Crown Castle
3 Corporate Park Drive, Suite 101
Clifton Park, NY 12065

June 10, 2020

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

RE: **Notice of Exempt Modification for T-Mobile:**
826217 - T-Mobile Site ID: CT11004B
240 Kensington Road, Berlin, CT 06037
Latitude: 41° 37′ 34.30″ / Longitude: -72° 46′ 32.33″

Dear Ms. Bachman:

T-Mobile currently maintains nine (9) antennas at the 184-foot mount on the existing 190-foot Monopole Tower, located at 240 Kensington Road, Berlin, CT. The tower is owned by Crown Castle and the property is owned by the Town of Berlin. T-Mobile now intends to replace three (3) existing antennas with three (3) new 600/700 MHz antennas. The new antennas will be installed at the 184-ft level of the tower. T-Mobile is also proposing tower mount modifications. As shown on the enclosed mount analysis.

Planned Modifications:
Tower:

Remove and Replace:
(3) LNX 6515DS-A1M Antenna **(REMOVE)** - (3) RFS-APXVAARR24_43-U-NA20 Antenna 600/700 MHz **(REPLACE)**

Install New:
(1) 1 5/8" Hybrid Fiber Line
(3) Radio 4449 B71/B12

Existing to Remain:
(13) 1 5/8" Coax
(3) AIR32 B66A/B2A Antenna 1900/2100 MHz
(3) APX16DWV-S-E-ACU Antenna 1900/2100 MHz
(3) TMA

Ground:

Upgrade to existing ground cabinet. (Internally)

The facility was approved by the Berlin Planning and Zoning Commission on December 10, 1998. This approval was given without conditions.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Mark Kaczynski, Mayor for the Town of Berlin, as both the municipality and property owner, Maureen Giusti, Acting Town Planner, and Crown Castle is the tower owner.

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

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

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

4. The operation of the replacement antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communication Commission safety standard.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.

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

For the foregoing reasons, T-Mobile respectfully submits that the proposed modifications to the above-reference telecommunications facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2). Please send approval/rejection letter to Attn: Anne Marie Zsamba.

Sincerely,

Anne Marie Zsamba
Site Acquisition Specialist
3 Corporate Park Drive, Suite 101
Clifton Park, NY 12065
(201) 236-9224
AnneMarie.Zsamba@crowncastle.com

Attachments
cc:

Mark Kaczynski, Mayor *(via email only to mkaczynski@town.berlin.ct.us)*
Town of Berlin
240 Kensington Road
Berlin, CT 06037

Maureen Giusti, Acting Town Planner *(via email only to mgiusti@town.berlin.ct.us)*
Town of Berlin
240 Kensington Road
Berlin, CT 06037

From: Zsamba, Anne Marie
To: mgiusti@town.berlin.ct.us
Subject: Notice of Exempt Modification - 240 Kensington Road, Berlin
Date: Wednesday, June 10, 2020 12:06:00 PM
Attachments: EM-T-MOBILE-826217-CT11004B-240 KENSINGTON RD BERLIN_notice.pdf

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Dear Ms. Giusti:

Attached please find T-Mobile's exempt modification application that is being submitted to the Connecticut Siting Council, today June 10, 2020.

In light of the present circumstances with Covid-19, The Council has advised that electronic notification of this filing is acceptable. If you could kindly confirm receipt. Thank you.

Best,
Anne Marie Zsamba

ANNE MARIE ZSAMBA
Site Acquisition Specialist
T: (201) 236-9224
M: (518) 350-3639
F: (724) 416-6112

CROWN CASTLE
3 Corporate Park Drive, Suite 101
Clifton Park, NY 12065
CrownCastle.com

From: Zsamba, Anne Marie
To: mkaczynski@town.berlin.ct.us
Subject: Notice of Exempt Modification - 240 Kensington Road, Berlin
Date: Wednesday, June 10, 2020 12:06:00 PM
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CROWN CASTLE
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CrownCastle.com

Exhibit A

Original Facility Approval

VOL. 415 PAGE 0924

Town of Berlin

Department of Development Services

December 31, 1998

NOTICE OF DECISION

BERLIN PLANNING AND ZONING COMMISSION

000047

Application: **Special Permit**

Applicant: **Omnipoint Communications, Inc.**

Location: **Lot 29, Block 54, 240 Kensington Road**

At its Regular Meeting of December 10, 1998, the Berlin Planning and Zoning Commission voted four to two, with one abstention to approve the Special Permit of Omnipoint Communications for a 190' telecommunications tower at Lot 29, Block 54, 240 Kensington Road.

Town of Berlin
Owner of Record

RECEIVED January 7, 1999
AT 9 HR 15 MIN A.M.
AND RECORDED IN
BERLIN LAND RECORDS
VOL 415 PAGE 924
Joanne G. Vair
TOWN CLERK

Brian J. Miller
Brian J. Miller, AICP
Director of Development Services

Exhibit B

Property Card

Town of Berlin, CT

Property Listing Report

Map Block Lot	9-3-54-29-8026	Building #	1	PID	8026	Account	1101150

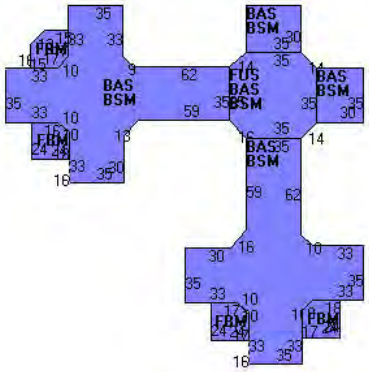
Property Information

Property Location	240 KENSINGTON RD
Owner	BERLIN TOWN OF
Co-Owner	TOWN HALL COMPLEX
Mailing Address	240 KENSINGTON ROAD KENSINGTON CT 06037
Land Use	903I Municipal MDL-96
Land Class	E
Zoning Code	R-15
Census Tract	4003

District	1
Acreage	25.1
Utilities	All Public
Book / Page	0165/0370

Photo

Sketch



Primary Construction Details

Year Built	1975
Building Desc.	Municipal MDL-94
Building Style	Other Municip
Stories	1
Occupancy	1.00
Exterior Walls	Brick Veneer
Exterior Walls 2	
Roof Style	Gable/Hip
Roof Cover	Asph/F Gls/Cmp
Interior Walls	Drywall/Plaste
Interior Walls 2	
Interior Floors 1	Carpet
Interior Floors 2	

Heating Fuel	Oil/Gas
Heating Type	Hot Water
AC Type	Central
Bedrooms	0
Full Bathrooms	0
Half Bathrooms	0
Extra Fixtures	0
Total Rooms	0
Bath Style	
Kitchen Style	
Fin BSMT Area	
Fin BSMT Quality	
Fin BSMT Area 2	
Fin BSMT Qual 2	

BSMT Garages	0
Fireplaces	0
Whirlpool Tub	0
Building Use	Comm/Ind
Building Condition	G

Industrial / Commercial Details
(*Residential Not Applicable)

Heat / AC	HEAT/AC PKGS
Frame Type	MASONRY
Baths / Plumbing	AVERAGE
Ceiling / Wall	SUS-CEIL & WL
Rooms / Prtns	AVERAGE
Wall Height	10
First Floor Use	903I

Report Created On 6/8/2020

Town of Berlin, CT

Property Listing Report

Map Block Lot	9-3-54-29-8026	Building #	1	PID	8026	Account	1101150

Valuation Summary

(Assessed value = 70% of Appraised Value)

Item	Appraised	Assessed
Buildings	12482371	8737600
Extras	0	0
Improvements		
Outbuildings	355700	249000
Land	1283500	898500
Total	14121571	9885100

Sub Areas

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
Upper Story, Finished	2870	2870
First Floor	20901	20901
Basement	20901	0
Basement, Finished	2170	2170
Total Area	46842	25941

Outbuilding and Extra Features

Type	Description
MERC VAP/FLU	36 UNITS
Paving - Asphalt	117800 S.F.

Sales History

Owner of Record	Book/ Page	Sale Date	Sale Price
BERLIN TOWN OF	0165/0370	2007-10-02	0
BERLIN TOWN OF	0165/0370	2007-10-02	0
BERLIN TOWN OF	0165/0000	1971-09-17	0
BERLIN TOWN OF	0165/0000	1971-09-17	0

Report Created On 6/8/2020

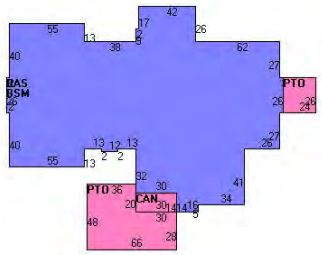
Town of Berlin, CT

Property Listing Report

Map Block Lot	9-3-54-29-8026	Building #	2	PID	8026	Account	1101150

Photo

Sketch



Primary Construction Details

Year Built	1988
Building Desc.	Comm/Ind
Building Style	Other Municip
Stories	1
Occupancy	1.00
Exterior Walls	Brick Veneer
Exterior Walls 2	
Roof Style	Gable/Hip
Roof Cover	Asph/F Gls/Cmp
Interior Walls	Drywall/Plaste
Interior Walls 2	
Interior Floors 1	Carpet
Interior Floors 2	

Heating Fuel	Oil/Gas
Heating Type	Hot Water
AC Type	Central
Bedrooms	0
Full Bathrooms	0
Half Bathrooms	0
Extra Fixtures	0
Total Rooms	0
Bath Style	
Kitchen Style	
Fin BSMT Area	
Fin BSMT Qual	
Fin BSMT Area 2	
Fin BSMT Qual 2	

BSMT Garages	0
Fireplaces	0
Whirlpool Tubs	0
Building Use	Municipal MDL-94
Building Condition	G

Industrial / Commercial Details
(*Residential Not Applicable)

Heat / AC	HEAT/AC PKGS
Frame Type	MASONRY
Baths / Plumbing	AVERAGE
Ceiling / Wall	SUS-CEIL & WL
Rooms / Prtns	AVERAGE
Wall Height	10
First Floor Use	903I

Sub Areas

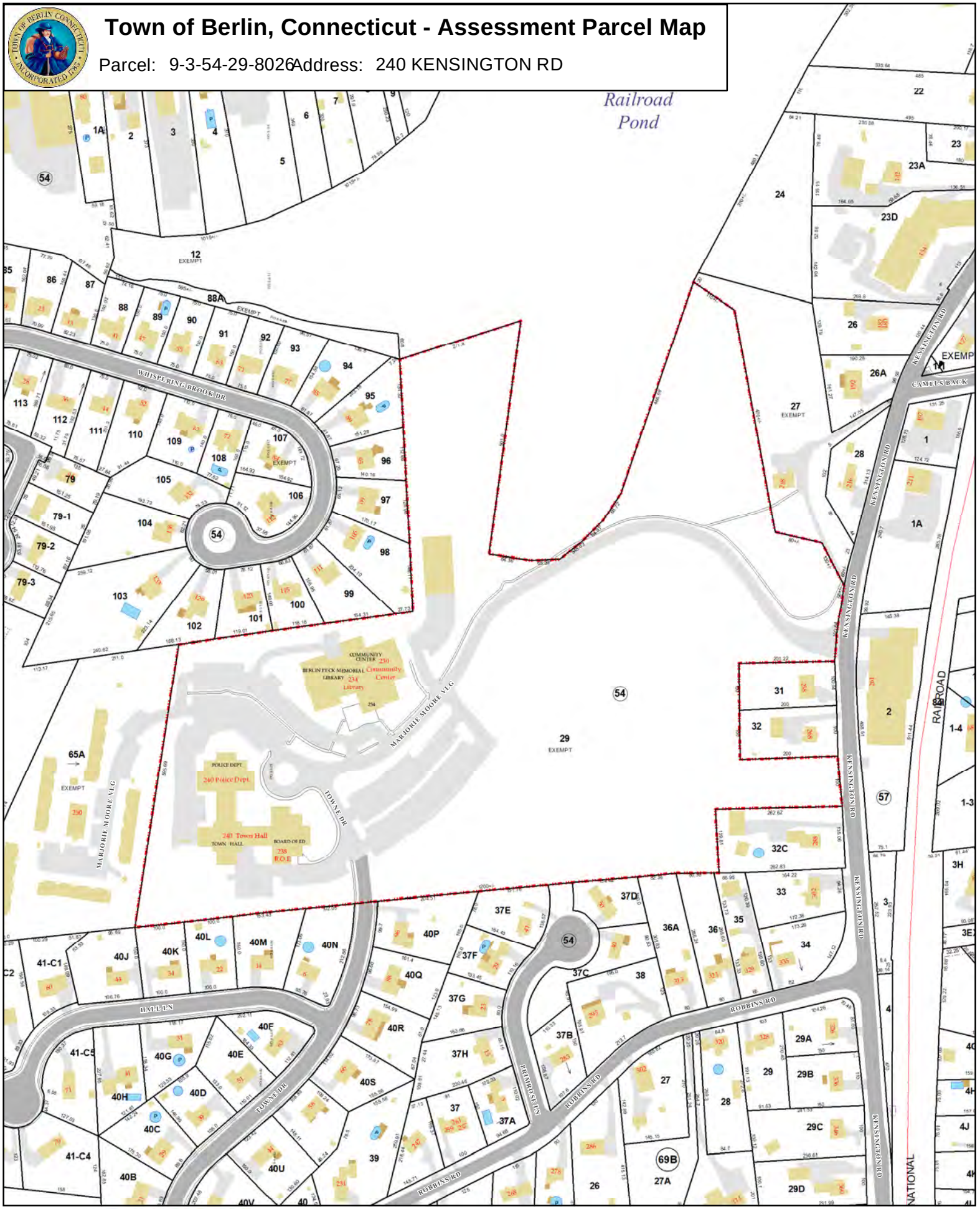
Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
Canopy Attached	420	0
Patio	3192	0
First Floor	21704	21704
Basement	21704	0

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
Total Area	47020	21704

Report Created On 6/8/2020

Town of Berlin, Connecticut - Assessment Parcel Map

Parcel: 9-3-54-29-8026 Address: 240 KENSINGTON RD



N W E S

NEGEO New England Geosystems www.negeosystems.com 282 Main Street Extension - C2 Middletown, CT 06457 • (203) 404 - 7129

Approximate Scale: 1 inch = 250 feet

0 125 250 375 500 Feet

Map Produced: March 2020

Disclaimer: This map is for informational purposes only All information is subject to verification by any user. The Town of Berlin and its mapping contractors assume no legal responsibility for the information contained herein.

Exhibit C

Construction Drawings

DocuSign Envelope ID: 30B2D339-45BF-469C-A8D3-05B0CF406FCA

T-Mobile

T-MOBILE SITE NUMBER: CT11004B
T-MOBILE SITE NAME: NEWINGTON_1
SITE TYPE: MONOPOLE
TOWER HEIGHT: 190'-0"

BUSINESS UNIT #: 826217
SITE ADDRESS: 240 KENSINGTON ROAD, BERLIN, CT 06037
COUNTY: HARTFORD
JURISDICTION: TOWN OF BERLIN

T-MOBILE 600 MHZ SITE CONFIGURATION: 67D94DB HYBRID (EVOLVED FROM 4B)

SITE INFORMATION

CROWN CASTLE USA INC. SITE NAME:	NEWINGTON_1
SITE ADDRESS:	240 KENSINGTON ROAD BERLIN, CT 06037
COUNTY:	HARTFORD
MAP/PARCEL #:	BERL-000101-000150
AREA OF CONSTRUCTION:	EXISTING
LATITUDE:	41° 37' 34.30"
LONGITUDE:	-72° 46' 32.33"
LAT/LONG TYPE:	NAD83
GROUND ELEVATION:	129 FT.
CURRENT ZONING:	NOT REQUIRED
JURISDICTION:	TOWN OF BERLIN
OCCUPANCY CLASSIFICATION:	U
TYPE OF CONSTRUCTION:	IIB
A.D.A. COMPLIANCE:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION
PROPERTY OWNER:	TOWN OF BERLIN CONNECTICUT 240 KENSINGTON RD C/O TOWN MANAGER BERLIN, CT 06037
TOWER OWNER:	CCTMO LLC 2000 CORPORATE DRIVE CANONSBURG, PA 15317
CARRIER/APPLICANT:	T-MOBILE 12920 SE 38TH STREET BELLEVUE, WA 98006
CROWN CASTLE USA INC. APPLICATION ID:	495645
ELECTRIC PROVIDER:	NORTHEAST UTILITIES (800) 286-2000
TELCO PROVIDER:	LIGHTTOWER (845) 458-7720

PROJECT TEAM

A&E FIRM:	CROWN CASTLE USA INC. 2000 CORPORATE DRIVE CANONSBURG, PA 15317 CROWNAE.APPROVAL@CROWNCASTLE.COM
CROWN CASTLE USA INC. DISTRICT CONTACTS:	3 CORPORATE PARK DRIVE, SUITE 101 CLIFTON PARK, NY 12065 TRICIA PELON - PROJECT MANAGER (518) 373-3507 JASON D'AMICO - CONSTRUCTION MANAGER (860) 209-0104 ALLISON SQUIRES - A&E SPECIALIST ALLISON.SQUIRES.CONTRACTOR@CROWNCASTLE.COM (518) 373-3523

DRAWING INDEX

SHEET #	SHEET DESCRIPTION
T-1	TITLE SHEET
T-2	GENERAL NOTES
C-1	SITE PLAN AND ENLARGED SITE PLAN
C-2	FINAL ELEVATION AND ANTENNA PLANS
C-3	ANTENNA AND CABLE SCHEDULE
C-4	PLUMBING DIAGRAM
C-5	EQUIPMENT SPECIFICATIONS
G-1	ANTENNA GROUNDING DIAGRAM
G-2	GROUNDING DETAILS
G-3	GROUNDING DETAILS

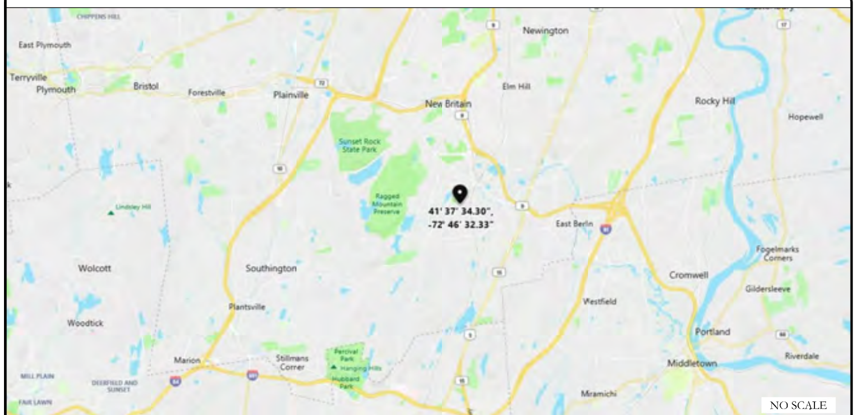
ALL DRAWINGS CONTAINED HEREIN ARE FORMATTED FOR 11x17. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

APPROVALS

APPROVAL	SIGNATURE	DATE
PROPERTY OWNER OR REP.		
LAND USE PLANNER		
T-MOBILE		
OPERATIONS		
RF		
NETWORK		
BACKHAUL		
CONSTRUCTION MANAGER		

THE PARTIES ABOVE HEREBY APPROVE AND ACCEPT THESE DOCUMENTS AND AUTHORIZE THE CONTRACTOR TO PROCEED WITH THE CONSTRUCTION DESCRIBED HEREIN. ALL CONSTRUCTION DOCUMENTS ARE SUBJECT TO REVIEW BY THE LOCAL BUILDING DEPARTMENT AND ANY CHANGES AND MODIFICATIONS THEY MAY IMPOSE.

LOCATION MAP



NO SCALE

APPLICABLE CODES/REFERENCE DOCUMENTS

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

CODE TYPE	CODE
BUILDING	2018 CT STATE BUILDING CODE/2015 IBC W/ CT AMENDMENTS
MECHANICAL	2018 CT STATE BUILDING CODE/2015 IMC W/ CT AMENDMENTS
ELECTRICAL	2018 CT STATE BUILDING CODE/2017 NEC W/ CT AMENDMENTS

REFERENCE DOCUMENTS:

STRUCTURAL ANALYSIS: B+T GROUP DATED AUGUST 16, 2019

MOUNT ANALYSIS: B+T GROUP DATED AUGUST 12, 2019

INSTALLER NOTE:
NO PROPOSED LOADING TO BE ADDED UNTIL MOUNT MODIFICATIONS ARE INSTALLED PER CONDITIONAL MOUNT ANALYSIS BY B+T GROUP DATED AUGUST 12, 2019

PROJECT DESCRIPTION

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

TOWER SCOPE OF WORK:
- REMOVE (3) ANTENNAS
- REMOVE (6) 1-5/8" COAX CABLES
- INSTALL (3) ANTENNAS
- INSTALL (3) RRHs
- INSTALL (1) 1-5/8" HYBRID CABLE
- INSTALL MOUNT MODIFICATIONS PER MOUNT ANALYSIS BY B+T GROUP, DATED AUGUST 12, 2019

GROUND SCOPE OF WORK:
- REMOVE (3) RRUS 11 B12s
- INSTALL (1) BB 6630

DESIGN PACKAGE BASED ON THE APPLICATION ID: 495645 REVISION: 0

DESIGN PACKAGE BASED ON THE RFDS REVISION: 5.1 DATE: 5/2/2019

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

CALL CONNECTICUT ONE CALL
(800) 922-4455 CBYD.COM
CALL 2 WORKING DAYS BEFORE YOU DIG!
811

T-Mobile
12920 SE 38TH STREET
BELLEVUE, WA 98006

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

T-MOBILE SITE NUMBER:
CT11004B

BU #: **826217**
NEWINGTON_1

240 KENSINGTON ROAD
BERLIN, CT 06037

EXISTING 190'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	08/06/19	DM	PRELIMINARY	LR/JL
0	08/12/19	DM	CONSTRUCTION	JL
1	08/20/19	DM	CONSTRUCTION	JL
2	05/27/20	MLC	CONSTRUCTION	JL

DocuSigned by:
Justin Linette
1B4085B2547C41E...
STATE OF CONNECTICUT
JUSTIN PETER LINETTE
No. 31965
LICENSED PROFESSIONAL ENGINEER
5/27/2020 | 3:52:20 PM EDT

Crown Castle USA Inc. Certificate of Registration #PEC.0001101

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

SHEET NUMBER: T-1
REVISION: 2

DocuSign Envelope ID: 30B2D339-45BF-469C-A8D3-05B0CF406FCA

SITE WORK GENERAL NOTES:

1. THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
2. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY CONTRACTOR. EXTREME CAUTION SHOULD BE USED BY THE SUBCONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES, SUBCONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING AND EXCAVATION.
3. ALL SITE WORK TO COMPLY WITH QAS-STD-10068 "INSTALLATION STANDARDS FOR CONSTRUCTION ACTIVITIES ON CROWN CASTLE USA INC. TOWER SITE" AND LATEST VERSION OF TIA 1019 "STANDARD FOR INSTALLATION, ALTERATION, AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS."
4. ALL SITE WORK SHALL BE AS INDICATED ON THE STAMPED CONSTRUCTION DRAWINGS AND PROJECT SPECIFICATIONS.
5. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
6. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF CONTRACTOR, OWNER AND/OR LOCAL UTILITIES.
7. THE SUBCONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION FOR SITE SIGNAGE.
8. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE BTS EQUIPMENT AND TOWER AREAS.
9. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
10. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
11. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION AS SPECIFIED ON THE PROJECT SPECIFICATIONS.
12. SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
13. NOTICE TO PROCEED– NO WORK TO COMMENCE PRIOR TO COMPANY'S WRITTEN NOTICE TO PROCEED AND THE ISSUANCE OF A PURCHASE ORDER.
14. ALL CONSTRUCTION MEANS AND METHODS; INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS, AND RESCUE PLANS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN AND SHALL MEET ANSI/ASSE A10.48 (LATEST EDITION); FEDERAL, STATE, AND LOCAL REGULATIONS; AND ANY APPLICABLE INDUSTRY CONSENSUS STANDARDS RELATED TO THE CONSTRUCTION ACTIVITIES BEING PERFORMED. ALL RIGGING PLANS SHALL ADHERE TO ANSI/ASSE A10.48 (LATEST EDITION) AND CROWN CASTLE USA INC. STANDARD STANDARD CED-STD-10253 INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION TO CERTIFY THE SUPPORTING STRUCTURE(S) IN ACCORDANCE WITH THE ANSI/TIA-322 (LATEST EDITION).

STRUCTURAL STEEL NOTES:

1. ALL STEEL WORK SHALL BE PAINTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND IN ACCORDANCE WITH ASTM A36 UNLESS OTHERWISE NOTED.
2. BOLTED CONNECTIONS SHALL BE ASTM A325 BEARING TYPE (3/4"ø) CONNECTIONS AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE.
3. NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8"ø ASTM A307 BOLTS UNLESS NOTED OTHERWISE.
4. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR CONTRACTOR APPROVAL WHEN DRILLING HOLES IN CONCRETE. SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS.

CONCRETE AND REINFORCING STEEL NOTES:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE. SLAB FOUNDATION DESIGN ASSUMING ALLOWABLE SOIL BEARING PRESSURE OF 2000 PSF.
3. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNO.
4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
   CONCRETE CAST AGAINST EARTH..................3 IN.
   CONCRETE EXPOSED TO EARTH OR WEATHER:
   #6 AND LARGER.................................2 IN.
   #5 AND SMALLER & WWF..................1 1/2 IN.
   CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:
   SLAB AND WALLS................................3/4 IN.
   BEAMS AND COLUMNS.......................1 1/2 IN.
5. A CHAMFER 3/4" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNLESS NOTED OTHERWISE. IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.

MASONRY NOTES:

1. HOLLOW CONCRETE MASONRY UNITS SHALL MEET A.S.T.M. SPECIFICATION C90, GRADE N, TYPE 1. THE SPECIFIED DESIGN COMPRESSIVE STRENGTH OF CONCRETE MASONRY (F'm) SHALL BE 1500 PSI.
2. MORTAR SHALL MEET THE PROPERTY SPECIFICATION OF A.S.T.M. C270 TYP. "S" MORTAR AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI.
3. GROUT SHALL MEET A.S.T.M. SPECIFICATION C475 AND HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 2000 PSI.
4. CONCRETE MASONRY SHALL BE LAID IN RUNNING (COMMON) BOND.
5. WALL SHALL RECEIVE TEMPORARY BRACING. TEMPORARY BRACING SHALL NOT BE REMOVED UNTIL GROUT IS FULLY CURED.

GENERAL NOTES:

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
   CONTRACTOR– _________
   SUBCONTRACTOR– GENERAL CONTRACTOR (CONSTRUCTION)
   CARRIER– T-MOBILE
   TOWER OWNER– CROWN CASTLE USA INC.
   OEM– ORIGINAL EQUIPMENT MANUFACTURER
2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR AND CROWN CASTLE USA INC.
3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
4. DRAWINGS PROVIDED HERE ARE NOT TO SCALE AND ARE INTENDED TO SHOW OUTLINE ONLY.
5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
6. "KITTING LIST" SUPPLIED WITH THE BID PACKAGE IDENTIFIES ITEMS THAT WILL BE SUPPLIED BY CONTRACTOR. ITEMS NOT INCLUDED IN THE BILL OF MATERIALS AND KITTING LIST SHALL BE SUPPLIED BY THE SUBCONTRACTOR.
7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
8. IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CONTRACTOR AND CROWN CASTLE USA INC. PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWINGS.
10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.

ABBREVIATIONS AND SYMBOLS:

ABBREVIATIONS:

AGL	ABOVE GRADE LEVEL
BTS	BASE TRANSCEIVER STATION
(E)	EXISTING
MIN.	MINIMUM
REF	REFERENCE
RF	RADIO FREQUENCY
T.B.D.	TO BE DETERMINED
T.B.R.	TO BE RESOLVED
TYP	TYPICAL
REQ	REQUIRED
EGR	EQUIPMENT GROUND RING
AWG	AMERICAN WIRE GAUGE
MGB	MASTER GROUND BAR
EG	EQUIPMENT GROUND
BCW	BARE COPPER WIRE
SIAD	SMART INTEGRATED ACCESS DEVICE
GEN	GENERATOR
IGR	INTERIOR GROUND RING (HALO)
RBS	RADIO BASE STATION

SYMBOLS:

S/G	SOLID GROUND BUS BAR
S/N	SOLID NEUTRAL BUS BAR
	SUPPLEMENTAL GROUND CONDUCTOR
	2-POLE THERMAL-MAGNETIC CIRCUIT BREAKER
	SINGLE-POLE THERMAL-MAGNETIC CIRCUIT BREAKER
	CHEMICAL GROUND ROD
	TEST WELL
	DISCONNECT SWITCH
M	METER
■	EXOTHERMIC WELD (CADWELD) (UNLESS OTHERWISE NOTED)
●	MECHANICAL CONNECTION
——	GROUNDING WIRE

ELECTRICAL INSTALLATION NOTES:

1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES/ORDINANCES.
2. CONDUIT ROUTINGS ARE SCHEMATIC. SUBCONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED AND TRIP HAZARDS ARE ELIMINATED.
3. WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC. HILTI EPOXY ANCHORS ARE REQUIRED BY CROWN CASTLE USA INC.
4. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC.
5. CABLES SHALL NOT BE ROUTED THROUGH LADDER-STYLE CABLE TRAY RUNGS.
6. EACH END OF EVERY POWER, POWER PHASE CONDUCTOR (I.E., HOTS), GROUNDING AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2" PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC AND OSHA.
7. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH PLASTIC TAPE PER COLOR SCHEDULE. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING AND BRANCH CIRCUIT ID NUMBERS (I.E. PANEL BOARD AND CIRCUIT ID'S).
8. PANEL BOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH PLASTIC LABELS.
9. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
10. POWER, CONTROL AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (#14 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90° C (WET & DRY) OPERATION LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED UNLESS OTHERWISE SPECIFIED.
11. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE CONDUCTOR (#6 AWG OR LARGER), 600V, OIL RESISTANT THHN OR THWN-2 GREEN INSULATION CLASS B STRANDED COPPER CABLE RATED FOR 90° C (WET AND DRY) OPERATION LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED UNLESS OTHERWISE SPECIFIED.
12. POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (#14 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90° C (WET AND DRY) OPERATION WITH OUTER JACKET LISTED OR LABELED FOR THE LOCATION USED UNLESS OTHERWISE SPECIFIED.
13. ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP-STYLE, COMPRESSION WIRE LUGS AND WIRE NUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRE NUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 75° C (90° C IF AVAILABLE).
14. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.
15. ELECTRICAL METALLIC TUBING (EMT) OR RIGID NONMETALLIC CONDUIT (I.E. RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80 FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
16. ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT) OR RIGID NONMETALLIC CONDUIT (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
17. SCHEDULE 40 PVC UNDERGROUND ON STRAIGHTS AND SCHEDULE 80 PVC FOR ALL ELBOWS/90s AND ALL APPROVED ABOVE GRADE PVC CONDUIT.
18. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
19. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SET SCREW FITTINGS ARE NOT ACCEPTABLE.
20. CABINETS, BOXES AND WIRE WAYS SHALL BE LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.
21. WIREWAYS SHALL BE EPOXY-COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARDS; SHALL BE PANDUIT TYPE E (OR EQUAL); AND RATED NEMA 1 (OR BETTER).
22. CONDUITS SHALL BE FASTENED SECURELY IN PLACE WITH APPROVED NON-PERFORATED STRAPS AND HANGERS. EXPLOSIVE DEVICES FOR ATTACHING HANGERS TO STRUCTURE WILL NOT BE PERMITTED. CLOSELY FOLLOW THE LINES OF THE STRUCTURE, MAINTAIN CLOSE PROXIMITY TO THE STRUCTURE AND KEEP CONDUITS IN TIGHT ENVELOPES. CHANGES IN DIRECTION TO ROUTE AROUND OBSTACLES SHALL BE MADE WITH CONDUIT OUTLET BODIES. CONDUIT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER. PARALLEL AND PERPENDICULAR TO STRUCTURE WALL AND CEILING LINES. ALL CONDUIT SHALL BE FISHED TO CLEAR OBSTRUCTIONS. ENDS OF CONDUITS SHALL BE TEMPORARILY CAPPED FLUSH TO FINISH GRADE TO PREVENT CONCRETE, PLASTER OR DIRT FROM ENTERING. CONDUITS SHALL BE RIGIDLY CLAMPED TO BOXES BY GALVANIZED MALLEABLE IRON BUSHING ON INSIDE AND GALVANIZED MALLEABLE IRON LOCKNUT ON OUTSIDE AND INSIDE.
23. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES AND PULL BOXES SHALL BE GALVANIZED OR EPOXY-COATED SHEET STEEL; SHALL MEET OR EXCEED UL 50 AND RATED NEMA 1 (OR BETTER) INDOORS OR NEMA 3R (OR BETTER) OUTDOORS.
24. METAL RECEPTACLE, SWITCH AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY-COATED OR NON-CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1; AND RATED NEMA 1 (OR BETTER) INDOORS OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
25. NONMETALLIC RECEPTACLE, SWITCH AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2; AND RATED NEMA 1 (OR BETTER) INDOORS OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
26. THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
27. THE SUBCONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD LIFE AND PROPERTY.
28. INSTALL PLASTIC LABEL ON THE METER CENTER TO SHOW "T-MOBILE".
29. ALL CONDUITS THAT ARE INSTALLED ARE TO HAVE A METERED MULE TAPE PULL CORD INSTALLED.

GREENFIELD GROUNDING NOTES:

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

NEC INSULATOR COLOR CODE

DESCRIPTION	PHASE/CODE LETTER	WIRE COLOR
240/120 1Ø	LEG 1	BLACK
	LEG 2	RED
AC NEUTRAL	N	WHITE
GROUND (EGC)	G	GREEN
VDC POS	+	*RED-POLARITY MARK AT TERMINATION
VDC NEG	–	*BLACK-POLARITY MARK AT TERMINATION
240V OR 208V, 3Ø	PHASE A	BLACK
	PHASE B	RED(ORG. IF HI LEG)
	PHASE C	BLUE
480V, 3Ø	PHASE A	BROWN
	PHASE B	ORANGE OR PURPLE
	PHASE C	YELLOW

* SEE NEC 210.5(C)(1) AND (2)

T-Mobile
12920 SE 38TH STREET
BELLEVUE, WA 98006

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

T-MOBILE SITE NUMBER:
CT11004B

BU #: **826217**
NEWINGTON_1

240 KENSINGTON ROAD
BERLIN, CT 06037

EXISTING 190'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	08/06/19	DM	PRELIMINARY	LR/JL
0	08/12/19	DM	CONSTRUCTION	JL
1	08/20/19	DM	CONSTRUCTION	JL
2	05/27/20	MLC	CONSTRUCTION	JL

DocuSigned by:
Justin Linette
1B4065B2547C418...

STATE OF CONNECTICUT
JUSTIN PETER LINETTE
No. 31965
LICENSED PROFESSIONAL ENGINEER

5/27/2020 | 3:52:20 PM EDT

Crown Castle USA Inc. Certificate of Registration #PEC.0001101

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SHEET NUMBER: T-2
REVISION: 2

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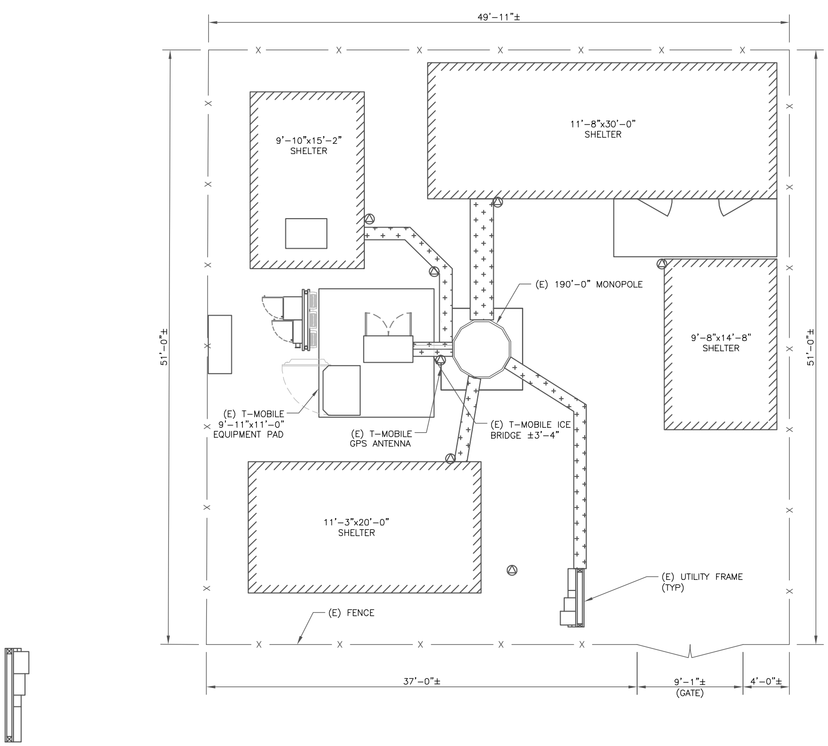
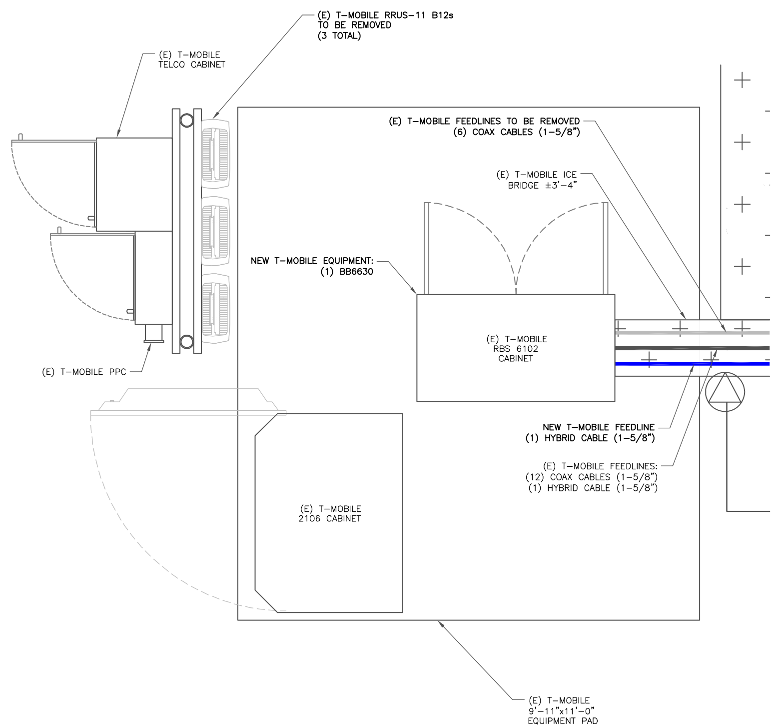


1 SITE PLAN
SCALE: 3/16"=1'-0" (FULL SIZE)
3/32"=1'-0" (11x17)



2 ENLARGED SITE PLAN
SCALE: 3/4"=1'-0" (FULL SIZE)
3/8"=1'-0" (11x17)

T-Mobile
12920 SE 38TH STREET
BELLEVUE, WA 98006

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STATE OF CONNECTICUT
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SHEET NUMBER: C-1
REVISION: 2

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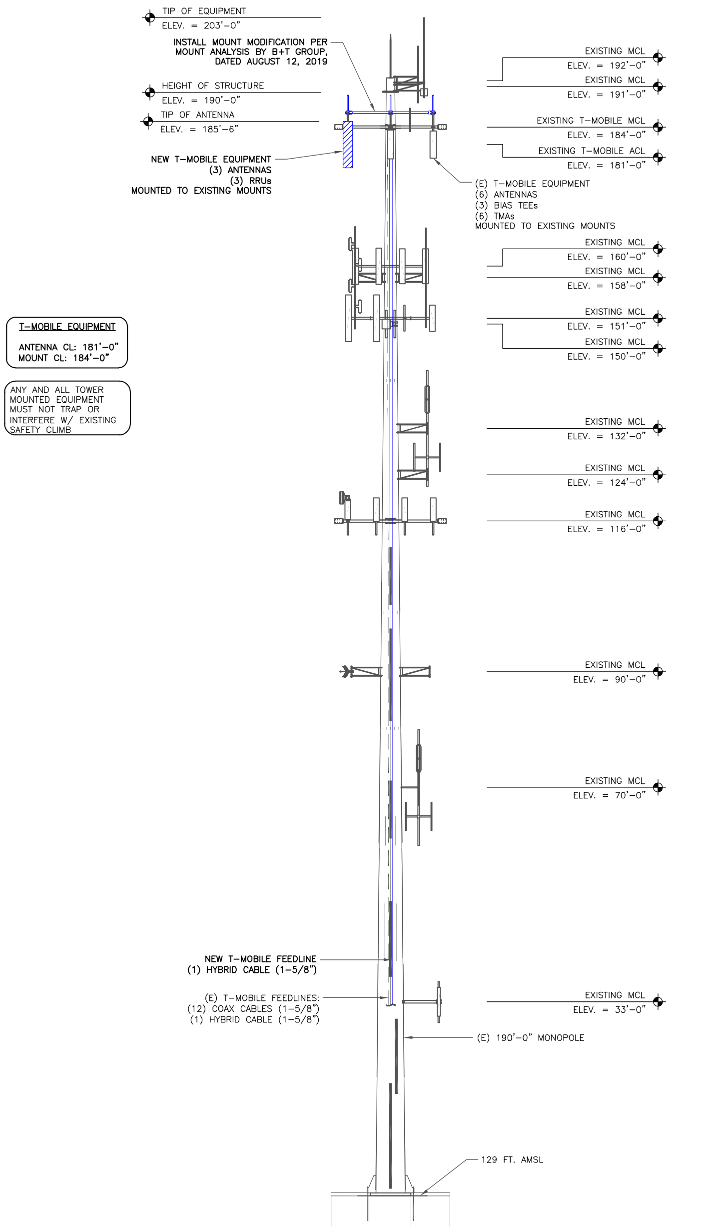
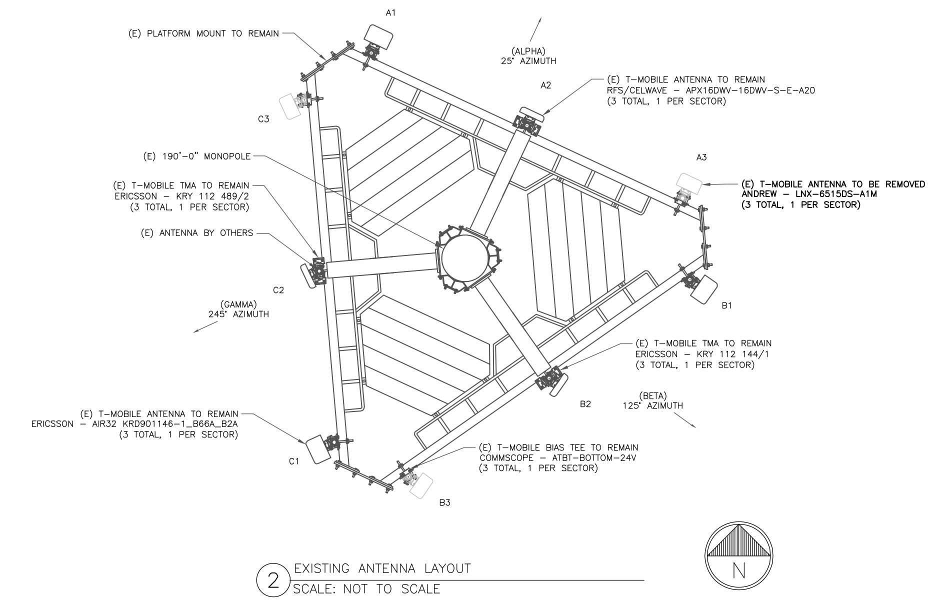
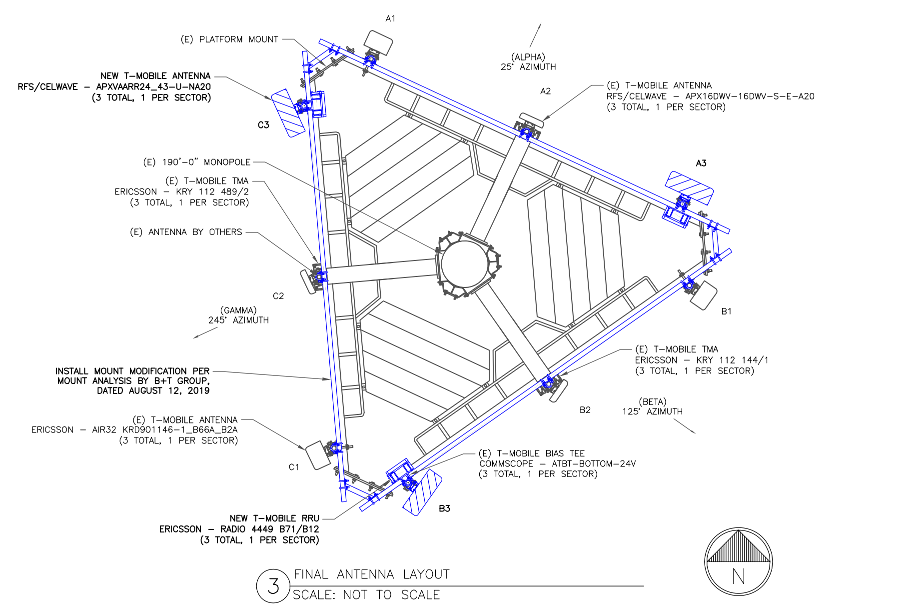


1 FINAL ELEVATION
SCALE: NOT TO SCALE



2 EXISTING ANTENNA LAYOUT
SCALE: NOT TO SCALE



3 FINAL ANTENNA LAYOUT
SCALE: NOT TO SCALE

T-Mobile
12920 SE 38TH STREET
BELLEVUE, WA 98006

CROWN CASTLE
3 CORPORATE PARK DRIVE, SUITE 101
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SHEET NUMBER: C-2
REVISION: 2

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ANTENNA SCHEDULE

SECTOR	POS.	TECHNOLOGY	RAD CENTER	AZIMUTH	ANTENNA MANUFACTURER	ANTENNA MODEL	MECH. TILT	ELECT. TILT	TOWER MOUNTED EQUIPMENT	FEEDLINE TYPE
ALPHA	A1	LTE AWS LTE PCS	181'-0"	25°	ERICSSON	AIR32 KRD901146-1_B66A_B2A	0°	2°/2°/2°/2°	–	HYBRID
ALPHA	A2	GSM PCS UMTS AWS	181'-0"	25°	RFS/CELWAVE	APX16DWV-16DWV-S-E-A20	0°	2°/2°	(1) ERICSSON – KRY 112 144/1 (1) ERICSSON – KRY 112 489/2	COAX
ALPHA	A3	LTE 600/700	181'-0"	25°	RFS/CELWAVE	APXVAARR24_43-U-NA20	0°	2°/2°	(1) ERICSSON – RADIO 4449 B71/B12 (1) COMMSCOPE – ATBT-BOTTOM-24V	HYBRID
BETA	B1	LTE AWS LTE PCS	181'-0"	125°	ERICSSON	AIR32 KRD901146-1_B66A_B2A	0°	2°/2°/2°/2°	–	HYBRID
BETA	B2	GSM PCS UMTS AWS	181'-0"	125°	RFS/CELWAVE	APX16DWV-16DWV-S-E-A20	0°	2°/2°	(1) ERICSSON – KRY 112 144/1 (1) ERICSSON – KRY 112 489/2	COAX
BETA	B3	LTE 600/700	181'-0"	125°	RFS/CELWAVE	APXVAARR24_43-U-NA20	0°	2°/2°	(1) ERICSSON – RADIO 4449 B71/B12 (1) COMMSCOPE – ATBT-BOTTOM-24V	HYBRID
GAMMA	C1	LTE AWS LTE PCS	181'-0"	245°	ERICSSON	AIR32 KRD901146-1_B66A_B2A	0°	2°/2°/2°/2°	–	HYBRID
GAMMA	C2	GSM PCS UMTS AWS	181'-0"	245°	RFS/CELWAVE	APX16DWV-16DWV-S-E-A20	0°	2°/2°	(1) ERICSSON – KRY 112 144/1 (1) ERICSSON – KRY 112 489/2	COAX
GAMMA	C3	LTE 600/700	181'-0"	245°	RFS/CELWAVE	APXVAARR24_43-U-NA20	0°	2°/2°	(1) ERICSSON – RADIO 4449 B71/B12 (1) COMMSCOPE – ATBT-BOTTOM-24V	HYBRID

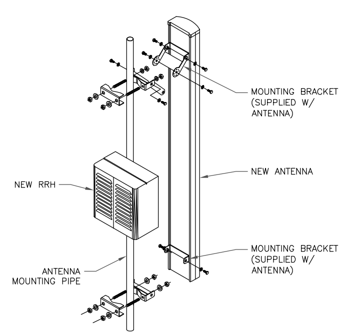
CABLE SCHEDULE

STATUS	CABLE TYPE	SIZE	QUANTITY
EXISTING	COAX	1-5/8"	12
EXISTING	HYBRID	1-5/8"	1
NEW	HYBRID	1-5/8"	1
CABLE QUANTITY			14

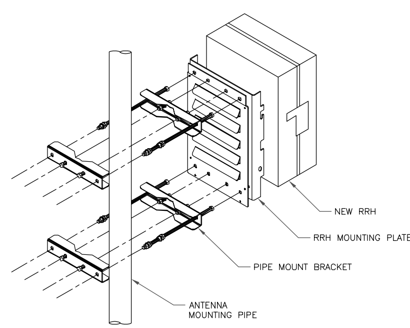
1 ANTENNA AND CABLE SCHEDULE
SCALE: NOT TO SCALE

INSTALLER NOTES:

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



NOTE:
ANTENNA NOT SHOWN FOR CLARITY



2 ANTENNA WITH RRH MOUNTING DETAIL
SCALE: NOT TO SCALE

T-Mobile
12920 SE 38TH STREET
BELLEVUE, WA 98006

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

T-MOBILE SITE NUMBER:
CT11004B

BU #: **826217**
NEWINGTON_1

240 KENSINGTON ROAD
BERLIN, CT 06037

EXISTING 190'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	08/06/19	DM	PRELIMINARY	LR/JL
0	08/12/19	DM	CONSTRUCTION	JL
1	08/20/19	DM	CONSTRUCTION	JL
2	05/27/20	MLC	CONSTRUCTION	JL

DocuSigned by:
Justin Linette
1B4005B2547C419

STATE OF CONNECTICUT
JUSTIN PETER LINETTE
No. 31965
LICENSED PROFESSIONAL ENGINEER

5/27/2020 | 3:52:20 PM EDT

Crown Castle USA Inc. Certificate of Registration #PEC.0001101

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SHEET NUMBER: C-3
REVISION: 2

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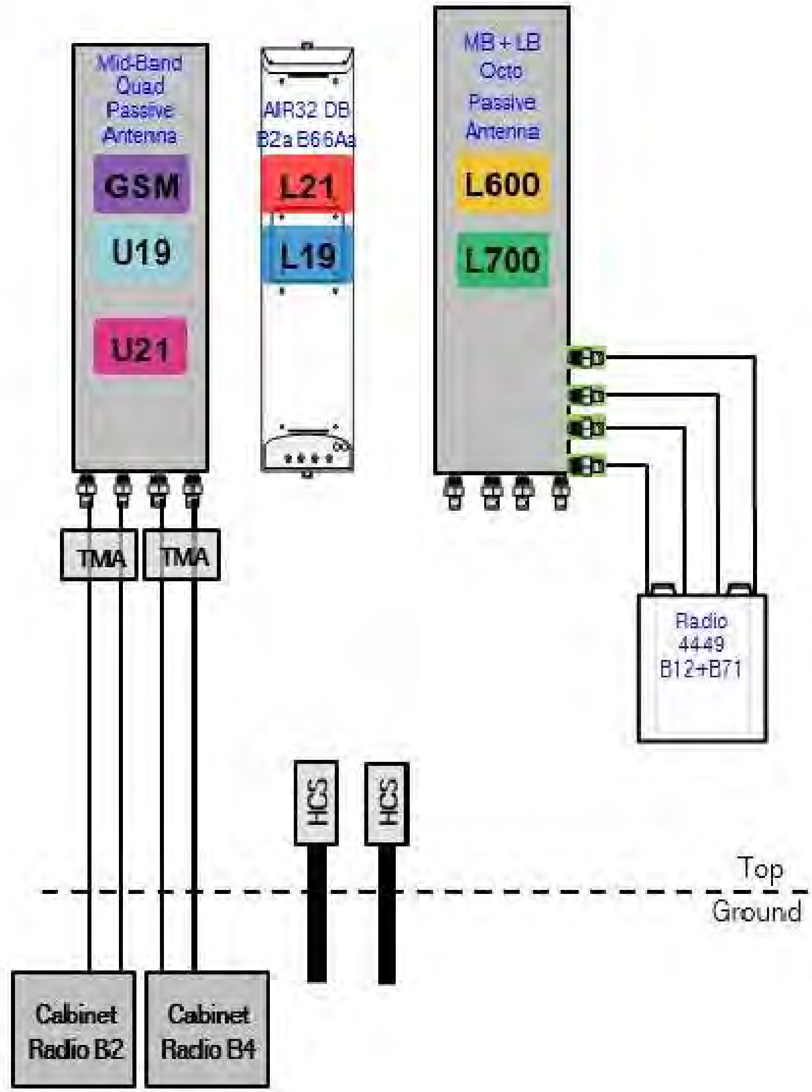

1 PLUMBING DIAGRAM
SCALE: NOT TO SCALE

T-Mobile
12920 SE 38TH STREET
BELLEVUE, WA 98006

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

T-MOBILE SITE NUMBER:
CT11004B

BU #: **826217**
NEWINGTON_1

240 KENSINGTON ROAD
BERLIN, CT 06037

EXISTING 190'-0" MONOPOLE

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SHEET NUMBER: C-4
REVISION: 2

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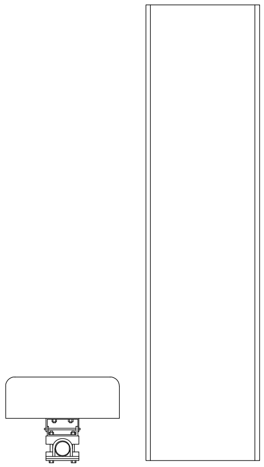
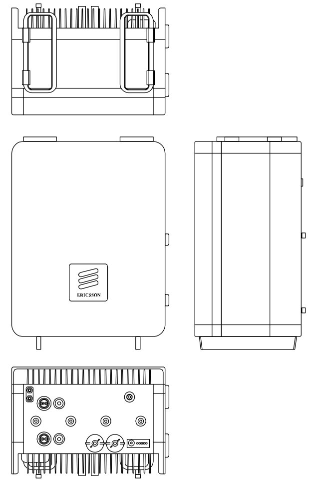


RFS/CELWAVE – APXVAARR24_43-U-NA20
WEIGHT (WITHOUT MOUNTING HARDWARE): 128.0 LBS
SIZE (HxWxD): 95.9x24.0x8.7 IN.

1 RFS/CELWAVE – APXVAARR24_43-U-NA20
SCALE: NOT TO SCALE



ERICSSON – RADIO 4449
WEIGHT: 70.0 LBS
SIZE (HxWxD): 18.0x13.2x9.4 IN.

2 ERICSSON – RADIO 4449
SCALE: NOT TO SCALE

3 NOT USED
SCALE: NOT TO SCALE

4 NOT USED
SCALE: NOT TO SCALE

5 NOT USED
SCALE: NOT TO SCALE

6 NOT USED
SCALE: NOT TO SCALE

T-Mobile
12920 SE 38TH STREET
BELLEVUE, WA 98006

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

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BERLIN, CT 06037

EXISTING 190'-0" MONOPOLE

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JUSTIN PETER LINETTE
No. 31965
LICENSED
PROFESSIONAL ENGINEER

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SHEET NUMBER: C-5
REVISION: 2

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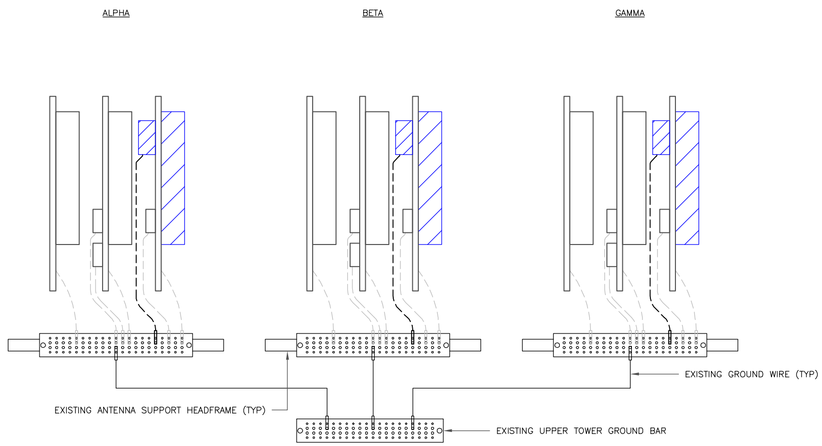


1 ANTENNA GROUNDING DIAGRAM
SCALE: NOT TO SCALE

T-Mobile
12920 SE 38TH STREET
BELLEVUE, WA 98006

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

T-MOBILE SITE NUMBER:
CT11004B

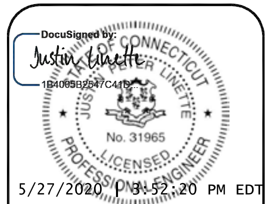
BU #: **826217**
NEWINGTON_1

240 KENSINGTON ROAD
BERLIN, CT 06037

EXISTING 190'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	08/06/19	DM	PRELIMINARY	LR/JL
0	08/12/19	DM	CONSTRUCTION	JL
1	08/20/19	DM	CONSTRUCTION	JL
2	05/27/20	MLC	CONSTRUCTION	JL



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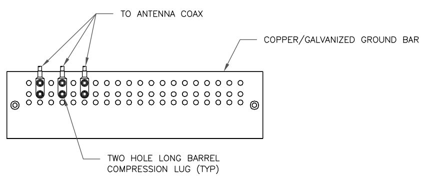
SHEET NUMBER: G-1
REVISION: 2

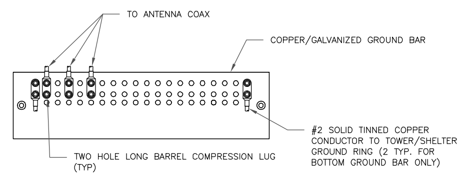
DocuSign Envelope ID: 30B2D339-45BF-469C-A8D3-05B0CF406FCA



NOTES:

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

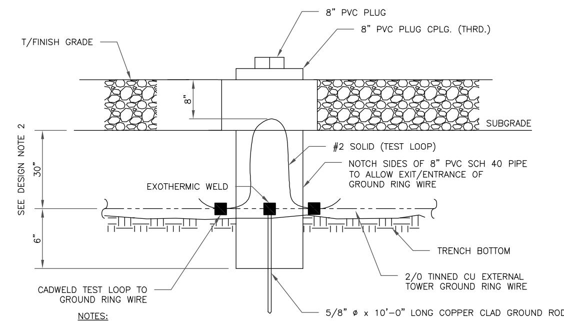
1 ANTENNA GROUND BAR DETAIL
SCALE: NOT TO SCALE



NOTES:

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

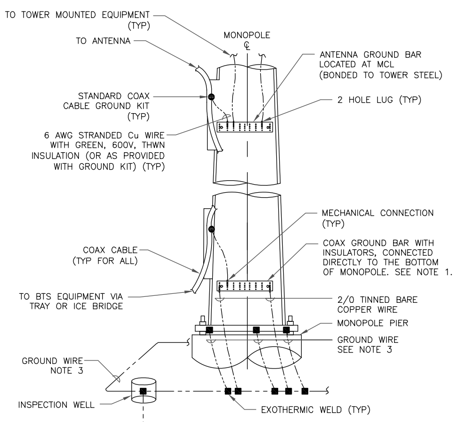
2 TOWER/SHELTER GROUND BAR DETAIL
SCALE: NOT TO SCALE



NOTES:

1. GROUND ROD SHALL BE DRIVEN VERTICALLY, NOT TO EXCEED 45 DEGREES FROM THE VERTICAL
2. GROUND WIRE SHALL BE MIN. 30" BELOW GRADE OR 6" BELOW FROST LINE. (WHICH EVER IS GREATER) AS PER N.E.C. ARTICLE 250-50(D)

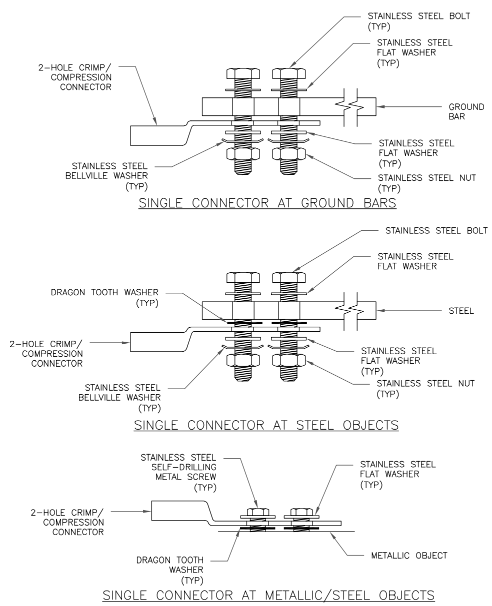
3 INSPECTION WELL DETAIL
SCALE: NOT TO SCALE



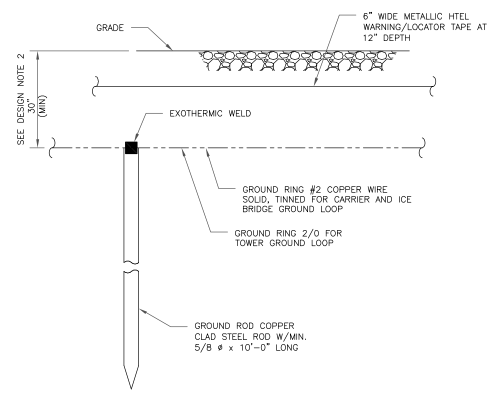
NOTES:

1. NUMBER OF GROUNDING BARS MAY VARY DEPENDING ON THE TYPE OF TOWER, ANTENNA LOCATIONS AND CONNECTION ORIENTATION. COAXIAL CABLES EXCEEDING 200 FEET ON THE TOWER SHALL HAVE GROUND KITS AT THE MIDPOINT. PROVIDE AS REQUIRED.
2. ONLY MECHANICAL CONNECTIONS ARE ALLOWED TO BE MADE TO CROWN CASTLE USA INC. TOWERS. ALL MECHANICAL CONNECTIONS SHALL BE TREATED WITH AN ANTI-OXIDANT COATING.
3. ALL TOWER GROUNDING SYSTEMS SHALL COMPLY WITH THE REQUIREMENTS OF THE RECOGNIZED EDITION OF ANSI/TIA 222 AND NFPA 780.

4 TYPICAL ANTENNA CABLE GROUNDING
SCALE: NOT TO SCALE



5 HARDWARE DETAIL FOR EXTERIOR CONNECTIONS
SCALE: NOT TO SCALE



NOTES:

1. GROUND ROD SHALL BE DRIVEN VERTICALLY, NOT TO EXCEED 45 DEGREES FROM THE VERTICAL
2. GROUND WIRE SHALL BE MIN. 30" BELOW GRADE OR 6" BELOW FROST LINE. (WHICH EVER IS GREATER) AS PER N.E.C. ARTICLE 250-50(D)

6 GROUND ROD DETAIL
SCALE: NOT TO SCALE

T-Mobile
12920 SE 38TH STREET
BELLEVUE, WA 98006

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

T-MOBILE SITE NUMBER:
CT11004B

BU #: **826217**
NEWINGTON_1

240 KENSINGTON ROAD
BERLIN, CT 06037

EXISTING 190'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
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0	08/12/19	DM	CONSTRUCTION	JL
1	08/20/19	DM	CONSTRUCTION	JL
2	05/27/20	MLC	CONSTRUCTION	JL

DocuSigned by:
Justin Linette
1B4005B2547C415...

STATE OF CONNECTICUT
JUSTIN PETER LINETTE
No. 31965
LICENSED PROFESSIONAL ENGINEER

5/27/2020 | 3:52:20 PM EDT

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REVISION: 2

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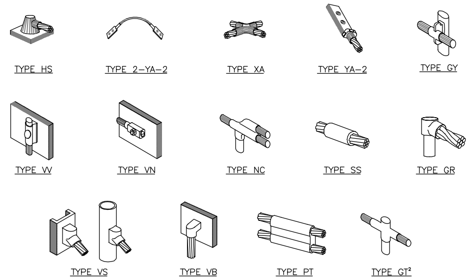
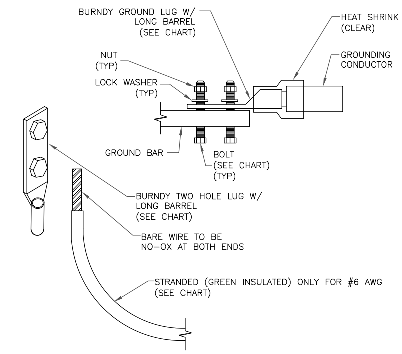


NOTE:

1. ERICO EXOTHERMIC "MOLD TYPES" SHOWN HERE ARE EXAMPLES. CONSULT WITH CONSTRUCTION MANAGER FOR SPECIFIC MOLDS TO BE USED FOR THIS PROJECT.
2. MOLD TYPE ONLY TO BE USED BELOW GRADE WHEN CONNECTING GROUND RING TO GROUND ROD.

1 CADWELD GROUNDING CONNECTIONS
SCALE: NOT TO SCALE

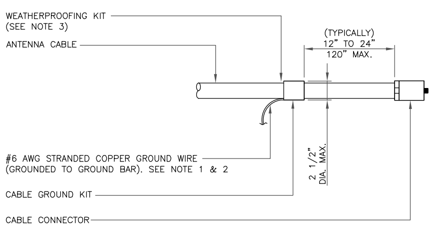
WIRE SIZE	BURNDY LUG	BOLT SIZE
#6 AWG GREEN INSULATED	YA6C-2TC38	3/8" - 16 NC S 2 BOLT
#2 AWG SOLID TINNED	YA3C-2TC38	3/8" - 16 NC S 2 BOLT
#2 AWG STRANDED	YA2C-2TC38	3/8" - 16 NC S 2 BOLT
#2/0 AWG STRANDED	YA26-2TC38	3/8" - 16 NC S 2 BOLT
#4/0 AWG STRANDED	YA28-2N	1/2" - 16 NC S 2 BOLT



NOTES:

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

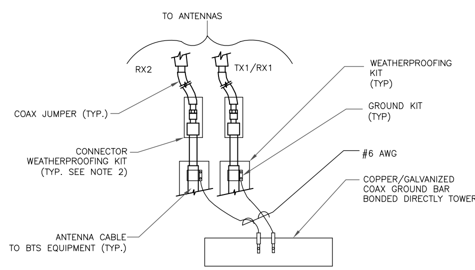
2 MECHANICAL LUG CONNECTION
SCALE: NOT TO SCALE



NOTES:

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

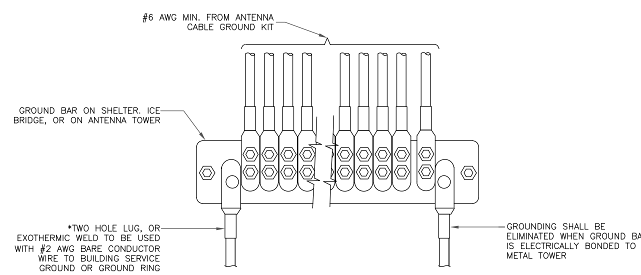
3 CABLE GROUND KIT CONNECTION
SCALE: NOT TO SCALE



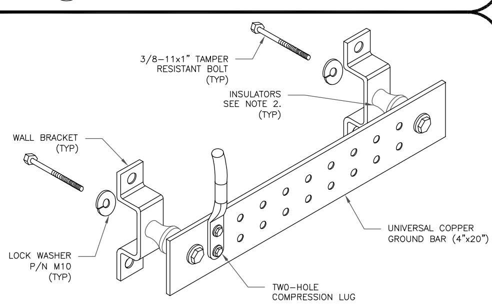
NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO ANTENNA GROUND BAR.
2. WEATHER PROOFING SHALL BE TWO-PART TAPE KIT. COLD SHRINK SHALL NOT BE USED.

4 GROUND CABLE CONNECTION
SCALE: NOT TO SCALE



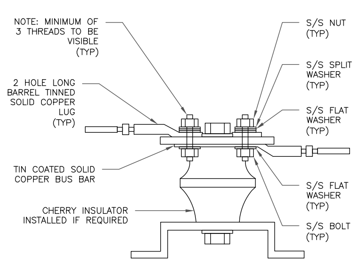
5 GROUNDWIRE INSTALLATION
SCALE: NOT TO SCALE



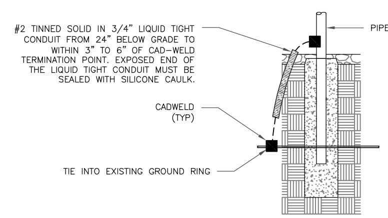
NOTES:

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

6 GROUND BAR DETAIL
SCALE: NOT TO SCALE



7 LUG DETAIL
SCALE: NOT TO SCALE



8 TRANSITIONING GROUND DETAIL
SCALE: NOT TO SCALE

T-Mobile

12920 SE 38TH STREET
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CROWN CASTLE

3 CORPORATE PARK DRIVE, SUITE 101
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BU #: **826217**
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2	05/27/20	MLC	CONSTRUCTION	JL

DocuSigned by:
Justin Linette
1B4095B2547C418...

STATE OF CONNECTICUT JUSTIN PETER LINETTE No. 31965 LICENSED PROFESSIONAL ENGINEER

5/27/2020 | 3:52:20 PM EDT

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SHEET NUMBER: G-3
REVISION: 2

Certificate Of Completion

Envelope Id: 30B2D33945BF469CA8D305B0CF406FCA
Status: Completed
Subject: Please DocuSign: CT11004B_826217_Newington_1_T-Mobile 600 MHz FCD REV 2_05.27.2020.pdf
Source Envelope:
Document Pages: 10
Signatures: 10
Certificate Pages: 3
Initials: 0
AutoNav: Enabled
EnvelopeId Stamping: Enabled
Time Zone: (UTC-05:00) Eastern Time (US & Canada)

Envelope Originator:
Phillip Lander
2000 Corporate Drive
Canonsburg, PA 15317
Phil.Lander@crowncastle.com
IP Address: 8.20.92.226

Record Tracking

Status: Original
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Location: DocuSign

Signer Events	Signature	Timestamp
Justin Linette Justin.linette@crowncastle.com Crown Castle International Corp. Security Level: Email, Account Authentication (None)	DocuSigned by: Justin Linette 1B4005B2547C41D... Signature Adoption: Pre-selected Style Using IP Address: 162.254.108.200	Sent: 5/27/2020 12:05:48 PM Viewed: 5/27/2020 3:51:40 PM Signed: 5/27/2020 3:52:20 PM

Electronic Record and Signature Disclosure:
Accepted: 9/20/2018 7:12:49 AM
ID: 5006cfc0-7b26-47be-9523-588826283226

In Person Signer Events	Signature	Timestamp

Editor Delivery Events	Status	Timestamp

Agent Delivery Events	Status	Timestamp

Intermediary Delivery Events	Status	Timestamp

Certified Delivery Events	Status	Timestamp

Carbon Copy Events	Status	Timestamp

Witness Events	Signature	Timestamp

Notary Events	Signature	Timestamp

Envelope Summary Events	Status	Timestamps
Envelope Sent	Hashed/Encrypted	5/27/2020 12:05:48 PM
Certified Delivered	Security Checked	5/27/2020 3:51:40 PM
Signing Complete	Security Checked	5/27/2020 3:52:20 PM
Completed	Security Checked	5/27/2020 3:52:20 PM

Payment Events	Status	Timestamps

Electronic Record and Signature Disclosure

Electronic Record and Signature Disclosure created on: 9/19/2018 4:13:40 PM
Parties agreed to: Justin Linette

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Unless you tell us otherwise in accordance with the procedures described herein, we may provide documents for execution, and other documents and records electronically to you through the DocuSign system during the course of our relationship with you. To reduce the chance of you inadvertently not receiving any document for execution or other document or record, we prefer to provide all documents for execution, and other documents and records by the same method and to the same address that you have given us. If you do not agree with this process, please let us know as described below.

How to contact Crown Castle

You may contact us to let us know of any changes related to contacting you electronically, to request paper copies of documents for execution and other documents and records from us, and to withdraw your prior consent to receive documents for execution and other documents and records electronically as follows:

To contact us by phone call: 724-416-2000
To contact us by email, send messages to: esignature@CrownCastle.com
To contact us by paper mail, send correspondence to
Crown Castle
2000 Corporate Drive
Canonsburg, PA 15317

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To let us know of a change to the e-mail address where we should send documents for execution and other documents and records to you, you must send an email message to esignature@CrownCastle.com and state your previous e-mail address and your new e-mail address.

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Mobile Signing:	Apple iOS 7.0 or above; Android 4.0 or above
PDF Reader:	Acrobat® Reader or similar software may be required to view and print PDF files
Screen Resolution:	1024 x 768

Enabled Security Settings:	Allow per session cookies

These minimum requirements are subject to change. If these requirements change, you will be asked to re-accept the disclosure. Pre-release (e.g. beta) versions of operating systems and browsers are not supported.

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Please confirm that you were able to access this disclosure electronically (which is similar to the manner in which we will deliver documents for execution and other documents and records) and that you were able to print this disclosure on paper or electronically save it for your future reference and access or that you were able to e-mail this disclosure to an address where you will be able to print it on paper or save it for your future reference and access. Further, if you consent to receiving documents for execution and other documents and records in electronic format on the terms described above, please let us know by clicking the "**I** agree" button below.

By checking the 'I agree' box, I confirm that:

- You can access and read this Electronic Record and Signature Disclosure; and
- As a recipient, you can read, electronically sign and act upon this message, and you agree not to forward it or any other DocuSign e-mail communications. In the event another party needs to be added to the DocuSign communication, you must make a request to the e-mail originator.

Exhibit D

Structural Analysis Report

Date: **August 16, 2019**

Darcy Tarr
Crown Castle
3530 Toringdon Way Suite 300
Charlotte, NC 28277

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

Subject:	**Structural Analysis Report**	
Carrier Designation:	***T-Mobile* Co-Locate**	
	Carrier Site Number:	CT11004B
	Carrier Site Name:	Newington_1
Crown Castle Designation:	**Crown Castle BU Number:**	826217
	Crown Castle Site Name:	Newington_1
	Crown Castle JDE Job Number:	578225
	Crown Castle Work Order Number:	1781648
	Crown Castle Order Number:	495645 Rev. 0
Engineering Firm Designation:	**B+T Group Project Number:**	87581.025.01
Site Data:	**240 Kensington Road, Berlin, Hartford County, CT** **Latitude *41° 37' 34.3"*, Longitude *-72° 46' 32.33"*** **191.667 Foot - Monopole**	

Dear Darcy Tarr,

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

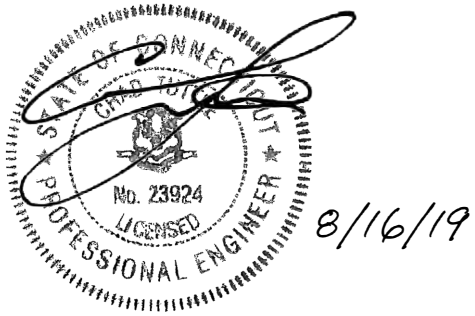
The purpose of the analysis is to determine acceptability of the tower stress level. Based on our analysis we have determined the tower stress level for the structure and foundation, under the following load case, to be:

LC7: Proposed Equipment Configuration **Sufficient Capacity** - 77.1%

This analysis utilizes an ultimate 3-second gust wind speed of 125 mph as required by the 2018 Connecticut State Building. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Structural analysis prepared by: John Landon

Respectfully submitted by: B+T Engineering, Inc.
COA: PEC.0001564 Expires: 02/10/2020



8/16/19

Chad E. Tuttle, P.E.

tnxTower Report - version 8.0.5.0

TABLE OF CONTENTS

1) INTRODUCTION

This tower is a 191.6 ft. Monopole designed by PiROD Manufactures and mapped by TEP in May of 2015. The tower was originally designed for a wind speed of 80 mph per TIA/EIA-222-F. This tower was modified multiple times to accommodate additional loading.

2) ANALYSIS CRITERIA

TIA-222 Revision:	TIA-222-H
Risk Category:	II
Wind Speed:	125 mph
Exposure Category:	B
Topographic Factor:	1
Ice Thickness:	2 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)
184.0	184.0	1	--	Platform Mount [LP 405-1_HR-1]	15	1-5/8
		3	SitePro 1	1 #X-AHCP		
	181.0	3	Commscope	ATBT-BOTTOM-24V		
		3	Ericsson	AIR -32 B2A/B66AA		
		3	Ericsson	KRY 112 144/1		
		3	Ericsson	KRY 112 489/2		
		3	Ericsson	RADIO 4449 B12/B71		
		3	RFS Celwave	APX16DWV-16DWVS-E-A20		
		3	RFS Celwave	APXVAARR24_43-U-NA20		

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)
191.0	191.0	1	--	Side Arm Mount [SO 701-1]	1	5/16
	190.0	1	Motorola	WB2623		
184.0	188.0	1	Kathrein	OGB4-900D	1	7/8
	179.0	1	Andrew	DB589-A		
160.0	160.0	2	Andrew	LNX-6514DS-A1M	7	1-5/8
		4	Commscope	LNX-8513DS-A1M		
		6	Commscope	NNHH-65B-R4		
		1	RFS Celwave	DB-T1-6Z-8AB-0Z		
		3	Samsung Telecom.	RFV01U-D1A		
		3	Samsung Telecom.	RFV01U-D2A		
		1	--	Platform Mount [LP 303-1]		
158.0	158.0	1	Decibel	DB205-A	2	7/8
		1	Sinclair	SRL-224NM-4		
		2	--	Side Arm Mount [SO 702-1]		

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
151.0	151.0	3	Andrew	SBNH-1D6565C	12	1-1/4
		3	CCI Antennas	TPA-65R-LCUUUU-H8		
		3	Comm Comp Inc.	DTMABP7819VG12A		
		3	Ericsson	RRUS 32		
		3	Ericsson	RRUS 32 B2		
		3	Kaelus	DBC0062F3V52-1		
		3	Powerwave Tech.	7770.00		
		1	Raycap	DC6-48-60-18-8F		
		9	--	2.5” Std Pipe Masts		
		1	Site Pro 1	PRK-1245		
		3	--	2.5” Std Pipe Handrail		
		1	--	Platform Mount [LP 403-1]		
150.0	152.0	3	Ericsson	RRUS 12	2 1	3/4 3/8
		1	Raycap	DC6-48-60-18-8F		
	150.0	3	Ericsson	RRUS 11		
		1	--	Pipe Mount [PM 601-3]		
		1	--	Side Arm Mount [SO 102-3]		
132.0	132.0	1	Sinclair	SRL-235-2	1	7/8
		1	--	Side Arm Mount [SO 702-1]		
124.0	124.0	1	Decibel	PCS 1900 TMA RX	--	--
		1	--	Side Arm Mount [SO 104-3]		
116.0	120.0	1	Andrew	VHLP2-18	3 1 1	1-5/8 1-1/2 1/2
	118.0	6	Alcatel Lucent	800MHZ 2X50W RRH		
		3	Alcatel Lucent	PCS 1900MHZ 4X45W-65MHZ		
		3	Commscope	NNVV-65B-R4		
		3	Nokia	AAHC		
	116.0	1	Dragonwave	HORIZON DUO		
		3	Site Pro1	PRK-HD		
		1	--	Platform Mount [LP 405-1]		
90.0	99.0	1	Decibel	DB205-A	1 2 1	7/8 1/2 5/16
	90.0	1	Andrew	KP2F-34		
		1	MTI Wireless Edge	MT-485002		
		2	--	Side Arm Mount [SO 702-1]		
70.0	70.0	1	Sinclair	SRL-235-2	2	7/8
		1	--	Side Arm Mount [SO 701-1]		
33.0	33.0	1	Decibel	DB909XVTE-M	2	1/2
		1	--	Side Arm Mount [SO 702-1]		

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Remarks	Reference	Source
Online Order Information	T-Mobile Co-Locate, Rev# 0	495645	CCI Sites
Tower Manufacturer Drawing	PiROD, File No. A-115400	3438498	CCI Sites
Tower Mapping	TEP, Project No. 25651-57340	3438498	CCI Sites
Mount Analysis Report	TEP, Project No. 25651.275018	8521102	CCI Sites
Mount Analysis Report	B+T Group, Project No. 87581.021.01 Date: 07/01/2019	8506409	CCI Sites
Mount Analysis Report	B+T Group, Project No. 87581.024.01 Rev# 1 Date: 08/12/2019	8589133	CCI Sites
Tower Modification Drawing	Natcomm Inc., Date: 03/18/2008	3678661	CCI Sites
Tower Modification Drawing	B+T Group, Project No. 87581.005.01 Date: 10/17/2014	4003976	CCI Sites
Post Modification Inspection	SGS, Date: 01/08/2015	5493013	CCI Sites
Tower Modification Drawing	B+T Group, Project No. 87581.012.01 Date: 06/16/2015	5753424	CCI Sites
Post Modification Inspection	SGS, Date: 10/21/2015	5947973	CCI Sites
Foundation Drawing	Pirod, File No. A-115400	3463552	CCI Sites
Geotech Report	French & Parrello, Job No. 98A209ERI	3438510	CCI Sites
	FDH, Project No. 1307031600		
Antenna Configuration	Crown CAD Package	Date: 06/26/2019	CCI Sites

3.1) Analysis Method

tnxTower (version 8.0.5.0), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A.

3.2) Assumptions

1) The tower and structures were built and have been maintained in accordance with the manufacturer's specification.
2) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.
3) Mount areas and weights are assumed based on photographs provided.
4) The existing base plate grout was considered in this analysis. Grout must be maintained and inspected periodically, and must be replaced if damaged or cracked. Refer to crown document ENG-BUL-10323, Tower Base Plate Grout Inspection and Classification.

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

Table 4 - Section Capacity (Summary)

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
L1	191.67 - 186.67	Pole	P18x0.375	1	-0.640	--	0.6	Pass
L2	186.67 - 181.57	Pole	P24x0.375	2	-14.561	--	2.0	Pass
L3	181.57 - 176.57	Pole	P24x0.375	3	-6.392	--	6.6	Pass
L4	176.57 - 171.57	Pole	P24x0.375	4	-7.074	--	11.5	Pass
L5	171.57 - 166.57	Pole	P24x0.375	5	-7.765	--	16.6	Pass
L6	166.57 - 161.57	Pole	P24x0.375	6	-8.461	--	22.0	Pass
L7	161.57 - 156.57	Pole	P24x0.375	7	-12.956	--	30.2	Pass
L8	156.57 - 151.57	Pole	P24x0.375	8	-13.701	--	39.4	Pass
L9	151.57 - 146.57	Pole	P24x0.375	9	-19.597	--	53.5	Pass
L10	146.57 - 141.57	Pole	P24x0.375	10	-20.470	--	67.9	Pass
L11	141.57 - 141.42	Pole	P24x0.375	11	-20.505	--	68.4	Pass
L12	141.42 - 136.42	Pole	P36x0.375	12	-21.635	--	39.2	Pass
L13	136.42 - 131.42	Pole	P36x0.375	13	-23.221	--	46.3	Pass
L14	131.42 - 126.42	Pole	P36x0.375	14	-24.383	--	53.6	Pass
L15	126.42 - 121.42	Pole	P36x0.375	15	-26.596	--	61.3	Pass
L16	121.42 - 121.17	Pole	P36x0.375	16	-26.670	--	61.7	Pass
L17	121.17 - 116.17	Pole	P42x0.375	17	-28.139	--	52.1	Pass
L18	116.17 - 111.17	Pole	P42x0.375	18	-33.490	--	59.3	Pass
L19	111.17 - 110.04	Pole	P42x0.375	19	-33.801	--	60.9	Pass
L20	110.04 - 109.79	Pole	P42x0.4875	20	-33.890	--	47.5	Pass
L21	109.79 - 105.08	Pole	P42x0.4875	21	-35.512	--	52.7	Pass
L22	105.08 - 104.83	Pole	P42x0.5625	22	-35.622	--	48.1	Pass
L23	104.83 - 100.92	Pole	P42x0.5625	23	-38.047	--	52.2	Pass
L24	100.92 - 100.67	Pole	P48x0.375	24	-38.157	--	57.9	Pass
L25	100.67 - 95.83	Pole	P48x0.375	25	-39.992	--	63.6	Pass
L26	95.83 - 95.58	Pole	P48x0.475	26	-40.089	--	50.8	Pass
L27	95.58 - 90.58	Pole	P48x0.475	27	-41.869	--	55.7	Pass
L28	90.58 - 89.92	Pole	P48x0.475	28	-42.594	--	56.4	Pass
L29	89.92 - 89.67	Pole	P48x0.575	29	-42.709	--	47.0	Pass
L30	89.67 - 84.67	Pole	P48x0.575	30	-45.543	--	51.3	Pass
L31	84.67 - 80.83	Pole	P48x0.575	31	-48.721	--	54.6	Pass
L32	80.83 - 80.33	Pole	P54x0.55	32	-49.104	--	45.9	Pass
L33	80.33 - 80.08	Pole	P54x0.4875	33	-49.245	--	51.9	Pass
L34	80.08 - 75.08	Pole	P54x0.4875	34	-51.721	--	56.1	Pass
L35	75.08 - 70.08	Pole	P54x0.4875	35	-54.623	--	60.5	Pass
L36	70.08 - 69.5	Pole	P54x0.4875	36	-55.295	--	61.0	Pass
L37	69.5 - 69.25	Pole	P54x0.5875	37	-55.483	--	50.6	Pass
L38	69.25 - 64.25	Pole	P54x0.5875	38	-61.849	--	54.5	Pass
L39	64.25 - 60.58	Pole	P54x0.5875	39	-67.028	--	57.5	Pass
L40	60.58 - 60.33	Pole	P60x0.5125	40	-67.234	--	54.0	Pass
L41	60.33 - 55.33	Pole	P60x0.5125	41	-71.016	--	57.7	Pass
L42	55.33 - 52.17	Pole	P60x0.5125	42	-72.509	--	60.2	Pass
L43	52.17 - 51.92	Pole	P60x0.625	43	-72.655	--	50.4	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
L44	51.92 - 46.92	Pole	P60x0.625	44	-75.754	--	53.7	Pass
L45	46.92 - 41.92	Pole	P60x0.625	45	-79.726	--	57.0	Pass
L46	41.92 - 40.33	Pole	P60x0.625	46	-80.974	--	58.1	Pass
L47	40.33 - 40.08	Pole	P60x0.6	47	-81.166	--	58.8	Pass
L48	40.08 - 35.08	Pole	P60x0.6	48	-84.838	--	62.3	Pass
L49	35.08 - 30.08	Pole	P60x0.6	49	-88.159	--	65.9	Pass
L50	30.08 - 28	Pole	P60x0.6	50	-89.284	--	67.4	Pass
L51	28 - 27.75	Pole	P60x0.725	51	-89.450	--	56.7	Pass
L52	27.75 - 22.75	Pole	P60x0.725	52	-93.569	--	59.8	Pass
L53	22.75 - 20.08	Pole	P60x0.725	53	-95.796	--	61.5	Pass
L54	20.08 - 19.83	Pole	P60x0.625	54	-95.995	--	68.7	Pass
L55	19.83 - 17	Pole	P60x0.625	55	-98.143	--	70.7	Pass
L56	17 - 16.75	Pole	P60x0.725	56	-98.369	--	61.2	Pass
L57	16.75 - 11.65	Pole	P60x0.75	57	-102.601	--	62.9	Pass
L58	11.65 - 11.42	Pole	P60x0.75	58	-102.765	--	63.1	Pass
L59	11.42 - 9.4	Pole	P60x0.75	59	-104.119	--	64.3	Pass
L60	9.4 - 9.15	Pole	P60x0.8	60	-104.300	--	64.0	Pass
L61	9.15 - 4.83	Pole	P60x0.8	61	-107.300	--	66.6	Pass
L62	4.83 - 4.58	Pole	P60x0.75	62	-107.478	--	68.1	Pass
L63	4.58 - 0	Pole	P60x0.75	63	-110.620	--	71.0	Pass
							Summary	
						Pole	71.0	Pass
						Reinforcement	69.2	Pass
						Overall	71.0	Pass

Table 5 - Tower Component Stresses vs. Capacity – LC7

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Flange Connection	181.583	1.7	Pass
1	Flange Connection	141.417	44.5	Pass
1	Bridge Stiffener	121.167	65.6	Pass
	Flange Connections		54.3	Pass
1	Bridge Stiffener	100.917	63.1	Pass
	Flange Connections		39.5	Pass
1	Bridge Stiffener	80.833	59.9	Pass
	Flange Connections		38.6	Pass
1	Bridge Stiffener	60.583	43.3	Pass
	Flange Connections		34.3	Pass
1	Existing Bridge Stiffener	40.333	51.7	Pass
	New Bridge Stiffener		39.5	Pass
	Flange Connections		51.3	Pass
1	Existing Bridge Stiffener	20.083	48.2	Pass
	New Bridge Stiffener		38.2	Pass
	Flange Connections		68.5	Pass
1	Anchor Rods	Base	41.8	Pass
1	Base Plate	Base	77.1	Pass
1	Base Foundation (Structure)	Base	73.0	Pass
1	Base Foundation (Soil Interaction)	Base	69.5	Pass

Structure Rating (max from all components) =	77.1%

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

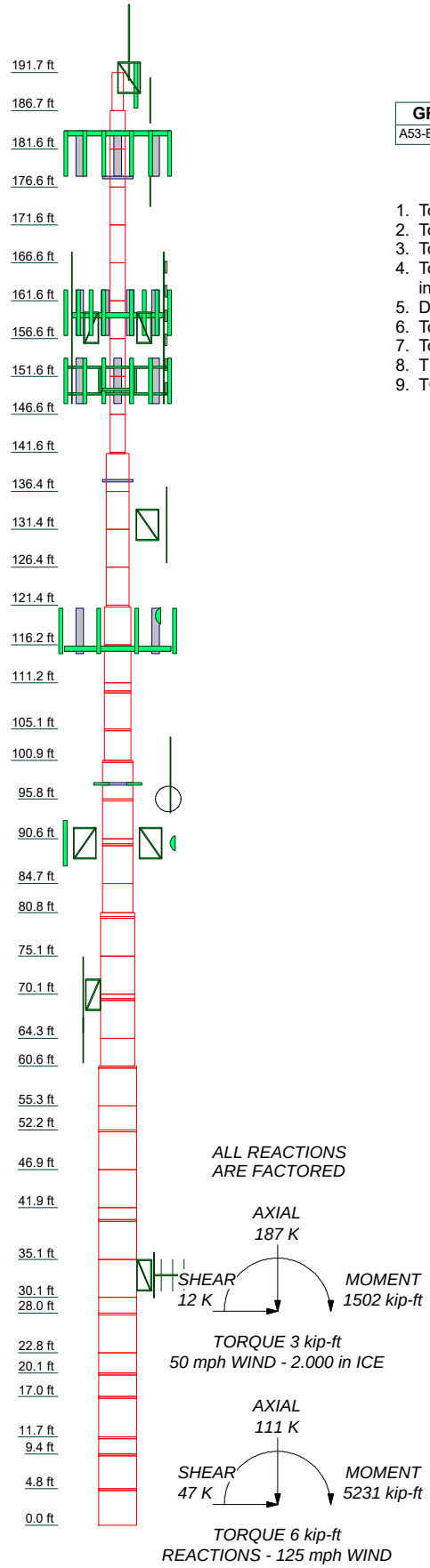
4.1) Recommendations

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

APPENDIX A

TNXTOWER OUTPUT

Section	Size	Length (ft)	Grade	Weight (K)
1	P5.000x0.375	5.000	A53-B-42	0.4
2	P5.100x0.375	5.100		0.5
3	P5.000x0.375	5.000		0.5
4	P5.000x0.375	5.000		0.5
5	P5.000x0.375	5.000		0.5
6	P5.000x0.375	5.000		0.5
7	P5.000x0.375	5.000		0.5
8	P5.000x0.375	5.000		0.5
9	P5.000x0.375	5.000		0.5
10	P5.000x0.375	5.000		0.5
11	P5.000x0.375	5.000		0.70
12	P5.000x0.375	5.000		0.7
13	P5.000x0.375	5.000		0.7
14	P5.000x0.375	5.000		0.7
15	P5.000x0.375	5.000		0.8
16	P5.000x0.375	5.000		0.8
17	P5.000x0.375	5.000		1.2
18	P5.000x0.375	5.000		11.0
19	P5.000x0.375	5.000		1.00
20	P5.000x0.375	5.000		10.9
21	P5.000x0.375	5.000		1.20
22	P5.000x0.375	5.000		1.2
23	P5.000x0.375	5.000		1.4
24	P5.000x0.375	5.000		21.1
25	P5.000x0.375	5.000		1.4
26	P5.000x0.375	5.000		1.4
27	P5.000x0.375	5.000		1.2
28	P5.000x0.375	5.000		1.7
30	P5.000x0.375	5.000		11.2
31	P5.000x0.375	5.000		1.6
32	P5.000x0.375	5.000		11.0
34	P5.000x0.375	5.000		2.00
35	P5.000x0.375	5.000		2.0
36	P5.000x0.375	5.000		16
38	P5.000x0.375	5.000		1.90
39	P5.000x0.375	5.000		1.9
40	P5.000x0.375	5.000		1.8
41	P5.000x0.375	5.000		2.30
42	P5.000x0.375	5.000		1.2
44	P5.000x0.375	5.000		1.0
45	P5.000x0.375	5.000		12.5
46	P5.000x0.375	5.000		1.0
48	P5.000x0.375	5.000		12.2
49	P5.000x0.375	5.000		2.30
50	P5.000x0.375	5.000		48.0
52	P5.000x0.375	5.000		
53	P5.000x0.375	5.000		
55	P5.000x0.375	5.000		
57	P5.000x0.375	5.000		
58	P5.000x0.375	5.000		
61	P5.000x0.375	5.000		
62	P5.000x0.375	5.000		
63	P5.000x0.375	4.583		



MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A53-B-42	42 ksi	63 ksi			

TOWER DESIGN NOTES

1. Tower is located in Hartford County, Connecticut.
2. Tower designed for Exposure B to the TIA-222-H Standard.
3. Tower designed for a 125 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 50 mph basic wind with 2.00 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Risk Category II.
7. Topographic Category 1 with Crest Height of 0.000 ft
8. TIA-222-H Annex S
9. TOWER RATING: 71.0%

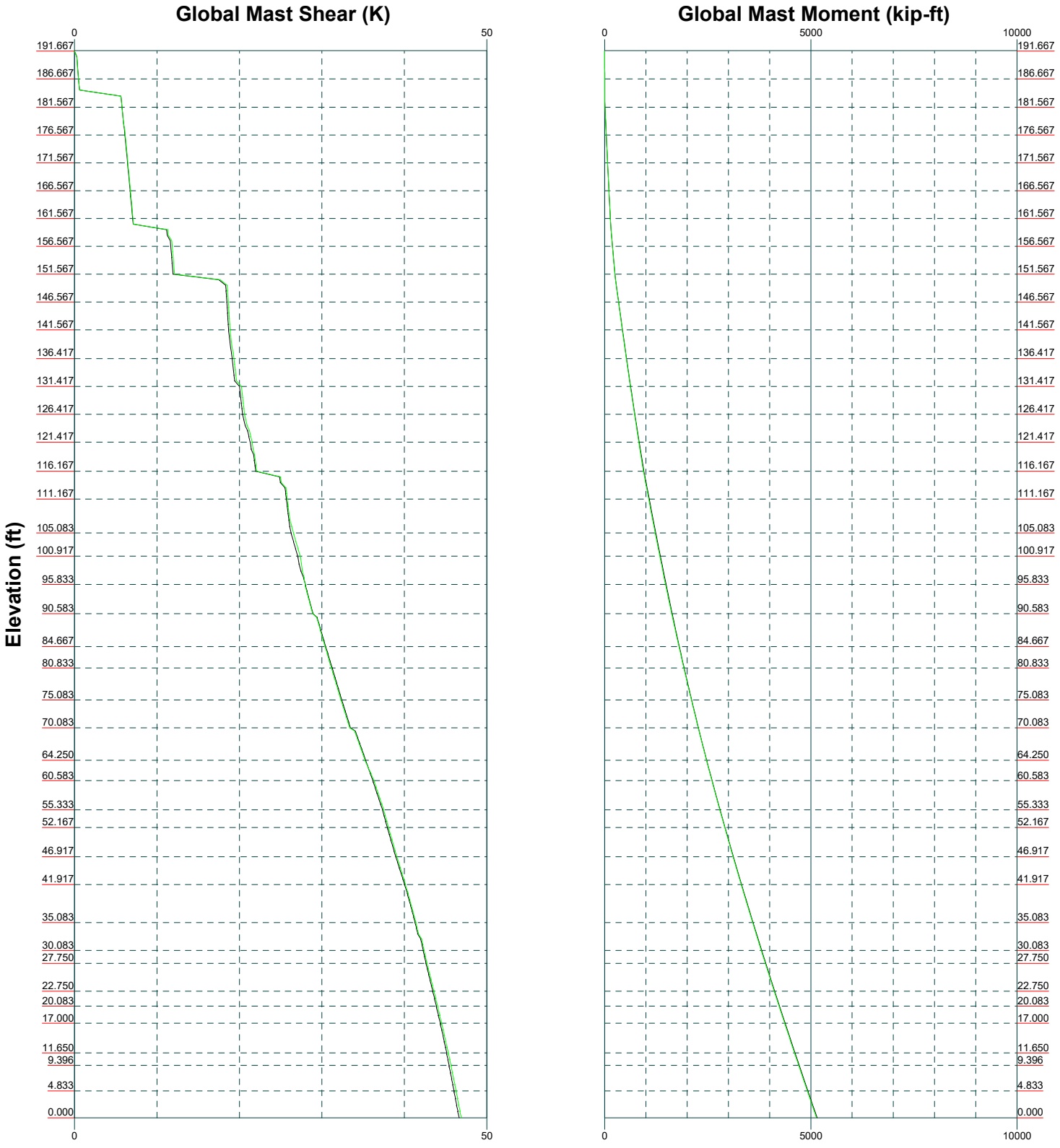
B+T Group
1717 S, Boulder, Suite 300
Tulsa, OK 74119
Phone: (918) 587-4630
FAX:

Job: 87581.025.01 - Newington_1, CT (BU# 826217			
Project:			
Client: Crown Castle	Drawn by: Pavan Upadhya	App'd:	
Code: TIA-222-H	Date: 08/16/19	Scale: NTS	
Path:		Dwg No. E-1	

TIA-222-H - 125 mph/50 mph 2.000 in Ice Exposure B

Maximum Values

Vx Vz Mx Mz



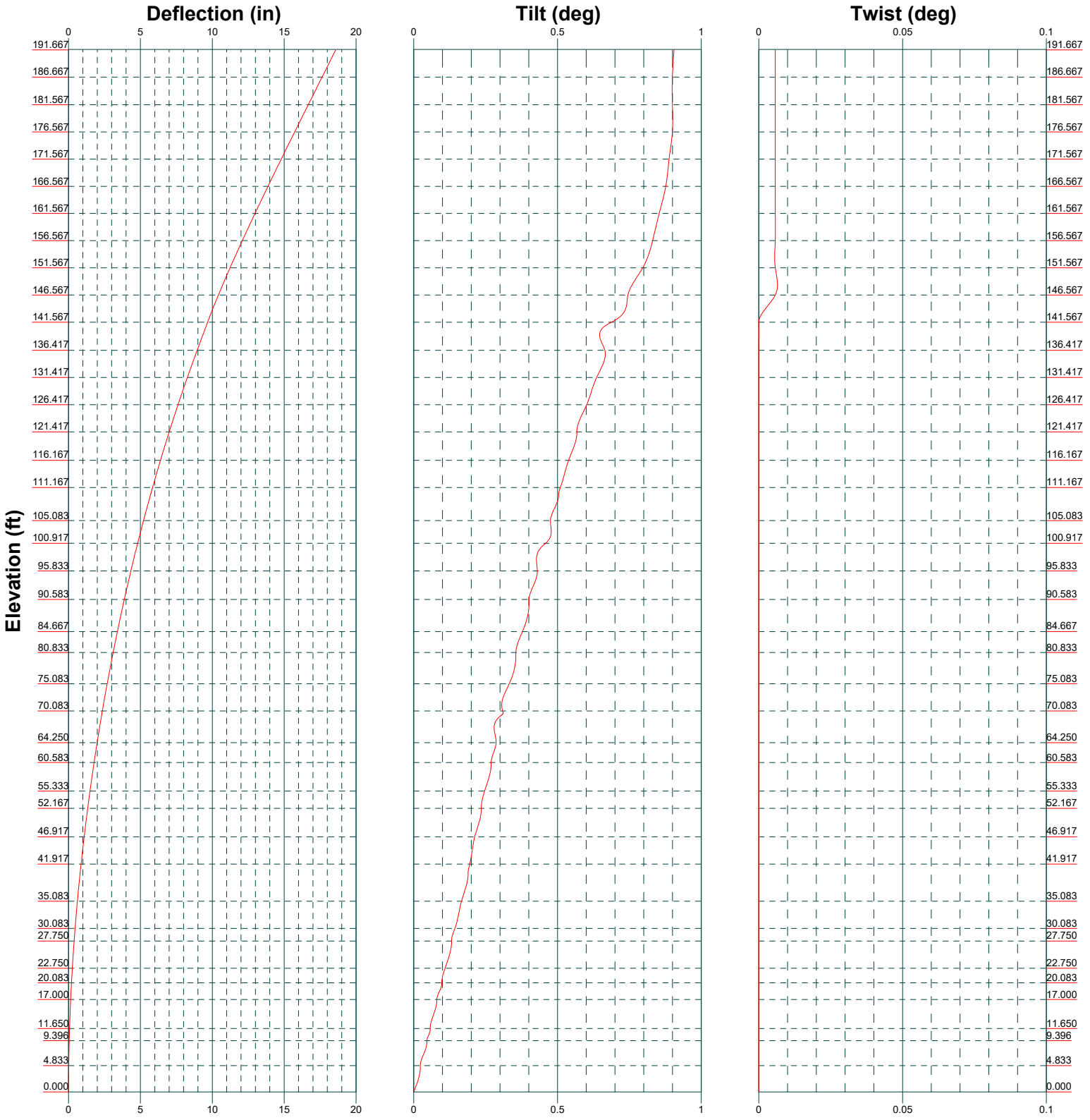
B+T GRP

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

Job: *87581.025.01 - Newington_1, CT (BU# 826217*			
Project:			
Client: Crown Castle	Drawn by: Pavan Upadhya	App'd:	
Code: TIA-222-H	Date: 08/16/19	Scale: NTS	
Path:		Dwg No. E-4	

TIA-222-H - Service - 60 mph

Maximum Values



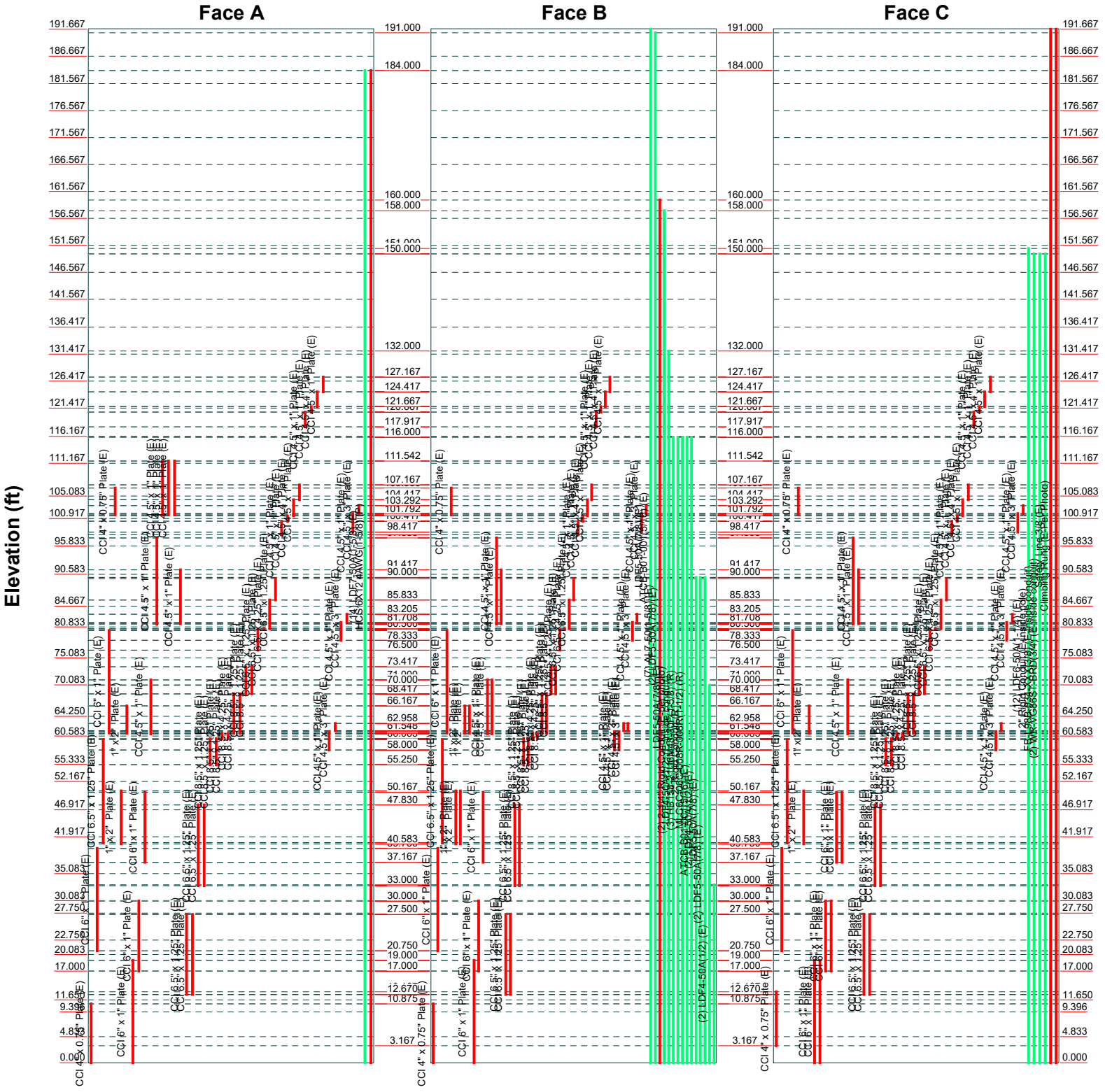
B+T GRP

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

Job: *87581.025.01 - Newington_1, CT (BU# 826217*			
Project:			
Client: Crown Castle	Drawn by: Pavan Upadhya	App'd:	
Code: TIA-222-H	Date: 08/16/19	Scale: NTS	
Path:		Dwg No. E-5	

Feed Line Distribution Chart
0' - 191'8"

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



B+T Group 1717 S, Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX:	Job: *87581.025.01 - Newington_1, CT (BU# 826217*		
	Project:		
	Client: Crown Castle	Drawn by: Pavan Upadhya	App'd:
	Code: TIA-222-H	Date: 08/16/19	Scale: NTS
	Path:		Dwg No. E-7

Tower Input Data

The tower is a monopole.
This tower is designed using the TIA-222-H standard.
The following design criteria apply:

Tower is located in Hartford County, Connecticut.
Tower base elevation above sea level: 133.000 ft.
Basic wind speed of 125 mph.
Risk Category II.
Exposure Category B.
Simplified Topographic Factor Procedure for wind speed-up calculations is used.
Topographic Category: 1.
Crest Height: 0.000 ft.
Nominal ice thickness of 2.000 in.
Ice thickness is considered to increase with height.
Ice density of 56.000 pcf.
A wind speed of 50 mph is used in combination with ice.
Temperature drop of 50.000 °F.
Deflections calculated using a wind speed of 60 mph.
TIA-222-H Annex S.
TOWER RATING: 71.0%.
A non-linear (P-delta) analysis was used.
Pressures are calculated at each section.
Stress ratio used in pole design is 1.05.
Tower analysis based on target reliabilities in accordance with Annex S.
Load Modification Factors used: $K_{es}(F_w) = 0.95$, $K_{es}(t_i) = 0.85$.
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

Pole Section Geometry

Section	Elevation ft	Section Length ft	Pole Size	Pole Grade	Socket Length ft
L1	191.667-186.667	5.000	P18x0.375	A53-B-42 (42 ksi)	
L2	186.667-181.567	5.100	P24x0.375	A53-B-42 (42 ksi)	
L3	181.567-176.567	5.000	P24x0.375	A53-B-42 (42 ksi)	
L4	176.567-171.567	5.000	P24x0.375	A53-B-42 (42 ksi)	
L5	171.567-166.567	5.000	P24x0.375	A53-B-42 (42 ksi)	
L6	166.567-161.567	5.000	P24x0.375	A53-B-42 (42 ksi)	
L7	161.567-156.567	5.000	P24x0.375	A53-B-42 (42 ksi)	
L8	156.567-151.567	5.000	P24x0.375	A53-B-42 (42 ksi)	
L9	151.567-146.567	5.000	P24x0.375	A53-B-42 (42 ksi)	
L10	146.567-141.567	5.000	P24x0.375	A53-B-42 (42 ksi)	
L11	141.567-141.417	0.150	P24x0.375	A53-B-42 (42 ksi)	
L12	141.417-136.417	5.000	P36x0.375	A53-B-42 (42 ksi)	
L13	136.417-131.417	5.000	P36x0.375	A53-B-42 (42 ksi)	
L14	131.417-126.417	5.000	P36x0.375	A53-B-42 (42 ksi)	
L15	126.417-121.417	5.000	P36x0.375	A53-B-42 (42 ksi)	
L16	121.417-121.167	0.250	P36x0.375	A53-B-42 (42 ksi)	
L17	121.167-116.167	5.000	P42x0.375	A53-B-42 (42 ksi)	
L18	116.167-111.167	5.000	P42x0.375	A53-B-42 (42 ksi)	
L19	111.167-110.042	1.125	P42x0.375	A53-B-42 (42 ksi)	
L20	110.042-109.792	0.250	P42x0.4875	A53-B-42 (42 ksi)	
L21	109.792-105.083	4.709	P42x0.4875	A53-B-42 (42 ksi)	
L22	105.083-104.833	0.250	P42x0.5625	A53-B-42 (42 ksi)	
L23	104.833-100.917	3.916	P42x0.5625	A53-B-42 (42 ksi)	
L24	100.917-100.667	0.250	P48x0.375	A53-B-42 (42 ksi)	
L25	100.667-95.833	4.834	P48x0.375	A53-B-42 (42 ksi)	
L26	95.833-95.583	0.250	P48x0.475	A53-B-42 (42 ksi)	
L27	95.583-90.583	5.000	P48x0.475	A53-B-42 (42 ksi)	
L28	90.583-89.917	0.666	P48x0.475	A53-B-42 (42 ksi)	
L29	89.917-89.667	0.250	P48x0.575	A53-B-42 (42 ksi)	

Section	Elevation ft	Section Length ft	Pole Size	Pole Grade	Socket Length ft
L30	89.667-84.667	5.000	P48x0.575	A53-B-42 (42 ksi)	
L31	84.667-80.833	3.834	P48x0.575	A53-B-42 (42 ksi)	
L32	80.833-80.333	0.500	P54x0.55	A53-B-42 (42 ksi)	
L33	80.333-80.083	0.250	P54x0.4875	A53-B-42 (42 ksi)	
L34	80.083-75.083	5.000	P54x0.4875	A53-B-42 (42 ksi)	
L35	75.083-70.083	5.000	P54x0.4875	A53-B-42 (42 ksi)	
L36	70.083-69.500	0.583	P54x0.4875	A53-B-42 (42 ksi)	
L37	69.500-69.250	0.250	P54x0.5875	A53-B-42 (42 ksi)	
L38	69.250-64.250	5.000	P54x0.5875	A53-B-42 (42 ksi)	
L39	64.250-60.583	3.667	P54x0.5875	A53-B-42 (42 ksi)	
L40	60.583-60.333	0.250	P60x0.5125	A53-B-42 (42 ksi)	
L41	60.333-55.333	5.000	P60x0.5125	A53-B-42 (42 ksi)	
L42	55.333-52.167	3.166	P60x0.5125	A53-B-42 (42 ksi)	
L43	52.167-51.917	0.250	P60x0.625	A53-B-42 (42 ksi)	
L44	51.917-46.917	5.000	P60x0.625	A53-B-42 (42 ksi)	
L45	46.917-41.917	5.000	P60x0.625	A53-B-42 (42 ksi)	
L46	41.917-40.333	1.584	P60x0.625	A53-B-42 (42 ksi)	
L47	40.333-40.083	0.250	P60x0.6	A53-B-42 (42 ksi)	
L48	40.083-35.083	5.000	P60x0.6	A53-B-42 (42 ksi)	
L49	35.083-30.083	5.000	P60x0.6	A53-B-42 (42 ksi)	
L50	30.083-28.000	2.083	P60x0.6	A53-B-42 (42 ksi)	
L51	28.000-27.750	0.250	P60x0.725	A53-B-42 (42 ksi)	
L52	27.750-22.750	5.000	P60x0.725	A53-B-42 (42 ksi)	
L53	22.750-20.083	2.667	P60x0.725	A53-B-42 (42 ksi)	
L54	20.083-19.833	0.250	P60x0.625	A53-B-42 (42 ksi)	
L55	19.833-17.000	2.833	P60x0.625	A53-B-42 (42 ksi)	
L56	17.000-16.750	0.250	P60x0.725	A53-B-42 (42 ksi)	
L57	16.750-11.650	5.100	P60x0.75	A53-B-42 (42 ksi)	
L58	11.650-11.417	0.233	P60x0.75	A53-B-42 (42 ksi)	
L59	11.417-9.396	2.021	P60x0.75	A53-B-42 (42 ksi)	
L60	9.396-9.146	0.250	P60x0.8	A53-B-42	

Section	Elevation ft	Section Length ft	Pole Size	Pole Grade	Socket Length ft
L61	9.146-4.833	4.313	P60x0.8	(42 ksi) A53-B-42 (42 ksi)	
L62	4.833-4.583	0.250	P60x0.75	A53-B-42 (42 ksi)	
L63	4.583-0.000	4.583	P60x0.75	A53-B-42 (42 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 191.667-186.667				1	1	1			
L2 186.667-181.567				1	1	1			
L3 181.567-176.567				1	1	1			
L4 176.567-171.567				1	1	1			
L5 171.567-166.567				1	1	1			
L6 166.567-161.567				1	1	1			
L7 161.567-156.567				1	1	1			
L8 156.567-151.567				1	1	1			
L9 151.567-146.567				1	1	1			
L10 146.567-141.567				1	1	1			
L11 141.567-141.417				1	1	1			
L12 141.417-136.417				1	1	1			
L13 136.417-131.417				1	1	1			
L14 131.417-126.417				1	1	1			
L15 126.417-121.417				1	1	1			

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
L16 121.417-121.167				1	1	1			
L17 121.167-116.167				1	1	1			
L18 116.167-111.167				1	1	1			
L19 111.167-110.042				1	1	1			
L20 110.042-109.792				1	1	0.983655			
L21 109.792-105.083				1	1	0.983655			
L22 105.083-104.833				1	1	0.976951			
L23 104.833-100.917				1	1	0.976951			
L24 100.917-100.667				1	1	1			
L25 100.667-95.833				1	1	1			
L26 95.833-95.583				1	1	0.981492			
L27 95.583-90.583				1	1	0.981492			
L28 90.583-89.917				1	1	0.981492			
L29 89.917-89.667				1	1	0.97009			
L30 89.667-84.667				1	1	0.97009			
L31 84.667-80.833				1	1	0.97009			
L32 80.833-80.333				1	1	0.976401			
L33 80.333-80.083				1	1	0.990478			
L34 80.083-75.083				1	1	0.990478			
L35 75.083-70.083				1	1	0.990478			
L36 70.083-69.500				1	1	0.990478			
L37 69.500-69.250				1	1	1.00601			
L38 69.250-64.250				1	1	1.00601			
L39 64.250-60.583				1	1	1.00601			
L40				1	1	0.987891			

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
60.583-60.333									
L41				1	1	0.987891			
60.333-55.333									
L42				1	1	0.987891			
55.333-52.167									
L43				1	1	1.01747			
52.167-51.917									
L44				1	1	1.01747			
51.917-46.917									
L45				1	1	1.01747			
46.917-41.917									
L46				1	1	1.01747			
41.917-40.333									
L47				1	1	0.995499			
40.333-40.083									
L48				1	1	0.995499			
40.083-35.083									
L49				1	1	0.995499			
35.083-30.083									
L50				1	1	0.995499			
30.083-28.000									
L51				1	1	1.00337			
28.000-27.750									
L52				1	1	1.00337			
27.750-22.750									
L53				1	1	1.00337			
22.750-20.083									
L54				1	1	1			
20.083-19.833									
L55				1	1	1			
19.833-17.000									
L56				1	1	1.04129			
17.000-16.750									
L57				1	1	1.02849			
16.750-11.650									
L58				1	1	1.02849			
11.650-11.417									
L59				1	1	1.02849			
11.417-9.396									
L60				1	1	1.00535			
9.396-9.146									
L61				1	1	1.00535			
9.146-4.833									
L62				1	1	1.04998			
4.833-4.583									
L63				1	1	1.04998			
4.583-0.000									

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 klf
* Reinforcement Plates*										

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 klf
CCI 4" x 0.75" Plate (E)	A	No	Surface Af (CaAa)	10.875 - 0.000	1	1	0.400 0.450	4.000	9.500	0.000
CCI 4" x 0.75" Plate (E)	B	No	Surface Af (CaAa)	10.875 - 0.000	1	1	-0.250 -0.200	4.000	9.500	0.000
CCI 4" x 0.75" Plate (E) ***LW***	C	No	Surface Af (CaAa)	13.167 - 3.167	1	1	0.250 0.300	4.000	9.500	0.000
CCI 6" x 1" Plate (E)	A	No	Surface Af (CaAa)	39.750 - 20.750	1	1	0.400 0.500	6.000	14.000	0.000
CCI 6" x 1" Plate (E)	B	No	Surface Af (CaAa)	39.750 - 20.750	1	1	0.400 0.500	6.000	14.000	0.000
CCI 6" x 1" Plate (E) ***LW***	C	No	Surface Af (CaAa)	39.750 - 20.750	1	1	0.400 0.500	6.000	14.000	0.000
CCI 6.5" x 1.25" Plate (E)	A	No	Surface Af (CaAa)	59.917 - 40.833	1	1	-0.450 -0.400	6.500	15.500	0.000
CCI 6.5" x 1.25" Plate (E)	B	No	Surface Af (CaAa)	59.917 - 40.833	1	1	-0.450 -0.400	6.500	15.500	0.000
CCI 6.5" x 1.25" Plate (E) ***LW***	C	No	Surface Af (CaAa)	59.917 - 40.833	1	1	-0.400 -0.350	6.500	15.500	0.000
CCI 6" x 1" Plate (E)	A	No	Surface Af (CaAa)	80.167 - 61.167	1	1	-0.450 -0.400	6.000	14.000	0.000
CCI 6" x 1" Plate (E)	B	No	Surface Af (CaAa)	80.167 - 61.167	1	1	-0.350 -0.300	6.000	14.000	0.000
CCI 6" x 1" Plate (E) ***LW***	C	No	Surface Af (CaAa)	80.167 - 61.167	1	1	-0.450 -0.400	6.000	14.000	0.000
CCI 4" x 0.75" Plate (E)	A	No	Surface Af (CaAa)	106.583 - 101.583	1	1	-0.500 -0.450	4.000	9.500	0.000
CCI 4" x 0.75" Plate (E)	B	No	Surface Af (CaAa)	106.583 - 101.583	1	1	-0.500 -0.450	4.000	9.500	0.000
CCI 4" x 0.75" Plate (E) ***LW***	C	No	Surface Af (CaAa)	106.583 - 101.583	1	1	-0.500 -0.450	4.000	9.500	0.000
1" x 2" Plate (E)	A	No	Surface Af (CaAa)	50.417 - 40.583	1	1	-0.450 -0.400	1.000	6.000	0.007
1" x 2" Plate (E)	B	No	Surface Af (CaAa)	50.417 - 40.583	1	1	-0.350 -0.300	1.000	6.000	0.007
1" x 2" Plate (E)	B	No	Surface Af (CaAa)	50.417 - 40.583	1	1	0.200 0.250	1.000	6.000	0.007
1" x 2" Plate (E) ***LW***	C	No	Surface Af (CaAa)	50.417 - 40.583	1	1	-0.350 -0.300	1.000	6.000	0.007
1" x 2" Plate (E)	A	No	Surface Af (CaAa)	66.167 - 61.083	1	1	-0.350 -0.300	1.000	6.000	0.007
1" x 2" Plate (E)	B	No	Surface Af (CaAa)	66.167 - 61.083	1	1	-0.450 -0.400	1.000	6.000	0.007
1" x 2" Plate (E)	B	No	Surface Af (CaAa)	66.167 - 61.083	1	1	0.300 0.350	1.000	6.000	0.007
1" x 2" Plate (E) ***LW***	C	No	Surface Af (CaAa)	66.167 - 61.083	1	1	-0.450 -0.400	1.000	6.000	0.007
CCI 6" x 1" Plate (E)	A	No	Surface Af (CaAa)	19.000 - 0.000	1	1	0.300 0.350	6.000	14.000	0.000
CCI 6" x 1" Plate (E)	B	No	Surface Af (CaAa)	19.000 - 0.000	1	1	0.400 0.450	6.000	14.000	0.000
CCI 6" x 1" Plate (E)	C	No	Surface Af (CaAa)	19.000 - 0.000	1	1	0.450 0.500	6.000	14.000	0.000
CCI 6" x 1" Plate	C	No	Surface Af	19.000 -	1	1	-0.500	6.000	14.000	0.000

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 klf
(E)			(CaAa)	0.000			-0.450			
LW										
CCI 6" x 1" Plate	A	No	Surface Af	30.000 -	1	1	-0.150	6.000	14.000	0.000
(E)			(CaAa)	17.000			-0.100			
CCI 6" x 1" Plate	B	No	Surface Af	30.000 -	1	1	-0.450	6.000	14.000	0.000
(E)			(CaAa)	17.000			-0.400			
CCI 6" x 1" Plate	C	No	Surface Af	30.000 -	1	1	0.350	6.000	14.000	0.000
(E)			(CaAa)	17.000			0.400			
CCI 6" x 1" Plate	C	No	Surface Af	30.000 -	1	1	-0.500	6.000	14.000	0.000
(E)			(CaAa)	17.000			-0.450			
LW										
CCI 6" x 1" Plate	A	No	Surface Af	50.167 -	1	1	0.250	6.000	14.000	0.000
(E)			(CaAa)	37.167			0.300			
CCI 6" x 1" Plate	B	No	Surface Af	50.167 -	1	1	0.100	6.000	14.000	0.000
(E)			(CaAa)	37.167			0.150			
CCI 6" x 1" Plate	C	No	Surface Af	50.167 -	1	1	-0.400	6.000	14.000	0.000
(E)			(CaAa)	37.167			-0.350			
CCI 6" x 1" Plate	C	No	Surface Af	50.167 -	1	1	0.450	6.000	14.000	0.000
(E)			(CaAa)	37.167			0.500			
LW										
CCI 4.5" x 1" Plate	A	No	Surface Af	71.000 -	1	1	-0.250	4.500	11.000	0.000
(E)			(CaAa)	61.000			-0.200			
CCI 4.5" x 1" Plate	B	No	Surface Af	71.000 -	1	1	-0.450	4.500	11.000	0.000
(E)			(CaAa)	61.000			-0.400			
CCI 4.5" x 1" Plate	B	No	Surface Af	71.000 -	1	1	0.400	4.500	11.000	0.000
(E)			(CaAa)	61.000			0.450			
CCI 4.5" x 1" Plate	C	No	Surface Af	71.000 -	1	1	0.350	4.500	11.000	0.000
(E)			(CaAa)	61.000			0.400			
LW										
CCI 4.5" x 1" Plate	A	No	Surface Af	97.333 -	1	1	-0.500	4.500	11.000	0.000
(E)			(CaAa)	81.333			-0.450			
CCI 4.5" x 1" Plate	B	No	Surface Af	97.333 -	1	1	-0.500	4.500	11.000	0.000
(E)			(CaAa)	81.333			-0.450			
CCI 4.5" x 1" Plate	C	No	Surface Af	97.333 -	1	1	-0.500	4.500	11.000	0.000
(E)			(CaAa)	81.333			-0.450			
LW										
CCI 4.5" x 1" Plate	A	No	Surface Af	111.542 -	1	1	-0.350	4.500	11.000	0.000
(E)			(CaAa)	101.542			-0.300			
CCI 4.5" x 1" Plate	A	No	Surface Af	111.542 -	1	1	-0.350	4.500	11.000	0.000
(E)			(CaAa)	101.542			-0.300			
CCI 4.5" x 1" Plate	A	No	Surface Af	111.542 -	1	1	-0.350	4.500	11.000	0.000
(E)			(CaAa)	101.542			-0.300			
LW										
CCI 4.5" x 1" Plate	A	No	Surface Af	91.417 -	1	1	-0.150	4.500	11.000	0.000
(E)			(CaAa)	81.417			-0.100			
CCI 4.5" x 1" Plate	B	No	Surface Af	91.417 -	1	1	-0.150	4.500	11.000	0.000
(E)			(CaAa)	81.417			-0.100			
CCI 4.5" x 1" Plate	C	No	Surface Af	91.417 -	1	1	-0.150	4.500	11.000	0.000
(E)			(CaAa)	81.417			-0.100			
LW										
* BS*										
CCI 6.5" x 1.25" Plate	A	No	Surface Af	27.500 -	1	1	0.400	6.500	15.500	0.028
(E)			(CaAa)	12.670			0.450			
CCI 6.5" x 1.25" Plate	A	No	Surface Af	27.500 -	1	1	-0.250	6.500	15.500	0.028
(E)			(CaAa)	12.670			-0.200			
CCI 6.5" x 1.25" Plate	B	No	Surface Af	27.500 -	1	1	0.450	6.500	15.500	0.028
(E)			(CaAa)	12.670			0.500			
CCI 6.5" x 1.25" Plate	B	No	Surface Af	27.500 -	1	1	-0.250	6.500	15.500	0.028
(E)			(CaAa)	12.670			-0.200			
CCI 6.5" x 1.25" Plate	C	No	Surface Af	27.500 -	1	1	0.350	6.500	15.500	0.028

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 klf
(E)			(CaAa)	12.670			0.400			
CCI 6.5" x 1.25" Plate	C	No	Surface Af	27.500 -	1	1	-0.250	6.500	15.500	0.028
(E)			(CaAa)	12.670			-0.200			
LW										
CCI 6.5" x 1.25" Plate	A	No	Surface Af	47.830 -	1	1	0.400	6.500	15.500	0.028
(E)			(CaAa)	32.830			0.450			
CCI 6.5" x 1.25" Plate	A	No	Surface Af	47.830 -	1	1	-0.400	6.500	15.500	0.028
(E)			(CaAa)	32.830			-0.350			
CCI 6.5" x 1.25" Plate	B	No	Surface Af	47.830 -	1	1	-0.400	6.500	15.500	0.028
(E)			(CaAa)	32.830			-0.350			
CCI 6.5" x 1.25" Plate	B	No	Surface Af	47.830 -	1	1	-0.250	6.500	15.500	0.028
(E)			(CaAa)	32.830			-0.200			
CCI 6.5" x 1.25" Plate	C	No	Surface Af	47.830 -	1	1	-0.400	6.500	15.500	0.028
(E)			(CaAa)	32.830			0.350			
CCI 6.5" x 1.25" Plate	C	No	Surface Af	47.830 -	1	1	-0.250	6.500	15.500	0.028
(E)			(CaAa)	32.830			-0.200			
LW										
CCI 8.5" x 1.25" Plate	A	No	Surface Af	60.083 -	1	1	0.200	8.500	19.500	0.036
(E)			(CaAa)	55.250			0.250			
CCI 8.5" x 1.25" Plate	A	No	Surface Af	60.083 -	1	1	-0.400	8.500	19.500	0.036
(E)			(CaAa)	55.250			-0.350			
CCI 8.5" x 1.25" Plate	B	No	Surface Af	60.083 -	1	1	0.150	8.500	19.500	0.036
(E)			(CaAa)	55.250			0.200			
CCI 8.5" x 1.25" Plate	B	No	Surface Af	60.083 -	1	1	-0.350	8.500	19.500	0.036
(E)			(CaAa)	55.250			-0.300			
CCI 8.5" x 1.25" Plate	C	No	Surface Af	60.083 -	1	1	0.100	8.500	19.500	0.036
(E)			(CaAa)	55.250			0.150			
CCI 8.5" x 1.25" Plate	C	No	Surface Af	60.083 -	1	1	-0.500	8.500	19.500	0.036
(E)			(CaAa)	55.250			-0.450			
LW										
CCI 8.5" x 1.25" Plate	A	No	Surface Af	61.083 -	1	1	0.200	8.500	19.500	0.036
(E)			(CaAa)	60.083			0.250			
CCI 8.5" x 1.25" Plate	A	No	Surface Af	61.083 -	1	1	-0.400	8.500	19.500	0.036
(E)			(CaAa)	60.083			-0.350			
CCI 8.5" x 1.25" Plate	B	No	Surface Af	61.083 -	1	1	0.150	8.500	19.500	0.036
(E)			(CaAa)	60.083			0.200			
CCI 8.5" x 1.25" Plate	B	No	Surface Af	61.083 -	1	1	-0.350	8.500	19.500	0.036
(E)			(CaAa)	60.083			-0.300			
CCI 8.5" x 1.25" Plate	C	No	Surface Af	61.083 -	1	1	0.100	8.500	19.500	0.036
(E)			(CaAa)	60.083			0.150			
CCI 8.5" x 1.25" Plate	C	No	Surface Af	61.083 -	1	1	-0.500	8.500	19.500	0.036
(E)			(CaAa)	60.083			-0.450			
LW										
CCI 8.5" x 4.25" Plate	A	No	Surface Af	68.417 -	1	1	0.200	8.500	25.500	0.123
(E)			(CaAa)	61.083			0.250			
CCI 8.5" x 4.25" Plate	A	No	Surface Af	68.417 -	1	1	-0.400	8.500	25.500	0.123
(E)			(CaAa)	61.083			-0.350			
CCI 8.5" x 4.25" Plate	B	No	Surface Af	68.417 -	1	1	0.150	8.500	25.500	0.123
(E)			(CaAa)	61.083			0.200			
CCI 8.5" x 4.25" Plate	B	No	Surface Af	68.417 -	1	1	-0.350	8.500	25.500	0.123
(E)			(CaAa)	61.083			-0.300			
CCI 8.5" x 4.25" Plate	C	No	Surface Af	68.417 -	1	1	0.100	8.500	25.500	0.123
(E)			(CaAa)	61.083			0.150			
CCI 8.5" x 4.25" Plate	C	No	Surface Af	68.417 -	1	1	-0.500	8.500	25.500	0.123
(E)			(CaAa)	61.083			-0.450			
LW										
CCI 8.5" x 1.25" Plate	A	No	Surface Af	73.417 -	1	1	0.200	8.500	19.500	0.036
(E)			(CaAa)	68.417			0.250			
CCI 8.5" x 1.25" Plate	A	No	Surface Af	73.417 -	1	1	-0.400	8.500	19.500	0.036
(E)			(CaAa)	68.417			-0.350			

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 klf
CCI 8.5" x 1.25" Plate (E)	B	No	Surface Af (CaAa)	73.417 - 68.417	1	1	0.150 0.200	8.500	19.500	0.036
CCI 8.5" x 1.25" Plate (E)	B	No	Surface Af (CaAa)	73.417 - 68.417	1	1	-0.350 -0.300	8.500	19.500	0.036
CCI 8.5" x 1.25" Plate (E)	C	No	Surface Af (CaAa)	73.417 - 68.417	1	1	0.100 0.150	8.500	19.500	0.036
CCI 8.5" x 1.25" Plate (E) ***LW***	C	No	Surface Af (CaAa)	73.417 - 68.417	1	1	-0.500 -0.450	8.500	19.500	0.036
CCI 6.5" x 1.25" Plate (E)	A	No	Surface Af (CaAa)	80.333 - 76.500	1	1	0.050 0.100	6.500	15.500	0.028
CCI 6.5" x 1.25" Plate (E)	B	No	Surface Af (CaAa)	80.333 - 76.500	1	1	0.000 0.050	6.500	15.500	0.028
CCI 6.5" x 1.25" Plate (E) ***LW***	C	No	Surface Af (CaAa)	80.333 - 76.500	1	1	0.150 0.200	6.500	15.500	0.028
CCI 6.5" x 1.25" Plate (E)	A	No	Surface Af (CaAa)	80.500 - 80.333	1	1	0.050 0.100	6.500	15.500	0.028
CCI 6.5" x 1.25" Plate (E)	B	No	Surface Af (CaAa)	80.500 - 80.333	1	1	0.000 0.050	6.500	15.500	0.028
CCI 6.5" x 1.25" Plate (E) ***LW***	C	No	Surface Af (CaAa)	80.500 - 80.333	1	1	0.150 0.200	6.500	15.500	0.028
CCI 6.5" x 4.25" Plate (E)	A	No	Surface Af (CaAa)	85.833 - 80.500	1	1	0.050 0.100	6.500	21.500	0.094
CCI 6.5" x 4.25" Plate (E)	B	No	Surface Af (CaAa)	85.833 - 80.500	1	1	0.000 0.050	6.500	21.500	0.094
CCI 6.5" x 4.25" Plate (E) ***LW***	C	No	Surface Af (CaAa)	85.833 - 80.500	1	1	0.150 0.200	6.500	21.500	0.094
CCI 6.5" x 1.25" Plate (E)	A	No	Surface Af (CaAa)	89.750 - 85.833	1	1	0.050 0.100	6.500	15.500	0.028
CCI 6.5" x 1.25" Plate (E)	B	No	Surface Af (CaAa)	89.750 - 85.833	1	1	0.000 0.050	6.500	15.500	0.028
CCI 6.5" x 1.25" Plate (E) ***LW***	C	No	Surface Af (CaAa)	89.750 - 85.833	1	1	0.150 0.200	6.500	15.500	0.028
CCI 4.5" x 1" Plate (E)	A	No	Surface Af (CaAa)	100.417 - 97.917	1	1	-0.150 -0.100	4.500	11.000	0.015
CCI 4.5" x 1" Plate (E)	B	No	Surface Af (CaAa)	100.417 - 97.917	1	1	-0.100 -0.050	4.500	11.000	0.015
CCI 4.5" x 1" Plate (E) ***LW***	C	No	Surface Af (CaAa)	100.417 - 97.917	1	1	-0.100 -0.050	4.500	11.000	0.015
CCI 4.5" x 1" Plate (E)	A	No	Surface Af (CaAa)	101.417 - 100.417	1	1	-0.150 -0.100	4.500	11.000	0.015
CCI 4.5" x 1" Plate (E)	B	No	Surface Af (CaAa)	101.417 - 100.417	1	1	-0.100 -0.050	4.500	11.000	0.015
CCI 4.5" x 1" Plate (E) ***LW***	C	No	Surface Af (CaAa)	101.417 - 100.417	1	1	-0.100 -0.050	4.500	11.000	0.015
CCI 4.5" x 4" Plate (E)	A	No	Surface Af (CaAa)	104.417 - 101.417	1	1	-0.150 -0.100	4.500	17.000	0.061
CCI 4.5" x 4" Plate (E)	B	No	Surface Af (CaAa)	104.417 - 101.417	1	1	-0.100 -0.050	4.500	17.000	0.061
CCI 4.5" x 4" Plate (E) ***LW***	C	No	Surface Af (CaAa)	104.417 - 101.417	1	1	-0.100 -0.050	4.500	17.000	0.061
CCI 4.5" x 1" Plate (E)	A	No	Surface Af (CaAa)	107.167 - 104.417	1	1	-0.150 -0.100	4.500	11.000	0.015

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 klf
CCI 4.5" x 1" Plate (E)	B	No	Surface Af (CaAa)	107.167 - 104.417	1	1	-0.100 -0.050	4.500	11.000	0.015
CCI 4.5" x 1" Plate (E) ***LW***	C	No	Surface Af (CaAa)	107.167 - 104.417	1	1	-0.100 -0.050	4.500	11.000	0.015
CCI 4.5" x 1" Plate (E)	A	No	Surface Af (CaAa)	120.667 - 117.917	1	1	-0.150 -0.100	4.500	11.000	0.015
CCI 4.5" x 1" Plate (E)	B	No	Surface Af (CaAa)	120.667 - 117.917	1	1	-0.100 -0.050	4.500	11.000	0.015
CCI 4.5" x 1" Plate (E) ***LW***	C	No	Surface Af (CaAa)	120.667 - 117.917	1	1	-0.200 -0.150	4.500	11.000	0.015
CCI 4.5" x 1" Plate (E)	A	No	Surface Af (CaAa)	121.667 - 120.667	1	1	-0.150 -0.100	4.500	11.000	0.015
CCI 4.5" x 1" Plate (E)	B	No	Surface Af (CaAa)	121.667 - 120.667	1	1	-0.100 -0.050	4.500	11.000	0.015
CCI 4.5" x 1" Plate (E) ***LW***	C	No	Surface Af (CaAa)	121.667 - 120.667	1	1	-0.200 -0.150	4.500	11.000	0.015
CCI 4.5" x 4" Plate (E)	A	No	Surface Af (CaAa)	124.417 - 121.667	1	1	-0.150 -0.100	4.500	17.000	0.061
CCI 4.5" x 4" Plate (E)	B	No	Surface Af (CaAa)	124.417 - 121.667	1	1	-0.100 -0.050	4.500	17.000	0.061
CCI 4.5" x 4" Plate (E) ***LW***	C	No	Surface Af (CaAa)	124.417 - 121.667	1	1	-0.200 -0.150	4.500	17.000	0.061
CCI 4.5" x 1" Plate (E)	A	No	Surface Af (CaAa)	127.167 - 124.417	1	1	-0.150 -0.100	4.500	11.000	0.015
CCI 4.5" x 1" Plate (E)	B	No	Surface Af (CaAa)	127.167 - 124.417	1	1	-0.100 -0.050	4.500	11.000	0.015
CCI 4.5" x 1" Plate (E) ***LW***	C	No	Surface Af (CaAa)	127.167 - 124.417	1	1	-0.200 -0.150	4.500	11.000	0.015
CCI 4.5" x 1" Plate (E)	A	No	Surface Af (CaAa)	61.458 - 58.000	1	1	-0.250 -0.200	4.500	11.000	0.015
CCI 4.5" x 1" Plate (E)	B	No	Surface Af (CaAa)	61.458 - 58.000	1	1	-0.450 -0.400	4.500	11.000	0.015
CCI 4.5" x 1" Plate (E)	B	No	Surface Af (CaAa)	61.458 - 58.000	1	1	0.400 0.450	4.500	11.000	0.015
CCI 4.5" x 1" Plate (E) ***LW***	C	No	Surface Af (CaAa)	61.458 - 58.000	1	1	0.350 0.400	4.500	11.000	0.015
CCI 4.5" x 3" Plate (E)	A	No	Surface Af (CaAa)	62.958 - 61.548	1	1	-0.250 -0.200	4.500	15.000	0.046
CCI 4.5" x 3" Plate (E)	B	No	Surface Af (CaAa)	62.958 - 61.548	1	1	-0.450 -0.400	4.500	15.000	0.046
CCI 4.5" x 3" Plate (E)	B	No	Surface Af (CaAa)	62.958 - 61.548	1	1	0.400 0.450	4.500	15.000	0.046
CCI 4.5" x 3" Plate (E) ***LW***	C	No	Surface Af (CaAa)	62.958 - 61.548	1	1	0.350 0.400	4.500	15.000	0.046
CCI 4.5" x 1" Plate (E)	A	No	Surface Af (CaAa)	81.708 - 78.333	1	1	-0.500 -0.450	4.500	11.000	0.015
CCI 4.5" x 1" Plate (E)	B	No	Surface Af (CaAa)	81.708 - 78.333	1	1	-0.500 -0.450	4.500	11.000	0.015
CCI 4.5" x 1" Plate (E) ***LW***	C	No	Surface Af (CaAa)	81.708 - 78.333	1	1	-0.500 -0.450	4.500	11.000	0.015
CCI 4.5" x 3" Plate (E)	A	No	Surface Af (CaAa)	83.205 - 81.708	1	1	-0.500 -0.450	4.500	15.000	0.046

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 klf
CCI 4.5" x 3" Plate (E)	B	No	Surface Af (CaAa)	83.205 - 81.708	1	1	-0.500 -0.450	4.500	15.000	0.046
CCI 4.5" x 3" Plate (E) ***LW***	C	No	Surface Af (CaAa)	83.205 - 81.708	1	1	-0.500 -0.450	4.500	15.000	0.046
CCI 4.5" x 1" Plate (E)	A	No	Surface Af (CaAa)	101.792 - 98.417	1	1	0.300 0.350	4.500	11.000	0.015
CCI 4.5" x 1" Plate (E)	B	No	Surface Af (CaAa)	101.792 - 98.417	1	1	0.300 0.350	4.500	11.000	0.015
CCI 4.5" x 1" Plate (E) ***LW***	C	No	Surface Af (CaAa)	101.792 - 98.417	1	1	0.300 0.350	4.500	11.000	0.015
CCI 4.5" x 3" Plate (E)	A	No	Surface Af (CaAa)	103.292 - 101.792	1	1	0.300 0.350	4.500	15.000	0.046
CCI 4.5" x 3" Plate (E)	B	No	Surface Af (CaAa)	103.292 - 101.792	1	1	0.300 0.350	4.500	15.000	0.046
CCI 4.5" x 3" Plate (E)	C	No	Surface Af (CaAa)	103.292 - 101.792	1	1	0.300 0.350	4.500	15.000	0.046
HCS 6X12 4AWG(1-5/8) (P) ***LW***	A	No	Surface Ar (CaAa)	184.000 - 0.000	1	1	-0.320 -0.300	1.660		0.002
AL7-50(1-5/8) (E) ***LW***	B	No	Surface Ar (CaAa)	160.000 - 0.000	7	7	-0.320 -0.050	1.960		0.001
Safety Line 3/8 (E)	C	No	Surface Ar (CaAa)	191.667 - 0.000	1	1	0.000 0.010	0.375		0.000
Climbing Rung (E-Per Photo) ***LW***	C	No	Surface Ar (CaAa)	191.667 - 0.000	1	1	-0.050 0.050	1.000		0.008

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight klf
LW									
LW									
LDF5-50A(7/8) (E)	B	No	No	Inside Pole	191.667 - 0.000	1	No Ice 1/2" Ice 1" Ice 2" Ice	0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000
LW									
ATCB-B01-001(5/16) (E)	B	No	No	Inside Pole	191.000 - 0.000	1	No Ice 1/2" Ice 1" Ice 2" Ice	0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000
LW									
LDF7-50A(1-5/8) (E)	A	No	No	Inside Pole	184.000 - 0.000	14	No Ice 1/2" Ice 1" Ice 2" Ice	0.000 0.000 0.000 0.000	0.001 0.001 0.001 0.001
LW									
LDF5-50A(7/8) (E)	B	No	No	Inside Pole	158.000 - 0.000	2	No Ice 1/2" Ice 1" Ice 2" Ice	0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight klf
LW									
LDF6-50A(1-1/4) (E)	C	No	No	Inside Pole	151.000 - 0.000	12	No Ice	0.000	0.001
							1/2" Ice	0.000	0.001
							1" Ice	0.000	0.001
							2" Ice	0.000	0.001
2" Rigid Conduit (E-inside pole)	C	No	No	Inside Pole	150.000 - 0.000	1	No Ice	0.000	0.003
							1/2" Ice	0.000	0.003
							1" Ice	0.000	0.003
							2" Ice	0.000	0.003
FB-L98B-034-XXX(3/8) (E-inside conduit)	C	No	No	Inside Pole	150.000 - 0.000	1	No Ice	0.000	0.000
							1/2" Ice	0.000	0.000
							1" Ice	0.000	0.000
							2" Ice	0.000	0.000
WR-VG86ST-BRD(3/4) (E-inside conduit)	C	No	No	Inside Pole	150.000 - 0.000	2	No Ice	0.000	0.001
							1/2" Ice	0.000	0.001
							1" Ice	0.000	0.001
							2" Ice	0.000	0.001
LW									
LDF5-50A(7/8) (E)	B	No	No	Inside Pole	132.000 - 0.000	1	No Ice	0.000	0.000
							1/2" Ice	0.000	0.000
							1" Ice	0.000	0.000
							2" Ice	0.000	0.000
LW									
2-1/4" Rigid Conduit (E-per photo)	B	No	No	Inside Pole	116.000 - 0.000	2	No Ice	0.000	0.003
							1/2" Ice	0.000	0.003
							1" Ice	0.000	0.003
							2" Ice	0.000	0.003
LDF4-50A(1/2) (E-inside conduit)	B	No	No	Inside Pole	116.000 - 0.000	1	No Ice	0.000	0.000
							1/2" Ice	0.000	0.000
							1" Ice	0.000	0.000
							2" Ice	0.000	0.000
HB158-21U6M48-30F(1-5/8) (R)	B	No	No	Inside Pole	116.000 - 0.000	3	No Ice	0.000	0.002
							1/2" Ice	0.000	0.002
							1" Ice	0.000	0.002
							2" Ice	0.000	0.002
2" Rigid Conduit (R)	B	No	No	Inside Pole	116.000 - 0.000	1	No Ice	0.000	0.003
							1/2" Ice	0.000	0.003
							1" Ice	0.000	0.003
							2" Ice	0.000	0.003
MLC6C-06C-008R-008R(1-1/2) (R)	B	No	No	Inside Pole	116.000 - 0.000	1	No Ice	0.000	0.002
							1/2" Ice	0.000	0.002
							1" Ice	0.000	0.002
							2" Ice	0.000	0.002
LW									
ATCB-B01-001(5/16) (E)	B	No	No	Inside Pole	90.000 - 0.000	1	No Ice	0.000	0.000
							1/2" Ice	0.000	0.000
							1" Ice	0.000	0.000
							2" Ice	0.000	0.000
LDF4-50A(1/2) (E)	B	No	No	Inside Pole	90.000 - 0.000	2	No Ice	0.000	0.000
							1/2" Ice	0.000	0.000
							1" Ice	0.000	0.000
							2" Ice	0.000	0.000
LDF5-50A(7/8) (E)	B	No	No	Inside Pole	90.000 - 0.000	1	No Ice	0.000	0.000
							1/2" Ice	0.000	0.000
							1" Ice	0.000	0.000
							2" Ice	0.000	0.000
LW									
LDF5-50A(7/8) (E)	B	No	No	Inside Pole	70.000 - 0.000	2	No Ice	0.000	0.000
							1/2" Ice	0.000	0.000
							1" Ice	0.000	0.000

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight klf
							2" Ice	0.000	0.000
LW LDF4-50A(1/2) (E) ***LW***	B	No	No	Inside Pole	33.000 - 0.000	2	No Ice 1/2" Ice 1" Ice 2" Ice	0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000

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	191.667-186.667	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.002
		C	0.000	0.000	0.688	0.000	0.043
L2	186.667-181.567	A	0.000	0.000	0.404	0.000	0.034
		B	0.000	0.000	0.000	0.000	0.002
		C	0.000	0.000	0.701	0.000	0.044
L3	181.567-176.567	A	0.000	0.000	0.830	0.000	0.069
		B	0.000	0.000	0.000	0.000	0.002
		C	0.000	0.000	0.688	0.000	0.043
L4	176.567-171.567	A	0.000	0.000	0.830	0.000	0.069
		B	0.000	0.000	0.000	0.000	0.002
		C	0.000	0.000	0.688	0.000	0.043
L5	171.567-166.567	A	0.000	0.000	0.830	0.000	0.069
		B	0.000	0.000	0.000	0.000	0.002
		C	0.000	0.000	0.688	0.000	0.043
L6	166.567-161.567	A	0.000	0.000	0.830	0.000	0.069
		B	0.000	0.000	0.000	0.000	0.002
		C	0.000	0.000	0.688	0.000	0.043
L7	161.567-156.567	A	0.000	0.000	0.830	0.000	0.069
		B	0.000	0.000	4.710	0.000	0.015
		C	0.000	0.000	0.688	0.000	0.043
L8	156.567-151.567	A	0.000	0.000	0.830	0.000	0.069
		B	0.000	0.000	6.860	0.000	0.024
		C	0.000	0.000	0.688	0.000	0.043
L9	151.567-146.567	A	0.000	0.000	0.830	0.000	0.069
		B	0.000	0.000	6.860	0.000	0.024
		C	0.000	0.000	0.688	0.000	0.089
L10	146.567-141.567	A	0.000	0.000	0.830	0.000	0.069
		B	0.000	0.000	6.860	0.000	0.024
		C	0.000	0.000	0.688	0.000	0.099
L11	141.567-141.417	A	0.000	0.000	0.025	0.000	0.002
		B	0.000	0.000	0.206	0.000	0.001
		C	0.000	0.000	0.021	0.000	0.003
L12	141.417-136.417	A	0.000	0.000	0.830	0.000	0.069
		B	0.000	0.000	6.860	0.000	0.024
		C	0.000	0.000	0.688	0.000	0.099
L13	136.417-131.417	A	0.000	0.000	0.830	0.000	0.069
		B	0.000	0.000	6.860	0.000	0.024
		C	0.000	0.000	0.688	0.000	0.099
L14	131.417-126.417	A	0.000	0.000	1.225	0.000	0.081
		B	0.000	0.000	7.255	0.000	0.037

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	1.083	0.000	0.111
L15	126.417-121.417	A	0.000	0.000	3.371	0.000	0.272
		B	0.000	0.000	9.401	0.000	0.228
		C	0.000	0.000	3.229	0.000	0.302
L16	121.417-121.167	A	0.000	0.000	0.154	0.000	0.007
		B	0.000	0.000	0.456	0.000	0.005
		C	0.000	0.000	0.147	0.000	0.009
L17	121.167-116.167	A	0.000	0.000	2.505	0.000	0.119
		B	0.000	0.000	8.535	0.000	0.075
		C	0.000	0.000	2.363	0.000	0.149
L18	116.167-111.167	A	0.000	0.000	1.674	0.000	0.069
		B	0.000	0.000	6.860	0.000	0.110
		C	0.000	0.000	0.688	0.000	0.099
L19	111.167-110.042	A	0.000	0.000	2.718	0.000	0.016
		B	0.000	0.000	1.544	0.000	0.026
		C	0.000	0.000	0.155	0.000	0.022
L20	110.042-109.792	A	0.000	0.000	0.604	0.000	0.003
		B	0.000	0.000	0.343	0.000	0.006
		C	0.000	0.000	0.034	0.000	0.005
L21	109.792-105.083	A	0.000	0.000	13.304	0.000	0.097
		B	0.000	0.000	8.388	0.000	0.139
		C	0.000	0.000	2.575	0.000	0.125
L22	105.083-104.833	A	0.000	0.000	0.874	0.000	0.007
		B	0.000	0.000	0.613	0.000	0.010
		C	0.000	0.000	0.304	0.000	0.009
L23	104.833-100.917	A	0.000	0.000	12.995	0.000	0.335
		B	0.000	0.000	10.313	0.000	0.369
		C	0.000	0.000	5.478	0.000	0.358
L24	100.917-100.667	A	0.000	0.000	0.291	0.000	0.011
		B	0.000	0.000	0.593	0.000	0.013
		C	0.000	0.000	0.284	0.000	0.013
L25	100.667-95.833	A	0.000	0.000	4.564	0.000	0.144
		B	0.000	0.000	10.394	0.000	0.186
		C	0.000	0.000	4.426	0.000	0.173
L26	95.833-95.583	A	0.000	0.000	0.229	0.000	0.003
		B	0.000	0.000	0.530	0.000	0.006
		C	0.000	0.000	0.222	0.000	0.005
L27	95.583-90.583	A	0.000	0.000	5.205	0.000	0.069
		B	0.000	0.000	11.236	0.000	0.113
		C	0.000	0.000	5.063	0.000	0.099
L28	90.583-89.917	A	0.000	0.000	1.110	0.000	0.009
		B	0.000	0.000	1.913	0.000	0.015
		C	0.000	0.000	1.091	0.000	0.013
L29	89.917-89.667	A	0.000	0.000	0.480	0.000	0.006
		B	0.000	0.000	0.781	0.000	0.008
		C	0.000	0.000	0.472	0.000	0.007
L30	89.667-84.667	A	0.000	0.000	12.155	0.000	0.285
		B	0.000	0.000	18.185	0.000	0.333
		C	0.000	0.000	12.012	0.000	0.315
L31	84.667-80.833	A	0.000	0.000	9.741	0.000	0.496
		B	0.000	0.000	14.365	0.000	0.532
		C	0.000	0.000	9.632	0.000	0.519
L32	80.833-80.333	A	0.000	0.000	0.725	0.000	0.051
		B	0.000	0.000	1.328	0.000	0.055
		C	0.000	0.000	0.711	0.000	0.054
L33	80.333-80.083	A	0.000	0.000	0.452	0.000	0.014
		B	0.000	0.000	0.753	0.000	0.017
		C	0.000	0.000	0.444	0.000	0.016
L34	80.083-75.083	A	0.000	0.000	9.501	0.000	0.195
		B	0.000	0.000	15.531	0.000	0.243
		C	0.000	0.000	9.358	0.000	0.225

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
L35	75.083-70.083	A	0.000	0.000	13.127	0.000	0.311
		B	0.000	0.000	19.845	0.000	0.358
		C	0.000	0.000	12.984	0.000	0.340
L36	70.083-69.500	A	0.000	0.000	2.273	0.000	0.050
		B	0.000	0.000	3.413	0.000	0.056
		C	0.000	0.000	2.256	0.000	0.054
L37	69.500-69.250	A	0.000	0.000	0.975	0.000	0.022
		B	0.000	0.000	1.464	0.000	0.024
		C	0.000	0.000	0.967	0.000	0.023
L38	69.250-64.250	A	0.000	0.000	20.260	0.000	1.167
		B	0.000	0.000	30.360	0.000	1.231
		C	0.000	0.000	20.118	0.000	1.197
L39	64.250-60.583	A	0.000	0.000	15.257	0.000	0.966
		B	0.000	0.000	23.775	0.000	1.103
		C	0.000	0.000	15.152	0.000	0.987
L40	60.583-60.333	A	0.000	0.000	0.604	0.000	0.025
		B	0.000	0.000	1.043	0.000	0.032
		C	0.000	0.000	0.597	0.000	0.027
L41	60.333-55.333	A	0.000	0.000	16.850	0.000	0.467
		B	0.000	0.000	24.164	0.000	0.553
		C	0.000	0.000	16.708	0.000	0.497
L42	55.333-52.167	A	0.000	0.000	4.119	0.000	0.050
		B	0.000	0.000	7.937	0.000	0.082
		C	0.000	0.000	4.028	0.000	0.069
L43	52.167-51.917	A	0.000	0.000	0.312	0.000	0.003
		B	0.000	0.000	0.614	0.000	0.006
		C	0.000	0.000	0.305	0.000	0.005
L44	51.917-46.917	A	0.000	0.000	12.058	0.000	0.144
		B	0.000	0.000	18.672	0.000	0.218
		C	0.000	0.000	15.166	0.000	0.174
L45	46.917-41.917	A	0.000	0.000	22.913	0.000	0.380
		B	0.000	0.000	29.777	0.000	0.465
		C	0.000	0.000	27.771	0.000	0.410
L46	41.917-40.333	A	0.000	0.000	6.676	0.000	0.119
		B	0.000	0.000	8.808	0.000	0.144
		C	0.000	0.000	8.214	0.000	0.128
L47	40.333-40.083	A	0.000	0.000	0.833	0.000	0.017
		B	0.000	0.000	1.135	0.000	0.020
		C	0.000	0.000	1.076	0.000	0.019
L48	40.083-35.083	A	0.000	0.000	19.246	0.000	0.346
		B	0.000	0.000	25.276	0.000	0.397
		C	0.000	0.000	22.020	0.000	0.376
L49	35.083-30.083	A	0.000	0.000	10.711	0.000	0.194
		B	0.000	0.000	16.741	0.000	0.246
		C	0.000	0.000	10.569	0.000	0.224
L50	30.083-28.000	A	0.000	0.000	4.429	0.000	0.029
		B	0.000	0.000	6.941	0.000	0.051
		C	0.000	0.000	6.369	0.000	0.041
L51	28.000-27.750	A	0.000	0.000	0.541	0.000	0.003
		B	0.000	0.000	0.843	0.000	0.006
		C	0.000	0.000	0.784	0.000	0.005
L52	27.750-22.750	A	0.000	0.000	21.122	0.000	0.332
		B	0.000	0.000	27.152	0.000	0.384
		C	0.000	0.000	25.979	0.000	0.362
L53	22.750-20.083	A	0.000	0.000	10.888	0.000	0.185
		B	0.000	0.000	14.105	0.000	0.212
		C	0.000	0.000	13.479	0.000	0.200
L54	20.083-19.833	A	0.000	0.000	0.833	0.000	0.017
		B	0.000	0.000	1.135	0.000	0.020
		C	0.000	0.000	1.076	0.000	0.019
L55	19.833-17.000	A	0.000	0.000	11.441	0.000	0.196

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	14.858	0.000	0.226
		C	0.000	0.000	16.194	0.000	0.213
L56	17.000-16.750	A	0.000	0.000	0.833	0.000	0.017
		B	0.000	0.000	1.135	0.000	0.020
		C	0.000	0.000	1.076	0.000	0.019
L57	16.750-11.650	A	0.000	0.000	14.787	0.000	0.296
		B	0.000	0.000	20.937	0.000	0.350
		C	0.000	0.000	20.753	0.000	0.327
L58	11.650-11.417	A	0.000	0.000	0.272	0.000	0.003
		B	0.000	0.000	0.553	0.000	0.006
		C	0.000	0.000	0.653	0.000	0.005
L59	11.417-9.396	A	0.000	0.000	3.342	0.000	0.028
		B	0.000	0.000	5.780	0.000	0.049
		C	0.000	0.000	5.667	0.000	0.040
L60	9.396-9.146	A	0.000	0.000	0.458	0.000	0.003
		B	0.000	0.000	0.760	0.000	0.006
		C	0.000	0.000	0.701	0.000	0.005
L61	9.146-4.833	A	0.000	0.000	7.904	0.000	0.060
		B	0.000	0.000	13.106	0.000	0.105
		C	0.000	0.000	12.094	0.000	0.086
L62	4.833-4.583	A	0.000	0.000	0.458	0.000	0.003
		B	0.000	0.000	0.760	0.000	0.006
		C	0.000	0.000	0.701	0.000	0.005
L63	4.583-0.000	A	0.000	0.000	8.399	0.000	0.064
		B	0.000	0.000	13.926	0.000	0.112
		C	0.000	0.000	10.740	0.000	0.091

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	191.667-186.667	A	2.024	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.002
		C		0.000	0.000	4.736	0.000	0.110
L2	186.667-181.567	A	2.019	0.000	0.000	1.386	0.000	0.056
		B		0.000	0.000	0.000	0.000	0.002
		C		0.000	0.000	4.820	0.000	0.112
L3	181.567-176.567	A	2.013	0.000	0.000	2.843	0.000	0.115
		B		0.000	0.000	0.000	0.000	0.002
		C		0.000	0.000	4.714	0.000	0.110
L4	176.567-171.567	A	2.008	0.000	0.000	2.838	0.000	0.114
		B		0.000	0.000	0.000	0.000	0.002
		C		0.000	0.000	4.703	0.000	0.109
L5	171.567-166.567	A	2.002	0.000	0.000	2.832	0.000	0.114
		B		0.000	0.000	0.000	0.000	0.002
		C		0.000	0.000	4.691	0.000	0.109
L6	166.567-161.567	A	1.996	0.000	0.000	2.826	0.000	0.114
		B		0.000	0.000	0.000	0.000	0.002
		C		0.000	0.000	4.679	0.000	0.109
L7	161.567-156.567	A	1.990	0.000	0.000	2.820	0.000	0.114
		B		0.000	0.000	7.595	0.000	0.118
		C		0.000	0.000	4.667	0.000	0.108
L8	156.567-151.567	A	1.983	0.000	0.000	2.813	0.000	0.114
		B		0.000	0.000	11.054	0.000	0.172
		C		0.000	0.000	4.654	0.000	0.108
L9	151.567-146.567	A	1.977	0.000	0.000	2.807	0.000	0.113
		B		0.000	0.000	11.046	0.000	0.171

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	4.641	0.000	0.153
L10	146.567-141.567	A	1.970	0.000	0.000	2.800	0.000	0.113
		B		0.000	0.000	11.037	0.000	0.171
		C		0.000	0.000	4.627	0.000	0.163
L11	141.567-141.417	A	1.966	0.000	0.000	0.084	0.000	0.003
		B		0.000	0.000	0.331	0.000	0.005
		C		0.000	0.000	0.139	0.000	0.005
L12	141.417-136.417	A	1.963	0.000	0.000	2.793	0.000	0.113
		B		0.000	0.000	11.028	0.000	0.170
		C		0.000	0.000	4.613	0.000	0.163
L13	136.417-131.417	A	1.956	0.000	0.000	2.786	0.000	0.113
		B		0.000	0.000	11.020	0.000	0.170
		C		0.000	0.000	4.599	0.000	0.162
L14	131.417-126.417	A	1.948	0.000	0.000	3.327	0.000	0.134
		B		0.000	0.000	11.559	0.000	0.192
		C		0.000	0.000	5.132	0.000	0.184
L15	126.417-121.417	A	1.940	0.000	0.000	6.360	0.000	0.397
		B		0.000	0.000	14.590	0.000	0.454
		C		0.000	0.000	8.158	0.000	0.446
L16	121.417-121.167	A	1.936	0.000	0.000	0.307	0.000	0.013
		B		0.000	0.000	0.719	0.000	0.016
		C		0.000	0.000	0.397	0.000	0.015
L17	121.167-116.167	A	1.932	0.000	0.000	5.106	0.000	0.206
		B		0.000	0.000	13.334	0.000	0.264
		C		0.000	0.000	6.896	0.000	0.256
L18	116.167-111.167	A	1.924	0.000	0.000	3.836	0.000	0.127
		B		0.000	0.000	10.980	0.000	0.254
		C		0.000	0.000	4.535	0.000	0.161
L19	111.167-110.042	A	1.919	0.000	0.000	3.863	0.000	0.071
		B		0.000	0.000	2.469	0.000	0.058
		C		0.000	0.000	1.018	0.000	0.036
L20	110.042-109.792	A	1.917	0.000	0.000	0.858	0.000	0.016
		B		0.000	0.000	0.549	0.000	0.013
		C		0.000	0.000	0.226	0.000	0.008
L21	109.792-105.083	A	1.913	0.000	0.000	18.809	0.000	0.375
		B		0.000	0.000	12.979	0.000	0.320
		C		0.000	0.000	6.902	0.000	0.230
L22	105.083-104.833	A	1.909	0.000	0.000	1.228	0.000	0.026
		B		0.000	0.000	0.919	0.000	0.023
		C		0.000	0.000	0.596	0.000	0.018
L23	104.833-100.917	A	1.905	0.000	0.000	18.532	0.000	0.643
		B		0.000	0.000	15.492	0.000	0.623
		C		0.000	0.000	10.433	0.000	0.548
L24	100.917-100.667	A	1.901	0.000	0.000	0.492	0.000	0.020
		B		0.000	0.000	0.903	0.000	0.027
		C		0.000	0.000	0.580	0.000	0.022
L25	100.667-95.833	A	1.896	0.000	0.000	7.956	0.000	0.271
		B		0.000	0.000	15.902	0.000	0.410
		C		0.000	0.000	9.651	0.000	0.318
L26	95.833-95.583	A	1.891	0.000	0.000	0.415	0.000	0.009
		B		0.000	0.000	0.826	0.000	0.016
		C		0.000	0.000	0.503	0.000	0.011
L27	95.583-90.583	A	1.886	0.000	0.000	9.093	0.000	0.188
		B		0.000	0.000	17.310	0.000	0.331
		C		0.000	0.000	10.837	0.000	0.236
L28	90.583-89.917	A	1.880	0.000	0.000	1.741	0.000	0.032
		B		0.000	0.000	2.835	0.000	0.051
		C		0.000	0.000	1.973	0.000	0.039
L29	89.917-89.667	A	1.879	0.000	0.000	0.733	0.000	0.016
		B		0.000	0.000	1.144	0.000	0.023
		C		0.000	0.000	0.820	0.000	0.018

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
L30	89.667-84.667	A	1.873	0.000	0.000	17.873	0.000	0.545
		B		0.000	0.000	26.086	0.000	0.691
		C		0.000	0.000	19.604	0.000	0.593
L31	84.667-80.833	A	1.864	0.000	0.000	14.318	0.000	0.728
		B		0.000	0.000	20.614	0.000	0.839
		C		0.000	0.000	15.638	0.000	0.764
L32	80.833-80.333	A	1.859	0.000	0.000	1.115	0.000	0.071
		B		0.000	0.000	1.936	0.000	0.085
		C		0.000	0.000	1.286	0.000	0.075
L33	80.333-80.083	A	1.858	0.000	0.000	0.673	0.000	0.025
		B		0.000	0.000	1.083	0.000	0.032
		C		0.000	0.000	0.759	0.000	0.027
L34	80.083-75.083	A	1.852	0.000	0.000	14.196	0.000	0.391
		B		0.000	0.000	22.404	0.000	0.537
		C		0.000	0.000	15.905	0.000	0.439
L35	75.083-70.083	A	1.839	0.000	0.000	18.223	0.000	0.563
		B		0.000	0.000	27.302	0.000	0.719
		C		0.000	0.000	19.920	0.000	0.610
L36	70.083-69.500	A	1.832	0.000	0.000	3.035	0.000	0.093
		B		0.000	0.000	4.547	0.000	0.118
		C		0.000	0.000	3.232	0.000	0.098
L37	69.500-69.250	A	1.831	0.000	0.000	1.301	0.000	0.040
		B		0.000	0.000	1.950	0.000	0.050
		C		0.000	0.000	1.386	0.000	0.042
L38	69.250-64.250	A	1.824	0.000	0.000	27.344	0.000	1.584
		B		0.000	0.000	41.081	0.000	1.825
		C		0.000	0.000	29.026	0.000	1.631
L39	64.250-60.583	A	1.812	0.000	0.000	21.026	0.000	1.304
		B		0.000	0.000	32.990	0.000	1.614
		C		0.000	0.000	22.250	0.000	1.339
L40	60.583-60.333	A	1.806	0.000	0.000	0.848	0.000	0.040
		B		0.000	0.000	1.444	0.000	0.054
		C		0.000	0.000	0.931	0.000	0.042
L41	60.333-55.333	A	1.798	0.000	0.000	22.562	0.000	0.789
		B		0.000	0.000	32.489	0.000	1.000
		C		0.000	0.000	24.218	0.000	0.836
L42	55.333-52.167	A	1.785	0.000	0.000	6.365	0.000	0.126
		B		0.000	0.000	11.551	0.000	0.218
		C		0.000	0.000	7.405	0.000	0.155
L43	52.167-51.917	A	1.779	0.000	0.000	0.487	0.000	0.009
		B		0.000	0.000	0.896	0.000	0.016
		C		0.000	0.000	0.569	0.000	0.011
L44	51.917-46.917	A	1.770	0.000	0.000	17.719	0.000	0.362
		B		0.000	0.000	27.638	0.000	0.561
		C		0.000	0.000	23.230	0.000	0.454
L45	46.917-41.917	A	1.751	0.000	0.000	31.161	0.000	0.756
		B		0.000	0.000	41.805	0.000	0.977
		C		0.000	0.000	38.734	0.000	0.872
L46	41.917-40.333	A	1.738	0.000	0.000	9.023	0.000	0.227
		B		0.000	0.000	12.268	0.000	0.293
		C		0.000	0.000	11.416	0.000	0.263
L47	40.333-40.083	A	1.734	0.000	0.000	1.078	0.000	0.030
		B		0.000	0.000	1.487	0.000	0.037
		C		0.000	0.000	1.455	0.000	0.036
L48	40.083-35.083	A	1.722	0.000	0.000	25.299	0.000	0.633
		B		0.000	0.000	33.475	0.000	0.776
		C		0.000	0.000	30.349	0.000	0.718
L49	35.083-30.083	A	1.698	0.000	0.000	15.065	0.000	0.361
		B		0.000	0.000	23.234	0.000	0.504
		C		0.000	0.000	16.620	0.000	0.406
L50	30.083-28.000	A	1.678	0.000	0.000	6.192	0.000	0.097

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
		B		0.000	0.000	9.593	0.000	0.156
		C		0.000	0.000	9.203	0.000	0.142
L51	28.000-27.750	A	1.672	0.000	0.000	0.754	0.000	0.012
		B		0.000	0.000	1.162	0.000	0.019
		C		0.000	0.000	1.127	0.000	0.017
L52	27.750-22.750	A	1.655	0.000	0.000	27.301	0.000	0.629
		B		0.000	0.000	35.460	0.000	0.770
		C		0.000	0.000	34.730	0.000	0.738
L53	22.750-20.083	A	1.628	0.000	0.000	13.975	0.000	0.335
		B		0.000	0.000	18.323	0.000	0.409
		C		0.000	0.000	17.916	0.000	0.392
L54	20.083-19.833	A	1.617	0.000	0.000	1.060	0.000	0.029
		B		0.000	0.000	1.468	0.000	0.036
		C		0.000	0.000	1.429	0.000	0.034
L55	19.833-17.000	A	1.604	0.000	0.000	14.637	0.000	0.351
		B		0.000	0.000	19.253	0.000	0.429
		C		0.000	0.000	21.442	0.000	0.436
L56	17.000-16.750	A	1.590	0.000	0.000	1.092	0.000	0.029
		B		0.000	0.000	1.499	0.000	0.035
		C		0.000	0.000	1.494	0.000	0.034
L57	16.750-11.650	A	1.563	0.000	0.000	19.586	0.000	0.496
		B		0.000	0.000	27.884	0.000	0.635
		C		0.000	0.000	29.057	0.000	0.614
L58	11.650-11.417	A	1.530	0.000	0.000	0.414	0.000	0.007
		B		0.000	0.000	0.793	0.000	0.014
		C		0.000	0.000	0.987	0.000	0.014
L59	11.417-9.396	A	1.515	0.000	0.000	4.910	0.000	0.077
		B		0.000	0.000	8.194	0.000	0.131
		C		0.000	0.000	8.530	0.000	0.122
L60	9.396-9.146	A	1.497	0.000	0.000	0.666	0.000	0.010
		B		0.000	0.000	1.071	0.000	0.017
		C		0.000	0.000	1.051	0.000	0.015
L61	9.146-4.833	A	1.456	0.000	0.000	11.392	0.000	0.168
		B		0.000	0.000	18.387	0.000	0.281
		C		0.000	0.000	17.975	0.000	0.250
L62	4.833-4.583	A	1.399	0.000	0.000	0.653	0.000	0.009
		B		0.000	0.000	1.058	0.000	0.016
		C		0.000	0.000	1.029	0.000	0.014
L63	4.583-0.000	A	1.302	0.000	0.000	11.754	0.000	0.163
		B		0.000	0.000	19.152	0.000	0.276
		C		0.000	0.000	15.774	0.000	0.218

Feed Line Center of Pressure

Section	Elevation ft	CP_X in	CP_Z in	CP_X Ice in	CP_Z Ice in
L1	191.667-186.667	-0.003	1.248	-0.014	2.811
L2	186.667-181.567	-0.715	1.295	-0.875	3.012
L3	181.567-176.567	-1.409	1.313	-1.691	2.912
L4	176.567-171.567	-1.409	1.313	-1.689	2.908
L5	171.567-166.567	-1.409	1.313	-1.688	2.904
L6	166.567-161.567	-1.409	1.313	-1.686	2.900
L7	161.567-156.567	2.198	-3.144	0.767	-0.497
L8	156.567-151.567	3.059	-4.207	1.432	-1.418
L9	151.567-146.567	3.059	-4.207	1.434	-1.422
L10	146.567-141.567	3.059	-4.207	1.437	-1.427

Section	Elevation	CP_X	CP_Z	CP_X Ice	CP_Z Ice
	ft	in	in	in	in
L11	141.567-141.417	3.059	-4.207	1.438	-1.429
L12	141.417-136.417	3.698	-5.079	1.799	-1.762
L13	136.417-131.417	3.698	-5.079	1.802	-1.767
L14	131.417-126.417	3.593	-4.737	1.814	-1.696
L15	126.417-121.417	3.199	-3.430	1.867	-1.356
L16	121.417-121.167	3.236	-3.576	1.857	-1.381
L17	121.167-116.167	3.615	-4.206	2.014	-1.615
L18	116.167-111.167	2.955	-4.459	1.462	-1.483
L19	111.167-110.042	-3.391	2.109	-3.123	2.605
L20	110.042-109.792	-3.391	2.109	-3.123	2.604
L21	109.792-105.083	-2.932	1.913	-2.728	2.355
L22	105.083-104.833	-2.399	1.655	-2.260	2.033
L23	104.833-100.917	-1.786	1.121	-1.694	1.532
L24	100.917-100.667	1.712	-2.189	1.383	-1.177
L25	100.667-95.833	2.590	-3.400	1.524	-1.381
L26	95.833-95.583	2.673	-3.669	1.553	-1.532
L27	95.583-90.583	1.857	-2.549	1.498	-1.480
L28	90.583-89.917	1.524	-2.091	1.261	-1.247
L29	89.917-89.667	1.184	-2.125	0.977	-1.331
L30	89.667-84.667	0.617	-2.184	0.489	-1.477
L31	84.667-80.833	0.569	-2.134	0.447	-1.453
L32	80.833-80.333	0.866	-2.987	0.681	-2.046
L33	80.333-80.083	1.101	-2.735	0.952	-1.888
L34	80.083-75.083	1.914	-2.574	1.741	-1.757
L35	75.083-70.083	2.300	-2.147	2.120	-1.499
L36	70.083-69.500	0.147	-1.316	0.065	-0.848
L37	69.500-69.250	0.147	-1.316	0.065	-0.849
L38	69.250-64.250	0.267	-1.279	0.230	-0.785
L39	64.250-60.583	-0.436	-1.001	-0.473	-0.468
L40	60.583-60.333	0.061	-1.900	-0.195	-1.215
L41	60.333-55.333	1.185	-1.652	0.959	-1.068
L42	55.333-52.167	1.711	-2.002	1.478	-1.090
L43	52.167-51.917	1.687	-2.003	1.456	-1.083
L44	51.917-46.917	2.890	-3.046	2.908	-1.986
L45	46.917-41.917	3.122	-3.377	3.204	-2.528
L46	41.917-40.333	3.292	-3.699	3.335	-2.852
L47	40.333-40.083	3.633	-4.730	3.434	-4.094
L48	40.083-35.083	2.800	-3.652	2.619	-3.072
L49	35.083-30.083	2.116	-2.823	1.921	-2.086
L50	30.083-28.000	-1.701	-4.283	-1.537	-3.468
L51	28.000-27.750	-1.809	-4.329	-1.636	-3.523
L52	27.750-22.750	-1.382	-2.478	-1.287	-2.027
L53	22.750-20.083	-1.421	-2.508	-1.323	-2.062
L54	20.083-19.833	-1.612	-2.846	-1.506	-2.355
L55	19.833-17.000	-0.523	-2.920	-0.378	-2.523
L56	17.000-16.750	2.346	-1.706	2.346	-1.353
L57	16.750-11.650	2.199	-1.767	2.174	-1.377
L58	11.650-11.417	2.159	-2.614	2.009	-1.940
L59	11.417-9.396	2.923	-4.818	2.805	-4.254
L60	9.396-9.146	3.176	-5.549	3.071	-5.027
L61	9.146-4.833	3.176	-5.549	3.080	-5.051
L62	4.833-4.583	3.176	-5.549	3.092	-5.085
L63	4.583-0.000	4.346	-6.340	4.271	-5.909

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	218	Safety Line 3/8	186.67 - 191.67	1.0000	1.0000
L1	219	Climbing Rung	186.67 - 191.67	1.0000	1.0000
L2	187	HCS 6X12 4AWG(1-5/8)	181.57 - 184.00	1.0000	1.0000
L2	218	Safety Line 3/8	181.57 - 186.67	1.0000	1.0000
L2	219	Climbing Rung	181.57 - 186.67	1.0000	1.0000
L3	187	HCS 6X12 4AWG(1-5/8)	176.57 - 181.57	1.0000	1.0000
L3	218	Safety Line 3/8	176.57 - 181.57	1.0000	1.0000
L3	219	Climbing Rung	176.57 - 181.57	1.0000	1.0000
L4	187	HCS 6X12 4AWG(1-5/8)	171.57 - 176.57	1.0000	1.0000
L4	218	Safety Line 3/8	171.57 - 176.57	1.0000	1.0000
L4	219	Climbing Rung	171.57 - 176.57	1.0000	1.0000
L5	187	HCS 6X12 4AWG(1-5/8)	166.57 - 171.57	1.0000	1.0000
L5	218	Safety Line 3/8	166.57 - 171.57	1.0000	1.0000
L5	219	Climbing Rung	166.57 - 171.57	1.0000	1.0000
L6	187	HCS 6X12 4AWG(1-5/8)	161.57 - 166.57	1.0000	1.0000
L6	218	Safety Line 3/8	161.57 - 166.57	1.0000	1.0000
L6	219	Climbing Rung	161.57 - 166.57	1.0000	1.0000
L7	187	HCS 6X12 4AWG(1-5/8)	156.57 - 161.57	1.0000	1.0000
L7	190	AL7-50(1-5/8)	156.57 - 160.00	1.0000	1.0000
L7	218	Safety Line 3/8	156.57 - 161.57	1.0000	1.0000
L7	219	Climbing Rung	156.57 - 161.57	1.0000	1.0000
L8	187	HCS 6X12 4AWG(1-5/8)	151.57 - 156.57	1.0000	1.0000
L8	190	AL7-50(1-5/8)	151.57 - 156.57	1.0000	1.0000
L8	218	Safety Line 3/8	151.57 - 156.57	1.0000	1.0000
L8	219	Climbing Rung	151.57 - 156.57	1.0000	1.0000
L9	187	HCS 6X12 4AWG(1-5/8)	146.57 - 151.57	1.0000	1.0000
L9	190	AL7-50(1-5/8)	146.57 - 151.57	1.0000	1.0000
L9	218	Safety Line 3/8	146.57 - 151.57	1.0000	1.0000
L9	219	Climbing Rung	146.57 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
			151.57		
L10	187	HCS 6X12 4AWG(1-5/8)	141.57 - 146.57	1.0000	1.0000
L10	190	AL7-50(1-5/8)	141.57 - 146.57	1.0000	1.0000
L10	218	Safety Line 3/8	141.57 - 146.57	1.0000	1.0000
L10	219	Climbing Rung	141.57 - 146.57	1.0000	1.0000
L11	187	HCS 6X12 4AWG(1-5/8)	141.42 - 141.57	1.0000	1.0000
L11	190	AL7-50(1-5/8)	141.42 - 141.57	1.0000	1.0000
L11	218	Safety Line 3/8	141.42 - 141.57	1.0000	1.0000
L11	219	Climbing Rung	141.42 - 141.57	1.0000	1.0000
L12	187	HCS 6X12 4AWG(1-5/8)	136.42 - 141.42	1.0000	1.0000
L12	190	AL7-50(1-5/8)	136.42 - 141.42	1.0000	1.0000
L12	218	Safety Line 3/8	136.42 - 141.42	1.0000	1.0000
L12	219	Climbing Rung	136.42 - 141.42	1.0000	1.0000
L13	187	HCS 6X12 4AWG(1-5/8)	131.42 - 136.42	1.0000	1.0000
L13	190	AL7-50(1-5/8)	131.42 - 136.42	1.0000	1.0000
L13	218	Safety Line 3/8	131.42 - 136.42	1.0000	1.0000
L13	219	Climbing Rung	131.42 - 136.42	1.0000	1.0000
L14	151	CCI 4.5" x 1" Plate	126.42 - 127.17	1.0000	1.0000
L14	152	CCI 4.5" x 1" Plate	126.42 - 127.17	1.0000	1.0000
L14	153	CCI 4.5" x 1" Plate	126.42 - 127.17	1.0000	1.0000
L14	187	HCS 6X12 4AWG(1-5/8)	126.42 - 131.42	1.0000	1.0000
L14	190	AL7-50(1-5/8)	126.42 - 131.42	1.0000	1.0000
L14	218	Safety Line 3/8	126.42 - 131.42	1.0000	1.0000
L14	219	Climbing Rung	126.42 - 131.42	1.0000	1.0000
L15	143	CCI 4.5" x 1" Plate	121.42 - 121.67	1.0000	1.0000
L15	144	CCI 4.5" x 1" Plate	121.42 - 121.67	1.0000	1.0000
L15	145	CCI 4.5" x 1" Plate	121.42 - 121.67	1.0000	1.0000
L15	147	CCI 4.5" x 4" Plate	121.67 - 124.42	1.0000	1.0000
L15	148	CCI 4.5" x 4" Plate	121.67 - 124.42	1.0000	1.0000
L15	149	CCI 4.5" x 4" Plate	121.67 - 124.42	1.0000	1.0000
L15	151	CCI 4.5" x 1" Plate	124.42 - 126.42	1.0000	1.0000
L15	152	CCI 4.5" x 1" Plate	124.42 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L15	153	CCI 4.5" x 1" Plate	126.42 124.42 - 126.42	1.0000	1.0000
L15	187	HCS 6X12 4AWG(1-5/8)	121.42 - 126.42	1.0000	1.0000
L15	190	AL7-50(1-5/8)	121.42 - 126.42	1.0000	1.0000
L15	218	Safety Line 3/8	121.42 - 126.42	1.0000	1.0000
L15	219	Climbing Rung	121.42 - 126.42	1.0000	1.0000
L16	143	CCI 4.5" x 1" Plate	121.17 - 121.42	1.0000	1.0000
L16	144	CCI 4.5" x 1" Plate	121.17 - 121.42	1.0000	1.0000
L16	145	CCI 4.5" x 1" Plate	121.17 - 121.42	1.0000	1.0000
L16	187	HCS 6X12 4AWG(1-5/8)	121.17 - 121.42	1.0000	1.0000
L16	190	AL7-50(1-5/8)	121.17 - 121.42	1.0000	1.0000
L16	218	Safety Line 3/8	121.17 - 121.42	1.0000	1.0000
L16	219	Climbing Rung	121.17 - 121.42	1.0000	1.0000
L17	139	CCI 4.5" x 1" Plate	117.92 - 120.67	1.0000	1.0000
L17	140	CCI 4.5" x 1" Plate	117.92 - 120.67	1.0000	1.0000
L17	141	CCI 4.5" x 1" Plate	117.92 - 120.67	1.0000	1.0000
L17	143	CCI 4.5" x 1" Plate	120.67 - 121.17	1.0000	1.0000
L17	144	CCI 4.5" x 1" Plate	120.67 - 121.17	1.0000	1.0000
L17	145	CCI 4.5" x 1" Plate	120.67 - 121.17	1.0000	1.0000
L17	187	HCS 6X12 4AWG(1-5/8)	116.17 - 121.17	1.0000	1.0000
L17	190	AL7-50(1-5/8)	116.17 - 121.17	1.0000	1.0000
L17	218	Safety Line 3/8	116.17 - 121.17	1.0000	1.0000
L17	219	Climbing Rung	116.17 - 121.17	1.0000	1.0000
L18	56	CCI 4.5" x 1" Plate	111.17 - 111.54	1.0000	1.0000
L18	57	CCI 4.5" x 1" Plate	111.17 - 111.54	1.0000	1.0000
L18	58	CCI 4.5" x 1" Plate	111.17 - 111.54	1.0000	1.0000
L18	187	HCS 6X12 4AWG(1-5/8)	111.17 - 116.17	1.0000	1.0000
L18	190	AL7-50(1-5/8)	111.17 - 116.17	1.0000	1.0000
L18	218	Safety Line 3/8	111.17 - 116.17	1.0000	1.0000
L18	219	Climbing Rung	111.17 - 116.17	1.0000	1.0000
L19	56	CCI 4.5" x 1" Plate	110.04 - 111.17	1.0000	1.0000
L19	57	CCI 4.5" x 1" Plate	110.04 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L19	58	CCI 4.5" x 1" Plate	110.04 - 111.17	1.0000	1.0000
L19	187	HCS 6X12 4AWG(1-5/8)	110.04 - 111.17	1.0000	1.0000
L19	190	AL7-50(1-5/8)	110.04 - 111.17	1.0000	1.0000
L19	218	Safety Line 3/8	110.04 - 111.17	1.0000	1.0000
L19	219	Climbing Rung	110.04 - 111.17	1.0000	1.0000
L20	56	CCI 4.5" x 1" Plate	109.79 - 110.04	1.0000	1.0000
L20	57	CCI 4.5" x 1" Plate	109.79 - 110.04	1.0000	1.0000
L20	58	CCI 4.5" x 1" Plate	109.79 - 110.04	1.0000	1.0000
L20	187	HCS 6X12 4AWG(1-5/8)	109.79 - 110.04	1.0000	1.0000
L20	190	AL7-50(1-5/8)	109.79 - 110.04	1.0000	1.0000
L20	218	Safety Line 3/8	109.79 - 110.04	1.0000	1.0000
L20	219	Climbing Rung	109.79 - 110.04	1.0000	1.0000
L21	18	CCI 4" x 0.75" Plate	105.08 - 106.58	1.0000	1.0000
L21	19	CCI 4" x 0.75" Plate	105.08 - 106.58	1.0000	1.0000
L21	20	CCI 4" x 0.75" Plate	105.08 - 106.58	1.0000	1.0000
L21	56	CCI 4.5" x 1" Plate	105.08 - 109.79	1.0000	1.0000
L21	57	CCI 4.5" x 1" Plate	105.08 - 109.79	1.0000	1.0000
L21	58	CCI 4.5" x 1" Plate	105.08 - 109.79	1.0000	1.0000
L21	135	CCI 4.5" x 1" Plate	105.08 - 107.17	1.0000	1.0000
L21	136	CCI 4.5" x 1" Plate	105.08 - 107.17	1.0000	1.0000
L21	137	CCI 4.5" x 1" Plate	105.08 - 107.17	1.0000	1.0000
L21	187	HCS 6X12 4AWG(1-5/8)	105.08 - 109.79	1.0000	1.0000
L21	190	AL7-50(1-5/8)	105.08 - 109.79	1.0000	1.0000
L21	218	Safety Line 3/8	105.08 - 109.79	1.0000	1.0000
L21	219	Climbing Rung	105.08 - 109.79	1.0000	1.0000
L22	18	CCI 4" x 0.75" Plate	104.83 - 105.08	1.0000	1.0000
L22	19	CCI 4" x 0.75" Plate	104.83 - 105.08	1.0000	1.0000
L22	20	CCI 4" x 0.75" Plate	104.83 - 105.08	1.0000	1.0000
L22	56	CCI 4.5" x 1" Plate	104.83 - 105.08	1.0000	1.0000
L22	57	CCI 4.5" x 1" Plate	104.83 - 105.08	1.0000	1.0000
L22	58	CCI 4.5" x 1" Plate	104.83 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L22	135	CCI 4.5" x 1" Plate	104.83 - 105.08	1.0000	1.0000
L22	136	CCI 4.5" x 1" Plate	104.83 - 105.08	1.0000	1.0000
L22	137	CCI 4.5" x 1" Plate	104.83 - 105.08	1.0000	1.0000
L22	187	HCS 6X12 4AWG(1-5/8)	104.83 - 105.08	1.0000	1.0000
L22	190	AL7-50(1-5/8)	104.83 - 105.08	1.0000	1.0000
L22	218	Safety Line 3/8	104.83 - 105.08	1.0000	1.0000
L22	219	Climbing Rung	104.83 - 105.08	1.0000	1.0000
L23	18	CCI 4" x 0.75" Plate	101.58 - 104.83	1.0000	1.0000
L23	19	CCI 4" x 0.75" Plate	101.58 - 104.83	1.0000	1.0000
L23	20	CCI 4" x 0.75" Plate	101.58 - 104.83	1.0000	1.0000
L23	56	CCI 4.5" x 1" Plate	101.54 - 104.83	1.0000	1.0000
L23	57	CCI 4.5" x 1" Plate	101.54 - 104.83	1.0000	1.0000
L23	58	CCI 4.5" x 1" Plate	101.54 - 104.83	1.0000	1.0000
L23	127	CCI 4.5" x 1" Plate	100.92 - 101.42	1.0000	1.0000
L23	128	CCI 4.5" x 1" Plate	100.92 - 101.42	1.0000	1.0000
L23	129	CCI 4.5" x 1" Plate	100.92 - 101.42	1.0000	1.0000
L23	131	CCI 4.5" x 4" Plate	101.42 - 104.42	1.0000	1.0000
L23	132	CCI 4.5" x 4" Plate	101.42 - 104.42	1.0000	1.0000
L23	133	CCI 4.5" x 4" Plate	101.42 - 104.42	1.0000	1.0000
L23	135	CCI 4.5" x 1" Plate	104.42 - 104.83	1.0000	1.0000
L23	136	CCI 4.5" x 1" Plate	104.42 - 104.83	1.0000	1.0000
L23	137	CCI 4.5" x 1" Plate	104.42 - 104.83	1.0000	1.0000
L23	173	CCI 4.5" x 1" Plate	100.92 - 101.79	1.0000	1.0000
L23	174	CCI 4.5" x 1" Plate	100.92 - 101.79	1.0000	1.0000
L23	175	CCI 4.5" x 1" Plate	100.92 - 101.79	1.0000	1.0000
L23	177	CCI 4.5" x 3" Plate	101.79 - 103.29	1.0000	1.0000
L23	178	CCI 4.5" x 3" Plate	101.79 - 103.29	1.0000	1.0000
L23	179	CCI 4.5" x 3" Plate	101.79 - 103.29	1.0000	1.0000
L23	187	HCS 6X12 4AWG(1-5/8)	100.92 - 104.83	1.0000	1.0000
L23	190	AL7-50(1-5/8)	100.92 - 104.83	1.0000	1.0000
L23	218	Safety Line 3/8	100.92 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
			104.83		
L23	219	Climbing Rung	100.92 - 104.83	1.0000	1.0000
L24	127	CCI 4.5" x 1" Plate	100.67 - 100.92	1.0000	1.0000
L24	128	CCI 4.5" x 1" Plate	100.67 - 100.92	1.0000	1.0000
L24	129	CCI 4.5" x 1" Plate	100.67 - 100.92	1.0000	1.0000
L24	173	CCI 4.5" x 1" Plate	100.67 - 100.92	1.0000	1.0000
L24	174	CCI 4.5" x 1" Plate	100.67 - 100.92	1.0000	1.0000
L24	175	CCI 4.5" x 1" Plate	100.67 - 100.92	1.0000	1.0000
L24	187	HCS 6X12 4AWG(1-5/8)	100.67 - 100.92	1.0000	1.0000
L24	190	AL7-50(1-5/8)	100.67 - 100.92	1.0000	1.0000
L24	218	Safety Line 3/8	100.67 - 100.92	1.0000	1.0000
L24	219	Climbing Rung	100.67 - 100.92	1.0000	1.0000
L25	52	CCI 4.5" x 1" Plate	95.83 - 97.33	1.0000	1.0000
L25	53	CCI 4.5" x 1" Plate	95.83 - 97.33	1.0000	1.0000
L25	54	CCI 4.5" x 1" Plate	95.83 - 97.33	1.0000	1.0000
L25	123	CCI 4.5" x 1" Plate	97.92 - 100.42	1.0000	1.0000
L25	124	CCI 4.5" x 1" Plate	97.92 - 100.42	1.0000	1.0000
L25	125	CCI 4.5" x 1" Plate	97.92 - 100.42	1.0000	1.0000
L25	127	CCI 4.5" x 1" Plate	100.42 - 100.67	1.0000	1.0000
L25	128	CCI 4.5" x 1" Plate	100.42 - 100.67	1.0000	1.0000
L25	129	CCI 4.5" x 1" Plate	100.42 - 100.67	1.0000	1.0000
L25	173	CCI 4.5" x 1" Plate	98.42 - 100.67	1.0000	1.0000
L25	174	CCI 4.5" x 1" Plate	98.42 - 100.67	1.0000	1.0000
L25	175	CCI 4.5" x 1" Plate	98.42 - 100.67	1.0000	1.0000
L25	187	HCS 6X12 4AWG(1-5/8)	95.83 - 100.67	1.0000	1.0000
L25	190	AL7-50(1-5/8)	95.83 - 100.67	1.0000	1.0000
L25	218	Safety Line 3/8	95.83 - 100.67	1.0000	1.0000
L25	219	Climbing Rung	95.83 - 100.67	1.0000	1.0000
L26	52	CCI 4.5" x 1" Plate	95.58 - 95.83	1.0000	1.0000
L26	53	CCI 4.5" x 1" Plate	95.58 - 95.83	1.0000	1.0000
L26	54	CCI 4.5" x 1" Plate	95.58 - 95.83	1.0000	1.0000
L26	187	HCS 6X12 4AWG(1-5/8)	95.58 - 95.83	1.0000	1.0000
L26	190	AL7-50(1-5/8)	95.58 - 95.83	1.0000	1.0000
L26	218	Safety Line 3/8	95.58 - 95.83	1.0000	1.0000
L26	219	Climbing Rung	95.58 - 95.83	1.0000	1.0000
L27	52	CCI 4.5" x 1" Plate	90.58 - 95.58	1.0000	1.0000
L27	53	CCI 4.5" x 1" Plate	90.58 - 95.58	1.0000	1.0000
L27	54	CCI 4.5" x 1" Plate	90.58 - 95.58	1.0000	1.0000
L27	60	CCI 4.5" x 1" Plate	90.58 - 91.42	1.0000	1.0000
L27	61	CCI 4.5" x 1" Plate	90.58 - 91.42	1.0000	1.0000
L27	62	CCI 4.5" x 1" Plate	90.58 - 91.42	1.0000	1.0000
L27	187	HCS 6X12 4AWG(1-5/8)	90.58 - 95.58	1.0000	1.0000
L27	190	AL7-50(1-5/8)	90.58 - 95.58	1.0000	1.0000
L27	218	Safety Line 3/8	90.58 - 95.58	1.0000	1.0000
L27	219	Climbing Rung	90.58 - 95.58	1.0000	1.0000
L28	52	CCI 4.5" x 1" Plate	89.92 - 90.58	1.0000	1.0000
L28	53	CCI 4.5" x 1" Plate	89.92 - 90.58	1.0000	1.0000
L28	54	CCI 4.5" x 1" Plate	89.92 - 90.58	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L28	60	CCI 4.5" x 1" Plate	89.92 - 90.58	1.0000	1.0000
L28	61	CCI 4.5" x 1" Plate	89.92 - 90.58	1.0000	1.0000
L28	62	CCI 4.5" x 1" Plate	89.92 - 90.58	1.0000	1.0000
L28	187	HCS 6X12 4AWG(1-5/8)	89.92 - 90.58	1.0000	1.0000
L28	190	AL7-50(1-5/8)	89.92 - 90.58	1.0000	1.0000
L28	218	Safety Line 3/8	89.92 - 90.58	1.0000	1.0000
L28	219	Climbing Rung	89.92 - 90.58	1.0000	1.0000
L29	52	CCI 4.5" x 1" Plate	89.67 - 89.92	1.0000	1.0000
L29	53	CCI 4.5" x 1" Plate	89.67 - 89.92	1.0000	1.0000
L29	54	CCI 4.5" x 1" Plate	89.67 - 89.92	1.0000	1.0000
L29	60	CCI 4.5" x 1" Plate	89.67 - 89.92	1.0000	1.0000
L29	61	CCI 4.5" x 1" Plate	89.67 - 89.92	1.0000	1.0000
L29	62	CCI 4.5" x 1" Plate	89.67 - 89.92	1.0000	1.0000
L29	119	CCI 6.5" x 1.25" Plate	89.67 - 89.75	1.0000	1.0000
L29	120	CCI 6.5" x 1.25" Plate	89.67 - 89.75	1.0000	1.0000
L29	121	CCI 6.5" x 1.25" Plate	89.67 - 89.75	1.0000	1.0000
L29	187	HCS 6X12 4AWG(1-5/8)	89.67 - 89.92	1.0000	1.0000
L29	190	AL7-50(1-5/8)	89.67 - 89.92	1.0000	1.0000
L29	218	Safety Line 3/8	89.67 - 89.92	1.0000	1.0000
L29	219	Climbing Rung	89.67 - 89.92	1.0000	1.0000
L30	52	CCI 4.5" x 1" Plate	84.67 - 89.67	1.0000	1.0000
L30	53	CCI 4.5" x 1" Plate	84.67 - 89.67	1.0000	1.0000
L30	54	CCI 4.5" x 1" Plate	84.67 - 89.67	1.0000	1.0000
L30	60	CCI 4.5" x 1" Plate	84.67 - 89.67	1.0000	1.0000
L30	61	CCI 4.5" x 1" Plate	84.67 - 89.67	1.0000	1.0000
L30	62	CCI 4.5" x 1" Plate	84.67 - 89.67	1.0000	1.0000
L30	115	CCI 6.5" x 4.25" Plate	84.67 - 85.83	1.0000	1.0000
L30	116	CCI 6.5" x 4.25" Plate	84.67 - 85.83	1.0000	1.0000
L30	117	CCI 6.5" x 4.25" Plate	84.67 - 85.83	1.0000	1.0000
L30	119	CCI 6.5" x 1.25" Plate	85.83 - 89.67	1.0000	1.0000
L30	120	CCI 6.5" x 1.25" Plate	85.83 - 89.67	1.0000	1.0000
L30	121	CCI 6.5" x 1.25" Plate	85.83 - 89.67	1.0000	1.0000
L30	187	HCS 6X12 4AWG(1-5/8)	84.67 - 89.67	1.0000	1.0000
L30	190	AL7-50(1-5/8)	84.67 - 89.67	1.0000	1.0000
L30	218	Safety Line 3/8	84.67 - 89.67	1.0000	1.0000
L30	219	Climbing Rung	84.67 - 89.67	1.0000	1.0000
L31	52	CCI 4.5" x 1" Plate	81.33 - 84.67	1.0000	1.0000
L31	53	CCI 4.5" x 1" Plate	81.33 - 84.67	1.0000	1.0000
L31	54	CCI 4.5" x 1" Plate	81.33 - 84.67	1.0000	1.0000
L31	60	CCI 4.5" x 1" Plate	81.42 - 84.67	1.0000	1.0000
L31	61	CCI 4.5" x 1" Plate	81.42 - 84.67	1.0000	1.0000
L31	62	CCI 4.5" x 1" Plate	81.42 - 84.67	1.0000	1.0000
L31	115	CCI 6.5" x 4.25" Plate	80.83 - 84.67	1.0000	1.0000
L31	116	CCI 6.5" x 4.25" Plate	80.83 - 84.67	1.0000	1.0000
L31	117	CCI 6.5" x 4.25" Plate	80.83 - 84.67	1.0000	1.0000
L31	165	CCI 4.5" x 1" Plate	80.83 - 81.71	1.0000	1.0000
L31	166	CCI 4.5" x 1" Plate	80.83 - 81.71	1.0000	1.0000
L31	167	CCI 4.5" x 1" Plate	80.83 - 81.71	1.0000	1.0000
L31	169	CCI 4.5" x 3" Plate	81.71 - 83.20	1.0000	1.0000
L31	170	CCI 4.5" x 3" Plate	81.71 - 83.20	1.0000	1.0000
L31	171	CCI 4.5" x 3" Plate	81.71 - 83.20	1.0000	1.0000
L31	187	HCS 6X12 4AWG(1-5/8)	80.83 - 84.67	1.0000	1.0000
L31	190	AL7-50(1-5/8)	80.83 - 84.67	1.0000	1.0000
L31	218	Safety Line 3/8	80.83 - 84.67	1.0000	1.0000
L31	219	Climbing Rung	80.83 - 84.67	1.0000	1.0000
L32	111	CCI 6.5" x 1.25" Plate	80.33 - 80.50	1.0000	1.0000
L32	112	CCI 6.5" x 1.25" Plate	80.33 - 80.50	1.0000	1.0000
L32	113	CCI 6.5" x 1.25" Plate	80.33 - 80.50	1.0000	1.0000
L32	115	CCI 6.5" x 4.25" Plate	80.50 - 80.83	1.0000	1.0000
L32	116	CCI 6.5" x 4.25" Plate	80.50 - 80.83	1.0000	1.0000
L32	117	CCI 6.5" x 4.25" Plate	80.50 - 80.83	1.0000	1.0000
L32	165	CCI 4.5" x 1" Plate	80.33 - 80.83	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L32	166	CCI 4.5" x 1" Plate	80.33 - 80.83	1.0000	1.0000
L32	167	CCI 4.5" x 1" Plate	80.33 - 80.83	1.0000	1.0000
L32	187	HCS 6X12 4AWG(1-5/8)	80.33 - 80.83	1.0000	1.0000
L32	190	AL7-50(1-5/8)	80.33 - 80.83	1.0000	1.0000
L32	218	Safety Line 3/8	80.33 - 80.83	1.0000	1.0000
L32	219	Climbing Rung	80.33 - 80.83	1.0000	1.0000
L33	14	CCI 6" x 1" Plate	80.08 - 80.17	1.0000	1.0000
L33	15	CCI 6" x 1" Plate	80.08 - 80.17	1.0000	1.0000
L33	16	CCI 6" x 1" Plate	80.08 - 80.17	1.0000	1.0000
L33	107	CCI 6.5" x 1.25" Plate	80.08 - 80.33	1.0000	1.0000
L33	108	CCI 6.5" x 1.25" Plate	80.08 - 80.33	1.0000	1.0000
L33	109	CCI 6.5" x 1.25" Plate	80.08 - 80.33	1.0000	1.0000
L33	165	CCI 4.5" x 1" Plate	80.08 - 80.33	1.0000	1.0000
L33	166	CCI 4.5" x 1" Plate	80.08 - 80.33	1.0000	1.0000
L33	167	CCI 4.5" x 1" Plate	80.08 - 80.33	1.0000	1.0000
L33	187	HCS 6X12 4AWG(1-5/8)	80.08 - 80.33	1.0000	1.0000
L33	190	AL7-50(1-5/8)	80.08 - 80.33	1.0000	1.0000
L33	218	Safety Line 3/8	80.08 - 80.33	1.0000	1.0000
L33	219	Climbing Rung	80.08 - 80.33	1.0000	1.0000
L34	14	CCI 6" x 1" Plate	75.08 - 80.08	1.0000	1.0000
L34	15	CCI 6" x 1" Plate	75.08 - 80.08	1.0000	1.0000
L34	16	CCI 6" x 1" Plate	75.08 - 80.08	1.0000	1.0000
L34	107	CCI 6.5" x 1.25" Plate	76.50 - 80.08	1.0000	1.0000
L34	108	CCI 6.5" x 1.25" Plate	76.50 - 80.08	1.0000	1.0000
L34	109	CCI 6.5" x 1.25" Plate	76.50 - 80.08	1.0000	1.0000
L34	165	CCI 4.5" x 1" Plate	78.33 - 80.08	1.0000	1.0000
L34	166	CCI 4.5" x 1" Plate	78.33 - 80.08	1.0000	1.0000
L34	167	CCI 4.5" x 1" Plate	78.33 - 80.08	1.0000	1.0000
L34	187	HCS 6X12 4AWG(1-5/8)	75.08 - 80.08	1.0000	1.0000
L34	190	AL7-50(1-5/8)	75.08 - 80.08	1.0000	1.0000
L34	218	Safety Line 3/8	75.08 - 80.08	1.0000	1.0000
L34	219	Climbing Rung	75.08 - 80.08	1.0000	1.0000
L35	14	CCI 6" x 1" Plate	70.08 - 75.08	1.0000	1.0000
L35	15	CCI 6" x 1" Plate	70.08 - 75.08	1.0000	1.0000
L35	16	CCI 6" x 1" Plate	70.08 - 75.08	1.0000	1.0000
L35	47	CCI 4.5" x 1" Plate	70.08 - 71.00	1.0000	1.0000
L35	48	CCI 4.5" x 1" Plate	70.08 - 71.00	1.0000	1.0000
L35	49	CCI 4.5" x 1" Plate	70.08 - 71.00	1.0000	1.0000
L35	50	CCI 4.5" x 1" Plate	70.08 - 71.00	1.0000	1.0000
L35	100	CCI 8.5" x 1.25" Plate	70.08 - 73.42	1.0000	1.0000
L35	101	CCI 8.5" x 1.25" Plate	70.08 - 73.42	1.0000	1.0000
L35	102	CCI 8.5" x 1.25" Plate	70.08 - 73.42	1.0000	1.0000
L35	103	CCI 8.5" x 1.25" Plate	70.08 - 73.42	1.0000	1.0000
L35	104	CCI 8.5" x 1.25" Plate	70.08 - 73.42	1.0000	1.0000
L35	105	CCI 8.5" x 1.25" Plate	70.08 - 73.42	1.0000	1.0000
L35	187	HCS 6X12 4AWG(1-5/8)	70.08 - 75.08	1.0000	1.0000
L35	190	AL7-50(1-5/8)	70.08 - 75.08	1.0000	1.0000
L35	218	Safety Line 3/8	70.08 - 75.08	1.0000	1.0000
L35	219	Climbing Rung	70.08 - 75.08	1.0000	1.0000
L36	14	CCI 6" x 1" Plate	69.50 - 70.08	1.0000	1.0000
L36	15	CCI 6" x 1" Plate	69.50 - 70.08	1.0000	1.0000
L36	16	CCI 6" x 1" Plate	69.50 - 70.08	1.0000	1.0000
L36	47	CCI 4.5" x 1" Plate	69.50 - 70.08	1.0000	1.0000
L36	48	CCI 4.5" x 1" Plate	69.50 - 70.08	1.0000	1.0000
L36	49	CCI 4.5" x 1" Plate	69.50 - 70.08	1.0000	1.0000
L36	50	CCI 4.5" x 1" Plate	69.50 - 70.08	1.0000	1.0000
L36	100	CCI 8.5" x 1.25" Plate	69.50 - 70.08	1.0000	1.0000
L36	101	CCI 8.5" x 1.25" Plate	69.50 - 70.08	1.0000	1.0000
L36	102	CCI 8.5" x 1.25" Plate	69.50 - 70.08	1.0000	1.0000
L36	103	CCI 8.5" x 1.25" Plate	69.50 - 70.08	1.0000	1.0000
L36	104	CCI 8.5" x 1.25" Plate	69.50 - 70.08	1.0000	1.0000
L36	105	CCI 8.5" x 1.25" Plate	69.50 - 70.08	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L36	187	HCS 6X12 4AWG(1-5/8)	69.50 - 70.08	1.0000	1.0000
L36	190	AL7-50(1-5/8)	69.50 - 70.08	1.0000	1.0000
L36	218	Safety Line 3/8	69.50 - 70.08	1.0000	1.0000
L36	219	Climbing Rung	69.50 - 70.08	1.0000	1.0000
L37	14	CCI 6" x 1" Plate	69.25 - 69.50	1.0000	1.0000
L37	15	CCI 6" x 1" Plate	69.25 - 69.50	1.0000	1.0000
L37	16	CCI 6" x 1" Plate	69.25 - 69.50	1.0000	1.0000
L37	47	CCI 4.5" x 1" Plate	69.25 - 69.50	1.0000	1.0000
L37	48	CCI 4.5" x 1" Plate	69.25 - 69.50	1.0000	1.0000
L37	49	CCI 4.5" x 1" Plate	69.25 - 69.50	1.0000	1.0000
L37	50	CCI 4.5" x 1" Plate	69.25 - 69.50	1.0000	1.0000
L37	100	CCI 8.5" x 1.25" Plate	69.25 - 69.50	1.0000	1.0000
L37	101	CCI 8.5" x 1.25" Plate	69.25 - 69.50	1.0000	1.0000
L37	102	CCI 8.5" x 1.25" Plate	69.25 - 69.50	1.0000	1.0000
L37	103	CCI 8.5" x 1.25" Plate	69.25 - 69.50	1.0000	1.0000
L37	104	CCI 8.5" x 1.25" Plate	69.25 - 69.50	1.0000	1.0000
L37	105	CCI 8.5" x 1.25" Plate	69.25 - 69.50	1.0000	1.0000
L37	187	HCS 6X12 4AWG(1-5/8)	69.25 - 69.50	1.0000	1.0000
L37	190	AL7-50(1-5/8)	69.25 - 69.50	1.0000	1.0000
L37	218	Safety Line 3/8	69.25 - 69.50	1.0000	1.0000
L37	219	Climbing Rung	69.25 - 69.50	1.0000	1.0000
L38	14	CCI 6" x 1" Plate	64.25 - 69.25	1.0000	1.0000
L38	15	CCI 6" x 1" Plate	64.25 - 69.25	1.0000	1.0000
L38	16	CCI 6" x 1" Plate	64.25 - 69.25	1.0000	1.0000
L38	27	1" x 2" Plate	64.25 - 66.17	1.0000	1.0000
L38	28	1" x 2" Plate	64.25 - 66.17	1.0000	1.0000
L38	29	1" x 2" Plate	64.25 - 66.17	1.0000	1.0000
L38	30	1" x 2" Plate	64.25 - 66.17	1.0000	1.0000
L38	47	CCI 4.5" x 1" Plate	64.25 - 69.25	1.0000	1.0000
L38	48	CCI 4.5" x 1" Plate	64.25 - 69.25	1.0000	1.0000
L38	49	CCI 4.5" x 1" Plate	64.25 - 69.25	1.0000	1.0000
L38	50	CCI 4.5" x 1" Plate	64.25 - 69.25	1.0000	1.0000
L38	93	CCI 8.5" x 4.25" Plate	64.25 - 68.42	1.0000	1.0000
L38	94	CCI 8.5" x 4.25" Plate	64.25 - 68.42	1.0000	1.0000
L38	95	CCI 8.5" x 4.25" Plate	64.25 - 68.42	1.0000	1.0000
L38	96	CCI 8.5" x 4.25" Plate	64.25 - 68.42	1.0000	1.0000
L38	97	CCI 8.5" x 4.25" Plate	64.25 - 68.42	1.0000	1.0000
L38	98	CCI 8.5" x 4.25" Plate	64.25 - 68.42	1.0000	1.0000
L38	100	CCI 8.5" x 1.25" Plate	68.42 - 69.25	1.0000	1.0000
L38	101	CCI 8.5" x 1.25" Plate	68.42 - 69.25	1.0000	1.0000
L38	102	CCI 8.5" x 1.25" Plate	68.42 - 69.25	1.0000	1.0000
L38	103	CCI 8.5" x 1.25" Plate	68.42 - 69.25	1.0000	1.0000
L38	104	CCI 8.5" x 1.25" Plate	68.42 - 69.25	1.0000	1.0000
L38	105	CCI 8.5" x 1.25" Plate	68.42 - 69.25	1.0000	1.0000
L38	187	HCS 6X12 4AWG(1-5/8)	64.25 - 69.25	1.0000	1.0000
L38	190	AL7-50(1-5/8)	64.25 - 69.25	1.0000	1.0000
L38	218	Safety Line 3/8	64.25 - 69.25	1.0000	1.0000
L38	219	Climbing Rung	64.25 - 69.25	1.0000	1.0000
L39	14	CCI 6" x 1" Plate	61.17 - 64.25	1.0000	1.0000
L39	15	CCI 6" x 1" Plate	61.17 - 64.25	1.0000	1.0000
L39	16	CCI 6" x 1" Plate	61.17 - 64.25	1.0000	1.0000
L39	27	1" x 2" Plate	61.08 - 64.25	1.0000	1.0000
L39	28	1" x 2" Plate	61.08 - 64.25	1.0000	1.0000
L39	29	1" x 2" Plate	61.08 - 64.25	1.0000	1.0000
L39	30	1" x 2" Plate	61.08 - 64.25	1.0000	1.0000
L39	47	CCI 4.5" x 1" Plate	61.00 - 64.25	1.0000	1.0000
L39	48	CCI 4.5" x 1" Plate	61.00 - 64.25	1.0000	1.0000
L39	49	CCI 4.5" x 1" Plate	61.00 - 64.25	1.0000	1.0000
L39	50	CCI 4.5" x 1" Plate	61.00 - 64.25	1.0000	1.0000
L39	86	CCI 8.5" x 1.25" Plate	60.58 - 61.08	1.0000	1.0000
L39	87	CCI 8.5" x 1.25" Plate	60.58 - 61.08	1.0000	1.0000
L39	88	CCI 8.5" x 1.25" Plate	60.58 - 61.08	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L39	89	CCI 8.5" x 1.25" Plate	60.58 - 61.08	1.0000	1.0000
L39	90	CCI 8.5" x 1.25" Plate	60.58 - 61.08	1.0000	1.0000
L39	91	CCI 8.5" x 1.25" Plate	60.58 - 61.08	1.0000	1.0000
L39	93	CCI 8.5" x 4.25" Plate	61.08 - 64.25	1.0000	1.0000
L39	94	CCI 8.5" x 4.25" Plate	61.08 - 64.25	1.0000	1.0000
L39	95	CCI 8.5" x 4.25" Plate	61.08 - 64.25	1.0000	1.0000
L39	96	CCI 8.5" x 4.25" Plate	61.08 - 64.25	1.0000	1.0000
L39	97	CCI 8.5" x 4.25" Plate	61.08 - 64.25	1.0000	1.0000
L39	98	CCI 8.5" x 4.25" Plate	61.08 - 64.25	1.0000	1.0000
L39	155	CCI 4.5" x 1" Plate	60.58 - 61.46	1.0000	1.0000
L39	156	CCI 4.5" x 1" Plate	60.58 - 61.46	1.0000	1.0000
L39	157	CCI 4.5" x 1" Plate	60.58 - 61.46	1.0000	1.0000
L39	158	CCI 4.5" x 1" Plate	60.58 - 61.46	1.0000	1.0000
L39	160	CCI 4.5" x 3" Plate	61.55 - 62.96	1.0000	1.0000
L39	161	CCI 4.5" x 3" Plate	61.55 - 62.96	1.0000	1.0000
L39	162	CCI 4.5" x 3" Plate	61.55 - 62.96	1.0000	1.0000
L39	163	CCI 4.5" x 3" Plate	61.55 - 62.96	1.0000	1.0000
L39	187	HCS 6X12 4AWG(1-5/8)	60.58 - 64.25	1.0000	1.0000
L39	190	AL7-50(1-5/8)	60.58 - 64.25	1.0000	1.0000
L39	218	Safety Line 3/8	60.58 - 64.25	1.0000	1.0000
L39	219	Climbing Rung	60.58 - 64.25	1.0000	1.0000
L40	86	CCI 8.5" x 1.25" Plate	60.33 - 60.58	1.0000	1.0000
L40	87	CCI 8.5" x 1.25" Plate	60.33 - 60.58	1.0000	1.0000
L40	88	CCI 8.5" x 1.25" Plate	60.33 - 60.58	1.0000	1.0000
L40	89	CCI 8.5" x 1.25" Plate	60.33 - 60.58	1.0000	1.0000
L40	90	CCI 8.5" x 1.25" Plate	60.33 - 60.58	1.0000	1.0000
L40	91	CCI 8.5" x 1.25" Plate	60.33 - 60.58	1.0000	1.0000
L40	155	CCI 4.5" x 1" Plate	60.33 - 60.58	1.0000	1.0000
L40	156	CCI 4.5" x 1" Plate	60.33 - 60.58	1.0000	1.0000
L40	157	CCI 4.5" x 1" Plate	60.33 - 60.58	1.0000	1.0000
L40	158	CCI 4.5" x 1" Plate	60.33 - 60.58	1.0000	1.0000
L40	187	HCS 6X12 4AWG(1-5/8)	60.33 - 60.58	1.0000	1.0000
L40	190	AL7-50(1-5/8)	60.33 - 60.58	1.0000	1.0000
L40	218	Safety Line 3/8	60.33 - 60.58	1.0000	1.0000
L40	219	Climbing Rung	60.33 - 60.58	1.0000	1.0000
L41	10	CCI 6.5" x 1.25" Plate	55.33 - 59.92	1.0000	1.0000
L41	11	CCI 6.5" x 1.25" Plate	55.33 - 59.92	1.0000	1.0000
L41	12	CCI 6.5" x 1.25" Plate	55.33 - 59.92	1.0000	1.0000
L41	79	CCI 8.5" x 1.25" Plate	55.33 - 60.08	1.0000	1.0000
L41	80	CCI 8.5" x 1.25" Plate	55.33 - 60.08	1.0000	1.0000
L41	81	CCI 8.5" x 1.25" Plate	55.33 - 60.08	1.0000	1.0000
L41	82	CCI 8.5" x 1.25" Plate	55.33 - 60.08	1.0000	1.0000
L41	83	CCI 8.5" x 1.25" Plate	55.33 - 60.08	1.0000	1.0000
L41	84	CCI 8.5" x 1.25" Plate	55.33 - 60.08	1.0000	1.0000
L41	86	CCI 8.5" x 1.25" Plate	60.08 - 60.33	1.0000	1.0000
L41	87	CCI 8.5" x 1.25" Plate	60.08 - 60.33	1.0000	1.0000
L41	88	CCI 8.5" x 1.25" Plate	60.08 - 60.33	1.0000	1.0000
L41	89	CCI 8.5" x 1.25" Plate	60.08 - 60.33	1.0000	1.0000
L41	90	CCI 8.5" x 1.25" Plate	60.08 - 60.33	1.0000	1.0000
L41	91	CCI 8.5" x 1.25" Plate	60.08 - 60.33	1.0000	1.0000
L41	155	CCI 4.5" x 1" Plate	58.00 - 60.33	1.0000	1.0000
L41	156	CCI 4.5" x 1" Plate	58.00 - 60.33	1.0000	1.0000
L41	157	CCI 4.5" x 1" Plate	58.00 - 60.33	1.0000	1.0000
L41	158	CCI 4.5" x 1" Plate	58.00 - 60.33	1.0000	1.0000
L41	187	HCS 6X12 4AWG(1-5/8)	55.33 - 60.33	1.0000	1.0000
L41	190	AL7-50(1-5/8)	55.33 - 60.33	1.0000	1.0000
L41	218	Safety Line 3/8	55.33 - 60.33	1.0000	1.0000
L41	219	Climbing Rung	55.33 - 60.33	1.0000	1.0000
L42	10	CCI 6.5" x 1.25" Plate	52.17 - 55.33	1.0000	1.0000
L42	11	CCI 6.5" x 1.25" Plate	52.17 - 55.33	1.0000	1.0000
L42	12	CCI 6.5" x 1.25" Plate	52.17 - 55.33	1.0000	1.0000
L42	79	CCI 8.5" x 1.25" Plate	55.25 - 55.33	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L42	80	CCI 8.5" x 1.25" Plate	55.25 - 55.33	1.0000	1.0000
L42	81	CCI 8.5" x 1.25" Plate	55.25 - 55.33	1.0000	1.0000
L42	82	CCI 8.5" x 1.25" Plate	55.25 - 55.33	1.0000	1.0000
L42	83	CCI 8.5" x 1.25" Plate	55.25 - 55.33	1.0000	1.0000
L42	84	CCI 8.5" x 1.25" Plate	55.25 - 55.33	1.0000	1.0000
L42	187	HCS 6X12 4AWG(1-5/8)	52.17 - 55.33	1.0000	1.0000
L42	190	AL7-50(1-5/8)	52.17 - 55.33	1.0000	1.0000
L42	218	Safety Line 3/8	52.17 - 55.33	1.0000	1.0000
L42	219	Climbing Rung	52.17 - 55.33	1.0000	1.0000
L43	10	CCI 6.5" x 1.25" Plate	51.92 - 52.17	1.0000	1.0000
L43	11	CCI 6.5" x 1.25" Plate	51.92 - 52.17	1.0000	1.0000
L43	12	CCI 6.5" x 1.25" Plate	51.92 - 52.17	1.0000	1.0000
L43	187	HCS 6X12 4AWG(1-5/8)	51.92 - 52.17	1.0000	1.0000
L43	190	AL7-50(1-5/8)	51.92 - 52.17	1.0000	1.0000
L43	218	Safety Line 3/8	51.92 - 52.17	1.0000	1.0000
L43	219	Climbing Rung	51.92 - 52.17	1.0000	1.0000
L44	10	CCI 6.5" x 1.25" Plate	46.92 - 51.92	1.0000	1.0000
L44	11	CCI 6.5" x 1.25" Plate	46.92 - 51.92	1.0000	1.0000
L44	12	CCI 6.5" x 1.25" Plate	46.92 - 51.92	1.0000	1.0000
L44	22	1" x 2" Plate	46.92 - 50.42	1.0000	1.0000
L44	23	1" x 2" Plate	46.92 - 50.42	1.0000	1.0000
L44	24	1" x 2" Plate	46.92 - 50.42	1.0000	1.0000
L44	25	1" x 2" Plate	46.92 - 50.42	1.0000	1.0000
L44	42	CCI 6" x 1" Plate	46.92 - 50.17	1.0000	1.0000
L44	43	CCI 6" x 1" Plate	46.92 - 50.17	1.0000	1.0000
L44	44	CCI 6" x 1" Plate	46.92 - 50.17	1.0000	1.0000
L44	45	CCI 6" x 1" Plate	46.92 - 50.17	1.0000	1.0000
L44	72	CCI 6.5" x 1.25" Plate	46.92 - 47.83	1.0000	1.0000
L44	73	CCI 6.5" x 1.25" Plate	46.92 - 47.83	1.0000	1.0000
L44	74	CCI 6.5" x 1.25" Plate	46.92 - 47.83	1.0000	1.0000
L44	75	CCI 6.5" x 1.25" Plate	46.92 - 47.83	1.0000	1.0000
L44	76	CCI 6.5" x 1.25" Plate	46.92 - 47.83	1.0000	1.0000
L44	77	CCI 6.5" x 1.25" Plate	46.92 - 47.83	1.0000	1.0000
L44	187	HCS 6X12 4AWG(1-5/8)	46.92 - 51.92	1.0000	1.0000
L44	190	AL7-50(1-5/8)	46.92 - 51.92	1.0000	1.0000
L44	218	Safety Line 3/8	46.92 - 51.92	1.0000	1.0000
L44	219	Climbing Rung	46.92 - 51.92	1.0000	1.0000
L45	10	CCI 6.5" x 1.25" Plate	41.92 - 46.92	1.0000	1.0000
L45	11	CCI 6.5" x 1.25" Plate	41.92 - 46.92	1.0000	1.0000
L45	12	CCI 6.5" x 1.25" Plate	41.92 - 46.92	1.0000	1.0000
L45	22	1" x 2" Plate	41.92 - 46.92	1.0000	1.0000
L45	23	1" x 2" Plate	41.92 - 46.92	1.0000	1.0000
L45	24	1" x 2" Plate	41.92 - 46.92	1.0000	1.0000
L45	25	1" x 2" Plate	41.92 - 46.92	1.0000	1.0000
L45	42	CCI 6" x 1" Plate	41.92 - 46.92	1.0000	1.0000
L45	43	CCI 6" x 1" Plate	41.92 - 46.92	1.0000	1.0000
L45	44	CCI 6" x 1" Plate	41.92 - 46.92	1.0000	1.0000
L45	45	CCI 6" x 1" Plate	41.92 - 46.92	1.0000	1.0000
L45	72	CCI 6.5" x 1.25" Plate	41.92 - 46.92	1.0000	1.0000
L45	73	CCI 6.5" x 1.25" Plate	41.92 - 46.92	1.0000	1.0000
L45	74	CCI 6.5" x 1.25" Plate	41.92 - 46.92	1.0000	1.0000
L45	75	CCI 6.5" x 1.25" Plate	41.92 - 46.92	1.0000	1.0000
L45	76	CCI 6.5" x 1.25" Plate	41.92 - 46.92	1.0000	1.0000
L45	77	CCI 6.5" x 1.25" Plate	41.92 - 46.92	1.0000	1.0000
L45	187	HCS 6X12 4AWG(1-5/8)	41.92 - 46.92	1.0000	1.0000
L45	190	AL7-50(1-5/8)	41.92 - 46.92	1.0000	1.0000
L45	218	Safety Line 3/8	41.92 - 46.92	1.0000	1.0000
L45	219	Climbing Rung	41.92 - 46.92	1.0000	1.0000
L46	10	CCI 6.5" x 1.25" Plate	40.83 - 41.92	1.0000	1.0000
L46	11	CCI 6.5" x 1.25" Plate	40.83 - 41.92	1.0000	1.0000
L46	12	CCI 6.5" x 1.25" Plate	40.83 - 41.92	1.0000	1.0000
L46	22	1" x 2" Plate	40.58 - 41.92	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L46	23	1" x 2" Plate	40.58 - 41.92	1.0000	1.0000
L46	24	1" x 2" Plate	40.58 - 41.92	1.0000	1.0000
L46	25	1" x 2" Plate	40.58 - 41.92	1.0000	1.0000
L46	42	CCI 6" x 1" Plate	40.33 - 41.92	1.0000	1.0000
L46	43	CCI 6" x 1" Plate	40.33 - 41.92	1.0000	1.0000
L46	44	CCI 6" x 1" Plate	40.33 - 41.92	1.0000	1.0000
L46	45	CCI 6" x 1" Plate	40.33 - 41.92	1.0000	1.0000
L46	72	CCI 6.5" x 1.25" Plate	40.33 - 41.92	1.0000	1.0000
L46	73	CCI 6.5" x 1.25" Plate	40.33 - 41.92	1.0000	1.0000
L46	74	CCI 6.5" x 1.25" Plate	40.33 - 41.92	1.0000	1.0000
L46	75	CCI 6.5" x 1.25" Plate	40.33 - 41.92	1.0000	1.0000
L46	76	CCI 6.5" x 1.25" Plate	40.33 - 41.92	1.0000	1.0000
L46	77	CCI 6.5" x 1.25" Plate	40.33 - 41.92	1.0000	1.0000
L46	187	HCS 6X12 4AWG(1-5/8)	40.33 - 41.92	1.0000	1.0000
L46	190	AL7-50(1-5/8)	40.33 - 41.92	1.0000	1.0000
L46	218	Safety Line 3/8	40.33 - 41.92	1.0000	1.0000
L46	219	Climbing Rung	40.33 - 41.92	1.0000	1.0000
L47	42	CCI 6" x 1" Plate	40.08 - 40.33	1.0000	1.0000
L47	43	CCI 6" x 1" Plate	40.08 - 40.33	1.0000	1.0000
L47	44	CCI 6" x 1" Plate	40.08 - 40.33	1.0000	1.0000
L47	45	CCI 6" x 1" Plate	40.08 - 40.33	1.0000	1.0000
L47	72	CCI 6.5" x 1.25" Plate	40.08 - 40.33	1.0000	1.0000
L47	73	CCI 6.5" x 1.25" Plate	40.08 - 40.33	1.0000	1.0000
L47	74	CCI 6.5" x 1.25" Plate	40.08 - 40.33	1.0000	1.0000
L47	75	CCI 6.5" x 1.25" Plate	40.08 - 40.33	1.0000	1.0000
L47	76	CCI 6.5" x 1.25" Plate	40.08 - 40.33	1.0000	1.0000
L47	77	CCI 6.5" x 1.25" Plate	40.08 - 40.33	1.0000	1.0000
L47	187	HCS 6X12 4AWG(1-5/8)	40.08 - 40.33	1.0000	1.0000
L47	190	AL7-50(1-5/8)	40.08 - 40.33	1.0000	1.0000
L47	218	Safety Line 3/8	40.08 - 40.33	1.0000	1.0000
L47	219	Climbing Rung	40.08 - 40.33	1.0000	1.0000
L48	6	CCI 6" x 1" Plate	35.08 - 39.75	1.0000	1.0000
L48	7	CCI 6" x 1" Plate	35.08 - 39.75	1.0000	1.0000
L48	8	CCI 6" x 1" Plate	35.08 - 39.75	1.0000	1.0000
L48	42	CCI 6" x 1" Plate	37.17 - 40.08	1.0000	1.0000
L48	43	CCI 6" x 1" Plate	37.17 - 40.08	1.0000	1.0000
L48	44	CCI 6" x 1" Plate	37.17 - 40.08	1.0000	1.0000
L48	45	CCI 6" x 1" Plate	37.17 - 40.08	1.0000	1.0000
L48	72	CCI 6.5" x 1.25" Plate	35.08 - 40.08	1.0000	1.0000
L48	73	CCI 6.5" x 1.25" Plate	35.08 - 40.08	1.0000	1.0000
L48	74	CCI 6.5" x 1.25" Plate	35.08 - 40.08	1.0000	1.0000
L48	75	CCI 6.5" x 1.25" Plate	35.08 - 40.08	1.0000	1.0000
L48	76	CCI 6.5" x 1.25" Plate	35.08 - 40.08	1.0000	1.0000
L48	77	CCI 6.5" x 1.25" Plate	35.08 - 40.08	1.0000	1.0000
L48	187	HCS 6X12 4AWG(1-5/8)	35.08 - 40.08	1.0000	1.0000
L48	190	AL7-50(1-5/8)	35.08 - 40.08	1.0000	1.0000
L48	218	Safety Line 3/8	35.08 - 40.08	1.0000	1.0000
L48	219	Climbing Rung	35.08 - 40.08	1.0000	1.0000
L49	6	CCI 6" x 1" Plate	30.08 - 35.08	1.0000	1.0000
L49	7	CCI 6" x 1" Plate	30.08 - 35.08	1.0000	1.0000
L49	8	CCI 6" x 1" Plate	30.08 - 35.08	1.0000	1.0000
L49	72	CCI 6.5" x 1.25" Plate	32.83 - 35.08	1.0000	1.0000
L49	73	CCI 6.5" x 1.25" Plate	32.83 - 35.08	1.0000	1.0000
L49	74	CCI 6.5" x 1.25" Plate	32.83 - 35.08	1.0000	1.0000
L49	75	CCI 6.5" x 1.25" Plate	32.83 - 35.08	1.0000	1.0000
L49	76	CCI 6.5" x 1.25" Plate	32.83 - 35.08	1.0000	1.0000
L49	77	CCI 6.5" x 1.25" Plate	32.83 - 35.08	1.0000	1.0000
L49	187	HCS 6X12 4AWG(1-5/8)	30.08 - 35.08	1.0000	1.0000
L49	190	AL7-50(1-5/8)	30.08 - 35.08	1.0000	1.0000
L49	218	Safety Line 3/8	30.08 - 35.08	1.0000	1.0000
L49	219	Climbing Rung	30.08 - 35.08	1.0000	1.0000
L50	6	CCI 6" x 1" Plate	28.00 - 30.08	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L50	7	CCI 6" x 1" Plate	28.00 - 30.08	1.0000	1.0000
L50	8	CCI 6" x 1" Plate	28.00 - 30.08	1.0000	1.0000
L50	37	CCI 6" x 1" Plate	28.00 - 30.00	1.0000	1.0000
L50	38	CCI 6" x 1" Plate	28.00 - 30.00	1.0000	1.0000
L50	39	CCI 6" x 1" Plate	28.00 - 30.00	1.0000	1.0000
L50	40	CCI 6" x 1" Plate	28.00 - 30.00	1.0000	1.0000
L50	187	HCS 6X12 4AWG(1-5/8)	28.00 - 30.08	1.0000	1.0000
L50	190	AL7-50(1-5/8)	28.00 - 30.08	1.0000	1.0000
L50	218	Safety Line 3/8	28.00 - 30.08	1.0000	1.0000
L50	219	Climbing Rung	28.00 - 30.08	1.0000	1.0000
L51	6	CCI 6" x 1" Plate	27.75 - 28.00	1.0000	1.0000
L51	7	CCI 6" x 1" Plate	27.75 - 28.00	1.0000	1.0000
L51	8	CCI 6" x 1" Plate	27.75 - 28.00	1.0000	1.0000
L51	37	CCI 6" x 1" Plate	27.75 - 28.00	1.0000	1.0000
L51	38	CCI 6" x 1" Plate	27.75 - 28.00	1.0000	1.0000
L51	39	CCI 6" x 1" Plate	27.75 - 28.00	1.0000	1.0000
L51	40	CCI 6" x 1" Plate	27.75 - 28.00	1.0000	1.0000
L51	187	HCS 6X12 4AWG(1-5/8)	27.75 - 28.00	1.0000	1.0000
L51	190	AL7-50(1-5/8)	27.75 - 28.00	1.0000	1.0000
L51	218	Safety Line 3/8	27.75 - 28.00	1.0000	1.0000
L51	219	Climbing Rung	27.75 - 28.00	1.0000	1.0000
L52	6	CCI 6" x 1" Plate	22.75 - 27.75	1.0000	1.0000
L52	7	CCI 6" x 1" Plate	22.75 - 27.75	1.0000	1.0000
L52	8	CCI 6" x 1" Plate	22.75 - 27.75	1.0000	1.0000
L52	37	CCI 6" x 1" Plate	22.75 - 27.75	1.0000	1.0000
L52	38	CCI 6" x 1" Plate	22.75 - 27.75	1.0000	1.0000
L52	39	CCI 6" x 1" Plate	22.75 - 27.75	1.0000	1.0000
L52	40	CCI 6" x 1" Plate	22.75 - 27.75	1.0000	1.0000
L52	65	CCI 6.5" x 1.25" Plate	22.75 - 27.50	1.0000	1.0000
L52	66	CCI 6.5" x 1.25" Plate	22.75 - 27.50	1.0000	1.0000
L52	67	CCI 6.5" x 1.25" Plate	22.75 - 27.50	1.0000	1.0000
L52	68	CCI 6.5" x 1.25" Plate	22.75 - 27.50	1.0000	1.0000
L52	69	CCI 6.5" x 1.25" Plate	22.75 - 27.50	1.0000	1.0000
L52	70	CCI 6.5" x 1.25" Plate	22.75 - 27.50	1.0000	1.0000
L52	187	HCS 6X12 4AWG(1-5/8)	22.75 - 27.75	1.0000	1.0000
L52	190	AL7-50(1-5/8)	22.75 - 27.75	1.0000	1.0000
L52	218	Safety Line 3/8	22.75 - 27.75	1.0000	1.0000
L52	219	Climbing Rung	22.75 - 27.75	1.0000	1.0000
L53	6	CCI 6" x 1" Plate	20.75 - 22.75	1.0000	1.0000
L53	7	CCI 6" x 1" Plate	20.75 - 22.75	1.0000	1.0000
L53	8	CCI 6" x 1" Plate	20.75 - 22.75	1.0000	1.0000
L53	37	CCI 6" x 1" Plate	20.08 - 22.75	1.0000	1.0000
L53	38	CCI 6" x 1" Plate	20.08 - 22.75	1.0000	1.0000
L53	39	CCI 6" x 1" Plate	20.08 - 22.75	1.0000	1.0000
L53	40	CCI 6" x 1" Plate	20.08 - 22.75	1.0000	1.0000
L53	65	CCI 6.5" x 1.25" Plate	20.08 - 22.75	1.0000	1.0000
L53	66	CCI 6.5" x 1.25" Plate	20.08 - 22.75	1.0000	1.0000
L53	67	CCI 6.5" x 1.25" Plate	20.08 - 22.75	1.0000	1.0000
L53	68	CCI 6.5" x 1.25" Plate	20.08 - 22.75	1.0000	1.0000
L53	69	CCI 6.5" x 1.25" Plate	20.08 - 22.75	1.0000	1.0000
L53	70	CCI 6.5" x 1.25" Plate	20.08 - 22.75	1.0000	1.0000
L53	187	HCS 6X12 4AWG(1-5/8)	20.08 - 22.75	1.0000	1.0000
L53	190	AL7-50(1-5/8)	20.08 - 22.75	1.0000	1.0000
L53	218	Safety Line 3/8	20.08 - 22.75	1.0000	1.0000
L53	219	Climbing Rung	20.08 - 22.75	1.0000	1.0000
L54	37	CCI 6" x 1" Plate	19.83 - 20.08	1.0000	1.0000
L54	38	CCI 6" x 1" Plate	19.83 - 20.08	1.0000	1.0000
L54	39	CCI 6" x 1" Plate	19.83 - 20.08	1.0000	1.0000
L54	40	CCI 6" x 1" Plate	19.83 - 20.08	1.0000	1.0000
L54	65	CCI 6.5" x 1.25" Plate	19.83 - 20.08	1.0000	1.0000
L54	66	CCI 6.5" x 1.25" Plate	19.83 - 20.08	1.0000	1.0000
L54	67	CCI 6.5" x 1.25" Plate	19.83 - 20.08	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L54	68	CCI 6.5" x 1.25" Plate	19.83 - 20.08	1.0000	1.0000
L54	69	CCI 6.5" x 1.25" Plate	19.83 - 20.08	1.0000	1.0000
L54	70	CCI 6.5" x 1.25" Plate	19.83 - 20.08	1.0000	1.0000
L54	187	HCS 6X12 4AWG(1-5/8)	19.83 - 20.08	1.0000	1.0000
L54	190	AL7-50(1-5/8)	19.83 - 20.08	1.0000	1.0000
L54	218	Safety Line 3/8	19.83 - 20.08	1.0000	1.0000
L54	219	Climbing Rung	19.83 - 20.08	1.0000	1.0000
L55	32	CCI 6" x 1" Plate	17.00 - 19.00	1.0000	1.0000
L55	33	CCI 6" x 1" Plate	17.00 - 19.00	1.0000	1.0000
L55	34	CCI 6" x 1" Plate	17.00 - 19.00	1.0000	1.0000
L55	35	CCI 6" x 1" Plate	17.00 - 19.00	1.0000	1.0000
L55	37	CCI 6" x 1" Plate	17.00 - 19.83	1.0000	1.0000
L55	38	CCI 6" x 1" Plate	17.00 - 19.83	1.0000	1.0000
L55	39	CCI 6" x 1" Plate	17.00 - 19.83	1.0000	1.0000
L55	40	CCI 6" x 1" Plate	17.00 - 19.83	1.0000	1.0000
L55	65	CCI 6.5" x 1.25" Plate	17.00 - 19.83	1.0000	1.0000
L55	66	CCI 6.5" x 1.25" Plate	17.00 - 19.83	1.0000	1.0000
L55	67	CCI 6.5" x 1.25" Plate	17.00 - 19.83	1.0000	1.0000
L55	68	CCI 6.5" x 1.25" Plate	17.00 - 19.83	1.0000	1.0000
L55	69	CCI 6.5" x 1.25" Plate	17.00 - 19.83	1.0000	1.0000
L55	70	CCI 6.5" x 1.25" Plate	17.00 - 19.83	1.0000	1.0000
L55	187	HCS 6X12 4AWG(1-5/8)	17.00 - 19.83	1.0000	1.0000
L55	190	AL7-50(1-5/8)	17.00 - 19.83	1.0000	1.0000
L55	218	Safety Line 3/8	17.00 - 19.83	1.0000	1.0000
L55	219	Climbing Rung	17.00 - 19.83	1.0000	1.0000
L56	32	CCI 6" x 1" Plate	16.75 - 17.00	1.0000	1.0000
L56	33	CCI 6" x 1" Plate	16.75 - 17.00	1.0000	1.0000
L56	34	CCI 6" x 1" Plate	16.75 - 17.00	1.0000	1.0000
L56	35	CCI 6" x 1" Plate	16.75 - 17.00	1.0000	1.0000
L56	65	CCI 6.5" x 1.25" Plate	16.75 - 17.00	1.0000	1.0000
L56	66	CCI 6.5" x 1.25" Plate	16.75 - 17.00	1.0000	1.0000
L56	67	CCI 6.5" x 1.25" Plate	16.75 - 17.00	1.0000	1.0000
L56	68	CCI 6.5" x 1.25" Plate	16.75 - 17.00	1.0000	1.0000
L56	69	CCI 6.5" x 1.25" Plate	16.75 - 17.00	1.0000	1.0000
L56	70	CCI 6.5" x 1.25" Plate	16.75 - 17.00	1.0000	1.0000
L56	187	HCS 6X12 4AWG(1-5/8)	16.75 - 17.00	1.0000	1.0000
L56	190	AL7-50(1-5/8)	16.75 - 17.00	1.0000	1.0000
L56	218	Safety Line 3/8	16.75 - 17.00	1.0000	1.0000
L56	219	Climbing Rung	16.75 - 17.00	1.0000	1.0000
L57	4	CCI 4" x 0.75" Plate	11.65 - 13.17	1.0000	1.0000
L57	32	CCI 6" x 1" Plate	11.65 - 16.75	1.0000	1.0000
L57	33	CCI 6" x 1" Plate	11.65 - 16.75	1.0000	1.0000
L57	34	CCI 6" x 1" Plate	11.65 - 16.75	1.0000	1.0000
L57	35	CCI 6" x 1" Plate	11.65 - 16.75	1.0000	1.0000
L57	65	CCI 6.5" x 1.25" Plate	12.67 - 16.75	1.0000	1.0000
L57	66	CCI 6.5" x 1.25" Plate	12.67 - 16.75	1.0000	1.0000
L57	67	CCI 6.5" x 1.25" Plate	12.67 - 16.75	1.0000	1.0000
L57	68	CCI 6.5" x 1.25" Plate	12.67 - 16.75	1.0000	1.0000
L57	69	CCI 6.5" x 1.25" Plate	12.67 - 16.75	1.0000	1.0000
L57	70	CCI 6.5" x 1.25" Plate	12.67 - 16.75	1.0000	1.0000
L57	187	HCS 6X12 4AWG(1-5/8)	11.65 - 16.75	1.0000	1.0000
L57	190	AL7-50(1-5/8)	11.65 - 16.75	1.0000	1.0000
L57	218	Safety Line 3/8	11.65 - 16.75	1.0000	1.0000
L57	219	Climbing Rung	11.65 - 16.75	1.0000	1.0000
L58	4	CCI 4" x 0.75" Plate	11.42 - 11.65	1.0000	1.0000
L58	32	CCI 6" x 1" Plate	11.42 - 11.65	1.0000	1.0000
L58	33	CCI 6" x 1" Plate	11.42 - 11.65	1.0000	1.0000
L58	34	CCI 6" x 1" Plate	11.42 - 11.65	1.0000	1.0000
L58	35	CCI 6" x 1" Plate	11.42 - 11.65	1.0000	1.0000
L58	187	HCS 6X12 4AWG(1-5/8)	11.42 - 11.65	1.0000	1.0000
L58	190	AL7-50(1-5/8)	11.42 - 11.65	1.0000	1.0000
L58	218	Safety Line 3/8	11.42 - 11.65	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L58	219	Climbing Rung	11.42 - 11.65	1.0000	1.0000
L59	2	CCI 4" x 0.75" Plate	9.40 - 10.88	1.0000	1.0000
L59	3	CCI 4" x 0.75" Plate	9.40 - 10.88	1.0000	1.0000
L59	4	CCI 4" x 0.75" Plate	9.40 - 11.42	1.0000	1.0000
L59	32	CCI 6" x 1" Plate	9.40 - 11.42	1.0000	1.0000
L59	33	CCI 6" x 1" Plate	9.40 - 11.42	1.0000	1.0000
L59	34	CCI 6" x 1" Plate	9.40 - 11.42	1.0000	1.0000
L59	35	CCI 6" x 1" Plate	9.40 - 11.42	1.0000	1.0000
L59	187	HCS 6X12 4AWG(1-5/8)	9.40 - 11.42	1.0000	1.0000
L59	190	AL7-50(1-5/8)	9.40 - 11.42	1.0000	1.0000
L59	218	Safety Line 3/8	9.40 - 11.42	1.0000	1.0000
L59	219	Climbing Rung	9.40 - 11.42	1.0000	1.0000
L60	2	CCI 4" x 0.75" Plate	9.15 - 9.40	1.0000	1.0000
L60	3	CCI 4" x 0.75" Plate	9.15 - 9.40	1.0000	1.0000
L60	4	CCI 4" x 0.75" Plate	9.15 - 9.40	1.0000	1.0000
L60	32	CCI 6" x 1" Plate	9.15 - 9.40	1.0000	1.0000
L60	33	CCI 6" x 1" Plate	9.15 - 9.40	1.0000	1.0000
L60	34	CCI 6" x 1" Plate	9.15 - 9.40	1.0000	1.0000
L60	35	CCI 6" x 1" Plate	9.15 - 9.40	1.0000	1.0000
L60	187	HCS 6X12 4AWG(1-5/8)	9.15 - 9.40	1.0000	1.0000
L60	190	AL7-50(1-5/8)	9.15 - 9.40	1.0000	1.0000
L60	218	Safety Line 3/8	9.15 - 9.40	1.0000	1.0000
L60	219	Climbing Rung	9.15 - 9.40	1.0000	1.0000
L61	2	CCI 4" x 0.75" Plate	4.83 - 9.15	1.0000	1.0000
L61	3	CCI 4" x 0.75" Plate	4.83 - 9.15	1.0000	1.0000
L61	4	CCI 4" x 0.75" Plate	4.83 - 9.15	1.0000	1.0000
L61	32	CCI 6" x 1" Plate	4.83 - 9.15	1.0000	1.0000
L61	33	CCI 6" x 1" Plate	4.83 - 9.15	1.0000	1.0000
L61	34	CCI 6" x 1" Plate	4.83 - 9.15	1.0000	1.0000
L61	35	CCI 6" x 1" Plate	4.83 - 9.15	1.0000	1.0000
L61	187	HCS 6X12 4AWG(1-5/8)	4.83 - 9.15	1.0000	1.0000
L61	190	AL7-50(1-5/8)	4.83 - 9.15	1.0000	1.0000
L61	218	Safety Line 3/8	4.83 - 9.15	1.0000	1.0000
L61	219	Climbing Rung	4.83 - 9.15	1.0000	1.0000
L62	2	CCI 4" x 0.75" Plate	4.58 - 4.83	1.0000	1.0000
L62	3	CCI 4" x 0.75" Plate	4.58 - 4.83	1.0000	1.0000
L62	4	CCI 4" x 0.75" Plate	4.58 - 4.83	1.0000	1.0000
L62	32	CCI 6" x 1" Plate	4.58 - 4.83	1.0000	1.0000
L62	33	CCI 6" x 1" Plate	4.58 - 4.83	1.0000	1.0000
L62	34	CCI 6" x 1" Plate	4.58 - 4.83	1.0000	1.0000
L62	35	CCI 6" x 1" Plate	4.58 - 4.83	1.0000	1.0000
L62	187	HCS 6X12 4AWG(1-5/8)	4.58 - 4.83	1.0000	1.0000
L62	190	AL7-50(1-5/8)	4.58 - 4.83	1.0000	1.0000
L62	218	Safety Line 3/8	4.58 - 4.83	1.0000	1.0000
L62	219	Climbing Rung	4.58 - 4.83	1.0000	1.0000
L63	2	CCI 4" x 0.75" Plate	0.00 - 4.58	1.0000	1.0000
L63	3	CCI 4" x 0.75" Plate	0.00 - 4.58	1.0000	1.0000
L63	4	CCI 4" x 0.75" Plate	3.17 - 4.58	1.0000	1.0000
L63	32	CCI 6" x 1" Plate	0.00 - 4.58	1.0000	1.0000
L63	33	CCI 6" x 1" Plate	0.00 - 4.58	1.0000	1.0000
L63	34	CCI 6" x 1" Plate	0.00 - 4.58	1.0000	1.0000
L63	35	CCI 6" x 1" Plate	0.00 - 4.58	1.0000	1.0000
L63	187	HCS 6X12 4AWG(1-5/8)	0.00 - 4.58	1.0000	1.0000
L63	190	AL7-50(1-5/8)	0.00 - 4.58	1.0000	1.0000
L63	218	Safety Line 3/8	0.00 - 4.58	1.0000	1.0000
L63	219	Climbing Rung	0.00 - 4.58	1.0000	1.0000

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
Lightning Rod 5/8" x 4' on 4' Pole (E)	B	From Leg	1.000 0.000 4.000	0.000	191.667	No Ice 1/2" Ice 1" Ice 2" Ice	1.356 2.131 2.702 3.773	1.356 2.131 2.702 3.773	0.066 0.087 0.112 0.175
LW ***LW***									
WB2623 w/ Mount Pipe (E)	B	From Leg	2.000 0.000 -1.000	0.000	191.000	No Ice 1/2" Ice 1" Ice 2" Ice	1.929 2.158 2.399 2.915	0.866 1.110 1.369 1.938	0.020 0.038 0.058 0.111
3' x 2" Pipe Mount (E-For Omni)	B	From Leg	2.000 0.000 -1.000	0.000	191.000	No Ice 1/2" Ice 1" Ice 2" Ice	0.522 0.708 0.903 1.321	0.522 0.708 0.903 1.321	0.011 0.016 0.023 0.044
Side Arm Mount [SO 701-1] (E)	B	From Leg	1.000 0.000 0.000	0.000	191.000	No Ice 1/2" Ice 1" Ice 2" Ice	0.850 1.140 1.430 2.010	1.670 2.340 3.010 4.350	0.065 0.079 0.093 0.121
LW OGB4-900D (E - Per Photo)	B	From Leg	4.000 0.000 4.000	0.000	184.000	No Ice 1/2" Ice 1" Ice 2" Ice	0.785 1.028 1.281 1.814	0.785 1.028 1.281 1.814	0.010 0.016 0.025 0.053
DB589-A (E - Per Photo)	B	From Leg	4.000 0.000 -5.000	0.000	184.000	No Ice 1/2" Ice 1" Ice 2" Ice	2.763 4.170 5.593 8.490	2.763 4.170 5.593 8.490	0.012 0.033 0.063 0.150
AIR -32 B2A/B66AA (E-Installed)	A	From Leg	4.000 0.000 -3.000	0.000	184.000	No Ice 1/2" Ice 1" Ice 2" Ice	6.510 6.887 7.271 8.060	4.712 5.068 5.431 6.178	0.132 0.178 0.229 0.348
AIR -32 B2A/B66AA (E-Installed)	B	From Leg	4.000 0.000 -3.000	0.000	184.000	No Ice 1/2" Ice 1" Ice 2" Ice	6.510 6.887 7.271 8.060	4.712 5.068 5.431 6.178	0.132 0.178 0.229 0.348
AIR -32 B2A/B66AA (E-Installed)	C	From Leg	4.000 0.000 -3.000	0.000	184.000	No Ice 1/2" Ice 1" Ice 2" Ice	6.510 6.887 7.271 8.060	4.712 5.068 5.431 6.178	0.132 0.178 0.229 0.348
APX16DWV-16DWVS-E-A20 (E-Installed)	A	From Leg	4.000 0.000 -3.000	0.000	184.000	No Ice 1/2" Ice 1" Ice 2" Ice	6.996 7.391 7.794 8.620	2.359 2.722 3.092 3.855	0.042 0.077 0.117 0.214
APX16DWV-16DWVS-E-A20 (E-Installed)	B	From Leg	4.000 0.000 -3.000	0.000	184.000	No Ice 1/2" Ice 1" Ice 2" Ice	6.996 7.391 7.794 8.620	2.359 2.722 3.092 3.855	0.042 0.077 0.117 0.214
APX16DWV-16DWVS-E-A20 (E-Installed)	C	From Leg	4.000 0.000 -3.000	0.000	184.000	No Ice 1/2" Ice 1" Ice 2" Ice	6.996 7.391 7.794 8.620	2.359 2.722 3.092 3.855	0.042 0.077 0.117 0.214
KRY 112 144/1	A	From Leg	4.000	0.000	184.000	No Ice	0.350	0.175	0.011

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
(E-Installed)			0.000			1/2" Ice	0.426	0.234	0.014
			-3.000			1" Ice	0.509	0.301	0.019
						2" Ice	0.698	0.456	0.032
KRY 112 144/1	B	From Leg	4.000	0.000	184.000	No Ice	0.350	0.175	0.011
(E-Installed)			0.000			1/2" Ice	0.426	0.234	0.014
			-3.000			1" Ice	0.509	0.301	0.019
						2" Ice	0.698	0.456	0.032
KRY 112 144/1	C	From Leg	4.000	0.000	184.000	No Ice	0.350	0.175	0.011
(E-Installed)			0.000			1/2" Ice	0.426	0.234	0.014
			-3.000			1" Ice	0.509	0.301	0.019
						2" Ice	0.698	0.456	0.032
KRY 112 489/2	A	From Leg	4.000	0.000	184.000	No Ice	0.559	0.365	0.015
(E-Installed)			0.000			1/2" Ice	0.658	0.448	0.020
			-3.000			1" Ice	0.764	0.542	0.027
						2" Ice	0.998	0.752	0.046
KRY 112 489/2	B	From Leg	4.000	0.000	184.000	No Ice	0.559	0.365	0.015
(E-Installed)			0.000			1/2" Ice	0.658	0.448	0.020
			-3.000			1" Ice	0.764	0.542	0.027
						2" Ice	0.998	0.752	0.046
KRY 112 489/2	C	From Leg	4.000	0.000	184.000	No Ice	0.559	0.365	0.015
(E-Installed)			0.000			1/2" Ice	0.658	0.448	0.020
			-3.000			1" Ice	0.764	0.542	0.027
						2" Ice	0.998	0.752	0.046
ATBT-BOTTOM-24V	A	From Leg	4.000	0.000	184.000	No Ice	0.104	0.065	0.003
(E-Installed)			0.000			1/2" Ice	0.148	0.102	0.004
			-3.000			1" Ice	0.199	0.147	0.006
						2" Ice	0.323	0.259	0.013
ATBT-BOTTOM-24V	B	From Leg	4.000	0.000	184.000	No Ice	0.104	0.065	0.003
(E-Installed)			0.000			1/2" Ice	0.148	0.102	0.004
			-3.000			1" Ice	0.199	0.147	0.006
						2" Ice	0.323	0.259	0.013
ATBT-BOTTOM-24V	C	From Leg	4.000	0.000	184.000	No Ice	0.104	0.065	0.003
(E-Installed)			0.000			1/2" Ice	0.148	0.102	0.004
			-3.000			1" Ice	0.199	0.147	0.006
						2" Ice	0.323	0.259	0.013
APXVAARR24_43-U-NA20	A	From Leg	4.000	0.000	184.000	No Ice	14.670	5.320	0.153
(P)			0.000			1/2" Ice	15.430	5.990	0.266
			-3.000			1" Ice	16.210	6.680	0.387
						2" Ice	17.810	8.080	0.656
APXVAARR24_43-U-NA20	B	From Leg	4.000	0.000	184.000	No Ice	14.670	5.320	0.153
(P)			0.000			1/2" Ice	15.430	5.990	0.266
			-3.000			1" Ice	16.210	6.680	0.387
						2" Ice	17.810	8.080	0.656
APXVAARR24_43-U-NA20	C	From Leg	4.000	0.000	184.000	No Ice	14.670	5.320	0.153
(P)			0.000			1/2" Ice	15.430	5.990	0.266
			-3.000			1" Ice	16.210	6.680	0.387
						2" Ice	17.810	8.080	0.656
RADIO 4449 B12/B71	A	From Leg	4.000	0.000	184.000	No Ice	1.650	1.300	0.075
(P)			0.000			1/2" Ice	1.810	1.445	0.092
			-3.000			1" Ice	1.978	1.597	0.112
						2" Ice	2.336	1.924	0.161
RADIO 4449 B12/B71	B	From Leg	4.000	0.000	184.000	No Ice	1.650	1.300	0.075
(P)			0.000			1/2" Ice	1.810	1.445	0.092
			-3.000			1" Ice	1.978	1.597	0.112
						2" Ice	2.336	1.924	0.161
RADIO 4449 B12/B71	C	From Leg	4.000	0.000	184.000	No Ice	1.650	1.300	0.075
(P)			0.000			1/2" Ice	1.810	1.445	0.092

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
			-3.000			1" Ice	1.978	1.597	0.112
						2" Ice	2.336	1.924	0.161
7' x 2.375" Mount Pipe (P-For Omni-per MA)	B	From Leg	4.000 0.000 -1.000	0.000	184.000	No Ice 1/2" Ice 1" Ice 2" Ice	1.663 2.391 2.825 3.706	1.663 2.391 2.825 3.706	0.061 0.073 0.090 0.140
(2) 6' x 2.375" Mount Pipe (P-Per MA)	A	From Leg	4.000 0.000 -1.000	0.000	184.000	No Ice 1/2" Ice 1" Ice 2" Ice	1.425 1.925 2.294 3.060	1.425 1.925 2.294 3.060	0.041 0.051 0.066 0.109
(2) 6' x 2.375" Mount Pipe (P-Per MA)	B	From Leg	4.000 0.000 -1.000	0.000	184.000	No Ice 1/2" Ice 1" Ice 2" Ice	1.425 1.925 2.294 3.060	1.425 1.925 2.294 3.060	0.041 0.051 0.066 0.109
(2) 6' x 2.375" Mount Pipe (P-Per MA)	C	From Leg	4.000 0.000 -1.000	0.000	184.000	No Ice 1/2" Ice 1" Ice 2" Ice	1.425 1.925 2.294 3.060	1.425 1.925 2.294 3.060	0.041 0.051 0.066 0.109
9' x 2.375" Mount Pipe (P-Per MA)	A	From Leg	4.000 0.000 -1.000	0.000	184.000	No Ice 1/2" Ice 1" Ice 2" Ice	2.138 3.066 4.010 5.131	2.138 3.066 4.010 5.131	0.061 0.077 0.099 0.161
9' x 2.375" Mount Pipe (P-Per MA)	B	From Leg	4.000 0.000 -1.000	0.000	184.000	No Ice 1/2" Ice 1" Ice 2" Ice	2.138 3.066 4.010 5.131	2.138 3.066 4.010 5.131	0.061 0.077 0.099 0.161
9' x 2.375" Mount Pipe (P-Per MA)	C	From Leg	4.000 0.000 -1.000	0.000	184.000	No Ice 1/2" Ice 1" Ice 2" Ice	2.138 3.066 4.010 5.131	2.138 3.066 4.010 5.131	0.061 0.077 0.099 0.161
Side Arm Mount [SO 102-3] (P- Sitepro 1 #X-AHCP)	C	None		0.000	184.000	No Ice 1/2" Ice 1" Ice 2" Ice	3.600 4.180 4.750 5.900	3.600 4.180 4.750 5.900	0.075 0.105 0.135 0.195
Platform Mount [LP 405-1_HR-1] (E+ Handrail per MA)	C	None		0.000	184.000	No Ice 1/2" Ice 1" Ice 2" Ice	25.330 33.790 42.160 58.770	25.330 33.790 42.160 58.770	2.056 2.634 3.360 5.254
LW									
(2) LNX-8513DS-A1M (E)	A	From Leg	4.000 0.000 0.000	0.000	160.000	No Ice 1/2" Ice 1" Ice 2" Ice	4.160 4.570 4.980 5.850	2.490 2.880 3.270 4.090	0.039 0.090 0.146 0.279
(2) LNX-6514DS-A1M (E)	B	From Leg	4.000 0.000 0.000	0.000	160.000	No Ice 1/2" Ice 1" Ice 2" Ice	4.160 4.570 4.980 5.850	2.490 2.880 3.270 4.090	0.039 0.089 0.146 0.278
(2) LNX-8513DS-A1M (E)	C	From Leg	4.000 0.000 0.000	0.000	160.000	No Ice 1/2" Ice 1" Ice 2" Ice	4.160 4.570 4.980 5.850	2.490 2.880 3.270 4.090	0.039 0.090 0.146 0.279
DB-T1-6Z-8AB-0Z (E)	A	From Leg	4.000 0.000 0.000	0.000	160.000	No Ice 1/2" Ice 1" Ice 2" Ice	4.800 5.070 5.348 5.926	2.000 2.193 2.393 2.815	0.044 0.080 0.120 0.213
(2) NNHH-65B-R4 (R)	A	From Leg	4.000 0.000	0.000	160.000	No Ice 1/2" Ice	7.620 8.120	3.010 3.450	0.077 0.150

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft	Offsets: Vert ft	Offsets: ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			0.000					1" Ice	8.630	3.900	0.228
								2" Ice	9.680	4.820	0.407
(2) NNHH-65B-R4	B	From Leg	4.000			0.000	160.000	No Ice	7.620	3.010	0.077
(R)			0.000					1/2" Ice	8.120	3.450	0.150
			0.000					1" Ice	8.630	3.900	0.228
								2" Ice	9.680	4.820	0.407
(2) NNHH-65B-R4	C	From Leg	4.000			0.000	160.000	No Ice	7.620	3.010	0.077
(R)			0.000					1/2" Ice	8.120	3.450	0.150
			0.000					1" Ice	8.630	3.900	0.228
								2" Ice	9.680	4.820	0.407
RFV01U-D1A	A	From Leg	4.000			0.000	160.000	No Ice	1.875	1.250	0.084
(R)			0.000					1/2" Ice	2.045	1.393	0.103
			0.000					1" Ice	2.223	1.543	0.124
								2" Ice	2.601	1.865	0.175
RFV01U-D1A	B	From Leg	4.000			0.000	160.000	No Ice	1.875	1.250	0.084
(R)			0.000					1/2" Ice	2.045	1.393	0.103
			0.000					1" Ice	2.223	1.543	0.124
								2" Ice	2.601	1.865	0.175
RFV01U-D1A	C	From Leg	4.000			0.000	160.000	No Ice	1.875	1.250	0.084
(R)			0.000					1/2" Ice	2.045	1.393	0.103
			0.000					1" Ice	2.223	1.543	0.124
								2" Ice	2.601	1.865	0.175
RFV01U-D2A	A	From Leg	4.000			0.000	160.000	No Ice	1.875	1.013	0.070
(R)			0.000					1/2" Ice	2.045	1.145	0.087
			0.000					1" Ice	2.223	1.284	0.106
								2" Ice	2.601	1.585	0.153
RFV01U-D2A	B	From Leg	4.000			0.000	160.000	No Ice	1.875	1.013	0.070
(R)			0.000					1/2" Ice	2.045	1.145	0.087
			0.000					1" Ice	2.223	1.284	0.106
								2" Ice	2.601	1.585	0.153
RFV01U-D2A	C	From Leg	4.000			0.000	160.000	No Ice	1.875	1.013	0.070
(R)			0.000					1/2" Ice	2.045	1.145	0.087
			0.000					1" Ice	2.223	1.284	0.106
								2" Ice	2.601	1.585	0.153
5' x 2" Pipe Mount	A	From Leg	2.000			0.000	160.000	No Ice	1.000	1.000	0.018
(E-per MA)			0.000					1/2" Ice	1.393	1.393	0.026
			0.000					1" Ice	1.703	1.703	0.037
								2" Ice	2.351	2.351	0.071
(4) 8' x 2.375" Mount Pipe	A	From Leg	4.000			0.000	160.000	No Ice	1.900	1.900	0.061
(E-per MA)			0.000					1/2" Ice	2.728	2.728	0.075
			0.000					1" Ice	3.401	3.401	0.095
								2" Ice	4.396	4.396	0.150
(4) 8' x 2.375" Mount Pipe	B	From Leg	4.000			0.000	160.000	No Ice	1.900	1.900	0.061
(E-per MA)			0.000					1/2" Ice	2.728	2.728	0.075
			0.000					1" Ice	3.401	3.401	0.095
								2" Ice	4.396	4.396	0.150
(4) 8' x 2.375" Mount Pipe	C	From Leg	4.000			0.000	160.000	No Ice	1.900	1.900	0.061
(E-per MA)			0.000					1/2" Ice	2.728	2.728	0.075
			0.000					1" Ice	3.401	3.401	0.095
								2" Ice	4.396	4.396	0.150
Platform Mount [LP 303-1]	C	None				0.000	160.000	No Ice	14.690	14.690	1.250
(E)								1/2" Ice	18.010	18.010	1.569
								1" Ice	21.340	21.340	1.942
								2" Ice	28.080	28.080	2.852
LW											
SRL-224NM-4	B	From Leg	6.000			0.000	158.000	No Ice	2.600	2.600	0.035
(E)			0.000					1/2" Ice	4.680	4.680	0.045

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft	Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			0.000				1" Ice	6.760	6.760	0.056
							2" Ice	10.920	10.920	0.077
DB205-A	C	From Leg	6.000		0.000	158.000	No Ice	1.200	1.200	0.038
(E)			0.000				1/2" Ice	2.160	2.160	0.049
			0.000				1" Ice	3.120	3.120	0.061
							2" Ice	5.040	5.040	0.084
4' x 2" Pipe Mount	B	From Leg	6.000		0.000	158.000	No Ice	0.785	0.785	0.029
(E-For Omni)			0.000				1/2" Ice	1.028	1.028	0.035
			0.000				1" Ice	1.281	1.281	0.044
							2" Ice	1.814	1.814	0.072
4' x 2" Pipe Mount	C	From Leg	6.000		0.000	158.000	No Ice	0.785	0.785	0.029
(E-For Omni)			0.000				1/2" Ice	1.028	1.028	0.035
			0.000				1" Ice	1.281	1.281	0.044
							2" Ice	1.814	1.814	0.072
Side Arm Mount [SO 702-1]	B	From Leg	3.000		0.000	158.000	No Ice	0.620	1.490	0.027
(E)			0.000				1/2" Ice	0.740	2.070	0.042
			0.000				1" Ice	0.890	2.540	0.063
							2" Ice	1.250	3.550	0.122
Side Arm Mount [SO 702-1]	C	From Leg	3.000		0.000	158.000	No Ice	0.620	1.490	0.027
(E)			0.000				1/2" Ice	0.740	2.070	0.042
			0.000				1" Ice	0.890	2.540	0.063
							2" Ice	1.250	3.550	0.122
LW										
7770.00 w/ Mount Pipe	A	From Leg	4.000		0.000	151.000	No Ice	5.746	4.254	0.055
(E)			0.000				1/2" Ice	6.179	5.014	0.103
			0.000				1" Ice	6.607	5.711	0.157
							2" Ice	7.488	7.155	0.287
7770.00 w/ Mount Pipe	B	From Leg	4.000		0.000	151.000	No Ice	5.746	4.254	0.055
(E)			0.000				1/2" Ice	6.179	5.014	0.103
			0.000				1" Ice	6.607	5.711	0.157
							2" Ice	7.488	7.155	0.287
7770.00 w/ Mount Pipe	C	From Leg	4.000		0.000	151.000	No Ice	5.746	4.254	0.055
(E)			0.000				1/2" Ice	6.179	5.014	0.103
			0.000				1" Ice	6.607	5.711	0.157
							2" Ice	7.488	7.155	0.287
SBNH-1D6565C w/ Mount Pipe	A	From Leg	4.000		0.000	151.000	No Ice	5.560	4.470	0.085
(E)			0.000				1/2" Ice	6.070	4.970	0.167
			0.000				1" Ice	6.590	5.470	0.262
							2" Ice	7.650	6.520	0.495
SBNH-1D6565C w/ Mount Pipe	B	From Leg	4.000		0.000	151.000	No Ice	5.560	4.470	0.085
(E)			0.000				1/2" Ice	6.070	4.970	0.167
			0.000				1" Ice	6.590	5.470	0.262
							2" Ice	7.650	6.520	0.495
SBNH-1D6565C w/ Mount Pipe	C	From Leg	4.000		0.000	151.000	No Ice	5.560	4.470	0.085
(E)			0.000				1/2" Ice	6.070	4.970	0.167
			0.000				1" Ice	6.590	5.470	0.262
							2" Ice	7.650	6.520	0.495
DTMABP7819VG12A	A	From Leg	4.000		0.000	151.000	No Ice	0.976	0.339	0.019
(E)			0.000				1/2" Ice	1.100	0.419	0.026
			0.000				1" Ice	1.232	0.510	0.036
							2" Ice	1.517	0.714	0.060
DTMABP7819VG12A	B	From Leg	4.000		0.000	151.000	No Ice	0.976	0.339	0.019
(E)			0.000				1/2" Ice	1.100	0.419	0.026
			0.000				1" Ice	1.232	0.510	0.036
							2" Ice	1.517	0.714	0.060
DTMABP7819VG12A	C	From Leg	4.000		0.000	151.000	No Ice	0.976	0.339	0.019
(E)			0.000				1/2" Ice	1.100	0.419	0.026

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			0.000			1" Ice	1.232	0.510	0.036
						2" Ice	1.517	0.714	0.060
DC6-48-60-18-8F	A	From Leg	4.000	0.000	151.000	No Ice	1.212	1.212	0.033
(E)			0.000			1/2" Ice	1.892	1.892	0.055
			0.000			1" Ice	2.105	2.105	0.080
						2" Ice	2.570	2.570	0.138
TPA-65R-LCUUUU-H8	A	From Leg	4.000	0.000	151.000	No Ice	11.870	7.020	0.082
(R)			0.000			1/2" Ice	12.820	7.910	0.161
			0.000			1" Ice	13.770	8.820	0.248
						2" Ice	15.740	10.680	0.448
TPA-65R-LCUUUU-H8	B	From Leg	4.000	0.000	151.000	No Ice	11.870	7.020	0.082
(R)			0.000			1/2" Ice	12.820	7.910	0.161
			0.000			1" Ice	13.770	8.820	0.248
						2" Ice	15.740	10.680	0.448
TPA-65R-LCUUUU-H8	C	From Leg	4.000	0.000	151.000	No Ice	11.870	7.020	0.082
(R)			0.000			1/2" Ice	12.820	7.910	0.161
			0.000			1" Ice	13.770	8.820	0.248
						2" Ice	15.740	10.680	0.448
RRUS 32	A	From Leg	4.000	0.000	151.000	No Ice	2.857	1.777	0.055
(R)			0.000			1/2" Ice	3.083	1.968	0.077
			0.000			1" Ice	3.316	2.166	0.103
						2" Ice	3.805	2.583	0.165
RRUS 32	B	From Leg	4.000	0.000	151.000	No Ice	2.857	1.777	0.055
(R)			0.000			1/2" Ice	3.083	1.968	0.077
			0.000			1" Ice	3.316	2.166	0.103
						2" Ice	3.805	2.583	0.165
RRUS 32	C	From Leg	4.000	0.000	151.000	No Ice	2.857	1.777	0.055
(R)			0.000			1/2" Ice	3.083	1.968	0.077
			0.000			1" Ice	3.316	2.166	0.103
						2" Ice	3.805	2.583	0.165
RRUS 32 B2	A	From Leg	4.000	0.000	151.000	No Ice	2.731	1.668	0.053
(R)			0.000			1/2" Ice	2.953	1.855	0.074
			0.000			1" Ice	3.182	2.049	0.098
						2" Ice	3.663	2.458	0.157
RRUS 32 B2	B	From Leg	4.000	0.000	151.000	No Ice	2.731	1.668	0.053
(R)			0.000			1/2" Ice	2.953	1.855	0.074
			0.000			1" Ice	3.182	2.049	0.098
						2" Ice	3.663	2.458	0.157
RRUS 32 B2	C	From Leg	4.000	0.000	151.000	No Ice	2.731	1.668	0.053
(R)			0.000			1/2" Ice	2.953	1.855	0.074
			0.000			1" Ice	3.182	2.049	0.098
						2" Ice	3.663	2.458	0.157
DBC0062F3V52-1	A	From Leg	4.000	0.000	151.000	No Ice	0.711	0.220	0.013
(R)			0.000			1/2" Ice	0.818	0.289	0.018
			0.000			1" Ice	0.932	0.366	0.025
						2" Ice	1.182	0.543	0.044
DBC0062F3V52-1	B	From Leg	4.000	0.000	151.000	No Ice	0.711	0.220	0.013
(R)			0.000			1/2" Ice	0.818	0.289	0.018
			0.000			1" Ice	0.932	0.366	0.025
						2" Ice	1.182	0.543	0.044
DBC0062F3V52-1	C	From Leg	4.000	0.000	151.000	No Ice	0.711	0.220	0.013
(R)			0.000			1/2" Ice	0.818	0.289	0.018
			0.000			1" Ice	0.932	0.366	0.025
						2" Ice	1.182	0.543	0.044
(3) 10' x 2.875" Pipe Mount	A	From Leg	4.000	0.000	151.000	No Ice	2.875	2.875	0.085
(R - Mount Mod)			0.000			1/2" Ice	3.907	3.907	0.106
			0.000			1" Ice	4.956	4.956	0.134

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
						2" Ice	6.188	6.188	0.209
(3) 10' x 2.875" Pipe Mount (R - Mount Mod)	B	From Leg	4.000 0.000 0.000	0.000	151.000	No Ice 1/2" Ice 1" Ice 2" Ice	2.875 3.907 4.956 6.188	2.875 3.907 4.956 6.188	0.085 0.106 0.134 0.209
(3) 10' x 2.875" Pipe Mount (R - Mount Mod)	C	From Leg	4.000 0.000 0.000	0.000	151.000	No Ice 1/2" Ice 1" Ice 2" Ice	2.875 3.907 4.956 6.188	2.875 3.907 4.956 6.188	0.085 0.106 0.134 0.209
Miscellaneous [NA 510-1] (R - Mount Mod)	C	None		0.000	151.000	No Ice 1/2" Ice 1" Ice 2" Ice	6.360 8.520 10.620 14.640	6.360 8.520 10.620 14.640	0.256 0.344 0.459 0.769
Platform Mount [LP 403-1_KCKR] (E+ R-PRK-1245)	C	None		0.000	151.000	No Ice 1/2" Ice 1" Ice 2" Ice	30.160 37.530 45.130 61.010	30.160 37.530 45.130 61.010	1.775 2.318 2.971 4.615
LW									
DC6-48-60-18-8F (E)	C	From Leg	1.000 0.000 2.000	0.000	150.000	No Ice 1/2" Ice 1" Ice 2" Ice	1.212 1.892 2.105 2.570	1.212 1.892 2.105 2.570	0.033 0.055 0.080 0.138
RRUS 11 (R)	A	From Leg	1.000 0.000 0.000	0.000	150.000	No Ice 1/2" Ice 1" Ice 2" Ice	2.784 2.992 3.207 3.658	1.187 1.334 1.490 1.833	0.048 0.068 0.092 0.150
RRUS 11 (R)	B	From Leg	1.000 0.000 0.000	0.000	150.000	No Ice 1/2" Ice 1" Ice 2" Ice	2.784 2.992 3.207 3.658	1.187 1.334 1.490 1.833	0.048 0.068 0.092 0.150
RRUS 11 (R)	C	From Leg	1.000 0.000 0.000	0.000	150.000	No Ice 1/2" Ice 1" Ice 2" Ice	2.784 2.992 3.207 3.658	1.187 1.334 1.490 1.833	0.048 0.068 0.092 0.150
RRUS 12 (R)	A	From Leg	1.000 0.000 2.000	0.000	150.000	No Ice 1/2" Ice 1" Ice 2" Ice	3.145 3.365 3.592 4.069	1.285 1.438 1.600 1.954	0.058 0.081 0.108 0.171
RRUS 12 (R)	B	From Leg	1.000 0.000 2.000	0.000	150.000	No Ice 1/2" Ice 1" Ice 2" Ice	3.145 3.365 3.592 4.069	1.285 1.438 1.600 1.954	0.058 0.081 0.108 0.171
RRUS 12 (R)	C	From Leg	1.000 0.000 2.000	0.000	150.000	No Ice 1/2" Ice 1" Ice 2" Ice	3.145 3.365 3.592 4.069	1.285 1.438 1.600 1.954	0.058 0.081 0.108 0.171
Side Arm Mount [SO 102-3] (E)	C	None		0.000	150.000	No Ice 1/2" Ice 1" Ice 2" Ice	3.600 4.180 4.750 5.900	3.600 4.180 4.750 5.900	0.075 0.105 0.135 0.195
Pipe Mount [PM 601-3] (E)	C	None		0.000	150.000	No Ice 1/2" Ice 1" Ice 2" Ice	3.170 3.790 4.420 5.760	3.170 3.790 4.420 5.760	0.195 0.232 0.279 0.401
LW									
SRL-235-2 (E)	B	From Leg	6.000 0.000	0.000	132.000	No Ice 1/2" Ice	7.000 9.037	7.000 9.037	0.076 0.125

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft Vert ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			0.000			1" Ice	11.092	11.092	0.187
						2" Ice	15.250	15.250	0.351
4' x 2" Pipe Mount	B	From Leg	6.000	0.000	132.000	No Ice	0.785	0.785	0.029
(E-For Omni)			0.000			1/2" Ice	1.028	1.028	0.035
			0.000			1" Ice	1.281	1.281	0.044
						2" Ice	1.814	1.814	0.072
Side Arm Mount [SO 702-1]	B	From Leg	3.000	0.000	132.000	No Ice	0.620	1.490	0.027
(E)			0.000			1/2" Ice	0.740	2.070	0.042
			0.000			1" Ice	0.890	2.540	0.063
						2" Ice	1.250	3.550	0.122
Side Arm Mount [SO 104-3]	C	None		0.000	132.000	No Ice	2.620	2.620	0.288
(E-Mount Attachment)						1/2" Ice	3.300	3.300	0.408
						1" Ice	3.980	3.980	0.528
						2" Ice	5.350	5.350	0.768
LW									
PCS 1900 TMA RX	A	From Leg	2.000	0.000	124.000	No Ice	0.539	0.529	0.018
(E)			0.000			1/2" Ice	0.638	0.628	0.023
			0.000			1" Ice	0.745	0.734	0.031
						2" Ice	0.981	0.969	0.052
2' x 2" Pipe Mount	A	From Leg	2.000	0.000	124.000	No Ice	0.023	0.023	0.007
(E-For TMA)			0.000			1/2" Ice	0.049	0.049	0.008
			0.000			1" Ice	0.085	0.085	0.009
						2" Ice	0.186	0.186	0.013
Side Arm Mount [SO 104-3]	C	None		0.000	124.000	No Ice	2.620	2.620	0.288
(E)						1/2" Ice	3.300	3.300	0.408
						1" Ice	3.980	3.980	0.528
						2" Ice	5.350	5.350	0.768
LW									
* Sprint*									
* Clear Wire*									
(2) 6' x 2" Mount Pipe	A	From Leg	4.000	0.000	116.000	No Ice	1.200	1.200	0.022
(E - Per Photo)			0.000			1/2" Ice	1.802	1.802	0.031
			0.000			1" Ice	2.170	2.170	0.045
						2" Ice	2.932	2.932	0.084
6' x 2" Mount Pipe	B	From Leg	4.000	0.000	116.000	No Ice	1.200	1.200	0.022
(E - Per Photo)			0.000			1/2" Ice	1.802	1.802	0.031
			0.000			1" Ice	2.170	2.170	0.045
						2" Ice	2.932	2.932	0.084
8' x 2.375" Mount Pipe	B	From Leg	4.000	0.000	116.000	No Ice	1.900	1.900	0.061
(E - Per Photo(Dia))			0.000			1/2" Ice	2.728	2.728	0.075
			0.000			1" Ice	3.401	3.401	0.095
						2" Ice	4.396	4.396	0.150
(2) 6' x 2" Mount Pipe	C	From Leg	4.000	0.000	116.000	No Ice	1.200	1.200	0.022
(E - Per Photo)			0.000			1/2" Ice	1.802	1.802	0.031
			0.000			1" Ice	2.170	2.170	0.045
						2" Ice	2.932	2.932	0.084
HORIZON DUO	A	From Leg	4.000	0.000	116.000	No Ice	0.469	0.294	0.007
(E - V. Offset Per APP)			0.000			1/2" Ice	0.556	0.365	0.012
			0.000			1" Ice	0.650	0.444	0.018
						2" Ice	0.861	0.624	0.036
NNVV-65B-R4 w/ Mount	A	From Leg	4.000	0.000	116.000	No Ice	7.550	4.230	0.110
Pipe			0.000			1/2" Ice	8.040	4.670	0.197
(R)			2.000			1" Ice	8.530	5.120	0.296
						2" Ice	9.560	6.050	0.529
NNVV-65B-R4 w/ Mount	B	From Leg	4.000	0.000	116.000	No Ice	7.550	4.230	0.110
Pipe			0.000			1/2" Ice	8.040	4.670	0.197
(R)			2.000			1" Ice	8.530	5.120	0.296

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	9.560	6.050	0.529
NNVV-65B-R4 w/ Mount Pipe (R)	C	From Leg	4.000 0.000 2.000	0.000	116.000	No Ice 1/2" Ice 1" Ice 2" Ice	7.550 8.040 8.530 9.560	4.230 4.670 5.120 6.050	0.110 0.197 0.296 0.529
AAHC w/ Mount Pipe (R)	A	From Leg	4.000 0.000 2.000	0.000	116.000	No Ice 1/2" Ice 1" Ice 2" Ice	4.409 4.727 5.055 5.743	2.691 3.079 3.486 4.359	0.115 0.156 0.202 0.310
AAHC w/ Mount Pipe (R)	B	From Leg	4.000 0.000 2.000	0.000	116.000	No Ice 1/2" Ice 1" Ice 2" Ice	4.409 4.727 5.055 5.743	2.691 3.079 3.486 4.359	0.115 0.156 0.202 0.310
AAHC w/ Mount Pipe (R)	C	From Leg	4.000 0.000 2.000	0.000	116.000	No Ice 1/2" Ice 1" Ice 2" Ice	4.409 4.727 5.055 5.743	2.691 3.079 3.486 4.359	0.115 0.156 0.202 0.310
800MHZ 2X50W RRH (R)	A	From Leg	4.000 0.000 2.000	0.000	116.000	No Ice 1/2" Ice 1" Ice 2" Ice	2.134 2.320 2.512 2.920	1.773 1.946 2.127 2.510	0.053 0.074 0.098 0.157
(2) 800MHZ 2X50W RRH (R)	B	From Leg	4.000 0.000 2.000	0.000	116.000	No Ice 1/2" Ice 1" Ice 2" Ice	2.134 2.320 2.512 2.920	1.773 1.946 2.127 2.510	0.053 0.074 0.098 0.157
(3) 800MHZ 2X50W RRH (R)	C	From Leg	4.000 0.000 2.000	0.000	116.000	No Ice 1/2" Ice 1" Ice 2" Ice	2.134 2.320 2.512 2.920	1.773 1.946 2.127 2.510	0.053 0.074 0.098 0.157
(2) PCS 1900MHZ 4X45W-65MHZ (R)	A	From Leg	4.000 0.000 2.000	0.000	116.000	No Ice 1/2" Ice 1" Ice 2" Ice	2.322 2.527 2.739 3.185	2.238 2.441 2.651 3.093	0.060 0.083 0.110 0.173
PCS 1900MHZ 4X45W-65MHZ (R)	B	From Leg	4.000 0.000 2.000	0.000	116.000	No Ice 1/2" Ice 1" Ice 2" Ice	2.322 2.527 2.739 3.185	2.238 2.441 2.651 3.093	0.060 0.083 0.110 0.173
Miscellaneous [NA 509-3] (R - Site Pro1 - PRK-HD)	C	None		0.000	114.000	No Ice 1/2" Ice 1" Ice 2" Ice	11.840 16.960 22.080 32.320	11.840 16.960 22.080 32.320	0.275 0.296 0.317 0.360
Platform Mount [LP 405-1] (E)	C	None		0.000	116.000	No Ice 1/2" Ice 1" Ice 2" Ice	20.880 28.890 37.040 53.730	20.880 28.890 37.040 53.730	1.800 2.277 2.868 4.394
LW									
DB205-A (E-Per Photo)	B	From Leg	6.000 0.000 9.000	0.000	90.000	No Ice 1/2" Ice 1" Ice 2" Ice	1.200 2.160 3.120 5.040	1.200 2.160 3.120 5.040	0.038 0.049 0.061 0.084
MT-485002 w/ Mount Pipe (E)	C	From Leg	6.000 0.000 0.000	0.000	90.000	No Ice 1/2" Ice 1" Ice 2" Ice	1.372 1.574 1.788 2.253	0.473 0.681 0.902 1.391	0.011 0.022 0.037 0.075
5' x 2" Pipe Mount (E-For Omni)	B	From Leg	6.000 0.000 0.000	0.000	90.000	No Ice 1/2" Ice 1" Ice	1.000 1.393 1.703	1.000 1.393 1.703	0.018 0.026 0.037

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	2.351	2.351	0.071
Side Arm Mount [SO 104-3]	C	None		0.000	90.000	No Ice	2.620	2.620	0.288
(E-per photo)						1/2" Ice	3.300	3.300	0.408
						1" Ice	3.980	3.980	0.528
						2" Ice	5.350	5.350	0.768
Side Arm Mount [SO 702-1]	B	From Leg	3.000	0.000	90.000	No Ice	0.620	1.490	0.027
(E)			0.000			1/2" Ice	0.740	2.070	0.042
			0.000			1" Ice	0.890	2.540	0.063
						2" Ice	1.250	3.550	0.122
Side Arm Mount [SO 702-1]	C	From Leg	3.000	0.000	90.000	No Ice	0.620	1.490	0.027
(E)			0.000			1/2" Ice	0.740	2.070	0.042
			0.000			1" Ice	0.890	2.540	0.063
						2" Ice	1.250	3.550	0.122
LW									
SRL-235-2	C	From Leg	3.000	0.000	70.000	No Ice	7.000	7.000	0.076
(E)			0.000			1/2" Ice	9.037	9.037	0.125
			0.000			1" Ice	11.092	11.092	0.187
						2" Ice	15.250	15.250	0.351
2" x 2' Omni	C	From Leg	3.000	0.000	70.000	No Ice	0.304	0.304	0.005
(E-Per Photo)			0.000			1/2" Ice	0.432	0.432	0.008
			-6.000			1" Ice	0.578	0.578	0.013
						2" Ice	0.933	0.933	0.028
6' x 2" Mount Pipe	C	From Leg	3.000	0.000	70.000	No Ice	1.200	1.200	0.022
(E-For Omni)			0.000			1/2" Ice	1.802	1.802	0.031
			0.000			1" Ice	2.170	2.170	0.045
						2" Ice	2.932	2.932	0.084
Side Arm Mount [SO 701-1]	C	From Leg	1.500	0.000	70.000	No Ice	0.850	1.670	0.065
(E)			0.000			1/2" Ice	1.140	2.340	0.079
			0.000			1" Ice	1.430	3.010	0.093
						2" Ice	2.010	4.350	0.121
Side Arm Mount [SO 102-3]	C	None		0.000	70.000	No Ice	3.600	3.600	0.075
(E-Mount Attachment)						1/2" Ice	4.180	4.180	0.105
						1" Ice	4.750	4.750	0.135
						2" Ice	5.900	5.900	0.195
LW									
DB909XVTE-M	B	From Leg	3.000	0.000	33.000	No Ice	1.892	1.892	0.024
(E)			0.000			1/2" Ice	2.622	2.622	0.047
			0.000			1" Ice	2.952	2.952	0.073
						2" Ice	3.640	3.640	0.139
2" x 4' Omni	B	From Leg	3.000	0.000	33.000	No Ice	0.304	0.304	0.005
(E-Per Photo)			0.000			1/2" Ice	0.432	0.432	0.008
			0.000			1" Ice	0.578	0.578	0.013
						2" Ice	0.933	0.933	0.028
6' x 2" Mount Pipe	B	From Leg	3.000	0.000	33.000	No Ice	1.200	1.200	0.022
(E-For Yagi)			0.000			1/2" Ice	1.802	1.802	0.031
			0.000			1" Ice	2.170	2.170	0.045
						2" Ice	2.932	2.932	0.084
Side Arm Mount [SO 702-1]	B	From Leg	1.500	0.000	33.000	No Ice	0.620	1.490	0.027
(E)			0.000			1/2" Ice	0.740	2.070	0.042
			0.000			1" Ice	0.890	2.540	0.063
						2" Ice	1.250	3.550	0.122
Side Arm Mount [SO 102-3]	C	None		0.000	33.000	No Ice	3.600	3.600	0.075
(E-Mount Attachment)						1/2" Ice	4.180	4.180	0.105
						1" Ice	4.750	4.750	0.135
						2" Ice	5.900	5.900	0.195
LW									
4' ICE SHIELDS	A	From Leg	0.500	0.000	178.000	No Ice	1.400	0.467	0.030

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
(E)			0.000			1/2" Ice	1.884	0.640	0.095
			0.000			1" Ice	2.377	0.821	0.167
						2" Ice	3.388	1.210	0.332
4' ICE SHIELDS	A	From Leg	0.500	0.000	138.000	No Ice	1.400	0.467	0.030
(E)			0.000			1/2" Ice	1.884	0.640	0.095
			0.000			1" Ice	2.377	0.821	0.167
						2" Ice	3.388	1.210	0.332
4' ICE SHIELDS	A	From Leg	0.500	0.000	98.000	No Ice	1.400	0.467	0.030
(E)			0.000			1/2" Ice	1.884	0.640	0.095
			0.000			1" Ice	2.377	0.821	0.167
						2" Ice	3.388	1.210	0.332
4' ICE SHIELDS	B	From Leg	0.500	0.000	98.000	No Ice	1.400	0.467	0.030
(E)			0.000			1/2" Ice	1.884	0.640	0.095
			0.000			1" Ice	2.377	0.821	0.167
						2" Ice	3.388	1.210	0.332
4' ICE SHIELDS	C	From Leg	0.500	0.000	98.000	No Ice	1.400	0.467	0.030
(E)			0.000			1/2" Ice	1.884	0.640	0.095
			0.000			1" Ice	2.377	0.821	0.167
						2" Ice	3.388	1.210	0.332
LW									

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
VHLP2-18	B	Paraboloid w/o Radome	From Leg	4.000	0.000		116.000	2.175	No Ice	3.715	0.031
(E)				0.000					1/2" Ice	4.006	0.052
				4.000					1" Ice	4.296	0.072
									2" Ice	4.876	0.113
LW											
KP2F-34	B	Grid	From Leg	6.000	5.000		90.000	2.000	No Ice	3.140	0.005
(E)				0.000					1/2" Ice	3.410	0.023
				0.000					1" Ice	3.680	0.040
									2" Ice	4.276	0.075
LW											

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice
3	0.9 Dead+1.0 Wind 0 deg - No Ice
4	1.2 Dead+1.0 Wind 30 deg - No Ice
5	0.9 Dead+1.0 Wind 30 deg - No Ice

Comb. No.	Description
6	1.2 Dead+1.0 Wind 60 deg - No Ice
7	0.9 Dead+1.0 Wind 60 deg - No Ice
8	1.2 Dead+1.0 Wind 90 deg - No Ice
9	0.9 Dead+1.0 Wind 90 deg - No Ice
10	1.2 Dead+1.0 Wind 120 deg - No Ice
11	0.9 Dead+1.0 Wind 120 deg - No Ice
12	1.2 Dead+1.0 Wind 150 deg - No Ice
13	0.9 Dead+1.0 Wind 150 deg - No Ice
14	1.2 Dead+1.0 Wind 180 deg - No Ice
15	0.9 Dead+1.0 Wind 180 deg - No Ice
16	1.2 Dead+1.0 Wind 210 deg - No Ice
17	0.9 Dead+1.0 Wind 210 deg - No Ice
18	1.2 Dead+1.0 Wind 240 deg - No Ice
19	0.9 Dead+1.0 Wind 240 deg - No Ice
20	1.2 Dead+1.0 Wind 270 deg - No Ice
21	0.9 Dead+1.0 Wind 270 deg - No Ice
22	1.2 Dead+1.0 Wind 300 deg - No Ice
23	0.9 Dead+1.0 Wind 300 deg - No Ice
24	1.2 Dead+1.0 Wind 330 deg - No Ice
25	0.9 Dead+1.0 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	191.667 - 186.667	Pole	Max Tension	20	0.000	-0.000	0.000
			Max. Compression	26	-1.283	-0.888	-0.606
			Max. Mx	8	-0.640	-2.132	-0.215
			Max. My	14	-0.640	-0.301	-2.037
			Max. Vy	20	-0.474	1.481	-0.215
			Max. Vx	2	-0.469	-0.301	1.579
			Max. Torque	4			-0.432

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L2	186.667 - 181.567	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-14.603	-2.457	-1.635
			Max. Mx	8	-5.677	-9.282	-0.505
			Max. My	14	-5.674	-0.687	-9.045
			Max. Vy	20	-5.764	7.789	-0.452
			Max. Vx	2	-5.760	-0.633	7.989
			Max. Torque	5			-1.547
L3	181.567 - 176.567	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-16.080	-2.442	-1.235
			Max. Mx	8	-6.397	-38.922	-0.535
			Max. My	14	-6.390	-0.713	-38.744
			Max. Vy	20	-6.112	37.467	-0.429
			Max. Vx	2	-6.152	-0.603	37.706
			Max. Torque	5			-1.547
L4	176.567 - 171.567	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-17.216	-2.428	-1.346
			Max. Mx	8	-7.086	-70.255	-0.618
			Max. My	14	-7.079	-0.739	-70.346
			Max. Vy	20	-6.432	68.841	-0.458
			Max. Vx	2	-6.472	-0.572	69.219
			Max. Torque	5			-1.531
L5	171.567 - 166.567	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-18.350	-2.415	-1.456
			Max. Mx	8	-7.778	-103.167	-0.701
			Max. My	14	-7.771	-0.766	-103.529
			Max. Vy	20	-6.745	101.795	-0.487
			Max. Vx	2	-6.785	-0.540	102.313
			Max. Torque	5			-1.531
L6	166.567 - 161.567	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-19.483	-2.401	-1.566
			Max. Mx	8	-8.474	-137.623	-0.784
			Max. My	14	-8.467	-0.792	-138.258
			Max. Vy	20	-7.051	136.294	-0.515
			Max. Vx	2	-7.091	-0.508	136.954
			Max. Torque	5			-1.531
L7	161.567 - 156.567	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-31.954	-2.464	-1.946
			Max. Mx	8	-12.983	-187.768	-1.170
			Max. My	14	-12.964	-0.785	-189.437
			Max. Vy	20	-11.675	186.516	-0.844
			Max. Vx	2	-11.855	-0.439	187.369
			Max. Torque	5			-2.172
L8	156.567 - 151.567	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-33.257	-2.630	-1.972
			Max. Mx	8	-13.728	-246.796	-1.245
			Max. My	14	-13.709	-0.838	-249.414
			Max. Vy	20	-11.951	245.560	-0.862
			Max. Vx	2	-12.131	-0.428	247.287
			Max. Torque	5			-2.172
L9	151.567 - 146.567	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-49.470	-2.565	-1.429
			Max. Mx	8	-19.619	-334.652	-1.178
			Max. My	14	-19.597	-0.832	-338.143

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vy	20	-18.479	333.582	-0.733
			Max. Vx	2	-18.661	-0.353	336.280
			Max. Torque	5			-2.171
L10	146.567 - 141.567	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-50.836	-2.746	-1.460
			Max. Mx	8	-20.490	-427.497	-1.256
			Max. My	14	-20.470	-0.889	-431.953
			Max. Vy	20	-18.690	426.463	-0.751
			Max. Vx	2	-18.871	-0.340	430.040
			Max. Torque	5			-2.024
L11	141.567 - 141.417	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-50.877	-2.752	-1.461
			Max. Mx	8	-20.525	-430.298	-1.259
			Max. My	14	-20.505	-0.891	-434.783
			Max. Vy	20	-18.689	429.265	-0.752
			Max. Vx	2	-18.870	-0.340	432.869
			Max. Torque	5			-2.024
L12	141.417 - 136.417	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-53.005	-2.977	-0.827
			Max. Mx	8	-21.657	-524.733	-1.283
			Max. My	14	-21.635	-0.951	-530.186
			Max. Vy	20	-19.117	523.732	-0.715
			Max. Vx	2	-19.338	-0.329	528.335
			Max. Torque	5			-2.023
L13	136.417 - 131.417	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-56.171	-6.506	-2.766
			Max. Mx	8	-23.243	-622.465	-1.845
			Max. My	14	-23.221	-1.825	-628.707
			Max. Vy	20	-20.008	619.614	-1.232
			Max. Vx	2	-20.248	-1.150	625.690
			Max. Torque	5			-4.733
L14	131.417 - 126.417	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-58.035	-6.734	-2.798
			Max. Mx	8	-24.404	-723.372	-1.860
			Max. My	14	-24.383	-1.806	-730.884
			Max. Vy	20	-20.383	720.554	-1.344
			Max. Vx	2	-20.622	-1.217	727.787
			Max. Torque	5			-4.733
L15	126.417 - 121.417	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-61.680	-7.026	-2.629
			Max. Mx	8	-26.633	-826.608	-1.801
			Max. My	14	-26.596	-1.836	-836.226
			Max. Vy	20	-21.303	824.689	-1.382
			Max. Vx	14	21.536	-1.836	-836.226
			Max. Torque	5			-4.732
L16	121.417 - 121.167	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-61.793	-7.039	-2.631
			Max. Mx	8	-26.709	-831.835	-1.803
			Max. My	14	-26.670	-1.836	-841.616
			Max. Vy	20	-21.336	830.016	-1.389
			Max. Vx	14	21.568	-1.836	-841.616
			Max. Torque	5			-4.692
L17	121.167 - 116.167	Pole	Max Tension	1	0.000	0.000	0.000

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Compression	26	-64.224	-7.884	-3.010
			Max. Mx	20	-28.142	938.341	-1.150
			Max. My	14	-28.139	-2.091	-951.076
			Max. Vy	20	-21.978	938.341	-1.150
			Max. Vx	14	22.102	-2.091	-951.076
			Max. Torque	5			-5.038
L18	116.167 - 111.167	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-76.117	-8.540	-2.896
			Max. Mx	20	-33.491	1067.040	-0.696
			Max. My	14	-33.490	-2.436	-1080.683
			Max. Vy	20	-25.698	1067.040	-0.696
			Max. Vx	14	25.812	-2.436	-1080.683
			Max. Torque	5			-5.143
L19	111.167 - 110.042	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-76.636	-8.497	-2.907
			Max. Mx	20	-33.802	1095.987	-0.587
			Max. My	14	-33.801	-2.455	-1109.775
			Max. Vy	20	-25.787	1095.987	-0.587
			Max. Vx	14	25.901	-2.455	-1109.775
			Max. Torque	5			-5.142
L20	110.042 - 109.792	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-76.765	-8.488	-2.910
			Max. Mx	20	-33.891	1102.433	-0.564
			Max. My	14	-33.890	-2.460	-1116.253
			Max. Vy	20	-25.803	1102.433	-0.564
			Max. Vx	14	25.916	-2.460	-1116.253
			Max. Torque	5			-5.142
L21	109.792 - 105.083	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-79.448	-8.296	-2.964
			Max. Mx	20	-35.557	1224.828	-0.115
			Max. My	14	-35.556	-2.534	-1239.264
			Max. Vy	8	26.270	-1221.554	-2.049
			Max. Vx	2	-26.556	0.952	1230.882
			Max. Torque	5			-5.142
L22	105.083 - 104.833	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-79.619	-8.287	-2.968
			Max. Mx	20	-35.667	1231.380	-0.092
			Max. My	14	-35.667	-2.539	-1245.849
			Max. Vy	8	26.311	-1228.125	-2.053
			Max. Vx	2	-26.599	0.998	1237.521
			Max. Torque	5			-5.141
L23	104.833 - 100.917	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-83.189	-8.159	-3.047
			Max. Mx	20	-38.093	1335.538	0.251
			Max. My	14	-38.094	-2.582	-1350.502
			Max. Vy	8	27.072	-1332.611	-2.116
			Max. Vx	2	-27.377	1.745	1343.097
			Max. Torque	5			-5.141
L24	100.917 - 100.667	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-83.352	-8.172	-3.051
			Max. Mx	20	-38.202	1342.283	0.273
			Max. My	14	-38.203	-2.587	-1357.276
			Max. Vy	8	27.115	-1339.383	-2.120
			Max. Vx	2	-27.420	1.791	1349.940

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Torque	5			-5.141
L25	100.667 - 95.833	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-87.079	-8.407	-3.093
			Max. Mx	20	-40.036	1475.193	0.725
			Max. My	14	-40.054	-2.661	-1489.653
			Max. Vy	20	-28.009	1475.193	0.725
			Max. Vx	2	-27.965	2.692	1483.667
			Max. Torque	5			-5.140
L26	95.833 - 95.583	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-87.218	-8.420	-3.095
			Max. Mx	20	-40.132	1482.195	0.748
			Max. My	14	-40.150	-2.666	-1496.570
			Max. Vy	20	-28.025	1482.195	0.748
			Max. Vx	2	-27.981	2.738	1490.655
			Max. Torque	5			-5.140
L27	95.583 - 90.583	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-90.025	-8.668	-3.122
			Max. Mx	20	-41.911	1624.541	1.224
			Max. My	14	-41.943	-2.747	-1636.061
			Max. Vy	20	-28.930	1624.541	1.224
			Max. Vx	2	-28.882	3.666	1632.715
			Max. Torque	5			-5.140
L28	90.583 - 89.917	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-91.761	-9.796	-4.941
			Max. Mx	20	-42.636	1643.877	0.808
			Max. My	14	-42.669	-3.150	-1655.784
			Max. Vy	20	-29.417	1643.877	0.808
			Max. Vx	2	-29.369	3.397	1651.919
			Max. Torque	17			6.151
L29	89.917 - 89.667	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-91.936	-9.807	-4.942
			Max. Mx	20	-42.750	1651.237	0.829
			Max. My	14	-42.782	-3.152	-1662.941
			Max. Vy	20	-29.465	1651.237	0.829
			Max. Vx	2	-29.415	3.443	1659.263
			Max. Torque	17			6.151
L30	89.667 - 84.667	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-96.218	-9.878	-4.909
			Max. Mx	20	-45.583	1801.147	1.306
			Max. My	2	-45.583	4.474	1808.718
			Max. Vy	20	-30.464	1801.147	1.306
			Max. Vx	2	-30.388	4.474	1808.718
			Max. Torque	17			6.151
L31	84.667 - 80.833	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-100.595	-9.808	-4.840
			Max. Mx	20	-48.760	1919.624	1.712
			Max. My	2	-48.761	5.383	1926.686
			Max. Vy	20	-31.250	1919.624	1.712
			Max. Vx	2	-31.157	5.383	1926.686
			Max. Torque	17			6.150
L32	80.833 - 80.333	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-101.105	-9.806	-4.833
			Max. Mx	20	-49.143	1935.292	1.763

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. My	2	-49.143	5.497	1942.286
			Max. Vy	20	-31.348	1935.292	1.763
			Max. Vx	2	-31.254	5.497	1942.286
			Max. Torque	17			6.150
L33	80.333 - 80.083	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-101.313	-9.813	-4.832
			Max. Mx	20	-49.283	1943.138	1.785
			Max. My	2	-49.284	5.546	1950.103
			Max. Vy	20	-31.401	1943.138	1.785
			Max. Vx	2	-31.308	5.546	1950.103
			Max. Torque	17			6.150
L34	80.083 - 75.083	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-105.102	-9.992	-4.853
			Max. Mx	20	-51.758	2102.700	2.233
			Max. My	2	-51.758	6.515	2109.092
			Max. Vy	20	-32.416	2102.700	2.233
			Max. Vx	2	-32.323	6.515	2109.092
			Max. Torque	17			6.150
L35	75.083 - 70.083	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-109.481	-10.414	-4.885
			Max. Mx	20	-54.658	2267.213	2.658
			Max. My	2	-54.658	7.287	2273.207
			Max. Vy	20	-33.464	2267.213	2.658
			Max. Vx	2	-33.371	7.287	2273.207
			Max. Torque	17			6.149
L36	70.083 - 69.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-110.864	-8.020	-6.302
			Max. Mx	20	-55.330	2287.718	2.265
			Max. My	2	-55.330	8.153	2292.394
			Max. Vy	20	-34.062	2287.718	2.265
			Max. Vx	2	-33.983	8.153	2292.394
			Max. Torque	17			6.149
L37	69.5 - 69.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-111.143	-8.045	-6.303
			Max. Mx	20	-55.517	2296.229	2.288
			Max. My	2	-55.517	8.191	2300.892
			Max. Vy	20	-34.119	2296.229	2.288
			Max. Vx	2	-34.040	8.191	2300.892
			Max. Torque	7			-5.653
L38	69.25 - 64.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-119.549	-9.043	-6.306
			Max. Mx	20	-61.882	2469.128	2.782
			Max. My	2	-61.882	8.524	2473.972
			Max. Vy	20	-35.312	2469.128	2.782
			Max. Vx	2	-35.234	8.524	2473.972
			Max. Torque	7			-5.653
L39	64.25 - 60.583	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-126.355	-9.854	-6.260
			Max. Mx	20	-67.059	2599.654	3.177
			Max. My	2	-67.054	8.730	2605.117
			Max. Vy	20	-36.181	2599.654	3.177
			Max. Vx	2	-36.328	8.730	2605.117
			Max. Torque	7			-5.653
L40	60.583 - 60.333	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-126.638	-9.880	-6.258
			Max. Mx	20	-67.265	2608.692	3.202
			Max. My	2	-67.260	8.768	2614.200

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vy	20	-36.229	2608.692	3.202
			Max. Vx	2	-36.376	8.768	2614.200
			Max. Torque	7			-5.653
L41	60.333 - 55.333	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-132.177	-10.383	-6.239
			Max. Mx	20	-71.046	2792.390	3.697
			Max. My	2	-71.041	9.526	2798.785
			Max. Vy	20	-37.356	2792.390	3.697
			Max. Vx	2	-37.503	9.526	2798.785
			Max. Torque	7			-5.653
L42	55.333 - 52.167	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-134.365	-10.521	-6.240
			Max. Mx	20	-72.537	2911.525	4.002
			Max. My	2	-72.532	10.133	2918.347
			Max. Vy	20	-37.936	2911.525	4.002
			Max. Vx	2	-38.083	10.133	2918.347
			Max. Torque	7			-5.652
L43	52.167 - 51.917	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-134.560	-10.532	-6.241
			Max. Mx	20	-72.683	2921.011	4.025
			Max. My	2	-72.678	10.181	2927.866
			Max. Vy	20	-37.976	2921.011	4.025
			Max. Vx	2	-38.123	10.181	2927.866
			Max. Torque	7			-5.652
L44	51.917 - 46.917	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-139.134	-10.908	-6.213
			Max. Mx	20	-75.780	3113.231	4.589
			Max. My	2	-75.776	11.075	3120.881
			Max. Vy	20	-38.962	3113.231	4.589
			Max. Vx	2	-39.100	11.075	3120.881
			Max. Torque	7			-5.652
L45	46.917 - 41.917	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-145.071	-11.333	-5.679
			Max. Mx	20	-79.749	3310.581	5.533
			Max. My	2	-79.746	11.955	3319.306
			Max. Vy	20	-40.039	3310.581	5.533
			Max. Vx	2	-40.140	11.955	3319.306
			Max. Torque	7			-5.652
L46	41.917 - 40.333	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-146.907	-11.457	-5.510
			Max. Mx	20	-80.996	3374.211	5.832
			Max. My	2	-80.993	12.239	3383.234
			Max. Vy	20	-40.369	3374.211	5.832
			Max. Vx	2	-40.459	12.239	3383.234
			Max. Torque	7			-5.651
L47	40.333 - 40.083	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-147.168	-11.469	-5.483
			Max. Mx	20	-81.188	3384.304	5.879
			Max. My	2	-81.185	12.288	3393.368
			Max. Vy	20	-40.402	3384.304	5.879
			Max. Vx	2	-40.491	12.288	3393.368
			Max. Torque	7			-5.651
L48	40.083 - 35.083	Pole	Max Tension	1	0.000	0.000	0.000

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Compression	26	-152.443	-11.681	-4.887
			Max. Mx	20	-84.858	3588.574	6.828
			Max. My	2	-84.855	13.270	3598.448
			Max. Vy	20	-41.324	3588.574	6.828
			Max. Vx	2	-41.408	13.270	3598.448
			Max. Torque	7			-5.651
L49	35.083 - 30.083	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-157.290	-13.340	-5.428
			Max. Mx	20	-88.177	3797.250	7.260
			Max. My	2	-88.174	13.813	3807.918
			Max. Vy	20	-42.303	3797.250	7.260
			Max. Vx	2	-42.412	13.813	3807.918
			Max. Torque	7			-6.260
L50	30.083 - 28	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-158.922	-13.408	-5.463
			Max. Mx	20	-89.299	3885.633	7.438
			Max. My	2	-89.297	14.190	3896.512
			Max. Vy	20	-42.600	3885.633	7.438
			Max. Vx	2	-42.720	14.190	3896.512
			Max. Torque	7			-6.260
L51	28 - 27.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-159.142	-13.416	-5.467
			Max. Mx	20	-89.465	3896.282	7.459
			Max. My	2	-89.462	14.235	3907.189
			Max. Vy	20	-42.625	3896.282	7.459
			Max. Vx	2	-42.747	14.235	3907.189
			Max. Torque	7			-6.260
L52	27.75 - 22.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-164.884	-13.657	-5.601
			Max. Mx	20	-93.582	4111.361	7.852
			Max. My	2	-93.580	15.080	4122.898
			Max. Vy	20	-43.456	4111.361	7.852
			Max. Vx	2	-43.603	15.080	4122.898
			Max. Torque	7			-6.260
L53	22.75 - 20.083	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-167.941	-13.787	-5.673
			Max. Mx	20	-95.808	4227.745	8.060
			Max. My	2	-95.805	15.529	4239.666
			Max. Vy	20	-43.890	4227.745	8.060
			Max. Vx	2	-44.048	15.529	4239.666
			Max. Torque	7			-6.259
L54	20.083 - 19.833	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-168.200	-13.800	-5.679
			Max. Mx	20	-96.006	4238.713	8.079
			Max. My	2	-96.004	15.571	4250.671
			Max. Vy	20	-43.912	4238.713	8.079
			Max. Vx	2	-44.070	15.571	4250.671
			Max. Torque	7			-6.259
L55	19.833 - 17	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-171.233	-13.983	-5.829
			Max. Mx	20	-98.153	4363.674	8.300
			Max. My	2	-98.151	16.046	4376.070
			Max. Vy	20	-44.373	4363.674	8.300
			Max. Vx	2	-44.541	16.046	4376.070
			Max. Torque	7			-6.259
L56	17 - 16.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-171.516	-14.004	-5.841
			Max. Mx	20	-98.379	4374.761	8.320
			Max. My	2	-98.377	16.088	4387.197

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vy	20	-44.389	4374.761	8.320
			Max. Vx	2	-44.557	16.088	4387.197
			Max. Torque	7			-6.259
L57	16.75 - 11.65	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-177.045	-14.380	-6.108
			Max. Mx	20	-102.608	4602.969	8.723
			Max. My	2	-102.607	16.955	4616.297
			Max. Vy	20	-45.153	4602.969	8.723
			Max. Vx	2	-45.353	16.955	4616.297
			Max. Torque	7			-6.259
L58	11.65 - 11.417	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-177.246	-14.391	-6.122
			Max. Mx	20	-102.772	4613.485	8.743
			Max. My	2	-102.770	16.997	4626.860
			Max. Vy	20	-45.151	4613.485	8.743
			Max. Vx	2	-45.372	16.997	4626.860
			Max. Torque	7			-6.259
L59	11.417 - 9.396	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-179.014	-14.498	-6.169
			Max. Mx	20	-104.124	4704.986	8.914
			Max. My	2	-104.122	17.359	4718.793
			Max. Vy	20	-45.432	4704.986	8.914
			Max. Vx	2	-45.665	17.359	4718.793
			Max. Torque	7			-6.259
L60	9.396 - 9.146	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-179.239	-14.511	-6.172
			Max. Mx	20	-104.304	4716.342	8.936
			Max. My	2	-104.303	17.404	4730.204
			Max. Vy	20	-45.451	4716.342	8.936
			Max. Vx	2	-45.686	17.404	4730.204
			Max. Torque	7			-6.259
L61	9.146 - 4.833	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-183.094	-14.735	-6.217
			Max. Mx	20	-107.302	4913.571	9.300
			Max. My	2	-107.301	18.176	4928.434
			Max. Vy	20	-46.038	4913.571	9.300
			Max. Vx	2	-46.295	18.176	4928.434
			Max. Torque	7			-6.259
L62	4.833 - 4.583	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-183.313	-14.748	-6.220
			Max. Mx	20	-107.481	4925.078	9.322
			Max. My	2	-107.480	18.221	4940.003
			Max. Vy	20	-46.055	4925.078	9.322
			Max. Vx	2	-46.313	18.221	4940.003
			Max. Torque	7			-6.259
L63	4.583 - 0	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-187.213	-14.995	-6.208
			Max. Mx	20	-110.620	5137.430	9.708
			Max. My	2	-110.620	19.039	5153.503
			Max. Vy	20	-46.651	5137.430	9.708
			Max. Vx	2	-46.921	19.039	5153.503
			Max. Torque	7			-6.259

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	26	187.213	-0.000	-0.000
	Max. H_x	20	110.632	46.624	0.101
	Max. H_z	2	110.632	0.181	46.894
	Max. M_x	2	5153.503	0.181	46.894
	Max. M_z	8	5019.072	-45.212	0.012
	Max. Torsion	19	5.994	39.928	-22.966
	Min. Vert	17	82.974	22.221	-38.712
	Min. H_x	8	110.632	-45.212	0.012
	Min. H_z	14	110.632	-0.009	-45.188
	Min. M_x	14	-5055.686	-0.009	-45.188
	Min. M_z	20	-5137.430	46.624	0.101
	Min. Torsion	7	-6.259	-38.523	22.351

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	92.193	0.000	0.000	2.827	-3.273	-0.000
1.2 Dead+1.0 Wind 0 deg - No Ice	110.632	-0.181	-46.894	-5153.503	19.040	4.170
0.9 Dead+1.0 Wind 0 deg - No Ice	82.974	-0.181	-46.894	-5103.422	19.899	4.177
1.2 Dead+1.0 Wind 30 deg - No Ice	110.632	23.562	-41.006	-4526.206	-2601.242	5.925
0.9 Dead+1.0 Wind 30 deg - No Ice	82.974	23.562	-41.006	-4482.393	-2574.553	5.932
1.2 Dead+1.0 Wind 60 deg - No Ice	110.632	38.523	-22.351	-2545.126	-4389.332	6.253
0.9 Dead+1.0 Wind 60 deg - No Ice	82.974	38.523	-22.351	-2520.628	-4344.559	6.259
1.2 Dead+1.0 Wind 90 deg - No Ice	110.632	45.212	-0.012	2.759	-5019.072	4.826
0.9 Dead+1.0 Wind 90 deg - No Ice	82.974	45.212	-0.012	1.832	-4968.039	4.828
1.2 Dead+1.0 Wind 120 deg - No Ice	110.632	40.479	23.491	2583.830	-4440.676	1.823
0.9 Dead+1.0 Wind 120 deg - No Ice	82.974	40.479	23.491	2557.383	-4395.788	1.822
1.2 Dead+1.0 Wind 150 deg - No Ice	110.632	23.431	40.818	4538.262	-2602.323	-1.670
0.9 Dead+1.0 Wind 150 deg - No Ice	82.974	23.431	40.818	4492.514	-2575.603	-1.674
1.2 Dead+1.0 Wind 180 deg - No Ice	110.632	0.009	45.188	5055.686	-5.746	-4.427
0.9 Dead+1.0 Wind 180 deg - No Ice	82.974	0.009	45.188	5004.336	-4.663	-4.434
1.2 Dead+1.0 Wind 210 deg - No Ice	110.632	-22.221	38.712	4311.367	2463.295	-5.943
0.9 Dead+1.0 Wind 210 deg - No Ice	82.974	-22.221	38.712	4267.334	2439.696	-5.950
1.2 Dead+1.0 Wind 240 deg - No Ice	110.632	-39.928	22.966	2523.219	4373.296	-5.989
0.9 Dead+1.0 Wind 240 deg - No Ice	82.974	-39.928	22.966	2497.262	4330.978	-5.994
1.2 Dead+1.0 Wind 270 deg - No Ice	110.632	-46.624	-0.101	-9.709	5137.430	-4.433

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
0.9 Dead+1.0 Wind 270 deg - No Ice	82.974	-46.624	-0.101	-10.520	5087.662	-4.435
1.2 Dead+1.0 Wind 300 deg - No Ice	110.632	-38.899	-22.576	-2523.718	4340.977	-1.838
0.9 Dead+1.0 Wind 300 deg - No Ice	82.974	-38.899	-22.576	-2499.404	4298.685	-1.837
1.2 Dead+1.0 Wind 330 deg - No Ice	110.632	-22.456	-38.906	-4316.708	2486.466	1.271
0.9 Dead+1.0 Wind 330 deg - No Ice	82.974	-22.456	-38.906	-4274.447	2462.672	1.276
1.2 Dead+1.0 Ice+1.0 Temp	187.213	0.000	0.000	6.208	-14.995	0.000
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	187.213	-0.061	-11.598	-1491.070	-8.996	1.662
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	187.213	5.692	-9.948	-1284.605	-753.491	2.461
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	187.213	9.808	-5.706	-737.661	-1291.636	2.602
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	187.213	11.358	-0.010	4.737	-1488.498	2.048
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	187.213	9.963	5.794	753.731	-1298.649	0.850
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	187.213	5.685	9.940	1297.526	-752.502	-0.581
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	187.213	-0.005	11.481	1496.484	-14.436	-1.767
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	187.213	-5.658	9.882	1291.599	719.585	-2.459
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	187.213	-9.946	5.715	746.464	1267.935	-2.501
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	187.213	-11.414	-0.036	2.866	1462.596	-1.848
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	187.213	-9.873	-5.747	-739.392	1264.421	-0.819
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	187.213	-5.715	-9.910	-1279.989	724.303	0.422
Dead+Wind 0 deg - Service	92.193	-0.039	-10.176	-1109.225	1.592	0.910
Dead+Wind 30 deg - Service	92.193	5.113	-8.898	-973.955	-563.513	1.292
Dead+Wind 60 deg - Service	92.193	8.359	-4.850	-546.667	-949.069	1.362
Dead+Wind 90 deg - Service	92.193	9.811	-0.003	2.776	-1084.862	1.051
Dead+Wind 120 deg - Service	92.193	8.784	5.097	559.406	-960.192	0.396
Dead+Wind 150 deg - Service	92.193	5.085	8.857	980.913	-563.743	-0.365
Dead+Wind 180 deg - Service	92.193	0.002	9.806	1092.423	-3.756	-0.966
Dead+Wind 210 deg - Service	92.193	-4.822	8.400	931.890	528.674	-1.296
Dead+Wind 240 deg - Service	92.193	-8.664	4.984	546.319	940.605	-1.305
Dead+Wind 270 deg - Service	92.193	-10.117	-0.022	0.087	1105.423	-0.965
Dead+Wind 300 deg - Service	92.193	-8.441	-4.899	-542.047	933.601	-0.399
Dead+Wind 330 deg - Service	92.193	-4.873	-8.442	-928.688	533.678	0.278

Solution Summary

	Sum of Applied Forces			Sum of Reactions			
Load Comb.	PX	PY	PZ	PX	PY	PZ	% Error
	K	K	K	K	K	K	
1	0.000	-92.193	0.000	0.000	92.193	0.000	0.000%
2	-0.181	-110.632	-46.894	0.181	110.632	46.894	0.000%
3	-0.181	-82.974	-46.894	0.181	82.974	46.894	0.000%
4	23.562	-110.632	-41.006	-23.562	110.632	41.006	0.000%
5	23.562	-82.974	-41.006	-23.562	82.974	41.006	0.000%

Load Comb.	Sum of Applied Forces PX K	PY K	PZ K	Sum of Reactions PX K	PY K	PZ K	% Error
6	38.523	-110.632	-22.351	-38.523	110.632	22.351	0.000%
7	38.523	-82.974	-22.351	-38.523	82.974	22.351	0.000%
8	45.212	-110.632	-0.012	-45.212	110.632	0.012	0.000%
9	45.212	-82.974	-0.012	-45.212	82.974	0.012	0.000%
10	40.479	-110.632	23.491	-40.479	110.632	-23.491	0.000%
11	40.479	-82.974	23.491	-40.479	82.974	-23.491	0.000%
12	23.431	-110.632	40.818	-23.431	110.632	-40.818	0.000%
13	23.431	-82.974	40.818	-23.431	82.974	-40.818	0.000%
14	0.009	-110.632	45.188	-0.009	110.632	-45.188	0.000%
15	0.009	-82.974	45.188	-0.009	82.974	-45.188	0.000%
16	-22.221	-110.632	38.712	22.221	110.632	-38.712	0.000%
17	-22.221	-82.974	38.712	22.221	82.974	-38.712	0.000%
18	-39.928	-110.632	22.966	39.928	110.632	-22.966	0.000%
19	-39.928	-82.974	22.966	39.928	82.974	-22.966	0.000%
20	-46.624	-110.632	-0.101	46.624	110.632	0.101	0.000%
21	-46.624	-82.974	-0.101	46.624	82.974	0.101	0.000%
22	-38.899	-110.632	-22.576	38.899	110.632	22.576	0.000%
23	-38.899	-82.974	-22.576	38.899	82.974	22.576	0.000%
24	-22.456	-110.632	-38.906	22.456	110.632	38.906	0.000%
25	-22.456	-82.974	-38.906	22.456	82.974	38.906	0.000%
26	0.000	-187.213	0.000	-0.000	187.213	-0.000	0.000%
27	-0.061	-187.213	-11.598	0.061	187.213	11.598	0.000%
28	5.692	-187.213	-9.948	-5.692	187.213	9.948	0.000%
29	9.808	-187.213	-5.706	-9.808	187.213	5.706	0.000%
30	11.358	-187.213	-0.010	-11.358	187.213	0.010	0.000%
31	9.963	-187.213	5.794	-9.963	187.213	-5.794	0.000%
32	5.685	-187.213	9.940	-5.685	187.213	-9.940	0.000%
33	-0.005	-187.213	11.481	0.005	187.213	-11.481	0.000%
34	-5.658	-187.213	9.882	5.658	187.213	-9.882	0.000%
35	-9.946	-187.213	5.715	9.946	187.213	-5.715	0.000%
36	-11.414	-187.213	-0.036	11.414	187.213	0.036	0.000%
37	-9.873	-187.213	-5.747	9.873	187.213	5.747	0.000%
38	-5.715	-187.213	-9.910	5.715	187.213	9.910	0.000%
39	-0.039	-92.193	-10.176	0.039	92.193	10.176	0.000%
40	5.113	-92.193	-8.898	-5.113	92.193	8.898	0.000%
41	8.359	-92.193	-4.850	-8.359	92.193	4.850	0.000%
42	9.811	-92.193	-0.003	-9.811	92.193	0.003	0.000%
43	8.784	-92.193	5.097	-8.784	92.193	-5.097	0.000%
44	5.085	-92.193	8.857	-5.085	92.193	-8.857	0.000%
45	0.002	-92.193	9.806	-0.002	92.193	-9.806	0.000%
46	-4.822	-92.193	8.400	4.822	92.193	-8.400	0.000%
47	-8.664	-92.193	4.984	8.664	92.193	-4.984	0.000%
48	-10.117	-92.193	-0.022	10.117	92.193	0.022	0.000%
49	-8.441	-92.193	-4.899	8.441	92.193	4.899	0.000%
50	-4.873	-92.193	-8.442	4.873	92.193	8.442	0.000%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	4	0.00000001	0.00000228
2	Yes	5	0.00000001	0.00076866
3	Yes	5	0.00000001	0.00038665
4	Yes	6	0.00000001	0.00032748
5	Yes	6	0.00000001	0.00012017
6	Yes	6	0.00000001	0.00026527

7	Yes	6	0.00000001	0.00009646
8	Yes	5	0.00000001	0.00075260
9	Yes	5	0.00000001	0.00037881
10	Yes	6	0.00000001	0.00029295
11	Yes	6	0.00000001	0.00010691
12	Yes	6	0.00000001	0.00031037
13	Yes	6	0.00000001	0.00011315
14	Yes	5	0.00000001	0.00086489
15	Yes	5	0.00000001	0.00043795
16	Yes	6	0.00000001	0.00025093
17	Yes	6	0.00000001	0.00009152
18	Yes	6	0.00000001	0.00030602
19	Yes	6	0.00000001	0.00011284
20	Yes	5	0.00000001	0.00066694
21	Yes	5	0.00000001	0.00033214
22	Yes	6	0.00000001	0.00027626
23	Yes	6	0.00000001	0.00010114
24	Yes	6	0.00000001	0.00026690
25	Yes	6	0.00000001	0.00009774
26	Yes	5	0.00000001	0.00018678
27	Yes	7	0.00000001	0.00012687
28	Yes	7	0.00000001	0.00013926
29	Yes	7	0.00000001	0.00013800
30	Yes	7	0.00000001	0.00012810
31	Yes	7	0.00000001	0.00013973
32	Yes	7	0.00000001	0.00014004
33	Yes	7	0.00000001	0.00012847
34	Yes	7	0.00000001	0.00013646
35	Yes	7	0.00000001	0.00013664
36	Yes	7	0.00000001	0.00012423
37	Yes	7	0.00000001	0.00013407
38	Yes	7	0.00000001	0.00013471
39	Yes	5	0.00000001	0.00005076
40	Yes	5	0.00000001	0.00010081
41	Yes	5	0.00000001	0.00007746
42	Yes	5	0.00000001	0.00004914
43	Yes	5	0.00000001	0.00008306
44	Yes	5	0.00000001	0.00008923
45	Yes	5	0.00000001	0.00005219
46	Yes	5	0.00000001	0.00007464
47	Yes	5	0.00000001	0.00009450
48	Yes	5	0.00000001	0.00004778
49	Yes	5	0.00000001	0.00007555
50	Yes	5	0.00000001	0.00007327

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	191.667 - 186.667	18.582	44	0.903	0.006
L2	186.667 - 181.567	17.637	44	0.902	0.006
L3	181.567 - 176.567	16.674	44	0.901	0.006
L4	176.567 - 171.567	15.732	44	0.897	0.005
L5	171.567 - 166.567	14.797	44	0.888	0.005
L6	166.567 - 161.567	13.874	44	0.874	0.005
L7	161.567 - 156.567	12.968	44	0.855	0.004
L8	156.567 - 151.567	12.086	44	0.829	0.004
L9	151.567 - 146.567	11.235	44	0.794	0.004
L10	146.567 - 141.567	10.427	44	0.748	0.003

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L11	141.567 - 141.417	9.674	44	0.687	0.003
L12	141.417 - 136.417	9.653	44	0.685	0.003
L13	136.417 - 131.417	8.947	44	0.662	0.003
L14	131.417 - 126.417	8.267	44	0.636	0.003
L15	126.417 - 121.417	7.618	44	0.604	0.002
L16	121.417 - 121.167	7.004	44	0.568	0.002
L17	121.167 - 116.167	6.974	44	0.566	0.002
L18	116.167 - 111.167	6.395	44	0.540	0.002
L19	111.167 - 110.042	5.844	44	0.511	0.002
L20	110.042 - 109.792	5.725	44	0.503	0.002
L21	109.792 - 105.083	5.699	44	0.502	0.001
L22	105.083 - 104.833	5.215	44	0.477	0.001
L23	104.833 - 100.917	5.190	44	0.476	0.001
L24	100.917 - 100.667	4.808	44	0.456	0.001
L25	100.667 - 95.833	4.784	44	0.455	0.001
L26	95.833 - 95.583	4.337	44	0.428	0.001
L27	95.583 - 90.583	4.315	44	0.427	0.001
L28	90.583 - 89.917	3.880	44	0.403	0.001
L29	89.917 - 89.667	3.824	44	0.399	0.001
L30	89.667 - 84.667	3.803	44	0.398	0.001
L31	84.667 - 80.833	3.398	44	0.376	0.001
L32	80.833 - 80.333	3.103	44	0.357	0.001
L33	80.333 - 80.083	3.066	44	0.355	0.001
L34	80.083 - 75.083	3.048	44	0.354	0.001
L35	75.083 - 70.083	2.688	44	0.333	0.001
L36	70.083 - 69.5	2.351	44	0.309	0.001
L37	69.5 - 69.25	2.314	44	0.307	0.001
L38	69.25 - 64.25	2.298	44	0.306	0.001
L39	64.25 - 60.583	1.988	44	0.284	0.001
L40	60.583 - 60.333	1.776	44	0.268	0.001
L41	60.333 - 55.333	1.762	44	0.267	0.001
L42	55.333 - 52.167	1.493	44	0.247	0.000
L43	52.167 - 51.917	1.334	44	0.233	0.000
L44	51.917 - 46.917	1.322	44	0.233	0.000
L45	46.917 - 41.917	1.088	44	0.214	0.000
L46	41.917 - 40.333	0.874	44	0.195	0.000
L47	40.333 - 40.083	0.810	44	0.188	0.000
L48	40.083 - 35.083	0.800	44	0.187	0.000
L49	35.083 - 30.083	0.616	44	0.165	0.000
L50	30.083 - 28	0.455	44	0.141	0.000
L51	28 - 27.75	0.396	44	0.131	0.000
L52	27.75 - 22.75	0.389	44	0.130	0.000
L53	22.75 - 20.083	0.264	44	0.109	0.000
L54	20.083 - 19.833	0.206	44	0.097	0.000
L55	19.833 - 17	0.201	44	0.096	0.000
L56	17 - 16.75	0.148	44	0.081	0.000
L57	16.75 - 11.65	0.144	44	0.080	0.000
L58	11.65 - 11.417	0.071	44	0.057	0.000
L59	11.417 - 9.396	0.068	44	0.056	0.000
L60	9.396 - 9.146	0.047	44	0.046	0.000
L61	9.146 - 4.833	0.044	44	0.045	0.000
L62	4.833 - 4.583	0.013	44	0.025	0.000
L63	4.583 - 0	0.011	44	0.024	0.000

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
191.667	Lightning Rod 5/8" x 4' on 4' Pole	44	18.582	0.903	0.006	365775
191.000	WB2623 w/ Mount Pipe	44	18.456	0.903	0.006	365775
184.000	OGB4-900D	44	17.134	0.902	0.006	239554
178.000	4' ICE SHIELDS	44	16.002	0.899	0.005	55963
160.000	(2) LNX-8513DS-A1M	44	12.688	0.848	0.004	11659
158.000	SRL-224NM-4	44	12.336	0.837	0.004	10305
151.000	7770.00 w/ Mount Pipe	44	11.141	0.789	0.004	6884
150.000	DC6-48-60-18-8F	44	10.976	0.781	0.003	6496
138.000	4' ICE SHIELDS	44	9.168	0.665	0.003	11227
132.000	SRL-235-2	44	8.345	0.639	0.003	10052
124.000	PCS 1900 TMA RX	44	7.316	0.587	0.002	8247
120.000	VHLP2-18	44	6.836	0.558	0.002	9774
116.000	(2) 6' x 2" Mount Pipe	44	6.376	0.539	0.002	10314
114.000	Miscellaneous [NA 509-3]	44	6.152	0.529	0.002	9872
98.000	4' ICE SHIELDS	44	4.534	0.440	0.001	10689
90.000	KP2F-34	44	3.831	0.400	0.001	12197
70.000	SRL-235-2	44	2.346	0.309	0.001	12693
33.000	DB909XVTE-M	44	0.546	0.156	0.000	12281

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	191.667 - 186.667	85.829	12	4.164	0.028
L2	186.667 - 181.567	81.476	12	4.162	0.027
L3	181.567 - 176.567	77.037	12	4.160	0.026
L4	176.567 - 171.567	72.695	12	4.143	0.024
L5	171.567 - 166.567	68.382	12	4.103	0.023
L6	166.567 - 161.567	64.123	12	4.039	0.022
L7	161.567 - 156.567	59.944	12	3.950	0.020
L8	156.567 - 151.567	55.872	12	3.832	0.019
L9	151.567 - 146.567	51.944	12	3.671	0.017
L10	146.567 - 141.567	48.210	12	3.457	0.015
L11	141.567 - 141.417	44.735	12	3.175	0.013
L12	141.417 - 136.417	44.635	12	3.166	0.013
L13	136.417 - 131.417	41.375	12	3.063	0.012
L14	131.417 - 126.417	38.233	12	2.939	0.012
L15	126.417 - 121.417	35.231	12	2.794	0.010
L16	121.417 - 121.167	32.393	12	2.627	0.009
L17	121.167 - 116.167	32.256	12	2.618	0.009
L18	116.167 - 111.167	29.577	12	2.498	0.008
L19	111.167 - 110.042	27.032	12	2.362	0.007
L20	110.042 - 109.792	26.480	12	2.329	0.007
L21	109.792 - 105.083	26.358	12	2.323	0.007
L22	105.083 - 104.833	24.124	12	2.208	0.006
L23	104.833 - 100.917	24.009	12	2.202	0.006
L24	100.917 - 100.667	22.240	12	2.110	0.006
L25	100.667 - 95.833	22.130	12	2.104	0.006
L26	95.833 - 95.583	20.062	12	1.980	0.005
L27	95.583 - 90.583	19.959	12	1.975	0.005
L28	90.583 - 89.917	17.949	12	1.863	0.005
L29	89.917 - 89.667	17.690	12	1.847	0.005
L30	89.667 - 84.667	17.594	12	1.842	0.005
L31	84.667 - 80.833	15.718	12	1.739	0.004
L32	80.833 - 80.333	14.357	12	1.653	0.004

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L33	80.333 - 80.083	14.184	12	1.644	0.004
L34	80.083 - 75.083	14.098	12	1.640	0.004
L35	75.083 - 70.083	12.433	12	1.540	0.003
L36	70.083 - 69.5	10.877	12	1.432	0.003
L37	69.5 - 69.25	10.703	12	1.419	0.003
L38	69.25 - 64.25	10.629	12	1.414	0.003
L39	64.25 - 60.583	9.199	12	1.316	0.003
L40	60.583 - 60.333	8.218	12	1.239	0.003
L41	60.333 - 55.333	8.153	12	1.235	0.002
L42	55.333 - 52.167	6.908	12	1.142	0.002
L43	52.167 - 51.917	6.171	12	1.080	0.002
L44	51.917 - 46.917	6.115	12	1.076	0.002
L45	46.917 - 41.917	5.032	12	0.991	0.002
L46	41.917 - 40.333	4.041	12	0.900	0.002
L47	40.333 - 40.083	3.748	12	0.870	0.002
L48	40.083 - 35.083	3.702	12	0.865	0.002
L49	35.083 - 30.083	2.849	12	0.763	0.001
L50	30.083 - 28	2.106	12	0.655	0.001
L51	28 - 27.75	1.831	12	0.608	0.001
L52	27.75 - 22.75	1.799	12	0.603	0.001
L53	22.75 - 20.083	1.219	12	0.505	0.001
L54	20.083 - 19.833	0.952	12	0.451	0.001
L55	19.833 - 17	0.929	12	0.445	0.001
L56	17 - 16.75	0.685	12	0.376	0.001
L57	16.75 - 11.65	0.666	12	0.370	0.001
L58	11.65 - 11.417	0.327	12	0.262	0.000
L59	11.417 - 9.396	0.315	12	0.257	0.000
L60	9.396 - 9.146	0.215	12	0.212	0.000
L61	9.146 - 4.833	0.204	12	0.207	0.000
L62	4.833 - 4.583	0.059	12	0.115	0.000
L63	4.583 - 0	0.053	12	0.109	0.000

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
191.667	Lightning Rod 5/8" x 4' on 4' Pole	12	85.829	4.164	0.028	129413
191.000	WB2623 w/ Mount Pipe	12	85.249	4.164	0.027	129413
184.000	OGB4-900D	12	79.154	4.162	0.026	75034
178.000	4' ICE SHIELDS	12	73.937	4.150	0.025	13137
160.000	(2) LNX-8513DS-A1M	12	58.655	3.917	0.020	2569
158.000	SRL-224NM-4	12	57.026	3.869	0.019	2269
151.000	7770.00 w/ Mount Pipe	12	51.510	3.650	0.016	1507
150.000	DC6-48-60-18-8F	12	50.750	3.610	0.016	1421
138.000	4' ICE SHIELDS	12	42.395	3.074	0.012	2438
132.000	SRL-235-2	12	38.593	2.957	0.012	2185
124.000	PCS 1900 TMA RX	12	33.837	2.717	0.010	1792
120.000	VHLP2-18	12	31.619	2.582	0.009	2123
116.000	(2) 6' x 2" Mount Pipe	12	29.490	2.494	0.008	2239
114.000	Miscellaneous [NA 509-3]	12	28.457	2.445	0.008	2143
98.000	4' ICE SHIELDS	12	20.974	2.034	0.005	2317
90.000	KP2F-34	12	17.722	1.849	0.005	2643
70.000	SRL-235-2	12	10.852	1.430	0.003	2747
33.000	DB909XVTE-M	12	2.526	0.719	0.001	2654

Compression Checks

Pole Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
L1	191.667 - 190.667	P18x0.375	5.000	0.000	0.0	20.764	-0.646	784.878	0.001
	190.667 - 189.667					20.764	-0.805	784.878	0.001
	189.667 - 188.667					20.764	-0.963	784.878	0.001
	188.667 - 187.667					20.764	-1.121	784.878	0.001
	187.667 - 186.667					20.764	-0.640	784.878	0.001
L2	186.667 - 185.647	P24x0.375	5.100	0.000	0.0	27.833	-0.771	1052.070	0.001
	185.647 - 184.627					27.833	-0.901	1052.070	0.001
	184.627 - 183.607					27.833	-14.166	1052.070	0.013*
	183.607 - 182.587					27.833	-14.343	1052.070	0.014
	182.587 - 181.567					27.833	-14.561	1052.070	0.014
L3	181.567 - 180.567	P24x0.375	5.000	0.000	0.0	27.833	-5.810	1052.070	0.006
	180.567 - 179.567					27.833	-5.947	1052.070	0.006
	179.567 - 178.567					27.833	-6.084	1052.070	0.006
	178.567 - 177.567					27.833	-6.255	1052.070	0.006
	177.567 - 176.567					27.833	-6.392	1052.070	0.006
L4	176.567 - 175.567	P24x0.375	5.000	0.000	0.0	27.833	-6.523	1052.070	0.006
	175.567 - 174.567					27.833	-6.660	1052.070	0.006
	174.567 - 173.567					27.833	-6.798	1052.070	0.006
	173.567 - 172.567					27.833	-6.936	1052.070	0.007
	172.567 - 171.567					27.833	-7.074	1052.070	0.007
L5	171.567 - 170.567	P24x0.375	5.000	0.000	0.0	27.833	-7.212	1052.070	0.007
	170.567 - 169.567					27.833	-7.350	1052.070	0.007
	169.567 - 168.567					27.833	-7.488	1052.070	0.007
	168.567 - 167.567					27.833	-7.627	1052.070	0.007
	167.567 - 166.567					27.833	-7.765	1052.070	0.007

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
L6	166.567 - 165.567	P24x0.375	5.000	0.000	0.0	27.833	-7.904	1052.070	0.008
	165.567 - 164.567					27.833	-8.043	1052.070	0.008
	164.567 - 163.567					27.833	-8.182	1052.070	0.008
	163.567 - 162.567					27.833	-8.321	1052.070	0.008
	162.567 - 161.567					27.833	-8.461	1052.070	0.008
L7	161.567 - 160.567	P24x0.375	5.000	0.000	0.0	27.833	-8.604	1052.070	0.008
	160.567 - 159.567					27.833	-12.322	1052.070	0.012
	159.567 - 158.567					27.833	-12.467	1052.070	0.012
	158.567 - 157.567					27.833	-12.810	1052.070	0.012
	157.567 - 156.567					27.833	-12.956	1052.070	0.012
L8	156.567 - 155.567	P24x0.375	5.000	0.000	0.0	27.833	-13.104	1052.070	0.012
	155.567 - 154.567					27.833	-13.253	1052.070	0.013
	154.567 - 153.567					27.833	-13.402	1052.070	0.013
	153.567 - 152.567					27.833	-13.551	1052.070	0.013
	152.567 - 151.567					27.833	-13.701	1052.070	0.013
L9	151.567 - 150.567	P24x0.375	5.000	0.000	0.0	27.833	-18.230	1052.070	0.017
	150.567 - 149.567					27.833	-19.093	1052.070	0.018
	149.567 - 148.567					27.833	-19.260	1052.070	0.018
	148.567 - 147.567					27.833	-19.428	1052.070	0.018
	147.567 - 146.567					27.833	-19.597	1052.070	0.019
L10	146.567 - 145.567	P24x0.375	5.000	0.000	0.0	27.833	-19.769	1052.070	0.019
	145.567 - 144.567					27.833	-19.943	1052.070	0.019
	144.567 - 143.567					27.833	-20.118	1052.070	0.019
	143.567 - 142.567					27.833	-20.293	1052.070	0.019
	142.567 - 141.567					27.833	-20.470	1052.070	0.019
L11	141.567 - 141.417 (11)	P24x0.375	0.150	0.000	0.0	27.833	-20.505	1052.070	0.019
L12	141.417 - 140.417	P36x0.375	5.000	0.000	0.0	41.970	-20.723	1490.100	0.014
	140.417 - 139.417					41.970	-20.942	1490.100	0.014
	139.417 - 138.417					41.970	-21.162	1490.100	0.014
	138.417 - 137.417					41.970	-21.415	1490.100	0.014

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
	137.417 - 136.417					41.970	-21.635	1490.100	0.015
L13	136.417 - 135.417	P36x0.375	5.000	0.000	0.0	41.970	-21.856	1490.100	0.015
	135.417 - 134.417					41.970	-22.077	1490.100	0.015
	134.417 - 133.417					41.970	-22.299	1490.100	0.015
	133.417 - 132.417					41.970	-22.521	1490.100	0.015
	132.417 - 131.417					41.970	-23.221	1490.100	0.016
L14	131.417 - 130.417	P36x0.375	5.000	0.000	0.0	41.970	-23.453	1490.100	0.016
	130.417 - 129.417					41.970	-23.685	1490.100	0.016
	129.417 - 128.417					41.970	-23.917	1490.100	0.016
	128.417 - 127.417					41.970	-24.150	1490.100	0.016
	127.417 - 126.417					41.970	-24.383	1490.100	0.016
L15	126.417 - 125.417	P36x0.375	5.000	0.000	0.0	41.970	-24.751	1490.100	0.017
	125.417 - 124.417					41.970	-25.119	1490.100	0.017
	124.417 - 123.417					41.970	-25.857	1490.100	0.017
	123.417 - 122.417					41.970	-26.226	1490.100	0.018
	122.417 - 121.417					41.970	-26.596	1490.100	0.018
L16	121.417 - 121.167 (16)	P36x0.375	0.250	0.000	0.0	41.970	-26.670	1490.100	0.018
L17	121.167 - 120.167	P42x0.375	5.000	0.000	0.0	49.038	-26.955	1668.870	0.016
	120.167 - 119.167					49.038	-27.275	1668.870	0.016
	119.167 - 118.167					49.038	-27.563	1668.870	0.017
	118.167 - 117.167					49.038	-27.851	1668.870	0.017
	117.167 - 116.167					49.038	-28.139	1668.870	0.017
L18	116.167 - 115.167	P42x0.375	5.000	0.000	0.0	49.038	-32.078	1668.870	0.019
	115.167 - 114.167					49.038	-32.353	1668.870	0.019
	114.167 - 113.167					49.038	-32.938	1668.870	0.020
	113.167 - 112.167					49.038	-33.214	1668.870	0.020
	112.167 - 111.167					49.038	-33.490	1668.870	0.020
L19	111.167 - 110.042 (19)	P42x0.375	1.125	0.000	0.0	49.038	-33.801	1668.870	0.020
L20	110.042 - 109.792 (20)	P42x0.4875	0.250	0.000	0.0	63.577	-33.890	2332.130	0.015
L21	109.792 - 108.615	P42x0.4875	4.709	0.000	0.0	63.577	-34.302	2332.130	0.015

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
	108.615 - 107.438					63.577	-34.684	2332.130	0.015
	107.438 - 106.26					63.577	-35.098	2332.130	0.015
	106.26 - 105.083					63.577	-35.512	2332.130	0.015
L22	105.083 - 104.833 (22)	P42x0.5625	0.250	0.000	0.0	73.226	-35.622	2767.950	0.013
L23	104.833 - 103.528	P42x0.5625	3.916	0.000	0.0	73.226	-36.426	2767.950	0.013
	103.528 - 102.222					73.226	-37.236	2767.950	0.013
	102.222 - 100.917					73.226	-38.047	2767.950	0.014
L24	100.917 - 100.667 (24)	P48x0.375	0.250	0.000	0.0	56.107	-38.157	1847.490	0.021
L25	100.667 - 99.4585	P48x0.375	4.834	0.000	0.0	56.107	-38.584	1847.490	0.021
	99.4585 - 98.25					56.107	-39.018	1847.490	0.021
	98.25 - 97.0415					56.107	-39.557	1847.490	0.021
	97.0415 - 95.833					56.107	-39.992	1847.490	0.022
L26	95.833 - 95.583 (26)	P48x0.475	0.250	0.000	0.0	70.920	-40.089	2481.390	0.016
L27	95.583 - 94.583	P48x0.475	5.000	0.000	0.0	70.920	-40.441	2481.390	0.016
	94.583 - 93.583					70.920	-40.797	2481.390	0.016
	93.583 - 92.583					70.920	-41.154	2481.390	0.017
	92.583 - 91.583					70.920	-41.511	2481.390	0.017
	91.583 - 90.583					70.920	-41.869	2481.390	0.017
L28	90.583 - 89.917 (28)	P48x0.475	0.666	0.000	0.0	70.920	-42.594	2481.390	0.017
L29	89.917 - 89.667 (29)	P48x0.575	0.250	0.000	0.0	85.669	-42.709	3174.020	0.013
L30	89.667 - 88.667	P48x0.575	5.000	0.000	0.0	85.669	-43.272	3174.020	0.014
	88.667 - 87.667					85.669	-43.839	3174.020	0.014
	87.667 - 86.667					85.669	-44.407	3174.020	0.014
	86.667 - 85.667					85.669	-44.975	3174.020	0.014
	85.667 - 84.667					85.669	-45.543	3174.020	0.014
L31	84.667 - 83.389	P48x0.575	3.834	0.000	0.0	85.669	-46.601	3174.020	0.015
	83.389 - 82.111					85.669	-47.661	3174.020	0.015
	82.111 - 80.833					85.669	-48.721	3174.020	0.015
L32	80.833 - 80.333 (32)	P54x0.55	0.500	0.000	0.0	92.355	-49.104	3257.830	0.015
L33	80.333 - 80.083 (33)	P54x0.4875	0.250	0.000	0.0	81.956	-49.245	2797.170	0.018

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
L34	80.083 - 79.083	P54x0.4875	5.000	0.000	0.0	81.956	-49.736	2797.170	0.018
	79.083 - 78.083					81.956	-50.232	2797.170	0.018
	78.083 - 77.083					81.956	-50.728	2797.170	0.018
	77.083 - 76.083					81.956	-51.224	2797.170	0.018
	76.083 - 75.083					81.956	-51.721	2797.170	0.018
L35	75.083 - 74.083	P54x0.4875	5.000	0.000	0.0	81.956	-52.301	2797.170	0.019
	74.083 - 73.083					81.956	-52.881	2797.170	0.019
	73.083 - 72.083					81.956	-53.461	2797.170	0.019
	72.083 - 71.083					81.956	-54.042	2797.170	0.019
	71.083 - 70.083					81.956	-54.623	2797.170	0.020
L36	70.083 - 69.5 (36)	P54x0.4875	0.583	0.000	0.0	81.956	-55.295	2797.170	0.020
L37	69.5 - 69.25 (37)	P54x0.5875	0.250	0.000	0.0	98.583	-55.483	3545.230	0.016
L38	69.25 - 68.25	P54x0.5875	5.000	0.000	0.0	98.583	-56.752	3545.230	0.016
	68.25 - 67.25					98.583	-58.026	3545.230	0.016
	67.25 - 66.25					98.583	-59.300	3545.230	0.017
	66.25 - 65.25					98.583	-60.574	3545.230	0.017
	65.25 - 64.25					98.583	-61.849	3545.230	0.017
L39	64.25 - 63.0277	P54x0.5875	3.667	0.000	0.0	98.583	-63.574	3545.230	0.018
	63.0277 - 61.8053					98.583	-65.300	3545.230	0.018
	61.8053 - 60.583					98.583	-67.028	3545.230	0.019
L40	60.583 - 60.333 (40)	P60x0.5125	0.250	0.000	0.0	95.779	-67.234	3222.890	0.021
L41	60.333 - 59.333	P60x0.5125	5.000	0.000	0.0	95.779	-67.986	3222.890	0.021
	59.333 - 58.333					95.779	-68.743	3222.890	0.021
	58.333 - 57.333					95.779	-69.501	3222.890	0.022
	57.333 - 56.333					95.779	-70.258	3222.890	0.022
	56.333 - 55.333					95.779	-71.016	3222.890	0.022
L42	55.333 - 54.2777	P60x0.5125	3.166	0.000	0.0	95.779	-71.513	3222.890	0.022
	54.2777 - 53.2223					95.779	-72.011	3222.890	0.022
	53.2223 - 52.167					95.779	-72.509	3222.890	0.022
L43	52.167 - 51.917 (43)	P60x0.625	0.250	0.000	0.0	116.583	-72.655	4139.150	0.018
L44	51.917 - 50.917	P60x0.625	5.000	0.000	0.0	116.583	-73.271	4139.150	0.018
	50.917 - 49.917					116.583	-73.891	4139.150	0.018
	49.917 -					116.583	-74.512	4139.150	0.018

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
	48.917								
	48.917 - 47.917					116.583	-75.133	4139.150	0.018
	47.917 - 46.917					116.583	-75.754	4139.150	0.018
L45	46.917 - 45.917	P60x0.625	5.000	0.000	0.0	116.583	-76.548	4139.150	0.018
	45.917 - 44.917					116.583	-77.342	4139.150	0.019
	44.917 - 43.917					116.583	-78.136	4139.150	0.019
	43.917 - 42.917					116.583	-78.931	4139.150	0.019
	42.917 - 41.917					116.583	-79.726	4139.150	0.019
L46	41.917 - 40.333 (46)	P60x0.625	1.584	0.000	0.0	116.583	-80.974	4139.150	0.020
L47	40.333 - 40.083 (47)	P60x0.6	0.250	0.000	0.0	111.966	-81.166	3929.110	0.021
L48	40.083 - 39.083	P60x0.6	5.000	0.000	0.0	111.966	-81.896	3929.110	0.021
	39.083 - 38.083					111.966	-82.631	3929.110	0.021
	38.083 - 37.083					111.966	-83.366	3929.110	0.021
	37.083 - 36.083					111.966	-84.102	3929.110	0.021
	36.083 - 35.083					111.966	-84.838	3929.110	0.022
L49	35.083 - 34.083	P60x0.6	5.000	0.000	0.0	111.966	-85.466	3929.110	0.022
	34.083 - 33.083					111.966	-86.093	3929.110	0.022
	33.083 - 32.083					111.966	-86.902	3929.110	0.022
	32.083 - 31.083					111.966	-87.531	3929.110	0.022
	31.083 - 30.083					111.966	-88.159	3929.110	0.022
L50	30.083 - 29.0415	P60x0.6	2.083	0.000	0.0	111.966	-88.721	3929.110	0.023
	29.0415 - 28					111.966	-89.284	3929.110	0.023
L51	28 - 27.75 (51)	P60x0.725	0.250	0.000	0.0	135.008	-89.450	5015.910	0.018
L52	27.75 - 26.75	P60x0.725	5.000	0.000	0.0	135.008	-90.269	5015.910	0.018
	26.75 - 25.75					135.008	-91.093	5015.910	0.018
	25.75 - 24.75					135.008	-91.918	5015.910	0.018
	24.75 - 23.75					135.008	-92.743	5015.910	0.018
	23.75 - 22.75					135.008	-93.569	5015.910	0.019
L53	22.75 - 21.4165	P60x0.725	2.667	0.000	0.0	135.008	-94.681	5015.910	0.019
	21.4165 - 20.083					135.008	-95.796	5015.910	0.019
L54	20.083 - 19.833 (54)	P60x0.625	0.250	0.000	0.0	116.583	-95.995	4139.150	0.023
L55	19.833 - 18.4165	P60x0.625	2.833	0.000	0.0	116.583	-97.063	4139.150	0.023
	18.4165 - 17					116.583	-98.143	4139.150	0.024
L56	17 - 16.75 (56)	P60x0.725	0.250	0.000	0.0	135.008	-98.369	5015.910	0.020
L57	16.75 - 15.73	P60x0.75	5.100	0.000	0.0	139.605	-99.210	5244.230	0.019
	15.73 - 14.71					139.605	-100.058	5244.230	0.019

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
	14.71 - 13.69					139.605	-100.905	5244.230	0.019
	13.69 - 12.67					139.605	-101.753	5244.230	0.019
	12.67 - 11.65					139.605	-102.601	5244.230	0.020
L58	11.65 - 11.417 (58)	P60x0.75	0.233	0.000	0.0	139.605	-102.765	5244.230	0.020
L59	11.417 - 10.4065	P60x0.75	2.021	0.000	0.0	139.605	-103.438	5244.230	0.020
	10.4065 - 9.396					139.605	-104.119	5244.230	0.020
L60	9.396 - 9.146 (60)	P60x0.8	0.250	0.000	0.0	148.786	-104.300	5624.100	0.019
L61	9.146 - 8.06775	P60x0.8	4.313	0.000	0.0	148.786	-105.044	5624.100	0.019
	8.06775 - 6.9895					148.786	-105.795	5624.100	0.019
	6.9895 - 5.91125					148.786	-106.547	5624.100	0.019
	5.91125 - 4.833					148.786	-107.300	5624.100	0.019
L62	4.833 - 4.583 (62)	P60x0.75	0.250	0.000	0.0	139.605	-107.478	5244.230	0.020
L63	4.583 - 3.43725	P60x0.75	4.583	0.000	0.0	139.605	-108.257	5244.230	0.021
	3.43725 - 2.2915					139.605	-109.044	5244.230	0.021
	2.2915 - 1.14575					139.605	-109.832	5244.230	0.021
	1.14575 - 0					139.605	-110.620	5244.230	0.021

* DL controls

Pole Bending Design Data

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L1	191.667 - 190.667	P18x0.375	1.177	367.000	0.003	0.000	367.000	0.000
	190.667 - 189.667		1.304	367.000	0.004	0.000	367.000	0.000
	189.667 - 188.667		1.453	367.000	0.004	0.000	367.000	0.000
	188.667 - 187.667		1.621	367.000	0.004	0.000	367.000	0.000
	187.667 - 186.667		2.205	367.000	0.006	0.000	367.000	0.000
L2	186.667 - 185.647	P24x0.375	2.729	623.717	0.004	0.000	623.717	0.000
	185.647 - 184.627		3.321	623.717	0.005	0.000	623.717	0.000
	184.627 - 183.607		2.918	623.717	0.005	0.000	623.717	0.000
	183.607 - 182.587		4.824	623.717	0.008	0.000	623.717	0.000
	182.587 - 181.567		6.788	623.717	0.011	0.000	623.717	0.000

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L3	181.567 - 180.567	P24x0.375	15.275	623.717	0.024	0.000	623.717	0.000
	180.567 - 179.567		21.143	623.717	0.034	0.000	623.717	0.000
	179.567 - 178.567		27.076	623.717	0.043	0.000	623.717	0.000
	178.567 - 177.567		33.062	623.717	0.053	0.000	623.717	0.000
	177.567 - 176.567		39.159	623.717	0.063	0.000	623.717	0.000
L4	176.567 - 175.567	P24x0.375	45.319	623.717	0.073	0.000	623.717	0.000
	175.567 - 174.567		51.573	623.717	0.083	0.000	623.717	0.000
	174.567 - 173.567		57.892	623.717	0.093	0.000	623.717	0.000
	173.567 - 172.567		64.275	623.717	0.103	0.000	623.717	0.000
	172.567 - 171.567		70.721	623.717	0.113	0.000	623.717	0.000
L5	171.567 - 170.567	P24x0.375	77.231	623.717	0.124	0.000	623.717	0.000
	170.567 - 169.567		83.803	623.717	0.134	0.000	623.717	0.000
	169.567 - 168.567		90.439	623.717	0.145	0.000	623.717	0.000
	168.567 - 167.567		97.138	623.717	0.156	0.000	623.717	0.000
	167.567 - 166.567		103.898	623.717	0.167	0.000	623.717	0.000
L6	166.567 - 165.567	P24x0.375	110.721	623.717	0.178	0.000	623.717	0.000
	165.567 - 164.567		117.605	623.717	0.189	0.000	623.717	0.000
	164.567 - 163.567		124.550	623.717	0.200	0.000	623.717	0.000
	163.567 - 162.567		131.557	623.717	0.211	0.000	623.717	0.000
	162.567 - 161.567		138.624	623.717	0.222	0.000	623.717	0.000
L7	161.567 - 160.567	P24x0.375	145.752	623.717	0.234	0.000	623.717	0.000
	160.567 - 159.567		154.419	623.717	0.248	0.000	623.717	0.000
	159.567 - 158.567		165.748	623.717	0.266	0.000	623.717	0.000
	158.567 - 157.567		177.863	623.717	0.285	0.000	623.717	0.000
	157.567 - 156.567		189.663	623.717	0.304	0.000	623.717	0.000
L8	156.567 - 155.567	P24x0.375	201.520	623.717	0.323	0.000	623.717	0.000
	155.567 - 154.567		213.433	623.717	0.342	0.000	623.717	0.000
	154.567 - 153.567		225.401	623.717	0.361	0.000	623.717	0.000
	153.567 - 152.567		237.423	623.717	0.381	0.000	623.717	0.000
	152.567 - 151.567		249.500	623.717	0.400	0.000	623.717	0.000

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L9	151.567 - 150.567	P24x0.375	263.753	623.717	0.423	0.000	623.717	0.000
	150.567 - 149.567		282.384	623.717	0.453	0.000	623.717	0.000
	149.567 - 148.567		300.924	623.717	0.482	0.000	623.717	0.000
	148.567 - 147.567		319.511	623.717	0.512	0.000	623.717	0.000
	147.567 - 146.567		338.144	623.717	0.542	0.000	623.717	0.000
L10	146.567 - 145.567	P24x0.375	356.822	623.717	0.572	0.000	623.717	0.000
	145.567 - 144.567		375.543	623.717	0.602	0.000	623.717	0.000
	144.567 - 143.567		394.307	623.717	0.632	0.000	623.717	0.000
	143.567 - 142.567		413.111	623.717	0.662	0.000	623.717	0.000
	142.567 - 141.567		431.954	623.717	0.693	0.000	623.717	0.000
L11	141.567 - 141.417 (11)	P24x0.375	434.784	623.717	0.697	0.000	623.717	0.000
L12	141.417 - 140.417	P36x0.375	453.697	1338.808	0.339	0.000	1338.808	0.000
	140.417 - 139.417		472.691	1338.808	0.353	0.000	1338.808	0.000
	139.417 - 138.417		491.767	1338.808	0.367	0.000	1338.808	0.000
	138.417 - 137.417		510.887	1338.808	0.382	0.000	1338.808	0.000
	137.417 - 136.417		530.187	1338.808	0.396	0.000	1338.808	0.000
L13	136.417 - 135.417	P36x0.375	549.565	1338.808	0.410	0.000	1338.808	0.000
	135.417 - 134.417		569.023	1338.808	0.425	0.000	1338.808	0.000
	134.417 - 133.417		588.558	1338.808	0.440	0.000	1338.808	0.000
	133.417 - 132.417		608.171	1338.808	0.454	0.000	1338.808	0.000
	132.417 - 131.417		628.710	1338.808	0.470	0.000	1338.808	0.000
L14	131.417 - 130.417	P36x0.375	648.996	1338.808	0.485	0.000	1338.808	0.000
	130.417 - 129.417		669.357	1338.808	0.500	0.000	1338.808	0.000
	129.417 - 128.417		689.793	1338.808	0.515	0.000	1338.808	0.000
	128.417 - 127.417		710.303	1338.808	0.531	0.000	1338.808	0.000
	127.417 - 126.417		730.886	1338.808	0.546	0.000	1338.808	0.000
L15	126.417 - 125.417	P36x0.375	751.590	1338.808	0.561	0.000	1338.808	0.000
	125.417 - 124.417		772.449	1338.808	0.577	0.000	1338.808	0.000
	124.417 - 123.417		793.444	1338.808	0.593	0.000	1338.808	0.000
	123.417 - 122.417		814.760	1338.808	0.609	0.000	1338.808	0.000

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
	122.417 - 121.417		836.225	1338.808	0.625	0.000	1338.808	0.000
L16	121.417 - 121.167 (16)	P36x0.375	841.617	1338.808	0.629	0.000	1338.808	0.000
L17	121.167 - 120.167	P42x0.375	863.242	1796.558	0.480	0.000	1796.558	0.000
	120.167 - 119.167		885.133	1796.558	0.493	0.000	1796.558	0.000
	119.167 - 118.167		907.033	1796.558	0.505	0.000	1796.558	0.000
	118.167 - 117.167		929.008	1796.558	0.517	0.000	1796.558	0.000
	117.167 - 116.167		951.075	1796.558	0.529	0.000	1796.558	0.000
L18	116.167 - 115.167	P42x0.375	978.642	1796.558	0.545	0.000	1796.558	0.000
	115.167 - 114.167		1003.683	1796.558	0.559	0.000	1796.558	0.000
	114.167 - 113.167		1029.217	1796.558	0.573	0.000	1796.558	0.000
	113.167 - 112.167		1054.908	1796.558	0.587	0.000	1796.558	0.000
	112.167 - 111.167		1080.683	1796.558	0.602	0.000	1796.558	0.000
L19	111.167 - 110.042 (19)	P42x0.375	1109.775	1796.558	0.618	0.000	1796.558	0.000
L20	110.042 - 109.792 (20)	P42x0.4875	1116.258	2395.433	0.466	0.000	2395.433	0.000
L21	109.792 - 108.615	P42x0.4875	1146.833	2395.433	0.479	0.000	2395.433	0.000
	108.615 - 107.438		1177.792	2395.433	0.492	0.000	2395.433	0.000
	107.438 - 106.26		1209.083	2395.433	0.505	0.000	2395.433	0.000
	106.26 - 105.083		1240.625	2395.433	0.518	0.000	2395.433	0.000
L22	105.083 - 104.833 (22)	P42x0.5625	1247.358	2809.308	0.444	0.000	2809.308	0.000
L23	104.833 - 103.528	P42x0.5625	1282.708	2809.308	0.457	0.000	2809.308	0.000
	103.528 - 102.222		1318.400	2809.308	0.469	0.000	2809.308	0.000
	102.222 - 100.917		1354.425	2809.308	0.482	0.000	2809.308	0.000
L24	100.917 - 100.667 (24)	P48x0.375	1361.367	2321.108	0.587	0.000	2321.108	0.000
L25	100.667 - 99.4585	P48x0.375	1395.067	2321.108	0.601	0.000	2321.108	0.000
	99.4585 - 98.25		1429.033	2321.108	0.616	0.000	2321.108	0.000
	98.25 - 97.0415		1463.375	2321.108	0.630	0.000	2321.108	0.000
	97.0415 - 95.833		1498.017	2321.108	0.645	0.000	2321.108	0.000
L26	95.833 - 95.583 (26)	P48x0.475	1505.208	2999.958	0.502	0.000	2999.958	0.000
L27	95.583 - 94.583	P48x0.475	1534.092	2999.958	0.511	0.000	2999.958	0.000
	94.583 - 93.583		1563.150	2999.958	0.521	0.000	2999.958	0.000

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
	93.583 - 92.583		1592.400	2999.958	0.531	0.000	2999.958	0.000
	92.583 - 91.583		1621.817	2999.958	0.541	0.000	2999.958	0.000
	91.583 - 90.583		1651.425	2999.958	0.550	0.000	2999.958	0.000
L28	90.583 - 89.917 (28)	P48x0.475	1672.342	2999.958	0.557	0.000	2999.958	0.000
L29	89.917 - 89.667 (29)	P48x0.575	1679.892	3702.967	0.454	0.000	3702.967	0.000
L30	89.667 - 88.667	P48x0.575	1710.208	3702.967	0.462	0.000	3702.967	0.000
	88.667 - 87.667		1740.717	3702.967	0.470	0.000	3702.967	0.000
	87.667 - 86.667		1771.433	3702.967	0.478	0.000	3702.967	0.000
	86.667 - 85.667		1802.350	3702.967	0.487	0.000	3702.967	0.000
	85.667 - 84.667		1833.458	3702.967	0.495	0.000	3702.967	0.000
L31	84.667 - 83.389	P48x0.575	1873.483	3702.967	0.506	0.000	3702.967	0.000
	83.389 - 82.111		1913.842	3702.967	0.517	0.000	3702.967	0.000
	82.111 - 80.833		1954.533	3702.967	0.528	0.000	3702.967	0.000
L32	80.833 - 80.333 (32)	P54x0.55	1970.550	4408.408	0.447	0.000	4408.408	0.000
L33	80.333 - 80.083 (33)	P54x0.4875	1978.583	3864.467	0.512	0.000	3864.467	0.000
L34	80.083 - 79.083	P54x0.4875	2010.842	3864.467	0.520	0.000	3864.467	0.000
	79.083 - 78.083		2043.317	3864.467	0.529	0.000	3864.467	0.000
	78.083 - 77.083		2075.983	3864.467	0.537	0.000	3864.467	0.000
	77.083 - 76.083		2108.858	3864.467	0.546	0.000	3864.467	0.000
	76.083 - 75.083		2141.925	3864.467	0.554	0.000	3864.467	0.000
L35	75.083 - 74.083	P54x0.4875	2175.233	3864.467	0.563	0.000	3864.467	0.000
	74.083 - 73.083		2208.742	3864.467	0.572	0.000	3864.467	0.000
	73.083 - 72.083		2242.467	3864.467	0.580	0.000	3864.467	0.000
	72.083 - 71.083		2276.400	3864.467	0.589	0.000	3864.467	0.000
	71.083 - 70.083		2310.542	3864.467	0.598	0.000	3864.467	0.000
L36	70.083 - 69.5 (36)	P54x0.4875	2330.733	3864.467	0.603	0.000	3864.467	0.000
L37	69.5 - 69.25 (37)	P54x0.5875	2339.458	4739.867	0.494	0.000	4739.867	0.000
L38	69.25 - 68.25	P54x0.5875	2374.550	4739.867	0.501	0.000	4739.867	0.000
	68.25 - 67.25		2409.883	4739.867	0.508	0.000	4739.867	0.000
	67.25 - 66.25		2445.458	4739.867	0.516	0.000	4739.867	0.000
	66.25 - 65.25		2481.267	4739.867	0.523	0.000	4739.867	0.000
	65.25 - 64.25		2517.308	4739.867	0.531	0.000	4739.867	0.000
L39	64.25 -	P54x0.5875	2561.683	4739.867	0.540	0.000	4739.867	0.000

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
	63.0277							
	63.0277 - 61.8053		2606.408	4739.867	0.550	0.000	4739.867	0.000
	61.8053 - 60.583		2651.492	4739.867	0.559	0.000	4739.867	0.000
L40	60.583 - 60.333 (40)	P60x0.5125	2660.742	4992.042	0.533	0.000	4992.042	0.000
L41	60.333 - 59.333	P60x0.5125	2697.892	4992.042	0.540	0.000	4992.042	0.000
	59.333 - 58.333		2735.267	4992.042	0.548	0.000	4992.042	0.000
	58.333 - 57.333		2772.867	4992.042	0.555	0.000	4992.042	0.000
	57.333 - 56.333		2810.692	4992.042	0.563	0.000	4992.042	0.000
	56.333 - 55.333		2848.733	4992.042	0.571	0.000	4992.042	0.000
L42	55.333 - 54.2777	P60x0.5125	2889.092	4992.042	0.579	0.000	4992.042	0.000
	54.2777 - 53.2223		2929.650	4992.042	0.587	0.000	4992.042	0.000
	53.2223 - 52.167		2970.408	4992.042	0.595	0.000	4992.042	0.000
L43	52.167 - 51.917 (43)	P60x0.625	2980.092	6198.183	0.481	0.000	6198.183	0.000
L44	51.917 - 50.917	P60x0.625	3018.950	6198.183	0.487	0.000	6198.183	0.000
	50.917 - 49.917		3057.992	6198.183	0.493	0.000	6198.183	0.000
	49.917 - 48.917		3097.233	6198.183	0.500	0.000	6198.183	0.000
	48.917 - 47.917		3136.658	6198.183	0.506	0.000	6198.183	0.000
	47.917 - 46.917		3176.275	6198.183	0.512	0.000	6198.183	0.000
L45	46.917 - 45.917	P60x0.625	3216.033	6198.183	0.519	0.000	6198.183	0.000
	45.917 - 44.917		3256.000	6198.183	0.525	0.000	6198.183	0.000
	44.917 - 43.917		3296.175	6198.183	0.532	0.000	6198.183	0.000
	43.917 - 42.917		3336.550	6198.183	0.538	0.000	6198.183	0.000
	42.917 - 41.917		3377.142	6198.183	0.545	0.000	6198.183	0.000
L46	41.917 - 40.333 (46)	P60x0.625	3441.833	6198.183	0.555	0.000	6198.183	0.000
L47	40.333 - 40.083 (47)	P60x0.6	3452.092	5926.841	0.582	0.000	5926.841	0.000
L48	40.083 - 39.083	P60x0.6	3493.217	5926.841	0.589	0.000	5926.841	0.000
	39.083 - 38.083		3534.525	5926.841	0.596	0.000	5926.841	0.000
	38.083 - 37.083		3576.008	5926.841	0.603	0.000	5926.841	0.000
	37.083 - 36.083		3617.675	5926.841	0.610	0.000	5926.841	0.000
	36.083 - 35.083		3659.517	5926.841	0.617	0.000	5926.841	0.000
L49	35.083 -	P60x0.6	3701.567	5926.841	0.625	0.000	5926.841	0.000

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
	34.083							
	34.083 - 33.083		3743.767	5926.841	0.632	0.000	5926.841	0.000
	33.083 - 32.083		3786.733	5926.841	0.639	0.000	5926.841	0.000
	32.083 - 31.083		3829.467	5926.841	0.646	0.000	5926.841	0.000
	31.083 - 30.083		3872.342	5926.841	0.653	0.000	5926.841	0.000
L50	30.083 - 29.0415	P60x0.6	3917.192	5926.841	0.661	0.000	5926.841	0.000
	29.0415 - 28		3962.192	5926.841	0.669	0.000	5926.841	0.000
L51	28 - 27.75 (51)	P60x0.725	3973.017	7302.233	0.544	0.000	7302.233	0.000
L52	27.75 - 26.75	P60x0.725	4016.433	7302.233	0.550	0.000	7302.233	0.000
	26.75 - 25.75		4060.017	7302.233	0.556	0.000	7302.233	0.000
	25.75 - 24.75		4103.758	7302.233	0.562	0.000	7302.233	0.000
	24.75 - 23.75		4147.667	7302.233	0.568	0.000	7302.233	0.000
	23.75 - 22.75		4191.742	7302.233	0.574	0.000	7302.233	0.000
L53	22.75 - 21.4165	P60x0.725	4250.758	7302.233	0.582	0.000	7302.233	0.000
	21.4165 - 20.083		4310.067	7302.233	0.590	0.000	7302.233	0.000
L54	20.083 - 19.833 (54)	P60x0.625	4321.217	6198.183	0.697	0.000	6198.183	0.000
L55	19.833 - 18.4165	P60x0.625	4384.567	6198.183	0.707	0.000	6198.183	0.000
	18.4165 - 17		4448.217	6198.183	0.718	0.000	6198.183	0.000
L56	17 - 16.75 (56)	P60x0.725	4459.483	7302.233	0.611	0.000	7302.233	0.000
L57	16.75 - 15.73	P60x0.75	4505.533	7582.875	0.594	0.000	7582.875	0.000
	15.73 - 14.71		4551.733	7582.875	0.600	0.000	7582.875	0.000
	14.71 - 13.69		4598.083	7582.875	0.606	0.000	7582.875	0.000
	13.69 - 12.67		4644.583	7582.875	0.613	0.000	7582.875	0.000
	12.67 - 11.65		4691.225	7582.875	0.619	0.000	7582.875	0.000
L58	11.65 - 11.417 (58)	P60x0.75	4701.892	7582.875	0.620	0.000	7582.875	0.000
L59	11.417 - 10.4065	P60x0.75	4748.200	7582.875	0.626	0.000	7582.875	0.000
	10.4065 - 9.396		4794.550	7582.875	0.632	0.000	7582.875	0.000
L60	9.396 - 9.146 (60)	P60x0.8	4806.025	8149.650	0.590	0.000	8149.650	0.000
L61	9.146 - 8.06775	P60x0.8	4855.625	8149.650	0.596	0.000	8149.650	0.000
	8.06775 - 6.9895		4905.367	8149.650	0.602	0.000	8149.650	0.000
	6.9895 - 5.91125		4955.267	8149.650	0.608	0.000	8149.650	0.000
	5.91125 - 4.833		5005.317	8149.650	0.614	0.000	8149.650	0.000
L62	4.833 - 4.583 (62)	P60x0.75	5016.942	7582.875	0.662	0.000	7582.875	0.000
L63	4.583 - 3.43725	P60x0.75	5070.325	7582.875	0.669	0.000	7582.875	0.000
	3.43725 - 2.2915		5123.867	7582.875	0.676	0.000	7582.875	0.000
	2.2915 - 1.14575		5177.567	7582.875	0.683	0.000	7582.875	0.000
	1.14575 - 0		5231.433	7582.875	0.690	0.000	7582.875	0.000

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
L1	191.667 - 190.667	P18x0.375	0.108	235.463	0.000	0.000	364.865	0.000
	190.667 - 189.667		0.128	235.463	0.001	0.000	364.865	0.000
	189.667 - 188.667		0.149	235.463	0.001	0.000	364.865	0.000
	188.667 - 187.667		0.169	235.463	0.001	0.000	364.865	0.000
	187.667 - 186.667		0.477	235.463	0.002	0.000	364.865	0.000
L2	186.667 - 185.647	P24x0.375	0.544	315.621	0.002	0.000	655.568	0.000
	185.647 - 184.627		0.610	315.621	0.002	0.000	655.568	0.000
	184.627 - 183.607		0.009	315.621	0.000	0.000	655.568	0.000
	183.607 - 182.587		1.907	315.621	0.006	0.000	655.568	0.000
	182.587 - 181.567		1.933	315.621	0.006	0.000	655.568	0.000
L3	181.567 - 180.567	P24x0.375	5.834	315.621	0.018	0.001	655.568	0.000
	180.567 - 179.567		5.899	315.621	0.019	0.001	655.568	0.000
	179.567 - 178.567		5.964	315.621	0.019	0.001	655.568	0.000
	178.567 - 177.567		6.063	315.621	0.019	0.028	655.568	0.000
	177.567 - 176.567		6.128	315.621	0.019	0.028	655.568	0.000
L4	176.567 - 175.567	P24x0.375	6.217	315.621	0.020	0.788	655.568	0.001
	175.567 - 174.567		6.281	315.621	0.020	0.788	655.568	0.001
	174.567 - 173.567		6.345	315.621	0.020	0.788	655.568	0.001
	173.567 - 172.567		6.409	315.621	0.020	0.788	655.568	0.001
	172.567 - 171.567		6.473	315.621	0.021	0.788	655.568	0.001
L5	171.567 - 170.567	P24x0.375	6.536	315.621	0.021	0.788	655.568	0.001
	170.567 - 169.567		6.599	315.621	0.021	0.788	655.568	0.001
	169.567 - 168.567		6.661	315.621	0.021	0.788	655.568	0.001
	168.567 - 167.567		6.724	315.621	0.021	0.788	655.568	0.001
	167.567 - 166.567		6.786	315.621	0.022	0.788	655.568	0.001
L6	166.567 - 165.567	P24x0.375	6.848	315.621	0.022	0.788	655.568	0.001
	165.567 - 164.567		6.910	315.621	0.022	0.788	655.568	0.001
	164.567 - 163.567		6.971	315.621	0.022	0.788	655.568	0.001

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
	163.567 - 162.567		7.032	315.621	0.022	0.788	655.568	0.001
	162.567 - 161.567		7.093	315.621	0.022	0.788	655.568	0.001
L7	161.567 - 160.567	P24x0.375	7.153	315.621	0.023	0.788	655.568	0.001
	160.567 - 159.567		11.295	315.621	0.036	1.014	655.568	0.002
	159.567 - 158.567		11.353	315.621	0.036	1.014	655.568	0.002
	158.567 - 157.567		11.768	315.621	0.037	1.014	655.568	0.002
	157.567 - 156.567		11.825	315.621	0.037	0.802	655.568	0.001
L8	156.567 - 155.567	P24x0.375	11.882	315.621	0.038	0.802	655.568	0.001
	155.567 - 154.567		11.937	315.621	0.038	0.802	655.568	0.001
	154.567 - 153.567		11.993	315.621	0.038	0.802	655.568	0.001
	153.567 - 152.567		12.047	315.621	0.038	0.802	655.568	0.001
	152.567 - 151.567		12.101	315.621	0.038	0.802	655.568	0.001
L9	151.567 - 150.567	P24x0.375	17.670	315.621	0.056	1.713	655.568	0.003
	150.567 - 149.567		18.516	315.621	0.059	1.713	655.568	0.003
	149.567 - 148.567		18.564	315.621	0.059	1.641	655.568	0.003
	148.567 - 147.567		18.611	315.621	0.059	1.641	655.568	0.003
	147.567 - 146.567		18.657	315.621	0.059	1.641	655.568	0.003
L10	146.567 - 145.567	P24x0.375	18.702	315.621	0.059	1.641	655.568	0.003
	145.567 - 144.567		18.745	315.621	0.059	1.641	655.568	0.003
	144.567 - 143.567		18.787	315.621	0.060	1.640	655.568	0.003
	143.567 - 142.567		18.828	315.621	0.060	1.640	655.568	0.003
	142.567 - 141.567		18.867	315.621	0.060	1.640	655.568	0.003
L11	141.567 - 141.417 (11)	P24x0.375	18.866	315.621	0.060	1.640	655.568	0.003
L12	141.417 - 140.417	P36x0.375	18.947	454.187	0.042	1.640	1094.275	0.001
	140.417 - 139.417		19.029	454.187	0.042	1.640	1094.275	0.001
	139.417 - 138.417		19.110	454.187	0.042	1.640	1094.275	0.001
	138.417 - 137.417		19.253	454.187	0.042	1.640	1094.275	0.001
	137.417 - 136.417		19.333	454.187	0.043	1.640	1094.275	0.001
L13	136.417 - 135.417	P36x0.375	19.412	454.187	0.043	1.640	1094.275	0.001
	135.417 - 134.417		19.491	454.187	0.043	1.640	1094.275	0.001

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
	134.417 - 133.417		19.569	454.187	0.043	1.639	1094.275	0.001
	133.417 - 132.417		19.647	454.187	0.043	1.639	1094.275	0.001
	132.417 - 131.417		20.243	454.187	0.045	3.998	1094.275	0.004
L14	131.417 - 130.417	P36x0.375	20.319	454.187	0.045	3.998	1094.275	0.004
	130.417 - 129.417		20.394	454.187	0.045	3.997	1094.275	0.004
	129.417 - 128.417		20.469	454.187	0.045	3.997	1094.275	0.004
	128.417 - 127.417		20.543	454.187	0.045	3.997	1094.275	0.004
	127.417 - 126.417		20.616	454.187	0.045	3.997	1094.275	0.004
L15	126.417 - 125.417	P36x0.375	20.772	454.187	0.046	3.997	1094.275	0.004
	125.417 - 124.417		20.927	454.187	0.046	3.997	1094.275	0.004
	124.417 - 123.417		21.231	454.187	0.047	3.997	1094.275	0.004
	123.417 - 122.417		21.384	454.187	0.047	3.996	1094.275	0.004
	122.417 - 121.417		21.536	454.187	0.047	3.996	1094.275	0.004
L16	121.417 - 121.167 (16)	P36x0.375	21.568	454.187	0.047	3.996	1094.275	0.004
L17	121.167 - 120.167	P42x0.375	21.658	421.127	0.051	3.996	1185.508	0.003
	120.167 - 119.167		21.842	421.127	0.052	4.446	1185.508	0.004
	119.167 - 118.167		21.929	421.127	0.052	4.446	1185.508	0.004
	118.167 - 117.167		22.016	421.127	0.052	4.446	1185.508	0.004
	117.167 - 116.167		22.102	421.127	0.052	4.446	1185.508	0.004
L18	116.167 - 115.167	P42x0.375	24.997	421.127	0.059	4.637	1185.508	0.004
	115.167 - 114.167		25.078	421.127	0.060	4.636	1185.508	0.004
	114.167 - 113.167		25.652	421.127	0.061	4.636	1185.508	0.004
	113.167 - 112.167		25.733	421.127	0.061	4.636	1185.508	0.004
	112.167 - 111.167		25.812	421.127	0.061	4.636	1185.508	0.004
L19	111.167 - 110.042 (19)	P42x0.375	25.901	421.127	0.062	4.636	1185.508	0.004
L20	110.042 - 109.792 (20)	P42x0.4875	25.916	720.969	0.036	4.636	2272.017	0.002
L21	109.792 - 108.615	P42x0.4875	26.020	720.969	0.036	4.636	2272.017	0.002
	108.615 - 107.438		26.470	720.969	0.037	2.845	2272.017	0.001
	107.438 - 106.26		26.682	720.969	0.037	2.845	2272.017	0.001
	106.26 - 105.083		26.894	720.969	0.037	2.845	2272.017	0.001

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
L22	105.083 - 104.833 (22)	P42x0.5625	26.940	830.384	0.032	2.845	3025.183	0.001
L23	104.833 - 103.528	P42x0.5625	27.205	830.384	0.033	2.845	3025.183	0.001
	103.528 - 102.222		27.466	830.384	0.033	2.844	3025.183	0.001
	102.222 - 100.917		27.725	830.384	0.033	2.844	3025.183	0.001
L24	100.917 - 100.667 (24)	P48x0.375	27.769	394.372	0.070	2.844	1270.217	0.002
L25	100.667 - 99.4585	P48x0.375	27.994	394.372	0.071	2.844	1270.217	0.002
	99.4585 - 98.25		28.215	394.372	0.072	2.844	1270.217	0.002
	98.25 - 97.0415		28.548	394.372	0.072	2.844	1270.217	0.002
	97.0415 - 95.833		28.767	394.372	0.073	2.844	1270.217	0.002
L26	95.833 - 95.583 (26)	P48x0.475	28.784	710.639	0.041	2.844	2284.058	0.001
L27	95.583 - 94.583	P48x0.475	28.967	710.639	0.041	2.844	2284.058	0.001
	94.583 - 93.583		29.148	710.639	0.041	2.844	2284.058	0.001
	93.583 - 92.583		29.329	710.639	0.041	2.844	2284.058	0.001
	92.583 - 91.583		29.509	710.639	0.042	2.844	2284.058	0.001
	91.583 - 90.583		29.688	710.639	0.042	2.844	2284.058	0.001
L28	90.583 - 89.917 (28)	P48x0.475	30.180	710.639	0.042	3.119	2284.058	0.001
L29	89.917 - 89.667 (29)	P48x0.575	30.228	971.490	0.031	3.119	3667.025	0.001
L30	89.667 - 88.667	P48x0.575	30.430	971.490	0.031	3.119	3667.025	0.001
	88.667 - 87.667		30.631	971.490	0.032	3.119	3667.025	0.001
	87.667 - 86.667		30.830	971.490	0.032	3.119	3667.025	0.001
	86.667 - 85.667		31.029	971.490	0.032	3.119	3667.025	0.001
	85.667 - 84.667		31.227	971.490	0.032	3.119	3667.025	0.001
L31	84.667 - 83.389	P48x0.575	31.492	971.490	0.032	3.119	3667.025	0.001
	83.389 - 82.111		31.754	971.490	0.033	3.119	3667.025	0.001
	82.111 - 80.833		32.014	971.490	0.033	3.119	3667.025	0.001
L32	80.833 - 80.333 (32)	P54x0.55	32.111	966.315	0.033	3.119	3493.033	0.001
L33	80.333 - 80.083 (33)	P54x0.4875	32.164	729.657	0.044	3.119	2639.000	0.001
L34	80.083 - 79.083	P54x0.4875	32.370	729.657	0.044	3.119	2639.000	0.001
	79.083 - 78.083		32.574	729.657	0.045	3.119	2639.000	0.001
	78.083 - 77.083		32.776	729.657	0.045	3.119	2639.000	0.001

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
	77.083 - 76.083		32.978	729.657	0.045	3.119	2639.000	0.001
	76.083 - 75.083		33.179	729.657	0.045	3.119	2639.000	0.001
L35	75.083 - 74.083	P54x0.4875	33.390	729.657	0.046	3.119	2639.000	0.001
	74.083 - 73.083		33.600	729.657	0.046	3.119	2639.000	0.001
	73.083 - 72.083		33.810	729.657	0.046	3.118	2639.000	0.001
	72.083 - 71.083		34.019	729.657	0.047	3.118	2639.000	0.001
	71.083 - 70.083		34.227	729.657	0.047	3.118	2639.000	0.001
L36	70.083 - 69.5 (36)	P54x0.4875	34.846	729.657	0.048	3.118	2639.000	0.001
L37	69.5 - 69.25 (37)	P54x0.5875	34.902	1117.930	0.031	1.318	4113.450	0.000
L38	69.25 - 68.25	P54x0.5875	35.147	1117.930	0.031	1.318	4113.450	0.000
	68.25 - 67.25		35.386	1117.930	0.032	1.318	4113.450	0.000
	67.25 - 66.25		35.624	1117.930	0.032	1.318	4113.450	0.000
	66.25 - 65.25		35.860	1117.930	0.032	1.318	4113.450	0.000
	65.25 - 64.25		36.096	1117.930	0.032	1.318	4113.450	0.000
L39	64.25 - 63.0277	P54x0.5875	36.388	1117.930	0.033	1.318	4113.450	0.000
	63.0277 - 61.8053		36.676	1117.930	0.033	1.318	4113.450	0.000
	61.8053 - 60.583		36.961	1117.930	0.033	1.318	4113.450	0.000
L40	60.583 - 60.333 (40)	P60x0.5125	37.006	838.764	0.044	1.318	3372.333	0.000
L41	60.333 - 59.333	P60x0.5125	37.239	838.764	0.044	1.318	3372.333	0.000
	59.333 - 58.333		37.464	838.764	0.045	1.318	3372.333	0.000
	58.333 - 57.333		37.689	838.764	0.045	1.318	3372.333	0.000
	57.333 - 56.333		37.913	838.764	0.045	1.318	3372.333	0.000
	56.333 - 55.333		38.136	838.764	0.045	1.318	3372.333	0.000
L42	55.333 - 54.2777	P60x0.5125	38.330	838.764	0.046	1.318	3372.333	0.000
	54.2777 - 53.2223		38.523	838.764	0.046	1.318	3372.333	0.000
	53.2223 - 52.167		38.715	838.764	0.046	1.318	3372.333	0.000
L43	52.167 - 51.917 (43)	P60x0.625	38.752	1308.390	0.030	1.318	5250.550	0.000
L44	51.917 - 50.917	P60x0.625	38.952	1308.390	0.030	1.318	5250.550	0.000
	50.917 - 49.917		39.144	1308.390	0.030	1.318	5250.550	0.000
	49.917 - 48.917		39.336	1308.390	0.030	1.318	5250.550	0.000
	48.917 - 47.917		39.527	1308.390	0.030	1.318	5250.550	0.000
	47.917 - 46.917		39.717	1308.390	0.030	1.318	5250.550	0.000
L45	46.917 -	P60x0.625	39.927	1308.390	0.031	1.318	5250.550	0.000

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
	45.917							
	45.917 - 44.917		40.136	1308.390	0.031	1.318	5250.550	0.000
	44.917 - 43.917		40.345	1308.390	0.031	1.318	5250.550	0.000
	43.917 - 42.917		40.552	1308.390	0.031	1.318	5250.550	0.000
	42.917 - 41.917		40.759	1308.390	0.031	1.318	5250.550	0.000
L46	41.917 - 40.333 (46)	P60x0.625	41.078	1308.390	0.031	1.318	5250.550	0.000
L47	40.333 - 40.083 (47)	P60x0.6	41.107	1194.070	0.034	1.318	4793.808	0.000
L48	40.083 - 39.083	P60x0.6	41.297	1194.070	0.035	1.318	4793.808	0.000
	39.083 - 38.083		41.478	1194.070	0.035	1.318	4793.808	0.000
	38.083 - 37.083		41.657	1194.070	0.035	1.318	4793.808	0.000
	37.083 - 36.083		41.836	1194.070	0.035	1.318	4793.808	0.000
	36.083 - 35.083		42.013	1194.070	0.035	1.318	4793.808	0.000
L49	35.083 - 34.083	P60x0.6	42.165	1194.070	0.035	1.318	4793.808	0.000
	34.083 - 33.083		42.316	1194.070	0.035	1.318	4793.808	0.000
	33.083 - 32.083		42.692	1194.070	0.036	1.670	4793.808	0.000
	32.083 - 31.083		42.841	1194.070	0.036	1.670	4793.808	0.000
	31.083 - 30.083		42.990	1194.070	0.036	1.670	4793.808	0.000
L50	30.083 - 29.0415	P60x0.6	43.139	1194.070	0.036	1.670	4793.808	0.000
	29.0415 - 28		43.286	1194.070	0.036	1.670	4793.808	0.000
L51	28 - 27.75 (51)	P60x0.725	43.309	1530.990	0.028	1.670	7317.325	0.000
L52	27.75 - 26.75	P60x0.725	43.485	1530.990	0.028	1.670	7317.325	0.000
	26.75 - 25.75		43.650	1530.990	0.029	1.670	7317.325	0.000
	25.75 - 24.75		43.814	1530.990	0.029	1.670	7317.325	0.000
	24.75 - 23.75		43.977	1530.990	0.029	1.670	7317.325	0.000
	23.75 - 22.75		44.140	1530.990	0.029	1.670	7317.325	0.000
L53	22.75 - 21.4165	P60x0.725	44.360	1530.990	0.029	1.670	7317.325	0.000
	21.4165 - 20.083		44.573	1530.990	0.029	1.670	7317.325	0.000
L54	20.083 - 19.833 (54)	P60x0.625	44.592	1308.390	0.034	1.670	5250.550	0.000
L55	19.833 - 18.4165	P60x0.625	44.830	1308.390	0.034	1.670	5250.550	0.000
	18.4165 - 17		45.044	1308.390	0.034	1.670	5250.550	0.000
L56	17 - 16.75 (56)	P60x0.725	45.055	1530.990	0.029	1.670	7317.325	0.000
L57	16.75 - 15.73	P60x0.75	45.215	1583.120	0.029	1.670	7957.825	0.000
	15.73 - 14.71		45.361	1583.120	0.029	1.670	7957.825	0.000
	14.71 - 13.69		45.506	1583.120	0.029	1.670	7957.825	0.000
	13.69 - 12.67		45.649	1583.120	0.029	1.670	7957.825	0.000
	12.67 - 11.65		45.792	1583.120	0.029	1.670	7957.825	0.000
L58	11.65 - 11.417 (58)	P60x0.75	45.788	1583.120	0.029	1.670	7957.825	0.000
L59	11.417 -	P60x0.75	45.850	1583.120	0.029	1.670	7957.825	0.000

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
	10.4065							
	10.4065 - 9.396		45.896	1583.120	0.029	1.670	7957.825	0.000
L60	9.396 - 9.146 (60)	P60x0.8	45.914	1687.230	0.027	1.670	8781.667	0.000
L61	9.146 - 8.06775	P60x0.8	46.072	1687.230	0.027	1.670	8781.667	0.000
	8.06775 - 6.9895		46.213	1687.230	0.027	1.670	8781.667	0.000
	6.9895 - 5.91125		46.353	1687.230	0.027	1.670	8781.667	0.000
	5.91125 - 4.833		46.492	1687.230	0.028	1.670	8781.667	0.000
L62	4.833 - 4.583 (62)	P60x0.75	46.507	1583.120	0.029	1.670	7957.825	0.000
L63	4.583 - 3.43725	P60x0.75	46.670	1583.120	0.029	1.670	7957.825	0.000
	3.43725 - 2.2915		46.812	1583.120	0.030	1.670	7957.825	0.000
	2.2915 - 1.14575		46.953	1583.120	0.030	1.670	7957.825	0.000
	1.14575 - 0		47.092	1583.120	0.030	1.670	7957.825	0.000

Pole Interaction Design Data

Section No.	Elevation ft	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	Ratio $\frac{M_{uy}}{\phi M_{ny}}$	Ratio $\frac{V_u}{\phi V_n}$	Ratio $\frac{T_u}{\phi T_n}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	191.667 - 190.667	0.001	0.003	0.000	0.000	0.000	0.004 ✔	1.050	4.8.2 ✔
	190.667 - 189.667	0.001	0.004	0.000	0.001	0.000	0.005 ✔	1.050	4.8.2 ✔
	189.667 - 188.667	0.001	0.004	0.000	0.001	0.000	0.005 ✔	1.050	4.8.2 ✔
	188.667 - 187.667	0.001	0.004	0.000	0.001	0.000	0.006 ✔	1.050	4.8.2 ✔
	187.667 - 186.667	0.001	0.006	0.000	0.002	0.000	0.007 ✔	1.050	4.8.2 ✔
L2	186.667 - 185.647	0.001	0.004	0.000	0.002	0.000	0.005 ✔	1.050	4.8.2 ✔
	185.647 - 184.627	0.001	0.005	0.000	0.002	0.000	0.006 ✔	1.050	4.8.2 ✔
	184.627 - 183.607	0.013	0.005	0.000	0.000	0.000	0.018* ✔	1.000	4.8.2 ✔
	183.607 - 182.587	0.014	0.008	0.000	0.006	0.000	0.021 ✔	1.050	4.8.2 ✔
	182.587 - 181.567	0.014	0.011	0.000	0.006	0.000	0.025 ✔	1.050	4.8.2 ✔
L3	181.567 - 180.567	0.006	0.024	0.000	0.018	0.000	0.030 ✔	1.050	4.8.2 ✔
	180.567 - 179.567	0.006	0.034	0.000	0.019	0.000	0.040	1.050	4.8.2 ✔

Section No.	Elevation ft	Ratio $P_u/\phi P_n$	Ratio $M_{ux}/\phi M_{nx}$	Ratio $M_{uy}/\phi M_{ny}$	Ratio $V_u/\phi V_n$	Ratio $T_u/\phi T_n$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
	179.567 - 178.567	0.006	0.043	0.000	0.019	0.000	0.050 ✔	1.050	4.8.2 ✔
	178.567 - 177.567	0.006	0.053	0.000	0.019	0.000	0.059 ✔	1.050	4.8.2 ✔
	177.567 - 176.567	0.006	0.063	0.000	0.019	0.000	0.069 ✔	1.050	4.8.2 ✔
L4	176.567 - 175.567	0.006	0.073	0.000	0.020	0.001	0.079 ✔	1.050	4.8.2 ✔
	175.567 - 174.567	0.006	0.083	0.000	0.020	0.001	0.089 ✔	1.050	4.8.2 ✔
	174.567 - 173.567	0.006	0.093	0.000	0.020	0.001	0.100 ✔	1.050	4.8.2 ✔
	173.567 - 172.567	0.007	0.103	0.000	0.020	0.001	0.110 ✔	1.050	4.8.2 ✔
	172.567 - 171.567	0.007	0.113	0.000	0.021	0.001	0.121 ✔	1.050	4.8.2 ✔
L5	171.567 - 170.567	0.007	0.124	0.000	0.021	0.001	0.131 ✔	1.050	4.8.2 ✔
	170.567 - 169.567	0.007	0.134	0.000	0.021	0.001	0.142 ✔	1.050	4.8.2 ✔
	169.567 - 168.567	0.007	0.145	0.000	0.021	0.001	0.153 ✔	1.050	4.8.2 ✔
	168.567 - 167.567	0.007	0.156	0.000	0.021	0.001	0.163 ✔	1.050	4.8.2 ✔
	167.567 - 166.567	0.007	0.167	0.000	0.022	0.001	0.174 ✔	1.050	4.8.2 ✔
L6	166.567 - 165.567	0.008	0.178	0.000	0.022	0.001	0.186 ✔	1.050	4.8.2 ✔
	165.567 - 164.567	0.008	0.189	0.000	0.022	0.001	0.197 ✔	1.050	4.8.2 ✔
	164.567 - 163.567	0.008	0.200	0.000	0.022	0.001	0.208 ✔	1.050	4.8.2 ✔
	163.567 - 162.567	0.008	0.211	0.000	0.022	0.001	0.219 ✔	1.050	4.8.2 ✔
	162.567 - 161.567	0.008	0.222	0.000	0.022	0.001	0.231 ✔	1.050	4.8.2 ✔
L7	161.567 - 160.567	0.008	0.234	0.000	0.023	0.001	0.242 ✔	1.050	4.8.2 ✔
	160.567 - 159.567	0.012	0.248	0.000	0.036	0.002	0.261 ✔	1.050	4.8.2 ✔
	159.567 - 158.567	0.012	0.266	0.000	0.036	0.002	0.279 ✔	1.050	4.8.2 ✔
	158.567 - 157.567	0.012	0.285	0.000	0.037	0.002	0.299 ✔	1.050	4.8.2 ✔
	157.567 - 156.567	0.012	0.304	0.000	0.037	0.001	0.318 ✔	1.050	4.8.2 ✔
L8	156.567 - 155.567	0.012	0.323	0.000	0.038	0.001	0.337 ✔	1.050	4.8.2 ✔
	155.567 - 154.567	0.013	0.342	0.000	0.038	0.001	0.356 ✔	1.050	4.8.2 ✔
	154.567 -	0.013	0.361	0.000	0.038	0.001	0.376	1.050	4.8.2 ✔

Section No.	Elevation ft	Ratio P_u / ϕP_n	Ratio M_{ux} / ϕM_{nx}	Ratio M_{uy} / ϕM_{ny}	Ratio V_u / ϕV_n	Ratio T_u / ϕT_n	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
	153.567						✔		
	153.567 - 152.567	0.013	0.381	0.000	0.038	0.001	0.395 ✔	1.050	4.8.2 ✔
	152.567 - 151.567	0.013	0.400	0.000	0.038	0.001	0.415 ✔	1.050	4.8.2 ✔
L9	151.567 - 150.567	0.017	0.423	0.000	0.056	0.003	0.444 ✔	1.050	4.8.2 ✔
	150.567 - 149.567	0.018	0.453	0.000	0.059	0.003	0.475 ✔	1.050	4.8.2 ✔
	149.567 - 148.567	0.018	0.482	0.000	0.059	0.003	0.505 ✔	1.050	4.8.2 ✔
	148.567 - 147.567	0.018	0.512	0.000	0.059	0.003	0.535 ✔	1.050	4.8.2 ✔
	147.567 - 146.567	0.019	0.542	0.000	0.059	0.003	0.565 ✔	1.050	4.8.2 ✔
L10	146.567 - 145.567	0.019	0.572	0.000	0.059	0.003	0.595 ✔	1.050	4.8.2 ✔
	145.567 - 144.567	0.019	0.602	0.000	0.059	0.003	0.625 ✔	1.050	4.8.2 ✔
	144.567 - 143.567	0.019	0.632	0.000	0.060	0.003	0.655 ✔	1.050	4.8.2 ✔
	143.567 - 142.567	0.019	0.662	0.000	0.060	0.003	0.685 ✔	1.050	4.8.2 ✔
	142.567 - 141.567	0.019	0.693	0.000	0.060	0.003	0.716 ✔	1.050	4.8.2 ✔
L11	141.567 - 141.417 (11)	0.019	0.697	0.000	0.060	0.003	0.720 ✔	1.050	4.8.2 ✔
L12	141.417 - 140.417	0.014	0.339	0.000	0.042	0.001	0.355 ✔	1.050	4.8.2 ✔
	140.417 - 139.417	0.014	0.353	0.000	0.042	0.001	0.369 ✔	1.050	4.8.2 ✔
	139.417 - 138.417	0.014	0.367	0.000	0.042	0.001	0.383 ✔	1.050	4.8.2 ✔
	138.417 - 137.417	0.014	0.382	0.000	0.042	0.001	0.398 ✔	1.050	4.8.2 ✔
	137.417 - 136.417	0.015	0.396	0.000	0.043	0.001	0.412 ✔	1.050	4.8.2 ✔
L13	136.417 - 135.417	0.015	0.410	0.000	0.043	0.001	0.427 ✔	1.050	4.8.2 ✔
	135.417 - 134.417	0.015	0.425	0.000	0.043	0.001	0.442 ✔	1.050	4.8.2 ✔
	134.417 - 133.417	0.015	0.440	0.000	0.043	0.001	0.457 ✔	1.050	4.8.2 ✔
	133.417 - 132.417	0.015	0.454	0.000	0.043	0.001	0.471 ✔	1.050	4.8.2 ✔
	132.417 - 131.417	0.016	0.470	0.000	0.045	0.004	0.488 ✔	1.050	4.8.2 ✔
L14	131.417 - 130.417	0.016	0.485	0.000	0.045	0.004	0.503 ✔	1.050	4.8.2 ✔
	130.417 - 129.417	0.016	0.500	0.000	0.045	0.004	0.518 ✔	1.050	4.8.2 ✔
	129.417 -	0.016	0.515	0.000	0.045	0.004	0.534	1.050	4.8.2 ✔

Section No.	Elevation ft	Ratio $P_u/\phi P_n$	Ratio $M_{ux}/\phi M_{nx}$	Ratio $M_{uy}/\phi M_{ny}$	Ratio $V_u/\phi V_n$	Ratio $T_u/\phi T_n$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
	128.417								
	128.417 - 127.417	0.016	0.531	0.000	0.045	0.004	0.549	1.050	4.8.2
	127.417 - 126.417	0.016	0.546	0.000	0.045	0.004	0.565	1.050	4.8.2
L15	126.417 - 125.417	0.017	0.561	0.000	0.046	0.004	0.580	1.050	4.8.2
	125.417 - 124.417	0.017	0.577	0.000	0.046	0.004	0.596	1.050	4.8.2
	124.417 - 123.417	0.017	0.593	0.000	0.047	0.004	0.613	1.050	4.8.2
	123.417 - 122.417	0.018	0.609	0.000	0.047	0.004	0.629	1.050	4.8.2
	122.417 - 121.417	0.018	0.625	0.000	0.047	0.004	0.645	1.050	4.8.2
L16	121.417 - 121.167 (16)	0.018	0.629	0.000	0.047	0.004	0.649	1.050	4.8.2
L17	121.167 - 120.167	0.016	0.480	0.000	0.051	0.003	0.500	1.050	4.8.2
	120.167 - 119.167	0.016	0.493	0.000	0.052	0.004	0.512	1.050	4.8.2
	119.167 - 118.167	0.017	0.505	0.000	0.052	0.004	0.525	1.050	4.8.2
	118.167 - 117.167	0.017	0.517	0.000	0.052	0.004	0.537	1.050	4.8.2
	117.167 - 116.167	0.017	0.529	0.000	0.052	0.004	0.549	1.050	4.8.2
L18	116.167 - 115.167	0.019	0.545	0.000	0.059	0.004	0.568	1.050	4.8.2
	115.167 - 114.167	0.019	0.559	0.000	0.060	0.004	0.582	1.050	4.8.2
	114.167 - 113.167	0.020	0.573	0.000	0.061	0.004	0.597	1.050	4.8.2
	113.167 - 112.167	0.020	0.587	0.000	0.061	0.004	0.611	1.050	4.8.2
	112.167 - 111.167	0.020	0.602	0.000	0.061	0.004	0.626	1.050	4.8.2
L19	111.167 - 110.042 (19)	0.020	0.618	0.000	0.062	0.004	0.642	1.050	4.8.2
L20	110.042 - 109.792 (20)	0.015	0.466	0.000	0.036	0.002	0.482	1.050	4.8.2
L21	109.792 - 108.615	0.015	0.479	0.000	0.036	0.002	0.495	1.050	4.8.2
	108.615 - 107.438	0.015	0.492	0.000	0.037	0.001	0.508	1.050	4.8.2
	107.438 - 106.26	0.015	0.505	0.000	0.037	0.001	0.521	1.050	4.8.2
	106.26 - 105.083	0.015	0.518	0.000	0.037	0.001	0.535	1.050	4.8.2
L22	105.083 - 104.833 (22)	0.013	0.444	0.000	0.032	0.001	0.458	1.050	4.8.2
L23	104.833 -	0.013	0.457	0.000	0.033	0.001	0.471	1.050	4.8.2

Section No.	Elevation ft	Ratio $P_u/\phi P_n$	Ratio $M_{ux}/\phi M_{nx}$	Ratio $M_{uy}/\phi M_{ny}$	Ratio $V_u/\phi V_n$	Ratio $T_u/\phi T_n$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
	103.528								
	103.528 - 102.222	0.013	0.469	0.000	0.033	0.001	0.484	1.050	4.8.2
	102.222 - 100.917	0.014	0.482	0.000	0.033	0.001	0.497	1.050	4.8.2
L24	100.917 - 100.667 (24)	0.021	0.587	0.000	0.070	0.002	0.612	1.050	4.8.2
L25	100.667 - 99.4585	0.021	0.601	0.000	0.071	0.002	0.627	1.050	4.8.2
	99.4585 - 98.25	0.021	0.616	0.000	0.072	0.002	0.642	1.050	4.8.2
	98.25 - 97.0415	0.021	0.630	0.000	0.072	0.002	0.657	1.050	4.8.2
	97.0415 - 95.833	0.022	0.645	0.000	0.073	0.002	0.673	1.050	4.8.2
L26	95.833 - 95.583 (26)	0.016	0.502	0.000	0.041	0.001	0.520	1.050	4.8.2
L27	95.583 - 94.583	0.016	0.511	0.000	0.041	0.001	0.529	1.050	4.8.2
	94.583 - 93.583	0.016	0.521	0.000	0.041	0.001	0.539	1.050	4.8.2
	93.583 - 92.583	0.017	0.531	0.000	0.041	0.001	0.549	1.050	4.8.2
	92.583 - 91.583	0.017	0.541	0.000	0.042	0.001	0.559	1.050	4.8.2
	91.583 - 90.583	0.017	0.550	0.000	0.042	0.001	0.569	1.050	4.8.2
L28	90.583 - 89.917 (28)	0.017	0.557	0.000	0.042	0.001	0.577	1.050	4.8.2
L29	89.917 - 89.667 (29)	0.013	0.454	0.000	0.031	0.001	0.468	1.050	4.8.2
L30	89.667 - 88.667	0.014	0.462	0.000	0.031	0.001	0.477	1.050	4.8.2
	88.667 - 87.667	0.014	0.470	0.000	0.032	0.001	0.485	1.050	4.8.2
	87.667 - 86.667	0.014	0.478	0.000	0.032	0.001	0.493	1.050	4.8.2
	86.667 - 85.667	0.014	0.487	0.000	0.032	0.001	0.502	1.050	4.8.2
	85.667 - 84.667	0.014	0.495	0.000	0.032	0.001	0.511	1.050	4.8.2
L31	84.667 - 83.389	0.015	0.506	0.000	0.032	0.001	0.522	1.050	4.8.2
	83.389 - 82.111	0.015	0.517	0.000	0.033	0.001	0.533	1.050	4.8.2
	82.111 - 80.833	0.015	0.528	0.000	0.033	0.001	0.544	1.050	4.8.2
L32	80.833 - 80.333 (32)	0.015	0.447	0.000	0.033	0.001	0.463	1.050	4.8.2
L33	80.333 - 80.083 (33)	0.018	0.512	0.000	0.044	0.001	0.532	1.050	4.8.2
L34	80.083 -	0.018	0.520	0.000	0.044	0.001	0.540	1.050	4.8.2

Section No.	Elevation ft	Ratio P_u / ϕP_n	Ratio M_{ux} / ϕM_{nx}	Ratio M_{uy} / ϕM_{ny}	Ratio V_u / ϕV_n	Ratio T_u / ϕT_n	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
	79.083						✔		
	79.083 - 78.083	0.018	0.529	0.000	0.045	0.001	0.549 ✔	1.050	4.8.2 ✔
	78.083 - 77.083	0.018	0.537	0.000	0.045	0.001	0.557 ✔	1.050	4.8.2 ✔
	77.083 - 76.083	0.018	0.546	0.000	0.045	0.001	0.566 ✔	1.050	4.8.2 ✔
	76.083 - 75.083	0.018	0.554	0.000	0.045	0.001	0.575 ✔	1.050	4.8.2 ✔
L35	75.083 - 74.083	0.019	0.563	0.000	0.046	0.001	0.584 ✔	1.050	4.8.2 ✔
	74.083 - 73.083	0.019	0.572	0.000	0.046	0.001	0.593 ✔	1.050	4.8.2 ✔
	73.083 - 72.083	0.019	0.580	0.000	0.046	0.001	0.602 ✔	1.050	4.8.2 ✔
	72.083 - 71.083	0.019	0.589	0.000	0.047	0.001	0.611 ✔	1.050	4.8.2 ✔
	71.083 - 70.083	0.020	0.598	0.000	0.047	0.001	0.620 ✔	1.050	4.8.2 ✔
L36	70.083 - 69.5 (36)	0.020	0.603	0.000	0.048	0.001	0.625 ✔	1.050	4.8.2 ✔
L37	69.5 - 69.25 (37)	0.016	0.494	0.000	0.031	0.000	0.510 ✔	1.050	4.8.2 ✔
L38	69.25 - 68.25	0.016	0.501	0.000	0.031	0.000	0.518 ✔	1.050	4.8.2 ✔
	68.25 - 67.25	0.016	0.508	0.000	0.032	0.000	0.526 ✔	1.050	4.8.2 ✔
	67.25 - 66.25	0.017	0.516	0.000	0.032	0.000	0.534 ✔	1.050	4.8.2 ✔
	66.25 - 65.25	0.017	0.523	0.000	0.032	0.000	0.542 ✔	1.050	4.8.2 ✔
	65.25 - 64.25	0.017	0.531	0.000	0.032	0.000	0.550 ✔	1.050	4.8.2 ✔
L39	64.25 - 63.0277	0.018	0.540	0.000	0.033	0.000	0.559 ✔	1.050	4.8.2 ✔
	63.0277 - 61.8053	0.018	0.550	0.000	0.033	0.000	0.569 ✔	1.050	4.8.2 ✔
	61.8053 - 60.583	0.019	0.559	0.000	0.033	0.000	0.579 ✔	1.050	4.8.2 ✔
L40	60.583 - 60.333 (40)	0.021	0.533	0.000	0.044	0.000	0.556 ✔	1.050	4.8.2 ✔
L41	60.333 - 59.333	0.021	0.540	0.000	0.044	0.000	0.564 ✔	1.050	4.8.2 ✔
	59.333 - 58.333	0.021	0.548	0.000	0.045	0.000	0.571 ✔	1.050	4.8.2 ✔
	58.333 - 57.333	0.022	0.555	0.000	0.045	0.000	0.579 ✔	1.050	4.8.2 ✔
	57.333 - 56.333	0.022	0.563	0.000	0.045	0.000	0.587 ✔	1.050	4.8.2 ✔
	56.333 - 55.333	0.022	0.571	0.000	0.045	0.000	0.595 ✔	1.050	4.8.2 ✔
L42	55.333 -	0.022	0.579	0.000	0.046	0.000	0.603	1.050	4.8.2 ✔

Section No.	Elevation ft	Ratio $P_u/\phi P_n$	Ratio $M_{ux}/\phi M_{nx}$	Ratio $M_{uy}/\phi M_{ny}$	Ratio $V_u/\phi V_n$	Ratio $T_u/\phi T_n$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
	54.2777						✔		
	54.2777 - 53.2223	0.022	0.587	0.000	0.046	0.000	0.611 ✔	1.050	4.8.2 ✔
	53.2223 - 52.167	0.022	0.595	0.000	0.046	0.000	0.620 ✔	1.050	4.8.2 ✔
L43	52.167 - 51.917 (43)	0.018	0.481	0.000	0.030	0.000	0.499 ✔	1.050	4.8.2 ✔
L44	51.917 - 50.917	0.018	0.487	0.000	0.030	0.000	0.506 ✔	1.050	4.8.2 ✔
	50.917 - 49.917	0.018	0.493	0.000	0.030	0.000	0.512 ✔	1.050	4.8.2 ✔
	49.917 - 48.917	0.018	0.500	0.000	0.030	0.000	0.519 ✔	1.050	4.8.2 ✔
	48.917 - 47.917	0.018	0.506	0.000	0.030	0.000	0.525 ✔	1.050	4.8.2 ✔
	47.917 - 46.917	0.018	0.512	0.000	0.030	0.000	0.532 ✔	1.050	4.8.2 ✔
L45	46.917 - 45.917	0.018	0.519	0.000	0.031	0.000	0.538 ✔	1.050	4.8.2 ✔
	45.917 - 44.917	0.019	0.525	0.000	0.031	0.000	0.545 ✔	1.050	4.8.2 ✔
	44.917 - 43.917	0.019	0.532	0.000	0.031	0.000	0.552 ✔	1.050	4.8.2 ✔
	43.917 - 42.917	0.019	0.538	0.000	0.031	0.000	0.558 ✔	1.050	4.8.2 ✔
	42.917 - 41.917	0.019	0.545	0.000	0.031	0.000	0.565 ✔	1.050	4.8.2 ✔
L46	41.917 - 40.333 (46)	0.020	0.555	0.000	0.031	0.000	0.576 ✔	1.050	4.8.2 ✔
L47	40.333 - 40.083 (47)	0.021	0.582	0.000	0.034	0.000	0.604 ✔	1.050	4.8.2 ✔
L48	40.083 - 39.083	0.021	0.589	0.000	0.035	0.000	0.611 ✔	1.050	4.8.2 ✔
	39.083 - 38.083	0.021	0.596	0.000	0.035	0.000	0.619 ✔	1.050	4.8.2 ✔
	38.083 - 37.083	0.021	0.603	0.000	0.035	0.000	0.626 ✔	1.050	4.8.2 ✔
	37.083 - 36.083	0.021	0.610	0.000	0.035	0.000	0.633 ✔	1.050	4.8.2 ✔
	36.083 - 35.083	0.022	0.617	0.000	0.035	0.000	0.640 ✔	1.050	4.8.2 ✔
L49	35.083 - 34.083	0.022	0.625	0.000	0.035	0.000	0.648 ✔	1.050	4.8.2 ✔
	34.083 - 33.083	0.022	0.632	0.000	0.035	0.000	0.655 ✔	1.050	4.8.2 ✔
	33.083 - 32.083	0.022	0.639	0.000	0.036	0.000	0.662 ✔	1.050	4.8.2 ✔
	32.083 - 31.083	0.022	0.646	0.000	0.036	0.000	0.670 ✔	1.050	4.8.2 ✔
	31.083 - 30.083	0.022	0.653	0.000	0.036	0.000	0.677 ✔	1.050	4.8.2 ✔
L50	30.083 -	0.023	0.661	0.000	0.036	0.000	0.685	1.050	4.8.2 ✔

Section No.	Elevation ft	Ratio $P_u/\phi P_n$	Ratio $M_{ux}/\phi M_{nx}$	Ratio $M_{uy}/\phi M_{ny}$	Ratio $V_u/\phi V_n$	Ratio $T_u/\phi T_n$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
	29.0415								
	29.0415 - 28	0.023	0.669	0.000	0.036	0.000	0.693	1.050	4.8.2
L51	28 - 27.75 (51)	0.018	0.544	0.000	0.028	0.000	0.563	1.050	4.8.2
L52	27.75 - 26.75	0.018	0.550	0.000	0.028	0.000	0.569	1.050	4.8.2
	26.75 - 25.75	0.018	0.556	0.000	0.029	0.000	0.575	1.050	4.8.2
	25.75 - 24.75	0.018	0.562	0.000	0.029	0.000	0.581	1.050	4.8.2
	24.75 - 23.75	0.018	0.568	0.000	0.029	0.000	0.587	1.050	4.8.2
	23.75 - 22.75	0.019	0.574	0.000	0.029	0.000	0.594	1.050	4.8.2
L53	22.75 - 21.4165	0.019	0.582	0.000	0.029	0.000	0.602	1.050	4.8.2
	21.4165 - 20.083	0.019	0.590	0.000	0.029	0.000	0.610	1.050	4.8.2
L54	20.083 - 19.833 (54)	0.023	0.697	0.000	0.034	0.000	0.722	1.050	4.8.2
L55	19.833 - 18.4165	0.023	0.707	0.000	0.034	0.000	0.732	1.050	4.8.2
	18.4165 - 17	0.024	0.718	0.000	0.034	0.000	0.743	1.050	4.8.2
L56	17 - 16.75 (56)	0.020	0.611	0.000	0.029	0.000	0.631	1.050	4.8.2
L57	16.75 - 15.73	0.019	0.594	0.000	0.029	0.000	0.614	1.050	4.8.2
	15.73 - 14.71	0.019	0.600	0.000	0.029	0.000	0.620	1.050	4.8.2
	14.71 - 13.69	0.019	0.606	0.000	0.029	0.000	0.626	1.050	4.8.2
	13.69 - 12.67	0.019	0.613	0.000	0.029	0.000	0.633	1.050	4.8.2
	12.67 - 11.65	0.020	0.619	0.000	0.029	0.000	0.639	1.050	4.8.2
L58	11.65 - 11.417 (58)	0.020	0.620	0.000	0.029	0.000	0.641	1.050	4.8.2
L59	11.417 - 10.4065	0.020	0.626	0.000	0.029	0.000	0.647	1.050	4.8.2
	10.4065 - 9.396	0.020	0.632	0.000	0.029	0.000	0.653	1.050	4.8.2
L60	9.396 - 9.146 (60)	0.019	0.590	0.000	0.027	0.000	0.609	1.050	4.8.2
L61	9.146 - 8.06775	0.019	0.596	0.000	0.027	0.000	0.615	1.050	4.8.2
	8.06775 - 6.9895	0.019	0.602	0.000	0.027	0.000	0.621	1.050	4.8.2
	6.9895 - 5.91125	0.019	0.608	0.000	0.027	0.000	0.628	1.050	4.8.2
	5.91125 -	0.019	0.614	0.000	0.028	0.000	0.634	1.050	4.8.2

Section No.	Elevation ft	Ratio P_u / ϕP_n	Ratio M_{ux} / ϕM_{nx}	Ratio M_{uy} / ϕM_{ny}	Ratio V_u / ϕV_n	Ratio T_u / ϕT_n	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
	4.833						✔		
L62	4.833 - 4.583 (62)	0.020	0.662	0.000	0.029	0.000	0.683 ✔	1.050	4.8.2 ✔
L63	4.583 - 3.43725	0.021	0.669	0.000	0.029	0.000	0.690 ✔	1.050	4.8.2 ✔
	3.43725 - 2.2915	0.021	0.676	0.000	0.030	0.000	0.697 ✔	1.050	4.8.2 ✔
	2.2915 - 1.14575	0.021	0.683	0.000	0.030	0.000	0.705 ✔	1.050	4.8.2 ✔
	1.14575 - 0	0.021	0.690	0.000	0.030	0.000	0.712 ✔	1.050	4.8.2 ✔

* DL controls

Section Capacity Table

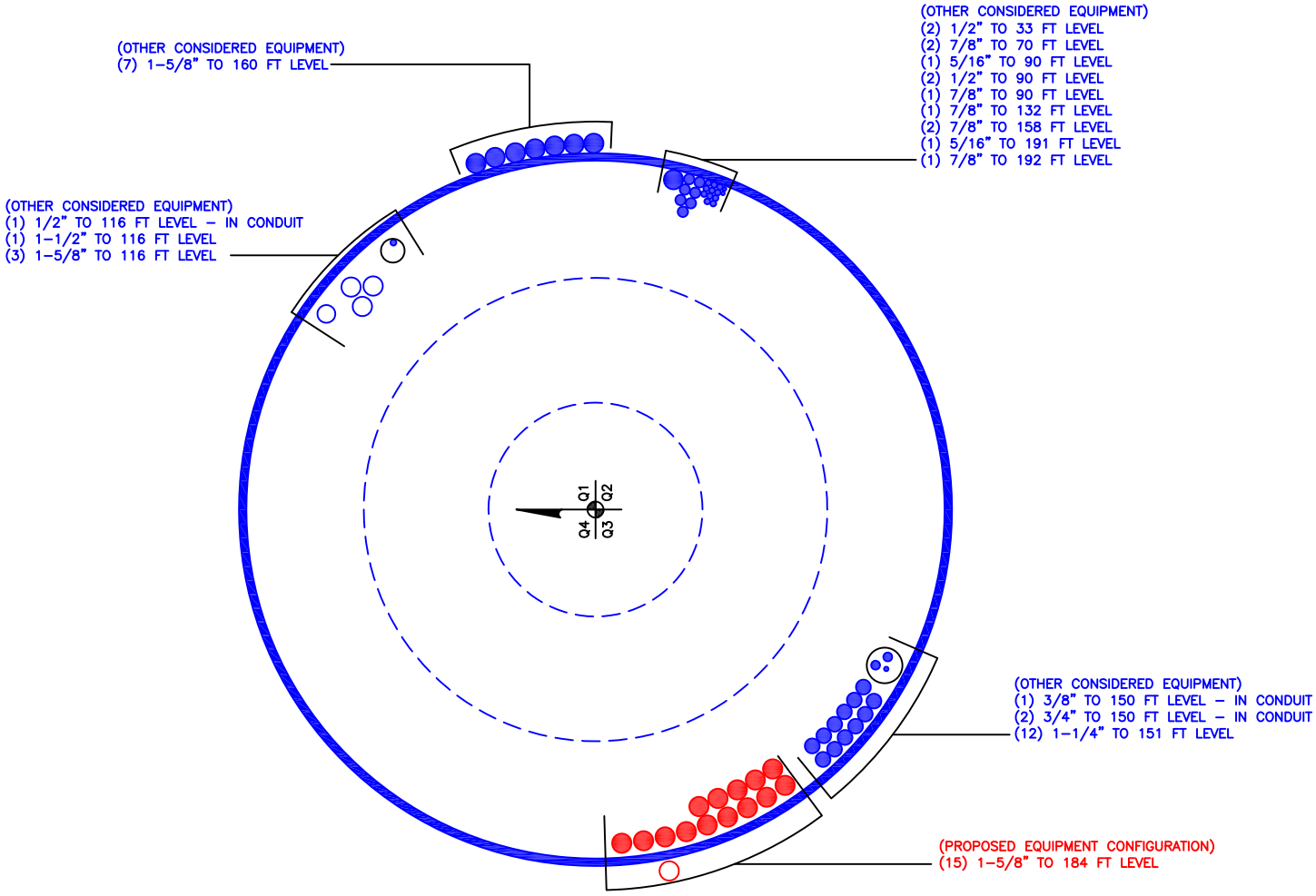
Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L1	191.667 - 186.667	Pole	P18x0.375	1	-0.640	824.122	**	**
L2	186.667 - 181.567	Pole	P24x0.375	2	-14.561	1104.673	**	**
L3	181.567 - 176.567	Pole	P24x0.375	3	-6.392	1104.673	**	**
L4	176.567 - 171.567	Pole	P24x0.375	4	-7.074	1104.673	**	**
L5	171.567 - 166.567	Pole	P24x0.375	5	-7.765	1104.673	**	**
L6	166.567 - 161.567	Pole	P24x0.375	6	-8.461	1104.673	**	**
L7	161.567 - 156.567	Pole	P24x0.375	7	-12.956	1104.673	**	**
L8	156.567 - 151.567	Pole	P24x0.375	8	-13.701	1104.673	**	**
L9	151.567 - 146.567	Pole	P24x0.375	9	-19.597	1104.673	**	**
L10	146.567 - 141.567	Pole	P24x0.375	10	-20.470	1104.673	**	**
L11	141.567 - 141.417	Pole	P24x0.375	11	-20.505	1104.673	**	**
L12	141.417 - 136.417	Pole	P36x0.375	12	-21.635	1564.605	**	**
L13	136.417 - 131.417	Pole	P36x0.375	13	-23.221	1564.605	**	**
L14	131.417 - 126.417	Pole	P36x0.375	14	-24.383	1564.605	**	**
L15	126.417 - 121.417	Pole	P36x0.375	15	-26.596	1564.605	**	**
L16	121.417 - 121.167	Pole	P36x0.375	16	-26.670	1564.605	**	**
L17	121.167 - 116.167	Pole	P42x0.375	17	-28.139	1752.313	**	**
L18	116.167 - 111.167	Pole	P42x0.375	18	-33.490	1752.313	**	**
L19	111.167 -	Pole	P42x0.375	19	-33.801	1752.313	**	**

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
	110.042							
L20	110.042 - 109.792	Pole	P42x0.4875	20	-33.890	2448.736	**	**
L21	109.792 - 105.083	Pole	P42x0.4875	21	-35.512	2448.736	**	**
L22	105.083 - 104.833	Pole	P42x0.5625	22	-35.622	2906.347	**	**
L23	104.833 - 100.917	Pole	P42x0.5625	23	-38.047	2906.347	**	**
L24	100.917 - 100.667	Pole	P48x0.375	24	-38.157	1939.864	**	**
L25	100.667 - 95.833	Pole	P48x0.375	25	-39.992	1939.864	**	**
L26	95.833 - 95.583	Pole	P48x0.475	26	-40.089	2605.459	**	**
L27	95.583 - 90.583	Pole	P48x0.475	27	-41.869	2605.459	**	**
L28	90.583 - 89.917	Pole	P48x0.475	28	-42.594	2605.459	**	**
L29	89.917 - 89.667	Pole	P48x0.575	29	-42.709	3332.721	**	**
L30	89.667 - 84.667	Pole	P48x0.575	30	-45.543	3332.721	**	**
L31	84.667 - 80.833	Pole	P48x0.575	31	-48.721	3332.721	**	**
L32	80.833 - 80.333	Pole	P54x0.55	32	-49.104	3420.721	**	**
L33	80.333 - 80.083	Pole	P54x0.4875	33	-49.245	2937.028	**	**
L34	80.083 - 75.083	Pole	P54x0.4875	34	-51.721	2937.028	**	**
L35	75.083 - 70.083	Pole	P54x0.4875	35	-54.623	2937.028	**	**
L36	70.083 - 69.5	Pole	P54x0.4875	36	-55.295	2937.028	**	**
L37	69.5 - 69.25	Pole	P54x0.5875	37	-55.483	3722.491	**	**
L38	69.25 - 64.25	Pole	P54x0.5875	38	-61.849	3722.491	**	**
L39	64.25 - 60.583	Pole	P54x0.5875	39	-67.028	3722.491	**	**
L40	60.583 - 60.333	Pole	P60x0.5125	40	-67.234	3384.034	**	**
L41	60.333 - 55.333	Pole	P60x0.5125	41	-71.016	3384.034	**	**
L42	55.333 - 52.167	Pole	P60x0.5125	42	-72.509	3384.034	**	**
L43	52.167 - 51.917	Pole	P60x0.625	43	-72.655	4346.107	**	**
L44	51.917 - 46.917	Pole	P60x0.625	44	-75.754	4346.107	**	**
L45	46.917 - 41.917	Pole	P60x0.625	45	-79.726	4346.107	**	**
L46	41.917 - 40.333	Pole	P60x0.625	46	-80.974	4346.107	**	**
L47	40.333 - 40.083	Pole	P60x0.6	47	-81.166	4125.565	**	**
L48	40.083 - 35.083	Pole	P60x0.6	48	-84.838	4125.565	**	**
L49	35.083 - 30.083	Pole	P60x0.6	49	-88.159	4125.565	**	**
L50	30.083 - 28	Pole	P60x0.6	50	-89.284	4125.565	**	**
L51	28 - 27.75	Pole	P60x0.725	51	-89.450	5266.705	**	**
L52	27.75 - 22.75	Pole	P60x0.725	52	-93.569	5266.705	**	**
L53	22.75 - 20.083	Pole	P60x0.725	53	-95.796	5266.705	**	**
L54	20.083 - 19.833	Pole	P60x0.625	54	-95.995	4346.107	**	**
L55	19.833 - 17	Pole	P60x0.625	55	-98.143	4346.107	**	**
L56	17 - 16.75	Pole	P60x0.725	56	-98.369	5266.705	**	**
L57	16.75 - 11.65	Pole	P60x0.75	57	-102.601	5506.441	**	**
L58	11.65 - 11.417	Pole	P60x0.75	58	-102.765	5506.441	**	**
L59	11.417 - 9.396	Pole	P60x0.75	59	-104.119	5506.441	**	**
L60	9.396 - 9.146	Pole	P60x0.8	60	-104.300	5905.305	**	**
L61	9.146 - 4.833	Pole	P60x0.8	61	-107.300	5905.305	**	**
L62	4.833 - 4.583	Pole	P60x0.75	62	-107.478	5506.441	**	**
L63	4.583 - 0	Pole	P60x0.75	63	-110.620	5506.441	**	**
							Summary	
						Pole (L55)	**	**
						RATING =	**	**

**See Additional Calculations

APPENDIX B

BASE LEVEL DRAWING



BUSINESS UNIT: 826217

APPENDIX C

ADDITIONAL CALCULATIONS

CCIpole

per TIA-222- H

Site BU: 826217

Work Order: 1781648

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Pole Geometry

	Pole Height Above Base (ft)	Section Length (ft)	Lap Splice Length (ft)	Number of Sides	Top Diameter (in)	Bottom Diameter (in)	Wall Thickness (in)	Bend Radius (in)	Pole Material
1	191.667	10.084		0	18	18	0.375		A53-B-42
2	181.583	40.166		0	24.00	24	0.375		A53-B-42
3	141.417	20.25		0	36.00	36	0.375		A53-B-42
4	121.167	20.25		0	42.00	42	0.375		A53-B-42
5	100.917	20.084		0	48.00	48	0.375		A53-B-42
6	80.833	20.25		0	54.00	54	0.375		A53-B-42
7	60.583	20.25		0	60.00	60	0.375		A53-B-42
8	40.333	20.25		0	60.00	60	0.5		A53-B-42
9	20.083	20.083		0	60.00	60	0.625		A53-B-42

Reinforcement Configuration

	Bottom Effective Elevation (ft)	Top Effective Elevation (ft)	Type	Model	Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	0	9.396	plate	CCI-AFP-040075	2				70												313		
2	20.083	40.333	plate	CCI-SFP-060100	3				66						189						312		
3	40.333	60.583	plate	CCI-SFP-065125	3				67.5						188						307		
4	60.583	80.333	plate	CCI-SFP-060100	3				67.5						190						307		
5	80.333	89.917	plate	CCI-SFP-045100	3				72						192						312		
6	100.917	105.083	plate	CCI-AFP-040075	3			53						178							303		
7	4.833	11.667	plate	CCI-AFP-040075	1										198								
8	0	17	plate	CCI-SFP-060100	4		36				113						223			294			
9	20.083	28	plate	CCI-SFP-060100	4			53					157					247				339	
10	40.333	52.167	plate	CCI-SFP-060100	4		36					126					234			294			
11	60.583	69.5	plate	CCI-SFP-045100	4				80				155					254					341
12	80.333	95.833	plate	CCI-SFP-045100	3					93						213						333	
13	100.917	110.042	plate	CCI-SFP-045100	3		30							150					270				
14																							

Reinforcement Details

	B (in)	H (in)	Gross Area (in^2)	Pole Face to Centroid (in)	Bottom Termination Length (in)	Top Termination Length (in)	L_u (in)	Net Area (in^2)	Bolt Hole Size (in)	Reinforcement Material
1	4	0.75	3	0.375	18.000	18.000	16.000	2.063	1.1875	A572-65
2	6	1	6	0.5	24.000	24.000	16.000	4.750	1.1875	A572-65
3	6.5	1.25	8.125	0.625	33.000	33.000	19.000	6.563	1.1875	A572-65
4	6	1	6	0.5	24.000	24.000	16.000	4.750	1.1875	A572-65
5	4.5	1	4.5	0.5	18.000	18.000	20.000	3.250	1.1875	A572-65
6	4	0.75	3	0.375	18.000	18.000	16.000	2.063	1.1875	A572-65
7	4	0.75	3	0.375	18.000	18.000	16.000	2.063	1.1875	A572-65
8	6	1	6	0.5	24.000	24.000	16.000	4.750	1.1875	A572-65
9	6	1	6	0.5	24.000	24.000	16.000	4.750	1.1875	A572-65
10	6	1	6	0.5	24.000	24.000	16.000	4.750	1.1875	A572-65
11	4.5	1	4.5	0.5	18.000	18.000	20.000	3.250	1.1875	A572-65
12	4.5	1	4.5	0.5	18.000	18.000	20.000	3.250	1.1875	A572-65
13	4.5	1	4.5	0.5	18.000	18.000	20.000	3.250	1.1875	A572-65

TNX Geometry Input

Increment (ft): 5

	Section Height (ft)	Section Length (ft)	Lap Splice Length (ft)	Number of Sides	Top Diameter (in)	Bottom Diameter (in)	Wall Thickness (in)	Tapered Pole Grade	Weight Multiplier
1	191.667 - 186.667	5	0	0	18.000	18.000	0.375	A53-B-42	1.000
2	186.667 - 181.567	5.1		0	24.000	24.000	0.375	A53-B-42	1.000
3	181.567 - 176.567	5		0	24.000	24.000	0.375	A53-B-42	1.000
4	176.567 - 171.567	5		0	24.000	24.000	0.375	A53-B-42	1.000
5	171.567 - 166.567	5		0	24.000	24.000	0.375	A53-B-42	1.000
6	166.567 - 161.567	5		0	24.000	24.000	0.375	A53-B-42	1.000
7	161.567 - 156.567	5		0	24.000	24.000	0.375	A53-B-42	1.000
8	156.567 - 151.567	5		0	24.000	24.000	0.375	A53-B-42	1.000
9	151.567 - 146.567	5		0	24.000	24.000	0.375	A53-B-42	1.000
10	146.567 - 141.567	5		0	24.000	24.000	0.375	A53-B-42	1.000
11	141.567 - 141.417	0.15	0	0	24.000	24.000	0.375	A53-B-42	1.000
12	141.417 - 136.417	5		0	36.000	36.000	0.375	A53-B-42	1.000
13	136.417 - 131.417	5		0	36.000	36.000	0.375	A53-B-42	1.000
14	131.417 - 126.417	5		0	36.000	36.000	0.375	A53-B-42	1.000
15	126.417 - 121.417	5		0	36.000	36.000	0.375	A53-B-42	1.000
16	121.417 - 121.167	0.25	0	0	36.000	36.000	0.375	A53-B-42	1.000
17	121.167 - 116.167	5		0	42.000	42.000	0.375	A53-B-42	1.000
18	116.167 - 111.167	5		0	42.000	42.000	0.375	A53-B-42	1.000
19	111.167 - 110.042	1.125		0	42.000	42.000	0.375	A53-B-42	1.000
20	110.042 - 109.792	0.25		0	42.000	42.000	0.4875	A53-B-42	0.984
21	109.792 - 105.083	4.709		0	42.000	42.000	0.4875	A53-B-42	0.984
22	105.083 - 104.833	0.25		0	42.000	42.000	0.5625	A53-B-42	0.977
23	104.833 - 100.917	3.916	0	0	42.000	42.000	0.5625	A53-B-42	0.977
24	100.917 - 100.667	0.25		0	48.000	48.000	0.375	A53-B-42	1.000
25	100.667 - 95.833	4.834		0	48.000	48.000	0.375	A53-B-42	1.000
26	95.833 - 95.583	0.25		0	48.000	48.000	0.475	A53-B-42	0.981
27	95.583 - 90.583	5		0	48.000	48.000	0.475	A53-B-42	0.981
28	90.583 - 89.917	0.666		0	48.000	48.000	0.475	A53-B-42	0.981
29	89.917 - 89.667	0.25		0	48.000	48.000	0.575	A53-B-42	0.970
30	89.667 - 84.667	5		0	48.000	48.000	0.575	A53-B-42	0.970
31	84.667 - 80.833	3.834	0	0	48.000	48.000	0.575	A53-B-42	0.970
32	80.833 - 80.333	0.5		0	54.000	54.000	0.55	A53-B-42	0.976
33	80.333 - 80.083	0.25		0	54.000	54.000	0.4875	A53-B-42	0.990
34	80.083 - 75.083	5		0	54.000	54.000	0.4875	A53-B-42	0.990
35	75.083 - 70.083	5		0	54.000	54.000	0.4875	A53-B-42	0.990
36	70.083 - 69.5	0.583		0	54.000	54.000	0.4875	A53-B-42	0.990
37	69.5 - 69.25	0.25		0	54.000	54.000	0.5875	A53-B-42	1.006
38	69.25 - 64.25	5		0	54.000	54.000	0.5875	A53-B-42	1.006
39	64.25 - 60.583	3.667	0	0	54.000	54.000	0.5875	A53-B-42	1.006
40	60.583 - 60.333	0.25		0	60.000	60.000	0.5125	A53-B-42	0.988
41	60.333 - 55.333	5		0	60.000	60.000	0.5125	A53-B-42	0.988
42	55.333 - 52.167	3.166		0	60.000	60.000	0.5125	A53-B-42	0.988
43	52.167 - 51.917	0.25		0	60.000	60.000	0.625	A53-B-42	1.017
44	51.917 - 46.917	5		0	60.000	60.000	0.625	A53-B-42	1.017
45	46.917 - 41.917	5		0	60.000	60.000	0.625	A53-B-42	1.017
46	41.917 - 40.333	1.584	0	0	60.000	60.000	0.625	A53-B-42	1.017
47	40.333 - 40.083	0.25		0	60.000	60.000	0.6	A53-B-42	0.995
48	40.083 - 35.083	5		0	60.000	60.000	0.6	A53-B-42	0.995
49	35.083 - 30.083	5		0	60.000	60.000	0.6	A53-B-42	0.995
50	30.083 - 28	2.083		0	60.000	60.000	0.6	A53-B-42	0.995
51	28 - 27.75	0.25		0	60.000	60.000	0.725	A53-B-42	1.003
52	27.75 - 22.75	5		0	60.000	60.000	0.725	A53-B-42	1.003
53	22.75 - 20.083	2.667	0	0	60.000	60.000	0.725	A53-B-42	1.003
54	20.083 - 19.833	0.25		0	60.000	60.000	0.625	A53-B-42	1.000
55	19.833 - 17	2.833		0	60.000	60.000	0.625	A53-B-42	1.000
56	17 - 16.75	0.25		0	60.000	60.000	0.725	A53-B-42	1.041
57	16.75 - 11.65	5.1		0	60.000	60.000	0.75	A53-B-42	1.028
58	11.65 - 11.417	0.233		0	60.000	60.000	0.75	A53-B-42	1.028
59	11.417 - 9.396	2.021		0	60.000	60.000	0.75	A53-B-42	1.028
60	9.396 - 9.146	0.25		0	60.000	60.000	0.8	A53-B-42	1.005
61	9.146 - 4.833	4.313		0	60.000	60.000	0.8	A53-B-42	1.005
62	4.833 - 4.583	0.25		0	60.000	60.000	0.75	A53-B-42	1.050
63	4.583 - 0	4.583		0	60.000	60.000	0.75	A53-B-42	1.050

TNX Section Forces

Increment (ft):	5	TNX Output		
	Section Height (ft)	P_u (K)	M_{ux} (kip-ft)	V_u (K)
1	191.667 - 186.667	0.64	2.20	0.48
2	186.667 - 181.567	5.67	9.47	5.77
3	181.567 - 176.567	6.39	39.16	6.13
4	176.567 - 171.567	7.07	70.72	6.47
5	171.567 - 166.567	7.77	103.90	6.79
6	166.567 - 161.567	8.46	138.62	7.09
7	161.567 - 156.567	12.96	189.66	11.83
8	156.567 - 151.567	13.70	249.50	12.10
9	151.567 - 146.567	19.60	338.14	18.66
10	146.567 - 141.567	20.47	431.95	18.87
11	141.567 - 141.417	20.50	434.78	18.87
12	141.417 - 136.417	21.64	530.19	19.33
13	136.417 - 131.417	23.22	628.71	20.24
14	131.417 - 126.417	24.38	730.89	20.62
15	126.417 - 121.417	26.60	836.23	21.54
16	121.417 - 121.167	26.67	841.62	21.57
17	121.167 - 116.167	28.14	951.08	22.10
18	116.167 - 111.167	33.49	1080.69	25.81
19	111.167 - 110.042	33.80	1109.78	25.90
20	110.042 - 109.792	33.89	1116.26	25.92
21	109.792 - 105.083	35.51	1240.62	26.89
22	105.083 - 104.833	35.62	1247.36	26.94
23	104.833 - 100.917	38.05	1354.43	27.73
24	100.917 - 100.667	38.16	1361.36	27.77
25	100.667 - 95.833	39.99	1498.01	28.77
26	95.833 - 95.583	40.09	1505.21	28.78
27	95.583 - 90.583	41.87	1651.42	29.69
28	90.583 - 89.917	42.59	1672.34	30.18
29	89.917 - 89.667	42.71	1679.89	30.23
30	89.667 - 84.667	45.54	1833.46	31.23
31	84.667 - 80.833	48.72	1954.53	32.01
32	80.833 - 80.333	49.10	1970.55	32.11
33	80.333 - 80.083	49.25	1978.58	32.16
34	80.083 - 75.083	51.72	2141.93	33.18
35	75.083 - 70.083	54.62	2310.54	34.23
36	70.083 - 69.5	55.29	2330.73	34.85
37	69.5 - 69.25	55.48	2339.46	34.90
38	69.25 - 64.25	61.85	2517.31	36.10
39	64.25 - 60.583	67.03	2651.49	36.96
40	60.583 - 60.333	67.23	2660.74	37.01
41	60.333 - 55.333	71.02	2848.74	38.14
42	55.333 - 52.167	72.51	2970.41	38.72
43	52.167 - 51.917	72.65	2980.09	38.75
44	51.917 - 46.917	75.75	3176.28	39.72
45	46.917 - 41.917	79.73	3377.14	40.76
46	41.917 - 40.333	80.97	3441.84	41.08
47	40.333 - 40.083	81.17	3452.09	41.11
48	40.083 - 35.083	84.84	3659.51	42.01
49	35.083 - 30.083	88.16	3872.34	42.99
50	30.083 - 28	89.28	3962.19	43.29
51	28 - 27.75	89.45	3973.02	43.31
52	27.75 - 22.75	93.57	4191.74	44.14
53	22.75 - 20.083	95.80	4310.06	44.57
54	20.083 - 19.833	95.99	4321.21	44.59
55	19.833 - 17	98.14	4448.22	45.04
56	17 - 16.75	98.37	4459.48	45.06
57	16.75 - 11.65	102.60	4691.23	45.79
58	11.65 - 11.417	102.76	4701.90	45.79
59	11.417 - 9.396	104.12	4794.55	45.90
60	9.396 - 9.146	104.30	4806.03	45.91
61	9.146 - 4.833	107.30	5005.32	46.49
62	4.833 - 4.583	107.48	5016.94	46.51
63	4.583 - 0	110.62	5231.43	47.09

Analysis Results

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
191.67 - 186.67	Pole	TP18x18x0.375	Pole	0.6%	Pass
186.67 - 181.57	Pole	TP24x24x0.375	Pole	2.0%	Pass
181.57 - 176.57	Pole	TP24x24x0.375	Pole	6.6%	Pass
176.57 - 171.57	Pole	TP24x24x0.375	Pole	11.5%	Pass
171.57 - 166.57	Pole	TP24x24x0.375	Pole	16.6%	Pass
166.57 - 161.57	Pole	TP24x24x0.375	Pole	22.0%	Pass
161.57 - 156.57	Pole	TP24x24x0.375	Pole	30.2%	Pass
156.57 - 151.57	Pole	TP24x24x0.375	Pole	39.4%	Pass
151.57 - 146.57	Pole	TP24x24x0.375	Pole	53.5%	Pass
146.57 - 141.57	Pole	TP24x24x0.375	Pole	67.9%	Pass
141.57 - 141.42	Pole	TP24x24x0.375	Pole	68.4%	Pass
141.42 - 136.42	Pole	TP36x36x0.375	Pole	39.2%	Pass
136.42 - 131.42	Pole	TP36x36x0.375	Pole	46.3%	Pass
131.42 - 126.42	Pole	TP36x36x0.375	Pole	53.6%	Pass
126.42 - 121.42	Pole	TP36x36x0.375	Pole	61.3%	Pass
121.42 - 121.17	Pole	TP36x36x0.375	Pole	61.7%	Pass
121.17 - 116.17	Pole	TP42x42x0.375	Pole	52.1%	Pass
116.17 - 111.17	Pole	TP42x42x0.375	Pole	59.3%	Pass
111.17 - 110.04	Pole	TP42x42x0.375	Pole	60.9%	Pass
110.04 - 109.79	Pole + Reinf.	TP42x42x0.4875	Reinf. 13 Tension Rupture	47.5%	Pass
109.79 - 105.08	Pole + Reinf.	TP42x42x0.4875	Reinf. 13 Tension Rupture	52.7%	Pass
105.08 - 104.83	Pole + Reinf.	TP42x42x0.5625	Reinf. 6 Tension Rupture	48.1%	Pass
104.83 - 100.92	Pole + Reinf.	TP42x42x0.5625	Reinf. 6 Tension Rupture	52.2%	Pass
100.92 - 100.67	Pole	TP48x48x0.375	Pole	57.9%	Pass
100.67 - 95.83	Pole	TP48x48x0.375	Pole	63.6%	Pass
95.83 - 95.58	Pole + Reinf.	TP48x48x0.475	Pole	50.8%	Pass
95.58 - 90.58	Pole + Reinf.	TP48x48x0.475	Pole	55.7%	Pass
90.58 - 89.92	Pole + Reinf.	TP48x48x0.475	Pole	56.4%	Pass
89.92 - 89.67	Pole + Reinf.	TP48x48x0.575	Pole	47.0%	Pass
89.67 - 84.67	Pole + Reinf.	TP48x48x0.575	Pole	51.3%	Pass
84.67 - 80.83	Pole + Reinf.	TP48x48x0.575	Pole	54.6%	Pass
80.83 - 80.33	Pole + Reinf.	TP54x54x0.55	Pole	45.9%	Pass
80.33 - 80.08	Pole + Reinf.	TP54x54x0.4875	Pole	51.9%	Pass
80.08 - 75.08	Pole + Reinf.	TP54x54x0.4875	Pole	56.1%	Pass
75.08 - 70.08	Pole + Reinf.	TP54x54x0.4875	Pole	60.5%	Pass
70.08 - 69.5	Pole + Reinf.	TP54x54x0.4875	Pole	61.0%	Pass
69.5 - 69.25	Pole + Reinf.	TP54x54x0.5875	Pole	50.6%	Pass
69.25 - 64.25	Pole + Reinf.	TP54x54x0.5875	Pole	54.5%	Pass
64.25 - 60.58	Pole + Reinf.	TP54x54x0.5875	Pole	57.5%	Pass
60.58 - 60.33	Pole + Reinf.	TP60x60x0.5125	Pole	54.0%	Pass
60.33 - 55.33	Pole + Reinf.	TP60x60x0.5125	Pole	57.7%	Pass
55.33 - 52.17	Pole + Reinf.	TP60x60x0.5125	Pole	60.2%	Pass
52.17 - 51.92	Pole + Reinf.	TP60x60x0.625	Pole	50.4%	Pass
51.92 - 46.92	Pole + Reinf.	TP60x60x0.625	Pole	53.7%	Pass
46.92 - 41.92	Pole + Reinf.	TP60x60x0.625	Pole	57.0%	Pass
41.92 - 40.33	Pole + Reinf.	TP60x60x0.625	Pole	58.1%	Pass
40.33 - 40.08	Pole + Reinf.	TP60x60x0.6	Pole	58.8%	Pass
40.08 - 35.08	Pole + Reinf.	TP60x60x0.6	Pole	62.3%	Pass
35.08 - 30.08	Pole + Reinf.	TP60x60x0.6	Pole	65.9%	Pass
30.08 - 28	Pole + Reinf.	TP60x60x0.6	Pole	67.4%	Pass
28 - 27.75	Pole + Reinf.	TP60x60x0.725	Pole	56.7%	Pass
27.75 - 22.75	Pole + Reinf.	TP60x60x0.725	Pole	59.8%	Pass
22.75 - 20.08	Pole + Reinf.	TP60x60x0.725	Pole	61.5%	Pass
20.08 - 19.83	Pole	TP60x60x0.625	Pole	68.7%	Pass
19.83 - 17	Pole	TP60x60x0.625	Pole	70.7%	Pass
17 - 16.75	Pole + Reinf.	TP60x60x0.725	Pole	61.2%	Pass
16.75 - 11.65	Pole + Reinf.	TP60x60x0.75	Pole	62.9%	Pass
11.65 - 11.42	Pole + Reinf.	TP60x60x0.75	Pole	63.1%	Pass
11.42 - 9.4	Pole + Reinf.	TP60x60x0.75	Pole	64.3%	Pass
9.4 - 9.15	Pole + Reinf.	TP60x60x0.8	Reinf. 7 Tension Rupture	64.0%	Pass
9.15 - 4.83	Pole + Reinf.	TP60x60x0.8	Reinf. 7 Tension Rupture	66.6%	Pass
4.83 - 4.58	Pole + Reinf.	TP60x60x0.75	Pole	68.1%	Pass
4.58 - 0	Pole + Reinf.	TP60x60x0.75	Pole	71.0%	Pass
				Summary	
			Pole	71.0%	Pass
			Reinforcement	69.2%	Pass
			Overall	71.0%	Pass

Additional Calculations

Section Elevation (ft)	Moment of Inertia (in^4)			Area (in^2)			% Capacity*												
	Pole	Reinf.	Total	Pole	Reinf.	Total	Pole	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13
191.67 - 186.67	807	n/a	807	20.76	n/a	20.76	0.6%													
186.67 - 181.57	1942	n/a	1942	27.83	n/a	27.83	2.0%													
181.57 - 176.57	1942	n/a	1942	27.83	n/a	27.83	6.6%													
176.57 - 171.57	1942	n/a	1942	27.83	n/a	27.83	11.5%													
171.57 - 166.57	1942	n/a	1942	27.83	n/a	27.83	16.6%													
166.57 - 161.57	1942	n/a	1942	27.83	n/a	27.83	22.0%													
161.57 - 156.57	1942	n/a	1942	27.83	n/a	27.83	30.2%													
156.57 - 151.57	1942	n/a	1942	27.83	n/a	27.83	39.4%													
151.57 - 146.57	1942	n/a	1942	27.83	n/a	27.83	53.5%													
146.57 - 141.57	1942	n/a	1942	27.83	n/a	27.83	67.9%													
141.57 - 141.42	1942	n/a	1942	27.83	n/a	27.83	68.4%													
141.42 - 136.42	6659	n/a	6659	41.97	n/a	41.97	39.2%													
136.42 - 131.42	6659	n/a	6659	41.97	n/a	41.97	46.3%													
131.42 - 126.42	6659	n/a	6659	41.97	n/a	41.97	53.6%													
126.42 - 121.42	6659	n/a	6659	41.97	n/a	41.97	61.3%													
121.42 - 121.17	6659	n/a	6659	41.97	n/a	41.97	61.7%													
121.17 - 116.17	10622	n/a	10622	49.04	n/a	49.04	52.1%													
116.17 - 111.17	10622	n/a	10622	49.04	n/a	49.04	59.3%													
111.17 - 110.04	10622	n/a	10622	49.04	n/a	49.04	60.9%													
110.04 - 109.79	10622	3132	13754	49.04	13.50	62.54	47.2%													47.5%
109.79 - 105.08	10622	3132	13754	49.04	13.50	62.54	52.3%													52.7%
105.08 - 104.83	10622	5106	15728	49.04	22.50	71.54	46.1%						48.1%							46.6%
104.83 - 100.92	10622	5106	15728	49.04	22.50	71.54	50.1%						52.2%							50.6%
100.92 - 100.67	15908	n/a	15908	56.11	n/a	56.11	57.9%													
100.67 - 95.83	15908	n/a	15908	56.11	n/a	56.11	63.6%													
95.83 - 95.58	15908	4064	19972	56.11	13.50	69.61	50.8%												50.3%	
95.58 - 90.58	15908	4064	19972	56.11	13.50	69.61	55.7%												55.1%	
90.58 - 89.92	15908	4064	19972	56.11	13.50	69.61	56.4%												55.8%	
89.92 - 89.67	15908	8127	24036	56.11	27.00	83.11	47.0%					46.5%							46.5%	
89.67 - 84.67	15908	8127	24036	56.11	27.00	83.11	51.3%					50.7%							50.7%	
84.67 - 80.83	15908	8127	24036	56.11	27.00	83.11	54.6%					54.1%							54.1%	
80.83 - 80.33	22710	10233	32943	63.18	27.00	90.18	45.9%					44.8%							44.8%	
80.33 - 80.08	22710	6614	29324	63.18	18.00	81.18	51.9%				46.1%									
80.08 - 75.08	22710	6614	29324	63.18	18.00	81.18	56.1%				49.8%									
75.08 - 70.08	22710	6614	29324	63.18	18.00	81.18	60.5%				53.7%									
70.08 - 69.5	22710	6614	29324	63.18	18.00	81.18	61.0%				54.2%									
69.5 - 69.25	22710	12688	35398	63.18	36.00	99.18	50.6%				45.0%							48.5%		
69.25 - 64.25	22710	12688	35398	63.18	36.00	99.18	54.5%				48.5%							52.3%		
64.25 - 60.58	22710	12688	35398	63.18	36.00	99.18	57.5%				51.1%							55.1%		
60.58 - 60.33	31217	11364	42581	70.24	24.38	94.62	54.0%			46.9%										
60.33 - 55.33	31217	11364	42581	70.24	24.38	94.62	57.7%			50.2%										
55.33 - 52.17	31217	11364	42581	70.24	24.38	94.62	60.2%			52.3%										
52.17 - 51.92	31219	19812	51030	70.24	48.38	118.62	50.4%			43.5%							42.8%			
51.92 - 46.92	31219	19812	51030	70.24	48.38	118.62	53.7%			46.3%							45.6%			
46.92 - 41.92	31219	19812	51030	70.24	48.38	118.62	57.0%			49.2%							48.5%			
41.92 - 40.33	31219	19812	51030	70.24	48.38	118.62	58.1%			50.2%							49.4%			
40.33 - 40.08	41363	7892	49255	93.46	18.00	111.46	58.8%		53.0%											
40.08 - 35.08	41363	7892	49255	93.46	18.00	111.46	62.3%		56.1%											
35.08 - 30.08	41363	7892	49255	93.46	18.00	111.46	65.9%		59.3%											
30.08 - 28	41363	7892	49255	93.46	18.00	111.46	67.4%		60.7%											
28 - 27.75	41368	17587	58955	93.46	42.00	135.46	56.7%		49.9%								50.1%			
27.75 - 22.75	41368	17587	58955	93.46	42.00	135.46	59.8%		52.7%								52.8%			
22.75 - 20.08	41368	17587	58955	93.46	42.00	135.46	61.5%		54.2%								54.3%			
20.08 - 19.83	51381	n/a	51381	116.58	n/a	116.58	68.7%													
19.83 - 17	51381	n/a	51381	116.58	n/a	116.58	70.7%													
17 - 16.75	51383	8145	59528	116.58	24.00	140.58	61.2%								53.9%					
16.75 - 11.65	51395	9920	61315	116.58	27.00	143.58	62.9%							62.7%	56.3%					
11.65 - 11.42	51395	9920	61315	116.58	27.00	143.58	63.1%							62.8%	56.4%					
11.42 - 9.4	51395	9920	61315	116.58	27.00	143.58	64.3%							64.1%	57.5%					
9.4 - 9.15	51382	13787	65169	116.58	33.00	149.58	60.2%	63.4%						64.0%	54.7%					
9.15 - 4.83	51382	13787	65169	116.58	33.00	149.58	62.7%	66.0%						66.6%	56.9%					
4.83 - 4.58	51446	9839	61284	116.58	30.00	146.58	68.1%	66.3%							59.3%					
4.58 - 0	51446	9839	61284	116.58	30.00	146.58	71.0%	69.2%							61.8%					

Note: Section capacity checked in 5 degree increments.
Rating per TIA-222-H Section 15.5.

Monopole Flange Plate Connection

Elevation = 181.583 ft.

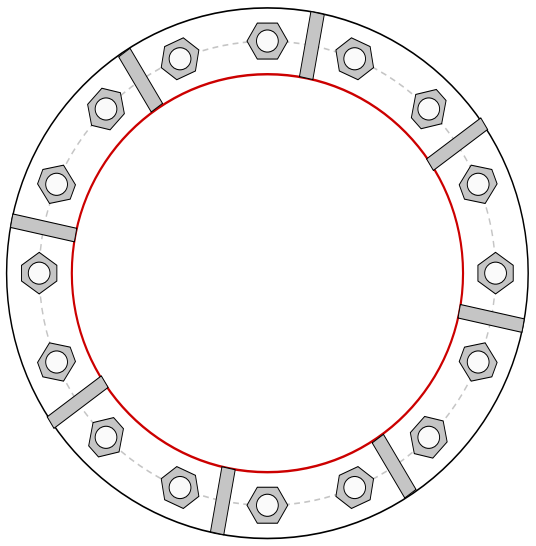
BU #	826217
Site Name	Newington_1, CT
Order #	495645, Rev# 0

TIA-222 Revision	H

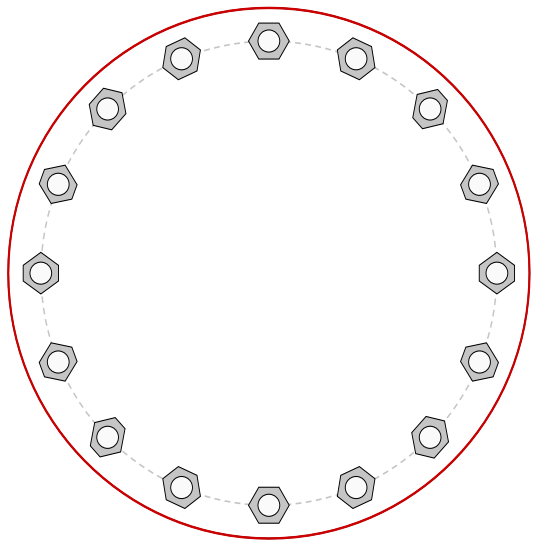
Applied Loads	
Moment (kip-ft)	9.47
Axial Force (kips)	5.67
Shear Force (kips)	5.77

**TIA-222-H Section 15.5 Applied*

Top Plate - External



Bottom Plate - External



Connection Properties

Bolt Data

(16) 1" ø bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 21" BC

Top Plate Data

24" OD x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Plate Data

24" OD x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Top Stiffener Data

(8) 5"H x 3"W x 0.625"T, Notch: 0.75"
plate: Fy= 36 ksi ; weld: Fy= 70 ksi
horiz. weld: 0.3125" fillet
vert. weld: 0.3125" fillet

Bottom Stiffener Data

N/A

Top Pole Data

18" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bottom Pole Data

24" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Analysis Results

Bolt Capacity

Max Load (kips)	1.00	
Allowable (kips)	54.54	
Stress Rating:	**1.7%**	**Pass**

Top Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	**N/A**
Tension Side Stress Rating:	**N/A**

Bottom Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	**N/A**
Tension Side Stress Rating:	**N/A**

Top Stiffener Capacity

Horizontal Weld:	**N/A**
Vertical Weld:	**N/A**
Plate Flexure+Shear:	**N/A**
Plate Tension+Shear:	**N/A**
Plate Compression:	**N/A**

Bottom Stiffener Capacity

Horizontal Weld:	**N/A**
Vertical Weld:	**N/A**
Plate Flexure+Shear:	**N/A**
Plate Tension+Shear:	**N/A**
Plate Compression:	**N/A**

Top Pole Capacity

Punching Shear:	**N/A**

Bottom Pole Capacity

Punching Shear:	**N/A**

Monopole Flange Plate Connection

Elevation = 141.417 ft.

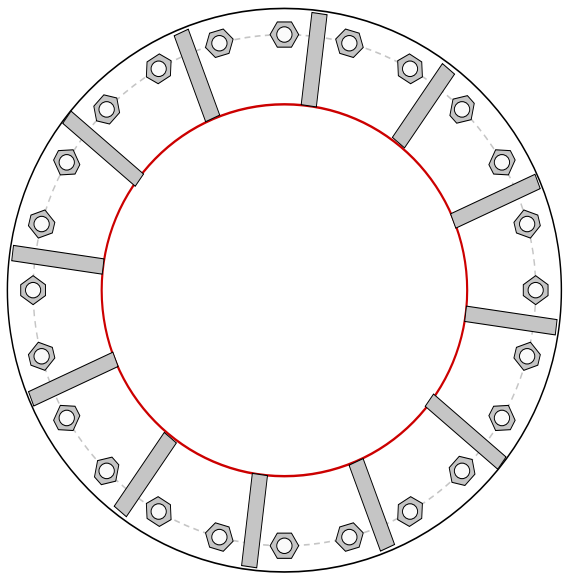
BU #	826217
Site Name	Newington_1, CT
Order #	495645, Rev# 0

TIA-222 Revision	H

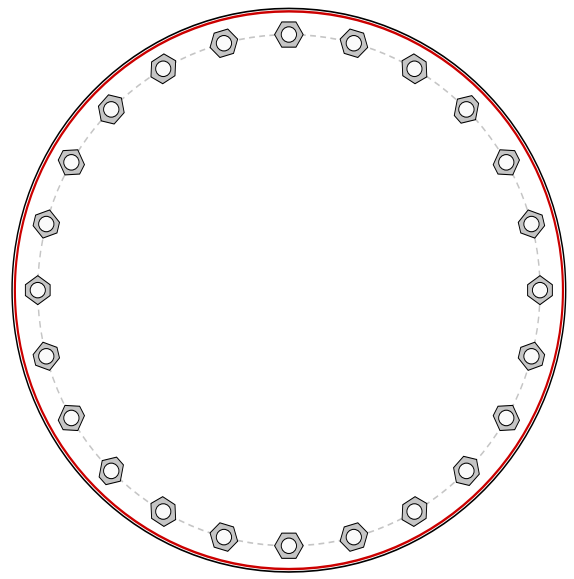
Applied Loads	
Moment (kip-ft)	434.78
Axial Force (kips)	20.50
Shear Force (kips)	18.87

**TIA-222-H Section 15.5 Applied*

Top Plate - External



Bottom Plate - External



Connection Properties

Bolt Data

(24) 1" ø bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 33" BC

Top Plate Data

36.375" OD x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Plate Data

36.375" OD x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Top Stiffener Data

(12) 8"H x 6"W x 1"T, Notch: 1"
plate: Fy= 36 ksi ; weld: Fy= 70 ksi
horiz. weld: 0.3125" fillet
vert. weld: 0.3125" fillet

Bottom Stiffener Data

N/A

Top Pole Data

24" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bottom Pole Data

36" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Analysis Results

Bolt Capacity

Max Load (kips)	25.49	
Allowable (kips)	54.53	
Stress Rating:	**44.5%**	**Pass**

Top Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	**N/A**
Tension Side Stress Rating:	**N/A**

Bottom Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	**N/A**
Tension Side Stress Rating:	**N/A**

Top Stiffener Capacity

Horizontal Weld:	**N/A**
Vertical Weld:	**N/A**
Plate Flexure+Shear:	**N/A**
Plate Tension+Shear:	**N/A**
Plate Compression:	**N/A**

Bottom Stiffener Capacity

Horizontal Weld:	**N/A**
Vertical Weld:	**N/A**
Plate Flexure+Shear:	**N/A**
Plate Tension+Shear:	**N/A**
Plate Compression:	**N/A**

Top Pole Capacity

Punching Shear:	**N/A**

Bottom Pole Capacity

Punching Shear:	**N/A**

PROJECT	**87581.025.01 - Newington_1, CT**	**Intiti**			
SUBJECT	**Bridge Stiffener - 121.167 ft**				
DATE	**08-16-19**	PAGE	1	OF	3

V1.0.1

B+T GRP
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Tulsa, OK 74119
(918) 587-4630

Bolted Bridge Stiffeners Reinforcement Check

Assumptions / Notes:

1. For design purposes, it is assumed that the proposed bridge stiffeners are to take the full load.
2. The plastification of the pole is not considered.
3. All shear and axial loads are taken by the flange bolts.

1. PARAMETERS

Rev. H

Elevation 121.167 ft Apply TIA-222-H Section 15.5? Yes

1.1 tnxTower Reactions

Moment (M)	841.62	k-ft
Axial Load (P)	26.67	kip
Shear Load (V)	21.57	kips

1.2 Shaft Properties at the Flange

Upper Shaft Diameter (Dshaft1)	36	in
Upper Shaft Thichkness (t1)	0.375	in
Lower Shaft Diameter (Dshaft2)	42	in
Lower Shaft Thickness (t2)	0.375	in
Shaft Grade:		
Fyshaft	42	ksi
Fushaft	63	ksi

1.3 Existing Bridge Stiffeners Properties

(Verify existing bolted connection for reduced moment.)

Number of Proposed Bridge Stiffeners (Nexist)	3	
Thickness of Proposed Bridge Stiffeners (texist)	1	in
Width of Proposed Bridge Stiffeners (wexist)	4.5	in
Existing Bridge Stiffener Grade:		
Fyex	65	ksi
Fuex	80	ksi
Diameter to the centroid of Existing Bridge Stiffeners (BCexist)	44	in
Gross Area of One Existing Bridge Stiffener (Ag_exist)	4.5	in^2
Radius of Gyration about x-axis (rx)	0.289	in
Moment of Inertia of Existing Bridge Stiffeners (Iexist)	3267	in^4

1.4 Flange Bolt Properties

Number of Flange Bolts (Nbolts)	28	
Diameter of Flange Bolts	1	in
Bolt Circle of Flange Bolts (BCbolts)	39	in
Gross Area of One Flange Bolt (Ag_bolts)	0.785	in^2
Moment of Inertia of Flange Bolts (Ibolts)	4181	in^4

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1.5 Division of Forces

Total Gross Area (Ag_total)	35.49	in^2
Total Moment of Inertia (Itotal)	7448	in^4

1.6 Reactions to Existing Bridge Stiffeners

Moment Reaction to Existing Bridge Stiffeners (Mexist)	369.2	kip-ft
Axial Reaction to Existing Bridge Stiffeners (Pexist)	0.0	kips
Shear Reaction to Flange Bolts (Vexist)	0.0	kips

1.7 Reactions to Flange Bolts

(It is assumed that all shear and axial loads are taken by the flange bolts)

Moment Reaction to Flange Bolts (Mbolts)	472.5	kip-ft	**Check Flange Connection**
Axial Reaction to Flange Bolts (Pbolts)	26.7	kips	**with these Reactions**
Shear Reaction to Flange Bolts (Vbolts)	21.6	kips	

2. Existing Bridge Stiffener

2.1 Maximum Axial Forces in Single Existing

Outer Radius of Bolt Circle (C)	22	in
Critical Compression Bending Stress (Pcomp)	134.2	kips
Critical Tension Bending Stress (Ptens)	134.2	kips

2.2 Available Compression Strength

[AISC 15th Edition E3-1]

Resistance Factor (φc)	0.9		
Unbraced Length (Lu)	16	in	
Effective Length Factor (K)	1		
Strength of Bridge Stiffener:			
Fy	65	ksi	
Fu	80	ksi	
Effective Length of Member (Lc)	16.00	in	[AISC 15th Edition E3-2]
Elastic Buckling Stress (Fe)	93.2	ksi	[AISC 15th Edition,Eq. E3-4]
Limit	99.5		
Determination of Crticial Stress (Fcr) [AISC 15th Edition,Eqs. E3-2 and E3-3]	48.5	ksi	

Allowable Compressive Strength (φPn) [AISC 15th Ed., Eqs. J4-6 and E3-1]	196.6	kips
Check Compressive Strength (Checkcomp)	65.0%	Pass

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2.3 Available Tension Strength

Gross Section Yield

Available Tension Yield Strength (φPty)	263.3	kips
[AISC 15th Ed., Ch.D2]		

Net Section Fracture

Bolt Hole Diameter (BH)	1.188	in
Thickness (T)	1.00	in
Net Area (Anet)	3.250	in^2
Net Area Limitation (Ae)	3.250	in^2
Available Fractile Strength (φPtr)	195.0	kips

Tension Check

Controlling Mode of Failure (Check mode)	Fracture Controls		
(φPnt)	195.0	kips	
Controlling Tension Mode Check (Checktension)	65.6%		Pass

SUMMARY

tnxTower Reactions

M	841.6	kip-ft
P	26.7	kip
V	21.6	kip

Flange Bolts

Diameter of Flange Bolts (Dbolts)	1.00	in	
Bolt Circle of Flange Bolts (BCbolts)	39.0	in	
Loads to Flange Bolts			
Mbolts	472.5	kip-ft	
P	26.7	kip	See Flange tool for Flange
V	21.6	kip	Bolt and Plate Capacities

Existing Jump Plates

Moment to Existing Bridge Stiffeners (Mexist)	369.2	kip-ft	
Number of Existing Bridge Stiffeners (Nexist)	3		
Thickness (texist)	1.00	in	
Width (wexist)	4.50	in	
Controlling Capacity of Existing Bridge Stiffeners (Capacitymax)	65.6%		Pass

Monopole Flange Plate Connection

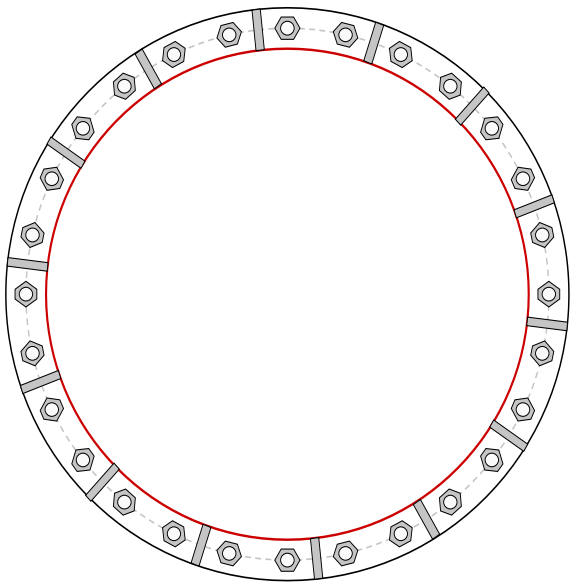
Elevation = 121.167 ft.

BU #	826217
Site Name	Newington_1, CT
Order #	495645, Rev# 0
TIA-222 Revision	H

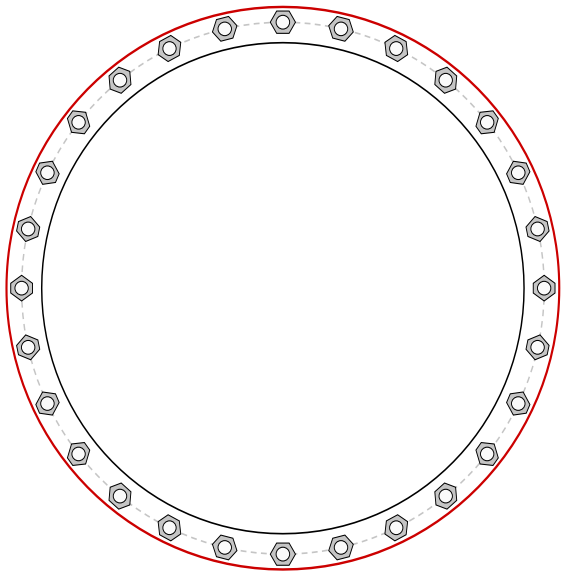
Applied Loads	
Moment (kip-ft)	472.50
Axial Force (kips)	26.70
Shear Force (kips)	21.60

**TIA-222-H Section 15.5 Applied*

Top Plate - External



Bottom Plate - Internal



Connection Properties

Bolt Data

(28) 1" ø bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 39" BC

Top Plate Data

42" OD x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Plate Data

36" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Top Stiffener Data

(14) 5"H x 3"W x 0.625"T, Notch: 0.75"
plate: Fy= 36 ksi ; weld: Fy= 70 ksi
horiz. weld: 0.3125" fillet
vert. weld: 0.3125" fillet

Bottom Stiffener Data

N/A

Top Pole Data

36" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bottom Pole Data

42" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Analysis Results

Bolt Capacity

Max Load (kips)	19.81	
Allowable (kips)	54.53	
Stress Rating:	**34.6%**	**Pass**

Top Plate Capacity

Max Stress (ksi):	13.00	(Flexural (b/Le>2))
Allowable Stress (ksi):	32.40	
Stress Rating:	**38.2%**	**Pass**
Tension Side Stress Rating:	**13.2%**	**Pass**

Bottom Plate Capacity

Max Stress (ksi):	13.51	(Flexural)
Allowable Stress (ksi):	32.40	
Stress Rating:	**39.7%**	**Pass**
Tension Side Stress Rating:	**N/A**	

Top Stiffener Capacity

Horizontal Weld:	**54.3%**	**Pass**
Vertical Weld:	**34.9%**	**Pass**
Plate Flexure+Shear:	**23.7%**	**Pass**
Plate Tension+Shear:	**40.3%**	**Pass**
Plate Compression:	**51.8%**	**Pass**

Bottom Stiffener Capacity

Horizontal Weld:	**N/A**
Vertical Weld:	**N/A**
Plate Flexure+Shear:	**N/A**
Plate Tension+Shear:	**N/A**
Plate Compression:	**N/A**

Top Pole Capacity

Punching Shear:	**17.8%**	**Pass**

Bottom Pole Capacity

Punching Shear:	**N/A**

PROJECT	**87581.025.01 - Newington_1, CT**	**Intiti**			
SUBJECT	**Bridge Stiffener - 100.917 ft**				
DATE	**08-16-19**	PAGE	1	OF	3

V1.0.1

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Bolted Bridge Stiffeners Reinforcement Check

Assumptions / Notes:

1. For design purposes, it is assumed that the proposed bridge stiffeners are to take the full load.
2. The plastification of the pole is not considered.
3. All shear and axial loads are taken by the flange bolts.

1. PARAMETERS

Rev. H

Elevation 100.917 ft Apply TIA-222-H Section 15.5? Yes

1.1 tnxTower Reactions

Moment (M)	1354.43	k-ft
Axial Load (P)	38.05	kip
Shear Load (V)	27.73	kips

1.2 Shaft Properties at the Flange

Upper Shaft Diameter (Dshaft1)	42	in
Upper Shaft Thichkness (t1)	0.375	in
Lower Shaft Diameter (Dshaft2)	48	in
Lower Shaft Thickness (t2)	0.375	in
Shaft Grade:		
Fyshaft	42	ksi
Fushaft	63	ksi

1.3 Existing Bridge Stiffeners Properties

(Verify existing bolted connection for reduced moment.)

Number of Proposed Bridge Stiffeners (Nexist)	6	
Thickness of Proposed Bridge Stiffeners (texist)	1	in
Width of Proposed Bridge Stiffeners (wexist)	4.5	in
Existing Bridge Stiffener Grade:		
Fyex	65	ksi
Fuex	80	ksi
Diameter to the centroid of Existing Bridge Stiffeners (BCexist)	49	in
Gross Area of One Existing Bridge Stiffener (Ag_exist)	4.5	in^2
Radius of Gyration about x-axis (rx)	0.289	in
Moment of Inertia of Existing Bridge Stiffeners (Iexist)	7660	in^4

1.4 Flange Bolt Properties

Number of Flange Bolts (Nbolts)	32	
Diameter of Flange Bolts	1	in
Bolt Circle of Flange Bolts (BCbolts)	45	in
Gross Area of One Flange Bolt (Ag_bolts)	0.785	in^2
Moment of Inertia of Flange Bolts (Ibolts)	6362	in^4

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1.5 Division of Forces

Total Gross Area (Ag_total)	52.13	in^2
Total Moment of Inertia (Itotal)	14023	in^4

1.6 Reactions to Existing Bridge Stiffeners

Moment Reaction to Existing Bridge Stiffeners (Mexist)	739.8	kip-ft
Axial Reaction to Existing Bridge Stiffeners (Pexist)	0.0	kips
Shear Reaction to Flange Bolts (Vexist)	0.0	kips

1.7 Reactions to Flange Bolts

(It is assumed that all shear and axial loads are taken by the flange bolts)

Moment Reaction to Flange Bolts (Mbolts)	614.4	kip-ft	**Check Flange Connection**
Axial Reaction to Flange Bolts (Pbolts)	38.1	kips	**with these Reactions**
Shear Reaction to Flange Bolts (Vbolts)	27.7	kips	

2. Existing Bridge Stiffener

2.1 Maximum Axial Forces in Single Existing

Outer Radius of Bolt Circle (C)	24.5	in
Critical Compression Bending Stress (Pcomp)	127.8	kips
Critical Tension Bending Stress (Ptens)	127.8	kips

2.2 Available Compression Strength

[AISC 15th Edition E3-1]

Resistance Factor (φc)	0.9		
Unbraced Length (Lu)	16.5	in	
Effective Length Factor (K)	1		
Strength of Bridge Stiffener:			
Fy	65	ksi	
Fu	80	ksi	
Effective Length of Member (Lc)	16.50	in	[AISC 15th Edition E3-2]
Elastic Buckling Stress (Fe)	87.6	ksi	[AISC 15th Edition,Eq. E3-4]
Limit	99.5		
Determination of Crticial Stress (Fcr)	47.6	ksi	

[AISC 15th Edition,Eqs. E3-2 and E3-3]

Allowable Compressive Strength (φPn)	193.0	kips

[AISC 15th Ed., Eqs. J4-6 and E3-1]

Check Compressive Strength (Checkcomp)	63.1%	Pass

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2.3 Available Tension Strength

Gross Section Yield

Available Tension Yield Strength (φPty)	263.3	kips
[AISC 15th Ed., Ch.D2]		

Net Section Fracture

Bolt Hole Diameter (BH)	1.188	in
Thickness (T)	1.00	in
Net Area (Anet)	3.250	in^2
Net Area Limitation (Ae)	3.250	in^2
Available Fractile Strength (φPtr)	195.0	kips

Tension Check

Controlling Mode of Failure (Check mode)	Fracture Controls		
(φPnt)	195.0	kips	
Controlling Tension Mode Check (Checktension)	62.4%		Pass

SUMMARY

tnxTower Reactions

M	1354.4	kip-ft
P	38.1	kip
V	27.7	kip

Flange Bolts

Diameter of Flange Bolts (Dbolts)	1.00	in	
Bolt Circle of Flange Bolts (BCbolts)	45.0	in	
Loads to Flange Bolts			
Mbolts	614.4	kip-ft	
P	38.1	kip	See Flange tool for Flange
V	27.7	kip	Bolt and Plate Capacities

Existing Jump Plates

Moment to Existing Bridge Stiffeners (Mexist)	739.8	kip-ft	
Number of Existing Bridge Stiffeners (Nexist)	6		
Thickness (texist)	1.00	in	
Width (wexist)	4.50	in	
Controlling Capacity of Existing Bridge Stiffeners (Capacitymax)	63.1%		Pass

Monopole Flange Plate Connection

Elevation = 100.917 ft.

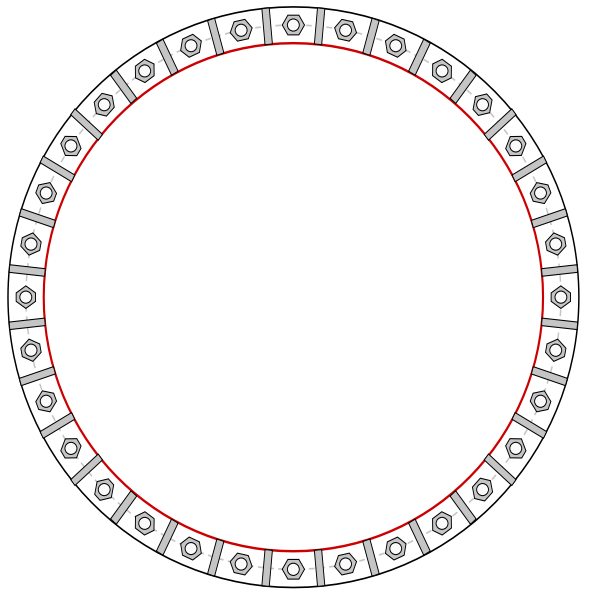
BU #	826217
Site Name	Newington_1, CT
Order #	495645, Rev# 0

TIA-222 Revision	H

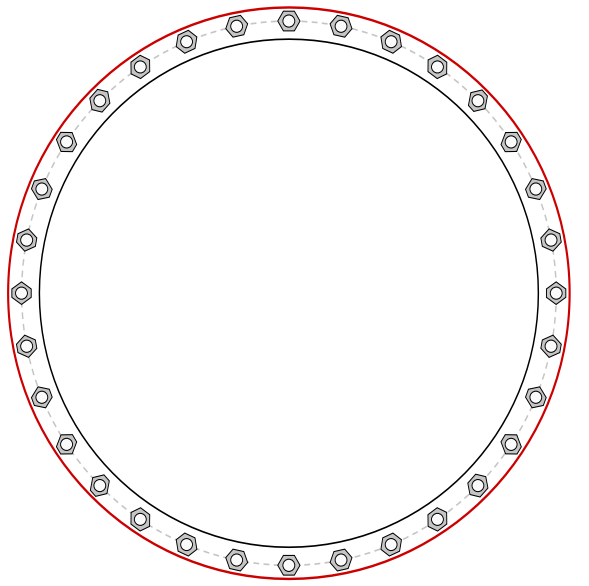
Applied Loads	
Moment (kip-ft)	614.40
Axial Force (kips)	38.10
Shear Force (kips)	27.70

**TIA-222-H Section 15.5 Applied*

Top Plate - External



Bottom Plate - Internal



Connection Properties

Bolt Data

(32) 1" ø bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 45" BC

Top Plate Data

48" OD x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Plate Data

42" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Top Stiffener Data

(32) 5"H x 3"W x 0.625"T, Notch: 0.75"
plate: Fy= 36 ksi ; weld: Fy= 70 ksi
horiz. weld: 0.3125" fillet
vert. weld: 0.3125" fillet

Bottom Stiffener Data

N/A

Top Pole Data

42" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bottom Pole Data

48" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Analysis Results

Bolt Capacity

Max Load (kips)	19.29	
Allowable (kips)	54.52	
Stress Rating:	**33.7%**	**Pass**

Top Plate Capacity

Max Stress (ksi):	12.84	(Roark's Flexural)
Allowable Stress (ksi):	32.40	
Stress Rating:	**37.7%**	**Pass**
Tension Side Stress Rating:	**N/A**	

Bottom Plate Capacity

Max Stress (ksi):	13.45	(Flexural)
Allowable Stress (ksi):	32.40	
Stress Rating:	**39.5%**	**Pass**
Tension Side Stress Rating:	**N/A**	

Top Stiffener Capacity

Horizontal Weld:	**38.7%**	**Pass**
Vertical Weld:	**24.9%**	**Pass**
Plate Flexure+Shear:	**15.4%**	**Pass**
Plate Tension+Shear:	**27.2%**	**Pass**
Plate Compression:	**37.0%**	**Pass**

Bottom Stiffener Capacity

Horizontal Weld:	**N/A**
Vertical Weld:	**N/A**
Plate Flexure+Shear:	**N/A**
Plate Tension+Shear:	**N/A**
Plate Compression:	**N/A**

Top Pole Capacity

Punching Shear:	**12.7%**	**Pass**

Bottom Pole Capacity

Punching Shear:	**N/A**

PROJECT	**87581.025.01 - Newington_1, CT**	**Intiti**			
SUBJECT	**Bridge Stiffener - 80.833 ft**				
DATE	**08-16-19**	PAGE	1	OF	3

V1.0.1

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Bolted Bridge Stiffeners Reinforcement Check

Assumptions / Notes:

1. For design purposes, it is assumed that the proposed bridge stiffeners are to take the full load.
2. The plastification of the pole is not considered.
3. All shear and axial loads are taken by the flange bolts.

1. PARAMETERS

Rev. H

Elevation 80.833 ft Apply TIA-222-H Section 15.5? Yes

1.1 tnxTower Reactions

Moment (M)	1954.53	k-ft
Axial Load (P)	48.72	kip
Shear Load (V)	32.01	kips

1.2 Shaft Properties at the Flange

Upper Shaft Diameter (Dshaft1)	48	in
Upper Shaft Thichkness (t1)	0.375	in
Lower Shaft Diameter (Dshaft2)	54	in
Lower Shaft Thickness (t2)	0.375	in
Shaft Grade:		
Fyshaft	42	ksi
Fushaft	63	ksi

1.3 Existing Bridge Stiffeners Properties

(Verify existing bolted connection for reduced moment.)

Number of Proposed Bridge Stiffeners (Nexist)	3		3	
Thickness of Proposed Bridge Stiffeners (texist)	1	in	1.25	in
Width of Proposed Bridge Stiffeners (wexist)	4.5	in	6.5	in
Existing Bridge Stiffener Grade:				
Fyex	65	ksi	65	ksi
Fuex	80	ksi	80	ksi
Diameter to the centroid of Existing Bridge Stiffeners (BCexist)	55	in	55.126	in
Gross Area of One Existing Bridge Stiffener (Ag_exist)	4.5	in^2	8.125	in^2
Radius of Gyration about x-axis (rx)	0.289	in	0.361	in
Moment of Inertia of Existing Bridge Stiffeners (Iexist)	14462	in^4		

1.4 Flange Bolt Properties

Number of Flange Bolts (Nbolts)	36	
Diameter of Flange Bolts	1	in
Bolt Circle of Flange Bolts (BCbolts)	51	in
Gross Area of One Flange Bolt (Ag_bolts)	0.785	in^2
Moment of Inertia of Flange Bolts (Ibolts)	9193	in^4

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1.5 Division of Forces

Total Gross Area (Ag_total)	41.77	in^2
Total Moment of Inertia (Itotal)	23655	in^4

1.6 Reactions to Existing Bridge Stiffeners

Moment Reaction to Existing Bridge Stiffeners (Mexist)	1195.0	kip-ft
Axial Reaction to Existing Bridge Stiffeners (Pexist)	0.0	kips
Shear Reaction to Flange Bolts (Vexist)	0.0	kips

1.7 Reactions to Flange Bolts

(It is assumed that all shear and axial loads are taken by the flange bolts)

Moment Reaction to Flange Bolts (Mbolts)	759.6	kip-ft	**Check Flange Connection with these Reactions**
Axial Reaction to Flange Bolts (Pbolts)	48.7	kips	
Shear Reaction to Flange Bolts (Vbolts)	32.0	kips	

2. Existing Bridge Stiffener

2.1 Maximum Axial Forces in Single Existing Bridge

Outer Radius of Bolt Circle (C)	27.5	in
Critical Compression Bending Stress (Pcomp)	122.7	kips
Critical Tension Bending Stress (Ptens)	122.7	kips

2.2 Available Compression Strength

[AISC 15th Edition E3-1]

Resistance Factor (φc)	0.9		
Unbraced Length (Lu)	16	in	
Effective Length Factor (K)	1		
Strength of Bridge Stiffener:			
Fy	65	ksi	
Fu	80	ksi	
Effective Length of Member (Lc)	16.00	in	[AISC 15th Edition E3-2]
Elastic Buckling Stress (Fe)	93.2	ksi	[AISC 15th Edition,Eq. E3-4]
Limit	99.5		
Determination of Crticial Stress (Fcr) [AISC 15th Edition,Eqs. E3-2 and E3-3]	48.5	ksi	
Allowable Compressive Strength (φPn) [AISC 15th Ed., Eqs. J4-6 and E3-1]	196.6	kips	
Check Compressive Strength (Checkcomp)	59.4%	Pass	

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2.3 Available Tension Strength

Gross Section Yield

Available Tension Yield Strength (φPty)	263.3	kips
[AISC 15th Ed., Ch.D2]		

Net Section Fracture

Bolt Hole Diameter (BH)	1.188	in
Thickness (T)	1.00	in
Net Area (Anet)	3.250	in^2
Net Area Limitation (Ae)	3.250	in^2
Available Fractile Strength (φPtr)	195.0	kips

Tension Check

Controlling Mode of Failure (Check mode)	Fracture Controls		
(φPnt)	195.0	kips	
Controlling Tension Mode Check (Checktension)	59.9%		Pass

SUMMARY

tnxTower Reactions

M	1954.5	kip-ft
P	48.7	kip
V	32.0	kip

Flange Bolts

Diameter of Flange Bolts (Dbolts)	1.00	in	
Bolt Circle of Flange Bolts (BCbolts)	51.0	in	
Loads to Flange Bolts			
Mbolts	759.6	kip-ft	
P	48.7	kip	See Flange tool for Flange
V	32.0	kip	Bolt and Plate Capacities

Existing Jump Plates

Moment to Existing Bridge Stiffeners (Mexist)	1195.0	kip-ft	
Number of Existing Bridge Stiffeners (Nexist)	3		
Thickness (texist)	1.00	in	
Width (wexist)	4.50	in	
Controlling Capacity of Existing Bridge Stiffeners (Capacitymax)	59.9%		Pass

Monopole Flange Plate Connection

Elevation = 80.833 ft.

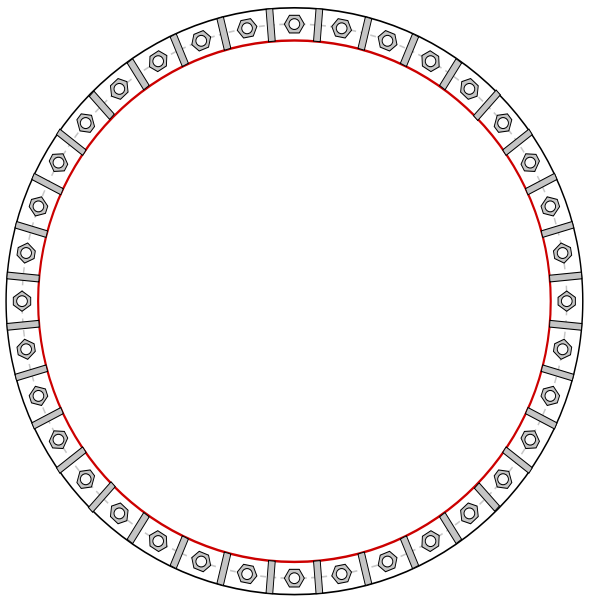
BU #	826217
Site Name	Newington_1, CT
Order #	495645, Rev# 0

TIA-222 Revision	H

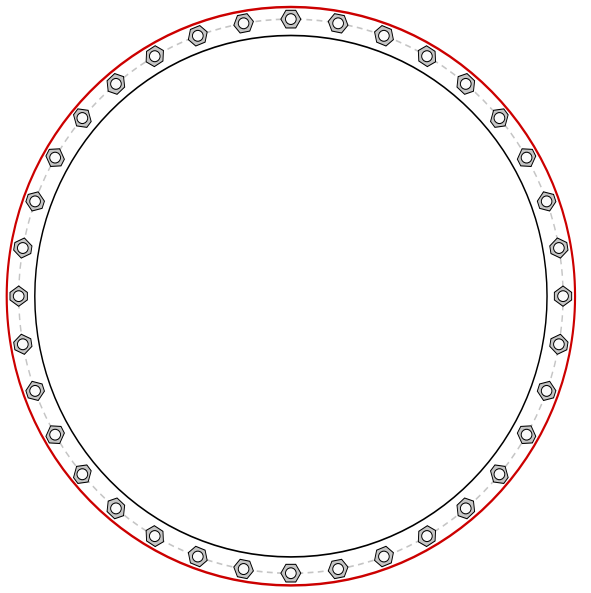
Applied Loads	
Moment (kip-ft)	759.60
Axial Force (kips)	48.70
Shear Force (kips)	32.00

**TIA-222-H Section 15.5 Applied*

Top Plate - External



Bottom Plate - Internal



Connection Properties

Bolt Data

(36) 1" ø bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 51" BC

Top Plate Data

54" OD x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Plate Data

48" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Top Stiffener Data

(36) 5"H x 3"W x 0.625"T, Notch: 0.75"
plate: Fy= 36 ksi ; weld: Fy= 70 ksi
horiz. weld: 0.3125" fillet
vert. weld: 0.3125" fillet

Bottom Stiffener Data

N/A

Top Pole Data

48" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bottom Pole Data

54" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Analysis Results

Bolt Capacity

Max Load (kips)	18.50	
Allowable (kips)	54.52	
Stress Rating:	**32.3%**	**Pass**

Top Plate Capacity

Max Stress (ksi):	12.56	(Roark's Flexural)
Allowable Stress (ksi):	32.40	
Stress Rating:	**36.9%**	**Pass**
Tension Side Stress Rating:	**N/A**	

Bottom Plate Capacity

Max Stress (ksi):	13.14	(Flexural)
Allowable Stress (ksi):	32.40	
Stress Rating:	**38.6%**	**Pass**
Tension Side Stress Rating:	**N/A**	

Top Stiffener Capacity

Horizontal Weld:	**37.3%**	**Pass**
Vertical Weld:	**23.9%**	**Pass**
Plate Flexure+Shear:	**14.7%**	**Pass**
Plate Tension+Shear:	**26.1%**	**Pass**
Plate Compression:	**35.6%**	**Pass**

Bottom Stiffener Capacity

Horizontal Weld:	**N/A**
Vertical Weld:	**N/A**
Plate Flexure+Shear:	**N/A**
Plate Tension+Shear:	**N/A**
Plate Compression:	**N/A**

Top Pole Capacity

Punching Shear:	**12.2%**	**Pass**

Bottom Pole Capacity

Punching Shear:	**N/A**

PROJECT	**87581.025.01 - Newington_1, CT**	**Intiti**			
SUBJECT	**Bridge Stiffener - 60.583 ft**				
DATE	**08-16-19**	PAGE	1	OF	3

V1.0.1

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Bolted Bridge Stiffeners Reinforcement Check

Assumptions / Notes:

1. For design purposes, it is assumed that the proposed bridge stiffeners are to take the full load.
2. The plastification of the pole is not considered.
3. All shear and axial loads are taken by the flange bolts.

1. PARAMETERS

Rev. H

Elevation 60.58 ft Apply TIA-222-H Section 15.5? Yes

1.1 tnxTower Reactions

Moment (M)	2651.49	k-ft
Axial Load (P)	67.03	kip
Shear Load (V)	36.96	kips

1.2 Shaft Properties at the Flange

Upper Shaft Diameter (Dshaft1)	54	in
Upper Shaft Thichkness (t1)	0.375	in
Lower Shaft Diameter (Dshaft2)	60	in
Lower Shaft Thickness (t2)	0.375	in
Shaft Grade:		
Fyshaft	42	ksi
Fushaft	63	ksi

1.3 Existing Bridge Stiffeners Properties

(Verify existing bolted connection for reduced moment.)

Number of Proposed Bridge Stiffeners (Nexist)	4		6	
Thickness of Proposed Bridge Stiffeners (texist)	1	in	1.25	in
Width of Proposed Bridge Stiffeners (wexist)	4.5	in	8.5	in
Existing Bridge Stiffener Grade:				
Fyex	65	ksi	65	ksi
Fuex	80	ksi	80	ksi
Diameter to the centroid of Existing Bridge Stiffeners (BCexist)	61	in	61.836	in
Gross Area of One Existing Bridge Stiffener (Ag_exist)	4.5	in^2	10.625	in^2
Radius of Gyration about x-axis (rx)	0.289	in	0.361	in
Moment of Inertia of Existing Bridge Stiffeners (Iexist)	34387	in^4		

1.4 Flange Bolt Properties

Number of Flange Bolts (Nbolts)	48	
Diameter of Flange Bolts	1	in
Bolt Circle of Flange Bolts (BCbolts)	57	in
Gross Area of One Flange Bolt (Ag_bolts)	0.785	in^2
Moment of Inertia of Flange Bolts (Ibolts)	15311	in^4

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1.5 Division of Forces

Total Gross Area (Ag_total)	119.45	in^2
Total Moment of Inertia (Itotal)	49737	in^4

1.6 Reactions to Existing Bridge Stiffeners

Moment Reaction to Existing Bridge Stiffeners (Mexist)	1833.2	kip-ft
Axial Reaction to Existing Bridge Stiffeners (Pexist)	0.0	kips
Shear Reaction to Flange Bolts (Vexist)	0.0	kips

1.7 Reactions to Flange Bolts

(It is assumed that all shear and axial loads are taken by the flange bolts)

Moment Reaction to Flange Bolts (Mbolts)	816.2	kip-ft	**Check Flange Connection**
Axial Reaction to Flange Bolts (Pbolts)	67.0	kips	**with these Reactions**
Shear Reaction to Flange Bolts (Vbolts)	37.0	kips	

2. Existing Bridge Stiffener

2.1 Maximum Axial Forces in Single Existing

Outer Radius of Bolt Circle (C)	30.5	in
Critical Compression Bending Stress (Pcomp)	87.8	kips
Critical Tension Bending Stress (Ptens)	87.8	kips

2.2 Available Compression Strength

[AISC 15th Edition E3-1]

Resistance Factor (φc)	0.9		
Unbraced Length (Lu)	16.5	in	
Effective Length Factor (K)	1		
Strength of Bridge Stiffener:			
Fy	65	ksi	
Fu	80	ksi	
Effective Length of Member (Lc)	16.50	in	[AISC 15th Edition E3-2]
Elastic Buckling Stress (Fe)	87.6	ksi	[AISC 15th Edition,Eq. E3-4]
Limit	99.5		
Determination of Crticial Stress (Fcr)	47.6	ksi	

[AISC 15th Edition,Eqs. E3-2 and E3-3]

Allowable Compressive Strength (φPn)	193.0	kips

[AISC 15th Ed., Eqs. J4-6 and E3-1]

Check Compressive Strength (Checkcomp)	43.3%	Pass

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2.3 Available Tension Strength

Gross Section Yield

Available Tension Yield Strength (φPty)	263.3	kips
[AISC 15th Ed., Ch.D2]		

Net Section Fracture

Bolt Hole Diameter (BH)	1.188	in
Thickness (T)	1.00	in
Net Area (Anet)	3.250	in^2
Net Area Limitation (Ae)	3.250	in^2
Available Fractile Strength (φPtr)	195.0	kips

Tension Check

Controlling Mode of Failure (Check mode)	Fracture Controls		
(φPnt)	195.0	kips	
Controlling Tension Mode Check (Checktension)	42.9%		Pass

SUMMARY

tnxTower Reactions

M	2651.5	kip-ft
P	67.0	kip
V	37.0	kip

Flange Bolts

Diameter of Flange Bolts (Dbolts)	1.00	in	
Bolt Circle of Flange Bolts (BCbolts)	57.0	in	
Loads to Flange Bolts			
Mbolts	816.2	kip-ft	
P	67.0	kip	See Flange tool for Flange
V	37.0	kip	Bolt and Plate Capacities

Existing Jump Plates

Moment to Existing Bridge Stiffeners (Mexist)	1833.2	kip-ft	
Number of Existing Bridge Stiffeners (Nexist)	4		
Thickness (texist)	1.00	in	
Width (wexist)	4.50	in	
Controlling Capacity of Existing Bridge Stiffeners (Capacitymax)	43.3%		Pass

Monopole Flange Plate Connection

Elevation = 60.583 ft.

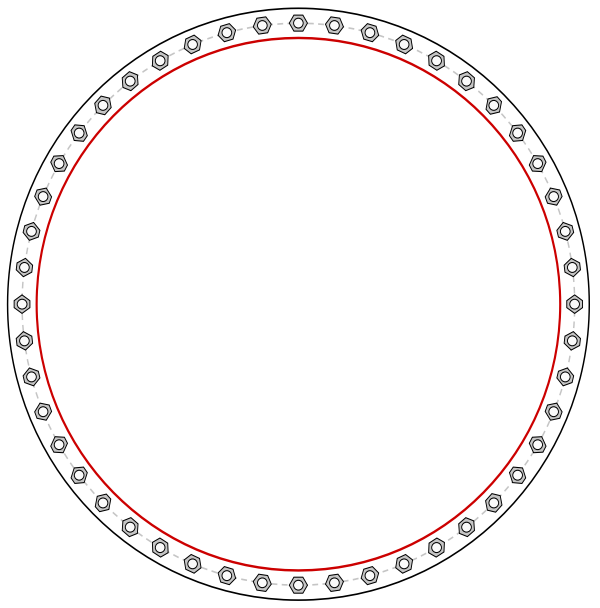
BU #	826217
Site Name	Newington_1, CT
Order #	495645, Rev# 0

TIA-222 Revision	H

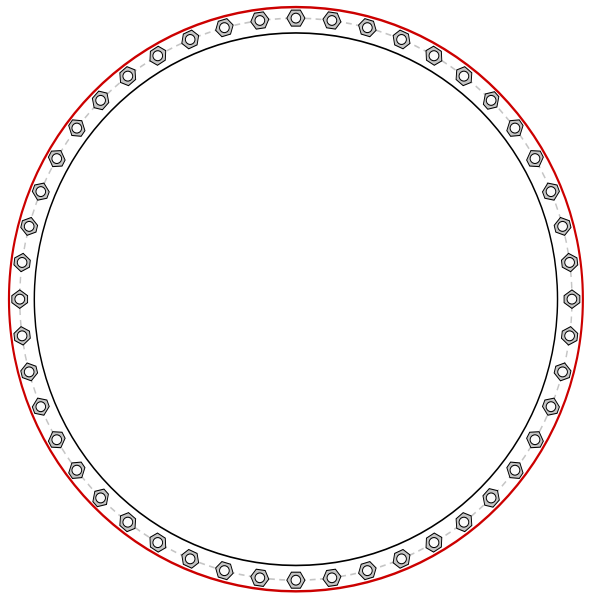
Applied Loads	
Moment (kip-ft)	816.20
Axial Force (kips)	67.00
Shear Force (kips)	37.00

**TIA-222-H Section 15.5 Applied*

Top Plate - External



Bottom Plate - Internal



Connection Properties

Bolt Data

(48) 1" ø bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 57" BC

Top Plate Data

60" OD x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Plate Data

54" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Top Stiffener Data

N/A

Bottom Stiffener Data

N/A

Top Pole Data

54" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bottom Pole Data

60" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Analysis Results

Bolt Capacity

Max Load (kips)	12.92	
Allowable (kips)	54.53	
Stress Rating:	**22.6%**	**Pass**

Top Plate Capacity

Max Stress (ksi):	11.06	(Flexural)
Allowable Stress (ksi):	32.40	
Stress Rating:	**32.5%**	**Pass**
Tension Side Stress Rating:	**10.0%**	**Pass**

Bottom Plate Capacity

Max Stress (ksi):	11.67	(Flexural)
Allowable Stress (ksi):	32.40	
Stress Rating:	**34.3%**	**Pass**
Tension Side Stress Rating:	**N/A**	

PROJECT	**87581.025.01 - Newington_1, CT**	**Intiti**			
SUBJECT	**Bridge Stiffener - 40.333 ft**				
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Bolted Bridge Stiffeners Reinforcement Check

Assumptions / Notes:

1. For design purposes, it is assumed that the proposed bridge stiffeners are to take the full load.
2. The plastification of the pole is not considered.
3. All shear and axial loads are taken by the flange bolts.

1. PARAMETERS

Rev. H

Elevation 40.33 ft Apply TIA-222-H Section 15.5? Yes

1.1 tnxTower Reactions

Moment (M)	3441.84	k-ft
Axial Load (P)	80.97	kip
Shear Load (V)	41.08	kips

1.2 Shaft Properties at the Flange

Upper Shaft Diameter (Dshaft1)	60	in
Upper Shaft Thichkness (t1)	0.375	in
Lower Shaft Diameter (Dshaft2)	60	in
Lower Shaft Thickness (t2)	0.5	in
Shaft Grade:		
Fyshaft	42	ksi
Fushaft	63	ksi

1.3 Existing Bridge Stiffeners Properties

(Verify existing bolted connection for reduced moment.)

Number of Proposed Bridge Stiffeners (Nexist)	6		4	
Thickness of Proposed Bridge Stiffeners (texist)	1.25	in	1	in
Width of Proposed Bridge Stiffeners (wexist)	6.5	in	6	in
Existing Bridge Stiffener Grade:				
Fyex	65	ksi	65	ksi
Fuex	80	ksi	80	ksi
Diameter to the centroid of Existing Bridge Stiffeners (BCexist)	63.75	in	63.5	in
Gross Area of One Existing Bridge Stiffener (Ag_exist)	8.125	in^	6	in^2
Radius of Gyration about x-axis (rx)	0.361	in	0.289	in
Moment of Inertia of Existing Bridge Stiffeners (Iexist)	33930	in^4		

1.4 Flange Bolt Properties

Number of Flange Bolts (Nbolts)	32		32	
Diameter of Flange Bolts	1 1/4	in	1 1/4	in
Bolt Circle of Flange Bolts (BCbolts)	47	in	53	in
Gross Area of One Flange Bolt (Ag_bolts)	1.227	in^2	1.227	in^2
Moment of Inertia of Flange Bolts (Ibolts)	31535	in^4		

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1.5 Division of Forces

Total Gross Area (Ag_total)	151.29	in^2
Total Moment of Inertia (Itotal)	65466	in^4

1.6 Reactions to Existing Bridge Stiffeners

Moment Reaction to Existing Bridge Stiffeners (Mexist)	1783.9	kip-ft
Axial Reaction to Existing Bridge Stiffeners (Pexist)	0.0	kips
Shear Reaction to Flange Bolts (Vexist)	0.0	kips

1.7 Reactions to Flange Bolts

(It is assumed that all shear and axial loads are taken by the flange bolts)

Moment Reaction to Flange Bolts (Mbolts)	1658.0	kip-ft	**Check Flange Connection with these Reactions**
Axial Reaction to Flange Bolts (Pbolts)	81.0	kips	
Shear Reaction to Flange Bolts (Vbolts)	41.1	kips	

2. Existing Bridge Stiffener

2.1 Maximum Axial Forces in Single Existing

Outer Radius of Bolt Circle (C)	31.875	in
Critical Compression Bending Stress (Pcomp)	163.4	kips
Critical Tension Bending Stress (Ptens)	163.4	kips

2.2 Available Compression Strength

[AISC 15th Edition E3-1]

Resistance Factor (φc)	0.9		
Unbraced Length (Lu)	25	in	
Effective Length Factor (K)	1		
Strength of Bridge Stiffener:			
Fy	65	ksi	
Fu	80	ksi	
Effective Length of Member (Lc)	25.00	in	[AISC 15th Edition E3-2]
Elastic Buckling Stress (Fe)	59.6	ksi	[AISC 15th Edition,Eq. E3-4]
Limit	99.5		
Determination of Crticial Stress (Fcr)	41.2	ksi	

[AISC 15th Edition,Eqs. E3-2 and E3-3]

Allowable Compressive Strength (φPn)	301.2	kips

[AISC 15th Ed., Eqs. J4-6 and E3-1]

Check Compressive Strength (Checkcomp)	51.7%	Pass

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2.3 Available Tension Strength

Gross Section Yield

Available Tension Yield Strength (φPty)	475.3	kips
[AISC 15th Ed., Ch.D2]		

Net Section Fracture

Bolt Hole Diameter (BH)	1.188	in
Thickness (T)	1.25	in
Net Area (Anet)	6.563	in^2
Net Area Limitation (Ae)	6.563	in^2
Available Fractile Strength (φPtr)	393.8	kips

Tension Check

Controlling Mode of Failure (Check mode)	Fracture Controls		
(φPnt)	393.8	kips	
Controlling Tension Mode Check (Checktension)	39.5%		Pass

SUMMARY

tnxTower Reactions

M	3441.8	kip-ft
P	81.0	kip
V	41.1	kip

Flange Bolts

Diameter of Flange Bolts (Dbolts)	1.25	in	
Bolt Circle of Flange Bolts (BCbolts)	47.0	in	
Loads to Flange Bolts			
Mbolts	1658.0	kip-ft	
P	81.0	kip	See Flange tool for Flange
V	41.1	kip	Bolt and Plate Capacities

Existing Jump Plates

Moment to Existing Bridge Stiffeners (Mexist)	1783.9	kip-ft	
Number of Existing Bridge Stiffeners (Nexist)	6		
Thickness (texist)	1.25	in	
Width (wexist)	6.50	in	
Controlling Capacity of Existing Bridge Stiffeners (Capacitymax)	51.7%		Pass

PROJECT	**87581.025.01 - Newington_1, CT**	**Intiti**			
SUBJECT	**Bridge Stiffener - 40.333 ft**				
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Bolted Bridge Stiffeners Reinforcement Check

Assumptions / Notes:

1. For design purposes, it is assumed that the proposed bridge stiffeners are to take the full load.
2. The plastification of the pole is not considered.
3. All shear and axial loads are taken by the flange bolts.

1. PARAMETERS

Rev. H

Elevation 40.33 ft New Apply TIA-222-H Section 15.5? Yes

1.1 tnxTower Reactions

Moment (M)	3441.84	k-ft
Axial Load (P)	80.97	kip
Shear Load (V)	41.08	kips

1.2 Shaft Properties at the Flange

Upper Shaft Diameter (Dshaft1)	60	in
Upper Shaft Thichkness (t1)	0.375	in
Lower Shaft Diameter (Dshaft2)	60	in
Lower Shaft Thickness (t2)	0.5	in
Shaft Grade:		
Fyshaft	42	ksi
Fushaft	63	ksi

1.3 Existing Bridge Stiffeners Properties

(Verify existing bolted connection for reduced moment.)

Number of Proposed Bridge Stiffeners (Nexist)	6		4	
Thickness of Proposed Bridge Stiffeners (texist)	1.25	in	1	in
Width of Proposed Bridge Stiffeners (wexist)	6.5	in	6	in
Existing Bridge Stiffener Grade:				
Fyex	65	ksi	65	ksi
Fuex	80	ksi	80	ksi
Diameter to the centroid of Existing Bridge Stiffeners (BCexist)	63.75	in	63.5	in
Gross Area of One Existing Bridge Stiffener (Ag_exist)	8.125	in^	6	in^2
Radius of Gyration about x-axis (rx)	0.361	in	0.289	in
Moment of Inertia of Existing Bridge Stiffeners (Iexist)	33930	in^4		

1.4 Flange Bolt Properties

Number of Flange Bolts (Nbolts)	32		32	
Diameter of Flange Bolts	1 1/4	in	1 1/4	in
Bolt Circle of Flange Bolts (BCbolts)	47	in	53	in
Gross Area of One Flange Bolt (Ag_bolts)	1.227	in^2	1.227	in^2
Moment of Inertia of Flange Bolts (Ibolts)	31535	in^4		

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1.5 Division of Forces

Total Gross Area (Ag_total)	151.29	in^2
Total Moment of Inertia (Itotal)	65466	in^4

1.6 Reactions to Existing Bridge Stiffeners

Moment Reaction to Existing Bridge Stiffeners (Mexist)	1783.9	kip-ft
Axial Reaction to Existing Bridge Stiffeners (Pexist)	0.0	kips
Shear Reaction to Flange Bolts (Vexist)	0.0	kips

1.7 Reactions to Flange Bolts

(It is assumed that all shear and axial loads are taken by the flange bolts)

Moment Reaction to Flange Bolts (Mbolts)	1658.0	kip-ft	**Check Flange Connection**
Axial Reaction to Flange Bolts (Pbolts)	81.0	kips	**with these Reactions**
Shear Reaction to Flange Bolts (Vbolts)	41.1	kips	

2. Existing Bridge Stiffener

2.1 Maximum Axial Forces in Single Existing

Outer Radius of Bolt Circle (C)	31.875	in
Critical Compression Bending Stress (Pcomp)	163.4	kips
Critical Tension Bending Stress (Ptens)	163.4	kips

2.2 Available Compression Strength

[AISC 15th Edition E3-1]

Resistance Factor (φc)	0.9		
Unbraced Length (Lu)	16	in	
Effective Length Factor (K)	1		
Strength of Bridge Stiffener:			
Fy	65	ksi	
Fu	80	ksi	
Effective Length of Member (Lc)	16.00	in	[AISC 15th Edition E3-2]
Elastic Buckling Stress (Fe)	145.6	ksi	[AISC 15th Edition,Eq. E3-4]
Limit	99.5		
Determination of Crticial Stress (Fcr)	53.9	ksi	

[AISC 15th Edition,Eqs. E3-2 and E3-3]

Allowable Compressive Strength (φPn)	394.3	kips

[AISC 15th Ed., Eqs. J4-6 and E3-1]

Check Compressive Strength (Checkcomp)	39.5%	Pass

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2.3 Available Tension Strength

Gross Section Yield

Available Tension Yield Strength (φPty)	475.3	kips
[AISC 15th Ed., Ch.D2]		

Net Section Fracture

Bolt Hole Diameter (BH)	1.188	in
Thickness (T)	1.25	in
Net Area (Anet)	6.563	in^2
Net Area Limitation (Ae)	6.563	in^2
Available Fractile Strength (φPtr)	393.8	kips

Tension Check

Controlling Mode of Failure (Check mode)	Fracture Controls		
(φPnt)	393.8	kips	
Controlling Tension Mode Check (Checktension)	39.5%		Pass

SUMMARY

tnxTower Reactions

M	3441.8	kip-ft
P	81.0	kip
V	41.1	kip

Flange Bolts

Diameter of Flange Bolts (Dbolts)	1.25	in	
Bolt Circle of Flange Bolts (BCbolts)	47.0	in	
Loads to Flange Bolts			
Mbolts	1658.0	kip-ft	
P	81.0	kip	See Flange tool for Flange
V	41.1	kip	Bolt and Plate Capacities

Existing Jump Plates

Moment to Existing Bridge Stiffeners (Mexist)	1783.9	kip-ft	
Number of Existing Bridge Stiffeners (Nexist)	6		
Thickness (texist)	1.25	in	
Width (wexist)	6.50	in	
Controlling Capacity of Existing Bridge Stiffeners (Capacitymax)	39.5%		Pass

Monopole Flange Plate Connection

Elevation = 40.333 ft.

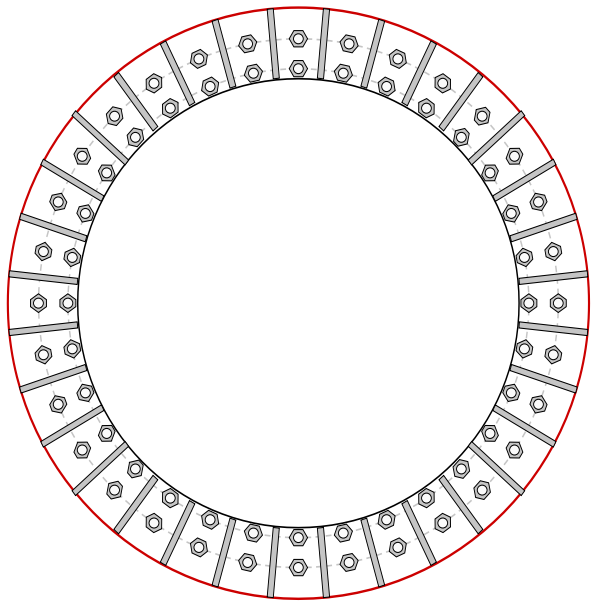
BU #	826217
Site Name	Newington_1, CT
Order #	495645, Rev# 0

TIA-222 Revision	H

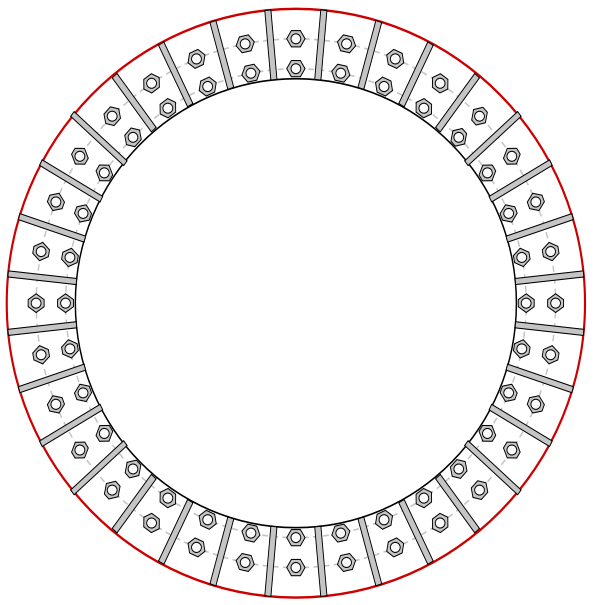
Applied Loads	
Moment (kip-ft)	1658.00
Axial Force (kips)	81.00
Shear Force (kips)	41.10

**TIA-222-H Section 15.5 Applied*

Top Plate - Internal



Bottom Plate - Internal



Connection Properties

Bolt Data

GROUP 1: (32) 1" ø bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 53" BC
GROUP 2: (32) 1" ø bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 47" BC

Top Plate Data

45" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Top Stiffener Data

(32) 10"H x 7"W x 0.625"T, Notch: 0.5"
plate: Fy= 36 ksi ; weld: Fy= 70 ksi
horiz. weld: 0.3125" fillet
vert. weld: 0.3125" fillet

Top Pole Data

60" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bottom Plate Data

45" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Stiffener Data

(32) 10"H x 7"W x 0.625"T, Notch: 0.5"
plate: Fy= 36 ksi ; weld: Fy= 70 ksi
horiz. weld: 0.3125" fillet
vert. weld: 0.3125" fillet

Bottom Pole Data

60" x 0.5" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Analysis Results

Bolt Capacity

Max Load (kips)	25.00	
Allowable (kips)	54.53	
Stress Rating:	**43.7%**	**Pass**

Top Plate Capacity

Max Stress (ksi):	15.08	(Roark's Flexural)
Allowable Stress (ksi):	32.40	
Stress Rating:	**44.3%**	**Pass**
Tension Side Stress Rating:	**N/A**	

Top Stiffener Capacity

Horizontal Weld:	**35.7%**	**Pass**
Vertical Weld:	**31.1%**	**Pass**
Plate Flexure+Shear:	**20.7%**	**Pass**
Plate Tension+Shear:	**24.8%**	**Pass**
Plate Compression:	**51.3%**	**Pass**

Top Pole Capacity

Punching Shear:	**16.7%**	**Pass**

Bottom Plate Capacity

Max Stress (ksi):	15.33	(Roark's Flexural)
Allowable Stress (ksi):	32.40	
Stress Rating:	**45.1%**	**Pass**
Tension Side Stress Rating:	**N/A**	

Bottom Stiffener Capacity

Horizontal Weld:	**31.4%**	**Pass**
Vertical Weld:	**27.5%**	**Pass**
Plate Flexure+Shear:	**17.7%**	**Pass**
Plate Tension+Shear:	**21.5%**	**Pass**
Plate Compression:	**45.3%**	**Pass**

Bottom Pole Capacity

Punching Shear:	**11.1%**	**Pass**

PROJECT	**87581.025.01 - Newington_1, CT**	**Intiti**			
SUBJECT	**Bridge Stiffener - 20.083 ft**				
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Bolted Bridge Stiffeners Reinforcement Check

Assumptions / Notes:

1. For design purposes, it is assumed that the proposed bridge stiffeners are to take the full load.
2. The plastification of the pole is not considered.
3. All shear and axial loads are taken by the flange bolts.

1. PARAMETERS

Rev. H

Elevation 20.08 ft Apply TIA-222-H Section 15.5? Yes

1.1 tnxTower Reactions

Moment (M)	4310.06	k-ft
Axial Load (P)	95.8	kip
Shear Load (V)	44.57	kips

1.2 Shaft Properties at the Flange

Upper Shaft Diameter (Dshaft1)	60	in
Upper Shaft Thichkness (t1)	0.5	in
Lower Shaft Diameter (Dshaft2)	60	in
Lower Shaft Thickness (t2)	0.625	in
Shaft Grade:		
Fyshaft	42	ksi
Fushaft	63	ksi

1.3 Existing Bridge Stiffeners Properties

(Verify existing bolted connection for reduced moment.)

Number of Proposed Bridge Stiffeners (Nexist)	6		4	
Thickness of Proposed Bridge Stiffeners (texist)	1.25	in	1	in
Width of Proposed Bridge Stiffeners (wexist)	6.5	in	6	in
Existing Bridge Stiffener Grade:				
Fyex	65	ksi	65	ksi
Fuex	80	ksi	80	ksi
Diameter to the centroid of Existing Bridge Stiffeners (BCexist)	63.75	in	63.5	in
Gross Area of One Existing Bridge Stiffener (Ag_exist)	8.125	in^2	6	in^2
Radius of Gyration about x-axis (rx)	0.361	in	0.289	in
Moment of Inertia of Existing Bridge Stiffeners (Iexist)	35505	in^4		

1.4 Flange Bolt Properties

Number of Flange Bolts (Nbolts)	32		32	
Diameter of Flange Bolts	1 1/4	in	1 1/4	in
Bolt Circle of Flange Bolts (BCbolts)	47	in	53	in
Gross Area of One Flange Bolt (Ag_bolts)	1.227	in^2	1.227	in^2
Moment of Inertia of Flange Bolts (Ibolts)	49270	in^4		

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1.5 Division of Forces

Total Gross Area (Ag_total)	151.29	in^2
Total Moment of Inertia (Itotal)	84837	in^4

1.6 Reactions to Existing Bridge Stiffeners

Moment Reaction to Existing Bridge Stiffeners (Mexist)	1803.8	kip-ft
Axial Reaction to Existing Bridge Stiffeners (Pexist)	0.0	kips
Shear Reaction to Flange Bolts (Vexist)	0.0	kips

1.7 Reactions to Flange Bolts

(It is assumed that all shear and axial loads are taken by the flange bolts)

Moment Reaction to Flange Bolts (Mbolts)	2503.1	kip-ft	**Check Flange Connection with these Reactions**
Axial Reaction to Flange Bolts (Pbolts)	95.8	kips	
Shear Reaction to Flange Bolts (Vbolts)	44.6	kips	

2. Existing Bridge Stiffener

2.1 Maximum Axial Forces in Single Existing

Outer Radius of Bolt Circle (C)	31.875	in
Critical Compression Bending Stress (Pcomp)	157.9	kips
Critical Tension Bending Stress (Ptens)	157.9	kips

2.2 Available Compression Strength

[AISC 15th Edition E3-1]

Resistance Factor (φc)	0.9		
Unbraced Length (Lu)	24	in	
Effective Length Factor (K)	1		
Strength of Bridge Stiffener:			
Fy	65	ksi	
Fu	80	ksi	
Effective Length of Member (Lc)	24.00	in	[AISC 15th Edition E3-2]
Elastic Buckling Stress (Fe)	64.7	ksi	[AISC 15th Edition,Eq. E3-4]
Limit	99.5		
Determination of Crticial Stress (Fcr)	42.7	ksi	

[AISC 15th Edition,Eqs. E3-2 and E3-3]

Allowable Compressive Strength (φPn)	312.2	kips

[AISC 15th Ed., Eqs. J4-6 and E3-1]

Check Compressive Strength (Checkcomp)	48.2%	Pass

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2.3 Available Tension Strength

Gross Section Yield

Available Tension Yield Strength (φPty)	475.3	kips
[AISC 15th Ed., Ch.D2]		

Net Section Fracture

Bolt Hole Diameter (BH)	1.188	in
Thickness (T)	1.25	in
Net Area (Anet)	6.563	in^2
Net Area Limitation (Ae)	6.563	in^2
Available Fractile Strength (φPtr)	393.8	kips

Tension Check

Controlling Mode of Failure (Check mode)	Fracture Controls		
(φPnt)	393.8	kips	
Controlling Tension Mode Check (Checktension)	38.2%		Pass

SUMMARY

tnxTower Reactions

M	4310.1	kip-ft
P	95.8	kip
V	44.6	kip

Flange Bolts

Diameter of Flange Bolts (Dbolts)	1.25	in	
Bolt Circle of Flange Bolts (BCbolts)	47.0	in	
Loads to Flange Bolts			
Mbolts	2503.1	kip-ft	
P	95.8	kip	See Flange tool for Flange
V	44.6	kip	Bolt and Plate Capacities

Existing Jump Plates

Moment to Existing Bridge Stiffeners (Mexist)	1803.8	kip-ft	
Number of Existing Bridge Stiffeners (Nexist)	6		
Thickness (texist)	1.25	in	
Width (wexist)	6.50	in	
Controlling Capacity of Existing Bridge Stiffeners (Capacitymax)	48.2%		Pass

PROJECT	**87581.025.01 - Newington_1, CT**	**Intiti**			
SUBJECT	**Bridge Stiffener - 20.083 ft**				
DATE	**08-16-19**	PAGE	1	OF	3

V1.0.1

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Bolted Bridge Stiffeners Reinforcement Check

Assumptions / Notes:

1. For design purposes, it is assumed that the proposed bridge stiffeners are to take the full load.
2. The plastification of the pole is not considered.
3. All shear and axial loads are taken by the flange bolts.

1. PARAMETERS

Rev. H

Elevation 20.08 ft Apply TIA-222-H Section 15.5? Yes

1.1 tnxTower Reactions

Moment (M)	4310.06	k-ft
Axial Load (P)	95.8	kip
Shear Load (V)	44.57	kips

1.2 Shaft Properties at the Flange

Upper Shaft Diameter (Dshaft1)	60	in
Upper Shaft Thichkness (t1)	0.5	in
Lower Shaft Diameter (Dshaft2)	60	in
Lower Shaft Thickness (t2)	0.625	in
Shaft Grade:		
Fyshaft	42	ksi
Fushaft	63	ksi

1.3 Existing Bridge Stiffeners Properties

(Verify existing bolted connection for reduced moment.)

Number of Proposed Bridge Stiffeners (Nexist)	6		4	
Thickness of Proposed Bridge Stiffeners (texist)	1.25	in	1	in
Width of Proposed Bridge Stiffeners (wexist)	6.5	in	6	in
Existing Bridge Stiffener Grade:				
Fyex	65	ksi	65	ksi
Fuex	80	ksi	80	ksi
Diameter to the centroid of Existing Bridge Stiffeners (BCexist)	63.75	in	63.5	in
Gross Area of One Existing Bridge Stiffener (Ag_exist)	8.125	in^2	6	in^2
Radius of Gyration about x-axis (rx)	0.361	in	0.289	in
Moment of Inertia of Existing Bridge Stiffeners (Iexist)	35505	in^4		

1.4 Flange Bolt Properties

Number of Flange Bolts (Nbolts)	32		32	
Diameter of Flange Bolts	1 1/4	in	1 1/4	in
Bolt Circle of Flange Bolts (BCbolts)	47	in	53	in
Gross Area of One Flange Bolt (Ag_bolts)	1.227	in^2	1.227	in^2
Moment of Inertia of Flange Bolts (Ibolts)	49270	in^4		

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1.5 Division of Forces

Total Gross Area (Ag_total)	151.29	in^2
Total Moment of Inertia (Itotal)	84837	in^4

1.6 Reactions to Existing Bridge Stiffeners

Moment Reaction to Existing Bridge Stiffeners (Mexist)	1803.8	kip-ft
Axial Reaction to Existing Bridge Stiffeners (Pexist)	0.0	kips
Shear Reaction to Flange Bolts (Vexist)	0.0	kips

1.7 Reactions to Flange Bolts

(It is assumed that all shear and axial loads are taken by the flange bolts)

Moment Reaction to Flange Bolts (Mbolts)	2503.1	kip-ft	**Check Flange Connection with these Reactions**
Axial Reaction to Flange Bolts (Pbolts)	95.8	kips	
Shear Reaction to Flange Bolts (Vbolts)	44.6	kips	

2. Existing Bridge Stiffener

2.1 Maximum Axial Forces in Single Existing

Outer Radius of Bolt Circle (C)	31.875	in
Critical Compression Bending Stress (Pcomp)	157.9	kips
Critical Tension Bending Stress (Ptens)	157.9	kips

2.2 Available Compression Strength

[AISC 15th Edition E3-1]

Resistance Factor (φc)	0.9		
Unbraced Length (Lu)	16	in	
Effective Length Factor (K)	1		
Strength of Bridge Stiffener:			
Fy	65	ksi	
Fu	80	ksi	
Effective Length of Member (Lc)	16.00	in	[AISC 15th Edition E3-2]
Elastic Buckling Stress (Fe)	145.6	ksi	[AISC 15th Edition,Eq. E3-4]
Limit	99.5		
Determination of Crticial Stress (Fcr)	53.9	ksi	

[AISC 15th Edition,Eqs. E3-2 and E3-3]

Allowable Compressive Strength (φPn)	394.3	kips

[AISC 15th Ed., Eqs. J4-6 and E3-1]

Check Compressive Strength (Checkcomp)	38.1%	Pass

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2.3 Available Tension Strength

Gross Section Yield

Available Tension Yield Strength (φPty)	475.3	kips
[AISC 15th Ed., Ch.D2]		

Net Section Fracture

Bolt Hole Diameter (BH)	1.188	in
Thickness (T)	1.25	in
Net Area (Anet)	6.563	in^2
Net Area Limitation (Ae)	6.563	in^2
Available Fractile Strength (φPtr)	393.8	kips

Tension Check

Controlling Mode of Failure (Check mode)	Fracture Controls		
(φPnt)	393.8	kips	
Controlling Tension Mode Check (Checktension)	38.2%		Pass

SUMMARY

tnxTower Reactions

M	4310.1	kip-ft
P	95.8	kip
V	44.6	kip

Flange Bolts

Diameter of Flange Bolts (Dbolts)	1.25	in	
Bolt Circle of Flange Bolts (BCbolts)	47.0	in	
Loads to Flange Bolts			
Mbolts	2503.1	kip-ft	
P	95.8	kip	See Flange tool for Flange
V	44.6	kip	Bolt and Plate Capacities

Existing Jump Plates

Moment to Existing Bridge Stiffeners (Mexist)	1803.8	kip-ft	
Number of Existing Bridge Stiffeners (Nexist)	6		
Thickness (texist)	1.25	in	
Width (wexist)	6.50	in	
Controlling Capacity of Existing Bridge Stiffeners (Capacitymax)	38.2%		Pass

Monopole Flange Plate Connection

Elevation = 20.083 ft.

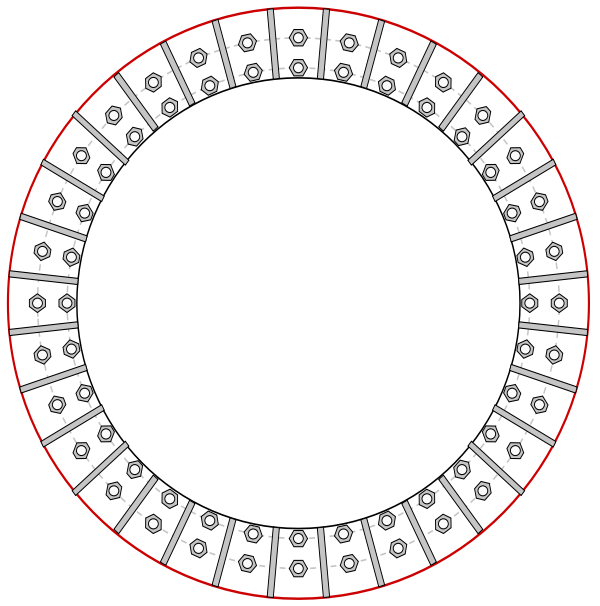
BU #	826217
Site Name	Newington_1, CT
Order #	495645, Rev# 0

TIA-222 Revision	H

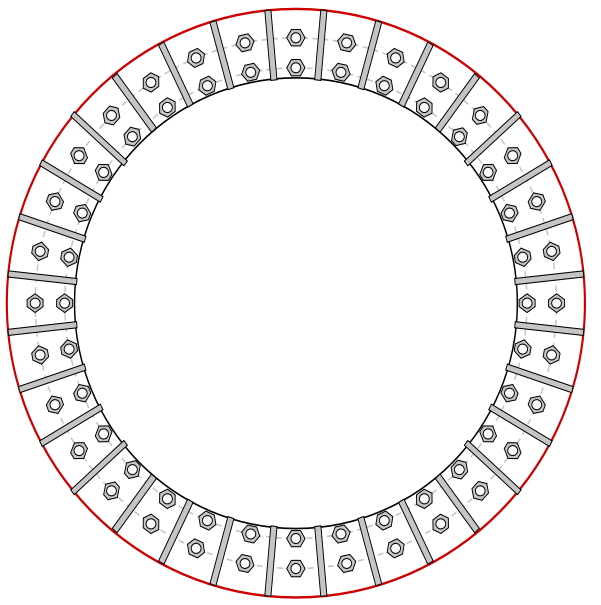
Applied Loads	
Moment (kip-ft)	2503.10
Axial Force (kips)	95.80
Shear Force (kips)	44.60

**TIA-222-H Section 15.5 Applied*

Top Plate - Internal



Bottom Plate - Internal



Connection Properties

Bolt Data

GROUP 1: (32) 1" ø bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 53" BC
GROUP 2: (32) 1" ø bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 47" BC

Top Plate Data

45" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Plate Data

45" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Top Stiffener Data

(32) 10"H x 7"W x 0.625"T, Notch: 0.5"
plate: Fy= 36 ksi ; weld: Fy= 70 ksi
horiz. weld: 0.3125" fillet
vert. weld: 0.3125" fillet

Bottom Stiffener Data

(32) 10"H x 7"W x 0.625"T, Notch: 0.5"
plate: Fy= 36 ksi ; weld: Fy= 70 ksi
horiz. weld: 0.3125" fillet
vert. weld: 0.3125" fillet

Top Pole Data

60" x 0.5" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bottom Pole Data

60" x 0.625" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Analysis Results

Bolt Capacity

Max Load (kips)	38.15	
Allowable (kips)	54.53	
Stress Rating:	**66.6%**	**Pass**

Top Plate Capacity

Max Stress (ksi):	22.91	(Roark's Flexural)
Allowable Stress (ksi):	32.40	
Stress Rating:	**67.3%**	**Pass**
Tension Side Stress Rating:	**N/A**	

Bottom Plate Capacity

Max Stress (ksi):	23.30	(Roark's Flexural)
Allowable Stress (ksi):	32.40	
Stress Rating:	**68.5%**	**Pass**
Tension Side Stress Rating:	**N/A**	

Top Stiffener Capacity

Horizontal Weld:	**46.9%**	**Pass**
Vertical Weld:	**40.9%**	**Pass**
Plate Flexure+Shear:	**29.3%**	**Pass**
Plate Tension+Shear:	**34.0%**	**Pass**
Plate Compression:	**67.5%**	**Pass**

Bottom Stiffener Capacity

Horizontal Weld:	**42.1%**	**Pass**
Vertical Weld:	**35.9%**	**Pass**
Plate Flexure+Shear:	**24.7%**	**Pass**
Plate Tension+Shear:	**30.0%**	**Pass**
Plate Compression:	**59.8%**	**Pass**

Top Pole Capacity

Punching Shear:	**16.5%**	**Pass**

Bottom Pole Capacity

Punching Shear:	**11.5%**	**Pass**

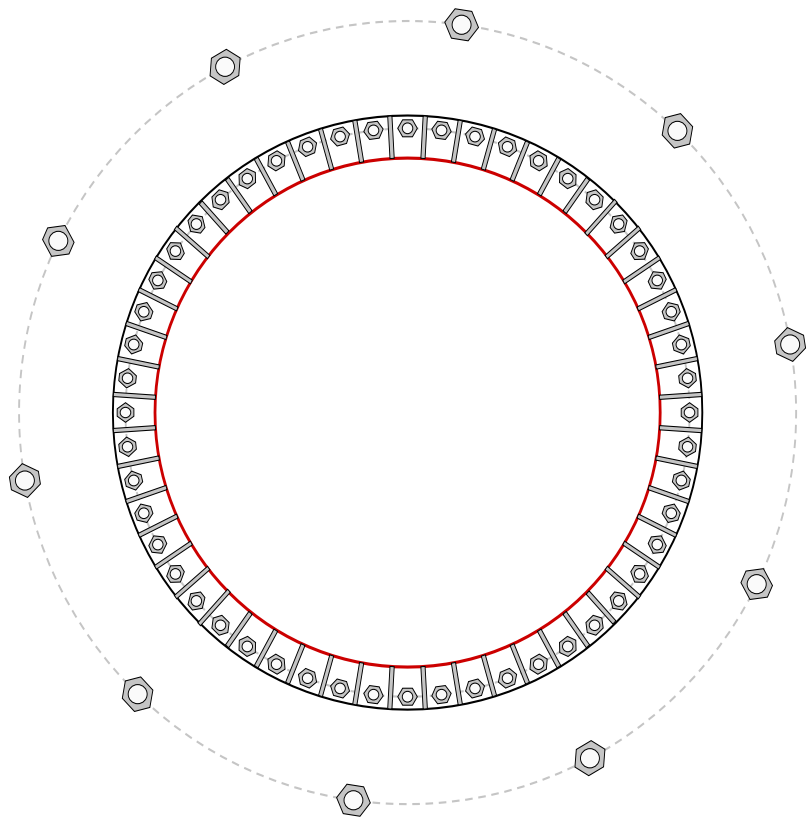
Monopole Base Plate Connection

Site Info	
BU #	826217
Site Name	Newington_1, CT
Order #	495645, Rev# 0

Analysis Considerations	
TIA-222 Revision	H
Grout Considered:	No
l_{ar} (in)	0

Applied Loads	
Moment (kip-ft)	5231.43
Axial Force (kips)	110.62
Shear Force (kips)	47.09

**TIA-222-H Section 15.5 Applied*



Connection Properties

Anchor Rod Data

GROUP 1: (52) 1-1/4" ø bolts (A687 N; Fy=105 ksi, Fu=125 ksi) on 67" BC
GROUP 2: (10) 2-1/4" ø bolts (A687 N; Fy=105 ksi, Fu=125 ksi) on 92.3" BC

Base Plate Data

70" OD x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Stiffener Data

(52) 6"H x 5"W x 0.5"T, Notch: 0.5"
plate: Fy= 36 ksi ; weld: Fy= 70 ksi
horiz. weld: 0.3125" fillet
vert. weld: 0.3125" fillet

Pole Data

60" x 0.625" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Analysis Results

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

GROUP 1:		
Pu_c = 34.53	ϕPn_c = 101.75	**Stress Rating**
Vu = 0.91	ϕVn = 30.52	**32.4%**
Mu = n/a	ϕMn = n/a	**Pass**
GROUP 2:		
Pu_c = 149.7	ϕPn_c = 341.25	**Stress Rating**
Vu = 0	ϕVn = 102.38	**41.8%**
Mu = n/a	ϕMn = n/a	**Pass**

Base Plate Summary

Max Stress (ksi):	2.76	(Shear)
Allowable Stress (ksi):	21.6	
Stress Rating:	**12.2%**	**Pass**

Stiffener Summary

Horizontal Weld:	**35.5%**	**Pass**
Vertical Weld:	**38.6%**	**Pass**
Plate Flexure+Shear:	**36.0%**	**Pass**
Plate Tension+Shear:	**32.2%**	**Pass**
Plate Compression:	**77.1%**	**Pass**

Pole Summary

Punching Shear:	**13.4%**	**Pass**

PROJECT	**87581.025.01 - Newington_1, CT**
SUBJECT	**Anchor Rod Bracket Analysis**
DATE	**08-16-19**
V4.2.2	

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

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Analysis Criteria		
Design/Analysis	Analysis	
Load Type	Current Load	
Current load	149.7	kips
AR Capacity	341.3	kips

Tower Type	Monopole

Manufacturers Tower Prop.		
Pole Thickness	0.625	in
Pole Grade	Custom	
Pole Sides #	0	
Pole Base OD	60	in
Fy	42	ksi
Fu	63	ksi
Base Plate Gr.	A36	
Fy	36	ksi
Fu	58	ksi
Anchor Rods		
Size	1.25	in
Quantity	52	
Bolt Circle	67	in
Grade	A687	
Fy	105	ksi
Fu	125	ksi

Post-Installed Adhesive AR Mod.		
ARB Type	Welded	
Size	2.25	in
AR Layout	Symmetric	
Quantity	10	
Bolt Circle	92.3	in
Grade	F1554-105	
Fy	105	ksi
Fu	125	ksi

Anchor Rod Bracket Analysis Checks		
Tube Bearing	26.1%	-
Tube Compression	N/A	
Gusset Shear	30.2%	-
Gusset Flexure	N/A	-
Welds: Gusset to Tower and BP	50.9%	-
Welds: Gusset to Tube	40.1%	-
Welds: Geometry	N/A	
Tower Punching	35.9%	-
Tube Punching	44.3%	-
Utilization	**50.9%**	

Bracket Properties

Gusset		
Thickness	1.25	in
Width at Tube	14.875	in
Height at Pole	36	in
Height at Tube	10.5	in
Grade	A572-65	
Fy	65	ksi
Fu	80	ksi

Pipe/Tube		
Size	4 XXS Pipe	
Total Length	10.5	in
Length above Gusset	0	in
Length below Gusset	0	in
Grade	Custom	
Fy	50	50 ksi
Fu	65	65 ksi

Weld - Gusset to Pipe/Tube		
FEXX	70	ksi
Weld Type	Double Bevel+Fillet	
Fillet Size	1/2	in
Bevel Depth	1/2	

Weld - Gusset to Tower		
FEXX	70	ksi
Weld Type	Double Fillet	
Fillet Size	3/8	in
Length	36	in
Load Angle	45	deg.

Weld - Gusset to Base Plate		
FEXX	70	ksi
Weld Type	Double Bevel+Fillet	
Fillet Size	1/2	in
Bevel Depth	1/2	in
Gap	0	in
Notch (horiz)	0.75	in
Notch (vert)	0.75	in
Pipe/Tube Welded to Base/Footpad?	Yes	
Fillet Size	1/2	in

Pier and Pad Foundation

BU # :	826217
Site Name:	Newington_1, CT
App. Number:	495645, Rev# 0

TIA-222 Revision:	H
Tower Type:	Monopole

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

Superstructure Analysis Reactions

Compression, P_{comp}:	111	kips
Base Shear, Vu_comp:	47	kips
Moment, M_u:	4031	ft-kips
Tower Height, **H**:	191.667	ft
BP Dist. Above Fdn, bp_{dist}:	2.5	in

Pier Properties

Pier Shape:	Circular	
Pier Diameter, **dpier**:	7	ft
Ext. Above Grade, **E**:	0.5	ft
Pier Rebar Size, **Sc**:	9	
Pier Rebar Quantity, **mc**:	34	
Pier Tie/Spiral Size, **St**:	4	
Pier Tie/Spiral Quantity, **mt**:	11	
Pier Reinforcement Type:	Tie	
Pier Clear Cover, cc_{pier}:	3	in

Pad Properties

Depth, **D**:	9	ft
Pad Width, **W**:	20.5	ft
Pad Thickness, **T**:	2.5	ft
Pad Rebar Size (Bottom), **Sp**:	11	
Pad Rebar Quantity (Bottom), **mp**:	30	
Pad Clear Cover, cc_{pad}:	3	in

Material Properties

Rebar Grade, **Fy**:	60	ksi
Concrete Compressive Strength, **F'c**:	4	ksi
Dry Concrete Density, δ**c**:	150	pcf

Soil Properties

Total Soil Unit Weight, γ:	130	pcf
Ultimate Gross Bearing, Qult:	16.000	ksf
Cohesion, **Cu**:	0.000	ksf
Friction Angle, φ:	36	degrees
SPT Blow Count, N_{blows}:		
Base Friction, μ:	0.35	
Neglected Depth, **N**:	3.33	ft
Foundation Bearing on Rock?	No	
Groundwater Depth, **gw**:	None	ft

<--Toggle between Gross and Net

Foundation Analysis Checks

	Capacity	Demand	Rating*	Check
Lateral (Sliding) (kips)	334.97	47.00	**13.4%**	**Pass**
Bearing Pressure (ksf)	12.00	4.45	**37.1%**	**Pass**
*Overturning (kip*ft)*	6452.53	4487.29	**69.5%**	**Pass**
*Pier Flexure (Comp.) (kip*ft)*	5690.52	4360.00	**73.0%**	**Pass**
Pier Compression (kip)	24494.62	159.49	**0.6%**	**Pass**
*Pad Flexure (kip*ft)*	4887.26	2043.26	**39.8%**	**Pass**
Pad Shear - 1-way (kips)	580.76	408.09	**66.9%**	**Pass**
Pad Shear - 2-way (Comp) (ksi)	0.190	0.000	**0.0%**	**Pass**
*Flexural 2-way (Comp) (kip*ft)*	6892.45	2616.00	**36.1%**	**Pass**

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

Soil Rating*:	**69.5%**
Structural Rating*:	**73.0%**

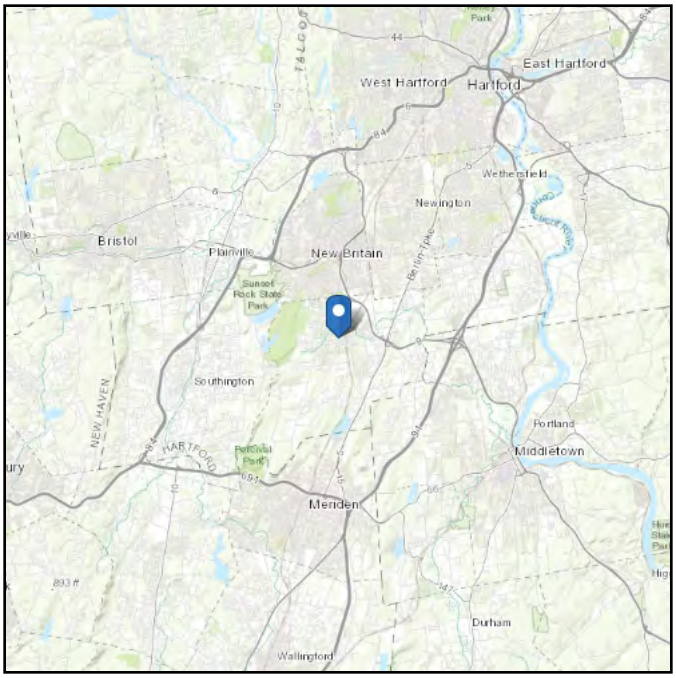
Version 3.2.0

ASCE 7 Hazards Report

Address:
No Address at This Location

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

Elevation: 133.49 ft (NAVD 88)
Latitude: 41.626194
Longitude: -72.775647



Wind

Results:

Wind Speed:	123 Vmph
10-year MRI	77 Vmph
25-year MRI	86 Vmph
50-year MRI	93 Vmph
100-year MRI	100 Vmph
Data Source:	ASCE/SEI 7-10, Fig. 26.5-1A and Figs. CC-1–CC-4, incorporating errata of March 12, 2014
Date Accessed:	Fri Aug 16 2019

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.

Mountainous terrain, gorges, ocean promontories, and special wind regions should be examined for unusual wind conditions.

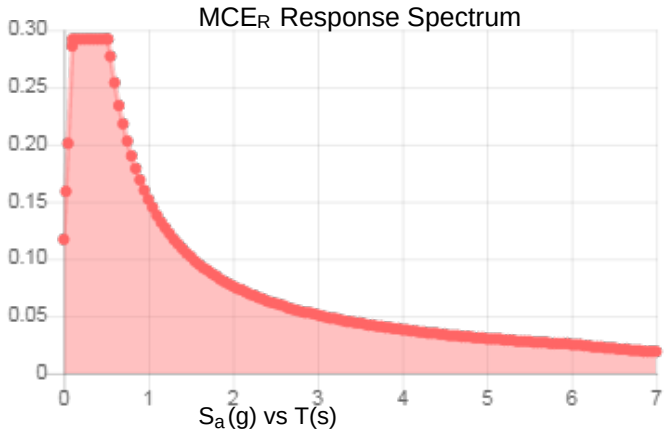
Seismic

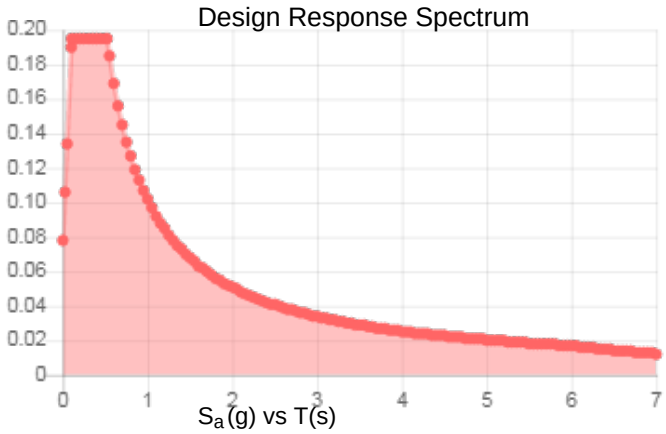
Site Soil Class: D - Stiff Soil

Results:

S_S :	0.183	S_{DS} :	0.195
S_1 :	0.063	S_{D1} :	0.102
F_a :	1.6	T_L :	6
F_v :	2.4	PGA :	0.093
S_{MS} :	0.292	PGA_M :	0.149
S_{M1} :	0.152	F_{PGA} :	1.6
		I_e :	1

Seismic Design Category B





Data Accessed: Fri Aug 16 2019

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:	1.00 in.
Concurrent Temperature:	5 F
Gust Speed:	50 mph
Data Source:	Standard ASCE/SEI 7-10, Figs. 10-2 through 10-8
Date Accessed:	Fri Aug 16 2019

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.

The ASCE 7 Hazard Tool is provided for your convenience, for informational purposes only, and is provided “as is” and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE 7 standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

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Exhibit E

Mount Analysis

Date: August 12, 2019

Kevin Morrow
Crown Castle
3530 Toringdon Way, Suite 300
Charlotte, NC 28277
(704) 405-6619

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

Subject:	**Mount Analysis Conditional Pass Report**	
Carrier Designation:	**T-Mobile Equipment Change-Out**	
	Carrier Site Number:	CT11004B
	Carrier Site Name:	Newington_1
Crown Castle Designation:	**Crown Castle BU Number:**	826217
	Crown Castle Site Name:	Newington_1
	Crown Castle JDE Job Number:	578225
	Crown Castle Order Number:	495645, Rev.0
Engineering Firm Designation:	**B+T Group Report Designation:**	87581.024.01 REV 1
Site Data:	**240 Kensington Road, Berlin, CT 06037, Hartford County**	
	Latitude 41° 37' 34.30" Longitude -72° 46' 32.33"	
Structure Information:	**Tower Height & Type:**	**191.667 ft. Monopole**
	Mount Elevation:	**184 ft.**
	Mount Type:	**16 ft. Platform Mount**

Dear Mr. Morrow,

B+T Group is pleased to submit this **"Mount Analysis Conditional Pass Report"** to determine the structural integrity of T-Mobile's antenna mounting system with the proposed appurtenance and equipment addition on the abovementioned supporting tower structure. Analysis of the existing supporting tower structure is to be completed by others and therefore is not part of this analysis. Analysis of the antenna mounting system as a tie-off point for fall protection or rigging is not part of this document.

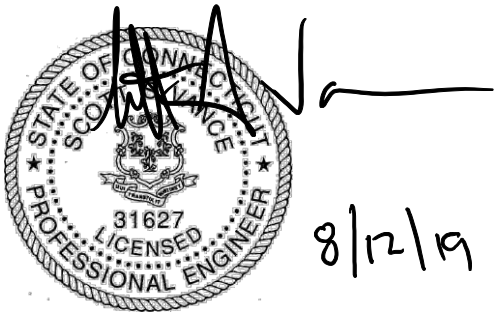
The purpose of the analysis is to determine acceptability of the mount's stress level. Based on our analysis we have determined the stress level to be:

Platform Mount **Sufficient**
***See Section 4.1 of this report for the structural modifications required in order for the mount to support the loading listed in Table 1**

This analysis utilizes an ultimate 3-second gust wind speed of 125 mph as required by the 2018 Connecticut State Building. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Mount structural analysis prepared by: Prashanth Ghanta.

Respectfully submitted by: B&T Engineering, Inc.
COA: PEC.0001564 Expires: 02/10/2020



Scott S. Vance, P.E.

TABLE OF CONTENTS

1) INTRODUCTION

This is a 16' Platform Mount, mapped by B+T Group.

2) ANALYSIS CRITERIA

Building Code: 2015 IBC
TIA-222 Revision: TIA-222-H
Risk Category: II
Ultimate Wind Speed: 125 mph
Exposure Category: B
Topographic Factor at Base: 1
Topographic Factor at Mount: 1
Ice Thickness: 2 in
Wind Speed with Ice: 50 mph
Seismic S_s: 0.183
Seismic S_1: 0.063
Live Loading Wind Speed: 30 mph
Man Live Load at Mid/End-Points: 250 lb.
Man Live Load at Mount Pipes: 500 lb.

Table 1 - Proposed Equipment Configuration

Mount Centerline (ft.)	Antenna Centerline (ft.)	Number of Antennas	Antenna Manufacturer	Antenna Model	Mount / Modification Details
184	181	3	Ericsson	AIR -32 B2A/B66AA	16' Platform Mount
		3	RFS/Celwave	APX16DWV-16DWVS-E-A20	
		3	RFS/Celwave	APXVAARR24_43-U-NA20	
		3	Commscope	ATBT-BOTTOM-24V	
		3	Ericsson	KRY 112 144/1	
		3	Ericsson	KRY 112 489/2	
		3	Ericsson	RADIO 4449 B12/B71	
		2	Kathrein	OGB4-900D	
		1	Andrew	DB589-A	

3) ANALYSIS PROCEDURE

Table 2 - Documents Provided

Document	Remarks	Reference	Source
CCI Order	Existing Loading Proposed Loading	Date: 05/29/2019	Crown Castle
Mount Mapping	B+T Group	Date: 06/24/2019	On File

3.1) Analysis Method

RISA-3D (Version 17.0.4), a commercially available analysis software package, was used to create a three-dimensional model of the antenna mounting system and calculate member stresses for various loading cases.

A tool internally developed by B+T Group, was used to calculate wind loading on all appurtenances, dishes and mount members for various loading cases. Selected output from the analysis is included in Appendix B "Software Input Calculations".

This analysis was performed in accordance with Crown Castle's ENG-SOW-10208 *Tower Mount Analysis* (Revision C).

3.2) Assumptions

1. The mount was properly fabricated and installed in accordance with its original design and manufacturer's specifications.
2. The mount has been maintained in accordance with the manufacturer's specifications and is free of damage.
3. The configuration of antennas, mounts, and other appurtenances are as specified in Table-1.
4. All mount components have been assumed to be in sufficient condition to carry their full design capacity for the analysis.
5. Mount areas and weights are determined from field measurements, standard material properties, and/or manufacturer product data.
   Per direction received from T-Mobile the following assumptions have been included in the analysis of the mount:

Component	Section	Length	Note
Handrail Pipe	2" Std. Pipe	16'-0"	--
Handrail Angle Connection Kit	SitePro1 **# X-AHCP**	--	--

6. Serviceability with respect to antenna twist, tilt, roll or lateral translation is not checked and is left to the carrier or tower owner to ensure conformance.
7. All prior structural modifications, if any are assumed to be correctly installed and fully effective.
8. 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.
9. The analysis will be required to be revised if the existing conditions in the field differ from those shown in the above-referenced documents or assumed in this analysis. No allowance was made for any damaged, missing, or rusted members.
10. The following material grades were assumed (Unless Noted Otherwise):
    (a) Connection Bolts : ASTM A325
    (b) Steel Pipe : ASTM A53 (GR. 35)
    (c) HSS (Round) : ASTM 500 (GR. B-42)
    (d) HSS (Rectangular) : ASTM 500 (GR. B-46)
    (e) Channel : ASTM A36 (GR. 36)
    (f) Steel Solid Rod : ASTM A36 (GR. 36)
    (g) Steel Plate : ASTM A36 (GR. 36)
    (h) Steel Angle : ASTM A36 (GR. 36)
    (i) UNISTRUT : ASTM A570 (GR. 33)

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

4) ANALYSIS RESULTS

Table 3 - Mount Component Stresses vs. Capacity (Platform Mount)

Notes	Component	Critical Member	Centerline (ft.)	% Capacity	Pass / Fail
1,2	Handrails	M101A	184	50.4	Pass
	Main Horizontals	M3	184	56.9	Pass
	Solid Rods	M68	184	37.0	Pass
	Connection Angles	M107A	184	31.6	Pass
	Supporting Tubes	M121	184	61.3	Pass
	Connection Plates	M93	184	18.5	Pass
	Mount Pipes	M117	184	89.6	Pass
Structure Rating (max from all components) =					**89.6 %**

Notes:
1) See additional documentation in "Appendix C - Software Analysis Output" for calculations supporting the % capacity consumed.
2) The capacities are based on the recommendations stated in section 4.1 of this report.

4.1) Recommendations

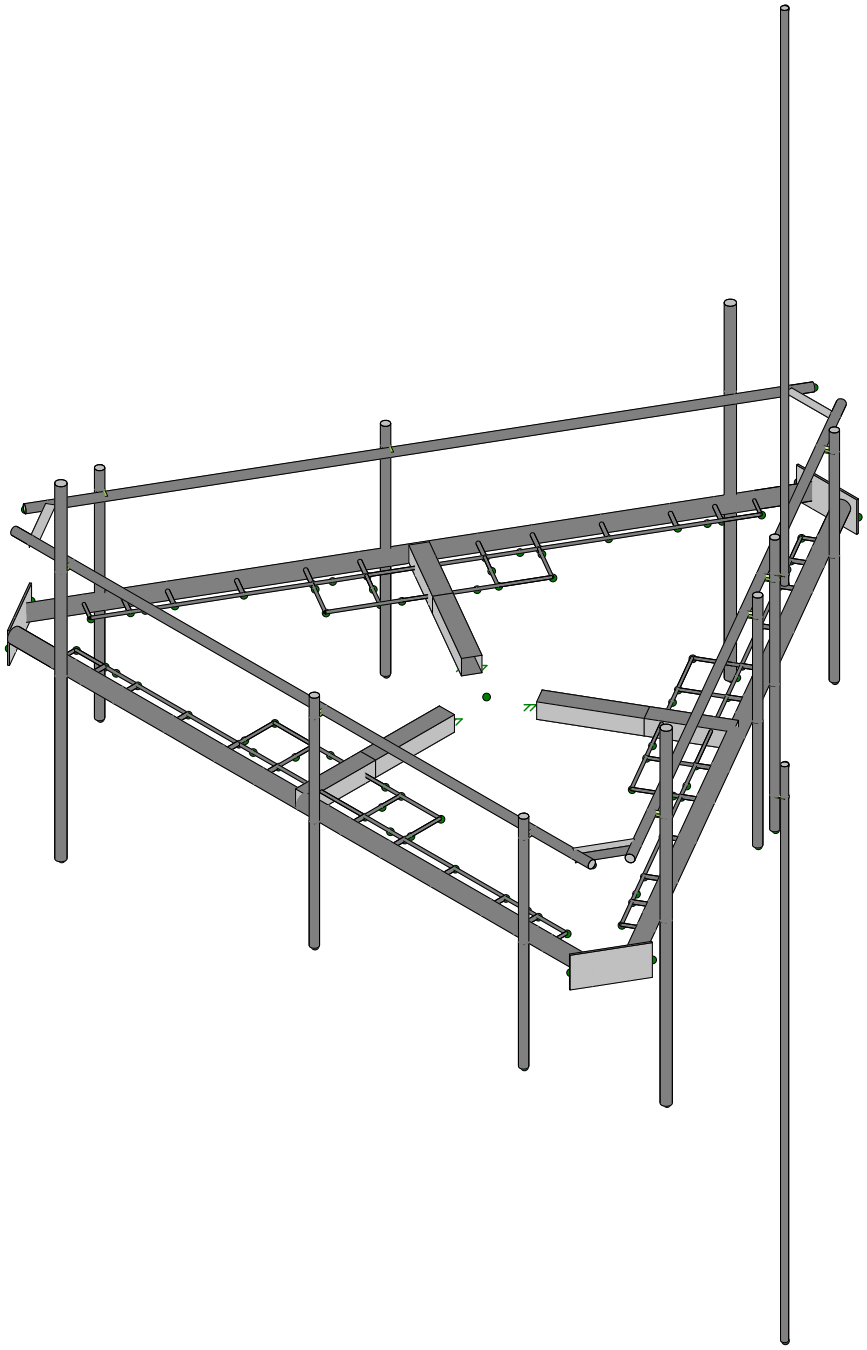
The mount has sufficient capacity to carry the proposed loading configuration. In order for the results of the analysis to be considered valid, the structural modification listed below must be completed.

1. Install (3) new 2” Std pipes X 16’-0” Long as Handrails at 2’-6” above the Platform.
2. Install (3) new Sitepro 1 **#X-AHCP** at the corners of Handrail.

No structural modifications are required at this time, provided that the above-listed changes are implemented.

APPENDIX A

WIRE FRAME AND RENDERED MODELS



Envelope Only Solution

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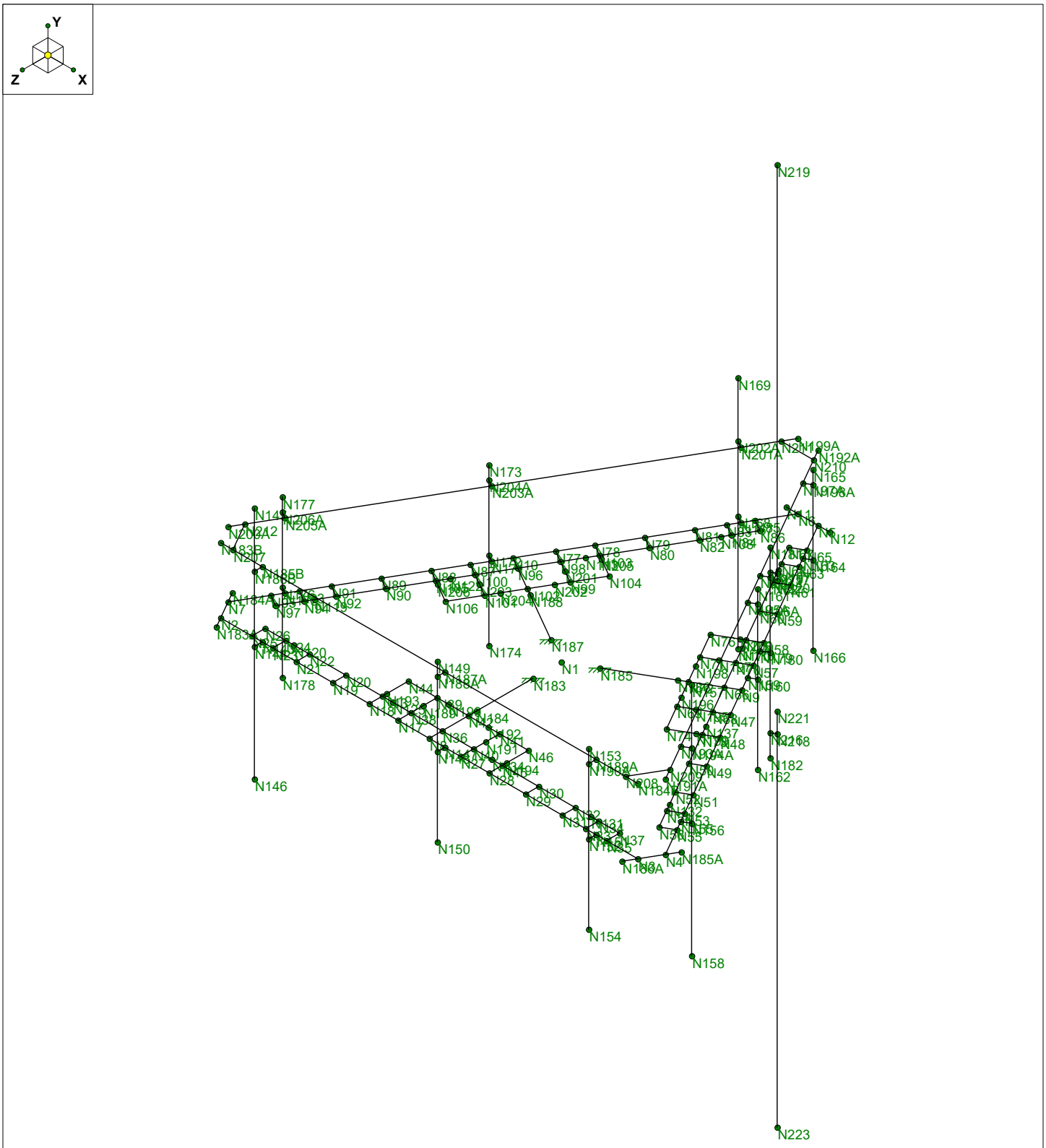

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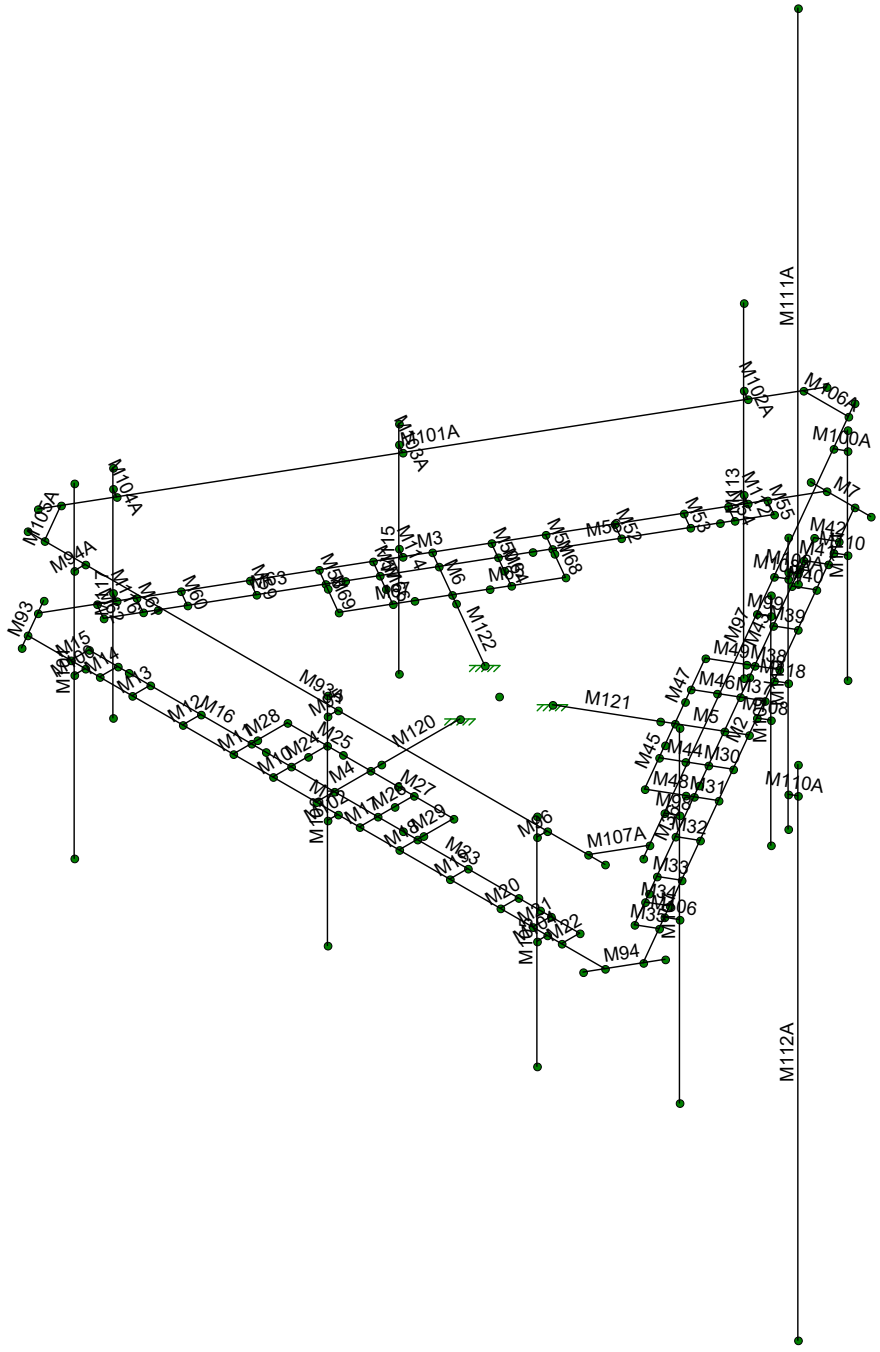

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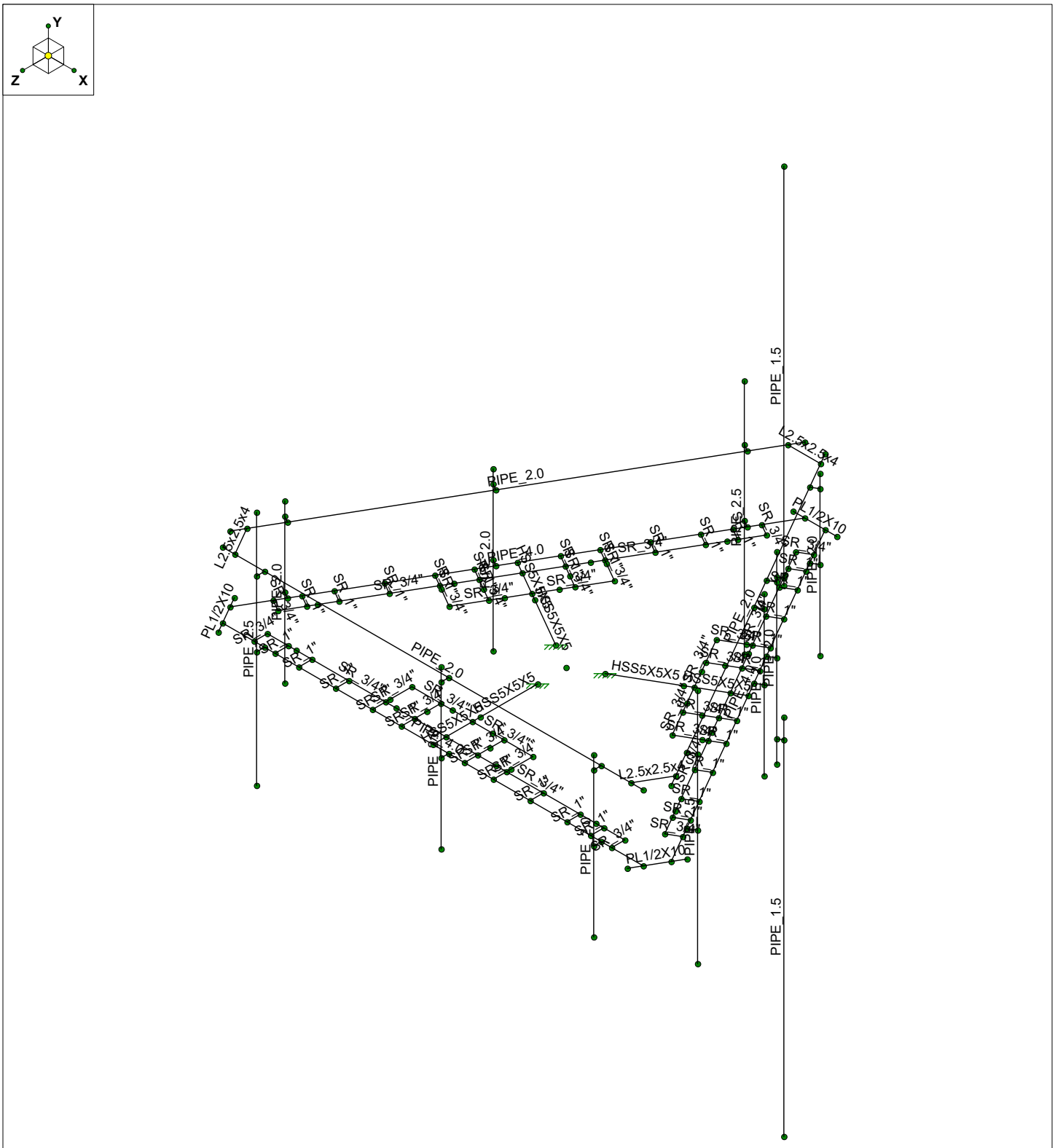

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APPENDIX B

SOFTWARE INPUT CALCULATIONS

PROJECT	**87581.024.01 - Newington_1, CT**				**PG**
SUBJECT	**Platform Mount Mount Analysis**				
DATE	**08/12/19**	PAGE	1	OF	6

B+T Group
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Tulsa, OK 74119
(918) 587-4630

INPUT

[REF: ANSI/TIA-222-H]

Tower Type		:	MP		
Tower Height		:	191.667	ft	
Mount Elevation		:	184	ft	
Antenna Elevation		:	181	ft	
Crest Height		:	0	ft	
Risk Category		:	II		[Table 2-1]
Exposure Category		:	B		[Sec. 2.6.5.1.2]
Topography Category		:	1		[Sec. 2.6.6.2]
Wind Velocity	V	:	125	mph	[Annex B]
Ice wind Velocity	V_i	:	50	mph	[Annex B]
Service Velocity	V_s	:	30	mph	[Annex B]
Base Ice thickness	t_i	:	2	in	[Annex B]
Ground Elevation	z_s	:	133.49	ft	[Sec. 2.6.8]

ANTENNAS

	Manufacturer	Model	Height (in)	Front Width (in)	Side Width (in)	Weight (lbs)	Shape	Quantity	Location (%)
Mount Pipe **M105**									
	ERICSSON	AIR -32 B2A/B66AA	56.60	12.90	8.70	132.20	Flat	0.5	10
	ERICSSON	AIR -32 B2A/B66AA	56.60	12.90	8.70	132.20	Flat	0.5	90
	ERICSSON	RADIO 4449 B12/B71	14.95	13.19	9.25	75.00	Flat	1	25
Mount Pipe **M1**									
	ERICSSON	KRY 112 144/1	3.00	7.00	6.00	11.00	Flat	1	75
	ERICSSON	KRY 112 489/2	3.94	11.00	6.10	15.40	Flat	1	40
Mount Pipe **M103**									
	RFS/CELWAVE	APX16DWV-16DWVS-E-A20	59.90	13.00	3.15	41.80	Flat	0.5	15
	RFS/CELWAVE	APX16DWV-16DWVS-E-A20	59.90	13.00	3.15	41.80	Flat	0.5	80
Mount Pipe **M101**									
	RFS/CELWAVE	APXVAARR24_43-U-NA20	95.90	24.00	8.70	128.00	Flat	0.5	10
	RFS/CELWAVE	APXVAARR24_43-U-NA20	95.90	24.00	8.70	128.00	Flat	0.5	85
	COMMSCOPE	ATBT-BOTTOM-24V	1.80	4.30	2.90	2.87	Flat	1	35
M107									
	RFS/CELWAVE	APXVAARR24_43-U-NA20	95.90	24.00	8.70	128.00	Flat	0.5	10
	RFS/CELWAVE	APXVAARR24_43-U-NA20	95.90	24.00	8.70	128.00	Flat	0.5	85
	COMMSCOPE	ATBT-BOTTOM-24V	1.80	4.30	2.90	2.87	Flat	1	35
M111									
	ERICSSON	AIR -32 B2A/B66AA	56.60	12.90	8.70	132.20	Flat	0.5	10
	ERICSSON	AIR -32 B2A/B66AA	56.60	12.90	8.70	132.20	Flat	0.5	90
	ERICSSON	RADIO 4449 B12/B71	14.95	13.19	9.25	75.00	Flat	1	25

PROJECT	**87581.024.01 - Newington_1, CT**			**PG**
SUBJECT	**Platform Mount Mount Analysis**			
DATE	**08/12/19**	PAGE 2	OF	6

B+T Group
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Mount Pipe **M3**

	ERICSSON	KRY 112 144/1	3.00	7.00	6.00	11.00	Flat	1	75
	ERICSSON	KRY 112 489/2	3.94	11.00	6.10	15.40	Flat	1	40

Mount Pipe **M115**

	RFS/CELWAVE	APX16DWV-16DWVS-E-A20	59.90	13.00	3.15	41.80	Flat	0.5	15
	RFS/CELWAVE	APX16DWV-16DWVS-E-A20	59.90	13.00	3.15	41.80	Flat	0.5	80

Mount Pipe **M109**

	RFS/CELWAVE	APX16DWV-16DWVS-E-A20	59.90	13.00	3.15	41.80	Flat	0.5	15
	RFS/CELWAVE	APX16DWV-16DWVS-E-A20	59.90	13.00	3.15	41.80	Flat	0.5	80

Mount Pipe **M113**

	RFS/CELWAVE	APXVAARR24_43-U-NA20	95.90	24.00	8.70	128.00	Flat	0.5	10
	RFS/CELWAVE	APXVAARR24_43-U-NA20	95.90	24.00	8.70	128.00	Flat	0.5	85
	COMMSCOPE	ATBT-BOTTOM-24V	1.80	4.30	2.90	2.87	Flat	1	35

Mount Pipe **M117**

	ERICSSON	AIR -32 B2A/B66AA	56.60	12.90	8.70	132.20	Flat	0.5	10
	ERICSSON	AIR -32 B2A/B66AA	56.60	12.90	8.70	132.20	Flat	0.5	90
	ERICSSON	RADIO 4449 B12/B71	14.95	13.19	9.25	75.00	Flat	1	25

Mount Pipe **M2**

	ERICSSON	KRY 112 144/1	3.00	7.00	6.00	11.00	Flat	1	75
	ERICSSON	KRY 112 489/2	3.94	11.00	6.10	15.40	Flat	1	40

Mount Pipe **M111A**

	Kathrein	OGB4-900D	48.00	2.00	2.00	10.00	Round	1	50

Mount Pipe **M112A**

	Kathrein	OGB4-900D	48.00	2.00	2.00	10.00	Round	1	50

Mount Pipe **M5**

	Andrew	DB589-A	165.80	2.00	2.00	11.50	Round	1	50

PROJECT	87581.024.01 - Newington_1, CT				PG
SUBJECT	Platform Mount Mount Analysis				
DATE	08/12/19	PAGE	3	OF	6

B+T Group
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INPUT

[REF: ANSI/TIA-222-H]

	Member Number	Section Set	Wind Projection (in)	Length (in)	Perimeter (in)	Shape	D_c (in)
	M1	MF-H1	4.50	192.00	14.14	Round	4.50
	M2	MF-H1	4.50	192.00	14.14	Round	4.50
	M3	MF-H1	4.50	192.00	14.14	Round	4.50
	M4	F1-S1	5.00	21.60	20.00	Flat	7.07
	M5	F1-S1	5.00	21.60	20.00	Flat	7.07
	M6	F1-S1	5.00	21.60	20.00	Flat	7.07
	M7	F1-C1	10.00	20.00	21.00	Flat	10.01
	M10	F1-SR1	1.00	6.00	3.14	Round	1.00
	M11	F1-SR1	1.00	6.00	3.14	Round	1.00
	M12	F1-SR1	1.00	6.00	3.14	Round	1.00
	M13	F1-SR1	1.00	6.00	3.14	Round	1.00
	M14	F1-SR1	1.00	6.00	3.14	Round	1.00
	M15	F1-SR2	0.75	6.00	2.36	Round	0.75
	M16	F1-SR2	0.75	81.60	2.36	Round	0.75
	M17	F1-SR1	1.00	6.00	3.14	Round	1.00
	M18	F1-SR1	1.00	6.00	3.14	Round	1.00
	M19	F1-SR1	1.00	6.00	3.14	Round	1.00
	M20	F1-SR1	1.00	6.00	3.14	Round	1.00
	M21	F1-SR1	1.00	6.00	3.14	Round	1.00
	M22	F1-SR2	0.75	6.00	2.36	Round	0.75
	M23	F1-SR2	0.75	81.60	2.36	Round	0.75
	M24	F1-SR2	0.75	12.00	2.36	Round	0.75
	M25	F1-SR2	0.75	27.60	2.36	Round	0.75
	M26	F1-SR2	0.75	12.00	2.36	Round	0.75
	M27	F1-SR2	0.75	27.60	2.36	Round	0.75
	M28	F1-SR2	0.75	12.00	2.36	Round	0.75
	M29	F1-SR2	0.75	12.00	2.36	Round	0.75
	M30	F1-SR1	1.00	6.00	3.14	Round	1.00
	M31	F1-SR1	1.00	6.00	3.14	Round	1.00
	M32	F1-SR1	1.00	6.00	3.14	Round	1.00
	M33	F1-SR1	1.00	6.00	3.14	Round	1.00
	M34	F1-SR1	1.00	6.00	3.14	Round	1.00
	M35	F1-SR2	0.75	6.00	2.36	Round	0.75
	M36	F1-SR2	0.75	81.60	2.36	Round	0.75
	M37	F1-SR1	1.00	6.00	3.14	Round	1.00
	M38	F1-SR1	1.00	6.00	3.14	Round	1.00
	M39	F1-SR1	1.00	6.00	3.14	Round	1.00
	M40	F1-SR1	1.00	6.00	3.14	Round	1.00
	M41	F1-SR1	1.00	6.00	3.14	Round	1.00
	M42	F1-SR2	0.75	6.00	2.36	Round	0.75
	M43	F1-SR2	0.75	81.60	2.36	Round	0.75
	M44	F1-SR2	0.75	12.00	2.36	Round	0.75
	M45	F1-SR2	0.75	27.60	2.36	Round	0.75
	M46	F1-SR2	0.75	12.00	2.36	Round	0.75
	M47	F1-SR2	0.75	27.60	2.36	Round	0.75
	M48	F1-SR2	0.75	12.00	2.36	Round	0.75
	M49	F1-SR2	0.75	12.00	2.36	Round	0.75
	M50	F1-SR1	1.00	6.00	3.14	Round	1.00
	M51	F1-SR1	1.00	6.00	3.14	Round	1.00
	M52	F1-SR1	1.00	6.00	3.14	Round	1.00
	M53	F1-SR1	1.00	6.00	3.14	Round	1.00
	M54	F1-SR1	1.00	6.00	3.14	Round	1.00

	M55	F1-SR2	0.75	6.00	2.36	Round	0.75
	M56	F1-SR2	0.75	81.60	2.36	Round	0.75
	M57	F1-SR1	1.00	6.00	3.14	Round	1.00
	M58	F1-SR1	1.00	6.00	3.14	Round	1.00
	M59	F1-SR1	1.00	6.00	3.14	Round	1.00
	M60	F1-SR1	1.00	6.00	3.14	Round	1.00
	M61	F1-SR1	1.00	6.00	3.14	Round	1.00
	M62	F1-SR2	0.75	6.00	2.36	Round	0.75
	M63	F1-SR2	0.75	81.60	2.36	Round	0.75
	M64	F1-SR2	0.75	12.00	2.36	Round	0.75
	M65	F1-SR2	0.75	27.60	2.36	Round	0.75
	M66	F1-SR2	0.75	12.00	2.36	Round	0.75
	M67	F1-SR2	0.75	27.60	2.36	Round	0.75
	M68	F1-SR2	0.75	12.00	2.36	Round	0.75
	M69	F1-SR2	0.75	12.00	2.36	Round	0.75
	M101	MF-P2	2.88	108.00	9.05	Round	2.88
	M103	MF-P1	2.38	72.00	7.48	Round	2.38
	M105	MF-P1	2.38	72.00	7.48	Round	2.38
	M107	MF-P2	2.88	108.00	9.05	Round	2.88
	M109	MF-P1	2.38	72.00	7.48	Round	2.38
	M111	MF-P1	2.38	72.00	7.48	Round	2.38
	M113	MF-P2	2.88	108.00	9.05	Round	2.88
	M115	MF-P1	2.38	72.00	7.48	Round	2.38
	M117	MF-P1	2.38	72.00	7.48	Round	2.38
	M119	MF-P1	2.38	84.00	7.48	Round	2.38
	M120	F1-S1	5.00	26.20	20.00	Flat	7.07
	M121	F1-S1	5.00	26.20	20.00	Flat	7.07
	M122	F1-S1	5.00	26.20	20.00	Flat	7.07
	M93	F1-C1	10.00	20.00	21.00	Flat	10.01
	M94	F1-C1	10.00	20.00	21.00	Flat	10.01
	M93A	Handrail	2.38	192.00	7.48	Round	2.38
	M97	Handrail	2.38	192.00	7.48	Round	2.38
	M101A	Handrail	2.38	192.00	7.48	Round	2.38
	M105A	F1-CA1	2.50	14.94	10.00	Flat	3.54
	M106A	F1-CA1	2.50	14.94	10.00	Flat	3.54
	M107A	F1-CA1	2.50	14.94	10.00	Flat	3.54
	M111A	Omni	1.90	165.80	5.97	Round	1.90
	M112A	Omni	1.90	165.80	5.97	Round	1.90

PROJECT	**87581.024.01 - Newington_1**				**PG**
SUBJECT	**Platform Mount Mount Analysis**				
DATE	**08/12/19**	PAGE	4	OF	6

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

Manufacturer	Model	Qty	Aspect Ratio	C_a flat/round	EPA_N*K_a (ft^2)	EPA_T*K_a (ft^2)	$EPA_{N\text{-}Ice}*K_a$ (ft^2)	$EPA_{T\text{-}Ice}*K_a$ (ft^2)	$F_{A\ No\ Ice\ (N)}$	$F_{A\ No\ Ice\ (T)}$	$F_{A\ Ice\ (N)}$	$F_{A\ Ice\ (T)}$
ERICSSON	AIR -32 B2A/B66AA	0.5	4.39	1.28	2.28	1.54	3.38	2.58	0.13	0.09	0.02	0.02
ERICSSON	AIR -32 B2A/B66AA	0.5	4.39	1.28	2.28	1.54	3.38	2.58	0.13	0.09	0.02	0.02
ERICSSON	RADIO 4449 B12/B71	1	1.13	1.20	1.23	0.86	2.21	1.72	0.07	0.05	0.01	0.01
ERICSSON	KRY 112 144/1	1	0.43	1.20	0.13	0.11	0.57	0.52	0.01	0.01	0.00	0.00
ERICSSON	KRY 112 489/2	1	0.36	1.20	0.27	0.15	0.86	0.59	0.01	0.01	0.00	0.00
RFS/CELWAVE	APX16DWV-16DWVS-E-A20	0.5	4.61	1.29	2.43	0.59	3.59	1.60	0.14	0.05	0.02	0.01
RFS/CELWAVE	APX16DWV-16DWVS-E-A20	0.5	4.61	1.29	2.43	0.59	3.59	1.60	0.14	0.05	0.02	0.01
RFS/CELWAVE	APXVAARR24_43-U-NA20	0.5	4.00	1.27	7.19	2.61	9.04	4.23	0.40	0.18	0.06	0.03
RFS/CELWAVE	APXVAARR24_43-U-NA20	0.5	4.00	1.27	7.19	2.61	9.04	4.23	0.40	0.18	0.06	0.03
COMMSCOPE	ATBT-BOTTOM-24V	1	0.42	1.20	0.05	0.03	0.37	0.31	0.00	0.00	0.00	0.00
RFS/CELWAVE	APXVAARR24_43-U-NA20	0.5	4.00	1.27	7.19	2.61	9.04	4.23	0.40	0.18	0.06	0.03
RFS/CELWAVE	APXVAARR24_43-U-NA20	0.5	4.00	1.27	7.19	2.61	9.04	4.23	0.40	0.18	0.06	0.03
COMMSCOPE	ATBT-BOTTOM-24V	1	0.42	1.20	0.05	0.03	0.37	0.31	0.00	0.00	0.00	0.00
ERICSSON	AIR -32 B2A/B66AA	0.5	4.39	1.28	2.28	1.54	3.38	2.58	0.13	0.09	0.02	0.02
ERICSSON	AIR -32 B2A/B66AA	0.5	4.39	1.28	2.28	1.54	3.38	2.58	0.13	0.09	0.02	0.02
ERICSSON	RADIO 4449 B12/B71	1	1.13	1.20	1.23	0.86	2.21	1.72	0.07	0.05	0.01	0.01

PROJECT	**87581.024.01 - Newington_1**				**PG**
SUBJECT	**Platform Mount Mount Analysis**				
DATE	**08/12/19**	PAGE	5	OF	6

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

Manufacturer	Model	Qty	Aspect Ratio	C_a flat/round	EPA_N*K_a (ft^2)	EPA_T*K_a (ft^2)	$EPA_{N\text{-}Ice}*K_a$ (ft^2)	$EPA_{T\text{-}Ice}*K_a$ (ft^2)	$F_{A\ No\ Ice\ (N)}$	$F_{A\ No\ Ice\ (T)}$	$F_{A\ Ice\ (N)}$	$F_{A\ Ice\ (T)}$
ERICSSON	KRY 112 144/1	1	0.43	1.20	0.13	0.11	0.57	0.52	0.00	0.01	0.00	0.00
ERICSSON	KRY 112 489/2	1	0.36	1.20	0.27	0.15	0.86	0.59	0.00	0.01	0.00	0.00
RFS/CELWAVE	APX16DWV-16DWVS-E-A20	0.5	4.61	1.29	2.43	0.59	3.59	1.60	0.00	0.05	0.02	0.01
RFS/CELWAVE	APX16DWV-16DWVS-E-A20	0.5	4.61	1.29	2.43	0.59	3.59	1.60	0.00	0.05	0.02	0.01
RFS/CELWAVE	APX16DWV-16DWVS-E-A20	0.5	4.61	1.29	2.43	0.59	3.59	1.60	0.00	0.05	0.02	0.01
RFS/CELWAVE	APX16DWV-16DWVS-E-A20	0.5	4.61	1.29	2.43	0.59	3.59	1.60	0.00	0.05	0.02	0.01
RFS/CELWAVE	APXVAARR24_43-U-NA20	0.5	4.00	1.27	7.19	2.61	9.04	4.23	0.00	0.18	0.06	0.03
RFS/CELWAVE	APXVAARR24_43-U-NA20	0.5	4.00	1.27	7.19	2.61	9.04	4.23	0.00	0.18	0.06	0.03
COMMSCOPE	ATBT-BOTTOM-24V	1	0.42	1.20	0.05	0.03	0.37	0.31	0.00	0.00	0.00	0.00
ERICSSON	AIR -32 B2A/B66AA	0.5	4.39	1.28	2.28	1.54	3.38	2.58	0.00	0.09	0.02	0.02
ERICSSON	AIR -32 B2A/B66AA	0.5	4.39	1.28	2.28	1.54	3.38	2.58	0.00	0.09	0.02	0.02
ERICSSON	RADIO 4449 B12/B71	1	1.13	1.20	1.23	0.86	2.21	1.72	0.00	0.05	0.01	0.01
ERICSSON	KRY 112 144/1	1	0.43	1.20	0.13	0.11	0.57	0.52	0.00	0.01	0.00	0.00
ERICSSON	KRY 112 489/2	1	0.36	1.20	0.27	0.15	0.86	0.59	0.00	0.01	0.00	0.00

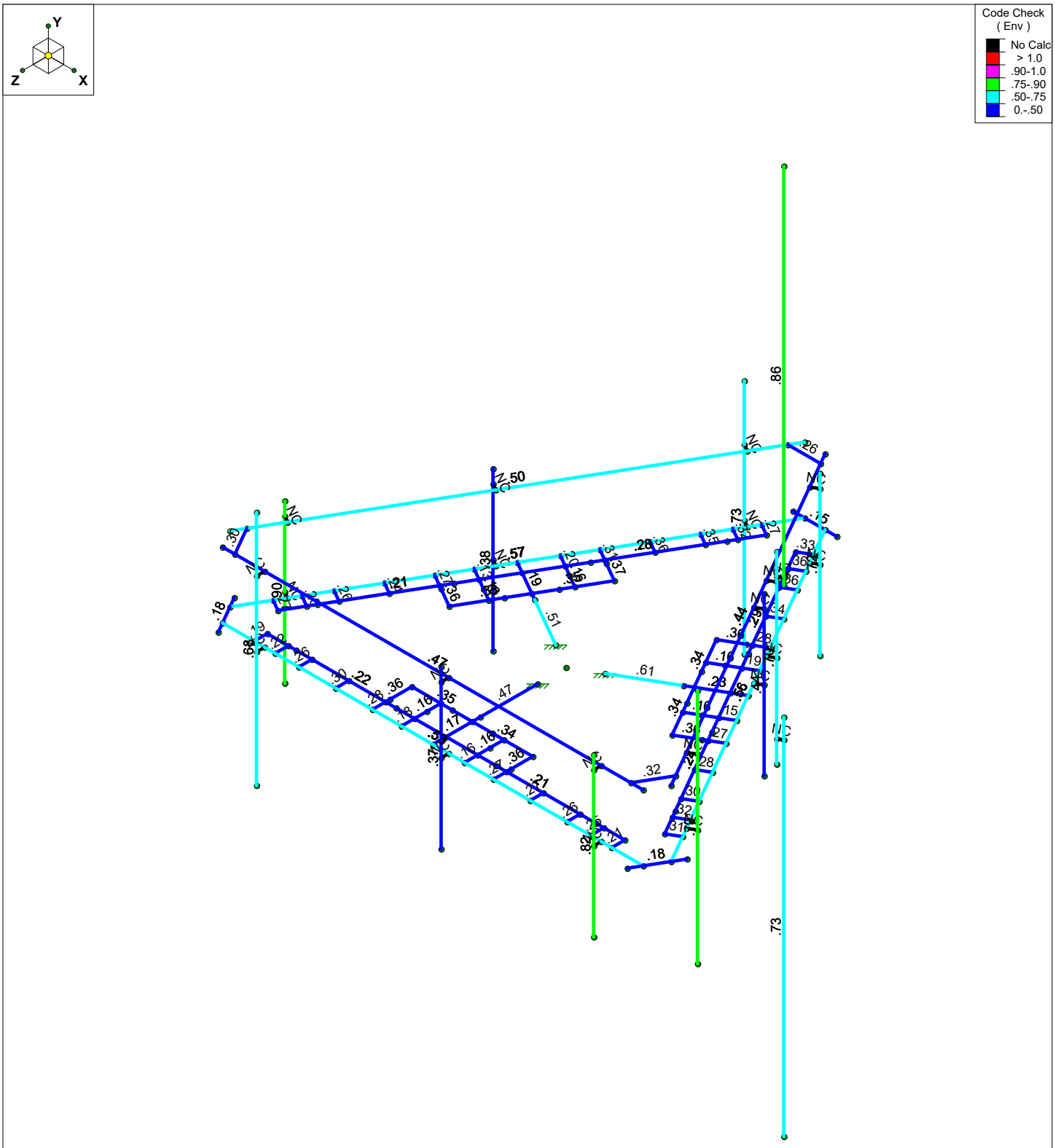
PROJECT	**87581.024.01 - Newington_1**				**PG**
SUBJECT	**Platform Mount Mount Analysis**				
DATE	**08/12/19**	PAGE	6	OF	6

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

Manufacturer	Model	Qty	Aspect Ratio	C_a flat/round	EPA_N*K_a (ft^2)	EPA_T*K_a (ft^2)	$EPA_{N\text{-}Ice}*K_a$ (ft^2)	$EPA_{T\text{-}Ice}*K_a$ (ft^2)	$F_{A\ No\ Ice\ (N)}$	$F_{A\ No\ Ice\ (T)}$	$F_{A\ Ice\ (N)}$	$F_{A\ Ice\ (T)}$
Kathrein	OGB4-900D	1	24.00	1.18	0.60	0.60	2.23	2.23	0.03	0.03	0.01	0.01
Kathrein	OGB4-900D	1	24.00	1.18	0.60	0.60	2.23	2.23	0.03	0.03	0.01	0.01
Andrew	DB589-A	1	82.90	1.20	2.07	2.07	7.20	7.20	0.11	0.11	0.02	0.02

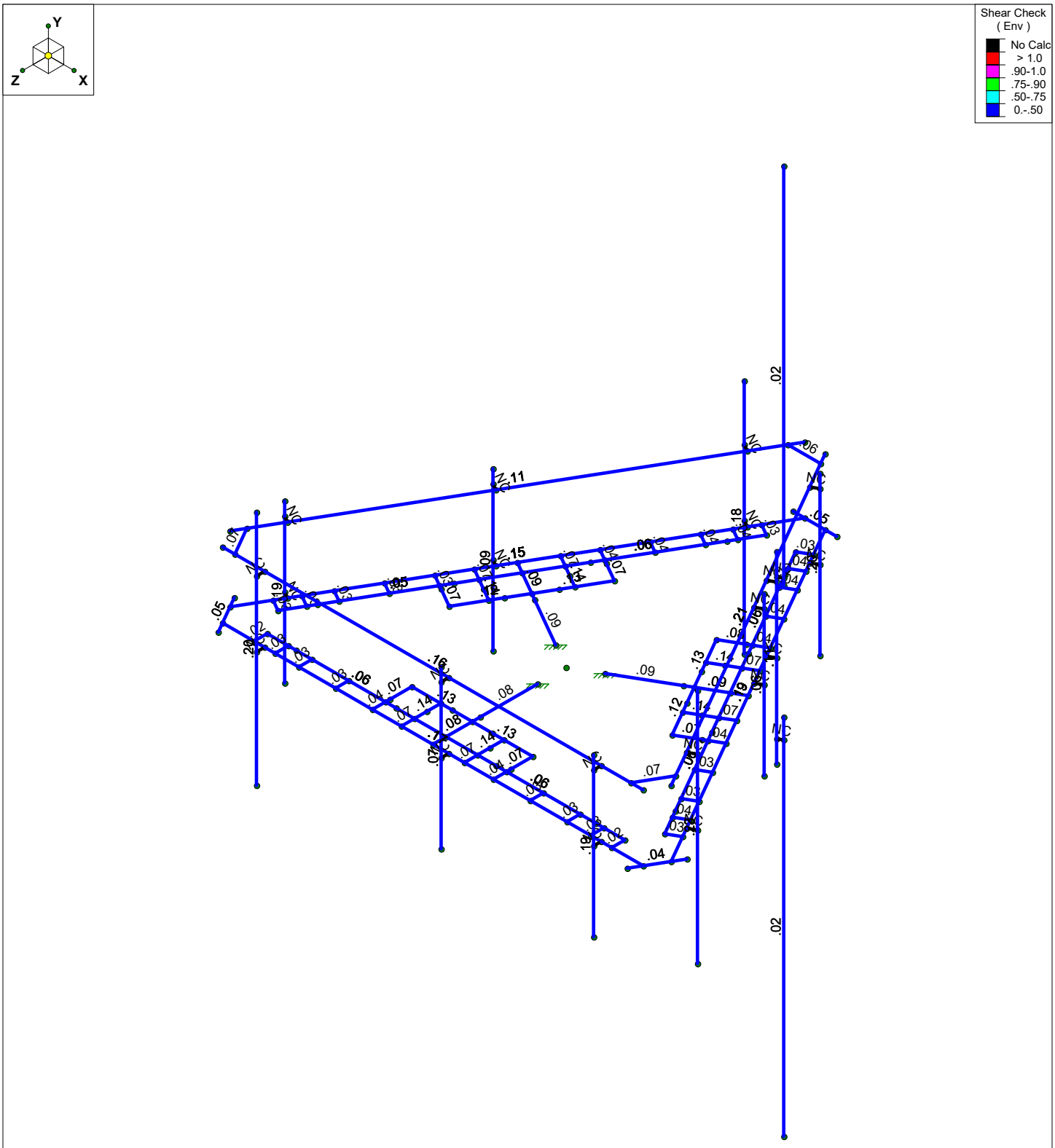
APPENDIX C

SOFTWARE ANALYSIS OUTPUT



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

B+T Group	826217 - Newington_1	SK - 5
PG		Aug 12, 2019 at 10:39 AM
87581.024.01		87581_024_01_Newington_1_CT....



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

B+T Group	826217 - Newington_1	SK - 6
PG		Aug 12, 2019 at 10:39 AM
87581.024.01		87581_024_01_Newington_1_CT....

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rul...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	MF-H1	PIPE_4.0	Beam	Pipe	A53 Gr.B	Typical	2.96	6.82	6.82	13.6
2	F1-S1	HSS5X5X5	Beam	Tube	A500 Gr.B ...	Typical	5.26	19	19	31.2
3	F1-C1	PL1/2X10	Beam	RECT	A36 Gr.36	Typical	5	.104	41.667	.404
4	F1-SR1	SR_1"	Beam	BAR	A36 Gr.36	Typical	.785	.049	.049	.098
5	F1-SR2	SR_3/4"	Beam	BAR	A36 Gr.36	Typical	.442	.016	.016	.031
6	MF-P1	PIPE_2.0	Column	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
7	F1-CA1	L2.5x2.5x4	Beam	Single Angle	A36 Gr.36	Typical	1.19	.692	.692	.026
8	Handrail	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
9	Omni	PIPE_1.5	Column	Pipe	A53 Gr.B	Typical	.749	.293	.293	.586
10	MF-P2	PIPE_2.5	Column	Pipe	A53 Gr.B	Typical	1.61	1.45	1.45	2.89

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N2	N3			MF-H1	Beam	Pipe	A53 Gr.B	Typical
2	M2	N4	N5			MF-H1	Beam	Pipe	A53 Gr.B	Typical
3	M3	N6	N7			MF-H1	Beam	Pipe	A53 Gr.B	Typical
4	M4	N184	N8			F1-S1	Beam	Tube	A500 Gr.B...	Typical
5	M5	N186	N9			F1-S1	Beam	Tube	A500 Gr.B...	Typical
6	M6	N188	N10			F1-S1	Beam	Tube	A500 Gr.B...	Typical
7	M7	N11	N12			F1-C1	Beam	RECT	A36 Gr.36	Typical
8	M10	N17	N38			F1-SR1	Beam	BAR	A36 Gr.36	Typical
9	M11	N18	N43			F1-SR1	Beam	BAR	A36 Gr.36	Typical
10	M12	N19	N20			F1-SR1	Beam	BAR	A36 Gr.36	Typical
11	M13	N21	N22			F1-SR1	Beam	BAR	A36 Gr.36	Typical
12	M14	N23	N24			F1-SR1	Beam	BAR	A36 Gr.36	Typical
13	M15	N25	N26			F1-SR2	Beam	BAR	A36 Gr.36	Typical
14	M16	N36	N26			F1-SR2	Beam	BAR	A36 Gr.36	Typical
15	M17	N27	N40			F1-SR1	Beam	BAR	A36 Gr.36	Typical
16	M18	N28	N45			F1-SR1	Beam	BAR	A36 Gr.36	Typical
17	M19	N29	N30			F1-SR1	Beam	BAR	A36 Gr.36	Typical
18	M20	N31	N32			F1-SR1	Beam	BAR	A36 Gr.36	Typical
19	M21	N33	N34			F1-SR1	Beam	BAR	A36 Gr.36	Typical
20	M22	N35	N37			F1-SR2	Beam	BAR	A36 Gr.36	Typical
21	M23	N36	N37			F1-SR2	Beam	BAR	A36 Gr.36	Typical
22	M24	N38	N39			F1-SR2	Beam	BAR	A36 Gr.36	Typical
23	M25	N44	N42			F1-SR2	Beam	BAR	A36 Gr.36	Typical
24	M26	N40	N41			F1-SR2	Beam	BAR	A36 Gr.36	Typical
25	M27	N46	N42			F1-SR2	Beam	BAR	A36 Gr.36	Typical
26	M28	N43	N44			F1-SR2	Beam	BAR	A36 Gr.36	Typical
27	M29	N45	N46			F1-SR2	Beam	BAR	A36 Gr.36	Typical
28	M30	N47	N68			F1-SR1	Beam	BAR	A36 Gr.36	Typical
29	M31	N48	N73			F1-SR1	Beam	BAR	A36 Gr.36	Typical
30	M32	N49	N50			F1-SR1	Beam	BAR	A36 Gr.36	Typical
31	M33	N51	N52			F1-SR1	Beam	BAR	A36 Gr.36	Typical
32	M34	N53	N54			F1-SR1	Beam	BAR	A36 Gr.36	Typical
33	M35	N55	N56			F1-SR2	Beam	BAR	A36 Gr.36	Typical
34	M36	N66	N56			F1-SR2	Beam	BAR	A36 Gr.36	Typical
35	M37	N57	N70			F1-SR1	Beam	BAR	A36 Gr.36	Typical
36	M38	N58	N75			F1-SR1	Beam	BAR	A36 Gr.36	Typical
37	M39	N59	N60			F1-SR1	Beam	BAR	A36 Gr.36	Typical
38	M40	N61	N62			F1-SR1	Beam	BAR	A36 Gr.36	Typical
39	M41	N63	N64			F1-SR1	Beam	BAR	A36 Gr.36	Typical
40	M42	N65	N67			F1-SR2	Beam	BAR	A36 Gr.36	Typical
41	M43	N66	N67			F1-SR2	Beam	BAR	A36 Gr.36	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
42	M44	N68	N69			F1-SR2	Beam	BAR	A36 Gr.36	Typical
43	M45	N74	N72			F1-SR2	Beam	BAR	A36 Gr.36	Typical
44	M46	N70	N71			F1-SR2	Beam	BAR	A36 Gr.36	Typical
45	M47	N76	N72			F1-SR2	Beam	BAR	A36 Gr.36	Typical
46	M48	N73	N74			F1-SR2	Beam	BAR	A36 Gr.36	Typical
47	M49	N75	N76			F1-SR2	Beam	BAR	A36 Gr.36	Typical
48	M50	N77	N98			F1-SR1	Beam	BAR	A36 Gr.36	Typical
49	M51	N78	N103			F1-SR1	Beam	BAR	A36 Gr.36	Typical
50	M52	N79	N80			F1-SR1	Beam	BAR	A36 Gr.36	Typical
51	M53	N81	N82			F1-SR1	Beam	BAR	A36 Gr.36	Typical
52	M54	N83	N84			F1-SR1	Beam	BAR	A36 Gr.36	Typical
53	M55	N85	N86			F1-SR2	Beam	BAR	A36 Gr.36	Typical
54	M56	N96	N86			F1-SR2	Beam	BAR	A36 Gr.36	Typical
55	M57	N87	N100			F1-SR1	Beam	BAR	A36 Gr.36	Typical
56	M58	N88	N105			F1-SR1	Beam	BAR	A36 Gr.36	Typical
57	M59	N89	N90			F1-SR1	Beam	BAR	A36 Gr.36	Typical
58	M60	N91	N92			F1-SR1	Beam	BAR	A36 Gr.36	Typical
59	M61	N93	N94			F1-SR1	Beam	BAR	A36 Gr.36	Typical
60	M62	N95	N97			F1-SR2	Beam	BAR	A36 Gr.36	Typical
61	M63	N96	N97			F1-SR2	Beam	BAR	A36 Gr.36	Typical
62	M64	N98	N99			F1-SR2	Beam	BAR	A36 Gr.36	Typical
63	M65	N104	N102			F1-SR2	Beam	BAR	A36 Gr.36	Typical
64	M66	N100	N101			F1-SR2	Beam	BAR	A36 Gr.36	Typical
65	M67	N106	N102			F1-SR2	Beam	BAR	A36 Gr.36	Typical
66	M68	N103	N104			F1-SR2	Beam	BAR	A36 Gr.36	Typical
67	M69	N105	N106			F1-SR2	Beam	BAR	A36 Gr.36	Typical
68	M100	N143	N144			RIGID	None	None	RIGID	Typical
69	M101	N145	N146			MF-P2	Column	Pipe	A53 Gr.B	Typical
70	M102	N147	N148			RIGID	None	None	RIGID	Typical
71	M103	N149	N150			MF-P1	Column	Pipe	A53 Gr.B	Typical
72	M104	N151	N152			RIGID	None	None	RIGID	Typical
73	M105	N153	N154			MF-P1	Column	Pipe	A53 Gr.B	Typical
74	M106	N155	N156			RIGID	None	None	RIGID	Typical
75	M107	N157	N158			MF-P2	Column	Pipe	A53 Gr.B	Typical
76	M108	N159	N160			RIGID	None	None	RIGID	Typical
77	M109	N161	N162			MF-P1	Column	Pipe	A53 Gr.B	Typical
78	M110	N163	N164			RIGID	None	None	RIGID	Typical
79	M111	N165	N166			MF-P1	Column	Pipe	A53 Gr.B	Typical
80	M112	N167	N168			RIGID	None	None	RIGID	Typical
81	M113	N169	N170			MF-P2	Column	Pipe	A53 Gr.B	Typical
82	M114	N171	N172			RIGID	None	None	RIGID	Typical
83	M115	N173	N174			MF-P1	Column	Pipe	A53 Gr.B	Typical
84	M116	N175	N176			RIGID	None	None	RIGID	Typical
85	M117	N177	N178			MF-P1	Column	Pipe	A53 Gr.B	Typical
86	M118	N179	N180			RIGID	None	None	RIGID	Typical
87	M119	N181	N182			MF-P1	Column	Pipe	A53 Gr.B	Typical
88	M120	N183	N184			F1-S1	Beam	Tube	A500 Gr.B...	Typical
89	M121	N185	N186			F1-S1	Beam	Tube	A500 Gr.B...	Typical
90	M122	N187	N188			F1-S1	Beam	Tube	A500 Gr.B...	Typical
91	M93	N183A	N184A			F1-C1	Beam	RECT	A36 Gr.36	Typical
92	M94	N185A	N186A			F1-C1	Beam	RECT	A36 Gr.36	Typical
93	M93A	N183B	N184B			Handrail	Beam	Pipe	A53 Gr.B	Typical
94	M94A	N185B	N186B			RIGID	None	None	RIGID	Typical
95	M95	N187A	N188A			RIGID	None	None	RIGID	Typical
96	M96	N189A	N190A			RIGID	None	None	RIGID	Typical
97	M97	N191A	N192A			Handrail	Beam	Pipe	A53 Gr.B	Typical
98	M98	N193A	N194A			RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
99	M99	N195A	N196A			RIGID	None	None	RIGID	Typical
100	M100A	N197A	N198A			RIGID	None	None	RIGID	Typical
101	M101A	N199A	N200A			Handrail	Beam	Pipe	A53 Gr.B	Typical
102	M102A	N201A	N202A			RIGID	None	None	RIGID	Typical
103	M103A	N203A	N204A			RIGID	None	None	RIGID	Typical
104	M104A	N205A	N206A			RIGID	None	None	RIGID	Typical
105	M105A	N207	N212		90	F1-CA1	Beam	Single Angle	A36 Gr.36	Typical
106	M106A	N211	N210		90	F1-CA1	Beam	Single Angle	A36 Gr.36	Typical
107	M107A	N209	N208		90	F1-CA1	Beam	Single Angle	A36 Gr.36	Typical
108	M108A	N213	N214			RIGID	None	None	RIGID	Typical
109	M109A	N217	N215			RIGID	None	None	RIGID	Typical
110	M110A	N218	N216			RIGID	None	None	RIGID	Typical
111	M111A	N219	N220			Omni	Column	Pipe	A53 Gr.B	Typical
112	M112A	N221	N223			Omni	Column	Pipe	A53 Gr.B	Typical

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	N1	0	0	0	0	
2	N2	-8	0	5.066667	0	
3	N3	8	0	5.066667	0	
4	N4	8.387862	0	4.39487	0	
5	N5	0.387862	0	-9.461537	0	
6	N6	-0.387862	0	-9.461537	0	
7	N7	-8.387862	0	4.39487	0	
8	N8	0	0	5.066667	0	
9	N9	4.387862	0	-2.533333	0	
10	N10	-4.387862	0	-2.533333	0	
11	N11	-0.833267	0	-9.461537	0	
12	N12	0.833667	0	-9.461537	0	
13	N17	-1.2	0	5.066667	0	
14	N18	-2.3	0	5.066667	0	
15	N19	-3.7	0	5.066667	0	
16	N20	-3.7	0	4.566667	0	
17	N21	-5.1	0	5.066667	0	
18	N22	-5.1	0	4.566667	0	
19	N23	-6	0	5.066667	0	
20	N24	-6	0	4.566667	0	
21	N25	-6.8	0	5.066667	0	
22	N26	-6.8	0	4.566667	0	
23	N27	1.2	0	5.066667	0	
24	N28	2.3	0	5.066667	0	
25	N29	3.7	0	5.066667	0	
26	N30	3.7	0	4.566667	0	
27	N31	5.1	0	5.066667	0	
28	N32	5.1	0	4.566667	0	
29	N33	6	0	5.066667	0	
30	N34	6	0	4.566667	0	
31	N35	6.8	0	5.066667	0	
32	N36	0	0	4.566667	0	
33	N37	6.8	0	4.566667	0	
34	N38	-1.2	0	4.566667	0	
35	N39	-1.2	0	3.566667	0	
36	N40	1.2	0	4.566667	0	
37	N41	1.2	0	3.566667	0	
38	N42	0	0	3.566667	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
39	N43	-2.3	0	4.566667	0	
40	N44	-2.3	0	3.566667	0	
41	N45	2.3	0	4.566667	0	
42	N46	2.3	0	3.566667	0	
43	N47	4.987862	0	-1.494103	0	
44	N48	5.537862	0	-0.541475	0	
45	N49	6.237862	0	0.670961	0	
46	N50	5.804849	0	0.920961	0	
47	N51	6.937862	0	1.883396	0	
48	N52	6.504849	0	2.133396	0	
49	N53	7.387862	0	2.662819	0	
50	N54	6.954849	0	2.912819	0	
51	N55	7.787862	0	3.355639	0	
52	N56	7.354849	0	3.605639	0	
53	N57	3.787862	0	-3.572564	0	
54	N58	3.237862	0	-4.525192	0	
55	N59	2.537862	0	-5.737627	0	
56	N60	2.104849	0	-5.487627	0	
57	N61	1.837862	0	-6.950063	0	
58	N62	1.404849	0	-6.700063	0	
59	N63	1.387862	0	-7.729486	0	
60	N64	0.954849	0	-7.479486	0	
61	N65	0.987862	0	-8.422306	0	
62	N66	3.954849	0	-2.283333	0	
63	N67	0.554849	0	-8.172306	0	
64	N68	4.554849	0	-1.244103	0	
65	N69	3.688824	0	-0.744103	0	
66	N70	3.354849	0	-3.322564	0	
67	N71	2.488824	0	-2.822564	0	
68	N72	3.088824	0	-1.783333	0	
69	N73	5.104849	0	-0.291475	0	
70	N74	4.238824	0	0.208525	0	
71	N75	2.804849	0	-4.275192	0	
72	N76	1.938824	0	-3.775192	0	
73	N77	-3.787862	0	-3.572564	0	
74	N78	-3.237862	0	-4.525192	0	
75	N79	-2.537862	0	-5.737627	0	
76	N80	-2.104849	0	-5.487627	0	
77	N81	-1.837862	0	-6.950063	0	
78	N82	-1.404849	0	-6.700063	0	
79	N83	-1.387862	0	-7.729486	0	
80	N84	-0.954849	0	-7.479486	0	
81	N85	-0.987862	0	-8.422306	0	
82	N86	-0.554849	0	-8.172306	0	
83	N87	-4.987862	0	-1.494103	0	
84	N88	-5.537862	0	-0.541475	0	
85	N89	-6.237862	0	0.670961	0	
86	N90	-5.804849	0	0.920961	0	
87	N91	-6.937862	0	1.883396	0	
88	N92	-6.504849	0	2.133396	0	
89	N93	-7.387862	0	2.662819	0	
90	N94	-6.954849	0	2.912819	0	
91	N95	-7.787862	0	3.355639	0	
92	N96	-3.954849	0	-2.283333	0	
93	N97	-7.354849	0	3.605639	0	
94	N98	-3.354849	0	-3.322564	0	
95	N99	-2.488824	0	-2.822564	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
96	N100	-4.554849	0	-1.244103	0	
97	N101	-3.688824	0	-0.744103	0	
98	N102	-3.088824	0	-1.783333	0	
99	N103	-2.804849	0	-4.275192	0	
100	N104	-1.938824	0	-3.775192	0	
101	N105	-5.104849	0	-0.291475	0	
102	N106	-4.238824	0	0.208525	0	
103	N107	1.104849	0	-7.219678	0	
104	N108	-1.104849	0	-7.219678	0	
105	N110	3.004849	6e-16	-3.928782	0	
106	N113	-3.004849	6e-16	-3.928782	0	
107	N119	-6.804849	0	2.653011	0	
108	N120	-5.7	0	4.566667	0	
109	N122	-4.904849	6e-16	-0.637885	0	
110	N125	-1.9	6e-16	4.566667	0	
111	N131	5.7	0	4.566667	0	
112	N132	6.804849	0	2.653011	0	
113	N134	1.9	6e-16	4.566667	0	
114	N137	4.904849	6e-16	-0.637885	0	
115	N143	-6.4	0	5.066667	0	
116	N144	-6.4	0	5.374167	0	
117	N145	-6.4	4.6	5.374167	0	
118	N146	-6.4	-4.4	5.374167	0	
119	N147	.6	0	5.066667	0	
120	N148	.6	0	5.353333	0	
121	N149	.6	3	5.353333	0	
122	N150	.6	-3	5.353333	0	
123	N151	6.4	0	5.066667	0	
124	N152	6.4	0	5.353333	0	
125	N153	6.4	3	5.353333	0	
126	N154	6.4	-3	5.353333	0	
127	N155	7.587862	0	3.009229	0	
128	N156	7.854165	0	2.855479	0	
129	N157	7.854165	4.6	2.855479	0	
130	N158	7.854165	-4.4	2.855479	0	
131	N159	4.087862	0	-3.052949	0	
132	N160	4.336123	0	-3.196282	0	
133	N161	4.336123	3	-3.196282	0	
134	N162	4.336123	-3	-3.196282	0	
135	N163	1.187862	0	-8.075896	0	
136	N164	1.436123	0	-8.219229	0	
137	N165	1.436123	3	-8.219229	0	
138	N166	1.436123	-3	-8.219229	0	
139	N167	-1.187862	0	-8.075896	0	
140	N168	-1.454165	0	-8.229646	0	
141	N169	-1.454165	4.6	-8.229646	0	
142	N170	-1.454165	-4.4	-8.229646	0	
143	N171	-4.687862	0	-2.013718	0	
144	N172	-4.936123	0	-2.157051	0	
145	N173	-4.936123	3	-2.157051	0	
146	N174	-4.936123	-3	-2.157051	0	
147	N175	-7.587862	0	3.009229	0	
148	N176	-7.836123	0	2.865896	0	
149	N177	-7.836123	3	2.865896	0	
150	N178	-7.836123	-3	2.865896	0	
151	N179	3.437862	0	-4.178782	0	
152	N180	3.686123	0	-4.322115	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
153	N181	3.686123	3.5	-4.322115	0	
154	N182	3.686123	-3.5	-4.322115	0	
155	N183	0	0	1.083333	0	
156	N184	0	0	3.266667	0	
157	N185	0.938194	0	-0.541667	0	
158	N186	2.829016	0	-1.633333	0	
159	N187	-0.938194	0	-0.541667	0	
160	N188	-2.829016	0	-1.633333	0	
161	N189	-1.2	0	4.097298	0	
162	N190	-0.761754	0	3.566667	0	
163	N191	1.2	0	4.097298	0	
164	N192	0.761754	0	3.566667	0	
165	N193	-2.3	0	4.4	0	
166	N194	2.3	0	4.4	0	
167	N195	4.148364	0	-1.009419	0	
168	N196	3.469701	0	-1.123635	0	
169	N197	2.948364	0	-3.08788	0	
170	N198	2.707947	0	-2.443032	0	
171	N199	4.960512	0	-0.208142	0	
172	N200	2.660512	0	-4.191858	0	
173	N201	-2.948364	0	-3.08788	0	
174	N202	-2.707947	0	-2.443032	0	
175	N203	-4.148364	0	-1.009419	0	
176	N204	-3.469701	0	-1.123635	0	
177	N205	-2.660512	0	-4.191858	0	
178	N206	-4.960512	0	-0.208142	0	
179	N183A	-7.777298	0	5.452398	0	
180	N184A	-8.610764	0	4.008792	0	
181	N185A	8.610564	0	4.009138	0	
182	N186A	7.777098	0	5.452745	0	
183	N183B	-8	2.5	5.066667	0	
184	N184B	8	2.5	5.066667	0	
185	N185B	-6.4	2.5	5.066667	0	
186	N186B	-6.4	2.5	5.374167	0	
187	N187A	.6	2.5	5.066667	0	
188	N188A	.6	2.5	5.353333	0	
189	N189A	6.4	2.5	5.066667	0	
190	N190A	6.4	2.5	5.353333	0	
191	N191A	8.387862	2.5	4.39487	0	
192	N192A	0.387862	2.5	-9.461537	0	
193	N193A	7.587862	2.5	3.009229	0	
194	N194A	7.854165	2.5	2.855479	0	
195	N195A	4.087862	2.5	-3.052949	0	
196	N196A	4.336123	2.5	-3.196282	0	
197	N197A	1.187862	2.5	-8.075896	0	
198	N198A	1.436123	2.5	-8.219229	0	
199	N199A	-0.387862	2.5	-9.461537	0	
200	N200A	-8.387862	2.5	4.39487	0	
201	N201A	-1.187862	2.5	-8.075896	0	
202	N202A	-1.454165	2.5	-8.229646	0	
203	N203A	-4.687862	2.5	-2.013718	0	
204	N204A	-4.936123	2.5	-2.157051	0	
205	N205A	-7.587862	2.5	3.009229	0	
206	N206A	-7.836123	2.5	2.865896	0	
207	N207	-7.530724	2.5	5.066667	0	
208	N208	7.530724	2.5	5.066667	0	
209	N209	8.153224	2.5	3.988465	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
210	N210	0.6225	2.5	-9.055132	0	
211	N211	-0.6225	2.5	-9.055132	0	
212	N212	-8.153224	2.5	3.988465	0	
213	N213	3.437862	2.5	-4.178782	0	
214	N214	3.686123	2.5	-4.322115	0	
215	N215	3.686123	2.667	-4.322115	0	
216	N216	3.686123	-2.6667	-4.322115	0	
217	N217	3.857596	2.667	-4.421115	0	
218	N218	3.857596	-2.6667	-4.421115	0	
219	N219	3.857596	16.234	-4.421115	0	
220	N220	3.857596	2.417	-4.421115	0	
221	N221	3.857596	-1.9167	-4.421115	0	
222	N223	3.857596	-15.733367	-4.421115	0	

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
1	Dead	DL		-1			75		9	
2	0 Wind - No Ice	WLZ					75	90		
3	90 Wind - No Ice	WLX					75	90		
4	0 Wind - Ice	WLZ					75	90		
5	90 Wind - Ice	WLX					75	90		
6	0 Wind - Service	WLZ					75	90		
7	90 Wind - Service	WLX					75	90		
8	Ice	OL1					75	90	9	
9	Live Load a	LL				1				
10	Live Load b	LL				1				
11	Live Load c	LL				1				
12	Live Load d	LL								
13	Maint LL 1	LL					1			
14	Maint LL 2	LL					1			
15	Maint LL 3	LL					1			
16	Maint LL 4	LL					1			
17	Maint LL 5	LL					1			
18	Maint LL 6	LL					1			
19	Maint LL 7	LL					1			
20	Maint LL 8	LL					1			
21	Maint LL 9	LL					1			
22	Maint LL 10	LL					1			
23	Maint LL 11	LL					1			
24	Maint LL 12	LL					1			
25	Maint LL 13	LL					1			
26	Maint LL 14	LL					1			
27	Maint LL 15	LL					1			
28	BLC 1 Transient Area...	None						166		
29	BLC 8 Transient Area...	None						166		

Load Combinations

	Description	S...	P...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
1	1.4 Dead	Yes	Y		1	1.4																				
2	1.2 D + 1.0 - 0 W	Yes	Y		1	1.2	2	1																		
3	1.2 D + 1.0 - 30 W	Yes	Y		1	1.2	2	.866	3	.5																
4	1.2 D + 1.0 - 60 W	Yes	Y		1	1.2	3	.866	2	.5																
5	1.2 D + 1.0 - 90 W	Yes	Y		1	1.2	3	1																		
6	1.2 D + 1.0 - 120 W	Yes	Y		1	1.2	3	.866	2	-.5																

Load Combinations (Continued)

	Description	S...	P...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
7	1.2 D + 1.0 - 150 W	Yes	Y		1	1.2	2	-.866	3	.5																
8	1.2 D + 1.0 - 180 W	Yes	Y		1	1.2	2	-1																		
9	1.2 D + 1.0 - 210 W	Yes	Y		1	1.2	2	-.866	3	-.5																
10	1.2 D + 1.0 - 240 W	Yes	Y		1	1.2	3	-.866	2	-.5																
11	1.2 D + 1.0 - 270 W	Yes	Y		1	1.2	3	-1																		
12	1.2 D + 1.0 - 300 W	Yes	Y		1	1.2	3	-.866	2	.5																
13	1.2 D + 1.0 - 330 W	Yes	Y		1	1.2	2	.866	3	-.5																
14	1.2 D + 1.0 - 0 W/Ice	Yes	Y		1	1.2	4	1			8	1														
15	1.2 D + 1.0 - 30 W/Ice	Yes	Y		1	1.2	4	.866	5	.5	8	1														
16	1.2 D + 1.0 - 60 W/Ice	Yes	Y		1	1.2	5	.866	4	.5	8	1														
17	1.2 D + 1.0 - 90 W/Ice	Yes	Y		1	1.2	5	1			8	1														
18	1.2 D + 1.0 - 120 W/Ice	Yes	Y		1	1.2	5	.866	4	-.5	8	1														
19	1.2 D + 1.0 - 150 W/Ice	Yes	Y		1	1.2	4	-.866	5	.5	8	1														
20	1.2 D + 1.0 - 180 W/Ice	Yes	Y		1	1.2	4	-1			8	1														
21	1.2 D + 1.0 - 210 W/Ice	Yes	Y		1	1.2	4	-.866	5	-.5	8	1														
22	1.2 D + 1.0 - 240 W/Ice	Yes	Y		1	1.2	5	-.866	4	-.5	8	1														
23	1.2 D + 1.0 - 270 W/Ice	Yes	Y		1	1.2	5	-1			8	1														
24	1.2 D + 1.0 - 300 W/Ice	Yes	Y		1	1.2	5	-.866	4	.5	8	1														
25	1.2 D + 1.0 - 330 W/Ice	Yes	Y		1	1.2	4	.866	5	-.5	8	1														
26	1.2 D + 1.5 LL a + Service ...	Yes	Y		1	1.2	6	1			9	1.5														
27	1.2 D + 1.5 LL a + Service ...	Yes	Y		1	1.2	6	.866	7	.5	9	1.5														
28	1.2 D + 1.5 LL a + Service ...	Yes	Y		1	1.2	7	.866	6	.5	9	1.5														
29	1.2 D + 1.5 LL a + Service ...	Yes	Y		1	1.2	7	1			9	1.5														
30	1.2 D + 1.5 LL a + Service ...	Yes	Y		1	1.2	7	.866	6	-.5	9	1.5														
31	1.2 D + 1.5 LL a + Service ...	Yes	Y		1	1.2	6	-.866	7	.5	9	1.5														
32	1.2 D + 1.5 LL a + Service ...	Yes	Y		1	1.2	6	-1			9	1.5														
33	1.2 D + 1.5 LL a + Service ...	Yes	Y		1	1.2	6	-.866	7	-.5	9	1.5														
34	1.2 D + 1.5 LL a + Service ...	Yes	Y		1	1.2	7	-.866	6	-.5	9	1.5														
35	1.2 D + 1.5 LL a + Service ...	Yes	Y		1	1.2	7	-1			9	1.5														
36	1.2 D + 1.5 LL a + Service ...	Yes	Y		1	1.2	7	-.866	6	.5	9	1.5														
37	1.2 D + 1.5 LL a + Service ...	Yes	Y		1	1.2	6	.866	7	-.5	9	1.5														
38	1.2 D + 1.5 LL b + Service ...	Yes	Y		1	1.2	6	1			10	1.5														
39	1.2 D + 1.5 LL b + Service ...	Yes	Y		1	1.2	6	.866	7	.5	10	1.5														
40	1.2 D + 1.5 LL b + Service ...	Yes	Y		1	1.2	7	.866	6	.5	10	1.5														
41	1.2 D + 1.5 LL b + Service ...	Yes	Y		1	1.2	7	1			10	1.5														
42	1.2 D + 1.5 LL b + Service ...	Yes	Y		1	1.2	7	.866	6	-.5	10	1.5														
43	1.2 D + 1.5 LL b + Service ...	Yes	Y		1	1.2	6	-.866	7	.5	10	1.5														
44	1.2 D + 1.5 LL b + Service ...	Yes	Y		1	1.2	6	-1			10	1.5														
45	1.2 D + 1.5 LL b + Service ...	Yes	Y		1	1.2	6	-.866	7	-.5	10	1.5														
46	1.2 D + 1.5 LL b + Service ...	Yes	Y		1	1.2	7	-.866	6	-.5	10	1.5														
47	1.2 D + 1.5 LL b + Service ...	Yes	Y		1	1.2	7	-1			10	1.5														
48	1.2 D + 1.5 LL b + Service ...	Yes	Y		1	1.2	7	-.866	6	.5	10	1.5														
49	1.2 D + 1.5 LL b + Service ...	Yes	Y		1	1.2	6	.866	7	-.5	10	1.5														
50	1.2 D + 1.5 LL c + Service -...	Yes	Y		1	1.2	6	1			11	1.5														
51	1.2 D + 1.5 LL c + Service -...	Yes	Y		1	1.2	6	.866	7	.5	11	1.5														
52	1.2 D + 1.5 LL c + Service -...	Yes	Y		1	1.2	7	.866	6	.5	11	1.5														
53	1.2 D + 1.5 LL c + Service -...	Yes	Y		1	1.2	7	1			11	1.5														
54	1.2 D + 1.5 LL c + Service -...	Yes	Y		1	1.2	7	.866	6	-.5	11	1.5														
55	1.2 D + 1.5 LL c + Service -...	Yes	Y		1	1.2	6	-.866	7	.5	11	1.5														
56	1.2 D + 1.5 LL c + Service -...	Yes	Y		1	1.2	6	-1			11	1.5														
57	1.2 D + 1.5 LL c + Service -...	Yes	Y		1	1.2	6	-.866	7	-.5	11	1.5														
58	1.2 D + 1.5 LL c + Service -...	Yes	Y		1	1.2	7	-.866	6	-.5	11	1.5														
59	1.2 D + 1.5 LL c + Service -...	Yes	Y		1	1.2	7	-1			11	1.5														
60	1.2 D + 1.5 LL c + Service -...	Yes	Y		1	1.2	7	-.866	6	.5	11	1.5														
61	1.2 D + 1.5 LL c + Service -...	Yes	Y		1	1.2	6	.866	7	-.5	11	1.5														
62	1.2 D + 1.5 LL d + Service ...	Yes	Y		1	1.2	6	1			12	1.5														
63	1.2 D + 1.5 LL d + Service ...	Yes	Y		1	1.2	6	.866	7	.5	12	1.5														

Load Combinations (Continued)

	Description	S...	P...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
64	1.2 D + 1.5 LL d + Service ...	Yes	Y		1	1.2	7	.866	6	.5	12	1.5														
65	1.2 D + 1.5 LL d + Service ...	Yes	Y		1	1.2	7	1			12	1.5														
66	1.2 D + 1.5 LL d + Service ...	Yes	Y		1	1.2	7	.866	6	-.5	12	1.5														
67	1.2 D + 1.5 LL d + Service ...	Yes	Y		1	1.2	6	-.866	7	.5	12	1.5														
68	1.2 D + 1.5 LL d + Service ...	Yes	Y		1	1.2	6	-1			12	1.5														
69	1.2 D + 1.5 LL d + Service ...	Yes	Y		1	1.2	6	-.866	7	-.5	12	1.5														
70	1.2 D + 1.5 LL d + Service ...	Yes	Y		1	1.2	7	-.866	6	-.5	12	1.5														
71	1.2 D + 1.5 LL d + Service ...	Yes	Y		1	1.2	7	-1			12	1.5														
72	1.2 D + 1.5 LL d + Service ...	Yes	Y		1	1.2	7	-.866	6	.5	12	1.5														
73	1.2 D + 1.5 LL d + Service ...	Yes	Y		1	1.2	6	.866	7	-.5	12	1.5														
74	1.2 D + 1.5 LL Maint (1)	Yes	Y		1	1.2					13	1.5														
75	1.2 D + 1.5 LL Maint (2)	Yes	Y		1	1.2					14	1.5														
76	1.2 D + 1.5 LL Maint (3)	Yes	Y		1	1.2					15	1.5														
77	1.2 D + 1.5 LL Maint (4)	Yes	Y		1	1.2					16	1.5														
78	1.2 D + 1.5 LL Maint (5)	Yes	Y		1	1.2					17	1.5														
79	1.2 D + 1.5 LL Maint (6)	Yes	Y		1	1.2					18	1.5														
80	1.2 D + 1.5 LL Maint (7)	Yes	Y		1	1.2					19	1.5														
81	1.2 D + 1.5 LL Maint (8)	Yes	Y		1	1.2					20	1.5														
82	1.2 D + 1.5 LL Maint (9)	Yes	Y		1	1.2					21	1.5														
83	1.2 D + 1.5 LL Maint (10)	Yes	Y		1	1.2					22	1.5														
84	1.2 D + 1.5 LL Maint (11)	Yes	Y		1	1.2					23	1.5														
85	1.2 D + 1.5 LL Maint (12)	Yes	Y		1	1.2					24	1.5														
86	1.2 D + 1.5 LL Maint (13)	Yes	Y		1	1.2					25	1.5														
87	1.2 D + 1.5 LL Maint (14)	Yes	Y		1	1.2					26	1.5														
88	1.2 D + 1.5 LL Maint (15)	Yes	Y		1	1.2					27	1.5														

Member Point Loads (BLC 1 : Dead)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	M105	Y	-.066	%10
2	M105	Y	-.066	%90
3	M105	Y	-.075	%25
4	M105	Y	0	0
5	M105	Y	0	0
6	M1	Y	-.011	%75
7	M1	Y	-.015	%40
8	M1	Y	0	0
9	M1	Y	0	0
10	M1	Y	0	0
11	M103	Y	-.021	%15
12	M103	Y	-.021	%80
13	M103	Y	0	0
14	M103	Y	0	0
15	M103	Y	0	0
16	M101	Y	-.064	%10
17	M101	Y	-.064	%85
18	M101	Y	-.003	%35
19	M101	Y	0	0
20	M101	Y	0	0
21	M107	Y	-.064	%10
22	M107	Y	-.064	%85
23	M107	Y	-.003	%35
24	M107	Y	0	0
25	M107	Y	0	0
26	M111	Y	-.066	%10
27	M111	Y	-.066	%90

Member Point Loads (BLC 1 : Dead) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
28	M111	Y	-.075	%25
29	M111	Y	0	0
30	M111	Y	0	0
31	M3	Y	-.011	%75
32	M3	Y	-.015	%40
33	M3	Y	0	0
34	M3	Y	0	0
35	M3	Y	0	0
36	M115	Y	-.021	%15
37	M115	Y	-.021	%80
38	M115	Y	0	0
39	M115	Y	0	0
40	M115	Y	0	0
41	M109	Y	-.021	%15
42	M109	Y	-.021	%80
43	M109	Y	0	0
44	M109	Y	0	0
45	M109	Y	0	0
46	M113	Y	-.064	%10
47	M113	Y	-.064	%85
48	M113	Y	-.003	%35
49	M113	Y	0	0
50	M113	Y	0	0
51	M117	Y	-.066	%10
52	M117	Y	-.066	%90
53	M117	Y	-.075	%25
54	M117	Y	0	0
55	M117	Y	0	0
56	M2	Y	-.011	%75
57	M2	Y	-.015	%40
58	M2	Y	0	0
59	M2	Y	0	0
60	M2	Y	0	0
61	M111A	Y	-.01	%50
62	M111A	Y	0	0
63	M111A	Y	0	0
64	M111A	Y	0	0
65	M111A	Y	0	0
66	M112A	Y	-.01	%50
67	M112A	Y	0	0
68	M112A	Y	0	0
69	M112A	Y	0	0
70	M112A	Y	0	0
71	M5	Y	-.011	%50
72	M5	Y	0	0
73	M5	Y	0	0
74	M5	Y	0	0
75	M5	Y	0	0

Member Point Loads (BLC 2 : 0 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	M105	Z	-.13	%10
2	M105	Z	-.13	%90
3	M105	Z	-.066	%25
4	M105	Z	0	0
5	M105	Z	0	0

Member Point Loads (BLC 2 : 0 Wind - No Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
6	M1	Z	-.007	%75
7	M1	Z	-.014	%40
8	M1	Z	0	0
9	M1	Z	0	0
10	M1	Z	0	0
11	M103	Z	-.139	%15
12	M103	Z	-.139	%80
13	M103	Z	0	0
14	M103	Z	0	0
15	M103	Z	0	0
16	M101	Z	-.403	%10
17	M101	Z	-.403	%85
18	M101	Z	-.003	%35
19	M101	Z	0	0
20	M101	Z	0	0
21	M107	Z	-.403	%10
22	M107	Z	-.403	%85
23	M107	Z	-.003	%35
24	M107	Z	0	0
25	M107	Z	0	0
26	M111	Z	-.13	%10
27	M111	Z	-.13	%90
28	M111	Z	-.066	%25
29	M111	Z	0	0
30	M111	Z	0	0
31	M3	Z	-.007	%75
32	M3	Z	-.014	%40
33	M3	Z	0	0
34	M3	Z	0	0
35	M3	Z	0	0
36	M115	Z	-.139	%15
37	M115	Z	-.139	%80
38	M115	Z	0	0
39	M115	Z	0	0
40	M115	Z	0	0
41	M109	Z	-.139	%15
42	M109	Z	-.139	%80
43	M109	Z	0	0
44	M109	Z	0	0
45	M109	Z	0	0
46	M113	Z	-.403	%10
47	M113	Z	-.403	%85
48	M113	Z	-.003	%35
49	M113	Z	0	0
50	M113	Z	0	0
51	M117	Z	-.13	%10
52	M117	Z	-.13	%90
53	M117	Z	-.066	%25
54	M117	Z	0	0
55	M117	Z	0	0
56	M2	Z	-.007	%75
57	M2	Z	-.014	%40
58	M2	Z	0	0
59	M2	Z	0	0
60	M2	Z	0	0
61	M111A	Z	-.031	%50
62	M111A	Z	0	0

Member Point Loads (BLC 2 : 0 Wind - No Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
63	M111A	Z	0	0
64	M111A	Z	0	0
65	M111A	Z	0	0
66	M112A	Z	-.031	%50
67	M112A	Z	0	0
68	M112A	Z	0	0
69	M112A	Z	0	0
70	M112A	Z	0	0
71	M5	Z	-.11	%50
72	M5	Z	0	0
73	M5	Z	0	0
74	M5	Z	0	0
75	M5	Z	0	0

Member Point Loads (BLC 3 : 90 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	M105	X	-.094	%10
2	M105	X	-.094	%90
3	M105	X	-.046	%25
4	M105	X	0	0
5	M105	X	0	0
6	M1	X	-.006	%75
7	M1	X	-.008	%40
8	M1	X	0	0
9	M1	X	0	0
10	M1	X	0	0
11	M103	X	-.047	%15
12	M103	X	-.047	%80
13	M103	X	0	0
14	M103	X	0	0
15	M103	X	0	0
16	M101	X	-.177	%10
17	M101	X	-.177	%85
18	M101	X	-.002	%35
19	M101	X	0	0
20	M101	X	0	0
21	M107	X	-.177	%10
22	M107	X	-.177	%85
23	M107	X	-.002	%35
24	M107	X	0	0
25	M107	X	0	0
26	M111	X	-.094	%10
27	M111	X	-.094	%90
28	M111	X	-.046	%25
29	M111	X	0	0
30	M111	X	0	0
31	M3	X	-.006	%75
32	M3	X	-.008	%40
33	M3	X	0	0
34	M3	X	0	0
35	M3	X	0	0
36	M115	X	-.047	%15
37	M115	X	-.047	%80
38	M115	X	0	0
39	M115	X	0	0
40	M115	X	0	0

Member Point Loads (BLC 3 : 90 Wind - No Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
41	M109	X	-.047	%15
42	M109	X	-.047	%80
43	M109	X	0	0
44	M109	X	0	0
45	M109	X	0	0
46	M113	X	-.177	%10
47	M113	X	-.177	%85
48	M113	X	-.002	%35
49	M113	X	0	0
50	M113	X	0	0
51	M117	X	-.094	%10
52	M117	X	-.094	%90
53	M117	X	-.046	%25
54	M117	X	0	0
55	M117	X	0	0
56	M2	X	-.006	%75
57	M2	X	-.008	%40
58	M2	X	0	0
59	M2	X	0	0
60	M2	X	0	0
61	M111A	X	-.031	%50
62	M111A	X	0	0
63	M111A	X	0	0
64	M111A	X	0	0
65	M111A	X	0	0
66	M112A	X	-.031	%50
67	M112A	X	0	0
68	M112A	X	0	0
69	M112A	X	0	0
70	M112A	X	0	0
71	M5	X	-.11	%50
72	M5	X	0	0
73	M5	X	0	0
74	M5	X	0	0
75	M5	X	0	0

Member Point Loads (BLC 4 : 0 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	M105	Z	-.021	%10
2	M105	Z	-.021	%90
3	M105	Z	-.011	%25
4	M105	Z	0	0
5	M105	Z	0	0
6	M1	Z	-.001	%75
7	M1	Z	-.002	%40
8	M1	Z	0	0
9	M1	Z	0	0
10	M1	Z	0	0
11	M103	Z	-.022	%15
12	M103	Z	-.022	%80
13	M103	Z	0	0
14	M103	Z	0	0
15	M103	Z	0	0
16	M101	Z	-.065	%10
17	M101	Z	-.065	%85
18	M101	Z	-.0004	%35

Member Point Loads (BLC 4 : 0 Wind - Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
19	M101	Z	0	0
20	M101	Z	0	0
21	M107	Z	-.065	%10
22	M107	Z	-.065	%85
23	M107	Z	-.0004	%35
24	M107	Z	0	0
25	M107	Z	0	0
26	M111	Z	-.021	%10
27	M111	Z	-.021	%90
28	M111	Z	-.011	%25
29	M111	Z	0	0
30	M111	Z	0	0
31	M3	Z	-.001	%75
32	M3	Z	-.002	%40
33	M3	Z	0	0
34	M3	Z	0	0
35	M3	Z	0	0
36	M115	Z	-.022	%15
37	M115	Z	-.022	%80
38	M115	Z	0	0
39	M115	Z	0	0
40	M115	Z	0	0
41	M109	Z	-.022	%15
42	M109	Z	-.022	%80
43	M109	Z	0	0
44	M109	Z	0	0
45	M109	Z	0	0
46	M113	Z	-.065	%10
47	M113	Z	-.065	%85
48	M113	Z	-.0004	%35
49	M113	Z	0	0
50	M113	Z	0	0
51	M117	Z	-.021	%10
52	M117	Z	-.021	%90
53	M117	Z	-.011	%25
54	M117	Z	0	0
55	M117	Z	0	0
56	M2	Z	-.001	%75
57	M2	Z	-.002	%40
58	M2	Z	0	0
59	M2	Z	0	0
60	M2	Z	0	0
61	M111A	Z	-.005	%50
62	M111A	Z	0	0
63	M111A	Z	0	0
64	M111A	Z	0	0
65	M111A	Z	0	0
66	M112A	Z	-.005	%50
67	M112A	Z	0	0
68	M112A	Z	0	0
69	M112A	Z	0	0
70	M112A	Z	0	0
71	M5	Z	-.018	%50
72	M5	Z	0	0
73	M5	Z	0	0
74	M5	Z	0	0
75	M5	Z	0	0

Member Point Loads (BLC 5 : 90 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	M105	X	-.015	%10
2	M105	X	-.015	%90
3	M105	X	-.007	%25
4	M105	X	0	0
5	M105	X	0	0
6	M1	X	-.001	%75
7	M1	X	-.001	%40
8	M1	X	0	0
9	M1	X	0	0
10	M1	X	0	0
11	M103	X	-.007	%15
12	M103	X	-.007	%80
13	M103	X	0	0
14	M103	X	0	0
15	M103	X	0	0
16	M101	X	-.028	%10
17	M101	X	-.028	%85
18	M101	X	-.0003	%35
19	M101	X	0	0
20	M101	X	0	0
21	M107	X	-.028	%10
22	M107	X	-.028	%85
23	M107	X	-.0003	%35
24	M107	X	0	0
25	M107	X	0	0
26	M111	X	-.015	%10
27	M111	X	-.015	%90
28	M111	X	-.007	%25
29	M111	X	0	0
30	M111	X	0	0
31	M3	X	-.001	%75
32	M3	X	-.001	%40
33	M3	X	0	0
34	M3	X	0	0
35	M3	X	0	0
36	M115	X	-.007	%15
37	M115	X	-.007	%80
38	M115	X	0	0
39	M115	X	0	0
40	M115	X	0	0
41	M109	X	-.007	%15
42	M109	X	-.007	%80
43	M109	X	0	0
44	M109	X	0	0
45	M109	X	0	0
46	M113	X	-.028	%10
47	M113	X	-.028	%85
48	M113	X	-.0003	%35
49	M113	X	0	0
50	M113	X	0	0
51	M117	X	-.015	%10
52	M117	X	-.015	%90
53	M117	X	-.007	%25
54	M117	X	0	0
55	M117	X	0	0
56	M2	X	-.001	%75
57	M2	X	-.001	%40

Member Point Loads (BLC 5 : 90 Wind - Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
58	M2	X	0	0
59	M2	X	0	0
60	M2	X	0	0
61	M111A	X	-.005	%50
62	M111A	X	0	0
63	M111A	X	0	0
64	M111A	X	0	0
65	M111A	X	0	0
66	M112A	X	-.005	%50
67	M112A	X	0	0
68	M112A	X	0	0
69	M112A	X	0	0
70	M112A	X	0	0
71	M5	X	-.018	%50
72	M5	X	0	0
73	M5	X	0	0
74	M5	X	0	0
75	M5	X	0	0

Member Point Loads (BLC 6 : 0 Wind - Service)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	M105	Z	-.007	%10
2	M105	Z	-.007	%90
3	M105	Z	-.004	%25
4	M105	Z	0	0
5	M105	Z	0	0
6	M1	Z	-.0004	%75
7	M1	Z	-.0008	%40
8	M1	Z	0	0
9	M1	Z	0	0
10	M1	Z	0	0
11	M103	Z	-.008	%15
12	M103	Z	-.008	%80
13	M103	Z	0	0
14	M103	Z	0	0
15	M103	Z	0	0
16	M101	Z	-.023	%10
17	M101	Z	-.023	%85
18	M101	Z	-.0001	%35
19	M101	Z	0	0
20	M101	Z	0	0
21	M107	Z	-.023	%10
22	M107	Z	-.023	%85
23	M107	Z	-.0001	%35
24	M107	Z	0	0
25	M107	Z	0	0
26	M111	Z	-.007	%10
27	M111	Z	-.007	%90
28	M111	Z	-.004	%25
29	M111	Z	0	0
30	M111	Z	0	0
31	M3	Z	-.0004	%75
32	M3	Z	-.0008	%40
33	M3	Z	0	0
34	M3	Z	0	0
35	M3	Z	0	0

Member Point Loads (BLC 6 : 0 Wind - Service) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
36	M115	Z	-.008	%15
37	M115	Z	-.008	%80
38	M115	Z	0	0
39	M115	Z	0	0
40	M115	Z	0	0
41	M109	Z	-.008	%15
42	M109	Z	-.008	%80
43	M109	Z	0	0
44	M109	Z	0	0
45	M109	Z	0	0
46	M113	Z	-.023	%10
47	M113	Z	-.023	%85
48	M113	Z	-.0001	%35
49	M113	Z	0	0
50	M113	Z	0	0
51	M117	Z	-.007	%10
52	M117	Z	-.007	%90
53	M117	Z	-.004	%25
54	M117	Z	0	0
55	M117	Z	0	0
56	M2	Z	-.0004	%75
57	M2	Z	-.0008	%40
58	M2	Z	0	0
59	M2	Z	0	0
60	M2	Z	0	0
61	M111A	Z	-.002	%50
62	M111A	Z	0	0
63	M111A	Z	0	0
64	M111A	Z	0	0
65	M111A	Z	0	0
66	M112A	Z	-.002	%50
67	M112A	Z	0	0
68	M112A	Z	0	0
69	M112A	Z	0	0
70	M112A	Z	0	0
71	M5	Z	-.006	%50
72	M5	Z	0	0
73	M5	Z	0	0
74	M5	Z	0	0
75	M5	Z	0	0

Member Point Loads (BLC 7 : 90 Wind - Service)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	M105	X	-.005	%10
2	M105	X	-.005	%90
3	M105	X	-.003	%25
4	M105	X	0	0
5	M105	X	0	0
6	M1	X	-.0003	%75
7	M1	X	-.0005	%40
8	M1	X	0	0
9	M1	X	0	0
10	M1	X	0	0
11	M103	X	-.003	%15
12	M103	X	-.003	%80
13	M103	X	0	0

Member Point Loads (BLC 7 : 90 Wind - Service) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
14	M103	X	0	0
15	M103	X	0	0
16	M101	X	-.01	%10
17	M101	X	-.01	%85
18	M101	X	-.0001	%35
19	M101	X	0	0
20	M101	X	0	0
21	M107	X	-.01	%10
22	M107	X	-.01	%85
23	M107	X	-.0001	%35
24	M107	X	0	0
25	M107	X	0	0
26	M111	X	-.005	%10
27	M111	X	-.005	%90
28	M111	X	-.003	%25
29	M111	X	0	0
30	M111	X	0	0
31	M3	X	-.0003	%75
32	M3	X	-.0005	%40
33	M3	X	0	0
34	M3	X	0	0
35	M3	X	0	0
36	M115	X	-.003	%15
37	M115	X	-.003	%80
38	M115	X	0	0
39	M115	X	0	0
40	M115	X	0	0
41	M109	X	-.003	%15
42	M109	X	-.003	%80
43	M109	X	0	0
44	M109	X	0	0
45	M109	X	0	0
46	M113	X	-.01	%10
47	M113	X	-.01	%85
48	M113	X	-.0001	%35
49	M113	X	0	0
50	M113	X	0	0
51	M117	X	-.005	%10
52	M117	X	-.005	%90
53	M117	X	-.003	%25
54	M117	X	0	0
55	M117	X	0	0
56	M2	X	-.0003	%75
57	M2	X	-.0005	%40
58	M2	X	0	0
59	M2	X	0	0
60	M2	X	0	0
61	M111A	X	-.002	%50
62	M111A	X	0	0
63	M111A	X	0	0
64	M111A	X	0	0
65	M111A	X	0	0
66	M112A	X	-.002	%50
67	M112A	X	0	0
68	M112A	X	0	0
69	M112A	X	0	0
70	M112A	X	0	0

Member Point Loads (BLC 7 : 90 Wind - Service) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
71	M5	X	-.006	%50
72	M5	X	0	0
73	M5	X	0	0
74	M5	X	0	0
75	M5	X	0	0

Member Point Loads (BLC 8 : Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	M105	Y	-.122	%10
2	M105	Y	-.122	%90
3	M105	Y	-.067	%25
4	M105	Y	0	0
5	M105	Y	0	0
6	M1	Y	-.008	%75
7	M1	Y	-.014	%40
8	M1	Y	0	0
9	M1	Y	0	0
10	M1	Y	0	0
11	M103	Y	-.114	%15
12	M103	Y	-.114	%80
13	M103	Y	0	0
14	M103	Y	0	0
15	M103	Y	0	0
16	M101	Y	-.323	%10
17	M101	Y	-.323	%85
18	M101	Y	-.003	%35
19	M101	Y	0	0
20	M101	Y	0	0
21	M107	Y	-.323	%10
22	M107	Y	-.323	%85
23	M107	Y	-.003	%35
24	M107	Y	0	0
25	M107	Y	0	0
26	M111	Y	-.122	%10
27	M111	Y	-.122	%90
28	M111	Y	-.067	%25
29	M111	Y	0	0
30	M111	Y	0	0
31	M3	Y	-.008	%75
32	M3	Y	-.014	%40
33	M3	Y	0	0
34	M3	Y	0	0
35	M3	Y	0	0
36	M115	Y	-.114	%15
37	M115	Y	-.114	%80
38	M115	Y	0	0
39	M115	Y	0	0
40	M115	Y	0	0
41	M109	Y	-.114	%15
42	M109	Y	-.114	%80
43	M109	Y	0	0
44	M109	Y	0	0
45	M109	Y	0	0
46	M113	Y	-.323	%10
47	M113	Y	-.323	%85
48	M113	Y	-.003	%35

Member Point Loads (BLC 8 : Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
49	M113	Y	0	0
50	M113	Y	0	0
51	M117	Y	-.122	%10
52	M117	Y	-.122	%90
53	M117	Y	-.067	%25
54	M117	Y	0	0
55	M117	Y	0	0
56	M2	Y	-.008	%75
57	M2	Y	-.014	%40
58	M2	Y	0	0
59	M2	Y	0	0
60	M2	Y	0	0
61	M111A	Y	-.051	%50
62	M111A	Y	0	0
63	M111A	Y	0	0
64	M111A	Y	0	0
65	M111A	Y	0	0
66	M112A	Y	-.051	%50
67	M112A	Y	0	0
68	M112A	Y	0	0
69	M112A	Y	0	0
70	M112A	Y	0	0
71	M5	Y	-.175	%50
72	M5	Y	0	0
73	M5	Y	0	0
74	M5	Y	0	0
75	M5	Y	0	0

Member Point Loads (BLC 13 : Maint LL 1)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	M93A	Y	-.25	%5

Member Point Loads (BLC 14 : Maint LL 2)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	M1	Y	-.25	%5

Member Point Loads (BLC 15 : Maint LL 3)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	M93A	Y	-.25	%95

Member Point Loads (BLC 16 : Maint LL 4)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	M1	Y	-.25	%95

Member Point Loads (BLC 17 : Maint LL 5)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	M101A	Y	-.25	%95

Member Point Loads (BLC 18 : Maint LL 6)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	M3	Y	-.25	%95

Member Point Loads (BLC 19 : Maint LL 7)

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

Member Point Loads (BLC 19 : Maint LL 7) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	M101A	Y	-.25	%5

Member Point Loads (BLC 20 : Maint LL 8)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	M3	Y	-.25	%5

Member Point Loads (BLC 21 : Maint LL 9)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	M97	Y	-.25	%5

Member Point Loads (BLC 22 : Maint LL 10)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	M2	Y	-.25	%5

Member Point Loads (BLC 23 : Maint LL 11)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	M97	Y	-.25	%95

Member Point Loads (BLC 24 : Maint LL 12)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	M2	Y	-.25	%95

Member Point Loads (BLC 25 : Maint LL 13)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	M6	Y	-.25	%95

Member Point Loads (BLC 26 : Maint LL 14)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	M4	Y	-.25	%95

Member Point Loads (BLC 27 : Maint LL 15)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	M5	Y	-.25	%95

Member Distributed Loads (BLC 2 : 0 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	Z	-.014	-.014	0	0
2	M2	Z	-.014	-.014	0	0
3	M3	Z	-.014	-.014	0	0
4	M4	Z	-.021	-.021	0	0
5	M5	Z	-.021	-.021	0	0
6	M6	Z	-.021	-.021	0	0
7	M7	Z	-.04	-.04	0	0
8	M10	Z	-.003	-.003	0	0
9	M11	Z	-.003	-.003	0	0
10	M12	Z	-.003	-.003	0	0
11	M13	Z	-.003	-.003	0	0
12	M14	Z	-.003	-.003	0	0
13	M15	Z	-.002	-.002	0	0
14	M16	Z	-.003	-.003	0	0
15	M17	Z	-.003	-.003	0	0

Member Distributed Loads (BLC 2 : 0 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
16	M18	Z	-.003	-.003	0	0
17	M19	Z	-.003	-.003	0	0
18	M20	Z	-.003	-.003	0	0
19	M21	Z	-.003	-.003	0	0
20	M22	Z	-.002	-.002	0	0
21	M23	Z	-.003	-.003	0	0
22	M24	Z	-.003	-.003	0	0
23	M25	Z	-.003	-.003	0	0
24	M26	Z	-.003	-.003	0	0
25	M27	Z	-.003	-.003	0	0
26	M28	Z	-.003	-.003	0	0
27	M29	Z	-.003	-.003	0	0
28	M30	Z	-.003	-.003	0	0
29	M31	Z	-.003	-.003	0	0
30	M32	Z	-.003	-.003	0	0
31	M33	Z	-.003	-.003	0	0
32	M34	Z	-.003	-.003	0	0
33	M35	Z	-.002	-.002	0	0
34	M36	Z	-.003	-.003	0	0
35	M37	Z	-.003	-.003	0	0
36	M38	Z	-.003	-.003	0	0
37	M39	Z	-.003	-.003	0	0
38	M40	Z	-.003	-.003	0	0
39	M41	Z	-.003	-.003	0	0
40	M42	Z	-.002	-.002	0	0
41	M43	Z	-.003	-.003	0	0
42	M44	Z	-.003	-.003	0	0
43	M45	Z	-.003	-.003	0	0
44	M46	Z	-.003	-.003	0	0
45	M47	Z	-.003	-.003	0	0
46	M48	Z	-.003	-.003	0	0
47	M49	Z	-.003	-.003	0	0
48	M50	Z	-.003	-.003	0	0
49	M51	Z	-.003	-.003	0	0
50	M52	Z	-.003	-.003	0	0
51	M53	Z	-.003	-.003	0	0
52	M54	Z	-.003	-.003	0	0
53	M55	Z	-.002	-.002	0	0
54	M56	Z	-.003	-.003	0	0
55	M57	Z	-.003	-.003	0	0
56	M58	Z	-.003	-.003	0	0
57	M59	Z	-.003	-.003	0	0
58	M60	Z	-.003	-.003	0	0
59	M61	Z	-.003	-.003	0	0
60	M62	Z	-.002	-.002	0	0
61	M63	Z	-.003	-.003	0	0
62	M64	Z	-.003	-.003	0	0
63	M65	Z	-.003	-.003	0	0
64	M66	Z	-.003	-.003	0	0
65	M67	Z	-.003	-.003	0	0
66	M68	Z	-.003	-.003	0	0
67	M69	Z	-.003	-.003	0	0
68	M101	Z	-.011	-.011	0	0
69	M103	Z	-.009	-.009	0	0
70	M105	Z	-.009	-.009	0	0
71	M107	Z	-.011	-.011	0	0
72	M109	Z	-.009	-.009	0	0

Member Distributed Loads (BLC 2 : 0 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
73	M111	Z	-.009	-.009	0	0
74	M113	Z	-.011	-.011	0	0
75	M115	Z	-.009	-.009	0	0
76	M117	Z	-.009	-.009	0	0
77	M119	Z	-.009	-.009	0	0
78	M120	Z	-.021	-.021	0	0
79	M121	Z	-.021	-.021	0	0
80	M122	Z	-.021	-.021	0	0
81	M93	Z	-.04	-.04	0	0
82	M94	Z	-.04	-.04	0	0
83	M93A	Z	-.009	-.009	0	0
84	M97	Z	-.009	-.009	0	0
85	M101A	Z	-.009	-.009	0	0
86	M105A	Z	-.011	-.011	0	0
87	M106A	Z	-.011	-.011	0	0
88	M107A	Z	-.011	-.011	0	0
89	M111A	Z	-.008	-.008	0	0
90	M112A	Z	-.008	-.008	0	0

Member Distributed Loads (BLC 3 : 90 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.014	-.014	0	0
2	M2	X	-.014	-.014	0	0
3	M3	X	-.014	-.014	0	0
4	M4	X	-.021	-.021	0	0
5	M5	X	-.021	-.021	0	0
6	M6	X	-.021	-.021	0	0
7	M7	X	-.04	-.04	0	0
8	M10	X	-.003	-.003	0	0
9	M11	X	-.003	-.003	0	0
10	M12	X	-.003	-.003	0	0
11	M13	X	-.003	-.003	0	0
12	M14	X	-.003	-.003	0	0
13	M15	X	-.002	-.002	0	0
14	M16	X	-.003	-.003	0	0
15	M17	X	-.003	-.003	0	0
16	M18	X	-.003	-.003	0	0
17	M19	X	-.003	-.003	0	0
18	M20	X	-.003	-.003	0	0
19	M21	X	-.003	-.003	0	0
20	M22	X	-.002	-.002	0	0
21	M23	X	-.003	-.003	0	0
22	M24	X	-.003	-.003	0	0
23	M25	X	-.003	-.003	0	0
24	M26	X	-.003	-.003	0	0
25	M27	X	-.003	-.003	0	0
26	M28	X	-.003	-.003	0	0
27	M29	X	-.003	-.003	0	0
28	M30	X	-.003	-.003	0	0
29	M31	X	-.003	-.003	0	0
30	M32	X	-.003	-.003	0	0
31	M33	X	-.003	-.003	0	0
32	M34	X	-.003	-.003	0	0
33	M35	X	-.002	-.002	0	0
34	M36	X	-.003	-.003	0	0
35	M37	X	-.003	-.003	0	0

Member Distributed Loads (BLC 3 : 90 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
36	M38	X	-.003	-.003	0	0
37	M39	X	-.003	-.003	0	0
38	M40	X	-.003	-.003	0	0
39	M41	X	-.003	-.003	0	0
40	M42	X	-.002	-.002	0	0
41	M43	X	-.003	-.003	0	0
42	M44	X	-.003	-.003	0	0
43	M45	X	-.003	-.003	0	0
44	M46	X	-.003	-.003	0	0
45	M47	X	-.003	-.003	0	0
46	M48	X	-.003	-.003	0	0
47	M49	X	-.003	-.003	0	0
48	M50	X	-.003	-.003	0	0
49	M51	X	-.003	-.003	0	0
50	M52	X	-.003	-.003	0	0
51	M53	X	-.003	-.003	0	0
52	M54	X	-.003	-.003	0	0
53	M55	X	-.002	-.002	0	0
54	M56	X	-.003	-.003	0	0
55	M57	X	-.003	-.003	0	0
56	M58	X	-.003	-.003	0	0
57	M59	X	-.003	-.003	0	0
58	M60	X	-.003	-.003	0	0
59	M61	X	-.003	-.003	0	0
60	M62	X	-.002	-.002	0	0
61	M63	X	-.003	-.003	0	0
62	M64	X	-.003	-.003	0	0
63	M65	X	-.003	-.003	0	0
64	M66	X	-.003	-.003	0	0
65	M67	X	-.003	-.003	0	0
66	M68	X	-.003	-.003	0	0
67	M69	X	-.003	-.003	0	0
68	M101	X	-.011	-.011	0	0
69	M103	X	-.009	-.009	0	0
70	M105	X	-.009	-.009	0	0
71	M107	X	-.011	-.011	0	0
72	M109	X	-.009	-.009	0	0
73	M111	X	-.009	-.009	0	0
74	M113	X	-.011	-.011	0	0
75	M115	X	-.009	-.009	0	0
76	M117	X	-.009	-.009	0	0
77	M119	X	-.009	-.009	0	0
78	M120	X	-.021	-.021	0	0
79	M121	X	-.021	-.021	0	0
80	M122	X	-.021	-.021	0	0
81	M93	X	-.04	-.04	0	0
82	M94	X	-.04	-.04	0	0
83	M93A	X	-.009	-.009	0	0
84	M97	X	-.009	-.009	0	0
85	M101A	X	-.009	-.009	0	0
86	M105A	X	-.011	-.011	0	0
87	M106A	X	-.011	-.011	0	0
88	M107A	X	-.011	-.011	0	0
89	M111A	X	-.008	-.008	0	0
90	M112A	X	-.008	-.008	0	0

Member Distributed Loads (BLC 4 : 0 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	Z	-.003	-.003	0	0
2	M2	Z	-.003	-.003	0	0
3	M3	Z	-.003	-.003	0	0
4	M4	Z	-.008	-.008	0	0
5	M5	Z	-.008	-.008	0	0
6	M6	Z	-.008	-.008	0	0
7	M7	Z	-.012	-.012	0	0
8	M10	Z	-.003	-.003	0	0
9	M11	Z	-.003	-.003	0	0
10	M12	Z	-.003	-.003	0	0
11	M13	Z	-.003	-.003	0	0
12	M14	Z	-.003	-.003	0	0
13	M15	Z	-.004	-.004	0	0
14	M16	Z	-.003	-.003	0	0
15	M17	Z	-.003	-.003	0	0
16	M18	Z	-.003	-.003	0	0
17	M19	Z	-.003	-.003	0	0
18	M20	Z	-.003	-.003	0	0
19	M21	Z	-.003	-.003	0	0
20	M22	Z	-.004	-.004	0	0
21	M23	Z	-.003	-.003	0	0
22	M24	Z	-.002	-.002	0	0
23	M25	Z	-.003	-.003	0	0
24	M26	Z	-.002	-.002	0	0
25	M27	Z	-.003	-.003	0	0
26	M28	Z	-.002	-.002	0	0
27	M29	Z	-.002	-.002	0	0
28	M30	Z	-.003	-.003	0	0
29	M31	Z	-.003	-.003	0	0
30	M32	Z	-.003	-.003	0	0
31	M33	Z	-.003	-.003	0	0
32	M34	Z	-.003	-.003	0	0
33	M35	Z	-.004	-.004	0	0
34	M36	Z	-.003	-.003	0	0
35	M37	Z	-.003	-.003	0	0
36	M38	Z	-.003	-.003	0	0
37	M39	Z	-.003	-.003	0	0
38	M40	Z	-.003	-.003	0	0
39	M41	Z	-.003	-.003	0	0
40	M42	Z	-.004	-.004	0	0
41	M43	Z	-.003	-.003	0	0
42	M44	Z	-.002	-.002	0	0
43	M45	Z	-.003	-.003	0	0
44	M46	Z	-.002	-.002	0	0
45	M47	Z	-.003	-.003	0	0
46	M48	Z	-.002	-.002	0	0
47	M49	Z	-.002	-.002	0	0
48	M50	Z	-.003	-.003	0	0
49	M51	Z	-.003	-.003	0	0
50	M52	Z	-.003	-.003	0	0
51	M53	Z	-.003	-.003	0	0
52	M54	Z	-.003	-.003	0	0
53	M55	Z	-.004	-.004	0	0
54	M56	Z	-.003	-.003	0	0
55	M57	Z	-.003	-.003	0	0
56	M58	Z	-.003	-.003	0	0
57	M59	Z	-.003	-.003	0	0

Member Distributed Loads (BLC 4 : 0 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
58	M60	Z	-.003	-.003	0	0
59	M61	Z	-.003	-.003	0	0
60	M62	Z	-.004	-.004	0	0
61	M63	Z	-.003	-.003	0	0
62	M64	Z	-.002	-.002	0	0
63	M65	Z	-.003	-.003	0	0
64	M66	Z	-.002	-.002	0	0
65	M67	Z	-.003	-.003	0	0
66	M68	Z	-.002	-.002	0	0
67	M69	Z	-.002	-.002	0	0
68	M101	Z	-.003	-.003	0	0
69	M103	Z	-.002	-.002	0	0
70	M105	Z	-.002	-.002	0	0
71	M107	Z	-.003	-.003	0	0
72	M109	Z	-.002	-.002	0	0
73	M111	Z	-.002	-.002	0	0
74	M113	Z	-.003	-.003	0	0
75	M115	Z	-.002	-.002	0	0
76	M117	Z	-.002	-.002	0	0
77	M119	Z	-.002	-.002	0	0
78	M120	Z	-.008	-.008	0	0
79	M121	Z	-.008	-.008	0	0
80	M122	Z	-.008	-.008	0	0
81	M93	Z	-.012	-.012	0	0
82	M94	Z	-.012	-.012	0	0
83	M93A	Z	-.002	-.002	0	0
84	M97	Z	-.002	-.002	0	0
85	M101A	Z	-.002	-.002	0	0
86	M105A	Z	-.007	-.007	0	0
87	M106A	Z	-.007	-.007	0	0
88	M107A	Z	-.007	-.007	0	0
89	M111A	Z	-.002	-.002	0	0
90	M112A	Z	-.002	-.002	0	0

Member Distributed Loads (BLC 5 : 90 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.003	-.003	0	0
2	M2	X	-.003	-.003	0	0
3	M3	X	-.003	-.003	0	0
4	M4	X	-.008	-.008	0	0
5	M5	X	-.008	-.008	0	0
6	M6	X	-.008	-.008	0	0
7	M7	X	-.012	-.012	0	0
8	M10	X	-.003	-.003	0	0
9	M11	X	-.003	-.003	0	0
10	M12	X	-.003	-.003	0	0
11	M13	X	-.003	-.003	0	0
12	M14	X	-.003	-.003	0	0
13	M15	X	-.004	-.004	0	0
14	M16	X	-.003	-.003	0	0
15	M17	X	-.003	-.003	0	0
16	M18	X	-.003	-.003	0	0
17	M19	X	-.003	-.003	0	0
18	M20	X	-.003	-.003	0	0
19	M21	X	-.003	-.003	0	0
20	M22	X	-.004	-.004	0	0

Member Distributed Loads (BLC 5 : 90 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
21	M23	X	-.003	-.003	0	0
22	M24	X	-.002	-.002	0	0
23	M25	X	-.003	-.003	0	0
24	M26	X	-.002	-.002	0	0
25	M27	X	-.003	-.003	0	0
26	M28	X	-.002	-.002	0	0
27	M29	X	-.002	-.002	0	0
28	M30	X	-.003	-.003	0	0
29	M31	X	-.003	-.003	0	0
30	M32	X	-.003	-.003	0	0
31	M33	X	-.003	-.003	0	0
32	M34	X	-.003	-.003	0	0
33	M35	X	-.004	-.004	0	0
34	M36	X	-.003	-.003	0	0
35	M37	X	-.003	-.003	0	0
36	M38	X	-.003	-.003	0	0
37	M39	X	-.003	-.003	0	0
38	M40	X	-.003	-.003	0	0
39	M41	X	-.003	-.003	0	0
40	M42	X	-.004	-.004	0	0
41	M43	X	-.003	-.003	0	0
42	M44	X	-.002	-.002	0	0
43	M45	X	-.003	-.003	0	0
44	M46	X	-.002	-.002	0	0
45	M47	X	-.003	-.003	0	0
46	M48	X	-.002	-.002	0	0
47	M49	X	-.002	-.002	0	0
48	M50	X	-.003	-.003	0	0
49	M51	X	-.003	-.003	0	0
50	M52	X	-.003	-.003	0	0
51	M53	X	-.003	-.003	0	0
52	M54	X	-.003	-.003	0	0
53	M55	X	-.004	-.004	0	0
54	M56	X	-.003	-.003	0	0
55	M57	X	-.003	-.003	0	0
56	M58	X	-.003	-.003	0	0
57	M59	X	-.003	-.003	0	0
58	M60	X	-.003	-.003	0	0
59	M61	X	-.003	-.003	0	0
60	M62	X	-.004	-.004	0	0
61	M63	X	-.003	-.003	0	0
62	M64	X	-.002	-.002	0	0
63	M65	X	-.003	-.003	0	0
64	M66	X	-.002	-.002	0	0
65	M67	X	-.003	-.003	0	0
66	M68	X	-.002	-.002	0	0
67	M69	X	-.002	-.002	0	0
68	M101	X	-.003	-.003	0	0
69	M103	X	-.002	-.002	0	0
70	M105	X	-.002	-.002	0	0
71	M107	X	-.003	-.003	0	0
72	M109	X	-.002	-.002	0	0
73	M111	X	-.002	-.002	0	0
74	M113	X	-.003	-.003	0	0
75	M115	X	-.002	-.002	0	0
76	M117	X	-.002	-.002	0	0
77	M119	X	-.002	-.002	0	0

Member Distributed Loads (BLC 5 : 90 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
78	M120	X	-.008	-.008	0	0
79	M121	X	-.008	-.008	0	0
80	M122	X	-.008	-.008	0	0
81	M93	X	-.012	-.012	0	0
82	M94	X	-.012	-.012	0	0
83	M93A	X	-.002	-.002	0	0
84	M97	X	-.002	-.002	0	0
85	M101A	X	-.002	-.002	0	0
86	M105A	X	-.007	-.007	0	0
87	M106A	X	-.007	-.007	0	0
88	M107A	X	-.007	-.007	0	0
89	M111A	X	-.002	-.002	0	0
90	M112A	X	-.002	-.002	0	0

Member Distributed Loads (BLC 6 : 0 Wind - Service)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	Z	-.0005	-.0005	0	0
2	M2	Z	-.0005	-.0005	0	0
3	M3	Z	-.0005	-.0005	0	0
4	M4	Z	-.001	-.001	0	0
5	M5	Z	-.001	-.001	0	0
6	M6	Z	-.001	-.001	0	0
7	M7	Z	-.002	-.002	0	0
8	M10	Z	-.0001	-.0001	0	0
9	M11	Z	-.0001	-.0001	0	0
10	M12	Z	-.0001	-.0001	0	0
11	M13	Z	-.0001	-.0001	0	0
12	M14	Z	-.0001	-.0001	0	0
13	M15	Z	-.0001	-.0001	0	0
14	M16	Z	-.0001	-.0001	0	0
15	M17	Z	-.0001	-.0001	0	0
16	M18	Z	-.0001	-.0001	0	0
17	M19	Z	-.0001	-.0001	0	0
18	M20	Z	-.0001	-.0001	0	0
19	M21	Z	-.0001	-.0001	0	0
20	M22	Z	-.0001	-.0001	0	0
21	M23	Z	-.0001	-.0001	0	0
22	M24	Z	-.0001	-.0001	0	0
23	M25	Z	-.0001	-.0001	0	0
24	M26	Z	-.0001	-.0001	0	0
25	M27	Z	-.0001	-.0001	0	0
26	M28	Z	-.0001	-.0001	0	0
27	M29	Z	-.0001	-.0001	0	0
28	M30	Z	-.0001	-.0001	0	0
29	M31	Z	-.0001	-.0001	0	0
30	M32	Z	-.0001	-.0001	0	0
31	M33	Z	-.0001	-.0001	0	0
32	M34	Z	-.0001	-.0001	0	0
33	M35	Z	-.0001	-.0001	0	0
34	M36	Z	-.0001	-.0001	0	0
35	M37	Z	-.0001	-.0001	0	0
36	M38	Z	-.0001	-.0001	0	0
37	M39	Z	-.0001	-.0001	0	0
38	M40	Z	-.0001	-.0001	0	0
39	M41	Z	-.0001	-.0001	0	0
40	M42	Z	-.0001	-.0001	0	0

Member Distributed Loads (BLC 6 : 0 Wind - Service) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
41	M43	Z	-.0001	-.0001	0	0
42	M44	Z	-.0001	-.0001	0	0
43	M45	Z	-.0001	-.0001	0	0
44	M46	Z	-.0001	-.0001	0	0
45	M47	Z	-.0001	-.0001	0	0
46	M48	Z	-.0001	-.0001	0	0
47	M49	Z	-.0001	-.0001	0	0
48	M50	Z	-.0001	-.0001	0	0
49	M51	Z	-.0001	-.0001	0	0
50	M52	Z	-.0001	-.0001	0	0
51	M53	Z	-.0001	-.0001	0	0
52	M54	Z	-.0001	-.0001	0	0
53	M55	Z	-.0001	-.0001	0	0
54	M56	Z	-.0001	-.0001	0	0
55	M57	Z	-.0001	-.0001	0	0
56	M58	Z	-.0001	-.0001	0	0
57	M59	Z	-.0001	-.0001	0	0
58	M60	Z	-.0001	-.0001	0	0
59	M61	Z	-.0001	-.0001	0	0
60	M62	Z	-.0001	-.0001	0	0
61	M63	Z	-.0001	-.0001	0	0
62	M64	Z	-.0001	-.0001	0	0
63	M65	Z	-.0001	-.0001	0	0
64	M66	Z	-.0001	-.0001	0	0
65	M67	Z	-.0001	-.0001	0	0
66	M68	Z	-.0001	-.0001	0	0
67	M69	Z	-.0001	-.0001	0	0
68	M101	Z	-.0003	-.0003	0	0
69	M103	Z	-.0003	-.0003	0	0
70	M105	Z	-.0003	-.0003	0	0
71	M107	Z	-.0003	-.0003	0	0
72	M109	Z	-.0003	-.0003	0	0
73	M111	Z	-.0003	-.0003	0	0
74	M113	Z	-.0003	-.0003	0	0
75	M115	Z	-.0003	-.0003	0	0
76	M117	Z	-.0003	-.0003	0	0
77	M119	Z	-.0003	-.0003	0	0
78	M120	Z	-.001	-.001	0	0
79	M121	Z	-.001	-.001	0	0
80	M122	Z	-.001	-.001	0	0
81	M93	Z	-.002	-.002	0	0
82	M94	Z	-.002	-.002	0	0
83	M93A	Z	-.0003	-.0003	0	0
84	M97	Z	-.0003	-.0003	0	0
85	M101A	Z	-.0003	-.0003	0	0
86	M105A	Z	-.0006	-.0006	0	0
87	M106A	Z	-.0006	-.0006	0	0
88	M107A	Z	-.0006	-.0006	0	0
89	M111A	Z	-.0002	-.0002	0	0
90	M112A	Z	-.0002	-.0002	0	0

Member Distributed Loads (BLC 7 : 90 Wind - Service)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.0005	-.0005	0	0
2	M2	X	-.0005	-.0005	0	0
3	M3	X	-.0005	-.0005	0	0

Member Distributed Loads (BLC 7 : 90 Wind - Service) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
4	M4	X	-.001	-.001	0	0
5	M5	X	-.001	-.001	0	0
6	M6	X	-.001	-.001	0	0
7	M7	X	-.002	-.002	0	0
8	M10	X	-.0001	-.0001	0	0
9	M11	X	-.0001	-.0001	0	0
10	M12	X	-.0001	-.0001	0	0
11	M13	X	-.0001	-.0001	0	0
12	M14	X	-.0001	-.0001	0	0
13	M15	X	-.0001	-.0001	0	0
14	M16	X	-.0001	-.0001	0	0
15	M17	X	-.0001	-.0001	0	0
16	M18	X	-.0001	-.0001	0	0
17	M19	X	-.0001	-.0001	0	0
18	M20	X	-.0001	-.0001	0	0
19	M21	X	-.0001	-.0001	0	0
20	M22	X	-.0001	-.0001	0	0
21	M23	X	-.0001	-.0001	0	0
22	M24	X	-.0001	-.0001	0	0
23	M25	X	-.0001	-.0001	0	0
24	M26	X	-.0001	-.0001	0	0
25	M27	X	-.0001	-.0001	0	0
26	M28	X	-.0001	-.0001	0	0
27	M29	X	-.0001	-.0001	0	0
28	M30	X	-.0001	-.0001	0	0
29	M31	X	-.0001	-.0001	0	0
30	M32	X	-.0001	-.0001	0	0
31	M33	X	-.0001	-.0001	0	0
32	M34	X	-.0001	-.0001	0	0
33	M35	X	-.0001	-.0001	0	0
34	M36	X	-.0001	-.0001	0	0
35	M37	X	-.0001	-.0001	0	0
36	M38	X	-.0001	-.0001	0	0
37	M39	X	-.0001	-.0001	0	0
38	M40	X	-.0001	-.0001	0	0
39	M41	X	-.0001	-.0001	0	0
40	M42	X	-.0001	-.0001	0	0
41	M43	X	-.0001	-.0001	0	0
42	M44	X	-.0001	-.0001	0	0
43	M45	X	-.0001	-.0001	0	0
44	M46	X	-.0001	-.0001	0	0
45	M47	X	-.0001	-.0001	0	0
46	M48	X	-.0001	-.0001	0	0
47	M49	X	-.0001	-.0001	0	0
48	M50	X	-.0001	-.0001	0	0
49	M51	X	-.0001	-.0001	0	0
50	M52	X	-.0001	-.0001	0	0
51	M53	X	-.0001	-.0001	0	0
52	M54	X	-.0001	-.0001	0	0
53	M55	X	-.0001	-.0001	0	0
54	M56	X	-.0001	-.0001	0	0
55	M57	X	-.0001	-.0001	0	0
56	M58	X	-.0001	-.0001	0	0
57	M59	X	-.0001	-.0001	0	0
58	M60	X	-.0001	-.0001	0	0
59	M61	X	-.0001	-.0001	0	0
60	M62	X	-.0001	-.0001	0	0

Member Distributed Loads (BLC 7 : 90 Wind - Service) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
61	M63	X	-.0001	-.0001	0	0
62	M64	X	-.0001	-.0001	0	0
63	M65	X	-.0001	-.0001	0	0
64	M66	X	-.0001	-.0001	0	0
65	M67	X	-.0001	-.0001	0	0
66	M68	X	-.0001	-.0001	0	0
67	M69	X	-.0001	-.0001	0	0
68	M101	X	-.0003	-.0003	0	0
69	M103	X	-.0003	-.0003	0	0
70	M105	X	-.0003	-.0003	0	0
71	M107	X	-.0003	-.0003	0	0
72	M109	X	-.0003	-.0003	0	0
73	M111	X	-.0003	-.0003	0	0
74	M113	X	-.0003	-.0003	0	0
75	M115	X	-.0003	-.0003	0	0
76	M117	X	-.0003	-.0003	0	0
77	M119	X	-.0003	-.0003	0	0
78	M120	X	-.001	-.001	0	0
79	M121	X	-.001	-.001	0	0
80	M122	X	-.001	-.001	0	0
81	M93	X	-.002	-.002	0	0
82	M94	X	-.002	-.002	0	0
83	M93A	X	-.0003	-.0003	0	0
84	M97	X	-.0003	-.0003	0	0
85	M101A	X	-.0003	-.0003	0	0
86	M105A	X	-.0006	-.0006	0	0
87	M106A	X	-.0006	-.0006	0	0
88	M107A	X	-.0006	-.0006	0	0
89	M111A	X	-.0002	-.0002	0	0
90	M112A	X	-.0002	-.0002	0	0

Member Distributed Loads (BLC 8 : Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	Y	-.02	-.02	0	0
2	M2	Y	-.02	-.02	0	0
3	M3	Y	-.02	-.02	0	0
4	M4	Y	-.027	-.027	0	0
5	M5	Y	-.027	-.027	0	0
6	M6	Y	-.027	-.027	0	0
7	M7	Y	-.036	-.036	0	0
8	M10	Y	-.01	-.01	0	0
9	M11	Y	-.01	-.01	0	0
10	M12	Y	-.01	-.01	0	0
11	M13	Y	-.01	-.01	0	0
12	M14	Y	-.01	-.01	0	0
13	M15	Y	-.009	-.009	0	0
14	M16	Y	-.009	-.009	0	0
15	M17	Y	-.01	-.01	0	0
16	M18	Y	-.01	-.01	0	0
17	M19	Y	-.01	-.01	0	0
18	M20	Y	-.01	-.01	0	0
19	M21	Y	-.01	-.01	0	0
20	M22	Y	-.009	-.009	0	0
21	M23	Y	-.009	-.009	0	0
22	M24	Y	-.009	-.009	0	0
23	M25	Y	-.009	-.009	0	0

Member Distributed Loads (BLC 8 : Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
24	M26	Y	-.009	-.009	0	0
25	M27	Y	-.009	-.009	0	0
26	M28	Y	-.009	-.009	0	0
27	M29	Y	-.009	-.009	0	0
28	M30	Y	-.01	-.01	0	0
29	M31	Y	-.01	-.01	0	0
30	M32	Y	-.01	-.01	0	0
31	M33	Y	-.01	-.01	0	0
32	M34	Y	-.01	-.01	0	0
33	M35	Y	-.009	-.009	0	0
34	M36	Y	-.009	-.009	0	0
35	M37	Y	-.01	-.01	0	0
36	M38	Y	-.01	-.01	0	0
37	M39	Y	-.01	-.01	0	0
38	M40	Y	-.01	-.01	0	0
39	M41	Y	-.01	-.01	0	0
40	M42	Y	-.009	-.009	0	0
41	M43	Y	-.009	-.009	0	0
42	M44	Y	-.009	-.009	0	0
43	M45	Y	-.009	-.009	0	0
44	M46	Y	-.009	-.009	0	0
45	M47	Y	-.009	-.009	0	0
46	M48	Y	-.009	-.009	0	0
47	M49	Y	-.009	-.009	0	0
48	M50	Y	-.01	-.01	0	0
49	M51	Y	-.01	-.01	0	0
50	M52	Y	-.01	-.01	0	0
51	M53	Y	-.01	-.01	0	0
52	M54	Y	-.01	-.01	0	0
53	M55	Y	-.009	-.009	0	0
54	M56	Y	-.009	-.009	0	0
55	M57	Y	-.01	-.01	0	0
56	M58	Y	-.01	-.01	0	0
57	M59	Y	-.01	-.01	0	0
58	M60	Y	-.01	-.01	0	0
59	M61	Y	-.01	-.01	0	0
60	M62	Y	-.009	-.009	0	0
61	M63	Y	-.009	-.009	0	0
62	M64	Y	-.009	-.009	0	0
63	M65	Y	-.009	-.009	0	0
64	M66	Y	-.009	-.009	0	0
65	M67	Y	-.009	-.009	0	0
66	M68	Y	-.009	-.009	0	0
67	M69	Y	-.009	-.009	0	0
68	M101	Y	-.015	-.015	0	0
69	M103	Y	-.014	-.014	0	0
70	M105	Y	-.014	-.014	0	0
71	M107	Y	-.015	-.015	0	0
72	M109	Y	-.014	-.014	0	0
73	M111	Y	-.014	-.014	0	0
74	M113	Y	-.015	-.015	0	0
75	M115	Y	-.014	-.014	0	0
76	M117	Y	-.014	-.014	0	0
77	M119	Y	-.014	-.014	0	0
78	M120	Y	-.027	-.027	0	0
79	M121	Y	-.027	-.027	0	0
80	M122	Y	-.027	-.027	0	0

Member Distributed Loads (BLC 8 : Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
81	M93	Y	-.036	-.036	0	0
82	M94	Y	-.036	-.036	0	0
83	M93A	Y	-.014	-.014	0	0
84	M97	Y	-.014	-.014	0	0
85	M101A	Y	-.014	-.014	0	0
86	M105A	Y	-.017	-.017	0	0
87	M106A	Y	-.017	-.017	0	0
88	M107A	Y	-.017	-.017	0	0
89	M111A	Y	-.012	-.012	0	0
90	M112A	Y	-.012	-.012	0	0

Member Distributed Loads (BLC 28 : BLC 1 Transient Area Loads)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M16	Y	-.0005671	-.004	1.36	2.312
2	M16	Y	-.004	-.011	2.312	3.264
3	M16	Y	-.011	-.018	3.264	4.216
4	M16	Y	-.018	-.015	4.216	5.168
5	M16	Y	-.015	-.004	5.168	6.12
6	M25	Y	-.028	-.028	0	.501
7	M28	Y	-1.056e-5	-.004	0	.2
8	M28	Y	-.004	-.008	.2	.4
9	M28	Y	-.008	-.008	.4	.6
10	M28	Y	-.008	-.007	.6	.8
11	M28	Y	-.007	-.01	.8	1
12	M63	Y	-9.343e-5	-.003	1.36	2.448
13	M63	Y	-.003	-.013	2.448	3.536
14	M63	Y	-.013	-.02	3.536	4.624
15	M63	Y	-.02	-.009	4.624	5.712
16	M63	Y	-.009	-9.343e-5	5.712	6.8
17	M67	Y	-.025	-.025	0	.501
18	M69	Y	7.668e-5	-.003	0	.2
19	M69	Y	-.003	-.007	.2	.4
20	M69	Y	-.007	-.008	.4	.6
21	M69	Y	-.008	-.011	.6	.8
22	M69	Y	-.011	-.012	.8	1
23	M16	Y	.0001812	-.0005435	.68	1.7
24	M16	Y	-.0005435	-.002	1.7	2.72
25	M24	Y	-.004	-.004	.308	.606
26	M25	Y	-.077	-.031	0	.276
27	M25	Y	-.031	-.006	.276	.552
28	M25	Y	-.006	-.001	.552	.828
29	M25	Y	-.001	.002	.828	1.104
30	M25	Y	.002	.002	1.104	1.38
31	M63	Y	.0001813	-.000544	.68	1.7
32	M63	Y	-.000544	-.002	1.7	2.72
33	M66	Y	-.004	-.004	.308	.606
34	M67	Y	-.074	-.031	0	.276
35	M67	Y	-.031	-.007	.276	.552
36	M67	Y	-.007	-.002	.552	.828
37	M67	Y	-.002	.002	.828	1.104
38	M67	Y	.002	.002	1.104	1.38
39	M24	Y	.0001902	-.0001785	0	.333
40	M24	Y	-.0001785	-.002	.333	.667
41	M24	Y	-.002	-.004	.667	1
42	M25	Y	-.018	-.014	0	.414
43	M25	Y	-.014	-.011	.414	.828

Member Distributed Loads (BLC 28 : BLC 1 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
44	M25	Y	-.011	-.006	.828	1.242
45	M25	Y	-.006	-.000914	1.242	1.656
46	M25	Y	-.000914	.0002146	1.656	2.07
47	M66	Y	.0001908	-.0001792	0	.333
48	M66	Y	-.0001792	-.002	.333	.667
49	M66	Y	-.002	-.004	.667	1
50	M67	Y	-.019	-.014	0	.414
51	M67	Y	-.014	-.011	.414	.828
52	M67	Y	-.011	-.006	.828	1.242
53	M67	Y	-.006	-.0008987	1.242	1.656
54	M67	Y	-.0008987	.0002295	1.656	2.07
55	M23	Y	-.0005973	-.004	1.36	2.312
56	M23	Y	-.004	-.011	2.312	3.264
57	M23	Y	-.011	-.018	3.264	4.216
58	M23	Y	-.018	-.015	4.216	5.168
59	M23	Y	-.015	-.005	5.168	6.12
60	M27	Y	-.029	-.029	0	.501
61	M29	Y	-.000206	-.003	0	.25
62	M29	Y	-.003	-.007	.25	.5
63	M29	Y	-.007	-.006	.5	.75
64	M29	Y	-.006	-.002	.75	1
65	M36	Y	-6.654e-5	-.003	1.36	2.448
66	M36	Y	-.003	-.013	2.448	3.536
67	M36	Y	-.013	-.02	3.536	4.624
68	M36	Y	-.02	-.009	4.624	5.712
69	M36	Y	-.009	-6.654e-5	5.712	6.8
70	M45	Y	-.025	-.025	0	.501
71	M48	Y	-.0001665	-.004	0	.2
72	M48	Y	-.004	-.007	.2	.4
73	M48	Y	-.007	-.009	.4	.6
74	M48	Y	-.009	-.01	.6	.8
75	M48	Y	-.01	-.01	.8	1
76	M23	Y	.0001811	-.0005432	.68	1.7
77	M23	Y	-.0005432	-.002	1.7	2.72
78	M26	Y	-.004	-.004	.308	.606
79	M27	Y	-.075	-.03	0	.276
80	M27	Y	-.03	-.007	.276	.552
81	M27	Y	-.007	-.002	.552	.828
82	M27	Y	-.002	.002	.828	1.104
83	M27	Y	.002	.002	1.104	1.38
84	M29	Y	.0001668	.0001668	0	.2
85	M29	Y	.0001668	-.001	.2	.4
86	M29	Y	-.001	-.003	.4	.6
87	M29	Y	-.003	-.004	.6	.8
88	M29	Y	-.004	-.007	.8	1
89	M36	Y	.0001812	-.0005436	.68	1.7
90	M36	Y	-.0005436	-.002	1.7	2.72
91	M44	Y	-.004	-.004	.308	.606
92	M45	Y	-.079	-.032	0	.276
93	M45	Y	-.032	-.006	.276	.552
94	M45	Y	-.006	-.001	.552	.828
95	M45	Y	-.001	.002	.828	1.104
96	M45	Y	.002	.002	1.104	1.38
97	M26	Y	.0001902	-.0001785	0	.333
98	M26	Y	-.0001785	-.002	.333	.667
99	M26	Y	-.002	-.004	.667	1
100	M27	Y	-.018	-.014	0	.414

Member Distributed Loads (BLC 28 : BLC 1 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
101	M27	Y	-.014	-.011	.414	.828
102	M27	Y	-.011	-.006	.828	1.242
103	M27	Y	-.006	-.0009139	1.242	1.656
104	M27	Y	-.0009139	.0002145	1.656	2.07
105	M44	Y	.0001907	-.0001793	0	.333
106	M44	Y	-.0001793	-.002	.333	.667
107	M44	Y	-.002	-.004	.667	1
108	M45	Y	-.019	-.014	0	.414
109	M45	Y	-.014	-.011	.414	.828
110	M45	Y	-.011	-.006	.828	1.242
111	M45	Y	-.006	-.0008986	1.242	1.656
112	M45	Y	-.0008986	.0002295	1.656	2.07
113	M43	Y	-.0006795	-.003	1.36	2.312
114	M43	Y	-.003	-.011	2.312	3.264
115	M43	Y	-.011	-.018	3.264	4.216
116	M43	Y	-.018	-.014	4.216	5.168
117	M43	Y	-.014	-.002	5.168	6.12
118	M47	Y	-.026	-.026	0	.501
119	M49	Y	.0003487	-.002	0	.2
120	M49	Y	-.002	-.008	.2	.4
121	M49	Y	-.008	-.011	.4	.6
122	M49	Y	-.011	-.014	.6	.8
123	M49	Y	-.014	-.021	.8	1
124	M56	Y	-.0002602	-.004	1.36	2.448
125	M56	Y	-.004	-.014	2.448	3.536
126	M56	Y	-.014	-.016	3.536	4.624
127	M56	Y	-.016	-.01	4.624	5.712
128	M56	Y	-.01	-.006	5.712	6.8
129	M65	Y	-.028	-.028	0	.501
130	M68	Y	-.0001415	-.005	0	.2
131	M68	Y	-.005	-.008	.2	.4
132	M68	Y	-.008	-.009	.4	.6
133	M68	Y	-.009	-.01	.6	.8
134	M68	Y	-.01	-.01	.8	1
135	M43	Y	.0001813	-.000544	.68	1.7
136	M43	Y	-.000544	-.002	1.7	2.72
137	M46	Y	-.004	-.004	.308	.606
138	M47	Y	-.068	-.028	0	.276
139	M47	Y	-.028	-.007	.276	.552
140	M47	Y	-.007	-.002	.552	.828
141	M47	Y	-.002	.002	.828	1.104
142	M47	Y	.002	.002	1.104	1.38
143	M56	Y	.0001812	-.0005436	.68	1.7
144	M56	Y	-.0005436	-.002	1.7	2.72
145	M64	Y	-.004	-.004	.308	.606
146	M65	Y	-.079	-.032	0	.276
147	M65	Y	-.032	-.006	.276	.552
148	M65	Y	-.006	-.001	.552	.828
149	M65	Y	-.001	.002	.828	1.104
150	M65	Y	.002	.002	1.104	1.38
151	M46	Y	.0001902	-.0001785	0	.333
152	M46	Y	-.0001785	-.002	.333	.667
153	M46	Y	-.002	-.004	.667	1
154	M47	Y	-.018	-.014	0	.414
155	M47	Y	-.014	-.011	.414	.828
156	M47	Y	-.011	-.006	.828	1.242
157	M47	Y	-.006	-.0009139	1.242	1.656

Member Distributed Loads (BLC 28 : BLC 1 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
158	M47	Y	-.0009139	.0002145	1.656	2.07
159	M64	Y	.0001907	-.0001793	0	.333
160	M64	Y	-.0001793	-.002	.333	.667
161	M64	Y	-.002	-.004	.667	1
162	M65	Y	-.019	-.014	0	.414
163	M65	Y	-.014	-.011	.414	.828
164	M65	Y	-.011	-.006	.828	1.242
165	M65	Y	-.006	-.0008986	1.242	1.656
166	M65	Y	-.0008986	.0002295	1.656	2.07

Member Distributed Loads (BLC 29 : BLC 8 Transient Area Loads)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M16	Y	-.0006407	-.005	1.36	2.312
2	M16	Y	-.005	-.013	2.312	3.264
3	M16	Y	-.013	-.02	3.264	4.216
4	M16	Y	-.02	-.017	4.216	5.168
5	M16	Y	-.017	-.005	5.168	6.12
6	M25	Y	-.032	-.032	0	.501
7	M28	Y	-1.386e-5	-.004	0	.2
8	M28	Y	-.004	-.009	.2	.4
9	M28	Y	-.009	-.01	.4	.6
10	M28	Y	-.01	-.008	.6	.8
11	M28	Y	-.008	-.011	.8	1
12	M63	Y	-.0001056	-.004	1.36	2.448
13	M63	Y	-.004	-.015	2.448	3.536
14	M63	Y	-.015	-.022	3.536	4.624
15	M63	Y	-.022	-.01	4.624	5.712
16	M63	Y	-.01	-.0001056	5.712	6.8
17	M67	Y	-.029	-.029	0	.501
18	M69	Y	8.45e-5	-.004	0	.2
19	M69	Y	-.004	-.008	.2	.4
20	M69	Y	-.008	-.009	.4	.6
21	M69	Y	-.009	-.012	.6	.8
22	M69	Y	-.012	-.014	.8	1
23	M16	Y	.0001993	-.0005979	.68	1.7
24	M16	Y	-.0005979	-.002	1.7	2.72
25	M24	Y	-.005	-.005	.308	.606
26	M25	Y	-.085	-.034	0	.276
27	M25	Y	-.034	-.007	.276	.552
28	M25	Y	-.007	-.001	.552	.828
29	M25	Y	-.001	.003	.828	1.104
30	M25	Y	.003	.003	1.104	1.38
31	M63	Y	.0001995	-.0005984	.68	1.7
32	M63	Y	-.0005984	-.002	1.7	2.72
33	M66	Y	-.005	-.005	.308	.606
34	M67	Y	-.081	-.034	0	.276
35	M67	Y	-.034	-.008	.276	.552
36	M67	Y	-.008	-.002	.552	.828
37	M67	Y	-.002	.002	.828	1.104
38	M67	Y	.002	.002	1.104	1.38
39	M24	Y	.0002092	-.0001964	0	.333
40	M24	Y	-.0001964	-.002	.333	.667
41	M24	Y	-.002	-.004	.667	1
42	M25	Y	-.02	-.015	0	.414
43	M25	Y	-.015	-.012	.414	.828
44	M25	Y	-.012	-.007	.828	1.242

Member Distributed Loads (BLC 29 : BLC 8 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
45	M25	Y	-.007	-.001	1.242	1.656
46	M25	Y	-.001	.0002361	1.656	2.07
47	M66	Y	.0002098	-.0001971	0	.333
48	M66	Y	-.0001971	-.002	.333	.667
49	M66	Y	-.002	-.004	.667	1
50	M67	Y	-.021	-.016	0	.414
51	M67	Y	-.016	-.012	.414	.828
52	M67	Y	-.012	-.007	.828	1.242
53	M67	Y	-.007	-.0009885	1.242	1.656
54	M67	Y	-.0009885	.0002524	1.656	2.07
55	M23	Y	-.0006571	-.005	1.36	2.312
56	M23	Y	-.005	-.012	2.312	3.264
57	M23	Y	-.012	-.02	3.264	4.216
58	M23	Y	-.02	-.017	4.216	5.168
59	M23	Y	-.017	-.005	5.168	6.12
60	M27	Y	-.031	-.031	0	.501
61	M29	Y	-.0002266	-.004	0	.25
62	M29	Y	-.004	-.008	.25	.5
63	M29	Y	-.008	-.006	.5	.75
64	M29	Y	-.006	-.003	.75	1
65	M36	Y	-7.319e-5	-.004	1.36	2.448
66	M36	Y	-.004	-.015	2.448	3.536
67	M36	Y	-.015	-.022	3.536	4.624
68	M36	Y	-.022	-.01	4.624	5.712
69	M36	Y	-.01	-7.319e-5	5.712	6.8
70	M45	Y	-.028	-.028	0	.501
71	M48	Y	-.0001831	-.005	0	.2
72	M48	Y	-.005	-.008	.2	.4
73	M48	Y	-.008	-.01	.4	.6
74	M48	Y	-.01	-.011	.6	.8
75	M48	Y	-.011	-.011	.8	1
76	M23	Y	.0001992	-.0005976	.68	1.7
77	M23	Y	-.0005976	-.002	1.7	2.72
78	M26	Y	-.005	-.005	.308	.606
79	M27	Y	-.082	-.033	0	.276
80	M27	Y	-.033	-.007	.276	.552
81	M27	Y	-.007	-.002	.552	.828
82	M27	Y	-.002	.002	.828	1.104
83	M27	Y	.002	.002	1.104	1.38
84	M29	Y	.0001835	.0001835	0	.2
85	M29	Y	.0001835	-.002	.2	.4
86	M29	Y	-.002	-.003	.4	.6
87	M29	Y	-.003	-.005	.6	.8
88	M29	Y	-.005	-.008	.8	1
89	M36	Y	.0001993	-.000598	.68	1.7
90	M36	Y	-.000598	-.002	1.7	2.72
91	M44	Y	-.005	-.005	.308	.606
92	M45	Y	-.087	-.035	0	.276
93	M45	Y	-.035	-.007	.276	.552
94	M45	Y	-.007	-.001	.552	.828
95	M45	Y	-.001	.003	.828	1.104
96	M45	Y	.003	.003	1.104	1.38
97	M26	Y	.0002092	-.0001964	0	.333
98	M26	Y	-.0001964	-.002	.333	.667
99	M26	Y	-.002	-.004	.667	1
100	M27	Y	-.02	-.015	0	.414
101	M27	Y	-.015	-.012	.414	.828

Member Distributed Loads (BLC 29 : BLC 8 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
102	M27	Y	-.012	-.007	.828	1.242
103	M27	Y	-.007	-.001	1.242	1.656
104	M27	Y	-.001	.0002359	1.656	2.07
105	M44	Y	.0002098	-.0001972	0	.333
106	M44	Y	-.0001972	-.002	.333	.667
107	M44	Y	-.002	-.004	.667	1
108	M45	Y	-.021	-.016	0	.414
109	M45	Y	-.016	-.012	.414	.828
110	M45	Y	-.012	-.007	.828	1.242
111	M45	Y	-.007	-.0009884	1.242	1.656
112	M45	Y	-.0009884	.0002525	1.656	2.07
113	M43	Y	-.0007474	-.004	1.36	2.312
114	M43	Y	-.004	-.012	2.312	3.264
115	M43	Y	-.012	-.02	3.264	4.216
116	M43	Y	-.02	-.016	4.216	5.168
117	M43	Y	-.016	-.002	5.168	6.12
118	M47	Y	-.028	-.028	0	.501
119	M49	Y	.0003836	-.003	0	.2
120	M49	Y	-.003	-.009	.2	.4
121	M49	Y	-.009	-.012	.4	.6
122	M49	Y	-.012	-.016	.6	.8
123	M49	Y	-.016	-.024	.8	1
124	M56	Y	-.0002862	-.004	1.36	2.448
125	M56	Y	-.004	-.015	2.448	3.536
126	M56	Y	-.015	-.018	3.536	4.624
127	M56	Y	-.018	-.011	4.624	5.712
128	M56	Y	-.011	-.007	5.712	6.8
129	M65	Y	-.031	-.031	0	.501
130	M68	Y	-.0001557	-.005	0	.2
131	M68	Y	-.005	-.008	.2	.4
132	M68	Y	-.008	-.01	.4	.6
133	M68	Y	-.01	-.011	.6	.8
134	M68	Y	-.011	-.012	.8	1
135	M43	Y	.0001995	-.0005984	.68	1.7
136	M43	Y	-.0005984	-.002	1.7	2.72
137	M46	Y	-.005	-.005	.308	.606
138	M47	Y	-.075	-.031	0	.276
139	M47	Y	-.031	-.008	.276	.552
140	M47	Y	-.008	-.002	.552	.828
141	M47	Y	-.002	.002	.828	1.104
142	M47	Y	.002	.002	1.104	1.38
143	M56	Y	.0001993	-.000598	.68	1.7
144	M56	Y	-.000598	-.002	1.7	2.72
145	M64	Y	-.005	-.005	.308	.606
146	M65	Y	-.087	-.035	0	.276
147	M65	Y	-.035	-.007	.276	.552
148	M65	Y	-.007	-.001	.552	.828
149	M65	Y	-.001	.003	.828	1.104
150	M65	Y	.003	.003	1.104	1.38
151	M46	Y	.0002092	-.0001964	0	.333
152	M46	Y	-.0001964	-.002	.333	.667
153	M46	Y	-.002	-.004	.667	1
154	M47	Y	-.02	-.015	0	.414
155	M47	Y	-.015	-.012	.414	.828
156	M47	Y	-.012	-.007	.828	1.242
157	M47	Y	-.007	-.001	1.242	1.656
158	M47	Y	-.001	.0002359	1.656	2.07

Member Distributed Loads (BLC 29 : BLC 8 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F...	Start Location[ft,%]	End Location[ft,%]
159	M64	Y	.0002098	-.0001972	0	.333
160	M64	Y	-.0001972	-.002	.333	.667
161	M64	Y	-.002	-.004	.667	1
162	M65	Y	-.021	-.016	0	.414
163	M65	Y	-.016	-.012	.414	.828
164	M65	Y	-.012	-.007	.828	1.242
165	M65	Y	-.007	-.0009884	1.242	1.656
166	M65	Y	-.0009884	.0002525	1.656	2.07

Joint Loads and Enforced Displacements (BLC 9 : Live Load a)

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/f...
1	N143	L	Y	-.5

Joint Loads and Enforced Displacements (BLC 10 : Live Load b)

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/f...
1	N147	L	Y	-.5

Joint Loads and Enforced Displacements (BLC 11 : Live Load c)

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/f...
1	N151	L	Y	-.5

Member Area Loads (BLC 1 : Dead)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N120	N125	N122	N119	Y	Two Way	-.01
2	N122	N203	N189	N125	Y	Two Way	-.01
3	N203	N204	N190	N189	Y	Two Way	-.01
4	N132	N137	N134	N131	Y	Two Way	-.01
5	N134	N191	N195	N137	Y	Two Way	-.01
6	N191	N192	N196	N195	Y	Two Way	-.01
7	N108	N113	N110	N107	Y	Two Way	-.01
8	N110	N197	N201	N113	Y	Two Way	-.01
9	N197	N198	N202	N201	Y	Two Way	-.01

Member Area Loads (BLC 8 : Ice)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N120	N125	N122	N119	Y	Two Way	-.011
2	N122	N203	N189	N125	Y	Two Way	-.011
3	N203	N204	N190	N189	Y	Two Way	-.011
4	N132	N137	N134	N131	Y	Two Way	-.011
5	N134	N191	N195	N137	Y	Two Way	-.011
6	N191	N192	N196	N195	Y	Two Way	-.011
7	N108	N113	N110	N107	Y	Two Way	-.011
8	N110	N197	N201	N113	Y	Two Way	-.011
9	N197	N198	N202	N201	Y	Two Way	-.011

Envelope Joint Reactions

	Joint		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N183	max	1.986	5	4.023	20	1.602	2	-3.307	2	5.038	5	1.112	60
2		min	-1.995	11	1.104	2	-1.489	8	-13.985	20	-5.052	11	-1.326	30
3	N187	max	1.414	6	4.174	16	2.665	2	7.81	15	7.279	13	-2.874	58
4		min	-1.5	12	1.073	57	-2.717	8	1.621	57	-7.276	7	-12.57	16

Envelope Joint Reactions (Continued)

	Joint		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
5	N185	max	1.883	4	4.963	24	2.994	2	8.972	25	8.416	9	15.273	23
6		min	-1.788	10	1.219	30	-3.054	8	1.893	31	-8.397	3	3.32	29
7	Totals:	max	5.05	5	13.048	14	7.261	2						
8		min	-5.05	11	4.09	8	-7.261	8						

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

	Member	Shape	Code Check	Loc[ft]	LC	Shear...	Loc[ft]	Dir	LC	phi*Pnc..	phi*Pnt...	phi*Mn ...	phi*Mn ...	Cb	Eqn
1	M1	PIPE_4.0	.534	8	20	.171	8		14	41.111	93.24	10.631	10.631	1...	H1-1b
2	M2	PIPE_4.0	.557	8	14	.188	8		18	41.111	93.24	10.631	10.631	1...	H1-1b
3	M3	PIPE_4.0	.569	8	15	.154	8		22	41.111	93.24	10.631	10.631	1...	H1-1b
4	M4	HSS5X5X5	.172	0	19	.081	0	y	30	215.88	217.764	31.602	31.602	2...	H1-1b
5	M5	HSS5X5X5	.228	0	22	.088	0	y	15	215.88	217.764	31.602	31.602	1...	H1-1b
6	M6	HSS5X5X5	.188	0	14	.088	0	y	14	215.88	217.764	31.602	31.602	1...	H1-1b
7	M7	PL1/2X10	.148	.451	4	.050	1.215	y	24	58.813	162	1.688	33.75	2...	H1-1b
8	M10	SR_1"	.181	0	13	.072	0		25	24.687	25.447	.424	.424	1...	H1-1b
9	M11	SR_1"	.283	0	13	.037	0		25	24.687	25.447	.424	.424	1...	H1-1b
10	M12	SR_1"	.298	0	13	.033	.5		13	24.687	25.447	.424	.424	1...	H1-1b
11	M13	SR_1"	.259	0	12	.031	.5		12	24.687	25.447	.424	.424	1...	H1-1b
12	M14	SR_1"	.222	0	12	.026	.5		12	24.687	25.447	.424	.424	1...	H1-1b
13	M15	SR_3/4"	.192	0	5	.018	.5		5	13.563	14.314	.179	.179	2...	H1-1b
14	M16	SR_3/4"	.216	1.204	13	.057	1.204		25	9.38	14.314	.179	.179	2...	H1-1b
15	M17	SR_1"	.156	0	3	.075	0		15	24.687	25.447	.424	.424	1...	H1-1b
16	M18	SR_1"	.270	0	15	.039	0		15	24.687	25.447	.424	.424	1...	H1-1b
17	M19	SR_1"	.267	0	3	.030	.5		3	24.687	25.447	.424	.424	1...	H1-1b
18	M20	SR_1"	.261	0	4	.031	.5		4	24.687	25.447	.424	.424	1...	H1-1b
19	M21	SR_1"	.252	0	10	.029	.5		10	24.687	25.447	.424	.424	1...	H1-1b
20	M22	SR_3/4"	.213	0	10	.021	.5		10	13.563	14.314	.179	.179	2...	H1-1b
21	M23	SR_3/4"	.208	5.1	4	.059	1.204		15	9.38	14.314	.179	.179	2...	H1-1b
22	M24	SR_3/4"	.160	0	24	.142	0		25	11.538	14.314	.179	.179	1...	H1-1b
23	M25	SR_3/4"	.347	2.3	18	.127	0		25	4.606	14.314	.179	.179	2...	H1-1b
24	M26	SR_3/4"	.160	0	17	.144	0		14	11.538	14.314	.179	.179	1...	H1-1b
25	M27	SR_3/4"	.341	2.3	15	.128	2.3		15	4.606	14.314	.179	.179	2...	H1-1b
26	M28	SR_3/4"	.365	0	24	.073	0		25	11.538	14.314	.179	.179	2...	H1-1b
27	M29	SR_3/4"	.361	0	17	.074	0		14	11.538	14.314	.179	.179	2...	H1-1b
28	M30	SR_1"	.152	0	4	.073	0		17	24.687	25.447	.424	.424	1...	H1-1b
29	M31	SR_1"	.267	0	16	.038	0		17	24.687	25.447	.424	.424	1...	H1-1b
30	M32	SR_1"	.284	0	4	.030	.5		4	24.687	25.447	.424	.424	1...	H1-1b
31	M33	SR_1"	.297	0	4	.034	.5		4	24.687	25.447	.424	.424	1...	H1-1b
32	M34	SR_1"	.315	0	9	.037	.5		9	24.687	25.447	.424	.424	1...	H1-1b
33	M35	SR_3/4"	.306	0	9	.028	.5		9	13.563	14.314	.179	.179	2...	H1-1b
34	M36	SR_3/4"	.244	5.1	3	.058	1.204		17	9.38	14.314	.179	.179	2...	H1-1b
35	M37	SR_1"	.185	0	7	.074	0		20	24.687	25.447	.424	.424	1...	H1-1b
36	M38	SR_1"	.284	0	8	.040	0		20	24.687	25.447	.424	.424	1...	H1-1b
37	M39	SR_1"	.335	0	8	.036	.5		2	24.687	25.447	.424	.424	1...	H1-1b
38	M40	SR_1"	.356	0	8	.042	.5		2	24.687	25.447	.424	.424	1...	H1-1b
39	M41	SR_1"	.356	0	8	.042	.5		2	24.687	25.447	.424	.424	1...	H1-1b
40	M42	SR_3/4"	.332	0	3	.031	.5		3	13.563	14.314	.179	.179	2...	H1-1b
41	M43	SR_3/4"	.291	5.1	8	.060	1.204		20	9.38	14.314	.179	.179	2...	H1-1b
42	M44	SR_3/4"	.160	0	15	.140	0		17	11.538	14.314	.179	.179	1...	H1-1b
43	M45	SR_3/4"	.342	2.3	16	.125	0		18	4.606	14.314	.179	.179	2...	H1-1b
44	M46	SR_3/4"	.160	0	20	.141	0		20	11.538	14.314	.179	.179	1...	H1-1b
45	M47	SR_3/4"	.338	2.3	14	.125	0		19	4.606	14.314	.179	.179	2...	H1-1b
46	M48	SR_3/4"	.360	0	15	.073	0		18	11.538	14.314	.179	.179	2...	H1-1b
47	M49	SR_3/4"	.363	0	20	.076	0		20	11.538	14.314	.179	.179	2...	H1-1b
48	M50	SR_1"	.196	0	8	.072	0		21	24.687	25.447	.424	.424	1...	H1-1b

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

	Member	Shape	Code Check	Loc[ft]	LC	Shear...	Loc[ft]	Dir	LC	phi*Pnc..	phi*Pnt...	phi*Mn ...	phi*Mn ...	Cb	Eqn
49	M51	SR_1"	.311	0	8	.038	.5		9	24.687	25.447	.424	.424	1...	H1-1b
50	M52	SR_1"	.358	0	8	.041	.5		8	24.687	25.447	.424	.424	1...	H1-1b
51	M53	SR_1"	.354	0	8	.041	.5		8	24.687	25.447	.424	.424	1...	H1-1b
52	M54	SR_1"	.324	0	2	.039	.5		2	24.687	25.447	.424	.424	1...	H1-1b
53	M55	SR_3/4"	.273	0	13	.025	.5		13	13.563	14.314	.179	.179	1...	H1-1b
54	M56	SR_3/4"	.281	0	8	.057	1.204		21	9.38	14.314	.179	.179	2...	H1-1a
55	M57	SR_1"	.134	0	24	.070	0		23	24.687	25.447	.424	.424	1...	H1-1b
56	M58	SR_1"	.265	0	24	.035	0		23	24.687	25.447	.424	.424	1...	H1-1b
57	M59	SR_1"	.244	0	12	.027	.5		12	24.687	25.447	.424	.424	1...	H1-1b
58	M60	SR_1"	.260	0	12	.032	.5		12	24.687	25.447	.424	.424	1...	H1-1b
59	M61	SR_1"	.281	0	7	.033	.5		7	24.687	25.447	.424	.424	1...	H1-1b
60	M62	SR_3/4"	.273	0	7	.026	.5		7	13.563	14.314	.179	.179	1...	H1-1b
61	M63	SR_3/4"	.214	5.1	13	.055	1.204		23	9.38	14.314	.179	.179	2...	H1-1b
62	M64	SR_3/4"	.162	0	20	.142	0		22	11.538	14.314	.179	.179	1...	H1-1b
63	M65	SR_3/4"	.355	2.3	25	.127	0		22	4.606	14.314	.179	.179	2...	H1-1b
64	M66	SR_3/4"	.164	0	25	.139	0		23	11.538	14.314	.179	.179	1...	H1-1b
65	M67	SR_3/4"	.330	2.3	19	.125	2.3		24	4.606	14.314	.179	.179	2...	H1-1b
66	M68	SR_3/4"	.370	0	19	.073	0		22	11.538	14.314	.179	.179	2...	H1-1b
67	M69	SR_3/4"	.362	0	25	.069	0		22	11.538	14.314	.179	.179	2...	H1-1b
68	M101	PIPE_2.5	.683	4.594	24	.201	2.156		20	26.137	50.715	3.596	3.596	1...	H1-1b
69	M103	PIPE_2.0	.374	3	2	.070	3		6	20.867	32.13	1.872	1.872	1...	H1-1b
70	M105	PIPE_2.0	.824	3	17	.191	3		19	20.867	32.13	1.872	1.872	1...	H1-1b
71	M107	PIPE_2.5	.790	4.594	15	.227	4.594		25	26.137	50.715	3.596	3.596	1...	H1-1b
72	M109	PIPE_2.0	.444	3	6	.063	3		9	20.867	32.13	1.872	1.872	1...	H1-1b
73	M111	PIPE_2.0	.724	3	20	.201	3		23	20.867	32.13	1.872	1.872	2...	H1-1b
74	M113	PIPE_2.5	.728	4.594	19	.183	2.156		16	26.137	50.715	3.596	3.596	1...	H1-1b
75	M115	PIPE_2.0	.376	3	2	.093	3		2	20.867	32.13	1.872	1.872	2...	H1-1b
76	M117	PIPE_2.0	.896	3	25	.187	3		14	20.867	32.13	1.872	1.872	1...	H1-1b
77	M119	PIPE_2.0	.700	3.5	5	.110	1.021		24	17.855	32.13	1.872	1.872	1...	H1-1b
78	M120	HSS5X5X5	.474	0	23	.081	0	y	30	214.998	217.764	31.602	31.602	1...	H1-1b
79	M121	HSS5X5X5	.613	0	21	.090	0	y	15	214.998	217.764	31.602	31.602	1...	H1-1b
80	M122	HSS5X5X5	.512	0	25	.089	0	y	14	214.998	217.764	31.602	31.602	1...	H1-1b
81	M93	PL1/2X10	.185	.451	2	.046	1.215	y	17	58.813	162	1.688	33.75	2...	H1-1b
82	M94	PL1/2X10	.182	1.215	8	.035	1.215	y	36	58.813	162	1.688	33.75	2...	H1-1b
83	M93A	PIPE_2.0	.467	8.667	17	.159	.5		8	3.842	32.13	1.872	1.872	1...	H1-1b
84	M97	PIPE_2.0	.439	8.5	15	.205	8.667		10	3.842	32.13	1.872	1.872	1...	H1-1b
85	M101A	PIPE_2.0	.504	8.667	25	.107	1.5		16	3.842	32.13	1.872	1.872	2...	H1-1b
86	M105A	L2.5x2.5x4	.300	1.245	21	.071	1.245	z	2	36.654	38.556	1.114	2.537	1...	H2-1
87	M106A	L2.5x2.5x4	.262	0	23	.064	1.245	z	11	36.654	38.556	1.114	2.537	1...	H2-1
88	M107A	L2.5x2.5x4	.316	1.245	25	.066	0	z	13	36.654	38.556	1.114	2.537	1...	H2-1
89	M111A	PIPE_1.5	.855	13.5...	12	.019	13.529		12	2.408	23.593	1.105	1.105	2...	H1-1b
90	M112A	PIPE_1.5	.726	.864	13	.018	.864		13	2.408	23.593	1.105	1.105	2...	H1-1b

Exhibit F

Power Density/RF Emissions Report

Transcom Engineering, Inc.

Wireless Network Design and Deployment

Radio Frequency Emissions Analysis Report

T-MOBILE Existing Facility

Site ID: CT11004B

Newington_1
240 Kensington Road
Berlin, CT 06037

May 30, 2019

Transcom Engineering Project Number: 737001-0104

Site Compliance Summary	
Compliance Status:	**COMPLIANT**
Site total MPE% of FCC general population allowable limit:	**17.21 %**

May 30, 2019

T-MOBILE
Attn: Jason Overbey, RF Manager
35 Griffin Road South
Bloomfield, CT 6009

Emissions Analysis for Site: **CT11004B – Newington_1**

Transcom Engineering, Inc ("Transcom") was directed to analyze the proposed upgrades to the T-MOBILE facility located at **240 Kensington Road, Berlin, CT**, for the purpose of determining whether the emissions from the Proposed T-MOBILE Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter (μW/cm2). The number of $\mu W/cm^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general population may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general population would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Population exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu W/cm^2$). The general population exposure limits for the 600 & 700 MHz bands are approximately 400 $\mu W/cm^2$ and 467 $\mu W/cm^2$ respectively. The general population exposure limit for the 1900 MHz (PCS) and 2100 MHz (AWS) bands is 1000 $\mu W/cm^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were performed for the proposed upgrades to the T-MOBILE antenna facility located at **240 Kensington Road, Berlin, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-MOBILE is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB for directional panel antennas, was focused at the base of the tower. For this report the sample point is the top of a 6-foot person standing at the base of the tower.

Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. All power values expressed and analyzed are maximum power levels expected to be used on all radios.

All emissions values for additional carriers were taken from the Connecticut Siting Council (CSC) active MPE database. Values in this database are provided by the individual carriers themselves

For each sector the following channel counts, frequency bands and power levels were utilized as shown in *Table 1*:

Technology	Frequency Band	Channel Count	Transmit Power per Channel (W)
LTE	1900 MHz (PCS)	4	40
LTE	2100 MHz (AWS)	2	60
GSM	1900 MHz (PCS)	1	15
UMTS	2100 MHz (AWS)	1	40
LTE / 5G NR	600 MHz	2	40
LTE	700 MHz	2	20

Table 1: Channel Data Table

The following antennas listed in *Table 2* were used in the modeling for transmission in the 600, 700 MHz, 1900 MHz (PCS) and 2100 MHz (AWS) frequency bands. This is based on feedback from the carrier with regards to anticipated antenna selection. Maximum gain values for all antennas are listed in the Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB for directional panel antennas, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

Sector	Antenna Number	Antenna Make / Model	Antenna Centerline (ft)
A	1	Ericsson AIR32 B66A / B2A	181
A	2	RFS APX16DWV-16DWV-S-E-ACU	181
A	3	RFS APXVAARR24_43-U-NA20	181
B	1	Ericsson AIR32 B66A / B2A	181
B	2	RFS APX16DWV-16DWV-S-E-ACU	181
B	3	RFS APXVAARR24_43-U-NA20	181
C	1	Ericsson AIR32 B66A / B2A	181
C	2	RFS APX16DWV-16DWV-S-E-ACU	181
C	3	RFS APXVAARR24_43-U-NA20	181

Table 2: Antenna Data

All calculations were done with respect to uncontrolled / general population threshold limits.

Cable losses were factored in the calculations for this site. Since the **1900 MHz (PCS) GSM** & **2100 MHz (AWS) UMTS** radios are ground mounted the following cable loss values were used. or each ground mounted **1900 MHz (PCS) GSM** radio there was **2.37 dB** of cable loss calculated into the system gains / losses for this site. For each ground mounted **2100 MHz (AWS) UMTS** radio there was **2.44 dB** of cable loss calculated into the system gains / losses for this site. These values were calculated based upon the manufacturers specifications for **230 feet** of **1-5/8”** coax.

RESULTS

Per the calculations completed for the proposed T-MOBILE configurations *Table 3* shows resulting emissions power levels and percentages of the FCC's allowable general population limit.

Antenna ID	Antenna Make / Model	Frequency Bands	Antenna Gain (dBd)	Channel Count	Total TX Power (W)	ERP (W)	MPE %
Antenna A1	Ericsson AIR32 B66A / B2A	1900 MHz (PCS) / 2100 MHz (AWS)	15.85	6	280	10,768.57	1.26
Antenna A2	RFS APX16DWV-16DWV-S-E-ACU	1900 MHz (PCS) / 2100 MHz (AWS)	15.9	2	55	1,225.41	0.14
Antenna A3	RFS APXVAARR24_43-U-NA20	600 MHz / 700 MHz	12.95 / 13.35	4	120	2,443.03	0.68
						Sector A Composite MPE%	**2.08**
Antenna B1	Ericsson AIR32 B66A / B2A	1900 MHz (PCS) / 2100 MHz (AWS)	15.85	6	280	10,768.57	1.26
Antenna B2	RFS APX16DWV-16DWV-S-E-ACU	1900 MHz (PCS) / 2100 MHz (AWS)	15.9	2	55	1,225.41	0.14
Antenna B3	RFS APXVAARR24_43-U-NA20	600 MHz / 700 MHz	12.95 / 13.35	4	120	2,443.03	0.68
						Sector B Composite MPE%	**2.08**
Antenna C1	Ericsson AIR32 B66A / B2A	1900 MHz (PCS) / 2100 MHz (AWS)	15.85	6	280	10,768.57	1.26
Antenna C2	RFS APX16DWV-16DWV-S-E-ACU	1900 MHz (PCS) / 2100 MHz (AWS)	15.9	2	55	1,225.41	0.14
Antenna C3	RFS APXVAARR24_43-U-NA20	600 MHz / 700 MHz	12.95 / 13.35	4	120	2,443.03	0.68
						Sector C Composite MPE%	**2.08**

Table 3: T-MOBILE Emissions Levels

The Following table (*table 4*) shows all additional carriers on site and their MPE% as recorded in the CSC active MPE database for this facility along with the newly calculated maximum T-MOBILE MPE contributions per this report. FCC OET 65 specifies that for carriers utilizing directional antennas that the highest recorded sector value be used for composite site MPE values due to their greatly reduced emissions contributions in the directions of the adjacent sectors. For this site, all three sectors have the same configuration yielding the same results on all three sectors. *Table 5* below shows a summary for each T-MOBILE Sector as well as the composite MPE value for the site.

Site Composite MPE%	
Carrier	**MPE%**
T-MOBILE – Max Per Sector Value	**2.08 %**
AT&T	1.64 %
Clearwire	0.14 %
MetroPCS	0.68 %
Sprint	5.47 %
Town of Berlin	5.61 %
Verizon Wireless	1.59 %
Site Total MPE %:	**17.21 %**

Table 4: All Carrier MPE Contributions

T-MOBILE Sector A Total:	2.08 %
T-MOBILE Sector B Total:	2.08 %
T-MOBILE Sector C Total:	2.08 %
Site Total:	17.21 %

Table 5: Site MPE Summary

FCC OET 65 specifies that for carriers utilizing directional antennas that the highest recorded sector value be used for composite site MPE values due to their greatly reduced emissions contributions in the directions of the adjacent sectors. *Table 6* below details a breakdown by frequency band and technology for the MPE power values for the maximum calculated T-MOBILE sector(s). For this site, all three sectors have the same configuration yielding the same results on all three sectors.

T-MOBILE _ Frequency Band / Technology Max Power Values (Per Sector)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu W/cm^2$)	Frequency (MHz)	Allowable MPE ($\mu W/cm^2$)	Calculated % MPE
T-Mobile 1900 MHz (PCS) LTE	4	1,538.37	181	7.22	1900 MHz (PCS)	1000	0.72%
T-Mobile 2100 MHz (AWS) LTE	2	2,307.55	181	5.42	2100 MHz (AWS)	1000	0.54%
T-Mobile 1900 MHz (PCS) GSM	1	338.14	181	0.40	1900 MHz (PCS)	1000	0.04%
T-Mobile 2100 MHz (AWS) UMTS	1	887.28	181	1.04	2100 MHz (AWS)	1000	0.10%
T-Mobile 600 MHz LTE / 5G NR	2	788.97	181	1.85	600 MHz	400	0.46%
T-Mobile 700 MHz LTE	2	432.54	181	1.02	700 MHz	467	0.22%
						Total:	**2.08%**

Table 6: T-MOBILE Maximum Sector MPE Power Values

Summary

All calculations performed for this analysis yielded results that were **within** the allowable limits for general population exposure to RF Emissions.

The anticipated maximum composite contributions from the T-MOBILE facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general population exposure to RF Emissions are shown here:

T-MOBILE Sector	Power Density Value (%)
Sector A:	2.08 %
Sector B:	2.08 %
Sector C:	2.08 %
T-MOBILE Maximum Total (per sector):	2.08 %
Site Total:	17.21 %
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **17.21 %** of the allowable FCC established general population limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were well within the allowable 100% threshold standard per the federal government.

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