dia x 3.5' Omni	287	(2) Panel Antenna (6'x1') w/ Mount Pipe	101
10" x 8" x 4.25" Box	287		
Stand-off Arm	273	(2) Panel Antenna (6'x1') w/ Mount Pipe	101
DB413-B	273		
25' x 1.62" Dia. Broadcast Antenna	260	(2) Panel Antenna (6'x1') w/ Mount Pipe	101
Stand-off Arm	239		
2.3" Dia. x 20' Omni	239	X7C-FRO-660 w/ Pipe	101
Stand-off Arm	237	X7C-FRO-660 w/ Pipe	101
2.3" Dia. x 20' Omni	237	RRUS E2 B29	80
L-810 Side Light	223	DC6-48-60-18-8C	80
L-810 Side Light	223	Sector Mount [SM 103-3]	80
26.5" x 15" Conduit Box	183	HPA-65R-BUU-H6 w/ 7' MP	80
10" x 10" x 1.25" Detuner Box	169	HPA-65R-BUU-H6 w/ 7' MP	80
14.875x15.125"x0.5" Flat Panel	145.5	HPA-65R-BUU-H6 w/ 7' MP	80
2SCH40 x 43"	141	(2) OPA-65R-LCUU-H6 w/ Mount Pipe	80
4' Grid Dish	141	(2) OPA-65R-LCUU-H6 w/ Mount Pipe	80
L-810 Side Light	135	(2) OPA-65R-LCUU-H6 w/ Mount Pipe	80
L-810 Side Light	135	DTMABP7819VG12A	80
X7C-FRO-660 w/ Pipe	101	DTMABP7819VG12A	80
Sector Mount [SM 303-3]	101	DTMABP7819VG12A	80
(2) MX06FRO660-03_TIA w/ Mount Pipe	101	RRUS 11	80
(2) MX06FRO660-03_TIA w/ Mount Pipe	101	RRUS 11	80
(2) MX06FRO660-03_TIA w/ Mount Pipe	101	RRUS 11	80
		RRUS 32	80
		RRUS 32	80
		RRUS 32	80
MT6407-77A w/ Pipe	101	RRUS E2 B29	80
MT6407-77A w/ Pipe	101	RRUS E2 B29	80
MT6407-77A w/ Pipe	101	26.5" x 15" Conduit Box	33
RFV01U-D1A	101	26.5" x 15" Conduit Box	8.5

SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	2.25SR + BP9.5x0.25 (Norwalk)	H	A36
B	W8x40	I	L2x2x1/4
C	2L2x2x1/4x3/8	J	W16x50
D	P1.5x.2	K	L2 1/2x2x1/4
E	Pipe 1.5" x 0.120" (11 ga)	L	2L2 1/2x2x1/4x3/8
F	P1.5 STD	M	SR 1
G	L2x2x3/8	N	1 @ 6.5

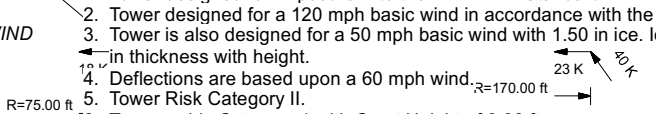
MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A500-42	42 ksi	58 ksi
A36	36 ksi	58 ksi			

TOWER DESIGN NOTES

1. Tower designed for Exposure B to the TIA-222-H Standard.
2. Tower designed for a 120 mph basic wind in accordance with the TIA-222-H Standard.
3. Tower is also designed for a 50 mph basic wind with 1.50 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 60 mph wind.
5. Tower Risk Category II.
6. Topographic Category 1 with Crest Height of 0.00 ft
7. TOWER RATING: 98.6%

ALL REACTIONS ARE FACTORED



Engineered Tower Solutions
3227 Wellington Court
Raleigh, NC 27615
Phone: (919) 782-2710
FAX: (919) 435-0631

Job: 52010 - Norwalk 1		
Project: ETS Job No. 21093576.STR.5549		
Client: CTI Towers	Drawn by: BSanders	App'd:
Code: TIA-222-H	Date: 08/20/21	Scale: NTS
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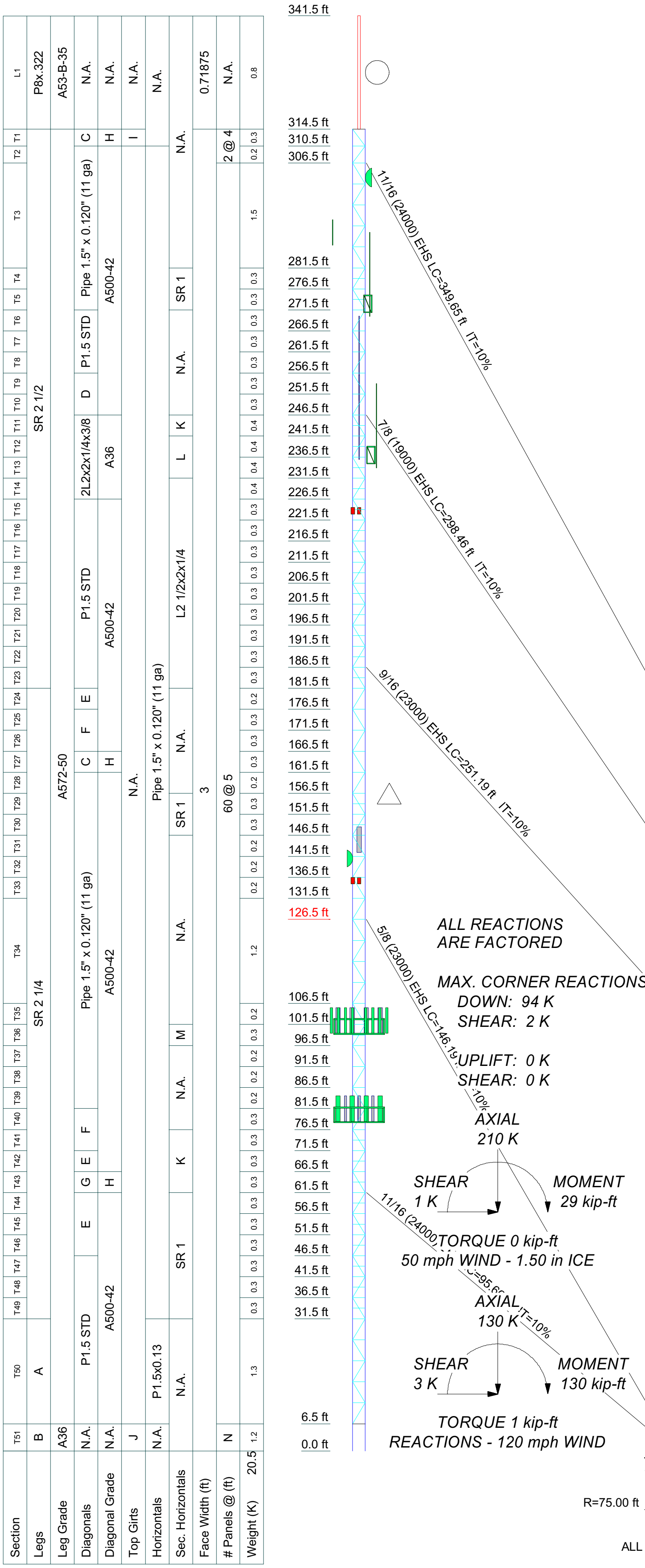

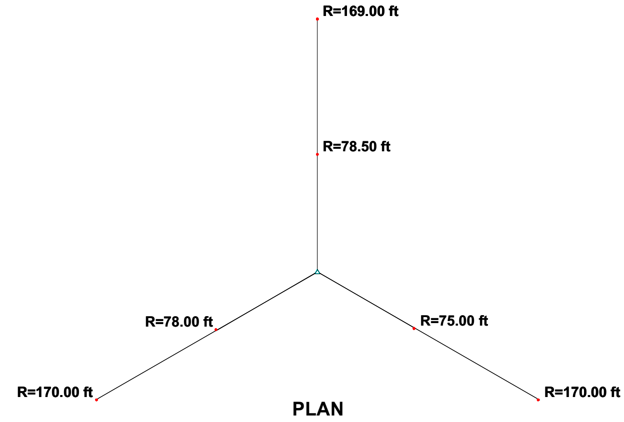

SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	2.25SR + BP9.5x0.25 (Norwalk)	H	A36
B	W8x40	I	L2x2x1/4
C	2L2x2x1/4x3/8	J	W16x50
D	P1.5x.2	K	L2 1/2x2x1/4
E	Pipe 1.5" x 0.120" (11 ga)	L	2L2 1/2x2x1/4x3/8
F	P1.5 STD	M	SR 1
G	L2x2x3/8	N	1 @ 6.5

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A500-42	42 ksi	58 ksi
A36	36 ksi	58 ksi			

TOWER DESIGN NOTES

1. Tower designed for Exposure B to the TIA-222-H Standard.
2. Tower designed for a 120 mph basic wind in accordance with the TIA-222-H Standard.
3. Tower is also designed for a 50 mph basic wind with 1.50 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 60 mph wind.
5. Tower Risk Category II.
6. Topographic Category 1 with Crest Height of 0.00 ft
7. TOWER RATING: 98.6%

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Raleigh, NC 27615
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Job: **52010 - Norwalk 1**		
Project: **ETS Job No. 21093576.STR.5549**		
Client: CTI Towers	Drawn by: BSanders	App'd:
Code: TIA-222-H	Date: 08/20/21	Scale: NTS
Path: C:\Workfolder Brent\093576 - Norwalk TOWER MOD\CTI Towers_Norwalk 1_Tower Analysis (MOD).eri		Dwg No. E-1

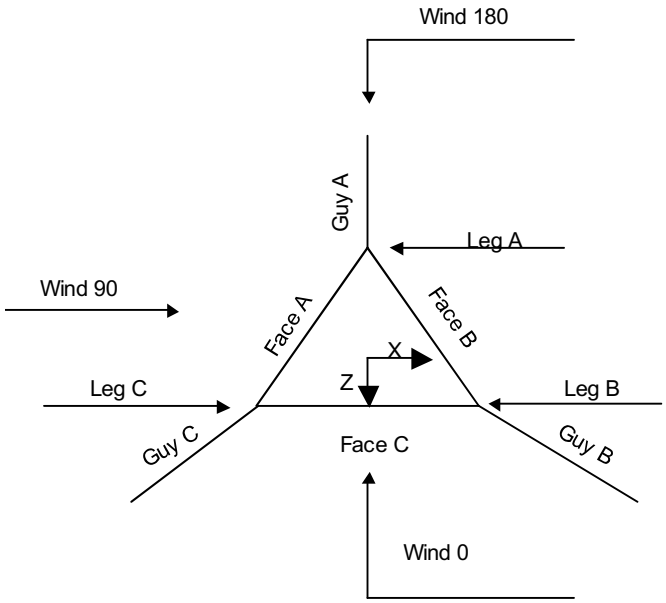
Tower Input Data

The main tower is a 3x guyed tower with an overall height of 341.50 ft above the ground line.
The base of the tower is set at an elevation of 0.00 ft above the ground line.
The face width of the tower is 3.00 ft at the top and 3.00 ft at the base.
An index plate is provided at the 3x guyed -tower connection.
There is a pole section.
This tower is designed using the TIA-222-H standard.
The following design criteria apply:

Tower base elevation above sea level: 118.00 ft.
Basic wind speed of 120 mph.
Risk Category II.
Exposure Category B.
Simplified Topographic Factor Procedure for wind speed-up calculations is used.
Topographic Category: 1.
Crest Height: 0.00 ft.
Nominal ice thickness of 1.50 in.
Ice thickness is considered to increase with height.
Ice density of 56 pcf.
A wind speed of 50 mph is used in combination with ice.
Temperature drop of 50 °F.
Deflections calculated using a wind speed of 60 mph.
Pressures are calculated at each section.
Stress ratio used in pole design is 1.
Stress ratio used in tower member design is 1.
Safety factor used in guy design is 1.
Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

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



Corner & Starmount Guyed Tower

Pole Section Geometry

Section	Elevation ft	Section Length ft	Pole Size	Pole Grade	Socket Length ft
L1	341.50-314.50	27.00	P8x.322	A53-B-35 (35 ksi)	

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
L1 341.50-314.50				1	1	1			

Tower Section Geometry

Tower Section	Tower Elevation ft	Assembly Database	Description	Section Width ft	Number of Sections	Section Length ft

Tower Section	Tower Elevation ft	Assembly Database	Description	Section Width ft	Number of Sections	Section Length ft
T1	314.50-310.50			3.00	1	4.00
T2	310.50-306.50			3.00	1	4.00
T3	306.50-281.50			3.00	1	25.00
T4	281.50-276.50			3.00	1	5.00
T5	276.50-271.50			3.00	1	5.00
T6	271.50-266.50			3.00	1	5.00
T7	266.50-261.50			3.00	1	5.00
T8	261.50-256.50			3.00	1	5.00
T9	256.50-251.50			3.00	1	5.00
T10	251.50-246.50			3.00	1	5.00
T11	246.50-241.50			3.00	1	5.00
T12	241.50-236.50			3.00	1	5.00
T13	236.50-231.50			3.00	1	5.00
T14	231.50-226.50			3.00	1	5.00
T15	226.50-221.50			3.00	1	5.00
T16	221.50-216.50			3.00	1	5.00
T17	216.50-211.50			3.00	1	5.00
T18	211.50-206.50			3.00	1	5.00
T19	206.50-201.50			3.00	1	5.00
T20	201.50-196.50			3.00	1	5.00
T21	196.50-191.50			3.00	1	5.00
T22	191.50-186.50			3.00	1	5.00
T23	186.50-181.50			3.00	1	5.00
T24	181.50-176.50			3.00	1	5.00
T25	176.50-171.50			3.00	1	5.00
T26	171.50-166.50			3.00	1	5.00
T27	166.50-161.50			3.00	1	5.00
T28	161.50-156.50			3.00	1	5.00
T29	156.50-151.50			3.00	1	5.00
T30	151.50-146.50			3.00	1	5.00
T31	146.50-141.50			3.00	1	5.00
T32	141.50-136.50			3.00	1	5.00
T33	136.50-131.50			3.00	1	5.00
T34	131.50-106.50			3.00	1	25.00
T35	106.50-101.50			3.00	1	5.00
T36	101.50-96.50			3.00	1	5.00
T37	96.50-91.50			3.00	1	5.00
T38	91.50-86.50			3.00	1	5.00
T39	86.50-81.50			3.00	1	5.00
T40	81.50-76.50			3.00	1	5.00
T41	76.50-71.50			3.00	1	5.00
T42	71.50-66.50			3.00	1	5.00
T43	66.50-61.50			3.00	1	5.00
T44	61.50-56.50			3.00	1	5.00
T45	56.50-51.50			3.00	1	5.00
T46	51.50-46.50			3.00	1	5.00
T47	46.50-41.50			3.00	1	5.00
T48	41.50-36.50			3.00	1	5.00
T49	36.50-31.50			3.00	1	5.00
T50	31.50-6.50			3.00	1	25.00
T51	6.50-0.00			3.00	1	6.50

Tower Section Geometry *(cont'd)*

Tower Section	Tower Elevation ft	Diagonal Spacing ft	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset in	Bottom Girt Offset in
T1	314.50-310.50	4.00	Diag Down	No	Yes	0.00	0.00
T2	310.50-306.50	4.00	Diag Up	No	Yes	0.00	0.00
T3	306.50-281.50	5.00	K Brace Right	No	Yes	0.00	0.00
T4	281.50-276.50	5.00	Diag Up	No	Yes	0.00	0.00
T5	276.50-271.50	5.00	Diag Down	No	Yes	0.00	0.00
T6	271.50-266.50	5.00	Diag Up	No	Yes	0.00	0.00
T7	266.50-261.50	5.00	Diag Down	No	Yes	0.00	0.00
T8	261.50-256.50	5.00	Diag Up	No	Yes	0.00	0.00
T9	256.50-251.50	5.00	Diag Down	No	Yes	0.00	0.00
T10	251.50-246.50	5.00	Diag Up	No	Yes	0.00	0.00
T11	246.50-241.50	5.00	Diag Down	No	Yes	0.00	0.00
T12	241.50-236.50	5.00	Diag Up	No	Yes	0.00	0.00
T13	236.50-231.50	5.00	Diag Down	No	Yes	0.00	0.00
T14	231.50-226.50	5.00	Diag Up	No	Yes	0.00	0.00
T15	226.50-221.50	5.00	Diag Down	No	Yes	0.00	0.00
T16	221.50-216.50	5.00	Diag Up	No	Yes	0.00	0.00
T17	216.50-211.50	5.00	Diag Down	No	Yes	0.00	0.00
T18	211.50-206.50	5.00	Diag Up	No	Yes	0.00	0.00
T19	206.50-201.50	5.00	Diag Down	No	Yes	0.00	0.00
T20	201.50-196.50	5.00	Diag Up	No	Yes	0.00	0.00
T21	196.50-191.50	5.00	Diag Down	No	Yes	0.00	0.00
T22	191.50-186.50	5.00	Diag Up	No	Yes	0.00	0.00
T23	186.50-181.50	5.00	Diag Down	No	Yes	0.00	0.00
T24	181.50-176.50	5.00	Diag Up	No	Yes	0.00	0.00
T25	176.50-171.50	5.00	Diag Down	No	Yes	0.00	0.00
T26	171.50-166.50	5.00	Diag Up	No	Yes	0.00	0.00
T27	166.50-161.50	5.00	Diag Down	No	Yes	0.00	0.00
T28	161.50-156.50	5.00	Diag Up	No	Yes	0.00	0.00
T29	156.50-151.50	5.00	Diag Down	No	Yes	0.00	0.00
T30	151.50-146.50	5.00	Diag Up	No	Yes	0.00	0.00
T31	146.50-141.50	5.00	Diag Down	No	Yes	0.00	0.00
T32	141.50-136.50	5.00	Diag Up	No	Yes	0.00	0.00
T33	136.50-131.50	5.00	Diag Down	No	Yes	0.00	0.00
T34	131.50-106.50	5.00	K Brace Left	No	Yes	0.00	0.00
T35	106.50-101.50	5.00	Diag Down	No	Yes	0.00	0.00
T36	101.50-96.50	5.00	Diag Up	No	Yes	0.00	0.00
T37	96.50-91.50	5.00	Diag Down	No	Yes	0.00	0.00
T38	91.50-86.50	5.00	Diag Up	No	Yes	0.00	0.00
T39	86.50-81.50	5.00	Diag Down	No	Yes	0.00	0.00
T40	81.50-76.50	5.00	Diag Up	No	Yes	0.00	0.00
T41	76.50-71.50	5.00	Diag Down	No	Yes	0.00	0.00
T42	71.50-66.50	5.00	Diag Up	No	Yes	0.00	0.00
T43	66.50-61.50	5.00	Diag Down	No	Yes	0.00	0.00
T44	61.50-56.50	5.00	Diag Up	No	Yes	0.00	0.00
T45	56.50-51.50	5.00	Diag Down	No	Yes	0.00	0.00
T46	51.50-46.50	5.00	Diag Up	No	Yes	0.00	0.00
T47	46.50-41.50	5.00	Diag Down	No	Yes	0.00	0.00
T48	41.50-36.50	5.00	Diag Up	No	Yes	0.00	0.00
T49	36.50-31.50	5.00	Diag Down	No	Yes	0.00	0.00
T50	31.50-6.50	5.00	K Brace Left	No	Yes	0.00	0.00
T51	6.50-0.00	6.50	X Brace	No	Yes	0.00	0.00

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade

Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
T1 314.50-310.50	Solid Round	2 1/2	A572-50 (50 ksi)	Double Equal Angle	2L2x2x1/4x3/8	A36 (36 ksi)
T2 310.50-306.50	Solid Round	2 1/2	A572-50 (50 ksi)	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42 (42 ksi)
T3 306.50-281.50	Solid Round	2 1/2	A572-50 (50 ksi)	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42 (42 ksi)
T4 281.50-276.50	Solid Round	2 1/2	A572-50 (50 ksi)	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42 (42 ksi)
T5 276.50-271.50	Solid Round	2 1/2	A572-50 (50 ksi)	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42 (42 ksi)
T6 271.50-266.50	Solid Round	2 1/2	A572-50 (50 ksi)	Pipe	P1.5 STD	A500-42 (42 ksi)
T7 266.50-261.50	Solid Round	2 1/2	A572-50 (50 ksi)	Pipe	P1.5 STD	A500-42 (42 ksi)
T8 261.50-256.50	Solid Round	2 1/2	A572-50 (50 ksi)	Pipe	P1.5 STD	A500-42 (42 ksi)
T9 256.50-251.50	Solid Round	2 1/2	A572-50 (50 ksi)	Pipe	P1.5x.2	A500-42 (42 ksi)
T10 251.50-246.50	Solid Round	2 1/2	A572-50 (50 ksi)	Pipe	P1.5x.2	A500-42 (42 ksi)
T11 246.50-241.50	Solid Round	2 1/2	A572-50 (50 ksi)	Double Equal Angle	2L2x2x1/4x3/8	A36 (36 ksi)
T12 241.50-236.50	Solid Round	2 1/2	A572-50 (50 ksi)	Double Equal Angle	2L2x2x1/4x3/8	A36 (36 ksi)
T13 236.50-231.50	Solid Round	2 1/2	A572-50 (50 ksi)	Double Equal Angle	2L2x2x1/4x3/8	A36 (36 ksi)
T14 231.50-226.50	Solid Round	2 1/2	A572-50 (50 ksi)	Double Equal Angle	2L2x2x1/4x3/8	A36 (36 ksi)
T15 226.50-221.50	Solid Round	2 1/2	A572-50 (50 ksi)	Pipe	P1.5 STD	A500-42 (42 ksi)
T16 221.50-216.50	Solid Round	2 1/2	A572-50 (50 ksi)	Pipe	P1.5 STD	A500-42 (42 ksi)
T17 216.50-211.50	Solid Round	2 1/2	A572-50 (50 ksi)	Pipe	P1.5 STD	A500-42 (42 ksi)
T18 211.50-206.50	Solid Round	2 1/2	A572-50 (50 ksi)	Pipe	P1.5 STD	A500-42 (42 ksi)
T19 206.50-201.50	Solid Round	2 1/2	A572-50 (50 ksi)	Pipe	P1.5 STD	A500-42 (42 ksi)
T20 201.50-196.50	Solid Round	2 1/2	A572-50 (50 ksi)	Pipe	P1.5 STD	A500-42 (42 ksi)
T21 196.50-191.50	Solid Round	2 1/2	A572-50 (50 ksi)	Pipe	P1.5 STD	A500-42 (42 ksi)
T22 191.50-186.50	Solid Round	2 1/2	A572-50 (50 ksi)	Pipe	P1.5 STD	A500-42 (42 ksi)
T23 186.50-181.50	Solid Round	2 1/2	A572-50 (50 ksi)	Pipe	P1.5 STD	A500-42 (42 ksi)
T24 181.50-176.50	Solid Round	2 1/4	A572-50 (50 ksi)	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42 (42 ksi)
T25 176.50-171.50	Solid Round	2 1/4	A572-50 (50 ksi)	Pipe	P1.5 STD	A500-42 (42 ksi)
T26 171.50-166.50	Solid Round	2 1/4	A572-50 (50 ksi)	Pipe	P1.5 STD	A500-42 (42 ksi)
T27 166.50-161.50	Solid Round	2 1/4	A572-50 (50 ksi)	Double Equal Angle	2L2x2x1/4x3/8	A36 (36 ksi)
T28 161.50-156.50	Solid Round	2 1/4	A572-50 (50 ksi)	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42 (42 ksi)
T29 156.50-151.50	Solid Round	2 1/4	A572-50 (50 ksi)	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42 (42 ksi)
T30 151.50-146.50	Solid Round	2 1/4	A572-50 (50 ksi)	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42 (42 ksi)
T31	Solid Round	2 1/4	A572-50	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42

Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
146.50-141.50			(50 ksi)			(42 ksi)
T32	Solid Round	2 1/4	A572-50	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42
141.50-136.50			(50 ksi)			(42 ksi)
T33	Solid Round	2 1/4	A572-50	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42
136.50-131.50			(50 ksi)			(42 ksi)
T34	Solid Round	2 1/4	A572-50	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42
131.50-106.50			(50 ksi)			(42 ksi)
T35	Solid Round	2 1/4	A572-50	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42
106.50-101.50			(50 ksi)			(42 ksi)
T36 101.50-96.50	Solid Round	2 1/4	A572-50	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42
			(50 ksi)			(42 ksi)
T37 96.50-91.50	Solid Round	2 1/4	A572-50	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42
			(50 ksi)			(42 ksi)
T38 91.50-86.50	Solid Round	2 1/4	A572-50	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42
			(50 ksi)			(42 ksi)
T39 86.50-81.50	Solid Round	2 1/4	A572-50	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42
			(50 ksi)			(42 ksi)
T40 81.50-76.50	Solid Round	2 1/4	A572-50	Pipe	P1.5 STD	A500-42
			(50 ksi)			(42 ksi)
T41 76.50-71.50	Solid Round	2 1/4	A572-50	Pipe	P1.5 STD	A500-42
			(50 ksi)			(42 ksi)
T42 71.50-66.50	Solid Round	2 1/4	A572-50	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42
			(50 ksi)			(42 ksi)
T43 66.50-61.50	Solid Round	2 1/4	A572-50	Equal Angle	L2x2x3/8	A36
			(50 ksi)			(36 ksi)
T44 61.50-56.50	Solid Round	2 1/4	A572-50	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42
			(50 ksi)			(42 ksi)
T45 56.50-51.50	Solid Round	2 1/4	A572-50	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42
			(50 ksi)			(42 ksi)
T46 51.50-46.50	Solid Round	2 1/4	A572-50	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42
			(50 ksi)			(42 ksi)
T47 46.50-41.50	Solid Round	2 1/4	A572-50	Pipe	P1.5 STD	A500-42
			(50 ksi)			(42 ksi)
T48 41.50-36.50	Solid Round	2 1/4	A572-50	Pipe	P1.5 STD	A500-42
			(50 ksi)			(42 ksi)
T49 36.50-31.50	Solid Round	2 1/4	A572-50	Pipe	P1.5 STD	A500-42
			(50 ksi)			(42 ksi)
T50 31.50-6.50	Arbitrary Shape	2.25SR + BP9.5x0.25 (Norwalk)	A572-50 (50 ksi)	Pipe	P1.5 STD	A500-42 (42 ksi)
T51 6.50-0.00	Wide Flange	W8x40	A36 (36 ksi)	Tube		A500-42 (42 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
T1 314.50-310.50	Equal Angle	L2x2x1/4	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T51 6.50-0.00	Wide Flange	W16x50	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	No. of Mid Girts	Mid Girt Type	Mid Girt Size	Mid Girt Grade	Horizontal Type	Horizontal Size	Horizontal Grade
T1 314.50-310.50	None	Solid Round		A572-50 (50 ksi)	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42 (42 ksi)
T2 310.50-306.50	None	Solid Round		A572-50 (50 ksi)	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42 (42 ksi)
T3 306.50-281.50	None	Solid Round		A572-50 (50 ksi)	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42 (42 ksi)
T4 281.50-276.50	None	Solid Round		A572-50 (50 ksi)	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42 (42 ksi)
T5 276.50-271.50	None	Solid Round		A572-50 (50 ksi)	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42 (42 ksi)
T6 271.50-266.50	None	Solid Round		A572-50 (50 ksi)	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42 (42 ksi)
T7 266.50-261.50	None	Solid Round		A572-50 (50 ksi)	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42 (42 ksi)
T8 261.50-256.50	None	Solid Round		A572-50 (50 ksi)	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42 (42 ksi)
T9 256.50-251.50	None	Solid Round		A572-50 (50 ksi)	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42 (42 ksi)
T10 251.50-246.50	None	Solid Round		A572-50 (50 ksi)	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42 (42 ksi)
T11 246.50-241.50	None	Solid Round		A572-50 (50 ksi)	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42 (42 ksi)
T12 241.50-236.50	None	Solid Round		A572-50 (50 ksi)	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42 (42 ksi)
T13 236.50-231.50	None	Solid Round		A572-50 (50 ksi)	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42 (42 ksi)
T14 231.50-226.50	None	Solid Round		A572-50 (50 ksi)	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42 (42 ksi)
T15 226.50-221.50	None	Solid Round		A572-50 (50 ksi)	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42 (42 ksi)
T16 221.50-216.50	None	Solid Round		A572-50 (50 ksi)	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42 (42 ksi)
T17 216.50-211.50	None	Solid Round		A572-50 (50 ksi)	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42 (42 ksi)
T18 211.50-206.50	None	Solid Round		A572-50 (50 ksi)	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42 (42 ksi)
T19 206.50-201.50	None	Solid Round		A572-50 (50 ksi)	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42 (42 ksi)
T20 201.50-196.50	None	Solid Round		A572-50 (50 ksi)	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42 (42 ksi)
T21 196.50-191.50	None	Solid Round		A572-50 (50 ksi)	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42 (42 ksi)
T22 191.50-186.50	None	Solid Round		A572-50 (50 ksi)	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42 (42 ksi)
T23 186.50-181.50	None	Solid Round		A572-50 (50 ksi)	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42 (42 ksi)
T24 181.50-176.50	None	Solid Round		A572-50 (50 ksi)	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42 (42 ksi)
T25 176.50-171.50	None	Solid Round		A572-50 (50 ksi)	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42 (42 ksi)
T26 171.50-166.50	None	Solid Round		A572-50 (50 ksi)	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42 (42 ksi)
T27 166.50-161.50	None	Solid Round		A572-50 (50 ksi)	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42 (42 ksi)
T28 161.50-156.50	None	Solid Round		A572-50 (50 ksi)	Pipe	Pipe 1.5" x 0.120" (11 ga)	A500-42 (42 ksi)
T29	None	Solid Round		A572-50	Pipe	Pipe 1.5" x 0.120" (11	A500-42

Tower Elevation ft	No. of Mid Girts	Mid Girt Type	Mid Girt Size	Mid Girt Grade	Horizontal Type	Horizontal Size	Horizontal Grade
156.50-151.50				(50 ksi)		ga)	(42 ksi)
T30	None	Solid Round		A572-50	Pipe	Pipe 1.5" x 0.120" (11	A500-42
151.50-146.50				(50 ksi)		ga)	(42 ksi)
T31	None	Solid Round		A572-50	Pipe	Pipe 1.5" x 0.120" (11	A500-42
146.50-141.50				(50 ksi)		ga)	(42 ksi)
T32	None	Solid Round		A572-50	Pipe	Pipe 1.5" x 0.120" (11	A500-42
141.50-136.50				(50 ksi)		ga)	(42 ksi)
T33	None	Solid Round		A572-50	Pipe	Pipe 1.5" x 0.120" (11	A500-42
136.50-131.50				(50 ksi)		ga)	(42 ksi)
T34	None	Solid Round		A572-50	Pipe	Pipe 1.5" x 0.120" (11	A500-42
131.50-106.50				(50 ksi)		ga)	(42 ksi)
T35	None	Solid Round		A572-50	Pipe	Pipe 1.5" x 0.120" (11	A500-42
106.50-101.50				(50 ksi)		ga)	(42 ksi)
T36 101.50-96.50	None	Solid Round		A572-50	Pipe	Pipe 1.5" x 0.120" (11	A500-42
				(50 ksi)		ga)	(42 ksi)
T37 96.50-91.50	None	Solid Round		A572-50	Pipe	Pipe 1.5" x 0.120" (11	A500-42
				(50 ksi)		ga)	(42 ksi)
T38 91.50-86.50	None	Solid Round		A572-50	Pipe	Pipe 1.5" x 0.120" (11	A500-42
				(50 ksi)		ga)	(42 ksi)
T39 86.50-81.50	None	Solid Round		A572-50	Pipe	Pipe 1.5" x 0.120" (11	A500-42
				(50 ksi)		ga)	(42 ksi)
T40 81.50-76.50	None	Solid Round		A572-50	Pipe	Pipe 1.5" x 0.120" (11	A500-42
				(50 ksi)		ga)	(42 ksi)
T41 76.50-71.50	None	Solid Round		A572-50	Pipe	Pipe 1.5" x 0.120" (11	A500-42
				(50 ksi)		ga)	(42 ksi)
T42 71.50-66.50	None	Solid Round		A572-50	Pipe	Pipe 1.5" x 0.120" (11	A500-42
				(50 ksi)		ga)	(42 ksi)
T43 66.50-61.50	None	Solid Round		A572-50	Pipe	Pipe 1.5" x 0.120" (11	A500-42
				(50 ksi)		ga)	(42 ksi)
T44 61.50-56.50	None	Solid Round		A572-50	Pipe	Pipe 1.5" x 0.120" (11	A500-42
				(50 ksi)		ga)	(42 ksi)
T45 56.50-51.50	None	Solid Round		A572-50	Pipe	Pipe 1.5" x 0.120" (11	A500-42
				(50 ksi)		ga)	(42 ksi)
T46 51.50-46.50	None	Solid Round		A572-50	Pipe	Pipe 1.5" x 0.120" (11	A500-42
				(50 ksi)		ga)	(42 ksi)
T47 46.50-41.50	None	Solid Round		A572-50	Pipe	Pipe 1.5" x 0.120" (11	A500-42
				(50 ksi)		ga)	(42 ksi)
T48 41.50-36.50	None	Solid Round		A572-50	Pipe	Pipe 1.5" x 0.120" (11	A500-42
				(50 ksi)		ga)	(42 ksi)
T49 36.50-31.50	None	Solid Round		A572-50	Pipe	Pipe 1.5" x 0.120" (11	A500-42
				(50 ksi)		ga)	(42 ksi)
T50 31.50-6.50	None	Solid Round		A572-50	Pipe	P1.5x0.13	A500-42
				(50 ksi)			(42 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Secondary Horizontal Type	Secondary Horizontal Size	Secondary Horizontal Grade	Inner Bracing Type	Inner Bracing Size	Inner Bracing Grade
T4 281.50-276.50	Solid Round	1	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T5 276.50-271.50	Solid Round	1	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T11	Single Angle	L2 1/2x2x1/4	A36	Solid Round		A572-50

Tower Elevation ft	Secondary Horizontal Type	Secondary Horizontal Size	Secondary Horizontal Grade	Inner Bracing Type	Inner Bracing Size	Inner Bracing Grade
246.50-241.50			(36 ksi)			(50 ksi)
T12	Double Angle	2L2 1/2x2x1/4x3/8	A36	Solid Round		A572-50
241.50-236.50			(36 ksi)			(50 ksi)
T13	Double Angle	2L2 1/2x2x1/4x3/8	A36	Solid Round		A572-50
236.50-231.50			(36 ksi)			(50 ksi)
T14	Single Angle	L2 1/2x2x1/4	A36	Solid Round		A572-50
231.50-226.50			(36 ksi)			(50 ksi)
T15	Single Angle	L2 1/2x2x1/4	A36	Solid Round		A572-50
226.50-221.50			(36 ksi)			(50 ksi)
T16	Single Angle	L2 1/2x2x1/4	A36	Solid Round		A572-50
221.50-216.50			(36 ksi)			(50 ksi)
T17	Single Angle	L2 1/2x2x1/4	A36	Solid Round		A572-50
216.50-211.50			(36 ksi)			(50 ksi)
T18	Single Angle	L2 1/2x2x1/4	A36	Solid Round		A572-50
211.50-206.50			(36 ksi)			(50 ksi)
T19	Single Angle	L2 1/2x2x1/4	A36	Solid Round		A572-50
206.50-201.50			(36 ksi)			(50 ksi)
T20	Single Angle	L2 1/2x2x1/4	A36	Solid Round		A572-50
201.50-196.50			(36 ksi)			(50 ksi)
T21	Single Angle	L2 1/2x2x1/4	A36	Solid Round		A572-50
196.50-191.50			(36 ksi)			(50 ksi)
T22	Single Angle	L2 1/2x2x1/4	A36	Solid Round		A572-50
191.50-186.50			(36 ksi)			(50 ksi)
T23	Single Angle	L2 1/2x2x1/4	A36	Solid Round		A572-50
186.50-181.50			(36 ksi)			(50 ksi)
T29	Solid Round	1	A36	Solid Round		A572-50
156.50-151.50			(36 ksi)			(50 ksi)
T30	Solid Round	1	A36	Solid Round		A572-50
151.50-146.50			(36 ksi)			(50 ksi)
T36 101.50-96.50	Solid Round	1	A36	Solid Round		A572-50
			(36 ksi)			(50 ksi)
T41 76.50-71.50	Single Angle	L2 1/2x2x1/4	A36	Solid Round		A572-50
			(36 ksi)			(50 ksi)
T42 71.50-66.50	Single Angle	L2 1/2x2x1/4	A36	Solid Round		A572-50
			(36 ksi)			(50 ksi)
T43 66.50-61.50	Single Angle	L2 1/2x2x1/4	A36	Solid Round		A572-50
			(36 ksi)			(50 ksi)
T44 61.50-56.50	Solid Round	1	A36	Solid Round		A572-50
			(36 ksi)			(50 ksi)
T45 56.50-51.50	Solid Round	1	A36	Solid Round		A572-50
			(36 ksi)			(50 ksi)
T46 51.50-46.50	Solid Round	1	A36	Solid Round		A572-50
			(36 ksi)			(50 ksi)
T47 46.50-41.50	Solid Round	1	A36	Solid Round		A572-50
			(36 ksi)			(50 ksi)
T48 41.50-36.50	Solid Round	1	A36	Solid Round		A572-50
			(36 ksi)			(50 ksi)
T49 36.50-31.50	Solid Round	1	A36	Solid Round		A572-50
			(36 ksi)			(50 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
T1 314.50-310.50	0.00	0.00	A36 (36 ksi)	1	1	1	36.00	36.00	36.00
T2 310.50-306.50	0.00	0.00	A36 (36 ksi)	1	1	1	36.00	36.00	36.00
T3 306.50-281.50	0.00	0.00	A36 (36 ksi)	1	1	1	36.00	36.00	36.00
T4 281.50-276.50	0.00	0.00	A36 (36 ksi)	1	1	1	36.00	36.00	36.00
T5 276.50-271.50	0.00	0.00	A36 (36 ksi)	1	1	1	36.00	36.00	36.00
T6 271.50-266.50	0.00	0.00	A36 (36 ksi)	1	1	1	36.00	36.00	36.00
T7 266.50-261.50	0.00	0.00	A36 (36 ksi)	1	1	1	36.00	36.00	36.00
T8 261.50-256.50	0.00	0.00	A36 (36 ksi)	1	1	1	36.00	36.00	36.00
T9 256.50-251.50	0.00	0.00	A36 (36 ksi)	1	1	1	36.00	36.00	36.00
T10 251.50-246.50	0.00	0.00	A36 (36 ksi)	1	1	1	36.00	36.00	36.00
T11 246.50-241.50	0.00	0.00	A36 (36 ksi)	1	1	1	36.00	36.00	36.00
T12 241.50-236.50	0.00	0.00	A36 (36 ksi)	1	1	1	36.00	36.00	36.00
T13 236.50-231.50	0.00	0.00	A36 (36 ksi)	1	1	1	36.00	36.00	36.00
T14 231.50-226.50	0.00	0.00	A36 (36 ksi)	1	1	1	36.00	36.00	36.00
T15 226.50-221.50	0.00	0.00	A36 (36 ksi)	1	1	1	36.00	36.00	36.00
T16 221.50-216.50	0.00	0.00	A36 (36 ksi)	1	1	1	36.00	36.00	36.00
T17 216.50-211.50	0.00	0.00	A36 (36 ksi)	1	1	1	36.00	36.00	36.00
T18 211.50-206.50	0.00	0.00	A36 (36 ksi)	1	1	1	36.00	36.00	36.00
T19 206.50-201.50	0.00	0.00	A36 (36 ksi)	1	1	1	36.00	36.00	36.00
T20 201.50-196.50	0.00	0.00	A36 (36 ksi)	1	1	1	36.00	36.00	36.00
T21 196.50-191.50	0.00	0.00	A36 (36 ksi)	1	1	1	36.00	36.00	36.00
T22 191.50-186.50	0.00	0.00	A36 (36 ksi)	1	1	1	36.00	36.00	36.00
T23 186.50-181.50	0.00	0.00	A36 (36 ksi)	1	1	1	36.00	36.00	36.00
T24 181.50-176.50	0.00	0.00	A36 (36 ksi)	1	1	1	36.00	36.00	36.00
T25 176.50-171.50	0.00	0.00	A36 (36 ksi)	1	1	1	36.00	36.00	36.00
T26 171.50-166.50	0.00	0.00	A36 (36 ksi)	1	1	1	36.00	36.00	36.00
T27 166.50-161.50	0.00	0.00	A36 (36 ksi)	1	1	1	36.00	36.00	36.00
T28 161.50-156.50	0.00	0.00	A36 (36 ksi)	1	1	1	36.00	36.00	36.00
T29 156.50-151.50	0.00	0.00	A36 (36 ksi)	1	1	1	36.00	36.00	36.00
T30	0.00	0.00	A36	1	1	1	36.00	36.00	36.00

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
151.50-146.50			(36 ksi)						
T31	0.00	0.00	A36	1	1	1	36.00	36.00	36.00
146.50-141.50			(36 ksi)						
T32	0.00	0.00	A36	1	1	1	36.00	36.00	36.00
141.50-136.50			(36 ksi)						
T33	0.00	0.00	A36	1	1	1	36.00	36.00	36.00
136.50-131.50			(36 ksi)						
T34	0.00	0.00	A36	1	1	1	36.00	36.00	36.00
131.50-106.50			(36 ksi)						
T35	0.00	0.00	A36	1	1	1	36.00	36.00	36.00
106.50-101.50			(36 ksi)						
T36	0.00	0.00	A36	1	1	1	36.00	36.00	36.00
101.50-96.50			(36 ksi)						
T37	0.00	0.00	A36	1	1	1	36.00	36.00	36.00
96.50-91.50			(36 ksi)						
T38	0.00	0.00	A36	1	1	1	36.00	36.00	36.00
91.50-86.50			(36 ksi)						
T39	0.00	0.00	A36	1	1	1	36.00	36.00	36.00
86.50-81.50			(36 ksi)						
T40	0.00	0.00	A36	1	1	1	36.00	36.00	36.00
81.50-76.50			(36 ksi)						
T41	0.00	0.00	A36	1	1	1	36.00	36.00	36.00
76.50-71.50			(36 ksi)						
T42	0.00	0.00	A36	1	1	1	36.00	36.00	36.00
71.50-66.50			(36 ksi)						
T43	0.00	0.00	A36	1	1	1	36.00	36.00	36.00
66.50-61.50			(36 ksi)						
T44	0.00	0.00	A36	1	1	1	36.00	36.00	36.00
61.50-56.50			(36 ksi)						
T45	0.00	0.00	A36	1	1	1	36.00	36.00	36.00
56.50-51.50			(36 ksi)						
T46	0.00	0.00	A36	1	1	1	36.00	36.00	36.00
51.50-46.50			(36 ksi)						
T47	0.00	0.00	A36	1	1	1	36.00	36.00	36.00
46.50-41.50			(36 ksi)						
T48	0.00	0.00	A36	1	1	1	36.00	36.00	36.00
41.50-36.50			(36 ksi)						
T49	0.00	0.00	A36	1	1	1	36.00	36.00	36.00
36.50-31.50			(36 ksi)						
T50 31.50-6.50	0.00	0.00	A36	1	1	1	36.00	36.00	36.00
			(36 ksi)						
T51 6.50-0.00	0.00	0.00	A36	1	1	1	36.00	36.00	36.00
			(36 ksi)						

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Calc K Single Angles	Calc K Solid Rounds	K Factors[1] Legs	X Brace Diags X Y	K Brace Diags X Y	Single Diags X Y	Girts X Y	Horiz. X Y	Sec. Horiz. X Y	Inner Brace X Y
T1	No	Yes	1	1	1	1	1	1	1	1
314.50-310.50				1	1	1	1	1	1	1
T2	No	Yes	1	1	1	1	1	1	1	1

Tower Elevation ft	Calc K Single Angles	Calc K Solid Rounds	K Factors[1] Legs	X Brace Diags X Y	K Brace Diags X Y	Single Diags X Y	Girts X Y	Horiz. X Y	Sec. Horiz. X Y	Inner Brace X Y
310.50-306.50				1	1	1	1	1	1	1
T3	No	Yes	1	1	1	1	1	1	1	1
306.50-281.50				1	1	1	1	1	1	1
T4	No	Yes	1	1	1	1	1	1	1	1
281.50-276.50				1	1	1	1	1	1	1
T5	No	Yes	1	1	1	1	1	1	1	1
276.50-271.50				1	1	1	1	1	1	1
T6	No	Yes	1	1	1	1	1	1	1	1
271.50-266.50				1	1	1	1	1	1	1
T7	No	Yes	1	1	1	1	1	1	1	1
266.50-261.50				1	1	1	1	1	1	1
T8	No	Yes	1	1	1	1	1	1	1	1
261.50-256.50				1	1	1	1	1	1	1
T9	No	Yes	1	1	1	1	1	1	1	1
256.50-251.50				1	1	1	1	1	1	1
T10	No	Yes	1	1	1	1	1	1	1	1
251.50-246.50				1	1	1	1	1	1	1
T11	No	Yes	1	1	1	1	1	1	1	1
246.50-241.50				1	1	1	1	1	1	1
T12	No	Yes	1	1	1	1	1	1	1	1
241.50-236.50				1	1	1	1	1	1	1
T13	No	Yes	1	1	1	1	1	1	1	1
236.50-231.50				1	1	1	1	1	1	1
T14	No	Yes	1	1	1	1	1	1	1	1
231.50-226.50				1	1	1	1	1	1	1
T15	No	Yes	1	1	1	1	1	1	1	1
226.50-221.50				1	1	1	1	1	1	1
T16	No	Yes	1	1	1	1	1	1	1	1
221.50-216.50				1	1	1	1	1	1	1
T17	No	Yes	1	1	1	1	1	1	1	1
216.50-211.50				1	1	1	1	1	1	1
T18	No	Yes	1	1	1	1	1	1	1	1
211.50-206.50				1	1	1	1	1	1	1
T19	No	Yes	1	1	1	1	1	1	1	1
206.50-201.50				1	1	1	1	1	1	1
T20	No	Yes	1	1	1	1	1	1	1	1
201.50-196.50				1	1	1	1	1	1	1
T21	No	Yes	1	1	1	1	1	1	1	1
196.50-191.50				1	1	1	1	1	1	1
T22	No	Yes	1	1	1	1	1	1	1	1
191.50-186.50				1	1	1	1	1	1	1
T23	No	Yes	1	1	1	1	1	1	1	1
186.50-181.50				1	1	1	1	1	1	1
T24	No	Yes	1	1	1	1	1	1	1	1
181.50-176.50				1	1	1	1	1	1	1
T25	No	Yes	1	1	1	1	1	1	1	1
176.50-171.50				1	1	1	1	1	1	1
T26	No	Yes	1	1	1	1	1	1	1	1
171.50-166.50				1	1	1	1	1	1	1
T27	No	Yes	1	1	1	1	1	1	1	1
166.50-161.50				1	1	1	1	1	1	1
T28	No	Yes	1	1	1	1	1	1	1	1
161.50-156.50				1	1	1	1	1	1	1
T29	No	Yes	1	1	1	1	1	1	1	1
156.50-151.50				1	1	1	1	1	1	1
T30	No	Yes	1	1	1	1	1	1	1	1
151.50-146.50				1	1	1	1	1	1	1
T31	No	Yes	1	1	1	1	1	1	1	1

Tower Elevation ft	Calc K Single Angles	Calc K Solid Rounds	K Factors[1] Legs	X Brace Diags X Y	K Brace Diags X Y	Single Diags X Y	Girts X Y	Horiz. X Y	Sec. Horiz. X Y	Inner Brace X Y
146.50-141.50				1	1	1	1	1	1	1
T32	No	Yes	1	1	1	1	1	1	1	1
141.50-136.50				1	1	1	1	1	1	1
T33	No	Yes	1	1	1	1	1	1	1	1
136.50-131.50				1	1	1	1	1	1	1
T34	No	Yes	1	1	1	1	1	1	1	1
131.50-106.50				1	1	1	1	1	1	1
T35	No	Yes	1	1	1	1	1	1	1	1
106.50-101.50				1	1	1	1	1	1	1
T36	No	Yes	1	1	1	1	1	1	1	1
101.50-96.50				1	1	1	1	1	1	1
T37	No	Yes	1	1	1	1	1	1	1	1
96.50-91.50				1	1	1	1	1	1	1
T38	No	Yes	1	1	1	1	1	1	1	1
91.50-86.50				1	1	1	1	1	1	1
T39	No	Yes	1	1	1	1	1	1	1	1
86.50-81.50				1	1	1	1	1	1	1
T40	No	Yes	1	1	1	1	1	1	1	1
81.50-76.50				1	1	1	1	1	1	1
T41	No	Yes	1	1	1	0.5	1	1	1	1
76.50-71.50				1	1	0.5	1	1	1	1
T42	No	Yes	1	1	1	0.5	1	1	1	1
71.50-66.50				1	1	0.5	1	1	1	1
T43	Yes	Yes	1	1	1	0.5	1	1	1	1
66.50-61.50				1	1	0.5	1	1	1	1
T44	No	Yes	1	1	1	1	1	1	1	1
61.50-56.50				1	1	1	1	1	1	1
T45	No	Yes	1	1	1	1	1	1	1	1
56.50-51.50				1	1	1	1	1	1	1
T46	No	Yes	1	1	1	1	1	1	1	1
51.50-46.50				1	1	1	1	1	1	1
T47	No	Yes	1	1	1	1	1	1	1	1
46.50-41.50				1	1	1	1	1	1	1
T48	No	Yes	1	1	1	1	1	1	1	1
41.50-36.50				1	1	1	1	1	1	1
T49	No	Yes	1	1	1	1	1	1	1	1
36.50-31.50				1	1	1	1	1	1	1
T50	No	Yes	1.0173	1	1	1	1	1	1	1
31.50-6.50				1	1	1	1	1	1	1
T51 6.50-0.00	No	Yes	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1

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

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
T1 314.50-310.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T2 310.50-306.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T3 306.50-281.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T4 281.50-276.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T5 276.50-271.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T6 271.50-266.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T7 266.50-261.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T8 261.50-256.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T9 256.50-251.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T10 251.50-246.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T11 246.50-241.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T12 241.50-236.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T13 236.50-231.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T14 231.50-226.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T15 226.50-221.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T16 221.50-216.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T17 216.50-211.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T18 211.50-206.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T19 206.50-201.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T20 201.50-196.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T21 196.50-191.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T22 191.50-186.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T23 186.50-181.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T24 181.50-176.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T25 176.50-171.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T26 171.50-166.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T27 166.50-161.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T28 161.50-156.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1

Tower Elevation ft	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
T29 156.50-151.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T30 151.50-146.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T31 146.50-141.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T32 141.50-136.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T33 136.50-131.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T34 131.50-106.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T35 106.50-101.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T36 101.50-96.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T37 96.50-91.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T38 91.50-86.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T39 86.50-81.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T40 81.50-76.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T41 76.50-71.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T42 71.50-66.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T43 66.50-61.50	0.00	1	0.00	0.75	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T44 61.50-56.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T45 56.50-51.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T46 51.50-46.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T47 46.50-41.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T48 41.50-36.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T49 36.50-31.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T50 31.50-6.50	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1
T51 6.50-0.00	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1

Tower Elevation ft	Redundant Horizontal		Redundant Diagonal		Redundant Sub-Diagonal		Redundant Sub-Horizontal		Redundant Vertical		Redundant Hip		Redundant Hip Diagonal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
T1 314.50-310.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75

Tower Elevation ft	Redundant Horizontal		Redundant Diagonal		Redundant Sub-Diagonal		Redundant Sub-Horizontal		Redundant Vertical		Redundant Hip		Redundant Hip Diagonal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
T2 310.50-306.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T3 306.50-281.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T4 281.50-276.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T5 276.50-271.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T6 271.50-266.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T7 266.50-261.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T8 261.50-256.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T9 256.50-251.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T10 251.50-246.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T11 246.50-241.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T12 241.50-236.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T13 236.50-231.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T14 231.50-226.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T15 226.50-221.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T16 221.50-216.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T17 216.50-211.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T18 211.50-206.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T19 206.50-201.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T20 201.50-196.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T21 196.50-191.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T22 191.50-186.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T23 186.50-181.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T24 181.50-176.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T25 176.50-171.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T26 171.50-166.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T27 166.50-161.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T28 161.50-156.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T29 156.50-151.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75

Tower Elevation ft	Redundant Horizontal		Redundant Diagonal		Redundant Sub-Diagonal		Redundant Sub-Horizontal		Redundant Vertical		Redundant Hip		Redundant Hip Diagonal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
T30 151.50-146.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T31 146.50-141.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T32 141.50-136.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T33 136.50-131.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T34 131.50-106.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T35 106.50-101.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T36 101.50-96.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T37 96.50-91.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T38 91.50-86.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T39 86.50-81.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T40 81.50-76.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T41 76.50-71.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T42 71.50-66.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T43 66.50-61.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T44 61.50-56.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T45 56.50-51.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T46 51.50-46.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T47 46.50-41.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T48 41.50-36.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T49 36.50-31.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T50 31.50-6.50	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75
T51 6.50-0.00	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75	0.00	0.75

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg Connection Type	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
		Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.
T1 314.50-310.50	Flange	0.50 A325N	0	0.63 A325N	1	0.63 A325N	0	0.63 A325N	0	0.63 A325N	0	0.63 A325N	1	0.50 A325N	0

Tower Elevation ft	Leg Connection Type	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
		Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.
T2	Flange	0.50	3	0.63	1	0.63	0	0.63	0	0.63	0	0.63	1	0.50	0
310.50-306.50		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T3	Flange	0.50	3	0.63	1	0.63	0	0.63	0	0.63	0	0.63	1	0.50	1
306.50-281.50		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T4	Flange	0.50	0	0.63	1	0.63	0	0.63	0	0.63	0	0.63	1	0.50	1
281.50-276.50		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T5	Flange	0.50	0	0.63	1	0.63	0	0.63	0	0.63	0	0.63	1	0.50	0
276.50-271.50		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T6	Flange	0.50	0	0.63	1	0.63	0	0.63	0	0.63	0	0.63	1	0.50	0
271.50-266.50		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T7	Flange	0.50	0	0.63	1	0.63	0	0.63	0	0.63	0	0.63	1	0.50	0
266.50-261.50		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T8	Flange	0.50	3	0.63	1	0.63	0	0.63	0	0.63	0	0.63	1	0.50	0
261.50-256.50		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T9	Flange	0.50	0	0.63	1	0.63	0	0.63	0	0.63	0	0.63	1	0.50	0
256.50-251.50		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T10	Flange	0.50	0	0.63	1	0.63	0	0.63	0	0.63	0	0.63	1	0.50	1
251.50-246.50		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T11	Flange	0.50	0	0.63	1	0.63	0	0.63	0	0.63	0	0.63	1	0.50	1
246.50-241.50		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T12	Flange	0.50	0	0.63	1	0.63	0	0.63	0	0.63	0	0.63	1	0.50	1
241.50-236.50		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T13	Flange	0.50	3	0.63	1	0.63	0	0.63	0	0.63	0	0.63	1	0.50	1
236.50-231.50		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T14	Flange	0.50	0	0.63	1	0.63	0	0.63	0	0.63	0	0.63	1	0.50	1
231.50-226.50		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T15	Flange	0.50	0	0.63	1	0.63	0	0.63	0	0.63	0	0.63	1	0.50	1
226.50-221.50		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T16	Flange	0.50	0	0.63	1	0.63	0	0.63	0	0.63	0	0.63	1	0.50	1
221.50-216.50		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T17	Flange	0.50	0	0.63	1	0.63	0	0.63	0	0.63	0	0.63	1	0.50	1
216.50-211.50		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T18	Flange	0.50	3	0.63	1	0.63	0	0.63	0	0.63	0	0.63	1	0.50	1
211.50-206.50		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T19	Flange	0.50	0	0.63	1	0.63	0	0.63	0	0.63	0	0.63	1	0.50	1
206.50-201.50		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T20	Flange	0.50	0	0.63	1	0.63	0	0.63	0	0.63	0	0.63	1	0.50	1
201.50-196.50		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T21	Flange	0.50	0	0.63	1	0.63	0	0.63	0	0.63	0	0.63	1	0.50	1
196.50-191.50		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T22	Flange	0.50	0	0.63	1	0.63	0	0.63	0	0.63	0	0.63	1	0.50	1
191.50-186.50		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T23	Flange	0.50	3	0.63	1	0.63	0	0.63	0	0.63	0	0.63	1	0.50	0
186.50-181.50		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T24	Flange	0.50	0	0.63	1	0.63	0	0.63	0	0.63	0	0.63	1	0.50	0
181.50-176.50		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T25	Flange	0.50	0	0.63	1	0.63	0	0.63	0	0.63	0	0.63	1	0.50	0
176.50-171.50		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T26	Flange	0.50	0	0.63	1	0.63	0	0.63	0	0.63	0	0.63	1	0.50	0
171.50-166.50		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T27	Flange	0.50	0	0.63	1	0.63	0	0.63	0	0.63	0	0.63	1	0.50	0
166.50-161.50		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T28	Flange	0.50	3	0.63	1	0.63	0	0.63	0	0.63	0	0.63	1	0.50	1
161.50-156.50		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T29	Flange	0.50	0	0.63	1	0.63	0	0.63	0	0.63	0	0.63	1	0.50	1
156.50-151.50		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T30	Flange	0.50	0	0.63	1	0.63	0	0.63	0	0.63	0	0.63	1	0.50	0
151.50-146.50		A325N		A325N		A325N		A325N		A325N		A325N		A325N	

Tower Elevation ft	Leg Connection Type	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
		Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.
T31 146.50-141.50	Flange	0.50 A325N	0	0.63 A325N	1	0.63 A325N	0	0.63 A325N	0	0.63 A325N	0	0.63 A325N	1	0.50 A325N	0
T32 141.50-136.50	Flange	0.50 A325N	0	0.63 A325N	1	0.63 A325N	0	0.63 A325N	0	0.63 A325N	0	0.63 A325N	1	0.50 A325N	0
T33 136.50-131.50	Flange	0.50 A325N	3	0.63 A325N	1	0.63 A325N	0	0.63 A325N	0	0.63 A325N	0	0.63 A325N	1	0.50 A325N	0
T34 131.50-106.50	Flange	0.50 A325N	3	0.63 A325N	1	0.63 A325N	0	0.63 A325N	0	0.63 A325N	0	0.63 A325N	1	0.50 A325N	0
T35 106.50-101.50	Flange	0.50 A325N	0	0.63 A325N	1	0.63 A325N	0	0.63 A325N	0	0.63 A325N	0	0.63 A325N	1	0.50 A325N	1
T36 101.50-96.50	Flange	0.50 A325N	0	0.63 A325N	1	0.63 A325N	0	0.63 A325N	0	0.63 A325N	0	0.63 A325N	1	0.50 A325N	0
T37 96.50-91.50	Flange	0.50 A325N	0	0.63 A325N	1	0.63 A325N	0	0.63 A325N	0	0.63 A325N	0	0.63 A325N	1	0.50 A325N	0
T38 91.50-86.50	Flange	0.50 A325N	0	0.63 A325N	1	0.63 A325N	0	0.63 A325N	0	0.63 A325N	0	0.63 A325N	1	0.50 A325N	0
T39 86.50-81.50	Flange	0.50 A325N	3	0.63 A325N	1	0.63 A325N	0	0.63 A325N	0	0.63 A325N	0	0.63 A325N	1	0.50 A325N	0
T40 81.50-76.50	Flange	0.50 A325N	0	0.63 A325N	1	0.63 A325N	0	0.63 A325N	0	0.63 A325N	0	0.63 A325N	1	0.50 A325N	0
T41 76.50-71.50	Flange	0.50 A325N	0	0.63 A325N	1	0.63 A325N	0	0.63 A325N	0	0.63 A325N	0	0.63 A325N	1	0.50 A325N	0
T42 71.50-66.50	Flange	0.50 A325N	0	0.63 A325N	1	0.63 A325N	0	0.63 A325N	0	0.63 A325N	0	0.63 A325N	1	0.50 A325N	0
T43 66.50-61.50	Flange	0.50 A325N	0	0.63 A325N	1	0.63 A325N	0	0.63 A325N	0	0.63 A325N	0	0.63 A325N	1	0.50 A325N	1
T44 61.50-56.50	Flange	0.50 A325N	3	0.63 A325N	1	0.63 A325N	0	0.63 A325N	0	0.63 A325N	0	0.63 A325N	1	0.50 A325N	1
T45 56.50-51.50	Flange	0.50 A325N	0	0.63 A325N	1	0.63 A325N	0	0.63 A325N	0	0.63 A325N	0	0.63 A325N	1	0.50 A325N	1
T46 51.50-46.50	Flange	0.50 A325N	0	0.63 A325N	1	0.63 A325N	0	0.63 A325N	0	0.63 A325N	0	0.63 A325N	1	0.50 A325N	1
T47 46.50-41.50	Flange	0.50 A325N	0	0.63 A325N	1	0.63 A325N	0	0.63 A325N	0	0.63 A325N	0	0.63 A325N	1	0.50 A325N	1
T48 41.50-36.50	Flange	0.50 A325N	0	0.63 A325N	1	0.63 A325N	0	0.63 A325N	0	0.63 A325N	0	0.63 A325N	1	0.50 A325N	1
T49 36.50-31.50	Flange	0.50 A325N	3	0.63 A325N	1	0.63 A325N	0	0.63 A325N	0	0.63 A325N	0	0.63 A325N	1	0.50 A325N	0
T50 31.50-6.50	Flange	0.50 A325N	4	0.63 A325N	1	0.63 A325N	0	0.63 A325N	0	0.63 A325N	0	0.63 A325N	1	0.50 A325N	0
T51 6.50-0.00	Flange	0.50 A325N	0	0.50 A325N	0	0.63 A325N	0	0.63 A325N	0	0.63 A325N	0	0.63 A325N	0	0.50 A325N	0

Guy Data

Guy Elevation ft	Guy Grade	Guy Size	Initial Tension K	%	Guy Modulus ksi	Guy Weight plf	L_u ft	Anchor Radius ft	Anchor Azimuth Adj. °	Anchor Elevation ft	End Fitting Efficiency %

306.5	EHS	A	11/16 (24000)	5.00	10%	24000.00	0.98	348.92	169.00	0.00	0.00	100%
		B	11/16 (24000)	5.00	10%	24000.00	0.98	349.40	170.00	0.00	0.00	100%
		C	11/16 (24000)	5.00	10%	24000.00	0.98	349.40	170.00	0.00	0.00	100%
246.5	EHS	A	7/8 (19000)	7.97	10%	19000.00	1.58	297.63	169.00	0.00	0.00	100%
		B	7/8 (19000)	7.97	10%	19000.00	1.58	298.19	170.00	0.00	0.00	100%
		C	7/8 (19000)	7.97	10%	19000.00	1.58	298.19	170.00	0.00	0.00	100%
186.5	EHS	A	9/16 (23000)	3.50	10%	23000.00	0.67	250.33	169.00	0.00	0.00	100%
		B	9/16 (23000)	3.50	10%	23000.00	0.67	251.00	170.00	0.00	0.00	100%
		C	9/16 (23000)	3.50	10%	23000.00	0.67	251.00	170.00	0.00	0.00	100%
126.5	EHS	A	5/8 (23000)	4.24	10%	23000.00	0.81	147.86	78.50	0.00	0.00	100%
		B	5/8 (23000)	4.24	10%	23000.00	0.81	146.07	75.00	0.00	0.00	100%
		C	5/8 (23000)	4.24	10%	23000.00	0.81	147.60	78.00	0.00	0.00	100%
61.5	EHS	A	11/16 (24000)	5.00	10%	24000.00	0.98	98.29	78.50	0.00	0.00	100%
		B	11/16 (24000)	5.00	10%	24000.00	0.98	95.59	75.00	0.00	0.00	100%
		C	11/16 (24000)	5.00	10%	24000.00	0.98	97.90	78.00	0.00	0.00	100%

Guy Data *(cont'd)*

Guy Elevation ft	*Mount Type*	*Torque-Arm Spread ft*	*Torque-Arm Leg Angle °*	*Torque-Arm Style*	*Torque-Arm Grade*	*Torque-Arm Type*	*Torque-Arm Size*
306.5	Corner						
246.5	Corner						
186.5	Corner						
126.5	Corner						
61.5	Corner						

Guy Data *(cont'd)*

Guy Elevation ft	*Diagonal Grade*	*Diagonal Type*	*Upper Diagonal Size*	*Lower Diagonal Size*	*Is Strap.*	*Pull-Off Grade*	*Pull-Off Type*	*Pull-Off Size*
306.50	A572-50 (50 ksi)	Solid Round				A572-50 (50 ksi)	Flat Bar	
246.50	A572-50 (50 ksi)	Solid Round				A572-50 (50 ksi)	Single Angle	
186.50	A572-50 (50 ksi)	Solid Round				A572-50 (50 ksi)	Flat Bar	
126.50	A572-50 (50 ksi)	Solid Round				A572-50 (50 ksi)	Flat Bar	
61.50	A572-50 (50 ksi)	Solid Round				A572-50 (50 ksi)	Flat Bar	

Guy Data *(cont'd)*

Guy Elevation ft	Cable Weight A K	Cable Weight B K	Cable Weight C K	Cable Weight D K	Tower Intercept A ft	Tower Intercept B ft	Tower Intercept C ft	Tower Intercept D ft
306.5	0.34	0.34	0.34		11.54 5.9 sec/pulse	11.57 5.9 sec/pulse	11.57 5.9 sec/pulse	
246.5	0.47	0.47	0.47		8.59 5.1 sec/pulse	8.62 5.1 sec/pulse	8.62 5.1 sec/pulse	
186.5	0.17	0.17	0.17		5.91 4.2 sec/pulse	5.94 4.2 sec/pulse	5.94 4.2 sec/pulse	
126.5	0.12	0.12	0.12		2.07 2.5 sec/pulse	2.02 2.5 sec/pulse	2.07 2.5 sec/pulse	
61.5	0.10	0.09	0.10		0.94 1.7 sec/pulse	0.89 1.6 sec/pulse	0.93 1.7 sec/pulse	

Guy Data *(cont'd)*

Guy Elevation ft	Calc K Single Angles	Calc K Solid Rounds	Torque Arm K_x	Torque Arm K_y	Pull Off K_x	Pull Off K_y	Diagonal K_x	Diagonal K_y
306.5	No	No			1	1	1	1
246.5	No	No			1	1	1	1
186.5	No	No			1	1	1	1
126.5	No	No			1	1	1	1
61.5	No	No			1	1	1	1

Guy Data *(cont'd)*

Guy Elevation ft	Torque-Arm Bolt Size in	Torque-Arm Number	Torque-Arm Net Width Deduct in	Torque-Arm U	Pull Off Bolt Size in	Pull Off Number	Pull Off Net Width Deduct in	Pull Off U	Diagonal Bolt Size in	Diagonal Number	Diagonal Net Width Deduct in	Diagonal U
306.5	0.63 A325N	0	0.00	0.75	0.63 A325N	0	0.00	0.75	0.63 A325N	0	0.00	0.75
246.5	0.00 A325N	0	0.00	1	0.63 A325N	0	0.00	0.75	0.63 A325N	0	0.00	0.75
186.5	0.63 A325N	0	0.00	0.75	0.63 A325N	0	0.00	0.75	0.63 A325N	0	0.00	0.75
126.5	0.63 A325N	0	0.00	0.75	0.63 A325N	0	0.00	0.75	0.63 A325N	0	0.00	0.75
61.5	0.63 A325N	0	0.00	0.75	0.63 A325N	0	0.00	0.75	0.63 A325N	0	0.00	0.75

Guy Pressures

Guy Elevation ft	Guy Location	z ft	q_z psf	q_z Ice psf	Ice Thickness in

Guy Elevation ft	Guy Location	z ft	q_z psf	q_z Ice psf	Ice Thickness in
306.5	A	153.25	34.83	6.05	1.75
	B	153.25	34.83	6.05	1.75
	C	153.25	34.83	6.05	1.75
246.5	A	123.25	32.73	5.68	1.71
	B	123.25	32.73	5.68	1.71
	C	123.25	32.73	5.68	1.71
186.5	A	93.25	30.22	5.25	1.66
	B	93.25	30.22	5.25	1.66
	C	93.25	30.22	5.25	1.66
126.5	A	63.25	27.05	4.70	1.60
	B	63.25	27.05	4.70	1.60
	C	63.25	27.05	4.70	1.60
61.5	A	30.75	22.01	3.82	1.49
	B	30.75	22.01	3.82	1.49
	C	30.75	22.01	3.82	1.49

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
1 5/8	A	No	Ar (CaAa)	314.50 - 0.00	1	1	0.000 0.000	1.98		0.82
1 5/8	A	No	Surface Ar (CaAa)	325.00 - 314.50	1	1	0.000 0.000	1.98		0.82
***										
7/16" Power	C	No	Ar (CaAa)	303.00 - 0.00	1	1	0.000 0.000	0.44		0.05
***										
3/8"	B	No	Ar (CaAa)	287.00 - 0.00	1	1	0.000 0.000	0.44		0.08
7/8"	C	No	Ar (CaAa)	287.00 - 0.00	1	1	0.000 0.000	1.09		0.33
***										
7/8"	C	No	Ar (CaAa)	288.00 - 0.00	1	1	0.000 0.000	1.09		0.33
***										
1 5/8	B	No	Ar (CaAa)	273.00 - 0.00	1	1	0.000 0.000	1.98		0.82
***										
1 5/8	B	No	Ar (CaAa)	260.00 - 0.00	1	1	0.000 0.000	1.98		0.82
***										
7/8"	C	No	Ar (CaAa)	239.00 - 0.00	1	1	0.000 0.000	1.09		0.33
***										
7/8"	C	No	Ar (CaAa)	237.00 - 0.00	1	1	0.000 0.000	1.09		0.33
***										
1" Conduit (Lighting)	A	No	Ar (CaAa)	223.00 - 0.00	1	1	0.000 0.000	1.00		1.13
***										
7/16" Power	C	No	Ar (CaAa)	183.00 - 0.00	1	1	0.000 0.000	0.44		0.05
***										
7/16" Power	C	No	Ar (CaAa)	169.00 - 0.00	1	1	0.000 0.000	0.44		0.05

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
***										
1/4" Fiber	C	No	Ar (CaAa)	145.50 - 0.00	1	1	0.000 0.000	0.34		0.06
***										
7/8"	C	No	Ar (CaAa)	141.00 - 0.00	1	1	0.000 0.000	1.09		0.33
***										
1" Conduit (Lighting)	A	No	Ar (CaAa)	135.00 - 0.00	1	1	0.000 0.000	1.00		1.13
***										
1 1/4"	C	No	Ar (CaAa)	101.00 - 0.00	15	5	0.000 0.000	1.55		0.66
***										
7/8"	B	No	Ar (CaAa)	80.00 - 0.00	3	2	0.000 0.000	1.09		0.33
7/8"	B	No	Ar (CaAa)	80.00 - 0.00	3	2	0.000 0.000	1.09		0.33
7/8"	C	No	Ar (CaAa)	80.00 - 0.00	3	2	0.000 0.000	1.09		0.33
10 mm	B	No	Ar (CaAa)	80.00 - 0.00	1	1	0.000 0.000	0.39		0.01
0.795"	B	No	Ar (CaAa)	80.00 - 0.00	2	2	0.000 0.000	0.80		0.33
7/8"	B	No	Ar (CaAa)	80.00 - 0.00	3	2	0.000 0.000	1.09		0.33
***										
7/16" Power	B	No	Ar (CaAa)	33.00 - 0.00	1	1	0.000 0.000	0.44		0.05
***										
7/16" Power	B	No	Ar (CaAa)	8.50 - 0.00	1	1	0.000 0.000	0.44		0.05

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L1	341.50-314.50	A	0.000	0.000	2.079	0.000	0.01
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00
T1	314.50-310.50	A	0.000	0.000	0.792	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00
T2	310.50-306.50	A	0.000	0.000	0.792	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00
T3	306.50-281.50	A	0.000	0.000	4.950	0.000	0.02
		B	0.000	0.000	0.242	0.000	0.00
		C	0.000	0.000	2.249	0.000	0.01
T4	281.50-276.50	A	0.000	0.000	0.990	0.000	0.00
		B	0.000	0.000	0.220	0.000	0.00
		C	0.000	0.000	1.309	0.000	0.00
T5	276.50-271.50	A	0.000	0.000	0.990	0.000	0.00
		B	0.000	0.000	0.517	0.000	0.00
		C	0.000	0.000	1.309	0.000	0.00
T6	271.50-266.50	A	0.000	0.000	0.990	0.000	0.00
		B	0.000	0.000	1.210	0.000	0.00

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		C	0.000	0.000	1.309	0.000	0.00
T7	266.50-261.50	A	0.000	0.000	0.990	0.000	0.00
		B	0.000	0.000	1.210	0.000	0.00
		C	0.000	0.000	1.309	0.000	0.00
T8	261.50-256.50	A	0.000	0.000	0.990	0.000	0.00
		B	0.000	0.000	1.903	0.000	0.01
		C	0.000	0.000	1.309	0.000	0.00
T9	256.50-251.50	A	0.000	0.000	0.990	0.000	0.00
		B	0.000	0.000	2.200	0.000	0.01
		C	0.000	0.000	1.309	0.000	0.00
T10	251.50-246.50	A	0.000	0.000	0.990	0.000	0.00
		B	0.000	0.000	2.200	0.000	0.01
		C	0.000	0.000	1.309	0.000	0.00
T11	246.50-241.50	A	0.000	0.000	0.990	0.000	0.00
		B	0.000	0.000	2.200	0.000	0.01
		C	0.000	0.000	1.309	0.000	0.00
T12	241.50-236.50	A	0.000	0.000	0.990	0.000	0.00
		B	0.000	0.000	2.200	0.000	0.01
		C	0.000	0.000	1.636	0.000	0.00
T13	236.50-231.50	A	0.000	0.000	0.990	0.000	0.00
		B	0.000	0.000	2.200	0.000	0.01
		C	0.000	0.000	2.399	0.000	0.01
T14	231.50-226.50	A	0.000	0.000	0.990	0.000	0.00
		B	0.000	0.000	2.200	0.000	0.01
		C	0.000	0.000	2.399	0.000	0.01
T15	226.50-221.50	A	0.000	0.000	1.140	0.000	0.01
		B	0.000	0.000	2.200	0.000	0.01
		C	0.000	0.000	2.399	0.000	0.01
T16	221.50-216.50	A	0.000	0.000	1.490	0.000	0.01
		B	0.000	0.000	2.200	0.000	0.01
		C	0.000	0.000	2.399	0.000	0.01
T17	216.50-211.50	A	0.000	0.000	1.490	0.000	0.01
		B	0.000	0.000	2.200	0.000	0.01
		C	0.000	0.000	2.399	0.000	0.01
T18	211.50-206.50	A	0.000	0.000	1.490	0.000	0.01
		B	0.000	0.000	2.200	0.000	0.01
		C	0.000	0.000	2.399	0.000	0.01
T19	206.50-201.50	A	0.000	0.000	1.490	0.000	0.01
		B	0.000	0.000	2.200	0.000	0.01
		C	0.000	0.000	2.399	0.000	0.01
T20	201.50-196.50	A	0.000	0.000	1.490	0.000	0.01
		B	0.000	0.000	2.200	0.000	0.01
		C	0.000	0.000	2.399	0.000	0.01
T21	196.50-191.50	A	0.000	0.000	1.490	0.000	0.01
		B	0.000	0.000	2.200	0.000	0.01
		C	0.000	0.000	2.399	0.000	0.01
T22	191.50-186.50	A	0.000	0.000	1.490	0.000	0.01
		B	0.000	0.000	2.200	0.000	0.01
		C	0.000	0.000	2.399	0.000	0.01
T23	186.50-181.50	A	0.000	0.000	1.490	0.000	0.01
		B	0.000	0.000	2.200	0.000	0.01
		C	0.000	0.000	2.464	0.000	0.01
T24	181.50-176.50	A	0.000	0.000	1.490	0.000	0.01
		B	0.000	0.000	2.200	0.000	0.01
		C	0.000	0.000	2.618	0.000	0.01
T25	176.50-171.50	A	0.000	0.000	1.490	0.000	0.01
		B	0.000	0.000	2.200	0.000	0.01
		C	0.000	0.000	2.618	0.000	0.01
T26	171.50-166.50	A	0.000	0.000	1.490	0.000	0.01
		B	0.000	0.000	2.200	0.000	0.01
		C	0.000	0.000	2.727	0.000	0.01

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
T27	166.50-161.50	A	0.000	0.000	1.490	0.000	0.01
		B	0.000	0.000	2.200	0.000	0.01
		C	0.000	0.000	2.836	0.000	0.01
T28	161.50-156.50	A	0.000	0.000	1.490	0.000	0.01
		B	0.000	0.000	2.200	0.000	0.01
		C	0.000	0.000	2.836	0.000	0.01
T29	156.50-151.50	A	0.000	0.000	1.490	0.000	0.01
		B	0.000	0.000	2.200	0.000	0.01
		C	0.000	0.000	2.836	0.000	0.01
T30	151.50-146.50	A	0.000	0.000	1.490	0.000	0.01
		B	0.000	0.000	2.200	0.000	0.01
		C	0.000	0.000	2.836	0.000	0.01
T31	146.50-141.50	A	0.000	0.000	1.490	0.000	0.01
		B	0.000	0.000	2.200	0.000	0.01
		C	0.000	0.000	2.974	0.000	0.01
T32	141.50-136.50	A	0.000	0.000	1.490	0.000	0.01
		B	0.000	0.000	2.200	0.000	0.01
		C	0.000	0.000	3.499	0.000	0.01
T33	136.50-131.50	A	0.000	0.000	1.840	0.000	0.01
		B	0.000	0.000	2.200	0.000	0.01
		C	0.000	0.000	3.554	0.000	0.01
T34	131.50-106.50	A	0.000	0.000	9.950	0.000	0.08
		B	0.000	0.000	11.000	0.000	0.04
		C	0.000	0.000	17.769	0.000	0.05
T35	106.50-101.50	A	0.000	0.000	1.990	0.000	0.02
		B	0.000	0.000	2.200	0.000	0.01
		C	0.000	0.000	3.554	0.000	0.01
T36	101.50-96.50	A	0.000	0.000	1.990	0.000	0.02
		B	0.000	0.000	2.200	0.000	0.01
		C	0.000	0.000	14.016	0.000	0.05
T37	96.50-91.50	A	0.000	0.000	1.990	0.000	0.02
		B	0.000	0.000	2.200	0.000	0.01
		C	0.000	0.000	15.179	0.000	0.06
T38	91.50-86.50	A	0.000	0.000	1.990	0.000	0.02
		B	0.000	0.000	2.200	0.000	0.01
		C	0.000	0.000	15.179	0.000	0.06
T39	86.50-81.50	A	0.000	0.000	1.990	0.000	0.02
		B	0.000	0.000	2.200	0.000	0.01
		C	0.000	0.000	15.179	0.000	0.06
T40	81.50-76.50	A	0.000	0.000	1.990	0.000	0.02
		B	0.000	0.000	6.328	0.000	0.02
		C	0.000	0.000	16.323	0.000	0.06
T41	76.50-71.50	A	0.000	0.000	1.990	0.000	0.02
		B	0.000	0.000	8.097	0.000	0.03
		C	0.000	0.000	16.814	0.000	0.06
T42	71.50-66.50	A	0.000	0.000	1.990	0.000	0.02
		B	0.000	0.000	8.097	0.000	0.03
		C	0.000	0.000	16.814	0.000	0.06
T43	66.50-61.50	A	0.000	0.000	1.990	0.000	0.02
		B	0.000	0.000	8.097	0.000	0.03
		C	0.000	0.000	16.814	0.000	0.06
T44	61.50-56.50	A	0.000	0.000	1.990	0.000	0.02
		B	0.000	0.000	8.097	0.000	0.03
		C	0.000	0.000	16.814	0.000	0.06
T45	56.50-51.50	A	0.000	0.000	1.990	0.000	0.02
		B	0.000	0.000	8.097	0.000	0.03
		C	0.000	0.000	16.814	0.000	0.06
T46	51.50-46.50	A	0.000	0.000	1.990	0.000	0.02
		B	0.000	0.000	8.097	0.000	0.03
		C	0.000	0.000	16.814	0.000	0.06
T47	46.50-41.50	A	0.000	0.000	1.990	0.000	0.02

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		B	0.000	0.000	8.097	0.000	0.03
		C	0.000	0.000	16.814	0.000	0.06
T48	41.50-36.50	A	0.000	0.000	1.990	0.000	0.02
		B	0.000	0.000	8.097	0.000	0.03
		C	0.000	0.000	16.814	0.000	0.06
T49	36.50-31.50	A	0.000	0.000	1.990	0.000	0.02
		B	0.000	0.000	8.162	0.000	0.03
		C	0.000	0.000	16.814	0.000	0.06
T50	31.50-6.50	A	0.000	0.000	9.950	0.000	0.08
		B	0.000	0.000	41.666	0.000	0.14
		C	0.000	0.000	84.069	0.000	0.32
T51	6.50-0.00	A	0.000	0.000	2.587	0.000	0.02
		B	0.000	0.000	11.095	0.000	0.04
		C	0.000	0.000	21.858	0.000	0.08

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L1	341.50-314.50	A	1.887	0.000	0.000	6.042	0.000	0.10
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00
T1	314.50-310.50	A	1.878	0.000	0.000	2.295	0.000	0.04
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00
T2	310.50-306.50	A	1.876	0.000	0.000	2.293	0.000	0.04
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00
T3	306.50-281.50	A	1.867	0.000	0.000	14.284	0.000	0.24
		B		0.000	0.000	2.295	0.000	0.03
		C		0.000	0.000	14.756	0.000	0.20
T4	281.50-276.50	A	1.857	0.000	0.000	2.847	0.000	0.05
		B		0.000	0.000	2.077	0.000	0.03
		C		0.000	0.000	6.880	0.000	0.10
T5	276.50-271.50	A	1.854	0.000	0.000	2.844	0.000	0.05
		B		0.000	0.000	2.927	0.000	0.04
		C		0.000	0.000	6.870	0.000	0.10
T6	271.50-266.50	A	1.850	0.000	0.000	2.840	0.000	0.05
		B		0.000	0.000	4.910	0.000	0.07
		C		0.000	0.000	6.859	0.000	0.10
T7	266.50-261.50	A	1.847	0.000	0.000	2.837	0.000	0.05
		B		0.000	0.000	4.903	0.000	0.07
		C		0.000	0.000	6.849	0.000	0.10
T8	261.50-256.50	A	1.843	0.000	0.000	2.833	0.000	0.05
		B		0.000	0.000	6.880	0.000	0.11
		C		0.000	0.000	6.838	0.000	0.10
T9	256.50-251.50	A	1.840	0.000	0.000	2.830	0.000	0.05
		B		0.000	0.000	7.719	0.000	0.12
		C		0.000	0.000	6.828	0.000	0.09
T10	251.50-246.50	A	1.836	0.000	0.000	2.826	0.000	0.05
		B		0.000	0.000	7.708	0.000	0.12
		C		0.000	0.000	6.817	0.000	0.09
T11	246.50-241.50	A	1.832	0.000	0.000	2.822	0.000	0.05
		B		0.000	0.000	7.697	0.000	0.12
		C		0.000	0.000	6.805	0.000	0.09
T12	241.50-236.50	A	1.828	0.000	0.000	2.818	0.000	0.05
		B		0.000	0.000	7.685	0.000	0.12

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		C		0.000	0.000	8.218	0.000	0.11
T13	236.50-231.50	A	1.825	0.000	0.000	2.815	0.000	0.05
		B		0.000	0.000	7.674	0.000	0.12
		C		0.000	0.000	11.522	0.000	0.16
T14	231.50-226.50	A	1.821	0.000	0.000	2.811	0.000	0.05
		B		0.000	0.000	7.662	0.000	0.12
		C		0.000	0.000	11.502	0.000	0.16
T15	226.50-221.50	A	1.817	0.000	0.000	3.502	0.000	0.06
		B		0.000	0.000	7.650	0.000	0.12
		C		0.000	0.000	11.482	0.000	0.16
T16	221.50-216.50	A	1.813	0.000	0.000	5.115	0.000	0.08
		B		0.000	0.000	7.638	0.000	0.12
		C		0.000	0.000	11.461	0.000	0.16
T17	216.50-211.50	A	1.808	0.000	0.000	5.107	0.000	0.08
		B		0.000	0.000	7.625	0.000	0.12
		C		0.000	0.000	11.440	0.000	0.16
T18	211.50-206.50	A	1.804	0.000	0.000	5.098	0.000	0.08
		B		0.000	0.000	7.612	0.000	0.12
		C		0.000	0.000	11.419	0.000	0.16
T19	206.50-201.50	A	1.800	0.000	0.000	5.089	0.000	0.08
		B		0.000	0.000	7.599	0.000	0.12
		C		0.000	0.000	11.397	0.000	0.16
T20	201.50-196.50	A	1.795	0.000	0.000	5.081	0.000	0.08
		B		0.000	0.000	7.586	0.000	0.12
		C		0.000	0.000	11.375	0.000	0.16
T21	196.50-191.50	A	1.791	0.000	0.000	5.071	0.000	0.08
		B		0.000	0.000	7.572	0.000	0.12
		C		0.000	0.000	11.352	0.000	0.16
T22	191.50-186.50	A	1.786	0.000	0.000	5.062	0.000	0.08
		B		0.000	0.000	7.558	0.000	0.12
		C		0.000	0.000	11.329	0.000	0.16
T23	186.50-181.50	A	1.781	0.000	0.000	5.052	0.000	0.08
		B		0.000	0.000	7.544	0.000	0.11
		C		0.000	0.000	11.905	0.000	0.16
T24	181.50-176.50	A	1.776	0.000	0.000	5.043	0.000	0.08
		B		0.000	0.000	7.529	0.000	0.11
		C		0.000	0.000	13.276	0.000	0.18
T25	176.50-171.50	A	1.771	0.000	0.000	5.033	0.000	0.08
		B		0.000	0.000	7.514	0.000	0.11
		C		0.000	0.000	13.245	0.000	0.18
T26	171.50-166.50	A	1.766	0.000	0.000	5.022	0.000	0.08
		B		0.000	0.000	7.498	0.000	0.11
		C		0.000	0.000	14.207	0.000	0.19
T27	166.50-161.50	A	1.761	0.000	0.000	5.012	0.000	0.08
		B		0.000	0.000	7.483	0.000	0.11
		C		0.000	0.000	15.162	0.000	0.20
T28	161.50-156.50	A	1.755	0.000	0.000	5.001	0.000	0.08
		B		0.000	0.000	7.466	0.000	0.11
		C		0.000	0.000	15.124	0.000	0.20
T29	156.50-151.50	A	1.750	0.000	0.000	4.990	0.000	0.08
		B		0.000	0.000	7.449	0.000	0.11
		C		0.000	0.000	15.085	0.000	0.20
T30	151.50-146.50	A	1.744	0.000	0.000	4.978	0.000	0.08
		B		0.000	0.000	7.432	0.000	0.11
		C		0.000	0.000	15.045	0.000	0.20
T31	146.50-141.50	A	1.738	0.000	0.000	4.966	0.000	0.08
		B		0.000	0.000	7.414	0.000	0.11
		C		0.000	0.000	16.531	0.000	0.21
T32	141.50-136.50	A	1.732	0.000	0.000	4.954	0.000	0.08
		B		0.000	0.000	7.396	0.000	0.11
		C		0.000	0.000	18.914	0.000	0.25

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
T33	136.50-131.50	A	1.726	0.000	0.000	6.499	0.000	0.10
		B		0.000	0.000	7.377	0.000	0.11
		C		0.000	0.000	19.085	0.000	0.25
T34	131.50-106.50	A	1.705	0.000	0.000	35.529	0.000	0.55
		B		0.000	0.000	36.579	0.000	0.54
		C		0.000	0.000	94.506	0.000	1.22
T35	106.50-101.50	A	1.682	0.000	0.000	7.037	0.000	0.11
		B		0.000	0.000	7.247	0.000	0.11
		C		0.000	0.000	18.696	0.000	0.24
T36	101.50-96.50	A	1.674	0.000	0.000	7.013	0.000	0.11
		B		0.000	0.000	7.223	0.000	0.10
		C		0.000	0.000	27.560	0.000	0.43
T37	96.50-91.50	A	1.666	0.000	0.000	6.987	0.000	0.11
		B		0.000	0.000	7.197	0.000	0.10
		C		0.000	0.000	28.461	0.000	0.45
T38	91.50-86.50	A	1.656	0.000	0.000	6.959	0.000	0.11
		B		0.000	0.000	7.169	0.000	0.10
		C		0.000	0.000	28.363	0.000	0.44
T39	86.50-81.50	A	1.647	0.000	0.000	6.931	0.000	0.11
		B		0.000	0.000	7.141	0.000	0.10
		C		0.000	0.000	28.261	0.000	0.44
T40	81.50-76.50	A	1.637	0.000	0.000	6.900	0.000	0.10
		B		0.000	0.000	23.589	0.000	0.28
		C		0.000	0.000	32.201	0.000	0.48
T41	76.50-71.50	A	1.626	0.000	0.000	6.868	0.000	0.10
		B		0.000	0.000	30.534	0.000	0.35
		C		0.000	0.000	33.803	0.000	0.50
T42	71.50-66.50	A	1.615	0.000	0.000	6.834	0.000	0.10
		B		0.000	0.000	30.408	0.000	0.35
		C		0.000	0.000	33.661	0.000	0.49
T43	66.50-61.50	A	1.603	0.000	0.000	6.798	0.000	0.10
		B		0.000	0.000	30.275	0.000	0.34
		C		0.000	0.000	33.510	0.000	0.49
T44	61.50-56.50	A	1.590	0.000	0.000	6.759	0.000	0.10
		B		0.000	0.000	30.131	0.000	0.34
		C		0.000	0.000	33.347	0.000	0.49
T45	56.50-51.50	A	1.576	0.000	0.000	6.717	0.000	0.10
		B		0.000	0.000	29.977	0.000	0.34
		C		0.000	0.000	33.172	0.000	0.48
T46	51.50-46.50	A	1.560	0.000	0.000	6.671	0.000	0.10
		B		0.000	0.000	29.808	0.000	0.33
		C		0.000	0.000	32.982	0.000	0.48
T47	46.50-41.50	A	1.544	0.000	0.000	6.621	0.000	0.10
		B		0.000	0.000	29.624	0.000	0.33
		C		0.000	0.000	32.773	0.000	0.47
T48	41.50-36.50	A	1.525	0.000	0.000	6.566	0.000	0.10
		B		0.000	0.000	29.419	0.000	0.32
		C		0.000	0.000	32.541	0.000	0.46
T49	36.50-31.50	A	1.504	0.000	0.000	6.503	0.000	0.09
		B		0.000	0.000	29.707	0.000	0.32
		C		0.000	0.000	32.281	0.000	0.46
T50	31.50-6.50	A	1.419	0.000	0.000	31.242	0.000	0.43
		B		0.000	0.000	150.098	0.000	1.57
		C		0.000	0.000	156.090	0.000	2.15
T51	6.50-0.00	A	1.190	0.000	0.000	7.227	0.000	0.09
		B		0.000	0.000	37.090	0.000	0.35
		C		0.000	0.000	36.849	0.000	0.47

Feed Line Center of Pressure

Section	Elevation	CP_X	CP_Z	CP_X Ice	CP_Z Ice
	ft	in	in	in	in
L1	341.50-314.50	-0.70	-0.40	-0.70	-0.41
T1	314.50-310.50	-0.07	-1.82	-0.07	-1.91
T2	310.50-306.50	-0.09	-2.33	-0.09	-2.14
T3	306.50-281.50	-0.07	-1.76	0.51	-1.04
T4	281.50-276.50	-0.75	-0.68	-0.14	0.23
T5	276.50-271.50	-0.70	-1.23	-0.12	-0.21
T6	271.50-266.50	-0.62	-2.44	-0.09	-1.34
T7	266.50-261.50	-0.62	-2.44	-0.09	-1.34
T8	261.50-256.50	-0.48	-3.41	-0.00	-2.25
T9	256.50-251.50	-0.43	-3.79	0.04	-2.62
T10	251.50-246.50	-0.43	-3.79	0.04	-2.62
T11	246.50-241.50	-0.33	-3.10	0.03	-2.07
T12	241.50-236.50	0.01	-2.80	0.49	-1.72
T13	236.50-231.50	0.79	-2.17	1.49	-0.97
T14	231.50-226.50	0.79	-2.17	1.49	-0.97
T15	226.50-221.50	0.79	-2.38	1.42	-1.08
T16	221.50-216.50	0.61	-2.52	1.16	-1.30
T17	216.50-211.50	0.61	-2.52	1.17	-1.30
T18	211.50-206.50	0.61	-2.52	1.17	-1.30
T19	206.50-201.50	0.61	-2.52	1.17	-1.31
T20	201.50-196.50	0.61	-2.52	1.17	-1.31
T21	196.50-191.50	0.61	-2.52	1.17	-1.31
T22	191.50-186.50	0.61	-2.52	1.17	-1.31
T23	186.50-181.50	0.54	-2.46	0.99	-1.19
T24	181.50-176.50	0.48	-2.78	0.73	-1.12
T25	176.50-171.50	0.46	-2.70	0.72	-1.10
T26	171.50-166.50	0.33	-2.60	0.36	-0.86
T27	166.50-161.50	0.17	-2.31	0.01	-0.62
T28	161.50-156.50	0.20	-2.56	0.01	-0.65
T29	156.50-151.50	0.19	-2.48	0.01	-0.58
T30	151.50-146.50	0.19	-2.48	0.01	-0.58
T31	146.50-141.50	0.02	-2.44	-0.55	-0.31
T32	141.50-136.50	0.54	-1.95	0.00	0.22
T33	136.50-131.50	0.24	-1.77	-0.36	0.37
T34	131.50-106.50	0.09	-1.71	-0.54	0.41
T35	106.50-101.50	0.09	-1.71	-0.54	0.40
T36	101.50-96.50	-0.88	0.86	-0.84	1.40
T37	96.50-91.50	-0.97	1.12	-0.96	1.65
T38	91.50-86.50	-0.97	1.12	-0.96	1.65
T39	86.50-81.50	-0.97	1.12	-0.96	1.65
T40	81.50-76.50	0.44	0.53	0.59	1.01
T41	76.50-71.50	0.82	0.33	0.98	0.75
T42	71.50-66.50	0.83	0.34	0.99	0.76
T43	66.50-61.50	0.78	0.32	0.97	0.74
T44	61.50-56.50	0.88	0.35	1.03	0.78
T45	56.50-51.50	0.88	0.35	1.03	0.78
T46	51.50-46.50	0.88	0.35	1.03	0.78
T47	46.50-41.50	0.87	0.35	1.02	0.77
T48	41.50-36.50	0.87	0.35	1.02	0.77
T49	36.50-31.50	0.87	0.31	1.03	0.65
T50	31.50-6.50	0.64	0.15	0.96	0.32
T51	6.50-0.00	0.46	0.04	0.76	0.00

Note: For pole sections, center of pressure calculations do not consider feed line shielding.

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L1	2	1 5/8	314.50 - 325.00	1.0000	1.0000
T1	1	1 5/8	310.50 - 314.50	0.6000	0.4504
T2	1	1 5/8	306.50 - 310.50	0.6000	0.4728
T3	1	1 5/8	281.50 - 306.50	0.6000	0.5012
T3	4	7/16" Power	281.50 - 303.00	0.6000	0.5012
T3	6	3/8"	281.50 - 287.00	0.6000	0.5012
T3	7	7/8"	281.50 - 287.00	0.6000	0.5012
T3	9	7/8"	281.50 - 288.00	0.6000	0.5012
T4	1	1 5/8	276.50 - 281.50	0.6000	0.4403
T4	4	7/16" Power	276.50 - 281.50	0.6000	0.4403
T4	6	3/8"	276.50 - 281.50	0.6000	0.4403
T4	7	7/8"	276.50 - 281.50	0.6000	0.4403
T4	9	7/8"	276.50 - 281.50	0.6000	0.4403
T5	1	1 5/8	271.50 - 276.50	0.6000	0.4408
T5	4	7/16" Power	271.50 - 276.50	0.6000	0.4408
T5	6	3/8"	271.50 - 276.50	0.6000	0.4408
T5	7	7/8"	271.50 - 276.50	0.6000	0.4408
T5	9	7/8"	271.50 - 276.50	0.6000	0.4408
T5	11	1 5/8	271.50 - 273.00	0.6000	0.4408
T6	1	1 5/8	266.50 - 271.50	0.6000	0.4933
T6	4	7/16" Power	266.50 - 271.50	0.6000	0.4933
T6	6	3/8"	266.50 - 271.50	0.6000	0.4933
T6	7	7/8"	266.50 - 271.50	0.6000	0.4933
T6	9	7/8"	266.50 - 271.50	0.6000	0.4933
T6	11	1 5/8	266.50 - 271.50	0.6000	0.4933
T7	1	1 5/8	261.50 - 266.50	0.6000	0.4938
T7	4	7/16" Power	261.50 - 266.50	0.6000	0.4938
T7	6	3/8"	261.50 -	0.6000	0.4938

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T7	7	7/8"	261.50 - 266.50	0.6000	0.4938
T7	9	7/8"	261.50 - 266.50	0.6000	0.4938
T7	11	1 5/8	261.50 - 266.50	0.6000	0.4938
T8	1	1 5/8	256.50 - 261.50	0.6000	0.4944
T8	4	7/16" Power	256.50 - 261.50	0.6000	0.4944
T8	6	3/8"	256.50 - 261.50	0.6000	0.4944
T8	7	7/8"	256.50 - 261.50	0.6000	0.4944
T8	9	7/8"	256.50 - 261.50	0.6000	0.4944
T8	11	1 5/8	256.50 - 261.50	0.6000	0.4944
T8	13	1 5/8	256.50 - 260.00	0.6000	0.4944
T9	1	1 5/8	251.50 - 256.50	0.6000	0.4949
T9	4	7/16" Power	251.50 - 256.50	0.6000	0.4949
T9	6	3/8"	251.50 - 256.50	0.6000	0.4949
T9	7	7/8"	251.50 - 256.50	0.6000	0.4949
T9	9	7/8"	251.50 - 256.50	0.6000	0.4949
T9	11	1 5/8	251.50 - 256.50	0.6000	0.4949
T9	13	1 5/8	251.50 - 256.50	0.6000	0.4949
T10	1	1 5/8	246.50 - 251.50	0.6000	0.4954
T10	4	7/16" Power	246.50 - 251.50	0.6000	0.4954
T10	6	3/8"	246.50 - 251.50	0.6000	0.4954
T10	7	7/8"	246.50 - 251.50	0.6000	0.4954
T10	9	7/8"	246.50 - 251.50	0.6000	0.4954
T10	11	1 5/8	246.50 - 251.50	0.6000	0.4954
T10	13	1 5/8	246.50 - 251.50	0.6000	0.4954
T11	1	1 5/8	241.50 - 246.50	0.6000	0.4118
T11	4	7/16" Power	241.50 - 246.50	0.6000	0.4118
T11	6	3/8"	241.50 - 246.50	0.6000	0.4118
T11	7	7/8"	241.50 - 246.50	0.6000	0.4118
T11	9	7/8"	241.50 - 246.50	0.6000	0.4118
T11	11	1 5/8	241.50 - 246.50	0.6000	0.4118
T11	13	1 5/8	241.50 -	0.6000	0.4118

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T12	1	1 5/8	236.50 - 246.50	0.6000	0.4124
T12	4	7/16" Power	236.50 - 241.50	0.6000	0.4124
T12	6	3/8"	236.50 - 241.50	0.6000	0.4124
T12	7	7/8"	236.50 - 241.50	0.6000	0.4124
T12	9	7/8"	236.50 - 241.50	0.6000	0.4124
T12	11	1 5/8	236.50 - 241.50	0.6000	0.4124
T12	13	1 5/8	236.50 - 241.50	0.6000	0.4124
T12	15	7/8"	236.50 - 239.00	0.6000	0.4124
T12	17	7/8"	236.50 - 237.00	0.6000	0.4124
T13	1	1 5/8	231.50 - 236.50	0.6000	0.4131
T13	4	7/16" Power	231.50 - 236.50	0.6000	0.4131
T13	6	3/8"	231.50 - 236.50	0.6000	0.4131
T13	7	7/8"	231.50 - 236.50	0.6000	0.4131
T13	9	7/8"	231.50 - 236.50	0.6000	0.4131
T13	11	1 5/8	231.50 - 236.50	0.6000	0.4131
T13	13	1 5/8	231.50 - 236.50	0.6000	0.4131
T13	15	7/8"	231.50 - 236.50	0.6000	0.4131
T13	17	7/8"	231.50 - 236.50	0.6000	0.4131
T14	1	1 5/8	226.50 - 231.50	0.6000	0.4138
T14	4	7/16" Power	226.50 - 231.50	0.6000	0.4138
T14	6	3/8"	226.50 - 231.50	0.6000	0.4138
T14	7	7/8"	226.50 - 231.50	0.6000	0.4138
T14	9	7/8"	226.50 - 231.50	0.6000	0.4138
T14	11	1 5/8	226.50 - 231.50	0.6000	0.4138
T14	13	1 5/8	226.50 - 231.50	0.6000	0.4138
T14	15	7/8"	226.50 - 231.50	0.6000	0.4138
T14	17	7/8"	226.50 - 231.50	0.6000	0.4138
T15	1	1 5/8	221.50 - 226.50	0.6000	0.4170
T15	4	7/16" Power	221.50 - 226.50	0.6000	0.4170
T15	6	3/8"	221.50 - 226.50	0.6000	0.4170
T15	7	7/8"	221.50 -	0.6000	0.4170

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T15	9	7/8"	221.50 - 226.50	0.6000	0.4170
T15	11	1 5/8	221.50 - 226.50	0.6000	0.4170
T15	13	1 5/8	221.50 - 226.50	0.6000	0.4170
T15	15	7/8"	221.50 - 226.50	0.6000	0.4170
T15	17	7/8"	221.50 - 226.50	0.6000	0.4170
T15	19	1" Conduit (Lighting)	221.50 - 223.00	0.6000	0.4170
T16	1	1 5/8	216.50 - 221.50	0.6000	0.4178
T16	4	7/16" Power	216.50 - 221.50	0.6000	0.4178
T16	6	3/8"	216.50 - 221.50	0.6000	0.4178
T16	7	7/8"	216.50 - 221.50	0.6000	0.4178
T16	9	7/8"	216.50 - 221.50	0.6000	0.4178
T16	11	1 5/8	216.50 - 221.50	0.6000	0.4178
T16	13	1 5/8	216.50 - 221.50	0.6000	0.4178
T16	15	7/8"	216.50 - 221.50	0.6000	0.4178
T16	17	7/8"	216.50 - 221.50	0.6000	0.4178
T16	19	1" Conduit (Lighting)	216.50 - 221.50	0.6000	0.4178
T17	1	1 5/8	211.50 - 216.50	0.6000	0.4185
T17	4	7/16" Power	211.50 - 216.50	0.6000	0.4185
T17	6	3/8"	211.50 - 216.50	0.6000	0.4185
T17	7	7/8"	211.50 - 216.50	0.6000	0.4185
T17	9	7/8"	211.50 - 216.50	0.6000	0.4185
T17	11	1 5/8	211.50 - 216.50	0.6000	0.4185
T17	13	1 5/8	211.50 - 216.50	0.6000	0.4185
T17	15	7/8"	211.50 - 216.50	0.6000	0.4185
T17	17	7/8"	211.50 - 216.50	0.6000	0.4185
T17	19	1" Conduit (Lighting)	211.50 - 216.50	0.6000	0.4185
T18	1	1 5/8	206.50 - 211.50	0.6000	0.4192
T18	4	7/16" Power	206.50 - 211.50	0.6000	0.4192
T18	6	3/8"	206.50 - 211.50	0.6000	0.4192
T18	7	7/8"	206.50 - 211.50	0.6000	0.4192
T18	9	7/8"	206.50 -	0.6000	0.4192

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T18	11	1 5/8	206.50 - 211.50	0.6000	0.4192
T18	13	1 5/8	206.50 - 211.50	0.6000	0.4192
T18	15	7/8"	206.50 - 211.50	0.6000	0.4192
T18	17	7/8"	206.50 - 211.50	0.6000	0.4192
T18	19	1" Conduit (Lighting)	206.50 - 211.50	0.6000	0.4192
T19	1	1 5/8	201.50 - 206.50	0.6000	0.4200
T19	4	7/16" Power	201.50 - 206.50	0.6000	0.4200
T19	6	3/8"	201.50 - 206.50	0.6000	0.4200
T19	7	7/8"	201.50 - 206.50	0.6000	0.4200
T19	9	7/8"	201.50 - 206.50	0.6000	0.4200
T19	11	1 5/8	201.50 - 206.50	0.6000	0.4200
T19	13	1 5/8	201.50 - 206.50	0.6000	0.4200
T19	15	7/8"	201.50 - 206.50	0.6000	0.4200
T19	17	7/8"	201.50 - 206.50	0.6000	0.4200
T19	19	1" Conduit (Lighting)	201.50 - 206.50	0.6000	0.4200
T20	1	1 5/8	196.50 - 201.50	0.6000	0.4207
T20	4	7/16" Power	196.50 - 201.50	0.6000	0.4207
T20	6	3/8"	196.50 - 201.50	0.6000	0.4207
T20	7	7/8"	196.50 - 201.50	0.6000	0.4207
T20	9	7/8"	196.50 - 201.50	0.6000	0.4207
T20	11	1 5/8	196.50 - 201.50	0.6000	0.4207
T20	13	1 5/8	196.50 - 201.50	0.6000	0.4207
T20	15	7/8"	196.50 - 201.50	0.6000	0.4207
T20	17	7/8"	196.50 - 201.50	0.6000	0.4207
T20	19	1" Conduit (Lighting)	196.50 - 201.50	0.6000	0.4207
T21	1	1 5/8	191.50 - 196.50	0.6000	0.4215
T21	4	7/16" Power	191.50 - 196.50	0.6000	0.4215
T21	6	3/8"	191.50 - 196.50	0.6000	0.4215
T21	7	7/8"	191.50 - 196.50	0.6000	0.4215
T21	9	7/8"	191.50 - 196.50	0.6000	0.4215
T21	11	1 5/8	191.50 -	0.6000	0.4215

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T21	13	1 5/8	191.50 - 196.50	0.6000	0.4215
T21	15	7/8"	191.50 - 196.50	0.6000	0.4215
T21	17	7/8"	191.50 - 196.50	0.6000	0.4215
T21	19	1" Conduit (Lighting)	191.50 - 196.50	0.6000	0.4215
T22	1	1 5/8	186.50 - 191.50	0.6000	0.4223
T22	4	7/16" Power	186.50 - 191.50	0.6000	0.4223
T22	6	3/8"	186.50 - 191.50	0.6000	0.4223
T22	7	7/8"	186.50 - 191.50	0.6000	0.4223
T22	9	7/8"	186.50 - 191.50	0.6000	0.4223
T22	11	1 5/8	186.50 - 191.50	0.6000	0.4223
T22	13	1 5/8	186.50 - 191.50	0.6000	0.4223
T22	15	7/8"	186.50 - 191.50	0.6000	0.4223
T22	17	7/8"	186.50 - 191.50	0.6000	0.4223
T22	19	1" Conduit (Lighting)	186.50 - 191.50	0.6000	0.4223
T23	1	1 5/8	181.50 - 186.50	0.6000	0.4231
T23	4	7/16" Power	181.50 - 186.50	0.6000	0.4231
T23	6	3/8"	181.50 - 186.50	0.6000	0.4231
T23	7	7/8"	181.50 - 186.50	0.6000	0.4231
T23	9	7/8"	181.50 - 186.50	0.6000	0.4231
T23	11	1 5/8	181.50 - 186.50	0.6000	0.4231
T23	13	1 5/8	181.50 - 186.50	0.6000	0.4231
T23	15	7/8"	181.50 - 186.50	0.6000	0.4231
T23	17	7/8"	181.50 - 186.50	0.6000	0.4231
T23	19	1" Conduit (Lighting)	181.50 - 186.50	0.6000	0.4231
T23	21	7/16" Power	181.50 - 183.00	0.6000	0.4231
T24	1	1 5/8	176.50 - 181.50	0.6000	0.5222
T24	4	7/16" Power	176.50 - 181.50	0.6000	0.5222
T24	6	3/8"	176.50 - 181.50	0.6000	0.5222
T24	7	7/8"	176.50 - 181.50	0.6000	0.5222
T24	9	7/8"	176.50 - 181.50	0.6000	0.5222
T24	11	1 5/8	176.50 -	0.6000	0.5222

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T24	13	1 5/8	176.50 - 181.50	0.6000	0.5222
T24	15	7/8"	176.50 - 181.50	0.6000	0.5222
T24	17	7/8"	176.50 - 181.50	0.6000	0.5222
T24	19	1" Conduit (Lighting)	176.50 - 181.50	0.6000	0.5222
T24	21	7/16" Power	176.50 - 181.50	0.6000	0.5222
T25	1	1 5/8	171.50 - 176.50	0.6000	0.5125
T25	4	7/16" Power	171.50 - 176.50	0.6000	0.5125
T25	6	3/8"	171.50 - 176.50	0.6000	0.5125
T25	7	7/8"	171.50 - 176.50	0.6000	0.5125
T25	9	7/8"	171.50 - 176.50	0.6000	0.5125
T25	11	1 5/8	171.50 - 176.50	0.6000	0.5125
T25	13	1 5/8	171.50 - 176.50	0.6000	0.5125
T25	15	7/8"	171.50 - 176.50	0.6000	0.5125
T25	17	7/8"	171.50 - 176.50	0.6000	0.5125
T25	19	1" Conduit (Lighting)	171.50 - 176.50	0.6000	0.5125
T25	21	7/16" Power	171.50 - 176.50	0.6000	0.5125
T26	1	1 5/8	166.50 - 171.50	0.6000	0.5133
T26	4	7/16" Power	166.50 - 171.50	0.6000	0.5133
T26	6	3/8"	166.50 - 171.50	0.6000	0.5133
T26	7	7/8"	166.50 - 171.50	0.6000	0.5133
T26	9	7/8"	166.50 - 171.50	0.6000	0.5133
T26	11	1 5/8	166.50 - 171.50	0.6000	0.5133
T26	13	1 5/8	166.50 - 171.50	0.6000	0.5133
T26	15	7/8"	166.50 - 171.50	0.6000	0.5133
T26	17	7/8"	166.50 - 171.50	0.6000	0.5133
T26	19	1" Conduit (Lighting)	166.50 - 171.50	0.6000	0.5133
T26	21	7/16" Power	166.50 - 171.50	0.6000	0.5133
T26	23	7/16" Power	166.50 - 169.00	0.6000	0.5133
T27	1	1 5/8	161.50 - 166.50	0.6000	0.5115
T27	4	7/16" Power	161.50 - 166.50	0.6000	0.5115
T27	6	3/8"	161.50 -	0.6000	0.5115

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T27	7	7/8"	161.50 - 166.50	0.6000	0.5115
T27	9	7/8"	161.50 - 166.50	0.6000	0.5115
T27	11	1 5/8	161.50 - 166.50	0.6000	0.5115
T27	13	1 5/8	161.50 - 166.50	0.6000	0.5115
T27	15	7/8"	161.50 - 166.50	0.6000	0.5115
T27	17	7/8"	161.50 - 166.50	0.6000	0.5115
T27	19	1" Conduit (Lighting)	161.50 - 166.50	0.6000	0.5115
T27	21	7/16" Power	161.50 - 166.50	0.6000	0.5115
T27	23	7/16" Power	161.50 - 166.50	0.6000	0.5115
T28	1	1 5/8	156.50 - 161.50	0.6000	0.5254
T28	4	7/16" Power	156.50 - 161.50	0.6000	0.5254
T28	6	3/8"	156.50 - 161.50	0.6000	0.5254
T28	7	7/8"	156.50 - 161.50	0.6000	0.5254
T28	9	7/8"	156.50 - 161.50	0.6000	0.5254
T28	11	1 5/8	156.50 - 161.50	0.6000	0.5254
T28	13	1 5/8	156.50 - 161.50	0.6000	0.5254
T28	15	7/8"	156.50 - 161.50	0.6000	0.5254
T28	17	7/8"	156.50 - 161.50	0.6000	0.5254
T28	19	1" Conduit (Lighting)	156.50 - 161.50	0.6000	0.5254
T28	21	7/16" Power	156.50 - 161.50	0.6000	0.5254
T28	23	7/16" Power	156.50 - 161.50	0.6000	0.5254
T29	1	1 5/8	151.50 - 156.50	0.6000	0.4657
T29	4	7/16" Power	151.50 - 156.50	0.6000	0.4657
T29	6	3/8"	151.50 - 156.50	0.6000	0.4657
T29	7	7/8"	151.50 - 156.50	0.6000	0.4657
T29	9	7/8"	151.50 - 156.50	0.6000	0.4657
T29	11	1 5/8	151.50 - 156.50	0.6000	0.4657
T29	13	1 5/8	151.50 - 156.50	0.6000	0.4657
T29	15	7/8"	151.50 - 156.50	0.6000	0.4657
T29	17	7/8"	151.50 - 156.50	0.6000	0.4657
T29	19	1" Conduit (Lighting)	151.50 -	0.6000	0.4657

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T29	21	7/16" Power	151.50 - 156.50	0.6000	0.4657
T29	23	7/16" Power	151.50 - 156.50	0.6000	0.4657
T30	1	1 5/8	146.50 - 151.50	0.6000	0.4667
T30	4	7/16" Power	146.50 - 151.50	0.6000	0.4667
T30	6	3/8"	146.50 - 151.50	0.6000	0.4667
T30	7	7/8"	146.50 - 151.50	0.6000	0.4667
T30	9	7/8"	146.50 - 151.50	0.6000	0.4667
T30	11	1 5/8	146.50 - 151.50	0.6000	0.4667
T30	13	1 5/8	146.50 - 151.50	0.6000	0.4667
T30	15	7/8"	146.50 - 151.50	0.6000	0.4667
T30	17	7/8"	146.50 - 151.50	0.6000	0.4667
T30	19	1" Conduit (Lighting)	146.50 - 151.50	0.6000	0.4667
T30	21	7/16" Power	146.50 - 151.50	0.6000	0.4667
T30	23	7/16" Power	146.50 - 151.50	0.6000	0.4667
T31	1	1 5/8	141.50 - 146.50	0.6000	0.5281
T31	4	7/16" Power	141.50 - 146.50	0.6000	0.5281
T31	6	3/8"	141.50 - 146.50	0.6000	0.5281
T31	7	7/8"	141.50 - 146.50	0.6000	0.5281
T31	9	7/8"	141.50 - 146.50	0.6000	0.5281
T31	11	1 5/8	141.50 - 146.50	0.6000	0.5281
T31	13	1 5/8	141.50 - 146.50	0.6000	0.5281
T31	15	7/8"	141.50 - 146.50	0.6000	0.5281
T31	17	7/8"	141.50 - 146.50	0.6000	0.5281
T31	19	1" Conduit (Lighting)	141.50 - 146.50	0.6000	0.5281
T31	21	7/16" Power	141.50 - 146.50	0.6000	0.5281
T31	23	7/16" Power	141.50 - 146.50	0.6000	0.5281
T31	25	1/4" Fiber	141.50 - 145.50	0.6000	0.5281
T32	1	1 5/8	136.50 - 141.50	0.6000	0.5290
T32	4	7/16" Power	136.50 - 141.50	0.6000	0.5290
T32	6	3/8"	136.50 - 141.50	0.6000	0.5290
T32	7	7/8"	136.50 -	0.6000	0.5290

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T32	9	7/8"	136.50 - 141.50	0.6000	0.5290
T32	11	1 5/8	136.50 - 141.50	0.6000	0.5290
T32	13	1 5/8	136.50 - 141.50	0.6000	0.5290
T32	15	7/8"	136.50 - 141.50	0.6000	0.5290
T32	17	7/8"	136.50 - 141.50	0.6000	0.5290
T32	19	1" Conduit (Lighting)	136.50 - 141.50	0.6000	0.5290
T32	21	7/16" Power	136.50 - 141.50	0.6000	0.5290
T32	23	7/16" Power	136.50 - 141.50	0.6000	0.5290
T32	25	1/4" Fiber	136.50 - 141.50	0.6000	0.5290
T32	27	7/8"	136.50 - 141.00	0.6000	0.5290
T33	1	1 5/8	131.50 - 136.50	0.6000	0.5300
T33	4	7/16" Power	131.50 - 136.50	0.6000	0.5300
T33	6	3/8"	131.50 - 136.50	0.6000	0.5300
T33	7	7/8"	131.50 - 136.50	0.6000	0.5300
T33	9	7/8"	131.50 - 136.50	0.6000	0.5300
T33	11	1 5/8	131.50 - 136.50	0.6000	0.5300
T33	13	1 5/8	131.50 - 136.50	0.6000	0.5300
T33	15	7/8"	131.50 - 136.50	0.6000	0.5300
T33	17	7/8"	131.50 - 136.50	0.6000	0.5300
T33	19	1" Conduit (Lighting)	131.50 - 136.50	0.6000	0.5300
T33	21	7/16" Power	131.50 - 136.50	0.6000	0.5300
T33	23	7/16" Power	131.50 - 136.50	0.6000	0.5300
T33	25	1/4" Fiber	131.50 - 136.50	0.6000	0.5300
T33	27	7/8"	131.50 - 136.50	0.6000	0.5300
T33	29	1" Conduit (Lighting)	131.50 - 135.00	0.6000	0.5300
T34	1	1 5/8	106.50 - 131.50	0.6000	0.5331
T34	4	7/16" Power	106.50 - 131.50	0.6000	0.5331
T34	6	3/8"	106.50 - 131.50	0.6000	0.5331
T34	7	7/8"	106.50 - 131.50	0.6000	0.5331
T34	9	7/8"	106.50 - 131.50	0.6000	0.5331
T34	11	1 5/8	106.50 -	0.6000	0.5331

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
			131.50		
T34	13	1 5/8	106.50 - 131.50	0.6000	0.5331
T34	15	7/8"	106.50 - 131.50	0.6000	0.5331
T34	17	7/8"	106.50 - 131.50	0.6000	0.5331
T34	19	1" Conduit (Lighting)	106.50 - 131.50	0.6000	0.5331
T34	21	7/16" Power	106.50 - 131.50	0.6000	0.5331
T34	23	7/16" Power	106.50 - 131.50	0.6000	0.5331
T34	25	1/4" Fiber	106.50 - 131.50	0.6000	0.5331
T34	27	7/8"	106.50 - 131.50	0.6000	0.5331
T34	29	1" Conduit (Lighting)	106.50 - 131.50	0.6000	0.5331
T35	1	1 5/8	101.50 - 106.50	0.6000	0.5366
T35	4	7/16" Power	101.50 - 106.50	0.6000	0.5366
T35	6	3/8"	101.50 - 106.50	0.6000	0.5366
T35	7	7/8"	101.50 - 106.50	0.6000	0.5366
T35	9	7/8"	101.50 - 106.50	0.6000	0.5366
T35	11	1 5/8	101.50 - 106.50	0.6000	0.5366
T35	13	1 5/8	101.50 - 106.50	0.6000	0.5366
T35	15	7/8"	101.50 - 106.50	0.6000	0.5366
T35	17	7/8"	101.50 - 106.50	0.6000	0.5366
T35	19	1" Conduit (Lighting)	101.50 - 106.50	0.6000	0.5366
T35	21	7/16" Power	101.50 - 106.50	0.6000	0.5366
T35	23	7/16" Power	101.50 - 106.50	0.6000	0.5366
T35	25	1/4" Fiber	101.50 - 106.50	0.6000	0.5366
T35	27	7/8"	101.50 - 106.50	0.6000	0.5366
T35	29	1" Conduit (Lighting)	101.50 - 106.50	0.6000	0.5366
T36	1	1 5/8	96.50 - 101.50	0.6000	0.4791
T36	4	7/16" Power	96.50 - 101.50	0.6000	0.4791
T36	6	3/8"	96.50 - 101.50	0.6000	0.4791
T36	7	7/8"	96.50 - 101.50	0.6000	0.4791
T36	9	7/8"	96.50 - 101.50	0.6000	0.4791
T36	11	1 5/8	96.50 - 101.50	0.6000	0.4791
T36	13	1 5/8	96.50 - 101.50	0.6000	0.4791
T36	15	7/8"	96.50 - 101.50	0.6000	0.4791
T36	17	7/8"	96.50 - 101.50	0.6000	0.4791
T36	19	1" Conduit (Lighting)	96.50 - 101.50	0.6000	0.4791
T36	21	7/16" Power	96.50 - 101.50	0.6000	0.4791
T36	23	7/16" Power	96.50 - 101.50	0.6000	0.4791
T36	25	1/4" Fiber	96.50 - 101.50	0.6000	0.4791

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T36	27	7/8"	96.50 - 101.50	0.6000	0.4791
T36	29	1" Conduit (Lighting)	96.50 - 101.50	0.6000	0.4791
T36	31	1 1/4"	96.50 - 101.00	0.6000	0.4791
T37	1	1 5/8	91.50 - 96.50	0.6000	0.5392
T37	4	7/16" Power	91.50 - 96.50	0.6000	0.5392
T37	6	3/8"	91.50 - 96.50	0.6000	0.5392
T37	7	7/8"	91.50 - 96.50	0.6000	0.5392
T37	9	7/8"	91.50 - 96.50	0.6000	0.5392
T37	11	1 5/8	91.50 - 96.50	0.6000	0.5392
T37	13	1 5/8	91.50 - 96.50	0.6000	0.5392
T37	15	7/8"	91.50 - 96.50	0.6000	0.5392
T37	17	7/8"	91.50 - 96.50	0.6000	0.5392
T37	19	1" Conduit (Lighting)	91.50 - 96.50	0.6000	0.5392
T37	21	7/16" Power	91.50 - 96.50	0.6000	0.5392
T37	23	7/16" Power	91.50 - 96.50	0.6000	0.5392
T37	25	1/4" Fiber	91.50 - 96.50	0.6000	0.5392
T37	27	7/8"	91.50 - 96.50	0.6000	0.5392
T37	29	1" Conduit (Lighting)	91.50 - 96.50	0.6000	0.5392
T37	31	1 1/4"	91.50 - 96.50	0.6000	0.5392
T38	1	1 5/8	86.50 - 91.50	0.6000	0.5406
T38	4	7/16" Power	86.50 - 91.50	0.6000	0.5406
T38	6	3/8"	86.50 - 91.50	0.6000	0.5406
T38	7	7/8"	86.50 - 91.50	0.6000	0.5406
T38	9	7/8"	86.50 - 91.50	0.6000	0.5406
T38	11	1 5/8	86.50 - 91.50	0.6000	0.5406
T38	13	1 5/8	86.50 - 91.50	0.6000	0.5406
T38	15	7/8"	86.50 - 91.50	0.6000	0.5406
T38	17	7/8"	86.50 - 91.50	0.6000	0.5406
T38	19	1" Conduit (Lighting)	86.50 - 91.50	0.6000	0.5406
T38	21	7/16" Power	86.50 - 91.50	0.6000	0.5406
T38	23	7/16" Power	86.50 - 91.50	0.6000	0.5406
T38	25	1/4" Fiber	86.50 - 91.50	0.6000	0.5406
T38	27	7/8"	86.50 - 91.50	0.6000	0.5406
T38	29	1" Conduit (Lighting)	86.50 - 91.50	0.6000	0.5406
T38	31	1 1/4"	86.50 - 91.50	0.6000	0.5406
T39	1	1 5/8	81.50 - 86.50	0.6000	0.5420
T39	4	7/16" Power	81.50 - 86.50	0.6000	0.5420
T39	6	3/8"	81.50 - 86.50	0.6000	0.5420
T39	7	7/8"	81.50 - 86.50	0.6000	0.5420
T39	9	7/8"	81.50 - 86.50	0.6000	0.5420
T39	11	1 5/8	81.50 - 86.50	0.6000	0.5420
T39	13	1 5/8	81.50 - 86.50	0.6000	0.5420
T39	15	7/8"	81.50 - 86.50	0.6000	0.5420
T39	17	7/8"	81.50 - 86.50	0.6000	0.5420
T39	19	1" Conduit (Lighting)	81.50 - 86.50	0.6000	0.5420
T39	21	7/16" Power	81.50 - 86.50	0.6000	0.5420
T39	23	7/16" Power	81.50 - 86.50	0.6000	0.5420
T39	25	1/4" Fiber	81.50 - 86.50	0.6000	0.5420
T39	27	7/8"	81.50 - 86.50	0.6000	0.5420
T39	29	1" Conduit (Lighting)	81.50 - 86.50	0.6000	0.5420
T39	31	1 1/4"	81.50 - 86.50	0.6000	0.5420
T40	1	1 5/8	76.50 - 81.50	0.6000	0.5331
T40	4	7/16" Power	76.50 - 81.50	0.6000	0.5331
T40	6	3/8"	76.50 - 81.50	0.6000	0.5331
T40	7	7/8"	76.50 - 81.50	0.6000	0.5331
T40	9	7/8"	76.50 - 81.50	0.6000	0.5331
T40	11	1 5/8	76.50 - 81.50	0.6000	0.5331
T40	13	1 5/8	76.50 - 81.50	0.6000	0.5331
T40	15	7/8"	76.50 - 81.50	0.6000	0.5331
T40	17	7/8"	76.50 - 81.50	0.6000	0.5331
T40	19	1" Conduit (Lighting)	76.50 - 81.50	0.6000	0.5331
T40	21	7/16" Power	76.50 - 81.50	0.6000	0.5331

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T40	23	7/16" Power	76.50 - 81.50	0.6000	0.5331
T40	25	1/4" Fiber	76.50 - 81.50	0.6000	0.5331
T40	27	7/8"	76.50 - 81.50	0.6000	0.5331
T40	29	1" Conduit (Lighting)	76.50 - 81.50	0.6000	0.5331
T40	31	1 1/4"	76.50 - 81.50	0.6000	0.5331
T40	33	7/8"	76.50 - 80.00	0.6000	0.5331
T40	34	7/8"	76.50 - 80.00	0.6000	0.5331
T40	35	7/8"	76.50 - 80.00	0.6000	0.5331
T40	36	10 mm	76.50 - 80.00	0.6000	0.5331
T40	37	0.795"	76.50 - 80.00	0.6000	0.5331
T40	38	7/8"	76.50 - 80.00	0.6000	0.5331
T41	1	1 5/8	71.50 - 76.50	0.6000	0.4567
T41	4	7/16" Power	71.50 - 76.50	0.6000	0.4567
T41	6	3/8"	71.50 - 76.50	0.6000	0.4567
T41	7	7/8"	71.50 - 76.50	0.6000	0.4567
T41	9	7/8"	71.50 - 76.50	0.6000	0.4567
T41	11	1 5/8	71.50 - 76.50	0.6000	0.4567
T41	13	1 5/8	71.50 - 76.50	0.6000	0.4567
T41	15	7/8"	71.50 - 76.50	0.6000	0.4567
T41	17	7/8"	71.50 - 76.50	0.6000	0.4567
T41	19	1" Conduit (Lighting)	71.50 - 76.50	0.6000	0.4567
T41	21	7/16" Power	71.50 - 76.50	0.6000	0.4567
T41	23	7/16" Power	71.50 - 76.50	0.6000	0.4567
T41	25	1/4" Fiber	71.50 - 76.50	0.6000	0.4567
T41	27	7/8"	71.50 - 76.50	0.6000	0.4567
T41	29	1" Conduit (Lighting)	71.50 - 76.50	0.6000	0.4567
T41	31	1 1/4"	71.50 - 76.50	0.6000	0.4567
T41	33	7/8"	71.50 - 76.50	0.6000	0.4567
T41	34	7/8"	71.50 - 76.50	0.6000	0.4567
T41	35	7/8"	71.50 - 76.50	0.6000	0.4567
T41	36	10 mm	71.50 - 76.50	0.6000	0.4567
T41	37	0.795"	71.50 - 76.50	0.6000	0.4567
T41	38	7/8"	71.50 - 76.50	0.6000	0.4567
T42	1	1 5/8	66.50 - 71.50	0.6000	0.4693
T42	4	7/16" Power	66.50 - 71.50	0.6000	0.4693
T42	6	3/8"	66.50 - 71.50	0.6000	0.4693
T42	7	7/8"	66.50 - 71.50	0.6000	0.4693
T42	9	7/8"	66.50 - 71.50	0.6000	0.4693
T42	11	1 5/8	66.50 - 71.50	0.6000	0.4693
T42	13	1 5/8	66.50 - 71.50	0.6000	0.4693
T42	15	7/8"	66.50 - 71.50	0.6000	0.4693
T42	17	7/8"	66.50 - 71.50	0.6000	0.4693
T42	19	1" Conduit (Lighting)	66.50 - 71.50	0.6000	0.4693
T42	21	7/16" Power	66.50 - 71.50	0.6000	0.4693
T42	23	7/16" Power	66.50 - 71.50	0.6000	0.4693
T42	25	1/4" Fiber	66.50 - 71.50	0.6000	0.4693
T42	27	7/8"	66.50 - 71.50	0.6000	0.4693
T42	29	1" Conduit (Lighting)	66.50 - 71.50	0.6000	0.4693
T42	31	1 1/4"	66.50 - 71.50	0.6000	0.4693
T42	33	7/8"	66.50 - 71.50	0.6000	0.4693
T42	34	7/8"	66.50 - 71.50	0.6000	0.4693
T42	35	7/8"	66.50 - 71.50	0.6000	0.4693
T42	36	10 mm	66.50 - 71.50	0.6000	0.4693
T42	37	0.795"	66.50 - 71.50	0.6000	0.4693
T42	38	7/8"	66.50 - 71.50	0.6000	0.4693
T43	1	1 5/8	61.50 - 66.50	0.6000	0.4583
T43	4	7/16" Power	61.50 - 66.50	0.6000	0.4583
T43	6	3/8"	61.50 - 66.50	0.6000	0.4583
T43	7	7/8"	61.50 - 66.50	0.6000	0.4583
T43	9	7/8"	61.50 - 66.50	0.6000	0.4583
T43	11	1 5/8	61.50 - 66.50	0.6000	0.4583
T43	13	1 5/8	61.50 - 66.50	0.6000	0.4583

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T43	15	7/8"	61.50 - 66.50	0.6000	0.4583
T43	17	7/8"	61.50 - 66.50	0.6000	0.4583
T43	19	1" Conduit (Lighting)	61.50 - 66.50	0.6000	0.4583
T43	21	7/16" Power	61.50 - 66.50	0.6000	0.4583
T43	23	7/16" Power	61.50 - 66.50	0.6000	0.4583
T43	25	1/4" Fiber	61.50 - 66.50	0.6000	0.4583
T43	27	7/8"	61.50 - 66.50	0.6000	0.4583
T43	29	1" Conduit (Lighting)	61.50 - 66.50	0.6000	0.4583
T43	31	1 1/4"	61.50 - 66.50	0.6000	0.4583
T43	33	7/8"	61.50 - 66.50	0.6000	0.4583
T43	34	7/8"	61.50 - 66.50	0.6000	0.4583
T43	35	7/8"	61.50 - 66.50	0.6000	0.4583
T43	36	10 mm	61.50 - 66.50	0.6000	0.4583
T43	37	0.795"	61.50 - 66.50	0.6000	0.4583
T43	38	7/8"	61.50 - 66.50	0.6000	0.4583
T44	1	1 5/8	56.50 - 61.50	0.6000	0.4941
T44	4	7/16" Power	56.50 - 61.50	0.6000	0.4941
T44	6	3/8"	56.50 - 61.50	0.6000	0.4941
T44	7	7/8"	56.50 - 61.50	0.6000	0.4941
T44	9	7/8"	56.50 - 61.50	0.6000	0.4941
T44	11	1 5/8	56.50 - 61.50	0.6000	0.4941
T44	13	1 5/8	56.50 - 61.50	0.6000	0.4941
T44	15	7/8"	56.50 - 61.50	0.6000	0.4941
T44	17	7/8"	56.50 - 61.50	0.6000	0.4941
T44	19	1" Conduit (Lighting)	56.50 - 61.50	0.6000	0.4941
T44	21	7/16" Power	56.50 - 61.50	0.6000	0.4941
T44	23	7/16" Power	56.50 - 61.50	0.6000	0.4941
T44	25	1/4" Fiber	56.50 - 61.50	0.6000	0.4941
T44	27	7/8"	56.50 - 61.50	0.6000	0.4941
T44	29	1" Conduit (Lighting)	56.50 - 61.50	0.6000	0.4941
T44	31	1 1/4"	56.50 - 61.50	0.6000	0.4941
T44	33	7/8"	56.50 - 61.50	0.6000	0.4941
T44	34	7/8"	56.50 - 61.50	0.6000	0.4941
T44	35	7/8"	56.50 - 61.50	0.6000	0.4941
T44	36	10 mm	56.50 - 61.50	0.6000	0.4941
T44	37	0.795"	56.50 - 61.50	0.6000	0.4941
T44	38	7/8"	56.50 - 61.50	0.6000	0.4941
T45	1	1 5/8	51.50 - 56.50	0.6000	0.4966
T45	4	7/16" Power	51.50 - 56.50	0.6000	0.4966
T45	6	3/8"	51.50 - 56.50	0.6000	0.4966
T45	7	7/8"	51.50 - 56.50	0.6000	0.4966
T45	9	7/8"	51.50 - 56.50	0.6000	0.4966
T45	11	1 5/8	51.50 - 56.50	0.6000	0.4966
T45	13	1 5/8	51.50 - 56.50	0.6000	0.4966
T45	15	7/8"	51.50 - 56.50	0.6000	0.4966
T45	17	7/8"	51.50 - 56.50	0.6000	0.4966
T45	19	1" Conduit (Lighting)	51.50 - 56.50	0.6000	0.4966
T45	21	7/16" Power	51.50 - 56.50	0.6000	0.4966
T45	23	7/16" Power	51.50 - 56.50	0.6000	0.4966
T45	25	1/4" Fiber	51.50 - 56.50	0.6000	0.4966
T45	27	7/8"	51.50 - 56.50	0.6000	0.4966
T45	29	1" Conduit (Lighting)	51.50 - 56.50	0.6000	0.4966
T45	31	1 1/4"	51.50 - 56.50	0.6000	0.4966
T45	33	7/8"	51.50 - 56.50	0.6000	0.4966
T45	34	7/8"	51.50 - 56.50	0.6000	0.4966
T45	35	7/8"	51.50 - 56.50	0.6000	0.4966
T45	36	10 mm	51.50 - 56.50	0.6000	0.4966
T45	37	0.795"	51.50 - 56.50	0.6000	0.4966
T45	38	7/8"	51.50 - 56.50	0.6000	0.4966
T46	1	1 5/8	46.50 - 51.50	0.6000	0.4994
T46	4	7/16" Power	46.50 - 51.50	0.6000	0.4994
T46	6	3/8"	46.50 - 51.50	0.6000	0.4994

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T46	7	7/8"	46.50 - 51.50	0.6000	0.4994
T46	9	7/8"	46.50 - 51.50	0.6000	0.4994
T46	11	1 5/8	46.50 - 51.50	0.6000	0.4994
T46	13	1 5/8	46.50 - 51.50	0.6000	0.4994
T46	15	7/8"	46.50 - 51.50	0.6000	0.4994
T46	17	7/8"	46.50 - 51.50	0.6000	0.4994
T46	19	1" Conduit (Lighting)	46.50 - 51.50	0.6000	0.4994
T46	21	7/16" Power	46.50 - 51.50	0.6000	0.4994
T46	23	7/16" Power	46.50 - 51.50	0.6000	0.4994
T46	25	1/4" Fiber	46.50 - 51.50	0.6000	0.4994
T46	27	7/8"	46.50 - 51.50	0.6000	0.4994
T46	29	1" Conduit (Lighting)	46.50 - 51.50	0.6000	0.4994
T46	31	1 1/4"	46.50 - 51.50	0.6000	0.4994
T46	33	7/8"	46.50 - 51.50	0.6000	0.4994
T46	34	7/8"	46.50 - 51.50	0.6000	0.4994
T46	35	7/8"	46.50 - 51.50	0.6000	0.4994
T46	36	10 mm	46.50 - 51.50	0.6000	0.4994
T46	37	0.795"	46.50 - 51.50	0.6000	0.4994
T46	38	7/8"	46.50 - 51.50	0.6000	0.4994
T47	1	1 5/8	41.50 - 46.50	0.6000	0.4918
T47	4	7/16" Power	41.50 - 46.50	0.6000	0.4918
T47	6	3/8"	41.50 - 46.50	0.6000	0.4918
T47	7	7/8"	41.50 - 46.50	0.6000	0.4918
T47	9	7/8"	41.50 - 46.50	0.6000	0.4918
T47	11	1 5/8	41.50 - 46.50	0.6000	0.4918
T47	13	1 5/8	41.50 - 46.50	0.6000	0.4918
T47	15	7/8"	41.50 - 46.50	0.6000	0.4918
T47	17	7/8"	41.50 - 46.50	0.6000	0.4918
T47	19	1" Conduit (Lighting)	41.50 - 46.50	0.6000	0.4918
T47	21	7/16" Power	41.50 - 46.50	0.6000	0.4918
T47	23	7/16" Power	41.50 - 46.50	0.6000	0.4918
T47	25	1/4" Fiber	41.50 - 46.50	0.6000	0.4918
T47	27	7/8"	41.50 - 46.50	0.6000	0.4918
T47	29	1" Conduit (Lighting)	41.50 - 46.50	0.6000	0.4918
T47	31	1 1/4"	41.50 - 46.50	0.6000	0.4918
T47	33	7/8"	41.50 - 46.50	0.6000	0.4918
T47	34	7/8"	41.50 - 46.50	0.6000	0.4918
T47	35	7/8"	41.50 - 46.50	0.6000	0.4918
T47	36	10 mm	41.50 - 46.50	0.6000	0.4918
T47	37	0.795"	41.50 - 46.50	0.6000	0.4918
T47	38	7/8"	41.50 - 46.50	0.6000	0.4918
T48	1	1 5/8	36.50 - 41.50	0.6000	0.4951
T48	4	7/16" Power	36.50 - 41.50	0.6000	0.4951
T48	6	3/8"	36.50 - 41.50	0.6000	0.4951
T48	7	7/8"	36.50 - 41.50	0.6000	0.4951
T48	9	7/8"	36.50 - 41.50	0.6000	0.4951
T48	11	1 5/8	36.50 - 41.50	0.6000	0.4951
T48	13	1 5/8	36.50 - 41.50	0.6000	0.4951
T48	15	7/8"	36.50 - 41.50	0.6000	0.4951
T48	17	7/8"	36.50 - 41.50	0.6000	0.4951
T48	19	1" Conduit (Lighting)	36.50 - 41.50	0.6000	0.4951
T48	21	7/16" Power	36.50 - 41.50	0.6000	0.4951
T48	23	7/16" Power	36.50 - 41.50	0.6000	0.4951
T48	25	1/4" Fiber	36.50 - 41.50	0.6000	0.4951
T48	27	7/8"	36.50 - 41.50	0.6000	0.4951
T48	29	1" Conduit (Lighting)	36.50 - 41.50	0.6000	0.4951
T48	31	1 1/4"	36.50 - 41.50	0.6000	0.4951
T48	33	7/8"	36.50 - 41.50	0.6000	0.4951
T48	34	7/8"	36.50 - 41.50	0.6000	0.4951
T48	35	7/8"	36.50 - 41.50	0.6000	0.4951
T48	36	10 mm	36.50 - 41.50	0.6000	0.4951
T48	37	0.795"	36.50 - 41.50	0.6000	0.4951

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T48	38	7/8"	36.50 - 41.50	0.6000	0.4951
T49	1	1 5/8	31.50 - 36.50	0.6000	0.4989
T49	4	7/16" Power	31.50 - 36.50	0.6000	0.4989
T49	6	3/8"	31.50 - 36.50	0.6000	0.4989
T49	7	7/8"	31.50 - 36.50	0.6000	0.4989
T49	9	7/8"	31.50 - 36.50	0.6000	0.4989
T49	11	1 5/8	31.50 - 36.50	0.6000	0.4989
T49	13	1 5/8	31.50 - 36.50	0.6000	0.4989
T49	15	7/8"	31.50 - 36.50	0.6000	0.4989
T49	17	7/8"	31.50 - 36.50	0.6000	0.4989
T49	19	1" Conduit (Lighting)	31.50 - 36.50	0.6000	0.4989
T49	21	7/16" Power	31.50 - 36.50	0.6000	0.4989
T49	23	7/16" Power	31.50 - 36.50	0.6000	0.4989
T49	25	1/4" Fiber	31.50 - 36.50	0.6000	0.4989
T49	27	7/8"	31.50 - 36.50	0.6000	0.4989
T49	29	1" Conduit (Lighting)	31.50 - 36.50	0.6000	0.4989
T49	31	1 1/4"	31.50 - 36.50	0.6000	0.4989
T49	33	7/8"	31.50 - 36.50	0.6000	0.4989
T49	34	7/8"	31.50 - 36.50	0.6000	0.4989
T49	35	7/8"	31.50 - 36.50	0.6000	0.4989
T49	36	10 mm	31.50 - 36.50	0.6000	0.4989
T49	37	0.795"	31.50 - 36.50	0.6000	0.4989
T49	38	7/8"	31.50 - 36.50	0.6000	0.4989
T49	40	7/16" Power	31.50 - 33.00	0.6000	0.4989
T50	1	1 5/8	6.50 - 31.50	0.6000	0.5185
T50	4	7/16" Power	6.50 - 31.50	0.6000	0.5185
T50	6	3/8"	6.50 - 31.50	0.6000	0.5185
T50	7	7/8"	6.50 - 31.50	0.6000	0.5185
T50	9	7/8"	6.50 - 31.50	0.6000	0.5185
T50	11	1 5/8	6.50 - 31.50	0.6000	0.5185
T50	13	1 5/8	6.50 - 31.50	0.6000	0.5185
T50	15	7/8"	6.50 - 31.50	0.6000	0.5185
T50	17	7/8"	6.50 - 31.50	0.6000	0.5185
T50	19	1" Conduit (Lighting)	6.50 - 31.50	0.6000	0.5185
T50	21	7/16" Power	6.50 - 31.50	0.6000	0.5185
T50	23	7/16" Power	6.50 - 31.50	0.6000	0.5185
T50	25	1/4" Fiber	6.50 - 31.50	0.6000	0.5185
T50	27	7/8"	6.50 - 31.50	0.6000	0.5185
T50	29	1" Conduit (Lighting)	6.50 - 31.50	0.6000	0.5185
T50	31	1 1/4"	6.50 - 31.50	0.6000	0.5185
T50	33	7/8"	6.50 - 31.50	0.6000	0.5185
T50	34	7/8"	6.50 - 31.50	0.6000	0.5185
T50	35	7/8"	6.50 - 31.50	0.6000	0.5185
T50	36	10 mm	6.50 - 31.50	0.6000	0.5185
T50	37	0.795"	6.50 - 31.50	0.6000	0.5185
T50	38	7/8"	6.50 - 31.50	0.6000	0.5185
T50	40	7/16" Power	6.50 - 31.50	0.6000	0.5185
T50	42	7/16" Power	6.50 - 8.50	0.6000	0.5185
T51	1	1 5/8	0.00 - 6.50	0.4961	0.4016
T51	4	7/16" Power	0.00 - 6.50	0.4961	0.4016
T51	6	3/8"	0.00 - 6.50	0.4961	0.4016
T51	7	7/8"	0.00 - 6.50	0.4961	0.4016
T51	9	7/8"	0.00 - 6.50	0.4961	0.4016
T51	11	1 5/8	0.00 - 6.50	0.4961	0.4016
T51	13	1 5/8	0.00 - 6.50	0.4961	0.4016
T51	15	7/8"	0.00 - 6.50	0.4961	0.4016
T51	17	7/8"	0.00 - 6.50	0.4961	0.4016
T51	19	1" Conduit (Lighting)	0.00 - 6.50	0.4961	0.4016
T51	21	7/16" Power	0.00 - 6.50	0.4961	0.4016
T51	23	7/16" Power	0.00 - 6.50	0.4961	0.4016
T51	25	1/4" Fiber	0.00 - 6.50	0.4961	0.4016
T51	27	7/8"	0.00 - 6.50	0.4961	0.4016

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T51	29	1" Conduit (Lighting)	0.00 - 6.50	0.4961	0.4016
T51	31	1 1/4"	0.00 - 6.50	0.4961	0.4016
T51	33	7/8"	0.00 - 6.50	0.4961	0.4016
T51	34	7/8"	0.00 - 6.50	0.4961	0.4016
T51	35	7/8"	0.00 - 6.50	0.4961	0.4016
T51	36	10 mm	0.00 - 6.50	0.4961	0.4016
T51	37	0.795"	0.00 - 6.50	0.4961	0.4016
T51	38	7/8"	0.00 - 6.50	0.4961	0.4016
T51	40	7/16" Power	0.00 - 6.50	0.4961	0.4016
T51	42	7/16" Power	0.00 - 6.50	0.4961	0.4016

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
Shively 68010	C	From Leg	0.00 0.00 5.00	0.00	325.00	No Ice 1/2" Ice 1" Ice 2" Ice	22.30 40.14 57.98 93.66	22.30 40.14 57.98 93.66	0.35 0.46 0.57 0.79
***									
2SCH40x60"	B	From Leg	0.00 0.00 0.00	0.00	303.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.19 1.50 1.81 2.43	1.19 1.50 1.81 2.43	0.02 0.03 0.04 0.06
***									
10" x 8" x 4.25" Box	C	From Leg	5.50 0.00 0.00	0.00	287.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.67 0.77 0.87 1.07	0.35 0.44 0.53 0.71	0.01 0.02 0.03 0.05
7.5" Dia x 3.5' Omni	C	From Leg	5.50 0.00 3.00	0.00	287.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.24 1.92 2.60 3.96	1.24 1.92 2.60 3.96	0.03 0.04 0.05 0.07
Stand-off Arm	C	From Leg	2.75 0.00 0.00	0.00	287.00	No Ice 1/2" Ice 1" Ice 2" Ice	3.50 4.20 4.90 6.30	3.50 4.20 4.90 6.30	0.10 0.13 0.16 0.22
***									
2.36" Dia. x 20' (4) Element Dipole	A	From Leg	0.00 0.00 2.00	0.00	288.00	No Ice 1/2" Ice 1" Ice 2" Ice	4.72 6.75 8.78 12.84	4.72 6.75 8.78 12.84	0.04 0.07 0.10 0.16
***									
DB413-B	B	From Leg	1.25 0.00 7.00	0.00	273.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.55 4.59 6.63 10.71	2.55 4.59 6.63 10.71	0.03 0.04 0.05 0.07
Stand-off Arm	B	From Leg	0.63 0.00 0.00	0.00	273.00	No Ice 1/2" Ice 1" Ice	3.50 4.20 4.90	3.50 4.20 4.90	0.10 0.13 0.16

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
						2" Ice	6.30	6.30	0.22
***									
25' x 1.62" Dia. Broadcast Antenna	A	From Leg	0.00 0.00 0.00	0.00	260.00	No Ice 1/2" Ice 1" Ice 2" Ice	4.05 6.57 9.09 14.13	4.05 6.57 9.09 14.13	0.07 0.10 0.13 0.19
***									
2.3" Dia. x 20' Omni	A	From Leg	3.50 0.00 7.00	0.00	239.00	No Ice 1/2" Ice 1" Ice 2" Ice	4.60 6.63 8.66 12.72	4.60 6.63 8.66 12.72	0.04 0.07 0.10 0.16
Stand-off Arm	A	From Leg	1.75 0.00 0.00	0.00	239.00	No Ice 1/2" Ice 1" Ice 2" Ice	3.50 4.20 4.90 6.30	3.50 4.20 4.90 6.30	0.10 0.13 0.16 0.22
***									
2.3" Dia. x 20' Omni	B	From Leg	3.00 0.00 7.00	0.00	237.00	No Ice 1/2" Ice 1" Ice 2" Ice	4.60 6.63 8.66 12.72	4.60 6.63 8.66 12.72	0.04 0.07 0.10 0.16
Stand-off Arm	B	From Leg	1.50 0.00 0.00	0.00	237.00	No Ice 1/2" Ice 1" Ice 2" Ice	3.50 4.20 4.90 6.30	3.50 4.20 4.90 6.30	0.10 0.13 0.16 0.22
***									
L-810 Side Light	A	From Leg	0.00 0.00 0.00	0.00	223.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.20 0.28 0.36 0.52	0.20 0.28 0.36 0.52	0.00 0.01 0.02 0.03
L-810 Side Light	C	From Leg	0.00 0.00 0.00	0.00	223.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.20 0.28 0.36 0.52	0.20 0.28 0.36 0.52	0.00 0.01 0.02 0.03
***									
26.5" x 15" Conduit Box	B	From Leg	0.00 0.00 0.00	0.00	183.00	No Ice 1/2" Ice 1" Ice 2" Ice	3.31 3.55 3.79 4.27	1.42 1.60 1.78 2.14	0.01 0.03 0.05 0.09
***									
10" x 10" x 1.25" Detuner Box	B	From Leg	0.00 0.00 0.00	0.00	169.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.83 0.95 1.07 1.31	0.12 0.19 0.26 0.40	0.01 0.01 0.01 0.01
***									
14.875x15.125"x0.5" Flat Panel	A	From Leg	0.00 0.00 0.00	0.00	145.50	No Ice 1/2" Ice 1" Ice 2" Ice	1.87 2.05 2.23 2.59	0.10 0.20 0.30 0.50	0.01 0.02 0.03 0.05
***									
2SCH40 x 43"	C	From Leg	0.00 0.00 0.00	0.00	141.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.74 0.96 1.18 1.62	0.74 0.96 1.18 1.62	0.02 0.04 0.05 0.08
***									
L-810 Side Light	A	From Leg	0.00 0.00 0.00	0.00	135.00	No Ice 1/2" Ice 1" Ice	0.20 0.28 0.36	0.20 0.28 0.36	0.00 0.01 0.02

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
						2" Ice	0.52	0.52	0.03
L-810 Side Light	C	From Leg	0.00	0.00	135.00	No Ice	0.20	0.20	0.00
			0.00			1/2" Ice	0.28	0.28	0.01
			0.00			1" Ice	0.36	0.36	0.02
						2" Ice	0.52	0.52	0.03
***									
X7C-FRO-660 w/ Pipe	A	From Leg	3.00	0.00	101.00	No Ice	9.55	7.29	0.07
			0.00			1/2" Ice	10.02	8.25	0.14
			1.50			1" Ice	10.50	9.08	0.23
						2" Ice	11.47	10.80	0.42
X7C-FRO-660 w/ Pipe	B	From Leg	3.00	0.00	101.00	No Ice	9.55	7.29	0.07
			0.00			1/2" Ice	10.02	8.25	0.14
			1.50			1" Ice	10.50	9.08	0.23
						2" Ice	11.47	10.80	0.42
X7C-FRO-660 w/ Pipe	C	From Leg	3.00	0.00	101.00	No Ice	9.55	7.29	0.07
			0.00			1/2" Ice	10.02	8.25	0.14
			1.50			1" Ice	10.50	9.08	0.23
						2" Ice	11.47	10.80	0.42
Sector Mount [SM 303-3]	C	None		0.00	101.00	No Ice	43.57	43.57	1.88
						1/2" Ice	61.82	61.82	2.70
						1" Ice	80.07	80.07	3.52
						2" Ice	116.57	116.57	5.16
***									
HPA-65R-BUU-H6 w/ 7' MP	A	From Face	0.00	0.00	80.00	No Ice	9.72	7.15	0.07
			0.00			1/2" Ice	10.29	8.33	0.15
			1.50			1" Ice	10.83	9.23	0.23
						2" Ice	11.93	11.06	0.43
HPA-65R-BUU-H6 w/ 7' MP	B	From Face	0.00	0.00	80.00	No Ice	9.72	7.15	0.07
			0.00			1/2" Ice	10.29	8.33	0.15
			1.50			1" Ice	10.83	9.23	0.23
						2" Ice	11.93	11.06	0.43
HPA-65R-BUU-H6 w/ 7' MP	C	From Face	0.00	0.00	80.00	No Ice	9.72	7.15	0.07
			0.00			1/2" Ice	10.29	8.33	0.15
			1.50			1" Ice	10.83	9.23	0.23
						2" Ice	11.93	11.06	0.43
(2) OPA-65R-LCUU-H6 w/ Mount Pipe	A	From Face	0.00	0.00	80.00	No Ice	9.19	6.21	0.11
			0.00			1/2" Ice	9.94	6.93	0.18
			1.50			1" Ice	10.71	7.66	0.26
						2" Ice	12.30	9.17	0.45
(2) OPA-65R-LCUU-H6 w/ Mount Pipe	B	From Face	0.00	0.00	80.00	No Ice	9.19	6.21	0.11
			0.00			1/2" Ice	9.94	6.93	0.18
			1.50			1" Ice	10.71	7.66	0.26
						2" Ice	12.30	9.17	0.45
(2) OPA-65R-LCUU-H6 w/ Mount Pipe	C	From Face	0.00	0.00	80.00	No Ice	9.19	6.21	0.11
			0.00			1/2" Ice	9.94	6.93	0.18
			1.50			1" Ice	10.71	7.66	0.26
						2" Ice	12.30	9.17	0.45
DTMABP7819VG12A	A	From Face	0.00	0.00	80.00	No Ice	0.98	0.34	0.02
			0.00			1/2" Ice	1.10	0.42	0.03
			1.50			1" Ice	1.23	0.51	0.04
						2" Ice	1.52	0.71	0.06
DTMABP7819VG12A	B	From Face	0.00	0.00	80.00	No Ice	0.98	0.34	0.02
			0.00			1/2" Ice	1.10	0.42	0.03
			1.50			1" Ice	1.23	0.51	0.04
						2" Ice	1.52	0.71	0.06
DTMABP7819VG12A	C	From Face	0.00	0.00	80.00	No Ice	0.98	0.34	0.02
			0.00			1/2" Ice	1.10	0.42	0.03

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			1.50			1" Ice	1.23	0.51	0.04
						2" Ice	1.52	0.71	0.06
RRUS 11	A	From Face	0.00	0.00	80.00	No Ice	2.78	1.19	0.05
			0.00			1/2" Ice	2.99	1.33	0.07
			1.50			1" Ice	3.21	1.49	0.09
						2" Ice	3.66	1.83	0.15
RRUS 11	B	From Face	0.00	0.00	80.00	No Ice	2.78	1.19	0.05
			0.00			1/2" Ice	2.99	1.33	0.07
			1.50			1" Ice	3.21	1.49	0.09
						2" Ice	3.66	1.83	0.15
RRUS 11	C	From Face	0.00	0.00	80.00	No Ice	2.78	1.19	0.05
			0.00			1/2" Ice	2.99	1.33	0.07
			1.50			1" Ice	3.21	1.49	0.09
						2" Ice	3.66	1.83	0.15
RRUS 32	A	From Face	0.00	0.00	80.00	No Ice	2.86	1.78	0.06
			0.00			1/2" Ice	3.08	1.97	0.08
			1.50			1" Ice	3.32	2.17	0.10
						2" Ice	3.81	2.58	0.16
RRUS 32	B	From Face	0.00	0.00	80.00	No Ice	2.86	1.78	0.06
			0.00			1/2" Ice	3.08	1.97	0.08
			1.50			1" Ice	3.32	2.17	0.10
						2" Ice	3.81	2.58	0.16
RRUS 32	C	From Face	0.00	0.00	80.00	No Ice	2.86	1.78	0.06
			0.00			1/2" Ice	3.08	1.97	0.08
			1.50			1" Ice	3.32	2.17	0.10
						2" Ice	3.81	2.58	0.16
RRUS E2 B29	A	From Face	0.00	0.00	80.00	No Ice	3.15	1.29	0.06
			0.00			1/2" Ice	3.36	1.44	0.08
			1.50			1" Ice	3.59	1.60	0.11
						2" Ice	4.07	1.95	0.17
RRUS E2 B29	B	From Face	0.00	0.00	80.00	No Ice	3.15	1.29	0.06
			0.00			1/2" Ice	3.36	1.44	0.08
			1.50			1" Ice	3.59	1.60	0.11
						2" Ice	4.07	1.95	0.17
RRUS E2 B29	C	From Face	0.00	0.00	80.00	No Ice	3.15	1.29	0.06
			0.00			1/2" Ice	3.36	1.44	0.08
			1.50			1" Ice	3.59	1.60	0.11
						2" Ice	4.07	1.95	0.17
DC6-48-60-18-8C	C	From Face	0.00	0.00	80.00	No Ice	1.14	1.14	0.03
			0.00			1/2" Ice	1.79	1.79	0.05
			1.50			1" Ice	2.00	2.00	0.07
						2" Ice	2.45	2.45	0.13
Sector Mount [SM 103-3]	B	None		0.00	80.00	No Ice	50.40	50.40	1.54
						1/2" Ice	56.40	56.40	2.22
						1" Ice	62.48	62.48	3.01
						2" Ice	75.09	75.09	4.92
***									
26.5" x 15" Conduit Box	B	From Leg	0.00	0.00	33.00	No Ice	3.31	1.42	0.01
			0.00			1/2" Ice	3.55	1.60	0.03
			0.00			1" Ice	3.79	1.78	0.05
						2" Ice	4.27	2.14	0.09
***									
26.5" x 15" Conduit Box	C	From Face	0.00	0.00	8.50	No Ice	1.88	0.81	0.01
			0.00			1/2" Ice	2.05	0.94	0.02
			0.00			1" Ice	2.22	1.07	0.03
						2" Ice	2.56	1.33	0.05
***									

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
(2) MX06FRO660-03_TIA w/ Mount Pipe	A	From Leg	3.00 0.00 0.00	0.00	101.00	No Ice 1/2" Ice 1" Ice 2" Ice	10.11 10.68 11.22 12.32	8.99 10.15 11.03 12.83	0.10 0.19 0.29 0.51
(2) MX06FRO660-03_TIA w/ Mount Pipe	B	From Leg	3.00 0.00 0.00	0.00	101.00	No Ice 1/2" Ice 1" Ice 2" Ice	10.11 10.68 11.22 12.32	8.99 10.15 11.03 12.83	0.10 0.19 0.29 0.51
(2) MX06FRO660-03_TIA w/ Mount Pipe	C	From Leg	3.00 0.00 0.00	0.00	101.00	No Ice 1/2" Ice 1" Ice 2" Ice	10.11 10.68 11.22 12.32	8.99 10.15 11.03 12.83	0.10 0.19 0.29 0.51
MT6407-77A w/ Pipe	A	From Leg	3.00 0.00 0.00	0.00	101.00	No Ice 1/2" Ice 1" Ice 2" Ice	5.42 5.97 6.45 7.46	3.26 3.98 4.58 5.83	0.10 0.15 0.20 0.32
MT6407-77A w/ Pipe	B	From Leg	3.00 0.00 0.00	0.00	101.00	No Ice 1/2" Ice 1" Ice 2" Ice	5.42 5.97 6.45 7.46	3.26 3.98 4.58 5.83	0.10 0.15 0.20 0.32
MT6407-77A w/ Pipe	C	From Leg	3.00 0.00 0.00	0.00	101.00	No Ice 1/2" Ice 1" Ice 2" Ice	5.42 5.97 6.45 7.46	3.26 3.98 4.58 5.83	0.10 0.15 0.20 0.32
RFV01U-D1A	A	From Leg	3.00 0.00 0.00	0.00	101.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.88 2.05 2.22 2.60	1.25 1.39 1.54 1.86	0.08 0.10 0.12 0.18
RFV01U-D1A	B	From Leg	3.00 0.00 0.00	0.00	101.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.88 2.05 2.22 2.60	1.25 1.39 1.54 1.86	0.08 0.10 0.12 0.18
RFV01U-D1A	C	From Leg	3.00 0.00 0.00	0.00	101.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.88 2.05 2.22 2.60	1.25 1.39 1.54 1.86	0.08 0.10 0.12 0.18
RFV01U-D2A	A	From Leg	3.00 0.00 0.00	0.00	101.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.88 2.05 2.22 2.60	1.01 1.14 1.28 1.59	0.07 0.09 0.11 0.15
RFV01U-D2A	B	From Leg	3.00 0.00 0.00	0.00	101.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.88 2.05 2.22 2.60	1.01 1.14 1.28 1.59	0.07 0.09 0.11 0.15
RFV01U-D2A	C	From Leg	3.00 0.00 0.00	0.00	101.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.88 2.05 2.22 2.60	1.01 1.14 1.28 1.59	0.07 0.09 0.11 0.15
(2) Panel Antenna (6'x1') w/ Mount Pipe	A	From Leg	3.00 0.00 0.00	0.00	101.00	No Ice 1/2" Ice 1" Ice 2" Ice	8.13 8.59 9.05 10.00	5.89 6.64 7.41 8.99	0.07 0.13 0.20 0.36
(2) Panel Antenna (6'x1') w/ Mount Pipe	B	From Leg	3.00 0.00 0.00	0.00	101.00	No Ice 1/2" Ice 1" Ice 2" Ice	8.13 8.59 9.05 10.00	5.89 6.64 7.41 8.99	0.07 0.13 0.20 0.36
(2) Panel Antenna (6'x1') w/	C	From Leg	3.00	0.00	101.00	No Ice	8.13	5.89	0.07

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft Vert ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
Mount Pipe			0.00 0.00			1/2" Ice 1" Ice 2" Ice	8.59 9.05 10.00	6.64 7.41 8.99	0.13 0.20 0.36
***									

Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral ft Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft		Aperture Area ft^2	Weight K
3' x 5.5' Grid Dish	B	Grid	From Leg	0.00 0.00 0.00	0.00		303.00	4.58	No Ice 1/2" Ice 1" Ice 2" Ice	16.47 17.08 17.69 18.91	0.04 0.12 0.20 0.36
***											
4' Grid Dish	C	Grid	From Leg	0.00 0.00 0.00	0.00		141.00	4.00	No Ice 1/2" Ice 1" Ice 2" Ice	12.57 13.10 13.63 14.69	0.10 0.15 0.20 0.30

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice+1.0 Guy
3	1.2 Dead+1.0 Wind 30 deg - No Ice+1.0 Guy
4	1.2 Dead+1.0 Wind 60 deg - No Ice+1.0 Guy
5	1.2 Dead+1.0 Wind 90 deg - No Ice+1.0 Guy
6	1.2 Dead+1.0 Wind 120 deg - No Ice+1.0 Guy
7	1.2 Dead+1.0 Wind 150 deg - No Ice+1.0 Guy
8	1.2 Dead+1.0 Wind 180 deg - No Ice+1.0 Guy
9	1.2 Dead+1.0 Wind 210 deg - No Ice+1.0 Guy
10	1.2 Dead+1.0 Wind 240 deg - No Ice+1.0 Guy
11	1.2 Dead+1.0 Wind 270 deg - No Ice+1.0 Guy
12	1.2 Dead+1.0 Wind 300 deg - No Ice+1.0 Guy
13	1.2 Dead+1.0 Wind 330 deg - No Ice+1.0 Guy
14	1.2 Dead+1.0 Ice+1.0 Temp+Guy
15	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp+1.0 Guy
16	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp+1.0 Guy
17	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp+1.0 Guy
18	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp+1.0 Guy
19	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp+1.0 Guy
20	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp+1.0 Guy
21	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp+1.0 Guy
22	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp+1.0 Guy

Comb. No.	Description
23	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp+1.0 Guy
24	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp+1.0 Guy
25	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp+1.0 Guy
26	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp+1.0 Guy
27	Dead+Wind 0 deg - Service+Guy
28	Dead+Wind 30 deg - Service+Guy
29	Dead+Wind 60 deg - Service+Guy
30	Dead+Wind 90 deg - Service+Guy
31	Dead+Wind 120 deg - Service+Guy
32	Dead+Wind 150 deg - Service+Guy
33	Dead+Wind 180 deg - Service+Guy
34	Dead+Wind 210 deg - Service+Guy
35	Dead+Wind 240 deg - Service+Guy
36	Dead+Wind 270 deg - Service+Guy
37	Dead+Wind 300 deg - Service+Guy
38	Dead+Wind 330 deg - Service+Guy

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	341.5 - 314.5	Pole	Max Tension	13	0.00	0.00	0.00
			Max. Compression	14	-2.52	0.33	-0.11
			Max. Mx	11	-1.34	29.77	0.32
			Max. My	8	-1.34	0.07	-29.87
			Max. Vy	5	2.00	-29.50	0.33
			Max. Vx	8	2.00	0.07	-29.87
			Max. Torque	13			0.47
T1	314.5 - 310.5	Leg	Max Tension	8	12.80	-0.05	-0.05
			Max. Compression	2	-13.73	-0.04	-0.02
			Max. Mx	20	-0.23	-0.13	-0.04
			Max. My	17	-4.41	0.01	0.14
			Max. Vy	19	-0.06	-0.13	-0.03
			Max. Vx	17	0.06	0.01	0.14
		Diagonal	Max Tension	11	2.57	0.00	0.00
			Max. Compression	5	-2.55	0.00	0.00
			Max. Mx	25	1.40	0.04	0.00
			Max. My	24	-0.73	0.00	-0.00
			Max. Vy	25	0.03	0.00	0.00
			Max. Vx	24	0.00	0.00	0.00
		Top Girt	Max Tension	25	0.00	0.00	0.00
			Max. Compression	25	-0.00	0.00	0.00
			Max. Mx	25	-0.00	-0.02	0.00
			Max. My	5	-0.00	0.00	0.00
			Max. Vy	25	-0.02	0.00	0.00
			Max. Vx	5	-0.00	0.00	0.00
T2	310.5 - 306.5	Leg	Max Tension	12	15.99	-0.08	0.03
			Max. Compression	6	-17.15	-0.15	-0.02
			Max. Mx	11	14.13	0.18	-0.02
			Max. My	8	15.48	-0.08	-0.18
			Max. Vy	12	-0.08	0.18	0.07
			Max. Vx	8	0.07	-0.08	-0.18
		Diagonal	Max Tension	9	2.58	0.00	0.00
			Max. Compression	3	-2.57	0.00	0.00
			Max. Mx	25	1.05	0.02	0.00
			Max. My	24	0.62	0.00	-0.00
			Max. Vy	25	0.01	0.00	0.00
			Max. Vx	24	0.00	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
		Horizontal	Max Tension	18	0.12	0.00	0.00
			Max. Compression	8	-0.05	0.00	0.00
			Max. Mx	25	0.11	0.01	0.00
			Max. My	5	-0.02	0.00	-0.00
			Max. Vy	25	0.01	0.00	0.00
			Max. Vx	5	-0.00	0.00	0.00
T3	306.5 - 281.5	Leg	Max Tension	8	4.20	-0.08	-0.18
			Max. Compression	10	-22.21	0.07	0.08
			Max. Mx	11	2.30	0.18	-0.02
			Max. My	8	4.20	-0.08	-0.18
			Max. Vy	9	-0.18	0.09	-0.07
			Max. Vx	8	0.26	-0.07	-0.12
		Diagonal	Max Tension	2	1.39	0.00	0.00
			Max. Compression	6	-1.89	0.00	0.00
			Max. Mx	25	-0.15	0.02	0.00
			Max. My	24	0.32	0.00	-0.00
			Max. Vy	25	-0.01	0.00	0.00
			Max. Vx	24	0.00	0.00	0.00
		Horizontal	Max Tension	5	3.74	0.00	0.00
			Max. Compression	2	-0.27	0.00	0.00
			Max. Mx	25	0.06	0.01	0.00
			Max. My	5	0.27	0.00	-0.00
			Max. Vy	25	-0.01	0.00	0.00
			Max. Vx	5	-0.00	0.00	0.00
		Guy A	Bottom Tension	8	13.89		
			Top Tension	8	14.19		
			Top Cable Vert	8	12.60		
			Top Cable Norm	8	6.51		
			Top Cable Tan	8	0.00		
			Bot Cable Vert	8	-12.00		
			Bot Cable Norm	8	6.99		
			Bot Cable Tan	8	0.00		
		Guy B	Bottom Tension	25	13.93		
			Top Tension	12	14.24		
			Top Cable Vert	25	12.85		
			Top Cable Norm	25	6.13		
			Top Cable Tan	25	0.00		
			Bot Cable Vert	12	-12.02		
			Bot Cable Norm	12	7.04		
			Bot Cable Tan	12	0.00		
		Guy C	Bottom Tension	17	13.84		
			Top Tension	4	14.15		
			Top Cable Vert	17	12.78		
			Top Cable Norm	17	6.09		
			Top Cable Tan	17	0.00		
			Bot Cable Vert	4	-11.94		
			Bot Cable Norm	4	7.00		
			Bot Cable Tan	4	0.00		
T4	281.5 - 276.5	Leg	Max Tension	12	3.90	0.04	-0.03
			Max. Compression	6	-24.38	-0.10	0.07
			Max. Mx	13	-20.42	0.14	0.03
			Max. My	3	-6.66	-0.03	0.14
			Max. Vy	12	-0.06	0.13	-0.01
			Max. Vx	3	-0.05	-0.03	0.14
		Diagonal	Max Tension	6	1.82	0.00	0.00
			Max. Compression	2	-1.87	0.00	0.00
			Max. Mx	25	-0.03	0.02	0.00
			Max. My	24	0.07	0.00	-0.00
			Max. Vy	25	0.01	0.00	0.00
			Max. Vx	24	0.00	0.00	0.00
		Horizontal	Max Tension	3	0.13	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Compression	9	-0.02	0.00	0.00
			Max. Mx	25	0.08	0.01	0.00
			Max. My	11	0.12	0.00	-0.00
			Max. Vy	25	-0.01	0.00	0.00
			Max. Vx	11	-0.00	0.00	0.00
		Secondary Horizontal	Max Tension	2	0.00	0.00	0.00
			Max. Compression	10	-0.00	0.00	0.00
			Max. Mx	25	0.00	0.01	0.00
			Max. My	5	0.00	0.00	-0.00
			Max. Vy	25	0.01	0.00	0.00
			Max. Vx	5	0.00	0.00	0.00
T5	276.5 - 271.5	Leg	Max Tension	8	4.95	-0.07	-0.07
			Max. Compression	10	-26.59	0.15	0.10
			Max. Mx	10	-0.65	0.15	-0.09
			Max. My	7	-22.90	0.04	-0.16
			Max. Vy	10	-0.12	0.15	-0.09
			Max. Vx	8	0.15	0.09	-0.15
		Diagonal	Max Tension	11	2.00	0.00	0.00
			Max. Compression	6	-2.40	0.00	0.00
			Max. Mx	25	0.80	0.02	0.00
			Max. My	24	-0.18	0.00	-0.00
			Max. Vy	25	-0.01	0.00	0.00
			Max. Vx	24	-0.00	0.00	0.00
		Horizontal	Max Tension	4	0.19	0.00	0.00
			Max. Compression	10	-0.07	0.00	0.00
			Max. Mx	25	0.07	0.01	0.00
			Max. My	5	0.17	0.00	-0.00
			Max. Vy	25	0.01	0.00	0.00
			Max. Vx	5	-0.00	0.00	0.00
		Secondary Horizontal	Max Tension	8	0.01	0.00	0.00
			Max. Compression	4	-0.00	0.00	0.00
			Max. Mx	25	0.00	0.01	0.00
			Max. My	5	0.00	0.00	-0.00
			Max. Vy	25	0.01	0.00	0.00
			Max. Vx	5	0.00	0.00	0.00
T6	271.5 - 266.5	Leg	Max Tension	12	7.54	0.09	-0.01
			Max. Compression	6	-30.19	-0.10	0.10
			Max. Mx	10	2.81	0.15	-0.09
			Max. My	7	-25.87	0.04	-0.16
			Max. Vy	4	-0.06	-0.12	0.00
			Max. Vx	7	-0.06	0.04	-0.16
		Diagonal	Max Tension	5	2.65	0.00	0.00
			Max. Compression	11	-2.92	0.00	0.00
			Max. Mx	25	0.34	0.03	0.00
			Max. My	24	0.18	0.00	-0.00
			Max. Vy	25	-0.02	0.00	0.00
			Max. Vx	24	-0.00	0.00	0.00
		Horizontal	Max Tension	8	0.28	0.00	0.00
			Max. Compression	2	-0.16	0.00	0.00
			Max. Mx	14	0.08	0.01	0.00
			Max. My	11	0.24	0.00	-0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	11	-0.00	0.00	0.00
T7	266.5 - 261.5	Leg	Max Tension	8	9.62	0.05	-0.03
			Max. Compression	10	-33.23	0.13	0.08
			Max. Mx	17	-18.59	-0.18	-0.01
			Max. My	6	-32.49	0.02	-0.18
			Max. Vy	4	0.07	-0.17	-0.01
			Max. Vx	6	0.07	0.02	-0.18

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
		Diagonal	Max Tension	11	2.87	0.00	0.00
			Max. Compression	5	-3.10	0.00	0.00
			Max. Mx	25	1.11	0.03	0.00
			Max. My	24	-0.31	0.00	-0.00
			Max. Vy	25	0.02	0.00	0.00
			Max. Vx	24	0.00	0.00	0.00
		Horizontal	Max Tension	9	0.15	0.00	0.00
			Max. Compression	3	-0.03	0.00	0.00
			Max. Mx	14	0.09	0.01	0.00
			Max. My	5	0.12	0.00	-0.00
			Max. Vy	14	0.01	0.00	0.00
			Max. Vx	5	-0.00	0.00	0.00
T8	261.5 - 256.5	Leg	Max Tension	12	13.38	0.06	0.01
			Max. Compression	6	-37.78	-0.15	0.10
			Max. Mx	13	-32.26	0.19	0.04
			Max. My	10	-36.64	-0.02	-0.19
			Max. Vy	4	-0.12	-0.17	-0.01
			Max. Vx	6	-0.11	0.02	-0.18
		Diagonal	Max Tension	5	3.10	0.00	0.00
			Max. Compression	11	-3.38	0.00	0.00
			Max. Mx	25	0.71	0.03	0.00
			Max. My	24	0.45	0.00	-0.00
			Max. Vy	25	0.02	0.00	0.00
			Max. Vx	24	-0.00	0.00	0.00
		Horizontal	Max Tension	4	0.23	0.00	0.00
			Max. Compression	10	-0.11	0.00	0.00
			Max. Mx	14	0.09	0.01	0.00
			Max. My	11	0.14	0.00	-0.00
			Max. Vy	14	0.01	0.00	0.00
			Max. Vx	11	-0.00	0.00	0.00
T9	256.5 - 251.5	Leg	Max Tension	8	16.53	0.02	-0.08
			Max. Compression	10	-41.72	0.14	0.12
			Max. Mx	13	-35.87	0.19	0.04
			Max. My	6	-41.60	0.04	-0.20
			Max. Vy	13	0.08	0.19	0.04
			Max. Vx	10	-0.08	-0.02	-0.19
		Diagonal	Max Tension	11	3.43	0.00	0.00
			Max. Compression	5	-3.65	0.00	0.00
			Max. Mx	25	1.34	0.03	0.00
			Max. My	24	-0.67	0.00	-0.00
			Max. Vy	25	-0.02	0.00	0.00
			Max. Vx	24	0.00	0.00	0.00
		Horizontal	Max Tension	9	0.19	0.00	0.00
			Max. Compression	3	-0.10	0.00	0.00
			Max. Mx	14	0.09	0.01	0.00
			Max. My	5	0.15	0.00	-0.00
			Max. Vy	14	0.01	0.00	0.00
			Max. Vx	5	-0.00	0.00	0.00
T10	251.5 - 246.5	Leg	Max Tension	12	21.52	-0.00	0.02
			Max. Compression	6	-47.65	-0.20	0.16
			Max. Mx	6	8.03	-0.23	-0.02
			Max. My	10	-46.60	-0.02	-0.23
			Max. Vy	13	-0.08	0.23	0.05
			Max. Vx	6	-0.09	0.04	-0.20
		Diagonal	Max Tension	5	3.56	0.00	0.00
			Max. Compression	11	-3.83	0.00	0.00
			Max. Mx	25	1.02	0.03	0.00
			Max. My	11	1.23	0.00	-0.00
			Max. Vy	25	-0.02	0.00	0.00
			Max. Vx	11	0.00	0.00	0.00
		Horizontal	Max Tension	7	0.17	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Compression	13	-0.05	0.00	0.00
			Max. Mx	14	0.11	0.01	0.00
			Max. My	11	0.14	0.00	-0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	11	-0.00	0.00	0.00
T11	246.5 - 241.5	Leg	Max Tension	8	6.13	-0.00	-0.17
			Max. Compression	10	-48.69	0.14	0.10
			Max. Mx	4	-28.02	-0.29	-0.05
			Max. My	6	-48.35	0.09	-0.29
			Max. Vy	3	0.11	-0.10	0.12
			Max. Vx	6	0.13	-0.06	-0.14
		Diagonal	Max Tension	13	4.05	0.00	0.00
			Max. Compression	7	-4.37	0.00	0.00
			Max. Mx	21	-1.67	0.05	0.00
			Max. My	24	0.57	0.00	-0.00
			Max. Vy	21	-0.03	0.00	0.00
			Max. Vx	24	0.00	0.00	0.00
		Horizontal	Max Tension	5	5.46	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	19	4.66	0.01	0.00
			Max. My	5	1.54	0.00	-0.00
			Max. Vy	19	0.01	0.00	0.00
			Max. Vx	5	-0.00	0.00	0.00
		Secondary Horizontal	Max Tension	5	0.09	0.00	0.00
			Max. Compression	10	-0.03	0.00	0.00
			Max. Mx	19	0.06	-0.02	0.00
			Max. My	11	0.06	0.00	0.00
			Max. Vy	19	-0.02	0.00	0.00
			Max. Vx	11	-0.00	0.00	0.00
		Guy A	Bottom Tension	8	17.05		
			Top Tension	8	17.43		
			Top Cable Vert	8	14.62		
			Top Cable Norm	8	9.49		
			Top Cable Tan	8	0.00		
			Bot Cable Vert	8	-13.87		
			Bot Cable Norm	8	9.90		
			Bot Cable Tan	8	0.00		
		Guy B	Bottom Tension	12	17.08		
			Top Tension	12	17.46		
			Top Cable Vert	12	14.62		
			Top Cable Norm	12	9.55		
			Top Cable Tan	12	0.00		
			Bot Cable Vert	12	-13.87		
			Bot Cable Norm	12	9.96		
			Bot Cable Tan	12	0.00		
		Guy C	Bottom Tension	4	17.01		
			Top Tension	4	17.40		
			Top Cable Vert	4	14.57		
			Top Cable Norm	4	9.51		
			Top Cable Tan	4	0.00		
			Bot Cable Vert	4	-13.81		
			Bot Cable Norm	4	9.92		
			Bot Cable Tan	4	0.00		
T12	241.5 - 236.5	Leg	Max Tension	12	2.41	-0.01	0.23
			Max. Compression	6	-45.37	-0.17	0.08
			Max. Mx	12	-27.33	0.36	-0.01
			Max. My	10	-44.34	-0.05	-0.30
			Max. Vy	13	-0.32	0.33	0.06
			Max. Vx	2	-0.35	-0.02	0.29
		Diagonal	Max Tension	7	3.13	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Compression	13	-3.59	0.00	0.00
			Max. Mx	17	-1.51	0.05	0.00
			Max. My	11	-1.69	0.00	-0.00
			Max. Vy	17	-0.03	0.00	0.00
			Max. Vx	11	0.00	0.00	0.00
		Horizontal	Max Tension	4	0.30	0.00	0.00
			Max. Compression	12	-0.16	0.00	0.00
			Max. Mx	19	0.17	0.01	0.00
			Max. My	11	0.07	0.00	-0.00
			Max. Vy	19	-0.01	0.00	0.00
			Max. Vx	11	-0.00	0.00	0.00
		Secondary Horizontal	Max Tension	4	0.03	0.00	0.00
			Max. Compression	7	-0.00	0.00	0.00
			Max. Mx	17	0.01	0.03	0.00
			Max. My	5	0.00	0.00	-0.00
			Max. Vy	17	-0.04	0.00	0.00
			Max. Vx	5	0.00	0.00	0.00
T13	236.5 - 231.5	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	6	-41.58	0.09	-0.21
			Max. Mx	12	-27.45	0.36	-0.01
			Max. My	10	-40.44	-0.05	-0.30
			Max. Vy	12	0.13	0.36	-0.01
			Max. Vx	10	-0.11	-0.05	-0.30
		Diagonal	Max Tension	9	1.84	0.00	0.00
			Max. Compression	2	-2.36	0.00	0.00
			Max. Mx	21	-1.00	0.05	0.00
			Max. My	12	-0.48	0.00	-0.00
			Max. Vy	21	0.03	0.00	0.00
			Max. Vx	12	0.00	0.00	0.00
		Horizontal	Max Tension	13	0.53	0.00	0.00
			Max. Compression	7	-0.30	0.00	0.00
			Max. Mx	23	0.20	0.01	0.00
			Max. My	5	0.31	0.00	-0.00
			Max. Vy	23	0.01	0.00	0.00
			Max. Vx	5	-0.00	0.00	0.00
		Secondary Horizontal	Max Tension	2	0.01	0.00	0.00
			Max. Compression	6	-0.01	0.00	0.00
			Max. Mx	18	0.00	0.03	0.00
			Max. My	12	0.01	0.00	0.00
			Max. Vy	18	0.04	0.00	0.00
			Max. Vx	12	0.00	0.00	0.00
T14	231.5 - 226.5	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	6	-38.52	-0.16	0.17
			Max. Mx	25	-31.69	0.30	-0.02
			Max. My	25	-31.81	0.13	0.27
			Max. Vy	25	-0.12	0.30	-0.02
			Max. Vx	16	-0.11	-0.12	0.26
		Diagonal	Max Tension	3	1.53	0.00	0.00
			Max. Compression	9	-2.04	0.00	0.00
			Max. Mx	17	-1.05	0.05	0.00
			Max. My	12	-1.44	0.00	-0.00
			Max. Vy	17	-0.03	0.00	0.00
			Max. Vx	12	0.00	0.00	0.00
		Horizontal	Max Tension	11	0.23	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	19	0.18	0.01	0.00
			Max. My	12	0.06	0.00	0.00
			Max. Vy	19	-0.01	0.00	0.00
			Max. Vx	12	-0.00	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
		Secondary Horizontal	Max Tension	2	0.01	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	19	0.01	-0.02	0.00
			Max. My	12	0.01	0.00	-0.00
			Max. Vy	19	0.02	0.00	0.00
			Max. Vx	12	0.00	0.00	0.00
T15	226.5 - 221.5	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	6	-36.67	0.09	-0.21
			Max. Mx	25	-31.74	0.30	-0.02
			Max. My	17	-31.37	-0.13	0.26
			Max. Vy	25	0.12	0.30	-0.02
			Max. Vx	16	0.11	-0.12	0.26
		Diagonal	Max Tension	6	1.13	0.00	0.00
			Max. Compression	2	-1.67	0.00	0.00
			Max. Mx	21	-0.77	0.03	0.00
			Max. My	24	-0.25	0.00	-0.00
			Max. Vy	21	-0.02	0.00	0.00
			Max. Vx	24	-0.00	0.00	0.00
		Horizontal	Max Tension	12	0.26	0.00	0.00
			Max. Compression	6	-0.01	0.00	0.00
			Max. Mx	14	0.17	0.01	0.00
			Max. My	5	0.22	0.00	-0.00
			Max. Vy	14	0.01	0.00	0.00
			Max. Vx	5	-0.00	0.00	0.00
		Secondary Horizontal	Max Tension	10	0.01	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	19	0.01	-0.02	0.00
			Max. My	12	0.01	0.00	-0.00
			Max. Vy	19	0.02	0.00	0.00
			Max. Vx	12	0.00	0.00	0.00
T16	221.5 - 216.5	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	6	-34.68	-0.13	0.17
			Max. Mx	25	-31.70	0.29	-0.02
			Max. My	17	-31.03	-0.13	0.26
			Max. Vy	25	-0.12	0.29	-0.02
			Max. Vx	16	-0.10	-0.12	0.25
		Diagonal	Max Tension	2	0.80	0.00	0.00
			Max. Compression	6	-1.38	0.00	0.00
			Max. Mx	17	-0.80	0.03	0.00
			Max. My	24	0.26	0.00	-0.00
			Max. Vy	17	-0.02	0.00	0.00
			Max. Vx	24	0.00	0.00	0.00
		Horizontal	Max Tension	4	0.24	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	19	0.19	0.01	0.00
			Max. My	12	0.04	0.00	0.00
			Max. Vy	19	0.01	0.00	0.00
			Max. Vx	12	-0.00	0.00	0.00
		Secondary Horizontal	Max Tension	19	0.01	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	19	0.01	-0.02	0.00
			Max. My	12	0.01	0.00	-0.00
			Max. Vy	19	0.02	0.00	0.00
			Max. Vx	12	0.00	0.00	0.00
T17	216.5 - 211.5	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	6	-34.18	0.08	-0.21
			Max. Mx	25	-31.67	0.29	-0.02
			Max. My	25	-31.21	0.13	0.26

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vy	25	0.12	0.29	-0.02
			Max. Vx	16	0.10	-0.12	0.25
		Diagonal	Max Tension	6	0.54	0.00	0.00
			Max. Compression	2	-1.00	0.00	0.00
			Max. Mx	21	-0.47	0.03	0.00
			Max. My	24	-0.43	0.00	-0.00
			Max. Vy	21	-0.02	0.00	0.00
			Max. Vx	24	0.00	0.00	0.00
		Horizontal	Max Tension	12	0.25	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	14	0.17	0.01	0.00
			Max. My	12	0.25	0.00	0.00
			Max. Vy	14	0.01	0.00	0.00
			Max. Vx	12	-0.00	0.00	0.00
		Secondary Horizontal	Max Tension	23	0.01	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	19	0.01	-0.02	0.00
			Max. My	12	0.01	0.00	-0.00
			Max. Vy	19	-0.02	0.00	0.00
			Max. Vx	12	0.00	0.00	0.00
T18	211.5 - 206.5	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	2	-33.20	0.22	0.03
			Max. Mx	25	-32.14	0.29	-0.02
			Max. My	17	-31.43	-0.13	0.26
			Max. Vy	25	-0.12	0.29	-0.02
			Max. Vx	16	-0.11	-0.12	0.26
		Diagonal	Max Tension	13	0.24	0.00	0.00
			Max. Compression	7	-0.81	0.00	0.00
			Max. Mx	17	-0.54	0.03	0.00
			Max. My	24	-0.06	0.00	-0.00
			Max. Vy	17	-0.02	0.00	0.00
			Max. Vx	24	0.00	0.00	0.00
		Horizontal	Max Tension	4	0.24	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	14	0.17	0.01	0.00
			Max. My	12	0.04	0.00	0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	12	-0.00	0.00	0.00
		Secondary Horizontal	Max Tension	19	0.01	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	14	0.01	-0.02	0.00
			Max. My	12	0.01	0.00	-0.00
			Max. Vy	14	-0.02	0.00	0.00
			Max. Vx	12	0.00	0.00	0.00
T19	206.5 - 201.5	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	6	-34.03	0.09	-0.21
			Max. Mx	17	-32.14	-0.29	-0.01
			Max. My	25	-31.79	0.13	0.26
			Max. Vy	25	0.12	0.29	-0.02
			Max. Vx	16	0.11	-0.12	0.26
		Diagonal	Max Tension	7	0.49	0.00	0.00
			Max. Compression	12	-1.01	0.00	0.00
			Max. Mx	21	-0.18	0.02	0.00
			Max. My	24	-0.41	0.00	-0.00
			Max. Vy	21	0.02	0.00	0.00
			Max. Vx	24	0.00	0.00	0.00
		Horizontal	Max Tension	12	0.25	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	14	0.17	0.01	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. My	12	0.25	0.00	0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	12	-0.00	0.00	0.00
		Secondary Horizontal	Max Tension	23	0.01	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	22	0.01	-0.02	0.00
			Max. My	12	0.01	0.00	-0.00
			Max. Vy	22	0.02	0.00	0.00
			Max. Vx	12	0.00	0.00	0.00
T20	201.5 - 196.5	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	2	-34.24	0.22	0.03
			Max. Mx	25	-33.05	0.30	-0.02
			Max. My	17	-32.31	-0.13	0.27
			Max. Vy	25	-0.12	0.30	-0.02
			Max. Vx	16	-0.11	-0.13	0.26
		Diagonal	Max Tension	12	0.91	0.00	0.00
			Max. Compression	7	-1.41	0.00	0.00
			Max. Mx	22	-0.60	0.02	0.00
			Max. My	24	-0.36	0.00	-0.00
			Max. Vy	22	-0.02	0.00	0.00
			Max. Vx	24	0.00	0.00	0.00
		Horizontal	Max Tension	4	0.24	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	26	0.13	0.01	0.00
			Max. My	12	0.04	0.00	0.00
			Max. Vy	26	0.01	0.00	0.00
			Max. Vx	12	-0.00	0.00	0.00
		Secondary Horizontal	Max Tension	19	0.01	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	23	0.01	-0.02	0.00
			Max. My	12	0.01	0.00	-0.00
			Max. Vy	23	0.02	0.00	0.00
			Max. Vx	12	0.00	0.00	0.00
T21	196.5 - 191.5	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	6	-36.19	0.10	-0.19
			Max. Mx	25	-32.93	0.30	-0.02
			Max. My	17	-32.64	-0.13	0.27
			Max. Vy	25	0.12	0.30	-0.02
			Max. Vx	16	0.11	-0.13	0.26
		Diagonal	Max Tension	7	1.34	0.00	0.00
			Max. Compression	13	-1.82	0.00	0.00
			Max. Mx	23	-0.86	0.02	0.00
			Max. My	24	-0.59	0.00	-0.00
			Max. Vy	23	-0.02	0.00	0.00
			Max. Vx	24	0.00	0.00	0.00
		Horizontal	Max Tension	12	0.25	0.00	0.00
			Max. Compression	6	-0.00	0.00	0.00
			Max. Mx	14	0.17	0.01	0.00
			Max. My	12	0.25	0.00	0.00
			Max. Vy	14	0.01	0.00	0.00
			Max. Vx	12	-0.00	0.00	0.00
		Secondary Horizontal	Max Tension	18	0.01	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	20	0.01	-0.02	0.00
			Max. My	24	0.01	0.00	0.00
			Max. Vy	20	0.02	0.00	0.00
			Max. Vx	24	-0.00	0.00	0.00
T22	191.5 - 186.5	Leg	Max Tension	1	0.00	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Compression	2	-37.54	0.27	0.07
			Max. Mx	26	-35.65	0.32	-0.04
			Max. My	16	-30.78	-0.07	0.30
			Max. Vy	16	-0.13	-0.02	0.07
			Max. Vx	21	-0.13	-0.05	-0.05
		Diagonal	Max Tension	13	1.63	0.00	0.00
			Max. Compression	7	-2.15	0.00	0.00
			Max. Mx	23	-0.75	0.02	0.00
			Max. My	24	-0.64	0.00	-0.00
			Max. Vy	23	-0.02	0.00	0.00
			Max. Vx	24	0.00	0.00	0.00
		Horizontal	Max Tension	20	0.19	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	20	0.19	0.01	0.00
			Max. My	24	0.14	0.00	-0.00
			Max. Vy	20	0.01	0.00	0.00
			Max. Vx	24	-0.00	0.00	0.00
		Secondary Horizontal	Max Tension	5	0.08	0.00	0.00
			Max. Compression	6	-0.02	0.00	0.00
			Max. Mx	14	0.05	-0.02	0.00
			Max. My	24	0.02	0.00	0.00
			Max. Vy	14	-0.02	0.00	0.00
			Max. Vx	24	0.00	0.00	0.00
T23	186.5 - 181.5	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-39.93	-0.29	0.01
			Max. Mx	26	-39.69	0.32	-0.04
			Max. My	16	-37.12	-0.07	0.30
			Max. Vy	16	0.13	-0.03	0.07
			Max. Vx	21	0.14	-0.04	-0.06
		Diagonal	Max Tension	5	3.22	0.00	0.00
			Max. Compression	11	-3.76	0.00	0.00
			Max. Mx	15	0.87	0.02	0.00
			Max. My	24	0.25	0.00	-0.00
			Max. Vy	15	0.02	0.00	0.00
			Max. Vx	24	-0.00	0.00	0.00
		Horizontal	Max Tension	18	3.44	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	14	2.69	0.01	0.00
			Max. My	6	0.49	0.00	0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	6	0.00	0.00	0.00
		Secondary Horizontal	Max Tension	5	0.08	0.00	0.00
			Max. Compression	6	-0.02	0.00	0.00
			Max. Mx	14	0.04	-0.02	0.00
			Max. My	11	-0.01	0.00	0.00
			Max. Vy	14	-0.02	0.00	0.00
			Max. Vx	11	-0.00	0.00	0.00
		Guy A	Bottom Tension	21	8.64		
			Top Tension	8	9.27		
			Top Cable Vert	21	7.26		
			Top Cable Norm	21	5.76		
			Top Cable Tan	21	0.00		
			Bot Cable Vert	8	-6.32		
			Bot Cable Norm	8	5.90		
			Bot Cable Tan	8	0.00		
		Guy B	Bottom Tension	25	8.71		
			Top Tension	12	9.30		
			Top Cable Vert	25	7.27		
			Top Cable Norm	25	5.80		

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Top Cable Tan	25	0.00		
			Bot Cable Vert	12	-6.36		
			Bot Cable Norm	12	5.96		
			Bot Cable Tan	12	0.00		
		Guy C	Bottom Tension	17	8.62		
			Top Tension	4	9.25		
			Top Cable Vert	17	7.23		
			Top Cable Norm	17	5.77		
			Top Cable Tan	17	0.00		
			Bot Cable Vert	4	-6.29		
			Bot Cable Norm	4	5.90		
			Bot Cable Tan	4	0.00		
T24	181.5 - 176.5	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	17	-38.64	0.30	0.01
			Max. Mx	17	-38.48	-0.31	-0.01
			Max. My	25	-38.38	0.14	0.27
			Max. Vy	18	-0.13	-0.30	-0.02
			Max. Vx	26	0.11	0.14	0.27
		Diagonal	Max Tension	11	2.90	0.00	0.00
			Max. Compression	6	-3.32	0.00	0.00
			Max. Mx	23	0.86	0.02	0.00
			Max. My	24	-0.71	0.00	-0.00
			Max. Vy	23	0.01	0.00	0.00
			Max. Vx	24	0.00	0.00	0.00
		Horizontal	Max Tension	8	0.21	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	21	0.14	0.01	0.00
			Max. My	24	0.13	0.00	-0.00
			Max. Vy	21	0.01	0.00	0.00
			Max. Vx	24	-0.00	0.00	0.00
T25	176.5 - 171.5	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	24	-38.37	-0.30	0.00
			Max. Mx	18	-37.44	-0.31	-0.00
			Max. My	21	-37.72	0.15	-0.27
			Max. Vy	18	0.13	-0.31	-0.00
			Max. Vx	21	0.11	0.15	-0.27
		Diagonal	Max Tension	6	2.64	0.00	0.00
			Max. Compression	11	-3.14	0.00	0.00
			Max. Mx	15	0.60	0.02	0.00
			Max. My	24	0.10	0.00	-0.00
			Max. Vy	15	-0.02	0.00	0.00
			Max. Vx	24	0.00	0.00	0.00
		Horizontal	Max Tension	12	0.22	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	14	0.17	0.01	0.00
			Max. My	6	0.15	0.00	0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	6	0.00	0.00	0.00
T26	171.5 - 166.5	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	15	-39.03	-0.16	-0.27
			Max. Mx	19	-38.54	0.31	-0.00
			Max. My	24	-38.69	-0.16	0.28
			Max. Vy	18	-0.13	-0.31	-0.00
			Max. Vx	21	-0.11	0.15	-0.27
		Diagonal	Max Tension	11	2.31	0.00	0.00
			Max. Compression	6	-2.81	0.00	0.00
			Max. Mx	23	0.56	0.02	0.00
			Max. My	24	-0.52	0.00	-0.00
			Max. Vy	23	0.02	0.00	0.00
			Max. Vx	24	0.00	0.00	0.00
		Horizontal	Max Tension	4	0.23	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	25	0.14	0.01	0.00
			Max. My	11	0.21	0.00	0.00
			Max. Vy	25	-0.01	0.00	0.00
			Max. Vx	11	0.00	0.00	0.00
T27	166.5 - 161.5	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	22	-39.98	-0.31	-0.01
			Max. Mx	18	-38.24	-0.31	0.01
			Max. My	23	-39.24	0.15	-0.28
			Max. Vy	18	0.13	-0.31	0.01
			Max. Vx	15	-0.12	0.16	0.27
		Diagonal	Max Tension	6	2.09	0.00	0.00
			Max. Compression	11	-2.52	0.00	0.00
			Max. Mx	15	0.30	0.05	0.00
			Max. My	11	-0.06	0.00	-0.00
			Max. Vy	15	-0.03	0.00	0.00
			Max. Vx	11	0.00	0.00	0.00
		Horizontal	Max Tension	12	0.24	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	25	0.15	0.01	0.00
			Max. My	6	0.16	0.00	0.00
			Max. Vy	25	0.01	0.00	0.00
			Max. Vx	6	0.00	0.00	0.00
T28	161.5 - 156.5	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	24	-41.30	-0.15	0.28
			Max. Mx	18	-38.58	-0.31	0.01
			Max. My	23	-40.57	0.15	-0.28
			Max. Vy	18	-0.13	-0.31	0.01
			Max. Vx	22	-0.11	0.15	-0.28
		Diagonal	Max Tension	11	1.68	0.00	0.00
			Max. Compression	6	-2.24	0.00	0.00
			Max. Mx	15	0.24	0.02	0.00
			Max. My	24	0.46	0.00	-0.00
			Max. Vy	15	-0.01	0.00	0.00
			Max. Vx	24	0.00	0.00	0.00
		Horizontal	Max Tension	4	0.24	0.00	0.00
			Max. Compression	10	-0.00	0.00	0.00
			Max. Mx	21	0.14	0.01	0.00
			Max. My	11	0.21	0.00	0.00
			Max. Vy	21	0.01	0.00	0.00
			Max. Vx	11	0.00	0.00	0.00
T29	156.5 - 151.5	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	25	-41.98	0.16	-0.27
			Max. Mx	21	-41.89	-0.32	-0.01
			Max. My	24	-41.61	-0.15	0.28
			Max. Vy	23	0.13	0.31	0.01
			Max. Vx	16	-0.12	0.16	0.27
		Diagonal	Max Tension	6	1.54	0.00	0.00
			Max. Compression	11	-1.88	0.00	0.00
			Max. Mx	15	-0.05	0.02	0.00
			Max. My	24	-0.30	0.00	-0.00
			Max. Vy	15	-0.01	0.00	0.00
			Max. Vx	24	0.00	0.00	0.00
		Horizontal	Max Tension	12	0.23	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	17	0.14	0.01	0.00
			Max. My	6	0.16	0.00	0.00
			Max. Vy	17	-0.01	0.00	0.00
			Max. Vx	6	0.00	0.00	0.00
		Secondary Horizontal	Max Tension	2	0.00	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Compression	10	-0.00	0.00	0.00
			Max. Mx	25	0.00	0.01	0.00
			Max. My	6	0.00	0.00	0.00
			Max. Vy	25	0.01	0.00	0.00
			Max. Vx	6	-0.00	0.00	0.00
T30	151.5 - 146.5	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	25	-43.10	-0.16	0.28
			Max. Mx	20	-41.83	0.32	-0.01
			Max. My	24	-42.96	-0.16	0.28
			Max. Vy	19	-0.13	-0.31	0.00
			Max. Vx	16	0.12	0.16	0.27
		Diagonal	Max Tension	11	1.09	0.00	0.00
			Max. Compression	6	-1.72	0.00	0.00
			Max. Mx	26	-0.08	0.02	0.00
			Max. My	24	0.10	0.00	-0.00
			Max. Vy	26	-0.01	0.00	0.00
			Max. Vx	24	0.00	0.00	0.00
		Horizontal	Max Tension	4	0.23	0.00	0.00
			Max. Compression	10	-0.00	0.00	0.00
			Max. Mx	25	0.13	0.01	0.00
			Max. My	11	0.20	0.00	0.00
			Max. Vy	25	-0.01	0.00	0.00
			Max. Vx	11	0.00	0.00	0.00
		Secondary Horizontal	Max Tension	6	0.00	0.00	0.00
			Max. Compression	2	-0.00	0.00	0.00
			Max. Mx	20	0.00	0.01	0.00
			Max. My	6	0.00	0.00	0.00
			Max. Vy	20	-0.01	0.00	0.00
			Max. Vx	6	-0.00	0.00	0.00
T31	146.5 - 141.5	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	25	-43.23	0.16	-0.28
			Max. Mx	22	-42.62	-0.32	-0.01
			Max. My	24	-43.02	0.16	-0.28
			Max. Vy	23	0.13	0.31	0.01
			Max. Vx	26	0.12	-0.16	0.27
		Diagonal	Max Tension	6	1.00	0.00	0.00
			Max. Compression	11	-1.26	0.00	0.00
			Max. Mx	22	-0.08	0.02	0.00
			Max. My	16	-0.39	0.00	-0.00
			Max. Vy	22	-0.01	0.00	0.00
			Max. Vx	16	0.00	0.00	0.00
		Horizontal	Max Tension	12	0.24	0.00	0.00
			Max. Compression	2	-0.00	0.00	0.00
			Max. Mx	22	0.22	0.01	0.00
			Max. Vy	22	-0.01	0.00	0.00
			Max. Vx	6	0.00	0.00	0.00
T32	141.5 - 136.5	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	25	-43.66	-0.16	0.28
			Max. Mx	21	-42.61	0.32	-0.01
			Max. My	24	-43.46	-0.15	0.28
			Max. Vy	19	-0.16	-0.32	0.01
			Max. Vx	2	0.17	0.12	0.17
		Diagonal	Max Tension	12	0.78	0.00	0.00
			Max. Compression	4	-1.23	0.00	0.00
			Max. Mx	21	-0.09	0.02	0.00
			Max. My	16	-0.60	0.00	-0.00
			Max. Vy	21	-0.01	0.00	0.00
			Max. Vx	16	0.00	0.00	0.00
		Horizontal	Max Tension	12	0.32	0.00	0.00
			Max. Compression	6	-0.09	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Mx	16	0.27	0.01	0.00
			Max. Vy	16	0.01	0.00	0.00
T33	136.5 - 131.5	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	25	-43.29	0.15	-0.29
			Max. Mx	23	-41.47	-0.33	0.00
			Max. My	26	-42.90	0.15	-0.29
			Max. Vy	23	0.13	0.32	0.01
			Max. Vx	21	-0.12	-0.16	-0.28
		Diagonal	Max Tension	4	1.14	0.00	0.00
			Max. Compression	12	-1.61	0.00	0.00
			Max. Mx	21	0.30	0.02	0.00
			Max. My	16	-0.55	0.00	-0.00
			Max. Vy	21	-0.01	0.00	0.00
			Max. Vx	16	0.00	0.00	0.00
		Horizontal	Max Tension	8	0.25	0.00	0.00
			Max. Compression	2	-0.02	0.00	0.00
			Max. Mx	19	0.20	0.01	0.00
			Max. Vy	19	0.01	0.00	0.00
T34	131.5 - 106.5	Leg	Max Tension	2	8.38	-0.17	-0.03
			Max. Compression	11	-61.76	-0.23	0.30
			Max. Mx	19	-52.97	0.42	-0.01
			Max. My	16	-56.92	-0.20	-0.37
			Max. Vy	20	-0.16	-0.39	0.02
			Max. Vx	23	-0.14	0.17	-0.34
		Diagonal	Max Tension	5	5.28	0.00	0.00
			Max. Compression	11	-5.67	0.00	0.00
			Max. Mx	25	-1.11	0.02	0.00
			Max. My	16	-0.86	0.00	-0.00
			Max. Vy	25	0.01	0.00	0.00
			Max. Vx	16	0.00	0.00	0.00
		Horizontal	Max Tension	9	3.82	0.00	0.00
			Max. Compression	10	-0.06	0.00	0.00
			Max. Mx	17	0.15	0.01	0.00
			Max. My	11	0.25	0.00	-0.00
			Max. Vy	17	0.01	0.00	0.00
			Max. Vx	11	-0.00	0.00	0.00
		Guy A	Bottom Tension	8	12.50		
			Top Tension	8	12.60		
			Top Cable Vert	8	10.81		
			Top Cable Norm	8	6.47		
			Top Cable Tan	8	0.00		
			Bot Cable Vert	8	-10.61		
			Bot Cable Norm	8	6.60		
			Bot Cable Tan	8	0.00		
		Guy B	Bottom Tension	12	12.49		
			Top Tension	12	12.59		
			Top Cable Vert	12	10.93		
			Top Cable Norm	12	6.25		
			Top Cable Tan	12	0.00		
			Bot Cable Vert	12	-10.73		
			Bot Cable Norm	12	6.38		
			Bot Cable Tan	12	0.00		
		Guy C	Bottom Tension	4	12.41		
			Top Tension	4	12.52		
			Top Cable Vert	4	10.76		
			Top Cable Norm	4	6.40		
			Top Cable Tan	4	0.00		
			Bot Cable Vert	4	-10.56		
			Bot Cable Norm	4	6.53		
			Bot Cable Tan	4	0.00		
T35	106.5 - 101.5	Leg	Max Tension	2	13.98	0.16	-0.11

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Compression	8	-67.04	-0.33	-0.22
			Max. Mx	6	-52.46	-0.48	-0.04
			Max. My	3	-64.64	0.09	0.44
			Max. Vy	6	0.19	-0.48	-0.04
			Max. Vx	3	-0.17	0.09	0.44
		Diagonal	Max Tension	5	4.05	0.00	0.00
			Max. Compression	11	-4.46	0.00	0.00
			Max. Mx	24	-1.37	0.02	0.00
			Max. My	16	0.02	0.00	-0.00
			Max. Vy	24	-0.01	0.00	0.00
			Max. Vx	16	0.00	0.00	0.00
		Horizontal	Max Tension	21	0.24	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	17	0.17	0.01	0.00
			Max. My	5	0.15	0.00	-0.00
			Max. Vy	17	-0.01	0.00	0.00
			Max. Vx	5	-0.00	0.00	0.00
T36	101.5 - 96.5	Leg	Max Tension	2	14.65	-0.15	0.21
			Max. Compression	12	-70.20	-0.06	0.34
			Max. Mx	11	-36.80	-0.68	-0.01
			Max. My	2	-57.20	-0.01	-0.66
			Max. Vy	5	-1.45	-0.46	0.07
			Max. Vx	2	1.45	0.20	0.43
		Diagonal	Max Tension	13	2.35	0.00	0.00
			Max. Compression	6	-2.80	0.00	0.00
			Max. Mx	22	0.48	0.02	0.00
			Max. My	16	0.11	0.00	-0.00
			Max. Vy	22	-0.01	0.00	0.00
			Max. Vx	16	0.00	0.00	0.00
		Horizontal	Max Tension	8	1.89	0.00	0.00
			Max. Compression	2	-1.65	0.00	0.00
			Max. Mx	19	0.45	0.01	0.00
			Max. My	11	1.64	0.00	-0.00
			Max. Vy	19	0.01	0.00	0.00
			Max. Vx	11	-0.00	0.00	0.00
		Secondary Horizontal	Max Tension	2	0.05	0.00	0.00
			Max. Compression	13	-0.11	0.00	0.00
			Max. Mx	23	0.01	0.01	0.00
			Max. My	11	-0.08	0.00	-0.00
			Max. Vy	23	0.01	0.00	0.00
			Max. Vx	11	0.00	0.00	0.00
T37	96.5 - 91.5	Leg	Max Tension	2	8.59	0.17	0.10
			Max. Compression	8	-66.34	-0.32	0.05
			Max. Mx	23	-57.53	0.46	0.00
			Max. My	20	-52.10	-0.20	-0.40
			Max. Vy	23	0.18	0.46	0.00
			Max. Vx	20	-0.16	-0.20	-0.40
		Diagonal	Max Tension	7	3.35	0.00	0.00
			Max. Compression	13	-3.99	0.00	0.00
			Max. Mx	24	0.89	0.02	0.00
			Max. My	16	-1.09	0.00	-0.00
			Max. Vy	24	0.01	0.00	0.00
			Max. Vx	16	0.00	0.00	0.00
		Horizontal	Max Tension	8	0.53	0.00	0.00
			Max. Compression	2	-0.24	0.00	0.00
			Max. Mx	23	0.24	0.01	0.00
			Max. My	5	0.47	0.00	-0.00
			Max. Vy	23	-0.01	0.00	0.00
			Max. Vx	5	-0.00	0.00	0.00
T38	91.5 - 86.5	Leg	Max Tension	2	2.82	-0.18	-0.06

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Compression	25	-61.99	-0.25	0.37
			Max. Mx	19	-56.84	0.47	0.00
			Max. My	16	-60.45	-0.22	-0.41
			Max. Vy	21	-0.18	0.45	0.03
			Max. Vx	23	-0.16	0.18	-0.38
		Diagonal	Max Tension	13	3.88	0.00	0.00
			Max. Compression	7	-4.33	0.00	0.00
			Max. Mx	22	1.11	0.02	0.00
			Max. My	16	0.41	0.00	-0.00
			Max. Vy	22	0.01	0.00	0.00
			Max. Vx	16	0.00	0.00	0.00
		Horizontal	Max Tension	13	0.30	0.00	0.00
			Max. Compression	2	-0.04	0.00	0.00
			Max. Mx	19	0.21	0.01	0.00
			Max. My	11	0.25	0.00	-0.00
			Max. Vy	19	-0.01	0.00	0.00
			Max. Vx	11	-0.00	0.00	0.00
T39	86.5 - 81.5	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	17	-60.05	0.14	0.45
			Max. Mx	5	-37.09	-0.66	0.04
			Max. My	2	-50.39	0.18	0.62
			Max. Vy	5	0.22	-0.66	0.04
			Max. Vx	2	-0.21	0.18	0.62
		Diagonal	Max Tension	3	3.77	0.00	0.00
			Max. Compression	13	-4.46	0.00	0.00
			Max. Mx	24	1.22	0.02	0.00
			Max. My	16	-1.30	0.00	-0.00
			Max. Vy	24	-0.01	0.00	0.00
			Max. Vx	16	0.00	0.00	0.00
		Horizontal	Max Tension	21	0.25	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	17	0.19	0.01	0.00
			Max. My	5	0.16	0.00	-0.00
			Max. Vy	17	0.01	0.00	0.00
			Max. Vx	5	-0.00	0.00	0.00
T40	81.5 - 76.5	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-60.45	-0.20	0.46
			Max. Mx	11	-39.95	-0.87	0.01
			Max. My	2	-47.94	-0.16	-0.86
			Max. Vy	5	-0.87	-0.66	0.04
			Max. Vx	2	0.86	0.18	0.62
		Diagonal	Max Tension	13	7.74	0.00	0.00
			Max. Compression	3	-8.23	0.00	0.00
			Max. Mx	22	2.27	0.02	0.00
			Max. My	16	1.00	0.00	-0.00
			Max. Vy	22	-0.02	0.00	0.00
			Max. Vx	16	0.00	0.00	0.00
		Horizontal	Max Tension	8	1.32	0.00	0.00
			Max. Compression	2	-1.03	0.00	0.00
			Max. Mx	19	0.35	0.01	0.00
			Max. My	11	1.15	0.00	-0.00
			Max. Vy	19	-0.01	0.00	0.00
			Max. Vx	11	-0.00	0.00	0.00
T41	76.5 - 71.5	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-59.54	0.21	0.39
			Max. Mx	24	-56.05	0.53	-0.00
			Max. My	2	-34.58	-0.16	0.50
			Max. Vy	24	0.21	0.53	-0.00
			Max. Vx	15	0.19	-0.23	0.47
		Diagonal	Max Tension	7	9.62	0.00	0.00
			Max. Compression	13	-10.33	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Mx	24	2.87	0.02	0.00
			Max. My	16	-2.11	0.00	-0.00
			Max. Vy	24	-0.02	0.00	0.00
			Max. Vx	16	0.00	0.00	0.00
		Horizontal	Max Tension	4	0.74	0.00	0.00
			Max. Compression	2	-0.45	0.00	0.00
			Max. Mx	23	0.27	0.01	0.00
			Max. My	5	0.66	0.00	-0.00
			Max. Vy	23	0.01	0.00	0.00
			Max. Vx	5	-0.00	0.00	0.00
		Secondary Horizontal	Max Tension	9	0.02	0.00	0.00
			Max. Compression	12	-0.01	0.00	0.00
			Max. Mx	19	0.00	-0.02	0.00
			Max. My	11	-0.00	0.00	0.00
			Max. Vy	19	-0.02	0.00	0.00
			Max. Vx	11	-0.00	0.00	0.00
T42	71.5 - 66.5	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	22	-62.97	-0.24	-0.44
			Max. Mx	25	-61.81	0.51	-0.01
			Max. My	16	-59.94	-0.22	0.46
			Max. Vy	24	-0.21	0.51	-0.04
			Max. Vx	15	-0.20	-0.20	0.46
		Diagonal	Max Tension	13	9.88	0.00	0.00
			Max. Compression	7	-10.37	0.00	0.00
			Max. Mx	26	2.98	0.02	0.00
			Max. My	16	1.34	0.00	-0.00
			Max. Vy	26	-0.01	0.00	0.00
			Max. Vx	16	0.00	0.00	0.00
		Horizontal	Max Tension	21	0.22	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	19	0.21	0.01	0.00
			Max. My	16	0.21	0.00	-0.00
			Max. Vy	19	0.01	0.00	0.00
			Max. Vx	16	-0.00	0.00	0.00
		Secondary Horizontal	Max Tension	8	0.02	0.00	0.00
			Max. Compression	2	-0.00	0.00	0.00
			Max. Mx	14	0.01	-0.02	0.00
			Max. My	11	-0.00	0.00	0.00
			Max. Vy	14	-0.02	0.00	0.00
			Max. Vx	11	-0.00	0.00	0.00
T43	66.5 - 61.5	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	23	-68.65	0.25	0.47
			Max. Mx	16	-67.49	-0.53	-0.03
			Max. My	24	-68.17	0.24	0.47
			Max. Vy	25	0.22	0.05	0.08
			Max. Vx	21	-0.22	0.05	-0.08
		Diagonal	Max Tension	7	10.38	0.00	0.00
			Max. Compression	13	-11.08	0.00	0.00
			Max. Mx	24	3.13	-0.03	0.00
			Max. My	6	0.20	0.00	-0.00
			Max. Vy	24	0.02	0.00	0.00
			Max. Vx	6	-0.00	0.00	0.00
		Horizontal	Max Tension	3	0.25	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	23	0.20	0.01	0.00
			Max. My	5	0.22	0.00	-0.00
			Max. Vy	23	0.01	0.00	0.00
			Max. Vx	5	-0.00	0.00	0.00
		Secondary	Max Tension	3	0.11	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
		Horizontal					
			Max. Compression	3	-0.05	0.00	0.00
			Max. Mx	14	0.03	-0.02	0.00
			Max. My	11	-0.05	0.00	0.00
			Max. Vy	14	0.02	0.00	0.00
			Max. Vx	11	-0.00	0.00	0.00
T44	61.5 - 56.5	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	23	-73.79	-0.26	-0.45
			Max. Mx	16	-72.15	-0.53	-0.03
			Max. My	24	-72.59	0.24	0.47
			Max. Vy	26	-0.23	0.06	0.06
			Max. Vx	22	0.22	0.02	-0.08
		Diagonal	Max Tension	12	2.03	0.00	0.00
			Max. Compression	4	-2.56	0.00	0.00
			Max. Mx	26	-1.17	0.02	0.00
			Max. My	16	-0.84	0.00	-0.00
			Max. Vy	26	0.01	0.00	0.00
			Max. Vx	16	0.00	0.00	0.00
		Horizontal	Max Tension	3	6.65	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	19	3.88	0.01	0.00
			Max. My	16	2.07	0.00	-0.00
			Max. Vy	19	-0.01	0.00	0.00
			Max. Vx	16	0.00	0.00	0.00
		Secondary Horizontal	Max Tension	3	0.11	0.00	0.00
			Max. Compression	2	-0.04	0.00	0.00
			Max. Mx	19	0.05	0.01	0.00
			Max. My	11	-0.03	0.00	-0.00
			Max. Vy	19	-0.01	0.00	0.00
			Max. Vx	11	0.00	0.00	0.00
		Guy A	Bottom Tension	9	14.64		
			Top Tension	9	14.70		
			Top Cable Vert	9	9.22		
			Top Cable Norm	9	11.44		
			Top Cable Tan	9	0.00		
			Bot Cable Vert	9	-9.09		
			Bot Cable Norm	9	11.47		
			Bot Cable Tan	9	0.05		
		Guy B	Bottom Tension	13	14.93		
			Top Tension	13	14.99		
			Top Cable Vert	13	9.67		
			Top Cable Norm	13	11.46		
			Top Cable Tan	13	0.00		
			Bot Cable Vert	13	-9.54		
			Bot Cable Norm	13	11.49		
			Bot Cable Tan	13	0.05		
		Guy C	Bottom Tension	3	14.69		
			Top Tension	3	14.75		
			Top Cable Vert	3	9.29		
			Top Cable Norm	3	11.45		
			Top Cable Tan	3	0.00		
			Bot Cable Vert	3	-9.16		
			Bot Cable Norm	3	11.48		
			Bot Cable Tan	3	0.05		
T45	56.5 - 51.5	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	23	-73.60	0.29	0.47
			Max. Mx	16	-71.53	-0.55	0.00
			Max. My	25	-69.03	0.27	0.49
			Max. Vy	26	0.22	0.53	-0.02
			Max. Vx	16	0.20	-0.22	0.47

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
		Diagonal	Max Tension	4	1.70	0.00	0.00
			Max. Compression	12	-2.34	0.00	0.00
			Max. Mx	24	-0.93	0.02	0.00
			Max. My	16	-0.19	0.00	-0.00
			Max. Vy	24	-0.01	0.00	0.00
			Max. Vx	16	0.00	0.00	0.00
		Horizontal	Max Tension	26	0.19	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	19	0.19	0.01	0.00
			Max. My	5	0.15	0.00	-0.00
			Max. Vy	19	-0.01	0.00	0.00
			Max. Vx	5	-0.00	0.00	0.00
		Secondary Horizontal	Max Tension	3	0.02	0.00	0.00
			Max. Compression	2	-0.01	0.00	0.00
			Max. Mx	19	0.01	0.01	0.00
			Max. My	11	-0.01	0.00	-0.00
			Max. Vy	19	-0.01	0.00	0.00
			Max. Vx	11	0.00	0.00	0.00
T46	51.5 - 46.5	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	23	-73.08	-0.27	-0.49
			Max. Mx	26	-71.36	0.57	-0.00
			Max. My	17	-68.63	-0.27	0.50
			Max. Vy	17	-0.23	-0.55	-0.01
			Max. Vx	25	0.20	0.27	0.49
		Diagonal	Max Tension	12	1.37	0.00	0.00
			Max. Compression	4	-1.91	0.00	0.00
			Max. Mx	26	-0.94	0.02	0.00
			Max. My	16	-0.71	0.00	-0.00
			Max. Vy	26	-0.01	0.00	0.00
			Max. Vx	16	0.00	0.00	0.00
		Horizontal	Max Tension	8	0.27	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	19	0.22	0.01	0.00
			Max. My	16	0.20	0.00	-0.00
			Max. Vy	19	-0.01	0.00	0.00
			Max. Vx	16	0.00	0.00	0.00
		Secondary Horizontal	Max Tension	2	0.01	0.00	0.00
			Max. Compression	13	-0.00	0.00	0.00
			Max. Mx	19	0.01	0.01	0.00
			Max. My	11	-0.00	0.00	-0.00
			Max. Vy	19	-0.01	0.00	0.00
			Max. Vx	11	0.00	0.00	0.00
T47	46.5 - 41.5	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	23	-73.29	0.31	0.51
			Max. Mx	16	-71.46	-0.59	0.00
			Max. My	25	-69.26	0.29	0.52
			Max. Vy	26	0.24	0.57	-0.00
			Max. Vx	17	0.22	-0.27	0.50
		Diagonal	Max Tension	4	0.92	0.00	0.00
			Max. Compression	12	-1.70	0.00	0.00
			Max. Mx	24	-0.70	0.02	0.00
			Max. My	16	-0.39	0.00	-0.00
			Max. Vy	24	-0.01	0.00	0.00
			Max. Vx	16	0.00	0.00	0.00
		Horizontal	Max Tension	3	0.26	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	25	0.18	0.01	0.00
			Max. My	6	0.09	0.00	0.00
			Max. Vy	25	0.01	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vx	6	-0.00	0.00	0.00
		Secondary Horizontal	Max Tension	2	0.01	0.00	0.00
			Max. Compression	2	-0.00	0.00	0.00
			Max. Mx	25	0.00	0.01	0.00
			Max. My	11	-0.00	0.00	-0.00
			Max. Vy	25	0.01	0.00	0.00
			Max. Vx	11	0.00	0.00	0.00
T48	41.5 - 36.5	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	23	-73.09	-0.31	-0.56
			Max. Mx	26	-71.63	0.65	-0.01
			Max. My	17	-68.92	-0.31	0.57
			Max. Vy	16	-0.27	-0.59	0.00
			Max. Vx	25	0.24	0.29	0.52
		Diagonal	Max Tension	12	0.67	0.00	0.00
			Max. Compression	4	-1.25	0.00	0.00
			Max. Mx	26	-0.75	0.02	0.00
			Max. My	16	-0.63	0.00	-0.00
			Max. Vy	26	0.01	0.00	0.00
			Max. Vx	16	0.00	0.00	0.00
		Horizontal	Max Tension	8	0.29	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	19	0.25	0.01	0.00
			Max. My	16	0.24	0.00	-0.00
			Max. Vy	19	0.01	0.00	0.00
			Max. Vx	16	-0.00	0.00	0.00
		Secondary Horizontal	Max Tension	2	0.01	0.00	0.00
			Max. Compression	2	-0.00	0.00	0.00
			Max. Mx	14	0.00	0.01	0.00
			Max. My	11	0.00	0.00	-0.00
			Max. Vy	14	0.01	0.00	0.00
			Max. Vx	11	0.00	0.00	0.00
T49	36.5 - 31.5	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	23	-73.59	0.40	0.65
			Max. Mx	17	-69.29	-0.77	-0.01
			Max. My	25	-69.71	0.38	0.67
			Max. Vy	26	0.33	0.65	-0.01
			Max. Vx	17	0.29	-0.31	0.57
		Diagonal	Max Tension	6	0.52	0.00	0.00
			Max. Compression	2	-1.40	0.00	0.00
			Max. Mx	24	-0.65	0.02	0.00
			Max. My	16	-0.73	0.00	-0.00
			Max. Vy	24	-0.01	0.00	0.00
			Max. Vx	16	0.00	0.00	0.00
		Horizontal	Max Tension	4	0.30	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	14	0.27	0.01	0.00
			Max. My	6	0.15	0.00	0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	6	-0.00	0.00	0.00
		Secondary Horizontal	Max Tension	26	0.01	0.00	0.00
			Max. Compression	2	-0.01	0.00	0.00
			Max. Mx	19	0.01	0.01	0.00
			Max. My	11	-0.01	0.00	-0.00
			Max. Vy	19	0.01	0.00	0.00
			Max. Vx	11	0.00	0.00	0.00
T50	31.5 - 6.5	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	2	-81.38	0.45	-1.36
			Max. Mx	2	-22.81	-0.45	-1.31

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. My	17	-70.47	0.01	-1.81
			Max. Vy	2	0.14	-0.45	-1.31
			Max. Vx	17	0.71	0.01	-1.81
		Diagonal	Max Tension	2	1.21	0.00	0.00
			Max. Compression	6	-4.37	0.00	0.00
			Max. Mx	26	-1.38	0.02	0.00
			Max. My	16	-1.32	0.00	-0.00
			Max. Vy	26	-0.01	0.00	0.00
			Max. Vx	16	0.00	0.00	0.00
		Horizontal	Max Tension	15	1.19	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	14	1.14	0.01	0.00
			Max. My	16	0.51	0.00	-0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	16	0.00	0.00	0.00
T51	6.5 - 0	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	2	-93.52	-0.00	-0.00
			Max. Mx	2	-93.23	-10.03	0.45
			Max. My	6	-19.24	4.60	-3.33
			Max. Vy	2	-1.60	-0.00	-0.00
			Max. Vx	9	-0.56	-0.00	-0.00
		Top Girt	Max Tension	7	1.04	5.43	0.01
			Max. Compression	2	-0.35	-7.85	-0.00
			Max. Mx	2	-0.35	-7.85	-0.00
			Max. My	3	0.14	-3.80	-0.02
			Max. Vy	2	-5.30	-7.85	-0.00
			Max. Vx	3	-0.01	3.39	0.01

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Leg C	Max. Vert	10	90.86	1.23	-0.68
	Max. H_x	10	90.86	1.23	-0.68
	Max. H_z	2	18.51	-0.47	0.79
	Min. Vert	3	10.56	-0.85	0.75
	Min. H_x	5	12.17	-0.97	0.36
	Min. H_z	10	90.86	1.23	-0.68
Leg B	Max. Vert	6	90.16	-1.18	-0.80
	Max. H_x	11	11.71	0.98	0.34
	Max. H_z	2	17.96	0.42	0.92
	Min. Vert	13	10.28	0.79	0.86
	Min. H_x	6	90.16	-1.18	-0.80
	Min. H_z	7	80.84	-0.89	-0.81
Leg A	Max. Vert	2	93.55	0.06	1.53
	Max. H_x	11	35.14	0.52	-0.12
	Max. H_z	2	93.55	0.06	1.53
	Min. Vert	8	9.74	-0.10	-1.15
	Min. H_x	6	19.56	-0.58	-0.75
	Min. H_z	8	9.74	-0.10	-1.15
Guy C @ 170 ft Elev 0 ft Azimuth 240 deg	Max. Vert	10	-3.95	-1.82	1.05
	Max. H_x	10	-3.95	-1.82	1.05
	Max. H_z	4	-32.04	-19.76	11.41
	Min. Vert	4	-32.04	-19.76	11.41

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
	Min. H_x	4	-32.04	-19.76	11.41
	Min. H_z	10	-3.95	-1.82	1.05
Guy B @ 170 ft Elev 0 ft Azimuth 120 deg	Max. Vert	6	-3.89	1.79	1.03
	Max. H_x	12	-32.25	19.89	11.48
	Max. H_z	12	-32.25	19.89	11.48
	Min. Vert	12	-32.25	19.89	11.48
	Min. H_x	6	-3.89	1.79	1.03
	Min. H_z	6	-3.89	1.79	1.03
Guy A @ 169 ft Elev 0 ft Azimuth 0 deg	Max. Vert	2	-4.01	0.00	-2.12
	Max. H_x	11	-18.50	0.95	-12.79
	Max. H_z	2	-4.01	0.00	-2.12
	Min. Vert	8	-32.20	-0.00	-22.79
	Min. H_x	5	-18.61	-0.95	-12.87
	Min. H_z	8	-32.20	-0.00	-22.79
Guy C @ 78 ft Elev 0 ft Azimuth 240 deg	Max. Vert	10	-0.45	-0.23	0.13
	Max. H_x	10	-0.45	-0.23	0.13
	Max. H_z	3	-19.58	-15.46	9.07
	Min. Vert	3	-19.58	-15.46	9.07
	Min. H_x	3	-19.58	-15.46	9.07
	Min. H_z	10	-0.45	-0.23	0.13
Guy B @ 75 ft Elev 0 ft Azimuth 120 deg	Max. Vert	6	-0.47	0.22	0.13
	Max. H_x	13	-20.12	15.33	8.99
	Max. H_z	13	-20.12	15.33	8.99
	Min. Vert	13	-20.12	15.33	8.99
	Min. H_x	6	-0.47	0.22	0.13
	Min. H_z	6	-0.47	0.22	0.13
Guy A @ 78.5 ft Elev 0 ft Azimuth 0 deg	Max. Vert	2	-0.44	0.00	-0.26
	Max. H_x	11	-9.31	0.21	-8.58
	Max. H_z	2	-0.44	0.00	-0.26
	Min. Vert	8	-19.54	-0.00	-17.87
	Min. H_x	5	-9.34	-0.21	-8.60
	Min. H_z	9	-19.51	0.12	-17.96

Tower Mast Reaction Summary

Load Combination	Vertical K	$Shear_x$ K	$Shear_z$ K	Overturning Moment, M_x kip-ft	Overturning Moment, M_z kip-ft	Torque kip-ft
Dead Only	95.61	-0.00	-0.01	-0.30	0.42	-0.03
1.2 Dead+1.0 Wind 0 deg - No Ice+1.0 Guy	130.02	-0.01	-3.24	-130.45	0.82	0.36
1.2 Dead+1.0 Wind 30 deg - No Ice+1.0 Guy	126.37	1.12	-2.49	-102.59	-35.45	0.38
1.2 Dead+1.0 Wind 60 deg - No Ice+1.0 Guy	120.17	1.83	-1.08	-37.71	-64.39	-0.04
1.2 Dead+1.0 Wind 90 deg - No Ice+1.0 Guy	125.97	2.49	0.23	18.63	-100.20	-0.52

Load Combination	Vertical	$Shear_x$	$Shear_z$	Overturning Moment, M_x	Overturning Moment, M_z	Torque
	K	K	K	kip-ft	kip-ft	kip-ft
1.2 Dead+1.0 Wind 120 deg - No Ice+1.0 Guy	129.31	2.60	1.49	61.16	-105.86	-0.57
1.2 Dead+1.0 Wind 150 deg - No Ice+1.0 Guy	126.19	1.58	2.19	81.30	-69.38	-0.41
1.2 Dead+1.0 Wind 180 deg - No Ice+1.0 Guy	120.32	0.00	2.31	78.91	0.79	-0.52
1.2 Dead+1.0 Wind 210 deg - No Ice+1.0 Guy	126.37	-1.57	2.21	81.87	71.17	-0.52
1.2 Dead+1.0 Wind 240 deg - No Ice+1.0 Guy	129.64	-2.58	1.48	61.08	107.68	-0.11
1.2 Dead+1.0 Wind 270 deg - No Ice+1.0 Guy	126.51	-2.49	0.23	18.26	101.92	0.40
1.2 Dead+1.0 Wind 300 deg - No Ice+1.0 Guy	120.72	-1.84	-1.09	-38.30	65.93	0.52
1.2 Dead+1.0 Wind 330 deg - No Ice+1.0 Guy	126.71	-1.11	-2.48	-102.58	36.63	0.29
1.2 Dead+1.0 Ice+1.0 Temp+Guy	206.71	-0.02	-0.05	-1.07	1.04	-0.10
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp+1.0 Guy	209.65	-0.04	-0.62	-29.16	1.18	0.04
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp+1.0 Guy	209.77	0.20	-0.53	-24.46	-10.41	0.19
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp+1.0 Guy	209.90	0.39	-0.29	-13.12	-19.70	0.06
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp+1.0 Guy	209.62	0.50	-0.01	0.62	-24.60	-0.14
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp+1.0 Guy	209.39	0.46	0.24	12.93	-22.69	-0.16
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp+1.0 Guy	209.63	0.28	0.39	20.57	-13.14	-0.13
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp+1.0 Guy	209.94	-0.02	0.44	23.09	1.20	-0.27
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp+1.0 Guy	209.81	-0.31	0.39	20.59	15.56	-0.38
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp+1.0 Guy	209.70	-0.51	0.23	12.83	25.25	-0.24
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp+1.0 Guy	209.93	-0.54	-0.02	0.53	26.91	-0.09
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp+1.0 Guy	210.14	-0.43	-0.30	-13.24	21.81	-0.10
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp+1.0 Guy	209.89	-0.25	-0.54	-24.58	12.49	-0.13
Dead+Wind 0 deg - Service+Guy	96.23	-0.01	-0.69	-20.09	0.50	0.10
Dead+Wind 30 deg - Service+Guy	96.26	0.30	-0.55	-16.62	-8.88	0.07
Dead+Wind 60 deg - Service+Guy	96.29	0.48	-0.29	-9.17	-15.10	-0.06
Dead+Wind 90 deg - Service+Guy	96.22	0.56	-0.01	-0.12	-17.47	-0.20
Dead+Wind 120 deg - Service+Guy	96.16	0.54	0.31	9.15	-15.89	-0.21
Dead+Wind 150 deg - Service+Guy	96.22	0.31	0.51	15.89	-9.10	-0.16
Dead+Wind 180 deg - Service+Guy	96.29	-0.00	0.60	18.57	0.36	-0.17
Dead+Wind 210 deg - Service+Guy	96.25	-0.31	0.52	15.91	9.92	-0.15
Dead+Wind 240 deg - Service+Guy	96.22	-0.55	0.30	9.02	16.72	-0.02
Dead+Wind 270 deg -	96.28	-0.57	-0.01	-0.29	18.34	0.12

Load Combination	Vertical	$Shear_x$	$Shear_z$	Overturning Moment, M_x	Overturning Moment, M_z	Torque
	K	K	K	kip-ft	kip-ft	kip-ft
Service+Guy						
Dead+Wind 300 deg - Service+Guy	96.35	-0.49	-0.30	-9.33	16.00	0.14
Dead+Wind 330 deg - Service+Guy	96.29	-0.30	-0.54	-16.62	9.77	0.09

Solution Summary

	Sum of Applied Forces			Sum of Reactions			
Load Comb.	PX K	PY K	PZ K	PX K	PY K	PZ K	% Error
1	0.00	-35.14	0.00	0.00	35.14	0.00	0.011%
2	-0.06	-41.59	-35.65	0.06	41.59	35.62	0.052%
3	17.53	-41.45	-30.34	-17.54	41.45	30.32	0.045%
4	30.06	-41.32	-17.27	-30.05	41.32	17.27	0.020%
5	34.74	-41.46	0.07	-34.72	41.45	-0.06	0.045%
6	30.59	-41.59	17.67	-30.56	41.59	-17.65	0.049%
7	17.60	-41.45	30.41	-17.58	41.45	-30.40	0.044%
8	0.07	-41.32	35.14	-0.07	41.32	-35.13	0.021%
9	-17.49	-41.45	30.37	17.47	41.45	-30.36	0.047%
10	-30.51	-41.59	17.55	30.48	41.59	-17.53	0.051%
11	-34.74	-41.45	-0.04	34.72	41.45	0.06	0.046%
12	-30.12	-41.32	-17.38	30.11	41.32	17.39	0.015%
13	-17.62	-41.45	-30.40	17.62	41.45	30.37	0.045%
14	0.00	-125.53	0.00	-0.01	125.53	0.01	0.008%
15	-0.07	-125.67	-16.93	0.07	125.67	16.92	0.007%
16	8.46	-125.53	-14.54	-8.45	125.53	14.53	0.007%
17	14.60	-125.40	-8.40	-14.59	125.40	8.40	0.008%
18	16.87	-125.53	-0.04	-16.86	125.53	0.04	0.007%
19	14.70	-125.67	8.39	-14.69	125.67	-8.38	0.007%
20	8.43	-125.53	14.57	-8.42	125.53	-14.57	0.007%
21	0.02	-125.39	16.81	-0.02	125.39	-16.80	0.008%
22	-8.39	-125.53	14.54	8.39	125.53	-14.53	0.007%
23	-14.72	-125.67	8.31	14.71	125.67	-8.31	0.007%
24	-16.89	-125.53	-0.10	16.88	125.53	0.10	0.008%
25	-14.65	-125.39	-8.45	14.64	125.39	8.45	0.008%
26	-8.53	-125.53	-14.58	8.53	125.53	14.57	0.007%
27	-0.02	-35.18	-9.01	0.02	35.18	9.00	0.015%
28	4.43	-35.14	-7.67	-4.42	35.14	7.66	0.031%
29	7.59	-35.11	-4.36	-7.59	35.11	4.36	0.019%
30	8.78	-35.14	0.02	-8.77	35.14	-0.02	0.014%
31	7.73	-35.18	4.46	-7.72	35.18	-4.46	0.009%
32	4.45	-35.14	7.68	-4.44	35.14	-7.68	0.015%
33	0.02	-35.11	8.88	-0.02	35.11	-8.87	0.021%
34	-4.42	-35.14	7.67	4.41	35.14	-7.66	0.028%
35	-7.71	-35.18	4.43	7.70	35.18	-4.43	0.014%
36	-8.78	-35.14	-0.01	8.77	35.14	0.01	0.012%
37	-7.61	-35.11	-4.39	7.61	35.11	4.39	0.015%
38	-4.45	-35.14	-7.68	4.45	35.14	7.68	0.015%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	7	0.00000001	0.00018310
2	Yes	88	0.00019969	0.00006840
3	Yes	80	0.00019324	0.00006514
4	Yes	25	0.00019991	0.00013178
5	Yes	83	0.00019397	0.00007130
6	Yes	91	0.00019303	0.00007065
7	Yes	83	0.00019229	0.00007050
8	Yes	23	0.00019051	0.00013408
9	Yes	80	0.00019904	0.00006791
10	Yes	89	0.00019671	0.00006850
11	Yes	82	0.00019677	0.00007025
12	Yes	26	0.00017955	0.00012827
13	Yes	82	0.00019092	0.00006750
14	Yes	11	0.00020000	0.00006576
15	Yes	63	0.00000001	0.00002147
16	Yes	63	0.00019268	0.00002605
17	Yes	61	0.00019464	0.00003219
18	Yes	65	0.00019393	0.00002725
19	Yes	65	0.00000001	0.00002302
20	Yes	65	0.00019198	0.00002748
21	Yes	61	0.00019519	0.00003284
22	Yes	63	0.00019487	0.00002671
23	Yes	64	0.00000001	0.00002127
24	Yes	63	0.00019667	0.00002743
25	Yes	61	0.00018975	0.00003212
26	Yes	63	0.00019481	0.00002741
27	Yes	19	0.00000001	0.00005294
28	Yes	16	0.00000001	0.00005939
29	Yes	22	0.00000001	0.00005378
30	Yes	23	0.00000001	0.00005787
31	Yes	23	0.00000001	0.00005295
32	Yes	22	0.00000001	0.00005360
33	Yes	21	0.00000001	0.00005318
34	Yes	17	0.00000001	0.00005569
35	Yes	20	0.00000001	0.00006071
36	Yes	24	0.00000001	0.00005378
37	Yes	24	0.00000001	0.00005962
38	Yes	22	0.00000001	0.00006000

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	341.5 - 314.5	3.98	33	0.37	0.20
T1	314.5 - 310.5	2.23	33	0.10	0.22
T2	310.5 - 306.5	2.14	33	0.10	0.22
T3	306.5 - 281.5	2.06	33	0.09	0.21
T4	281.5 - 276.5	1.64	33	0.07	0.26
T5	276.5 - 271.5	1.56	33	0.07	0.25
T6	271.5 - 266.5	1.49	33	0.07	0.27
T7	266.5 - 261.5	1.42	33	0.06	0.27
T8	261.5 - 256.5	1.35	33	0.06	0.29
T9	256.5 - 251.5	1.29	33	0.05	0.28
T10	251.5 - 246.5	1.24	33	0.04	0.30
T11	246.5 - 241.5	1.19	33	0.04	0.29
T12	241.5 - 236.5	1.16	33	0.03	0.33

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T13	236.5 - 231.5	1.13	33	0.03	0.29
T14	231.5 - 226.5	1.11	33	0.02	0.33
T15	226.5 - 221.5	1.09	33	0.02	0.29
T16	221.5 - 216.5	1.07	33	0.02	0.33
T17	216.5 - 211.5	1.06	37	0.01	0.29
T18	211.5 - 206.5	1.05	37	0.01	0.32
T19	206.5 - 201.5	1.04	37	0.01	0.28
T20	201.5 - 196.5	1.04	37	0.01	0.31
T21	196.5 - 191.5	1.03	37	0.01	0.27
T22	191.5 - 186.5	1.03	37	0.01	0.31
T23	186.5 - 181.5	1.04	37	0.01	0.26
T24	181.5 - 176.5	1.05	37	0.02	0.31
T25	176.5 - 171.5	1.07	37	0.02	0.27
T26	171.5 - 166.5	1.09	37	0.02	0.30
T27	166.5 - 161.5	1.11	37	0.02	0.26
T28	161.5 - 156.5	1.13	37	0.02	0.30
T29	156.5 - 151.5	1.14	37	0.02	0.24
T30	151.5 - 146.5	1.16	37	0.02	0.29
T31	146.5 - 141.5	1.17	37	0.01	0.22
T32	141.5 - 136.5	1.18	37	0.01	0.27
T33	136.5 - 131.5	1.19	37	0.01	0.20
T34	131.5 - 106.5	1.19	37	0.01	0.25
T35	106.5 - 101.5	1.20	37	0.03	0.15
T36	101.5 - 96.5	1.18	37	0.04	0.22
T37	96.5 - 91.5	1.13	37	0.05	0.13
T38	91.5 - 86.5	1.06	37	0.06	0.20
T39	86.5 - 81.5	0.98	38	0.08	0.12
T40	81.5 - 76.5	0.89	38	0.08	0.18
T41	76.5 - 71.5	0.79	38	0.09	0.11
T42	71.5 - 66.5	0.68	38	0.09	0.17
T43	66.5 - 61.5	0.57	27	0.09	0.09
T44	61.5 - 56.5	0.47	27	0.08	0.16
T45	56.5 - 51.5	0.40	27	0.07	0.09
T46	51.5 - 46.5	0.34	27	0.06	0.16
T47	46.5 - 41.5	0.28	27	0.05	0.07
T48	41.5 - 36.5	0.23	27	0.05	0.16
T49	36.5 - 31.5	0.19	27	0.04	0.06
T50	31.5 - 6.5	0.15	27	0.04	0.15
T51	6.5 - 0	0.02	27	0.00	0.01

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
325.00	Shively 68010	33	2.70	0.16	0.21	4425
306.50	Guy	33	2.06	0.09	0.21	82255
303.00	3' x 5.5' Grid Dish	33	1.99	0.09	0.23	28240
288.00	2.36" Dia. x 20' (4) Element Dipole	33	1.74	0.08	0.27	144443
287.00	10" x 8" x 4.25" Box	33	1.72	0.08	0.27	198285
273.00	DB413-B	33	1.51	0.07	0.27	72172
260.00	25' x 1.62" Dia. Broadcast Antenna	33	1.33	0.06	0.28	51308
246.50	Guy	33	1.19	0.04	0.29	22149
239.00	2.3" Dia. x 20' Omni	33	1.14	0.03	0.30	74520
237.00	2.3" Dia. x 20' Omni	33	1.13	0.03	0.29	70966
223.00	L-810 Side Light	33	1.07	0.02	0.32	102333
186.50	Guy	37	1.04	0.01	0.26	27134

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
183.00	26.5" x 15" Conduit Box	37	1.05	0.01	0.30	44390
169.00	10" x 10" x 1.25" Detuner Box	37	1.10	0.02	0.26	272628
145.50	14.875x15.125"x0.5" Flat Panel	37	1.17	0.01	0.21	101782
141.00	4' Grid Dish	37	1.18	0.01	0.27	89105
135.00	L-810 Side Light	37	1.19	0.01	0.19	294464
126.50	Guy	37	1.20	0.01	0.28	118206
101.00	X7C-FRO-660 w/ Pipe	37	1.18	0.04	0.21	10619
80.00	HPA-65R-BUU-H6 w/ 7' MP	38	0.86	0.09	0.15	29359
61.50	Guy	27	0.47	0.08	0.16	11813
33.00	26.5" x 15" Conduit Box	27	0.16	0.04	0.09	51597
8.50	26.5" x 15" Conduit Box	27	0.03	0.01	0.03	93829

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	341.5 - 314.5	20.43	6	1.40	0.61
T1	314.5 - 310.5	13.49	6	0.52	0.65
T2	310.5 - 306.5	13.05	6	0.51	0.65
T3	306.5 - 281.5	12.62	6	0.49	0.66
T4	281.5 - 276.5	10.22	6	0.42	0.80
T5	276.5 - 271.5	9.78	6	0.40	0.82
T6	271.5 - 266.5	9.35	6	0.38	0.89
T7	266.5 - 261.5	8.94	6	0.36	0.88
T8	261.5 - 256.5	8.57	6	0.33	0.94
T9	256.5 - 251.5	8.22	6	0.30	0.93
T10	251.5 - 246.5	7.91	6	0.26	0.98
T11	246.5 - 241.5	7.64	6	0.22	0.97
T12	241.5 - 236.5	7.45	6	0.18	1.04
T13	236.5 - 231.5	7.28	6	0.16	0.98
T14	231.5 - 226.5	7.14	6	0.14	1.04
T15	226.5 - 221.5	7.03	6	0.12	0.97
T16	221.5 - 216.5	6.94	6	0.11	1.03
T17	216.5 - 211.5	6.87	6	0.09	0.95
T18	211.5 - 206.5	6.83	10	0.08	1.01
T19	206.5 - 201.5	6.81	10	0.07	0.93
T20	201.5 - 196.5	6.80	10	0.06	0.98
T21	196.5 - 191.5	6.81	2	0.05	0.90
T22	191.5 - 186.5	6.84	2	0.04	0.95
T23	186.5 - 181.5	6.89	2	0.06	0.88
T24	181.5 - 176.5	6.98	2	0.08	0.93
T25	176.5 - 171.5	7.10	2	0.09	0.86
T26	171.5 - 166.5	7.21	2	0.09	0.90
T27	166.5 - 161.5	7.32	2	0.09	0.82
T28	161.5 - 156.5	7.42	2	0.09	0.88
T29	156.5 - 151.5	7.52	2	0.08	0.78
T30	151.5 - 146.5	7.61	2	0.07	0.81
T31	146.5 - 141.5	7.68	2	0.05	0.71
T32	141.5 - 136.5	7.73	2	0.03	0.75
T33	136.5 - 131.5	7.76	2	0.02	0.65
T34	131.5 - 106.5	7.77	2	0.03	0.69
T35	106.5 - 101.5	7.53	2	0.19	0.47
T36	101.5 - 96.5	7.34	2	0.26	0.53
T37	96.5 - 91.5	7.01	2	0.32	0.40
T38	91.5 - 86.5	6.61	2	0.38	0.47

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T39	86.5 - 81.5	6.15	2	0.43	0.34
T40	81.5 - 76.5	5.64	2	0.48	0.41
T41	76.5 - 71.5	5.07	2	0.51	0.30
T42	71.5 - 66.5	4.48	2	0.52	0.37
T43	66.5 - 61.5	3.85	2	0.51	0.25
T44	61.5 - 56.5	3.29	2	0.47	0.33
T45	56.5 - 51.5	2.83	2	0.44	0.22
T46	51.5 - 46.5	2.40	2	0.40	0.31
T47	46.5 - 41.5	2.00	2	0.37	0.17
T48	41.5 - 36.5	1.63	2	0.33	0.31
T49	36.5 - 31.5	1.30	2	0.30	0.14
T50	31.5 - 6.5	1.00	2	0.26	0.30
T51	6.5 - 0	0.10	2	0.03	0.03

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
325.00	Shively 68010	6	15.51	0.72	0.64	1323
306.50	Guy	6	12.62	0.49	0.66	26116
303.00	3' x 5.5' Grid Dish	6	12.25	0.48	0.68	8582
288.00	2.36" Dia. x 20' (4) Element Dipole	6	10.80	0.44	0.79	28308
287.00	10" x 8" x 4.25" Box	6	10.71	0.44	0.79	33364
273.00	DB413-B	6	9.47	0.39	0.87	12881
260.00	25' x 1.62" Dia. Broadcast Antenna	6	8.46	0.32	0.94	9221
246.50	Guy	6	7.64	0.22	0.97	4277
239.00	2.3" Dia. x 20' Omni	6	7.36	0.17	1.00	12020
237.00	2.3" Dia. x 20' Omni	6	7.30	0.16	0.98	11432
223.00	L-810 Side Light	6	6.96	0.11	1.01	14543
186.50	Guy	2	6.89	0.06	0.88	6176
183.00	26.5" x 15" Conduit Box	2	6.95	0.07	0.93	9214
169.00	10" x 10" x 1.25" Detuner Box	2	7.27	0.09	0.84	39177
145.50	14.875x15.125"x0.5" Flat Panel	2	7.70	0.05	0.70	14087
141.00	4' Grid Dish	2	7.74	0.03	0.74	12319
135.00	L-810 Side Light	2	7.76	0.03	0.63	17194
126.50	Guy	2	7.77	0.03	0.70	28706
101.00	X7C-FRO-660 w/ Pipe	2	7.31	0.27	0.52	2383
80.00	HPA-65R-BUU-H6 w/ 7' MP	2	5.47	0.49	0.37	6569
61.50	Guy	2	3.29	0.47	0.33	2880
33.00	26.5" x 15" Conduit Box	2	1.08	0.28	0.18	7324
8.50	26.5" x 15" Conduit Box	2	0.14	0.05	0.07	10168

Bolt Design Data

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt K	Allowable Load per Bolt K	Ratio Load / Allowable	Allowable Ratio	Criteria
T1	314.5	Diagonal	A325N	0.63	1	2.57	18.22	0.141	1	Member Block Shear
T2	310.5	Leg	A325N	0.50	3	5.33	12.77	0.417	1	Bolt Tension

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt K	Allowable Load per Bolt K	Ratio Load / Allowable	Allowable Ratio	Criteria
		Diagonal	A325N	0.63	1	2.58	10.02	0.257	1	Member Bearing
		Horizontal	A325N	0.63	1	0.35	10.02	0.035	1	Member Bearing
T3	306.5	Leg	A325N	0.50	3	2.47	12.77	0.193	1	Bolt Tension
		Diagonal	A325N	0.63	1	1.39	10.02	0.138	1	Member Bearing
		Horizontal	A325N	0.63	1	3.74	10.02	0.373	1	Member Bearing
T4	281.5	Diagonal	A325N	0.63	1	1.82	10.02	0.181	1	Member Bearing
		Horizontal	A325N	0.63	1	0.59	10.02	0.059	1	Member Bearing
		Secondary Horizontal	A325N	0.50	1	0.59	8.84	0.067	1	Bolt Shear
T5	276.5	Diagonal	A325N	0.63	1	2.00	10.02	0.199	1	Member Bearing
		Horizontal	A325N	0.63	1	0.64	10.02	0.064	1	Member Bearing
T6	271.5	Diagonal	A325N	0.63	1	2.65	12.11	0.219	1	Member Bearing
		Horizontal	A325N	0.63	1	0.73	10.02	0.073	1	Member Bearing
T7	266.5	Diagonal	A325N	0.63	1	2.87	12.11	0.237	1	Member Bearing
		Horizontal	A325N	0.63	1	0.81	10.02	0.080	1	Member Bearing
T8	261.5	Leg	A325N	0.50	3	4.46	12.77	0.349	1	Bolt Tension
		Diagonal	A325N	0.63	1	3.10	12.11	0.256	1	Member Bearing
		Horizontal	A325N	0.63	1	0.92	10.02	0.091	1	Member Bearing
T9	256.5	Diagonal	A325N	0.63	1	3.65	13.81	0.264	1	Bolt Shear
		Horizontal	A325N	0.63	1	1.01	10.02	0.101	1	Member Bearing
T10	251.5	Diagonal	A325N	0.63	1	3.83	13.81	0.278	1	Bolt Shear
		Horizontal	A325N	0.63	1	1.16	10.02	0.115	1	Member Bearing
T11	246.5	Diagonal	A325N	0.63	1	4.05	18.22	0.222	1	Member Block Shear
		Horizontal	A325N	0.63	1	5.46	10.02	0.545	1	Member Bearing
		Secondary Horizontal	A325N	0.50	1	1.18	8.27	0.143	1	Member Bearing
T12	241.5	Diagonal	A325N	0.63	1	3.13	18.22	0.172	1	Member Block Shear
		Horizontal	A325N	0.63	1	1.10	10.02	0.110	1	Member Bearing
		Secondary Horizontal	A325N	0.50	1	1.10	16.53	0.067	1	Member Bearing
T13	236.5	Leg	A325N	0.50	3	4.62	12.77	0.362	1	Bolt Tension
		Diagonal	A325N	0.63	1	1.84	18.22	0.101	1	Member Block Shear
		Horizontal	A325N	0.63	1	1.01	10.02	0.101	1	Member Bearing
		Secondary Horizontal	A325N	0.50	1	1.01	16.53	0.061	1	Member Bearing
T14	231.5	Diagonal	A325N	0.63	1	1.53	18.22	0.084	1	Member Block Shear
		Horizontal	A325N	0.63	1	0.93	10.02	0.093	1	Member Bearing
		Secondary Horizontal	A325N	0.50	1	0.93	8.27	0.113	1	Member Bearing
T15	226.5	Diagonal	A325N	0.63	1	1.67	13.81	0.121	1	Bolt Shear
		Horizontal	A325N	0.63	1	0.89	10.02	0.089	1	Member Bearing
		Secondary Horizontal	A325N	0.50	1	0.89	8.27	0.108	1	Member Bearing
T16	221.5	Diagonal	A325N	0.63	1	1.38	13.81	0.100	1	Bolt Shear
		Horizontal	A325N	0.63	1	0.84	10.02	0.084	1	Member Bearing
		Secondary Horizontal	A325N	0.50	1	0.84	8.27	0.102	1	Member Bearing
T17	216.5	Diagonal	A325N	0.63	1	1.00	13.81	0.073	1	Bolt Shear
		Horizontal	A325N	0.63	1	0.83	10.02	0.083	1	Member Bearing
		Secondary Horizontal	A325N	0.50	1	0.83	8.27	0.100	1	Member Bearing
T18	211.5	Leg	A325N	0.50	3	3.69	12.77	0.289	1	Bolt Tension
		Diagonal	A325N	0.63	1	0.81	13.81	0.058	1	Bolt Shear
		Horizontal	A325N	0.63	1	0.81	10.02	0.080	1	Member Bearing
		Secondary Horizontal	A325N	0.50	1	0.81	8.27	0.097	1	Member Bearing

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt K	Allowable Load per Bolt K	Ratio Load / Allowable	Allowable Ratio	Criteria
T19	206.5	Diagonal	A325N	0.63	1	1.01	13.81	0.073	1	Bolt Shear
		Horizontal	A325N	0.63	1	0.83	10.02	0.082	1	Member Bearing
		Secondary Horizontal	A325N	0.50	1	0.83	8.27	0.100	1	Member Bearing
T20	201.5	Diagonal	A325N	0.63	1	1.41	13.81	0.102	1	Bolt Shear
		Horizontal	A325N	0.63	1	0.83	10.02	0.083	1	Member Bearing
		Secondary Horizontal	A325N	0.50	1	0.83	8.27	0.100	1	Member Bearing
T21	196.5	Diagonal	A325N	0.63	1	1.82	13.81	0.132	1	Bolt Shear
		Horizontal	A325N	0.63	1	0.88	10.02	0.088	1	Member Bearing
		Secondary Horizontal	A325N	0.50	1	0.88	8.27	0.106	1	Member Bearing
T22	191.5	Diagonal	A325N	0.63	1	2.15	13.81	0.156	1	Bolt Shear
		Horizontal	A325N	0.63	1	0.91	10.02	0.091	1	Member Bearing
		Secondary Horizontal	A325N	0.50	1	0.91	8.27	0.110	1	Member Bearing
T23	186.5	Leg	A325N	0.50	3	4.44	12.77	0.347	1	Bolt Tension
		Diagonal	A325N	0.63	1	3.76	13.81	0.272	1	Bolt Shear
		Horizontal	A325N	0.63	1	3.44	10.02	0.343	1	Member Bearing
T24	181.5	Diagonal	A325N	0.63	1	2.90	10.02	0.289	1	Member Bearing
		Horizontal	A325N	0.63	1	1.02	10.02	0.101	1	Member Bearing
T25	176.5	Diagonal	A325N	0.63	1	3.14	13.81	0.228	1	Bolt Shear
		Horizontal	A325N	0.63	1	1.01	10.02	0.101	1	Member Bearing
T26	171.5	Diagonal	A325N	0.63	1	2.81	13.81	0.204	1	Bolt Shear
		Horizontal	A325N	0.63	1	1.03	10.02	0.102	1	Member Bearing
T27	166.5	Diagonal	A325N	0.63	1	2.09	18.22	0.115	1	Member Block Shear
		Horizontal	A325N	0.63	1	1.05	10.02	0.105	1	Member Bearing
T28	161.5	Leg	A325N	0.50	3	4.59	12.77	0.359	1	Bolt Tension
		Diagonal	A325N	0.63	1	1.68	10.02	0.167	1	Member Bearing
		Horizontal	A325N	0.63	1	1.09	10.02	0.108	1	Member Bearing
T29	156.5	Diagonal	A325N	0.63	1	1.54	10.02	0.154	1	Member Bearing
		Horizontal	A325N	0.63	1	1.10	10.02	0.110	1	Member Bearing
		Secondary Horizontal	A325N	0.50	1	1.10	8.84	0.125	1	Bolt Shear
T30	151.5	Diagonal	A325N	0.63	1	1.72	13.81	0.124	1	Bolt Shear
		Horizontal	A325N	0.63	1	1.13	10.02	0.113	1	Member Bearing
T31	146.5	Diagonal	A325N	0.63	1	1.00	10.02	0.100	1	Member Bearing
		Horizontal	A325N	0.63	1	1.14	10.02	0.113	1	Member Bearing
T32	141.5	Diagonal	A325N	0.63	1	1.23	13.81	0.089	1	Bolt Shear
		Horizontal	A325N	0.63	1	1.15	10.02	0.115	1	Member Bearing
T33	136.5	Leg	A325N	0.50	3	4.81	12.77	0.377	1	Bolt Tension
		Diagonal	A325N	0.63	1	1.61	13.81	0.117	1	Bolt Shear
		Horizontal	A325N	0.63	1	1.14	10.02	0.114	1	Member Bearing
T34	131.5	Leg	A325N	0.50	3	6.86	12.77	0.537	1	Bolt Tension
		Diagonal	A325N	0.63	1	5.28	10.02	0.527	1	Member Bearing
		Horizontal	A325N	0.63	1	3.82	10.02	0.381	1	Member Bearing
T35	106.5	Diagonal	A325N	0.63	1	4.05	10.02	0.404	1	Member Bearing
		Horizontal	A325N	0.63	1	1.76	10.02	0.176	1	Member Bearing
T36	101.5	Diagonal	A325N	0.63	1	2.35	10.02	0.234	1	Member Bearing
		Horizontal	A325N	0.63	1	1.89	10.02	0.188	1	Member Bearing
T37	96.5	Diagonal	A325N	0.63	1	3.35	10.02	0.334	1	Member Bearing
		Horizontal	A325N	0.63	1	1.74	10.02	0.174	1	Member Bearing
T38	91.5	Diagonal	A325N	0.63	1	3.88	10.02	0.387	1	Member Bearing
		Horizontal	A325N	0.63	1	1.63	10.02	0.163	1	Member Bearing
T39	86.5	Leg	A325N	0.50	3	6.67	12.77	0.522	1	Bolt Tension
		Diagonal	A325N	0.63	1	3.77	10.02	0.377	1	Member Bearing
		Horizontal	A325N	0.63	1	1.58	10.02	0.158	1	Member Bearing
T40	81.5	Diagonal	A325N	0.63	1	7.74	12.11	0.639	1	Member Bearing
		Horizontal	A325N	0.63	1	1.59	10.02	0.159	1	Member Bearing

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt K	Allowable Load per Bolt K	Ratio Load / Allowable	Allowable Ratio	Criteria
T41	76.5	Diagonal	A325N	0.63	1	9.62	12.11	0.794	1	Member Bearing
		Horizontal	A325N	0.63	1	1.57	10.02	0.156	1	Member Bearing
T42	71.5	Diagonal	A325N	0.63	1	9.88	10.02	0.986	1	Member Bearing
		Horizontal	A325N	0.63	1	1.66	10.02	0.165	1	Member Bearing
T43	66.5	Diagonal	A325N	0.63	1	11.08	13.81	0.802	1	Bolt Shear
		Horizontal	A325N	0.63	1	1.81	10.02	0.180	1	Member Bearing
		Secondary Horizontal	A325N	0.50	1	1.81	8.27	0.218	1	Member Bearing
T44	61.5	Leg	A325N	0.50	3	8.20	12.77	0.642	1	Bolt Tension
		Diagonal	A325N	0.63	1	2.03	10.02	0.202	1	Member Bearing
		Horizontal	A325N	0.63	1	6.65	10.02	0.663	1	Member Bearing
		Secondary Horizontal	A325N	0.50	1	1.94	8.84	0.220	1	Bolt Shear
T45	56.5	Diagonal	A325N	0.63	1	1.70	10.02	0.170	1	Member Bearing
		Horizontal	A325N	0.63	1	1.94	10.02	0.193	1	Member Bearing
		Secondary Horizontal	A325N	0.50	1	1.94	8.84	0.219	1	Bolt Shear
T46	51.5	Diagonal	A325N	0.63	1	1.91	13.81	0.139	1	Bolt Shear
		Horizontal	A325N	0.63	1	1.92	10.02	0.192	1	Member Bearing
		Secondary Horizontal	A325N	0.50	1	1.92	8.84	0.218	1	Bolt Shear
T47	46.5	Diagonal	A325N	0.63	1	1.70	13.81	0.123	1	Bolt Shear
		Horizontal	A325N	0.63	1	1.93	10.02	0.192	1	Member Bearing
		Secondary Horizontal	A325N	0.50	1	1.93	8.84	0.218	1	Bolt Shear
T48	41.5	Diagonal	A325N	0.63	1	1.25	13.81	0.091	1	Bolt Shear
		Horizontal	A325N	0.63	1	1.92	10.02	0.192	1	Member Bearing
		Secondary Horizontal	A325N	0.50	1	1.92	8.84	0.218	1	Bolt Shear
T49	36.5	Leg	A325N	0.50	3	8.18	12.77	0.640	1	Bolt Tension
		Diagonal	A325N	0.63	1	1.40	13.81	0.101	1	Bolt Shear
		Horizontal	A325N	0.63	1	1.94	10.02	0.193	1	Member Bearing
T50	31.5	Leg	A325N	0.50	4	6.78	12.77	0.531	1	Bolt Tension
		Diagonal	A325N	0.63	1	4.37	13.81	0.317	1	Bolt Shear
		Horizontal	A325N	0.63	1	1.41	10.86	0.130	1	Member Bearing

Guy Design Data

Section No.	Elevation ft	Size	Initial Tension K	Breaking Load K	Actual T_u K	Allowable T_n K	Required S.F.	Actual S.F.
T3	306.50 (A) (613)	11/16 (24000) EHS	5.00	50.00	14.19	30.00	1.000	2.115
	306.50 (B) (612)	11/16 (24000) EHS	5.00	50.00	14.24	30.00	1.000	2.106
	306.50 (C) (611)	11/16 (24000) EHS	5.00	50.00	14.15	30.00	1.000	2.120
T11	246.50 (A) (616)	7/8 (19000) EHS	7.97	79.70	17.43	47.82	1.000	2.743
	246.50 (B) (615)	7/8 (19000) EHS	7.97	79.70	17.46	47.82	1.000	2.738
	246.50 (C) (614)	7/8 (19000) EHS	7.97	79.70	17.40	47.82	1.000	2.749
T23	186.50 (A)	9/16 (23000)	3.50	35.00	9.27	21.00	1.000	2.266

Section No.	Elevation ft	Size	Initial Tension K	Breaking Load K	Actual T_u K	Allowable T_n K	Required S.F.	Actual S.F.
	(619)	EHS						
	186.50 (B)	9/16 (23000)	3.50	35.00	9.30	21.00	1.000	2.258
	(618)	EHS						
	186.50 (C)	9/16 (23000)	3.50	35.00	9.25	21.00	1.000	2.271
	(617)	EHS						
T34	126.50 (A)	5/8 (23000)	4.24	42.40	12.60	25.44	1.000	2.019
	(622)	EHS						
	126.50 (B)	5/8 (23000)	4.24	42.40	12.59	25.44	1.000	2.021
	(621)	EHS						
	126.50 (C)	5/8 (23000)	4.24	42.40	12.52	25.44	1.000	2.032
	(620)	EHS						
T44	61.50 (A)	11/16	5.00	50.00	14.70	30.00	1.000	2.041
	(625)	(24000) EHS						
	61.50 (B) (624)	11/16 (24000) EHS	5.00	50.00	14.99	30.00	1.000	2.001
	61.50 (C) (623)	11/16 (24000) EHS	5.00	50.00	14.74	30.00	1.000	2.035

Compression Checks

Pole Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	P_n K	Ratio $\frac{P_u}{P_n}$
L1	341.5 - 314.5 (1)	P8x.322	27.00	0.00	0.0	8.40	-1.34	264.58	0.005

Pole Bending Design Data

Section No.	Elevation ft	Size	M_{ux} kip-ft	M_{nx} kip-ft	Ratio $\frac{M_{ux}}{M_{nx}}$	M_{uy} kip-ft	M_{ny} kip-ft	Ratio $\frac{M_{uy}}{M_{ny}}$
L1	341.5 - 314.5 (1)	P8x.322	29.88	58.30	0.513	0.00	58.30	0.000

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V_u K	V_n K	Ratio $\frac{V_u}{V_n}$	Actual T_u kip-ft	T_n kip-ft	Ratio $\frac{T_u}{T_n}$
L1	341.5 - 314.5 (1)	P8x.322	2.00	79.37	0.025	0.41	57.94	0.007

Pole Interaction Design Data

Section No.	Elevation ft	Ratio $\frac{P_u}{P_n}$	Ratio $\frac{M_{ux}}{M_{nx}}$	Ratio $\frac{M_{uy}}{M_{ny}}$	Ratio $\frac{V_u}{V_n}$	Ratio $\frac{T_u}{T_n}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	341.5 - 314.5 (1)	0.005	0.513	0.000	0.025	0.007	0.519	1.000	4.8.2

Leg Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	P_n K	Ratio $\frac{P_u}{P_n}$
T1	314.5 - 310.5	2 1/2	4.00	4.00	76.8 K=1.00	4.91	-13.73	143.51	0.096 [1]
T2	310.5 - 306.5	2 1/2	4.00	4.00	76.8 K=1.00	4.91	-17.15	143.51	0.119 [1]
T3	306.5 - 281.5	2 1/2	25.00	5.00	96.0 K=1.00	4.91	-22.21	112.60	0.197 [1]
T4	281.5 - 276.5	2 1/2	5.00	2.50	48.0 K=1.00	4.91	-24.38	186.65	0.131 [1]
T5	276.5 - 271.5	2 1/2	5.00	2.50	48.0 K=1.00	4.91	-26.59	186.65	0.142 [1]
T6	271.5 - 266.5	2 1/2	5.00	5.00	96.0 K=1.00	4.91	-30.19	112.60	0.268 [1]
T7	266.5 - 261.5	2 1/2	5.00	5.00	96.0 K=1.00	4.91	-33.23	112.60	0.295 [1]
T8	261.5 - 256.5	2 1/2	5.00	5.00	96.0 K=1.00	4.91	-37.78	112.60	0.336 [1]
T9	256.5 - 251.5	2 1/2	5.00	5.00	96.0 K=1.00	4.91	-41.72	112.60	0.371 [1]
T10	251.5 - 246.5	2 1/2	5.00	5.00	96.0 K=1.00	4.91	-47.65	112.60	0.423 [1]
T11	246.5 - 241.5	2 1/2	5.00	2.50	48.0 K=1.00	4.91	-48.70	186.65	0.261 [1]
T12	241.5 - 236.5	2 1/2	5.00	2.50	48.0 K=1.00	4.91	-45.37	186.65	0.243 [1]
T13	236.5 - 231.5	2 1/2	5.00	2.50	48.0 K=1.00	4.91	-41.58	186.65	0.223 [1]
T14	231.5 - 226.5	2 1/2	5.00	2.50	48.0 K=1.00	4.91	-38.52	186.65	0.206 [1]
T15	226.5 - 221.5	2 1/2	5.00	2.50	48.0 K=1.00	4.91	-36.67	186.65	0.196 [1]
T16	221.5 - 216.5	2 1/2	5.00	2.50	48.0 K=1.00	4.91	-34.68	186.65	0.186 [1]
T17	216.5 - 211.5	2 1/2	5.00	2.50	48.0 K=1.00	4.91	-34.18	186.65	0.183 [1]
T18	211.5 - 206.5	2 1/2	5.00	2.50	48.0 K=1.00	4.91	-33.20	186.65	0.178 [1]
T19	206.5 - 201.5	2 1/2	5.00	2.50	48.0 K=1.00	4.91	-34.03	186.65	0.182 [1]

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	P_n K	Ratio $\frac{P_u}{P_n}$
T20	201.5 - 196.5	2 1/2	5.00	2.50	48.0 K=1.00	4.91	-34.24	186.65	0.183 [1]
T21	196.5 - 191.5	2 1/2	5.00	2.50	48.0 K=1.00	4.91	-36.19	186.65	0.194 [1]
T22	191.5 - 186.5	2 1/2	5.00	2.50	48.0 K=1.00	4.91	-37.54	186.65	0.201 [1]
T23	186.5 - 181.5	2 1/2	5.00	2.50	48.0 K=1.00	4.91	-39.93	186.65	0.214 [1]
T24	181.5 - 176.5	2 1/4	5.00	5.00	106.7 K=1.00	3.98	-38.64	77.87	0.496 [1]
T25	176.5 - 171.5	2 1/4	5.00	5.00	106.7 K=1.00	3.98	-38.37	77.87	0.493 [1]
T26	171.5 - 166.5	2 1/4	5.00	5.00	106.7 K=1.00	3.98	-39.03	77.87	0.501 [1]
T27	166.5 - 161.5	2 1/4	5.00	5.00	106.7 K=1.00	3.98	-39.98	77.87	0.513 [1]
T28	161.5 - 156.5	2 1/4	5.00	5.00	106.7 K=1.00	3.98	-41.30	77.87	0.530 [1]
T29	156.5 - 151.5	2 1/4	5.00	2.50	53.3 K=1.00	3.98	-41.98	145.33	0.289 [1]
T30	151.5 - 146.5	2 1/4	5.00	2.50	53.3 K=1.00	3.98	-43.10	145.33	0.297 [1]
T31	146.5 - 141.5	2 1/4	5.00	5.00	106.7 K=1.00	3.98	-43.23	77.87	0.555 [1]
T32	141.5 - 136.5	2 1/4	5.00	5.00	106.7 K=1.00	3.98	-43.66	77.87	0.561 [1]
T33	136.5 - 131.5	2 1/4	5.00	5.00	106.7 K=1.00	3.98	-43.29	77.87	0.556 [1]
T34	131.5 - 106.5	2 1/4	25.00	5.00	106.7 K=1.00	3.98	-61.76	77.87	0.793 [1]
T35	106.5 - 101.5	2 1/4	5.00	5.00	106.7 K=1.00	3.98	-67.04	77.87	0.861 [1]
T36	101.5 - 96.5	2 1/4	5.00	2.50	53.3 K=1.00	3.98	-70.20	145.33	0.483 [1]
T37	96.5 - 91.5	2 1/4	5.00	5.00	106.7 K=1.00	3.98	-66.34	77.87	0.852 [1]
T38	91.5 - 86.5	2 1/4	5.00	5.00	106.7 K=1.00	3.98	-61.99	77.87	0.796 [1]
T39	86.5 - 81.5	2 1/4	5.00	5.00	106.7 K=1.00	3.98	-60.05	77.87	0.771 [1]
T40	81.5 - 76.5	2 1/4	5.00	5.00	106.7 K=1.00	3.98	-60.45	77.87	0.776 [1]
T41	76.5 - 71.5	2 1/4	5.00	2.50	53.3 K=1.00	3.98	-59.54	145.33	0.410 [1]
T42	71.5 - 66.5	2 1/4	5.00	2.50	53.3 K=1.00	3.98	-62.97	145.33	0.433 [1]
T43	66.5 - 61.5	2 1/4	5.00	2.50	53.3 K=1.00	3.98	-68.65	145.33	0.472 [1]
T44	61.5 - 56.5	2 1/4	5.00	2.50	53.3 K=1.00	3.98	-73.79	145.33	0.508 [1]
T45	56.5 - 51.5	2 1/4	5.00	2.50	53.3 K=1.00	3.98	-73.60	145.33	0.506 [1]
T46	51.5 - 46.5	2 1/4	5.00	2.50	53.3 K=1.00	3.98	-73.08	145.33	0.503 [1]
T47	46.5 - 41.5	2 1/4	5.00	2.50	53.3 K=1.00	3.98	-73.29	145.33	0.504 [1]
T48	41.5 - 36.5	2 1/4	5.00	2.50	53.3 K=1.00	3.98	-73.09	145.33	0.503 [1]
T49	36.5 - 31.5	2 1/4	5.00	2.50	53.3 K=1.00	3.98	-73.59	145.33	0.506 [1]

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	P_n K	Ratio $\frac{P_u}{P_n}$
T50	31.5 - 6.5	2.25SR + BP9.5x0.25 (Norwalk)	25.00	5.00	54.6 K=1.02	3.98	-81.38	143.89	0.566 [1]
T51	6.5 - 0	W8x40	6.50	6.50	38.2 K=1.00	11.70	-93.38	351.00	0.266

[1] P_u / P_n controls

Leg Bending Design Data (Compression)

Section No.	Elevation ft	Size	M_{ux} kip-ft	M_{nx} kip-ft	Ratio $\frac{M_{ux}}{M_{nx}}$	M_{uy} kip-ft	M_{ny} kip-ft	Ratio $\frac{M_{uy}}{M_{ny}}$
T1	314.5 - 310.5	2 1/2	0.00	9.77	0.000	0.00	9.77	0.000
T2	310.5 - 306.5	2 1/2	0.00	9.77	0.000	0.00	9.77	0.000
T3	306.5 - 281.5	2 1/2	0.00	9.77	0.000	0.00	9.77	0.000
T4	281.5 - 276.5	2 1/2	0.00	9.77	0.000	0.00	9.77	0.000
T5	276.5 - 271.5	2 1/2	0.00	9.77	0.000	0.00	9.77	0.000
T6	271.5 - 266.5	2 1/2	0.00	9.77	0.000	0.00	9.77	0.000
T7	266.5 - 261.5	2 1/2	0.00	9.77	0.000	0.00	9.77	0.000
T8	261.5 - 256.5	2 1/2	0.00	9.77	0.000	0.00	9.77	0.000
T9	256.5 - 251.5	2 1/2	0.00	9.77	0.000	0.00	9.77	0.000
T10	251.5 - 246.5	2 1/2	0.00	9.77	0.000	0.00	9.77	0.000
T11	246.5 - 241.5	2 1/2	0.00	9.77	0.000	0.00	9.77	0.000
T12	241.5 - 236.5	2 1/2	0.00	9.77	0.000	0.00	9.77	0.000
T13	236.5 - 231.5	2 1/2	0.00	9.77	0.000	0.00	9.77	0.000
T14	231.5 - 226.5	2 1/2	0.00	9.77	0.000	0.00	9.77	0.000
T15	226.5 - 221.5	2 1/2	0.00	9.77	0.000	0.00	9.77	0.000
T16	221.5 - 216.5	2 1/2	0.00	9.77	0.000	0.00	9.77	0.000
T17	216.5 - 211.5	2 1/2	0.00	9.77	0.000	0.00	9.77	0.000
T18	211.5 - 206.5	2 1/2	0.00	9.77	0.000	0.00	9.77	0.000
T19	206.5 - 201.5	2 1/2	0.00	9.77	0.000	0.00	9.77	0.000
T20	201.5 - 196.5	2 1/2	0.00	9.77	0.000	0.00	9.77	0.000
T21	196.5 - 191.5	2 1/2	0.00	9.77	0.000	0.00	9.77	0.000
T22	191.5 - 186.5	2 1/2	0.00	9.77	0.000	0.00	9.77	0.000
T23	186.5 - 181.5	2 1/2	0.00	9.77	0.000	0.00	9.77	0.000
T24	181.5 - 176.5	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000
T25	176.5 - 171.5	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000
T26	171.5 - 166.5	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000
T27	166.5 - 161.5	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000
T28	161.5 - 156.5	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000
T29	156.5 - 151.5	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000
T30	151.5 - 146.5	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000
T31	146.5 - 141.5	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000
T32	141.5 - 136.5	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000
T33	136.5 - 131.5	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000
T34	131.5 - 106.5	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000
T35	106.5 - 101.5	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000
T36	101.5 - 96.5	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000
T37	96.5 - 91.5	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000
T38	91.5 - 86.5	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000
T39	86.5 - 81.5	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000
T40	81.5 - 76.5	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000
T41	76.5 - 71.5	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000
T42	71.5 - 66.5	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000
T43	66.5 - 61.5	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000
T44	61.5 - 56.5	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000

Section No.	Elevation ft	Size	M_{ux} kip-ft	M_{nx} kip-ft	Ratio $\frac{M_{ux}}{M_{nx}}$	M_{uy} kip-ft	M_{ny} kip-ft	Ratio $\frac{M_{uy}}{M_{ny}}$
T45	56.5 - 51.5	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000
T46	51.5 - 46.5	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000
T47	46.5 - 41.5	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000
T48	41.5 - 36.5	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000
T49	36.5 - 31.5	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000
T50	31.5 - 6.5	2.25SR + BP9.5x0.25 (Norwalk)	0.00	10.65	0.000	0.00	10.65	0.000
T51	6.5 - 0	W8x40	-10.03	107.46	0.093	0.45	49.41	0.009

Leg Interaction Design Data (Compression)

Section No.	Elevation ft	Size	Ratio $\frac{P_u}{P_n}$	Ratio $\frac{M_{ux}}{M_{nx}}$	Ratio $\frac{M_{uy}}{M_{ny}}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
T1	314.5 - 310.5	2 1/2	0.096	0.000	0.000	0.096 [1]	1.000	4.8.1
T2	310.5 - 306.5	2 1/2	0.119	0.000	0.000	0.119 [1]	1.000	4.8.1
T3	306.5 - 281.5	2 1/2	0.197	0.000	0.000	0.197 [1]	1.000	4.8.1
T4	281.5 - 276.5	2 1/2	0.131	0.000	0.000	0.131 [1]	1.000	4.8.1
T5	276.5 - 271.5	2 1/2	0.142	0.000	0.000	0.142 [1]	1.000	4.8.1
T6	271.5 - 266.5	2 1/2	0.268	0.000	0.000	0.268 [1]	1.000	4.8.1
T7	266.5 - 261.5	2 1/2	0.295	0.000	0.000	0.295 [1]	1.000	4.8.1
T8	261.5 - 256.5	2 1/2	0.336	0.000	0.000	0.336 [1]	1.000	4.8.1
T9	256.5 - 251.5	2 1/2	0.371	0.000	0.000	0.371 [1]	1.000	4.8.1
T10	251.5 - 246.5	2 1/2	0.423	0.000	0.000	0.423 [1]	1.000	4.8.1
T11	246.5 - 241.5	2 1/2	0.261	0.000	0.000	0.261 [1]	1.000	4.8.1
T12	241.5 - 236.5	2 1/2	0.243	0.000	0.000	0.243 [1]	1.000	4.8.1
T13	236.5 - 231.5	2 1/2	0.223	0.000	0.000	0.223 [1]	1.000	4.8.1
T14	231.5 - 226.5	2 1/2	0.206	0.000	0.000	0.206 [1]	1.000	4.8.1
T15	226.5 - 221.5	2 1/2	0.196	0.000	0.000	0.196 [1]	1.000	4.8.1
T16	221.5 - 216.5	2 1/2	0.186	0.000	0.000	0.186 [1]	1.000	4.8.1
T17	216.5 - 211.5	2 1/2	0.183	0.000	0.000	0.183 [1]	1.000	4.8.1
T18	211.5 - 206.5	2 1/2	0.178	0.000	0.000	0.178 [1]	1.000	4.8.1
T19	206.5 - 201.5	2 1/2	0.182	0.000	0.000	0.182 [1]	1.000	4.8.1
T20	201.5 - 196.5	2 1/2	0.183	0.000	0.000	0.183 [1]	1.000	4.8.1
T21	196.5 - 191.5	2 1/2	0.194	0.000	0.000	0.194 [1]	1.000	4.8.1
T22	191.5 - 186.5	2 1/2	0.201	0.000	0.000	0.201 [1]	1.000	4.8.1
T23	186.5 - 181.5	2 1/2	0.214	0.000	0.000	0.214 [1]	1.000	4.8.1
T24	181.5 - 176.5	2 1/4	0.496	0.000	0.000	0.496 [1]	1.000	4.8.1
T25	176.5 - 171.5	2 1/4	0.493	0.000	0.000	0.493 [1]	1.000	4.8.1
T26	171.5 - 166.5	2 1/4	0.501	0.000	0.000	0.501 [1]	1.000	4.8.1
T27	166.5 - 161.5	2 1/4	0.513	0.000	0.000	0.513 [1]	1.000	4.8.1
T28	161.5 - 156.5	2 1/4	0.530	0.000	0.000	0.530 [1]	1.000	4.8.1
T29	156.5 - 151.5	2 1/4	0.289	0.000	0.000	0.289 [1]	1.000	4.8.1
T30	151.5 - 146.5	2 1/4	0.297	0.000	0.000	0.297 [1]	1.000	4.8.1
T31	146.5 - 141.5	2 1/4	0.555	0.000	0.000	0.555 [1]	1.000	4.8.1
T32	141.5 - 136.5	2 1/4	0.561	0.000	0.000	0.561 [1]	1.000	4.8.1
T33	136.5 - 131.5	2 1/4	0.556	0.000	0.000	0.556 [1]	1.000	4.8.1
T34	131.5 - 106.5	2 1/4	0.793	0.000	0.000	0.793 [1]	1.000	4.8.1
T35	106.5 - 101.5	2 1/4	0.861	0.000	0.000	0.861 [1]	1.000	4.8.1
T36	101.5 - 96.5	2 1/4	0.483	0.000	0.000	0.483 [1]	1.000	4.8.1
T37	96.5 - 91.5	2 1/4	0.852	0.000	0.000	0.852 [1]	1.000	4.8.1
T38	91.5 - 86.5	2 1/4	0.796	0.000	0.000	0.796 [1]	1.000	4.8.1
T39	86.5 - 81.5	2 1/4	0.771	0.000	0.000	0.771 [1]	1.000	4.8.1
T40	81.5 - 76.5	2 1/4	0.776	0.000	0.000	0.776 [1]	1.000	4.8.1
T41	76.5 - 71.5	2 1/4	0.410	0.000	0.000	0.410 [1]	1.000	4.8.1
T42	71.5 - 66.5	2 1/4	0.433	0.000	0.000	0.433 [1]	1.000	4.8.1

Section No.	Elevation ft	Size	Ratio $\frac{P_u}{P_n}$	Ratio $\frac{M_{ux}}{M_{nx}}$	Ratio $\frac{M_{uy}}{M_{ny}}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
T43	66.5 - 61.5	2 1/4	0.472	0.000	0.000	0.472 [1]	1.000	4.8.1
T44	61.5 - 56.5	2 1/4	0.508	0.000	0.000	0.508 [1]	1.000	4.8.1
T45	56.5 - 51.5	2 1/4	0.506	0.000	0.000	0.506 [1]	1.000	4.8.1
T46	51.5 - 46.5	2 1/4	0.503	0.000	0.000	0.503 [1]	1.000	4.8.1
T47	46.5 - 41.5	2 1/4	0.504	0.000	0.000	0.504 [1]	1.000	4.8.1
T48	41.5 - 36.5	2 1/4	0.503	0.000	0.000	0.503 [1]	1.000	4.8.1
T49	36.5 - 31.5	2 1/4	0.506	0.000	0.000	0.506 [1]	1.000	4.8.1
T50	31.5 - 6.5	2.25SR + BP9.5x0.25 (Norwalk)	0.566	0.000	0.000	0.566 [1]	1.000	4.8.1
T51	6.5 - 0	W8x40	0.266	0.093	0.009	0.328	1.000	4.8.1

[1] P_u / P_n controls

Diagonal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	P_n K	Ratio $\frac{P_u}{P_n}$
T1	314.5 - 310.5	2L2x2x1/4x3/8	5.00	4.65	108.0 K=1.00	1.88	-2.55	42.20	0.060 [1]
T2	310.5 - 306.5	2L 'a' > 26.89 in - 8 Pipe 1.5" x 0.120" (11 ga)	5.00	4.65	114.0 K=1.00	0.52	-2.57	8.85	0.290 [1]
T3	306.5 - 281.5	Pipe 1.5" x 0.120" (11 ga)	5.83	5.43	133.0 K=1.00	0.52	-1.89	6.65	0.284 [1]
T4	281.5 - 276.5	Pipe 1.5" x 0.120" (11 ga)	5.83	5.43	133.0 K=1.00	0.52	-1.87	6.65	0.282 [1]
T5	276.5 - 271.5	Pipe 1.5" x 0.120" (11 ga)	5.83	5.43	133.0 K=1.00	0.52	-2.40	6.65	0.361 [1]
T6	271.5 - 266.5	P1.5 STD	5.83	5.43	104.6 K=1.00	0.80	-2.92	15.44	0.189 [1]
T7	266.5 - 261.5	P1.5 STD	5.83	5.43	104.6 K=1.00	0.80	-3.10	15.44	0.201 [1]
T8	261.5 - 256.5	P1.5 STD	5.83	5.43	104.6 K=1.00	0.80	-3.38	15.44	0.219 [1]
T9	256.5 - 251.5	P1.5x.2	5.83	5.43	107.6 K=1.00	1.07	-3.65	19.83	0.184 [1]
T10	251.5 - 246.5	P1.5x.2	5.83	5.43	107.6 K=1.00	1.07	-3.83	19.83	0.193 [1]
T11	246.5 - 241.5	2L2x2x1/4x3/8	5.83	5.43	113.2 K=1.00	1.88	-4.37	39.76	0.110 [1]
T12	241.5 - 236.5	2L 'a' > 31.35 in - 129 2L2x2x1/4x3/8	5.83	5.43	113.2 K=1.00	1.88	-3.59	39.76	0.090 [1]
T13	236.5 - 231.5	2L 'a' > 31.35 in - 141 2L2x2x1/4x3/8	5.83	5.43	113.2 K=1.00	1.88	-2.36	39.76	0.059 [1]
T14	231.5 - 226.5	2L 'a' > 31.35 in - 154 2L2x2x1/4x3/8	5.83	5.43	113.2 K=1.00	1.88	-2.04	39.76	0.051 [1]
T15	226.5 - 221.5	2L 'a' > 31.35 in - 166 P1.5 STD	5.83	5.43	104.6 K=1.00	0.80	-1.67	15.44	0.108 [1]
T16	221.5 - 216.5	P1.5 STD	5.83	5.43	104.6 K=1.00	0.80	-1.38	15.44	0.090 [1]
T17	216.5 - 211.5	P1.5 STD	5.83	5.43	104.6	0.80	-1.00	15.44	0.065 [1]

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	P_n K	Ratio $\frac{P_u}{P_n}$
T18	211.5 - 206.5	P1.5 STD	5.83	5.43	K=1.00 104.6	0.80	-0.81	15.44	0.052 [1]
T19	206.5 - 201.5	P1.5 STD	5.83	5.43	K=1.00 104.6	0.80	-1.01	15.44	0.065 [1]
T20	201.5 - 196.5	P1.5 STD	5.83	5.43	K=1.00 104.6	0.80	-1.41	15.44	0.091 [1]
T21	196.5 - 191.5	P1.5 STD	5.83	5.43	K=1.00 104.6	0.80	-1.82	15.44	0.118 [1]
T22	191.5 - 186.5	P1.5 STD	5.83	5.43	K=1.00 104.6	0.80	-2.15	15.44	0.139 [1]
T23	186.5 - 181.5	P1.5 STD	5.83	5.43	K=1.00 104.6	0.80	-3.76	15.44	0.243 [1]
T24	181.5 - 176.5	Pipe 1.5" x 0.120" (11 ga)	5.83	5.47	K=1.00 133.9	0.52	-3.32	6.55	0.506 [1]
T25	176.5 - 171.5	P1.5 STD	5.83	5.47	K=1.00 105.4	0.80	-3.14	15.28	0.206 [1]
T26	171.5 - 166.5	P1.5 STD	5.83	5.47	K=1.00 105.4	0.80	-2.81	15.28	0.184 [1]
T27	166.5 - 161.5	2L2x2x1/4x3/8	5.83	5.47	K=1.00 113.5	1.88	-2.52	39.63	0.064 [1]
T28	161.5 - 156.5	2L 'a' > 31.59 in - 311 Pipe 1.5" x 0.120" (11 ga)	5.83	5.47	K=1.00 133.9	0.52	-2.24	6.55	0.342 [1]
T29	156.5 - 151.5	Pipe 1.5" x 0.120" (11 ga)	5.83	5.47	K=1.00 133.9	0.52	-1.88	6.55	0.287 [1]
T30	151.5 - 146.5	Pipe 1.5" x 0.120" (11 ga)	5.83	5.47	K=1.00 133.9	0.52	-1.72	6.55	0.262 [1]
T31	146.5 - 141.5	Pipe 1.5" x 0.120" (11 ga)	5.83	5.47	K=1.00 133.9	0.52	-1.26	6.55	0.193 [1]
T32	141.5 - 136.5	Pipe 1.5" x 0.120" (11 ga)	5.83	5.47	K=1.00 133.9	0.52	-1.23	6.55	0.187 [1]
T33	136.5 - 131.5	Pipe 1.5" x 0.120" (11 ga)	5.83	5.47	K=1.00 133.9	0.52	-1.61	6.55	0.246 [1]
T34	131.5 - 106.5	Pipe 1.5" x 0.120" (11 ga)	5.83	5.47	K=1.00 133.9	0.52	-5.67	6.55	0.866 [1]
T35	106.5 - 101.5	Pipe 1.5" x 0.120" (11 ga)	5.83	5.47	K=1.00 133.9	0.52	-4.46	6.55	0.681 [1]
T36	101.5 - 96.5	Pipe 1.5" x 0.120" (11 ga)	5.83	5.47	K=1.00 133.9	0.52	-2.80	6.55	0.427 [1]
T37	96.5 - 91.5	Pipe 1.5" x 0.120" (11 ga)	5.83	5.47	K=1.00 133.9	0.52	-3.99	6.55	0.610 [1]
T38	91.5 - 86.5	Pipe 1.5" x 0.120" (11 ga)	5.83	5.47	K=1.00 133.9	0.52	-4.33	6.55	0.660 [1]
T39	86.5 - 81.5	Pipe 1.5" x 0.120" (11 ga)	5.83	5.47	K=1.00 133.9	0.52	-4.46	6.55	0.680 [1]
T40	81.5 - 76.5	P1.5 STD	5.83	5.47	K=1.00 105.4	0.80	-8.23	15.28	0.538 [1]
T41	76.5 - 71.5	P1.5 STD	5.83	5.47	K=1.00 52.7	0.80	-10.33	25.48	0.405 [1]
T42	71.5 - 66.5	Pipe 1.5" x 0.120" (11 ga)	5.83	5.47	K=0.50 67.0	0.52	-10.37	14.93	0.694 [1]
T43	66.5 - 61.5	L2x2x3/8	5.83	5.47	K=0.50 102.2	1.36	-11.08	32.89	0.337 [1]
T44	61.5 - 56.5	Pipe 1.5" x 0.120" (11 ga)	5.83	5.47	K=0.61 133.9	0.52	-2.56	6.55	0.391 [1]
T45	56.5 - 51.5	Pipe 1.5" x 0.120" (11 ga)	5.83	5.47	K=1.00 133.9	0.52	-2.34	6.55	0.358 [1]
T46	51.5 - 46.5	Pipe 1.5" x 0.120" (11 ga)	5.83	5.47	K=1.00 133.9	0.52	-1.91	6.55	0.292 [1]
					K=1.00				

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	P_n K	Ratio $\frac{P_u}{P_n}$
T47	46.5 - 41.5	P1.5 STD	5.83	5.47	105.4 K=1.00	0.80	-1.70	15.28	0.111 [1]
T48	41.5 - 36.5	P1.5 STD	5.83	5.47	105.4 K=1.00	0.80	-1.25	15.28	0.082 [1]
T49	36.5 - 31.5	P1.5 STD	5.83	5.47	105.4 K=1.00	0.80	-1.40	15.28	0.091 [1]
T50	31.5 - 6.5	P1.5 STD	5.83	4.98	96.0 K=1.00	0.80	-4.37	17.16	0.255 [1]

[1] P_u / P_n controls

Horizontal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	P_n K	Ratio $\frac{P_u}{P_n}$
T2	310.5 - 306.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4 K=1.00	0.52	-0.35	14.75	0.024 [1]
T3	306.5 - 281.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4 K=1.00	0.52	-0.54	14.75	0.037 [1]
T4	281.5 - 276.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4 K=1.00	0.52	-0.59	14.75	0.040 [1]
T5	276.5 - 271.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4 K=1.00	0.52	-0.64	14.75	0.044 [1]
T6	271.5 - 266.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4 K=1.00	0.52	-0.73	14.75	0.050 [1]
T7	266.5 - 261.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4 K=1.00	0.52	-0.81	14.75	0.055 [1]
T8	261.5 - 256.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4 K=1.00	0.52	-0.92	14.75	0.062 [1]
T9	256.5 - 251.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4 K=1.00	0.52	-1.01	14.75	0.069 [1]
T10	251.5 - 246.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4 K=1.00	0.52	-1.16	14.75	0.078 [1]
T11	246.5 - 241.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4 K=1.00	0.52	-1.18	14.75	0.080 [1]
T12	241.5 - 236.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4 K=1.00	0.52	-1.10	14.75	0.075 [1]
T13	236.5 - 231.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4 K=1.00	0.52	-1.01	14.75	0.068 [1]
T14	231.5 - 226.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4 K=1.00	0.52	-0.93	14.75	0.063 [1]
T15	226.5 - 221.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4 K=1.00	0.52	-0.89	14.75	0.060 [1]
T16	221.5 - 216.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4 K=1.00	0.52	-0.84	14.75	0.057 [1]
T17	216.5 - 211.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4 K=1.00	0.52	-0.83	14.75	0.056 [1]
T18	211.5 - 206.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4 K=1.00	0.52	-0.81	14.75	0.055 [1]
T19	206.5 - 201.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4 K=1.00	0.52	-0.83	14.75	0.056 [1]
T20	201.5 - 196.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4 K=1.00	0.52	-0.83	14.75	0.056 [1]
T21	196.5 - 191.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4 K=1.00	0.52	-0.88	14.75	0.059 [1]

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	P_n K	Ratio $\frac{P_u}{P_n}$
T22	191.5 - 186.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4 K=1.00	0.52	-0.91	14.75	0.062 [1]
T23	186.5 - 181.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4 K=1.00	0.52	-0.97	14.75	0.066 [1]
T24	181.5 - 176.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9 K=1.00	0.52	-1.02	14.69	0.069 [1]
T25	176.5 - 171.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9 K=1.00	0.52	-1.01	14.69	0.069 [1]
T26	171.5 - 166.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9 K=1.00	0.52	-1.03	14.69	0.070 [1]
T27	166.5 - 161.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9 K=1.00	0.52	-1.05	14.69	0.072 [1]
T28	161.5 - 156.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9 K=1.00	0.52	-1.09	14.69	0.074 [1]
T29	156.5 - 151.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9 K=1.00	0.52	-1.10	14.69	0.075 [1]
T30	151.5 - 146.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9 K=1.00	0.52	-1.13	14.69	0.077 [1]
T31	146.5 - 141.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9 K=1.00	0.52	-1.14	14.69	0.077 [1]
T32	141.5 - 136.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9 K=1.00	0.52	-1.15	14.69	0.078 [1]
T33	136.5 - 131.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9 K=1.00	0.52	-1.14	14.69	0.078 [1]
T34	131.5 - 106.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9 K=1.00	0.52	-1.62	14.69	0.111 [1]
T35	106.5 - 101.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9 K=1.00	0.52	-1.76	14.69	0.120 [1]
T36	101.5 - 96.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9 K=1.00	0.52	-1.85	14.69	0.126 [1]
T37	96.5 - 91.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9 K=1.00	0.52	-1.74	14.69	0.119 [1]
T38	91.5 - 86.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9 K=1.00	0.52	-1.63	14.69	0.111 [1]
T39	86.5 - 81.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9 K=1.00	0.52	-1.58	14.69	0.108 [1]
T40	81.5 - 76.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9 K=1.00	0.52	-1.59	14.69	0.108 [1]
T41	76.5 - 71.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9 K=1.00	0.52	-1.57	14.69	0.107 [1]
T42	71.5 - 66.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9 K=1.00	0.52	-1.66	14.69	0.113 [1]
T43	66.5 - 61.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9 K=1.00	0.52	-1.81	14.69	0.123 [1]
T44	61.5 - 56.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9 K=1.00	0.52	-1.94	14.69	0.132 [1]
T45	56.5 - 51.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9 K=1.00	0.52	-1.94	14.69	0.132 [1]
T46	51.5 - 46.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9 K=1.00	0.52	-1.92	14.69	0.131 [1]
T47	46.5 - 41.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9 K=1.00	0.52	-1.93	14.69	0.131 [1]
T48	41.5 - 36.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9 K=1.00	0.52	-1.92	14.69	0.131 [1]
T49	36.5 - 31.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9 K=1.00	0.52	-1.94	14.69	0.132 [1]
T50	31.5 - 6.5	P1.5x0.13	3.00	2.56	63.2 K=1.00	0.56	-1.41	16.55	0.085 [1]

[1] P_u / P_n controls

Secondary Horizontal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	P_n K	Ratio $\frac{P_u}{P_n}$
T4	281.5 - 276.5	1	3.00	2.79	93.8 K=0.70	0.79	-0.59	16.01	0.037 [1]
T5	276.5 - 271.5	1	3.00	2.79	93.8 K=0.70	0.79	-0.64	16.01	0.040 [1]
T11	246.5 - 241.5	L2 1/2x2x1/4	3.00	2.79	79.0 K=1.00	1.06	-1.18	30.67	0.039 [1]
T12	241.5 - 236.5	2L2 1/2x2x1/4x3/8	3.00	2.79	86.8 K=1.00	2.13	-1.10	56.86	0.019 [1]
T13	236.5 - 231.5	2L 'a' > 13.59 in - 143 2L2 1/2x2x1/4x3/8 2L 'a' > 13.59 in - 155	3.00	2.79	86.8 K=1.00	2.13	-1.01	56.86	0.018 [1]
T14	231.5 - 226.5	L2 1/2x2x1/4	3.00	2.79	79.0 K=1.00	1.06	-0.93	30.67	0.030 [1]
T15	226.5 - 221.5	L2 1/2x2x1/4	3.00	2.79	79.0 K=1.00	1.06	-0.89	30.67	0.029 [1]
T16	221.5 - 216.5	L2 1/2x2x1/4	3.00	2.79	79.0 K=1.00	1.06	-0.84	30.67	0.027 [1]
T17	216.5 - 211.5	L2 1/2x2x1/4	3.00	2.79	79.0 K=1.00	1.06	-0.83	30.67	0.027 [1]
T18	211.5 - 206.5	L2 1/2x2x1/4	3.00	2.79	79.0 K=1.00	1.06	-0.81	30.67	0.026 [1]
T19	206.5 - 201.5	L2 1/2x2x1/4	3.00	2.79	79.0 K=1.00	1.06	-0.83	30.67	0.027 [1]
T20	201.5 - 196.5	L2 1/2x2x1/4	3.00	2.79	79.0 K=1.00	1.06	-0.83	30.67	0.027 [1]
T21	196.5 - 191.5	L2 1/2x2x1/4	3.00	2.79	79.0 K=1.00	1.06	-0.88	30.67	0.029 [1]
T22	191.5 - 186.5	L2 1/2x2x1/4	3.00	2.79	79.0 K=1.00	1.06	-0.91	30.67	0.030 [1]
T23	186.5 - 181.5	L2 1/2x2x1/4	3.00	2.79	79.0 K=1.00	1.06	-0.97	30.67	0.032 [1]
T29	156.5 - 151.5	1	3.00	2.81	94.5 K=0.70	0.79	-1.10	15.90	0.069 [1]
T30	151.5 - 146.5	1	3.00	2.81	94.5 K=0.70	0.79	-1.13	15.90	0.071 [1]
T36	101.5 - 96.5	1	3.00	2.81	94.5 K=0.70	0.79	-1.85	15.90	0.116 [1]
T41	76.5 - 71.5	L2 1/2x2x1/4	3.00	2.81	79.6 K=1.00	1.06	-1.57	30.56	0.051 [1]
T42	71.5 - 66.5	L2 1/2x2x1/4	3.00	2.81	79.6 K=1.00	1.06	-1.66	30.56	0.054 [1]
T43	66.5 - 61.5	L2 1/2x2x1/4	3.00	2.60	96.9 K=1.31	1.06	-1.81	26.90	0.067 [1]
T44	61.5 - 56.5	1	3.00	2.81	94.5 K=0.70	0.79	-1.94	15.90	0.122 [1]
T45	56.5 - 51.5	1	3.00	2.81	94.5 K=0.70	0.79	-1.94	15.90	0.122 [1]
T46	51.5 - 46.5	1	3.00	2.81	94.5 K=0.70	0.79	-1.92	15.90	0.121 [1]
T47	46.5 - 41.5	1	3.00	2.81	94.5 K=0.70	0.79	-1.93	15.90	0.121 [1]
T48	41.5 - 36.5	1	3.00	2.81	94.5 K=0.70	0.79	-1.92	15.90	0.121 [1]

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	P_n K	Ratio $\frac{P_u}{P_n}$
T49	36.5 - 31.5	1	3.00	2.81	94.5 K=0.70	0.79	-1.94	15.90	0.122 [1]

[1] P_u / P_n controls

Top Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	P_n K	Ratio $\frac{P_u}{P_n}$
T1	314.5 - 310.5	L2x2x1/4	3.00	2.79	85.7 K=1.00	0.94	-0.28	25.97	0.011 [1]
T51	6.5 - 0	W16x50	3.00	2.31	17.5 K=1.00	14.70	-1.62	468.70	0.003

[1] P_u / P_n controls

Top Girt Bending Design Data

Section No.	Elevation ft	Size	M_{ux} kip-ft	M_{nx} kip-ft	Ratio $\frac{M_{ux}}{M_{nx}}$	M_{uy} kip-ft	M_{ny} kip-ft	Ratio $\frac{M_{uy}}{M_{ny}}$
T1	314.5 - 310.5	L2x2x1/4	0.00	1.69	0.000	0.00	0.87	0.000
T51	6.5 - 0	W16x50	-7.85	248.40	0.032	-0.00	42.52	0.000

Top Girt Interaction Design Data

Section No.	Elevation ft	Size	Ratio $\frac{P_u}{P_n}$	Ratio $\frac{M_{ux}}{M_{nx}}$	Ratio $\frac{M_{uy}}{M_{ny}}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
T1	314.5 - 310.5	L2x2x1/4	0.011	0.000	0.000	0.011 [1]	1.000	4.8.1
T51	6.5 - 0	W16x50	0.003	0.032	0.000	0.033	1.000	4.8.1

[1] P_u / P_n controls

Tension Checks

Leg Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	P_n K	Ratio $\frac{P_u}{P_n}$
T1	314.5 - 310.5	2 1/2	4.00	4.00	76.8	4.91	12.80	220.89	0.058 [1]
T2	310.5 - 306.5	2 1/2	4.00	4.00	76.8	4.91	15.99	220.89	0.072 [1]
T3	306.5 - 281.5	2 1/2	25.00	5.00	96.0	4.91	4.20	220.89	0.019 [1]
T4	281.5 - 276.5	2 1/2	5.00	2.50	48.0	4.91	3.90	220.89	0.018 [1]
T5	276.5 - 271.5	2 1/2	5.00	2.50	48.0	4.91	4.95	220.89	0.022 [1]
T6	271.5 - 266.5	2 1/2	5.00	5.00	96.0	4.91	7.54	220.89	0.034 [1]
T7	266.5 - 261.5	2 1/2	5.00	5.00	96.0	4.91	9.62	220.89	0.044 [1]
T8	261.5 - 256.5	2 1/2	5.00	5.00	96.0	4.91	13.38	220.89	0.061 [1]
T9	256.5 - 251.5	2 1/2	5.00	5.00	96.0	4.91	16.53	220.89	0.075 [1]
T10	251.5 - 246.5	2 1/2	5.00	5.00	96.0	4.91	21.52	220.89	0.097 [1]
T11	246.5 - 241.5	2 1/2	5.00	2.50	48.0	4.91	6.13	220.89	0.028 [1]
T12	241.5 - 236.5	2 1/2	5.00	2.50	48.0	4.91	2.41	220.89	0.011 [1]
T34	131.5 - 106.5	2 1/4	25.00	5.00	106.7	3.98	8.38	178.92	0.047 [1]
T35	106.5 - 101.5	2 1/4	5.00	5.00	106.7	3.98	13.98	178.92	0.078 [1]
T36	101.5 - 96.5	2 1/4	5.00	2.50	53.3	3.98	14.65	178.92	0.082 [1]
T37	96.5 - 91.5	2 1/4	5.00	5.00	106.7	3.98	8.59	178.92	0.048 [1]
T38	91.5 - 86.5	2 1/4	5.00	5.00	106.7	3.98	2.82	178.92	0.016 [1]

[1] P_u / P_n controls

Leg Bending Design Data (Tension)

Section No.	Elevation ft	Size	M_{ux} kip-ft	M_{nx} kip-ft	Ratio $\frac{M_{ux}}{M_{nx}}$	M_{uy} kip-ft	M_{ny} kip-ft	Ratio $\frac{M_{uy}}{M_{ny}}$
T1	314.5 - 310.5	2 1/2	0.00	9.77	0.000	0.00	9.77	0.000
T2	310.5 - 306.5	2 1/2	0.00	9.77	0.000	0.00	9.77	0.000
T3	306.5 - 281.5	2 1/2	0.00	9.77	0.000	0.00	9.77	0.000
T4	281.5 - 276.5	2 1/2	0.00	9.77	0.000	0.00	9.77	0.000
T5	276.5 - 271.5	2 1/2	0.00	9.77	0.000	0.00	9.77	0.000
T6	271.5 - 266.5	2 1/2	0.00	9.77	0.000	0.00	9.77	0.000
T7	266.5 - 261.5	2 1/2	0.00	9.77	0.000	0.00	9.77	0.000
T8	261.5 - 256.5	2 1/2	0.00	9.77	0.000	0.00	9.77	0.000
T9	256.5 - 251.5	2 1/2	0.00	9.77	0.000	0.00	9.77	0.000
T10	251.5 - 246.5	2 1/2	0.00	9.77	0.000	0.00	9.77	0.000
T11	246.5 - 241.5	2 1/2	0.00	9.77	0.000	0.00	9.77	0.000
T12	241.5 - 236.5	2 1/2	0.00	9.77	0.000	0.00	9.77	0.000
T34	131.5 - 106.5	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000
T35	106.5 - 101.5	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000
T36	101.5 - 96.5	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000
T37	96.5 - 91.5	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000
T38	91.5 - 86.5	2 1/4	0.00	7.12	0.000	0.00	7.12	0.000

Leg Interaction Design Data (Tension)

Section No.	Elevation ft	Size	Ratio $\frac{P_u}{P_n}$	Ratio $\frac{M_{ux}}{M_{nx}}$	Ratio $\frac{M_{uy}}{M_{ny}}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
T1	314.5 - 310.5	2 1/2	0.058	0.000	0.000	0.058 [1]	1.000	4.8.1
T2	310.5 - 306.5	2 1/2	0.072	0.000	0.000	0.072 [1]	1.000	4.8.1
T3	306.5 - 281.5	2 1/2	0.019	0.000	0.000	0.019 [1]	1.000	4.8.1
T4	281.5 - 276.5	2 1/2	0.018	0.000	0.000	0.018 [1]	1.000	4.8.1

Section No.	Elevation ft	Size	Ratio $\frac{P_u}{P_n}$	Ratio $\frac{M_{ux}}{M_{nx}}$	Ratio $\frac{M_{uy}}{M_{ny}}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
T5	276.5 - 271.5	2 1/2	0.022	0.000	0.000	0.022 [1]	1.000	4.8.1
T6	271.5 - 266.5	2 1/2	0.034	0.000	0.000	0.034 [1]	1.000	4.8.1
T7	266.5 - 261.5	2 1/2	0.044	0.000	0.000	0.044 [1]	1.000	4.8.1
T8	261.5 - 256.5	2 1/2	0.061	0.000	0.000	0.061 [1]	1.000	4.8.1
T9	256.5 - 251.5	2 1/2	0.075	0.000	0.000	0.075 [1]	1.000	4.8.1
T10	251.5 - 246.5	2 1/2	0.097	0.000	0.000	0.097 [1]	1.000	4.8.1
T11	246.5 - 241.5	2 1/2	0.028	0.000	0.000	0.028 [1]	1.000	4.8.1
T12	241.5 - 236.5	2 1/2	0.011	0.000	0.000	0.011 [1]	1.000	4.8.1
T34	131.5 - 106.5	2 1/4	0.047	0.000	0.000	0.047 [1]	1.000	4.8.1
T35	106.5 - 101.5	2 1/4	0.078	0.000	0.000	0.078 [1]	1.000	4.8.1
T36	101.5 - 96.5	2 1/4	0.082	0.000	0.000	0.082 [1]	1.000	4.8.1
T37	96.5 - 91.5	2 1/4	0.048	0.000	0.000	0.048 [1]	1.000	4.8.1
T38	91.5 - 86.5	2 1/4	0.016	0.000	0.000	0.016 [1]	1.000	4.8.1

[1] P_u / P_n controls

Diagonal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	P_n K	Ratio $\frac{P_u}{P_n}$
T1	314.5 - 310.5	2L2x2x1/4x3/8 2L 'a' > 26.89 in - 8	5.00	4.65	91.7	1.88	2.57	60.91	0.042 [1]
T2	310.5 - 306.5	Pipe 1.5" x 0.120" (11 ga)	5.00	4.65	114.0	0.52	2.58	19.67	0.131 [1]
T3	306.5 - 281.5	Pipe 1.5" x 0.120" (11 ga)	5.83	5.43	133.0	0.52	1.39	19.67	0.071 [1]
T4	281.5 - 276.5	Pipe 1.5" x 0.120" (11 ga)	5.83	5.43	133.0	0.52	1.82	19.67	0.092 [1]
T5	276.5 - 271.5	Pipe 1.5" x 0.120" (11 ga)	5.83	5.43	133.0	0.52	2.00	19.67	0.102 [1]
T6	271.5 - 266.5	P1.5 STD	5.83	5.43	104.6	0.80	2.65	30.22	0.088 [1]
T7	266.5 - 261.5	P1.5 STD	5.83	5.43	104.6	0.80	2.87	30.22	0.095 [1]
T8	261.5 - 256.5	P1.5 STD	5.83	5.43	104.6	0.80	3.10	30.22	0.103 [1]
T9	256.5 - 251.5	P1.5x.2	5.83	5.43	107.6	1.07	3.43	40.38	0.085 [1]
T10	251.5 - 246.5	P1.5x.2	5.83	5.43	107.6	1.07	3.56	40.38	0.088 [1]
T11	246.5 - 241.5	2L2x2x1/4x3/8 2L 'a' > 31.35 in - 129	5.83	5.43	106.9	1.88	4.05	60.91	0.066 [1]
T12	241.5 - 236.5	2L2x2x1/4x3/8 2L 'a' > 31.35 in - 141	5.83	5.43	106.9	1.88	3.13	60.91	0.051 [1]
T13	236.5 - 231.5	2L2x2x1/4x3/8 2L 'a' > 31.35 in - 154	5.83	5.43	106.9	1.88	1.84	60.91	0.030 [1]
T14	231.5 - 226.5	2L2x2x1/4x3/8 2L 'a' > 31.35 in - 166	5.83	5.43	106.9	1.88	1.53	60.91	0.025 [1]
T15	226.5 - 221.5	P1.5 STD	5.83	5.43	104.6	0.80	1.13	30.22	0.037 [1]
T16	221.5 - 216.5	P1.5 STD	5.83	5.43	104.6	0.80	0.80	30.22	0.026 [1]
T17	216.5 - 211.5	P1.5 STD	5.83	5.43	104.6	0.80	0.54	30.22	0.018 [1]
T18	211.5 - 206.5	P1.5 STD	5.83	5.43	104.6	0.80	0.24	30.22	0.008 [1]
T19	206.5 - 201.5	P1.5 STD	5.83	5.43	104.6	0.80	0.49	30.22	0.016 [1]
T20	201.5 - 196.5	P1.5 STD	5.83	5.43	104.6	0.80	0.91	30.22	0.030 [1]
T21	196.5 - 191.5	P1.5 STD	5.83	5.43	104.6	0.80	1.34	30.22	0.044 [1]
T22	191.5 - 186.5	P1.5 STD	5.83	5.43	104.6	0.80	1.63	30.22	0.054 [1]
T23	186.5 - 181.5	P1.5 STD	5.83	5.43	104.6	0.80	3.22	30.22	0.106 [1]
T24	181.5 - 176.5	Pipe 1.5" x 0.120" (11 ga)	5.83	5.47	133.9	0.52	2.90	19.67	0.148 [1]
T25	176.5 - 171.5	P1.5 STD	5.83	5.47	105.4	0.80	2.64	30.22	0.087 [1]
T26	171.5 - 166.5	P1.5 STD	5.83	5.47	105.4	0.80	2.31	30.22	0.076 [1]
T27	166.5 - 161.5	2L2x2x1/4x3/8 2L 'a' > 31.59 in - 311	5.83	5.47	107.7	1.88	2.09	60.91	0.034 [1]
T28	161.5 - 156.5	Pipe 1.5" x 0.120" (11 ga)	5.83	5.47	133.9	0.52	1.68	19.67	0.085 [1]
T29	156.5 - 151.5	Pipe 1.5" x 0.120" (11 ga)	5.83	5.47	133.9	0.52	1.54	19.67	0.078 [1]

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	P_n K	Ratio $\frac{P_u}{P_n}$
T30	151.5 - 146.5	Pipe 1.5" x 0.120" (11 ga)	5.83	5.47	133.9	0.52	1.09	19.67	0.055 [1]
T31	146.5 - 141.5	Pipe 1.5" x 0.120" (11 ga)	5.83	5.47	133.9	0.52	1.00	19.67	0.051 [1]
T32	141.5 - 136.5	Pipe 1.5" x 0.120" (11 ga)	5.83	5.47	133.9	0.52	0.78	19.67	0.040 [1]
T33	136.5 - 131.5	Pipe 1.5" x 0.120" (11 ga)	5.83	5.47	133.9	0.52	1.14	19.67	0.058 [1]
T34	131.5 - 106.5	Pipe 1.5" x 0.120" (11 ga)	5.83	5.47	133.9	0.52	5.28	19.67	0.269 [1]
T35	106.5 - 101.5	Pipe 1.5" x 0.120" (11 ga)	5.83	5.47	133.9	0.52	4.05	19.67	0.206 [1]
T36	101.5 - 96.5	Pipe 1.5" x 0.120" (11 ga)	5.83	5.47	133.9	0.52	2.35	19.67	0.119 [1]
T37	96.5 - 91.5	Pipe 1.5" x 0.120" (11 ga)	5.83	5.47	133.9	0.52	3.35	19.67	0.170 [1]
T38	91.5 - 86.5	Pipe 1.5" x 0.120" (11 ga)	5.83	5.47	133.9	0.52	3.88	19.67	0.197 [1]
T39	86.5 - 81.5	Pipe 1.5" x 0.120" (11 ga)	5.83	5.47	133.9	0.52	3.77	19.67	0.192 [1]
T40	81.5 - 76.5	P1.5 STD	5.83	5.47	105.4	0.80	7.74	30.22	0.256 [1]
T41	76.5 - 71.5	P1.5 STD	5.83	5.47	105.4	0.80	9.62	30.22	0.318 [1]
T42	71.5 - 66.5	Pipe 1.5" x 0.120" (11 ga)	5.83	5.47	133.9	0.52	9.88	19.67	0.503 [1]
T43	66.5 - 61.5	L2x2x3/8	5.83	5.47	110.4	0.81	10.38	35.19	0.295 [1]
T44	61.5 - 56.5	Pipe 1.5" x 0.120" (11 ga)	5.83	5.47	133.9	0.52	2.03	19.67	0.103 [1]
T45	56.5 - 51.5	Pipe 1.5" x 0.120" (11 ga)	5.83	5.47	133.9	0.52	1.70	19.67	0.087 [1]
T46	51.5 - 46.5	Pipe 1.5" x 0.120" (11 ga)	5.83	5.47	133.9	0.52	1.37	19.67	0.070 [1]
T47	46.5 - 41.5	P1.5 STD	5.83	5.47	105.4	0.80	0.92	30.22	0.031 [1]
T48	41.5 - 36.5	P1.5 STD	5.83	5.47	105.4	0.80	0.67	30.22	0.022 [1]
T49	36.5 - 31.5	P1.5 STD	5.83	5.47	105.4	0.80	0.52	30.22	0.017 [1]
T50	31.5 - 6.5	P1.5 STD	5.83	4.98	96.0	0.80	1.21	30.22	0.040 [1]

[1] P_u / P_n controls

Horizontal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	P_n K	Ratio $\frac{P_u}{P_n}$
T2	310.5 - 306.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4	0.52	0.35	19.67	0.018 [1]
T3	306.5 - 281.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4	0.52	3.74	19.67	0.190 [1]
T4	281.5 - 276.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4	0.52	0.59	19.67	0.030 [1]
T5	276.5 - 271.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4	0.52	0.64	19.67	0.033 [1]
T6	271.5 - 266.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4	0.52	0.73	19.67	0.037 [1]
T7	266.5 - 261.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4	0.52	0.81	19.67	0.041 [1]
T8	261.5 - 256.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4	0.52	0.92	19.67	0.047 [1]
T9	256.5 - 251.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4	0.52	1.01	19.67	0.051 [1]
T10	251.5 - 246.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4	0.52	1.16	19.67	0.059 [1]
T11	246.5 - 241.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4	0.52	5.46	19.67	0.278 [1]
T12	241.5 - 236.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4	0.52	1.10	19.67	0.056 [1]
T13	236.5 - 231.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4	0.52	1.01	19.67	0.051 [1]
T14	231.5 - 226.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4	0.52	0.93	19.67	0.047 [1]
T15	226.5 - 221.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4	0.52	0.89	19.67	0.045 [1]
T16	221.5 - 216.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4	0.52	0.84	19.67	0.043 [1]
T17	216.5 - 211.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4	0.52	0.83	19.67	0.042 [1]
T18	211.5 - 206.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4	0.52	0.81	19.67	0.041 [1]
T19	206.5 - 201.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4	0.52	0.83	19.67	0.042 [1]
T20	201.5 - 196.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4	0.52	0.83	19.67	0.042 [1]
T21	196.5 - 191.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4	0.52	0.88	19.67	0.045 [1]
T22	191.5 - 186.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4	0.52	0.91	19.67	0.046 [1]
T23	186.5 - 181.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.79	68.4	0.52	3.44	19.67	0.175 [1]
T24	181.5 - 176.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9	0.52	1.02	19.67	0.052 [1]
T25	176.5 - 171.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9	0.52	1.01	19.67	0.051 [1]
T26	171.5 - 166.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9	0.52	1.03	19.67	0.052 [1]
T27	166.5 - 161.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9	0.52	1.05	19.67	0.053 [1]
T28	161.5 - 156.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9	0.52	1.09	19.67	0.055 [1]

Section No.	Elevation	Size	L	L_u	Kl/r	A	P_u	P_n	Ratio $\frac{P_u}{P_n}$
	ft		ft	ft		in^2	K	K	
T29	156.5 - 151.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9	0.52	1.10	19.67	0.056 [1]
T30	151.5 - 146.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9	0.52	1.13	19.67	0.058 [1]
T31	146.5 - 141.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9	0.52	1.14	19.67	0.058 [1]
T32	141.5 - 136.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9	0.52	1.15	19.67	0.058 [1]
T33	136.5 - 131.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9	0.52	1.14	19.67	0.058 [1]
T34	131.5 - 106.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9	0.52	3.82	19.67	0.194 [1]
T35	106.5 - 101.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9	0.52	1.76	19.67	0.090 [1]
T36	101.5 - 96.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9	0.52	1.89	19.67	0.096 [1]
T37	96.5 - 91.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9	0.52	1.74	19.67	0.089 [1]
T38	91.5 - 86.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9	0.52	1.63	19.67	0.083 [1]
T39	86.5 - 81.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9	0.52	1.58	19.67	0.080 [1]
T40	81.5 - 76.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9	0.52	1.59	19.67	0.081 [1]
T41	76.5 - 71.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9	0.52	1.57	19.67	0.080 [1]
T42	71.5 - 66.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9	0.52	1.66	19.67	0.084 [1]
T43	66.5 - 61.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9	0.52	1.81	19.67	0.092 [1]
T44	61.5 - 56.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9	0.52	6.65	19.67	0.338 [1]
T45	56.5 - 51.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9	0.52	1.94	19.67	0.098 [1]
T46	51.5 - 46.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9	0.52	1.92	19.67	0.098 [1]
T47	46.5 - 41.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9	0.52	1.93	19.67	0.098 [1]
T48	41.5 - 36.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9	0.52	1.92	19.67	0.098 [1]
T49	36.5 - 31.5	Pipe 1.5" x 0.120" (11 ga)	3.00	2.81	68.9	0.52	1.94	19.67	0.098 [1]
T50	31.5 - 6.5	P1.5x0.13	3.00	2.56	63.2	0.56	1.41	21.15	0.067 [1]

[1] P_u / P_n controls

Secondary Horizontal Design Data (Tension)

Section No.	Elevation	Size	L	L_u	Kl/r	A	P_u	P_n	Ratio $\frac{P_u}{P_n}$
	ft		ft	ft		in^2	K	K	
T4	281.5 - 276.5	1	3.00	2.79	134.0	0.79	0.59	25.45	0.023 [1]
T5	276.5 - 271.5	1	3.00	2.79	134.0	0.79	0.64	25.45	0.025 [1]
T11	246.5 - 241.5	L2 1/2x2x1/4	3.00	2.79	56.5	1.06	1.18	34.34	0.034 [1]
T12	241.5 - 236.5	2L2 1/2x2x1/4x3/8 2L 'a' > 13.59 in - 143	3.00	2.79	42.7	2.13	1.10	69.01	0.016 [1]
T13	236.5 - 231.5	2L2 1/2x2x1/4x3/8 2L 'a' > 13.59 in - 155	3.00	2.79	42.7	2.13	1.01	69.01	0.015 [1]
T14	231.5 - 226.5	L2 1/2x2x1/4	3.00	2.79	56.5	1.06	0.93	34.34	0.027 [1]
T15	226.5 - 221.5	L2 1/2x2x1/4	3.00	2.79	56.5	1.06	0.89	34.34	0.026 [1]
T16	221.5 - 216.5	L2 1/2x2x1/4	3.00	2.79	56.5	1.06	0.84	34.34	0.024 [1]
T17	216.5 - 211.5	L2 1/2x2x1/4	3.00	2.79	56.5	1.06	0.83	34.34	0.024 [1]
T18	211.5 - 206.5	L2 1/2x2x1/4	3.00	2.79	56.5	1.06	0.81	34.34	0.023 [1]
T19	206.5 - 201.5	L2 1/2x2x1/4	3.00	2.79	56.5	1.06	0.83	34.34	0.024 [1]
T20	201.5 - 196.5	L2 1/2x2x1/4	3.00	2.79	56.5	1.06	0.83	34.34	0.024 [1]
T21	196.5 - 191.5	L2 1/2x2x1/4	3.00	2.79	56.5	1.06	0.88	34.34	0.026 [1]
T22	191.5 - 186.5	L2 1/2x2x1/4	3.00	2.79	56.5	1.06	0.91	34.34	0.027 [1]
T23	186.5 - 181.5	L2 1/2x2x1/4	3.00	2.79	56.5	1.06	0.97	34.34	0.028 [1]
T29	156.5 - 151.5	1	3.00	2.81	135.0	0.79	1.10	25.45	0.043 [1]
T30	151.5 - 146.5	1	3.00	2.81	135.0	0.79	1.13	25.45	0.045 [1]
T36	101.5 - 96.5	1	3.00	2.81	135.0	0.79	1.85	25.45	0.073 [1]
T41	76.5 - 71.5	L2 1/2x2x1/4	3.00	2.81	57.0	1.06	1.57	34.34	0.046 [1]
T42	71.5 - 66.5	L2 1/2x2x1/4	3.00	2.81	57.0	1.06	1.66	34.34	0.048 [1]
T43	66.5 - 61.5	L2 1/2x2x1/4	3.00	2.60	57.0	1.06	1.81	34.34	0.053 [1]
T44	61.5 - 56.5	1	3.00	2.81	135.0	0.79	1.94	25.45	0.076 [1]
T45	56.5 - 51.5	1	3.00	2.81	135.0	0.79	1.94	25.45	0.076 [1]
T46	51.5 - 46.5	1	3.00	2.81	135.0	0.79	1.92	25.45	0.076 [1]

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	P_n K	Ratio $\frac{P_u}{P_n}$
T47	46.5 - 41.5	1	3.00	2.81	135.0	0.79	1.93	25.45	0.076 [1]
T48	41.5 - 36.5	1	3.00	2.81	135.0	0.79	1.92	25.45	0.076 [1]
T49	36.5 - 31.5	1	3.00	2.81	135.0	0.79	1.94	25.45	0.076 [1]

[1] P_u / P_n controls

Top Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	P_n K	Ratio $\frac{P_u}{P_n}$
T1	314.5 - 310.5	L2x2x1/4	3.00	2.79	55.0	0.94	0.28	30.39	0.009 [1]
T51	6.5 - 0	W16x50	3.00	2.31	17.5	14.70	1.62	476.28	0.003

[1] P_u / P_n controls

Top Girt Bending Design Data

Section No.	Elevation ft	Size	M_{ux} kip-ft	M_{nx} kip-ft	Ratio $\frac{M_{ux}}{M_{nx}}$	M_{uy} kip-ft	M_{ny} kip-ft	Ratio $\frac{M_{uy}}{M_{ny}}$
T1	314.5 - 310.5	L2x2x1/4	0.00	1.69	0.000	0.00	0.87	0.000
T51	6.5 - 0	W16x50	-7.85	248.40	0.032	-0.00	42.52	0.000

Top Girt Interaction Design Data

Section No.	Elevation ft	Size	Ratio $\frac{P_u}{P_n}$	Ratio $\frac{M_{ux}}{M_{nx}}$	Ratio $\frac{M_{uy}}{M_{ny}}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
T1	314.5 - 310.5	L2x2x1/4	0.009	0.000	0.000	0.009 [1]	1.000	4.8.1
T51	6.5 - 0	W16x50	0.003	0.032	0.000	0.033	1.000	4.8.1

[1] P_u / P_n controls

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L1	341.5 - 314.5	Pole	P8x.322	1	-1.34	264.58	51.9	Pass
T1	314.5 - 310.5	Leg	2 1/2	4	-13.73	143.51	9.6	Pass
T2	310.5 - 306.5	Leg	2 1/2	12	-17.15	143.51	11.9 41.7 (b)	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
T3	306.5 - 281.5	Leg	2 1/2	20	-22.21	112.60	19.7	Pass
T4	281.5 - 276.5	Leg	2 1/2	54	-24.38	186.65	13.1	Pass
T5	276.5 - 271.5	Leg	2 1/2	65	-26.59	186.65	14.2	Pass
T6	271.5 - 266.5	Leg	2 1/2	78	-30.19	112.60	26.8	Pass
T7	266.5 - 261.5	Leg	2 1/2	86	-33.23	112.60	29.5	Pass
T8	261.5 - 256.5	Leg	2 1/2	96	-37.78	112.60	33.6	Pass
							34.9 (b)	
T9	256.5 - 251.5	Leg	2 1/2	104	-41.72	112.60	37.1	Pass
T10	251.5 - 246.5	Leg	2 1/2	114	-47.65	112.60	42.3	Pass
T11	246.5 - 241.5	Leg	2 1/2	122	-48.70	186.65	26.1	Pass
T12	241.5 - 236.5	Leg	2 1/2	135	-45.37	186.65	24.3	Pass
T13	236.5 - 231.5	Leg	2 1/2	147	-41.58	186.65	22.3	Pass
							36.2 (b)	
T14	231.5 - 226.5	Leg	2 1/2	159	-38.52	186.65	20.6	Pass
T15	226.5 - 221.5	Leg	2 1/2	171	-36.67	186.65	19.6	Pass
T16	221.5 - 216.5	Leg	2 1/2	183	-34.68	186.65	18.6	Pass
T17	216.5 - 211.5	Leg	2 1/2	195	-34.18	186.65	18.3	Pass
T18	211.5 - 206.5	Leg	2 1/2	208	-33.20	186.65	17.8	Pass
							28.9 (b)	
T19	206.5 - 201.5	Leg	2 1/2	219	-34.03	186.65	18.2	Pass
T20	201.5 - 196.5	Leg	2 1/2	232	-34.24	186.65	18.3	Pass
T21	196.5 - 191.5	Leg	2 1/2	243	-36.19	186.65	19.4	Pass
T22	191.5 - 186.5	Leg	2 1/2	256	-37.54	186.65	20.1	Pass
T23	186.5 - 181.5	Leg	2 1/2	268	-39.93	186.65	21.4	Pass
							34.7 (b)	
T24	181.5 - 176.5	Leg	2 1/4	280	-38.64	77.87	49.6	Pass
T25	176.5 - 171.5	Leg	2 1/4	289	-38.37	77.87	49.3	Pass
T26	171.5 - 166.5	Leg	2 1/4	296	-39.03	77.87	50.1	Pass
T27	166.5 - 161.5	Leg	2 1/4	307	-39.98	77.87	51.3	Pass
T28	161.5 - 156.5	Leg	2 1/4	315	-41.30	77.87	53.0	Pass
T29	156.5 - 151.5	Leg	2 1/4	324	-41.98	145.33	28.9	Pass
T30	151.5 - 146.5	Leg	2 1/4	336	-43.10	145.33	29.7	Pass
T31	146.5 - 141.5	Leg	2 1/4	348	-43.23	77.87	55.5	Pass
T32	141.5 - 136.5	Leg	2 1/4	357	-43.66	77.87	56.1	Pass
T33	136.5 - 131.5	Leg	2 1/4	366	-43.29	77.87	55.6	Pass
T34	131.5 - 106.5	Leg	2 1/4	375	-61.76	77.87	79.3	Pass
T35	106.5 - 101.5	Leg	2 1/4	409	-67.04	77.87	86.1	Pass
T36	101.5 - 96.5	Leg	2 1/4	417	-70.20	145.33	48.3	Pass
T37	96.5 - 91.5	Leg	2 1/4	430	-66.34	77.87	85.2	Pass
T38	91.5 - 86.5	Leg	2 1/4	438	-61.99	77.87	79.6	Pass
T39	86.5 - 81.5	Leg	2 1/4	446	-60.05	77.87	77.1	Pass
T40	81.5 - 76.5	Leg	2 1/4	456	-60.45	77.87	77.6	Pass
T41	76.5 - 71.5	Leg	2 1/4	464	-59.54	145.33	41.0	Pass
T42	71.5 - 66.5	Leg	2 1/4	476	-62.97	145.33	43.3	Pass
T43	66.5 - 61.5	Leg	2 1/4	488	-68.65	145.33	47.2	Pass
T44	61.5 - 56.5	Leg	2 1/4	500	-73.79	145.33	50.8	Pass
							64.2 (b)	
T45	56.5 - 51.5	Leg	2 1/4	512	-73.60	145.33	50.6	Pass
T46	51.5 - 46.5	Leg	2 1/4	524	-73.08	145.33	50.3	Pass
T47	46.5 - 41.5	Leg	2 1/4	536	-73.29	145.33	50.4	Pass
T48	41.5 - 36.5	Leg	2 1/4	548	-73.09	145.33	50.3	Pass
T49	36.5 - 31.5	Leg	2 1/4	560	-73.59	145.33	50.6	Pass
							64.0 (b)	
T50	31.5 - 6.5	Leg	2.25SR + BP9.5x0.25 (Norwalk)	574	-81.38	143.89	56.6	Pass
T51	6.5 - 0	Leg	W8x40	607	-93.38	351.00	32.8	Pass
T1	314.5 - 310.5	Diagonal	2L2x2x1/4x3/8	8	-2.55	42.20	6.0	Pass
							14.1 (b)	
T2	310.5 - 306.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	19	-2.57	8.85	29.0	Pass
T3	306.5 - 281.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	26	-1.89	6.65	28.4	Pass
T4	281.5 - 276.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	61	-1.87	6.65	28.2	Pass
T5	276.5 - 271.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	71	-2.40	6.65	36.1	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
T6	271.5 - 266.5	Diagonal	P1.5 STD	83	-2.92	15.44	18.9 21.9 (b)	Pass
T7	266.5 - 261.5	Diagonal	P1.5 STD	92	-3.10	15.44	20.1 23.7 (b)	Pass
T8	261.5 - 256.5	Diagonal	P1.5 STD	101	-3.38	15.44	21.9 25.6 (b)	Pass
T9	256.5 - 251.5	Diagonal	P1.5x.2	110	-3.65	19.83	18.4 26.4 (b)	Pass
T10	251.5 - 246.5	Diagonal	P1.5x.2	119	-3.83	19.83	19.3 27.8 (b)	Pass
T11	246.5 - 241.5	Diagonal	2L2x2x1/4x3/8	129	-4.37	39.76	11.0 22.2 (b)	Pass
T12	241.5 - 236.5	Diagonal	2L2x2x1/4x3/8	141	-3.59	39.76	9.0 17.2 (b)	Pass
T13	236.5 - 231.5	Diagonal	2L2x2x1/4x3/8	154	-2.36	39.76	5.9 10.1 (b)	Pass
T14	231.5 - 226.5	Diagonal	2L2x2x1/4x3/8	166	-2.04	39.76	5.1 8.4 (b)	Pass
T15	226.5 - 221.5	Diagonal	P1.5 STD	178	-1.67	15.44	10.8 12.1 (b)	Pass
T16	221.5 - 216.5	Diagonal	P1.5 STD	188	-1.38	15.44	9.0 10.0 (b)	Pass
T17	216.5 - 211.5	Diagonal	P1.5 STD	202	-1.00	15.44	6.5 7.3 (b)	Pass
T18	211.5 - 206.5	Diagonal	P1.5 STD	212	-0.81	15.44	5.2 5.8 (b)	Pass
T19	206.5 - 201.5	Diagonal	P1.5 STD	225	-1.01	15.44	6.5 7.3 (b)	Pass
T20	201.5 - 196.5	Diagonal	P1.5 STD	237	-1.41	15.44	9.1 10.2 (b)	Pass
T21	196.5 - 191.5	Diagonal	P1.5 STD	249	-1.82	15.44	11.8 13.2 (b)	Pass
T22	191.5 - 186.5	Diagonal	P1.5 STD	261	-2.15	15.44	13.9 15.6 (b)	Pass
T23	186.5 - 181.5	Diagonal	P1.5 STD	272	-3.76	15.44	24.3 27.2 (b)	Pass
T24	181.5 - 176.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	284	-3.32	6.55	50.6	Pass
T25	176.5 - 171.5	Diagonal	P1.5 STD	293	-3.14	15.28	20.6 22.8 (b)	Pass
T26	171.5 - 166.5	Diagonal	P1.5 STD	302	-2.81	15.28	18.4 20.4 (b)	Pass
T27	166.5 - 161.5	Diagonal	2L2x2x1/4x3/8	311	-2.52	39.63	6.4 11.5 (b)	Pass
T28	161.5 - 156.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	320	-2.24	6.55	34.2	Pass
T29	156.5 - 151.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	329	-1.88	6.55	28.7	Pass
T30	151.5 - 146.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	341	-1.72	6.55	26.2	Pass
T31	146.5 - 141.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	353	-1.26	6.55	19.3	Pass
T32	141.5 - 136.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	364	-1.23	6.55	18.7	Pass
T33	136.5 - 131.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	372	-1.61	6.55	24.6	Pass
T34	131.5 - 106.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	398	-5.67	6.55	86.6	Pass
T35	106.5 - 101.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	413	-4.46	6.55	68.1	Pass
T36	101.5 - 96.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	423	-2.80	6.55	42.7	Pass
T37	96.5 - 91.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	435	-3.99	6.55	61.0	Pass
T38	91.5 - 86.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	444	-4.33	6.55	66.0	Pass
T39	86.5 - 81.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	453	-4.46	6.55	68.0	Pass
T40	81.5 - 76.5	Diagonal	P1.5 STD	463	-8.23	15.28	53.8 63.9 (b)	Pass
T41	76.5 - 71.5	Diagonal	P1.5 STD	471	-10.33	25.48	40.5 79.4 (b)	Pass
T42	71.5 - 66.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	483	-10.37	14.93	69.4 98.6 (b)	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
T43	66.5 - 61.5	Diagonal	L2x2x3/8	495	-11.08	32.89	33.7 80.2 (b)	Pass
T44	61.5 - 56.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	506	-2.56	6.55	39.1	Pass
T45	56.5 - 51.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	518	-2.34	6.55	35.8	Pass
T46	51.5 - 46.5	Diagonal	Pipe 1.5" x 0.120" (11 ga)	530	-1.91	6.55	29.2	Pass
T47	46.5 - 41.5	Diagonal	P1.5 STD	542	-1.70	15.28	11.1 12.3 (b)	Pass
T48	41.5 - 36.5	Diagonal	P1.5 STD	554	-1.25	15.28	8.2 9.1 (b)	Pass
T49	36.5 - 31.5	Diagonal	P1.5 STD	567	-1.40	15.28	9.1 10.1 (b)	Pass
T50	31.5 - 6.5	Diagonal	P1.5 STD	579	-4.37	17.16	25.5 31.7 (b)	Pass
T2	310.5 - 306.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	14	-0.35	14.75	2.4 3.5 (b)	Pass
T3	306.5 - 281.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	25	3.74	19.67	19.0 37.3 (b)	Pass
T4	281.5 - 276.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	56	-0.59	14.75	4.0 5.9 (b)	Pass
T5	276.5 - 271.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	70	-0.64	14.75	4.4 6.4 (b)	Pass
T6	271.5 - 266.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	80	-0.73	14.75	5.0 7.3 (b)	Pass
T7	266.5 - 261.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	91	-0.81	14.75	5.5 8.0 (b)	Pass
T8	261.5 - 256.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	98	-0.92	14.75	6.2 9.1 (b)	Pass
T9	256.5 - 251.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	109	-1.01	14.75	6.9 10.1 (b)	Pass
T10	251.5 - 246.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	116	-1.16	14.75	7.8 11.5 (b)	Pass
T11	246.5 - 241.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	127	5.46	19.67	27.8 54.5 (b)	Pass
T12	241.5 - 236.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	137	-1.10	14.75	7.5 11.0 (b)	Pass
T13	236.5 - 231.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	149	-1.01	14.75	6.8 10.1 (b)	Pass
T14	231.5 - 226.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	161	-0.93	14.75	6.3 9.3 (b)	Pass
T15	226.5 - 221.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	173	-0.89	14.75	6.0 8.9 (b)	Pass
T16	221.5 - 216.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	185	-0.84	14.75	5.7 8.4 (b)	Pass
T17	216.5 - 211.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	197	-0.83	14.75	5.6 8.3 (b)	Pass
T18	211.5 - 206.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	210	-0.81	14.75	5.5 8.0 (b)	Pass
T19	206.5 - 201.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	221	-0.83	14.75	5.6 8.2 (b)	Pass
T20	201.5 - 196.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	234	-0.83	14.75	5.6 8.3 (b)	Pass
T21	196.5 - 191.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	245	-0.88	14.75	5.9 8.8 (b)	Pass
T22	191.5 - 186.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	258	-0.91	14.75	6.2 9.1 (b)	Pass
T23	186.5 - 181.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	271	3.44	19.67	17.5 34.3 (b)	Pass
T24	181.5 - 176.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	282	-1.02	14.69	6.9 10.1 (b)	Pass
T25	176.5 - 171.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	291	-1.01	14.69	6.9 10.1 (b)	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
T26	171.5 - 166.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	301	-1.03	14.69	7.0 10.2 (b)	Pass
T27	166.5 - 161.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	309	-1.05	14.69	7.2 10.5 (b)	Pass
T28	161.5 - 156.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	317	-1.09	14.69	7.4 10.8 (b)	Pass
T29	156.5 - 151.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	326	-1.10	14.69	7.5 11.0 (b)	Pass
T30	151.5 - 146.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	338	-1.13	14.69	7.7 11.3 (b)	Pass
T31	146.5 - 141.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	350	-1.14	14.69	7.7 11.3 (b)	Pass
T32	141.5 - 136.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	359	-1.15	14.69	7.8 11.5 (b)	Pass
T33	136.5 - 131.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	368	-1.14	14.69	7.8 11.4 (b)	Pass
T34	131.5 - 106.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	402	3.82	19.67	19.4 38.1 (b)	Pass
T35	106.5 - 101.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	411	-1.76	14.69	12.0 17.6 (b)	Pass
T36	101.5 - 96.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	419	-1.85	14.69	12.6 18.8 (b)	Pass
T37	96.5 - 91.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	432	-1.74	14.69	11.9 17.4 (b)	Pass
T38	91.5 - 86.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	440	-1.63	14.69	11.1 16.3 (b)	Pass
T39	86.5 - 81.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	451	-1.58	14.69	10.8 15.8 (b)	Pass
T40	81.5 - 76.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	458	-1.59	14.69	10.8 15.9 (b)	Pass
T41	76.5 - 71.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	469	-1.57	14.69	10.7 15.6 (b)	Pass
T42	71.5 - 66.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	481	-1.66	14.69	11.3 16.5 (b)	Pass
T43	66.5 - 61.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	493	-1.81	14.69	12.3 18.0 (b)	Pass
T44	61.5 - 56.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	503	6.65	19.67	33.8 66.3 (b)	Pass
T45	56.5 - 51.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	517	-1.94	14.69	13.2 19.3 (b)	Pass
T46	51.5 - 46.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	529	-1.92	14.69	13.1 19.2 (b)	Pass
T47	46.5 - 41.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	541	-1.93	14.69	13.1 19.2 (b)	Pass
T48	41.5 - 36.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	553	-1.92	14.69	13.1 19.2 (b)	Pass
T49	36.5 - 31.5	Horizontal	Pipe 1.5" x 0.120" (11 ga)	565	-1.94	14.69	13.2 19.3 (b)	Pass
T50	31.5 - 6.5	Horizontal	P1.5x0.13	576	-1.41	16.55	8.5 13.0 (b)	Pass
T4	281.5 - 276.5	Secondary Horizontal	1	62	-0.59	16.01	3.7 6.7 (b)	Pass
T5	276.5 - 271.5	Secondary Horizontal	1	76	-0.64	16.01	4.0	Pass
T11	246.5 - 241.5	Secondary Horizontal	L2 1/2x2x1/4	133	-1.18	30.67	3.9 14.3 (b)	Pass
T12	241.5 - 236.5	Secondary Horizontal	2L2 1/2x2x1/4x3/8	143	-1.10	56.86	1.9 6.7 (b)	Pass
T13	236.5 - 231.5	Secondary Horizontal	2L2 1/2x2x1/4x3/8	155	-1.01	56.86	1.8 6.1 (b)	Pass
T14	231.5 - 226.5	Secondary Horizontal	L2 1/2x2x1/4	167	-0.93	30.67	3.0 11.3 (b)	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
T15	226.5 - 221.5	Secondary Horizontal	L2 1/2x2x1/4	179	-0.89	30.67	2.9 10.8 (b)	Pass
T16	221.5 - 216.5	Secondary Horizontal	L2 1/2x2x1/4	191	-0.84	30.67	2.7 10.2 (b)	Pass
T17	216.5 - 211.5	Secondary Horizontal	L2 1/2x2x1/4	203	-0.83	30.67	2.7 10.0 (b)	Pass
T18	211.5 - 206.5	Secondary Horizontal	L2 1/2x2x1/4	216	-0.81	30.67	2.6 9.7 (b)	Pass
T19	206.5 - 201.5	Secondary Horizontal	L2 1/2x2x1/4	227	-0.83	30.67	2.7 10.0 (b)	Pass
T20	201.5 - 196.5	Secondary Horizontal	L2 1/2x2x1/4	240	-0.83	30.67	2.7 10.0 (b)	Pass
T21	196.5 - 191.5	Secondary Horizontal	L2 1/2x2x1/4	251	-0.88	30.67	2.9 10.6 (b)	Pass
T22	191.5 - 186.5	Secondary Horizontal	L2 1/2x2x1/4	264	-0.91	30.67	3.0 11.0 (b)	Pass
T23	186.5 - 181.5	Secondary Horizontal	L2 1/2x2x1/4	276	-0.97	30.67	3.2	Pass
T29	156.5 - 151.5	Secondary Horizontal	1	332	-1.10	15.90	6.9 12.5 (b)	Pass
T30	151.5 - 146.5	Secondary Horizontal	1	344	-1.13	15.90	7.1	Pass
T36	101.5 - 96.5	Secondary Horizontal	1	425	-1.85	15.90	11.6	Pass
T41	76.5 - 71.5	Secondary Horizontal	L2 1/2x2x1/4	475	-1.57	30.56	5.1	Pass
T42	71.5 - 66.5	Secondary Horizontal	L2 1/2x2x1/4	487	-1.66	30.56	5.4	Pass
T43	66.5 - 61.5	Secondary Horizontal	L2 1/2x2x1/4	499	-1.81	26.90	6.7 21.8 (b)	Pass
T44	61.5 - 56.5	Secondary Horizontal	1	511	-1.94	15.90	12.2 22.0 (b)	Pass
T45	56.5 - 51.5	Secondary Horizontal	1	523	-1.94	15.90	12.2 21.9 (b)	Pass
T46	51.5 - 46.5	Secondary Horizontal	1	535	-1.92	15.90	12.1 21.8 (b)	Pass
T47	46.5 - 41.5	Secondary Horizontal	1	547	-1.93	15.90	12.1 21.8 (b)	Pass
T48	41.5 - 36.5	Secondary Horizontal	1	559	-1.92	15.90	12.1 21.8 (b)	Pass
T49	36.5 - 31.5	Secondary Horizontal	1	571	-1.94	15.90	12.2	Pass
T1	314.5 - 310.5	Top Girt	L2x2x1/4	6	-0.28	25.97	1.1	Pass
T51	6.5 - 0	Top Girt	W16x50	609	-1.62	468.70	4.4	Pass
T3	306.5 - 281.5	Guy A@306.5	11/16 (24000)	613	14.19	30.00	47.3	Pass
T11	246.5 - 241.5	Guy A@246.5	7/8 (19000)	616	17.43	47.82	36.5	Pass
T23	186.5 - 181.5	Guy A@186.5	9/16 (23000)	619	9.27	21.00	44.1	Pass
T34	131.5 - 106.5	Guy A@126.5	5/8 (23000)	622	12.60	25.44	49.5	Pass
T44	61.5 - 56.5	Guy A@61.5	11/16 (24000)	625	14.70	30.00	49.0	Pass
T3	306.5 - 281.5	Guy B@306.5	11/16 (24000)	612	14.24	30.00	47.5	Pass
T11	246.5 - 241.5	Guy B@246.5	7/8 (19000)	615	17.46	47.82	36.5	Pass
T23	186.5 - 181.5	Guy B@186.5	9/16 (23000)	618	9.30	21.00	44.3	Pass
T34	131.5 - 106.5	Guy B@126.5	5/8 (23000)	621	12.59	25.44	49.5	Pass
T44	61.5 - 56.5	Guy B@61.5	11/16 (24000)	624	14.99	30.00	50.0	Pass
T3	306.5 - 281.5	Guy C@306.5	11/16 (24000)	611	14.15	30.00	47.2	Pass
T11	246.5 - 241.5	Guy C@246.5	7/8 (19000)	614	17.40	47.82	36.4	Pass
T23	186.5 - 181.5	Guy C@186.5	9/16 (23000)	617	9.25	21.00	44.0	Pass
T34	131.5 - 106.5	Guy C@126.5	5/8 (23000)	620	12.52	25.44	49.2	Pass
T44	61.5 - 56.5	Guy C@61.5	11/16 (24000)	623	14.74	30.00	49.2	Pass
							Summary	
						Pole (L1)	51.9	Pass
						Leg (T35)	86.1	Pass
						Diagonal (T42)	98.6	Pass
						Horizontal (T44)	66.3	Pass
						Secondary	22.0	Pass

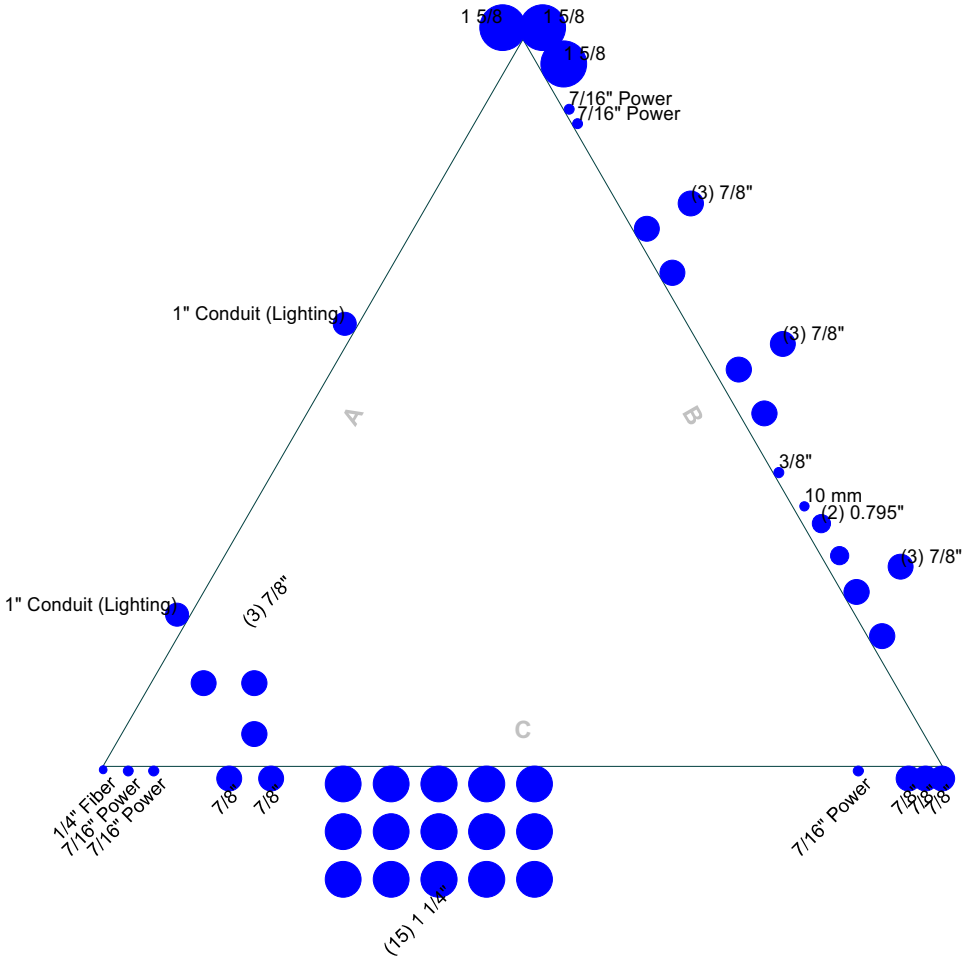
Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$øP_{allow}$ K	% Capacity	Pass Fail
						Horizontal (T44)		
						Top Girt (T51)	4.4	Pass
						Guy A (T34)	49.5	Pass
						Guy B (T44)	50.0	Pass
						Guy C (T34)	49.2	Pass
						Bolt Checks	98.6	Pass
						RATING =	**98.6**	**Pass**

APPENDIX B

BASE LEVEL DRAWING

Feed Line Plan

Round Flat App In Face App Out Face



Engineered Tower Solutions
3227 Wellington Court
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Phone: (919) 782-2710
FAX: (919) 435-0631

Job: ***52010 - Norwalk 1***		
Project: ***ETS Job No. 21093576.STR.5549***		
Client: CTI Towers	Drawn by: BSanders	App'd:
Code: TIA-222-H	Date: 08/20/21	Scale: NTS
Path: C:\Workfolder Brent\093576 - Norwalk TOWER MOD\CTI Towers_Norwalk 1_Tower Analysis (MOD).eri		Dwg No. E-7

APPENDIX C

ADDITIONAL CALCULATIONS

Leg Built-Up Member Compression Capacity

Tower Section	6.5 to 31.5-ft
P_u	81.38 kip
Code	H
ø Factor	0.90
Controlling Load Case	Ice
Allowable Stress Increase	1.00
F_y	50 ksi
F_u	65 ksi
E	29,000 ksi
Effective Length Factor, "K_{eff}"	1.00
Stitch Connection Type	Bolted

Member Type	Member	Area (in^2)	Moment of Inertia (in^4)	Radius of Gyration (in)	Unbraced Length (in)	KL/r	$a_i/r_i \leq 0.75(KL/r)_o$
Original Member	2.25 SR	3.976	1.258	0.56	60.000	106.67	-
Additional Member	BP9.5x0.25	2.483	3.548	1.20	12.000	10.04	10.04
Built-Up Member	Built Up Leg	3.976	4.970	1.12	60.000	53.67	40.25
							Sufficient

Bolted Option	
r_{ib}	1.195 in
$KL/r_{r.m}$	54.60
F_a	23.62 ksi
F_e	96.02 ksi
λ_c	0.72
F_{cr}	40.21 ksi
øPn	143.88 kip

Compression Capacity	56.6%

tnxTower Inputs	
Effective Length Factor	1.0173

Pier and Pad Foundation

Site Name:	Norwalk 1

TIA-222 Revision:	H
Tower Type:	Guyed

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

Superstructure Analysis Reactions		
Compression, P_{comp}:	130	kips
Base Shear, Vu_comp:	3	kips
Moment, M_u:	130	ft-kips
Tower Height, **H**:	341.5	ft
BP Dist. Above Fdn, bp_{dist}:	2	in
Bolt Circle / Bearing Plate Width, **BC**:	5.5	in

Pier Properties		
Pier Shape:	Square	
Pier Diameter, **dpier**:	6	ft
Ext. Above Grade, **E**:	1.6	ft
Pier Rebar Size, **Sc**:	9	
Pier Rebar Quantity, **mc**:	26	
Pier Tie/Spiral Size, **St**:	5	
Pier Tie/Spiral Quantity, **mt**:	5	
Pier Reinforcement Type:	Tie	
Pier Clear Cover, cc_{pier}:	3	in

Pad Properties		
Depth, **D**:	7.9	ft
Pad Width, W_1:	13	ft
Pad Width, W_2:	18.7	ft
Pad Thickness, **T**:	4.5	ft
Pad Rebar Size (Top dir. 1), Sp_{top1}:	9	
Pad Rebar Quantity (Top dir 1), mp_{top1}:	0	
Pad Rebar Size (Top dir.2), Sp_{top2}:	9	
Pad Rebar Quantity (Top dir. 2), mp_{top2}:	0	
Pad Rebar Size (Bottom dir. 1), Sp_1:	9	
Pad Rebar Quantity (Bottom dir. 1), mp_1:	15	
Pad Rebar Size (Bottom dir. 2), Sp_2:	9	
Pad Rebar Quantity (Bottom dir. 2), mp_2:	15	
Pad Clear Cover, cc_{pad}:	3	in

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

Soil Properties		
Total Soil Unit Weight, γ:	120	pcf
Ultimate Net Bearing, Qnet:	40.000	ksf
Cohesion, **Cu**:	0.000	ksf
Friction Angle, φ:	34	degrees
SPT Blow Count, N_{blows}:	100	
Base Friction, μ:	0.35	
Neglected Depth, **N**:	3.30	ft
Foundation Bearing on Rock?	No	
Groundwater Depth, **gw**:	N/A	ft

<--Toggle between Gross and Net

Foundation Analysis Checks				
	Capacity	**Demand**	**Rating**	**Check**
Lateral (Sliding) (kips)	157.25	3.00	**1.9%**	**Pass**
Bearing Pressure (ksf)	24.57	2.09	**8.5%**	**Pass**
*Overturning (kip*ft)*	2242.34	159.00	**7.1%**	**Pass**
*Pier Flexure (Comp.) (kip*ft)*	3666.08	145.00	**4.0%**	**Pass**
Pier Compression (kip)	17184.96	162.40	**0.9%**	**Pass**
*Pad Flexure (kip*ft)*	3251.93	198.64	**6.1%**	**Pass**
Pad Shear - 1-way (kips)	631.97	22.73	**3.6%**	**Pass**
Pad Shear - 2-way (Comp) (ksi)	0.164	0.004	**2.7%**	**Pass**
*Flexural 2-way (Comp) (kip*ft)*	3251.93	87.00	**2.7%**	**Pass**

Structural Rating:	**6.1%**
Soil Rating:	**8.5%**

Version 4.1.0

Guyed Anchor Block Foundation

Checks capacity of anchor blocks for a guyed tower.

Site Name:	Norwalk 1
Location:	Inner, B-2
TIA-222 Revision:	H

Design Reactions		
Shear, **S**:	18.00	kips
Uplift, **Ua**:	20.00	kips
Resultant Force, **Rf**:	26.91	kips
Tower Height, **H**:	341.50	ft
Guy Anchor Radius, **R**:	170.00	ft
Resultant Angle to Horizontal, **θ**:	48.0	deg

Guy Anchor Properties		
Depth to Bottom of Deadman, **Da**:	5.75	ft
Anchor Width, **Wa**:	6	ft
Anchor Thickness, **Ta**:	2.5	ft
Anchor Length, **La**:	16	ft
Concrete Volume, **Vc**:	8.9	yd^3
Toe Width, **toe**:	0	ft

Material Properties		
Wt. Avg.Concrete Density, **δx**:	0.150	kcf

Design Checks				
	Capacity	**Demand**	**Rating**	**Check**
Lateral Capacity (kips):	63.39	18.00	**28.4%**	**Pass**
Uplift Capacity (kips):	105.41	20.00	**19.0%**	**Pass**

Anchor Shaft Rating:	**N/A**
Structural Rating:	**N/A**
Soil Rating:	**28.4%**

Neglect Depth, **Neg**:	3.3	ft
Groundwater Level, **gw**:	6	ft

Soil Properties: No. of Soil Layers: 4

Layer	φ, deg	cu, ksf	δ, pcf	Depth, ft	Ultimate fs (ksf)	N (blows/ft)
1	35	0.000	120	3.25	0.000	
2	36	0.000	120	3.30	0.000	
3	36	0.000	120	4.00		29
4	35	0.000	120	5.75		29

*key: φ = *Internal Angle of Friction*
cu = Cohesion / Undrained Shear Strength
δ = *Buoyant Soil Unit Weight*
d = Depth to Bottom of Layer
Ultimate fs = Geotechnical Report-provided skin friction / adhesion
N = SPT Blow Count

Version 4.0.0

Guyed Anchor Block Foundation

Checks capacity of anchor blocks for a guyed tower.

Site Name:	Norwalk 1
Location:	Outer, B-2
TIA-222 Revision:	H

Design Reactions		
Shear, **S**:	23.00	kips
Uplift, **Ua**:	32.00	kips
Resultant Force, **Rf**:	39.41	kips
Tower Height, **H**:	341.50	ft
Guy Anchor Radius, **R**:	170.00	ft
Resultant Angle to Horizontal, **θ**:	54.3	deg

Guy Anchor Properties		
Depth to Bottom of Deadman, **Da**:	7.5	ft
Anchor Width, **Wa**:	6	ft
Anchor Thickness, **Ta**:	2.5	ft
Anchor Length, **La**:	16	ft
Concrete Volume, **Vc**:	8.9	yd^3
Toe Width, **toe**:	0	ft

Material Properties		
Wt. Avg.Concrete Density, **δx**:	0.113	kcf

Design Checks				
	Capacity	**Demand**	**Rating**	**Check**
Lateral Capacity (kips):	139.77	23.00	**16.5%**	**Pass**
Uplift Capacity (kips):	148.33	32.00	**21.6%**	**Pass**

Anchor Shaft Rating:	**N/A**
Structural Rating:	**N/A**
Soil Rating:	**21.6%**

Neglect Depth, **Neg**:	3.3	ft
Groundwater Level, **gw**:	6	ft

Soil Properties: No. of Soil Layers: 5

Layer	φ, deg	cu, ksf	δ, pcf	Depth, ft	Ultimate fs (ksf)	N (blows/ft)
1	35	0.000	120	3.30	0.000	
2	36	0.000	120	4.00		30
3	35	0.000	120	5.00		29
4	35	0.000	120	6.00		29
5	36	0.000	120	7.50		33

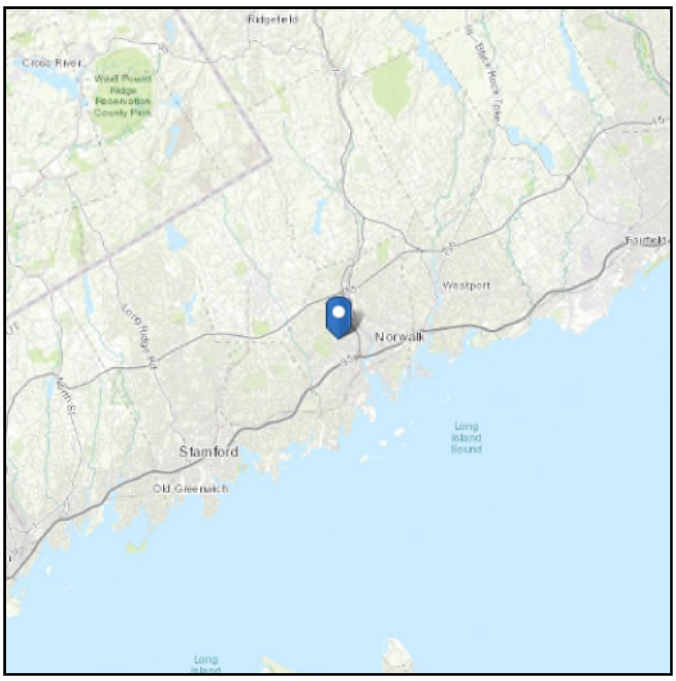
*key: φ = *Internal Angle of Friction*
cu = Cohesion / Undrained Shear Strength
δ = *Buoyant Soil Unit Weight*
d = Depth to Bottom of Layer
Ultimate fs = Geotechnical Report-provided skin friction / adhesion
N = SPT Blow Count

ASCE 7 Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-10
Risk Category: II
Soil Class: D - Stiff Soil

Elevation: 118.45 ft (NAVD 88)
Latitude: 41.11556
Longitude: -73.43436



Wind

Results:

Wind Speed:	120 Vmph
10-year MRI	76 Vmph
25-year MRI	86 Vmph
50-year MRI	91 Vmph
100-year MRI	98 Vmph

Data Accessed: Wed Jun 02 2021

Date Source: ASCE/SEI 7-10, Fig. 26.5-1A and Figs. CC-1–CC-4, and Section 26.5.2, incorporating errata of March 12, 2014

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-10 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

Site is in a hurricane-prone region as defined in ASCE/SEI 7-10 Section 26.2. Glazed openings need not be protected against wind-borne debris.

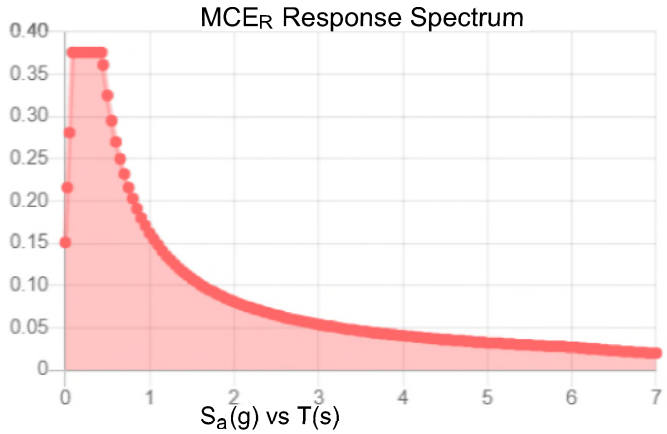
Seismic

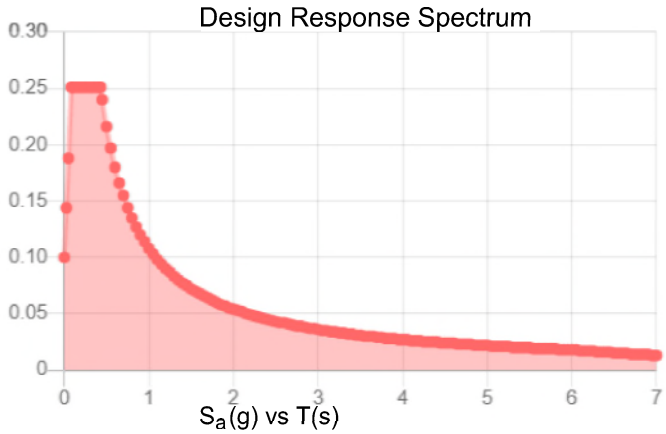
Site Soil Class: D - Stiff Soil

Results:

S_S :	0.235	S_{DS} :	0.251
S_1 :	0.068	S_{D1} :	0.108
F_a :	1.6	T_L :	6
F_v :	2.4	PGA :	0.134
S_{MS} :	0.376	PGA_M :	0.205
S_{M1} :	0.162	F_{PGA} :	1.532
		I_e :	1

Seismic Design Category B





Data Accessed: Wed Jun 02 2021

Date Source: USGS Seismic Design Maps based on ASCE/SEI 7-10, incorporating Supplement 1 and errata of March 31, 2013, and ASCE/SEI 7-10 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-10 Ch. 21 are available from USGS.

Ice

Results:

Ice Thickness:	0.75 in.
Concurrent Temperature:	15 F
Gust Speed:	50 mph
Data Source:	Standard ASCE/SEI 7-10, Figs. 10-2 through 10-8
Date Accessed:	Wed Jun 02 2021

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

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 50-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

APPENDIX D

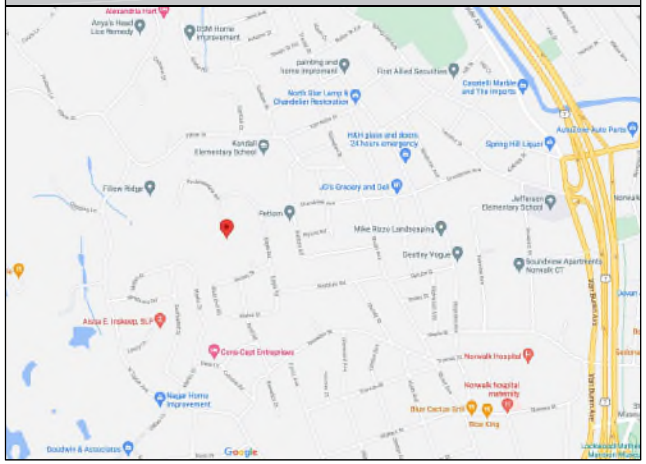
TOWER MODIFICATION DRAWINGS

TOWER MODIFICATION DRAWINGS

SITE INFORMATION

SITE NAME	NORWALK 1
SITE NUMBER	52010
SITE ADDRESS	6 SHIRLEY STREET NORWALK, CT 06850 FAIRFIELD COUNTY
LAT. / LONG.	N 41.115556°, W 73.434444°
ETS JOB#:	21093576.STR.5549
ETS FAILING REPORT JOB#:	21093576.STR.0367
TOWER MANUFACTURER	UNKNOWN
TOWER TYPE	GUYED TOWER
TOWER HEIGHT	341.5 FT

LOCATION MAP



DRIVING DIRECTIONS

FROM NORWALK, HEAD NORTH ON EAST AVE TOWARD E WALL ST (26 FT). TURN LEFT ONTO E WALL ST (0.1 MI). E WALL ST TURNS SLIGHTLY LEFT AND BECOMES WALL STREET (0.2 MI). TURN RIGHT ONTO BELDEN AVE (0.4 MI). CONTINUE STRAIGHT ONTO SPRING HILL AVE (384 FT). TURN LEFT ONTO KELLOGG ST (410 FT). TURN RIGHT ONTO GRANDVIEW AVE (203 FT). SLIGHT LEFT TO STAY ON GRANDVIEW AVE (0.3 MI). TURN LEFT ONTO STUART AVE (0.2 MI). TURN RIGHT ONTO NOSTRUM RD (0.2 MI). TURN RIGHT ONTO EAGLE RD (0.3 MI). TURN LEFT ONTO ROCKMEADOW RD (217 FT). TCWER WILL BE STRAIGHT AHEAD.

PROJECT CONTACTS

1. CLIENT REPRESENTATIVE

   JENNIFER BOCCELLA
   OPERATIONS COORDINATOR

   CTI TOWERS, INC.
   5000 CENTREGREEN WAY, SUITE 325
   CARY, NC 27513
   OFFICE: (919) 893-2841 EXT. 430

   JBOCCELLA@CTITOWERS.COM

2. CONSTRUCTION MANAGER
   TBD

3. ENGINEER OF RECORD (EOR)

   FREDERIC G. BOST, P.E.

   3227 WELLINGTON CT.
   RALEIGH, NC 27615
   OFFICE: (919) 782-2710

   GEOFF.BOST@ETS-PLLC.COM

CODE COMPLIANCE

THIS REINFORCEMENT DESIGN IS BASED ON THE REQUIREMENTS OF TIA STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES USING:

TIA CODE	TIA-222-H
BUILDING CODE	2018 CONNECTICUT STATE BUILDING CODE (2015 IBC)
ULTIMATE WIND SPEED	120 MPH
ICE THICKNESS	1.50 IN
WIND SPEED WITH ICE	50 MPH
SERVICE LOAD WIND SPEED	60 MPH
EXPOSURE CATEGORY	B
RISK CATEGORY	II
TOPOGRAPHIC CATEGORY	1
SPECIAL NOTES	-

SHEET INDEX

SHEET #	REV. (DATE)	DESCRIPTION
T-1	0-8/20/2021	TITLE PAGE
N-1	0-8/20/2021	MODIFICATION INSPECTION CHECKLIST
N-2	0-8/20/2021	PROJECT NOTES
S-1	0-8/20/2021	TOWER ELEVATION AND MODIFICATION SCHEDULE
S-2	0-8/20/2021	DIAGONAL REPLACEMENT DETAILS
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PREPARED BY:
ETS
ENGINEERED TOWER SOLUTIONS, PLLC
3227 WELLINGTON COURT
RALEIGH, NC 27615
o: 919-782-2710, f: 919-435-0631
www.engineeredtowersolutions.com

PREPARED FOR:
CTI TOWERS

SITE NAME:
Norwalk 1

SITE NUMBER:
52010

SITE ADDRESS:
6 SHIRLEY STREET
NORWALK, CT 06850

LATITUDE/LONGITUDE:
N 41.115556°, W 73.434444°

SEAL.
STATE OF CONNECTICUT
FREDERIC G. BOST
PEN 0029129
LICENSED PROFESSIONAL ENGINEER
8/20/2021

REV	DATE	DETAILS
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DRAWN BY: EDR | CHECKED BY: JSH

SHEET TITLE:
TITLE PAGE

SHEET # **T-1** | CURRENT REV #: **0**
ETS #: 21093576.STR.5549

MI CHECKLIST		
REQUIRED	REPORT ITEM	BRIEF DESCRIPTION
PRE-CONSTRUCTION		
X	MI CHECKLIST DRAWING	THIS CHECKLIST SHALL BE INCLUDED IN THE MI REPORT.
N/A	EOR APPROVED SHOP DRAWINGS	ONCE THE PRE-MODIFICATION MAPPING IS COMPLETE AND PRIOR TO FABRICATION, THE CONTRACTOR SHALL PROVIDE DETAILED ASSEMBLY DRAWINGS AND/OR SHOP DRAWINGS. THESE ARE TO INCLUDE, BUT ARE NOT LIMITED TO, A VISUAL LAYOUT OF NEW REINFORCEMENT, EXISTING REINFORCEMENT CONFIGURATION, PORTHOLES, MOUNTS, STEP PEGS, SAFETY CLIMBS AND ANY OTHER MISCELLANEOUS ITEMS WHICH MAY AFFECT SUCCESSFUL INSTALLATION OF MODIFICATIONS ON THE TOWER. THESE DRAWINGS SHALL BE SUBMITTED TO THE EOR FOR APPROVAL. APPROVED ASSEMBLY/SHOP DRAWINGS SHALL BE SUBMITTED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
N/A	FABRICATION INSPECTION	A LETTER FROM THE FABRICATOR, STATING THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH INDUSTRY STANDARDS AND THE CONTRACT DOCUMENTS, SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
N/A	FABRICATOR CERTIFIED WELD INSPECTION	A CWI SHALL INSPECT ALL WELDING PERFORMED ON STRUCTURAL MEMBERS DURING FABRICATION. A WRITTEN REPORT SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
X	MATERIAL TEST REPORTS (MTR)	MATERIAL TEST REPORTS SHALL BE PROVIDED FOR MATERIAL USED. MTRS SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
N/A	FABRICATOR NDE INSPECTION REPORT	CRITICAL SHOP WELDS THAT REQUIRE TESTING ARE NOTED ON THESE CONTRACT DRAWINGS. A CERTIFIED NDT INSPECTOR SHALL PERFORM NON-DESTRUCTIVE EXAMINATION AND A REPORT SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
N/A	NDE OF MONOPOLE BASE PLATE SEAM WELD	A NDE OF THE POLE TO BASE PLATE CONNECTION IS REQUIRED AND A WRITTEN REPORT SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
X	PACKING SLIPS	THE MATERIAL SHIPPING LIST SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
ADDITIONAL TESTING AND INSPECTIONS:		
N/A		
CONSTRUCTION		
N/A	FOUNDATION INSPECTIONS	A VISUAL OBSERVATION OF THE EXCAVATION AND REBAR SHALL BE PERFORMED BEFORE PLACING THE CONCRETE. A VISUAL OBSERVATION OF THE REBAR SHALL BE PERFORMED BEFORE PLACING THE EPOXY. A SEALED WRITTEN REPORT SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
N/A	CONCRETE COMP. STRENGTH AND SLUMP TEST	THE CONCRETE MIX DESIGN, SLUMP TEST, AND COMPRESSIVE STRENGTH TESTS SHALL BE PROVIDED AS PART OF THE FOUNDATION REPORT.
N/A	EARTHWORK	FOUNDATION SUB-GRADES SHALL BE INSPECTED AND APPRCVED BY AN APPROVED FOUNDATION INSPECTOR AND RESULTS INCLUDED AS PART OF THE FOUNDATION REPORT.
N/A	MICROPILE/ROCK ANCHOR	MICROPILES/ROCK ANCHORS SHALL BE INSPECTED BY THE FOUNDATION INSPECTION VENDOR AND SHALL BE INCLUDED AS PART OF THE FOUNDATION INSPECTION REPORT, ADDITIONAL TESTING AND/OR INSPECTION REQUIREMENTS ARE NOTED IN THESE CONTRACT DOCUMENTS.
N/A	POST-INSTALLED ANCHOR ROD VERIFICATION	POST INSTALLED ANCHOR ROD VERIFICATION SHALL BE PERFORMED IN ACCORDANCE WITH REQUIREMENTS AND A REPORT SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
N/A	BASE PLATE GROUT VERIFICATION	THE GENERAL CONTRACTOR SHALL PROVIDE DOCUMENTATION TO THE MI INSPECTOR THAT CERTIFIES THAT THE GROUT WAS REMOVED AND/OR INSTALLED IN ACCORDANCE WITH APPLICABLE REQUIREMENTS FOR INCLUSION IN THE MI REPORT.
N/A	FIELD CERTIFIED WELD INSPECTION	A CERTIFIED WELD INSPECTOR SHALL INSPECT AND TEST FIELD WELDS. A REPORT SHALL BE PROVIDED. NDE OF FIELD WELDS SHALL BE PERFORMED IF EXPLICITLY REQUIRED WITHIN CONTRACT DOCUMENTS. THE NDE REPORT SHALL BE INCLUDED IN THE CWI REPORT.
X	ON-SITE COLD GALVANIZING VERIFICATION	THE GENERAL CONTRACTOR SHALL PROVIDE WRITTEN AND PHOTOGRAPHIC DOCUMENTATION TO THE MI INSPECTOR VERIFYING THAT ANY ON-SITE COLD GALVANIZING WAS APPLIED PER MANUFACTURER SPECIFICATIONS AND APPLICABLE STANDARDS.
N/A	TENSION TWIST AND PLUMB	THE GENERAL CONTRACTOR SHALL PROVIDE A REPORT IN ACCORDANCE WITH APPLICABLE STANDARDS DOCUMENTING TENSION TWIST AND PLUMB.
X	GC AS-BUILT DRAWINGS	THE GENERAL CONTRACTOR SHALL SUBMIT A LEGIBLE COPY OF THE ORIGINAL DESIGN DRAWINGS EITHER STATING "INSTALLED AS DESIGNED" OR NOTING ANY CHANGES THAT WERE REQUIRED AND APPROVED BY THE ENGINEER OF RECORD. EOR/RFI FORMS APPROVING ALL CHANGES SHALL BE SUBMITTED WHEN THE EOR IS SPECIFYING ADDITIONAL INSPECTIONS DESCRIPTION AND APPLICABLE STANDARDS SHALL BE APPLIED.
ADDITIONAL TESTING AND INSPECTIONS:		
N/A		
POST-CONSTRUCTION		
X	CONSTRUCTION COMPLIANCE LETTER	A LETTER FROM THE GENERAL CONTRACTOR STATING THAT THE WORKMANSHIP WAS PERFORMED IN ACCORDANCE WITH INDUSTRY STANDARDS AND THESE CONTRACT DRAWINGS, INCLUDING LISTING ADDITIONAL PARTIES TO THE MODIFICATION PROCESS.
N/A	POST-INSTALLED ANCHOR ROD PULL TESTS	POST-INSTALLED ANCHOR RODS SHALL BE TESTED BY AN APPROVED PULL TEST INSPECTOR AND A REPORT SHALL BE PROVIDED INDICATING TESTING RESULTS.
X	PHOTOGRAPHS	PHOTOGRAPHS SHALL BE SUBMITTED TO THE MI. PHOTOS SHALL DOCUMENT ALL PHASES OF THE CONSTRUCTION. THE PHOTOS SHALL BE ORGANIZED IN A MANNER THAT EASILY IDENTIFIES THE EXACT LOCATION OF THE PHOTO.
X	BOLT INSTALLATION VERIFICATION REPORT	THE MI INSPECTOR SHALL VERIFY THE INSTALLATION AND TIGHTNESS 10% OF ALL NON PRE-TENSIONED BOLTS INSTALLED AS PART OF THE MODIFICATION. THE MI INSPECTOR SHALL LOOSEN THE NUT AND VERIFY THE BOLT HOLE SIZE AND CONDITION. THE MI REPORT SHALL CONTAIN THE COMPLETED BOLT INSTALLATION VERIFICATION REPORT, INCLUDING THE SUPPORTING PHOTOGRAPHS.
X	PUNCHLIST DEVELOPMENT AND CORRECTION DOCUMENTATION	FINAL PUNCHLIST INDICATING ALL NONCONFORMANCE(S) IDENTIFIED AND THE FINAL RESOLUTION AND APPROVAL.
X	MI INSPECTOR REDLINE OR RECORD DRAWING(S)	THE MI INSPECTOR SHALL OBSERVE AND REPORT ANY DISCREPANCIES BETWEEN THE CONTRACTOR'S REDLINE DRAWING AND THE ACTUAL COMPLETED INSTALLATION.
ADDITIONAL TESTING AND INSPECTIONS:		
N/A		

MODIFICATION INSPECTION NOTES

GENERAL

THE MI IS AN ON-SITE VISUAL AND HANDS-ON INSPECTION OF TOWER MODIFICATIONS INCLUDING A REVIEW OF CONSTRUCTION REPORTS AND ADDITIONAL PERTINENT DOCUMENTATION PROVIDED BY THE GENERAL CONTRACTOR (GC), AS WELL AS ANY INSPECTION DOCUMENTS PROVIDED BY 3RD PARTY INSPECTORS. THE MI IS TO ENSURE THE INSTALLATION WAS CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, NAMELY THE MODIFICATION DRAWINGS; IN ACCORDANCE WITH APPLICABLE STANDARDS; AND AS DESIGNED BY THE ENGINEER OF RECORD (EOR).

NO DOCUMENT, CODE OR POLICY CAN ANTICIPATE EVERY SITUATION THAT MAY ARISE. ACCORDINGLY, THIS CHECKLIST IS INTENDED TO SERVE AS A SOURCE OF GUIDING PRINCIPLES IN ESTABLISHING GUIDELINES FOR MODIFICATION INSPECTION.

THE MI IS TO CONFIRM INSTALLATION CONFIGURATION AND WORKMANSHIP ONLY AND IS NOT A REVIEW OF THE MODIFICATION DESIGN ITSELF, AND THE MI INSPECTOR DOES NOT TAKE OWNERSHIP OF THE MODIFICATION DESIGN. OWNERSHIP OF THE STRUCTURAL MODIFICATION DESIGN EFFECTIVENESS AND INTEGRITY RESIDES WITH THE EOR AT ALL TIMES. THE MI INSPECTOR SHALL INSPECT AND NOTE CONFORMANCE/NONCONFORMANCE AND PROVIDE TO THE POINT OF CONTACT FOR EVALUATION.

TO ENSURE THAT THE REQUIREMENTS OF THE MI ARE MET, IT IS VITAL THAT THE GENERAL CONTRACTOR (GC) AND THE MI INSPECTOR BEGIN COMMUNICATING AND COORDINATING AS SOON AS A PURCHASE ORDER (PO) IS RECEIVED. IT IS EXPECTED THAT EACH PARTY WILL BE PROACTIVE IN REACHING OUT TO THE OTHER PARTY. IF CONTACT INFORMATION IS NOT KNOWN THE GC AND/OR INSPECTOR SHALL CONTACT THE POINT OF CONTACT (POC).

SERVICE LEVEL COMMITMENT

THE FOLLOWING RECOMMENDATIONS AND SUGGESTIONS ARE OFFERED TO ENHANCE THE EFFICIENCY AND EFFECTIVENESS OF DELIVERING AN MI REPORT:

- THE GC SHALL PROVIDE A MINIMUM OF 5 BUSINESS DAYS NOTICE, PREFERABLY 10, TO THE MI INSPECTOR AS TO WHEN THE SITE WILL BE READY FOR THE MI TO BE CONDUCTED.
- THE GC AND MI INSPECTOR COORDINATE CLOSELY THROUGHOUT THE ENTIRE PROJECT.
- WHEN POSSIBLE, IT IS PREFERRED TO HAVE THE GC AND MI INSPECTOR ON-SITE SIMULTANEOUSLY FOR ANY GUY WIRE TENSIONING OR RE-TENSIONING OPERATIONS.
- WHEN POSSIBLE, IT IS PREFERRED TO HAVE THE GC AND MI INSPECTOR ON-SITE DURING THE MI TO HAVE ANY MINOR DEFICIENCIES CORRECTED DURING THE INITIAL MI. THEREFORE, THE GC MAY CHOOSE TO COORDINATE THE MI CAREFULLY TO ENSURE ALL CONSTRUCTION FACILITIES ARE AT THEIR DISPOSAL WHEN THE MI INSPECTOR IS ON SITE.

REQUIRED PHOTOS

BETWEEN THE GC AND THE MI INSPECTOR THE FOLLOWING PHOTOGRAPHS, AT A MINIMUM, ARE TO BE TAKEN AND INCLUDED IN THE MI REPORT:

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

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

PREPARED BY:

ENGINEERED TOWER SOLUTIONS, PLLC

3227 WELLINGTON COURT
RALEIGH, NC 27615
o: 919-782-2710, f: 919-435-0631
www.engineeredtowersolutions.com

PREPARED FOR:

CTI TOWERS

SITE NAME:

Norwalk 1

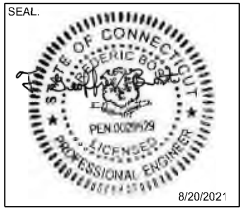
SITE NUMBER:

52010

SITE ADDRESS:
6 SHIRLEY STREET
NORWALK, CT 06850

LATITUDE/LONGITUDE:
N 41.115556°, W 73.434444°

SEAL.



8/20/2021

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DRAWN BY: EDR | CHECKED BY: JSH

SHEET TITLE:

MODIFICATION INSPECTION CHECKLIST

SHEET # **N-1**

CURRENT REV #: **0**
ETS #: 21093576.STR.5549

GENERAL NOTES:

1. ALL REFERENCES TO THE OWNER IN THESE DOCUMENTS SHALL BE CONSIDERED CTI TOWERS, INC. OR ITS DESIGNATED REPRESENTATIVE.
2. ALL WORK PRESENTED ON THESE DRAWINGS MUST BE COMPLETED BY THE CONTRACTOR UNLESS NOTED OTHERWISE. THE CONTRACTOR MUST HAVE CONSIDERABLE EXPERIENCE IN PERFORMANCE OF WORK SIMILAR TO THAT DESCRIBED HEREIN. BY ACCEPTANCE OF THIS ASSIGNMENT, THE CONTRACTOR IS ATTESTING THAT HE DOES HAVE SUFFICIENT EXPERIENCE AND ABILITY, THAT HE IS KNOWLEDGEABLE OF THE WORK TO BE PERFORMED AND THAT HE IS PROPERLY LICENSED AND PROPERLY REGISTERED TO DO THIS WORK IN THE STATE OF CONNECTICUT.
3. WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE 2018 CONNECTICUT STATE BUILDING CODE (2015 IBC).
4. UNLESS SHOWN OR NOTED OTHERWISE ON THE CONTRACT DRAWINGS, OR IN THE SPECIFICATIONS, THE FOLLOWING NOTES SHALL APPLY TO THE MATERIALS LISTED HEREIN, AND TO THE PROCEDURES TO BE USED ON THIS PROJECT.
5. ALL HARDWARE ASSEMBLY MANUFACTURER'S INSTRUCTIONS SHALL BE FOLLOWED EXACTLY AND SHALL SUPERSEDE ANY CONFLICTING NOTES ENCLOSED HEREIN.
6. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE TO INSURE THE SAFETY OF THE STRUCTURE AND IT'S COMPONENT PARTS DURING ERECTION AND/OR FIELD MODIFICATIONS. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF TEMPORARY BRACING, GUYS OR TIE DOWNS THAT MAY BE NECESSARY. SUCH MATERIAL SHALL BE REMOVED AND SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER THE COMPLETION OF THE PROJECT.
7. ALL DIMENSIONS, ELEVATIONS, AND EXISTING CONDITIONS SHOWN ON THE DRAWINGS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO BEGINNING ANY MATERIALS ORDERING, FABRICATION OR CONSTRUCTION WORK ON THIS PROJECT. CONTRACTOR SHALL NOT SCALE CONTRACT DRAWINGS IN LIEU OF FIELD VERIFICATIONS. ANY DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER AND THE OWNERS ENGINEER. THE DISCREPANCIES MUST BE RESOLVED BEFORE THE CONTRACTOR IS TO PROCEED WITH THE WORK. THE CONTRACT DOCUMENTS DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. OBSERVATION VISITS TO THE SITE BY THE OWNER AND/OR THE ENGINEER SHALL NOT INCLUDE INSPECTION OF THE PROTECTIVE MEASURES OR THE PROCEDURES.
8. ALL MATERIALS AND EQUIPMENT FURNISHED SHALL BE NEW AND OF GOOD QUALITY, FREE FROM FAULTS AND DEFECTS AND IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. ANY AND ALL SUBSTITUTIONS MUST BE PROPERLY APPROVED AND AUTHORIZED IN WRITING BY THE OWNER AND ENGINEER PRIOR TO INSTALLATION. THE CONTRACTOR SHALL FURNISH SATISFACTORY EVIDENCE AS TO THE KIND AND QUALITY OF THE MATERIALS AND EQUIPMENT BEING SUBSTITUTED.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THIS PROJECT AND RELATED WORK COMPLIES WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL SAFETY CODES AND REGULATIONS GOVERNING THIS WORK.
10. ACCESS TO THE PROPOSED WORK SITE MAY BE RESTRICTED. THE CONTRACTOR SHALL COORDINATE INTENDED CONSTRUCTION ACTIVITY, INCLUDING WORK SCHEDULE AND MATERIALS ACCESS, WITH THE RESIDENT LEASING AGENT FOR APPROVAL.
11. ALL PERMITS THAT MUST BE OBTAINED ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL BE RESPONSIBLE FOR ABIDING BY ALL CONDITIONS AND REQUIREMENTS OF THE PERMITS.
12. IF APPLICABLE, ALL CONCRETE WORK SHALL COMPLY TO LOCAL CODES AND THE ACI 318-14, "BUILDING REQUIREMENTS FOR STRUCTURAL CONCRETE".
13. 24 HOURS PRIOR TO THE BEGINNING OF ANY CONSTRUCTION, THE CONTRACTOR MUST NOTIFY THE APPLICABLE JURISDICTIONAL (STATE, COUNTY OR CITY) ENGINEER.

WELDING NOTES:

1. ALL WELDING SHALL BE IN ACCORDANCE WITH THE AWS D1.1/D1.1M: 2015 "STRUCTURAL WELDING CODE-STEEL".
2. ALL WELDING SHALL BE PERFORMED BY AWS CERTIFIED WELDERS.
3. CONTRACTOR SHALL RETAIN AN AWS CERTIFIED WELD INSPECTOR TO PERFORM VISUAL INSPECTIONS ON FIELD WELDS. A LETTER AND REPORT SHALL BE ISSUED TO THE CONTRACTOR. CONTRACTOR SHALL SUBMIT LETTER AND REPORT TO TOWER OWNER.
4. GRIND THE SURFACE ADJACENT TO THE WELD FOR A DISTANCE OF 2" MINIMUM ALL AROUND. GRIND THE SURFACE OF THE ROD TO BE INSTALLED FOR A DISTANCE OF 2" MINIMUM ALL AROUND THE AREA TO BE WELDED. ENSURE BOTH AREAS ARE 100% FREE OF ALL GALVANIZING. SURFACES TO BE WELDED SHALL BE FREE FROM SCALE, SLAG, RUST, MOISTURE, GREASE OR ANY OTHER FOREIGN MATERIAL THAT WOULD PREVENT PROPER WELDING.
5. DO NOT WELD IF THE TEMPERATURE OF THE STEEL IN THE VICINITY OF THE WELD AREA IS BELOW 0°F. WHEN THE TEMPERATURE IS BETWEEN 0°F AND 32°F, PREHEAT AND MAINTAIN THE STEEL IN THE VICINITY OF THE WELD AREA AT 70°F DURING THE WELDING PROCESS.
6. DO NOT WELD ON WET OR FROST-COVERED SURFACES & PROVIDE ADEQUATE PROTECTION FROM HIGH WINDS.
7. FOR ALL WELDING, USE E70XX ELECTRODES.
8. AFTER FINAL INSPECTION, THE AREA OF THE WELDS, THE INSTALLATION AND ALL SURFACES DAMAGED BY WELDING OR GRINDING SHALL RECEIVE A COLD-GALVANIZED COATING. THIS COATING SHALL BE APPLIED BY BRUSH. THE GALVANIZING COMPOUND SHALL CONTAIN A MINIMUM OF 95% ± PURE ZINC. THE FINISHED COATING SHALL BE A MINIMUM THICKNESS OF 3 MILS.

STRUCTURAL STEEL NOTES:

1. THE FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AISC SPECIFICATION FOR MANUAL OF STEEL CONSTRUCTION, LOAD AND RESISTANCE FACTOR DESIGN, 15TH EDITION.
2. UNLESS OTHERWISE NOTED, ALL STRUCTURAL ELEMENTS SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
   A. STRUCTURAL STEEL:
      - ANGLE: ASTM A36
      - PIPE/TUBE: ASTM A53 GR. B (FY = 42 KSI)
      - PLATE: ASTM A36 (SELF SUPPORTING AND GUYED TOWERS)
      - PLATE: ASTM A572-65 (MONOPOLE)
      - GUYED WIRES: ASTM A475 (EHS CABLES)
      - GUYED WIRES: ASTM A586 OR A603 (BRIDGE STRAND)

   B. ALL BOLTS, ASTM A325 TYPE I GALVANIZED HIGH STRENGTH BOLTS.
   C. ALL U-BOLTS, ASTM A193 GRADE B7
   D. ALL NUTS, ASTM A563 CARBON AND ALLOY STEEL NUTS.
   E. ALL WASHERS, ASTM F436 HARDENED STEEL WASHERS.
3. ALL CONNECTIONS NOT FULLY DETAILED ON THESE PLANS SHALL BE DETAILED BY THE STEEL FABRICATOR IN ACCORDANCE WITH AISC SPECIFICATION FOR MANUAL OF STEEL CONSTRUCTION, LOAD AND RESISTANCE FACTOR DESIGN, 15TH EDITION.
4. HOLES SHALL NOT BE FLAME CUT THRU STEEL UNLESS APPROVED BY THE ENGINEER.
5. HOT-DIP GALVANIZE ALL ITEMS UNLESS OTHERWISE NOTED, AFTER FABRICATION WHERE PRACTICABLE. GALVANIZING: ASTM A123, ASTM, A153/A153M OR ASTM A653/A653M, G90, AS APPLICABLE.
6. REPAIR DAMAGED SURFACES WITH GALVANIZING REPAIR METHOD AND PAINT CONFORMING TO ASTM A780 OR BY APPLICATION OF STICK OR THICK PASTED MATERIAL SPECIFICALLY DESIGNED FOR REPAIR OF GALVANIZING. CLEAN AREAS TO BE REPAIRED AND REMOVE SLAG FROM WELDS. HEAT SURFACES TO WHICH STICK OR PASTE MATERIAL IS APPLIED, WITH A TORCH TO A TEMPERATURE SUFFICIENT TO MELT THE METALLICS IN STICK OR PASTED; SPREAD MOLTEN MATERIAL UNIFORMLY OVER SURFACES TO BE COATED AND WIPE OFF EXCESS MATERIAL.
7. A NUT LOCKING DEVICE SHALL BE INSTALLED ON ALL PROPOSED AND/OR REPLACED BOLTS.
8. ALL PROPOSED AND/OR REPLACED BOLTS SHALL BE OF SUFFICIENT LENGTH TO EXCLUDE THE THREADS FROM THE SHEAR PLANE.
9. ALL PROPOSED AND/OR REPLACED BOLTS SHALL BE OF SUFFICIENT LENGTH SUCH THAT THE END OF THE BOLT BE 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.
10. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.

BOLT TIGHTENING PROCEDURE:

1. CONNECTION BOLTS SUBJECT TO DIRECT TENSION SHALL BE INSTALLED AND TIGHTENED AS PER SECTION 8.2 OF THE AISC SPECIFICATION FOR STRUCTURAL JOINTS USING A325 OR A490 BOLTS, LOCATED IN THE AISC MANUAL OF STEEL CONSTRUCTION. THE INSTALLATION PROCEDURE IS PARAPHRASED AS FOLLOWS:
2. FASTENERS SHALL BE INSTALLED IN PROPERLY ALIGNED HOLES AND TIGHTENED BY ONE OF THE METHODS DESCRIBED IN SUBSECTION 8.2.1 THROUGH 8.2.4.

   8.2.1 TURN-OF-THE-NUT TIGHTENING

   BOLTS SHALL BE INSTALLED IN ALL HOLES OF THE CONNECTION AND BROUGHT TO A SNUG TIGHT CONDITION AS DEFINED IN SECTION 8.1, UNTIL ALL THE BOLTS ARE SIMULTANEOUSLY SNUG TIGHT AND THE CONNECTION IS FULLY COMPACTED. FOLLOWING THIS INITIAL OPERATION ALL BOLTS IN THE CONNECTION SHALL BE TIGHTENED FURTHER BY THE APPLICABLE AMOUNT OF ROTATION SPECIFIED ABOVE. DURING THE TIGHTENING OPERATION THERE SHALL BE NO ROTATION OF THE PART NOT TURNED BY THE WRENCH. TIGHTENING SHALL PROGRESS SYSTEMATICALLY FROM THE MOST RIGID PART OF THE JOINT IN A MANNER THAT WILL MINIMIZE RELAXATION OF PREVIOUSLY PRETENSIONED BOLTS.
3. TIGHTEN CONNECTION BOLTS BY AISC - "TURN OF THE NUT" METHOD, USING THE CHART BELOW.

BOLT LENGTHS UP TO AND INCLUDING FOUR DIA.		
½"	BOLTS UP TO AND INCLUDING 2.0 INCH LENGTH	+⅓ TURN BEYOND SNUG TIGHT
⅝"	BOLTS UP TO AND INCLUDING 2.5 INCH LENGTH	+⅓ TURN BEYOND SNUG TIGHT
¾"	BOLTS UP TO AND INCLUDING 3.0 INCH LENGTH	+⅓ TURN BEYOND SNUG TIGHT
⅞"	BOLTS UP TO AND INCLUDING 3.5 INCH LENGTH	+⅓ TURN BEYOND SNUG TIGHT
1"	BOLTS UP TO AND INCLUDING 4.0 INCH LENGTH	+⅓ TURN BEYOND SNUG TIGHT
BOLT LENGTHS OVER FOUR DIA. BUT NOT EXCEEDING EIGHT DIA.		
½"	BOLTS 2.25 TO 4.0 INCH LENGTH	+½ TURN BEYOND SNUG TIGHT
⅝"	BOLTS 2.75 TO 5.0 INCH LENGTH	+½ TURN BEYOND SNUG TIGHT
¾"	BOLTS 3.25 TO 6.0 INCH LENGTH	+½ TURN BEYOND SNUG TIGHT
⅞"	BOLTS 3.75 TO 7.0 INCH LENGTH	+½ TURN BEYOND SNUG TIGHT
1"	BOLTS 4.25 TO 8.0 INCH LENGTH	+½ TURN BEYOND SNUG TIGHT

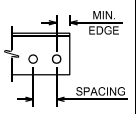
4. ALL OTHER BOLTED CONNECTIONS SHALL BE BROUGHT TO A SNUG TIGHT CONDITION AS DEFINED IN SECTION 8.1 OF THE SPECIFICATION.

NOMINAL HOLE DIMENSIONS

BOLT DIAMETER	STANDARD HOLE	SHORT SLOT
½	9/16	9/16 x 1 1/16
⅝	11/16	11/16 x 7/8
¾	13/16	13/16 x 1
⅞	15/16	15/16 x 1⅛
1	1 1/16	1 1/16 x 1 5/16

BOLT EDGE AND SPACING

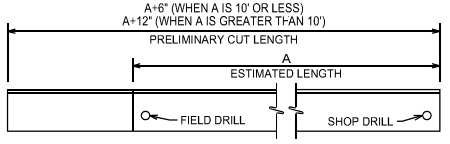
BOLT DIAMETER	MIN EDGE	SPACING
½	⅞	1½
⅝	1⅛	1⅞
¾	1¼	2¼
⅞	1½	2⅝
1	1¾	3



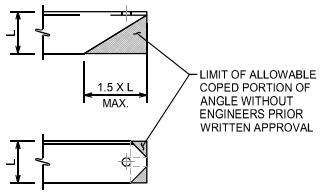
WORKABLE GAGES

LEG LENGTH	GAGE
4	2½
3½	2
3	1¾
2½	1⅜
2	1⅛
1¾	1

MEMBER LENGTHS



ALLOWABLE ANGLE COPE



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RALEIGH, NC 27615
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www.engineeredtowersolutions.com

PREPARED FOR:
CTI TOWERS

SITE NAME:
Norwalk 1

SITE NUMBER:
52010

SITE ADDRESS:
6 SHIRLEY STREET
NORWALK, CT 06850

LATITUDE/LONGITUDE:
N 41.115556°, W 73.434444°

SEAL.
STATE OF CONNECTICUT
PEN.0029729
LICENSED PROFESSIONAL ENGINEER
8/20/2021

REV	DATE	DETAILS
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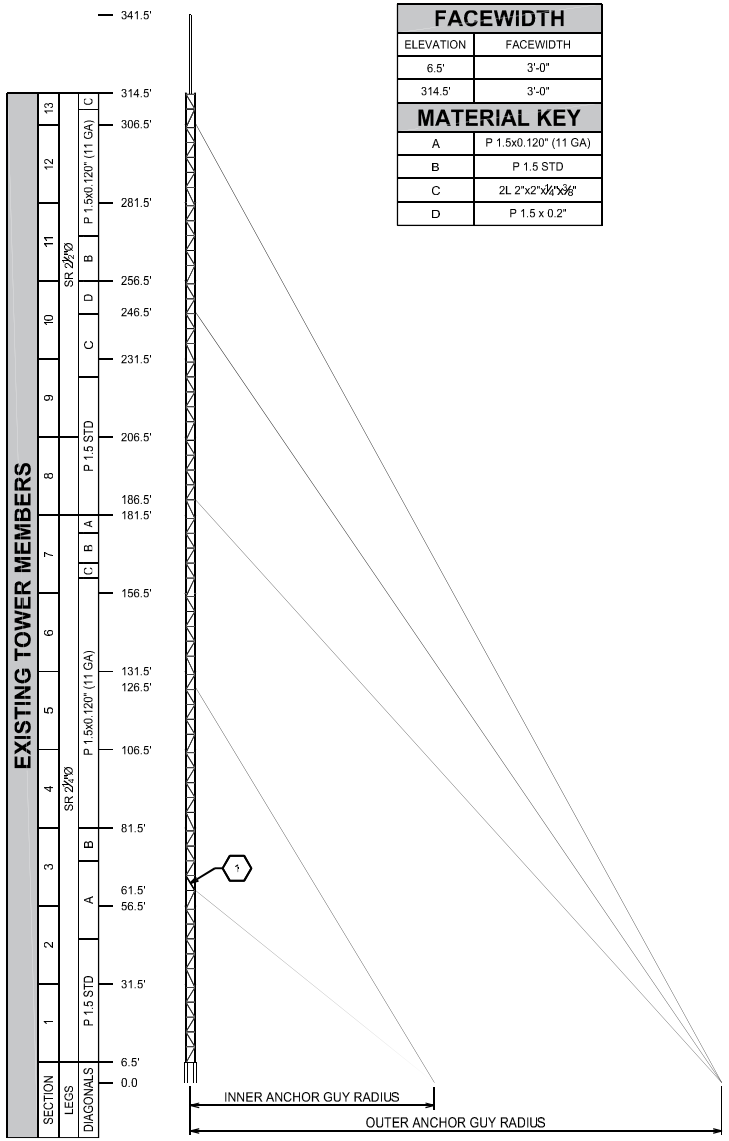
DRAWN BY: EDR | CHECKED BY: JSH

SHEET TITLE:
PROJECT NOTES

SHEET # **N-2**
CURRENT REV #: **0**
ETS #: 21093576.STR.5549



FACEWIDTH	
ELEVATION	FACEWIDTH
6.5'	3'-0"
314.5'	3'-0"

MATERIAL KEY	
A	P 1.5x0.120" (11 GA)
B	P 1.5 STD
C	2L 2"x2"x¼"x⅜"
D	P 1.5 x 0.2"

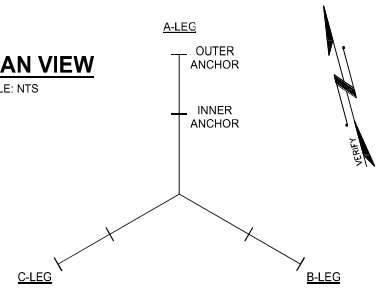
MODIFICATION SCHEDULE			
NO.	MODIFICATION DESCRIPTION	ELEVATIONS (FT.)	DETAIL SHEET #
1	REPLACE EXISTING DIAGONALS	61.5 - 66.5	S-2

NOTES:

1. ANTENNAS AND OTHER APPURTENANCES MAY NEED TO BE TEMPORARILY REMOVED OR MOVED DURING MODIFICATION INSTALLATION.
2. FIELD VERIFICATION OF ALL MEASUREMENTS REQUIRED PRIOR TO FABRICATION.

GUY PLAN VIEW

SCALE: NTS



GUY RADIUS / RELATIVE ELEVATION						
	ANCHOR	RADIUS (FT)	REL. ELEV.		ANCHOR	RADIUS (FT)	REL. ELEV.
INNER	A-LEG	78.5	0.0	OUTER	A-LEG	169.0	0.0
	B-LEG	75.0	0.0		B-LEG	170.0	0.0
	C-LEG	78.0	0.0		C-LEG	170.0	0.0

TOWER ELEVATION

SCALE: 1" = 40'

0 40 80

SCALE IN FEET

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SEAL.

8/20/2021

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DRAWN BY: EDR | CHECKED BY: JSH

SHEET TITLE:

TOWER ELEVATION AND MODIFICATION SCHEDULE

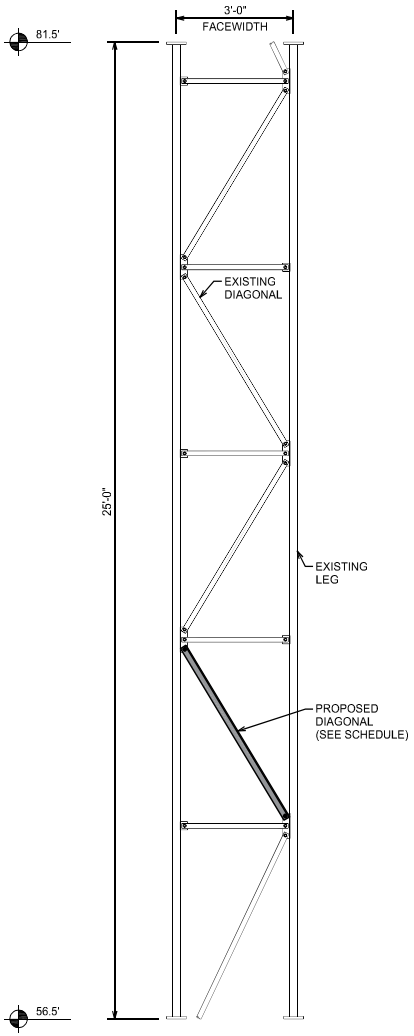
SHEET # **S-1** | CURRENT REV #: **0**
ETS #: 21093576.STR.5549

BRACING SCHEDULE

SECTION	BAY	ELEVATION (FT)	EXISTING DIAGONAL	PROPOSED BRACING			PROPOSED CONNECTION	
				SIZE	LENGTH	QTY.	SIZE	QTY.
3	2 (of 5)	61.5 - 66.5	P 1.5x0.120" (11 GA)	L 2"x2"x3/8"	5'-7"± (FIELD VERIFY)	3	5/8"Ø A325N	6

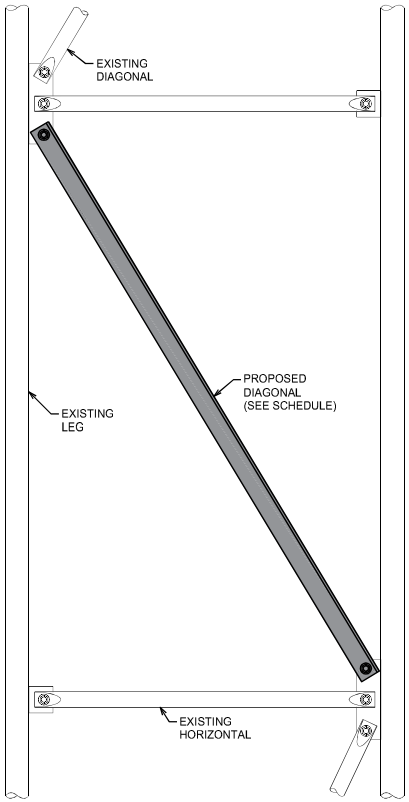
NOTES:

1. IT IS THE CONTRACTORS RESPONSIBILITY TO MEASURE ALL RELEVANT EXISTING MEMBERS PRIOR TO ORDERING MATERIALS.
2. PRIOR TO FABRICATION AND INSTALLATION, CONTRACTOR SHALL FIELD VERIFY ALL LENGTHS.
3. ALL CONNECTIONS NOT FULLY DETAILED ON THESE PLANS SHALL BE DETAILED BY THE STEEL FABRICATOR IN ACCORDANCE WITH AISC SPECIFICATION FOR MANUAL OF STEEL CONSTRUCTION, LOAD AND RESISTANCE FACTOR DESIGN 15TH EDITION.



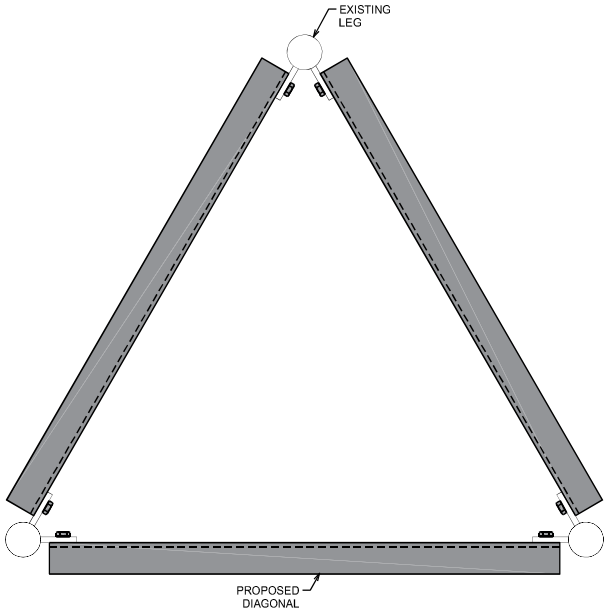
SECTION 2 ELEVATION

SCALE: 5/16" = 1'-0"



BRACING DETAIL (ELEVATION VIEW)

SCALE: 1" = 1'-0"



BRACING DETAIL (PLAN VIEW)

SCALE: 1" = 1'-0"

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DRAWN BY: EDR | CHECKED BY: JSH

SHEET TITLE:

DIAGONAL REPLACEMENT DETAILS

SHEET # **S-2** | CURRENT REV #: **0** | ETS #: 21093576.STR.5549

Maser Consulting Connecticut
2000 Midlantic Drive, Suite 100
Mt. Laurel, NJ 08054
856.797.0412
peter.albano@colliersengineering.com

Antenna Mount Analysis Report and PMI Requirements

Mount Analysis

SMART Tool Project #: 10018139
Maser Consulting Connecticut Project #: 20777331A

May 21, 2021

Site Information	*Site ID:*	*469061-VZW / Norwalk 9 CT*
	Site Name:	*Norwalk 9 CT*
	Carrier Name:	*Verizon Wireless*
	Address:	*6 Shirley St* *Norwalk, Connecticut 06850* *Fairfield County*
	Latitude:	*41.115556°*
	Longitude:	*-73.434444°*
Structure Information	*Tower Type:*	*Guyed*
	Mount Type:	*12.50-Ft Sector Mount*

FUZE ID # 16231952

Analysis Results

Sector Mount: **95.2% Pass**

******Contractor PMI Requirements*:**
Included at the end of this MA report
Available & Submitted via portal at https://pmi.vzwsmart.com
Contractor - Please Review Specific Site PMI Requirements Upon Award
Requirements also Noted on Mount Modification Drawings
Requirements may also be Noted on A & E drawings

Report Prepared By: Evelina Lopez

Digitally signed by Justin Linette
Date: 2021.05.21 16:07:56-04'00'

Executive Summary:

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

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

Sources of Information:

Document Type	Remarks
Radio Frequency Data Sheet (RFDS)	*Verizon RFDS Site ID: 1918233, dated November 17, 2020*
Mount Mapping Report	*RKS Design & Engineering LLC, Site ID: CTI:52010, dated March 18, 2021*

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H	
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), V_{ULT}:	117 mph
	Ice Wind Speed (3-sec. Gust):	50 mph
	Design Ice Thickness:	1.00 in
	Risk Category:	II
	Exposure Category:	B
	Topographic Category:	1
	Topographic Feature Considered:	N/A
	Topographic Method:	N/A
	Ground Elevation Factor, K_e:	0.996
Seismic Parameters:	S_S:	0.244
	S_1:	0.057
Maintenance Parameters:	Wind Speed (3-sec. Gust):	30 mph
	Maintenance Live Load, Lv:	250 lbs.
	Maintenance Live Load, Lm:	500 lbs.
Analysis Software:	RISA-3D (V17)	

Final Loading Configuration:

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

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
100.00	101.0	6	JMA Wireless	MX06FRO660-02	Added
		3	Samsung	MT6407-77A	
		3	Samsung	B2/B66A RRH-BR049	
		3	Samsung	B5/B13 RRH-BR04C	
		3	CSS	X7C-FRO-660-V	Retained
		1	Raycap	RRFDC-3315-PF-48*	

* Equipment is flush mounted directly to the Guyed. It is not mounted on Sector mounts and is not included in this mount analysis.

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

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

Standard Conditions:

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

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

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

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

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

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

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

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

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

Discrepancies between in-field conditions and the assumptions listed above may render this analysis invalid unless explicitly approved by Maser Consulting Connecticut.

Analysis Results:

Component	Utilization %	Pass/Fail
Face Horizontal	95.2%	Pass
Standoff Plate	38.6%	Pass
Antenna Mount	25.9%	Pass
Standoff Horizontal	77.0%	Pass
Standoff Pipe	6.7%	Pass
Standoff Diagonal	50.5%	Pass
Tieback	7.2%	Pass
Mount Connection	29.4%	Pass

Structure Rating – *(Controlling Utilization of all Components)*	**95.2%**

Recommendation:

The existing mounts are **SUFFICIENT** for the final loading configuration and do not require modifications.

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

Attachments:

1. Mount Photos
2. Mount Mapping Report (for reference only)
3. Analysis Calculations
4. **Contractor Required Post Installation Inspection (PMI) Report Deliverables**
5. Antenna Placement Diagrams
6. TIA Adoption and Wind Speed Usage Letter


03/18/2021

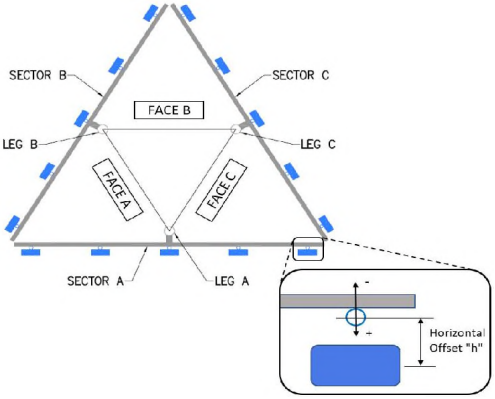

2021. 3. 18

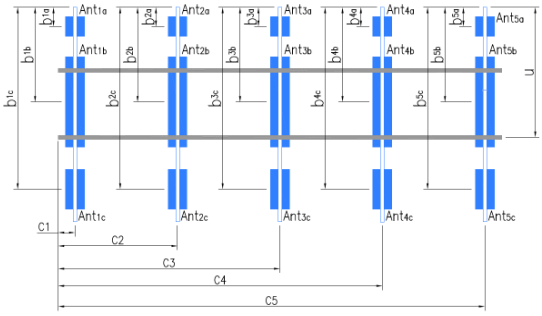
V3.0 Updated on 8-31-2020

Antenna Mount Mapping Form (PATENT PENDING)

Tower Owner:	CTI TOWERS	**Mapping Date:**	3/18/2021
Site Name:	VZW:Norwalk 9 CT	**Tower Type:**	Guyed Tower
Site Number or ID:	CTI:52010	**Tower Height (Ft.):**	UNKNOWN
Mapping Contractor:	RKS Design & Engineering LLC.	**Mount Elevation (Ft.):**	100.45

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





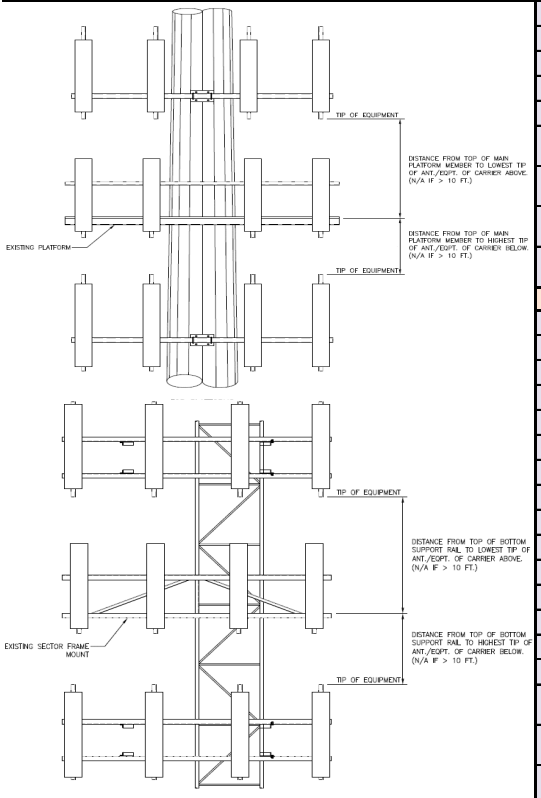
Antenna Layout (Looking Out From Tower)

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."
	PIPE 2.375"Ø x 0.15" x 96.5" LON				PIPE 2.375"Ø x 0.15" x 96.5" LONG		
	PIPE 2.375"Ø x 0.15" x 96.5" LON				PIPE 2.375"Ø x 0.15" x 96.5" LONG		
	PIPE 2.375"Ø x 0.15" x 96.5" LON				PIPE 2.375"Ø x 0.15" x 96.5" LONG		
	PIPE 2.375"Ø x 0.15" x 96.5" LON				PIPE 2.375"Ø x 0.15" x 96.5" LONG		
	PIPE 2.375"Ø x 0.15" x 96.5" LON						
	PIPE 2.375"Ø x 0.15" x 96.5" LON						
	PIPE 2.375"Ø x 0.15" x 96.5" LON						
	PIPE 2.375"Ø x 0.15" x 96.5" LON						
Distance between bottom rail and mount CL elevation (dim d). Unit is inches. See 'Mount Elev Ref' tab for details. :							
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.):			Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.):				

	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 , b b , b_{1b}...." (Inches)	Horiz. Offset "h" (Use "-" if Ant. is behind)	Antenna Azimuth (Degrees)	Photo Numbers
Sector A										
Ant										
Ant_{1b}										
Ant_{1c}										
Ant										
Ant_{2b}										
Ant_{2c}										
Ant										
Ant_{3b}										
Ant_{3c}										
Ant										
Ant_{4b}										
Ant_{4c}										
Ant										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff	9442 RRH2x40-AWS	10.60								
Ant on Standoff										
Ant on Tower										
Ant on Tower										

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

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



Sector B										
Ant										
Ant_{1b}										
Ant_{1c}										
Ant										
Ant_{2b}										
Ant_{2c}										
Ant										
Ant_{3b}										
Ant_{3c}										
Ant										
Ant_{4b}										
Ant_{4c}										
Ant										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff	9442 RRH2x40-AWS	10.60								
Ant on Standoff										
Ant on Tower										
Ant on Tower										

Sector C										
Ant										
Ant_{1b}										
Ant_{1c}										
Ant										
Ant_{2b}										
Ant_{2c}										
Ant										
Ant_{3b}										
Ant_{3c}										
Ant										
Ant_{4b}										
Ant_{4c}										
Ant										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff	9442 RRH2x40-AWS	10.60								
Ant on Standoff										
Ant on Tower										
Ant on Tower										

Sector D										
Ant										
Ant_{1b}										
Ant_{1c}										
Ant										
Ant_{2b}										
Ant_{2c}										
Ant										
Ant_{3b}										
Ant_{3c}										
Ant										
Ant_{4b}										
Ant_{4c}										
Ant										
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 #

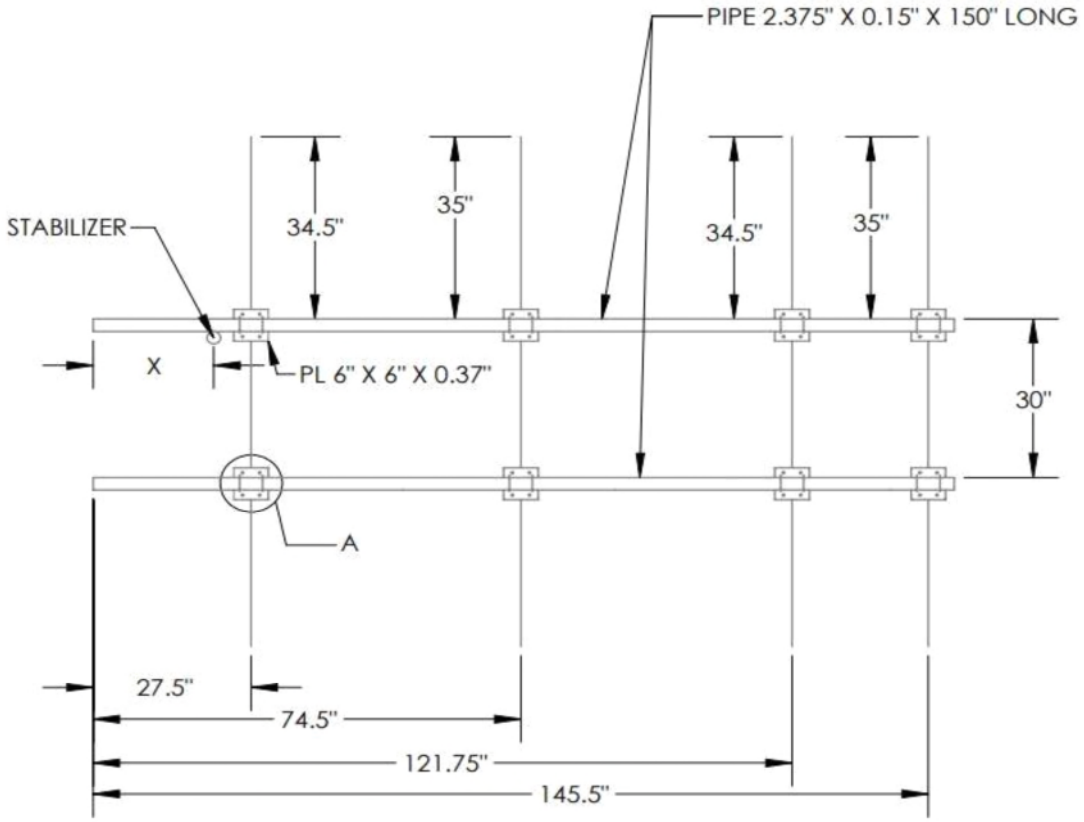
Mapping Notes
1. Please report any visible structural or safety issues observed on the antenna mounts (Damaged members, loose connections, tilting mounts, safety climb issues, etc.)
2. If the thickness of the existing pipes or tubing can't be obtained from a general tool (such as Caliper), please use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

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

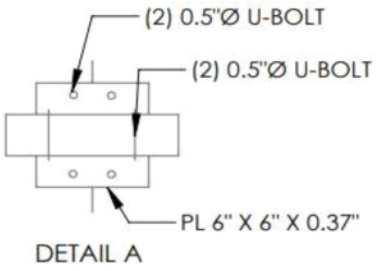
Antenna Mount Mapping Form (PATENT PENDING)

Tower Owner:	CTI TOWERS	**Mapping Date:**	3/18/2021
Site Name:	VZW:Norwalk 9 CT	**Tower Type:**	Guyed Tower
Site Number or ID:	CTI:52010	**Tower Height (Ft.):**	UNKNOWN
Mapping Contractor:	RKS Design & Engineering LLC.	**Mount Elevation (Ft.):**	100.45

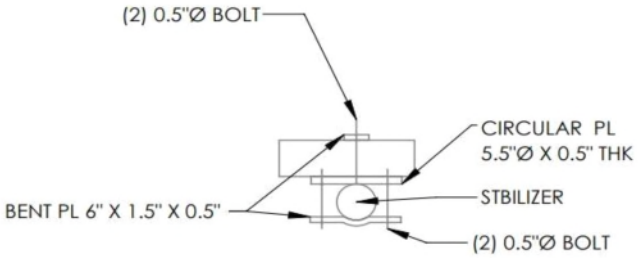
Please Insert Sketches of the Antenna Mount



SECTOR -A,B,C



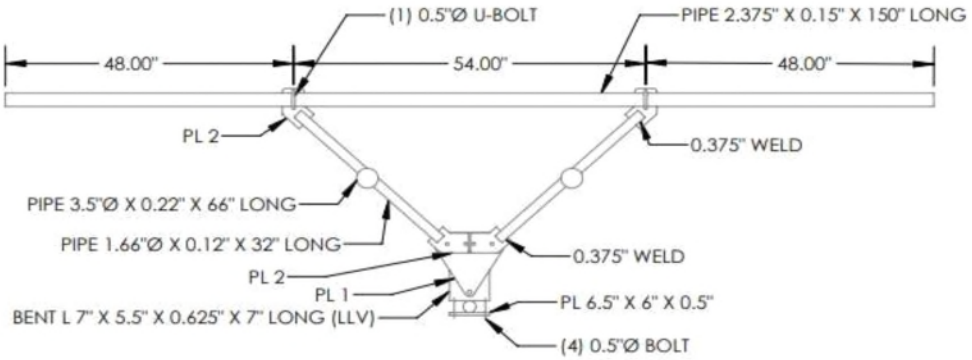
DETAIL A



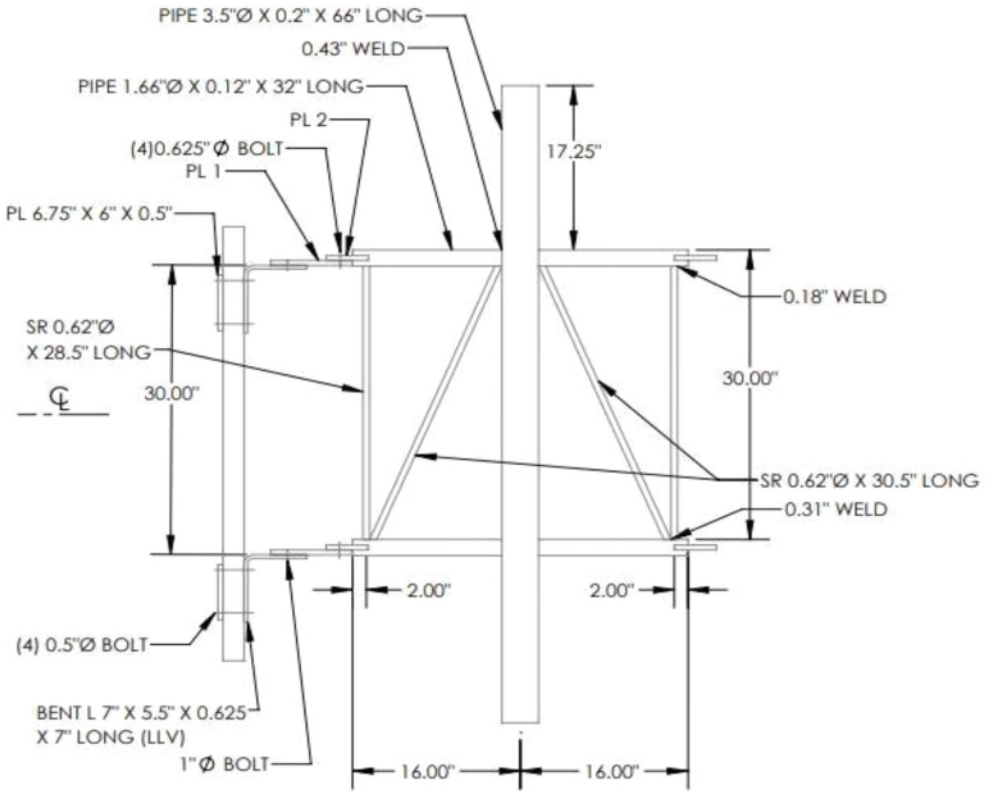
STABILIZER CONNECTION
ON MOUNT & TOWER LEG

	SECTOR-A	SECTOR-B	SECTOR-C
X	21"	21"	12.5"

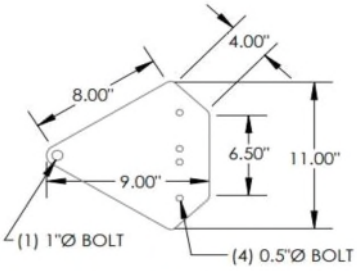
Please Insert Sketches of the Antenna Mount, cont'd



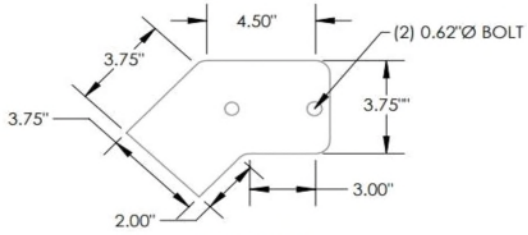
PLAN VIEW



STAND-OFF VIEW - 1

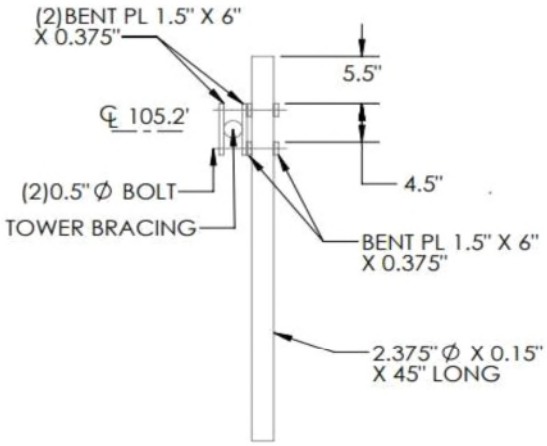


PL 1 DETAIL
0.625" THK



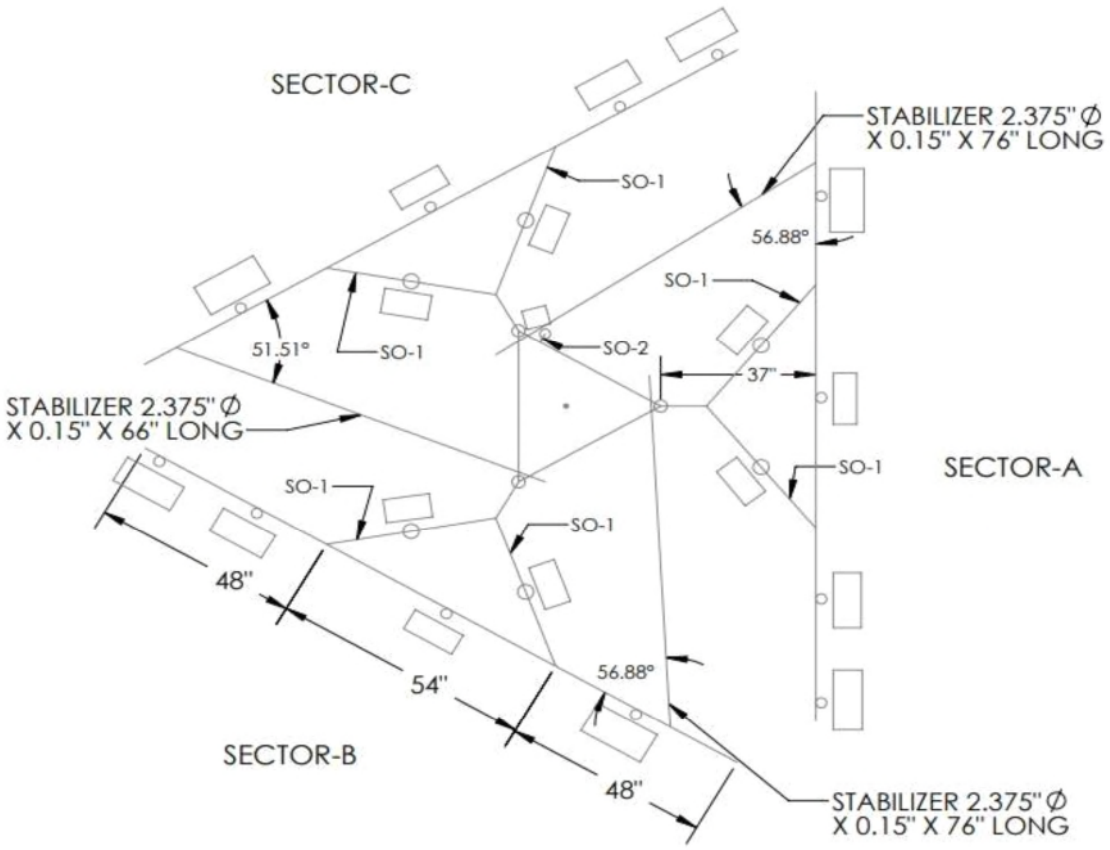
PL 2 DETAIL
0.625" THK

Please Insert Sketches of the Antenna Mount, cont'd

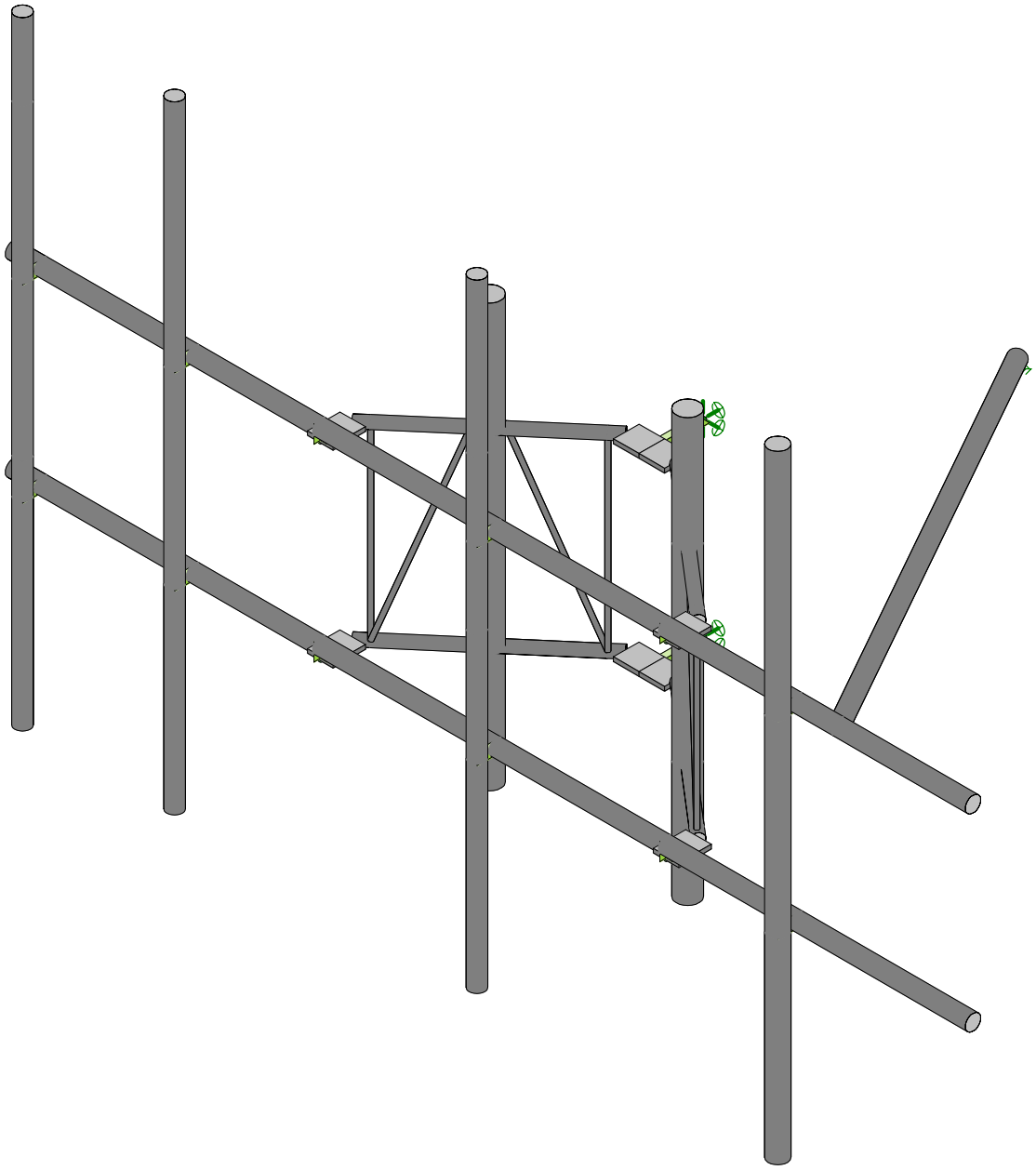


STAND-OFF VIEW - 2

Please Insert Sketches of the Antenna Mount, cont'd

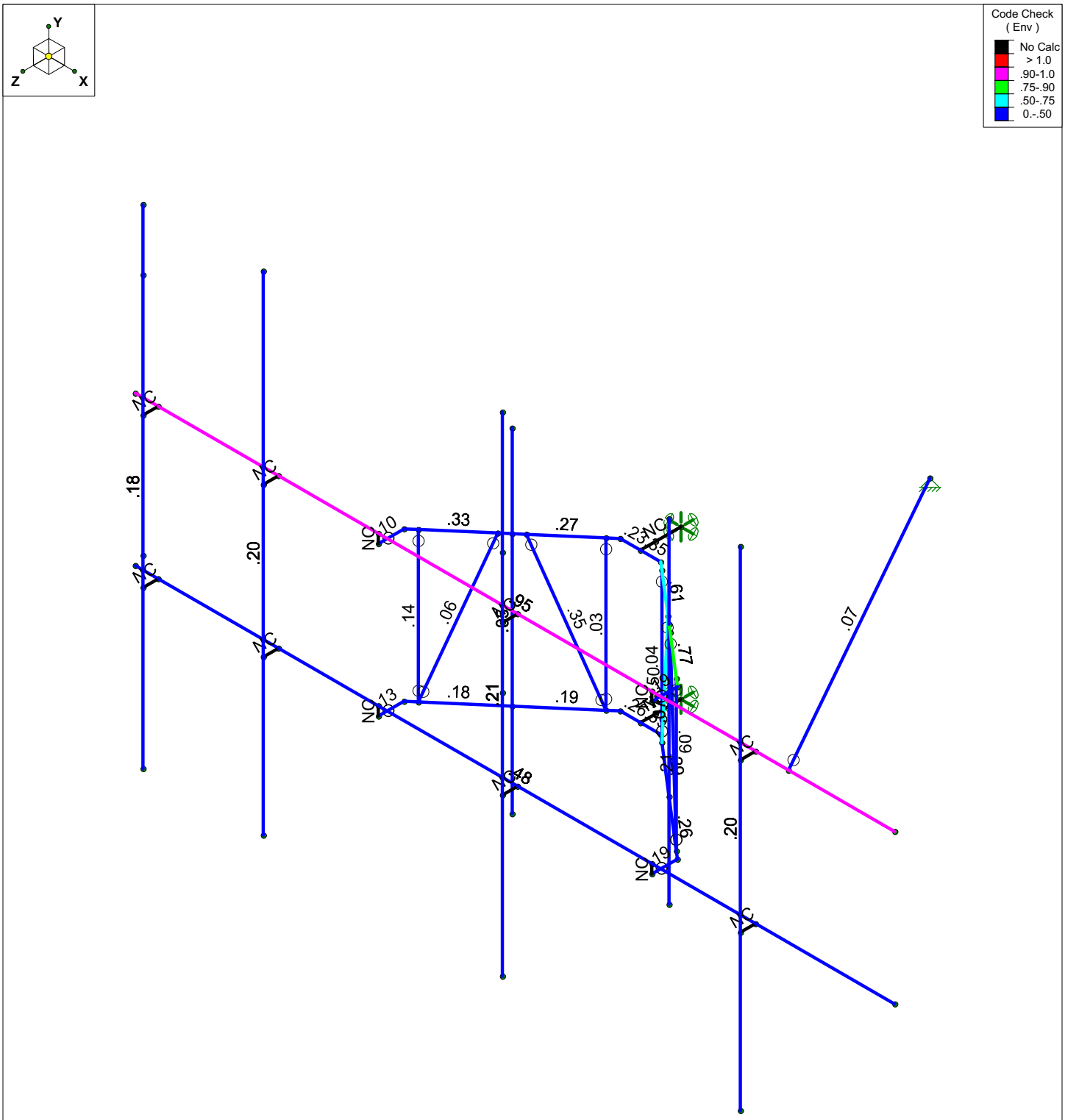


ANTENNA PLAN VIEW



Envelope Only Solution

Maser Consulting	Mount Analysis	SK - 1
NL		May 21, 2021 at 2:36 PM
20777331A		469061-VZW_MT_LOT_A_H.r3d



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

Maser Consulting	Mount Analysis	SK - 2
NL		May 21, 2021 at 2:36 PM
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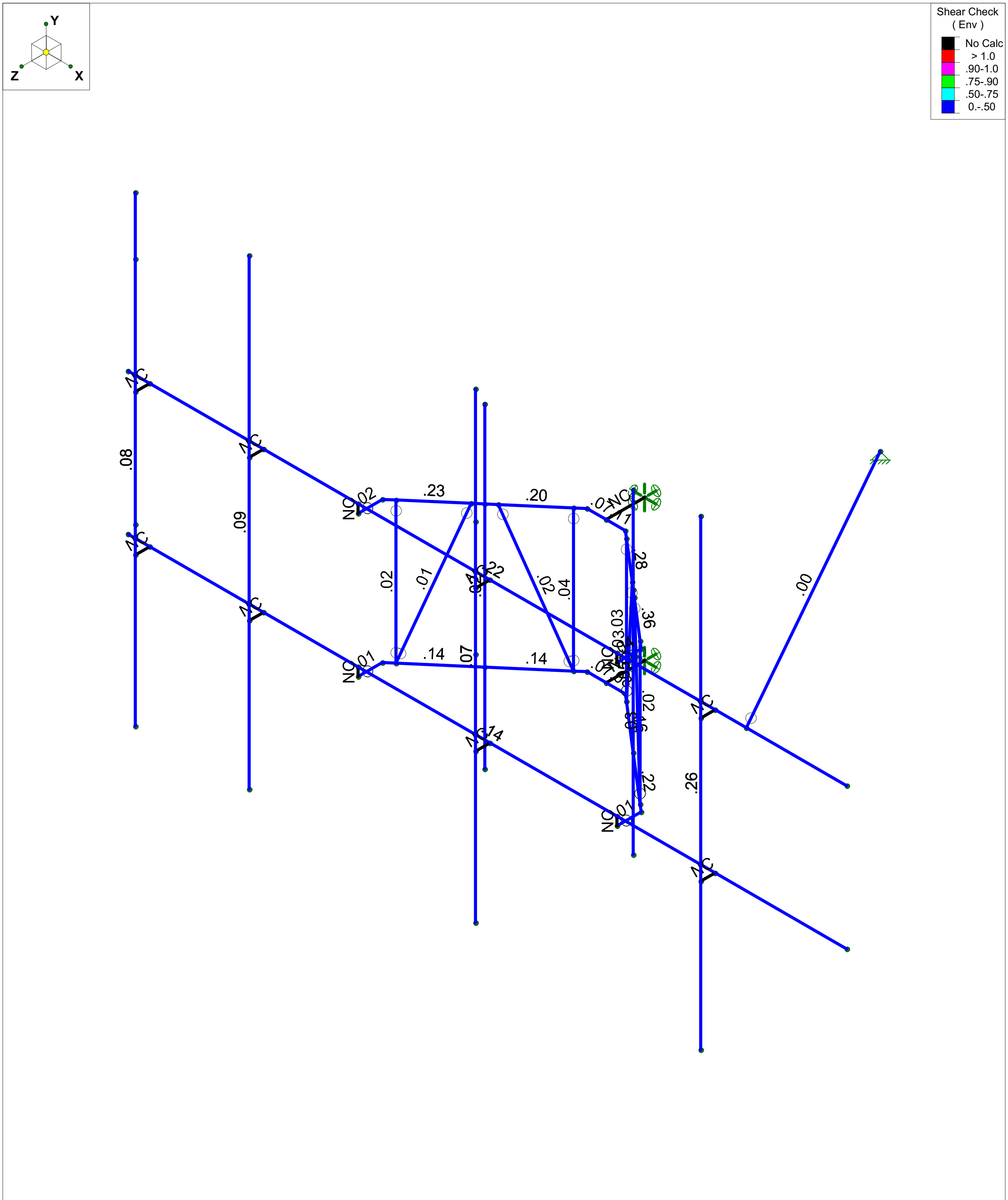


Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

Maser Consulting	Mount Analysis	SK - 3
NL		May 21, 2021 at 2:36 PM
20777331A		469061-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					30			
2	Antenna Di	None					30			
3	Antenna Wo (0 Deg)	None					30			
4	Antenna Wo (30 Deg)	None					30			
5	Antenna Wo (60 Deg)	None					30			
6	Antenna Wo (90 Deg)	None					30			
7	Antenna Wo (120 Deg)	None					30			
8	Antenna Wo (150 Deg)	None					30			
9	Antenna Wo (180 Deg)	None					30			
10	Antenna Wo (210 Deg)	None					30			
11	Antenna Wo (240 Deg)	None					30			
12	Antenna Wo (270 Deg)	None					30			
13	Antenna Wo (300 Deg)	None					30			
14	Antenna Wo (330 Deg)	None					30			
15	Antenna Wi (0 Deg)	None					30			
16	Antenna Wi (30 Deg)	None					30			
17	Antenna Wi (60 Deg)	None					30			
18	Antenna Wi (90 Deg)	None					30			
19	Antenna Wi (120 Deg)	None					30			
20	Antenna Wi (150 Deg)	None					30			
21	Antenna Wi (180 Deg)	None					30			
22	Antenna Wi (210 Deg)	None					30			
23	Antenna Wi (240 Deg)	None					30			
24	Antenna Wi (270 Deg)	None					30			
25	Antenna Wi (300 Deg)	None					30			
26	Antenna Wi (330 Deg)	None					30			
27	Antenna Wm (0 Deg)	None					30			
28	Antenna Wm (30 Deg)	None					30			
29	Antenna Wm (60 Deg)	None					30			
30	Antenna Wm (90 Deg)	None					30			
31	Antenna Wm (120 Deg)	None					30			
32	Antenna Wm (150 Deg)	None					30			
33	Antenna Wm (180 Deg)	None					30			
34	Antenna Wm (210 Deg)	None					30			
35	Antenna Wm (240 Deg)	None					30			
36	Antenna Wm (270 Deg)	None					30			
37	Antenna Wm (300 Deg)	None					30			
38	Antenna Wm (330 Deg)	None					30			
39	Structure D	None		-1						
40	Structure Di	None						33		
41	Structure Wo (0 Deg)	None						66		
42	Structure Wo (30 Deg)	None						66		
43	Structure Wo (60 Deg)	None						66		
44	Structure Wo (90 Deg)	None						66		
45	Structure Wo (120 Deg)	None						66		
46	Structure Wo (150 Deg)	None						66		
47	Structure Wo (180 Deg)	None						66		
48	Structure Wo (210 Deg)	None						66		
49	Structure Wo (240 Deg)	None						66		
50	Structure Wo (270 Deg)	None						66		
51	Structure Wo (300 Deg)	None						66		
52	Structure Wo (330 Deg)	None						66		
53	Structure Wi (0 Deg)	None						66		
54	Structure Wi (30 Deg)	None						66		
55	Structure Wi (60 Deg)	None						66		
56	Structure Wi (90 Deg)	None						66		

Basic Load Cases (Continued)

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

Load Combinations

	Description	Solve	P...	S...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...
1	1.2D+1.0Wo (0 De...	Yes	Y		1	1.2	39	1.2	3	1	41	1												
2	1.2D+1.0Wo (30 D...	Yes	Y		1	1.2	39	1.2	4	1	42	1												
3	1.2D+1.0Wo (60 D...	Yes	Y		1	1.2	39	1.2	5	1	43	1												
4	1.2D+1.0Wo (90 D...	Yes	Y		1	1.2	39	1.2	6	1	44	1												
5	1.2D+1.0Wo (120 ...	Yes	Y		1	1.2	39	1.2	7	1	45	1												
6	1.2D+1.0Wo (150 ...	Yes	Y		1	1.2	39	1.2	8	1	46	1												
7	1.2D+1.0Wo (180 ...	Yes	Y		1	1.2	39	1.2	9	1	47	1												
8	1.2D+1.0Wo (210 ...	Yes	Y		1	1.2	39	1.2	10	1	48	1												
9	1.2D+1.0Wo (240 ...	Yes	Y		1	1.2	39	1.2	11	1	49	1												
10	1.2D+1.0Wo (270 ...	Yes	Y		1	1.2	39	1.2	12	1	50	1												
11	1.2D+1.0Wo (300 ...	Yes	Y		1	1.2	39	1.2	13	1	51	1												
12	1.2D+1.0Wo (330 ...	Yes	Y		1	1.2	39	1.2	14	1	52	1												
13	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	15	1	53	1								
14	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	16	1	54	1								
15	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	17	1	55	1								
16	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	18	1	56	1								
17	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	19	1	57	1								
18	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	20	1	58	1								
19	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	21	1	59	1								
20	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	22	1	60	1								
21	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	23	1	61	1								
22	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	24	1	62	1								
23	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	25	1	63	1								
24	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	26	1	64	1								
25	1.2D + 1.5Lm1 + 1...	Yes	Y		1	1.2	39	1.2	77	1.5	27	1	65	1										
26	1.2D + 1.5Lm1 + 1...	Yes	Y		1	1.2	39	1.2	77	1.5	28	1	66	1										
27	1.2D + 1.5Lm1 + 1...	Yes	Y		1	1.2	39	1.2	77	1.5	29	1	67	1										
28	1.2D + 1.5Lm1 + 1...	Yes	Y		1	1.2	39	1.2	77	1.5	30	1	68	1										

Load Combinations (Continued)

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

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	N1	3.416667	0.145833	8.083333	0	
2	N2	-9.083333	0.145833	8.083333	0	
3	N3	3.416667	2.604167	8.083333	0	
4	N4	-9.083333	2.604167	8.083333	0	
5	N29	-2.833333	0	6.019792	0	
6	N30	-2.833333	2.458333	6.019792	0	
7	N35	-2.833333	0	5.353125	0	
8	N36	-2.833333	2.458333	5.353125	0	
9	N31A	-2.5	2.458333	6.019792	0	
10	N32A	-3.166667	2.458333	6.019792	0	
11	N31	-2.5	0	6.019792	0	
12	N32	-3.166667	0	6.019792	0	
13	N47A	1.125	0.145833	8.083333	0	
14	N48A	1.125	2.604167	8.083333	0	
15	N49A	-2.791667	0.145833	8.083333	0	
16	N50	-2.791667	2.604167	8.083333	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
17	N51	-6.729167	0.145833	8.083333	0	
18	N52	-6.729167	2.604167	8.083333	0	
19	N53	-8.708333	0.145833	8.083333	0	
20	N54	-8.708333	2.604167	8.083333	0	
21	N55	1.125	0.145833	8.333333	0	
22	N56	1.125	2.604167	8.333333	0	
23	N57	-2.791667	0.145833	8.333333	0	
24	N58	-2.791667	2.604167	8.333333	0	
25	N59A	-6.729167	0.145833	8.333333	0	
26	N60A	-6.729167	2.604167	8.333333	0	
27	N61A	-8.708333	0.145833	8.333333	0	
28	N62A	-8.708333	2.604167	8.333333	0	
29	N63	1.125	5.645833	8.333333	0	
30	N64	-2.791667	5.604167	8.333333	0	
31	N65	-6.729167	5.645833	8.333333	0	
32	N66	-8.708333	5.604167	8.333333	0	
33	N67	1.125	-2.395833	8.333333	0	
34	N68	-2.791667	-2.4375	8.333333	0	
35	N69	-6.729167	-2.395833	8.333333	0	
36	N70	-8.708333	-2.4375	8.333333	0	
37	N71A	-5.083333	0	8.083333	0	
38	N72A	-5.083333	2.458333	8.083333	0	
39	N73A	-5.083333	0	7.661458	0	
40	N74	-5.083333	2.458333	7.661458	0	
41	N75	-5.083333	0.145833	8.083333	0	
42	N76	-5.083333	2.604167	8.083333	0	
43	N77	-0.583333	0	8.083333	0	
44	N78	-0.583333	2.458333	8.083333	0	
45	N79	-0.583333	0	7.661458	0	
46	N80	-0.583333	2.458333	7.661458	0	
47	N81	-0.583333	0.145833	8.083333	0	
48	N82	-0.583333	2.604167	8.083333	0	
49	N83	-1.541667	2.458333	6.840625	0	
50	N84	-1.541667	3.965	6.840625	0	
51	N85	-1.541667	-1.535	6.840625	0	
52	N86	-1.541667	0	6.840625	0	
53	N87	-1.415101	2.458333	6.949031	0	
54	N88	-1.668248	2.458333	6.732205	0	
55	N89	-0.709915	2.458333	7.553038	0	
56	N91	-0.709915	-0.	7.553038	0	
57	N75A	-2.373434	2.458333	6.128198	0	
58	N76A	-2.373434	-0.	6.128198	0	
59	N61	-4.956752	2.458333	7.553038	0	
60	N62	-4.956752	0	7.553038	0	
61	N63A	-4.125	2.458333	6.840625	0	
62	N64A	-4.125	0	6.840625	0	
63	N65A	-4.125	3.965	6.840625	0	
64	N66A	-4.125	-1.535	6.840625	0	
65	N67A	-3.998418	2.458333	6.732205	0	
66	N69A	-3.293232	2.458333	6.128198	0	
67	N70A	-3.293232	0	6.128198	0	
68	N71B	-4.251566	2.458333	6.949031	0	
69	N69B	1.666667	2.604167	8.083333	0	
70	N70B	-1.333333	2.604167	2.755049	0	
71	N71	-8.708333	4.604167	8.333333	0	
72	N72	-8.708333	0.604167	8.333333	0	
73	N73	-2.791667	3.604167	8.333333	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
74	N74A	-2.791667	1.604167	8.333333	0	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Antenna Pipe	PIPE_2.0	Beam	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
2	Face Horizontal	PIPE_2.0	Beam	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
3	Standoff Horizontal	PIPE_1.25	Beam	Pipe	A53 Gr. B	Typical	.625	.184	.184	.368
4	Standoff Diagonal	SR_0.625	Beam	BAR	A36 Gr.36	Typical	.307	.007	.007	.015
5	Tieback	PIPE_2.0	Beam	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
6	Standoff Vertical	PIPE_3.0	Column	Pipe	A53 Gr. B	Typical	2.07	2.85	2.85	5.69
7	Standoff Plate	PL5/8x4	Beam	RECT	A36 Gr.36	Typical	2.5	.081	3.333	.293
8	Dual Mount	PIPE_2.5	Column	Pipe	A53 Gr. B	Typical	1.61	1.45	1.45	2.89

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/1...	Density[k/ft...	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A36 Gr.36	29000	11154	.3	.65	.49	36	1.5	58	1.2
2	A53 Gr. B	29000	11154	.3	.65	.49	35	1.5	60	1.2
3	A572 Gr.50	29000	11154	.3	.65	.49	50	1.1	65	1.1
4	A992	29000	11154	.3	.65	.49	50	1.1	65	1.1
5	A500 Gr. B 42	29000	11154	.3	.65	.49	42	1.4	58	1.3
6	A500 Gr. B 46	29000	11154	.3	.65	.49	46	1.4	58	1.3
7	Q235	29000	11154	.3	.65	.49	35	1.5	58	1.2

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N2	N1			Face Horizontal	Beam	Pipe	A53 Gr. B	Typical
2	M2	N4	N3			Face Horizontal	Beam	Pipe	A53 Gr. B	Typical
3	M21	N32A	N30		90	Standoff Plate	Beam	RECT	A36 Gr.36	Typical
4	M22	N31A	N30		90	Standoff Plate	Beam	RECT	A36 Gr.36	Typical
5	M29	N29	N35			RIGID	None	None	RIGID	Typical
6	M30	N30	N36			RIGID	None	None	RIGID	Typical
7	M51A	N30	N36			RIGID	None	None	RIGID	Typical
8	M52A	N29	N35			RIGID	None	None	RIGID	Typical
9	M20	N32	N29		90	Standoff Plate	Beam	RECT	A36 Gr.36	Typical
10	M21A	N31	N29		90	Standoff Plate	Beam	RECT	A36 Gr.36	Typical
11	M38	N62A	N54			RIGID	None	None	RIGID	Typical
12	M39	N61A	N53			RIGID	None	None	RIGID	Typical
13	M40	N59A	N51			RIGID	None	None	RIGID	Typical
14	M41	N60A	N52			RIGID	None	None	RIGID	Typical
15	M42	N58	N50			RIGID	None	None	RIGID	Typical
16	M43	N57	N49A			RIGID	None	None	RIGID	Typical
17	M44	N55	N47A			RIGID	None	None	RIGID	Typical
18	M45	N56	N48A			RIGID	None	None	RIGID	Typical
19	MP1A	N63	N67			Dual Mount	Column	Pipe	A53 Gr. B	Typical
20	MP2A	N64	N68			Antenna Pipe	Beam	Pipe	A53 Gr. B	Typical
21	MP3A	N65	N69			Antenna Pipe	Beam	Pipe	A53 Gr. B	Typical
22	MP4A	N66	N70			Antenna Pipe	Beam	Pipe	A53 Gr. B	Typical
23	M50	N72A	N74		90	Standoff Plate	Beam	RECT	A36 Gr.36	Typical
24	M51	N71A	N73A		90	Standoff Plate	Beam	RECT	A36 Gr.36	Typical
25	M52	N72A	N76			RIGID	None	None	RIGID	Typical
26	M53	N71A	N75			RIGID	None	None	RIGID	Typical
27	M54	N77	N79		90	Standoff Plate	Beam	RECT	A36 Gr.36	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
28	M55	N78	N80		90	Standoff Plate	Beam	RECT	A36 Gr.36	Typical
29	M56	N78	N82			RIGID	None	None	RIGID	Typical
30	M57	N77	N81			RIGID	None	None	RIGID	Typical
31	M58	N80	N83			Standoff Horiz...	Beam	Pipe	A53 Gr. B	Typical
32	M59	N79	N86			Standoff Horiz...	Beam	Pipe	A53 Gr. B	Typical
33	M60	N83	N31A			Standoff Horiz...	Beam	Pipe	A53 Gr. B	Typical
34	RRH1	N84	N85			Standoff Vertical	Column	Pipe	A53 Gr. B	Typical
35	M62	N86	N31			Standoff Horiz...	Beam	Pipe	A53 Gr. B	Typical
36	M63	N89	N91			Standoff Diago...	Beam	BAR	A36 Gr.36	Typical
37	M64	N91	N87			Standoff Diago...	Beam	BAR	A36 Gr.36	Typical
38	M52B	N75A	N76A			Standoff Diago...	Beam	BAR	A36 Gr.36	Typical
39	M53A	N76A	N88			Standoff Diago...	Beam	BAR	A36 Gr.36	Typical
40	M41A	N74	N63A			Standoff Horiz...	Beam	Pipe	A53 Gr. B	Typical
41	M42A	N73A	N64A			Standoff Horiz...	Beam	Pipe	A53 Gr. B	Typical
42	M43A	N63A	N32A			Standoff Horiz...	Beam	Pipe	A53 Gr. B	Typical
43	M44A	N64A	N32			Standoff Horiz...	Beam	Pipe	A53 Gr. B	Typical
44	RRH2	N65A	N66A			Standoff Vertical	Column	Pipe	A53 Gr. B	Typical
45	M46	N61	N62			Standoff Diago...	Beam	BAR	A36 Gr.36	Typical
46	M47	N62	N71B			Standoff Diago...	Beam	BAR	A36 Gr.36	Typical
47	M48	N67A	N70A			Standoff Diago...	Beam	BAR	A36 Gr.36	Typical
48	M49	N70A	N69A			Standoff Diago...	Beam	BAR	A36 Gr.36	Typical
49	M49A	N69B	N70B			Tieback	Beam	Pipe	A53 Gr. B	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	M1						Yes				None
2	M2						Yes	Default			None
3	M21						Yes	Default			None
4	M22						Yes				None
5	M29						Yes	** NA **		Inactive	None
6	M30						Yes	** NA **		Inactive	None
7	M51A						Yes	** NA **			None
8	M52A						Yes	** NA **			None
9	M20						Yes	Default			None
10	M21A						Yes				None
11	M38						Yes	** NA **			None
12	M39						Yes	** NA **			None
13	M40						Yes	** NA **			None
14	M41						Yes	** NA **			None
15	M42						Yes	** NA **			None
16	M43						Yes	** NA **			None
17	M44						Yes	** NA **			None
18	M45						Yes	** NA **			None
19	MP1A						Yes	** NA **			None
20	MP2A						Yes				None
21	MP3A						Yes				None
22	MP4A						Yes				None
23	M50	OOOXOX					Yes	Default			None
24	M51	OOOXOX					Yes	Default			None
25	M52						Yes	** NA **			None
26	M53						Yes	** NA **			None
27	M54	OOOXOX					Yes				None
28	M55	OOOXOX					Yes				None
29	M56						Yes	** NA **			None
30	M57						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...
31	M58						Yes				None
32	M59						Yes				None
33	M60						Yes				None
34	RRH1						Yes	** NA **			None
35	M62						Yes				None
36	M63	BenPIN	BenPIN				Yes	Default			None
37	M64	BenPIN	BenPIN				Yes	Default			None
38	M52B	BenPIN	BenPIN				Yes	Default			None
39	M53A	BenPIN	BenPIN				Yes	Default			None
40	M41A						Yes				None
41	M42A						Yes				None
42	M43A						Yes	Default			None
43	M44A						Yes				None
44	RRH2						Yes	** NA **			None
45	M46	BenPIN	BenPIN				Yes	Default			None
46	M47	BenPIN	BenPIN				Yes	Default			None
47	M48	BenPIN	BenPIN				Yes	Default			None
48	M49	BenPIN	BenPIN				Yes	Default			None
49	M49A	BenPIN					Yes	Default			None

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	Y	-23	1
2	MP1A	My	-.017	1
3	MP1A	Mz	.015	1
4	MP1A	Y	-23	5
5	MP1A	My	-.017	5
6	MP1A	Mz	.015	5
7	MP1A	Y	-23	1
8	MP1A	My	-.017	1
9	MP1A	Mz	-.015	1
10	MP1A	Y	-23	5
11	MP1A	My	-.017	5
12	MP1A	Mz	-.015	5
13	MP2A	Y	-43.55	2
14	MP2A	My	-.033	2
15	MP2A	Mz	0	2
16	MP2A	Y	-43.55	4
17	MP2A	My	-.033	4
18	MP2A	Mz	0	4
19	RRH1	Y	-84.4	2.5
20	RRH1	My	0	2.5
21	RRH1	Mz	.042	2.5
22	RRH2	Y	-70.3	2.5
23	RRH2	My	0	2.5
24	RRH2	Mz	.035	2.5
25	MP4A	Y	-14	1
26	MP4A	My	-.011	1
27	MP4A	Mz	0	1
28	MP4A	Y	-14	5
29	MP4A	My	-.011	5
30	MP4A	Mz	0	5

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	MP1A	Y	-79.499	1
2	MP1A	My	-.06	1
3	MP1A	Mz	.053	1
4	MP1A	Y	-79.499	5
5	MP1A	My	-.06	5
6	MP1A	Mz	.053	5
7	MP1A	Y	-79.499	1
8	MP1A	My	-.06	1
9	MP1A	Mz	-.053	1
10	MP1A	Y	-79.499	5
11	MP1A	My	-.06	5
12	MP1A	Mz	-.053	5
13	MP2A	Y	-34.297	2
14	MP2A	My	-.026	2
15	MP2A	Mz	0	2
16	MP2A	Y	-34.297	4
17	MP2A	My	-.026	4
18	MP2A	Mz	0	4
19	RRH1	Y	-43.216	2.5
20	RRH1	My	0	2.5
21	RRH1	Mz	.022	2.5
22	RRH2	Y	-38.854	2.5
23	RRH2	My	0	2.5
24	RRH2	Mz	.019	2.5
25	MP4A	Y	-72.331	1
26	MP4A	My	-.054	1
27	MP4A	Mz	0	1
28	MP4A	Y	-72.331	5
29	MP4A	My	-.054	5
30	MP4A	Mz	0	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	0	1
2	MP1A	Z	-144.873	1
3	MP1A	Mx	-.097	1
4	MP1A	X	0	5
5	MP1A	Z	-144.873	5
6	MP1A	Mx	-.097	5
7	MP1A	X	0	1
8	MP1A	Z	-144.873	1
9	MP1A	Mx	.097	1
10	MP1A	X	0	5
11	MP1A	Z	-144.873	5
12	MP1A	Mx	.097	5
13	MP2A	X	0	2
14	MP2A	Z	-68.987	2
15	MP2A	Mx	0	2
16	MP2A	X	0	4
17	MP2A	Z	-68.987	4
18	MP2A	Mx	0	4
19	RRH1	X	0	2.5
20	RRH1	Z	-36.695	2.5
21	RRH1	Mx	-.018	2.5
22	RRH2	X	0	2.5
23	RRH2	Z	-29.723	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
24	RRH2	Mx	-.015	2.5
25	MP4A	X	0	1
26	MP4A	Z	-140.322	1
27	MP4A	Mx	0	1
28	MP4A	X	0	5
29	MP4A	Z	-140.322	5
30	MP4A	Mx	0	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	67.791	1
2	MP1A	Z	-117.417	1
3	MP1A	Mx	-.129	1
4	MP1A	X	67.791	5
5	MP1A	Z	-117.417	5
6	MP1A	Mx	-.129	5
7	MP1A	X	67.791	1
8	MP1A	Z	-117.417	1
9	MP1A	Mx	.027	1
10	MP1A	X	67.791	5
11	MP1A	Z	-117.417	5
12	MP1A	Mx	.027	5
13	MP2A	X	29.246	2
14	MP2A	Z	-50.656	2
15	MP2A	Mx	-.022	2
16	MP2A	X	29.246	4
17	MP2A	Z	-50.656	4
18	MP2A	Mx	-.022	4
19	RRH1	X	20.623	2.5
20	RRH1	Z	-35.72	2.5
21	RRH1	Mx	-.018	2.5
22	RRH2	X	18.008	2.5
23	RRH2	Z	-31.191	2.5
24	RRH2	Mx	-.016	2.5
25	MP4A	X	64.455	1
26	MP4A	Z	-111.639	1
27	MP4A	Mx	-.048	1
28	MP4A	X	64.455	5
29	MP4A	Z	-111.639	5
30	MP4A	Mx	-.048	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	101.324	1
2	MP1A	Z	-58.499	1
3	MP1A	Mx	-.115	1
4	MP1A	X	101.324	5
5	MP1A	Z	-58.499	5
6	MP1A	Mx	-.115	5
7	MP1A	X	101.324	1
8	MP1A	Z	-58.499	1
9	MP1A	Mx	-.037	1
10	MP1A	X	101.324	5
11	MP1A	Z	-58.499	5
12	MP1A	Mx	-.037	5
13	MP2A	X	32.478	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
14	MP2A	Z	-18.751	2
15	MP2A	Mx	-.024	2
16	MP2A	X	32.478	4
17	MP2A	Z	-18.751	4
18	MP2A	Mx	-.024	4
19	RRH1	X	43.601	2.5
20	RRH1	Z	-25.173	2.5
21	RRH1	Mx	-.013	2.5
22	RRH2	X	42.091	2.5
23	RRH2	Z	-24.301	2.5
24	RRH2	Mx	-.012	2.5
25	MP4A	X	91.873	1
26	MP4A	Z	-53.043	1
27	MP4A	Mx	-.069	1
28	MP4A	X	91.873	5
29	MP4A	Z	-53.043	5
30	MP4A	Mx	-.069	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	107.707	1
2	MP1A	Z	0	1
3	MP1A	Mx	-.081	1
4	MP1A	X	107.707	5
5	MP1A	Z	0	5
6	MP1A	Mx	-.081	5
7	MP1A	X	107.707	1
8	MP1A	Z	0	1
9	MP1A	Mx	-.081	1
10	MP1A	X	107.707	5
11	MP1A	Z	0	5
12	MP1A	Mx	-.081	5
13	MP2A	X	27.008	2
14	MP2A	Z	0	2
15	MP2A	Mx	-.02	2
16	MP2A	X	27.008	4
17	MP2A	Z	0	4
18	MP2A	Mx	-.02	4
19	RRH1	X	54.896	2.5
20	RRH1	Z	0	2.5
21	RRH1	Mx	0	2.5
22	RRH2	X	54.896	2.5
23	RRH2	Z	0	2.5
24	RRH2	Mx	0	2.5
25	MP4A	X	94.674	1
26	MP4A	Z	0	1
27	MP4A	Mx	-.071	1
28	MP4A	X	94.674	5
29	MP4A	Z	0	5
30	MP4A	Mx	-.071	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	101.324	1
2	MP1A	Z	58.499	1
3	MP1A	Mx	-.037	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
4	MP1A	X	101.324	5
5	MP1A	Z	58.499	5
6	MP1A	Mx	-.037	5
7	MP1A	X	101.324	1
8	MP1A	Z	58.499	1
9	MP1A	Mx	-.115	1
10	MP1A	X	101.324	5
11	MP1A	Z	58.499	5
12	MP1A	Mx	-.115	5
13	MP2A	X	32.478	2
14	MP2A	Z	18.751	2
15	MP2A	Mx	-.024	2
16	MP2A	X	32.478	4
17	MP2A	Z	18.751	4
18	MP2A	Mx	-.024	4
19	RRH1	X	43.601	2.5
20	RRH1	Z	25.173	2.5
21	RRH1	Mx	.013	2.5
22	RRH2	X	42.091	2.5
23	RRH2	Z	24.301	2.5
24	RRH2	Mx	.012	2.5
25	MP4A	X	91.873	1
26	MP4A	Z	53.043	1
27	MP4A	Mx	-.069	1
28	MP4A	X	91.873	5
29	MP4A	Z	53.043	5
30	MP4A	Mx	-.069	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	67.791	1
2	MP1A	Z	117.417	1
3	MP1A	Mx	.027	1
4	MP1A	X	67.791	5
5	MP1A	Z	117.417	5
6	MP1A	Mx	.027	5
7	MP1A	X	67.791	1
8	MP1A	Z	117.417	1
9	MP1A	Mx	-.129	1
10	MP1A	X	67.791	5
11	MP1A	Z	117.417	5
12	MP1A	Mx	-.129	5
13	MP2A	X	29.246	2
14	MP2A	Z	50.656	2
15	MP2A	Mx	-.022	2
16	MP2A	X	29.246	4
17	MP2A	Z	50.656	4
18	MP2A	Mx	-.022	4
19	RRH1	X	20.623	2.5
20	RRH1	Z	35.72	2.5
21	RRH1	Mx	.018	2.5
22	RRH2	X	18.008	2.5
23	RRH2	Z	31.191	2.5
24	RRH2	Mx	.016	2.5
25	MP4A	X	64.455	1
26	MP4A	Z	111.639	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
27	MP4A	Mx	-.048	1
28	MP4A	X	64.455	5
29	MP4A	Z	111.639	5
30	MP4A	Mx	-.048	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	0	1
2	MP1A	Z	144.873	1
3	MP1A	Mx	.097	1
4	MP1A	X	0	5
5	MP1A	Z	144.873	5
6	MP1A	Mx	.097	5
7	MP1A	X	0	1
8	MP1A	Z	144.873	1
9	MP1A	Mx	-.097	1
10	MP1A	X	0	5
11	MP1A	Z	144.873	5
12	MP1A	Mx	-.097	5
13	MP2A	X	0	2
14	MP2A	Z	68.987	2
15	MP2A	Mx	0	2
16	MP2A	X	0	4
17	MP2A	Z	68.987	4
18	MP2A	Mx	0	4
19	RRH1	X	0	2.5
20	RRH1	Z	36.695	2.5
21	RRH1	Mx	.018	2.5
22	RRH2	X	0	2.5
23	RRH2	Z	29.723	2.5
24	RRH2	Mx	.015	2.5
25	MP4A	X	0	1
26	MP4A	Z	140.322	1
27	MP4A	Mx	0	1
28	MP4A	X	0	5
29	MP4A	Z	140.322	5
30	MP4A	Mx	0	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-67.791	1
2	MP1A	Z	117.417	1
3	MP1A	Mx	.129	1
4	MP1A	X	-67.791	5
5	MP1A	Z	117.417	5
6	MP1A	Mx	.129	5
7	MP1A	X	-67.791	1
8	MP1A	Z	117.417	1
9	MP1A	Mx	-.027	1
10	MP1A	X	-67.791	5
11	MP1A	Z	117.417	5
12	MP1A	Mx	-.027	5
13	MP2A	X	-29.246	2
14	MP2A	Z	50.656	2
15	MP2A	Mx	.022	2
16	MP2A	X	-29.246	4

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP2A	Z	50.656	4
18	MP2A	Mx	.022	4
19	RRH1	X	-20.623	2.5
20	RRH1	Z	35.72	2.5
21	RRH1	Mx	.018	2.5
22	RRH2	X	-18.008	2.5
23	RRH2	Z	31.191	2.5
24	RRH2	Mx	.016	2.5
25	MP4A	X	-64.455	1
26	MP4A	Z	111.639	1
27	MP4A	Mx	.048	1
28	MP4A	X	-64.455	5
29	MP4A	Z	111.639	5
30	MP4A	Mx	.048	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-101.324	1
2	MP1A	Z	58.499	1
3	MP1A	Mx	.115	1
4	MP1A	X	-101.324	5
5	MP1A	Z	58.499	5
6	MP1A	Mx	.115	5
7	MP1A	X	-101.324	1
8	MP1A	Z	58.499	1
9	MP1A	Mx	.037	1
10	MP1A	X	-101.324	5
11	MP1A	Z	58.499	5
12	MP1A	Mx	.037	5
13	MP2A	X	-32.478	2
14	MP2A	Z	18.751	2
15	MP2A	Mx	.024	2
16	MP2A	X	-32.478	4
17	MP2A	Z	18.751	4
18	MP2A	Mx	.024	4
19	RRH1	X	-43.601	2.5
20	RRH1	Z	25.173	2.5
21	RRH1	Mx	.013	2.5
22	RRH2	X	-42.091	2.5
23	RRH2	Z	24.301	2.5
24	RRH2	Mx	.012	2.5
25	MP4A	X	-91.873	1
26	MP4A	Z	53.043	1
27	MP4A	Mx	.069	1
28	MP4A	X	-91.873	5
29	MP4A	Z	53.043	5
30	MP4A	Mx	.069	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-107.707	1
2	MP1A	Z	0	1
3	MP1A	Mx	.081	1
4	MP1A	X	-107.707	5
5	MP1A	Z	0	5
6	MP1A	Mx	.081	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
7	MP1A	X	-107.707	1
8	MP1A	Z	0	1
9	MP1A	Mx	.081	1
10	MP1A	X	-107.707	5
11	MP1A	Z	0	5
12	MP1A	Mx	.081	5
13	MP2A	X	-27.008	2
14	MP2A	Z	0	2
15	MP2A	Mx	.02	2
16	MP2A	X	-27.008	4
17	MP2A	Z	0	4
18	MP2A	Mx	.02	4
19	RRH1	X	-54.896	2.5
20	RRH1	Z	0	2.5
21	RRH1	Mx	0	2.5
22	RRH2	X	-54.896	2.5
23	RRH2	Z	0	2.5
24	RRH2	Mx	0	2.5
25	MP4A	X	-94.674	1
26	MP4A	Z	0	1
27	MP4A	Mx	.071	1
28	MP4A	X	-94.674	5
29	MP4A	Z	0	5
30	MP4A	Mx	.071	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-101.324	1
2	MP1A	Z	-58.499	1
3	MP1A	Mx	.037	1
4	MP1A	X	-101.324	5
5	MP1A	Z	-58.499	5
6	MP1A	Mx	.037	5
7	MP1A	X	-101.324	1
8	MP1A	Z	-58.499	1
9	MP1A	Mx	.115	1
10	MP1A	X	-101.324	5
11	MP1A	Z	-58.499	5
12	MP1A	Mx	.115	5
13	MP2A	X	-32.478	2
14	MP2A	Z	-18.751	2
15	MP2A	Mx	.024	2
16	MP2A	X	-32.478	4
17	MP2A	Z	-18.751	4
18	MP2A	Mx	.024	4
19	RRH1	X	-43.601	2.5
20	RRH1	Z	-25.173	2.5
21	RRH1	Mx	-.013	2.5
22	RRH2	X	-42.091	2.5
23	RRH2	Z	-24.301	2.5
24	RRH2	Mx	-.012	2.5
25	MP4A	X	-91.873	1
26	MP4A	Z	-53.043	1
27	MP4A	Mx	.069	1
28	MP4A	X	-91.873	5
29	MP4A	Z	-53.043	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
30	MP4A	Mx	.069	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-67.791	1
2	MP1A	Z	-117.417	1
3	MP1A	Mx	-.027	1
4	MP1A	X	-67.791	5
5	MP1A	Z	-117.417	5
6	MP1A	Mx	-.027	5
7	MP1A	X	-67.791	1
8	MP1A	Z	-117.417	1
9	MP1A	Mx	.129	1
10	MP1A	X	-67.791	5
11	MP1A	Z	-117.417	5
12	MP1A	Mx	.129	5
13	MP2A	X	-29.246	2
14	MP2A	Z	-50.656	2
15	MP2A	Mx	.022	2
16	MP2A	X	-29.246	4
17	MP2A	Z	-50.656	4
18	MP2A	Mx	.022	4
19	RRH1	X	-20.623	2.5
20	RRH1	Z	-35.72	2.5
21	RRH1	Mx	-.018	2.5
22	RRH2	X	-18.008	2.5
23	RRH2	Z	-31.191	2.5
24	RRH2	Mx	-.016	2.5
25	MP4A	X	-64.455	1
26	MP4A	Z	-111.639	1
27	MP4A	Mx	.048	1
28	MP4A	X	-64.455	5
29	MP4A	Z	-111.639	5
30	MP4A	Mx	.048	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	0	1
2	MP1A	Z	-28.768	1
3	MP1A	Mx	-.019	1
4	MP1A	X	0	5
5	MP1A	Z	-28.768	5
6	MP1A	Mx	-.019	5
7	MP1A	X	0	1
8	MP1A	Z	-28.768	1
9	MP1A	Mx	.019	1
10	MP1A	X	0	5
11	MP1A	Z	-28.768	5
12	MP1A	Mx	.019	5
13	MP2A	X	0	2
14	MP2A	Z	-14.177	2
15	MP2A	Mx	0	2
16	MP2A	X	0	4
17	MP2A	Z	-14.177	4
18	MP2A	Mx	0	4
19	RRH1	X	0	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
20	RRH1	Z	-8.285	2.5
21	RRH1	Mx	-.004	2.5
22	RRH2	X	0	2.5
23	RRH2	Z	-6.901	2.5
24	RRH2	Mx	-.003	2.5
25	MP4A	X	0	1
26	MP4A	Z	-27.883	1
27	MP4A	Mx	0	1
28	MP4A	X	0	5
29	MP4A	Z	-27.883	5
30	MP4A	Mx	0	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	13.507	1
2	MP1A	Z	-23.395	1
3	MP1A	Mx	-.026	1
4	MP1A	X	13.507	5
5	MP1A	Z	-23.395	5
6	MP1A	Mx	-.026	5
7	MP1A	X	13.507	1
8	MP1A	Z	-23.395	1
9	MP1A	Mx	.005	1
10	MP1A	X	13.507	5
11	MP1A	Z	-23.395	5
12	MP1A	Mx	.005	5
13	MP2A	X	6.069	2
14	MP2A	Z	-10.512	2
15	MP2A	Mx	-.005	2
16	MP2A	X	6.069	4
17	MP2A	Z	-10.512	4
18	MP2A	Mx	-.005	4
19	RRH1	X	4.598	2.5
20	RRH1	Z	-7.963	2.5
21	RRH1	Mx	-.004	2.5
22	RRH2	X	4.079	2.5
23	RRH2	Z	-7.065	2.5
24	RRH2	Mx	-.004	2.5
25	MP4A	X	12.883	1
26	MP4A	Z	-22.314	1
27	MP4A	Mx	-.01	1
28	MP4A	X	12.883	5
29	MP4A	Z	-22.314	5
30	MP4A	Mx	-.01	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	20.356	1
2	MP1A	Z	-11.752	1
3	MP1A	Mx	-.023	1
4	MP1A	X	20.356	5
5	MP1A	Z	-11.752	5
6	MP1A	Mx	-.023	5
7	MP1A	X	20.356	1
8	MP1A	Z	-11.752	1
9	MP1A	Mx	-.007	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
10	MP1A	X	20.356	5
11	MP1A	Z	-11.752	5
12	MP1A	Mx	-.007	5
13	MP2A	X	6.981	2
14	MP2A	Z	-4.03	2
15	MP2A	Mx	-.005	2
16	MP2A	X	6.981	4
17	MP2A	Z	-4.03	4
18	MP2A	Mx	-.005	4
19	RRH1	X	9.54	2.5
20	RRH1	Z	-5.508	2.5
21	RRH1	Mx	-.003	2.5
22	RRH2	X	9.241	2.5
23	RRH2	Z	-5.335	2.5
24	RRH2	Mx	-.003	2.5
25	MP4A	X	18.647	1
26	MP4A	Z	-10.766	1
27	MP4A	Mx	-.014	1
28	MP4A	X	18.647	5
29	MP4A	Z	-10.766	5
30	MP4A	Mx	-.014	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	21.75	1
2	MP1A	Z	0	1
3	MP1A	Mx	-.016	1
4	MP1A	X	21.75	5
5	MP1A	Z	0	5
6	MP1A	Mx	-.016	5
7	MP1A	X	21.75	1
8	MP1A	Z	0	1
9	MP1A	Mx	-.016	1
10	MP1A	X	21.75	5
11	MP1A	Z	0	5
12	MP1A	Mx	-.016	5
13	MP2A	X	6.022	2
14	MP2A	Z	0	2
15	MP2A	Mx	-.005	2
16	MP2A	X	6.022	4
17	MP2A	Z	0	4
18	MP2A	Mx	-.005	4
19	RRH1	X	11.927	2.5
20	RRH1	Z	0	2.5
21	RRH1	Mx	0	2.5
22	RRH2	X	11.927	2.5
23	RRH2	Z	0	2.5
24	RRH2	Mx	0	2.5
25	MP4A	X	19.414	1
26	MP4A	Z	0	1
27	MP4A	Mx	-.015	1
28	MP4A	X	19.414	5
29	MP4A	Z	0	5
30	MP4A	Mx	-.015	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	20.356	1
2	MP1A	Z	11.752	1
3	MP1A	Mx	-.007	1
4	MP1A	X	20.356	5
5	MP1A	Z	11.752	5
6	MP1A	Mx	-.007	5
7	MP1A	X	20.356	1
8	MP1A	Z	11.752	1
9	MP1A	Mx	-.023	1
10	MP1A	X	20.356	5
11	MP1A	Z	11.752	5
12	MP1A	Mx	-.023	5
13	MP2A	X	6.981	2
14	MP2A	Z	4.03	2
15	MP2A	Mx	-.005	2
16	MP2A	X	6.981	4
17	MP2A	Z	4.03	4
18	MP2A	Mx	-.005	4
19	RRH1	X	9.54	2.5
20	RRH1	Z	5.508	2.5
21	RRH1	Mx	.003	2.5
22	RRH2	X	9.241	2.5
23	RRH2	Z	5.335	2.5
24	RRH2	Mx	.003	2.5
25	MP4A	X	18.647	1
26	MP4A	Z	10.766	1
27	MP4A	Mx	-.014	1
28	MP4A	X	18.647	5
29	MP4A	Z	10.766	5
30	MP4A	Mx	-.014	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	13.507	1
2	MP1A	Z	23.395	1
3	MP1A	Mx	.005	1
4	MP1A	X	13.507	5
5	MP1A	Z	23.395	5
6	MP1A	Mx	.005	5
7	MP1A	X	13.507	1
8	MP1A	Z	23.395	1
9	MP1A	Mx	-.026	1
10	MP1A	X	13.507	5
11	MP1A	Z	23.395	5
12	MP1A	Mx	-.026	5
13	MP2A	X	6.069	2
14	MP2A	Z	10.512	2
15	MP2A	Mx	-.005	2
16	MP2A	X	6.069	4
17	MP2A	Z	10.512	4
18	MP2A	Mx	-.005	4
19	RRH1	X	4.598	2.5
20	RRH1	Z	7.963	2.5
21	RRH1	Mx	.004	2.5
22	RRH2	X	4.079	2.5
23	RRH2	Z	7.065	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
24	RRH2	Mx	.004	2.5
25	MP4A	X	12.883	1
26	MP4A	Z	22.314	1
27	MP4A	Mx	-.01	1
28	MP4A	X	12.883	5
29	MP4A	Z	22.314	5
30	MP4A	Mx	-.01	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	0	1
2	MP1A	Z	28.768	1
3	MP1A	Mx	.019	1
4	MP1A	X	0	5
5	MP1A	Z	28.768	5
6	MP1A	Mx	.019	5
7	MP1A	X	0	1
8	MP1A	Z	28.768	1
9	MP1A	Mx	-.019	1
10	MP1A	X	0	5
11	MP1A	Z	28.768	5
12	MP1A	Mx	-.019	5
13	MP2A	X	0	2
14	MP2A	Z	14.177	2
15	MP2A	Mx	0	2
16	MP2A	X	0	4
17	MP2A	Z	14.177	4
18	MP2A	Mx	0	4
19	RRH1	X	0	2.5
20	RRH1	Z	8.285	2.5
21	RRH1	Mx	.004	2.5
22	RRH2	X	0	2.5
23	RRH2	Z	6.901	2.5
24	RRH2	Mx	.003	2.5
25	MP4A	X	0	1
26	MP4A	Z	27.883	1
27	MP4A	Mx	0	1
28	MP4A	X	0	5
29	MP4A	Z	27.883	5
30	MP4A	Mx	0	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-13.507	1
2	MP1A	Z	23.395	1
3	MP1A	Mx	.026	1
4	MP1A	X	-13.507	5
5	MP1A	Z	23.395	5
6	MP1A	Mx	.026	5
7	MP1A	X	-13.507	1
8	MP1A	Z	23.395	1
9	MP1A	Mx	-.005	1
10	MP1A	X	-13.507	5
11	MP1A	Z	23.395	5
12	MP1A	Mx	-.005	5
13	MP2A	X	-6.069	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
14	MP2A	Z	10.512	2
15	MP2A	Mx	.005	2
16	MP2A	X	-6.069	4
17	MP2A	Z	10.512	4
18	MP2A	Mx	.005	4
19	RRH1	X	-4.598	2.5
20	RRH1	Z	7.963	2.5
21	RRH1	Mx	.004	2.5
22	RRH2	X	-4.079	2.5
23	RRH2	Z	7.065	2.5
24	RRH2	Mx	.004	2.5
25	MP4A	X	-12.883	1
26	MP4A	Z	22.314	1
27	MP4A	Mx	.01	1
28	MP4A	X	-12.883	5
29	MP4A	Z	22.314	5
30	MP4A	Mx	.01	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-20.356	1
2	MP1A	Z	11.752	1
3	MP1A	Mx	.023	1
4	MP1A	X	-20.356	5
5	MP1A	Z	11.752	5
6	MP1A	Mx	.023	5
7	MP1A	X	-20.356	1
8	MP1A	Z	11.752	1
9	MP1A	Mx	.007	1
10	MP1A	X	-20.356	5
11	MP1A	Z	11.752	5
12	MP1A	Mx	.007	5
13	MP2A	X	-6.981	2
14	MP2A	Z	4.03	2
15	MP2A	Mx	.005	2
16	MP2A	X	-6.981	4
17	MP2A	Z	4.03	4
18	MP2A	Mx	.005	4
19	RRH1	X	-9.54	2.5
20	RRH1	Z	5.508	2.5
21	RRH1	Mx	.003	2.5
22	RRH2	X	-9.241	2.5
23	RRH2	Z	5.335	2.5
24	RRH2	Mx	.003	2.5
25	MP4A	X	-18.647	1
26	MP4A	Z	10.766	1
27	MP4A	Mx	.014	1
28	MP4A	X	-18.647	5
29	MP4A	Z	10.766	5
30	MP4A	Mx	.014	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-21.75	1
2	MP1A	Z	0	1
3	MP1A	Mx	.016	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
4	MP1A	X	-21.75	5
5	MP1A	Z	0	5
6	MP1A	Mx	.016	5
7	MP1A	X	-21.75	1
8	MP1A	Z	0	1
9	MP1A	Mx	.016	1
10	MP1A	X	-21.75	5
11	MP1A	Z	0	5
12	MP1A	Mx	.016	5
13	MP2A	X	-6.022	2
14	MP2A	Z	0	2
15	MP2A	Mx	.005	2
16	MP2A	X	-6.022	4
17	MP2A	Z	0	4
18	MP2A	Mx	.005	4
19	RRH1	X	-11.927	2.5
20	RRH1	Z	0	2.5
21	RRH1	Mx	0	2.5
22	RRH2	X	-11.927	2.5
23	RRH2	Z	0	2.5
24	RRH2	Mx	0	2.5
25	MP4A	X	-19.414	1
26	MP4A	Z	0	1
27	MP4A	Mx	.015	1
28	MP4A	X	-19.414	5
29	MP4A	Z	0	5
30	MP4A	Mx	.015	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-20.356	1
2	MP1A	Z	-11.752	1
3	MP1A	Mx	.007	1
4	MP1A	X	-20.356	5
5	MP1A	Z	-11.752	5
6	MP1A	Mx	.007	5
7	MP1A	X	-20.356	1
8	MP1A	Z	-11.752	1
9	MP1A	Mx	.023	1
10	MP1A	X	-20.356	5
11	MP1A	Z	-11.752	5
12	MP1A	Mx	.023	5
13	MP2A	X	-6.981	2
14	MP2A	Z	-4.03	2
15	MP2A	Mx	.005	2
16	MP2A	X	-6.981	4
17	MP2A	Z	-4.03	4
18	MP2A	Mx	.005	4
19	RRH1	X	-9.54	2.5
20	RRH1	Z	-5.508	2.5
21	RRH1	Mx	-.003	2.5
22	RRH2	X	-9.241	2.5
23	RRH2	Z	-5.335	2.5
24	RRH2	Mx	-.003	2.5
25	MP4A	X	-18.647	1
26	MP4A	Z	-10.766	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
27	MP4A	Mx	.014	1
28	MP4A	X	-18.647	5
29	MP4A	Z	-10.766	5
30	MP4A	Mx	.014	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-13.507	1
2	MP1A	Z	-23.395	1
3	MP1A	Mx	-.005	1
4	MP1A	X	-13.507	5
5	MP1A	Z	-23.395	5
6	MP1A	Mx	-.005	5
7	MP1A	X	-13.507	1
8	MP1A	Z	-23.395	1
9	MP1A	Mx	.026	1
10	MP1A	X	-13.507	5
11	MP1A	Z	-23.395	5
12	MP1A	Mx	.026	5
13	MP2A	X	-6.069	2
14	MP2A	Z	-10.512	2
15	MP2A	Mx	.005	2
16	MP2A	X	-6.069	4
17	MP2A	Z	-10.512	4
18	MP2A	Mx	.005	4
19	RRH1	X	-4.598	2.5
20	RRH1	Z	-7.963	2.5
21	RRH1	Mx	-.004	2.5
22	RRH2	X	-4.079	2.5
23	RRH2	Z	-7.065	2.5
24	RRH2	Mx	-.004	2.5
25	MP4A	X	-12.883	1
26	MP4A	Z	-22.314	1
27	MP4A	Mx	.01	1
28	MP4A	X	-12.883	5
29	MP4A	Z	-22.314	5
30	MP4A	Mx	.01	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	0	1
2	MP1A	Z	-9.525	1
3	MP1A	Mx	-.006	1
4	MP1A	X	0	5
5	MP1A	Z	-9.525	5
6	MP1A	Mx	-.006	5
7	MP1A	X	0	1
8	MP1A	Z	-9.525	1
9	MP1A	Mx	.006	1
10	MP1A	X	0	5
11	MP1A	Z	-9.525	5
12	MP1A	Mx	.006	5
13	MP2A	X	0	2
14	MP2A	Z	-4.536	2
15	MP2A	Mx	0	2
16	MP2A	X	0	4

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP2A	Z	-4.536	4
18	MP2A	Mx	0	4
19	RRH1	X	0	2.5
20	RRH1	Z	-2.413	2.5
21	RRH1	Mx	-.001	2.5
22	RRH2	X	0	2.5
23	RRH2	Z	-1.954	2.5
24	RRH2	Mx	-.000977	2.5
25	MP4A	X	0	1
26	MP4A	Z	-9.226	1
27	MP4A	Mx	0	1
28	MP4A	X	0	5
29	MP4A	Z	-9.226	5
30	MP4A	Mx	0	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	4.457	1
2	MP1A	Z	-7.72	1
3	MP1A	Mx	-.008	1
4	MP1A	X	4.457	5
5	MP1A	Z	-7.72	5
6	MP1A	Mx	-.008	5
7	MP1A	X	4.457	1
8	MP1A	Z	-7.72	1
9	MP1A	Mx	.002	1
10	MP1A	X	4.457	5
11	MP1A	Z	-7.72	5
12	MP1A	Mx	.002	5
13	MP2A	X	1.923	2
14	MP2A	Z	-3.33	2
15	MP2A	Mx	-.001	2
16	MP2A	X	1.923	4
17	MP2A	Z	-3.33	4
18	MP2A	Mx	-.001	4
19	RRH1	X	1.356	2.5
20	RRH1	Z	-2.348	2.5
21	RRH1	Mx	-.001	2.5
22	RRH2	X	1.184	2.5
23	RRH2	Z	-2.051	2.5
24	RRH2	Mx	-.001	2.5
25	MP4A	X	4.238	1
26	MP4A	Z	-7.34	1
27	MP4A	Mx	-.003	1
28	MP4A	X	4.238	5
29	MP4A	Z	-7.34	5
30	MP4A	Mx	-.003	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	6.662	1
2	MP1A	Z	-3.846	1
3	MP1A	Mx	-.008	1
4	MP1A	X	6.662	5
5	MP1A	Z	-3.846	5
6	MP1A	Mx	-.008	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
7	MP1A	X	6.662	1
8	MP1A	Z	-3.846	1
9	MP1A	Mx	-.002	1
10	MP1A	X	6.662	5
11	MP1A	Z	-3.846	5
12	MP1A	Mx	-.002	5
13	MP2A	X	2.135	2
14	MP2A	Z	-1.233	2
15	MP2A	Mx	-.002	2
16	MP2A	X	2.135	4
17	MP2A	Z	-1.233	4
18	MP2A	Mx	-.002	4
19	RRH1	X	2.867	2.5
20	RRH1	Z	-1.655	2.5
21	RRH1	Mx	-.000828	2.5
22	RRH2	X	2.767	2.5
23	RRH2	Z	-1.598	2.5
24	RRH2	Mx	-.000799	2.5
25	MP4A	X	6.04	1
26	MP4A	Z	-3.487	1
27	MP4A	Mx	-.005	1
28	MP4A	X	6.04	5
29	MP4A	Z	-3.487	5
30	MP4A	Mx	-.005	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	7.081	1
2	MP1A	Z	0	1
3	MP1A	Mx	-.005	1
4	MP1A	X	7.081	5
5	MP1A	Z	0	5
6	MP1A	Mx	-.005	5
7	MP1A	X	7.081	1
8	MP1A	Z	0	1
9	MP1A	Mx	-.005	1
10	MP1A	X	7.081	5
11	MP1A	Z	0	5
12	MP1A	Mx	-.005	5
13	MP2A	X	1.776	2
14	MP2A	Z	0	2
15	MP2A	Mx	-.001	2
16	MP2A	X	1.776	4
17	MP2A	Z	0	4
18	MP2A	Mx	-.001	4
19	RRH1	X	3.609	2.5
20	RRH1	Z	0	2.5
21	RRH1	Mx	0	2.5
22	RRH2	X	3.609	2.5
23	RRH2	Z	0	2.5
24	RRH2	Mx	0	2.5
25	MP4A	X	6.224	1
26	MP4A	Z	0	1
27	MP4A	Mx	-.005	1
28	MP4A	X	6.224	5
29	MP4A	Z	0	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
30	MP4A	Mx	-.005	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	6.662	1
2	MP1A	Z	3.846	1
3	MP1A	Mx	-.002	1
4	MP1A	X	6.662	5
5	MP1A	Z	3.846	5
6	MP1A	Mx	-.002	5
7	MP1A	X	6.662	1
8	MP1A	Z	3.846	1
9	MP1A	Mx	-.008	1
10	MP1A	X	6.662	5
11	MP1A	Z	3.846	5
12	MP1A	Mx	-.008	5
13	MP2A	X	2.135	2
14	MP2A	Z	1.233	2
15	MP2A	Mx	-.002	2
16	MP2A	X	2.135	4
17	MP2A	Z	1.233	4
18	MP2A	Mx	-.002	4
19	RRH1	X	2.867	2.5
20	RRH1	Z	1.655	2.5
21	RRH1	Mx	.000828	2.5
22	RRH2	X	2.767	2.5
23	RRH2	Z	1.598	2.5
24	RRH2	Mx	.000799	2.5
25	MP4A	X	6.04	1
26	MP4A	Z	3.487	1
27	MP4A	Mx	-.005	1
28	MP4A	X	6.04	5
29	MP4A	Z	3.487	5
30	MP4A	Mx	-.005	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	4.457	1
2	MP1A	Z	7.72	1
3	MP1A	Mx	.002	1
4	MP1A	X	4.457	5
5	MP1A	Z	7.72	5
6	MP1A	Mx	.002	5
7	MP1A	X	4.457	1
8	MP1A	Z	7.72	1
9	MP1A	Mx	-.008	1
10	MP1A	X	4.457	5
11	MP1A	Z	7.72	5
12	MP1A	Mx	-.008	5
13	MP2A	X	1.923	2
14	MP2A	Z	3.33	2
15	MP2A	Mx	-.001	2
16	MP2A	X	1.923	4
17	MP2A	Z	3.33	4
18	MP2A	Mx	-.001	4
19	RRH1	X	1.356	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
20	RRH1	Z	2.348	2.5
21	RRH1	Mx	.001	2.5
22	RRH2	X	1.184	2.5
23	RRH2	Z	2.051	2.5
24	RRH2	Mx	.001	2.5
25	MP4A	X	4.238	1
26	MP4A	Z	7.34	1
27	MP4A	Mx	-.003	1
28	MP4A	X	4.238	5
29	MP4A	Z	7.34	5
30	MP4A	Mx	-.003	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	0	1
2	MP1A	Z	9.525	1
3	MP1A	Mx	.006	1
4	MP1A	X	0	5
5	MP1A	Z	9.525	5
6	MP1A	Mx	.006	5
7	MP1A	X	0	1
8	MP1A	Z	9.525	1
9	MP1A	Mx	-.006	1
10	MP1A	X	0	5
11	MP1A	Z	9.525	5
12	MP1A	Mx	-.006	5
13	MP2A	X	0	2
14	MP2A	Z	4.536	2
15	MP2A	Mx	0	2
16	MP2A	X	0	4
17	MP2A	Z	4.536	4
18	MP2A	Mx	0	4
19	RRH1	X	0	2.5
20	RRH1	Z	2.413	2.5
21	RRH1	Mx	.001	2.5
22	RRH2	X	0	2.5
23	RRH2	Z	1.954	2.5
24	RRH2	Mx	.000977	2.5
25	MP4A	X	0	1
26	MP4A	Z	9.226	1
27	MP4A	Mx	0	1
28	MP4A	X	0	5
29	MP4A	Z	9.226	5
30	MP4A	Mx	0	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-4.457	1
2	MP1A	Z	7.72	1
3	MP1A	Mx	.008	1
4	MP1A	X	-4.457	5
5	MP1A	Z	7.72	5
6	MP1A	Mx	.008	5
7	MP1A	X	-4.457	1
8	MP1A	Z	7.72	1
9	MP1A	Mx	-.002	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
10	MP1A	X	-4.457	5
11	MP1A	Z	7.72	5
12	MP1A	Mx	-.002	5
13	MP2A	X	-1.923	2
14	MP2A	Z	3.33	2
15	MP2A	Mx	.001	2
16	MP2A	X	-1.923	4
17	MP2A	Z	3.33	4
18	MP2A	Mx	.001	4
19	RRH1	X	-1.356	2.5
20	RRH1	Z	2.348	2.5
21	RRH1	Mx	.001	2.5
22	RRH2	X	-1.184	2.5
23	RRH2	Z	2.051	2.5
24	RRH2	Mx	.001	2.5
25	MP4A	X	-4.238	1
26	MP4A	Z	7.34	1
27	MP4A	Mx	.003	1
28	MP4A	X	-4.238	5
29	MP4A	Z	7.34	5
30	MP4A	Mx	.003	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-6.662	1
2	MP1A	Z	3.846	1
3	MP1A	Mx	.008	1
4	MP1A	X	-6.662	5
5	MP1A	Z	3.846	5
6	MP1A	Mx	.008	5
7	MP1A	X	-6.662	1
8	MP1A	Z	3.846	1
9	MP1A	Mx	.002	1
10	MP1A	X	-6.662	5
11	MP1A	Z	3.846	5
12	MP1A	Mx	.002	5
13	MP2A	X	-2.135	2
14	MP2A	Z	1.233	2
15	MP2A	Mx	.002	2
16	MP2A	X	-2.135	4
17	MP2A	Z	1.233	4
18	MP2A	Mx	.002	4
19	RRH1	X	-2.867	2.5
20	RRH1	Z	1.655	2.5
21	RRH1	Mx	.000828	2.5
22	RRH2	X	-2.767	2.5
23	RRH2	Z	1.598	2.5
24	RRH2	Mx	.000799	2.5
25	MP4A	X	-6.04	1
26	MP4A	Z	3.487	1
27	MP4A	Mx	.005	1
28	MP4A	X	-6.04	5
29	MP4A	Z	3.487	5
30	MP4A	Mx	.005	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-7.081	1
2	MP1A	Z	0	1
3	MP1A	Mx	.005	1
4	MP1A	X	-7.081	5
5	MP1A	Z	0	5
6	MP1A	Mx	.005	5
7	MP1A	X	-7.081	1
8	MP1A	Z	0	1
9	MP1A	Mx	.005	1
10	MP1A	X	-7.081	5
11	MP1A	Z	0	5
12	MP1A	Mx	.005	5
13	MP2A	X	-1.776	2
14	MP2A	Z	0	2
15	MP2A	Mx	.001	2
16	MP2A	X	-1.776	4
17	MP2A	Z	0	4
18	MP2A	Mx	.001	4
19	RRH1	X	-3.609	2.5
20	RRH1	Z	0	2.5
21	RRH1	Mx	0	2.5
22	RRH2	X	-3.609	2.5
23	RRH2	Z	0	2.5
24	RRH2	Mx	0	2.5
25	MP4A	X	-6.224	1
26	MP4A	Z	0	1
27	MP4A	Mx	.005	1
28	MP4A	X	-6.224	5
29	MP4A	Z	0	5
30	MP4A	Mx	.005	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-6.662	1
2	MP1A	Z	-3.846	1
3	MP1A	Mx	.002	1
4	MP1A	X	-6.662	5
5	MP1A	Z	-3.846	5
6	MP1A	Mx	.002	5
7	MP1A	X	-6.662	1
8	MP1A	Z	-3.846	1
9	MP1A	Mx	.008	1
10	MP1A	X	-6.662	5
11	MP1A	Z	-3.846	5
12	MP1A	Mx	.008	5
13	MP2A	X	-2.135	2
14	MP2A	Z	-1.233	2
15	MP2A	Mx	.002	2
16	MP2A	X	-2.135	4
17	MP2A	Z	-1.233	4
18	MP2A	Mx	.002	4
19	RRH1	X	-2.867	2.5
20	RRH1	Z	-1.655	2.5
21	RRH1	Mx	-.000828	2.5
22	RRH2	X	-2.767	2.5
23	RRH2	Z	-1.598	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
24	RRH2	Mx	-.000799	2.5
25	MP4A	X	-6.04	1
26	MP4A	Z	-3.487	1
27	MP4A	Mx	.005	1
28	MP4A	X	-6.04	5
29	MP4A	Z	-3.487	5
30	MP4A	Mx	.005	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-4.457	1
2	MP1A	Z	-7.72	1
3	MP1A	Mx	-.002	1
4	MP1A	X	-4.457	5
5	MP1A	Z	-7.72	5
6	MP1A	Mx	-.002	5
7	MP1A	X	-4.457	1
8	MP1A	Z	-7.72	1
9	MP1A	Mx	.008	1
10	MP1A	X	-4.457	5
11	MP1A	Z	-7.72	5
12	MP1A	Mx	.008	5
13	MP2A	X	-1.923	2
14	MP2A	Z	-3.33	2
15	MP2A	Mx	.001	2
16	MP2A	X	-1.923	4
17	MP2A	Z	-3.33	4
18	MP2A	Mx	.001	4
19	RRH1	X	-1.356	2.5
20	RRH1	Z	-2.348	2.5
21	RRH1	Mx	-.001	2.5
22	RRH2	X	-1.184	2.5
23	RRH2	Z	-2.051	2.5
24	RRH2	Mx	-.001	2.5
25	MP4A	X	-4.238	1
26	MP4A	Z	-7.34	1
27	MP4A	Mx	.003	1
28	MP4A	X	-4.238	5
29	MP4A	Z	-7.34	5
30	MP4A	Mx	.003	5

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M1	Y	-500	%82

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M1	Y	-500	%50

Member Point Loads (BLC 79 : Lv1)

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

Member Point Loads (BLC 80 : Lv2)

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

Member Point Loads (BLC 80 : Lv2) (Continued)

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

Member Distributed Loads (BLC 40 : Structure Di)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	Y	-4.757	-4.757	0	%100
2	M2	Y	-4.757	-4.757	0	%100
3	M21	Y	-7.038	-7.038	0	%100
4	M22	Y	-7.038	-7.038	0	%100
5	M20	Y	-7.038	-7.038	0	%100
6	M21A	Y	-7.038	-7.038	0	%100
7	MP1A	Y	-5.439	-5.439	0	%100
8	MP2A	Y	-4.757	-4.757	0	%100
9	MP3A	Y	-4.757	-4.757	0	%100
10	MP4A	Y	-4.757	-4.757	0	%100
11	M50	Y	-7.038	-7.038	0	%100
12	M51	Y	-7.038	-7.038	0	%100
13	M54	Y	-7.038	-7.038	0	%100
14	M55	Y	-7.038	-7.038	0	%100
15	M58	Y	-3.783	-3.783	0	%100
16	M59	Y	-3.783	-3.783	0	%100
17	M60	Y	-3.783	-3.783	0	%100
18	RRH1	Y	-6.291	-6.291	0	%100
19	M62	Y	-3.783	-3.783	0	%100
20	M63	Y	-2.372	-2.372	0	%100
21	M64	Y	-2.372	-2.372	0	%100
22	M52B	Y	-2.372	-2.372	0	%100
23	M53A	Y	-2.372	-2.372	0	%100
24	M41A	Y	-3.783	-3.783	0	%100
25	M42A	Y	-3.783	-3.783	0	%100
26	M43A	Y	-3.783	-3.783	0	%100
27	M44A	Y	-3.783	-3.783	0	%100
28	RRH2	Y	-6.291	-6.291	0	%100
29	M46	Y	-2.372	-2.372	0	%100
30	M47	Y	-2.372	-2.372	0	%100
31	M48	Y	-2.372	-2.372	0	%100
32	M49	Y	-2.372	-2.372	0	%100
33	M49A	Y	-4.757	-4.757	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	-6.972	-6.972	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	-6.972	-6.972	0	%100
5	M21	X	0	0	0	%100
6	M21	Z	-1.835	-1.835	0	%100
7	M22	X	0	0	0	%100
8	M22	Z	-1.835	-1.835	0	%100
9	M20	X	0	0	0	%100
10	M20	Z	-1.835	-1.835	0	%100
11	M21A	X	0	0	0	%100
12	M21A	Z	-1.835	-1.835	0	%100
13	MP1A	X	0	0	0	%100
14	MP1A	Z	-8.44	-8.44	0	%100
15	MP2A	X	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
16	MP2A	Z	-6.972	-6.972	0	%100
17	MP3A	X	0	0	0	%100
18	MP3A	Z	-6.972	-6.972	0	%100
19	MP4A	X	0	0	0	%100
20	MP4A	Z	-6.972	-6.972	0	%100
21	M50	X	0	0	0	%100
22	M50	Z	0	0	0	%100
23	M51	X	0	0	0	%100
24	M51	Z	0	0	0	%100
25	M54	X	0	0	0	%100
26	M54	Z	0	0	0	%100
27	M55	X	0	0	0	%100
28	M55	Z	0	0	0	%100
29	M58	X	0	0	0	%100
30	M58	Z	-1.984	-1.984	0	%100
31	M59	X	0	0	0	%100
32	M59	Z	-1.984	-1.984	0	%100
33	M60	X	0	0	0	%100
34	M60	Z	-1.984	-1.984	0	%100
35	RRH1	X	0	0	0	%100
36	RRH1	Z	-9.106	-9.106	0	%100
37	M62	X	0	0	0	%100
38	M62	Z	-1.984	-1.984	0	%100
39	M63	X	0	0	0	%100
40	M63	Z	-1.835	-1.835	0	%100
41	M64	X	0	0	0	%100
42	M64	Z	-1.738	-1.738	0	%100
43	M52B	X	0	0	0	%100
44	M52B	Z	-1.835	-1.835	0	%100
45	M53A	X	0	0	0	%100
46	M53A	Z	-1.738	-1.738	0	%100
47	M41A	X	0	0	0	%100
48	M41A	Z	-1.984	-1.984	0	%100
49	M42A	X	0	0	0	%100
50	M42A	Z	-1.984	-1.984	0	%100
51	M43A	X	0	0	0	%100
52	M43A	Z	-1.984	-1.984	0	%100
53	M44A	X	0	0	0	%100
54	M44A	Z	-1.984	-1.984	0	%100
55	RRH2	X	0	0	0	%100
56	RRH2	Z	-9.106	-9.106	0	%100
57	M46	X	0	0	0	%100
58	M46	Z	-1.835	-1.835	0	%100
59	M47	X	0	0	0	%100
60	M47	Z	-1.738	-1.738	0	%100
61	M48	X	0	0	0	%100
62	M48	Z	-1.738	-1.738	0	%100
63	M49	X	0	0	0	%100
64	M49	Z	-1.835	-1.835	0	%100
65	M49A	X	0	0	0	%100
66	M49A	Z	-1.678	-1.678	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	2.615	2.615	0	%100
2	M1	Z	-4.529	-4.529	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
3	M2	X	2.615	2.615	0	%100
4	M2	Z	-4.529	-4.529	0	%100
5	M21	X	.688	.688	0	%100
6	M21	Z	-1.192	-1.192	0	%100
7	M22	X	.688	.688	0	%100
8	M22	Z	-1.192	-1.192	0	%100
9	M20	X	.688	.688	0	%100
10	M20	Z	-1.192	-1.192	0	%100
11	M21A	X	.688	.688	0	%100
12	M21A	Z	-1.192	-1.192	0	%100
13	MP1A	X	4.22	4.22	0	%100
14	MP1A	Z	-7.309	-7.309	0	%100
15	MP2A	X	3.486	3.486	0	%100
16	MP2A	Z	-6.038	-6.038	0	%100
17	MP3A	X	3.486	3.486	0	%100
18	MP3A	Z	-6.038	-6.038	0	%100
19	MP4A	X	3.486	3.486	0	%100
20	MP4A	Z	-6.038	-6.038	0	%100
21	M50	X	.229	.229	0	%100
22	M50	Z	-.397	-.397	0	%100
23	M51	X	.229	.229	0	%100
24	M51	Z	-.397	-.397	0	%100
25	M54	X	.229	.229	0	%100
26	M54	Z	-.397	-.397	0	%100
27	M55	X	.229	.229	0	%100
28	M55	Z	-.397	-.397	0	%100
29	M58	X	1.662	1.662	0	%100
30	M58	Z	-2.879	-2.879	0	%100
31	M59	X	1.662	1.662	0	%100
32	M59	Z	-2.879	-2.879	0	%100
33	M60	X	1.662	1.662	0	%100
34	M60	Z	-2.879	-2.879	0	%100
35	RRH1	X	4.553	4.553	0	%100
36	RRH1	Z	-7.886	-7.886	0	%100
37	M62	X	1.662	1.662	0	%100
38	M62	Z	-2.879	-2.879	0	%100
39	M63	X	.917	.917	0	%100
40	M63	Z	-1.589	-1.589	0	%100
41	M64	X	.914	.914	0	%100
42	M64	Z	-1.582	-1.582	0	%100
43	M52B	X	.917	.917	0	%100
44	M52B	Z	-1.589	-1.589	0	%100
45	M53A	X	.914	.914	0	%100
46	M53A	Z	-1.582	-1.582	0	%100
47	M41A	X	.19	.19	0	%100
48	M41A	Z	-.329	-.329	0	%100
49	M42A	X	.19	.19	0	%100
50	M42A	Z	-.329	-.329	0	%100
51	M43A	X	.19	.19	0	%100
52	M43A	Z	-.329	-.329	0	%100
53	M44A	X	.19	.19	0	%100
54	M44A	Z	-.329	-.329	0	%100
55	RRH2	X	4.553	4.553	0	%100
56	RRH2	Z	-7.886	-7.886	0	%100
57	M46	X	.917	.917	0	%100
58	M46	Z	-1.589	-1.589	0	%100
59	M47	X	.816	.816	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
60	M47	Z	-1.413	-1.413	0	%100
61	M48	X	.816	.816	0	%100
62	M48	Z	-1.413	-1.413	0	%100
63	M49	X	.917	.917	0	%100
64	M49	Z	-1.589	-1.589	0	%100
65	M49A	X	2.582	2.582	0	%100
66	M49A	Z	-4.472	-4.472	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	1.51	1.51	0	%100
2	M1	Z	-.872	-.872	0	%100
3	M2	X	1.51	1.51	0	%100
4	M2	Z	-.872	-.872	0	%100
5	M21	X	.397	.397	0	%100
6	M21	Z	-.229	-.229	0	%100
7	M22	X	.397	.397	0	%100
8	M22	Z	-.229	-.229	0	%100
9	M20	X	.397	.397	0	%100
10	M20	Z	-.229	-.229	0	%100
11	M21A	X	.397	.397	0	%100
12	M21A	Z	-.229	-.229	0	%100
13	MP1A	X	7.309	7.309	0	%100
14	MP1A	Z	-4.22	-4.22	0	%100
15	MP2A	X	6.038	6.038	0	%100
16	MP2A	Z	-3.486	-3.486	0	%100
17	MP3A	X	6.038	6.038	0	%100
18	MP3A	Z	-3.486	-3.486	0	%100
19	MP4A	X	6.038	6.038	0	%100
20	MP4A	Z	-3.486	-3.486	0	%100
21	M50	X	1.192	1.192	0	%100
22	M50	Z	-.688	-.688	0	%100
23	M51	X	1.192	1.192	0	%100
24	M51	Z	-.688	-.688	0	%100
25	M54	X	1.192	1.192	0	%100
26	M54	Z	-.688	-.688	0	%100
27	M55	X	1.192	1.192	0	%100
28	M55	Z	-.688	-.688	0	%100
29	M58	X	2.65	2.65	0	%100
30	M58	Z	-1.53	-1.53	0	%100
31	M59	X	2.65	2.65	0	%100
32	M59	Z	-1.53	-1.53	0	%100
33	M60	X	2.65	2.65	0	%100
34	M60	Z	-1.53	-1.53	0	%100
35	RRH1	X	7.886	7.886	0	%100
36	RRH1	Z	-4.553	-4.553	0	%100
37	M62	X	2.65	2.65	0	%100
38	M62	Z	-1.53	-1.53	0	%100
39	M63	X	1.589	1.589	0	%100
40	M63	Z	-.917	-.917	0	%100
41	M64	X	1.567	1.567	0	%100
42	M64	Z	-.905	-.905	0	%100
43	M52B	X	1.589	1.589	0	%100
44	M52B	Z	-.917	-.917	0	%100
45	M53A	X	1.567	1.567	0	%100
46	M53A	Z	-.905	-.905	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
47	M41A	X	.1	.1	0	%100
48	M41A	Z	-.058	-.058	0	%100
49	M42A	X	.1	.1	0	%100
50	M42A	Z	-.058	-.058	0	%100
51	M43A	X	.1	.1	0	%100
52	M43A	Z	-.058	-.058	0	%100
53	M44A	X	.1	.1	0	%100
54	M44A	Z	-.058	-.058	0	%100
55	RRH2	X	7.886	7.886	0	%100
56	RRH2	Z	-4.553	-4.553	0	%100
57	M46	X	1.589	1.589	0	%100
58	M46	Z	-.917	-.917	0	%100
59	M47	X	1.397	1.397	0	%100
60	M47	Z	-.807	-.807	0	%100
61	M48	X	1.397	1.397	0	%100
62	M48	Z	-.807	-.807	0	%100
63	M49	X	1.589	1.589	0	%100
64	M49	Z	-.917	-.917	0	%100
65	M49A	X	6.037	6.037	0	%100
66	M49A	Z	-3.486	-3.486	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	0	0	0	%100
5	M21	X	0	0	0	%100
6	M21	Z	0	0	0	%100
7	M22	X	0	0	0	%100
8	M22	Z	0	0	0	%100
9	M20	X	0	0	0	%100
10	M20	Z	0	0	0	%100
11	M21A	X	0	0	0	%100
12	M21A	Z	0	0	0	%100
13	MP1A	X	8.44	8.44	0	%100
14	MP1A	Z	0	0	0	%100
15	MP2A	X	6.972	6.972	0	%100
16	MP2A	Z	0	0	0	%100
17	MP3A	X	6.972	6.972	0	%100
18	MP3A	Z	0	0	0	%100
19	MP4A	X	6.972	6.972	0	%100
20	MP4A	Z	0	0	0	%100
21	M50	X	1.835	1.835	0	%100
22	M50	Z	0	0	0	%100
23	M51	X	1.835	1.835	0	%100
24	M51	Z	0	0	0	%100
25	M54	X	1.835	1.835	0	%100
26	M54	Z	0	0	0	%100
27	M55	X	1.835	1.835	0	%100
28	M55	Z	0	0	0	%100
29	M58	X	1.456	1.456	0	%100
30	M58	Z	0	0	0	%100
31	M59	X	1.456	1.456	0	%100
32	M59	Z	0	0	0	%100
33	M60	X	1.456	1.456	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
34	M60	Z	0	0	0	%100
35	RRH1	X	9.106	9.106	0	%100
36	RRH1	Z	0	0	0	%100
37	M62	X	1.456	1.456	0	%100
38	M62	Z	0	0	0	%100
39	M63	X	1.835	1.835	0	%100
40	M63	Z	0	0	0	%100
41	M64	X	1.703	1.703	0	%100
42	M64	Z	0	0	0	%100
43	M52B	X	1.835	1.835	0	%100
44	M52B	Z	0	0	0	%100
45	M53A	X	1.703	1.703	0	%100
46	M53A	Z	0	0	0	%100
47	M41A	X	1.456	1.456	0	%100
48	M41A	Z	0	0	0	%100
49	M42A	X	1.456	1.456	0	%100
50	M42A	Z	0	0	0	%100
51	M43A	X	1.456	1.456	0	%100
52	M43A	Z	0	0	0	%100
53	M44A	X	1.456	1.456	0	%100
54	M44A	Z	0	0	0	%100
55	RRH2	X	9.106	9.106	0	%100
56	RRH2	Z	0	0	0	%100
57	M46	X	1.835	1.835	0	%100
58	M46	Z	0	0	0	%100
59	M47	X	1.703	1.703	0	%100
60	M47	Z	0	0	0	%100
61	M48	X	1.703	1.703	0	%100
62	M48	Z	0	0	0	%100
63	M49	X	1.835	1.835	0	%100
64	M49	Z	0	0	0	%100
65	M49A	X	5.294	5.294	0	%100
66	M49A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	1.51	1.51	0	%100
2	M1	Z	.872	.872	0	%100
3	M2	X	1.51	1.51	0	%100
4	M2	Z	.872	.872	0	%100
5	M21	X	.397	.397	0	%100
6	M21	Z	.229	.229	0	%100
7	M22	X	.397	.397	0	%100
8	M22	Z	.229	.229	0	%100
9	M20	X	.397	.397	0	%100
10	M20	Z	.229	.229	0	%100
11	M21A	X	.397	.397	0	%100
12	M21A	Z	.229	.229	0	%100
13	MP1A	X	7.309	7.309	0	%100
14	MP1A	Z	4.22	4.22	0	%100
15	MP2A	X	6.038	6.038	0	%100
16	MP2A	Z	3.486	3.486	0	%100
17	MP3A	X	6.038	6.038	0	%100
18	MP3A	Z	3.486	3.486	0	%100
19	MP4A	X	6.038	6.038	0	%100
20	MP4A	Z	3.486	3.486	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
21	M50	X	1.192	1.192	0	%100
22	M50	Z	.688	.688	0	%100
23	M51	X	1.192	1.192	0	%100
24	M51	Z	.688	.688	0	%100
25	M54	X	1.192	1.192	0	%100
26	M54	Z	.688	.688	0	%100
27	M55	X	1.192	1.192	0	%100
28	M55	Z	.688	.688	0	%100
29	M58	X	.1	.1	0	%100
30	M58	Z	.058	.058	0	%100
31	M59	X	.1	.1	0	%100
32	M59	Z	.058	.058	0	%100
33	M60	X	.1	.1	0	%100
34	M60	Z	.058	.058	0	%100
35	RRH1	X	7.886	7.886	0	%100
36	RRH1	Z	4.553	4.553	0	%100
37	M62	X	.1	.1	0	%100
38	M62	Z	.058	.058	0	%100
39	M63	X	1.589	1.589	0	%100
40	M63	Z	.917	.917	0	%100
41	M64	X	1.397	1.397	0	%100
42	M64	Z	.807	.807	0	%100
43	M52B	X	1.589	1.589	0	%100
44	M52B	Z	.917	.917	0	%100
45	M53A	X	1.397	1.397	0	%100
46	M53A	Z	.807	.807	0	%100
47	M41A	X	2.65	2.65	0	%100
48	M41A	Z	1.53	1.53	0	%100
49	M42A	X	2.65	2.65	0	%100
50	M42A	Z	1.53	1.53	0	%100
51	M43A	X	2.65	2.65	0	%100
52	M43A	Z	1.53	1.53	0	%100
53	M44A	X	2.65	2.65	0	%100
54	M44A	Z	1.53	1.53	0	%100
55	RRH2	X	7.886	7.886	0	%100
56	RRH2	Z	4.553	4.553	0	%100
57	M46	X	1.589	1.589	0	%100
58	M46	Z	.917	.917	0	%100
59	M47	X	1.567	1.567	0	%100
60	M47	Z	.905	.905	0	%100
61	M48	X	1.567	1.567	0	%100
62	M48	Z	.905	.905	0	%100
63	M49	X	1.589	1.589	0	%100
64	M49	Z	.917	.917	0	%100
65	M49A	X	1.566	1.566	0	%100
66	M49A	Z	.904	.904	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	2.615	2.615	0	%100
2	M1	Z	4.529	4.529	0	%100
3	M2	X	2.615	2.615	0	%100
4	M2	Z	4.529	4.529	0	%100
5	M21	X	.688	.688	0	%100
6	M21	Z	1.192	1.192	0	%100
7	M22	X	.688	.688	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
8	M22	Z	1.192	1.192	0	%100
9	M20	X	.688	.688	0	%100
10	M20	Z	1.192	1.192	0	%100
11	M21A	X	.688	.688	0	%100
12	M21A	Z	1.192	1.192	0	%100
13	MP1A	X	4.22	4.22	0	%100
14	MP1A	Z	7.309	7.309	0	%100
15	MP2A	X	3.486	3.486	0	%100
16	MP2A	Z	6.038	6.038	0	%100
17	MP3A	X	3.486	3.486	0	%100
18	MP3A	Z	6.038	6.038	0	%100
19	MP4A	X	3.486	3.486	0	%100
20	MP4A	Z	6.038	6.038	0	%100
21	M50	X	.229	.229	0	%100
22	M50	Z	.397	.397	0	%100
23	M51	X	.229	.229	0	%100
24	M51	Z	.397	.397	0	%100
25	M54	X	.229	.229	0	%100
26	M54	Z	.397	.397	0	%100
27	M55	X	.229	.229	0	%100
28	M55	Z	.397	.397	0	%100
29	M58	X	.19	.19	0	%100
30	M58	Z	.329	.329	0	%100
31	M59	X	.19	.19	0	%100
32	M59	Z	.329	.329	0	%100
33	M60	X	.19	.19	0	%100
34	M60	Z	.329	.329	0	%100
35	RRH1	X	4.553	4.553	0	%100
36	RRH1	Z	7.886	7.886	0	%100
37	M62	X	.19	.19	0	%100
38	M62	Z	.329	.329	0	%100
39	M63	X	.917	.917	0	%100
40	M63	Z	1.589	1.589	0	%100
41	M64	X	.816	.816	0	%100
42	M64	Z	1.413	1.413	0	%100
43	M52B	X	.917	.917	0	%100
44	M52B	Z	1.589	1.589	0	%100
45	M53A	X	.816	.816	0	%100
46	M53A	Z	1.413	1.413	0	%100
47	M41A	X	1.662	1.662	0	%100
48	M41A	Z	2.879	2.879	0	%100
49	M42A	X	1.662	1.662	0	%100
50	M42A	Z	2.879	2.879	0	%100
51	M43A	X	1.662	1.662	0	%100
52	M43A	Z	2.879	2.879	0	%100
53	M44A	X	1.662	1.662	0	%100
54	M44A	Z	2.879	2.879	0	%100
55	RRH2	X	4.553	4.553	0	%100
56	RRH2	Z	7.886	7.886	0	%100
57	M46	X	.917	.917	0	%100
58	M46	Z	1.589	1.589	0	%100
59	M47	X	.914	.914	0	%100
60	M47	Z	1.582	1.582	0	%100
61	M48	X	.914	.914	0	%100
62	M48	Z	1.582	1.582	0	%100
63	M49	X	.917	.917	0	%100
64	M49	Z	1.589	1.589	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
65	M49A	X	.000407	.000407	0	%100
66	M49A	Z	.000705	.000705	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	6.972	6.972	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	6.972	6.972	0	%100
5	M21	X	0	0	0	%100
6	M21	Z	1.835	1.835	0	%100
7	M22	X	0	0	0	%100
8	M22	Z	1.835	1.835	0	%100
9	M20	X	0	0	0	%100
10	M20	Z	1.835	1.835	0	%100
11	M21A	X	0	0	0	%100
12	M21A	Z	1.835	1.835	0	%100
13	MP1A	X	0	0	0	%100
14	MP1A	Z	8.44	8.44	0	%100
15	MP2A	X	0	0	0	%100
16	MP2A	Z	6.972	6.972	0	%100
17	MP3A	X	0	0	0	%100
18	MP3A	Z	6.972	6.972	0	%100
19	MP4A	X	0	0	0	%100
20	MP4A	Z	6.972	6.972	0	%100
21	M50	X	0	0	0	%100
22	M50	Z	0	0	0	%100
23	M51	X	0	0	0	%100
24	M51	Z	0	0	0	%100
25	M54	X	0	0	0	%100
26	M54	Z	0	0	0	%100
27	M55	X	0	0	0	%100
28	M55	Z	0	0	0	%100
29	M58	X	0	0	0	%100
30	M58	Z	1.984	1.984	0	%100
31	M59	X	0	0	0	%100
32	M59	Z	1.984	1.984	0	%100
33	M60	X	0	0	0	%100
34	M60	Z	1.984	1.984	0	%100
35	RRH1	X	0	0	0	%100
36	RRH1	Z	9.106	9.106	0	%100
37	M62	X	0	0	0	%100
38	M62	Z	1.984	1.984	0	%100
39	M63	X	0	0	0	%100
40	M63	Z	1.835	1.835	0	%100
41	M64	X	0	0	0	%100
42	M64	Z	1.738	1.738	0	%100
43	M52B	X	0	0	0	%100
44	M52B	Z	1.835	1.835	0	%100
45	M53A	X	0	0	0	%100
46	M53A	Z	1.738	1.738	0	%100
47	M41A	X	0	0	0	%100
48	M41A	Z	1.984	1.984	0	%100
49	M42A	X	0	0	0	%100
50	M42A	Z	1.984	1.984	0	%100
51	M43A	X	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
52	M43A	Z	1.984	1.984	0	%100
53	M44A	X	0	0	0	%100
54	M44A	Z	1.984	1.984	0	%100
55	RRH2	X	0	0	0	%100
56	RRH2	Z	9.106	9.106	0	%100
57	M46	X	0	0	0	%100
58	M46	Z	1.835	1.835	0	%100
59	M47	X	0	0	0	%100
60	M47	Z	1.738	1.738	0	%100
61	M48	X	0	0	0	%100
62	M48	Z	1.738	1.738	0	%100
63	M49	X	0	0	0	%100
64	M49	Z	1.835	1.835	0	%100
65	M49A	X	0	0	0	%100
66	M49A	Z	1.678	1.678	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-2.615	-2.615	0	%100
2	M1	Z	4.529	4.529	0	%100
3	M2	X	-2.615	-2.615	0	%100
4	M2	Z	4.529	4.529	0	%100
5	M21	X	-.688	-.688	0	%100
6	M21	Z	1.192	1.192	0	%100
7	M22	X	-.688	-.688	0	%100
8	M22	Z	1.192	1.192	0	%100
9	M20	X	-.688	-.688	0	%100
10	M20	Z	1.192	1.192	0	%100
11	M21A	X	-.688	-.688	0	%100
12	M21A	Z	1.192	1.192	0	%100
13	MP1A	X	-4.22	-4.22	0	%100
14	MP1A	Z	7.309	7.309	0	%100
15	MP2A	X	-3.486	-3.486	0	%100
16	MP2A	Z	6.038	6.038	0	%100
17	MP3A	X	-3.486	-3.486	0	%100
18	MP3A	Z	6.038	6.038	0	%100
19	MP4A	X	-3.486	-3.486	0	%100
20	MP4A	Z	6.038	6.038	0	%100
21	M50	X	-.229	-.229	0	%100
22	M50	Z	.397	.397	0	%100
23	M51	X	-.229	-.229	0	%100
24	M51	Z	.397	.397	0	%100
25	M54	X	-.229	-.229	0	%100
26	M54	Z	.397	.397	0	%100
27	M55	X	-.229	-.229	0	%100
28	M55	Z	.397	.397	0	%100
29	M58	X	-1.662	-1.662	0	%100
30	M58	Z	2.879	2.879	0	%100
31	M59	X	-1.662	-1.662	0	%100
32	M59	Z	2.879	2.879	0	%100
33	M60	X	-1.662	-1.662	0	%100
34	M60	Z	2.879	2.879	0	%100
35	RRH1	X	-4.553	-4.553	0	%100
36	RRH1	Z	7.886	7.886	0	%100
37	M62	X	-1.662	-1.662	0	%100
38	M62	Z	2.879	2.879	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
39	M63	X	-.917	-.917	0	%100
40	M63	Z	1.589	1.589	0	%100
41	M64	X	-.914	-.914	0	%100
42	M64	Z	1.582	1.582	0	%100
43	M52B	X	-.917	-.917	0	%100
44	M52B	Z	1.589	1.589	0	%100
45	M53A	X	-.914	-.914	0	%100
46	M53A	Z	1.582	1.582	0	%100
47	M41A	X	-.19	-.19	0	%100
48	M41A	Z	.329	.329	0	%100
49	M42A	X	-.19	-.19	0	%100
50	M42A	Z	.329	.329	0	%100
51	M43A	X	-.19	-.19	0	%100
52	M43A	Z	.329	.329	0	%100
53	M44A	X	-.19	-.19	0	%100
54	M44A	Z	.329	.329	0	%100
55	RRH2	X	-4.553	-4.553	0	%100
56	RRH2	Z	7.886	7.886	0	%100
57	M46	X	-.917	-.917	0	%100
58	M46	Z	1.589	1.589	0	%100
59	M47	X	-.816	-.816	0	%100
60	M47	Z	1.413	1.413	0	%100
61	M48	X	-.816	-.816	0	%100
62	M48	Z	1.413	1.413	0	%100
63	M49	X	-.917	-.917	0	%100
64	M49	Z	1.589	1.589	0	%100
65	M49A	X	-2.582	-2.582	0	%100
66	M49A	Z	4.472	4.472	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-1.51	-1.51	0	%100
2	M1	Z	.872	.872	0	%100
3	M2	X	-1.51	-1.51	0	%100
4	M2	Z	.872	.872	0	%100
5	M21	X	-.397	-.397	0	%100
6	M21	Z	.229	.229	0	%100
7	M22	X	-.397	-.397	0	%100
8	M22	Z	.229	.229	0	%100
9	M20	X	-.397	-.397	0	%100
10	M20	Z	.229	.229	0	%100
11	M21A	X	-.397	-.397	0	%100
12	M21A	Z	.229	.229	0	%100
13	MP1A	X	-7.309	-7.309	0	%100
14	MP1A	Z	4.22	4.22	0	%100
15	MP2A	X	-6.038	-6.038	0	%100
16	MP2A	Z	3.486	3.486	0	%100
17	MP3A	X	-6.038	-6.038	0	%100
18	MP3A	Z	3.486	3.486	0	%100
19	MP4A	X	-6.038	-6.038	0	%100
20	MP4A	Z	3.486	3.486	0	%100
21	M50	X	-1.192	-1.192	0	%100
22	M50	Z	.688	.688	0	%100
23	M51	X	-1.192	-1.192	0	%100
24	M51	Z	.688	.688	0	%100
25	M54	X	-1.192	-1.192	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
26	M54	Z	.688	.688	0	%100
27	M55	X	-1.192	-1.192	0	%100
28	M55	Z	.688	.688	0	%100
29	M58	X	-2.65	-2.65	0	%100
30	M58	Z	1.53	1.53	0	%100
31	M59	X	-2.65	-2.65	0	%100
32	M59	Z	1.53	1.53	0	%100
33	M60	X	-2.65	-2.65	0	%100
34	M60	Z	1.53	1.53	0	%100
35	RRH1	X	-7.886	-7.886	0	%100
36	RRH1	Z	4.553	4.553	0	%100
37	M62	X	-2.65	-2.65	0	%100
38	M62	Z	1.53	1.53	0	%100
39	M63	X	-1.589	-1.589	0	%100
40	M63	Z	.917	.917	0	%100
41	M64	X	-1.567	-1.567	0	%100
42	M64	Z	.905	.905	0	%100
43	M52B	X	-1.589	-1.589	0	%100
44	M52B	Z	.917	.917	0	%100
45	M53A	X	-1.567	-1.567	0	%100
46	M53A	Z	.905	.905	0	%100
47	M41A	X	-.1	-.1	0	%100
48	M41A	Z	.058	.058	0	%100
49	M42A	X	-.1	-.1	0	%100
50	M42A	Z	.058	.058	0	%100
51	M43A	X	-.1	-.1	0	%100
52	M43A	Z	.058	.058	0	%100
53	M44A	X	-.1	-.1	0	%100
54	M44A	Z	.058	.058	0	%100
55	RRH2	X	-7.886	-7.886	0	%100
56	RRH2	Z	4.553	4.553	0	%100
57	M46	X	-1.589	-1.589	0	%100
58	M46	Z	.917	.917	0	%100
59	M47	X	-1.397	-1.397	0	%100
60	M47	Z	.807	.807	0	%100
61	M48	X	-1.397	-1.397	0	%100
62	M48	Z	.807	.807	0	%100
63	M49	X	-1.589	-1.589	0	%100
64	M49	Z	.917	.917	0	%100
65	M49A	X	-6.037	-6.037	0	%100
66	M49A	Z	3.486	3.486	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	0	0	0	%100
5	M21	X	0	0	0	%100
6	M21	Z	0	0	0	%100
7	M22	X	0	0	0	%100
8	M22	Z	0	0	0	%100
9	M20	X	0	0	0	%100
10	M20	Z	0	0	0	%100
11	M21A	X	0	0	0	%100
12	M21A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
13	MP1A	X	-8.44	-8.44	0	%100
14	MP1A	Z	0	0	0	%100
15	MP2A	X	-6.972	-6.972	0	%100
16	MP2A	Z	0	0	0	%100
17	MP3A	X	-6.972	-6.972	0	%100
18	MP3A	Z	0	0	0	%100
19	MP4A	X	-6.972	-6.972	0	%100
20	MP4A	Z	0	0	0	%100
21	M50	X	-1.835	-1.835	0	%100
22	M50	Z	0	0	0	%100
23	M51	X	-1.835	-1.835	0	%100
24	M51	Z	0	0	0	%100
25	M54	X	-1.835	-1.835	0	%100
26	M54	Z	0	0	0	%100
27	M55	X	-1.835	-1.835	0	%100
28	M55	Z	0	0	0	%100
29	M58	X	-1.456	-1.456	0	%100
30	M58	Z	0	0	0	%100
31	M59	X	-1.456	-1.456	0	%100
32	M59	Z	0	0	0	%100
33	M60	X	-1.456	-1.456	0	%100
34	M60	Z	0	0	0	%100
35	RRH1	X	-9.106	-9.106	0	%100
36	RRH1	Z	0	0	0	%100
37	M62	X	-1.456	-1.456	0	%100
38	M62	Z	0	0	0	%100
39	M63	X	-1.835	-1.835	0	%100
40	M63	Z	0	0	0	%100
41	M64	X	-1.703	-1.703	0	%100
42	M64	Z	0	0	0	%100
43	M52B	X	-1.835	-1.835	0	%100
44	M52B	Z	0	0	0	%100
45	M53A	X	-1.703	-1.703	0	%100
46	M53A	Z	0	0	0	%100
47	M41A	X	-1.456	-1.456	0	%100
48	M41A	Z	0	0	0	%100
49	M42A	X	-1.456	-1.456	0	%100
50	M42A	Z	0	0	0	%100
51	M43A	X	-1.456	-1.456	0	%100
52	M43A	Z	0	0	0	%100
53	M44A	X	-1.456	-1.456	0	%100
54	M44A	Z	0	0	0	%100
55	RRH2	X	-9.106	-9.106	0	%100
56	RRH2	Z	0	0	0	%100
57	M46	X	-1.835	-1.835	0	%100
58	M46	Z	0	0	0	%100
59	M47	X	-1.703	-1.703	0	%100
60	M47	Z	0	0	0	%100
61	M48	X	-1.703	-1.703	0	%100
62	M48	Z	0	0	0	%100
63	M49	X	-1.835	-1.835	0	%100
64	M49	Z	0	0	0	%100
65	M49A	X	-5.294	-5.294	0	%100
66	M49A	Z	0	0	0	%100

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

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-1.51	-1.51	0	%100
2	M1	Z	-.872	-.872	0	%100
3	M2	X	-1.51	-1.51	0	%100
4	M2	Z	-.872	-.872	0	%100
5	M21	X	-.397	-.397	0	%100
6	M21	Z	-.229	-.229	0	%100
7	M22	X	-.397	-.397	0	%100
8	M22	Z	-.229	-.229	0	%100
9	M20	X	-.397	-.397	0	%100
10	M20	Z	-.229	-.229	0	%100
11	M21A	X	-.397	-.397	0	%100
12	M21A	Z	-.229	-.229	0	%100
13	MP1A	X	-7.309	-7.309	0	%100
14	MP1A	Z	-4.22	-4.22	0	%100
15	MP2A	X	-6.038	-6.038	0	%100
16	MP2A	Z	-3.486	-3.486	0	%100
17	MP3A	X	-6.038	-6.038	0	%100
18	MP3A	Z	-3.486	-3.486	0	%100
19	MP4A	X	-6.038	-6.038	0	%100
20	MP4A	Z	-3.486	-3.486	0	%100
21	M50	X	-1.192	-1.192	0	%100
22	M50	Z	-.688	-.688	0	%100
23	M51	X	-1.192	-1.192	0	%100
24	M51	Z	-.688	-.688	0	%100
25	M54	X	-1.192	-1.192	0	%100
26	M54	Z	-.688	-.688	0	%100
27	M55	X	-1.192	-1.192	0	%100
28	M55	Z	-.688	-.688	0	%100
29	M58	X	-.1	-.1	0	%100
30	M58	Z	-.058	-.058	0	%100
31	M59	X	-.1	-.1	0	%100
32	M59	Z	-.058	-.058	0	%100
33	M60	X	-.1	-.1	0	%100
34	M60	Z	-.058	-.058	0	%100
35	RRH1	X	-7.886	-7.886	0	%100
36	RRH1	Z	-4.553	-4.553	0	%100
37	M62	X	-.1	-.1	0	%100
38	M62	Z	-.058	-.058	0	%100
39	M63	X	-1.589	-1.589	0	%100
40	M63	Z	-.917	-.917	0	%100
41	M64	X	-1.397	-1.397	0	%100
42	M64	Z	-.807	-.807	0	%100
43	M52B	X	-1.589	-1.589	0	%100
44	M52B	Z	-.917	-.917	0	%100
45	M53A	X	-1.397	-1.397	0	%100
46	M53A	Z	-.807	-.807	0	%100
47	M41A	X	-2.65	-2.65	0	%100
48	M41A	Z	-1.53	-1.53	0	%100
49	M42A	X	-2.65	-2.65	0	%100
50	M42A	Z	-1.53	-1.53	0	%100
51	M43A	X	-2.65	-2.65	0	%100
52	M43A	Z	-1.53	-1.53	0	%100
53	M44A	X	-2.65	-2.65	0	%100
54	M44A	Z	-1.53	-1.53	0	%100
55	RRH2	X	-7.886	-7.886	0	%100
56	RRH2	Z	-4.553	-4.553	0	%100
57	M46	X	-1.589	-1.589	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
58	M46	Z	-.917	-.917	0	%100
59	M47	X	-1.567	-1.567	0	%100
60	M47	Z	-.905	-.905	0	%100
61	M48	X	-1.567	-1.567	0	%100
62	M48	Z	-.905	-.905	0	%100
63	M49	X	-1.589	-1.589	0	%100
64	M49	Z	-.917	-.917	0	%100
65	M49A	X	-1.566	-1.566	0	%100
66	M49A	Z	-.904	-.904	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-2.615	-2.615	0	%100
2	M1	Z	-4.529	-4.529	0	%100
3	M2	X	-2.615	-2.615	0	%100
4	M2	Z	-4.529	-4.529	0	%100
5	M21	X	-.688	-.688	0	%100
6	M21	Z	-1.192	-1.192	0	%100
7	M22	X	-.688	-.688	0	%100
8	M22	Z	-1.192	-1.192	0	%100
9	M20	X	-.688	-.688	0	%100
10	M20	Z	-1.192	-1.192	0	%100
11	M21A	X	-.688	-.688	0	%100
12	M21A	Z	-1.192	-1.192	0	%100
13	MP1A	X	-4.22	-4.22	0	%100
14	MP1A	Z	-7.309	-7.309	0	%100
15	MP2A	X	-3.486	-3.486	0	%100
16	MP2A	Z	-6.038	-6.038	0	%100
17	MP3A	X	-3.486	-3.486	0	%100
18	MP3A	Z	-6.038	-6.038	0	%100
19	MP4A	X	-3.486	-3.486	0	%100
20	MP4A	Z	-6.038	-6.038	0	%100
21	M50	X	-.229	-.229	0	%100
22	M50	Z	-.397	-.397	0	%100
23	M51	X	-.229	-.229	0	%100
24	M51	Z	-.397	-.397	0	%100
25	M54	X	-.229	-.229	0	%100
26	M54	Z	-.397	-.397	0	%100
27	M55	X	-.229	-.229	0	%100
28	M55	Z	-.397	-.397	0	%100
29	M58	X	-.19	-.19	0	%100
30	M58	Z	-.329	-.329	0	%100
31	M59	X	-.19	-.19	0	%100
32	M59	Z	-.329	-.329	0	%100
33	M60	X	-.19	-.19	0	%100
34	M60	Z	-.329	-.329	0	%100
35	RRH1	X	-4.553	-4.553	0	%100
36	RRH1	Z	-7.886	-7.886	0	%100
37	M62	X	-.19	-.19	0	%100
38	M62	Z	-.329	-.329	0	%100
39	M63	X	-.917	-.917	0	%100
40	M63	Z	-1.589	-1.589	0	%100
41	M64	X	-.816	-.816	0	%100
42	M64	Z	-1.413	-1.413	0	%100
43	M52B	X	-.917	-.917	0	%100
44	M52B	Z	-1.589	-1.589	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
45	M53A	X	-.816	-.816	0	%100
46	M53A	Z	-1.413	-1.413	0	%100
47	M41A	X	-1.662	-1.662	0	%100
48	M41A	Z	-2.879	-2.879	0	%100
49	M42A	X	-1.662	-1.662	0	%100
50	M42A	Z	-2.879	-2.879	0	%100
51	M43A	X	-1.662	-1.662	0	%100
52	M43A	Z	-2.879	-2.879	0	%100
53	M44A	X	-1.662	-1.662	0	%100
54	M44A	Z	-2.879	-2.879	0	%100
55	RRH2	X	-4.553	-4.553	0	%100
56	RRH2	Z	-7.886	-7.886	0	%100
57	M46	X	-.917	-.917	0	%100
58	M46	Z	-1.589	-1.589	0	%100
59	M47	X	-.914	-.914	0	%100
60	M47	Z	-1.582	-1.582	0	%100
61	M48	X	-.914	-.914	0	%100
62	M48	Z	-1.582	-1.582	0	%100
63	M49	X	-.917	-.917	0	%100
64	M49	Z	-1.589	-1.589	0	%100
65	M49A	X	-.000407	-.000407	0	%100
66	M49A	Z	-.000705	-.000705	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	-2.469	-2.469	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	-2.469	-2.469	0	%100
5	M21	X	0	0	0	%100
6	M21	Z	-1.033	-1.033	0	%100
7	M22	X	0	0	0	%100
8	M22	Z	-1.033	-1.033	0	%100
9	M20	X	0	0	0	%100
10	M20	Z	-1.033	-1.033	0	%100
11	M21A	X	0	0	0	%100
12	M21A	Z	-1.033	-1.033	0	%100
13	MP1A	X	0	0	0	%100
14	MP1A	Z	-2.738	-2.738	0	%100
15	MP2A	X	0	0	0	%100
16	MP2A	Z	-2.469	-2.469	0	%100
17	MP3A	X	0	0	0	%100
18	MP3A	Z	-2.469	-2.469	0	%100
19	MP4A	X	0	0	0	%100
20	MP4A	Z	-2.469	-2.469	0	%100
21	M50	X	0	0	0	%100
22	M50	Z	0	0	0	%100
23	M51	X	0	0	0	%100
24	M51	Z	0	0	0	%100
25	M54	X	0	0	0	%100
26	M54	Z	0	0	0	%100
27	M55	X	0	0	0	%100
28	M55	Z	0	0	0	%100
29	M58	X	0	0	0	%100
30	M58	Z	-.82	-.82	0	%100
31	M59	X	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
32	M59	Z	-.82	-.82	0	%100
33	M60	X	0	0	0	%100
34	M60	Z	-.82	-.82	0	%100
35	RRH1	X	0	0	0	%100
36	RRH1	Z	-2.859	-2.859	0	%100
37	M62	X	0	0	0	%100
38	M62	Z	-.82	-.82	0	%100
39	M63	X	0	0	0	%100
40	M63	Z	-1.27	-1.27	0	%100
41	M64	X	0	0	0	%100
42	M64	Z	-1.222	-1.222	0	%100
43	M52B	X	0	0	0	%100
44	M52B	Z	-1.27	-1.27	0	%100
45	M53A	X	0	0	0	%100
46	M53A	Z	-1.222	-1.222	0	%100
47	M41A	X	0	0	0	%100
48	M41A	Z	-.82	-.82	0	%100
49	M42A	X	0	0	0	%100
50	M42A	Z	-.82	-.82	0	%100
51	M43A	X	0	0	0	%100
52	M43A	Z	-.82	-.82	0	%100
53	M44A	X	0	0	0	%100
54	M44A	Z	-.82	-.82	0	%100
55	RRH2	X	0	0	0	%100
56	RRH2	Z	-2.859	-2.859	0	%100
57	M46	X	0	0	0	%100
58	M46	Z	-1.27	-1.27	0	%100
59	M47	X	0	0	0	%100
60	M47	Z	-1.222	-1.222	0	%100
61	M48	X	0	0	0	%100
62	M48	Z	-1.222	-1.222	0	%100
63	M49	X	0	0	0	%100
64	M49	Z	-1.27	-1.27	0	%100
65	M49A	X	0	0	0	%100
66	M49A	Z	-.594	-.594	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.926	.926	0	%100
2	M1	Z	-1.604	-1.604	0	%100
3	M2	X	.926	.926	0	%100
4	M2	Z	-1.604	-1.604	0	%100
5	M21	X	.387	.387	0	%100
6	M21	Z	-.671	-.671	0	%100
7	M22	X	.387	.387	0	%100
8	M22	Z	-.671	-.671	0	%100
9	M20	X	.387	.387	0	%100
10	M20	Z	-.671	-.671	0	%100
11	M21A	X	.387	.387	0	%100
12	M21A	Z	-.671	-.671	0	%100
13	MP1A	X	1.369	1.369	0	%100
14	MP1A	Z	-2.371	-2.371	0	%100
15	MP2A	X	1.235	1.235	0	%100
16	MP2A	Z	-2.139	-2.139	0	%100
17	MP3A	X	1.235	1.235	0	%100
18	MP3A	Z	-2.139	-2.139	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
19	MP4A	X	1.235	1.235	0	%100
20	MP4A	Z	-2.139	-2.139	0	%100
21	M50	X	.129	.129	0	%100
22	M50	Z	-.224	-.224	0	%100
23	M51	X	.129	.129	0	%100
24	M51	Z	-.224	-.224	0	%100
25	M54	X	.129	.129	0	%100
26	M54	Z	-.224	-.224	0	%100
27	M55	X	.129	.129	0	%100
28	M55	Z	-.224	-.224	0	%100
29	M58	X	.687	.687	0	%100
30	M58	Z	-1.189	-1.189	0	%100
31	M59	X	.687	.687	0	%100
32	M59	Z	-1.189	-1.189	0	%100
33	M60	X	.687	.687	0	%100
34	M60	Z	-1.189	-1.189	0	%100
35	RRH1	X	1.43	1.43	0	%100
36	RRH1	Z	-2.476	-2.476	0	%100
37	M62	X	.687	.687	0	%100
38	M62	Z	-1.189	-1.189	0	%100
39	M63	X	.635	.635	0	%100
40	M63	Z	-1.1	-1.1	0	%100
41	M64	X	.643	.643	0	%100
42	M64	Z	-1.113	-1.113	0	%100
43	M52B	X	.635	.635	0	%100
44	M52B	Z	-1.1	-1.1	0	%100
45	M53A	X	.643	.643	0	%100
46	M53A	Z	-1.113	-1.113	0	%100
47	M41A	X	.079	.079	0	%100
48	M41A	Z	-.136	-.136	0	%100
49	M42A	X	.079	.079	0	%100
50	M42A	Z	-.136	-.136	0	%100
51	M43A	X	.079	.079	0	%100
52	M43A	Z	-.136	-.136	0	%100
53	M44A	X	.079	.079	0	%100
54	M44A	Z	-.136	-.136	0	%100
55	RRH2	X	1.43	1.43	0	%100
56	RRH2	Z	-2.476	-2.476	0	%100
57	M46	X	.635	.635	0	%100
58	M46	Z	-1.1	-1.1	0	%100
59	M47	X	.574	.574	0	%100
60	M47	Z	-.994	-.994	0	%100
61	M48	X	.574	.574	0	%100
62	M48	Z	-.994	-.994	0	%100
63	M49	X	.635	.635	0	%100
64	M49	Z	-1.1	-1.1	0	%100
65	M49A	X	.914	.914	0	%100
66	M49A	Z	-1.584	-1.584	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.535	.535	0	%100
2	M1	Z	-.309	-.309	0	%100
3	M2	X	.535	.535	0	%100
4	M2	Z	-.309	-.309	0	%100
5	M21	X	.224	.224	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
6	M21	Z	-.129	-.129	0	%100
7	M22	X	.224	.224	0	%100
8	M22	Z	-.129	-.129	0	%100
9	M20	X	.224	.224	0	%100
10	M20	Z	-.129	-.129	0	%100
11	M21A	X	.224	.224	0	%100
12	M21A	Z	-.129	-.129	0	%100
13	MP1A	X	2.371	2.371	0	%100
14	MP1A	Z	-1.369	-1.369	0	%100
15	MP2A	X	2.139	2.139	0	%100
16	MP2A	Z	-1.235	-1.235	0	%100
17	MP3A	X	2.139	2.139	0	%100
18	MP3A	Z	-1.235	-1.235	0	%100
19	MP4A	X	2.139	2.139	0	%100
20	MP4A	Z	-1.235	-1.235	0	%100
21	M50	X	.671	.671	0	%100
22	M50	Z	-.387	-.387	0	%100
23	M51	X	.671	.671	0	%100
24	M51	Z	-.387	-.387	0	%100
25	M54	X	.671	.671	0	%100
26	M54	Z	-.387	-.387	0	%100
27	M55	X	.671	.671	0	%100
28	M55	Z	-.387	-.387	0	%100
29	M58	X	1.095	1.095	0	%100
30	M58	Z	-.632	-.632	0	%100
31	M59	X	1.095	1.095	0	%100
32	M59	Z	-.632	-.632	0	%100
33	M60	X	1.095	1.095	0	%100
34	M60	Z	-.632	-.632	0	%100
35	RRH1	X	2.476	2.476	0	%100
36	RRH1	Z	-1.43	-1.43	0	%100
37	M62	X	1.095	1.095	0	%100
38	M62	Z	-.632	-.632	0	%100
39	M63	X	1.1	1.1	0	%100
40	M63	Z	-.635	-.635	0	%100
41	M64	X	1.102	1.102	0	%100
42	M64	Z	-.636	-.636	0	%100
43	M52B	X	1.1	1.1	0	%100
44	M52B	Z	-.635	-.635	0	%100
45	M53A	X	1.102	1.102	0	%100
46	M53A	Z	-.636	-.636	0	%100
47	M41A	X	.041	.041	0	%100
48	M41A	Z	-.024	-.024	0	%100
49	M42A	X	.041	.041	0	%100
50	M42A	Z	-.024	-.024	0	%100
51	M43A	X	.041	.041	0	%100
52	M43A	Z	-.024	-.024	0	%100
53	M44A	X	.041	.041	0	%100
54	M44A	Z	-.024	-.024	0	%100
55	RRH2	X	2.476	2.476	0	%100
56	RRH2	Z	-1.43	-1.43	0	%100
57	M46	X	1.1	1.1	0	%100
58	M46	Z	-.635	-.635	0	%100
59	M47	X	.983	.983	0	%100
60	M47	Z	-.567	-.567	0	%100
61	M48	X	.983	.983	0	%100
62	M48	Z	-.567	-.567	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
63	M49	X	1.1	1.1	0	%100
64	M49	Z	-.635	-.635	0	%100
65	M49A	X	2.138	2.138	0	%100
66	M49A	Z	-1.235	-1.235	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	0	0	0	%100
5	M21	X	0	0	0	%100
6	M21	Z	0	0	0	%100
7	M22	X	0	0	0	%100
8	M22	Z	0	0	0	%100
9	M20	X	0	0	0	%100
10	M20	Z	0	0	0	%100
11	M21A	X	0	0	0	%100
12	M21A	Z	0	0	0	%100
13	MP1A	X	2.738	2.738	0	%100
14	MP1A	Z	0	0	0	%100
15	MP2A	X	2.469	2.469	0	%100
16	MP2A	Z	0	0	0	%100
17	MP3A	X	2.469	2.469	0	%100
18	MP3A	Z	0	0	0	%100
19	MP4A	X	2.469	2.469	0	%100
20	MP4A	Z	0	0	0	%100
21	M50	X	1.033	1.033	0	%100
22	M50	Z	0	0	0	%100
23	M51	X	1.033	1.033	0	%100
24	M51	Z	0	0	0	%100
25	M54	X	1.033	1.033	0	%100
26	M54	Z	0	0	0	%100
27	M55	X	1.033	1.033	0	%100
28	M55	Z	0	0	0	%100
29	M58	X	.601	.601	0	%100
30	M58	Z	0	0	0	%100
31	M59	X	.601	.601	0	%100
32	M59	Z	0	0	0	%100
33	M60	X	.601	.601	0	%100
34	M60	Z	0	0	0	%100
35	RRH1	X	2.859	2.859	0	%100
36	RRH1	Z	0	0	0	%100
37	M62	X	.601	.601	0	%100
38	M62	Z	0	0	0	%100
39	M63	X	1.27	1.27	0	%100
40	M63	Z	0	0	0	%100
41	M64	X	1.198	1.198	0	%100
42	M64	Z	0	0	0	%100
43	M52B	X	1.27	1.27	0	%100
44	M52B	Z	0	0	0	%100
45	M53A	X	1.198	1.198	0	%100
46	M53A	Z	0	0	0	%100
47	M41A	X	.601	.601	0	%100
48	M41A	Z	0	0	0	%100
49	M42A	X	.601	.601	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
50	M42A	Z	0	0	0	%100
51	M43A	X	.601	.601	0	%100
52	M43A	Z	0	0	0	%100
53	M44A	X	.601	.601	0	%100
54	M44A	Z	0	0	0	%100
55	RRH2	X	2.859	2.859	0	%100
56	RRH2	Z	0	0	0	%100
57	M46	X	1.27	1.27	0	%100
58	M46	Z	0	0	0	%100
59	M47	X	1.198	1.198	0	%100
60	M47	Z	0	0	0	%100
61	M48	X	1.198	1.198	0	%100
62	M48	Z	0	0	0	%100
63	M49	X	1.27	1.27	0	%100
64	M49	Z	0	0	0	%100
65	M49A	X	1.875	1.875	0	%100
66	M49A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.535	.535	0	%100
2	M1	Z	.309	.309	0	%100
3	M2	X	.535	.535	0	%100
4	M2	Z	.309	.309	0	%100
5	M21	X	.224	.224	0	%100
6	M21	Z	.129	.129	0	%100
7	M22	X	.224	.224	0	%100
8	M22	Z	.129	.129	0	%100
9	M20	X	.224	.224	0	%100
10	M20	Z	.129	.129	0	%100
11	M21A	X	.224	.224	0	%100
12	M21A	Z	.129	.129	0	%100
13	MP1A	X	2.371	2.371	0	%100
14	MP1A	Z	1.369	1.369	0	%100
15	MP2A	X	2.139	2.139	0	%100
16	MP2A	Z	1.235	1.235	0	%100
17	MP3A	X	2.139	2.139	0	%100
18	MP3A	Z	1.235	1.235	0	%100
19	MP4A	X	2.139	2.139	0	%100
20	MP4A	Z	1.235	1.235	0	%100
21	M50	X	.671	.671	0	%100
22	M50	Z	.387	.387	0	%100
23	M51	X	.671	.671	0	%100
24	M51	Z	.387	.387	0	%100
25	M54	X	.671	.671	0	%100
26	M54	Z	.387	.387	0	%100
27	M55	X	.671	.671	0	%100
28	M55	Z	.387	.387	0	%100
29	M58	X	.041	.041	0	%100
30	M58	Z	.024	.024	0	%100
31	M59	X	.041	.041	0	%100
32	M59	Z	.024	.024	0	%100
33	M60	X	.041	.041	0	%100
34	M60	Z	.024	.024	0	%100
35	RRH1	X	2.476	2.476	0	%100
36	RRH1	Z	1.43	1.43	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
37	M62	X	.041	.041	0	%100
38	M62	Z	.024	.024	0	%100
39	M63	X	1.1	1.1	0	%100
40	M63	Z	.635	.635	0	%100
41	M64	X	.983	.983	0	%100
42	M64	Z	.567	.567	0	%100
43	M52B	X	1.1	1.1	0	%100
44	M52B	Z	.635	.635	0	%100
45	M53A	X	.983	.983	0	%100
46	M53A	Z	.567	.567	0	%100
47	M41A	X	1.095	1.095	0	%100
48	M41A	Z	.632	.632	0	%100
49	M42A	X	1.095	1.095	0	%100
50	M42A	Z	.632	.632	0	%100
51	M43A	X	1.095	1.095	0	%100
52	M43A	Z	.632	.632	0	%100
53	M44A	X	1.095	1.095	0	%100
54	M44A	Z	.632	.632	0	%100
55	RRH2	X	2.476	2.476	0	%100
56	RRH2	Z	1.43	1.43	0	%100
57	M46	X	1.1	1.1	0	%100
58	M46	Z	.635	.635	0	%100
59	M47	X	1.102	1.102	0	%100
60	M47	Z	.636	.636	0	%100
61	M48	X	1.102	1.102	0	%100
62	M48	Z	.636	.636	0	%100
63	M49	X	1.1	1.1	0	%100
64	M49	Z	.635	.635	0	%100
65	M49A	X	.555	.555	0	%100
66	M49A	Z	.32	.32	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.926	.926	0	%100
2	M1	Z	1.604	1.604	0	%100
3	M2	X	.926	.926	0	%100
4	M2	Z	1.604	1.604	0	%100
5	M21	X	.387	.387	0	%100
6	M21	Z	.671	.671	0	%100
7	M22	X	.387	.387	0	%100
8	M22	Z	.671	.671	0	%100
9	M20	X	.387	.387	0	%100
10	M20	Z	.671	.671	0	%100
11	M21A	X	.387	.387	0	%100
12	M21A	Z	.671	.671	0	%100
13	MP1A	X	1.369	1.369	0	%100
14	MP1A	Z	2.371	2.371	0	%100
15	MP2A	X	1.235	1.235	0	%100
16	MP2A	Z	2.139	2.139	0	%100
17	MP3A	X	1.235	1.235	0	%100
18	MP3A	Z	2.139	2.139	0	%100
19	MP4A	X	1.235	1.235	0	%100
20	MP4A	Z	2.139	2.139	0	%100
21	M50	X	.129	.129	0	%100
22	M50	Z	.224	.224	0	%100
23	M51	X	.129	.129	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
24	M51	Z	.224	.224	0	%100
25	M54	X	.129	.129	0	%100
26	M54	Z	.224	.224	0	%100
27	M55	X	.129	.129	0	%100
28	M55	Z	.224	.224	0	%100
29	M58	X	.079	.079	0	%100
30	M58	Z	.136	.136	0	%100
31	M59	X	.079	.079	0	%100
32	M59	Z	.136	.136	0	%100
33	M60	X	.079	.079	0	%100
34	M60	Z	.136	.136	0	%100
35	RRH1	X	1.43	1.43	0	%100
36	RRH1	Z	2.476	2.476	0	%100
37	M62	X	.079	.079	0	%100
38	M62	Z	.136	.136	0	%100
39	M63	X	.635	.635	0	%100
40	M63	Z	1.1	1.1	0	%100
41	M64	X	.574	.574	0	%100
42	M64	Z	.994	.994	0	%100
43	M52B	X	.635	.635	0	%100
44	M52B	Z	1.1	1.1	0	%100
45	M53A	X	.574	.574	0	%100
46	M53A	Z	.994	.994	0	%100
47	M41A	X	.687	.687	0	%100
48	M41A	Z	1.189	1.189	0	%100
49	M42A	X	.687	.687	0	%100
50	M42A	Z	1.189	1.189	0	%100
51	M43A	X	.687	.687	0	%100
52	M43A	Z	1.189	1.189	0	%100
53	M44A	X	.687	.687	0	%100
54	M44A	Z	1.189	1.189	0	%100
55	RRH2	X	1.43	1.43	0	%100
56	RRH2	Z	2.476	2.476	0	%100
57	M46	X	.635	.635	0	%100
58	M46	Z	1.1	1.1	0	%100
59	M47	X	.643	.643	0	%100
60	M47	Z	1.113	1.113	0	%100
61	M48	X	.643	.643	0	%100
62	M48	Z	1.113	1.113	0	%100
63	M49	X	.635	.635	0	%100
64	M49	Z	1.1	1.1	0	%100
65	M49A	X	.000144	.000144	0	%100
66	M49A	Z	.00025	.00025	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	2.469	2.469	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	2.469	2.469	0	%100
5	M21	X	0	0	0	%100
6	M21	Z	1.033	1.033	0	%100
7	M22	X	0	0	0	%100
8	M22	Z	1.033	1.033	0	%100
9	M20	X	0	0	0	%100
10	M20	Z	1.033	1.033	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
11	M21A	X	0	0	0	%100
12	M21A	Z	1.033	1.033	0	%100
13	MP1A	X	0	0	0	%100
14	MP1A	Z	2.738	2.738	0	%100
15	MP2A	X	0	0	0	%100
16	MP2A	Z	2.469	2.469	0	%100
17	MP3A	X	0	0	0	%100
18	MP3A	Z	2.469	2.469	0	%100
19	MP4A	X	0	0	0	%100
20	MP4A	Z	2.469	2.469	0	%100
21	M50	X	0	0	0	%100
22	M50	Z	0	0	0	%100
23	M51	X	0	0	0	%100
24	M51	Z	0	0	0	%100
25	M54	X	0	0	0	%100
26	M54	Z	0	0	0	%100
27	M55	X	0	0	0	%100
28	M55	Z	0	0	0	%100
29	M58	X	0	0	0	%100
30	M58	Z	.82	.82	0	%100
31	M59	X	0	0	0	%100
32	M59	Z	.82	.82	0	%100
33	M60	X	0	0	0	%100
34	M60	Z	.82	.82	0	%100
35	RRH1	X	0	0	0	%100
36	RRH1	Z	2.859	2.859	0	%100
37	M62	X	0	0	0	%100
38	M62	Z	.82	.82	0	%100
39	M63	X	0	0	0	%100
40	M63	Z	1.27	1.27	0	%100
41	M64	X	0	0	0	%100
42	M64	Z	1.222	1.222	0	%100
43	M52B	X	0	0	0	%100
44	M52B	Z	1.27	1.27	0	%100
45	M53A	X	0	0	0	%100
46	M53A	Z	1.222	1.222	0	%100
47	M41A	X	0	0	0	%100
48	M41A	Z	.82	.82	0	%100
49	M42A	X	0	0	0	%100
50	M42A	Z	.82	.82	0	%100
51	M43A	X	0	0	0	%100
52	M43A	Z	.82	.82	0	%100
53	M44A	X	0	0	0	%100
54	M44A	Z	.82	.82	0	%100
55	RRH2	X	0	0	0	%100
56	RRH2	Z	2.859	2.859	0	%100
57	M46	X	0	0	0	%100
58	M46	Z	1.27	1.27	0	%100
59	M47	X	0	0	0	%100
60	M47	Z	1.222	1.222	0	%100
61	M48	X	0	0	0	%100
62	M48	Z	1.222	1.222	0	%100
63	M49	X	0	0	0	%100
64	M49	Z	1.27	1.27	0	%100
65	M49A	X	0	0	0	%100
66	M49A	Z	.594	.594	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.926	-.926	0	%100
2	M1	Z	1.604	1.604	0	%100
3	M2	X	-.926	-.926	0	%100
4	M2	Z	1.604	1.604	0	%100
5	M21	X	-.387	-.387	0	%100
6	M21	Z	.671	.671	0	%100
7	M22	X	-.387	-.387	0	%100
8	M22	Z	.671	.671	0	%100
9	M20	X	-.387	-.387	0	%100
10	M20	Z	.671	.671	0	%100
11	M21A	X	-.387	-.387	0	%100
12	M21A	Z	.671	.671	0	%100
13	MP1A	X	-1.369	-1.369	0	%100
14	MP1A	Z	2.371	2.371	0	%100
15	MP2A	X	-1.235	-1.235	0	%100
16	MP2A	Z	2.139	2.139	0	%100
17	MP3A	X	-1.235	-1.235	0	%100
18	MP3A	Z	2.139	2.139	0	%100
19	MP4A	X	-1.235	-1.235	0	%100
20	MP4A	Z	2.139	2.139	0	%100
21	M50	X	-.129	-.129	0	%100
22	M50	Z	.224	.224	0	%100
23	M51	X	-.129	-.129	0	%100
24	M51	Z	.224	.224	0	%100
25	M54	X	-.129	-.129	0	%100
26	M54	Z	.224	.224	0	%100
27	M55	X	-.129	-.129	0	%100
28	M55	Z	.224	.224	0	%100
29	M58	X	-.687	-.687	0	%100
30	M58	Z	1.189	1.189	0	%100
31	M59	X	-.687	-.687	0	%100
32	M59	Z	1.189	1.189	0	%100
33	M60	X	-.687	-.687	0	%100
34	M60	Z	1.189	1.189	0	%100
35	RRH1	X	-1.43	-1.43	0	%100
36	RRH1	Z	2.476	2.476	0	%100
37	M62	X	-.687	-.687	0	%100
38	M62	Z	1.189	1.189	0	%100
39	M63	X	-.635	-.635	0	%100
40	M63	Z	1.1	1.1	0	%100
41	M64	X	-.643	-.643	0	%100
42	M64	Z	1.113	1.113	0	%100
43	M52B	X	-.635	-.635	0	%100
44	M52B	Z	1.1	1.1	0	%100
45	M53A	X	-.643	-.643	0	%100
46	M53A	Z	1.113	1.113	0	%100
47	M41A	X	-.079	-.079	0	%100
48	M41A	Z	.136	.136	0	%100
49	M42A	X	-.079	-.079	0	%100
50	M42A	Z	.136	.136	0	%100
51	M43A	X	-.079	-.079	0	%100
52	M43A	Z	.136	.136	0	%100
53	M44A	X	-.079	-.079	0	%100
54	M44A	Z	.136	.136	0	%100
55	RRH2	X	-1.43	-1.43	0	%100
56	RRH2	Z	2.476	2.476	0	%100
57	M46	X	-.635	-.635	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
58	M46	Z	1.1	1.1	0	%100
59	M47	X	-.574	-.574	0	%100
60	M47	Z	.994	.994	0	%100
61	M48	X	-.574	-.574	0	%100
62	M48	Z	.994	.994	0	%100
63	M49	X	-.635	-.635	0	%100
64	M49	Z	1.1	1.1	0	%100
65	M49A	X	-.914	-.914	0	%100
66	M49A	Z	1.584	1.584	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.535	-.535	0	%100
2	M1	Z	.309	.309	0	%100
3	M2	X	-.535	-.535	0	%100
4	M2	Z	.309	.309	0	%100
5	M21	X	-.224	-.224	0	%100
6	M21	Z	.129	.129	0	%100
7	M22	X	-.224	-.224	0	%100
8	M22	Z	.129	.129	0	%100
9	M20	X	-.224	-.224	0	%100
10	M20	Z	.129	.129	0	%100
11	M21A	X	-.224	-.224	0	%100
12	M21A	Z	.129	.129	0	%100
13	MP1A	X	-2.371	-2.371	0	%100
14	MP1A	Z	1.369	1.369	0	%100
15	MP2A	X	-2.139	-2.139	0	%100
16	MP2A	Z	1.235	1.235	0	%100
17	MP3A	X	-2.139	-2.139	0	%100
18	MP3A	Z	1.235	1.235	0	%100
19	MP4A	X	-2.139	-2.139	0	%100
20	MP4A	Z	1.235	1.235	0	%100
21	M50	X	-.671	-.671	0	%100
22	M50	Z	.387	.387	0	%100
23	M51	X	-.671	-.671	0	%100
24	M51	Z	.387	.387	0	%100
25	M54	X	-.671	-.671	0	%100
26	M54	Z	.387	.387	0	%100
27	M55	X	-.671	-.671	0	%100
28	M55	Z	.387	.387	0	%100
29	M58	X	-1.095	-1.095	0	%100
30	M58	Z	.632	.632	0	%100
31	M59	X	-1.095	-1.095	0	%100
32	M59	Z	.632	.632	0	%100
33	M60	X	-1.095	-1.095	0	%100
34	M60	Z	.632	.632	0	%100
35	RRH1	X	-2.476	-2.476	0	%100
36	RRH1	Z	1.43	1.43	0	%100
37	M62	X	-1.095	-1.095	0	%100
38	M62	Z	.632	.632	0	%100
39	M63	X	-1.1	-1.1	0	%100
40	M63	Z	.635	.635	0	%100
41	M64	X	-1.102	-1.102	0	%100
42	M64	Z	.636	.636	0	%100
43	M52B	X	-1.1	-1.1	0	%100
44	M52B	Z	.635	.635	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
45	M53A	X	-1.102	-1.102	0	%100
46	M53A	Z	.636	.636	0	%100
47	M41A	X	-.041	-.041	0	%100
48	M41A	Z	.024	.024	0	%100
49	M42A	X	-.041	-.041	0	%100
50	M42A	Z	.024	.024	0	%100
51	M43A	X	-.041	-.041	0	%100
52	M43A	Z	.024	.024	0	%100
53	M44A	X	-.041	-.041	0	%100
54	M44A	Z	.024	.024	0	%100
55	RRH2	X	-2.476	-2.476	0	%100
56	RRH2	Z	1.43	1.43	0	%100
57	M46	X	-1.1	-1.1	0	%100
58	M46	Z	.635	.635	0	%100
59	M47	X	-.983	-.983	0	%100
60	M47	Z	.567	.567	0	%100
61	M48	X	-.983	-.983	0	%100
62	M48	Z	.567	.567	0	%100
63	M49	X	-1.1	-1.1	0	%100
64	M49	Z	.635	.635	0	%100
65	M49A	X	-2.138	-2.138	0	%100
66	M49A	Z	1.235	1.235	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	0	0	0	%100
5	M21	X	0	0	0	%100
6	M21	Z	0	0	0	%100
7	M22	X	0	0	0	%100
8	M22	Z	0	0	0	%100
9	M20	X	0	0	0	%100
10	M20	Z	0	0	0	%100
11	M21A	X	0	0	0	%100
12	M21A	Z	0	0	0	%100
13	MP1A	X	-2.738	-2.738	0	%100
14	MP1A	Z	0	0	0	%100
15	MP2A	X	-2.469	-2.469	0	%100
16	MP2A	Z	0	0	0	%100
17	MP3A	X	-2.469	-2.469	0	%100
18	MP3A	Z	0	0	0	%100
19	MP4A	X	-2.469	-2.469	0	%100
20	MP4A	Z	0	0	0	%100
21	M50	X	-1.033	-1.033	0	%100
22	M50	Z	0	0	0	%100
23	M51	X	-1.033	-1.033	0	%100
24	M51	Z	0	0	0	%100
25	M54	X	-1.033	-1.033	0	%100
26	M54	Z	0	0	0	%100
27	M55	X	-1.033	-1.033	0	%100
28	M55	Z	0	0	0	%100
29	M58	X	-.601	-.601	0	%100
30	M58	Z	0	0	0	%100
31	M59	X	-.601	-.601	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
32	M59	Z	0	0	0	%100
33	M60	X	-.601	-.601	0	%100
34	M60	Z	0	0	0	%100
35	RRH1	X	-2.859	-2.859	0	%100
36	RRH1	Z	0	0	0	%100
37	M62	X	-.601	-.601	0	%100
38	M62	Z	0	0	0	%100
39	M63	X	-1.27	-1.27	0	%100
40	M63	Z	0	0	0	%100
41	M64	X	-1.198	-1.198	0	%100
42	M64	Z	0	0	0	%100
43	M52B	X	-1.27	-1.27	0	%100
44	M52B	Z	0	0	0	%100
45	M53A	X	-1.198	-1.198	0	%100
46	M53A	Z	0	0	0	%100
47	M41A	X	-.601	-.601	0	%100
48	M41A	Z	0	0	0	%100
49	M42A	X	-.601	-.601	0	%100
50	M42A	Z	0	0	0	%100
51	M43A	X	-.601	-.601	0	%100
52	M43A	Z	0	0	0	%100
53	M44A	X	-.601	-.601	0	%100
54	M44A	Z	0	0	0	%100
55	RRH2	X	-2.859	-2.859	0	%100
56	RRH2	Z	0	0	0	%100
57	M46	X	-1.27	-1.27	0	%100
58	M46	Z	0	0	0	%100
59	M47	X	-1.198	-1.198	0	%100
60	M47	Z	0	0	0	%100
61	M48	X	-1.198	-1.198	0	%100
62	M48	Z	0	0	0	%100
63	M49	X	-1.27	-1.27	0	%100
64	M49	Z	0	0	0	%100
65	M49A	X	-1.875	-1.875	0	%100
66	M49A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.535	-.535	0	%100
2	M1	Z	-.309	-.309	0	%100
3	M2	X	-.535	-.535	0	%100
4	M2	Z	-.309	-.309	0	%100
5	M21	X	-.224	-.224	0	%100
6	M21	Z	-.129	-.129	0	%100
7	M22	X	-.224	-.224	0	%100
8	M22	Z	-.129	-.129	0	%100
9	M20	X	-.224	-.224	0	%100
10	M20	Z	-.129	-.129	0	%100
11	M21A	X	-.224	-.224	0	%100
12	M21A	Z	-.129	-.129	0	%100
13	MP1A	X	-2.371	-2.371	0	%100
14	MP1A	Z	-1.369	-1.369	0	%100
15	MP2A	X	-2.139	-2.139	0	%100
16	MP2A	Z	-1.235	-1.235	0	%100
17	MP3A	X	-2.139	-2.139	0	%100
18	MP3A	Z	-1.235	-1.235	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
19	MP4A	X	-2.139	-2.139	0	%100
20	MP4A	Z	-1.235	-1.235	0	%100
21	M50	X	-.671	-.671	0	%100
22	M50	Z	-.387	-.387	0	%100
23	M51	X	-.671	-.671	0	%100
24	M51	Z	-.387	-.387	0	%100
25	M54	X	-.671	-.671	0	%100
26	M54	Z	-.387	-.387	0	%100
27	M55	X	-.671	-.671	0	%100
28	M55	Z	-.387	-.387	0	%100
29	M58	X	-.041	-.041	0	%100
30	M58	Z	-.024	-.024	0	%100
31	M59	X	-.041	-.041	0	%100
32	M59	Z	-.024	-.024	0	%100
33	M60	X	-.041	-.041	0	%100
34	M60	Z	-.024	-.024	0	%100
35	RRH1	X	-2.476	-2.476	0	%100
36	RRH1	Z	-1.43	-1.43	0	%100
37	M62	X	-.041	-.041	0	%100
38	M62	Z	-.024	-.024	0	%100
39	M63	X	-1.1	-1.1	0	%100
40	M63	Z	-.635	-.635	0	%100
41	M64	X	-.983	-.983	0	%100
42	M64	Z	-.567	-.567	0	%100
43	M52B	X	-1.1	-1.1	0	%100
44	M52B	Z	-.635	-.635	0	%100
45	M53A	X	-.983	-.983	0	%100
46	M53A	Z	-.567	-.567	0	%100
47	M41A	X	-1.095	-1.095	0	%100
48	M41A	Z	-.632	-.632	0	%100
49	M42A	X	-1.095	-1.095	0	%100
50	M42A	Z	-.632	-.632	0	%100
51	M43A	X	-1.095	-1.095	0	%100
52	M43A	Z	-.632	-.632	0	%100
53	M44A	X	-1.095	-1.095	0	%100
54	M44A	Z	-.632	-.632	0	%100
55	RRH2	X	-2.476	-2.476	0	%100
56	RRH2	Z	-1.43	-1.43	0	%100
57	M46	X	-1.1	-1.1	0	%100
58	M46	Z	-.635	-.635	0	%100
59	M47	X	-1.102	-1.102	0	%100
60	M47	Z	-.636	-.636	0	%100
61	M48	X	-1.102	-1.102	0	%100
62	M48	Z	-.636	-.636	0	%100
63	M49	X	-1.1	-1.1	0	%100
64	M49	Z	-.635	-.635	0	%100
65	M49A	X	-.555	-.555	0	%100
66	M49A	Z	-.32	-.32	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.926	-.926	0	%100
2	M1	Z	-1.604	-1.604	0	%100
3	M2	X	-.926	-.926	0	%100
4	M2	Z	-1.604	-1.604	0	%100
5	M21	X	-.387	-.387	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
6	M21	Z	-.671	-.671	0	%100
7	M22	X	-.387	-.387	0	%100
8	M22	Z	-.671	-.671	0	%100
9	M20	X	-.387	-.387	0	%100
10	M20	Z	-.671	-.671	0	%100
11	M21A	X	-.387	-.387	0	%100
12	M21A	Z	-.671	-.671	0	%100
13	MP1A	X	-1.369	-1.369	0	%100
14	MP1A	Z	-2.371	-2.371	0	%100
15	MP2A	X	-1.235	-1.235	0	%100
16	MP2A	Z	-2.139	-2.139	0	%100
17	MP3A	X	-1.235	-1.235	0	%100
18	MP3A	Z	-2.139	-2.139	0	%100
19	MP4A	X	-1.235	-1.235	0	%100
20	MP4A	Z	-2.139	-2.139	0	%100
21	M50	X	-.129	-.129	0	%100
22	M50	Z	-.224	-.224	0	%100
23	M51	X	-.129	-.129	0	%100
24	M51	Z	-.224	-.224	0	%100
25	M54	X	-.129	-.129	0	%100
26	M54	Z	-.224	-.224	0	%100
27	M55	X	-.129	-.129	0	%100
28	M55	Z	-.224	-.224	0	%100
29	M58	X	-.079	-.079	0	%100
30	M58	Z	-.136	-.136	0	%100
31	M59	X	-.079	-.079	0	%100
32	M59	Z	-.136	-.136	0	%100
33	M60	X	-.079	-.079	0	%100
34	M60	Z	-.136	-.136	0	%100
35	RRH1	X	-1.43	-1.43	0	%100
36	RRH1	Z	-2.476	-2.476	0	%100
37	M62	X	-.079	-.079	0	%100
38	M62	Z	-.136	-.136	0	%100
39	M63	X	-.635	-.635	0	%100
40	M63	Z	-1.1	-1.1	0	%100
41	M64	X	-.574	-.574	0	%100
42	M64	Z	-.994	-.994	0	%100
43	M52B	X	-.635	-.635	0	%100
44	M52B	Z	-1.1	-1.1	0	%100
45	M53A	X	-.574	-.574	0	%100
46	M53A	Z	-.994	-.994	0	%100
47	M41A	X	-.687	-.687	0	%100
48	M41A	Z	-1.189	-1.189	0	%100
49	M42A	X	-.687	-.687	0	%100
50	M42A	Z	-1.189	-1.189	0	%100
51	M43A	X	-.687	-.687	0	%100
52	M43A	Z	-1.189	-1.189	0	%100
53	M44A	X	-.687	-.687	0	%100
54	M44A	Z	-1.189	-1.189	0	%100
55	RRH2	X	-1.43	-1.43	0	%100
56	RRH2	Z	-2.476	-2.476	0	%100
57	M46	X	-.635	-.635	0	%100
58	M46	Z	-1.1	-1.1	0	%100
59	M47	X	-.643	-.643	0	%100
60	M47	Z	-1.113	-1.113	0	%100
61	M48	X	-.643	-.643	0	%100
62	M48	Z	-1.113	-1.113	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
63	M49	X	-.635	-.635	0	%100
64	M49	Z	-1.1	-1.1	0	%100
65	M49A	X	-.000144	-.000144	0	%100
66	M49A	Z	-.00025	-.00025	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	-.458	-.458	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	-.458	-.458	0	%100
5	M21	X	0	0	0	%100
6	M21	Z	-.121	-.121	0	%100
7	M22	X	0	0	0	%100
8	M22	Z	-.121	-.121	0	%100
9	M20	X	0	0	0	%100
10	M20	Z	-.121	-.121	0	%100
11	M21A	X	0	0	0	%100
12	M21A	Z	-.121	-.121	0	%100
13	MP1A	X	0	0	0	%100
14	MP1A	Z	-.555	-.555	0	%100
15	MP2A	X	0	0	0	%100
16	MP2A	Z	-.458	-.458	0	%100
17	MP3A	X	0	0	0	%100
18	MP3A	Z	-.458	-.458	0	%100
19	MP4A	X	0	0	0	%100
20	MP4A	Z	-.458	-.458	0	%100
21	M50	X	0	0	0	%100
22	M50	Z	0	0	0	%100
23	M51	X	0	0	0	%100
24	M51	Z	0	0	0	%100
25	M54	X	0	0	0	%100
26	M54	Z	0	0	0	%100
27	M55	X	0	0	0	%100
28	M55	Z	0	0	0	%100
29	M58	X	0	0	0	%100
30	M58	Z	-.13	-.13	0	%100
31	M59	X	0	0	0	%100
32	M59	Z	-.13	-.13	0	%100
33	M60	X	0	0	0	%100
34	M60	Z	-.13	-.13	0	%100
35	RRH1	X	0	0	0	%100
36	RRH1	Z	-.599	-.599	0	%100
37	M62	X	0	0	0	%100
38	M62	Z	-.13	-.13	0	%100
39	M63	X	0	0	0	%100
40	M63	Z	-.121	-.121	0	%100
41	M64	X	0	0	0	%100
42	M64	Z	-.114	-.114	0	%100
43	M52B	X	0	0	0	%100
44	M52B	Z	-.121	-.121	0	%100
45	M53A	X	0	0	0	%100
46	M53A	Z	-.114	-.114	0	%100
47	M41A	X	0	0	0	%100
48	M41A	Z	-.13	-.13	0	%100
49	M42A	X	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
50	M42A	Z	-.13	-.13	0	%100
51	M43A	X	0	0	0	%100
52	M43A	Z	-.13	-.13	0	%100
53	M44A	X	0	0	0	%100
54	M44A	Z	-.13	-.13	0	%100
55	RRH2	X	0	0	0	%100
56	RRH2	Z	-.599	-.599	0	%100
57	M46	X	0	0	0	%100
58	M46	Z	-.121	-.121	0	%100
59	M47	X	0	0	0	%100
60	M47	Z	-.114	-.114	0	%100
61	M48	X	0	0	0	%100
62	M48	Z	-.114	-.114	0	%100
63	M49	X	0	0	0	%100
64	M49	Z	-.121	-.121	0	%100
65	M49A	X	0	0	0	%100
66	M49A	Z	-.11	-.11	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.172	.172	0	%100
2	M1	Z	-.298	-.298	0	%100
3	M2	X	.172	.172	0	%100
4	M2	Z	-.298	-.298	0	%100
5	M21	X	.045	.045	0	%100
6	M21	Z	-.078	-.078	0	%100
7	M22	X	.045	.045	0	%100
8	M22	Z	-.078	-.078	0	%100
9	M20	X	.045	.045	0	%100
10	M20	Z	-.078	-.078	0	%100
11	M21A	X	.045	.045	0	%100
12	M21A	Z	-.078	-.078	0	%100
13	MP1A	X	.277	.277	0	%100
14	MP1A	Z	-.481	-.481	0	%100
15	MP2A	X	.229	.229	0	%100
16	MP2A	Z	-.397	-.397	0	%100
17	MP3A	X	.229	.229	0	%100
18	MP3A	Z	-.397	-.397	0	%100
19	MP4A	X	.229	.229	0	%100
20	MP4A	Z	-.397	-.397	0	%100
21	M50	X	.015	.015	0	%100
22	M50	Z	-.026	-.026	0	%100
23	M51	X	.015	.015	0	%100
24	M51	Z	-.026	-.026	0	%100
25	M54	X	.015	.015	0	%100
26	M54	Z	-.026	-.026	0	%100
27	M55	X	.015	.015	0	%100
28	M55	Z	-.026	-.026	0	%100
29	M58	X	.109	.109	0	%100
30	M58	Z	-.189	-.189	0	%100
31	M59	X	.109	.109	0	%100
32	M59	Z	-.189	-.189	0	%100
33	M60	X	.109	.109	0	%100
34	M60	Z	-.189	-.189	0	%100
35	RRH1	X	.299	.299	0	%100
36	RRH1	Z	-.518	-.518	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
37	M62	X	.109	.109	0	%100
38	M62	Z	-.189	-.189	0	%100
39	M63	X	.06	.06	0	%100
40	M63	Z	-.104	-.104	0	%100
41	M64	X	.06	.06	0	%100
42	M64	Z	-.104	-.104	0	%100
43	M52B	X	.06	.06	0	%100
44	M52B	Z	-.104	-.104	0	%100
45	M53A	X	.06	.06	0	%100
46	M53A	Z	-.104	-.104	0	%100
47	M41A	X	.013	.013	0	%100
48	M41A	Z	-.022	-.022	0	%100
49	M42A	X	.013	.013	0	%100
50	M42A	Z	-.022	-.022	0	%100
51	M43A	X	.013	.013	0	%100
52	M43A	Z	-.022	-.022	0	%100
53	M44A	X	.013	.013	0	%100
54	M44A	Z	-.022	-.022	0	%100
55	RRH2	X	.299	.299	0	%100
56	RRH2	Z	-.518	-.518	0	%100
57	M46	X	.06	.06	0	%100
58	M46	Z	-.104	-.104	0	%100
59	M47	X	.054	.054	0	%100
60	M47	Z	-.093	-.093	0	%100
61	M48	X	.054	.054	0	%100
62	M48	Z	-.093	-.093	0	%100
63	M49	X	.06	.06	0	%100
64	M49	Z	-.104	-.104	0	%100
65	M49A	X	.17	.17	0	%100
66	M49A	Z	-.294	-.294	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.099	.099	0	%100
2	M1	Z	-.057	-.057	0	%100
3	M2	X	.099	.099	0	%100
4	M2	Z	-.057	-.057	0	%100
5	M21	X	.026	.026	0	%100
6	M21	Z	-.015	-.015	0	%100
7	M22	X	.026	.026	0	%100
8	M22	Z	-.015	-.015	0	%100
9	M20	X	.026	.026	0	%100
10	M20	Z	-.015	-.015	0	%100
11	M21A	X	.026	.026	0	%100
12	M21A	Z	-.015	-.015	0	%100
13	MP1A	X	.481	.481	0	%100
14	MP1A	Z	-.277	-.277	0	%100
15	MP2A	X	.397	.397	0	%100
16	MP2A	Z	-.229	-.229	0	%100
17	MP3A	X	.397	.397	0	%100
18	MP3A	Z	-.229	-.229	0	%100
19	MP4A	X	.397	.397	0	%100
20	MP4A	Z	-.229	-.229	0	%100
21	M50	X	.078	.078	0	%100
22	M50	Z	-.045	-.045	0	%100
23	M51	X	.078	.078	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
24	M51	Z	-.045	-.045	0	%100
25	M54	X	.078	.078	0	%100
26	M54	Z	-.045	-.045	0	%100
27	M55	X	.078	.078	0	%100
28	M55	Z	-.045	-.045	0	%100
29	M58	X	.174	.174	0	%100
30	M58	Z	-.101	-.101	0	%100
31	M59	X	.174	.174	0	%100
32	M59	Z	-.101	-.101	0	%100
33	M60	X	.174	.174	0	%100
34	M60	Z	-.101	-.101	0	%100
35	RRH1	X	.518	.518	0	%100
36	RRH1	Z	-.299	-.299	0	%100
37	M62	X	.174	.174	0	%100
38	M62	Z	-.101	-.101	0	%100
39	M63	X	.104	.104	0	%100
40	M63	Z	-.06	-.06	0	%100
41	M64	X	.103	.103	0	%100
42	M64	Z	-.059	-.059	0	%100
43	M52B	X	.104	.104	0	%100
44	M52B	Z	-.06	-.06	0	%100
45	M53A	X	.103	.103	0	%100
46	M53A	Z	-.059	-.059	0	%100
47	M41A	X	.007	.007	0	%100
48	M41A	Z	-.004	-.004	0	%100
49	M42A	X	.007	.007	0	%100
50	M42A	Z	-.004	-.004	0	%100
51	M43A	X	.007	.007	0	%100
52	M43A	Z	-.004	-.004	0	%100
53	M44A	X	.007	.007	0	%100
54	M44A	Z	-.004	-.004	0	%100
55	RRH2	X	.518	.518	0	%100
56	RRH2	Z	-.299	-.299	0	%100
57	M46	X	.104	.104	0	%100
58	M46	Z	-.06	-.06	0	%100
59	M47	X	.092	.092	0	%100
60	M47	Z	-.053	-.053	0	%100
61	M48	X	.092	.092	0	%100
62	M48	Z	-.053	-.053	0	%100
63	M49	X	.104	.104	0	%100
64	M49	Z	-.06	-.06	0	%100
65	M49A	X	.397	.397	0	%100
66	M49A	Z	-.229	-.229	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	0	0	0	%100
5	M21	X	0	0	0	%100
6	M21	Z	0	0	0	%100
7	M22	X	0	0	0	%100
8	M22	Z	0	0	0	%100
9	M20	X	0	0	0	%100
10	M20	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
11	M21A	X	0	0	0	%100
12	M21A	Z	0	0	0	%100
13	MP1A	X	.555	.555	0	%100
14	MP1A	Z	0	0	0	%100
15	MP2A	X	.458	.458	0	%100
16	MP2A	Z	0	0	0	%100
17	MP3A	X	.458	.458	0	%100
18	MP3A	Z	0	0	0	%100
19	MP4A	X	.458	.458	0	%100
20	MP4A	Z	0	0	0	%100
21	M50	X	.121	.121	0	%100
22	M50	Z	0	0	0	%100
23	M51	X	.121	.121	0	%100
24	M51	Z	0	0	0	%100
25	M54	X	.121	.121	0	%100
26	M54	Z	0	0	0	%100
27	M55	X	.121	.121	0	%100
28	M55	Z	0	0	0	%100
29	M58	X	.096	.096	0	%100
30	M58	Z	0	0	0	%100
31	M59	X	.096	.096	0	%100
32	M59	Z	0	0	0	%100
33	M60	X	.096	.096	0	%100
34	M60	Z	0	0	0	%100
35	RRH1	X	.599	.599	0	%100
36	RRH1	Z	0	0	0	%100
37	M62	X	.096	.096	0	%100
38	M62	Z	0	0	0	%100
39	M63	X	.121	.121	0	%100
40	M63	Z	0	0	0	%100
41	M64	X	.112	.112	0	%100
42	M64	Z	0	0	0	%100
43	M52B	X	.121	.121	0	%100
44	M52B	Z	0	0	0	%100
45	M53A	X	.112	.112	0	%100
46	M53A	Z	0	0	0	%100
47	M41A	X	.096	.096	0	%100
48	M41A	Z	0	0	0	%100
49	M42A	X	.096	.096	0	%100
50	M42A	Z	0	0	0	%100
51	M43A	X	.096	.096	0	%100
52	M43A	Z	0	0	0	%100
53	M44A	X	.096	.096	0	%100
54	M44A	Z	0	0	0	%100
55	RRH2	X	.599	.599	0	%100
56	RRH2	Z	0	0	0	%100
57	M46	X	.121	.121	0	%100
58	M46	Z	0	0	0	%100
59	M47	X	.112	.112	0	%100
60	M47	Z	0	0	0	%100
61	M48	X	.112	.112	0	%100
62	M48	Z	0	0	0	%100
63	M49	X	.121	.121	0	%100
64	M49	Z	0	0	0	%100
65	M49A	X	.348	.348	0	%100
66	M49A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.099	.099	0	%100
2	M1	Z	.057	.057	0	%100
3	M2	X	.099	.099	0	%100
4	M2	Z	.057	.057	0	%100
5	M21	X	.026	.026	0	%100
6	M21	Z	.015	.015	0	%100
7	M22	X	.026	.026	0	%100
8	M22	Z	.015	.015	0	%100
9	M20	X	.026	.026	0	%100
10	M20	Z	.015	.015	0	%100
11	M21A	X	.026	.026	0	%100
12	M21A	Z	.015	.015	0	%100
13	MP1A	X	.481	.481	0	%100
14	MP1A	Z	.277	.277	0	%100
15	MP2A	X	.397	.397	0	%100
16	MP2A	Z	.229	.229	0	%100
17	MP3A	X	.397	.397	0	%100
18	MP3A	Z	.229	.229	0	%100
19	MP4A	X	.397	.397	0	%100
20	MP4A	Z	.229	.229	0	%100
21	M50	X	.078	.078	0	%100
22	M50	Z	.045	.045	0	%100
23	M51	X	.078	.078	0	%100
24	M51	Z	.045	.045	0	%100
25	M54	X	.078	.078	0	%100
26	M54	Z	.045	.045	0	%100
27	M55	X	.078	.078	0	%100
28	M55	Z	.045	.045	0	%100
29	M58	X	.007	.007	0	%100
30	M58	Z	.004	.004	0	%100
31	M59	X	.007	.007	0	%100
32	M59	Z	.004	.004	0	%100
33	M60	X	.007	.007	0	%100
34	M60	Z	.004	.004	0	%100
35	RRH1	X	.518	.518	0	%100
36	RRH1	Z	.299	.299	0	%100
37	M62	X	.007	.007	0	%100
38	M62	Z	.004	.004	0	%100
39	M63	X	.104	.104	0	%100
40	M63	Z	.06	.06	0	%100
41	M64	X	.092	.092	0	%100
42	M64	Z	.053	.053	0	%100
43	M52B	X	.104	.104	0	%100
44	M52B	Z	.06	.06	0	%100
45	M53A	X	.092	.092	0	%100
46	M53A	Z	.053	.053	0	%100
47	M41A	X	.174	.174	0	%100
48	M41A	Z	.101	.101	0	%100
49	M42A	X	.174	.174	0	%100
50	M42A	Z	.101	.101	0	%100
51	M43A	X	.174	.174	0	%100
52	M43A	Z	.101	.101	0	%100
53	M44A	X	.174	.174	0	%100
54	M44A	Z	.101	.101	0	%100
55	RRH2	X	.518	.518	0	%100
56	RRH2	Z	.299	.299	0	%100
57	M46	X	.104	.104	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
58	M46	Z	.06	.06	0	%100
59	M47	X	.103	.103	0	%100
60	M47	Z	.059	.059	0	%100
61	M48	X	.103	.103	0	%100
62	M48	Z	.059	.059	0	%100
63	M49	X	.104	.104	0	%100
64	M49	Z	.06	.06	0	%100
65	M49A	X	.103	.103	0	%100
66	M49A	Z	.059	.059	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.172	.172	0	%100
2	M1	Z	.298	.298	0	%100
3	M2	X	.172	.172	0	%100
4	M2	Z	.298	.298	0	%100
5	M21	X	.045	.045	0	%100
6	M21	Z	.078	.078	0	%100
7	M22	X	.045	.045	0	%100
8	M22	Z	.078	.078	0	%100
9	M20	X	.045	.045	0	%100
10	M20	Z	.078	.078	0	%100
11	M21A	X	.045	.045	0	%100
12	M21A	Z	.078	.078	0	%100
13	MP1A	X	.277	.277	0	%100
14	MP1A	Z	.481	.481	0	%100
15	MP2A	X	.229	.229	0	%100
16	MP2A	Z	.397	.397	0	%100
17	MP3A	X	.229	.229	0	%100
18	MP3A	Z	.397	.397	0	%100
19	MP4A	X	.229	.229	0	%100
20	MP4A	Z	.397	.397	0	%100
21	M50	X	.015	.015	0	%100
22	M50	Z	.026	.026	0	%100
23	M51	X	.015	.015	0	%100
24	M51	Z	.026	.026	0	%100
25	M54	X	.015	.015	0	%100
26	M54	Z	.026	.026	0	%100
27	M55	X	.015	.015	0	%100
28	M55	Z	.026	.026	0	%100
29	M58	X	.013	.013	0	%100
30	M58	Z	.022	.022	0	%100
31	M59	X	.013	.013	0	%100
32	M59	Z	.022	.022	0	%100
33	M60	X	.013	.013	0	%100
34	M60	Z	.022	.022	0	%100
35	RRH1	X	.299	.299	0	%100
36	RRH1	Z	.518	.518	0	%100
37	M62	X	.013	.013	0	%100
38	M62	Z	.022	.022	0	%100
39	M63	X	.06	.06	0	%100
40	M63	Z	.104	.104	0	%100
41	M64	X	.054	.054	0	%100
42	M64	Z	.093	.093	0	%100
43	M52B	X	.06	.06	0	%100
44	M52B	Z	.104	.104	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
45	M53A	X	.054	.054	0	%100
46	M53A	Z	.093	.093	0	%100
47	M41A	X	.109	.109	0	%100
48	M41A	Z	.189	.189	0	%100
49	M42A	X	.109	.109	0	%100
50	M42A	Z	.189	.189	0	%100
51	M43A	X	.109	.109	0	%100
52	M43A	Z	.189	.189	0	%100
53	M44A	X	.109	.109	0	%100
54	M44A	Z	.189	.189	0	%100
55	RRH2	X	.299	.299	0	%100
56	RRH2	Z	.518	.518	0	%100
57	M46	X	.06	.06	0	%100
58	M46	Z	.104	.104	0	%100
59	M47	X	.06	.06	0	%100
60	M47	Z	.104	.104	0	%100
61	M48	X	.06	.06	0	%100
62	M48	Z	.104	.104	0	%100
63	M49	X	.06	.06	0	%100
64	M49	Z	.104	.104	0	%100
65	M49A	X	2.7e-5	2.7e-5	0	%100
66	M49A	Z	4.6e-5	4.6e-5	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	.458	.458	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	.458	.458	0	%100
5	M21	X	0	0	0	%100
6	M21	Z	.121	.121	0	%100
7	M22	X	0	0	0	%100
8	M22	Z	.121	.121	0	%100
9	M20	X	0	0	0	%100
10	M20	Z	.121	.121	0	%100
11	M21A	X	0	0	0	%100
12	M21A	Z	.121	.121	0	%100
13	MP1A	X	0	0	0	%100
14	MP1A	Z	.555	.555	0	%100
15	MP2A	X	0	0	0	%100
16	MP2A	Z	.458	.458	0	%100
17	MP3A	X	0	0	0	%100
18	MP3A	Z	.458	.458	0	%100
19	MP4A	X	0	0	0	%100
20	MP4A	Z	.458	.458	0	%100
21	M50	X	0	0	0	%100
22	M50	Z	0	0	0	%100
23	M51	X	0	0	0	%100
24	M51	Z	0	0	0	%100
25	M54	X	0	0	0	%100
26	M54	Z	0	0	0	%100
27	M55	X	0	0	0	%100
28	M55	Z	0	0	0	%100
29	M58	X	0	0	0	%100
30	M58	Z	.13	.13	0	%100
31	M59	X	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
32	M59	Z	.13	.13	0	%100
33	M60	X	0	0	0	%100
34	M60	Z	.13	.13	0	%100
35	RRH1	X	0	0	0	%100
36	RRH1	Z	.599	.599	0	%100
37	M62	X	0	0	0	%100
38	M62	Z	.13	.13	0	%100
39	M63	X	0	0	0	%100
40	M63	Z	.121	.121	0	%100
41	M64	X	0	0	0	%100
42	M64	Z	.114	.114	0	%100
43	M52B	X	0	0	0	%100
44	M52B	Z	.121	.121	0	%100
45	M53A	X	0	0	0	%100
46	M53A	Z	.114	.114	0	%100
47	M41A	X	0	0	0	%100
48	M41A	Z	.13	.13	0	%100
49	M42A	X	0	0	0	%100
50	M42A	Z	.13	.13	0	%100
51	M43A	X	0	0	0	%100
52	M43A	Z	.13	.13	0	%100
53	M44A	X	0	0	0	%100
54	M44A	Z	.13	.13	0	%100
55	RRH2	X	0	0	0	%100
56	RRH2	Z	.599	.599	0	%100
57	M46	X	0	0	0	%100
58	M46	Z	.121	.121	0	%100
59	M47	X	0	0	0	%100
60	M47	Z	.114	.114	0	%100
61	M48	X	0	0	0	%100
62	M48	Z	.114	.114	0	%100
63	M49	X	0	0	0	%100
64	M49	Z	.121	.121	0	%100
65	M49A	X	0	0	0	%100
66	M49A	Z	.11	.11	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.172	-.172	0	%100
2	M1	Z	.298	.298	0	%100
3	M2	X	-.172	-.172	0	%100
4	M2	Z	.298	.298	0	%100
5	M21	X	-.045	-.045	0	%100
6	M21	Z	.078	.078	0	%100
7	M22	X	-.045	-.045	0	%100
8	M22	Z	.078	.078	0	%100
9	M20	X	-.045	-.045	0	%100
10	M20	Z	.078	.078	0	%100
11	M21A	X	-.045	-.045	0	%100
12	M21A	Z	.078	.078	0	%100
13	MP1A	X	-.277	-.277	0	%100
14	MP1A	Z	.481	.481	0	%100
15	MP2A	X	-.229	-.229	0	%100
16	MP2A	Z	.397	.397	0	%100
17	MP3A	X	-.229	-.229	0	%100
18	MP3A	Z	.397	.397	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
19	MP4A	X	-.229	-.229	0	%100
20	MP4A	Z	.397	.397	0	%100
21	M50	X	-.015	-.015	0	%100
22	M50	Z	.026	.026	0	%100
23	M51	X	-.015	-.015	0	%100
24	M51	Z	.026	.026	0	%100
25	M54	X	-.015	-.015	0	%100
26	M54	Z	.026	.026	0	%100
27	M55	X	-.015	-.015	0	%100
28	M55	Z	.026	.026	0	%100
29	M58	X	-.109	-.109	0	%100
30	M58	Z	.189	.189	0	%100
31	M59	X	-.109	-.109	0	%100
32	M59	Z	.189	.189	0	%100
33	M60	X	-.109	-.109	0	%100
34	M60	Z	.189	.189	0	%100
35	RRH1	X	-.299	-.299	0	%100
36	RRH1	Z	.518	.518	0	%100
37	M62	X	-.109	-.109	0	%100
38	M62	Z	.189	.189	0	%100
39	M63	X	-.06	-.06	0	%100
40	M63	Z	.104	.104	0	%100
41	M64	X	-.06	-.06	0	%100
42	M64	Z	.104	.104	0	%100
43	M52B	X	-.06	-.06	0	%100
44	M52B	Z	.104	.104	0	%100
45	M53A	X	-.06	-.06	0	%100
46	M53A	Z	.104	.104	0	%100
47	M41A	X	-.013	-.013	0	%100
48	M41A	Z	.022	.022	0	%100
49	M42A	X	-.013	-.013	0	%100
50	M42A	Z	.022	.022	0	%100
51	M43A	X	-.013	-.013	0	%100
52	M43A	Z	.022	.022	0	%100
53	M44A	X	-.013	-.013	0	%100
54	M44A	Z	.022	.022	0	%100
55	RRH2	X	-.299	-.299	0	%100
56	RRH2	Z	.518	.518	0	%100
57	M46	X	-.06	-.06	0	%100
58	M46	Z	.104	.104	0	%100
59	M47	X	-.054	-.054	0	%100
60	M47	Z	.093	.093	0	%100
61	M48	X	-.054	-.054	0	%100
62	M48	Z	.093	.093	0	%100
63	M49	X	-.06	-.06	0	%100
64	M49	Z	.104	.104	0	%100
65	M49A	X	-.17	-.17	0	%100
66	M49A	Z	.294	.294	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.099	-.099	0	%100
2	M1	Z	.057	.057	0	%100
3	M2	X	-.099	-.099	0	%100
4	M2	Z	.057	.057	0	%100
5	M21	X	-.026	-.026	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
6	M21	Z	.015	.015	0	%100
7	M22	X	-.026	-.026	0	%100
8	M22	Z	.015	.015	0	%100
9	M20	X	-.026	-.026	0	%100
10	M20	Z	.015	.015	0	%100
11	M21A	X	-.026	-.026	0	%100
12	M21A	Z	.015	.015	0	%100
13	MP1A	X	-.481	-.481	0	%100
14	MP1A	Z	.277	.277	0	%100
15	MP2A	X	-.397	-.397	0	%100
16	MP2A	Z	.229	.229	0	%100
17	MP3A	X	-.397	-.397	0	%100
18	MP3A	Z	.229	.229	0	%100
19	MP4A	X	-.397	-.397	0	%100
20	MP4A	Z	.229	.229	0	%100
21	M50	X	-.078	-.078	0	%100
22	M50	Z	.045	.045	0	%100
23	M51	X	-.078	-.078	0	%100
24	M51	Z	.045	.045	0	%100
25	M54	X	-.078	-.078	0	%100
26	M54	Z	.045	.045	0	%100
27	M55	X	-.078	-.078	0	%100
28	M55	Z	.045	.045	0	%100
29	M58	X	-.174	-.174	0	%100
30	M58	Z	.101	.101	0	%100
31	M59	X	-.174	-.174	0	%100
32	M59	Z	.101	.101	0	%100
33	M60	X	-.174	-.174	0	%100
34	M60	Z	.101	.101	0	%100
35	RRH1	X	-.518	-.518	0	%100
36	RRH1	Z	.299	.299	0	%100
37	M62	X	-.174	-.174	0	%100
38	M62	Z	.101	.101	0	%100
39	M63	X	-.104	-.104	0	%100
40	M63	Z	.06	.06	0	%100
41	M64	X	-.103	-.103	0	%100
42	M64	Z	.059	.059	0	%100
43	M52B	X	-.104	-.104	0	%100
44	M52B	Z	.06	.06	0	%100
45	M53A	X	-.103	-.103	0	%100
46	M53A	Z	.059	.059	0	%100
47	M41A	X	-.007	-.007	0	%100
48	M41A	Z	.004	.004	0	%100
49	M42A	X	-.007	-.007	0	%100
50	M42A	Z	.004	.004	0	%100
51	M43A	X	-.007	-.007	0	%100
52	M43A	Z	.004	.004	0	%100
53	M44A	X	-.007	-.007	0	%100
54	M44A	Z	.004	.004	0	%100
55	RRH2	X	-.518	-.518	0	%100
56	RRH2	Z	.299	.299	0	%100
57	M46	X	-.104	-.104	0	%100
58	M46	Z	.06	.06	0	%100
59	M47	X	-.092	-.092	0	%100
60	M47	Z	.053	.053	0	%100
61	M48	X	-.092	-.092	0	%100
62	M48	Z	.053	.053	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
63	M49	X	-.104	-.104	0	%100
64	M49	Z	.06	.06	0	%100
65	M49A	X	-.397	-.397	0	%100
66	M49A	Z	.229	.229	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	0	0	0	%100
5	M21	X	0	0	0	%100
6	M21	Z	0	0	0	%100
7	M22	X	0	0	0	%100
8	M22	Z	0	0	0	%100
9	M20	X	0	0	0	%100
10	M20	Z	0	0	0	%100
11	M21A	X	0	0	0	%100
12	M21A	Z	0	0	0	%100
13	MP1A	X	-.555	-.555	0	%100
14	MP1A	Z	0	0	0	%100
15	MP2A	X	-.458	-.458	0	%100
16	MP2A	Z	0	0	0	%100
17	MP3A	X	-.458	-.458	0	%100
18	MP3A	Z	0	0	0	%100
19	MP4A	X	-.458	-.458	0	%100
20	MP4A	Z	0	0	0	%100
21	M50	X	-.121	-.121	0	%100
22	M50	Z	0	0	0	%100
23	M51	X	-.121	-.121	0	%100
24	M51	Z	0	0	0	%100
25	M54	X	-.121	-.121	0	%100
26	M54	Z	0	0	0	%100
27	M55	X	-.121	-.121	0	%100
28	M55	Z	0	0	0	%100
29	M58	X	-.096	-.096	0	%100
30	M58	Z	0	0	0	%100
31	M59	X	-.096	-.096	0	%100
32	M59	Z	0	0	0	%100
33	M60	X	-.096	-.096	0	%100
34	M60	Z	0	0	0	%100
35	RRH1	X	-.599	-.599	0	%100
36	RRH1	Z	0	0	0	%100
37	M62	X	-.096	-.096	0	%100
38	M62	Z	0	0	0	%100
39	M63	X	-.121	-.121	0	%100
40	M63	Z	0	0	0	%100
41	M64	X	-.112	-.112	0	%100
42	M64	Z	0	0	0	%100
43	M52B	X	-.121	-.121	0	%100
44	M52B	Z	0	0	0	%100
45	M53A	X	-.112	-.112	0	%100
46	M53A	Z	0	0	0	%100
47	M41A	X	-.096	-.096	0	%100
48	M41A	Z	0	0	0	%100
49	M42A	X	-.096	-.096	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
50	M42A	Z	0	0	0	%100
51	M43A	X	-.096	-.096	0	%100
52	M43A	Z	0	0	0	%100
53	M44A	X	-.096	-.096	0	%100
54	M44A	Z	0	0	0	%100
55	RRH2	X	-.599	-.599	0	%100
56	RRH2	Z	0	0	0	%100
57	M46	X	-.121	-.121	0	%100
58	M46	Z	0	0	0	%100
59	M47	X	-.112	-.112	0	%100
60	M47	Z	0	0	0	%100
61	M48	X	-.112	-.112	0	%100
62	M48	Z	0	0	0	%100
63	M49	X	-.121	-.121	0	%100
64	M49	Z	0	0	0	%100
65	M49A	X	-.348	-.348	0	%100
66	M49A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.099	-.099	0	%100
2	M1	Z	-.057	-.057	0	%100
3	M2	X	-.099	-.099	0	%100
4	M2	Z	-.057	-.057	0	%100
5	M21	X	-.026	-.026	0	%100
6	M21	Z	-.015	-.015	0	%100
7	M22	X	-.026	-.026	0	%100
8	M22	Z	-.015	-.015	0	%100
9	M20	X	-.026	-.026	0	%100
10	M20	Z	-.015	-.015	0	%100
11	M21A	X	-.026	-.026	0	%100
12	M21A	Z	-.015	-.015	0	%100
13	MP1A	X	-.481	-.481	0	%100
14	MP1A	Z	-.277	-.277	0	%100
15	MP2A	X	-.397	-.397	0	%100
16	MP2A	Z	-.229	-.229	0	%100
17	MP3A	X	-.397	-.397	0	%100
18	MP3A	Z	-.229	-.229	0	%100
19	MP4A	X	-.397	-.397	0	%100
20	MP4A	Z	-.229	-.229	0	%100
21	M50	X	-.078	-.078	0	%100
22	M50	Z	-.045	-.045	0	%100
23	M51	X	-.078	-.078	0	%100
24	M51	Z	-.045	-.045	0	%100
25	M54	X	-.078	-.078	0	%100
26	M54	Z	-.045	-.045	0	%100
27	M55	X	-.078	-.078	0	%100
28	M55	Z	-.045	-.045	0	%100
29	M58	X	-.007	-.007	0	%100
30	M58	Z	-.004	-.004	0	%100
31	M59	X	-.007	-.007	0	%100
32	M59	Z	-.004	-.004	0	%100
33	M60	X	-.007	-.007	0	%100
34	M60	Z	-.004	-.004	0	%100
35	RRH1	X	-.518	-.518	0	%100
36	RRH1	Z	-.299	-.299	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
37	M62	X	-.007	-.007	0	%100
38	M62	Z	-.004	-.004	0	%100
39	M63	X	-.104	-.104	0	%100
40	M63	Z	-.06	-.06	0	%100
41	M64	X	-.092	-.092	0	%100
42	M64	Z	-.053	-.053	0	%100
43	M52B	X	-.104	-.104	0	%100
44	M52B	Z	-.06	-.06	0	%100
45	M53A	X	-.092	-.092	0	%100
46	M53A	Z	-.053	-.053	0	%100
47	M41A	X	-.174	-.174	0	%100
48	M41A	Z	-.101	-.101	0	%100
49	M42A	X	-.174	-.174	0	%100
50	M42A	Z	-.101	-.101	0	%100
51	M43A	X	-.174	-.174	0	%100
52	M43A	Z	-.101	-.101	0	%100
53	M44A	X	-.174	-.174	0	%100
54	M44A	Z	-.101	-.101	0	%100
55	RRH2	X	-.518	-.518	0	%100
56	RRH2	Z	-.299	-.299	0	%100
57	M46	X	-.104	-.104	0	%100
58	M46	Z	-.06	-.06	0	%100
59	M47	X	-.103	-.103	0	%100
60	M47	Z	-.059	-.059	0	%100
61	M48	X	-.103	-.103	0	%100
62	M48	Z	-.059	-.059	0	%100
63	M49	X	-.104	-.104	0	%100
64	M49	Z	-.06	-.06	0	%100
65	M49A	X	-.103	-.103	0	%100
66	M49A	Z	-.059	-.059	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.172	-.172	0	%100
2	M1	Z	-.298	-.298	0	%100
3	M2	X	-.172	-.172	0	%100
4	M2	Z	-.298	-.298	0	%100
5	M21	X	-.045	-.045	0	%100
6	M21	Z	-.078	-.078	0	%100
7	M22	X	-.045	-.045	0	%100
8	M22	Z	-.078	-.078	0	%100
9	M20	X	-.045	-.045	0	%100
10	M20	Z	-.078	-.078	0	%100
11	M21A	X	-.045	-.045	0	%100
12	M21A	Z	-.078	-.078	0	%100
13	MP1A	X	-.277	-.277	0	%100
14	MP1A	Z	-.481	-.481	0	%100
15	MP2A	X	-.229	-.229	0	%100
16	MP2A	Z	-.397	-.397	0	%100
17	MP3A	X	-.229	-.229	0	%100
18	MP3A	Z	-.397	-.397	0	%100
19	MP4A	X	-.229	-.229	0	%100
20	MP4A	Z	-.397	-.397	0	%100
21	M50	X	-.015	-.015	0	%100
22	M50	Z	-.026	-.026	0	%100
23	M51	X	-.015	-.015	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
24	M51	Z	-.026	-.026	0	%100
25	M54	X	-.015	-.015	0	%100
26	M54	Z	-.026	-.026	0	%100
27	M55	X	-.015	-.015	0	%100
28	M55	Z	-.026	-.026	0	%100
29	M58	X	-.013	-.013	0	%100
30	M58	Z	-.022	-.022	0	%100
31	M59	X	-.013	-.013	0	%100
32	M59	Z	-.022	-.022	0	%100
33	M60	X	-.013	-.013	0	%100
34	M60	Z	-.022	-.022	0	%100
35	RRH1	X	-.299	-.299	0	%100
36	RRH1	Z	-.518	-.518	0	%100
37	M62	X	-.013	-.013	0	%100
38	M62	Z	-.022	-.022	0	%100
39	M63	X	-.06	-.06	0	%100
40	M63	Z	-.104	-.104	0	%100
41	M64	X	-.054	-.054	0	%100
42	M64	Z	-.093	-.093	0	%100
43	M52B	X	-.06	-.06	0	%100
44	M52B	Z	-.104	-.104	0	%100
45	M53A	X	-.054	-.054	0	%100
46	M53A	Z	-.093	-.093	0	%100
47	M41A	X	-.109	-.109	0	%100
48	M41A	Z	-.189	-.189	0	%100
49	M42A	X	-.109	-.109	0	%100
50	M42A	Z	-.189	-.189	0	%100
51	M43A	X	-.109	-.109	0	%100
52	M43A	Z	-.189	-.189	0	%100
53	M44A	X	-.109	-.109	0	%100
54	M44A	Z	-.189	-.189	0	%100
55	RRH2	X	-.299	-.299	0	%100
56	RRH2	Z	-.518	-.518	0	%100
57	M46	X	-.06	-.06	0	%100
58	M46	Z	-.104	-.104	0	%100
59	M47	X	-.06	-.06	0	%100
60	M47	Z	-.104	-.104	0	%100
61	M48	X	-.06	-.06	0	%100
62	M48	Z	-.104	-.104	0	%100
63	M49	X	-.06	-.06	0	%100
64	M49	Z	-.104	-.104	0	%100
65	M49A	X	-2.7e-5	-2.7e-5	0	%100
66	M49A	Z	-4.6e-5	-4.6e-5	0	%100

Member Area Loads

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

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N35	max	1108.162	34	1084.147	24	1721.99	13	-.329	12	0	51	.324	27
2		min	-682.941	49	484.698	6	433.857	7	-.799	17	0	1	-.196	49
3	N36	max	1625.705	10	879.34	17	1261.32	12	-.256	12	0	51	.279	27
4		min	-1869.971	4	389.866	12	-2492.34	6	-.649	18	0	1	-.169	49

Envelope Joint Reactions (Continued)

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
5	N70B	max	720.051	3	27.705	22	1287.908	3	0	51	0	51	0	51
6		min	-681.404	9	10.542	3	-1286.403	9	0	1	0	1	0	1
7	Totals:	max	1206.126	10	1988.941	18	1643.991	1						
8		min	-1206.124	4	892.168	1	-1643.988	7						

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

	Member	Shape	Code Check	Loc[...	LC	Shear Check	Loc[ft]	Dir	LC	phi*Pnc...	phi*Pnt ...	phi*Mn ...	phi*Mn ...	Cb	Eqn
1	M1	PIPE_2.0	.482	6.38	5	.142	8.594		35	6295.422	32130	1.872	1.872	3...	H1-1b
2	M2	PIPE_2.0	.952	8.594	11	.218	8.594		11	6295.422	32130	1.872	1.872	2...	H1-1b
3	M21	PL5/8x4	.228	.333	49	.067	.333	y	20	79411.08	81000	1.055	6.75	1...	H1-1b
4	M22	PL5/8x4	.346	.333	29	.110	.333	y	5	79411.08	81000	1.055	6.75	1...	H1-1b
5	M20	PL5/8x4	.262	.333	49	.069	.333	y	15	79411.08	81000	1.055	6.75	1...	H1-1b
6	M21A	PL5/8x4	.386	.333	26	.083	0	y	17	79411.08	81000	1.055	6.75	1...	H1-1b
7	MP1A	PIPE_2.5	.201	3.099	5	.259	3.099		5	29874.6...	50715	3.596	3.596	2...	H3-6
8	MP2A	PIPE_2.0	.211	3.016	6	.068	5.445		3	14797.0...	32130	1.872	1.872	3...	H1-1b
9	MP3A	PIPE_2.0	.198	5.445	49	.087	3.099		7	14797.0...	32130	1.872	1.872	3...	H1-1b
10	MP4A	PIPE_2.0	.177	5.445	49	.081	5.445		6	14797.0...	32130	1.872	1.872	4...	H1-1b
11	M50	PL5/8x4	.095	0	49	.018	.422	y	8	77711.3...	81000	1.055	6.75	1...	H1-1b
12	M51	PL5/8x4	.130	0	49	.009	.422	z	49	77711.3...	81000	1.055	6.75	1...	H1-1b
13	M54	PL5/8x4	.191	0	31	.014	.422	z	29	77711.3...	81000	1.055	6.75	1...	H1-1b
14	M55	PL5/8x4	.195	.422	5	.042	.422	y	5	77711.3...	81000	1.055	6.75	1...	H1-1b
15	M58	PIPE_1.25	.770	0	5	.362	1.262		29	18918.1...	19687.5	.801	.801	1...	H1-1b
16	M59	PIPE_1.25	.256	.171	29	.223	.158		29	18918.1...	19687.5	.801	.801	1...	H1-1b
17	M60	PIPE_1.25	.612	1.262	5	.278	.158		25	18918.1...	19687.5	.801	.801	3...	H1-1b
18	RRH1	PIPE_3.0	.067	1.547	28	.048	1.547		5	55456.8...	65205	5.749	5.749	2...	H1-1b
19	M62	PIPE_1.25	.291	1.262	36	.155	1.262		17	18918.1...	19687.5	.801	.801	1...	H1-1b
20	M63	SR_0.625	.212	1.536	25	.033	2.458		11	3963.263	9940.19	.104	.104	1	H1-1a
21	M64	SR_0.625	.095	1.314	26	.018	2.628		6	3472.698	9940.19	.104	.104	1...	H1-1b
22	M52B	SR_0.625	.040	1.178	27	.033	0		36	3963.263	9940.19	.104	.104	1...	H1-1b
23	M53A	SR_0.625	.505	1.232	27	.026	2.628		11	3472.698	9940.19	.104	.104	1...	H1-1a
24	M41A	PIPE_1.25	.331	0	8	.230	1.262		49	18918.1...	19687.5	.801	.801	1...	H1-1b
25	M42A	PIPE_1.25	.177	.171	49	.141	.158		49	18918.1...	19687.5	.801	.801	1...	H1-1b
26	M43A	PIPE_1.25	.274	1.262	8	.204	.158		20	18918.1...	19687.5	.801	.801	2...	H1-1b
27	M44A	PIPE_1.25	.187	1.262	49	.138	1.262		20	18918.1...	19687.5	.801	.801	1...	H1-1b
28	RRH2	PIPE_3.0	.046	1.547	49	.018	1.547		7	55456.8...	65205	5.749	5.749	3...	H1-1b
29	M46	SR_0.625	.138	2.458	49	.021	0		9	3963.263	9940.19	.104	.104	1	H1-1b*
30	M47	SR_0.625	.063	1.341	49	.014	0		1	3472.698	9940.19	.104	.104	1...	H1-1b
31	M48	SR_0.625	.349	1.396	49	.016	0		32	3472.698	9940.19	.104	.104	1...	H1-1a
32	M49	SR_0.625	.034	1.255	21	.038	0		27	3963.263	9940.19	.104	.104	1...	H1-1b
33	M49A	PIPE_2.0	.072	6.115	3	.003	6.115		21	20521.7...	32130	1.872	1.872	1...	H1-1b*

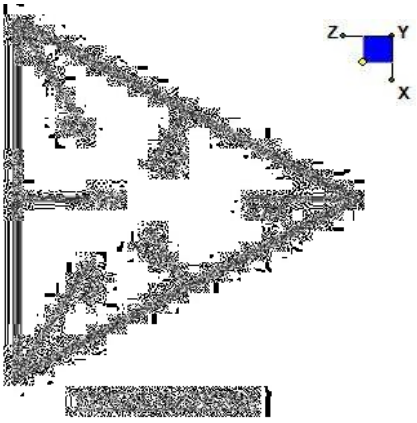
Client:	Verizon	Date:	5/21/2021
Site Name:	Norwalk 9 CT		
Project No.	20777331A		
Title:	Mount Analysis	Page:	1

Version 3.1

I. Mount-to-Tower Connection Check

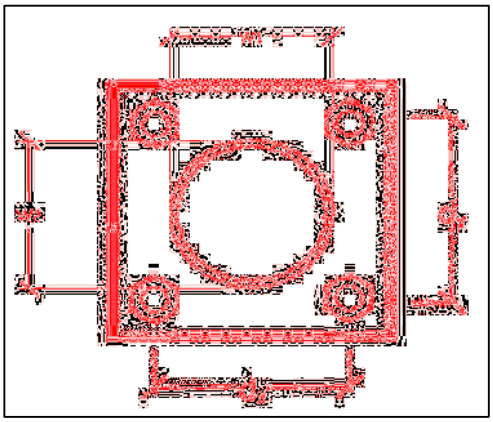
RISA Model Data

Nodes *(labeled per RISA)*	Orientation *(per graphic of typical platform)*
N35	90
N36	90



Tower Connection Bolt Checks

Any moment resistance?:	yes
Bolt Quantity per Reaction:	4
d_x (in) *(Delta X of typ. bolt config. sketch)* :	5
d_y (in) *(Delta Y of typ. bolt config. sketch)* :	3.5
Bolt Type:	A307
Bolt Diameter (in):	0.5
Required Tensile Strength (kips):	7.5
Required Shear Strength (kips):	3.4
Tensile Strength / bolt (kips):	6.4
Shear Strength / bolt (kips):	3.8
Tensile Capacity Overall:	**29.4%***
Shear Capacity Overall:	**21.9%**



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

Mount Desktop – Post Modification Inspection (PMI) Report Requirements

Documents & Photos Required from Contractor – Passing Mount Analysis

Purpose – to provide Maser Consulting Connecticut the proper documentation in order to complete the required Mount Desktop review of the Post Modification Inspection Report.

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

Base Requirements:

- Any special photos outside of the standard requirements will be indicated on the passing MA
- Verification that loading is as communicated in the Passing Mount Analysis. NOTE If loading is different than what is conveyed contact Maser Consulting Connecticut immediately.
- Each photo should be time and date stamped
- Photos should be high resolution and submitted in a Zip File and should be organized in the file structure as depicted in Schedule A attached.
- Contractor shall ensure that the safety climb wire rope is supported and not adversely impacted by the install of the modification components. This may involve the install of wire rope guides, or other items to protect the wire rope.
- The photos in the file structure should be uploaded to ***https://pmi.vzwsmart.com*** as depicted on the drawings

Photo Requirements:

- *Base and "During Installation Photos"*
  - Base pictures include
    - Photo of Gate Signs showing the tower owner, site name, and number
    - Photo of carrier shelter showing the carrier site name and number if available
    - Photos of the galvanizing compound and/or paint used (if applicable), clearly showing the label and name
  - "During Installation Photos if provided - must be placed only in this folder
- *Photos taken at ground level*
  - Overall tower structure before and after installation of the equipment modifications
  - Photos of the appropriate mount before and after installation of the modifications; if the mounts are at different rad elevations, pictures must be provided for all elevations that the modifications were installed
- *Photos taken at Mount Elevation*
  - Photos showing each individual sector before and also after installation of equipment.

These photos should also certify that the placement and geometry of the equipment on the mount is as depicted on the sketch and table in the mount analysis

- 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.

Antenna & equipment placement and Geometry Confirmation:

- The contractor must certify that the antenna & equipment placement and geometry is in accordance with the antenna placement diagrams as included in this mount analysis.

☐ The contractor certifies that the photos support and the equipment on the mount is as depicted on the antenna placement diagrams as included in this mount analysis.

☐ The contractor notes that the equipment on the mount is not in accordance with the antenna placement diagrams and has accordingly marked up the diagrams or provided a diagram outlining the differences.

Certifying Individual: Company _____

Name _____

Signature _____

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

Issue:

Contractor shall install radios not shown in the attached placement diagrams onto the existing standoff radio pipes on all sectors. A maximum of one (1) radio shall be installed per pipe.

Response:

Schedule A – Photo & Document File Structure

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

Structure: 469061-VZW - Norwalk 9 CT

Sector: **A**

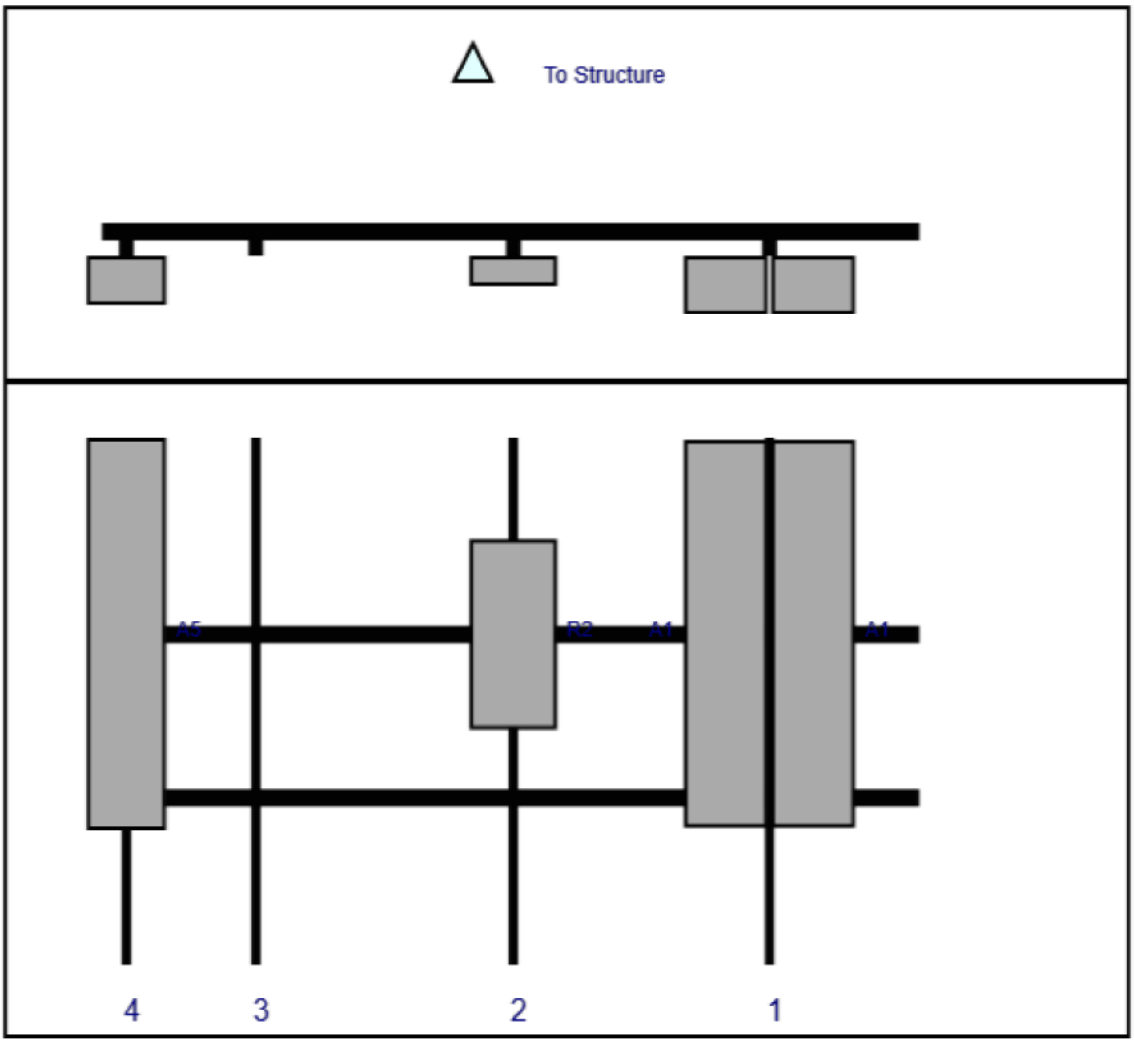
Structure Type: Guyed

Mount Elev: 98.50

5/21/2021

Plan View

Front View
Looking at Structure



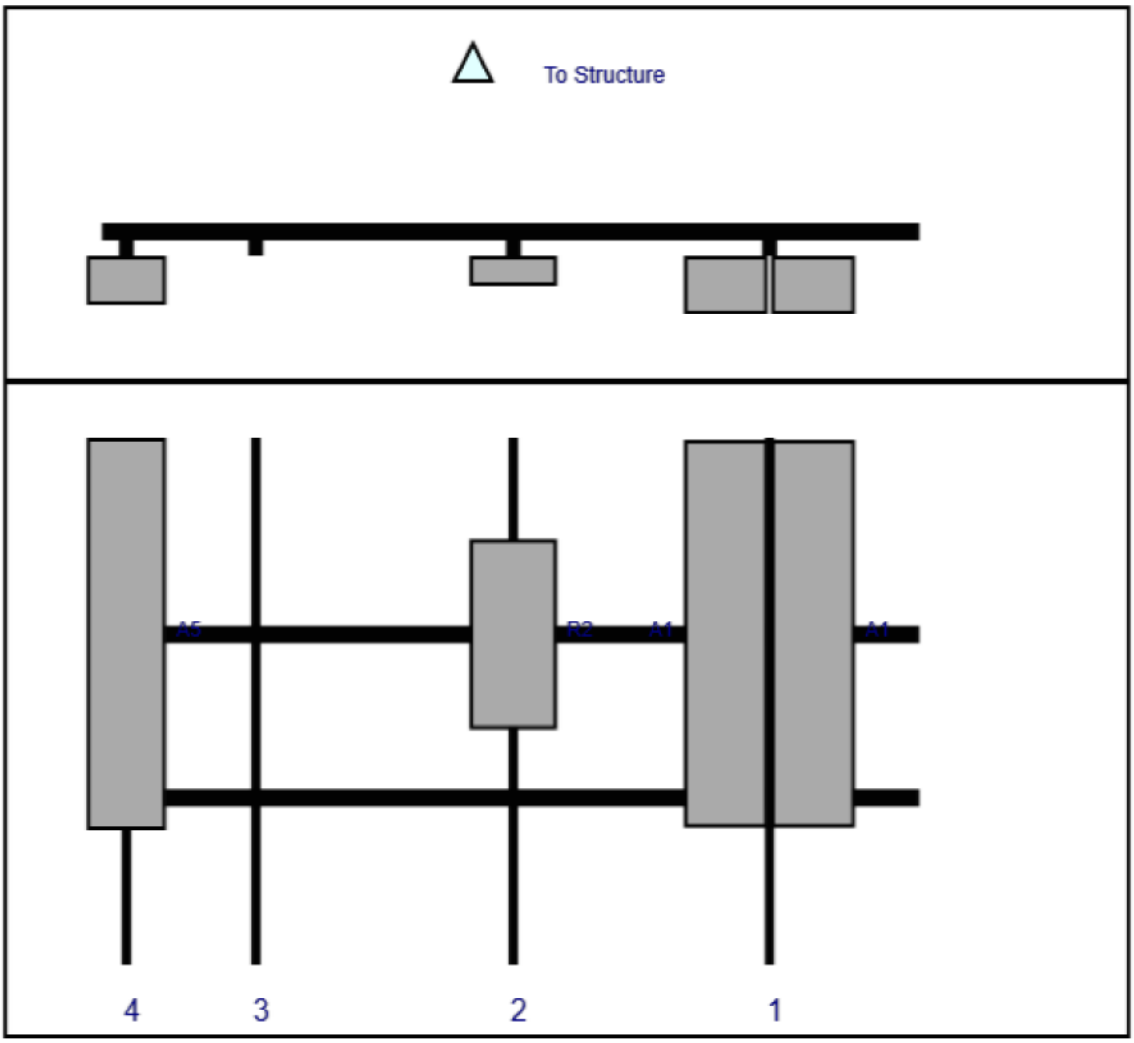
Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A1	MX06FRO660-02	71.3	15.4	122.5	1	a	Front	36	8	Added	
A1	MX06FRO660-02	71.3	15.4	122.5	1	b	Front	36	-8	Added	
R2	MT6407-77A	35.1	16.1	75.5	2	a	Front	36	0	Added	
A5	X7C-FRO-660-V	72	14.6	4.5	4	a	Front	36	0	Retained	03/18/2021

Sector: **B**
Structure Type: Guyed
Mount Elev: 98.50

5/21/2021
Page: 2

Plan View

Front View
Looking at Structure



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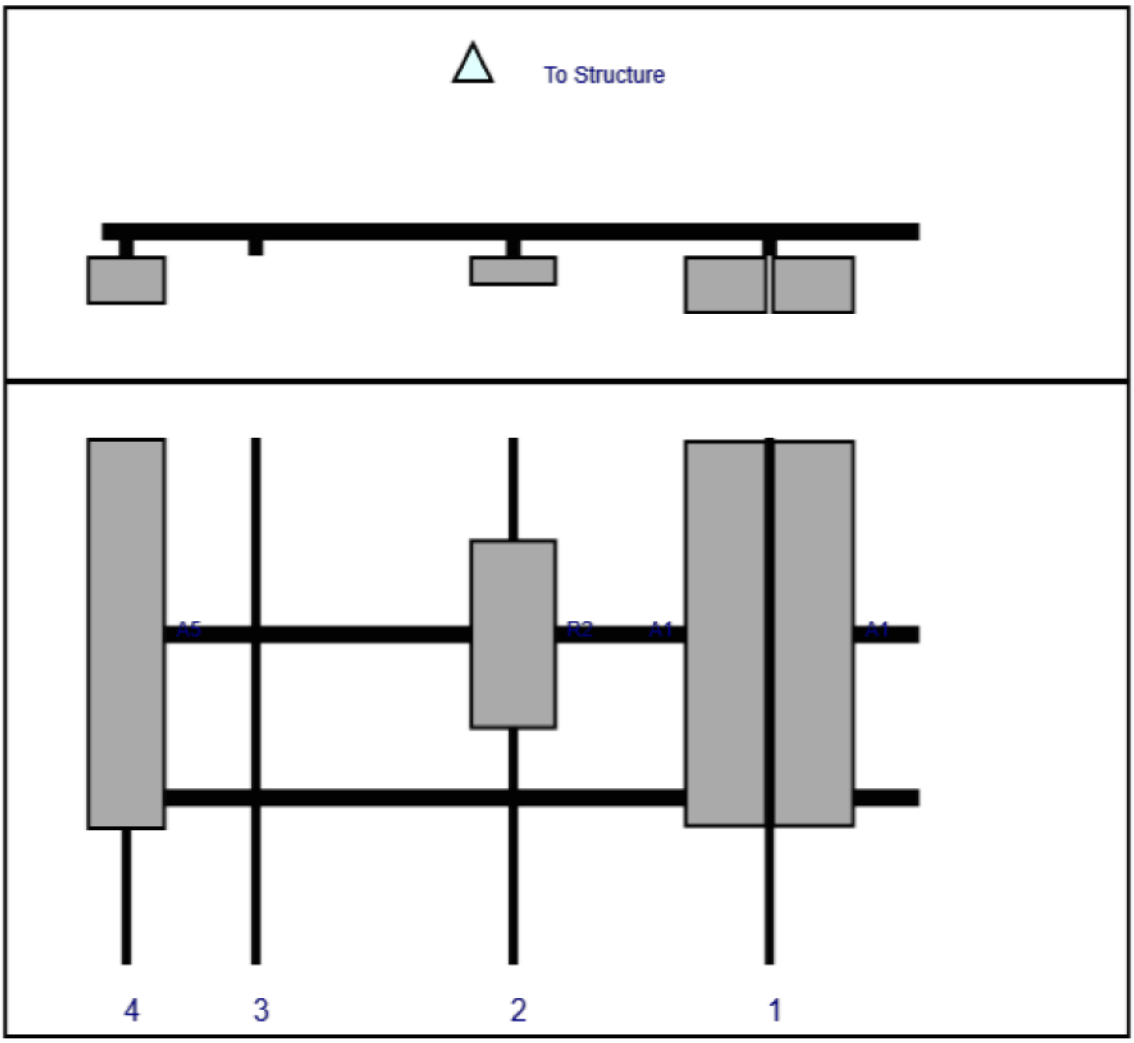
A1	MX06FRO660-02	71.3	15.4	122.5	1	b	Front	36	-8	Added	
R2	MT6407-77A	35.1	16.1	75.5	2	a	Front	36	0	Added	
A5	X7C-FRO-660-V	72	14.6	4.5	4	a	Front	36	0	Retained	03/18/2021

Plan View

Front View
Looking at Structure



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A5	X7C-FRO-660-V	72	14.6	4.5	4	a	Front	36	0	Retained	03/18/2021

Maser Consulting Connecticut

MASER CONSULTING
— CONNECTICUT —

Subject:	*TIA-222-H Usage*	
Site Information	*Site ID:*	*469061-VZW / Norwalk 9 CT*
	Site Name:	*Norwalk 9 CT*
	Carrier Name:	*Verizon Wireless*
	Address:	*6 Shirley St* *Norwalk, Connecticut 06850* *Fairfield County*
	Latitude:	*41.115556°*
	Longitude:	*-73.434444°*
Structure Information	*Tower Type:*	*Guyed*
	Mount Type:	*12.50-Ft Sector Mount*

To Whom It May Concern,

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

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

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

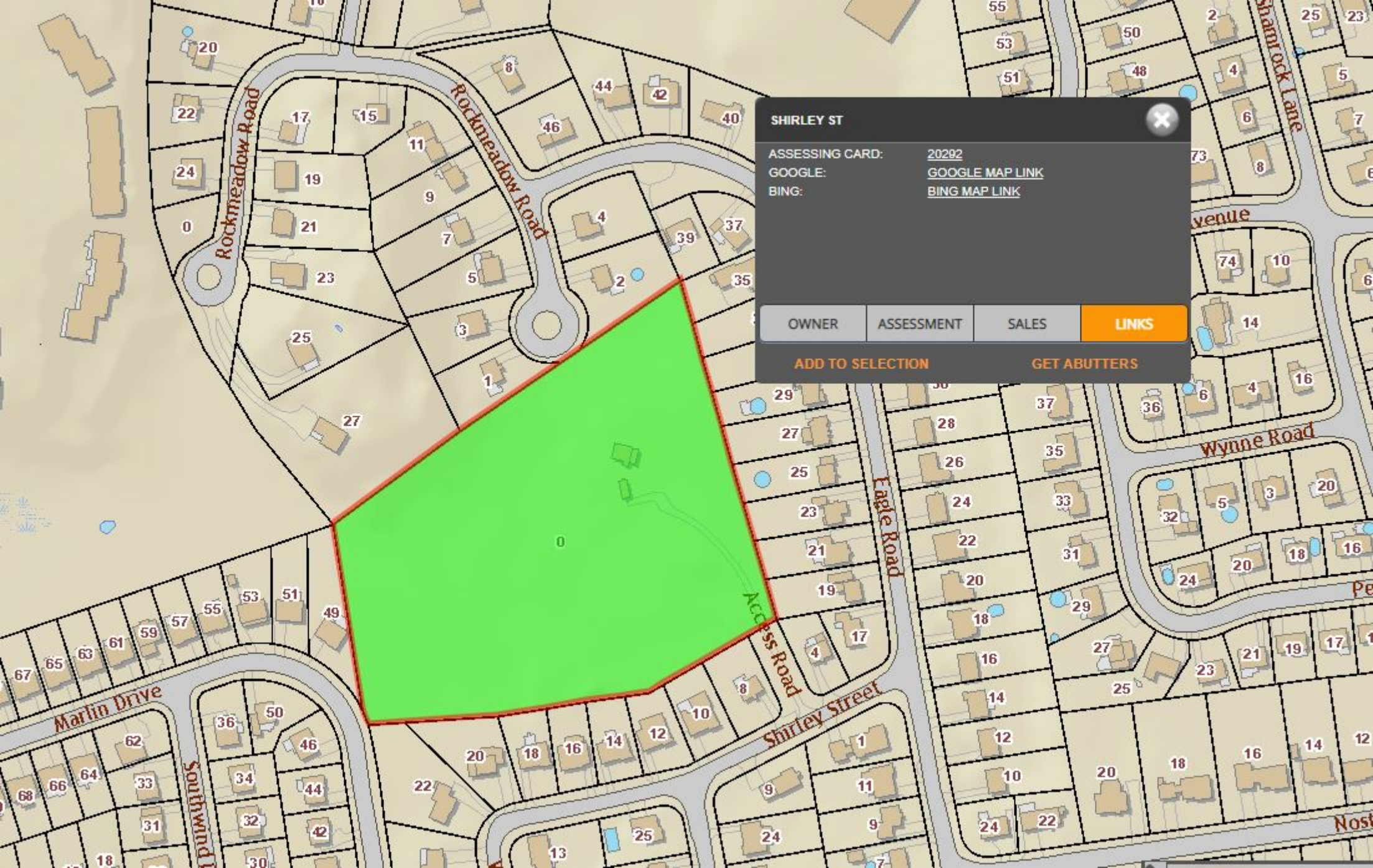
The TIA-222-H standard clarifies these specific requirements for the antenna mount analysis such as modeling method, seismic analysis, 30-degree increment wind direction and maintenance loading. Therefore, it is our opinion that TIA-222-H is the most appropriate standard for antenna mount structural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

Sincerely,

Digitally signed by Justin Linette
Date: 2021.05.21 16:08:19-04'00'

Justin Linette, PE
Technical Specialist

ATTACHMENT 5


SHIRLEY ST
ASSESSING CARD: 20292
GOOGLE: GOOGLE MAP LINK
BING: BING MAP LINK
OWNER
ASSESSMENT
SALES
LINKS
ADD TO SELECTION
GET ABUTTERS
Rockmeadow Road
Rockmeadow Road
Eagle Road
Shirley Street
Wynne Road
Martin Drive
Shamrock Lane
0

SHIRLEY ST

Sales Print Field Card Map It

Location	SHIRLEY ST	**Mblu**	5/ 58/ 43/ 0/
Acct#	20292	**Owner**	CTI TOWERS ASSETS II LLC
Assessment	$1,783,720	**Appraisal**	$2,548,180
PID	20292	**Building Count**	1

Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2018	$1,608,760	$939,420	$2,548,180
Assessment			
Valuation Year	Improvements	Land	Total
2018	$1,126,130	$657,590	$1,783,720

Owner of Record

Owner	CTI TOWERS ASSETS II LLC	**Sale Price**	$1,062,373
Co-Owner		**Certificate**	
Address	C/O RYAN LLC ATTN ALEX OUCH 2800 POST OAK BLVD SUITE 3700 HOUSTON, TX 77056	**Book & Page**	8425/253
		Sale Date	10/24/2016
		Instrument	0

ATTACHMENT 6

UNITED STATES POSTAL SERVICE®

NORWALK 9

Certificate of Mailing — Firm

Name and Address of Sender	TOTAL NO. of Pieces Listed by Sender	TOTAL NO. of Pieces Received at Post Office™	Affix Stamp Here *Postmark with Date of Receipt.*
Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103		3	neopost 10/25/2021 US POSTAGE $002.99 ZIP 06103 041L12203687
	Postmaster, per *(name of receiving employee)*		OLD STATE HOUSE STATION 06103 OCT 25 2021 USPS

USPS® Tracking Number / Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	Harry Rilling, Mayor City of Norwalk 125 East Street Norwalk, CT 06856				
2.	Steven Kleppin, Director of Planning and Zoning City of Norwalk 125 East Street Norwalk, CT 06856				
3.	CTI Towes Assets II, LLC Attn: Ryan LLC – Alex Ouch 2800 Post Oak Blvd, Suite 3700 Houston, TX 77056				
4.					
5.					
6.					